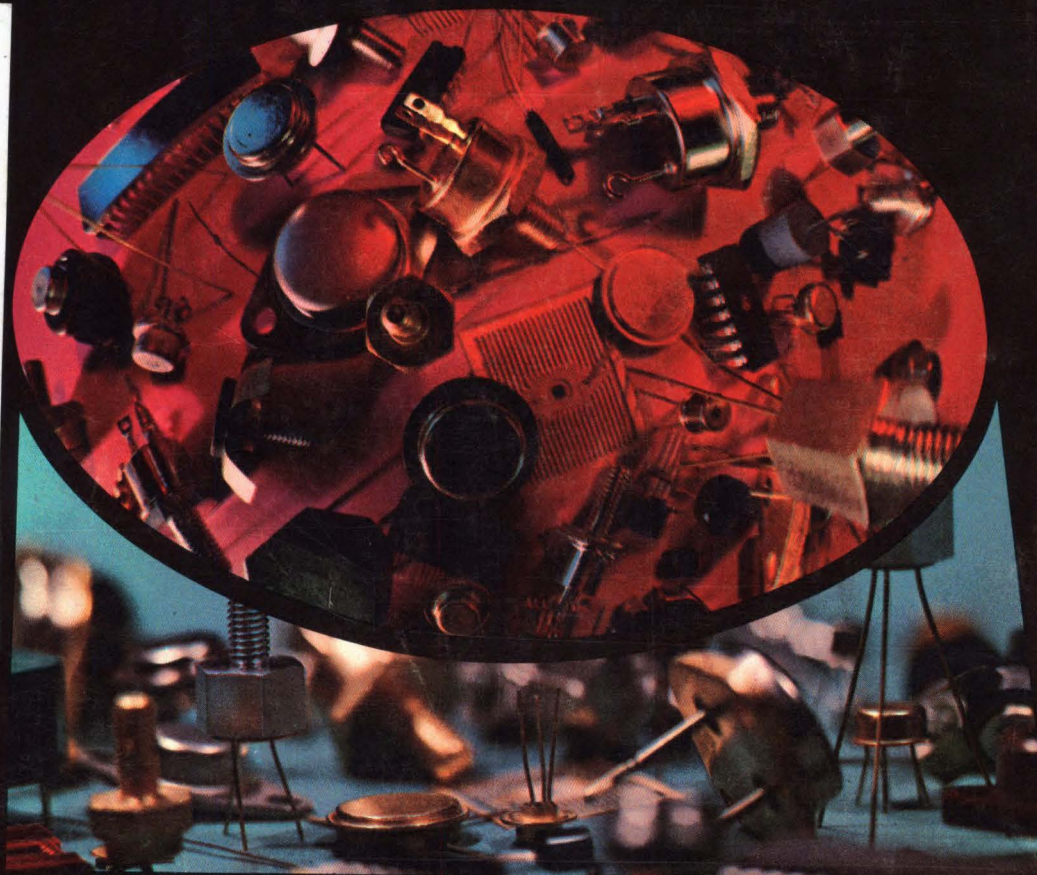


A CAHNERS PUBLICATION

EDN

TENTH EDITION

1968 Semiconductor Annual



PARAMETERS: TRANSISTORS 34 · FET'S 105

UJT'S 114 · DIODES AND RECTIFIERS 118

SCR'S 156 · ZENER DIODES 174 · IC'S 204

How to flatten spikes precisely and for pennies

One look at this circuit and you recognize the answer to voltage transients.

But forget about paired diodes.

A single Carborundum® varistor gives you precise suppression for pennies. "VDR" marks the spot.

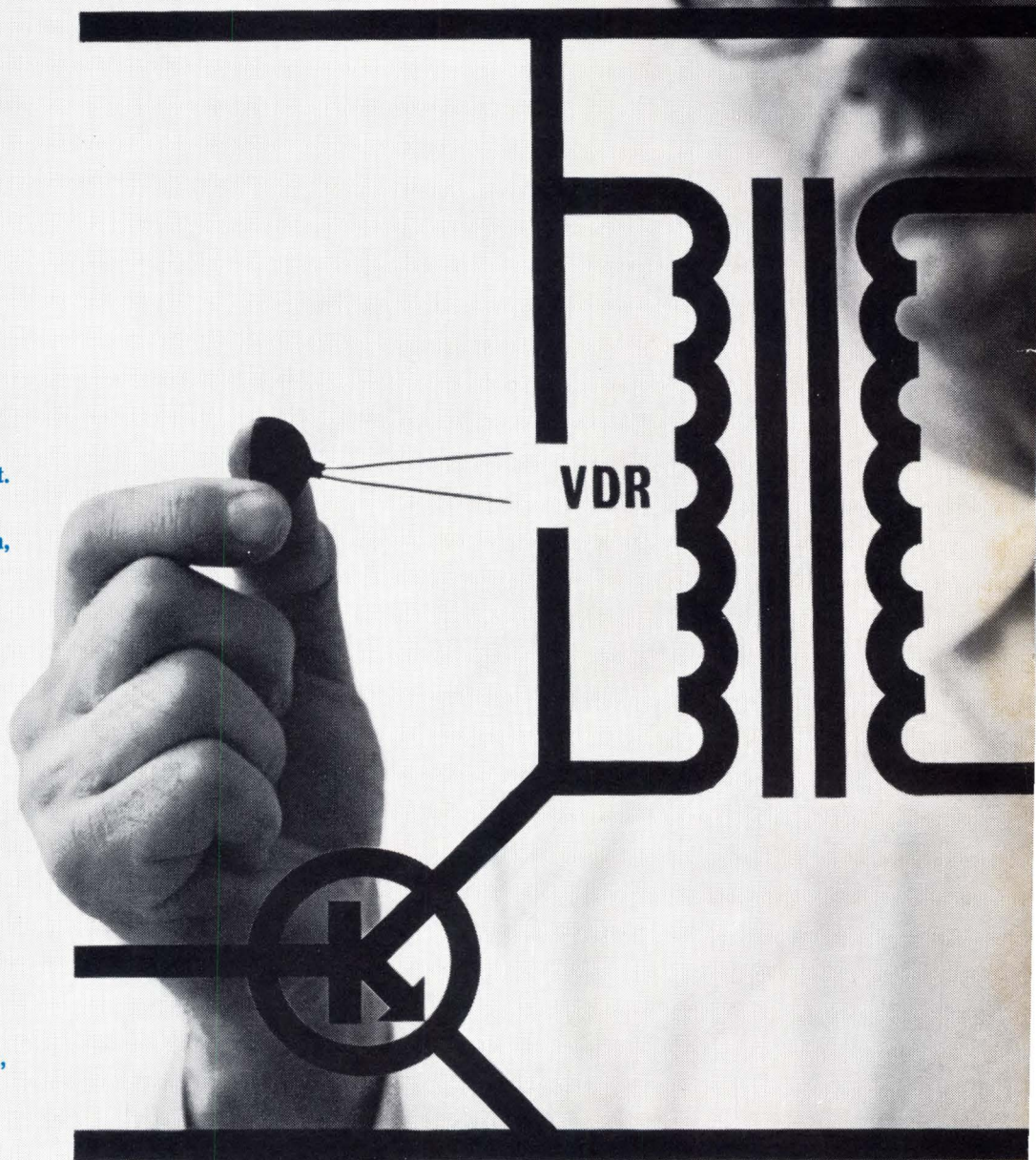
Our nonpolarized varistors flatten spikes from either direction, defy installation error. They're rugged enough to handle severe overloads, and they will do it with better reliability than diodes.

Aside from their low purchase price, Carborundum varistors can save you transistor dollars, too. Their precision damping performance means you can settle for lower breakdown ratings in transistors.

Send us your problems with transient suppression and voltage control and we'll send you precise technical and cost data.

Write to Mr. Harry Emes,
The Carborundum Company,
Refractories & Electronics Division,
Niagara Falls, N. Y. 14302.

Precisely yours...



CARBORUNDUM



1968 Semiconductor Annual

FEATURES

1968 SEMICONDUCTOR MANUFACTURERS

Index to Company Addresses and Products	22
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TRANSISTORS

Parameter Listings	34
Cross-Reference (Diss., Freq. and Gain)	84
Case Outlines	90
Manufacturers	92

FIELD-EFFECT TRANSISTORS

Parameter Listings and Manufacturers	105
Case Outlines	90

UNIUNCTION TRANSISTORS

Parameter Listings and Manufacturers	114
Case Outlines	90

DIODES AND RECTIFIERS

Parameter Listings	118
Case Outlines	143
Manufacturers	144

REVERSE BLOCKING TRIODE THYRISTORS (SCR's)

Parameter Listings	154
Manufacturers of JEDEC Types	171

ZENER DIODES

Regulator Diode Parameter Listings	174
Reference Diode Parameter Listings	188
Case Outlines	143
Cross-Reference (Diss. and Breakdown Volts)	192
Manufacturers	196

MICROCIRCUITS

Capabilities	204
Digital	212
Linear	224

INDEX TO ADVERTISERS

240

COVER design by Art Director Ray Lewis displays representative semiconductor packages.



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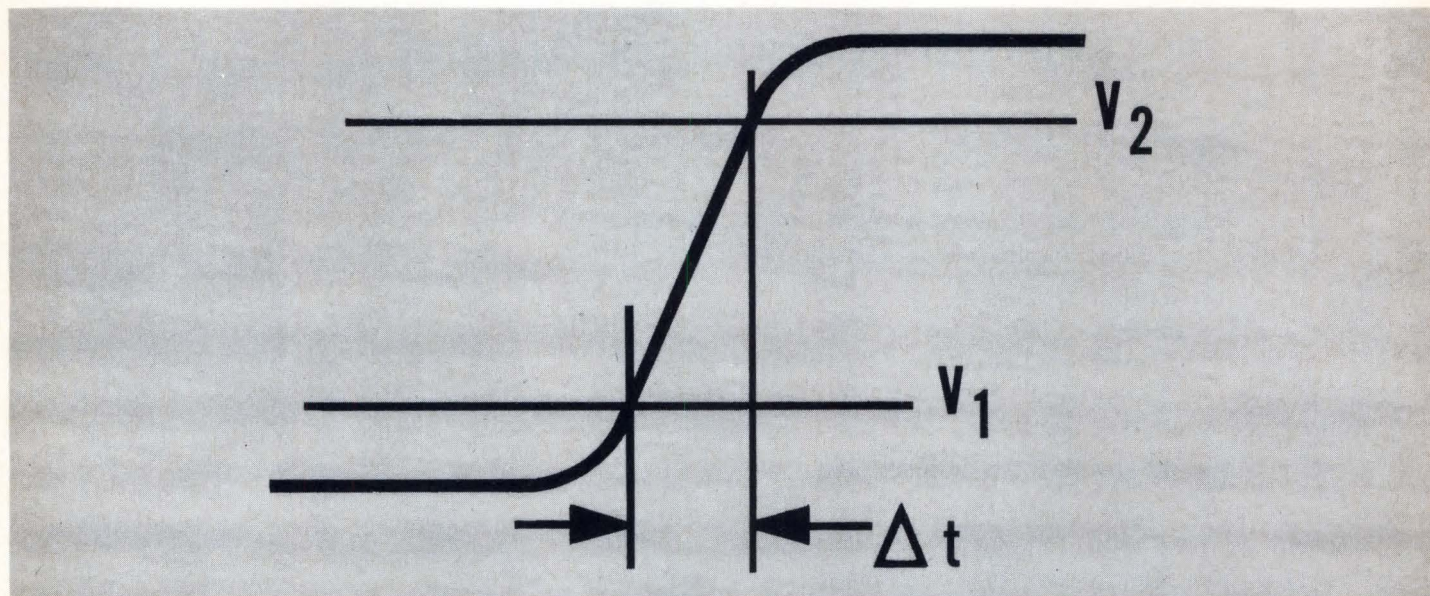
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SEMICONDUCTOR & DYNAMIC TEST SYSTEMS

SEMICONDUCTOR MEASUREMENTS THE E-H WAY



ASSUMPTION:

- A physical phenomenon occurs of the general order shown in Figure 1, or combinations of its ultimate variations.
- There are practical reasons to quantitatively evaluate the parameters of the occurrence.

CONCLUSION:

Since the occurrence is defined by the locus of an infinite number of voltage/time coordinates which progress in some definable orderly fashion; the measurement problem reduces to (a) logically selecting a meaningful voltage, and (b) quantizing the increment of time at which it occurs.

These assumptions and conclusions are obviously an oversimplification of the measurement problem; however, they form the largest common factor of the general family of measurement problems to which the 4000 Dynamic Switching Time systems address themselves.

GENERAL DESCRIPTION OF E-H 4000 SYSTEMS

To meet the automatic testing needs in production quality assurance, engineering and incoming inspection E-H has developed a series of automatic measuring systems. The 4001, 4002, and 4003 all make use of a basic set of important system measurement and pulse modules.

These modules were designed specifically for automatic pulse testing applications. The fundamental measurements that can be made include time and voltage in the μ sec to sub ns area. Programmable pulse generators provide stimuli capable of simulating actual operation and allow worst case testing.

An important feature of the time and voltage measurement modules is their ability to do SINGLE SHOT measurements. This means only a single test event need occur to make a measurement rather than several hundred as used in other techniques. This feature not only increases measurement rate but allows devices to be tested closer to actual conditions. In the case of complex arrays such as LSI and MSI this technique is the only approach practical and in some instances, the only possible method due to thermal (power up time) and economics (test time).

The E-H Model 4000 Series Dynamic Test Systems extends high-speed measurement technology into areas never before achievable.

IF YOUR MEASUREMENT PROBLEM;

- Is definable by the above generalities.
- Is in the sub-nanosecond to hundreds-of-nanoseconds time domain.
- Must be repeated many times within stringent economic limits. . . . then the automated single-shot measurement capability of the 4000 Series Dynamic Switching Time Systems are the most comprehensive, flexible, and economically feasible solutions commercially available today.

Single-shot measurement capability makes it possible for the first time to test in accordance with the requirements of the **Device Under Test**. No longer must the DUT be subjected to the repetitive cycling required by iterative measurement equipment.

The performance parameters of the DUT can now be comprehensively evaluated with the DUT subjected to its normal operating stimuli.

All active devices are repetition rate sensitive to some degree. Power dissipation, stored charge buildup, propagation time, rise-time, RC-L/R-or LC time constants, mismatch reflections, flicker noise, etc., combine to cause the DUT response to be a function of its stimuli repetition rate. Meaningful test results require the DUT to be stimulated in its 'worst case' operating mode.

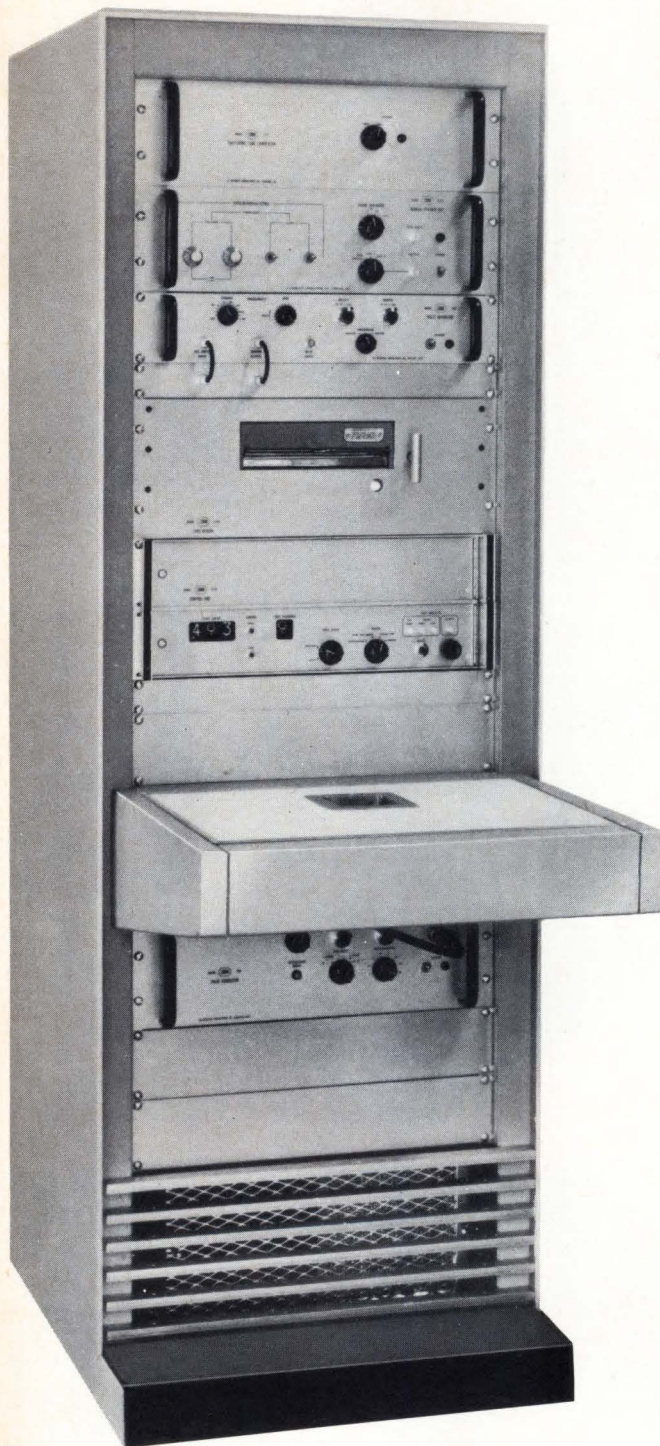
Single-shot capability is the only measurement technique demonstrated to date which practically permits the stimuli pattern to be solely dictated by the requirements of the Device Under Test.

In the case of complex-function arrays, such as counters, memory arrays, shift registers, adders, and program sequencing modules, the complexity of the preconditioning stimuli together with the maximum permissible clock rate can make the time interval between output pulses prohibitively long for iterative measurement techniques.

Circle No. 2 on Reader Service Card for more information.



SEMICONDUCTOR & DYNAMIC TEST SYSTEMS



MODEL 4001 SWITCHING TIME TEST SYSTEM

applications:

Automatic Testing of
Transistors
Diodes
Delay Lines
Other Discrete Devices

features:

**Single Shot Switching time measurements from
sub ns to μ sec**

50 v 2 ns t. Programmable Pulse Generator

66 Double Limit Measurements/sec

Digital Readout of Test Results

**Easy to Learn Card Programming Stores &
Sequences Measurements**

**Extendable Signal Discriminator Probes to Accommodate
Interconnection to Automatic Device Handlers**

The E-H 4001 is a basic low cost pulse stimuli and switching time measurement system for use in applications where a 50 v pulse source is required. Recommended for automatic measurements on discrete semiconductor devices the single shot feature is useful to reduce thermal rise and increase measurement rate when low duty factor pulse source must be used.

SYSTEM ELEMENTS:

Model 142 Switching Time Converter,
Model 5203 Manual Control Unit for 142,
Model 1271 Timing Unit,
Model 1121 Pulse Driver,

Model 4201 Control unit
Model 4202 Card Reader
Model 4205 Rack Assembly
Model 4206 Table top assembly
Model 4207 AC Control Panel
Model 4209 STC power supply (10 heads)

PRICE \$28,775



E-H RESEARCH LABORATORIES, INC.

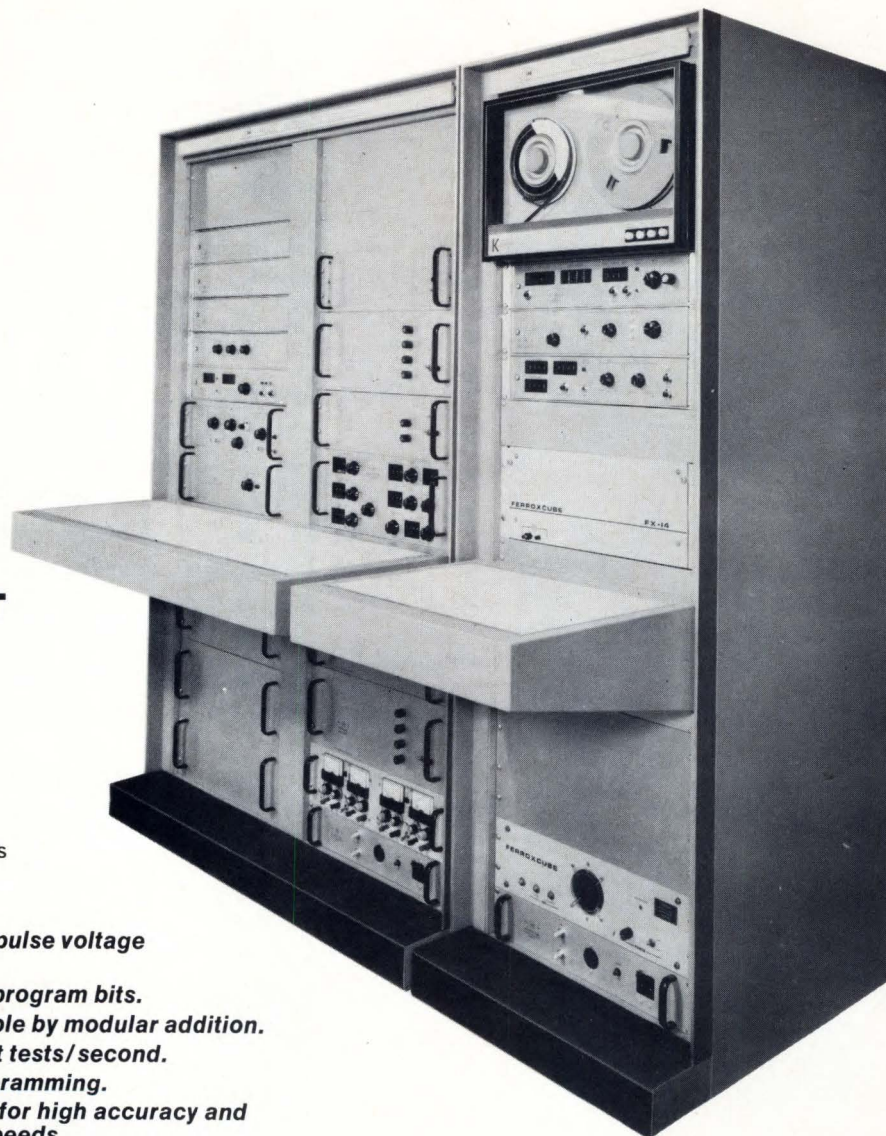
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(415) 834-3030 ■ TWX-910-366-7258

in Europe: E-H Research Laboratories (Ned) N.V., Box 1018, Eindhoven,
The Netherlands ■ Telex 51116 **in Japan:** Iwatsu Electric Co., Ltd.,
No. 710, 2-Chome, Kugayama, Suginami-Ku, Tokyo, Japan

Circle No. 3 on Reader Service Card for more information.



SEMICONDUCTOR & DYNAMIC TEST SYSTEMS



MODEL 4002 DYNAMIC TEST SYSTEM

applications:

High speed production testing of
Integrated Circuits, Bipolar or MOS
LSI
Transistors
Diodes
and other pulse and logic components

features:

Single shot or repetitive time and pulse voltage measurements.
Core program storage of 128,000 program bits.
Parallel programming is expandable by modular addition.
Test rates of up to 200 double limit tests/second.
Variable length Change-only programming.
Differential timing measurements for high accuracy and ease of fixturing at nanosecond speeds.
Wide signal dynamic range $\pm 5v$ and equivalent bandwidth (1 GHz).
Remote signal probes to accommodate interconnection to automated handlers.
Data logging on incremental tape recorder.
Program entry by Flexowriter or high speed optical tape reader.

The E-H 4002 is a highly sophisticated production test system that is especially suited for making switching time and dynamic voltage level measurements on solid state discrete devices and micromodular logic modules. Its single shot capability is particularly useful in Large Scale Array testing. Instrumentation is incorporated within the system to stimulate the Device Under Test and to measure and record the resultant data in accordance with a prepared program. The measurement results are digitized and compared against programmed upper and lower limits, resulting in a three digit numerical display of the measured value, together with a lamp display of GO/NO-GO results. Additional displays include: measurement number, device serial number and manually entered data. Data is recorded on an incremental magnetic tape recorder. Programs are retained in a core memory unit and are sequenced under operator control or by an automated device handler.

SYSTEM ELEMENTS:

Model 142 Switching Time Converter with four 5301 Discriminator Probes,
Model 153 Strobng Voltmeters (2),
Model 1420 Timing Units (2),
Model 1139 Pulse Drivers (2),
Model 5202 Manual Control Unit,
Model 5205 Manual Control Unit,

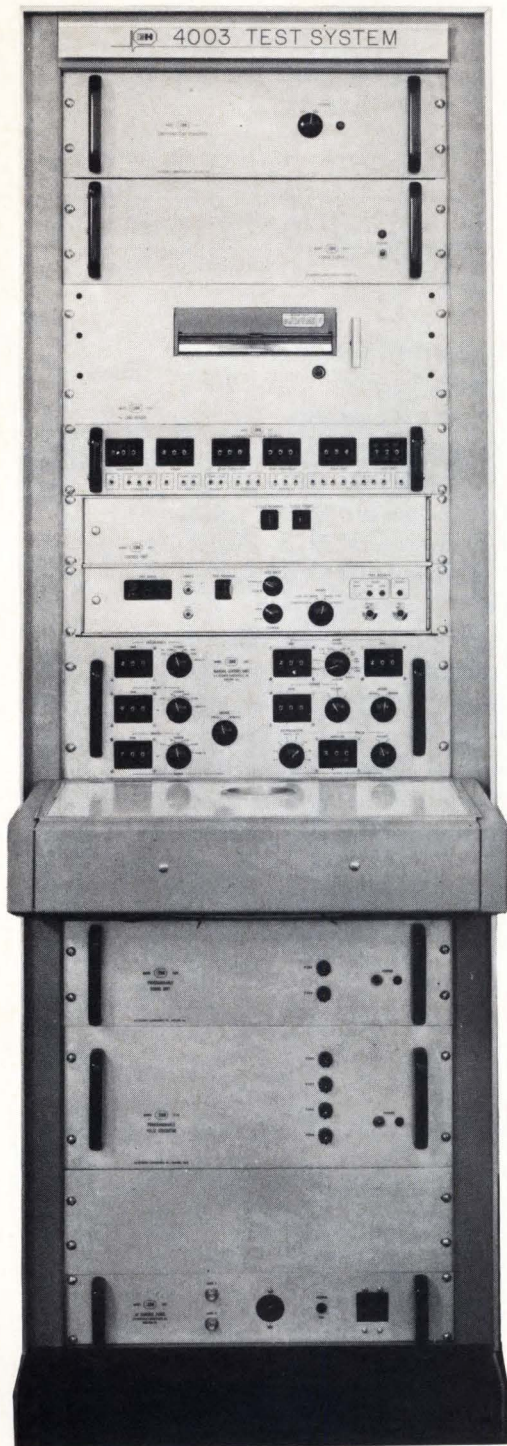
Model 4220	System control unit
Model 4221	Memory control unit
Model 4222	Intercoupler
Model 4223	Program register
Model 4224	Paper tape reader
Model 4225	Memory
Model 4226	Data Recorder
Model 4227	Friden Flexowriter
Model 4228	Relay control unit
Model 4229	Rack assembly (2 bay)
Model 4230	Fixture assembly
Model 4231	Rack assembly (1 bay)

PRICE \$153,000

Circle No. 4 on Reader Service Card for more information.



SEMICONDUCTOR & DYNAMIC TEST SYSTEMS



MODEL 4003 DYNAMIC TEST SYSTEM

applications:

Automatic Testing of
Integrated Circuits Bipolar and MOS
Transistors
Other Pulse & Logic Components

features:

Single Shot or Repetitive Switching Time Measurements
Fast Rise Programmable Pulse Generator
66 Double Limit Measurements/Sec
Digital Readout of Test Results
Easy to Learn Card Programming Allows up to 81 Sequential Measurements

High Speed Fixturing System for 14 Pin Devices included
Choice of 50 or Hi Z Discriminators

Options to expand system include:

- a. **Second Pulse Generator**
- b. **153 Strobing Voltmeter for Single Shot Pulse Voltage Measurements and % related Time Measurements**
- c. **Second Card Reader for Additional Program Flexibility**
- d. **Data Logging**
- e. **Additional Discriminators for increased fixturing flexibility (2 Standard)**

The E-H 4003 is intended for medium size production and incoming inspection testing of 14 lead integrated circuits or other solid state arrays of comparable terminal complexity. The 4003 system features single shot time interval measurements. It is designed to make measurements of switching time propagation delay and other time interval measurements in the sub-nanosecond to hundreds-of-nanoseconds time domain. Instrumentation is incorporated to stimulate the Device Under Test, make the timing measurement and handle the data resulting from the timing measurement. Measurement results are digitized and compared against programmed upper and lower digits. Measurement results data include: measurement value-3 digits; test number-1 digit; cycle number-1 digit and high/go/low indication.

SYSTEM ELEMENTS:

Model 142 Switching Time Converter,
Model 1420 Timing Unit,
Model 1139 Pulse Driver,
Model 5202 Manual Control Unit,

Model 4202 Card Reader
Model 4203 Card Reader #2 (optional)
Model 4205 Rack Assembly
Model 4206 Table top assembly
Model 4207 AC control Panel
Model 4208 Test field programmer
Model 4209 STC power supply (10 heads)
Model 4211 Control unit
Model 4240 Fixture Card

PRICE \$37,500



E-H RESEARCH LABORATORIES, INC.

163 Adeline Street ■ Oakland, California 94607
(415) 834-3030 ■ TWX-910-366-7258

in Europe: E-H Research Laboratories (Ned) N.V., Box 1018, Eindhoven,
The Netherlands ■ Telex 51116 *in Japan:* Iwatsu Electric Co., Ltd.,
No. 710, 2-Chome, Kugayama, Suginami-Ku, Tokyo, Japan

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EDITORIAL

RSI

There is a tendency for designers to want to work with the latest devices and most advanced techniques. In the last year or so, terms such as LSI, MSI, discretionary wiring, unit-cell, poly-cell and many others have become common in the glossary of terms used in semiconductor design work. However, we should be careful to use elephant guns on elephants and not rabbits. Think in terms of RSI—right-scale integration. RSI is that amount of integration required whether it be discrete plastics or 500 T²L gates/chip.

It takes a truly sophisticated designer to use RSI. He must decide and use exactly that amount of device sophistication and precisely the degree of integration that is necessary to do the best engineering job. He produces the best product optimizing cost and performance trade-offs.

This, the tenth edition of the EDN Semiconductor Annual, is the most complete and widely used semiconductor reference issue in the industry.

It is dedicated to all those designers solving problems with RSI.

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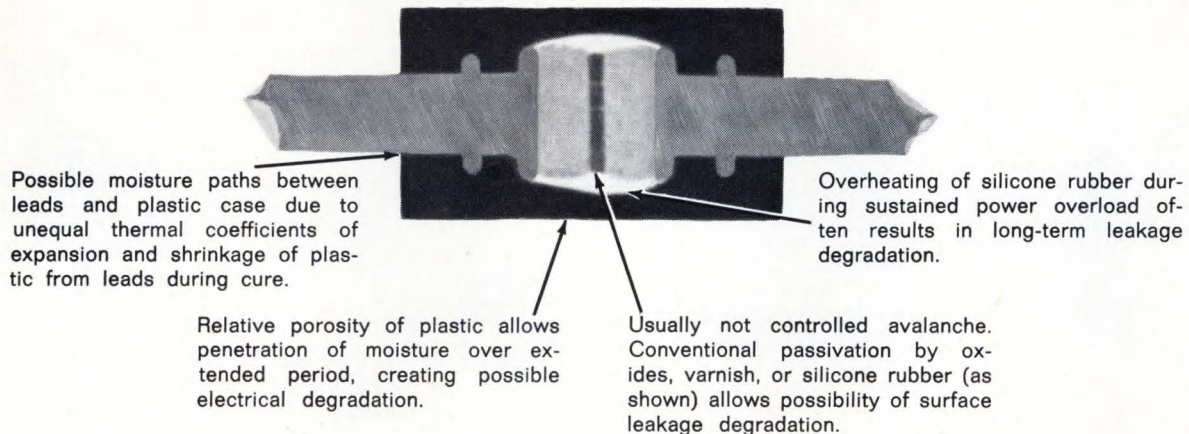
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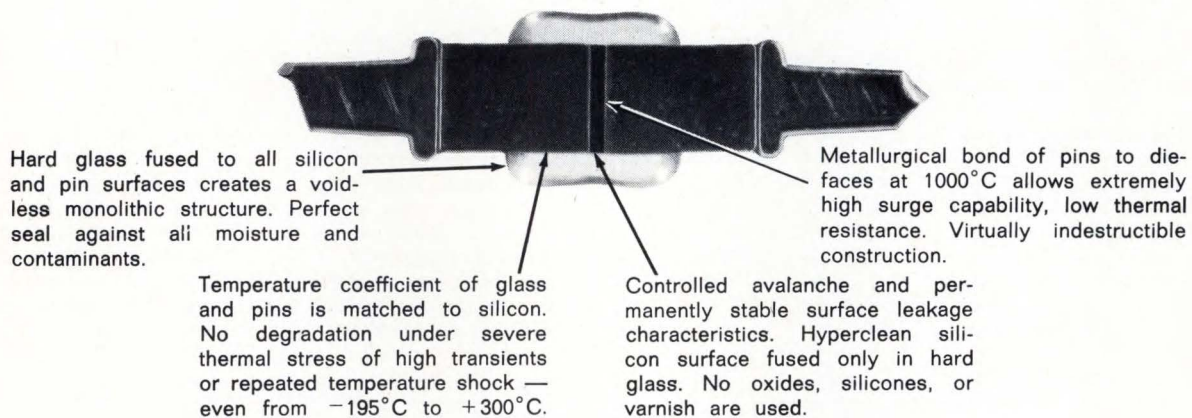
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27 seconds from now you'll know whose JAN 1N3611 you want to use . . . and why

This is an actual section of a conventional plastic JAN 1N3611 rectifier



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And by the way . . .

Glass doesn't always cost more than plastic. Not when you get the economies of making 250 thousand at a time. So don't be shocked at how low our prices are. And . . . you can buy a 100 thousand right off the shelf.

For fast action, call Dave Greene COLLECT at (617) 926-0404.



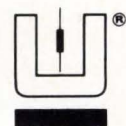
Our catalog sheet is loaded with charts, graphs, and all kinds of detailed specs you'll want to have, so circle the reply card number now.

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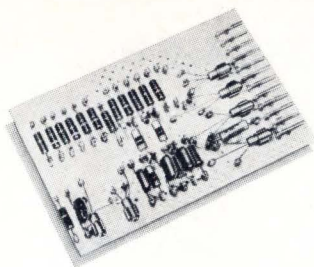
Part #	PIV	Rating
JAN1N3611	200V	2A
JAN1N3612	400	2
JAN1N3613	600	2
JAN1N3614	800	2

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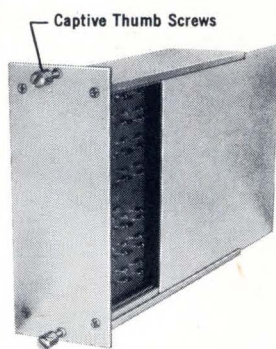
UNITRODE



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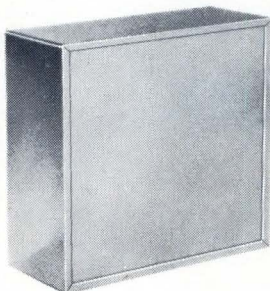


**Okay. The breadboard works.
Doesn't it deserve one of these
sleek, new Vector cases?**



Vector "EFP" plug-in cases

Aluminum plug-in cases available in 60 sizes to accommodate circuit boards from 2.7" to 7.9" and 4.6" to 14". All cases fit the Vector Strut Cages shown below. Cases have identical top and bottom extruded rails with .072" longitudinal grooves for circuit cards, slide-out side covers, front panels for controls and rear panels for plugs. Case parts available separately or in kits. Stock plug-in cards for many sizes.



"Multi-Mod" equipment cases

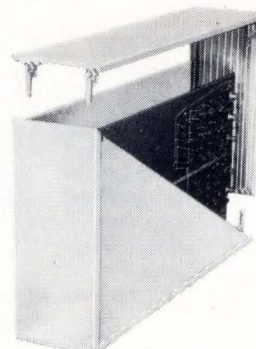
These quietly handsome and strong aluminum cases with four internally grooved surfaces for $\frac{1}{16}$ " panels can rest on any face and provide table top housings for instruments, circuitry, controls, miscellaneous small equipment. Bases remove quickly for ready access; good R.F.I. shielding is provided by overlapping cover joints. 14 standard sizes from 1.6" x 3.1" x 3.1" to 4.5" x 14" x 8" are available.



Patented

"Vector-Pak" cases for R.F.I. shielding

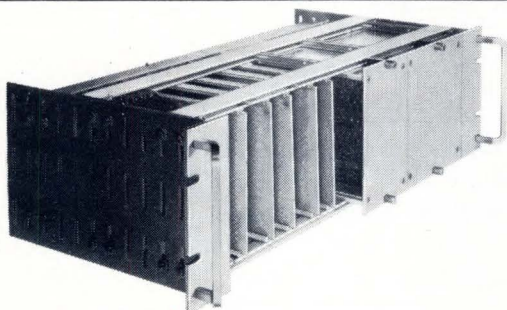
These pluggable modules for high frequency printed circuit cards provide up to 80 d.b. of shielding at 400 megacycles. All joints overlap. Access is by removable top and slide-out sides. Cards may have ground planes reliably contacted to case. Coaxial input plugs are optional. Also useful for general circuit card or equipment plug-in enclosures. Cases are available with either fully or partially overlapping end pieces.



Patented

Quickly-made cases and card enclosures

Dozens of different cases can be assembled from stock "Frame Loc" rail extrusions. Widths of 1", 1.6", 2", 3" and 4½" are available in lengths from 3" to 24" with square-cut or mitred ends. For fast, easy case assembly push-in corner brackets are supplied for lengths with mitred ends. For sturdy low cost card enclosures, rails mount vertically or horizontally. Hardware is available for mounting equipment inside cases.



"Vector-Strut" cages

Uniquely adjustable aluminum frames mount most types of plug-in cases or circuit cards in standard equipment racks. Cages are sold in kit form in 3 heights: $3\frac{15}{32}$ ", $5\frac{7}{32}$ ", $8\frac{23}{32}$ ", and in 3 depths, 8.975", 11.975" and 15.725", all 19" wide. Users can quickly adjust for any height, width, depth or position of module with-

in the range selected, a feature not found in other cages on the market. Kits consist of slotted side walls, cross members (Triple Tee Struts) and the brackets, plus necessary assembly hardware. Card and case guides, EFP Plug-In Modules, and handles are ordered separately as required.

Vector



Data Sheets are available on all Vector cases and the Vector Strut Cage. Send for copies.

VECTOR ELECTRONIC COMPANY, INC. 1100 Flower Street, Glendale, California 91201

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The miniature relay with built-in arc suppression



TO-5 Relay

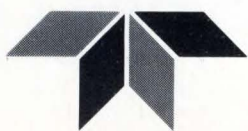
Every time we add to the already enormous capabilities of Teledyne TO-5 Relays we surprise a lot of "relay skeptical" engineers.

Now *all* standard Teledyne Relays are available with internal diode chips for arc suppression. It is no longer necessary for you to add external diodes on your circuit board. Single

or double diodes (for polarity reversal protection), added to our many other performance assets, insures our undisputed leadership in the miniature relay field.

(We have also suppressed the price of the diodes!!! — \$1.00 or less).

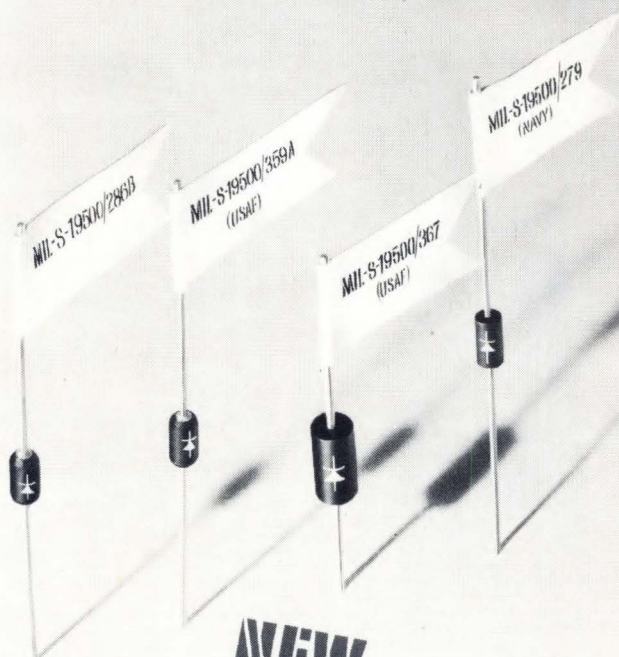
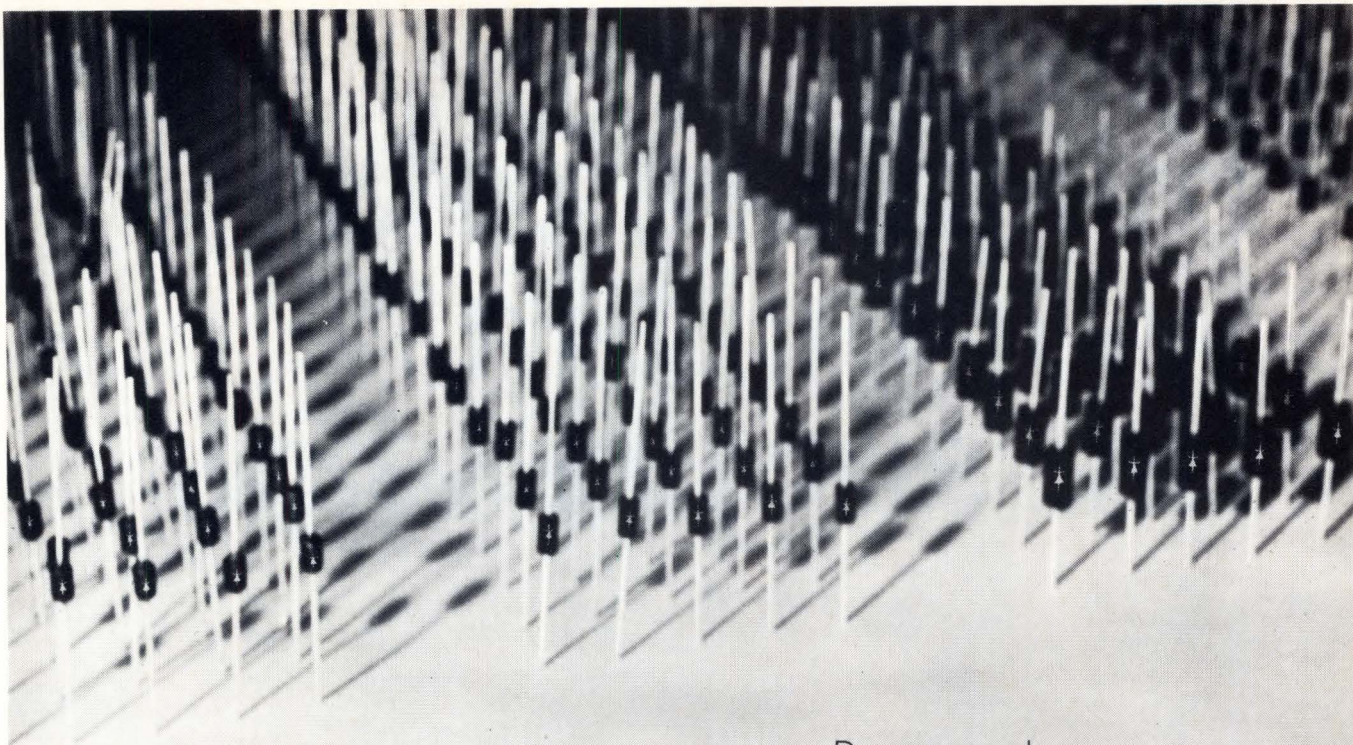
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 1N4248 and 1N4249

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NO CONTEST

if you're looking for 1 to 2 watts
of continuous audio power



**See for yourself why General Electric's silicon monolithic IC's
can't be beat.**

No matter what your application, the PA234 or PA237 probably fits . . . and you save on design expense. See if you can draw a path from the feature most important to you, to the PA237 amplifier in the center of the puzzle. If you *can* get to the center, the PA237 is right for you. If you want to prove it to yourself, tell us your expected application and we'll send you a free PA237 to put to the test. Simply tear out this page and send it with your name, address, title, company, and PA237 application to Product Manager, Monolithic Audio Amplifiers, General Electric Company, Northern Concourse Office Bldg., North Syracuse, N.Y.

For more facts, turn the page. ➤

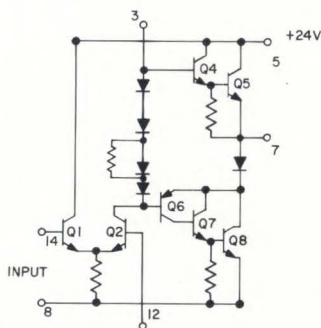
SEMICONDUCTOR PRODUCTS DEPARTMENT

GENERAL  **ELECTRIC**

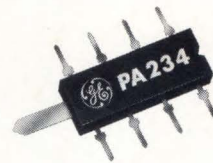
Save design expense. Take advantage of the PA237's application versatility.



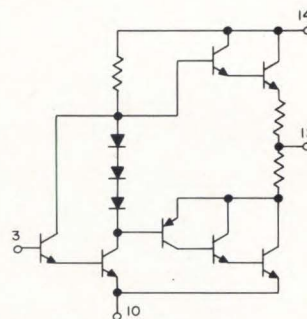
Because General Electric's PA237 operates over a supply voltage range of 9 to 27 volts, you can probably use this one circuit for most of your applications and save money. It is capable of delivering up to two watts of power to resistive or inductive loads. (Pictured actual size.)



The PA237, shown in this circuit diagram, converts 8 mV of input signal to 2W of continuous, low distortion output power.



General Electric's PA234 gives you the lowest total cost for a 1-watt amplifier function through a combination of low device cost and minimum number of outboard components. (Shown actual size.)



PA234 audio amplifier delivers 1 watt of continuous power to a 22-ohm load from a 22-volt supply.

Now you can use a single IC for most of your audio applications by simply varying its bias.

General Electric PA237 silicon monolithic audio amplifier is designed to have its biasing network external to the chip. Thus appropriate biasing for any power supply from 9- to 27-volts is readily achieved.

External biasing permits operation with Class A, Class A-B, or Class B output modes. The input may be biased for voltage or current sources as well as differential signals.

In addition to the PA237's wide range of supply voltage and bias alternatives, feedback may be applied to the amplifier to allow adjustment of stability, input and output

impedance and amplifier sensitivity. Simple AC and DC feedback networks are employed to provide excellent stability with frequency and temperature.

General Electric's 1- and 2-watt low-distortion amplifiers are packaged in an 8-lead dual-in-line plastic package with a tab for transferring heat to a printed circuit board. This means easy insertion into the P.C. board and easy heat sinking too. **General Electric's PA234** is the ultimate in low cost 1-watt monolithic audio IC's. Its low cost plus the least number of outboard components of any audio amplifier on

the market makes the PA234 the most economical alternative for achieving one watt of audio power.

Both General Electric's PA234 and PA237 offer you outstanding performance and top reliability in a wide range of circuit applications. These varied uses include phonographs, dictating equipment, tape player/recorders, and TV, AM, and FM receivers. Plus: the PA237 can drive inductive loads or provide voltage regulation for 1% typical over a 9- to 27-volt range. For more information on how GE can save you design expense and cash outlay **circle number 241**.

Here are some other outstanding GE semiconductors on which you can depend.

Industry's most predictable UJT saves time and money.

Stand-off ratio spread $\pm 3\%$!!
Oscillator frequency shift .6% max. !
(-15°C to $+65^{\circ}\text{C}$)

GE's D5K1 and D5K2 planar complementary unijunction transistors offer greater stability and uniformity than any UJT previously available. They have characteristics of standard unijunction transistors except that, being complementary, their currents and voltages are of opposite polarity. For most applications, polarity is unimportant.



The D5K1 and D5K2 combine planar and integrated circuit techniques resulting in a much tighter intrinsic-standoff ratio distribution and lower saturation voltage. This gives them both a new high level of performance predictability versus temperature.

Timing stability of 0.5% is achievable without the necessity of expensive temperature testing on individual devices to determine the compensating resistor. For more details circle number 242.

1200-volt, 400-amp

PRESS PAK

silicon rectifier costs less.

If you want a high power silicon rectifier diode with the same proved, all-diffused construction of the A90 series, General Electric offers the A390 PRESS PAK. The package innovation delivers far more continuous current than comparable stud-mounted devices, and it's smaller, too.

The new PRESS PAK package, using pressure contacts, allows double-side cooling to significantly reduce thermal resistance and, therefore, increase current ratings about 60%. Result: You get more average amps per dollar.

Light weight, hermetically-sealed PRESS PAK also features reversibility of mounting, thus eliminating the need for special reverse polarity units. And it complements many SCR's already in the PRESS PAK package. For more details, circle number 243.



Now you can custom tailor UJT characteristics to meet your specific needs.

With General Electric's D13T1 and D13T2 programmable unijunction transistors (PUT) you can now program unijunction characteristics such as η , R_{BB} , I_P , and I_V to your specific needs by adding two external resistors.



Generally, the D13T gives programmability without increasing circuit complexity. In fact, it often reduces circuit cost. And the PUT offers tight parameter specifications, high sensitivity, low unit cost, low leakage current, low peak point current, low forward voltage, and fast, high-energy trigger pulse too.

D13T2 is specifically characterized for long interval timers and other applications requiring low leakage and low peak point current. The D13T1 has been characterized for general use where low peak point current is not essential. Circle number 244.

For more information on these and other General Electric semiconductor products, call or write your GE sales engineer or distributor, or write General Electric Company, Section 220-63, 1 River Road, Schenectady, N. Y. 12305. In Canada: Canadian General Electric, 189 Dufferin St., Toronto, Ont. Export: Electronic Component Sales, IGE Export Division, 159 Madison Ave., New York, N. Y. 10016.

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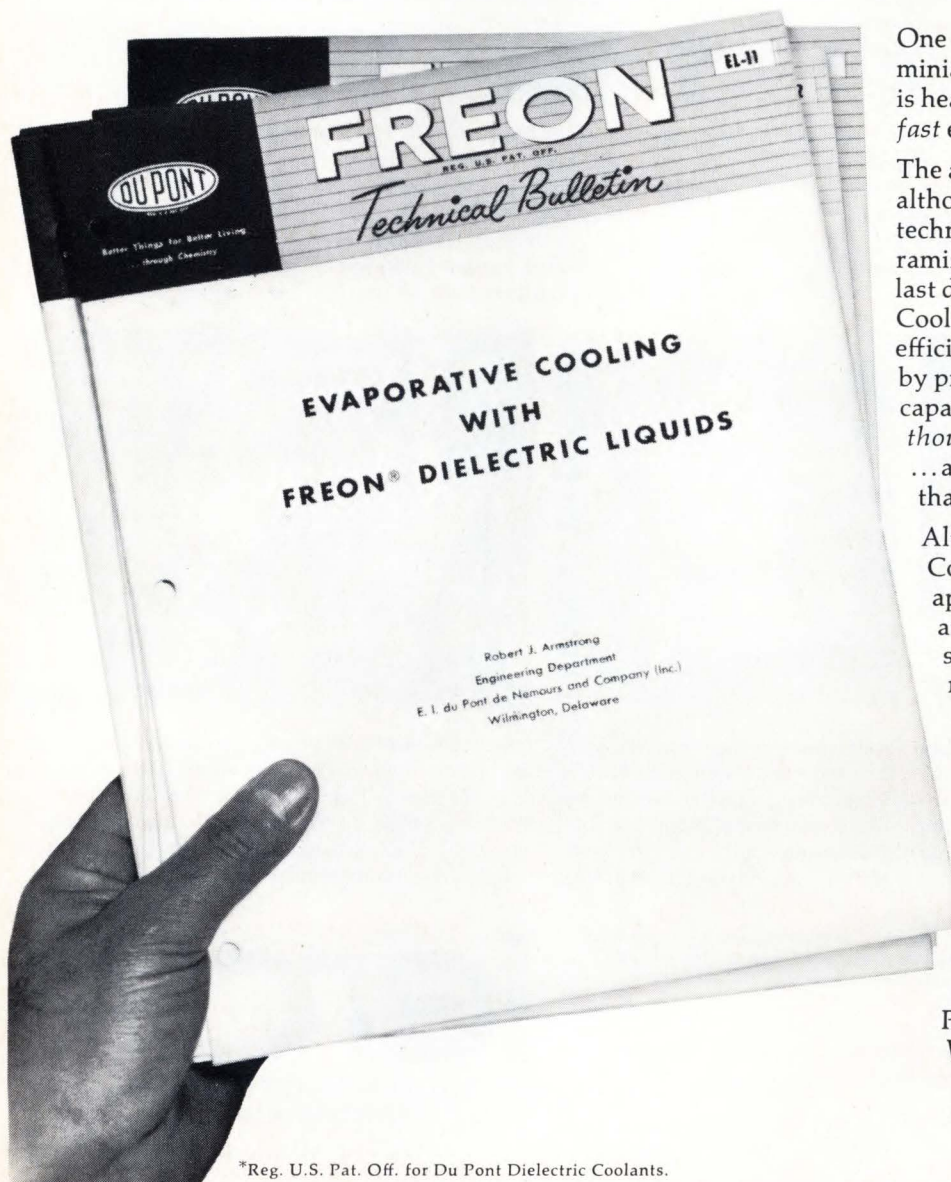
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SEMICONDUCTOR PRODUCTS DEPARTMENT

GENERAL  ELECTRIC

Take the heat off miniaturization.

New Du Pont technical bulletins tell how Freon* Dielectric Coolants eliminate heat problems in the most compact electronic assemblies.



One of the big problems in miniaturization, as you're well aware, is heat: How to get rid of *enough* of it *fast* enough.

The answer is now quite simple, although it takes several Du Pont technical bulletins to explain all the ramifications. These bulletins tell to the last detail how FREON Dielectric Coolants offer the fastest, most efficient method of transferring heat... by providing the greatest cooling capacity per unit of volume. Up to a *thousand times* more effective than air... a *hundred times* more effective than oil.

Although each FREON Dielectric Coolant is formulated for specific applications, they are all chemically and thermally stable. They are all safe, being nonflammable, nonexplosive and low in toxicity. And all have high dielectric strength and resistivity and low dielectric loss.

Find out now how FREON Dielectric Coolants can help you design components and circuitry that are smaller, smaller and smaller. For your complete set of technical bulletins, write on your letterhead to Du Pont, FREON Products Division, Room 5953, Wilmington, Del. 19898.

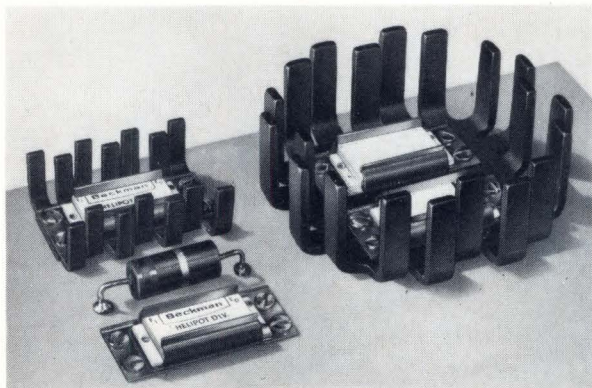


*Reg. U.S. Pat. Off. for Du Pont Dielectric Coolants.

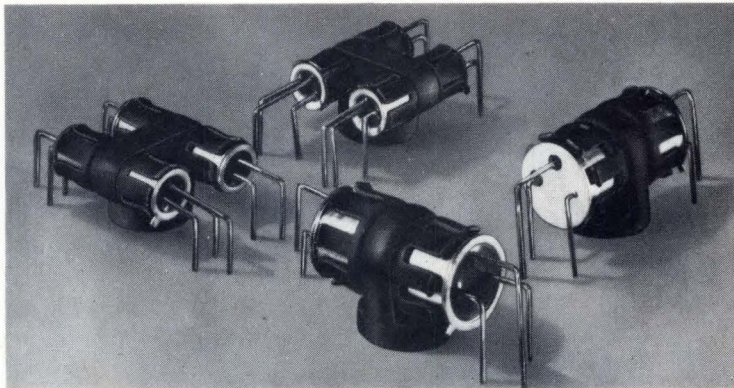
Circle No. 14 on Reader Service Card for more information.

Tips on cooling off hot semiconductors and microcircuits

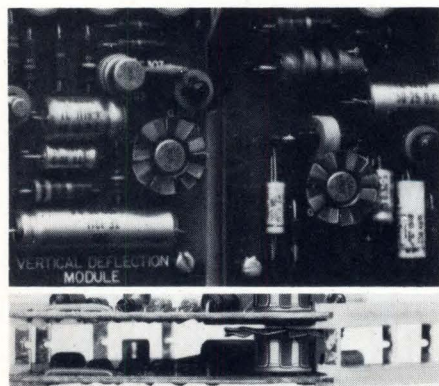
Read on. Find out how circuit designers use IERC heat dissipators to protect and improve circuit performance of semiconductors and microcircuits.



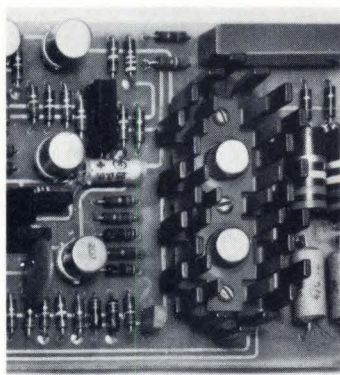
Cool off microcircuit devices with a choice of four new dissipator/retainers. Example: with natural convection, a typical microcircuit device dissipates 1.8 watts with case temperature rise of 103°C. Add IERC's model LBOC2-61B and retainer and you dissipate 5 watts with the same case temperature rise. Retainer-clip may also be used alone to mount package to conduction plane.



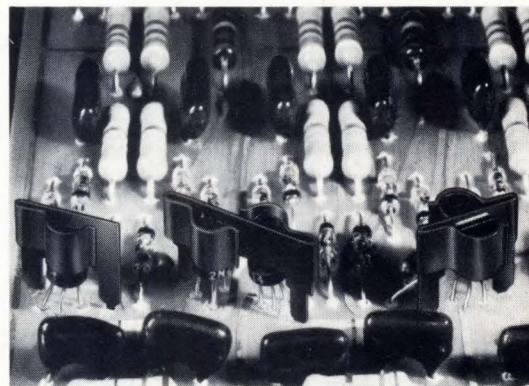
These special dual and quad Thermo-Link dissipators permit thermal mating of matched transistors. Thermo-Link retainers do exactly as their name says: They provide a thermal link between transistors and the chassis or heat sinks. They are also available with beryllium oxide washers which have the excellent thermal conductivity of aluminum, are electrically insulative and reduce normal mounting capacitance by 1/2 to 1/3. The washer is brazed to a brass slug or hex stud for mounting.



Fan Top Dissipators for TO-5 and TO-18 cases add almost nothing to board height. Don't need much room on the board either. Available for both metal and plastic cases. Spring fingers make installation simple. And Fan Tops cost just pennies.



Help low-to-medium power transistors keep their cool with IERC's stagger-fingered LP's. Available in single or dual mounting for thermal mating of matched transistors. They fit both TO-5 and TO-18 cases.



New "Universal" Spade Series for plastic transistors fits all D-case sizes. Spring clip allows for variation in case diameters. Excellent dissipation lets you boost operating power 33%. Both single and dual models as shown. IERC has heat dissipators for all popular epoxy and ceramic semiconductors.

Need a non-hygroscopic finish with excellent dielectric properties, 50 K megohms insulation resistance and high heat emissivity? Use Insulube® 448. It also protects against salt spray and fungus and other adverse environments.

Got a tough one? Our engineers welcome your inquiry for more specific information. Write us on your company letterhead, please.

ierc
SEMICONDUCTOR
HEAT DISSIPATORS

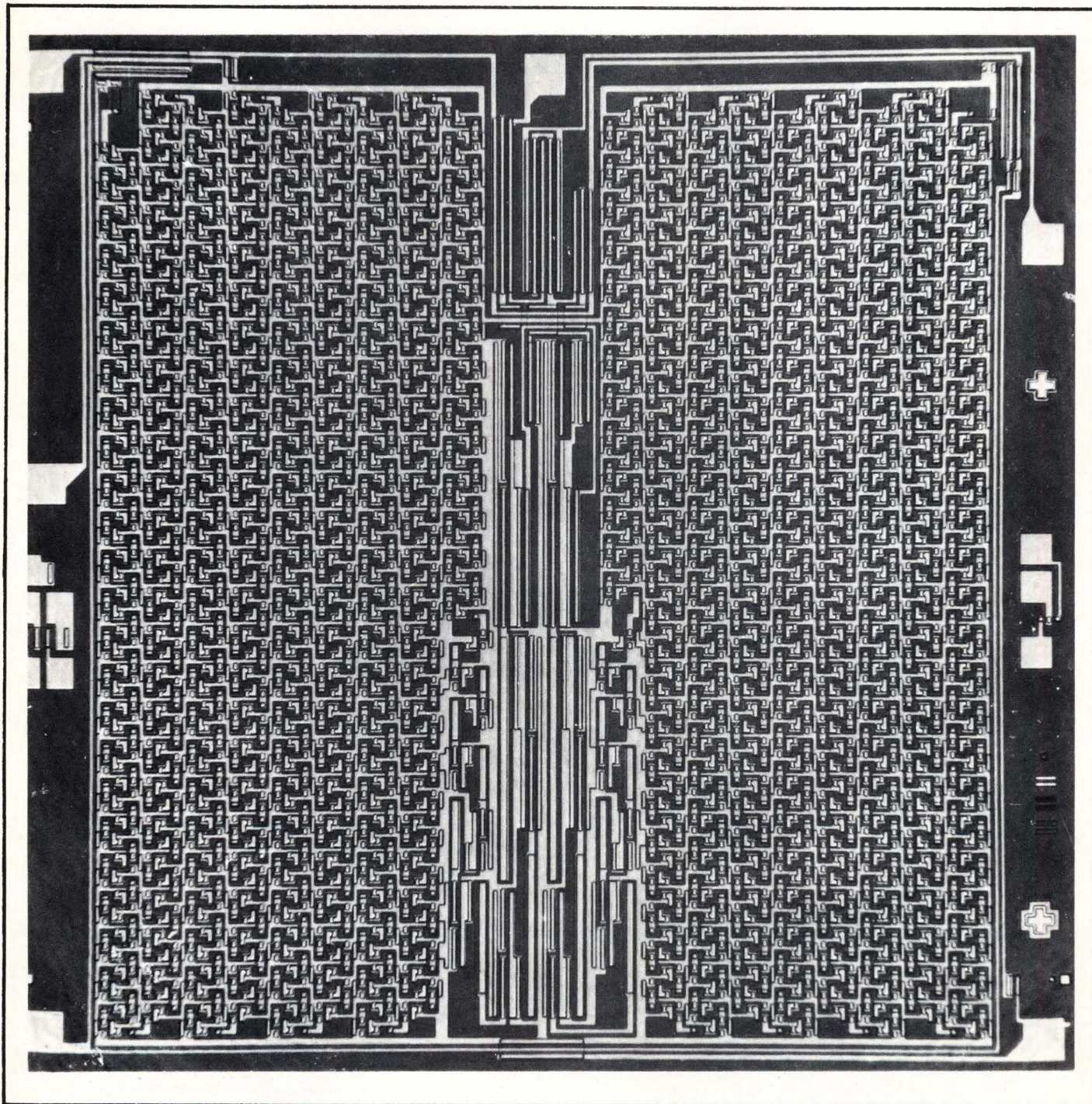
INTERNATIONAL ELECTRONIC RESEARCH CORPORATION  A corporate division of Dynamics Corporation of America • 135 West Magnolia Blvd. • Burbank, Calif. 91502

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STANDARD PRODUCTS

MOS LARGE SCALE INTEGRATION



426-BIT REGISTER

AMERICAN MICRO-SYSTEMS, INC.

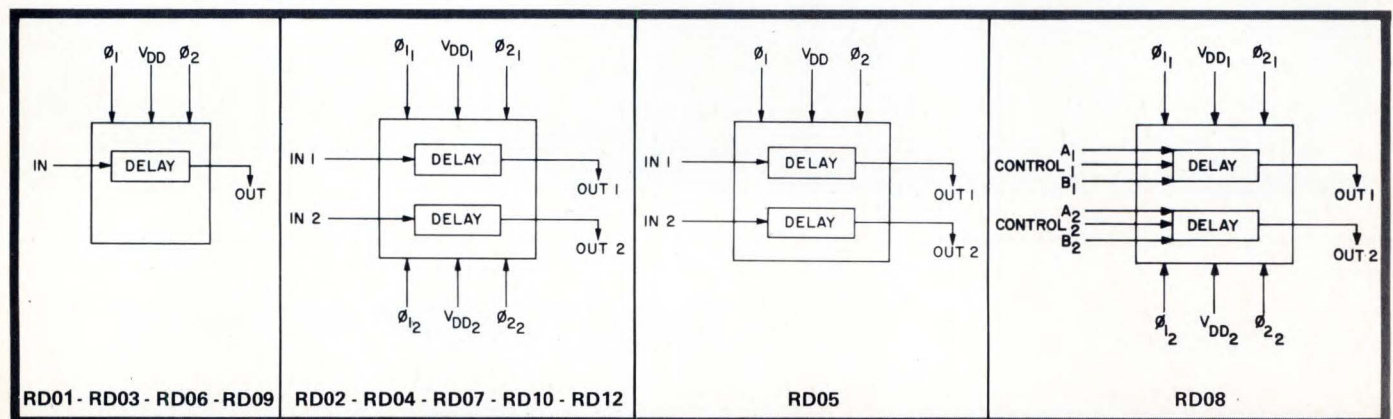
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DYNAMIC SHIFT REGISTERS

AMI's Dynamic Shift Register family consists of a series of compatible Ultra-Thick Oxide (UTO) large scale integrated MOS arrays. Registers are available in single or dual versions and may be used individually or combined into longer registers. These elements feature two-phase logic for selective variation of power vs. speed, zener diode gate protection, and precharge buffers for driving larger capacitive loads.

Part No.	Circuit	Package (Leads)	Description
RD01B	Single 20-Bit Shift Register	TO-5 (6)	Registers shift and recirculate at a rate of 1 MHz. Clock capacitive load is typically 10 pF. A worst-case noise immunity of 1 V is guaranteed.
RD02C	Dual 20-Bit Shift Register	Flatpack (22)	
RD03B	Single 50-Bit Shift Register	TO-5 (6)	Registers shift and recirculate information at a rate of 1 MHz. Clock capacitive loading is typically 13 pF. A worst-case noise immunity of 1 V is guaranteed.
RD04F	Dual 50-Bit Shift Register	TO-5 (12)	
RD04C	Dual 50-Bit Shift Register	Flatpack (22)	
RD05G	Dual 50-Bit Shift Register	TO-5 (10)	These registers, which are equivalent to the PL5R100 series, shift and recirculate information at 1 MHz. The output is a standard MOS inverter with the pull-up clocked at phase 2 time. Precharge buffers are not provided on these registers.
RD05D	Dual 50-Bit Shift Register	Flatpack (14)	
RD06B	Single 50-Bit Shift Register	TO-5 (6)	Registers shift and recirculate information at a rate of 5 MHz. Clock capacitive loading is typically 13 pF. A worst-case noise immunity of 1 V is guaranteed.
RD07C	Dual 50-Bit Shift Register	Flatpack (22)	
RD07F	Dual 50-Bit Shift Register	TO-5 (12)	
RD08F	Dual 50-Bit Shift Register	TO-5 (12)	These registers contain internal circuits to provide stream select capability on a 5 MHz register similar to RD07. A worst-case noise immunity of 1 V is guaranteed.
RD08D	Dual 50-Bit Shift Register	Flatpack (14)	
RD09B	Single 50-Bit Shift Register	TO-5 (6)	These registers shift and recirculate information at a rate of 10 MHz. Clock capacitive loading is typically 13 pF.
RD10F	Dual 50-Bit Shift Register	TO-5 (12)	
RD10C	Dual 50-Bit Shift Register	Flatpack (22)	
RD12C	Dual 50-Bit Shift Register	Flatpack (22)	These 1 MHz shift registers are designed for direct DTL/TTL compatibility and operate with a power supply of +5 V and clock of -5 V. A worst-case noise immunity of 0.7 V is guaranteed.
RD12D	Dual 50-Bit Shift Register	TO-5 (12)	



Circle No. 17 on Reader Service Card for more information.

ULTRA-LOGIC BREADBOARDING ELEMENTS

The Ultra-Logic family consists of devices that are specially designed for breadboarding complex MOS circuits. These elements offer a unique concept in MOS LSI. Once a breadboard of ultra-logic elements has been proved, the circuit design can be run through AMI's process to provide an MOS LSI of that design.

Part No.	Circuit	Package (Leads)	Description
UL02C	Quad NAND Gate	Flatpack (22)	The UL02C element is a quad two-input gate, the UL03C provides gate expander transistors and inverters, and the UL04C combines logic and storage. These elements feature two-phase logic and zener diode protection. Functions include 1-bit delays, binary counters (T Flip-Flop), J-K/Clear or Load Flip-Flops, RS Flip-Flops with R override and clear, sample and hold, AB comparator, 2 stream select gates, 2 to 5-input NOR-gates, 2-input AND-gate, 1 to 8-channel or dual 1 to 4-channel analog switches, quad inverter and precharge to level conversion.
UL03C	Expandable Gate Array	Flatpack (22)	
UL04C	Gating & Storage Element	Flatpack (22)	

LOW POWER LOGIC

The Low-Power Logic family consists of compatible, highly reliable P-channel MOS integrated circuits. Power dissipation on the chip in logic application from $< 0.1 \mu\text{W}$ to 15 mW; 0.1 mW is typical for a NOR-gate operating at 15 V with a 100 k Ω load resistance. High temperature (125°C) positive gate bias (+15 V) stress testing is available. Zener diode protection is provided for all gate inputs.

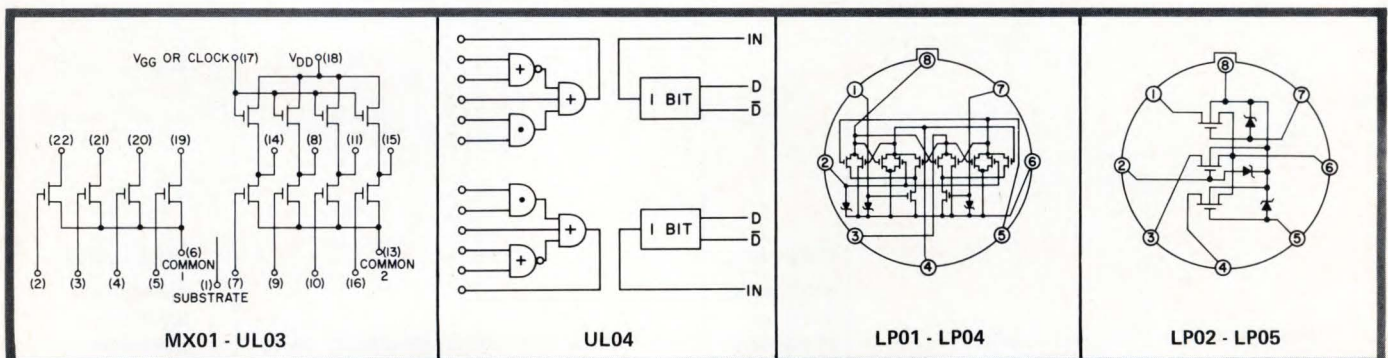
Part No.	Circuit	Package (Leads)	Description
LP01A* LP04A	Binary Element	TO-5 (8)	This element has a single direct-coupling binary stage for use with 4 external load resistors for user selection of power dissipation. Two push-pull inputs are used, and the true and complement outputs are available externally. A separate input is provided to reset the binary.
LP02A* LP05A	3-Input NOR-Gate	TO-5 (8)	This pair of gates has 3 MOS transistors connected in parallel with a common source, separate drain and all gate terminals available externally. External resistors are used to form a 3-input NOR-gate, a differential amplifier stage and a 1, 2, or 3-stage dc or ac amplifier.
LP03A* LP06A	3-Input NAND-Gate	TO-5 (8)	This pair of gates has 3 MOS transistors connected in series with all drain, source and gate terminals available externally. External resistors are used to form a 3-input NAND-gate, a 3-input NOR-gate, a differential stage and a 1 or 2-stage dc or ac amplifier.

*Hi-Rel Versions

12-BIT SERIAL-TO-PARALLEL CONVERTER

This device is a useful tool for many complex systems applications and, as a complement to the Ultra-Logic Line, it offers a register stage that will store data indefinitely when the clocks are in the proper state. This element converts serial data to 12-bit parallel output and may be used as a 12-channel commutator or a D/A converter ladder driver.

Part No.	Circuit	Package (Leads)	Description
SP01C	12-bit Serial/Parallel Converter	Flatpack (22)	This converter operates at frequencies up to 2 MHz. Zener diode gate protection is featured on all inputs. A worst-case noise immunity of 1 V is guaranteed. Typical ON impedance of the output switches is 1 k Ω .



Circle No. 18 on Reader Service Card for more information.

MULTIPLEXERS

The Multiplexer family consists of MOS devices with a wide range of applications. Each of these will switch 10 mA when the gate drive voltage is -20 V. Zener diode gate protection is featured on all inputs. These diodes are returned to the body to prevent extraneous currents in switching applications.

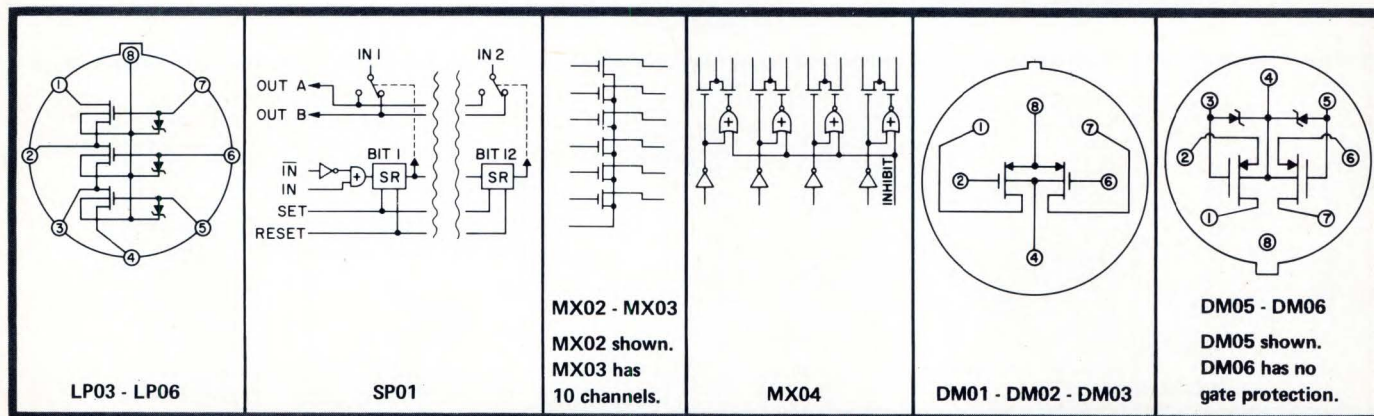
Part No.	Circuit	Package (Leads)	Description
MX01C	4-Channel Gate	Flatpack (22)	This device consists of a 4-channel MOS multiplexer and 4 inverters with MOS load resistors. Applications for this circuit include dc and dynamic inverters and analog switches, time division multiplexers and choppers.
MX02D	6-Channel Gate	Flatpack (14)	Each of the 6 MOS transistors in this device has dual gate and drain input. Applications for this circuit include analog multiplexing, time division multiplexing and chopping. It can be used for MOS interfacing, lamp drivers and, by paralleling inputs, as a single transistor with a large transconductance.
MX03C	10-Channel Gate	Flatpack (22)	Each of the 10 MOS transistors in this device has dual gate and drain input. Applications for this circuit include analog multiplexing, time division multiplexing and chopping. It can be used for MOS interfacing, lamp drivers and, by paralleling inputs, as a single transistor with a large transconductance.
MX04C	4-Channel Switch	Flatpack (22)	This switch has 4 separate switching circuits which can be used independently as series shunt chopper switches, as voltage multiplexer switches, or as current multiplexer switches at the input of an operational amplifier. A common inhibit line is provided to disable one side of all switches simultaneously.

MOS FIELD EFFECT TRANSISTORS

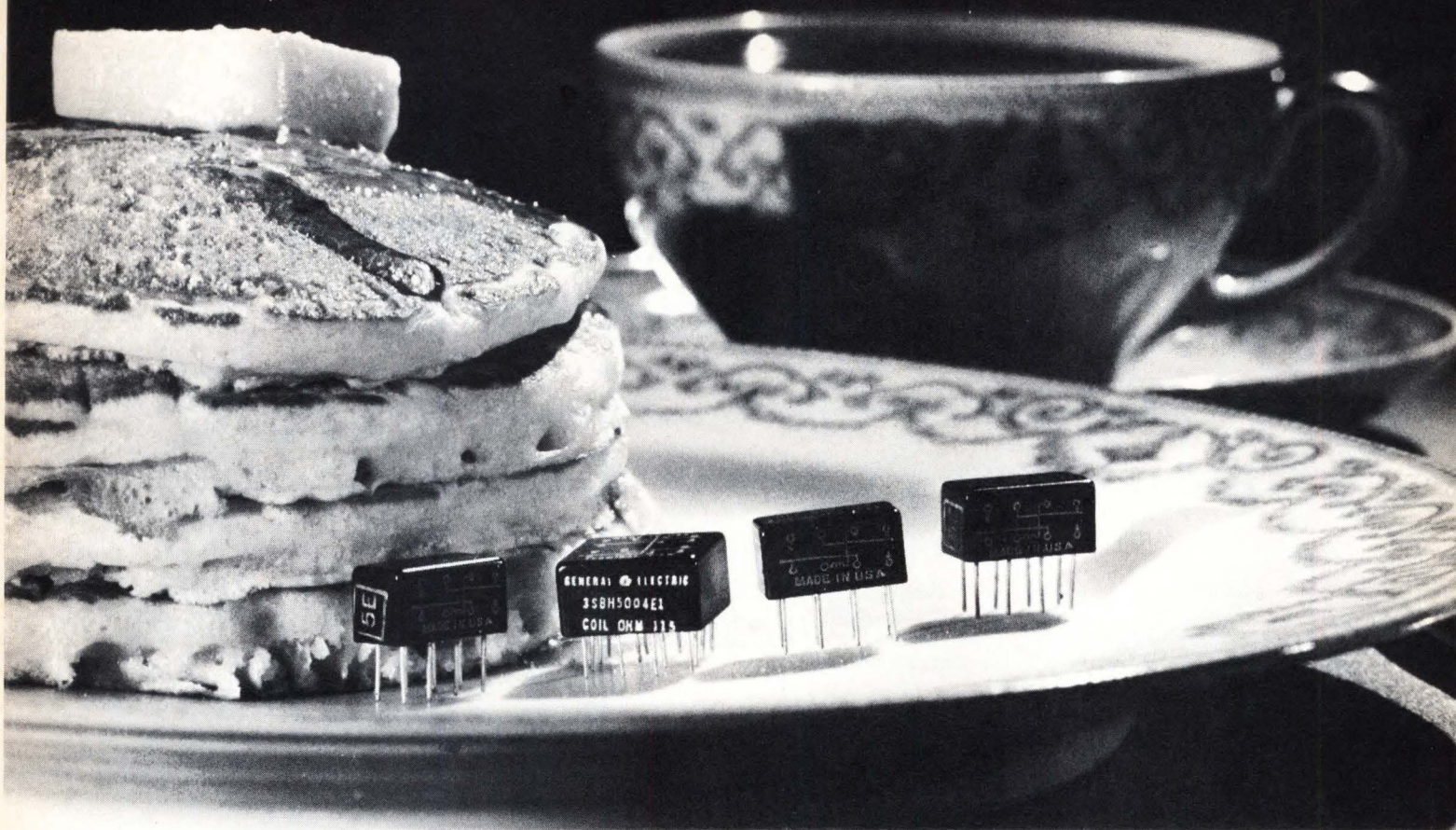
This family consists of Dual Matched transistors and medium conductance discrete transistors.

Part No.	Circuit	Package (Leads)	Description
DM01B	Dual Matched < 50 mV V _{GST}	TO-5 (6)	Each of these devices has 2 MOS transistors with closely matched threshold voltages, transconductances and ON resistances and offers impedances as high as 10 ¹⁸ Ω. Applications include electrometer input stages, high impedance operational amplifiers, analog switches and buffer devices for digital MOS circuits.
DM02B	Dual Matched < 100 mV V _{GST}	TO-5 (6)	
DM03B	Dual Matched < 150 mV V _{GST}	TO-5 (6)	
This discrete family features high figure of merit:			
DM05N	Dual Discrete	TO-77 (8)	Y _{fs} / C _{iss} = 1230 μmhos/pF Low capacitance: Dual—C _{iss} = 2.2 pF, C _{rss} = 0.30 pF Single—C _{iss} = 4.4 pF, C _{rss} = 0.60 pF
DM06N	Dual Discrete	TO-77 (8)	High Y _{fs} : Dual—2700 μmhos Single—5400 μmhos
DD07P	Single Discrete	TO-72 (4)	Excellent capacitance match: ΔC _{iss} = 0.02 pF Narrow turn on range: V _T = −3.5 to −5.5 V
DD08P	Single Discrete	TO-72 (4)	Excellent V _T match: ΔV _T = 50 mV DM05N and DD07P have a protective diode while DM06N and DD08P do not

DM05N and DD07P have a protective diode while DM06N and DD08P do not.



Circle No. 19 on Reader Service Card for more information.



Flat as a pancake... and selling like hotcakes

And why not?

General Electric's new high performance 150-grid sealed relays are smallest where it counts most—only 0.320" high. What's more they come in 4 versions: 4 Form C, 2 Form C, 4 Form C AND-logic type, and a 50 milliwatt sensitivity 1 Form C (or 1A+1B).

Result: for the first time you can get really small size, a variety of forms to choose from, and exceptional performance all in one relay type.

These General Electric 150-grid space relays meet or exceed the environmental and mechanical specs of much larger Mil Spec micro-miniature relays. And compared to relays of comparable size, GE 150-grid space relays have 3 times the magnetic force and over twice the contact force of the nearest competitor.

Outstanding features include:

- High vibration capability
- Excellent minimum current switching ability
- Excellent thermal resistance
- High overload capability—can withstand 5 amps each contact and make and carry 10 amps for short periods
- No flux contamination because of all-welded construction and design.

For more information on the small relay that's going over big, contact your General Electric Electronic Components Sales Engineer. He can tell you more about them and help with your individual application. Or write for bulletin GEA-8042B, Section 792-41, General Electric Company, Schenectady, New York 12305.

Specialty Control Department, Waynesboro, Virginia

GENERAL  **ELECTRIC**

Circle No. 20 on Reader Service
Card for more information.

1968 SEMICONDUCTOR MANUFACTURERS

To locate specific semiconductor products of a manufacturer, first find company name at the left side of chart. Dots are placed in line following manufacturer under product of the company.

Shading over a manufacturer's product line indicates that an advertisement has been placed in the publication. Referring to the advertisers' index allows additional information to be obtained regarding a manufacturer's products.

MANUFACTURERS' ABBREVIATIONS

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MANUFACTURERS' ABBREVIATIONS

TRANSISTORS

GERMANIUM					SILICON					SPECIAL				
SMALL-SIGNAL	COMPUTER	HIGH-FREQUENCY	POWER	CONSUMER	INDUSTRIAL	SMALL-SIGNAL	COMPUTER	HIGH-FREQUENCY	POWER	CONSUMER	INDUSTRIAL	BILATERAL	CHOPPER	FIELD-EFFECT
														JUNCTION
														MOS
														MATCHED
														UNIUNCTION

AMC	ALPHA MICROELECTRONICS CO., INC., 10307 Kensington Pkwy., Kensington, Md. 20705
AmI	AMELCO SEMICONDUCTOR, Box 1030, Mountain View, Calif. 94040
AEL	AMERICAN ELECTRONIC LABS., INC., Box 552, Lansdale, Pa. 19446
AMD	AMERICAN MICRO DEVICES, INC., Standard Rectifier Div., Box 5415, Santa Ana, Calif.
AMI	AMERICAN MICRO-SYSTEMS, INC., 3800 Homestead Rd., Santa Clara, Calif. 95051
ASC	AMERICAN SEMICONDUCTOR CORP., 4 N. Hickory Ave., Arlington Heights, Ill. 60004
AmP	AMPEREX ELECTRONIC CORP., Providence Pike, Slatersville, R.I. 02876
AIE	ATLANTIC INSTRUMENTS & ELECTRONICS, INC., 50 Hunt St., Watertown, Mass. 02172
AS	ATLANTIC SEMICONDUCTOR, INC., 905 Mattison Ave., Asbury Park, N.J. 07712
Bel	BELL, F. W., INC., 1356 Norton Ave., Columbus, Ohio 43212
Bnx	BENDIX CORP., Bendix Semiconductor Div., South St., Holmdel, N.J. 07733
Brd	BRADLEY SEMICONDUCTOR CORP., 275 Welton St., New Haven, Conn. 06506
BRC	BUNKER-RAMO CORP., 8433 Fallbrook Ave., Canoga Park, Calif. 91304
Bur	BURROUGHS CORP., Electronic Components Div., Box 1226, Plainfield, N.J. 07061
CTS	CTS MICROELECTRONICS, INC., 1201 Cumberland Ave., West Lafayette, Ind. 47906
Gen	CENTRALAB, Div. Globe-Union, Inc., 5751 N. Green Bay Ave., Milwaukee, Wis. 53201*
CT	CIRCUIT TECHNOLOGY, INC., 160 Smith St., Farmingdale, N.Y. 11735
Clx	CLAIREX ELECTRONICS, INC., 1239 Broadway, New York, N.Y. 10001
Col	COLLINS RADIO CO., 19700 Jamboree Rd., Newport Beach, Calif. 92663
CCC	COLUMBIA COMPONENTS CORP., 60 Madison Ave., Hempstead, N.Y. 11550
CmD	COMPUTER DIODE CORP., Pollitt Dr. S., Fair Lawn, N.J. 07410
CC	CONRAC CORP., 1600 S. Mountain Ave., Duarte, Calif. 91010
Con	CONTINENTAL DEVICE CORP., 12515 Chadron Ave., Hawthorne, Calif. 90250
Crs	CRYSTALONICS, A Teledyne Co., 147 Sherman St., Cambridge, Mass. 02140
Dlc	DELCO RADIO, Div. General Motors Corp., 700 E. Firmin St., Kokomo, Ind. 46901
Dit	DELTA SEMICONDUCTORS, 225 Paularino Ave., Costa Mesa, Calif. 92626
Dks	DICKSON ELECTRONICS CORP., Box 1387, Scottsdale, Ariz. 85251
DI	DIODES, INC., 20235 Nordhoff St., Chatsworth, Calif. 91311
EGG	EG&G, INC., Electronic Products Div., 160 Brookline Ave., Boston, Mass. 02215
EDS	EASTERN DELTA CORP. 29-09 Broadway, Fair Lawn, N.J. 07410
EC	EASTRON CORP., 25 Locust St., Haverhill, Mass. 01830
EI	EDAL INDUSTRIES, INC., 4 Short Beach Rd., East Haven, Conn. 06512
ENL	ELECTRO-NUCLEAR LABS., INC., 115 Independence Dr., Menlo Park, Calif. 94025
EA	ELECTRONIC ARRAYS, INC., 1269 Terra Bella Ave., Mountain View, Calif. 94040
ECom	ELECTRONIC COMPONENTS, Div. United Aircraft Corp., Trevose, Pa. 19047

*Centralab acquired the Semiconductor Div. of Hoffman Electronics Corp. on May 1, 1967.

Key to Other Special Devices (Far Right Column)

- A** Arc suppressors, transient controls
- B** Capacitors, voltage variable
- C** Codistors
- D** Detectors, Radiators
- E** Diodes, back
- F** Diodes, beam lead
- G** Diodes, hot carrier
- H** Diodes, laser

- I** Diodes, light-emitting
- J** Diodes, mixer
- K** Diodes, paramp
- L** Diodes, pin
- M** Diodes, step recovery
- N** Hall-effect devices
- O** Isolators, optoelectronic
- P** Networks, passive
- Q** Noise generators

- | | |
|----------|-----------------------------|
| R | Photochoppers |
| S | Pulsers |
| T | Rectifiers, tunnel |
| U | Resistors, magneto |
| V | Resistors, photocontrolled |
| W | Sensors, strain or pressure |
| X | Switches, microwave |
| Y | Thermometers, cryogenic |
| Z | Ultraviolet photodiodes |

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(Continued)

Semiconductor Manufacturers (Cont'd)

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MANUFACTURERS' ABBREVIATIONS

Semiconductor Manufacturers (Cont'd)		TRANSISTORS																
		GERMANIUM					SILICON					SPECIAL						
		SMALL-SIGNAL	COMPUTER	HIGH-FREQUENCY	POWER	CONSUMER	INDUSTRIAL	SMALL-SIGNAL	COMPUTER	HIGH-FREQUENCY	POWER	CONSUMER	INDUSTRIAL	BILATERAL	CHOPPER	FIELD-EFFECT		UNIJUNCTION
																JUNCTION	MOS	
EIC	ELECTRONIC CONTROL CORP., 1010 Pamela Dr., Euless, Tex. 76039																	
ED	ELECTRONIC DEVICES, INC., 21 Gray Oaks Ave., Yonkers, N.Y. 10710																	
ETC	ELECTRONIC TRANSISTORS CORP., 153-13 Northern Blvd., Flushing, N.Y. 11354	●	●	●	●	●	●	●	●	●	●	●	●					●
ECD	ENERGY CONVERSION DEVICES, INC., 1675 W. Maple Rd., Troy, Mich. 48048																	
Eri	ERIE TECHNOLOGICAL PRODUCTS, INC., 644 W. 12th St., Erie, Pa. 19013																	
Esp	ESPEY MFG. & ELECTRONICS CORP., Box 422, Saratoga Springs, N.Y. 12866																	
Fch	FAIRCHILD SEMICONDUCTOR, 313 Fairchild Dr., Mountain View, Calif. 94040						●	●	●	●	●	●			●	●		
FWE	FAR WEST ELECTRONICS, INC., 2815 La Cienega Ave., Los Angeles, Calif. 90034																	
GE	GENERAL ELECTRIC CO., Electronics Pk., Bldg. 7, Rm. 203, Syracuse, N.Y. 13201	●	●			●	●	●	●	●	●	●	●	●			●	●
GI	GENERAL INSTRUMENT CORP., Semiconductor Prod. Group, Box 600, Hicksville, N.Y.	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●
GSI	GENERAL SEMICONDUCTORS, INC., 230 W. Fifth St., Tempe, Ariz. 85281																	
GS	GENERAL SENSORS, INC., Box 231, Athens, Tex. 75751																	
GRC	GREEN RECTIFIER CORP., 1-10 30th St., Fair Lawn, N.J. 07410																	
HAL	HALEX, INC., 3500 W. Torrance Blvd., Torrance, Calif. 90501																	
Hel	HELIOTEK, A Textron Co., 12500 Gladstone Ave., Sylmar, Calif. 91342																	
HD	HELIPOT, Div. Beckman Instruments, 2500 Harbor Blvd., Fullerton, Calif.																	
HP	HEWLETT-PACKARD, 1501 Page Mill Rd., Palo Alto, Calif. 94304																	
Hgh	HUGHES SEMICONDUCTORS, 500 Superior Ave., Newport Beach, Calif. 92663	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●
IRC	IRC, Div. of TRW, Inc., 401 N. Broad St., Philadelphia, Pa. 19108																	
ITT	ITT SEMICONDUCTORS, 3301 Electronics Way, West Palm Beach, Fla. 33402							●	●	●	●	●	●					●
Ind	INDUSTRO TRANSISTOR CORP., 35-10 36th Ave., Long Island City, N.Y. 11106	●	●	●	●	●	●	●	●	●	●	●	●					●
II	INFRARED INDUSTRIES, INC., Photoconductor Div., Box 42, Waltham, Mass. 02154																	
ISC	INSTRUMENT SYSTEMS CORP., Magnetics Div., 770 Park Ave., Huntington, N.Y. 11743																	
Int	INTELLUX, INC., 26 Coromar Dr., Goleta, Calif. 93017																	
IDC	INTERNATIONAL DIODE CORP., 90 Forrest St., Jersey City, N.J. 07304	●	●		●	●	●	●		●	●	●						
IRec	INTERNATIONAL RECTIFIER, 233 Kansas St., El Segundo, Calif. 90245																	
Inc	INTERSIL, INC., 10900 N. Tantau Ave., Cupertino, Calif. 95014						●	●	●						●			
Iso	ISOFILM INTERNATIONAL, 20131 Bahama St., Chatsworth, Calif. 91311																	
JE	JAMES ELECTRONICS, INC., 4050 N. Rockwell St., Chicago, Ill. 60618																	
JRL	JULIE RESEARCH LABS., 211 W. 61st St., New York, N.Y. 10023																	
KMC	KMC SEMICONDUCTOR CORP., Parker Rd., R.F.D. 2, Long Valley, N.J. 07853						●		●			●					●	
KSC	KSC SEMICONDUCTOR CORP., 437 Cherry St., West Newton, Mass., 02165				●													
Kmt	KEMTRON ELECTRON PRODUCTS, INC., 14 Price Pl., Newburyport, Mass. 01950																	
LPM	LA POINTE MICROELECTRONICS, 18225 Euclid Ave., Fountain Valley, Calif. 92708																	
Lns	LANSDALE TRANSISTOR & ELECTRONICS CORP., 1111 N. Broad St., Lansdale, Pa.	●	●	●	●	●	●	●	●			●						
Led	LEDEX DIV., Ledex, Inc., 123 Webster St., Dayton, Ohio 45402																	
MSI	MSI ELECTRONICS, INC., 34-32 57th St., Woodside, N.Y. 11377																	
MRL	MacKAY RESEARCH LABS., P.O. Drawer GGG, Wickenburg, Ariz. 85358																	
Mal	MALLORY, P. R., & CO., INC., 3920 E. Washington St., Indianapolis, Ind. 46206																	
Meg	MEGADYNE INDUSTRIES, INC., 1665 Buffalo Rd., Rochester N.Y. 14624																	
MI	MEPCO, INC., Columbia Rd., Morristown, N.J. 07960																	
MO	MICRO OPTICS, Div. Alpha Industries, Inc., 381 Elliot St., Newton Upper Falls, Mass.																	
Msm	MICROSEMICONDUCTOR CORP., 11250 Playa Ct., Culver City, Calif. 90230																	
Mcw	MICROWAVE ASSOC., INC., Northwest Industrial Park, Burlington, Mass. 01803																	
Mon	MONSANTO CO., 800 N. Lindbergh Blvd., St. Louis, Mo. 63166																	
Mot	MOTOROLA SEMICONDUCTOR PRODUCTS, INC., 5005 E. McDowell Rd., Phoenix, Ariz.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NPC	NPC SEMICONDUCTOR DIV., Nucleonic Products 3133 E. 12th St., Los Angeles, Calif.	●	●			●		●	●	●		●	●	●			●	●

		DIODES										RECTIFIERS				THYRISTORS				SEMICONDUCTOR CIRCUITS				PHOTOSENSORS				
		GERMANIUM		SILICON		OTHER																						
																</												

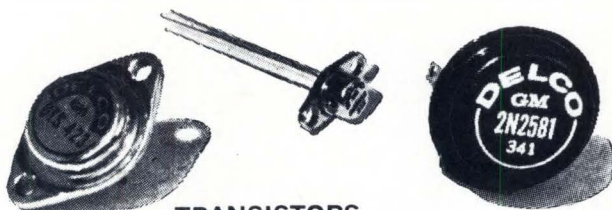
(Continued)

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NE	NATIONAL ELECTRONIC ASSOCIATION, Sub. Varian Assoc., Box 269, Geneva, Ill. 60134
NS	NATIONAL SEMICONDUCTOR CORP., 2950 San Ysidro Way, Santa Clara, Calif. 95051
Nuc	NUCLEAR SEMICONDUCTOR, INC., 537 Old County Rd., San Carlos, Calif. 94070
Phl	PHILCO-FORD CORP., Microelectronics Div., 2920 San Ysidro Way, Santa Clara, Calif.
PE	PIONEER ELECTRIC & RESEARCH CORP., 713 Circle Ave., Forest Park, Ill. 60130
PC	POWER COMPONENTS, INC., Box 421, Scottsdale, Pa. 15683
PSI	POWER SEMICONDUCTORS, INC., 90 Munson St., Devon, Conn. 06460
RI	RADIATION, INC., Microelectronics Div., Box 37, Melbourne, Fla. 32901
RCA	RADIO CORP. OF AMERICA, RCA Electronic Components, 415 S. Fifth St., Harrison, N.J.
Ray	RAYTHEON CO., Semiconductor Div., 350 Ellis St., Mountain View, Calif. 94040
Rct	RECTICO, INC., 20 Village Park Rd., Cedar Grove, N.J. 07009
SM	SANFORD MILLER CORP., 89 Throop Ave., Brooklyn, N.Y. 11206
ST	SARKES TARZIAN, INC., 415 N. College Ave., Bloomington, Ind. 61701
Shr	SCHAUER MFG. CORP., 4500-4 Alpine Ave., Cincinnati, Ohio 45242
Smcr	SEMCOR, Div. Components, Inc., 3540 W. Osborn Rd., Phoenix, Ariz. 85019
Smi	SEMI-ELEMENTS, INC., Saxonburg Blvd., Saxonburg, Pa. 16056
Smc	SEMICON, INC., Box 328, Bedford, Mass. 01730
SD	SEMICONDUCTOR DEVICES, INC., 1353 E. Edinger, Santa Ana, Calif. 92705
Smt	SEMTECH CORP., 652 Mitchell Rd., Newbury Park, Calif. 91320
Sgn	SIGNETICS CORP., 811 E. Argues Ave., Sunnyvale, Calif. 94086
STC	SILICON TRANSISTOR CORP., East Gate Blvd., Garden City, N.Y. 11532
Scx	SILICONIX, INC., 1140 W. Evelyn, Sunnyvale, Calif. 94086
Slt	SLATER ELECTRIC, INC., 45 Sea Cliff Ave., Glen Cove, N.Y. 11542
Slr	SOLAR SYSTEMS, Div. Tyco, 8241 N. Kimball Ave., Skokie, Ill. 60076
SSE	SOLID STATE ELECTRONICS CORP., 15321 Rayen St., Sepulveda, Calif. 91343
SSP	SOLID STATE PRODUCTS, INC., 1 Pingree St., Salem, Mass. 01970
SSS	SOLID STATE SCIENTIFIC CORP., Montgomeryville, Pa. 18936
Sol	SOLITRON DEVICES, INC., 256 Oak Tree Rd., Tappan, N.Y. 10983
Spg	SPRAGUE ELECTRIC CO., 491 Marshall St., North Adams, Mass. 01247
SWM	STEWART-WARNER MICRO CIRCUITS, INC., 730 E. Evelyn Ave., Sunnyvale, Calif. 94686
SL	STOW LABS., INC., Stow, Mass. 01775
Syl	SYLVANIA ELECTRIC PRODUCTS, INC., 100 Sylvan Rd., Woburn, Mass. 01801
Syn	SYNTRON CO., 439 Lexington Ave., Homer City, Pa. 15748
TRW	TRW SEMICONDUCTORS, 14520 S. Aviation Blvd., Lawndale, Calif. 90260
TI	TEXAS INSTRUMENTS INCORPORATED, Box 5012, Dallas, Tex. 75222
Tns	TRANSITRON ELECTRONIC CORP., 168-182 Albion St., Wakefield, Mass. 01881
TL	TRIO LABS, INC., 80 Dupont St., Plainview, N.Y. 11803
UC	UNION CARBIDE ELECTRONICS, 365 Middlefield Rd., Mountain View, Calif. 94040
UDT	UNITED DETECTOR TECHNOLOGY Box 5251, Santa Monica, Calif. 90405
Unt	UNITRODE CORP., 580 Pleasant St., Watertown, Mass. 02172
VI	VACTEC, INC., 2423 Northline Industrial Blvd., Maryland Heights, Mo. 63042
VA	VARIAN ASSOC., Bomac Div., 8 Salem Rd., Beverly, Mass. 01915
Var	VARO, INC., Special Products Div., 2203 Walnut St., Garland, Tex. 75040
Wag	WAGNER ELECTRIC CORP., Tung-Sol Div., 1 Summer Ave., Newark, N.J. 07104
Wsn	WESTERN SEMICONDUCTOR, INC., 2200 S. Fairview St., Santa Ana, Calif. 92704
Wst	WESTINGHOUSE ELECTRIC CORP., Box 2278, Pittsburgh, Pa. 15222

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The Kokomoans'



TRANSISTORS

Type	Ic	Vcbo	Vceo	hFE @ Ic Amps	Vce(sat) @ Ic Volts @ Amps
NPN SILICON TO-36, HIGH VOLTAGE					
2N2580	5	400	400	10/40 4 min	5 0.7 5.0
2N2580M†	5	400	400	10/40	5 0.7 5.0
2N2581	10	400	400	25/65 10 min	5 1.0 10.0
2N2582	5	500	500	10/40 4 min	5 0.7 5.0
2N2583	10	500	500	25/65 10 min	5 1.0 10.0
2N3079	10	200	200	10/50	5 .14Ω* 5.0
2N3080	10	300	300	10/50	5 .14Ω* 5.0

NPN SILICON TO-3, HIGH VOLTAGE

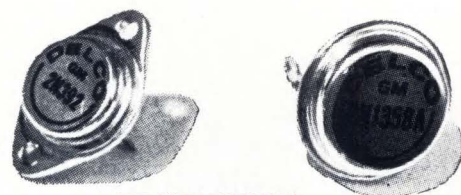
DTS-401	3.5	400	400	30/90	1.0 .8 1.0
DTS-402	3.5	400	400	30/90	1.0 .8 1.0
DTS-410	3.5	200	200	30/90	1.0 0.8 1.0
DTS-411	3.5	300	300	30/90	1.0 0.8 1.0
DTS-413	2.0	400	400	20/80	0.5 0.8 0.5
DTS-423	3.5	400	400	30/90	1.0 0.8 1.0
DTS-423M†	3.5	400	400	30/90	1.0 0.8 1.0
DTS-424	3.5	500	500	30/90	1.0 .8 1.0
DTS-425	3.5	500	500	30/90	1.0 .8 1.0
DTS-430	5	400	400	15/45	2.5 0.9 2.5
DTS-431	5	400	400	15/35	2.5 0.7 2.5
DTS-431M†	5	400	400	15/35	2.5 0.7 2.5
2N3902	3.5	400	400	20/100	1.0 .8 1.0
JAN 2N3902	3.5	700	400	30/90	1.0 .8 1.0
2N5157	3.5	700	500	30/90	1.0 .8 1.0
2N5241	5	400	400	15/35	2.5 0.7 2.5

NPN GERMANIUM TO-36 ALLOY BASE

2N173	15	60	45	35/70	5.0 1.0 12.0
2N174	15	80	55	25/50	5.0 0.9 12.0
JAN 2N174A	15	80	40	40/80	1.2 0.7 12.0
2N277	15	40	25	35/70	5.0 0.3 12.0
2N278	15	50	30	35/70	5.0 1.0 12.0
2N441	15	40	25	20/40	5.0 0.3 12.0
2N442	15	50	30	20/40	5.0 0.3 12.0
2N443	15	60	45	20/40	5.0 1.0 12.0
2N1099	15	80	55	35/70	5.0 0.7 12.0
2N1100	15	100	65	25/50	5.0 0.7 12.0
2N1358	15	80	40	40/80	1.2 0.7 12.0
2N1358A	15	100	60	25/50	5.0 0.7 12.0
JAN 2N1358	15	80	40	25/50	5.0 0.7 12.0
2N1412	15	100	65	25/50	5.0 0.7 12.0
JAN 2N1412A	15	100	70	25/50	5.0 0.6 12.0
2N1518	25	50	40	15/60	15 0.7 25
2N1519	25	80	60	15/60	15 0.7 25
2N1520	35	50	40	17/68	15 0.6 35
2N1521	35	80	60	17/68	15 0.6 35
2N1522	50	50	40	25/100	15 0.5 50
2N1523	50	80	60	25/100	15 0.5 50
2N1970	15	100	50	17/40	5.0 1.0 12.0
2N2075	15	80	65	20/40	5.0 0.7 12.0
2N2076	15	70	55	20/40	5.0 0.7 12.0
2N2077	15	50	45	20/40	5.0 0.9 12.0
2N2078	15	40	25	20/40	5.0 0.9 12.0
2N2079	15	80	65	35/70	5.0 0.7 12.0
2N2080	15	70	55	35/70	5.0 0.7 12.0
2N2081	15	50	45	35/70	5.0 0.9 12.0
2N2082	15	40	25	35/70	5.0 0.9 12.0
JAN 2N2210				use JAN 2N1412A	
2N2490	15	70	50	20/40	5.0 0.7 12.0
2N2491	15	60	40	35/70	5.0 0.7 12.0
2N2492	15	80	65	25/50	5.0 0.5 12.0
2N2493	15	100	75	25/50	5.0 0.5 12.0

NPN GERMANIUM TO-37 NU-BASE

2N3212	5	100	80	30/90	3.0 0.5 5.0
2N3213	5	80	60	30/90	3.0 0.5 5.0
2N3214	5	60	40	30/90	3.0 0.5 5.0
2N3215	5	40	30	25/100	3.0 0.5 5.0



TRANSISTORS

Type	Ic	Vcbo	Vceo	hFE @ Ic Amps	Vce(sat) @ Ic Volts @ Amps
PNP GERMANIUM TO-41 NU-BASE					
2N1073	10	40	40	20/60	5.0 0.6 5.0
2N1073A	10	80	80	20/60	5.0 0.6 5.0
2N1073B	10	120	120	20/60	5.0 0.6 5.0

PNP GERMANIUM TO-3 NU-BASE

2N5155	25	140	120	25/100	8.0 0.9 25.0
DTG-110A	25	110	70	50/300	1.0 0.5 5.0
DTG-110B	25	90	40	65/300	1.0 0.5 5.0
DTG-600	25	90	50	50/115	5.0 0.75 25
DTG-601	25	90	60	50/115	5.0 0.75 25
DTG-602	25	100	70	50/115	5.0 0.75 25
DTG-603	25	90	80	50/	5.0 0.75 25.0
DTG-603M†	25	90	80	50/	5.0 0.75 25.0
DTG-1200	15	120	120	20	8.0 0.5 12
DTG-1010	15	325	110	100	8.0 0.5 12
DTG-1110	15	200	80	7	0.5 10
DTG-2000	25	60	30	25	8.0 0.9 25
DTG-2100	25	80	60	25	8.0 0.9 25
DTG-2200	25	100	80	25	8.0 0.9 25
DTG-2300	25	120	100	25	8.0 0.9 25
DTG-2400	25	140	120	25	8.0 0.9 25
DTG-2400M†	25	140	120	25/125	10.0 0.9 25

PNP GERMANIUM TO-3 ALLOY BASE

2N255A	5	15	15	25	.450
2N301	3	40	32	62.5	.700
2N301A	3	60	32	62.5	.700
2N379	7	80	40	20/90	2.0 1.0 2.0
2N380	7	60	30	20/90	2.0 1.0 2.0
2N392	5	60	45	60/150	3.0 0.5 3.0
2N456A	7	40	20	30/90	5.0 0.5 5.0
2N456B	7	40	30	30/90	5.0 0.5 5.0
2N457A	7	60	30	30/90	5.0 0.5 5.0
2N457B	7	60	40	30/90	5.0 0.5 5.0
2N458A	7	80	40	30/90	5.0 0.5 5.0
2N458B	7	80	45	30/90	5.0 0.5 5.0
2N554	5	15	30	30	1.0
2N669	3	30	30	250	.500 0.4 3.0
2N1011	5	80	40	30/75	3.0 1.5 3.0
2N1021	7	100	50	30/90	5.0 0.5 5.0
2N1021A	7	100	50	30/90	5.0 0.5 5.0
2N1022	7	120	50	30/90	5.0 0.5 5.0
2N1022A	7	120	55	30/90	5.0 0.5 5.0
2N1159	5	80	60	30/75	3.0 1.0 3.0
2N1160	7	80	60	20/50	5.0 1.0 5.0
2N1168	5	50	30	60	.30 .25 3.0
2N1534	5	40	20	35/70	3.0 1.2 3.0
2N1535	5	60	30	35/70	3.0 1.2 3.0
2N1536	5	80	40	35/75	3.0 1.2 3.0
2N1539	5	25	20	50/100	3.0 0.3 .300
2N1540	5	40	30	50/100	3.0 0.3 .300
2N1541	5	55	40	50/100	3.0 0.3 .300
2N1542	5	65	50	50/100	3.0 0.3 .300
2N1543	5	80	60	50/100	3.0 0.3 .300
2N1544	5	25	20	75/150	3.0 0.2 .300
2N1545	5	40	30	75/150	3.0 0.2 .300
2N1546	5	55	40	75/150	3.0 0.2 .300
2N1547	5	65	50	75/150	3.0 0.2 .300
2N5156	10	100	60	25/60	5.0 1.0 10
DTG-110	7	40	40	74/250	1.0 5.0 2.0

① Vces ② Vcer ③ Power gain db ④ Max. ⑤ Typical
⑥ VceX ⑦ Vce Sus ⑧ @ 90° C-Ret = 100 ohm
⑨ VcbX *Rsat † Military Type Spec.

power is here.

SILICON POWER RECTIFIERS

TYPE	MAXIMUM AVERAGE CURRENT	P.R.V. AND MAXIMUM CONTINUOUS DC BLOCKING VOLTAGE	REVERSE CURRENT	FORWARD VOLTAGE DROP	REPETITIVE PEAK FORWARD CURRENT
AXIAL LEAD					
DRS102	1A	200V	200 μ A	0.9V	10A
DRS104	1A	400V	200 μ A	0.9V	10A
DRS106	1A	600V	200 μ A	0.9V	10A
DRS107	1A	700V	200 μ A	0.9V	10A
PRESS FIT					
IN3491	25A	50V	10 mA	0.7V	110A
IN3492	25A	100V	10 mA	0.7V	110A
IN3493	25A	200V	8 mA	0.7V	110A
STUD BASE					
IN3208	15A	50V	10 mA	1.5V	70A
IN3209	15A	100V	10 mA	1.5V	70A
IN3210	15A	200V	10 mA	1.5V	70A
DRS250	250A	800V	10 mA	.55V	4500A
DRS251	250A	1000V	10 mA	.55V	4500A
DRS252	250A	1200V	10 mA	.55V	4500A
DRS253	250A	1400V	10 mA	.55V	4500A
DRS254	250A	1600V	10 mA	.55V	4500A

All rectifiers available with reverse polarity (Anode connected to base). To order, add "R" to type number.

HEAT SINKS AND ACCESSORIES

PART NUMBER	OUT- LINE	DESCRIPTION	THERMAL RESIS. †	MAX. WIDTH	MAX. DEPTH	MAX. LENGTH
7270725	A	Single Punch, Universal Mount	2.3° C/watt	3.125"	1.370"	4.690"
7281352	A	Double Punched, Universal Mount	2.3° C/watt	3.125"	1.370"	4.690"
7270606	A	Unpunched, Unpainted	2.3° C/watt	3.125"	1.370"	4.690"
7300811	A	Double punched for 2 Press Fit Rectifiers	2.3° C/Watt	3.125"	1.370"	4.690"
7281361	B	Double Punched, Universal Mount	1.6° C/watt	3.125"	1.080"	6.135"
7281364	B	Unpunched, Unpainted	1.6° C/watt	3.125"	1.080"	6.135"
7281357	C	Punched for Diamond Base Only	5.0° C/watt	1.625"	1.330"	2.930"
7281360	C	Unpunched, Unpainted	5.0° C/watt	1.625"	1.330"	2.930"
7281351	D	Double Punched, Universal Mount	2.2° C/watt	3.125"	.750"	.750"
7281354	D	Unpunched, Unpainted	2.2° C/watt	3.125"	.750"	.750"
7281355	E	Double Punched, Universal Mount	2.2° C/watt	3.125"	1.330"	4.850"
7281353	E	Unpunched, Unpainted	2.2° C/watt	3.125"	1.330"	4.850"
7276040	E	Punched for Round Base Only	3.5° C/watt	1.531"	1.330"	4.850"
7277151	E	Punched for Diamond Base Only	3.5° C/watt	1.531"	1.330"	4.850"
7278482	E	Unpunched, Unpainted	3.5° C/watt	1.531"	1.330"	4.850"
7281366	F	Double Punched, Universal Mount	1.3° C/watt	3.125"	2.475"	4.850"
7281369	F	Unpunched, Unpainted	1.3° C/watt	3.125"	2.475"	4.850"
7269634	F	Insulating Spacer	Furnished with All Transistors and Rectifiers Purchased in Sample Quantities			
7274633	F	TO 36 (Round Base) Mtg. Kit				
7274775	F	TO 3 (Diamond Base) Mtg. Kit				
7276383	F	TO 4 (Min. Dia. Base) Mtg. Kit				
7276396	F	DO 5 (6 Rectifier) Mtg. Kit				
7305209	F	TO-41 (Diamond base) Mtg. Kit.				
7305210	F	TO-3 (Silicon) Mtg. Kit.				

†Typical value with length of fin positioned vertically.

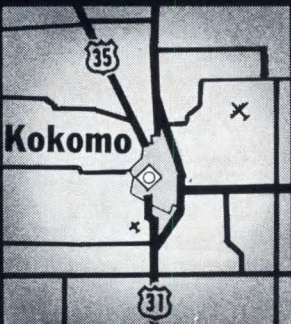
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DELCO RADIO
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KOKOMO, INDIANA

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Circle No. 22 on Reader Service Card for more information.

Sealing diodes, ICs, thick or thin film packages?

GTI can help you:

Seal 675 diodes in less than ten minutes with the DAP-500 infrared multispeed sealer. Leads, envelopes and dice are loaded in fifteen minutes; automatic sealing takes less than ten. Adaptable for soldering and brazing; handles glass kovar or ceramic.

Totally control entire sealing cycle when sealing "Flat-Packs" in the FP-VP-1 bench-type single head perimeter sealer. Designed especially for lab and pilot line work, it allows complete variation of all sealing parameters—atmosphere, heat and heat location, time at temperature and slope of heating and annealing curves.

Automatically seal 3, 5, or 10 "Flat-Packs" at once in FP-VP-103, 10 or 210 perimeter sealers. Cycling from 30 to 120 seconds, these production sealers load semi-automatically, insure perfect hermetic seals on glass, kovar or ceramic packages. Plug-in elements adapt sealers to different types and sizes. Sealing yields of 98% are possible when GTI Providence glass/ceramic packages are used.

Seal high reliability diodes semi-automatically in the DE618-5 (standard) and DE618-10 (vacuum) sealers with a seven stage timer for split second control of all sealing stages.

Completely control pre-bake and seal atmospheres. FP-DB-103 and 10 add hermetic dry boxes to the "Flat-Pack" sealers described above. DE618-55 adds a dry box to two DE618-5 sealers for producing up to 5,000 diodes per day with less than 10 ppm moisture.

Develop reliable procedures for your hermetic sealing process with the help of GTI packaging specialists. As suppliers of the Dix Division sealing equipment described, "Flat-Packs" for integrated circuits (Providence Division) and diode glassware and leads (Saegertown Components Division), GTI is uniquely qualified to assist you in all phases of your packaging operations.

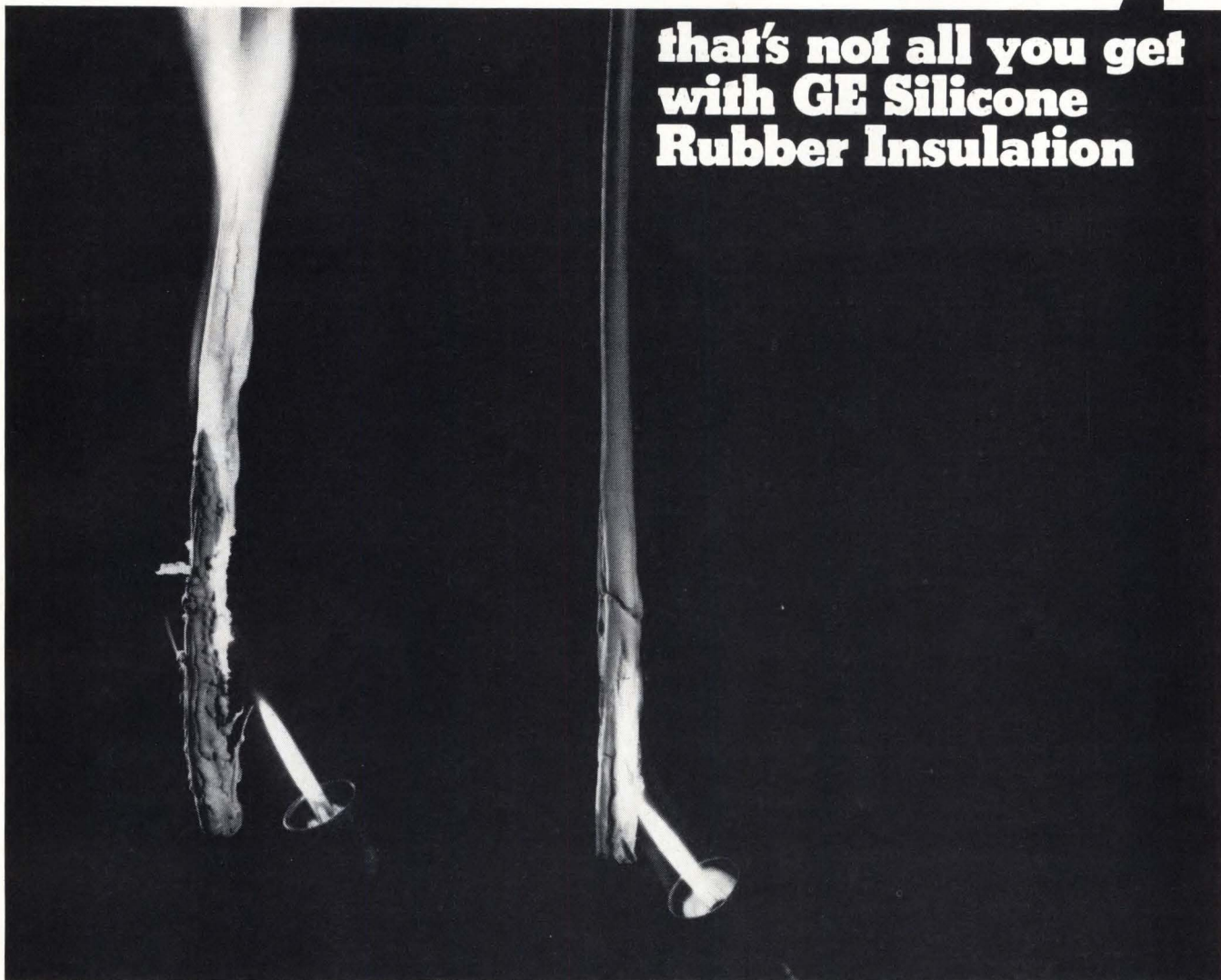
Find out more about sealing diodes, ICs, thick or thin film packages with our new Dix applications brochure. Just write for your free copy. GTI Corporation, 310 Chestnut Street, Meadville, Pa. 16335.



Circle No. 25 on Reader Service Card for more information.

Flame retardancy!

**that's not all you get
with GE Silicone
Rubber Insulation**



New ultra-tough SE-9090 braidless wire and cable insulation (right) doesn't support combustion like conventional insulation. It's shown here passing the UL vertical flame test. SE-9090 has both outstanding insulation resistance and dielectric strength.

The big news in silicone rubber this year is flame retardancy *plus* high physical strength.

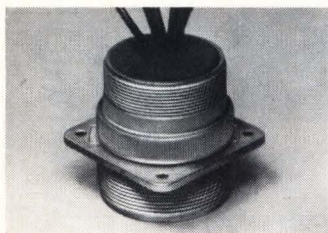
But don't overlook the other design advantages of GE silicones: radiation, ozone, corona, and fungus resistance ... reliable performance from -150°F to 600°F ... and the proved dependability of silicones for the most demanding dielectric requirements. Weigh them all and you'll find that GE silicones offer the best combination of desirable values in insulation.

Versatile silicones take many shapes and forms to adapt to your specific problems. For a new booklet illustrating electronic applications for GE silicones, write Section KK6294 General Electric Company, Waterford, N.Y. 12188.

GENERAL  ELECTRIC

Use GE flame-retardant silicones for...

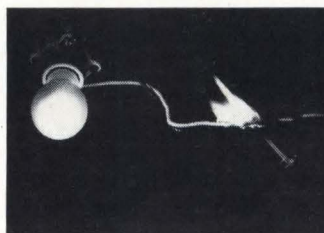
Potting applications



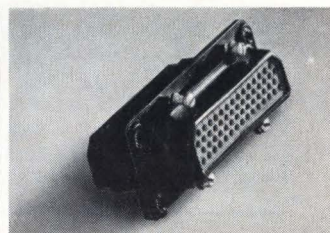
Conformal coatings



Wire & cable insulation



Fabricated parts



◀ Circle No. 26 on Reader Service Card for more information.

Circle No. 27 on Reader Service Card for more information.

TRANSISTORS

Transistors with EIA registered part numbers are listed in numerical order. Twelve service classifications, four performance ratings, construction and case type describe each device. Cross-references listing all transistors in order of ascending h_{fe} ,

high-frequency types in order of increasing frequency capability and high-power types in order of increasing power-handling ability follow the chart. Device manufacturers are listed following the cross-reference.

KEY

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	•	•	•	•	•	•	<1w	V_{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz	$f_{\alpha b}$ MHz	
		AUD	RF	OSC	LIN	SW	CHP			h_{FE}	(ma)		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V_{CB}	h_{fe}	(amp)	f_T MHz	MIL

TYPE
Number identifying the transistor.
Shading shows that transistor is PNP. Otherwise, it is NPN.

CST—Type of construction:
 Ad—Alloy-diffused
 Aj—Alloy junction
 An—Annular
 Dd—Double diffused
 Dr—Drift
 Dj—Diffused junction
 Ep—Epitaxial
 Fa—Fused alloy
 Fu—Fused
 Gb—Graded-base
 Gd—Grown diffused
 Gj—Grown junction
 Ma—Micro-alloy
 Md—Micro-diffused
 Me—Mesa
 Ov—Overlay
 Pa—Precision alloy
 Pc—Point contact
 Pd—Post-alloy diffused
 Pl—Planar
 Sa—Surface-alloy
 Sb—Surface barrier
 Td—Triple diffused
 Shading indicates germanium. Otherwise, the transistor is silicon.

D-C AUD • Dot in this column indicates that the transistor has been characterized for audio service. Shading means it is useful for d-c amplifiers, current and voltage regulators, etc.

VHF RF • Dot here indicates high-frequency service (RF, IF, video). Shading means VHF (>30 Mc).

DIM MIL—Case dimensions shown approximately by figures on pages 90-91. Numbers refer to EIA TO types; others use letter designation. Shading means that a military-approved version is available.

f_{ab} —Typical alpha cutoff frequency in Mc. Shading means number refers to gain-bandwidth product f_T . * indicates f_{ae} in kc. Δ indicates f_{max} .

$h_{FE} I_C$ —Typical d-c common-emitter forward current gain h_{FE} shown at specified collector current in milliamps. Shading indicates that small-signal a-c current gain is shown. Shading on I_C means current is expressed in amperes.
*Indicates base current in milliamps.

$V_{CE} V_{CB}$ —Maximum collector-to-emitter voltage, usually BV_{CEO} without regard to polarity. Shading indicates maximum collector-to-base volts, usually BV_{CBO} .

DISS—Maximum allowable dissipation in watts. Power types generally are specified at a mounting base temperature of 25C, milliwatt types at ambient of 25C. Shading identifies ratings of 1w or greater.

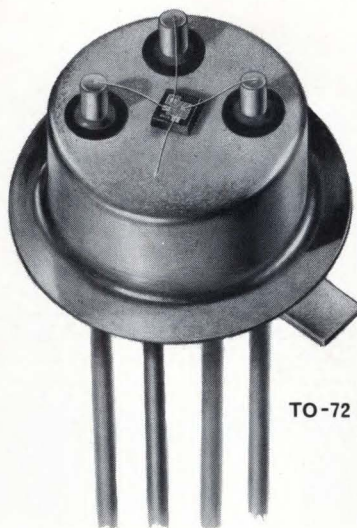
CMP CHP • Dot means suitability for chopper service. Shading means that the transistor is characterized for high-speed or computer switching.

SAT SW • Dot means general switching service. Shading means capable of switching high currents and/or indicates relatively low saturation voltage.

SRV LIN • Dot means capable of large signal service with constant β ; this also means suitability for Class B push-pull service. Shading means suitability for servo amps, converters and the like.

MIX OSC • Dot here indicates suitability for HF oscillators. Shading means suitability for RF converter-mixers.

MTOS now makes possible the ideal RF amplifier...



TO-72

with Cascode Performance

General Instrument's exclusive MTOS N-channel Dual Gate FETs combine the high power gain and low noise figure of bipolar transistors with the large signal handling capability and low cross-modulation distortion of vacuum tubes.

In 1948 the "cascode" amplifier was born.* Of course, it was designed around vacuum tubes but it yielded what has come to be recognized as the ideal RF amplifier configuration. It featured the low noise high G_m performance of triodes and the low feedback capacitance-high output resistance of pentodes.

Now, within a single integrated solid state device, the N-channel Dual Gate MTOS Transistor (MEM 554 Series), a high performance cascode circuit has been developed and is available in quantity. It combines the advantages of both bipolar transistors (high gain and low noise) and vacuum tubes (high input impedance, large signal handling capability and low distortion) to make the device an ideal RF amplifier.

Its applications are by no means limited to RF amplifiers. Major advantages result in spurious response reduction in FM tuners when the device is used as a highly linear mixer. In VHF tuner mixers very low cross-modulation distortion is also obtained.

Here today is the answer to the constantly increasing problem of frequency spectrum crowding:—solid state devices that reduce the annoying effects of interfering signals.

Features . . . MEM 554 Series

- 18 dB @ 200 MHz Power Gain
- 3.5 dB @ 200 MHz Noise Figure
- 120 mV undesired signal for 1% cross-modulation distortion
- Reverse AGC capability
- 150 mW dissipation
- Dual Gate provides Linear Mixing Capability
- C_{rss} .025 pF
- G_m 12,000 μ mhos

*Proceedings of IRE, June 1948, "A Low-Noise Amplifier"

Call your authorized General Instrument Distributor for off-the-shelf delivery. Write for complete data.
For all information relating to MTOS in Europe, write to: General Instrument Europe, Via Turati 28, Milano, Italy.



GENERAL INSTRUMENT CORPORATION • 600 WEST JOHN STREET, HICKSVILLE, L. I., NEW YORK

Circle No. 28 on Reader Service Card for more information.

Transistors 2N34-2N219

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD●	VHF●	OSC●	LIN●	SAT●	CHP●	<1w	V _{CE}	β @I _C or I _B [*]		f _{αe} kHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
										h _{fe}	(amp)	f _T MHz	MIL
2N167							●	.065	30	17-90	8	9	A
2N167A							●	.075	30	17-90	8	9	A
2N168A	Gj		●	●				.065	15	23-135	1	8	A
2N169	Gj							.065	15	34 min	1	8	A
2N169A	Gj		●					.075	25	34-200	1	9	A
2N170	Gj		●					.025	6	20	1	2.5	A
2N172	Gj							.065	16				C
2N173	Aj	●			●	●		.150	45	35-70	5	10*	36
2N174	Aj				●	●		.150	55	25-50	5	10*	36
2N174A	Aj				●	●		.150	40	40-80	1.2	15*	36
2N175	Aj	●	Lo Noise					.02	10	65	.5	.85	40
2N176	Aj	●						.90	40	25-90	500	7*	3
2N178	Aj	●						.40	30	15-45	500	6*	3
2N180	Aj							.15	30	60	1	.7	
2N181	Aj	●						.15	30	60	1	.7	
2N182	Aj		●					.1	25	25	1	3.8	
2N183	Aj							.1	25	40	1	7.5	
2N184	Aj						●	.1	25	60	1	15	
2N185	Aj	●			●			.15	20	80	50		22
2N186	Aj	●			●			.1	25	24	100	.8	I
2N186A	Aj	●			●			.2	25	24	100	.8	I
2N187	Aj	●			●			.1	25	36	1	1	I
2N187A	Aj	●			●			.2	25	36	100	1	I
2N188	Aj	●			●			.1	25	54	1	1.2	I
2N188A	Aj	●			●			.2	25	54	100	1.2	I
2N189	Aj	●			●			.2	25	35	20	.8	I
2N190	Aj	●			●			.2	25	50	20	1	I
2N191	Aj	●			●			.2	25	85	20	1.2	I
2N192	Aj	●			●			.2	25	125	20	1.5	I
2N193	Aj			●				.15	18	4-15	1	3	22
2N194	Aj			●				.05	18	8	1	3	22
2N194A	Aj			●				.15	18	5-15	1	3	22
2N206	Aj	●						.075	30	47	1	.78	1
2N211	Aj			●				.05	10	5-15	10	3	22
2N212	Aj			●				.15	18	10-30	1	4	22
2N213	Aj	●			●			.18	25	70-250	1	3	22
2N213A	Aj	●			●			.18	25	100-250	1	.15	22
2N214	Aj	●			●			.18	25	50-100	35	.8	22
2N215	Aj	●						.150	30	44	1	.7	44
2N216	Aj		●					.05	18	7.5	1	3	22
2N217	Aj						●	.165	35	75	50		1
2N218	Aj		●			●		.035	16	48 max	1	4.7	1
2N219	Aj						●	.08	9	75 min	.6	10	44

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD●	RF●	OSC●	LIN●	SAT●	SW●	CHP●	<1w	V _{CE}	$\beta_{@I_C}$ or I_B^*	f _{ce} kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	SW	CMP	≥1w	V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
											h _{fe}	(amp)	f _T MHz	MIL
2N109	Aj	●							.165	35	75	50		40
2N110	Pc					●			.2	50	3	1	5	
2N111	Fu	●	●						.13	30	25	1	3	
2N111A	Fu	●	●						.13	30	25	1	3	
2N112	Fu	●	●						.13	30	30	1	5	
2N112A	Fu	●	●						.13	30	30	1	5	
2N113	Fu	●	●						.13	30	45	1	10	
2N114	Fu	●	●						.13	30	75	1	20	
2N117	Gj	●							.15	45	15	1	4	B
2N118	Gj	●							.15	45	29	1	5	B
2N118A	Gj	●							.15	45	54	1	8	
2N119	Gj	●							.15	45	63	1	6	B
2N120	Gj	●							.15	45	200	1	7	B
2N122	Gj	●							.9	120	3 min	100	7	
2N123	Aj					●			.15	15	30-150	10	8	1
2N124				●	●	●			.05	10	18	1	.3	C
2N125				●	●	●			.05	10	36	1	5	C
2N126				●	●	●			.05	10	20	1	5	
2N128	Sb	●	●						.025	4.5	19-66	.5	45A	24
2N129									.03	10	10 min	.5	30	
2N130A	Aj	●	●			●			.1	44	26	1	.7	
2N131A	Aj	●	●			●			.1	30	45	1	.8	
2N132A	Aj	●	●			●			.1	24	90	1	1	
2N133A	Aj	●	●			●			.1	30	50	1	.8	
2N135	Aj	●	●						.1	20	20	1	4.5	
2N136	Aj	●	●						.1	20	40	1	6.5	
2N137	Aj	●	●						.1	10	60	1	10	
2N138	Aj	●							.15	20	44	50		22
2N139	Aj	●							.035	12	48 max	1	13	40
2N140	Aj					●			.08	16	75 min	.6	10	40
2N141/13	Aj					●			.20	30	25 min	500		13
2N143/13	Aj					●			.20	30	10 min	250		13
2N144/13	Aj	●				●			1	60	11 min	500		13
2N145	Gj	●	●						.065	20				C
2N146	Gj	●	●						.065	20				C
2N147	Gj	●	●						.065	20				C
2N155	Aj	●				●			.50	15	24 min	500	.18	3
2N156	Aj	●	●			●			.20	30	25 min	500	4*	13
2N158	Aj	●	●			●			.20	60	21 min	500	4*	13
2N158A	Aj	●	●			●			.20	60	21 min	500	4*	13
2N164A	Gj	●	●						.065	15	40		8	
2N165	Gj	●	●			●			.065	15	72		5	
2N166		●	●			●			.025	6	32	1	2	

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	$\beta_{@I_C}$ or I_B^*	$f_{\alpha e}$ kHz		
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N34	Aj	•						.15	40	40	1	.4	22
2N34A	Aj	•						.05	25	40	1	.6	
2N35	Aj	•						.15	40	25-125	1	.8	22
2N36		•						.05	20	45	1	.5	
2N37		•						.05	20	30	1	.8	
2N38		•						.05	20	15	1	.5	
2N43	Aj	•						.24	30	34-65	20	1.3	1
2N43A	Aj	•						.24	30	34-65	20	1.3	1
2N44	Aj	•						.24	30	18-43	20	1	1
2N44A	Aj	•						.24	30	18-43	20	1	1
2N45	Aj	•						.155	30	11-23	20	1	29
2N59	Fu	•			•			.18	25	90	100	1.8	5
2N59A	Fu	•			•			.18	40	90	100	1.8	5
2N59B	Fu	•			•			.18	50	90	100	1.8	5
2N59C	Fu	•			•			.18	60	90	100	1.8	5
2N60	Fu	•			•			.18	25	70	100	1.5	5
2N60A	Fu	•			•			.18	40	70	100	1.5	5
2N60B	Fu	•			•			.18	50	70	100	1.5	5
2N60C	Fu	•			•			.18	60	70	100	1.5	5
2N61	Fu	•			•			.18	25	45	100	1.5	5
2N61A	Fu	•			•			.18	40	45	100	1	5
2N61B	Fu	•			•			.18	50	45	100	1	5
2N61C	Fu	•			•			.18	60	45	100	1	5
2N63	Fu	•						.1	22	22	1	.6	
2N64	Fu	•						.1	15	45	1	.8	
2N65	Aj	•						.125	20	75	1	1	
2N68/13	Aj	•						.20	30	15 min	0.5	10*	13
2N77	Aj	•						.035	25	55	.7	.7	1
2N78	Gj	•	•					.065	15	45-135	1	9	A
2N78A	Gj	•	•					.065	20	45-135	1	9	A
2N94	Aj	•				•		.15	20	20-80	1	2	22
2N94A	Aj	•				•		.15	20	20-80	1	5	22
2N97	Gj	•	•					.05	30	13	1	1	
2N98	Gj	•	•					.05	40	40	1	2.5	
2N99	Gj	•	•					.05	40	40	1	3.5	
2N101/13	Aj	•		•	•			1	30	10.5 min	500	.6	13
2N102/13	Aj	•		•	•			1	30	10.5 min	500		13
2N103	Gj	•	•					.05	35	4	1	.75	
2N104	Aj	•						.15	30	44	1	.7	
2N105	Aj	•						.035	25	55	.7	.75	2
2N106	Fu	•						.1	15	45	.5	.8	
2N107		•						.05	12	19	1	1	
2N108		•						.05	20				

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} *kHz		
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N220	Aj	•	•	•	•	•	•	.02	10	65	.5	.85	1
2N223	Aj	•	•	•	•	•	•	.25	18	110	2	.6	25
2N224	Aj	•	•	•	•	•	•	.25	25	90	100	.51	25
2N225	Aj	•	•	•	•	•	•	.25	Pair	2N224			25
2N226	Aj	•	•	•	•	•	•	.25	30	60	100	.4	25
2N227	Aj	•	•	•	•	•	•	Pair	2N226				25
2N228	Aj	•	•	•	•	•	•	.18	40	55-100	1	.6	22
2N229	Aj	•	•	•	•	•	•	.18	10	25 min	1	.6	22
2N231	Dr	•	•	•	•	•	•	.009	4	19 min	.5	20*	24
2N233	Aj	•	•	•	•	•	•	.15	10	10 min	1	2	22
2N233A	Aj	•	•	•	•	•	•	.15	18	10-50	1	2	22
2N234A	Aj	•	•	•	•	•	•	.25	25	25	500	8*	3
2N235A	Aj	•	•	•	•	•	•	.25	40	40	500	.5	3
2N235B	Aj	•	•	•	•	•	•	.25	40	60	500	.5	3
2N236A	Aj	•	•	•	•	•	•	.25	40	40	750	.5	3
2N236B	Aj	•	•	•	•	•	•	.25	40	60	750	.5	3
2N237	•	•	•	•	•	•	•	.15	45	50	1	.5	
2N238	Aj	•	•	•	•	•	•	.15	20	45	50	1.3	22
2N240	Sb	•	•	•	•	•	•	.025	6	16 min	.5	25	24
2N241	Aj	•	•	•	•	•	•	.1	25	73	100	1.3	1
2N241A	Aj	•	•	•	•	•	•	.2	25	50-125	20	1.3	1
2N242	Aj	•	•	•	•	•	•	.25	45	40		5*	3
2N243	Gj	•	•	•	•	•	•	.750	60	20			
2N244	Gj	•	•	•	•	•	•	.750	60	59			
2N249	•	•	•	•	•	•	•	.35	25	50	100		
2N250	Aj	•	•	•	•	•	•	.25	30	30 min	500	12*	3
2N250A	Aj	•	•	•	•	•	•	.90	25	35 min	500		3
2N251	Aj	•	•	•	•	•	•	.25	60	30 min	500	12*	3
2N251A	Aj	•	•	•	•	•	•	.90	35	35 min	500		3
2N252	Gj	•	•	•	•	•	•	.03	16				C
2N253	•	•	•	•	•	•	•	.065	12				C
2N254	•	•	•	•	•	•	•	.65	20				C
2N255	Aj	•	•	•	•	•	•	.25	14	100 max	500		3
2N255A	Aj	•	•	•	•	•	•	.20	15	30	500	.125	3
2N256	Aj	•	•	•	•	•	•	.25	28	100 max	500		3
2N256A	Aj	•	•	•	•	•	•	.20	25	30	500	.125	3
2N257	Aj	•	•	•	•	•	•	.25	35	40	2	5*	3
2N257B	Aj	•	•	•	•	•	•	.25	35	50	2	5*	3
2N257G	Aj	•	•	•	•	•	•	.25	35	40	2	5*	3
2N257W	Aj	•	•	•	•	•	•	.25	35	60	2	5*	3
2N263	Gj	•	•	•	•	•	•	.125	45	45	10	20	
2N264	Gj	•	•	•	•	•	•	.125	45	20	10	10	
2N265	Aj	•	•	•	•	•	•	.075	25	140	20	1.5	1

(Continued)

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} *kHz		
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N268	Aj	•	•	•	•	•	•	.25	60	40	2	6*	3
2N268A	Aj	•	•	•	•	•	•	.35	60	20-80	2		3
2N269	Aj	•	•	•	•	•	•	.12	24	24 min	20	13	1
2N270	Aj	•	•	•	•	•	•	.25	25	70	150		
2N271	Fu	•	•	•	•	•	•	.13	30	45	1	10	
2N271A	Fu	•	•	•	•	•	•	.13	30	45	1	10	
2N274	Dr	•	•	•	•	•	•	.12	40	60	1.5	30	44
2N277	Aj	•	•	•	•	•	•	.50	40	35-70	5	10*	36
2N278	Aj	•	•	•	•	•	•	.50	50	35-70	5	10*	36
2N279	Ad	•	•	•	•	•	•	.125	30	30	.5	.3	
2N280	Ad	•	•	•	•	•	•	.125	30	47	3	.3	
2N281	Ad	•	•	•	•	•	•	.165	16	70	10	.35	
2N282	•	•	•	•	•	•	•	Matched Pair	2N281				5
2N283	Aj	•	•	•	•	•	•	.125	32	40	.5	.5	
2N284	Aj	•	•	•	•	•	•	.165	32	45	10	.35	1
2N284A	Aj	•	•	•	•	•	•	.165	60	45	10	.35	1
2N285A	Ad	•	•	•	•	•	•	.25	35	150	500	.5	3
2N285B	Ad	•	•	•	•	•	•	.25	35	150	500	.5	3
2N291	Aj	•	•	•	•	•	•	.18	25	45	100		
2N292	Gj	•	•	•	•	•	•	.065	15	8-51	1	5	C
2N293	Gj	•	•	•	•	•	•	.065	15	8-51	1	8	C
2N296	Aj	•	•	•	•	•	•	.20	60	19 min	1	4*	3
2N297	Aj	•	•	•	•	•	•	.45	50	12-40	2	.005	3
2N297A	Aj	•	•	•	•	•	•	.35	40	40-100	500	12*	3
2N301	Aj	•	•	•	•	•	•	.25	32	70 max	1		3
2N301A	Aj	•	•	•	•	•	•	.25	32	70 max	1		3
2N302	Aj	•	•	•	•	•	•	.15	10	45	1	7	
2N306	Aj	•	•	•	•	•	•	.18	15	75	1	.6	22
2N307	Aj	•	•	•	•	•	•	.25	35	20 min	200	3*	3
2N307A	Aj	•	•	•	•	•	•	.25	35	20 min	500	3.5*	3
2N308	Gd	•	•	•	•	•	•	.03	20				C
2N309	Gd	•	•	•	•	•	•	.03	20				C
2N310	Gd	•	•	•	•	•	•	.03	30				C
2N311	Aj	•	•	•	•	•	•	.15	15	50	10		5
2N312	Aj	•	•	•	•	•	•	.15	15	50	10		5
2N315	Aj	•	•	•	•	•	•	.1	15	15-30	100	5	5
2N315A	Aj	•	•	•	•	•	•	.15	20	20-50	100	5	5
2N316	Aj	•	•	•	•	•	•	.1	10	20-50	200	12	5
2N316A	Aj	•	•	•	•	•	•	.15	15	20-50	200	12	
2N317	Aj	•	•	•	•	•	•	.1	6	20-60	400	20	5
2N317A	Aj	•	•	•	•	•	•	.15	10	20-60	400	20	5
2N319	Aj	•	•	•	•	•	•	.225	20	25-42	20	1	5
2N320	Aj	•	•	•	•	•	•	.225	20	34-65	20	1.5	5

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} *kHz		
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N321	Aj	•	•	•	•	•	•	.225	20	53-121	20	2	5
2N322	Aj	•	•	•	•	•	•	.2	18	34-65	20	1	5
2N323	Aj	•	•	•	•	•	•	.2	18	53-121	20	1.5	5
2N324	Aj	•	•	•	•	•	•	.2	18	72-198	20	2	5
2N326	Aj	•	•	•	•	•	•	.7	35	30-60	500	.15	EE
2N327A	Fa	•	•	•	•	•	•	.25	40	9-22	3	.2	5
2N327B	Ep	•	•	•	•	•	•	.4	40	9-22	.1*	2	5
2N328A	Fa	•	•	•	•	•	•	.25	35	18-44	3	.3	5
2N328B	Ep	•	•	•	•	•	•	.4	35	18-44	.1*	3	5
2N329A	Fa	•	•	•	•	•	•	.39	30	36-88	3	.5	5
2N329B	Ep	•	•	•	•	•	•	.4	30	36-88	.1*	5	5
2N330A	Aj	•	•	•	•	•	•	.385	30	25	3	.5	5
2N331	Aj	•	•	•	•	•	•	.2	30	30-70	1	.4	9
2N332	Gd	•	•	•	•	•	•	.15	45	9-20	1	6	5
2N332A	Dr	•	•	•	•	•	•	.5	45	9-22	1	10	5
2N333	Gd	•	•	•	•	•	•	.15	45	18-40	1	8	5
2N333A	Dr	•	•	•	•	•	•	.5	45	18-44	1	11	5
2N334	Gd	•	•	•	•	•	•	.15	45	18-90	1	10	5
2N334A	Dr	•	•	•	•	•	•	.5	45	18-90	1	12	5
2N335	Gd	•	•	•	•	•	•	.15	45	36-90	1	11	5
2N335A	Dr	•	•	•	•	•	•	.5	45	37-90	1	13	5
2N335B	Gj	•	•	•	•	•	•	.5	60	37-90	1	13	5
2N336	Gd	•	•	•	•	•	•	.15	45	76-333	1	13	5
2N336A	Dr	•	•	•	•	•	•	.5	45	76-333	1	15	5
2N337	Gj	•	•	•	•	•	•	.125	30	20-55	10	20	5

Circle No. 29 on Reader-Service Card for more information. ▶

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SRV	SW	CHP	<1w	V_{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz	
											h_{FE}	(ma)	$f_{\alpha b}$ MHz
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\geq 1w$	V_{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N350A	Aj	•					•	90	40	20-60	700	6*	3
2N351	Aj	•						65	30	25-90	700	6*	3
2N351A	Aj	•						90	40	25-90	700	6*	3
2N356	Aj						•	.1	18	20-50	100	3	5
2N356A	Aj						•	.15	20	20-50	100	3	5
2N357	Aj						•	.1	15	20-50	200	6	5
2N357A	Aj						•	.15	20	25-75	200	6	5
2N358	Aj						•	.1	12	20-50	300	9	5
2N358A	Aj						•	.15	15	25-75	300	9	5
2N359	Fu	•					•	.17	18	100-300	50	3.5	5
2N360	Fu	•					•	.17	30	50-150	50	2.5	5
2N361	Fu	•					•	.17	30	25-75	50	2.5	5
2N362	Fu	•					•	.17	18	90	1	2	5
2N363	Fu	•					•	.17	30	50	1	1.5	5
2N364	Gj							.15	30	15	1	2.5	C
2N365	Gj							.15	30	34	1	3	C
2N366	Gj							.15	30	95	1	3.5	C
2N367	Aj	•					•	.15	30	15	1	.7	9
2N368	Aj	•					•	.15	30	34	1	1	C
2N369	Aj	•					•	.15	30	95	1	1.3	C
2N370	Dr		•					.08	24	100	1	30	7
2N371	Dr		•					.08	24	80	1	30	7
2N372	Dr		•					.08	20	80	1	30	7
2N375	Aj	•					•	90	60	35-90	1	10*	3
2N376	Aj	•					•	10	40	35-120	700	6*	3
2N376A	Aj	•					•	90	40	35-120	700	6*	3
2N377	Aj	•					•	.15	20	20-60	30	6	5
2N377A	Aj	•					•	.2	40	20-60	30	6	5
2N378	Aj	•					•	50	20	15-40	2	5*	3
2N379	Aj	•					•	50	40	20-70	2	5*	3
2N380	Aj	•					•	50	30	30-70	2	8*	3
2N381	Aj	•					•	.225	50	35-65	20	3	5
2N382	Aj	•					•	.225	50	60-95	20	4	5
2N383	Aj	•					•	.225	50	75-120	20	5	5
2N384	Dr		•					.12	40	20-175	1.5	100	44
2N385	Aj	•					•	.15	25	30-110	30	6	5
2N385A	Aj	•					•	.2	40	30-110	30	8	5
2N386		•						12.5	60	20 min	2.5		27
2N387		•						12.5	80	20 min	2.5		27
2N388	Aj	•					•	.15	20	60-180	30	12	5
2N388A	Aj	•					•	.2	40	60-180	30	12	5
2N389	Me	•					•	85	60	12-60	1		FF
2N389A	Me	•					•	85	60	12-60	1	2	FF
2N392	Aj	•					•		60	60-150	3	6*	3

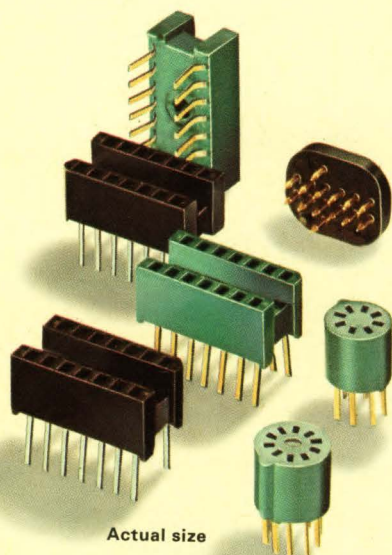
TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SRV	SW	CHP	<1w	V_{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz	
											h_{FE}	(ma)	$f_{\alpha b}$ MHz
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\geq 1w$	V_{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N393	Ma						•	.025	6	40 min	.5	25 min	24
2N394	Aj						•	.15	30	20 min	10	4	5
2N394A	Aj	•					•	.15	30	20 min	10	7	5
2N395	Aj						•	.2	30	20-150	10	4.5	5
2N396	Aj						•	.2	30	30-150	10	8	5
2N396A	Aj						•	.2	30	30-150	10	5	5
2N397	Aj						•	.2	30	40-150	10	12	5
2N398	Aj						•	.05	105	20 min	5		9
2N398A	Aj						•	.15	105	20 min	5	1	5
2N398B	Aj						•	.25	105	20 min	5	1	5
2N399	Aj						•	.25	35	40	750	400*	3
2N400	Aj	•						.35	35	50	1	.5	3
2N401	Aj	•						.25	40	40	500	.4	3
2N402	Fu	•						.18	25	25	1	.6	5
2N403	Fu	•						.18	25	35	1	.85	5
2N404	Aj						•	.15	24	40	24	12	5
2N404A	Aj						•	.15	35	40	1	12	5
2N405	Aj	•					•	.15	18	30 min	12	.65	40
2N406	Aj	•					•	.15	18	35	1	.65	1
2N407	Aj	•					•	.15	18	65	1		40
2N408	Aj	•					•	.15	18	65	1		1
2N409	Aj						•	.08	13	48	1	6.8	40
2N410	Aj						•	.08	13	48	1	6.8	1
2N411	Aj						•	.08	13	75	.6	10	40
2N412	Aj						•	.08	13	75	.6	10	1
2N413	Fu	•						.17	18	30	1	2.5	5
2N413A	Aj						•	.15	18	20-80	1	3.5	5
2N414	Fu	•						.17	15	80	1	8	5
2N414A	Aj						•	.15	15	30-90	1	5.5	5
2N414B	Aj						•	.2	30	60	1	7	5
2N414C	Aj						•	.2	30	60	1	7	5
2N415	Fu	•						.15	12	80	1	10	5
2N415A	Aj						•	.15	30	80	1	10	5
2N416	Fu	•						.17	12	80	1	10	5
2N417	Fu	•						.17	10	140	1	20	5
2N418	Aj						•	.25	80	40 min	4	.4	3
2N419	Aj						•	.25	45	9-44	2.2	.3	3
2N420	Aj						•	.25	45	40 min	4	.4	3
2N420A	Aj						•	.25	70	40 min	4	.4	3
2N422	Fu	•						.15	20	50	1	.8	5
2N424	Me	•					•	.85	80	12-60	1		FF
2N424A	Me	•					•	.85	80	12-60	1	2	FF
2N424A/I		•					•	.80	80	12-60	1	2.5	FF
2N425	Fu	•					•	.17	20	20-40	1	4	5

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SRV	SW	CHP	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}^*$ kHz	
											h_{FE}	(ma)	$f_{\alpha b}$ MHz
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N426	Fu						•	.17	10	30-60	1	6	5
2N427	Fu						•	.17	15	40-80	1	11	5
2N428	Fu						•	.17	12	60 min	1	17	5
2N428A	Aj						•	.15	30	100	10	12	5
2N438	Aj						•	.15	25	20 min	50	2.5	5
2N438A	Aj						•	.2	25	20 min	50	2.5	5
2N439	Aj						•	.15	20	30 min	50	5	5
2N439A	Aj						•	.2	20	30 min	50	5	5
2N440	Aj						•	.15	15	40 min	50	10	5
2N440A	Aj						•	.2	15	40 min	50	10	5
2N441	Aj	•					•	.50	25	20-40	5	10*	36
2N442	Aj	•					•	.50	30	20-40	5	10*	36
2N443	Aj	•					•	.50	45	20-40	5	10*	36
2N444	Aj						•	.15	15	15	1	.5	5
2N444A	Aj						•	.15	25	20-40	20	.5	9
2N445	Aj						•	.15	15	35	1	2	5
2N445A	Aj						•	.15	18	40-160	20	2	9
2N446	Aj						•	.15	15	60	1	5	5
2N446A	Aj						•	.15	15	60-250	20	5	9
2N447	Aj						•	.15	15	125	1	9	5
2N447A	Aj						•	.15	12	80-300	20	9	5
2N447B	Aj						•	.15	25	200	1	9	5
2N448	Gj		•					.065	15	8-51	1	5	A
2N449	Gj		•					.065	15	34 min	1	8	
2N450	Aj						•	.15	12	30 min	10	10	5
2N456	Aj	•					•	.50	40	10 min	5		3
2N456A	Aj	•					•	.150	20	30-90	5	200*	3
2N456B	Aj							.150	30	30-90	5	200*	3
2N457	Aj	•					•	.50	60	10 min	5		3
2N457A	Aj	•					•	.150	40	30-90	5	200*	3
2N457B	Aj	•					•	.150	40	30-90	5	200*	3
2N458	Aj	•					•	.50	40	10 min	5		3
2N458A	Aj	•					•	.150	40	30-90	5	200*	3
2N458B	Aj	•					•	.150	45	30-90	5	200*	3
2N459	Aj						•	.50	105	20-70	2	5*	3
2N459A	Aj						•	.106	105	40-70	2	5*	3
2N460	Aj	•					•	.2	35	24	1	1.2	5
2N461	Aj							.2	35	32-199	1	4	5
2N464	Fu	•	•					.17	40	14 min	1	1	5
2N465	Fu	•	•					.17	30	27 min	1	1.1	5
2N466	Fu	•	•					.17	20	56 min	1	1.5	5
2N467	Fu	•	•					.17	15	112 min	1	2.7	5
2N469A	Aj	Phototrans.						.05	15	75	1	1.8	



CINCH PRECISION MINIATURE SOCKETS

INSURE EQUIPMENT DEPENDABILITY



Equipment design frequently involves problems of field maintenance or circuit updating. Cinch component sockets provide inexpensive and effective solutions without compromising reliability.

DIP sockets for 14 and 16 lead DIP's are typical of Cinch specialized miniature sockets. Available in GP black phenolic or SDGF diallyl phthalate, they have extremely high resistance to shock, vibration, humidity and corrosive atmospheres. Contacts are gold or cadmium plated beryllium copper with low contact resistance.

IC sockets for 6, 8 and 10 pin TO-5 cased devices, miniature *NIXIE* Tube sockets and *Subminiature* relay sockets are just a few of the other component sockets Cinch manufactures.

For information on DIP sockets and other Cinch interconnection devices, write to Cinch Manufacturing Company, 1501 Morse Avenue, Elk Grove Village, Illinois 60007.

C-6818

MEMBER



CONSISTING OF CINCH MANUFACTURING COMPANY, CINCH-GRAPIK, CINCH-MONADNOCK, CINCH-NULINE, UCINITE (ELECTRONICS) AND PLAXIAL CABLE DEPT.

CINCH
DIVISION OF UNITED-CARR

Transistors

2N470—2N579

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	VHF	RF	OSC	LIN	SW	CMP	<1w	V _{CE}	β @ I _C or I _B *	f _{ce} *kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	SW	CMP	≥1w	V _{CB}	h _{FE}	(ma)	f _{cb} MHz	
											h _{fe}	(amp)	f _T MHz	
													MIL	
2N539A	Aj	•				•	•	•	34	55	30-75	2	.2	BB
2N540	Aj	•				•	•	•	34	55	45-113	2	.2	BB
2N540A	Aj	•				•	•	•	34	55	45-113	2	.2	BB
2N541	Gd	•							.2	15	80-200	1	39	5
2N542	Gd	•							.2	30	80-200	1	39	5
2N542A	Gd	•							.2	30	80-200	1	8	5
2N543	Gj	•							.2	45	80-200	1	39	5
2N543A	Gj	•							.2	45	80-200	1	8	5
2N545	Dj	•			•				.6	60	15 min	500	4	5
2N546	Dj	•				•			.6	30	15 min	500	4	5
2N547	Dj	•				•			.6	60	20-80	500	4	5
2N548	Dj	•				•			.6	30	20-80	500	4	5
2N549	Dj	•				•			.6	60	20-80	200	4	5
2N550	Dj	•				•			.6	30	20-80	200	4	5
2N551	Dj	•				•			.6	60	20-80	50	4	5
2N552	Dj	•				•			.6	30	20-80	50	4	5
2N553	Aj					•	•		35	80	40-80	500	25*	
2N554	Aj					•			10	16	50	500	6*	3
2N555	Aj					•			10	30	50	500	6*	3
2N556	Aj						•		.1	25	50			5
2N557	Aj						•		.1	20	30			5
2N558	Aj						•		.1	15	75			5
2N559	Me								.15	15	25-150	10		18
2N560	Dj					•			.5	60	20 min	100	50	5
2N560A	Dj					•			.5	60	25	10	60	5
2N561	Aj	•					•		50	65	20-50	4	.65	3
2N563	Aj								.15	30	25	1	.8	
2N564	Aj						•		.15	30	25	1	.8	5
2N565	Aj	•							.15	30	55	1	1	
2N566	Aj								.15	30	55	1	1	5
2N567	Aj	•							.05	40	40	10	.6	
2N568	Aj	•					•		.15	30	100	1	1.5	5
2N569	Aj								.15	30	150	1	2	
2N570	Aj	•							.15	30	150	1	2	5
2N571	Aj						•		.15	30	200	1	3	
2N572		•					•		.15	30	200	1	3	5
2N573	Aj	•							.15	30	200	1	3	5
2N574	Aj						•		.187	55	9-22	10	.1	0
2N574A	Aj						•		.187	60	9-22	10	.1	0
2N575	Aj	•							.187	50	19-42	10	.15	0
2N575A	Aj	•							.187	55	19-42	10	.15	0
2N576	Aj						•		.2	20	20-60	400	8	5
2N576A	Aj						•		.2	40	20-60	400	10	5
2N578	Aj						•		.12	14	10 min	400	5	5
2N579	Aj						•		.12	14	20 min	400	8	5

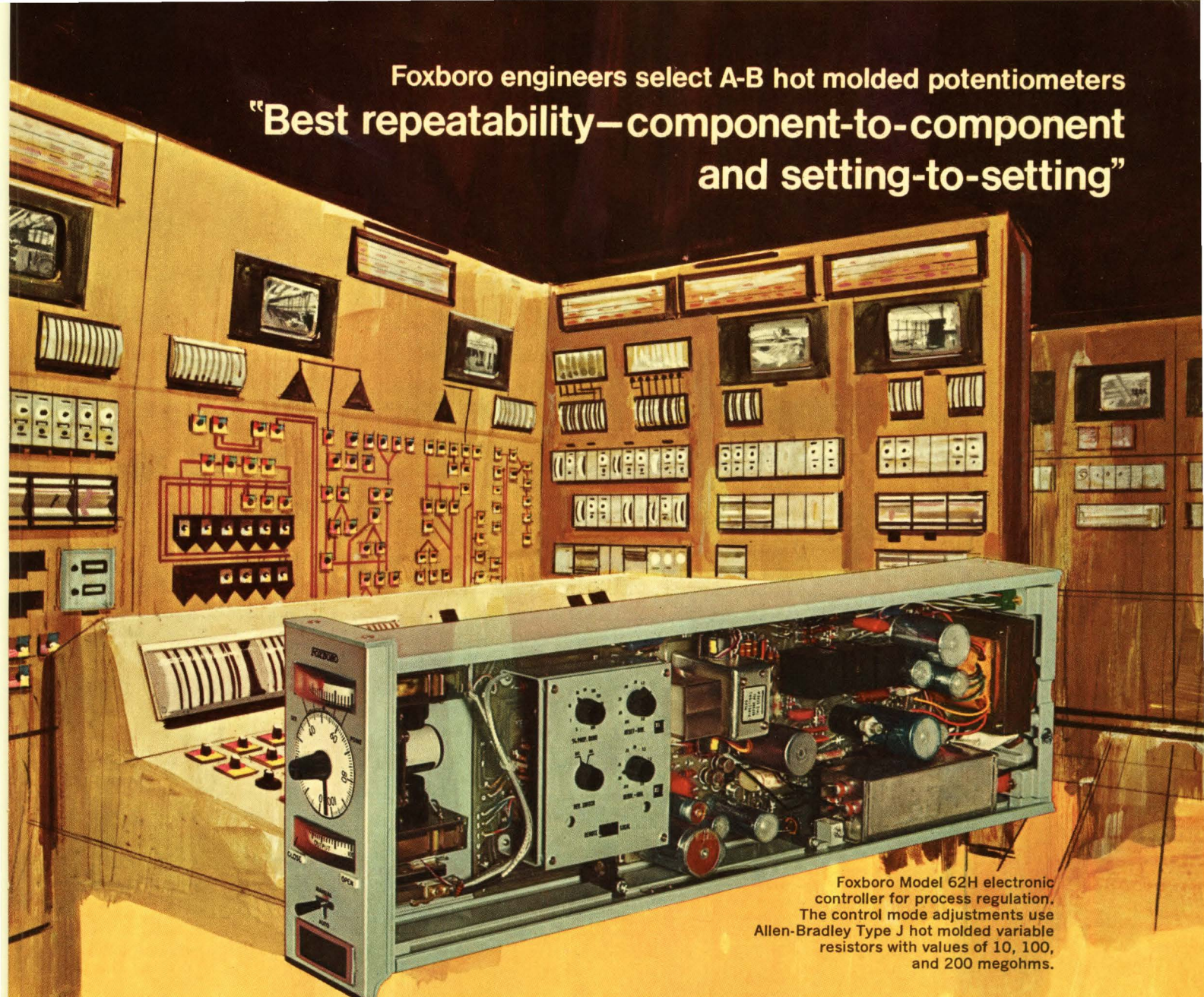
TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CMP	<1w	V _{CE}	β @ I _c or I _B *	f _{αe} * kHz		
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N508A	Aj	•			•			.2	30	99-198	20	4.5	5
2N511	Aj	•			•			.150	30	20-60	10	.26	CC
2N511A	Aj	•			•			.150	40	20-60	10	.26	CC
2N511B	Aj	•			•			.150	45	20-60	10	.26	CC
2N512	Aj	•			•			.150	30	20-60	15	.28	CC
2N512A	Aj	•			•			.150	40	20-60	15	.28	CC
2N512B	Aj	•			•			.150	45	20-60	15	.28	CC
2N513	Aj	•			•			.150	30	20-60	20	.3	CC
2N513A	Aj	•			•			.150	40	20-60	20	.3	CC
2N513B	Aj	•			•			.150	45	20-60	20	.3	CC
2N514	Aj	•			•			.150	30	20-60	25	.43	CC
2N514A	Aj	•			•			.150	40	20-60	25	.43	CC
2N514B	Aj	•			•			.150	45	20-60	25	.43	CC
2N515	Aj	•	•					.05	18	7.5	1	3	22
2N516	Aj	•	•					.05	18	7.5	1	3	22
2N517	Aj	•	•					.05	18	7.5	1	3	22
2N518	Aj	•			•			.15	45	60	10	11	1
2N519	Aj	•	•		•			.1	25	27 min	15	1.5	5
2N519A	Aj	•	•		•			.15	25	35	20	.5	5
2N520	Aj	•	•		•			.15	20	20	1	3	5
2N520A	Aj	•	•		•			.15	25	100	20	3	5
2N521	Aj	•	•		•			.15	15	7	1	8 min	5
2N521A	Aj	•	•		•			.15	25	150	20	8 min	5
2N522	Aj	•	•		•			.2	8	120	1	18	5
2N522A	Aj	•	•		•			.15	25	200	20	15 min	5
2N523	Aj	•	•		•			.2	6	200	1	25	5
2N523A	Aj	•	•		•			.15	25	250	20	21 min	5
2N524	Aj	•	•		•			.225	30	25-42	20	2.5	5
2N524A	Aj	•	•		•			.225	30	25-42	20	2.5	5
2N525	Aj	•	•		•			.225	30	34-65	20	3	5
2N525A	Aj	•	•		•			.225	30	34-65	20	3	5
2N526	Aj	•	•		•			.225	30	53-90	20	3.5	5
2N526A	Aj	•	•		•			.225	30	53-90	20	3.5	5
2N527	Aj	•	•		•			.225	30	72-121	20	4	5
2N527A	Aj	•	•		•			.225	30	72-121	20	4	5
2N529	Aj	•	•		•			.15	15	18		2.5	5
2N530	Aj	•	•		•			.15	15	23		3	5
2N531	Aj	•	•		•			.15	15	28		3.5	5
2N532	Aj	•	•		•			.15	16	40	50	4	5
2N533	Aj	•	•		•			.15	15	38	1	4.5	
2N538	Aj	•	•	•	•			34	60	20-50	2	.2	BB
2N538A	Aj	•	•	•	•			34	60	20-50	2	.2	BB
2N539	Aj	•	•	•	•			34	55	30-75	2	.2	BB

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CMP	<1w	V _{CE}	β @I _c or I _B *		f _{ce} *kHz	
										h _{FE}	(ma)	f _{cb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N470	Gd	•						.2	15	10-25	1	30	5
2N471	Gd	•						.2	30	10-25	1	30	5
2N471A	Gd	•						.2	30	10-25	1	8	5
2N472	Gd	•						.2	45	10-25	1	30	5
2N472A	Gd	•						.2	45	10-25	1	8	5
2N473	Gd	•						.2	15	20-50	1	30	5
2N474	Gd	•						.2	30	20-50	1	30	5
2N474A	Gd	•						.2	30	20-50	1	8	5
2N475	Gd	•						.2	45	20-50	1	30	5
2N475A	Gd	•						.2	45	20-50	1	8	5
2N476	Gj	•	•					.2	15	45	1		5
2N477	Gj	•	•					.2	30	45	1		5
2N478	Gd	•						.2	15	40-100	1	39	5
2N479	Gd	•						.2	30	40-100	1	39	5
2N479A	Gd	•						.2	30	40-100	1	8	5
2N480	Gd	•						.2	45	40-100	1	39	5
2N480A	Gd	•						.2	45	40-100	1	8	5
2N481	Fa	•		•				.15	12	50	1	3	5
2N482	Fa	•	•					.15	12	50	1	3.5	5
2N483	Fa	•	•					.15	12	60	1	5.5	5
2N484	Fa	•	•					.15	12	90	1	10	5
2N485	Fa	•	•					.15	12	50	1	7.5	5
2N486	Fa	•	•					.15	12	100	1	12	5
2N495					•			.15	25	15 min	1		1
2N496					•			.15	10	15 min	15		1
2N497	Me	•			•	•		.4	60	12-36	200		5
2N497A	Dr	•			•	•		.5	60	12-36	200		5
2N498	Me	•			•	•		.4	100	12-36	200		5
2N498A	Dr	•			•	•		.5	100	12-36	200		5
2N499	Md	•	•					.03	18	6 min	2	200	1
2N499A	Md	•	•					.06	12	50	1	170	1
2N501	Md	•	•		•			.06	12	20 min	10	90	1
2N501/18	Me	•	•		•			.15	12	20 min	10	4.5	18
2N501A	Md	•	•		•			.06	12	30 min	10	120	1
2N502	Md	•	•	•				.06	20	9 min	3	260	9
2N502A	Md	•	•	•				.075	30	15 min	2	260	9
2N502B	Md	•	•	•				.075	30	20-80	2	620▲	9
2N503	Md	•	•					.025	20	45		350	9
2N504	Md	•	•					.03	25	16 min	1	50▲	1
2N505	Aj				•			.125	40	40	10	8	9
2N506	Aj				•			.05	40	40	10	.6	
2N507								.05	40	25 min	10	.6	22
2N508	Aj	•		•				.2	18	99-198	20	4.5	5

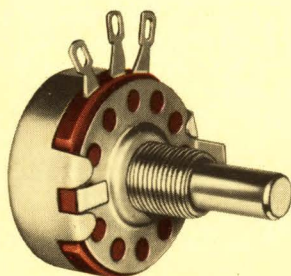
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Foxboro engineers select A-B hot molded potentiometers

"Best repeatability—component-to-component and setting-to-setting"



Foxboro Model 62H electronic controller for process regulation. The control mode adjustments use Allen-Bradley Type J hot molded variable resistors with values of 10, 100, and 200 megohms.



A-B Type J hot molded variable resistor rated 2.25 watts @ 70°C. Available in single, dual, and triple units. Standard total resistance values from 50 ohms to 5 megohms. Special resistance values and tapers can be supplied.

Widely used throughout the process industries, the Foxboro Model 62H Universal Controller is a highly dependable precision instrument. During the years of painstaking development, Allen-Bradley engineers worked closely with Foxboro to provide a potentiometer having unusually high resistance values, which would provide the precise performance required.

Allen-Bradley Type J potentiometers were the answer. They have a solid hot molded resistance track which is produced by an exclusive A-B molding technique that assures extremely long operating life. Accelerated tests—exceeding 100,000 revolutions—show very slight resistance change. Control is smooth at all times with adjustment approaching infinite resolution. There are none of the abrupt turn-to-turn resistance vari-

ations inherent in wirewound controls. Furthermore, Allen-Bradley Type J potentiometers are—for all practical purposes—noninductive, permitting their use throughout the frequency spectrum.

Whether your particular circuit design can be best satisfied with one of the millions of standard Type J variations or whether it calls for unusual resistance characteristics, it will pay you to look first to A-B Type J potentiometers. Their more than 25-year history of providing superior performance is your guarantee of complete satisfaction. For full details, please write for Technical Bulletin 5200: Allen-Bradley Co., 206 West Greenfield Ave., Milwaukee, Wisconsin 53204. Export Office: 630 Third Avenue, New York, N. Y., U.S.A. 10017. In Canada: Allen-Bradley Canada Limited.



ALLEN - BRADLEY

QUALITY ELECTRONIC COMPONENTS

Transistors

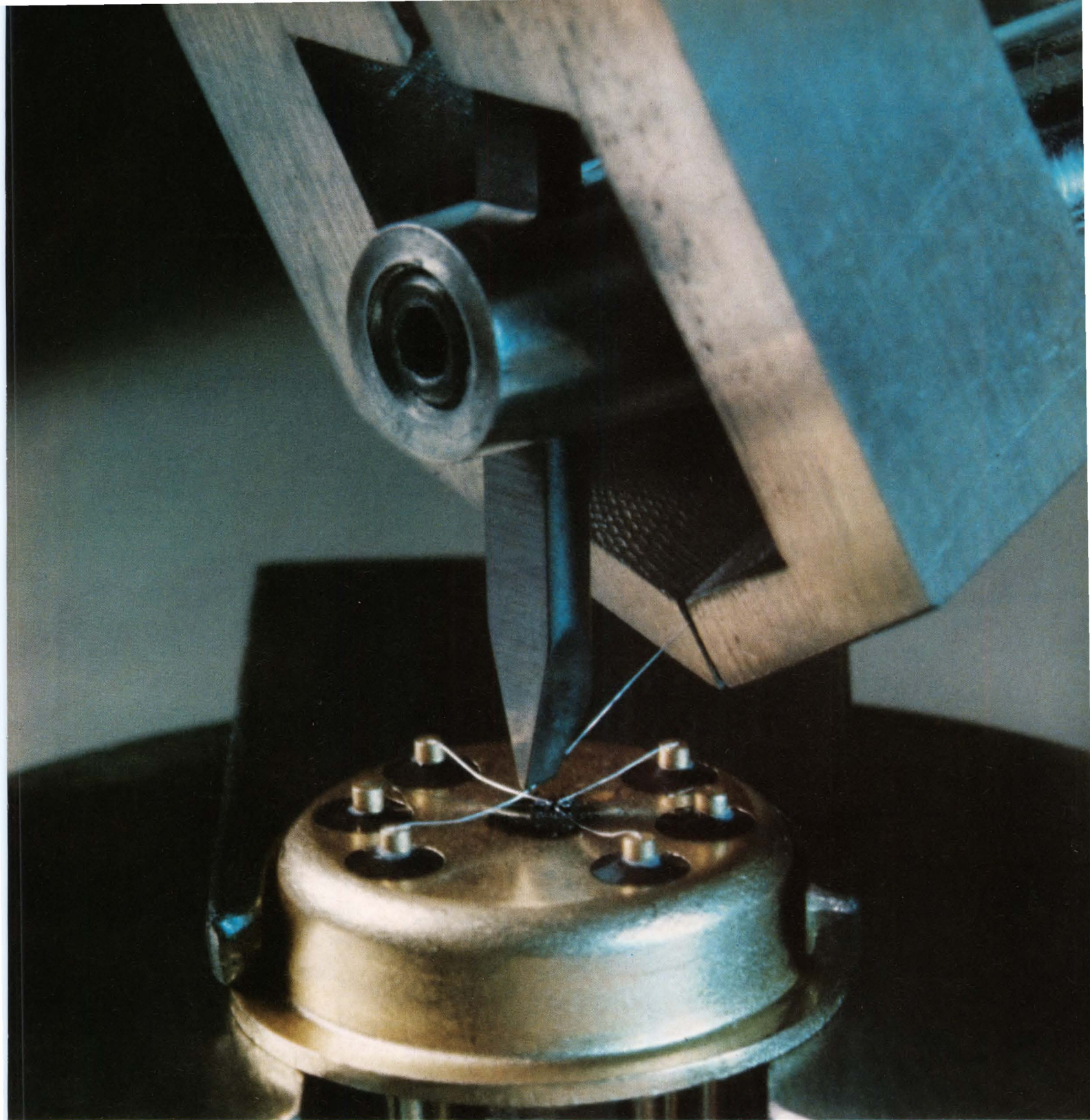
2N580-2N719A

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SRV • SW • CMP •	<1w	V _{CE}	$\beta_{\text{at } c} \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
					h_{FE} (ma)	$f_{\alpha b} \text{ MHz}$	
PNP	GE	D-C VHF MIX SRV SAT CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	$f_T \text{ MHz}$	MIL
2N697	Me	•	.6	40	40-120	150	80 5
2N697A	PI	•	.8	60	40-120	150	150 5
2N698	Dd	•	.8	60	20-60	150	40 5
2N699	Dj	•	.6	80	40-120	150	80 5
2N699A	PI	•	.8	120	40-120	150	180 5
2N699B	PI	•	.87	80	40-120	150	70 5
2N700	Me	•	.075	20	4 min	2	17
2N700A	Me	•	.075	25	4 min	2	17
2N702	Me	•	.3	25	20-60	10	150 18
2N702A	Me	•	.3	25	20-60	10	18
2N703	Me	•	.3	25	40-100	10	150 18
2N703A	Me	•	.3	25	40-100	10	18
2N705	Me	•	.3	15	25 min	10	300 18
2N705A	Me	•	.15	15	25 min	10	300 18
2N706	Dd	•	.3	20	20 min	10	400 18
2N706/46	Me	•	.4	20	20 min	10	200 46
2N706/51	Me	•	.3	20	20 min	10	200 51
2N706A	Me	•	.3	20	20-60	10	400 18
2N706A/46	Me	•	.4	15	20-60	10	200 46
2N706A/51	Me	•	.3	15	20	10	200 51
2N706B	Me	•	.3	20	20-60	10	400 18
2N706B/46	Me	•	.4	20	20-60	10	400 46
2N706B/51	Me	•	.3	20	20-60	10	400 51
2N706C	Dd	•	.36	20	20-60	10	400 18
2N706C/46	Me	•	.4	15	20 min	10	200 46
2N706C/51	Me	•	.3	15	20 min	10	200 51
2N707	Dd	•	.3	28	9 min	10	400 18
2N707A	Me	•	.3	71	30	10	500 18
2N708	PI	•	.36	15	30-120	10	400 18
2N708/46	PI	•	.36	20	30 min	10	480 46
2N708/51	PI	•	.36	20	30 min	10	480 51
2N708A	PI	•	.36	20	40 min	10	400 18
2N709	PI	•	.3	6	20-120	10	800 18
2N709/51	PI	•	.3	6	55	10	800 51
2N709A	PI	•	.3	6	30-90	10	18
2N710	Me	•	.3	15	25 min	10	300 18
2N711	Me	•	.3	12	20 min	10	300 18
2N711A	Me	•	.15	7	25-150	10	150 18
2N711B	Me	•	.15	7	30-150	10	150 18
2N715	Me	•	.5	35	30	15	150 18
2N716	Me	•	.5	40	30	15	150 18
2N717	Dj	•	.4	40	20-60	150	60 18
2N718	Dd	•	.4	40	40-120	150	80 18
2N718A	PI	•	.5	50	40-120	150	80 18
2N719	Dd	•	.4	80	20-60	150	70 18
2N719A	PI	•	.5	80	20-60	150	70 18

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SRV • SW • CMP •	<1w	V _{CE}	$\beta_{\text{at } c} \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
					h_{FE} (ma)	$f_{\alpha b} \text{ MHz}$	
PNP	GE	D-C VHF MIX SRV SAT CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	$f_T \text{ MHz}$	MIL
2N638A	Aj	•	60	55	20-40	3	3
2N638B	Aj	•	60	65	20-40	3	3
2N639	Aj	•	37	40	15-30	3	3
2N639A	Aj	•	37	70	15-30	3	3
2N639B	Aj	•	37	80	15-30	3	3
2N647	Aj	•	.1	25	70	50	1
2N647/22	Aj	•	.18	25	70	50	22
2N649	Aj	•	.1	18	65	50	1
2N649/22	Aj	•	.18	18	65	50	22
2N650	Aj	•	.2	30	33 min	10	1.5 5
2N650A	Aj	•	.2	30	33 min	10	.75 5
2N651	Aj	•	.2	30	45 min	10	2 5
2N651A	Aj	•	.2	30	45 min	10	1 5
2N652	Aj	•	.2	30	80 min	10	2.5 5
2N652A	Aj	•	.2	30	80 min	10	1.25 5
2N653	Aj	•	.2	25	30-70	1	1.5 5
2N654	Aj	•	.2	25	50-125	1	2 5
2N655	Aj	•	.2	25	100-250	1	2.5 5
2N656	Me	•	4	60	30-90	200	5 5
2N656A	Dr	•	5	60	30-90	200	5 5
2N657	Me	•	4	100	30-90	200	5 5
2N657A	Dr	•	5	100	30-90	200	5 5
2N658	Fa	•	.21	18	25-80	50	5 5
2N659	Fa	•	.21	16	40-115	50	10 5
2N660	Fa	•	.21	14	60-160	50	15 5
2N661	Fa	•	.21	9	80 min	50	20 5
2N662	Fa	•	.21	14	30 min	50	8 5
2N663	Aj	•	37	25	25-75	500	15* 3
2N665	Aj	•	37	40	40-80	500	20* 3
2N669	Aj	•	90	30	75-250	500	5* 3
2N670	Aj	•	.3	40	40-250	1	.5 26
2N671	Aj	•	1	40	40-250	1	.5 26
2N672	Aj	•	.3	25	100	1	.2 26
2N673	Aj	•	1	25			
2N677	Aj	•	90	20	20-60	10	3 3
2N677A	Aj	•	90	30	20-60	10	3 3
2N677B	Aj	•	90	60	20-60	10	3 3
2N677C	Aj	•	90	70	20-60	10	3 3
2N678	Aj	•	90	20	50-100	10	3 3
2N678A	Aj	•	90	30	50-100	10	3 3
2N678B	Aj	•	90	60	50-100	10	3 3
2N678C	Aj	•	90	70	50-100	10	3 3
2N679	Aj	•	.15	20	20 min	30	2 5
2N680		•	.15	20	35		
2N695	Me	•	.075	15	25 min	10	250 17
2N696	Dd	•	.6	40	20-60	150	60 5
2N696A	PI	•	.8	60	20-60	150	150 5

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SRV • SW • CMP •	<1w	V _{CE}	$\beta_{\text{at } c} \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
					h_{FE} (ma)	$f_{\alpha b} \text{ MHz}$	
PNP	GE	D-C VHF MIX SRV SAT CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	$f_T \text{ MHz}$	MIL
2N580	Aj	•	.12	14	30 min	400	15 5
2N581	Aj	•	.08	15	20 min	20	8 5
2N582	Aj	•	.12	14	40 min	20	14 5
2N583	Aj	•	.08	15	20 min	20	8 1
2N584	Aj	•	.12	14	40 min	24	14 1
2N585	Aj	•	.12	25	20 min	20	5 5
2N586	Aj	•	.25	45	35 min	250	
2N587	Aj	•	.2	30	20 min	200	5
2N588	Ma	•	.03	15	14db@50 Mc	250A	1
2N591	Aj	•	.05	32	70	2	.7 1
2N592		•		20	15 min	1*	4 5
2N594*	Aj	•	.15	20	20 min	1	1.5 9
2N595*	Aj	•	.15	15	35 min	1	3 9
2N596*	Aj	•	.15	10	50 min	1	5 9
2N597	Aj	•	.25	40	40 min	100	8 9
2N598	Aj	•	.25	35	70-225	100	8 9
2N599	Aj	•	.25	25	100 min	100	16 9
2N600	Aj	•	.75	35	70-225	100	12 31
2N601		•	.75	30	100 min	100	
2N602		•		20	20-80	.5*	5
2N603		•		20	30-100	.5*	5
2N604		•		20	40-140	.5*	5
2N609	Fu	•	.18	25	90	100	1.8 5
2N610	Fu	•	.18	25	65	100	1.5 5
2N611	Fu	•	.18	25	45	100	1 5
2N612	Fu	•	.18	25	25	1	.6 5
2N613	Fu	•	.18	25	35	1	.85 5
2N617	Aj	•	.125	15	15	.5	7.5 5
2N618	Aj	•	90	60	60-140	1	8.5* 3
2N627	Aj	•	90	30	10-30	10	8* 3
2N628	Aj	•	90	45	10-30	10	8* 3
2N629	Aj	•	90	60	10-30	10	8* 3
2N630	Aj	•	90	75	10-30	10	8* 3
2N631	Fu	•	.17	18	200	10	3.5 5
2N632	Fu	•	.17	24	120	50	2.5 5
2N633	Fu	•	.17	30	60	50	1.5 5
2N634	Aj	•	.15	15	15 min	200	8 9
2N634A	Aj	•	.15	20	55	10	8 5
2N635	Aj	•	.15	15	25 min	200	12 9
2N635A	Aj	•	.15	20	100	10	12.5 5
2N636	Aj	•	.15	15	35 min	200	17 9
2N636A	Aj	•	.15	15	190	10	17 5
2N637	Aj	•	60	30	30-60	3	3 3
2N637A	Aj	•	60	55	30-60	3	3 3
2N637B	Aj	•	60	65	30-60	3	3 3
2N638	Aj	•	60	30	20-40	3	3 3

(Continued)



Craftsmanship in hard materials...an industry standard

HIGH PRECISION TUNGSTEN CARBIDE BONDING TOOLS, SUCH AS THE ONE SHOWN IN THIS 13X MAGNIFICATION OF AN ULTRASONIC LEAD BONDING OPERATION, WERE PIONEERED AND INTRODUCED AS PRODUCTION DEVICES BY TEMPRESS... IN 1963, THE TEMPRESS CAPILLARY TUBE, AN INDUSTRY STANDARD... IN 1967, THE ULTRASONIC BONDING TOOL, AN INDUSTRY STANDARD. The techniques and the specialized machinery developed to produce such precision products from ultra-hard materials have not been duplicated; quite probably will not be, for they are a result of the unique combination of Tempress people and the

Tempress philosophy. To meet its responsibilities, Tempress maintains a continuing expansion program, limited only by strict adherence to the Tempress Standard of Excellence. (It requires as long as 11 months to train an operator for certain operations.) The same uncompromising standard is applied to Tempress Automatic Scribing Machines and to the entire growing family of Tempress miniature assembly tools and production equipment.

LEAD BONDING, DUAL FET, COURTESY OF UNION CARBIDE ELECTRONICS



TEMPRESS

Tempress Research Co., 566 San Xavier Ave., Sunnyvale, Calif. 94086

Circle No. 31 on Reader-Service Card for more information.

Amperex Semiconductors

GERMANIUM TRANSISTORS

(METAL CANS)

Audio, Low Level

TYPE	CONSTRUCTION
2N2428	TO-1
2N2429	TO-1
2N2430	TO-1
2N2706	TO-1

Audio, Power

TYPE	CONSTRUCTION
2N2431	TO-1
2N2431 (MP)	TO-1
2N2707 (CP)	TO-1
2N4077	Small TO-3
2N4078	Small TO-3
2N4078 (MP)	Small TO-3
2N4079 (CP)	Small TO-3
2N4106	TO-1
2N4107 (CP)	TO-1
2N4136 (CP)	TO-1
2N4241	TO-3
2N4241 (MP)	TO-3

R. F. Amplifiers

TYPE	CONSTRUCTION
2N987	TO-18
USA 2N987	TO-18
2N990	TO-18
2N993	TO-18
2N1224	TO-5
USA 2N1224	TO-5
2N1225	TO-5
USA 2N1225	TO-5
2N1226	TO-5
2N1395	TO-5
2N1396	TO-5
2N2084	TO-5
USA 2N2084	TO-5
2N2089	TO-5
2N2092	TO-5
2N2495	TO-5
2N2496	TO-18
2N2654	TO-5
2N2671	TO-5
2N2672	TO-5
2N3399	TO-18
2N3588	TO-18

Switches

TYPE	CONSTRUCTION
1302 (PNP)	TO-5
1303 (PNP)	TO-5
1304 (NPN)	TO-5
1305 (PNP)	TO-5
1306 (NPN)	TO-5
1307 (PNP)	TO-5
1308 (NPN)	TO-5
1309 (PNP)	TO-5

CP = Complementary Pair
MP = Matched Pair

N-CHANNEL, JUNCTION FETS

(Metal TO-18's)

TYPE	APPLICATION
2N4221	A. F. Amplifier
2N4221A	A. F. Amplifier
2N4222	A. F. Amplifier
2N4222A	A. F. Amplifier
2N4391	High speed switch
2N4392	High speed switch
2N4393	High speed switch
2N5103	Low Level, Low Noise
2N5104	Low Level, Low Noise
2N5105	Low Level, Low Noise
A190	Low Level, Low Noise
A191	Low Level, Low Noise
A192	R. F. Amplifier
A193	R. F. Amplifier
2N3823	R. F. Amplifier

FETS, ZENERS, DUAL ISOLATED DIODES, RF & IF AMPLIFIERS & SWITCHES available in LIDS

LIDS, (Leadless Inverted Devices) introduced by Amperex are the microelectronic packages for semiconductors which brought mechanized production to hybrid circuit manufacture.

TYPE	DESCRIPTION
LDA 400/401	Low level amplifier (NPN) similar to 2N929/2N930
LDA 402/403	Medium current switch and amplifier (NPN)
LDA 404/405	Medium current switch and amplifier (NPN) similar to 2N2218/2N2219
LDA 406/407	Very high frequency amplifier (NPN) similar to 2N918/2N2857
LDA 410	High gain, low capacity IF amplifier (NPN)
LDA 450/451	Low current amplifier and switch (PNP) similar to 2N2604
LDA 452/453	Medium current amplifier and switch (PNP) similar to 2N2904/2N2905
LDD 5	Single fast diode similar to IN914
LDD 10	Dual diode common cathode similar to IN914
LDD 50	Dual diode common anode (IN914)
LDD 15	Dual diode fully isolated (IN914)
LDF 603/604/605	Junction field effect transistor DC-100 MHz
LDS 200/201	High speed switch (NPN) similar to 2N2368/2N2369
LDS 205	Very high speed switch similar to 2N709 (NPN)
LDS 206/208	D/A switch (NPN)
LDZ 70 Series	5% zener diode 4 to 10 Volts

DIODES

Germanium

TYPE	DESCRIPTION
A20	Bias diode
IN34A	General Purpose
IN67A	General Purpose
IN68A	General Purpose
IN87	Small Signal Detector
IN87A	Small Signal Detector
IN90	General Purpose
IN116	General Purpose
IN117	General Purpose
IN126	General Purpose
IN128	General Purpose
IN191	Switching
IN270	High Conductance
IN541	Small Signal Detector
IN542	Small Signal Detector
IN616	General Purpose
IN617	General Purpose
IN618	General Purpose
IN698	Switching
AA119MP	Small Signal Detector
AA119	Small Signal Detector

Silicon

TYPE	DESCRIPTION
A13	Switching
A23	Switching
A33	H. F. Varicap
A34	H. F. Varicap
A35	H. F. Varicap
A45	Clamping
A48	Clamping
A74	High Voltage Rectifier
A82	R. F. Switch
A93	H. F. Varicap Triplet
A94	H. F. Varicap Triplet
A95	H. F. Varicap Triplet
BA114	Stabistor
BY100	Power Rectifier
BY122	Bridge Rectifier
BY123	Bridge Rectifier
BY126	Power Rectifier
BY127	Power Rectifier
IN914	Switching
IN914A	Switching
IN3182	Varicap

INTEGRATED CIRCUITS

Hybrid Linear Thin Film

TYPE	DESCRIPTION
ATF 401	Operational amplifier
ATF 402	High gain operational amplifier

Monolithic, Linear, Silicon

TYPE	DESCRIPTION
TAB 101	Ring modulator/demodulator
TAA 103	3-stage, low-level amplifier
OM 200	Hearing-aid amplifier
TAA 263	3-stage, DC coupled, low-level amplifier
TAA 293	3-stage preamplifier
TAA 310	AF high-gain preamplifier
TAA 320	MOS/Bipolar amplifier
TAA 350	IF strip, FM and TV sound
TAA 370	1 mw hearing-aid amplifier

SILICON POWER DEVICES

RF Power Transistors (NPN)

TYPE	PACKAGE
A201	TO-60
A210	TO-39
A211	TO-39
2N3924	TO-5
2N3926	TO-60
2N3927	TO-60
2N3375	TO-60
2N3553	TO-5
2N3632	TO-60
2N3866	TO-39
2N4427	TO-39

Varactors (DO-4's)

TYPE	DESCRIPTION
IN4885	UHF, VHF HiFrequency Multiplier 24W output
IN4886	UHF, VHF HiFrequency Multiplier 16W output

Hi-Voltage Switch (TO-3)

A705	1400V, 25 Amps Switch
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and Microcircuits

SILICON SIGNAL TRANSISTORS

Low Level Audio

TYPE	PACKAGE	CONSTRUCTION
A141	Micro Min	NPN
A142	Micro Min	NPN
A143	Micro Min	NPN
A151	Micro Min	NPN
A152	Micro Min	NPN
A153	Micro Min	NPN
A157	TO-18	NPN
A158	TO-18	NPN
A159	TO-18	NPN
A177	TO-18	PNP
A178	TO-18	PNP
A179	TO-18	PNP
A747	Autosert*	NPN
A748	Autosert*	NPN
A749	Autosert*	NPN
A757	Autosert*	PNP
A758	Autosert*	PNP
A759	Autosert*	PNP

RF Amplifier

TYPE	PACKAGE	CONSTRUCTION
A415	TO-18	NPN
A417	TO-18	NPN
A418	TO-18	NPN
A419	TO-18	NPN
A420	TO-18	NPN
A430	TO-18	NPN
A431	TO-71	NPN
A444	PLASTIC	NPN
A445	PLASTIC	NPN
A467	TO-18	NPN
A473	TO-18	NPN
A482	TO-18	NPN
A483	TO-18	NPN
A484	TO-18	NPN
A485	TO-18	NPN
A490	TO-18	NPN
A492	TO-18	NPN
A494	Autosert*	NPN
A495	Autosert*	NPN
A496	Autosert*	NPN
A497	Autosert*	NPN
A777	TO-5	NPN
A778	TO-5	NPN
A779	TO-5	NPN
2N2857	TO-18	NPN
2N5053	TO-18	NPN
2N5054	TO-18	NPN

* new transistor configuration with rigid alloy leads that permits automatic insertion into all standard PC boards.



ACTUAL SIZE

HEAVY CURRENT, POWER CONTROL DEVICES

Diodes

TYPE	DESCRIPTION
BYX25 Series	600 to 1000V, 20A
BYX30 Series	200 to 600V, 14A
BYX39 Series	600 to 1000V, 6A
BYX38 Series	300 to 1200V, 2.5A
BYX42 Series	300 to 1000V, 10A

For Reverse Polarity on above add R to type number when specifying.

Thyristors

TYPE	DESCRIPTION
BTX47	11.5 A average, 1000V, 1200V, 1400V
BTX48	16.0 A average, 1000V, 1200V, 1400V
BTX49/BTX50	70.0 A average, 1000V, 1200V, 1400V

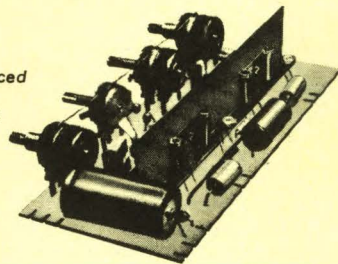
Rectifier Stacks

Series 9110 and Series 9210 Rectifier Stacks are assemblies of the standard BYX25/1000R and BYX39/100R series of rectifiers listed above and are available to your custom specifications.

SOLID STATE, PRINTED CIRCUIT ASSEMBLIES

Audio Amplifiers

Employing the most advanced Complementary Symmetry designs, Amperex assemblies provide the ultimate in economical circuitry for reliable audio applications from one watt to twenty.



TYPE	DESCRIPTION
PCA-3B-18-1	4W/Channel Stereo Amplifier with Volume, Balance, Treble and Bass Controls
PCA-4-9	1W, Single Channel Amplifier for Guitar, P.A. or Microphone
PCA-4-9A	Same as PCA-4-9 with Treble Control
PCA-4-18	3.5W Single Channel Amplifier for Guitar, P.A. or Microphone
PCA-4-18A	Same as PCA-4-18 with Treble Control
PCA-6A-25	10W/Channel Stereo Amplifier with 0.5 volt Sensitivity for Ceramic Cartridge, Tuner, etc.
PCA-6A-25SCS	Same as PCA-6A-25 but with Separate Preamplifier Section
PCA-8-36	20W Single Channel Power Amplifier with 0.5 volt Sensitivity. No controls
PCA-10-36	15W Guitar Amplifier with Tone, Volume and Tremolo Controls

DIFFERENTIAL DUAL TRANSISTORS

TO-77's	DESCRIPTION
A600	NPN, 10% hFE, 10mV, 10 μ V/ $^{\circ}$ C
A601	NPN, 10% hFE, 10mV, 10 μ V/ $^{\circ}$ C
A602	NPN, 20% hFE, 20mV, 20 μ V/ $^{\circ}$ C
A603	NPN, 20% hFE, 5mV, 10 μ V/ $^{\circ}$ C
A604	NPN, 20% hFE, 10mV, 10 μ V/ $^{\circ}$ C
A605	NPN, 10% hFE, 5mV, 10 μ V/ $^{\circ}$ C
A606	NPN, 10% hFE, 10mV, 10 μ V/ $^{\circ}$ C
A607	NPN, 10% hFE, 1.5mV, 5 μ V/ $^{\circ}$ C
A608	NPN, 10% hFE, 3mV, 10 μ V/ $^{\circ}$ C
A646	NPN, 40% hFE, 20mV, 30 μ V/ $^{\circ}$ C
2N2913	NPN, medium gain, low cost
2N2914	NPN, high gain, low cost
2N2915	NPN, 10% hFE, 3mV, 10 μ V/ $^{\circ}$ C
2N2916	NPN, 10% hFE, 3mV, 10 μ V/ $^{\circ}$ C
2N2917	NPN, 20% hFE, 5mV, 20 μ V/ $^{\circ}$ C
2N2918	NPN, 20% hFE, 5mV, 20 μ V/ $^{\circ}$ C
2N2919	NPN, 10% hFE, 3mV, 10 μ V/ $^{\circ}$ C
2N2920	NPN, 10% hFE, 3mV, 10 μ V/ $^{\circ}$ C
2N4315	NPN, 10% hFE, 10mV, 10 μ V/ $^{\circ}$ C

TEC's*	DESCRIPTION
A640	NPN, 10% hFE, 3mV, 10 μ V/ $^{\circ}$ C
A641	NPN, same as A640 except hFE, 80-200
A642	NPN, same as A640 except hFE, 160-400
A643	NPN, 20% hFE, 15mV, 50 μ V/ $^{\circ}$ C
A644	NPN, same as A643 except hFE, 60-300
A645	NPN, same as A643 except hFE, 120-600
A647	PNP, 20% hFE, 15mV, 50 μ V/ $^{\circ}$ C
A648	PNP, 20% hFE, 15mV, 50 μ V/ $^{\circ}$ C
A649	NPN, 10% hFE, 1mV, 3 μ V/ $^{\circ}$ C

*TEC units are two matched TO-18's in a thermal equalizing clip.

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS

AMPEREX ELECTRONIC CORPORATION

Semiconductor Factory, Slatersville, Rhode Island 02876
Distributor Sales Dept., Hicksville, L. I., New York 11802

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC LIN	SW CHP	$\beta @ I_c \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
					h_{FE} (ma)	$f_{\alpha b} \text{ MHz}$	
PNP	GE	D-C VHF	MIX SRV	SAT CMP	$\geq 1w$	V_{CB}	h_{fe} (amp)
						T_T MHz	MIL
2N720	Dd	•	•	•	.4	80	40-120
2N720A	PI	•	•	•	.5	80	40-120
2N721	Dd	•	•	•	.4	35	20-45
2N721A		•	•	•	1.8	50	32
2N722	Dd	•	•	•	.4	35	30-90
2N722A	Ep	•	•	•	.5	35	30-90
2N726	Me	•	•	•	.3	20	15-45
2N727	Me	•	•	•	.3	20	40-120
2N728	Me	•	•	•	.3	15	20 min
2N729	Me	•	•	•	.3	30	20 min
2N730	PI	•	•	•	.5	40	20-60
2N731	PI	•	•	•	.5	40	40-120
2N734	Me	•	•	•	.5	60	20-50
2N735	Me	•	•	•	.5	60	40-100
2N736	Me	•	•	•	.5	60	80-200
2N736A	Me	•	•	•	.5	60	60-200
2N736B	PI	•	•	•	.5	60	80-200
2N738	Me	•	•	•	.5	80	20-50
2N739	Me	•	•	•	.5	80	40-100
2N740	Me	•	•	•	.5	80	80-200
2N740A	PI	•	•	•	.5	80	80-200
2N741	Me	•	•	•	.15	15	20 min
2N741A	Me	•	•	•	.15	20	20 min
2N742	Me	•	•	•	.5	60	20 min
2N742A	Me	•	•	•	.5	60	20 min
2N743	Ep	•	•	•	.3	12	20-60
2N743A		•	•	•		15	50-60
2N743/46	Ep	•	•	•	.4	12	20-60
2N743/51	Ep	•	•	•	.3	12	20-60
2N744	Ep	•	•	•	.3	12	40-120
2N744A		•	•	•		15	40-120
2N744/46	Ep	•	•	•	.4	12	40-120
2N744/51	Ep	•	•	•	.3	12	40-120
2N752	Me	•	•	•	.5	45	40-120
2N753	Me	•	•	•	.3	20	40-120
2N753/46	Me	•	•	•	.4	20	40-120
2N753/51	Me	•	•	•	.3	20	40-120
2N754	Me	•	•	•	.3	60	20-80
2N755	Me	•	•	•	.3	80	20-80
2N756	Me	•	•	•	.5	45	12-22
2N756A	Me	•	•	•	.5	60	12-22
2N757	Me	•	•	•	.5	45	18-40
2N757A	Me	•	•	•	.5	60	18-40
2N758	Me	•	•	•	.5	45	18-90
2N758A	Me	•	•	•	.5	60	18-90

(Continued)

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC LIN	SW CHP	$\beta @ I_c \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
					h_{FE} (ma)	$f_{\alpha b} \text{ MHz}$	
PNP	GE	D-C VHF	MIX SRV	SAT CMP	$\geq 1w$	V_{CB}	h_{fe} (amp)
						T_T MHz	MIL
2N758B	PI	•	•	•	.5	60	18-90
2N759	Me	•	•	•	.5	45	36-90
2N759A	Me	•	•	•	.5	60	36-90
2N759B	PI	•	•	•	.5	60	36-90
2N760	Me	•	•	•	.5	45	76-333
2N760A	Me	•	•	•	.5	60	76-333
2N760B	PI	•	•	•	.5	60	76-333
2N761	Me	•	•	•	.5	50	20-55
2N762	Me	•	•	•	.5	50	45-150
2N768	Md	•	•	•	.035	10	25 min
2N769	Md	•	•	•	.035	7	25 min
2N779A	Md	•	•	•	.06	15	50-200
2N780	Me	•	•	•	.3	45	35-140
2N781	Ep	•	•	•	.15	15	25 min
2N782	Ep	•	•	•	.15	12	20 min
2N783	Me	•	•	•	.3	20	20-80
2N784	Ep	•	•	•	.1	30	25 min
2N784A	Me	•	•	•	.36	20	25-150
2N784A/46	Me	•	•	•	.4	20	25-150
2N784A/51	Me	•	•	•	.3	20	25-150
2N794	Me	•	•	•	.12	12	30 min
2N795	Me	•	•	•	.12	12	30 min
2N796	Me	•	•	•	.12	12	50 min
2N797	Me	•	•	•	.15	7	40-85
2N827	Me	•	•	•	.15	20	100 min
2N828	Me	•	•	•	.15	15	25 min
2N828A	EP	•	•	•	.15	15	25 min
2N829	Ep	•	•	•	.15	15	80
2N834	Ep	•	•	•	.3	30	25 min
2N834/46	Ep	•	•	•	.4	30	25 min
2N834A		•	•	•	1.2	30	25
2N835	Ep	•	•	•	.3	20	20 min
2N835/46	Ep	•	•	•	.4	20	20 min
2N835/51	Ep	•	•	•	.3	20	20 min
2N838		•	•	•	.15	30	30 min
2N839	Me	•	•	•	.3	45	20-45
2N840	Me	•	•	•	.3	45	40-90
2N841	Me	•	•	•	.3	45	80-330
2N842	Me	•	•	•	.3	45	20-50
2N843	Me	•	•	•	.3	45	45-150
2N844	Me	•	•	•	.3	60	40-120
2N845	Me	•	•	•	.3	80	40-120
2N846A	Md	•	•	•	.06	15	20-100
2N849	Me	•	•	•	.3	15	20-60
2N850	Me	•	•	•	.3	15	40-120

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC LIN	SW CHP	$\beta @ I_c \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
					h_{FE} (ma)	$f_{\alpha b} \text{ MHz}$	
PNP	GE	D-C VHF	MIX SRV	SAT CMP	$\geq 1w$	V_{CB}	h_{fe} (amp)
						T_T MHz	MIL
2N851	Ep	•	•	•	.3	12	20-60
2N852	Ep	•	•	•	.3	12	40-120
2N858	Pa	•	•	•	.15	40	10 min
2N859	Pa	•	•	•	.15	40	35
2N860	Pa	•	•	•	.15	25	20
2N861	Pa	•	•	•	.15	25	25 min
2N862	Pa	•	•	•	.15	15	12 min
2N863	Pa	•	•	•	.15	15	25-100
2N864	Pa	•	•	•	.15	6	20-100
2N865	Pa	•	•	•	.15	6	45-125
2N869	PI	•	•	•	.36	18	20 min
2N869A	PI	•	•	•	.36	18	40-120
2N870	PI	•	•	•	.5	60	40-120
2N871	PI	•	•	•	.5	60	100-300
2N909	Me	•	•	•	.4	30	110 min
2N910	PI	•	•	•	.5	60	75 min
2N911	PI	•	•	•	.5	60	35 min
2N912	PI	•	•	•	.5	60	15 min
2N913	Ep	•	•	•	.36	25	75
2N914	PI	•	•	•	.36	15	30-120
2N914/46	PI	•	•	•	.36	15	30-120
2N914/51	PI	•	•	•	.36	15	30-120
2N915	PI	•	•	•	.36	50	50-200
2N916	PI	•	•	•	.36	25	50-200
2N917	PI	•	•	•	.2	15	20 min
2N918	PI	•	•	•	.2	15	20 min
2N919	Me	•	•	•	.36	15	20-60
2N920	Me	•	•	•	.36	15	40-120
2N921	Me	•	•	•	.36	25	20-60
2N922	Me	•	•	•	.36	25	40-120
2N923	Aj	•	•	•	.15	25	12-30
2N924	Aj	•	•	•	.15	25	24-70
2N925	Aj	•	•	•	.15	40	10-24
2N926	Aj	•	•	•	.15	40	20-55
2N927	Aj	•	•	•	.15	60	8-22
2N928	Aj	•	•	•	.15	60	18-50
2N929	PI	•	•	•	.3	45	40-120
2N929A	PI	•	•	•	.5	45	25 min
2N930	PI	•	•	•	.3	45	100-300
2N930A	PI	•	•	•	.4	45	60 min
2N934	Ep	•	•	•	.15	13	40
2N935	Aj	•	•	•	.385	40	6 min
2N936	Aj	•	•	•	.385	35	9 min

Transistors

2N720-2N936

Our airborne switches and relays are finding a home in military systems down below.

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prompt availability,
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CUTLER-HAMMER
Milwaukee, Wisconsin 53201



Transistors

2N937-2N1045-2

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1 w	V _{CE}	$\beta @ I_C$ or I_B^*		$f_{\alpha e}$ kHz	
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\geq 1 w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N1029A	Aj	•				•		90	30	20-60	10		
2N1029B	Aj	•				•		90	60	20-60	10		
2N1029C	Aj	•				•		90	70	20-60	10		
2N1030	Aj	•				•		90	20	50-100	10		
2N1030A	Aj	•				•		90	30	50-100	10		
2N1030B	Aj	•				•		90	60	50-100	10		
2N1030C	Aj	•				•		90	70	50-100	10		
2N1031	Aj	•				•		90	20	20-60	10		41
2N1031A	Aj	•				•		90	30	20-60	10		41
2N1031B	Aj	•				•		90	60	20-60	10		41
2N1031C	Aj	•				•		90	70	20-60	10		41
2N1032	Aj	•				•		90	20	50-100	10		41
2N1032A	Aj	•				•		90	30	50-100	10		41
2N1032B	Aj	•				•		90	60	50-100	10		41
2N1032C	Aj	•				•		90	70	50-100	10		41
2N1034	Fa	•						.25	40	9-22	1	.2	5
2N1035	Fa	•						.25	35	18-42	1	.3	5
2N1036	Fa	•						.25	30	34-88	1	.5	5
2N1037	Fa	•						.25	35	9-42	1	.3	5
2N1038	Aj	•				•		20	30	30-60	1	10*	K
2N1038-1	Reregistered as 2N2552												
2N1038-2	Reregistered as 2N2556												
2N1039	Aj	•						20	40	30-60	1	10*	K
2N1039-1	Reregistered as 2N2553												
2N1039-2	Reregistered as 2N2557												
2N1040	Aj	•				•		20	50	30-60	1	10*	K
2N1040-1	Reregistered as 2N2554												
2N1040-2	Reregistered as 2N2558												
2N1041	Aj	•				•		20	60	30-60	1	10*	K
2N1041-1	Reregistered as 2N2555												
2N1041-2	Reregistered as 2N2559												
2N1042	Aj	•				•		20	30	20-60	3	10*	N
2N1042-1	Reregistered as 2N2560												
2N1042-2	Reregistered as 2N2564												
2N1043	Aj	•				•		20	40	20-60	3	10*	N
2N1043-1	Reregistered as 2N2561												
2N1043-2	Reregistered as 2N2565												
2N1044	Aj	•				•		20	50	20-60	3	10*	N
2N1044-1	Reregistered as 2N2562												
2N1044-2	Reregistered as 2N2566												
2N1045	Aj	•				•		20	60	20-60	3	10*	N
2N1045-1	Reregistered as 2N2563												
2N1045-2	Reregistered as 2N2567												

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	$\beta @ I_c \text{ or } I_B^*$		$f_{\alpha e}^* \text{ kHz}$		
									h_{FE}	(ma)	$f_{\alpha b} \text{ MHz}$		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	$f_T \text{ MHz}$	MIL
2N989	PI							.3	10	20 min	10	300	18
2N990	Pd							.067	32	150	1	70	18
2N993	Pd							.067	32	150	1	70	18
2N995	Ep							.36	15	35-140	20	200	18
2N995A	PI							1.2	20	35-140	20	200	18
2N996	Ep							.36	12	35 min	20	230	18
2N997	Ep	Darlington						.6	40	1000 min	.1		18
2N998	PI	Darlington						.5	60	1600 min	10		18
2N999	PI	Darlington						.5	60	7000 min	100		18
2N1000	Aj							.15	25	40 min	10	7	5
2N1007	Aj							.35	30	30	.5	5*	3
2N1008	Aj							.4	20	40-150	10	25*	9
2N1008A	Aj							.4	40	40-150	10	25*	9
2N1008B	Aj							.4	60	40-150	10	25*	9
2N1010	Aj							.02	10	35	1	2	1
2N1011	Aj							.35	70	30-75	3	5*	3
2N1012	Aj							.15	22	40 min	100	3	9
2N1015	Fu							.150	30	10 min	2	25*	L
2N1015A	Fu							.150	60	10 min	2	25*	L
2N1015B	Fu							.150	100	10 min	2	25*	L
2N1015C	Fu							.150	150	10 min	2	25*	L
2N1015D	Fu							.150	200	10 min	2	25*	L
2N1015E	Fu							.150	250	10 min	2	25*	L
2N1016	Fu							.150	30	10 min	5	30*	L
2N1016A	Fu							.150	60	10 min	5	30*	L
2N1016B	Fu							.150	100	10 min	5	30*	L
2N1016C	Fu							.150	150	10 min	5	30*	L
2N1016D	Fu							.150	200	10 min	5	30*	L
2N1016E	Fu							.150	250	10 min	5	30*	L
2N1017	Fu							.215	30	70 min	10	20	5
2N1018	Fu							.215	30	70 min	1	25	5
2N1021	Aj							.150	50	30-90	5	.43	3
2N1021A	Aj							.150	50	30-90	5	.2	3
2N1022	Aj							.150	55	30-90	5	.43	.3
2N1022A	Aj							.150	55	30-90	5	.2	3
2N1023	Dr							.12	40	60	1	120	44
2N1024	Aj							.25	15	9 min	1	1	5
2N1025	Aj							.25	35	9 min	1	1	5
2N1026	Aj							.25	35	18 min	1	2	5
2N1026A	Ep							.4	35	36	1	2	5
2N1027	Aj							.25	15	18 min	1	4	5
2N1028	Aj							.25	10	9 min	1	6	5
2N1029	Aj							.90	20	20-60	10		

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SRV	SW	CHP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*		f _{ce} *kHz	
										h _{FE}	(ma)	f _{cb} MHz	
PNP	GE	D-C	VHF	MIX	SAT	CMP		≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N937	Aj	•				•		.385	30	36 min	.1	.5	18
2N938	Aj	•				•		.25	35	9 min	1	1	18
2N939	Aj	•				•		.25	35	18 min	1	2	18
2N940	Aj	•				•		.25	35	36 min	1	2	18
2N941	Aj					•		.25	8	25 min	1	10	18
2N942	Aj					•		.25	8	25 min	1	10	18
2N943	Aj					•		.25	18			1	18
2N944	Aj					•		.25	18			1	18
2N945	Aj					•		.25	50			1	18
2N946	Aj					•		.25	80			1	18
2N947	PI					•		.36	15	30 min	10	300	18
2N955	Me					•		.15	12	50	30	1000	18
2N955A	Me					•		.15	12	50	30	1000	18
2N956	PI	•		•		•		.5	50	100-300	150	100	18
2N957	Dj		•	•		•		.25	20	45 min	10	300	18
2N960	Ep					•		.15	15	20-40	10	460	18
2N961	Ep					•		.15	12	20-40	10	460	18
2N962	Ep					•		.15	12	20-40	10	460	18
2N963	Ep					•		.15	10	20 min	10	300	18
2N964	Ep					•		.15	15	40-70	10	460	18
2N964A	Ep					•		.15	15	40 min	10	460	18
2N965	Ep					•		.15	12	40-70	10	460	18
2N966	Ep					•		.15	12	40-70	10	460	18
2N967	Ep					•		.15	10	40 min	10	300	18
2N968	Me					•		.15	15	20 min	25	320	18
2N969	Me					•		.15	12	20 min	25	320	18
2N970	Me					•		.15	12	20 min	25	320	18
2N971	Me					•		.15	7	20 min	25	320	18
2N972	Me					•		.15	15	40 min	25	320	18
2N973	Me					•		.15	12	40 min	25	320	18
2N974	Me					•		.15	12	40 min	25	320	18
2N975	Me					•		.15	7	40 min	25	320	18
2N976	Md					•		.1	10	80	20	900	18
2N978	Dd					•		.33	20	15-60	150	50	18
2N979	Md					•		.06	15	30 min	10	100	18
2N980	Md					•		.06	20	30 min	10	100	18
2N981		•						.5	3	36-100	10		18
2N982	Md					•		.06	15	50 min	10	450	18
2N983	Md					•		.06	15	40 min	10	450	18
2N984	Md					•		.06	10	70	10	350	18
2N985	Me					•		.3	7	60 min	100	300	18
2N986	PI	Photo				•		.5	60				18
2N987	Pd		•					.086	40	100	1	100	
2N988	PI		•			•		.3	10	20 min	10	300	18

(Continued)

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	$f_{\alpha e}$ kHz			
									h_{FE} (ma)	$f_{\alpha b}$ MHz			
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz		MIL
2N1046	Ad							60	50	60 min	5	20	3
2N1046A	Ad							30	5	20 min	4	20	3
2N1046B	Ad							30	50	10 min	10	20	3
2N1047	Me							40	80	12-36	500		M
2N1047A	Me							40	80	12-36	500	2	M
2N1047B	Me							40	80	12-36	500	90*	M
2N1048	Me							40	120	12-36	500		M
2N1048A	Me							40	120	12-36	500	2	M
2N1048B	Me							40	120	12-36	500	90*	M
2N1049	Me							40	80	30-90	500		M
2N1049A	Me							40	80	30-90	500	2	M
2N1049B	Me							40	80	30-90	500	90*	M
2N1050	Me							40	120	30-90	500		M
2N1050A	Me							40	120	30-90	500	2	M
2N1050B	Me							40	120	30-90	500	90*	M
2N1051								3	40	25	50		5
2N1052	Me							.6	200	20-80	200	12	5
2N1053	Me							.6	180	20-80	200	12	5
2N1054	Dj							.6	125	20-80	200	12	5
2N1055	Dj							.6	100	3	50	4	5
2N1056	A							.24	75	32	1	1	
2N1057	Aj							.24	30	34-90	20	1.5	I
2N1058	Aj							.15	18	10-23	1	4	22
2N1059	Aj							.18	15	50-100	35	10*	22
2N1060								.18	40	16.7	5		18
2N1065								20	20-80	.5*		10	5
2N1066	Dr							.12	40	60	1.5	120	33
2N1067	Dj							5	30	15-75	200	1.5	8
2N1068	Dj							10	30	15-75	750	1.5	8
2N1069	Dj							50	45	10-50	1.5	1.2	3
2N1070	Dj							50	45	10-50	1.5	1.2	3
2N1073	Ad							60	40	20-60	5	1.5	41
2N1073A	Ad							60	80	20-60	5	1.5	41
2N1073B	Ad							60	120	20-60	5	1.5	41
2N1078	Aj							20	45	30 min	500		13
2N1079								60	60	20-80	1		53
2N1080								60	60	20-80	2		53
2N1081								.6	40	20 min	500		5
2N1082								.2	25	10 min	10		5
2N1084	PI							.6	50	20-60	500	25	5
2N1085									50	40-120	500	.01	5
2N1086	Gj							.065	9	17-195	1	8	A
2N1086A	Gj							.065	9	17-195	1	8	A
2N1087	Gj							.065	9	17-195	1	8	A
2N1090	Aj							.12	18	30 min	20	7 min	5
2N1091	Aj							.12	15	40 min	20	10	5

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	$f_{\alpha e}$ kHz			
									h_{FE} (ma)	$f_{\alpha b}$ MHz			
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz		MIL
2N1092	Dj							2	30	15-75	200	1.5	5
2N1093	Aj							.15	30	125	1	8	
2N1097	Aj							.2	18	34-90	20	3	5
2N1098	Aj							.2	18	25-90	20	3	5
2N1099	Aj							150	80	35-70	5	10*	36
2N1100	Aj							150	100	25-50	5	10*	36
2N1101	Aj							.18	15	30-60	35	.01	22
2N1102	Aj							.18	25	30-60	35	.01	22
2N1107	Gd							.03	16	34db@455kc		40	22
2N1108	Gd							.03	16	33db@455kc		35	22
2N1109	Gd							.03	16	20db@455kc		30	22
2N1110	Gd							.03	16	29db@455kc		35	22
2N1111	Gd							.03	20	25db@455kc		35	22
2N1111A	Gd							.03	20	25db@455kc		35	22
2N1111B	Gd							.03	27	25db@455kc		35	22
2N1114	Aj							.15	25	110	20	10	5
2N1115	Aj							.15	15	35-110	60	5	A
2N1116	Ad							.6	60	40 min	500	6	5
2N1117	Ad							.6	60	40-150	200	30	5
2N1118	Sa							.15	25	15 min	1	18*	5
2N1118A	Sa							.15	25	15-35	1	18*	5
2N1119	Sa							.15	10	15 min	15	20	5
2N1120	Aj							.45	70	20-50	10	3*	41
2N1121	Gj							.065	15	34	1	8	A
2N1122	Ma							.025	12	25 min	10	40 min	24
2N1122A	Ma							.025	14	25 min	10	40 min	24
2N1123	Aj							.75	40	40 min	100	3	31
2N1124	Aj							.3	35	40 min	10	1.3	
2N1125	Aj							.3	40	50-150	500	1.6	
2N1128	Aj							.15	18	70-150	2	1.25	
2N1129	Aj							.15	25	100-200	100	.75	
2N1130	Aj							.15	30	130	10	.95	
2N1131	Dd							.6	35	20-45	150	70	5
2N1131A	PI							.6	40	20-45	150	70	5
2N1132	Dd							.6	35	30-90	150	90	5
2N1132A	PI							.6	40	30-90	150	90	5
2N1132B	PI							.6	45	30-90	150	90	5
2N1136	Aj							.60	30	50-100	3	.5	3
2N1136A	Aj							.60	55	50-100	3	.5	3
2N1136B	Aj							.60	65	50-100	3	.5	3
2N1137	Aj							.60	30	75-150	3	.5	3
2N1137A	Aj							.60	55	75-150	3	.5	3
2N1137B	Aj							.60	65	75-150	3	.5	3
2N1138	Aj							.60	30	100-200	3	.5	3
2N1138A	Aj							.60	55	100-200	3	.5	3

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	$f_{\alpha e}$ kHz			
									h_{FE} (ma)	$f_{\alpha b}$ MHz			
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz		MIL
2N1138B	Aj							.60	65	100-200	3	5	3
2N1139	Me							.5	15	40	10	15	5
2N1141	Me							.3	35	10 min	10	750	5
2N1141A	Me							.3	35			500	5
2N1142	Me							.3	30	10 min	10	600	5
2N1142A	Me							.3	30			400	5
2N1143	Me							.3	25	10 min	10	480	5
2N1143A	Me							.3	30			400	5
2N1144	Aj							.14	16	34-90	20		I
2N1145	Aj							.14	16	25-90	20		I
2N1146	Aj							.90	30	60-150	5	4*	3
2N1146A	Aj							.90	45	60-150	5	4*	3
2N1146B	Aj							.90	60	60-150	5	4*	3
2N1146C	Aj							.90	75	60-150	5	4*	3
2N1147	Aj							.90	30	60-150	5	4*	41
2N1147A	Aj							.90	45	60-150	5	4*	41
2N1147B	Aj							.90	60	60-150	5	4*	41
2N1147C	Aj							.90	75	60-150	5	4*	41
2N1149	Gj							.15	45	13	2	12	C
2N1150	Gj							.15	45	25	2	13	C
2N1151	Gj							.15	45	25	2	14	C
2N1152	Gj							.15	45	55	5	15	C
2N1153	Gj							.15	45	100	5	16	C
2N1154	Gj							.75	50	19	5	1	C
2N1155	Gj							.75	80	19	5	1	C
2N1156	Gj							.75	120	15	5	1	C
2N1157	Aj							.187	45	38-84	10	.2	0
2N1157A	Aj							.187	50	38-84	10	.2	0
2N1158	Ma							.06	20	50	3		9
2N1158A	Ma							.075	20	9 min	3	200	

Transistors

2N1168-2N1326

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • VHF • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	β @ _{I_C} or I _B *	f _{αe} * kHz	
					h _{FE} (ma)	f _{αb} MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	≅1w	V _{CB}	h _{fe} (amp)	f _T MHz	MIL
2N1273	Aj	•	.15	15	30-150	50	9
2N1274	Aj	•	.15	25	30-150	50	9
2N1275	Fa	•	.25	80	9-25	1	.2
2N1276	Gd	•	.15	30	9-22	1	30
2N1277	Gd	•	.15	30	18-44	1	30
2N1278	Gd	•	.15	30	37-90	1	30
2N1279	Gd	•	.15	30	76-333	1	34
2N1280	Aj	•	.2	16	60	20	5
2N1281	Aj	•	.2	20	90	10	7
2N1282	Aj	•	.2	16	100	20	10
2N1284		•	.2	20	90	10	5
2N1285	Dr	•	.12	40	100 max	1.5	100
2N1291	Aj	•	.90	30	30-90	500	.15
2N1292	Aj	•	.25	30	30 min	500	3
2N1293	Aj	•	.90	45	30-90	500	.15
2N1294	Aj	•	.25	45	30 min	500	3
2N1295	Aj	•	.90	80	40 min	500	.15
2N1296	Aj	•	.25	60	30 min	500	3
2N1297	Aj	•	.90	80	30-90	500	.15
2N1298	Aj	•	.25	75	30-90	500	3
2N1299	Aj	•	.2	20	30-110	50	4
2N1300	Me	•	.15	12	30 min	10	25 min
2N1301	Me	•	.15	12	30 min	10	35 min
2N1302	Aj	•	.15	25	20 min	10	4.5
2N1303	Aj	•	.15	30	20 min	10	4.5
2N1304	Aj	•	.15	25	40-200	10	8
2N1305	Aj	•	.15	30	40-200	10	8
2N1306	Aj	•	.15	25	60-300	10	12
2N1307	Aj	•	.15	30	60-300	10	12
2N1308	Aj	•	.15	25	80 min	10	20
2N1309	Aj	•	.15	30	80 min	10	20
2N1309A		•	.15	35	80 min	10	15
2N1310		•	.12	90	35	1	1
2N1311		•	.12	75	30	1	1.5
2N1312		•	.12	50	40	1	2
2N1313	Aj	•	.18	15	83 min	1	8
2N1314	Aj	•	.125	16	20-80	30	4.5*
2N1316	Aj	•	.2	15	100	1	10
2N1317	Aj	•	.2	12	95	1	10
2N1318	Aj	•	.2	6	85	1	10
2N1319	Aj	•	.12	20	15 min	400	6
2N1321	Aj	•	.25	30	30 min	500	10
2N1323	Aj	•	.25	45	30 min	500	10
2N1324	Aj	•	.80	40	40 min	500	10
2N1325	Aj	•	.25	60	30 min	500	10
2N1326	Aj	•	.20	80	30 min	500	10

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • VHF • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	β @ _{I_C} or I _B *	f _{αe} * kHz	
					h _{FE} (ma)	f _{αb} MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	≅1w	V _{CB}	h _{fe} (amp)	f _T MHz	MIL
2N1217		•	.075	20	40-100	2	9
2N1218	Aj	•	.6	45	40-160	100	7*
2N1219	Aj	•	.25	25	18 min	5	5
2N1220	Aj	•	.25	25	9 min	5	2
2N1221	Aj	•	.25	25	18 min	1	5
2N1222	Aj	•	.25	25	9 min	1	2
2N1223	Aj	•	.25	40	6 min	1	5
2N1224	Dr	•	.12	40	20-175	1.5	30
2N1225	Dr	•	.12	40	20-175	1.5	100
2N1226	Dr	•	.12	60	20-175	1.5	30
2N1227	Aj	•	.50	30	25-320	500	5*
2N1228	Aj	•	.4	15	14-32	1	1.2
2N1229	Aj	•	.4	15	28-65	1	1.2
2N1230	Aj	•	.4	35	14-32	1	1.2
2N1231	Aj	•	.4	35	28-65	1	1.2
2N1232	Aj	•	.4	60	14-32	1	1
2N1233	Aj	•	.4	60	28-65	1	1
2N1234	Aj	•	.4	110	14-32	1	.8
2N1238	Aj	•	.1	15	14-32	1	1.2
2N1239	Aj	•	.1	15	28-65	1	1.2
2N1240	Aj	•	.1	35	14-32	1	1.2
2N1241	Aj	•	.1	35	28-65	1	1.2
2N1242	Aj	•	.1	60	14-32	1	1
2N1243	Aj	•	.1	60	28-65	1	1
2N1244	Aj	•	.1	110	14-32	1	.8
2N1247	Dj	•	.03	6	15 min	.005	5
2N1248	Dj	•	.03	6	15 min	.02	5
2N1249	PI	•	.03	6	10 min	.03	5
2N1250	Dj	•	.45	60	15 min	2	12
2N1251	Aj	•	.15	15	70-250	1	7.5*
2N1252	Me	•	.6	20	15-45	150	80
2N1253	Dd	•	.6	20	30-90	150	110
2N1254	PI	•	.275	30	25-50	10	25
2N1255	PI	•	.275	30	40-80	10	40
2N1256	PI	•	.275	40	25-50	10	25
2N1257	PI	•	.275	40	40-80	10	40
2N1258	PI	•	.275	30	75-150	10	25
2N1259	PI	•	.275	50	25-100	10	40
2N1261	Aj	•	.34	45	20-50	2	.2
2N1262	Aj	•	.34	45	30-75	2	.2
2N1263	Aj	•	.34	45	45-113	2	.2
2N1265/5		•	.05	10	75	1	1
2N1266		•	.08	10	48	1	1

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • VHF • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	β @ _{I_C} or I _B *	f _{αe} * kHz	
					h _{FE} (ma)	f _{αb} MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	≅1w	V _{CB}	h _{fe} (amp)	f _T MHz	MIL
2N1168	Aj	•	.90	50	70 min	1	10*
2N1169	Aj	•	.12	18	20 min	200	7
2N1170	Aj	•	.12	20	20 min	200	7
2N1171	Fu	•	.17	12	30 min	1*	10
2N1175	Aj	•	.2	25	70-140	20	4.2
2N1175A	Aj	•	.2	25	70-140	20	4.2
2N1177	Dr	•	.08	30	100	1	140
2N1178	Dr	•	.08	30	40	1	140
2N1179	Dr	•	.08	30	80	1	140
2N1180	Dr	•	.08	30	80	1	100
2N1183	Aj	•	.1	20	20-60	400	.5
2N1183A	Aj	•	.1	30	20-60	400	.5
2N1183B	Aj	•	.1	40	20-60	400	.5
2N1184	Aj	•	.1	20	40-120	400	.5
2N1184A	Aj	•	.1	30	40-120	400	.5
2N1184B	Aj	•	.1	40	40-120	400	.5
2N1185	Aj	•	.2	30	190-400	1	3
2N1186	Aj	•	.2	45	30-70	1	1.5
2N1187	Aj	•	.2	45	50-120	1	2
2N1188	Aj	•	.2	45	100-225	1	2.5
2N1189		•	.2	30	75-175	1	3.5
2N1190		•	.2	30	125-300	1	4.5
2N1191	Aj	•	.2	25	30-70	1	1.5
2N1192	Aj	•	.2	25	50-125	1	2
2N1193	Aj	•	.2	25	100-250	1	2.5
2N1194	Aj	•	.2	25	190-500	1	3
2N1195	Me	•	.3	20	22	10	550
2N1198	Gj	•	.065	25	17	8	5
2N1199A		•	.15	20	36	20	125
2N1200		•	.1	20	100	1.5	4.3
2N1201		•	.1	20	100	1.5	12.5
2N1202	Aj	•	.34	60	40-120	500	.2
2N1203	Aj	•	.34	70	25-75	2	.2
2N1204	Me	•	.25	15	15 min	400	400
2N1204A		•	.2	15	725	.2	200
2N1205		•	.15	20	10 min	2	17
2N1206	Gj	•	.6	60	25-90	5	20
2N1207	Gj	•	.6	125	25-90	5	20
2N1208	Me	•	.45	60	15 min	2	12
2N1209	Me	•	.45	45	20 min	2	12
2N1210	Me	•	.60	60	15-75	2	8
2N1211	Me	•	.60	80	15-75	2	8
2N1212	Dj	•	.85	60	12-60	1	8

(Continued)

IF YOU GET CONSTANT VOLTAGE WHEN YOU VARY CURRENT IN ANY OF OUR ZENER DIODES, WHAT DO YOU GET WHEN YOU VARY TEMPERATURE?

MOTOROLA TEMPERATURE-COMPENSATED ZENER REFERENCE DIODES

Series	Voltage Change Over Temp. Range ΔV_z (Max)
1N821-29A ^{•†}	0.096 to 0.005
1N4565-84A	0.099 to 0.002
1N3154-57A ^{•†}	0.172 to 0.013
1N4775-84A	0.132 to 0.003
1N935-939B [•]	0.184 to 0.003
1N4765-74A	0.141 to 0.003
1N941-45B [•]	0.239 to 0.004
1N2620-24B	0.191 to 0.003
1N2163-71A	0.115 to 0.004
1N4896-15A	0.198 to 0.010
1N4916-32A	0.298 to 0.014
1N3580-83B	0.239 to 0.009
1N429**	0.050
1N1735-42A**	0.400 to 0.050
1N1530-30A**	0.014 to 0.007
1N2767-70A	0.316 to 0.079
1N4057-85A	1.550 to 0.038

[•]Available to MIL-S-19500 and Meg-A-Life II

^{**}Available to MIL-S-19500

[†]Precision reference availability

ONE OF THESE.

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We've prepared a special TC reference diode application package including a brochure and five new Designers Data Sheets* which discuss important considerations like the three most critical device selection parameters, results obtained when altering test currents, and special applications. It permits design of most circuits entirely from the data presented. Send for it — it's as complete and accurate as we could make it.

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Transistors

2N1327-2N1494A

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CMP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*		$f_{\alpha e}^*$ kHz	
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N1437	Aj					•		23	80	20 min	500	150*	13
2N1438	Aj	•				•		23	90	20 min	500	4*	10
2N1439	Aj	•			•			.4	40	5-12	1	1	5
2N1440	Aj	•			•			.4	40	9-22	1	1	5
2N1441	Aj	•			•			.4	35	18-36	1	1	5
2N1442	Aj	•			•			.4	30	30-65	1	1	5
2N1443	Aj	•			•			.4	15	50 min	1	1	5
2N1445	PI	•				•		.4	120	20-80	200		5
2N1446	Aj	•				•		.2	25	35	20	2	5
2N1447	Aj	•				•		.2	25	52	20	3	5
2N1448	Aj	•				•		.2	25	70	20	4	5
2N1449	Aj	•				•		.2	25	95	20	5	5
2N1450	Dr					•		.12	30	20 min	10		9
2N1451	Aj	•						.2	45	45	20	1.5	5
2N1452	Aj	•						.2	45	60	20	2.2	5
2N1465	Aj	•				•		.20	100	20 min	500		13
2N1466	Aj	•				•		.20	100	20 min	500		10
2N1469	Aj	•						.25	35	36 min	1	2	5
2N1471	Aj	•						.2	12	160	1	5	
2N1473	Aj					•		.25	40	25 min	400	8	5
2N1474	Aj	•				•		.25	60	12 min	1	1	5
2N1474A	Aj	•				•		.25	60	18 min	1	2	5
2N1475	Aj					•		.25	60	36 min	1	1	5
2N1476	Aj					•		.25	100	12 min	1	1	5
2N1477	Aj					•		.25	100	30 min	1	1	5
2N1478	Aj	•				•		.25	20	40 min	100	8	9
2N1479	Me	•			•	•	•	.5	40	20-60	200	1.5	5
2N1480	Me	•			•	•	•	.5	55	20-60	200	1.5	5
2N1481	Me	•			•	•	•	.5	40	35-100	200	1.5	5
2N1482	Me	•			•	•	•	.5	55	35-100	200	1.5	5
2N1483	Me	•			•	•	•	.25	40	20-60	750	1.25	8
2N1484	Me	•			•	•	•	.25	55	20-60	750	1.25	8
2N1485	Me	•			•	•	•	.25	40	35-100	750	1.25	8
2N1486	Me	•			•	•	•	.25	55	35-100	750	1.25	8
2N1487	Me	•			•	•	•	.75	40	15-45	1.5	1	3
2N1488	Me	•			•	•	•	.75	55	15-45	1.5	1	3
2N1489	Me	•			•	•	•	.75	40	25-75	1.5	1	3
2N1490	Me	•			•	•	•	.75	55	25-75	1.5	1	3
2N1491	Me		•	•				.5	30	15-200	15	250	12
2N1492	Me		•	•				.5	60	15-200	15	275	12
2N1493	Me		•	•				.5	100	15-200	15	300	12
2N1494	Ma					•		.4	15	15 min	400	400	31
2N1494A						•		.4	15	725	.2	200	31

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SRV	SW	CMP	<1w	V _{CE}	β@I _c or I _B [*]		f _{αe} [*] kHz	
PNP	GE	D-C	VHF	MIX	SRV	SW	CMP	≥1w	V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
										h _{fe}	(amp)	f _T MHz	MIL
2N1374	Aj	•			•	•		.25	25	50-150	50	2	9
2N1375	Aj	•			•	•		.25	45	50-150	50	2	9
2N1376	Aj	•			•	•		.25	25	75-150	50	2	9
2N1377	Aj	•			•	•		.25	45	75-150	50	2	9
2N1378	Aj	•			•	•		.25	12	95-300	50	3	9
2N1379	Aj	•			•	•		.25	25	95-300	50	3	9
2N1380	Aj	•			•	•		.25	12	30-300	50	2	9
2N1381	Aj	•			•	•		.25	25	30-300	50	2	9
2N1382	Aj	•						.2	25	50-150	50	2	9
2N1383	Aj	•						.2	25	30-150	50	1.5	9
2N1384	Dr					•		.24	30	20 min	200	20 min	11
2N1385	Me		•					.3	25			250	5
2N1386	Pa					•		.3	25	45	10	60	5
2N1387	Dj					•		.3	30	20-40	10	50	5
2N1388	Pa		•					.3	45			75	5
2N1389	Pa		•					.3	50	30	10	40	5
2N1390	Pa		•					.3	20			30	5
2N1391	Aj	•						.15	25	70	1	3	5
2N1392	Aj							.05	20	Photo Device			
2N1393	Aj							.05	20	Photo Device			
2N1394	Aj							.05	10	Photo Device			
2N1395	Dr		•					.12	40	50-175	1.5	30	33
2N1396	Dr			•				.12	40	50-175	1.5	100	33
2N1397	Dr		•	•				.12	40	50-175	1.5	120	33
2N1404	Aj					•		.15	25	30 min	12	4	5
2N1408						•		.15	50	25	1		5
2N1409	Me		•					.6	25	15-45	150	200	5
2N1409A	Me		•					.8	25	15-45	150	200	5
2N1410	PI							.6	30	39-90	150	130	5
2N1410A	Me					•		.8	30	30-90	150	130	5
2N1411	Ma		•			•		.025	5	30 min	15	70	24
2N1412	Aj	•				•	•	.125	100	25-50	5	10*	36
2N1413		•				•		.2	20	25-42	20	2	5
2N1414		•				•		.2	20	34-65	20	2.5	5
2N1415		•				•		.2	20	53-90	20	2.8	5
2N1416	Aj	•				•		.25		Pair 2N223			25
2N1417		•						.15	15	30-200	1	34	5
2N1418								.15	30	30-200	1	34	5
2N1420	Dd	•	•	•		•		.6	40	100-300	150	100	5
2N1420A	PI	•	•	•		•		.8	40	100-300	150	100	5
2N1425	Dr		•					.08	24	50	1	33	
2N1426	Dr			•				.08	24	130	1	33	
2N1427	Ma							.025	6	20 min	50	100	24
2N1429	Sa		•			•		.1	6	12 min	5	16	5
2N1430	Ad					•		.50	40	30-100	5	1.5	41
2N1431		•		•				.18	15	75-150	35	10*	22

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CMP	<1 w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}^*$ kHz		
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1 w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N1327	Aj	•						23	75	30-90	0.5		10
2N1328	Aj	•						20	35	30 min	0.5	8*	13
2N1329	Aj	•						23	25	30-90	.5		10
2N1330	Aj	•						23	40	30-90	.5		10
2N1331	Aj	•						20	80	30 min	0.5	8*	13
2N1332	Aj	•						23	55	30-90	0.5		10
2N1333	Aj	•						20	100	30 min	0.5	8*	13
2N1334	Aj	•						23	75	30-90	0.5		10
2N1335	Me	•	•	•	•	•		.85	90	13	30	170	16
2N1336	Me	•	•	•	•	•		.85	90	13	30	170	16
2N1337	Me	•	•	•	•	•		.85	90	13	30	170	16
2N1338	Me	•	•	•	•	•		.8	50	10 min	30	70	5
2N1339	Me	•	•	•	•	•		.85	100	10 min	30	220▲	16
2N1340	Me	•	•	•	•	•		.85	100	10 min	30	250▲	16
2N1341	Me	•	•	•	•	•		.85	100	10 min	30	280▲	16
2N1342	Me		•	•	•			.8	125	10 min	30	70	5
2N1343	Aj					•		.15	16	40	50	4	5
2N1344	Aj					•		.15	10	90	20	7	5
2N1345	Aj					•		.15	8	60	400	10	5
2N1346	Aj					•		.15	10	125	.35	10	5
2N1347	Aj					•		.15	12	80	10	5	5
2N1348	Aj					•		.2	40	95	10	5	
2N1349	Aj					•		.2	40	110	10	10	
2N1350	Aj					•		.2	50	95	10	8	
2N1351	Aj					•		.2	40	65	10	8	
2N1352	Aj	•						.15	20	70	1	2.5	5
2N1353	Aj					•		.2	10	70	10	1.5	5
2N1354	Aj					•		.2	15	70	10	3	5
2N1355	Aj					•		.2	20	80	10	5	5
2N1356	Aj					•		.2	20	80	10	5	5
2N1357	Aj					•		.2	15	85	10	10	5
2N1358	Aj				•	•		125	40	25-50	5	.1	36
2N1358A	Aj				•	•		125	60	25-50	5	5*	36
2N1358M	Aj				•	•							
2N1359	Aj	•				•		90	40	35-90	1	10*	3
2N1360	Aj	•				•		90	40	60-140	1	8.5*	3
2N1362	Aj	•				•		90	75	35-90	1	10*	3
2N1363	Aj	•				•		90	75	60-140	1	8.5*	3
2N1364	Aj	•				•		90	100	35-90	1	10*	3
2N1365	Aj	•				•		90	100	60-140	1	8.5*	3
2N1366	Fa		•			•		.1	12	10	1	2.5	5
2N1367	Fa		•			•		.1	12	20 min	1	2.5	5
2N1370	Aj	•				•		.15	25	50-150	50	2	9
2N1371	Aj	•				•		.15	45	50-150	50	2	9
2N1372	Aj	•			•	•		.25	25	30-90	50	1.5	9
2N1373	Aj	•			•	•		.25	45	30-90	50	1.5	9

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	β @ _{I_C} or I _B *	$f_{\alpha e}$ kHz			
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N1495	Ma							.25	40	25 min	25	240	9
2N1496	Ma							.5	40	25 min	200	240	31
2N1499A	Md							.06	20	30 min	10	100	9
2N1499B								.075	20	40 min	10	150	9
2N1500	Md							.06	12	20 min	50	120	9
2N1501	Aj							.34	40	25-100	2	2	10
2N1502	Aj							.34	40	25-100	2	2	10
2N1504/10	Aj							.25	60	21 min	500	.15	10
2N1505	Me							.85	40	7 min	100	250 Δ	9
2N1506	Me							.85	40	10-50	100	250 Δ	9
2N1506A	Me							.8	80	10-100	100	250 Δ	5
2N1507	PI							.6	60	100-300	150	50	5
2N1510	Gj							.075	70	8-90	1		
2N1511	Dj							.75	40	15-45	1.5	1	36
2N1512	Dj							.75	55	15-45	1.5	1	36
2N1513	Dj							.75	40	25-75	1.5	1	36
2N1514	Dj							.75	55	25-75	1.5	1	36
2N1515	Ad							.083	20	100	1	70	7
2N1516	Ad							.083	20	100	1	70	7
2N1517	Ad							.083	20	67	1	70	7
2N1518	Aj							.95	50	15-40	15	4*	36
2N1519	Aj							.95	80	15-40	15	4*	36
2N1520	Aj							.95	50	17-35	15	4*	36
2N1521	Aj							.95	80	17-35	15	4*	36
2N1522	Aj							.95	50	22-45	15	4*	36
2N1523	Aj							.95	80	22-45	15	4*	36
2N1524	Dr							.08	24	60	1	33	1
2N1525	Dr							.08	24	60	1	33	1
2N1526	Dr							.08	24	130	1	33	1
2N1527	Dr							.08	24	130	1	33	40
2N1529	Aj							.90	30	20-40	3	10*	3
2N1529A	Aj							.90	30	20-40	3	10*	3
2N1530	Aj							.90	45	20-40	3	10*	3
2N1530A	Aj							.90	45	20-40	3	10*	3
2N1531	Aj							.90	60	20-40	3	10*	3
2N1531A	Aj							.90	60	20-40	3	10*	3
2N1532	Aj							.90	75	20-40	3	10*	3
2N1532A	Aj							.90	75	20-40	3	10*	3
2N1533	Aj							.90	90	20-40	3	10*	3
2N1534	Aj							.90	30	35-70	3	8.5*	3
2N1534A	Aj							.90	30	35-70	3	8.5*	3
2N1535	Aj							.90	45	35-70	3	8.5*	3
2N1535A	Aj							.90	45	35-70	3	8.5*	3

(Continued)

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	β @ _{I_C} or I _B *	$f_{\alpha e}$ kHz			
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N1536	Aj							.90	60	35-70	3	8.5*	3
2N1536A	Aj							.90	60	35-70	3	8.5*	3
2N1537	Aj							.90	75	35-70	3	8.5*	3
2N1537A	Aj							.90	75	35-70	3	8.5*	3
2N1538	Aj							.90	90	35-70	3	8.5*	3
2N1539	Aj							.90	30	50-100	3	4*	3
2N1539A	Aj							.90	30	50-100	3	4*	3
2N1540	Aj							.90	45	50-100	3	4*	3
2N1540A	Aj							.90	45	50-100	3	4*	3
2N1541	Aj							.90	60	50-100	3	4*	3
2N1541A	Aj							.90	60	50-100	3	4*	3
2N1542	Aj							.90	75	50-100	3	4*	3
2N1542A	Aj							.90	75	50-100	3	4*	3
2N1543	Aj							.90	90	50-100	3	4*	3
2N1544	Aj							.90	30	75-150	3	4*	3
2N1544A	Aj							.90	30	75-150	3	4*	3
2N1545	Aj							.90	45	75-150	3	4*	3
2N1545A	Aj							.90	45	75-150	3	4*	3
2N1546	Aj							.90	60	75-150	3	4*	3
2N1546A	Aj							.90	60	75-150	3	4*	3
2N1547	Aj							.90	75	75-150	3	4*	3
2N1547A	Aj							.90	75	75-100	3	4*	3
2N1548	Aj							.90	90	75-150	3	4*	3
2N1549	Aj							.90	30	10-30	10	10*	3
2N1549A	Aj							.90	30	10-30	10	10*	3
2N1550	Aj							.90	45	10-30	10	10*	3
2N1550A	Aj							.90	45	10-30	10	10*	3
2N1551	Aj							.90	60	10-30	10	10*	3
2N1551A	Aj							.90	60	10-30	10	10*	3
2N1552	Aj							.90	75	10-30	10	10*	3
2N1552A	Aj							.90	75	10-30	10	10*	3
2N1553	Aj							.90	30	30-60	10	6*	3
2N1553A	Aj							.90	30	30-60	10	6*	3
2N1554	Aj							.90	45	30-60	10	6*	3
2N1554A	Aj							.90	45	30-60	10	6*	3
2N1555	Aj							.90	60	30-60	10	6*	3
2N1555A	Aj							.90	60	30-60	10	6*	3
2N1556	Aj							.90	75	30-60	10	6*	3
2N1556A	Aj							.90	75	30-60	10	6*	3
2N1557	Aj							.90	30	50-100	10	5*	3
2N1557A	Aj							.90	30	50-100	10	5*	3
2N1558	Aj							.90	45	50-100	10	5*	3
2N1558A	Aj							.90	45	50-100	10	5*	3

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} kHz			
									h _{FE}	(ma)	f _{αb} MHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N1559	Aj							.90	60	50-100	10	5*	3
2N1559A	Aj							.90	60	50-100	10	5*	3
2N1560	Aj							.90	75	50-100	10	5*	3
2N1560A	Aj							.90	75	50-100	10	5*	3
2N1561	Me							.25	25	10db@160Mc		500	
2N1562	Me							.25	25	9db@160Mc		450	
2N1564	Me							.6	60	20-50	5	120	5
2N1565	Me							.6	60	40-100	5	135	5
2N1566	Me							.6	60	80-200	5	150	5
2N1566A	Dj							.6	60	80-200	5	200	5
2N1572	Me							.6	80	20-50	5	120	5
2N1573	Me							.6	80	40-100	5	135	5
2N1574	Me							.6	80	80-200	5	150	5
2N1586	Gj							.15	15	9-27	1	4	C
2N1587	Gj							.15	30	9-27	1	4	C
2N1588	Gj							.15	60	9-27	1	4	C
2N1589	Gj							.15	15	25-75	1	6	C
2N1590	Gj							.15	30	25-75	1	6	C
2N1591	Gj							.15	60	25-75	1	6	C
2N1592	Gj							.15	15	70-210	1	7	C
2N1593	Gj							.15	30	70-210	1	7	C
2N1594	Gj							.15	60	70-210	1	7	C
2N1605	Aj							.15	24	40 min	20	12	5
2N1605A	Aj							.2	40	40 min	20	12	5
2N1613	PI							.8	50	40-120	150	80	5
2N1613A	PI							.5	50	80	150	60	5
2N1614	Aj							.24	40	18-43	20	1	1
2N1615								.6	100	25 min	5		5
2N1616	Me							.60	60	15-75	2	8	P
2N1616A	Me							.85	60	10 min	5	1.5*	P
2N1617	Me							.60	80	15-75	2	8	P
2N1617A	Dj							.85	70	10 min	5	1.5	P
2N1618	Me							.60	100	15-75	2	8	P
2N1618A	Dj							.85	80	10 min	5	1.5	P
2N1620	Me							.60	100	15-75	2	8	
2N1622									90	40 min	5	1.5	5
2N1623	Fa							.25	20	9-40	1	3	5
2N1624	Aj							.15	25	120	30	8	5
2N1631	Dr							.08	34	80	1	45	40
2N1632	Dr							.08	34	80	1	45	1
2N1637	Dr							.08	34	80	1	45	1
2N1638	Dr							.08	34	75	1	40	1
2N1639	Dr							.08	34	75	1	45	1
2N1640	Aj							.25	20	6 min	11*	4	5

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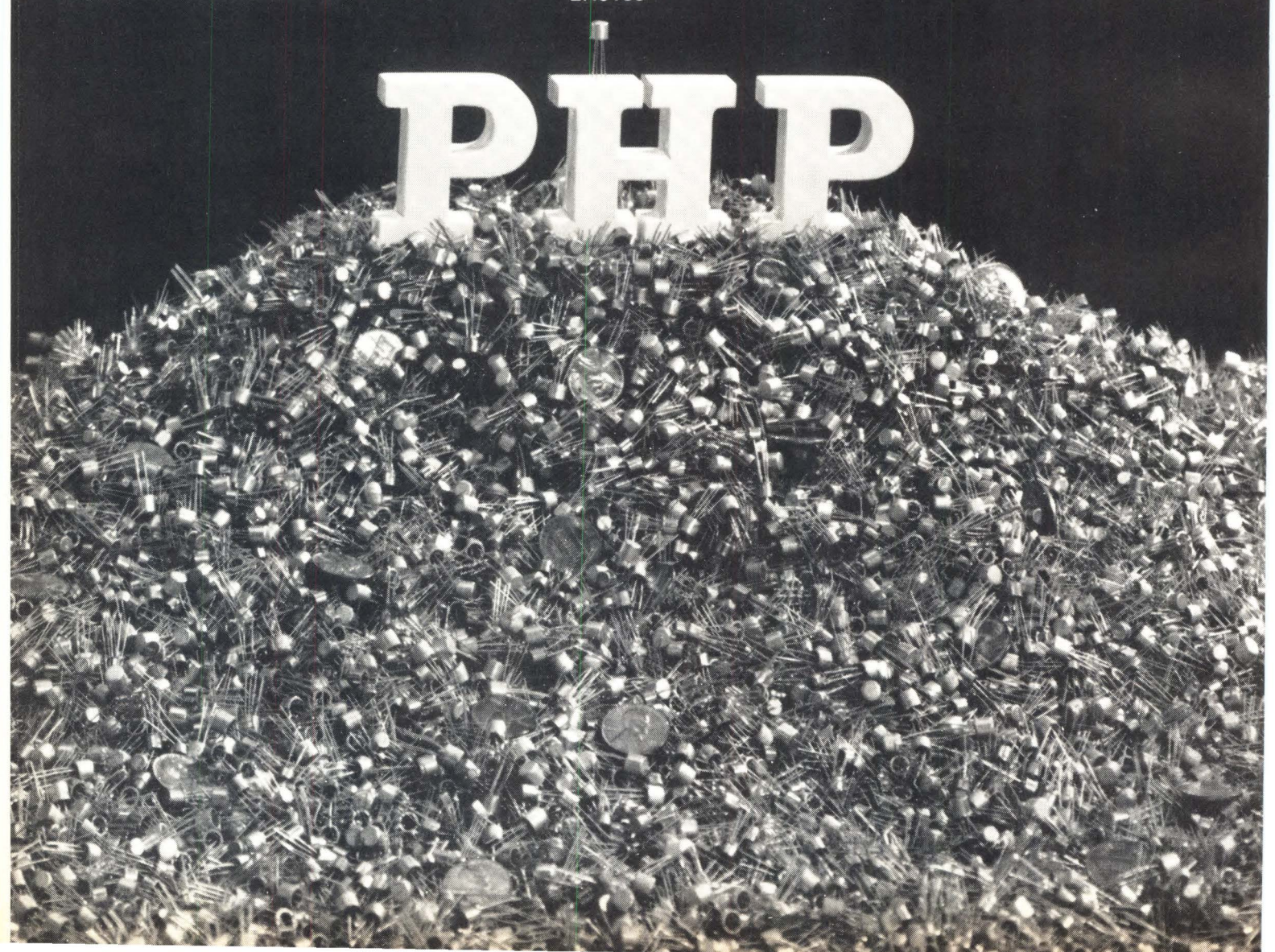
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TO-72

2N5179
PHP Price **39¢[†]**
LOW-NOISE
UHF
AMPLIFIER

20mW min oscillator output @ 500 MHz; 4.5 dB max NF @ 200 MHz; 15 dB min unneutralized power gain @ 200 MHz; $f_T = 1\text{GHz}$ min $C_{cb} = 1\text{ pF}$ max.

*Plus RCA Reliability Control



TO-104

2N5180
PHP Price **29¢[†]**
LOW-NOISE
VHF
AMPLIFIER

4.5 dB max NF @ 200 MHz; 12 dB min unneutralized power gain @ 200 MHz; $f_T = 900\text{ MHz}$ typ; $C_{cb} = 1\text{ pF}$ max.



TO-104

2N5181
PHP Price **27¢[†]**
HIGH GAIN
RF AND IF
AMPLIFIER

Max usable gain = 24 dB typ @ 200 MHz (neutralized); 3.5 dB typ NF @ 200 MHz; $f_T = 700\text{ MHz}$ typ; $C_{cb} = 0.34\text{ pF}$ max; new terminal arrangement for max isolation between collector and base terminals.



TO-104

2N5182
PHP Price **24¢[†]**
HIGH-GAIN RF
AND IF AMPLIFIER
for low-current applications

Max usable gain = 24 dB typ @ 200 MHz (neutralized); 4.5 dB typ NF @ 200 MHz; $f_T = 700\text{ MHz}$ typ; $C_{cb} = 0.34\text{ pF}$ max; new terminal arrangement for max isolation between collector and base terminals.



TO-104

2N5183
PHP Price **19¢[†]**
1-AMPERE
GENERAL PURPOSE
AMPLIFIER

$h_{FE} = 50$ min @ $V_{CE} = 1\text{V}$, $I_C = 300\text{ mA}$; $V_{CE0} = 18\text{ V}$ max; $V_{CE}(\text{SAT}) = 0.5\text{ V}$ max @ $I_C = 300\text{ mA}$, $I_B = 15\text{ mA}$; $f_T = 200\text{ MHz}$ typ; Planar epitaxial construction.



TO-104

2N5184[†]
PHP Price **27¢[†]**
HIGH-FREQUENCY
HIGH-VOLTAGE
AMPLIFIER

$V_{CE0} = 120\text{ V}$ max; $I_C = 50\text{ mA}$ max; $f_T = 100\text{ MHz}$ typ; $C_{cb} = 3.5\text{ pF}$ max.



TO-104 with
integral radiator

2N5185
PHP Price **31¢[†]**
HIGH-FREQUENCY
HIGH-VOLTAGE
AMPLIFIER

1 watt dissipation capability; $V_{CE0} = 120\text{V}$ max; $I_C = 50\text{ mA}$ max; $f_T = 100\text{ MHz}$ typ; $C_{cb} = 3.5\text{ pF}$ max.



TO-52

2N5186
PHP Price **24¢[†]**
HIGH-
SPEED
SWITCH

$V_{CB0} = 10\text{V}$ max; $t_{on} = 25\text{ ns}$ max @ $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$; $t_{off} = 25\text{ ns}$ max @ $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$; $V_{CE}(\text{SAT}) = 0.3\text{V}$ max @ $I_C = 10\text{ mA}$, $I_B = 1\text{ mA}$.

*Plus RCA Reliability Control



TO-52

2N5187
PHP Price **27¢[†]**
MEDIUM-CURRENT
HIGH-SPEED
SWITCH

$V_{CB0} = 25\text{V}$ max; $t_{on} = 18\text{ ns}$ max @ $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$; $t_{off} = 21\text{ ns}$ max @ $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$; $V_{CE}(\text{SAT}) = 0.5\text{V}$ max @ $I_C = 100\text{ mA}$, $I_B = 10\text{ mA}$.

*Plus RCA Reliability Control



TO-39

2N5188
PHP Price **33¢[†]**
HIGH-SPEED
HIGH-VOLTAGE
1/2-AMPERE SWITCH

$V_{CB0} = 60\text{V}$ max; $t_{on} = 35\text{ ns}$ max @ $I_C = 150\text{ mA}$, $I_B = 15\text{ mA}$; $t_{off} = 50\text{ ns}$ max @ $I_C = 150\text{ mA}$, $I_B = 15\text{ mA}$; $h_{FE} = 20$ min @ $V_{CE} = 1\text{V}$, $I_C = 500\text{ mA}$ (pulsed).

*Plus RCA Reliability Control



Similar to
TO-39

2N5189
PHP Price **39¢[†]**
HIGH-SPEED
HIGH-VOLTAGE
1-AMPERE SWITCH

$V_{CB0} = 60\text{V}$ max; $t_{on} = 40\text{ ns}$ max @ $I_C = 1\text{A}$, $I_B = 100\text{ mA}$; $t_{off} = 70\text{ ns}$ max @ $I_C = 1\text{A}$, $I_B = 100\text{ mA}$; $h_{FE} = 15$ min @ $I_C = 1\text{A}$, $V_{CE} = 1\text{V}$.

*Plus RCA Reliability Control

IN RCA'S MAX VALUE line you get the kind of performance/economy combination that only a hermetic metal package can give. This broad line offers you top silicon performance PLUS shielding, dissipation, and operating-temperature characteristics that plastic packages can't match.

CHECK the performance of RCA'S MAX VALUE line—then check your RCA Field Representative or your RCA Distributor for further details.

RCA

Circle No. 37 on Reader Service Card for more information.

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @ _c or I _B *		f _{αe} *kHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
										h _{fe}	(amp)	f _T MHz	MIL
2N1641	Aj						•	.25	10	10 min	1*	.8	5
2N1642	Aj						•	.25	6	15 min	1*	1.2	5
2N1643	Aj	•						.25	25	10-25	1*	.7	5
2N1644	PI							6	60	75	150	150	5
2N1646	Me	•	•				•	.15	12	20 min	10		18
2N1647	Me	•			•			40	80	15-45	500	10	Q
2N1648	Me	•			•			40	120	15-45	500	10	Q
2N1649	Me	•			•			40	80	30-90	500	10	
2N1650	Me	•			•			40	120	30-90	500	10	Q
2N1651	Ad					•		100	60	35-140	10	.6	41
2N1652	Ad					•		100	100	35-140	10	.6	41
2N1653	Ad					•		100	120	35-140	10	.6	41
2N1654	Fa	•				•		.25	80	20-45	1	.25	5
2N1655	Fa	•				•		.25	125	10-22	1	.2	5
2N1656	Fa	•				•		.25	125	20-45	1	.25	5
2N1658								15		90	0.2		5
2N1659								15		90	0.2		5
2N1666	Aj					•		30	60	55	1	.25	
2N1667	Aj					•		30	48	140	1	.2	
2N1668	Aj					•		30	48	75	1	.2	
2N1669	Aj					•		30	60	110	1	.2	
2N1672		•				•		.12	40	20 min	1	2	5
2N1672A		•				•		.12	40	20 min	1	2	5
2N1673	Dr		•					.08	35	20-175	1	5	33
2N1674								.2	45	50 min	1	20	5
2N1676	Aj						•	.1	4.5	10.5	1	42	5
2A1677	Aj						•	.1	4.5	25 min	1	32	5
2N1681	Aj					•		.18	15	75	10	5	5
2N1682	PI		•	•		•		.5	12	20 min	10	200	5
2N1683	Me					•		.15	12	50 min	10	80	5
2N1690	Me	•			•	•		40	80	20-60	500		M
2N1691	Me	•			•	•		40	120	20-60	500		M
2N1692	Me	•	•		•	•		.35	25	10db@160Mc		500	
2N1693	Me	•	•		•	•		.35	25	9db@160Mc		450	
2N1694		•				•		.075	20	15-45	2	9	A
2N1700	Dj				•	•		.5	40	20-80	100	1.2	5
2N1701	Dj				•	•		.25	40	20-80	300	1	8
2N1702	Dj				•	•		.75	40	15-60	800	1	3
2N1703	Dj				•	•		.75	40	15-60	800	1	36
2N1704		•	•					.5	45	50-200	1	5	5
2N1705	Aj	•			•			.2	12	70-150	1	4	5
2N1706	Aj	•			•			.2	18	40-150	10	3	5
2N1707	Aj	•			•	•		.2	25	60-120	20	3	5

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	RF	OSC	LIN	SRV	SAT	CMP	<1w	V _{CE}	β or I _B *	f _{ce} *kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP		$\geq 1w$	V _{CB}	h _{fe}	(ma)	f _{cb} MHz	MIL
2N1708	PI								• .3	20	20 min	10	200 min	46
2N1708A	Ep								• 1	15	30-120	10	100	46
2N1709	Me		•						• 15	60	7.5-75	350	150	8
2N1710	Me		•		•				• 15	45	7.5-75	350	120	8
2N1711	PI	•	•	•					• .8	50	100-300	150	100	5
2N1711A	Ep	•	•	•					• 1	50	100-300	150	70	5
2N1711B	Ep	•	•	•					• 1	55	100-300	150	70	5
2N1714	Me	•	•		•	•			• 10	60	20-60	200	16	5
2N1715	Me	•	•		•	•			• 10	100	20-60	200	16	5
2N1716	Me	•	•		•	•			• 10	60	40-120	200	16	5
2N1717	Me	•	•		•	•			• 10	100	40-120	200	16	5
2N1718	Me	•	•		•	•			• 10	60	20-60	200	16	R
2N1719	Me	•	•		•	•			• 10	100	20-60	200	16	R
2N1720	Me	•	•		•	•			• 10	60	40-120	200	16	R
2N1721	Me	•	•		•	•			• 10	100	40-120	200	16	R
2N1722	Me	•	•		•	•			• 50	80	20-90	2	10	53
2N1722A	Me	•	•		•	•			• 50	120	30-90	2	10	53
2N1723	Me	•	•		•	•			• 50	80	50-150	2	10	53
2N1724	PI				•				• 87.5	80	20-90	2	10	61
2N1724A	Me	•	•		•	•			• 50	120	20 min	2	10	P
2N1725	PI				•				• 87.5	80	50-150	2	10	61
2N1726	Me		•						• .06	20	50 min	1	100▲	9
2N1727	Me			•					• .06	20	20 min	1	100▲	9
2N1728	Me		•						• .06	20	40 min	1	100▲	9
2N1742	Md		•						• .06	20	10 min	2	13	9
2N1743	Md		•	•					• .06	20	10 min	2	2.1	9
2N1744	Md		•	•					• .06	20	10 min	2		9
2N1745	Md		•						• .06	20	10 min	2		9
2N1746	Md		•						• .06	20	10 min	1	175▲	9
2N1747	Md		•						• .06	20	10 min	1	200	9
2N1748	Md		•	•					• .06	25	30-150		50▲	9
2N1748A	Me		•						• .06	25	50-150	1	132	9
2N1749	Me		•						• .075	40	45	1	115	9
2N1751	Ad						•		• 90	80	30-90	20		3
2N1752	Dj	•	•						• .06	12	50-300		50▲	9
2N1754	Md						•		• .05	13	20 min	10	75	9
2N1755	Aj						•		• 28	35	30-75	500	15*	GG
2N1756	Aj						•		• 28	50	30-75	500	15*	GG
2N1757	Aj						•		• 28	65	30-75	500	15*	GG
2N1758	Aj						•		• 28	75	30-75	500	15*	GG
2N1759	Aj						•		• 28	35	60-150	500	15*	GG
2N1760	Aj						•		• 28	50	60-150	500	15*	GG
2N1761	Aj						•		• 28	65	60-150	500	15*	GG
2N1762	Aj						•		• 28	75	60-150	500	15*	GG

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM		
NPN	SI	AUD	RF	MIX	OSC	LIN	SW	CHP	<1w	V _{CE}	$\beta @ f_c$ or I_B^*	$f_{\alpha e}^*$ kHz			
PNP	GE	D-C	VHF	MIX	OSC	LIN	SRV	SAT	$\geq 1w$	V _{CB}	h_{fe}	(ma)	f_{cb} MHz	MIL	
2N1768	Dj							•	•	40	40	35-100	750	1.25	M
2N1769	Dj							•	•	40	55	35-100	750	1.25	M
2N1785	Md		•							.045	10	40-120	1	125 Δ	9
2N1786	Md			•						.045	10	15-200	1	125 Δ	9
2N1787	Md		•							.045	15	20-100	1	125 Δ	9
2N1788	Md		•							.06	35	40-120	1	150 Δ	9
2N1789				•						.06	35	15-150	1	150 Δ	9
2N1790			•							.06	35	25-100	1	150 Δ	9
2N1808	Aj					•				.15	25	120	20	14	5
2N1809	Fu					•	•			250	50	10 min	10	14*	S
2N1810	Fu					•	•			250	100	10 min	10	14*	S
2N1811	Fu					•	•			250	150	10 min	10	14*	S
2N1812	Fu					•	•			250	200	10 min	10	14*	S
2N1813	Fu					•	•			250	250	10 min	10	14*	S
2N1814	Fu					•	•			250	300	10 min	10	14*	S
2N1816	Fu					•	•			250	50	10 min	15	14.5*	S
2N1817	Fu					•	•			250	100	10 min	15	14.5*	S
2N1818	Fu					•	•			250	150	10 min	15	14.5*	S
2N1819	Fu					•	•			250	200	10 min	15	14.5*	S
2N1820	Fu					•	•			250	250	10 min	15	14.5*	S
2N1823	Fu					•	•			250	50	10 min	20	16*	S
2N1824	Fu					•	•			250	100	10 min	20	16*	S
2N1825	Fu					•	•			250	150	10 min	20	16*	S
2N1826	Fu					•	•			250	200	10 min	20	16*	S
2N1830	Fu					•	•			250	50	10 min	25	14*	S
2N1831	Fu					•	•			250	100	10 min	25	14*	S
2N1832	Fu					•	•			250	150	10 min	25	14*	S*
2N1833	Fu					•	•			250	200	10 min	25	14*	S
2N1837	Me	•	•	•	•	•	•			.6	50	40-120	150	180	5
2N1837A	Me	•	•	•	•	•	•			.8	50	40-120	150	180	5
2N1838	Me	•	•	•	•	•	•			.6	30	40-150	100	180	5
2N1839	Me	•	•	•	•	•	•			.6	30	12-50	100	180	5
2N1840	Me	•	•	•	•	•	•			.6	20	10 min	150	180	5
2N1853							•			.15	18	30 min	6		5
2N1853/18							•			.15	18	30 min	6		18
2N1854										.15	18	40 min	20	40	5
2N1864	Md	•	•							.06	20	10 min	1	50 Δ	9
2N1865	Md		•							.06	20	40 min	1		9
2N1866	Md		•							.06	35	40 min	1		9
2N1867	Md		•							.06	35	10 min	1		9
2N1868	Md		•							.06	20	10 min	2		9
2N1886	Dj	•				•	•			40	60	20-80	500	8	Q
2N1889	PI	•	•	•		•				.8	60	40-120	150	80	5
2N1890	PI	•	•	•		•				.8	60	100-300	150	100	5

2N1641-2N1890

Transistors

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} *kHz		
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N1891								.15	25	25	100		5
2N1893	PI							.8	80	40-120	150	70	5
2N1893A	PI							.8	80	30 min	1	100	5
2N1899	PI							125	100	10 min	10	50	
2N1900	PI							125	100	8 min	10	50	
2N1901	PI							125	10	20-60	10	50	
2N1902	PI							125	100	10-30	10	50	
2N1903	PI							125	100	8 min	10	50	
2N1904	PI							125	100	20-60	10	50	
2N1905	Dr							50	100	90	1	7.5	3
2N1906	Dr							50	60	125	5	7.5	3
2N1907	Ad							60	40	10 min	15	20	3
2N1908	Ad							150	50	10 min	15	20	3
2N1917	Aj							.25	8	25 min	1	10	5
2N1918	Aj							.25	8	25 min	1	10	5
2N1919	Aj							.25	18			1	5
2N1920	Aj							.25	18			1	5
2N1921	Aj							.4	50			1	5
2N1922	Aj							.4	80			1	5
2N1924	Aj							.225	40	34-65	20	3	5
2N1925	Aj							.225	40	53-90	20	3.5	5
2N1926	Aj							.225	40	72-121	20	4	5
2N1936	Me							100	60	10-50	10	7	V
2N1937	Me							100	80	10-50	10	7	V
2N1940								3.5	15	14	40	70	AA
2N1943	PI							.8	60	30-90	200		5
2N1954	Aj							.215	60	30-120	20		5
2N1955	Aj							.215	60	50-200	20		5
2N1956	Aj							.215	60	30-120	20		5
2N1957	Aj							.215	60	30-120	20		5
2N1958	Ep							.6	40	20-60	150	100	5
2N1958A	Ep							.6	40	20-60	150	100	5
2N1959	Ep							.6	40	40-120	150	100	5
2N1959A	Ep							.6	40	40-120	150	100	5
2N1959A/51	Ep							.6	40	40-120	150	100	51
2N1962	Ep							.4	20	20-80	10	200	D
2N1963	Ep							.4	15	25 min	10	200	D
2N1964	Ep							.4	40	20-60	150	100	D
2N1965	Ep							.4	40	40-120	150	100	D
2N1970	Aj							125	100	17-40	5	10*	36
2N1971	Aj							50	80	25-60	500	25*	41
2N1972								.6	30	110	50	80	5
2N1973	PI							.8	60	75 min	10	80	5
2N1974	PI							.8	60	35 min	10	70	5

(Continued)

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} *kHz		
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N1975	PI							.8	60	15 min	10	60	5
2N1980	Aj							170	30	50-100	5	3*	36
2N1981	Aj							170	40	50-100	5	3*	36
2N1982	Aj							170	50	50-100	5	3*	36
2N1983	Dd							.6	25	80-240	5	60	5
2N1984	Dd							.6	25	40-120	5	60	5
2N1985	Dd							.6	25	20-80	5	60	5
2N1986	Dd							.6	25	60-240	150	60	5
2N1987	Dd							.6	25	20-80	150	60	5
2N1988	Dd							.6	45	35-120	30	60	5
2N1989	Dd							.6	60	20-60	30	40	5
2N1990	Dd							.6	100	20 min	30		5
2N1991	PI							.6	20	15-60	150	50	5
2N1993	Aj							.15	18	50-300	10	3	5
2N1994	Aj							.15	30	15 min	10	3	5
2N1995	Aj							.15	25	25 min	10	5	5
2N1996	Aj							.15	20	35 min	10	8	5
2N1997	Aj							.25	45	40-200	100	4	5
2N1998	Aj							.25	35	50-160	200	7	5
2N1999	Aj							.25	30	75-250	200	12	5
2N2000	Aj							.3	50	50-300	.5	2	5
2N2001	Aj							.3	30	60 min	.5	6	5
2N2002	Aj							.25	5	1 mv offset @ .2 ma		5	5
2N2003	Aj							.25	5	2.5 mv offset @ .2 ma		5	5
2N2004	Aj							.25	15	1 mv offset @ .2ma		5	5
2N2005	Aj							.25	15	3.5mv offset @ .2ma		5	5
2N2006	Aj							.25	35	1.5mv offset @ .65ma		5	5
2N2007	Aj							.25	35	3.5mv offset @ .65ma		5	5
2N2008	PI							.8	110	40-120	50		5
2N2015	Dj							150	50	15-50	5	25*	36
2N2016	Dj							150	65	15-50	5	25*	36
2N2017	Dd							1	60	75-200	200		5
2N2018	Me							40	150	20-60	500	10	Q
2N2019	Me							40	200	20-60	500	10	Q
2N2020	Me							40	150	40-120	500	10	Q
2N2021	Me							40	200	40-120	500	10	Q
2N2032	Dj							45	45	20 min	2	12	
2N2033	Dj							5	60	20-60	500	1.5	5
2N2034	Dj							5	60	20-60	1	1.5	5
2N2035	Dj							14	60	15-45	1.5	1.5	8
2N2036	Dj							17	60	15-45	2	2	37
2N2038								.6	45	12-36	200		5
2N2039								.6	75	12-36	200		5

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β @I _C or I _B *	f _{αe} *kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
										h _{fe}	(amp)	f _T MHz	MIL
2N2040								.6	45	30-90	200		5
2N2041								.6	75	30-90	200		5
2N2042	Aj							.2	105	20-50	5	.5	5
2N2042A	Aj							.2	105	20-50	5	.5	5
2N2043	Aj							.2	105	40-100	5	.75	5
2N2043A	Aj							.2	105	40-100	5	.75	5
2N2048	Md							.15	20	50-300	10	250	9
2N2048A								.15	20	40 min	50	150	9
2N2049	PI							.8	50	100-300	150	85	5
2N2060	PI			Dual				.6	60	50-150	10	100	
2N2060A	PI			Dual				.6	60	50-150	10		
2N2060B	PI			Dual					60	30-90	.1		
2N2061A	Aj							90	15	20-60	2	5*	3
2N2062A	Aj							90	15	50-140	2	1*	3
2N2063A	Aj							90	20	20-60	2	5*	3
2N2064A	Aj							90	20	50-140	2	1*	3
2N2065A	Aj							90	40	20-60	2	5*	3
2N2066A	Aj							90	40	50-140	2	1*	3
2N2067	Aj							10	35	20 min	500	7*	GG
2N2067B	Aj							10	35	25 min	500	7*	GG
2N2067G	Aj							10	35	25 min	500	7*	GG
2N2067-0	Aj							10	35	20 min	500	7*	GG
2N2067W	Aj							10	35	33 min	500	7*	GG
2N2068	Aj							10	65	20 min	500	7*	GG
2N2068G	Aj							10	65	25 min	500	7*	GG
2N2068-0	Aj							10	65	20 min	500	7*	GG
2N2075	Aj							170	65	25-100	1.2	10*	36
2N2075A	Aj							170	65	25-100	1.2	10*	36
2N2076	Aj							170	55	25-100	1.2	10*	36
2N2076A	Aj							170	55	25-100	1.2	10*	36
2N2077	Aj							170	45	25-100	1.2	10*	36
2N2077A	Aj							170	45	25-100	1.2	10*	36
2N2078	Aj							170	25	25-100	1.2	10*	36
2N2078A	Aj							170	25	25-100	1.2	10*	36
2N2079	Aj							170	65	40-160	1.2	10*	36
2N2079A	Aj							170	65	40-160	1.2	10*	36
2N2080	Aj							170	55	40-160	1.2	10*	36
2N2080A	Aj							170	55	40-160	1.2	10*	36
2N2081	Aj							170	45	40-160	1.2	10*	36
2N2081A	Aj							170	45	40-160	1.2	10*	36
2N2082	Aj							170	25	40-160	1.2	10*	36
2N2082A	Aj							170	25	40-160	1.2	10*	36
2N2084	Ad							.125	40	100	1	100	33
2N2085	Aj							.15	33	100	10	8	5

Transistors

2N2086-2N2227

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	β @ I _c or I _B *	f _{αe} * kHz	
					h _{FE} (ma)	f _{αb} MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	≧1w	V _{CB}	h _{fe} (amp)	f _T MHz	MIL
2N2187	Pa		•.15	30		10	18
2N2188	Me	•	.125	40	40 min	2	120
2N2189	Me	•	.125	40	60 min	2	150
2N2190	Me	•	.125	60	40 min	2	120
2N2191	Me	•	.125	60	60 min	2	150
2N2192	PI		•.8	40	100-300	150	50
2N2192A	PI	•	•.8	40	100-300	150	50
2N2192B	PI	•	•.8	40	100-300	150	50
2N2193	PI	•	•.8	50	40-120	150	50
2N2193A	PI	•	•.8	50	40-120	150	50
2N2193B	PI	•	•.8	50	40-120	150	50
2N2194	PI	•	•.8	40	20-60	150	50
2N2194A	PI	•	•.8	40	20-60	151	50
2N2194B	PI	•	•.8	40	20-60	150	50
2N2195	PI	•	•.6	25	20 min	150	50
2N2195A	PI	•	•.6	25	20 min	150	50
2N2195B	PI	•	•.6	25	20 min	150	50
2N2196	Me	•	•.2	60	30-90	200	15
2N2197	Me	•	•.2	60	75-200	200	15
2N2198			•.6	80	45		5
2N2201	Me	•	•.10	100	30-90	2	
2N2202	Me	•	•.10	100	30-90	2	
2N2203	Me	•	•.10	100	30-90	2	
2N2204	Me	•	•.10	100	30-90	2	
2N2205	PI	•	•.3	20	20 min	10	200
2N2206	PI	•	•.3	20	90	10	200
2N2207	Ad	•	•.26	70	200	175	7
2N2210	Aj		•.70	65	25-50	5	10*
2N2212	Ad		•.60	120	50-120	5	41
2N2217	PI	•	•.8	30	20-60	150	400
2N2217/51	PI	•	•.6	30	20-60	150	400
2N2218	PI	•	•.8	30	40-120	150	400
2N2218A	Ep	•	•.8	40	40-120	150	250
2N2219	PI	•	•.8	30	100-300	150	400
2N2219A	Ep	•	•.8	40	100-300	150	250
2N2219/51	PI	•	•.6	30	100-300	150	400
2N2220	PI	•	•.5	30	20-60	150	400
2N2221	PI	•	•.5	30	40-120	150	400
2N2221A	Ep	•	•.5	40	40-120	150	300
2N2222	PI	•	•.5	30	100-300	150	400
2N2222A	Ep	•	•.5	40	100-300	150	300
2N2222B		•	•.5	40	100-300	150	300
2N2223	PI	DIFF AMP	•.6	60	50-200	10	
2N2223A	PI	DIFF AMP	•.6	60	50-200	10	
2N2224	Dj	•	•.3	40	40-120	100	100
2N2226	Fu	•	•.150	50	100 min	10	10*
2N2227	Fu	•	•.150	100	100 min	10	10*

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	β @ I _c or I _B *	f _{αe} * kHz	
					h _{FE} (ma)	f _{αb} MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	≧1w	V _{CB}	h _{fe} (amp)	f _T MHz	MIL
2N2141A	Aj	•	•.62.5	90	30-60	500	20*
2N2142	Aj	•	•.62.5	30	50-100	500	20*
2N2142A	Aj	•	•.62.5	30	50-100	500	20*
2N2143	Aj	•	•.62.5	45	50-100	500	20*
2N2143A	Aj	•	•.62.5	45	50-100	500	20*
2N2144	Aj	•	•.62.5	60	50-100	500	20*
2N2144A	Aj	•	•.62.5	60	50-100	500	20*
2N2145	Aj	•	•.62.5	75	50-100	500	20*
2N2145A	Aj	•	•.62.5	75	50-100	500	20*
2N2146	Aj	•	•.62.5	90	50-100	500	20*
2N2146A	Aj	•	•.62.5	90	50-100	500	20*
2N2147	Dr		•.12.5	75	100 min	1	4
2N2148	Dr		•.12.5	50	60 min	1	3
2N2150	Me		•.30	80	20-60	1	10
2N2151	Me	•	•.30	80	40-120	1	10
2N2152	Aj	•	•.170	45	50-100	5	2.7*
2N2152A	Aj	•	•.170	45	50-100	5	2.7*
2N2153	Aj	•	•.170	60	50-100	5	2.7*
2N2153A	Aj	•	•.170	60	50-100	5	2.7*
2N2154	Aj	•	•.170	75	50-100	5	2.7*
2N2154A	Aj	•	•.170	75	50-100	5	2.7*
2N2156	Aj	•	•.170	45	80-160	5	2.7*
2N2156A	Aj	•	•.170	45	80-160	5	2.7*
2N2157	Aj	•	•.170	60	80-160	5	2.7*
2N2157A	Aj	•	•.170	60	80-160	5	2.7*
2N2158	Aj	•	•.170	75	80-160	5	2.7*
2N2158A	Aj	•	•.170	75	80-160	5	2.7*
2N2162	Sa		•.15	30	Offset 2mv Max @1ma		5
2N2163	Sa		•.15	15	Offset 2mv Max @1ma		5
2N2164	Sa		•.15	12	Offset 1.5mv Max @1ma		5
2N2165	Sa		•.15	30	Offset 3mv Max @1ma		5
2N2166	Sa		•.15	15	Offset 3mv Max @1ma		5
2N2167	Sa		•.15	12	Offset 2.5mv Max @1ma		5
2N2168	Md	•	•.06	15	50 min	10	450
2N2169	Md	•	•.06	15	40 min	10	450
2N2170	Md	•	•.06	15	20 min	10	350
2N2171	Aj		•.225	25	210	10	7.5
2N2172	Aj	•	•.2	20	65	1	8
2N2175	Aj	•	•.1	6	30 min	.02	10
2N2176	Aj	•	•.1	6	30 min	.02	10
2N2177	Aj	•	•.1	6	15 min	.005	8
2N2178	Aj	•	•.1	6	15 min	.005	8
2N2185	Pa		•.15	30		10	18
2N2186					Matched pair 2N2185		

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	β @ I _c or I _B *	f _{αe} * kHz	
					h _{FE} (ma)	f _{αb} MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	≧1w	V _{CB}	h _{fe} (amp)	f _T MHz	MIL
2N2086	Ep		•.6	80	20 min	150	225
2N2087	Me		•.6	80	65	150	225
2N2089	Ad	•	•.1	32	150	1	75
2N2092	Ad	•	•.083	25	150	1	70
2N2095	Dj		•.3	15	6db @ 160mi		1000
2N2096	Dj		•.75	20	15 min	400	400
2N2097	Dj		•.75	35	30 min	400	400
2N2098	Dj		•.25	30	6db @ 160mc		1000
2N2099	Dj		•.25	20	15 min	400	400
2N2100	Dj		•.25	35	30 min	400	400
2N2101	Me	•	•.75	60	15-60	1	1.5
2N2102	PI	•	•.5	120	35-150	150	60
2N2102A	PI	•	•.5	65	40-120	150	60
2N2106	Me	•	•.1	60	12-36	200	15
2N2107	Me	•	•.1	60	30-90	200	15
2N2108	Me	•	•.1	60	75-200	200	15
2N2109	Fu		•.250	50	10 min	10	14*
2N2110	Fu	•	•.250	100	10 min	10	14*
2N2111	Fu	•	•.250	150	10 min	10	14*
2N2112	Fu	•	•.250	200	10 min	10	14*
2N2113	Fu	•	•.250	250	10 min	10	14*
2N2114	Fu	•	•.250	300	10 min	10	14*
2N2116	Fu	•	•.250	50	10 min	15	14.5*
2N2117	Fu	•	•.250	100	10 min	15	14.5*
2N2118	Fu	•	•.250	150	10 min	15	14.5*
2N2119	Fu	•	•.250	200	10 min	15	14.5*
2N2120	Fu	•	•.250	250	10 min	15	14.5*
2N2123	Fu	•	•.250	50	10 min	20	16*
2N2124	Fu	•	•.250	100	10 min	20	16*
2N2125	Fu	•	•.250	150	10 min	20	16*
2N2126	Fu	•	•.250	200	10 min	20	16*
2N2130	Fu	•	•.250	50	10 min	25	14*
2N2131	Fu	•	•.250	100	10 min	25	14*
2N2132	Fu	•	•.250	150	10 min	25	14*
2N2133	Fu	•	•.250	200	10 min	25	14*
2N2137	Aj	•	•.62.5	30	30-60	500	20*
2N2137A	Aj	•	•.62.5	30	30-60	500	20*
2N2138	Aj	•	•.62.5	45	30-60	500	20*
2N2138A	Aj	•	•.62.5	45	30-60	500	20*
2N2139	Aj	•	•.62.5	60	30-60	500	20*
2N2139A	Aj	•	•.62.5	60	30-60	500	20*
2N2140	Aj	•	•.62.5	75	30-60	500	20*
2N2140A	Aj	•	•.62.5	75	30-60	500	20*
2N2141	Aj	•	•.62.5	90	30-60	500	20*

(Continued)

Voltage Regulator Problems?

- Output voltage changes due to input voltage variations?
- Output voltage changes due to ambient temperature variations?
- Output voltage changes due to reference element voltage/time instability?

Problems Solved!

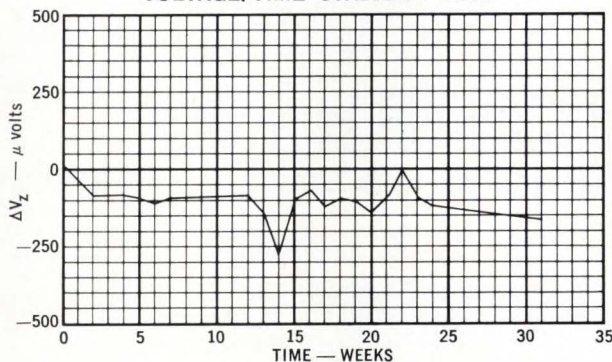
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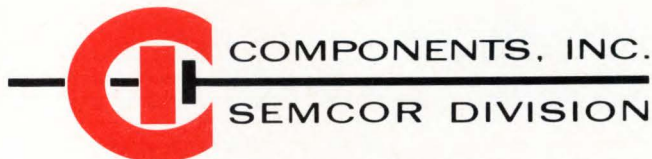
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Circle No. 38 on Reader Service Card for more information.

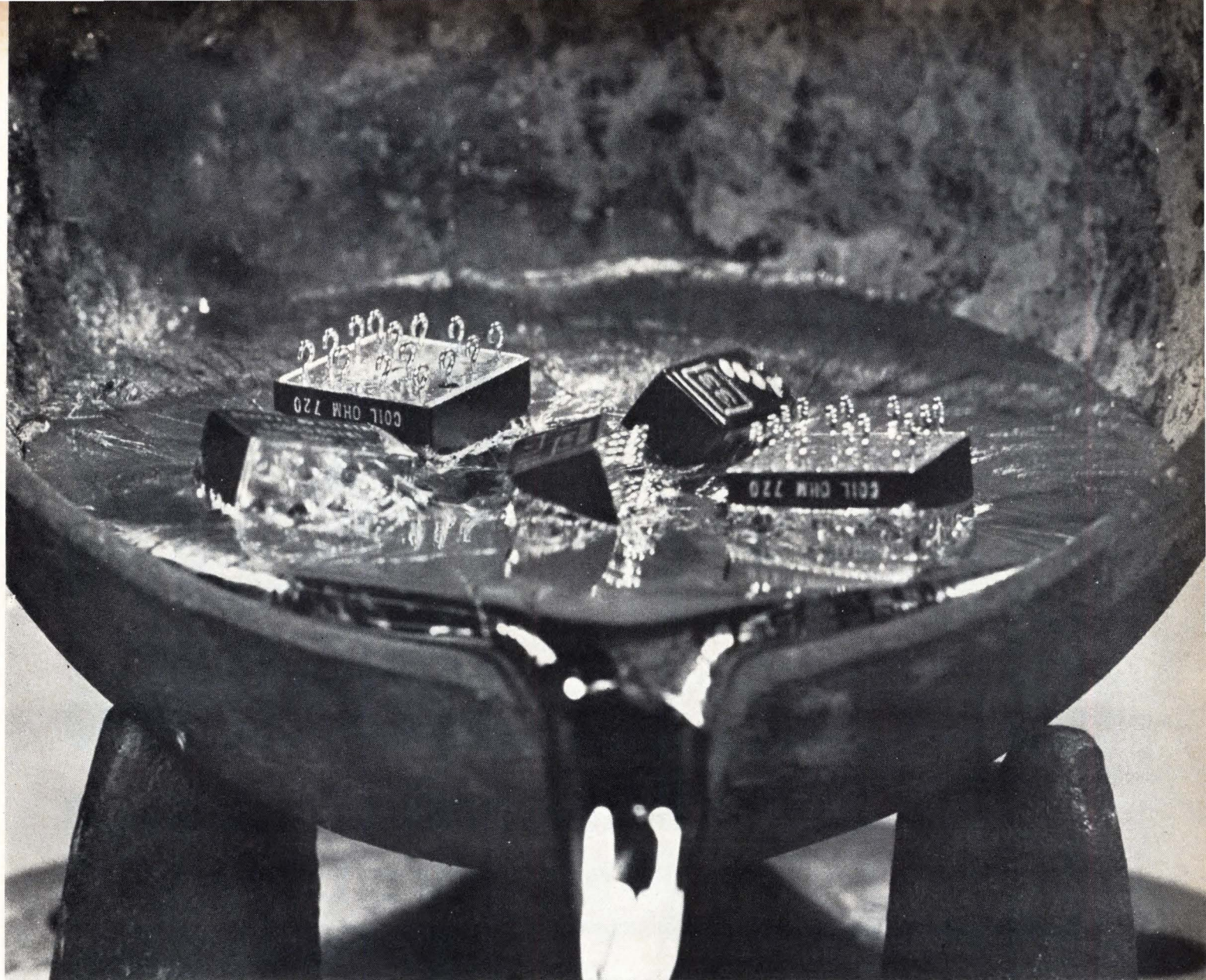
TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz		
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≅1w	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N2228	Fu					•	•	150	150	100 min	10	10*	L
2N2229	Fu					•	•	150	200	100 min	10	10*	L
2N2230	Fu					•	•	150	50	400 min	10	7*	L
2N2231	Fu					•	•	150	100	400 min	10	7*	L
2N2232	Fu					•	•	150	150	400 min	10	7*	L
2N2233	Fu					•	•	150	200	400 min	10	7*	L
2N2236						•		.6	20	15-60	100	50	5
2N2237						•		.6	20	40-125	100	50	5
2N2239	Me	•		•	•	•		10	50	30-200	200		
2N2240	PI		•			•		.6	20	40-100	1		5
2N2241	PI					•		.6	20	100-200	1		5
2N2242	PI					•	•	.36	20	40-120	10	350	18
2N2243	Ep					•		.8	80	40-120	150	50	5
2N2243A	Ep					•		.8	80	40-120	150	50	5
2N2244	Me	•	•		•			.5	20	40-120	1	60	18
2N2245	Me	•	•		•			.5	20	80-250	1	60	18
2N2246	Me	•	•		•			.5	20	150-450	1	60	18
2N2247	Me	•	•		•			.5	45	40-120	1	60	18
2N2248	Me	•	•		•			.5	45	80-250	1	60	18
2N2249	Me	•	•		•			.5	45	150-450	1	60	18
2N2250	Me	•	•		•			.5	20	40-120	1	60	18
2N2251	Me	•	•		•			.5	20	80-250	1	60	18
2N2252	Me	•	•		•			.5	20	150-450	1	60	18
2N2253	Me	•	•		•			.5	45	40-120	1	60	18
2N2254	Me	•	•		•			.5	45	80-250	1	60	18
2N2255	Me	•	•		•			.5	45	150-450	1	60	18
2N2256	Me					•		.3	7	20 min	25	320	18
2N2257	Ep					•		.3	7	40 min	25	320	18
2N2258	Me					•		.15	7	20 min	25	320	18
2N2259	Me					•		.15	7	40 min	25	320	18
2N2266	Aj							50	55	25-75	2	.2	10
2N2267	Aj							50	55	25-75	2	.2	10
2N2268	Aj							50	55	25-75	2	.2	10
2N2269	Aj							50	55	25-75	2	.2	10
2N2270	PI	•	•	•				5	60	30-180	5	60	5
2N2273	Me		•					.1	15	20 min	1	200	18
2N2274	Ep					•	•	.4	25	10 min		6	18
2N2275	Ep					•	•	.4		pair 2N2274			18
2N2276	Ep					•	•	.4	10	10 min		6	18
2N2277	Ep					•	•	.4		pair 2N2276			18
2N2278	Ep					•	•	.4	15			7.6	18
2N2279	Ep					•	•	.4		pair 2N2278			18
2N2280	Ep					•	•	.4	6			16	18
2N2281	Ep					•	•	.4		pair 2N2280			18
2N2282	Ad					•		5	60	30-90	500		37
2N2283	Ad					•		5	100	30-90	500		37

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SRV	SAT	CHP	$\leq 1\text{ w}$	V_{CE}	β at I_C or I_B^*	$f_{\alpha e}^* \text{ kHz}$	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1\text{ w}$	V_{CB}	h_{FE}	(ma)	$f_{\alpha b} \text{ MHz}$	
										h_{fe}	(amp)	$f_T \text{ MHz}$	MIL
2N2284	Ad						•	5	200	30-90	500		37
2N2285	Ad						•	100	60	20 min	25		3
2N2286	Ad						•	100	100	20 min	25		3
2N2287	Ad						•	100	120	20 min	25		3
2N2288	Ad						•	60	40	20-60	5	1.5	3
2N2289	Ad						•	60	80	20-60	5	1.5	3
2N2290	Ad						•	60	120	20-60	5	1.5	3
2N2291	Ad						•	60	40	50-120	5		3
2N2292	Ad						•	60	80	50-120	5		3
2N2293	Ad						•	60	120	50-120	5		3
2N2294	Ad						•	60	40	50-120	5		41
2N2295	Ad						•	60	80	50-120	5		41
2N2296	Ad						•	60	120	50-120	5		41
2N2297	PI						•	.8	35	40-120	150	90	5
2N2297/51	PI						•	.6	35	40-120	150	90	51
2N2303	Dd	•	•				•	.6	35	75-200	150	80	5
2N2304								25	60	20-80	300		8
2N2305								75	60	15-60	800		8
2N2308								25	80	20-60	1	1	5
2N2309	PI	•						.6	30	25-125	.2	150	5
2N2310	PI					•		.4	60	12-36	200	150	46
2N2311	PI					•		.4	100	12-36	200	150	46
2N2312	PI					•		.4	60	30-90	200	150	46
2N2313	PI					•		.4	100	30-90	200	150	46
2N2314	PI					•		.4	60	20-60	150	150	46
2N2315	PI	•				•		.4	60	40-120	150	150	46
2N2316	PI	•				•		.4	120	40-120	150	180	46
2N2317	PI					•		.35	75	100-300	150	160	46
2N2318	Ep							.36	30	30 min	10	300	18
2N2319	Ep							.36	30	30 min	10	300	46
2N2320	Ep							.36	30	30 min	10	300	5
2N2330	PI						•	.8	20	50 min	10	150	5
2N2331	PI						•	.5	20	50 min	10	150	18
2N2332	Aj						•	.15	5	Offset=1.5mv @ $I_B=.2\text{ma}$			18
2N2333	Aj						•	.15	5	Offset=2.5mv @ $I_B=.2\text{ma}$			18
2N2334	Aj						•	.15	15	Offset=1.5mv @ $I_B=.2\text{ma}$			18
2N2335	Aj						•	.15	15	Offset=3.5mv @ $I_B=.2\text{ma}$			18
2N2336	Aj						•	.15	35	Offset=2mv @ $I_B=.65\text{ma}$			18
2N2337	Aj						•	.15	35	Offset=3.5mv @ $I_B=.65\text{ma}$			18

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	RF	OSC	LIN	SRV	SW	CHP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz		
											h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SAT	CMP			$\approx 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N2338	Dj					•			150	40	15-60	3	1	36
2N2339	Dj					•			40	40	20-80	300	1	M
2N2349	Gj								.15	24	120 min	10		5
2N2350	Ep		•			•			.4	40	100-300	150	130	46
2N2350A	Ep		•			•			.4	40	100-300	150	130	46
2N2351	Ep		•			•			.4	50	40-120	150	130	46
2N2351A	Ep		•			•			.4	50	40-120	150	130	46
2N2352	Ep		•			•			.4	40	20-60	150	130	46
2N2352A	Ep		•			•			.4	40	20-60	150	130	46
2N2353	Ep		•			•			.4	25	20 min	150	130	46
2N2353A	Ep		•			•			.4	25	20 min	150	130	46
2N2354		•							.18	15	50 min	35		22
2N2356	PI					•			.6	7	Offset@1ma=50 μ v			
2N2356A	PI					•			.6	7	Offset@1ma=50 μ v			
2N2357	Ad					•	•		170	60	30-90	20		41
2N2358	Ad					•	•		170	80	30-90	20		41
2N2359	Ad					•	•		170	120	30-90	20		41
2N2360	Md								.06	20	10 min	2	1600 Δ	12
2N2361	Md								.06	20	10 min	2	1600 Δ	12
2N2362	Md								.06	20	10 min	2	1600 Δ	12
2N2364	Ep								.4	80	40 min	150	50	46
2N2364A	Ep								.4	80	40 min	150	50	46
2N2368	PI					•			.36	15	20-60	10	550	18
2N2368/51 PI	PI					•			.6	40	20-60	10	550	51
2N2369	PI					•			.36	15	40-120	10	650	18
2N2369/51 PI	PI					•			.6	40	40-120	10	650	51
2N2369A	PI					•			.36	15	40-120	10	675	18
2N2370	Aj	•							.2	15	15 min	.025		5
2N2371	Aj	•							.2	15	20 min	.025		5
2N2372	Aj	•							.15	15	15 min	.025		18
2N2373	Aj	•							.15	15	20 min	.025		18
2N2374	Aj	•							.25	35	140	2	15	5
2N2375	Aj	•							.25	35	75	2	9	5
2N2376	Aj	•							.25	35	pair 2N2375			5
2N2377	Aj		•						.15	25	10-100	5	20	18
2N2378	Aj		•						.15	10	15 min	15	20	18
2N2380	Dj					•			.2	60	20-120	150	270	46
2N2380A	Dd								.2	40	20-120	150	100	5
2N2381	Ep					•			.3	15	40 min	200	300	5
2N2382	Ep					•			.3	20	40 min	200	300	5
2N2383	Dj	•							.85	60	20-60	4	3	53
2N2384	Dj	•							.85	60	20-60	4	3	P
2N2387	PI		•						.3	45	40-120	.01	30	50
2N2388	PI		•						.3	45	100-300	.01	30	50

Transistors

2N2228-2N2388



Molten-solder temperatures won't hurt G-E 150-grid relays

During degassing, G-E 150-grid relays get even hotter than the 356F it takes to melt solder. And it's good for them. High-temperature degassing removes much more of the organic volatiles that can contaminate a relay at normal operating temperatures.

Not many relays can stand the heat. G-E 150-grid relays can because they have a polyimide coil insulation and a welded can-to-header seal. Polyimide insulation withstands 50% more heat than conventional fluorocarbons. And a weld won't melt like a soldered joint.

New materials and fabrication methods are constantly being developed and used by General Electric to make its sealed relays more reliable. Get the full story from your G-E Electronic Components Sales Engineer. Or write for bulletin GEA-8024B, Section 792-39, General Electric Co., Schenectady, New York.

Specialty Control Department, Waynesboro, Va.

GENERAL  **ELECTRIC**

Circle No. 39 on Reader Service Card for more information.

8 Handy Selection And Cross Reference Guides — From Assemblies To Zeners

● Silicon Power Rectifier Assemblies (refer to SG 6)

Digest of the most popular items from the most complete line of molded semiconductor assemblies — 1-amp to 8-amp range.

● Silicon Annular* Metal Case

Small-Signal Transistors

(refer to SG 7)

Locator Tables for preferred types of NPN/PNP General Purpose, High-Speed Switching, and RF Amplifier transistors.

● Unibloc** Plastic Small-Signal Transistors (refer to PHF 103)

Low to medium frequency applications — General Purpose, High-Speed Saturated Switches, Audio and Low/Medium Current Small-Signal Amplifiers, Nixie† Drivers, and Dual Diodes.

● Silicon Power Transistors

(refer to SG 2)

Summary of the industry's most extensive line — includes PNP, NPN Metal and Plastic Case, Complementary Pairs — Current range from 100 mA to 30 amp.

● Germanium Power Transistors

(refer to PP102R10)

Complete scope of applications from 3 to 150 amps—lists the preferred types from more than 3,000 devices.

● Motorola Silicon Rectifiers

(refer to PR110R1)

Selections from 1 to 1000 amps — 50 to 1000 volts — identified and accompanied by Current/Temperature Derating Curves.

● Thyristor Products Selector Guide

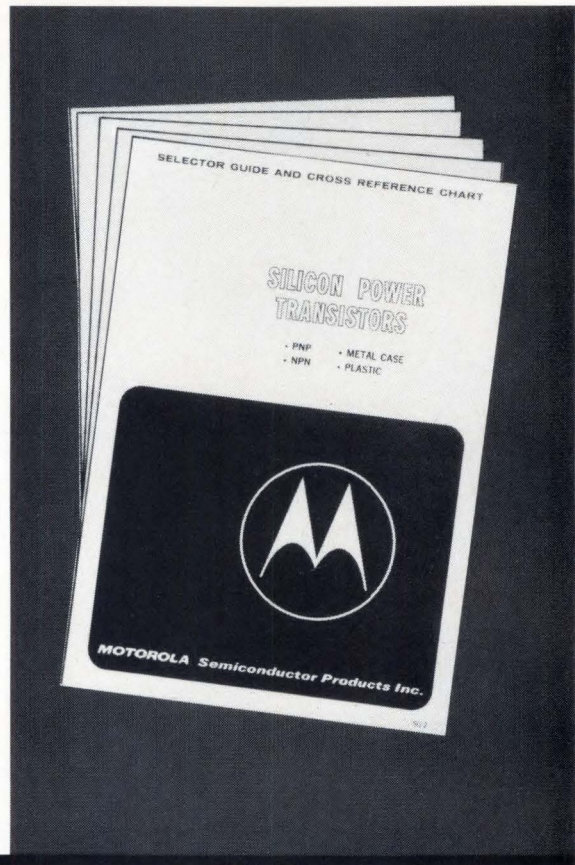
(refer to SG 1)

Metal and Plastic-Encapsulated SCR's from 800 mA to 35 Amps—100-Amp Modulator Types — Triacs, Triggers, Unijunction Transistors, 4-Layer Diodes.

● Zener Diode Condensed Selector Guide

(refer to SG 4)

Industrial and Mil Qualified Zeners from ¼ Watt to 50 Watts, TC Reference Diodes and the 5.0 kW Transient Suppressor. Synopsis of nearly 7,000 types.



Solve Semiconductor Device Motorola's Library Of

Choose One or Both of These Condensed Catalogs — Tailored To Your Needs

Full Line Catalog

(refer to CC 1)

Organized in two parts: ● First, a complete index of every standard product type number made by Motorola — full line listings. ● Balance of the catalog, pertinent max rating and electrical characteristics tables for those device types of each product line which have the broadest range of applications.

Integrated Circuits Catalog

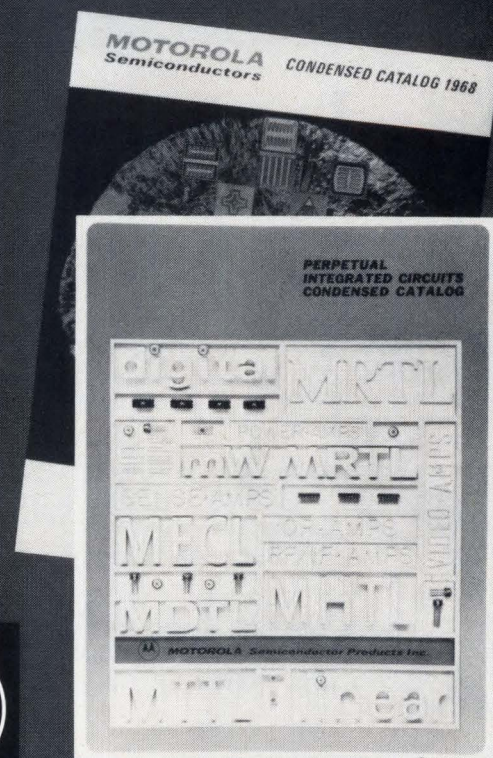
(refer to CC 2)

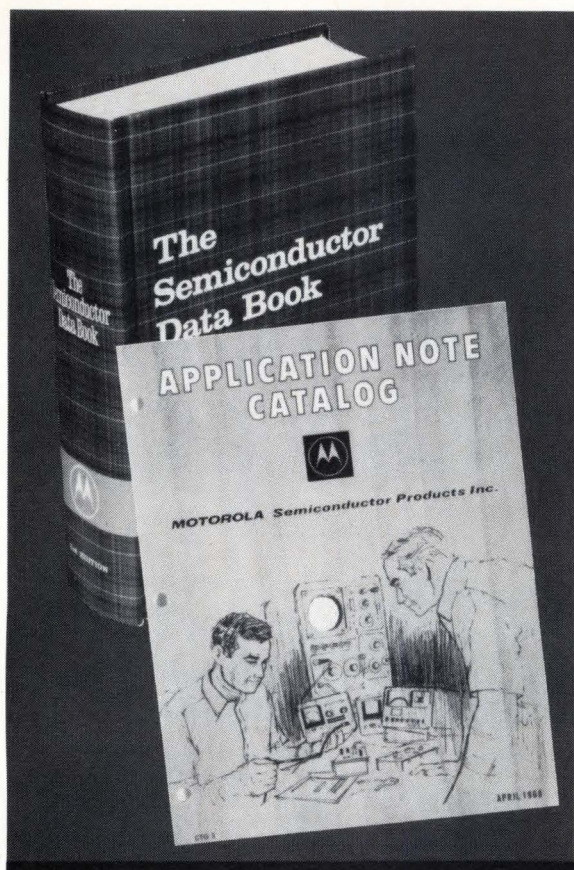
Only Motorola makes all major integrated circuit logic families, and each one is completely and individually characterized in color-coded, easy-to-locate sections. ● Application Selector Guide and Logic Comparison Chart are featured in front of this catalog. ● Similar treatment is given the industry's largest complement of commercially useable linear integrated circuits, with comparison tables for each linear type.

*Annular Semiconductors are patented by Motorola

**Trademark of Motorola Inc.

†Nixie is a Trademark of Burroughs Corp.





Widest Coverage Ever in 3rd Edition of "Semiconductor Data Book" — Updating Too

(refer to DB 3 — include check or money order . . . \$4.95 per copy)

About the size of a good desk dictionary, but contains 1,700 pages of data and general semiconductor information including:

- Alpha-Numeric index with short-form specs for all EIA registered 1N, 2N, and 3N device types.
- Complete data for all discrete standard semiconductors including house numbers, plus condensed data for all Motorola digital and linear ICs.
- Sixteen assorted Application Notes.
- Logically grouped product data sections with self-contained, edge-referenced Quick Selection Guides.

And For The First Time

- Data Book Updating Service — Receive all existing and future supplements to the third edition automatically by using the subscription form in the front of the book.

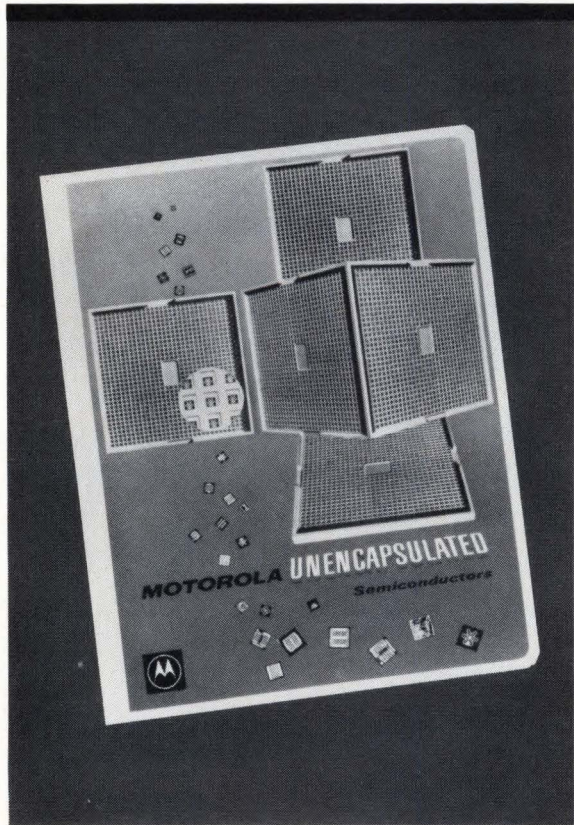
Don't Miss This Complete Guide To All Motorola Application Notes

Application Note Catalog

(refer to ANC)

More than 135 Application Notes are indexed in 29 different categories of the Selection Guide. Abstracts of all notes are then presented in numerical order for easy location in the catalog. Application Notes are available on request.

Selection Problems With Specialized Design Tools



Special Brochure — Unencapsulated Semiconductors

Motorola Unencapsulated Semiconductors

(refer to B-1)

Learn how to eliminate the extra handling costs and long lead time related to most "chip" ordering. To meet the needs of the increasing number of applications requiring a compromise between packaged discrete devices and monolithic integrated circuits, Motorola developed a program for "standard" unencapsulated semiconductors. The program is fully detailed in this brochure, including device specifications, ordering, handling and storage instructions, shipping options, and warranty information. The perpetual format of the brochure permits updating as supplemental information is published.

To order any of these outstanding design tools, write on your company letterhead referring to title and reference code, to Motorola Semiconductor Products Inc., Technical Information Center, P. O. Box 20912, Phoenix, Arizona 85036.

MOTOROLA
Semiconductor Products Inc.

P. O. BOX 20912 • PHOENIX, ARIZONA 85036

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β at I_c or I_B^*	$f_{\alpha e}$ kHz		
										h_{FE} (ma)	$f_{\alpha b}$ MHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL	
2N2389	PI							.5	35	40-120	150	60	50
2N2390	PI							.5	35	100-300	150	60	50
2N2393	PI							.3	35	20-45	150	50	50
2N2394	PI							.5	35	30-90	150	60	50
2N2395	PI							.5	40	20-60	150	40	50
2N2396	PI							.5	40	40-120	150	50	50
2N2398	Md							.06	20	10 min	2	1600 Δ	
2N2399	Md							.06	20	10 min	2	1600 Δ	
2N2400	Dj							.15	7	30 min	10	150	18
2N2401	Dj							.15	10	50 min	10	200	18
2N2402	Dj							.15	12	60 min	10	250	18
2N2405	PI							.5	120	50-275	150	120	5
2N2410	Ep							.8	40	30-120	10	300	5
2N2411	Ep							.3	20	20-60	10	140	18
2N2412	Ep							.3	20	40-120	10	140	18
2N2413	Ep							.3	18	30-120	10	400	18
2N2414	PI	DUAL						.5	28	50 min	10	60	
2N2415	Me							.075	10	10-200	2	560	18
2N2416	Me							.075	10	8-200	2	500	18
2N2423	Aj							.90	80	20-60	2		3
2N2424	Aj							.375	40	30 min	5	15	5
2N2425	Aj							.375	50	25 min	5	10	5
2N2427	Me							.5	40	20	.01	50	18
2N2428	Aj							.5	32	130	2	1.7	1
2N2429	Aj							.5	32	220	2	2.3	1
2N2430	Aj							.36	32	63	20	2.5	1
2N2431	Aj							1	32	90	300	1.5	1
2N2432	Ep							.3	15	30 min	.01	20	18
2N2433	PI							.8	45	90	5	60	46
2N2434	PI							.8	100	45 min	5	80	46
2N2435	PI							.8	45	185	5	90	46
2N2436	PI							.8	80	185	5	90	46
2N2437	PI							.8	75	35	5	70	46
2N2438	PI							.8	75	70	5	80	46
2N2439	PI							.8	75	140	5	90	46
2N2440	PI							.8	80	185	5	90	5
2N2443	PI							.8	100	50-150	50	80	5
2N2444	Ad							.85	80	90-120	3		3
2N2445	Aj							.90	100	30-60	10		41
2N2447	Fa							.075	24	65	1	1	F
2N2448	Fa							.075	24	65	1	1	G
2N2449	Fa							.075	20	125	1	1.2	F
2N2450	Fa							.075	20	125	1	1.2	G
2N2451	Ma							.025	6	25 min	10		24

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β at I_c or I_B^*	$f_{\alpha e}$ kHz		
										h_{FE} (ma)	$f_{\alpha b}$ MHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL	
2N2452	PI							.5	60	Photo device			18
2N2453	PI							.6	30	150-600	1		
2N2453A	PI							.6	50	150-600	1		
2N2455	Ep							.15	15	52	2	820	5
2N2456	Ep							.15	15	52	2	1000	18
2N2459	PI							.4	60	40 min	5	150	46
2N2460	PI							.4	60	70 min	5	150	46
2N2461	PI							.4	60	120 min	5	150	46
2N2462	PI							.4	60	170 min	5	150	46
2N2464	PI							.5	60	70 min	5	150	18
2N2465	PI							.5	60	120 min	5	150	18
2N2466	PI							.5	60	170 min	5	150	18
2N2467	Ad							.5	60	30-90	500		5
2N2468	Ad							.5	100	30-90	500		5
2N2469	Ad							.5	200	30-90	500		5
2N2474								.25	15	8	.1*		5
2N2475	Ep							.3	6	50	20	600 min	18
2N2475/46	Ep							.4	6	30-150	20	600	46
2N2475/51	Ep							.6	6	30-150	20	600	51
2N2476	Ep							.6	20	20 min	150	250 min	5
2N2477	Ep							.6	20	40 min	150	250	5
2N2478	Dj							.2	40	30	150	10	5
2N2479	Dj							.2	40	30-120	150	5	5
2N2480	PI							.6	40	30 min	1		
2N2480A	PI							.6	40	50-200	1		
2N2481	Dj							.36	15	40 min	10	300	18
2N2482								.15	12	25 min	2	600	18
2N2483	PI							.36	60	40-120	.01	70	18
2N2484	PI							.36	60	100-500	.01	80	18
2N2485	Me							.87	120	10 min	500		5
2N2486	Me							.87	140	10 min	500		5
2N2487	Dj							.06	10	20 min	10	360	18
2N2488	Dj							.06	10	20 min	50	360	18
2N2489	Dj							.06	15	20 min	10	300	18
2N2490	Aj							.170	50	20-40	5	10*	36
2N2491	Aj							.170	40	35-70	5	10*	36
2N2492	Aj							.170	65	25-50	5	10*	36
2N2493	Aj							.170	75	25-50	5	10*	36
2N2494	Aj							.1	35	70	1	180	
2N2495	Aj							.1	35	70	1	180	12
2N2496	Aj							.1	35	70	1	180	
2N2501	Ep							.5	20	50-150	10	350	18
2N2509	PI							.36	80	40 min	10	45	18

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	β at I_C or I_B^*	$f_{\alpha e}$ kHz		
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N2510	PI	•	•				•	.36					
2N2511	PI	•	•				•	.36	50	240-750	10	45	18
2N2512	Ad							.26	70	200	10	175	33
2N2515	PI	•	•					.4	60	40 min	5	100	46
2N2516	PI	•	•					.4	60	80 min	5	100	46
2N2518	PI		•					.4	80	40 min	5	100	46
2N2519	PI		•					.4	80	80 min	5	100	46
2N2520	PI		•					.4	60	18 min	1	50	46
2N2521	PI	•	•					.4	60	36 min	1	50	46
2N2522	PI	•	•					.4	60	76 min	1	50	46
2N2523	PI	•	•					.4	45	60 min	1	100	46
2N2524	PI	•	•					.4	45	150 min	1	100	46
2N2525	PI							.25	100	10 min	350		
2N2526	Ad	•						.85	80	20-50	3	.45	3
2N2527	Ad	•						.85	120	20-50	3	.45	3
2N2528	Ad	•						.85	160	20-50	3	.45	3
2N2537	Ep						•	.8	30	50-150	150	250	
2N2538	Ep						•	.8	30	100-300	150	250	
2N2539	Ep						•	.5	30	50-150	150	250	
2N2540	Ep						•	.5	30	100-300	150	250	
2N2551	Aj	•						.4	150	15-45	100		5
2N2552	Aj	•						.20	30	20-60	1	.225	X
2N2553	Aj	•						.20	40	20-60	1	.225	X
2N2554	Aj	•						.20	50	20-60	1	.225	X
2N2555	Aj	•						.20	60	20-60	1	.225	X
2N2556	Aj	•						.20	30	20-60	1	.225	Y
2N2557	Aj	•						.20	40	20-60	1	.225	Y
2N2558	Aj	•						.20	50	20-60	1	.225	Y
2N2559	Aj	•						.20	60	20-60	1	.225	Y
2N2560	Aj	•						.20	30	20-60	3	.25	X
2N2561	Aj	•						.20	40	20-60	3	.25	X
2N2562	Aj	•						.20	50	20-60	3	.25	X
2N2563	Aj	•						.20	60	20-60	3	.25	X
2N2564	Aj	•						.20	30	20-60	3	.25	11
2N2564/5	Aj	•						.8	30	20-60	3	.25	5
2N2565	Aj	•						.20	40	20-60	3	.25	11
2N2565/5	Aj	•						.8	40	20-60	3	.25	5
2N2566	Aj	•						.20	50	20-60	3	.25	11
2N2566/5	Aj	•						.8	50	20-60	3	.25	5
2N2567	Aj	•						.20	60	20-60	3	.25	11
2N2567/5	Aj	•						.8	60	20-60	3	.25	5
2N2569	PI						•	.3	15	100	.1	100	
2N2570	PI						•	.3	15	100	.1	100	

**5-AMP
10-AMP**

PNP

**Silicon
Power
Transistors**

from **Soliton**

In addition to 20-Amp devices, Soliton has now expanded its line of PNP Power Transistors with a 10-Amp and 5-Amp Series. Both Series have a voltage breakdown range of 40 to 120 Volts. All have direct complements available.

10-AMP SERIES



Type Number TO-61 Isolated	MAXIMUM RATINGS			PRIMARY ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)					
	V_{CEX} Volts	V_{CEO} Volts	V_{EBO} Volts	h_{FE}		$V_{CE(sat)}$ Volts	$V_{BE(sat)}$ Volts	I_{CEX} μA	f_T MHz
				$I_C = 10\text{A}$ $V_{CE} = -5\text{V}$	$I_C = 5\text{A}$ $V_{CE} = -5\text{V}$	$I_C = 5\text{A}$ $I_B = 0.5\text{A}$	$I_C = 5\text{A}$ $I_B = 0.5\text{A}$	$V_{CE} =$ Rated V_{CEX}	$I_C = 1.0\text{A}$ $V_{CE} = -10\text{V}$
				Min.	Range	Max.	Max.	Max.	Min.
SDT3105	-40	-40	-6	10	30-90	-1.0	-2.0	10	30
SDT3106	-60	-60	-6	10	30-90	-1.0	-2.0	10	30
2N5316	-80	-80	-6	10	30-90	-1.0	-2.0	10	30
2N5318	-100	-100	-6	10	30-90	-1.0	-2.0	10	30
SDT3109	-120	-120	-6	10	30-90	-1.0	-2.0	10	30

5-AMP SERIES



Type Number TO-5	Type Number TO-111 Isolated	MAXIMUM RATINGS			PRIMARY ELECTRICAL CHARACTERISTICS ($T_C = 25^\circ\text{C}$)					
		V_{CEX} Volts	V_{CEO} Volts	V_{EBO} Volts	h_{FE}		$V_{CE(sat)}$ Volts	$V_{BE(sat)}$ Volts	I_{CEX} μA	f_T MHz
					$I_C = 5.0\text{A}$ $V_{CE} = -5\text{V}$	$I_C = 2.0\text{A}$ $V_{CE} = -5\text{V}$	$I_C = 2.0\text{A}$ $I_B = 0.2\text{A}$	$I_C = 2.0\text{A}$ $I_B = 0.2\text{A}$	$V_{CE} =$ Rated V_{CEX}	$I_C = 0.2\text{A}$ $V_{CE} = -10\text{V}$
					Min.	Range	Max.	Max.	Max.	Min.
SDT3321	SDT3301	-40	-40	-6	10	40-120	-1.0	-2.2	10	40
SDT3322	SDT3302	-60	-60	-6	10	40-120	-1.0	-2.2	10	40
SDT3323	SDT3303	-80	-80	-6	10	40-120	-1.0	-2.2	10	40
SDT3324	SDT3304	-100	-100	-6	10	40-120	-1.0	-2.2	10	40
SDT3325	SDT3305	-40	-40	-6	5	20-60	-1.2	-2.5	10	40
SDT3326	SDT3306	-60	-60	-6	5	20-60	-1.2	-2.5	10	40
SDT3327	SDT3307	-80	-80	-6	5	20-60	-1.2	-2.5	10	40
SDT3328	SDT3308	-100	-100	-6	5	20-60	-1.2	-2.5	10	40
SDT3329	SDT3309	-120	-120	-6	5	20-60	-1.2	-2.5	10	40

TO-5

Dial 1-800-327-3243 for a "No Charge" telephone call and further information

*When you think of semiconductors
...think Soliton!*

Soliton
DEVICES, INC.

1177 BLUE HERON BLVD. / RIVIERA BEACH, FLA. / TWX: (510) 952-6676

Circle No. 40 on Reader Service Card for more information.

Transistors

2N2580-2N2769

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC LIN	SW CHP	β or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	MIX	SRV	SAT	f_T MHz	MIL
2N2713	PI					.2	18
2N2714	PI					.2	18
2N2715	PI					.2	18
2N2716	PI					.2	18
2N2719						.3	20
2N2720		Diff Amp				.6	60
2N2721		Diff Amp				.6	60
2N2722		Diff Amp				.6	45
2N2723						.5	60
2N2724						.5	60
2N2725						.5	45
2N2726	Me					1	200
2N2727	Me					1	200
2N2728	Aj					.170	5
2N2729						.3	15
2N2730	Aj					.170	60
2N2731	Aj					.170	45
2N2732	Aj					.170	30
2N2733	Aj					.140	60
2N2734	Aj					.140	45
2N2735	Aj					.140	30
2N2736	Aj					.140	60
2N2737	Aj					.140	45
2N2738	Aj					.140	30
2N2739						.200	50
2N2740						.200	100
2N2741						.200	150
2N2742						.200	200
2N2745						.200	50
2N2746						.200	100
2N2747						.200	150
2N2748						.200	200
2N2751						.200	50
2N2752						.200	100
2N2753						.200	150
2N2754						.200	200
2N2757						.200	50
2N2758						.200	100
2N2759						.200	150
2N2760						.200	200
2N2761						.200	250
2N2763						.200	50
2N2764						.200	100
2N2765						.200	150
2N2766						.200	200
2N2769						.200	50

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC LIN	SW CHP	β or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	MIX	SRV	SAT	f_T MHz	MIL
2N2645	PI					.5	50
2N2648	Aj					.3	25
2N2649	Me					8.7	65
2N2650	Me					8.7	140
2N2651	PI					.36	30
2N2652	PI	Dual				.6	60
2N2652A	PI	Dual				.6	60
2N2654	Ad					.1	32
2N2656	Me					.36	15
2N2657	PI					7	60
2N2658	PI					7	80
2N2659	Aj					.15	50
2N2660	Aj					.15	70
2N2661	Aj					.15	90
2N2662	Aj					.15	50
2N2663	Aj					.15	70
2N2664	Aj					.15	90
2N2665	Aj					.15	50
2N2666	Aj					.15	70
2N2667	Aj					.15	90
2N2668	Aj					.15	50
2N2669	Aj					.15	70
2N2670	Aj					.15	90
2N2671	Ad					.1	32
2N2672	Ad					.1	32
2N2673	Gd					.25	60
2N2674	Gd					.25	60
2N2675	Gd					.25	60
2N2676	Gd					.25	60
2N2677	Gd					.25	45
2N2678	Gd					.25	45
2N2691	Ad					.100	100
2N2691A	Ad					.170	120
2N2692	Ep					.6	30
2N2693	Ep					.6	30
2N2694	Ep					.6	20
2N2695	Ep					.36	25
2N2696	Ep					.36	25
2N2697	PI					17.5	60
2N2698	PI					17.5	80
2N2706	Ad					.5	32
Complementary Pair 2N2706 and 2N2430							
2N2707						.2	20
2N2708	Ep					1.2	20
2N2710						.2	18
2N2711	PI					.2	18
2N2712	PI					.2	18

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC LIN	SW CHP	β or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	MIX	SRV	SAT	f_T MHz	MIL
2N2580	Dj					150	400
2N2581	Dj					150	400
2N2582	Dj					150	500
2N2583	Dj					150	500
2N2586	PI					.3	45
2N2590	PI					.4	60
2N2591	PI					.4	60
2N2592	PI					.4	60
2N2593	PI					.4	60
2N2594						.5	80
2N2595	PI					.4	60
2N2596	PI					.4	60
2N2597	PI					.4	60
2N2599	PI					.4	80
2N2599A	PI					.4	100
2N2600	PI					.4	80
2N2600A	PI					.4	100
2N2601	PI					.4	60
2N2602	PI					.4	60
2N2603	PI					.4	60
2N2604	PI					.4	45
2N2605	PI					.4	45
2N2605A	Ep					.4	45
2N2610						.15	40
2N2611	Me					.10	100
2N2612	Ad					.90	65
2N2613	Aj					.12	25
2N2614	Aj					.12	35
2N2616						.3	15
2N2617						.25	25
2N2618						.6	40
2N2630						.3	10
2N2631	PI					.3	75
2N2632	PI					.40	60
2N2633	PI					.40	80
2N2634	PI					.40	100
2N2635	Ep					.15	15
2N2636	Ad					.50	40
2N2637	Ad					.50	60
2N2638	Ad					.50	80
2N2639	PI	Dual				.6	45
2N2640	PI	Dual				.6	45
2N2641	PI	Dual				.6	45
2N2642	PI	Dual				.6	45
2N2643	PI	Dual				.6	45
2N2644	PI	Dual				.6	45

(Continued)

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • VHF • RF • OSC • MIX • SRV • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C VHF • MIX • SRV • LIN • SW • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N2770		•	200	100	10 min	20	16*
2N2771		•	200	150	10 min	20	16*
2N2772		•	200	200	10 min	20	16*
2N2775		•	200	50	10 min	25	.2
2N2776		•	200	100	10 min	25	.2
2N2777		•	200	150	10 min	25	.2
2N2778		•	200	200	10 min	25	.2
2N2781	PI	•	15	75	7.5-75	350	140 8
2N2782	PI	•	15	100	7.5-75	350	140 8
2N2783	PI	•	15	100	7.5-75	350	140 8
2N2784	Ep	•	.3	6	120	10	1000 18
2N2784/46	Ep	•	.4	6	120	10	1000 46
2N2784/51	Ep	•	.6	6	120	10	1000 51
2N2785	PI	Darlington	.5	60	2000-20,000		
2N2786		•	1	34	80	80	350 39
2N2786A		•	1	34	80	80	350 39
2N2787	PI	•	.8	50	20-60	150	350 5
2N2788	PI	•	.8	50	40-120	150	350 5
2N2789	PI	•	.8	50	100-300	150	350 5
2N2790	PI	•	.5	50	20-60	150	350 18
2N2791	PI	•	.5	50	40-120	150	350 18
2N2792	PI	•	.5	50	100-300	150	350 18
2N2795	Dj	•	.075	15	50 min	10	450 18
2N2796	Dj	•	.075	12	30 min	10	300 18
2N2797	Dj	•	.075	20	50 min	10	235 9
2N2798	Dj	•	.075	25	30 min	10	235 9
2N2799	Dj	•	.075	15	30 min	10	120 9
2N2800	Ep	•	.6	35	30-90	150	120 5
2N2800/46	Ep	•	.4	35	30-90	150	120 46
2N2800/51	Ep	•	.6	35	30-90	150	120 51
2N2801	Ep	•	.6	35	75-225	150	120 5
2N2801/46	Ep	•	.4	35	75-225	150	120 46
2N2801/51	Ep	•	.6	35	75-225	150	120 51
2N2802	PI	•	.5	20	20-120	.1	120 5
2N2803	PI	•	.5	20	20-120	.1	120 5
2N2804	PI	•	.5	20	20-120	.1	120 5
2N2805	PI	•	.5	20	40-120	.1	140 5
2N2806	PI	•	.5	20	40-120	.1	140 5
2N2807	PI	•	.5	20	40-120	.1	140 5
2N2808A	Ep	•	.2	10	20-120	2	1500 18
2N2809	Ep	•	.2	15	20-120	2	1300 [▲] 18
2N2809A	Ep	•	.2	15	20-120	2	1300 [▲] 18
2N2810	Ep	•	.2	10	20-120	2	1000 [▲] 18
2N2810A	Ep	•	.2	10	20-120	2	1300 [▲] 18
2N2811	PI	•	.70	60	20-60	5	20 Z
2N2812	PI	•	.70	60	40-120	5	30 Z
2N2813	PI	•	.70	80	20-60	5	20 Z

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • VHF • RF • OSC • MIX • SRV • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C VHF • MIX • SRV • LIN • SW • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N2814	PI	•	.70	80	40-120	5	30 Z
2N2815	Me	•	.200	80	10-50	10	V
2N2816	Me	•	.200	100	10-50	10	V
2N2817	Me	•	.200	150	10-50	10	V
2N2818	Me	•	.200	200	10-50	10	V
2N2819	Me	•	.200	80	10-50	15	V
2N2820	Me	•	.200	100	10-50	15	V
2N2821	Me	•	.200	150	10-50	15	V
2N2822	Me	•	.200	200	10-50	15	V
2N2823	Me	•	.200	80	10-40	20	V
2N2824	Me	•	.200	100	10-40	20	V
2N2825	Me	•	.200	150	10-40	20	V
2N2828	Dj	•	.40	60	20-60	500	
2N2829	Dj	•	.40	60	20-60	1	
2N2831		•	.36	12	40 min	10	18
2N2832	Ep	•	.85	50	25-100	10	17.5* 3
2N2833	Ep	•	.85	75	25-100	10	17.5* 3
2N2834	Ep	•	.85	100	25-100	10	17.5* 3
2N2835		•	.16	32	30 min	1	10* 3
2N2836		•	.35	55	30	1	10* 3
2N2837	Ep	•	.4	35	30-90	150	120 18
2N2838	Ep	•	.4	35	75-225	150	120 18
2N2845	Ep	•	.36	30	30-120	150	350 18
2N2846	Ep	•	.8	30	30-120	150	350 5
2N2847	Ep	•	.36	20	40-140	150	350 18
2N2848	Ep	•	.8	20	40-140	150	350 5
2N2849	Ep	•	.85	80	100-300	1	80 J
2N2850	Ep	•	.80	40-120	1	60	J
2N2851	Ep	•	.80	40-120	1	60	J
2N2852	Ep	•	.80	20-60	1	40	J
2N2853	Ep	•	.40	40 min	1	60	J
2N2854	Ep	•	.40	100-300	1	80	J
2N2855	Ep	•	.40	40-120	1	60	J
2N2856	Ep	•	.40	20-60	1	40	J
2N2856-1	Ep	•	.40	20-60	1	40	5
2N2856-2	Ep	•	.40	20-60	1	40	W
2N2856-3	Ep	•	.40	20-60	1	40	AA
2N2857	Ep	•	.3	30	30 min	3	1000 18
2N2858	Dj	•	.6	80	20 min	1	1 5
2N2859	Dj	•	.6	100	20 min	1	1 5
2N2860		•	.15	7	40 min	40	18
2N2861	Ep	•	.3	20	30-120	.01	90 18
2N2862	Ep	•	.3	20	12-120	.01	75 18
2N2863	Ep	•	.8	25	30-200	200	250 5
2N2864	Ep	•	.8	25	20-200	200	250 5

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • VHF • RF • OSC • MIX • SRV • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C VHF • MIX • SRV • LIN • SW • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N2865	Ep	•	.2	13	20-200	4	600 18
2N2866	PI	•	.20	80	20-60	500	10
2N2867	PI	•	.20	80	40-120	500	10
2N2868	Ep	•	.8	40	40-120	150	50 5
2N2869	Aj	•	.30	80	50-165	1	.45 3
2N2870	Aj	•	.30	60	50-165	1	.45 3
2N2871		•	.60		Offset 20 mv		
2N2872		•	.110		Offset 20 mv		
2N2873	Me	•	.115	35	40-300	1	375 1
2N2874	PI	•	.15	75	7.5-75	350	140 8
2N2875	PI	•	.20	50	20-60	500	25
2N2876	PI	•	.17.5	80			200
2N2877	PI	•	.53	60	20-60	1	30
2N2878	PI	•	.53	60	40-120	1	50
2N2879	PI	•	.53	80	20-60	1	30
2N2880	PI	•	.53	80	40-120	1	50
2N2881	Dj	•	.8.75	60	20-60	500	5
2N2882	Dj	•	.8.75	100	20-60	500	5
2N2883	Ep	•	.8	20	20 min	100	500 5
2N2884	Ep	•	.8	20	20 min	100	500 5
2N2885		•	.15	15	30 min	10	300 51
2N2886		•	.8	40	22 min	5	5
2N2887	PI	•	.25	80	15-80	350	
2N2890	Ep	•	.8	80	30-90	1	50 5
2N2891	Ep	•	.8	80	50-150	1	50 5
2N2892	Ep	•	.30	80	30-90	1	50
2N2893	Ep	•	.30	80	50-150	1	50
2N2894	Ep	•	.36	12	40-150	30	550 18
2N2894A		•	.12				800
2N2895	PI	•	.1.8	120	40-120	150	120 18
2N2896	PI	•	.1.8	140	60-200	150	120 18
2N2897	PI	•	.1.8	60	50-200	150	100 18
2N2898	PI	•	.1.8	120	40-120	150	120 46
2N2899	PI	•	.1.8	140	60-200	150	120 46
2N2900	PI	•	.1.8	60	50-200	150	100 46
2N2901	Ep	•	Offset 200 μ v				300
2N2903	PI	•	.3	30	125-625	1	Offset 10 mv
2N2903A	PI	•	.3	30	125-625	1	Offset 5mv
2N2904	Ep	•	.6	40	40-120	150	200 5
2N2904A	Ep	•	.6	60	40-120	150	200 5
2N2905	Ep	•	.6	40	100-300	150	200 5
2N2905A	Ep	•	.6	60	100-300	150	200 5
2N2906	Ep	•	.4	40	40-120	150	200 18
2N2906A	Ep	•	.4	60	40-120	150	200 18
2N2907	Ep	•	.4	40	100-300	150	200 18
2N2907A	Ep	•	.4	60	100-300	150	200 18

Transistors

2N2770-2N2907A

Transistors

2N2909-2N3060

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SAT	CMP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*		f _{αe} kHz	
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N2999	Ep	•	•					.075	10	10 min	3	1400	18
2N3009	Ep							.36	15	30-120	30	550	52
2N3010	Ep				•			.3	6	25-125	10	800	18
2N3011	Ep				•			.36	12	30-120	10	650	18
2N3012	Ep				•			.36	12	30-120	30	550	18
2N3013	Ep				•			.36	15	30-120	30	350	52
2N3014	Ep				•			.36	20	30-120	30	550	52
2N3015	Ep				•			.8	30	30-120	150	330	5
2N3016	Ep							.5	50	60-150	1	200	5
2N3017	Ep							.10	50	60-150	1	200	X
2N3018	Ep							.25	50	60-150	1	200	T
2N3019		•						.8	80	80 min	1	100	5
2N3020		•						.8	80	30 min	1	100	5
2N3021						•		.25	30	20-60	1	100*	3
2N3022						•		.25	45	20-60	1	100*	3
2N3023						•		.25	60	20-60	1	100*	3
2N3024						•		.25	30	50-180	1	100*	3
2N3025						•		.25	45	50-180	1	100*	3
2N3026						•		.25	60	50-180	1	100*	3
2N3033†	Ep					•		.3	100 to 150				18
2N3034†	Ep					•		.3	70 to 110				18
2N3035†	Ep					•		.3	50 to 80				18
2N3036	Ep	•				•		.8	80	50-150	150	50	5
2N3037	Ep	•				•		.36	70	40-120	150	50	50
2N3038	Ep	•				•		.36	60	80-240	150	50	50
2N3039	Ep	•				•		.36	35	20-80	150	50	50
2N3040	Ep	•				•		.36	30	40-160	150	50	50
2N3043	PI	•	Pair					.35	45	100-300	.01	30	
2N3044	PI	•	Pair					.35	45	100-300	.01	30	
2N3045	PI	•	Pair					.35	45	100-300	.01	30	
2N3046	PI	•	Pair					.35	45	50-200	.01	30	
2N3047	PI	•	Pair					.35	45	50-200	.01	30	
2N3048	PI	•	Pair					.35	45	50-200	.01	30	
2N3049	Ep	•	Pair			•		.35	20	30-120	.1	60	
2N3050	Ep	•	Pair			•		.35	20	30-120	.1	60	
2N3051	Ep	•	Pair			•		.35	20	30-120	.1	60	
2N3052	Ep							Dual 2N706					
2N3053	PI	•				•		.5	40	50-250	150	100	5
2N3054	PI	•				•		.25	55	25-100	500		
2N3055	PI	•				•		.115	60	20-70	4		3
2N3056	PI		•					.5	60	115	1	100	46
2N3056A	PI		•					.5	80	100-300	150		46
2N3057	PI		•					.5	60	240	1	100	46
2N3057A	PI		•					.5	80	100-300	150		46
2N3058	Ep	•						.4	6	40-120	.0001	10	46
2N3059	Ep	•						.4	6	100-300	.01	10	46
2N3060	Ep	•						.4	60	30 min	1	5	46

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SAT	CHP	<1 w	V _{CE}	$\beta @ I_C$ or I_B^*		$f_{\alpha e}^*$ kHz	
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1 w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N2948	Ep		•	•				.25	40	2.5-100	400	100	3
2N2949	Ep		•	•				.5	60	5-100	40	100	
2N2950	Ep		•	•				.7	60	5-100	40	100	
2N2951	Ep		•	•				.8	60	20-150	10	200	5
2N2952	Ep		•	•				.5	60	20-150	10	200	18
2N2953	Aj	•						.12	25	200 min	10	10	1
2N2955	Ep		•			•		.15	25	20-60	50	350	18
2N2956	Ep		•			•		.15	20	40-120	50	375	18
2N2957	Ep		•			•		.15	18	100 min	50	400	18
2N2958	Ep		•			•		.6	20	40-120	150	250	5
2N2959	Ep		•			•		.6	20	100-300	150	250	5
2N2960	Ep		•			•		.3	30	100-300	150		5
2N2962	Dj		•					.35	18	6 db @160 Mc		700	
2N2963	Dj		•					.35	18	5 db @160 Mc		700	
2N2964	Dj		•					.35	15	6 db @160 Mc		700	
2N2965	Dj		•					.35	15	5 db @160 Mc		700	
2N2968*	Pa	•			•	•		.15	10	15 min	.1*	10	5
2N2969*	Pa	•			•	•		.15	10	15 min	.1*	10	18
2N2970*	Pa	•			•	•		.15	20	10 min	.1*	8	5
2N2971*	Pa	•			•	•		.15	20	10 min	.1*	8	18
2N2972	PI			DIFF AMP				.3	45	150 min	1		18
2N2973	PI			DIFF AMP				.3	45	300 min	1		18
2N2974	PI			DIFF AMP				.3	45	150 min	1		18
2N2975	PI			DIFF AMP				.3	45	300 min	1		18
2N2976	PI			DIFF AMP				.3	45	150 min	1		18
2N2977	PI			DIFF AMP				.3	45	300 min	1		18
2N2978	PI			DIFF AMP				.3	60	150 min	1		18
2N2979	PI			DIFF AMP				.3	60	300 min	1		18
2N2980	PI			DIFF AMP				.3	60	50-150	10		18
2N2981	PI			DIFF AMP				.3	60	50-200	10		18
2N2982	PI			DIFF AMP				.3	60	50-200	10		18
2N2983	Me					•		.1	80	20-60	1	40	5
2N2984	Me					•		.1	120	20-60	1	40	5
2N2985	Me					•		.1	80	40-120	1	40	5
2N2986	Me					•		.1	120	40-120	1	40	5
2N2987	PI					•		.1	80	25-75	200	30	5
2N2988	PI					•		.1	100	25-75	200	30	5
2N2989	PI					•		.1	80	60-120	200	30	5
2N2990	PI					•		.1	100	60-120	200	30	5
2N2991	PI					•		.2	80	25-75	200	30	R
2N2992	PI					•		.2	100	25-75	200	30	R
2N2993	PI					•		.2	80	60-120	200	30	R
2N2994	PI					•		.2	100	60-120	200	30	R
2N2995	Me				•	•	•	.10	100	30-90	200	15	
2N2996	Ep	•	•					.075	10	25-500	4	400	18
2N2997	Ep	•	•					.075	15	40-500	4	400	18
2N2998	Me	•	•					.075	12	15-300	3	600	18

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	RF	OSC	LIN	SRV	SAT	CMP	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	f _{αe} kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	≅1w		V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
											h _{fe}	(amp)	f _T MHz	MIL
2N2909	Ep	•					•	.4	40	20 min.	500			46
2N2910	PI		Dual					.3	25	70 min.	.01			
2N2911	Dj					•		.5	125	20-60	1	1000*	5	
2N2912	Ep	•					•	.75	6	75 min	10	20	8	
2N2913	PI		Dual					.6	45	150 min	1			
2N2914	PI		Dual					.6	45	300 min	1			
2N2915	PI		Dual					.6	45	150 min	1	Offset 5mv		
2N2915A			Dual					.15	45	60-240	.01		5	
2N2916	PI		Dual					.6	45	300 min	1	Offset 5mv		
2N2916A			Dual					.15	45	150-600	.01		5	
2N2917	PI		Dual					.6	45	150 min	1	Offset 10 mv		
2N2918	PI		Dual					.6	45	300 min	1	Offset 10 mv		
2N2919	PI		Dual					.6	60	150 min	1	Offset 5 mv		
2N2919A			Dual					.15	60	60-240	.01		5	
2N2920	PI		Dual					.6	60	300 min	1	Offset 5mv		
2N2920A			Dual					.15	60	150-600	.01		5	
2N2921	PI	•	•					.2	25	35-70	2	120		
2N2922	PI	•	•					.2	25	55-110	2	120		
2N2923	PI	•	•			•		.2	25	90-180	2	200		
2N2924	PI	•	•			•		.2	25	150-300	2	200		
2N2925	PI	•	•			•		.2	25	235-470	2	200		
2N2926	PI	•	•			•		.2	18	35-470	2	200		
2N2927	Ep	•	•			•		.8	25	30-130	50	150	5	
2N2927/46	Ep	•	•			•		.4	25	30-130	50	150	46	
2N2927/51	Ep	•	•			•		.6	25	30-130	50	150	51	
2N2928		•						.15	13	8 min	2	400		
2N2929	Me	•						.3	10	10-100	10	800	5	
2N2931								.05	5	30 min	.2			
2N2932								.05	5	70 min	.2			
2N2933								.05	5	45 min	.2			
2N2934								.05	30	30 min	.2			
2N2935								.05	30	70 min	.2			
2N2936									55	150-600	1		5	
2N2937									55	150-600	1		5	
2N2938	Ep						•	.1	13	30 min	50	690	52	
2N2939	Ep							.8	60	60 min	150	150	5	
2N2940	Ep							.8	80	60 min	150	150	5	
2N2941	Ep							.8	100	60 min	150	150	5	
2N2942	Dj					•		.15	25	50 min	10	235	9	
2N2943	Dj					•		.15	15	30 min	10	120	9	
2N2944	Ep					•	•	.4	10	200	1	15	46	
2N2944A						•	•	.4	10	100 min	1		46	
2N2945	Ep					•	•	.4	20	100	1	10	46	
2N2945A						•	•	.4	20	70 min	1		46	
2N2946	Ep					•	•	.4	35	70	1	5	46	
2N2946A						•	•	.4	35	50 min	1		46	
2N2947	Ep	•	•					.25	60	2.5-35	400	100	3	

(Continued)

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N3061	Ep	•	.4	60	60 min 1	8	46
2N3062	Ep	•	.4	80	20 min 1	3	46
2N3063	Ep	•	.4	80	50 min 1	5	46
2N3064	Ep	•	.4	100	15 min 1	2	46
2N3065	Ep	•	.4	100	30 min 1	4	46
2N3072	Ep	• •	.8	60	30-130 50	200	5
2N3073	Ep	• •	.36	60	30-130 50	200	18
2N3074		•	.14	25	36 db @200 Mc		12
2N3075		•	.14	30	56 db @35 Mc		12
2N3076	PI		125	100	30-90 7	50	
2N3077		•	1.2	80	80 min .001	15	18
2N3078		•	1.2	80	25 min .001	15	18
2N3079	Dj		178	200	10-50 5	50*	36
2N3080	Dj		178	300	10-50 5	50*	36
2N3081			.6	50	30 min 150	150	5
2N3081/46			.4	50	30 min 150	150	46
2N3081/51			.6	50	30 min 150	150	51
2N3082	DUAL		.5	7	100 min .25	100	5
2N3083	DUAL		.5	7	100 min .25	100	5
2N3107	Ep	• •	.8	60	100-300 150		5
2N3108	Ep	• •	.8	60	40-120 150	86	5
2N3109	Ep	• •	.8	40	100-300 150		5
2N3110	Ep	• •	.8	40	40-120 150	86	5
2N3114	PI	• •	.8	150	15 min .1	54	5
2N3115	Ep	• •	.4	20	40-120 150	250	18
2N3116	Ep	• •	.4	20	100-300 150	250	18
2N3117	PI	• •	.36	60	250-500 .01	120	18
2N3118	PI	• •	.4	60	50-275 25	380	5
2N3119	Td	• •	.4	100	50-200 100	250	5
2N3120	Ep	• •	.8	45	30-130 50	200	5
2N3121	Ep	• •	.36	45	30-130 50	200	18
2N3122		•	3	30	63 300	60	5
2N3123		•	3	30	200 150	400	5
2N3124		•	90	30	120 3	2.5*	41
2N3125		•	90	80	50 3	5*	41
2N3126		•	90	75	65 1	6*	41
2N3127	Me	• •	.1	25	20-100	400	18
2N3128		•	.15	20	50-150 .1	60	
2N3129		•	.15	45	100-300 .01	60	
2N3130		•	.15	60	60-180 .01	60	
2N3131		•	.15	15	30-120 10	250	
2N3132		•	90	70	40-200 2	3*	3
2N3133	Ep	• •	.6	35	40-120 150	200	5
2N3134	Ep	• •	.6	35	100-300 150	200	5
2N3135	Ep	• •	.4	35	40-120 150	200	18
2N3136	Ep	• •	.4	35	100-300 150	200	18
2N3137	Ep	• •	.6	20	20-120 50	750	5

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N3138		• •	20	65	10 min 1	400▲	
2N3139		• •	20	140	10 min 1	400▲	
2N3140		• •	20	65	10 min 1	400▲	
2N3141		• •	20	140	10 min 1	400▲	
2N3142		• •	25	65	10 min 1	400▲	
2N3143		• •	25	140	10 min 1	400▲	
2N3144		• •	25	65	10 min 1	400▲	
2N3145		• •	25	140	10 min 1	400▲	
2N3146	Aj	•	150	140	30-90 5	.5	3
2N3147	Aj	•	150	160	30-90 5	.5	3
2N3149		•	300	80	10 min 50	.1	
2N3150		•	300	100	10 min 50	.1	
2N3151		•	300	150	10 min 50	.1	
2N3152		•	2.5	120	40 min 30	200	
2N3153	PI	• •	.3	15	Offset 750 μ V@1ma		18
2N3154	Aj	•	28	35	60-180 500	15*	GG
2N3155	Aj	•	28	50	60-180 500	15*	GG
2N3156	Aj	•	28	65	60-180 500	15*	GG
2N3157	Aj	•	28	75	60-180 500	15*	GG
2N3158	Aj	•	28	35	25-75 500	10*	GG
2N3159	Aj	•	28	50	25-75 500	10*	GG
2N3160	Aj	•	28	65	25-75 500	10*	GG
2N3161	Aj	•	28	75	25-75 500	10*	GG
2N3163	Dj	•	85	40	12-36 1		P
2N3164	Dj	•	85	60	12-36 1		P
2N3165	Dj	•	85	80	12-36 1		P
2N3166	Dj	•	85	100	12-36 1		P
2N3167	Dj	•	85	40	12-36 1		53
2N3168	Dj	•	85	60	12-36 1		53
2N3169	Dj	•	85	80	12-36 1		53
2N3170	Dj	•	85	100	12-36 1		53
2N3171	Dj	•	75	40	12-36 1		3
2N3172	Dj	•	75	60	12-36 1		3
2N3173	Dj	•	75	80	12-36 1		3
2N3174	Dj	•	75	100	12-36 1		3
2N3175	Dj	•	85	40	10-30 2		P
2N3176	Dj	•	85	60	10-30 2		P
2N3177	Dj	•	85	80	10-30 2		P
2N3178	Dj	•	85	100	10-30 2		P
2N3179	Dj	•	85	40	10-30 2		53
2N3180	Dj	•	85	60	10-30 2		53
2N3181	Dj	•	85	80	10-30 2		53
2N3182	Dj	•	85	100	10-30 2		53
2N3183	Dj	•	75	40	10-30 2		3

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N3184	Dj	•	75	60	10-30 2		3
2N3185	Dj	•	75	80	10-30 2		3
2N3186	Dj	•	75	100	10-30 2		3
2N3187	Dj	•	85	40	10-30 3		P
2N3188	Dj	•	85	60	10-30 3		P
2N3189	Dj	•	85	80	10-30 3		P
2N3190	Dj	•	85	100	10-30 3		P
2N3191	Dj	•	85	40	10-30 3		53
2N3192	Dj	•	85	60	10-30 3		53
2N3193	Dj	•	85	80	10-30 3		53
2N3194	Dj	•	85	100	10-30 3		53
2N3195	Dj	•	75	40	10-30 3		3
2N3196	Dj	•	75	60	10-30 3		3
2N3197	Dj	•	75	80	10-30 3		3
2N3198	Dj	•	75	100	10-30 3		3
2N3199	Dj	•	40	40	20-60 1		
2N3200	Dj	•	40	60	20-60 1		
2N3201	Dj	•	40	80	20-60 1		
2N3202	Dj	•	8.75	40	20-60 1		5
2N3203	Dj	•	8.75	60	20-60 1		5
2N3204	Dj	•	8.75	80	20-60 1		5
2N3205	Dj	•	40	40	20-60 500		
2N3206	Dj	•	40	60	20-60 500		
2N3207	Dj	•	40	100	20-60 500		
2N3208	Dj	•	8.75	40	20-60 500		5
2N3209	Ep	• •	.36	20	30-120 30	550	18
2N3210		•	1.2	15	30 min 10	300	18
2N3211		•	1.2	15	50 min 10	350	18
2N3212	Dj	•	12	80	30-90 3	.6	37
2N3213	Dj	•	12	60	30-90 3	.6	37
2N3214	Dj	•	12	40	30-90 3	.6	37
2N3215	Dj	•	12	30	25-100 3	.6	37
2N3216		•	.15	10	60 min 200	90 min	5
2N3217	Ep	• •	.4	10		10	46
2N3218	Ep	• •	.4	20		5	46
2N3219	Ep	• •	.4	35		3	46
2N3220		•	30	80	20-60 1	10	
2N3221		•	30	80	40-120 1	10	
2N3222		•	30	60	20-60 1	10	
2N3223		•	30	60	40-120 1	10	
2N3224	PI	• •	.7	100	20 1	60	5
2N3225	PI	• •	.7	100	40 1	80	5
2N3226		•	75	35	20-50 2	30 min	3

Transistors

2N3061-2N3226

Transistors

2N3227-2N3413

TYPE NO.	CST	APPLICATIONS							DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	SAT	CHP	<1w	V _{CE}	β at I _C or I _B *	f _{αe} kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP		≥1w	V _{CB}	h _{FE}	(ma)	f _{αd} MHz	
											h _{fe}	(amp)	f _T MHz	MIL
2N3338	Ep		•		LOW				.3	40	30 min	4	500	18
2N3339	Ep		•		NOISE				.3	40	30 min	4	500	18
2N3340	PI					•			.4	20	60 min	.1	70	46
2N3341	PI					•			.4	20	60 min	.1	50	46
2N3342	Aj					•			.25	8	30 min	5		5
2N3343	Aj					•			.25	8	Offset 1.5mv@250μa			5
2N3344	Aj					•			.25	30	Offset 1.2mv@500μa			5
2N3345	Aj					•			.25	50	Offset 3mv@1ma			5
2N3346	Aj					•			.25	50	Offset 1.2mv@500μa			5
2N3347	Ep	DUAL							1.2	45	40-300	.01	30	5
2N3348	Ep	DUAL							1.2	45	40-300	.01	30	5
2N3349	Ep	DUAL							1.2	45	40-300	.01	30	5
2N3350	Ep	DUAL							1.2	45	100-300	.01	30	5
2N3351	Ep	DUAL							1.2	45	100-300	.01	30	5
2N3352	Ep	DUAL							1.2	45	100-300	.01	30	5
2N3371			•						.15	10	160	12	400	18
2N3374									.5	80	10	170	230	5
2N3375	PI				•				11.6	40	10 min	.5	500	60
2N3388					•				.6	100	60	2.5	36	5
2N3389					•				.6	160	60	7	36	5
2N3390	PI	•	•						.2	25	400-800	2		
2N3391	PI	•	•						.2	25	170 min	1μa	160	
2N3391A	PI	•	•						.2	25	170 min	1μa	160	
2N3392	PI	•	•						.2	25	150-300	2	140	
2N3393	PI	•	•						.2	25	90-180	2	140	
2N3394	PI	•	•						.2	25	55-110	2	140	
2N3395	PI	•	•						.2	25	150	2		
2N3396	PI	•	•						.2	25	90	2		
2N3397	PI	•	•						.2	25	55	2		
2N3398	PI	•	•						.2	25	55	2		
2N3399	Me	•	•						.025	20	20-300	1.5	600	18
2N3400			•						.15	20	35 min	50	150	9
2N3401						•			.25	25	4 min	1	100*	5
2N3402	Ep	•			•	•			.56	25	75-225	2		
2N3403	Ep	•			•	•			.56	25	180-540	2		
2N3404	Ep	•			•	•			.56	50	75-225	2		
2N3405	Ep	•			•	•			.56	50	180-540	2	100	
2N3407			•						.2	18	10 min	10	300	
2N3408			•	•					.4	25	10-100		200	
2N3409		DIFF AMP							.6	30	125	10	250	
2N3410		DIFF AMP							.6	30	125	10	250	
2N3411		DIFF AMP							.6	30	125	10	250	
2N3412			•						.06	20	25	1	100	5
2N3413									.6	150	27.5	50		5

TYPE NO.	CST	APPLICATIONS							DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SRV	SAT	CHP	<1w	V _{CE}	β at I_C or I_B^*	$f_{\alpha e}$ kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{FE}	(ma)	$f_{\alpha b}$ MHz		
										h_{fe}	(amp)	f_T MHz	MIL	
2N3286	Ep	•	•						.1	20	5 min	3	2000▲	18
2N3287	Ep	•		•					.2	20	15-100	2	600	18
2N3288	Ep	•	•	•					.2	20	15-100	2	600	18
2N3289	Ep	•	•	•					.2	15	10-150	2	500	18
2N3290	Ep	•	•	•					.2	15	10-150	3	500	18
2N3291	Ep	•	•						.2	25	10 min	2	2000*	18
2N3292	Ep	•	•						.2	25	10 min	2	2000*	18
2N3293	Ep			•					.2	20	10 min	2	2000*	18
2N3294	Ep	•	•						.2	20	10 min	2	2000*	18
2N3295	Ep				•				.8	60	20-150	10	200	5
2N3296	Ep				•				6	60	5-100	40	100	
2N3297	Ep				•				25		2.5-35	400	100	3
2N3298	Ep			•					.3	25	60-120	10	200	18
2N3299							•		.8	10	40-120	150	400	5
2N3300									.8	30	100-300	150	400	5
2N3301									.36	30	100-300	150	400	18
2N3302									.36	30	100-300	150	400	18
2N3303							•		3	12	30-120	300	500	
2N3304							•		.3	6	20 min	50	600	18
2N3305	PI	•			•		•		.6	40	40-120	.1	20	5
2N3306	PI	•			•		•		.6	40	100-300	.1	20	5
2N3307	Ep	•	•	•					.2	35	20-125	2	2000▲	18
2N3308	Ep	•	•	•					.2	25	10-175	2	2000▲	18
2N3309	Ep								1	50	5-100	75	500	5
2N3309A			•						5	60	8-80	50		
2N3310									1	15	10 min	20	300	
2N3311		•							170	30	60	3	1*	36
2N3312		•							170	45	60	3	1*	36
2N3313		•							170	60	60	3	1*	36
2N3314		•							170	30	80	3	1*	36
2N3315		•							170	45	80	3	1*	36
2N3316		•							170	60	80	3	1*	18
2N3317								•	.15	10	Offset 2.25mv@1ma			18
2N3318								•	.15	10	Offset 2mv@1ma			18
2N3319								•	.15		Offset 1.75mv@1ma			18
2N3320	Ma						•		.075	10	50 min	20	900	18
2N3321	Ma						•		.075	7	100 min	10	900	18
2N3322	Ma						•		.075	7	30 min	10	900	18
2N3323	Ep		•	•					.15	35	30-200	3	400	18
2N3324	EP		•	•					.15	35	30-200	3	400	18
2N3325	Ep		•	•					.15	35	30-200	3	400	18
2N3326									3	45	40 min	20	250	5
2N3327	Ep		•						.20	65	5db@260Mc@5w			
2N3337	EP		•						.3	40	30 min	4	500	18

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	RF	OSC	SRV	LIN	SW	CHP	<1w	V _{CE}	β @ I _C or I _B *	f _{ce} *kHz		
											h _{FE}	(ma)	f _{cb} MHz	
PNP	GE	D-C	VHF	MIX	SAT	CHP			≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N3227	E								.36	20	100-300	10	500	18
2N3229	PI								17.5	105	20db@50Mc		200	
2N3230									.25	60	1000	5	40	
2N3231									.25	80	1000	5	40	
2N3232									.117	60	18-40	3		3
2N3233									.117	100	18-40	3		3
2N3234									.117	160	18-40	3		3
2N3235									.117	55	20-70	4		3
2N3236									.150	90	17-60	5		3
2N3237									.200	75	12-36	10		3
2N3238									.150	80	8.5-25	10		3
2N3239									.150	80	8.5-25	10		3
2N3240									.150	160	8.5-25	10		3
2N3241	PI								.5	25	50 min	10	60	18
2N3241A									.5	25	100 min	10	175	104
2N3242	PI								.5	25	75 min	10	60	18
2N3242A									.5	40	125 min	10	175	104
2N3244	Ep								.1	40	50-150	500	175	5
2N3245	Ep								.1	50	30-90	500	150	5
2N3246	PI								.35	45	200-600	.01	90	18
2N3247	PI								.15	45	200-600	.01	90	
2N3248	Ep								.36	12	50-150	10	250	18
2N3249	Ep								.36	12	100-300	10	300	18
2N3250	Ep								.36	40	50-150	10	250	18
2N3250A	Ep								1.2	60	100	10	250	18
2N3251	Ep								.36	40	100-300	10	300	18
2N3251A	Ep								1.2	60	200	10	300	18
2N3252	Ep								.1	30	30-90	500	200	5
2N3253	Ep								.1	40	25-75	500	175	5
2N3260									.200	200	10-40	20	.6	V
2N3261	Ep								.3	40	40 min	10	600	52
2N3262	PI								8.75	100	40 min	500		39
2N3263	Ep								.84	150	150	15	20	
2N3264	Ep								.84	120	20-80	15	20	
2N3265	Ep								.125	150	25-75	15	20	
2N3266	Ep								.125	120	20-80	15	20	
2N3267	Ep								.075	15			900	72
2N3268									.15	45	46	10	2.5	5
2N3279	Ep								.20	.1	10-70	3	500	18
2N3280	Ep								.1	20	10-70	3	500	18
2N3281	Ep								.1	15	10-100	3	400	18
2N3282	Ep								.1	15	10-100	3	400	18
2N3283	Ep								.1	25	10 min	3	2000▲	18
2N3284	Ep								.1	25	10 min	3	2000▲	18
2N3285	Ep								.1	20	5 min	3	2000▲	18

(Continued)

It's what's in these RCA "overlay" transistors that gives you better watts out

Plastic Package for SSB Communications (TA2758)
75 Watts PEP Output (Min.) @ 30 MHz. Intended for 2- to 30-MHz SSB power amplifiers operating from a 28-volt supply, this high gain transistor is encased in RCA's plastic package with isolated pin-pad terminals.



High Power Performance up to 700 MHz (2N5016, TA7036) The 2N5016 is designed for Class-B and Class-C RF amplifier applications and provides 15 watts (min.) at 400 MHz. The TA7036 provides 20 watts (min.) at the same frequency.



For HF/VHF Communications Applications (2N5070, 2N5071)
2N5070—25 Watts PEP Output (min.) with 13 dB gain (min.) @ 30 MHz and 28 V.
2N5071—24 Watts Output (min.) with 9 dB Gain (min.) @ 76 MHz and 24 V. The 2N5070 is designed for single-sideband power amplifier service in military and amateur-radio transmitters. The 2N5071 is intended as a Class-B and Class-C RF amplifier for FM communications.



Load Mismatch Protection for Aircraft Transmitters (2N5102) 15 Watts Output (min.) @ 136 MHz. RCA-2N5102 is intended as a high power device for Class C, AM amplifier service (for aircraft VHF) in the 108- to 150-MHz range.



VHF/UHF Type with Higher Dissipation (2N5090) P_{out} —1.2 Watts (min.) @ 400 MHz. This new type offers famous "2N3866" performance in a TO-60 package. The stud-type package allows you to design circuits with better reliability for CATV and other general-purpose VHF/UHF equipments.



Microwave Coaxial Package (TA7003) 1 Watt Output with 5 dB Gain (min.) @ 2 GHz, 2 Watts Output (typ.) with 10 dB Gain @ 1 GHz. Low-inductance package for UHF and microwave oscillator, frequency-multiplier, and RF-amplifier service.



For more information on these and other RCA "overlay" transistors, see your RCA Representative or your RCA Distributor. For technical data on specific types, write: RCA Electronic Components, Commercial Engineering, Section P-F-6, Harrison, N.J. 07029.

Circle No. 41 on Reader Service Card for more information.

RCA

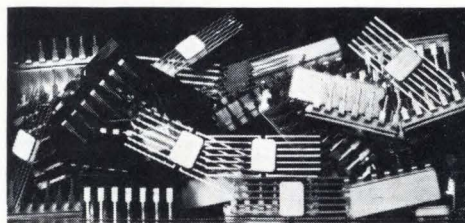
TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SRV	LIN	SW	CHP	<1w	V _{CE}	$\beta @ I_c \text{ or } I_B^*$	$f_{\alpha e}^* \text{ kHz}$	
PNP	GE	D-C	VHF	MIX	SAT	CMP	$\approx 1w$	V _{CB}	h_{fe}	h_{FE}	(ma)	$f_{\alpha b} \text{ MHz}$	
											(amp)	$f_T \text{ MHz}$	MIL
2N3414	Ep	•			•	•	.36	25	75-225	2			
2N3415	Ep	•			•	•	.36	25	180-540	2			
2N3416	Ep	•			•	•	.36	50	75-225	2			
2N3417	Ep	•			•	•	.36	50	180-540	2			
2N3418	Ep		•				10	60	20-60	1	40		5
2N3419	Ep		•				10	80	20-60	1	40		5
2N3420	Ep		•				10	60	40-120	1	40		5
2N3421	Ep		•				10	80	40-120	1	40		5
2N3423			DUAL				.3	15	20-200	3			5
2N3424			DUAL				.3	15	20-200	3			5
2N3425	PI		DUAL				15	12 min	.5		300		
2N3426	Ep				•		.6	12	30 min	300	200		
2N3427					•		.2	30	225	.1	4		5
2N3428					•		.2	30	275	.1	5		5
2N3429	Fu				•		176	50	10-35	5	20*		
2N3430	Fu				•		176	100	10-35	5	20*		
2N3431	Fu				•		176	150	10-35	5	20*		
2N3432	Fu				•		176	200	10-35	5	20*		
2N3433	Fu				•		176	250	10-35	5	20*		
2N3434	Fu				•		176	300	10-35	5	20*		
2N3435		•	•				1	60	50-200	10	140		5
2N3439	PI				•	•	5	350	40-160	20	10		5
2N3440	PI				•	•	5	250	40-160	20	10		5
2N3441		•					25	140	20-80	500			66
2N3442	Dj							140	20-70	3	80		3
2N3443							.3	15	20 min	10	75 min		5
2N3444					•		5	50	40	.5	175		5
2N3445					•		115	60	40	3	10		3
2N3446					•		115	80	40	3	10		3
2N3447					•		115	60	80	5	10		3
2N3448					•		115	80	80	5	10		3
2N3449							.15	6	20 min	10	300		18
2N3450					•		.6	60	40 min	150	100		5
2N3461	Ad				•		5	60	20 min	1	10*		5
2N3462							.3	35	150 min	1	10 min		18
2N3463							.3	45	150 min	1	45 min		18
2N3467					•		5	40	80	.5	175		5
2N3468					•		5	50	50	.5	150		5
2N3469							5	25	100-350	500	100		5
2N3470	Fu				•		150	50	100-500	9	7*		V
2N3471	Fu				•		150	100	100-500	9	7*		V
2N3472	Fu				•		150	150	100-500	9	7*		V
2N3473	Fu				•		150	200	100-500	9	7*		V

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SAT	CMP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{FE}	(ma)	$f_{\alpha b}$ MHz	
										h_{fe}	(amp)	f_T MHz	MIL
2N3474	Fu					•		150	50	350 min	9	4*	V
2N3475	Fu					•		150	100	350 min	9	4*	V
2N3476	Fu					•		150	150	350 min	9	4*	V
2N3477	Fu					•		150	200	350 min	9	4*	V
2N3478	Ep							.2	15	9	2	900	18
2N3485						•		2	40	80	.15	200	46
2N3485A						•		2	60	80	.15	200	46
2N3486						•		2	40	200	.15	200	46
2N3486A						•		2	60	200	.15	200	46
2N3487	An					•	•	117	60	20-60	3	10	
2N3488	An					•	•	117	80	20-60	3	10	
2N3489	An					•	•	117	100	15-45	3	10*	
2N3490	An					•	•	117	60	40-120	5	10	
2N3491	An					•	•	117	80	40-120	5	10	
2N3492	An					•	•	117	100	30-90	5	10	
2N3493						•		.25	8	80	.5	400	5
2N3494								.3	80	40	50	200	5
2N3495								.3	120	40	50	150	5
2N3496								1.8	80	40	50	200	18
2N3497								1.8	120	40	50	150	18
2N3498						•		.5	100	80	150	150	5
2N3499						•		.5	100	200	50	150	5
2N3500						•		.5	150	80	75	150	5
2N3501						•		.5	150	200	150	150	5
2N3502	Ep					•		.3	45	135 min	1		5
2N3503	Ep					•		.3	60	135 min	1		5
2N3504	Ep					•		1.3	45	135 min	1		5
2N3505	Ep					•		1.3	60	135 min	1		5
2N3506						•		.5	40	120	1.5	60	5
2N3507						•		.5	50	90	1.5	60	5
2N3508						•		.2	20	80	10	50	46
2N3509						•		.2	20	200	10	50	46
2N3510	Ep					•		.36	10	25-150	150		52
2N3511	Ep					•		.36	15	30-120	150		52
2N3512	Dj					•		.4	35	10	.5	250	5
2N3513	PI	DUAL						.3	40	50-200	1	40	18
2N3514	PI	DUAL						.35	40	50-200	1	40	
2N3515	PI	DUAL						.35	40	50-200	1	40	
2N3516	PI	DUAL						.3	60	50-200	1	60	18
2N3517	PI	DUAL						.35	60	50-200	1	60	
2N3518	PI	DUAL						.35	60	50-200	1	60	
2N3519		ROUND FLAT PACK VERSION OF 2N2453											
2N3520		RECTANGULAR FLAT PACK VERSION OF 2N2453											

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD •	RF •	OSC •	LIN •	SRV •	SW •	CHP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz		
PNP	GE	D-C	VHF	MIX	SAT	CMP			$\geq 1w$	V _{CB}	h_{fe}	(ma)	$f_{\alpha b}$ MHz	
											h_{fe}	(amp)	f_T MHz	MIL
2N3521	PI			DUAL					.6	45	155-500	.5		5
2N3522	PI			DUAL					.3	45	155-500	.5		18
2N3523	PI			DUAL					.35	45	155-500	.5		
2N3524	PI			DUAL					.35	45	155-500	.5		
2N3526	PI	•							.8	120	30 min	30	40	5
2N3527	Ep	•							.4	30	25-75	.1 μa	10	46
2N3543	PI		•						.60	65	10-80	4.5	50	3
2N3544									.4	25	50	10		18
2N3545						•			.36	20	40-120	10	250	18
2N3546						•			1.2	12	75	10	700	18
2N3547									.4	60	120-600	1		18
2N3548									.4	45	150-600	1		18
2N3549									.4	60	150-600	1		18
2N3550	PI								.4	45	200 min	.01	60 min	18
2N3551	Me					•			.40	60	20-90	10	40	
2N3552	Me					•			.40	80	20-90	10	40	
2N3553	PI				•				.7	40	10 min	.25	400	5
2N3554	Ep					•			.5	30	25-100	750	150	5
2N3570	Ep		•						.2	15	20-150	5	1000	18
2N3571	Ep		•						.2	15	20-200	5	1000	18
2N3572	Ep		•						.2	13	20-300	5	1000	18
2N3576	Ep					•			1.2	15	40-120	10	400	18
2N3577		•							.85	80	12-60	1	10	53
2N3579	PI	•	•						.4	60	30-150	1	90	46
2N3580	PI	•	•						.4	60	60-300	1	100	46
2N3581	PI	•	•						.4	40	50-200	.1	110	46
2N3582	PI	•	•						.4	40	100-400	.1	120	46
2N3583	PI					•	•		.35	175	10 min	1		66
2N3584	PI					•	•		.35	250	25-100	1		66
2N3585	PI					•	•		.35	300	25-100	1		66
2N3587				Dif Amp						45	80-500	1		5
2N3588			•						.1	25	50	1	250	18
2N3589	Me	•							.10	200	30-90	200	10	
2N3590	Me	•							.10	200	75-150	200	10	
2N3591	Me	•							.10	200	30-90	200	10	
2N3592	Me	•							.10	200	75-150	200	10	
2N3593	Me	•							.4	200	30-90	200	10	
2N3594	Me	•							.4	200	75-150	200	10	
2N3595	Me	•							.10	200	30-90	200	10	
2N3596	Me	•							.10	200	75-150	200	10	
2N3597	PI					•			.100	60	40-120	10	30	63
2N3598	PI					•			.100	80	40-120	10	30	63
2N3599	PI	•				•			.100	100	40-120	10	30	63
2N3600	Ep			•					.2	15	20-150	3	900	18
2N3601						•			.5	40	60 min	1	20 min	

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- Write-over capability — need not be cleared before writing
- High fan-out — available with 20 or 40 milliamps Sense Amplifier output
- High noise immunity — typically over 1V
- Full HLTTL compatibility
- Available in ceramic Dual In-line package or Flat Pack (TMC3162, 3163 and 3164)
- Available in plastic Dual In-line package (TMC3162E, TMC3164E)
- Wired OR capability on sense amplifier outputs
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35MHz 4-BIT SHIFT REGISTER

- High speed — shifting frequency typically 35MHz
- Versatile — 4 operating modes

serial in	{	serial out	or	parallel in	{	parallel out	or	serial out
		parallel out				serial out		
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- High output drive capability — 20ma
- Low input current loading
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4/10 (TSR2515 - 2518)
- Resettable version available — same packages and configurations as standard device —
7/14 (TSR2521 - 2524)
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TFF 3255-58 Dual 50MHz JK flip flop (common clock)
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TDD 1100 BCD-to-Decimal decoder driver
TDD 1101 High-Current BCD-to-Decimal
decoder driver

Packaging: 16-pin Epoxy Dual In-line
package (suffix "E") hermetic Dual
In-line package (suffix "P") or
hermetic Flat Pack (suffix "F")

Transitron
electronic corporation
168 Albion St., Wakefield, Massachusetts 01881

Circle No. 42 on Reader Service Card for more information.

Transistors

2N3602-2N3788

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N3728	Ep	DUAL	1.6	30	80-280	150	
2N3729	Ep	DIFF AMP					3
2N3730	Gb		10	200			3
2N3731	Gb		5	320			3
2N3732	Gb		3	100			
2N3733	Ov		23	65			400 60
2N3734	An		4	30	30-120	1	5
2N3735	An		4	50	20-80	1	5
2N3736	An		2	30	30-120	1	46
2N3737	An		2	50	20-80	1	46
2N3738			20	225	40-200	.1	15 66
2N3739			20	300	40-200	.1	15 66
2N3740			25	60	30-100	.25	4 66
2N3741			25	80	30-100	.25	4 66
2N3742	Ep		5	300	20-200	30	30 5
2N3743	Ep		5	300	25-250	30	30 5
2N3744			30	40	20-60	1	40
2N3745			30	60	20-60	1	40
2N3746			30	80	10-60	1	40
2N3747			30	40	40-120	1	60
2N3748			30	60	40-120	1	60
2N3749			30	80	40-120	1	60
2N3750			30	40	100-300	1	70
2N3751			30	60	100-300	1	70
2N3752			30	80	100-300	1	70
2N3762	An		4	40	30-120	1	5
2N3763	An		4	60	20-80	1	5
2N3764	An		2	40	30-120	1	46
2N3765	An		2	60	20-80	1	46
2N3766			20	60	40-160	.5	15 66
2N3767			20	80	40-160	.5	15 66
2N3771			150	40	15 min	8	3
2N3772			150	60	15 min	10	3
2N3773			150	140	15 min	15	3
2N3774				40	20-60	200	5
2N3775				60	20-60	200	5
2N3776				80	20-60	200	5
2N3777				100	20-60	200	5
2N3778				40	10-40	200	5
2N3779				60	10-40	200	5
2N3780				80	10-40	200	5
2N3781				100	10-40	200	5
2N3782				40	10-60	1	5
2N3783	Ep		.15	20	20-200	3	800 18
2N3784	Ep		.15	20	20-200	3	700 18
2N3785	Ep		.15	12	15-200	3	700 18
2N3788			100	325	4 min	2.5	3

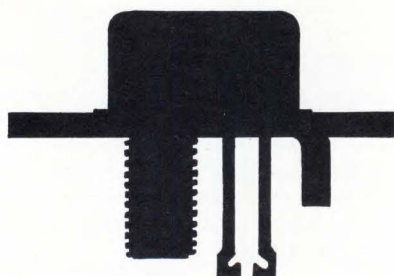
TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N3662	Ep		.2	12	20 min	8	1000
2N3663	Ep		.2	12	20 min	8	1000
2N3664			5	40	8-80	50	
2N3665	Ep		.8	80	40	150	100 5
2N3666	Ep		.8	80	100	150	100 5
2N3671			3	50	75-225	150	5
2N3672			1.8	40	75-225	150	18
2N3673			3	50	75-225	150	46
2N3677	Ep		.4	20	10	1	46
2N3678				55	40-120	500	5
2N3680	PI	DUAL	1.2	50	150-600	.01	50 5
2N3683	Dd		.2	15	20-150	3	18
2N3688	PI		.2	40	70	4	600
2N3689	PI		.2	40	70	4	600
2N3690	PI		.2	40	70	4	600
2N3691	PI		.2	25	40-160	10	120
2N3692	PI		.2	25	100-400	10	120
2N3693	PI		.2	45	40-160	10	120
2N3694	PI		.2	45	100-400	10	120
2N3700	PI		.5	80	100-300	150	100 18
2N3701	PI		.5	80	40-120	150	100 18
2N3702	PI		.3	30			92
2N3703	PI		.3	30			92
2N3704	Ep		.3	30			92
2N3705	Ep		.3	30			92
2N3706	Ep		.3	20			92
2N3707	PI		.25	30			92
2N3708	PI		.25	30			92
2N3709	PI		.25	30			92
2N3710	PI		.25	30			92
2N3711	PI		.25	30			92
2N3712	Ep		.1	150	30-150		40 5
2N3713			.150	60	25-90	1	3
2N3714			.150	80	25-90	1	3
2N3715			.150	60	50-150	1	3
2N3716			.150	80	50-150	1	3
2N3717	An		.75	40	8 min	.2	39
2N3718	An		.10	40	8 min	.2	39
2N3719	Ep		.6	40	25-180	1	90 5
2N3720	Ep		.6	60	25-180	1	90 5
2N3721	PI		.2	18	60-660	2	120
2N3722	Ep		.4	60	40-150	100	300 5
2N3723	Ep		.4	80	40-150	100	300 5
2N3724	Ep		.35	30	40-150	100	250 5
2N3725	Ep		.35	50	40-150	100	250 5
2N3726	Ep	DIFF AMP	1.4	45	135-350	1	
2N3727	Ep	DIFF AMP	1.4	45	135-350	1	

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD • RF • OSC • LIN • SW • CMP •	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C • VHF • MIX • SRV • SAT • CMP •	$\geq 1w$	V _{CB}	h_{fe} (amp)	f_T MHz	MIL
2N3602			.75	40	60 min	1	20 min
2N3603			.5	55	60 min	1	20 min
2N3604			.75	55	60 min	1	20 min
2N3605	Ep		.2	14	30 min	10	300
2N3606	Ep		.2	14	30 min	10	300
2N3607	Ep		.2	14	30 min	10	300
2N3611			.85	25	35-70	3	3
2N3612			.85	35	35-70	3	3
2N3613			.85	25	60-120	3	3
2N3614			.85	35	60-120	3	3
2N3615			.85		40-100	5	3
2N3616			.85		40-100	5	3
2N3617			.85		60-150	.5	3
2N3618			.85		60-150	.5	3
2N3619	Ep		7.5	40	40 min	1	200 5
2N3620	Ep		7.5	40	30 min	5	200 Y
2N3621	Ep		15	40	40 min	5	200 61
2N3622	Ep		15	40	40 min	5	200 61
2N3623	Ep		7.5	40	40 min	1	200 5
2N3624	Ep		7.5	40	30 min	5	200 Y
2N3625	Ep		15	40	40 min	5	200 61
2N3626	Ep		15	40	40 min	5	200 61
2N3627	Ep		7.5	50	40 min	1	200 5
2N3628	Ep		7.5	50	30 min	5	200 Y
2N3629	Ep		20	50	40 min	5	200 61
2N3630	Ep		20	50	40 min	5	200 61
2N3632	Ep		23	40			400 60
2N3633	Ep			15	50-150		1300
2N3634	Ep		.5	140	50-150	50	270 5
2N3635	Ep		.5	140	100-300	50	270 5
2N3636	Ep		.5	175	50-150	50	270 5
2N3637	Ep		.5	175	100-300	50	270 5
2N3638	Ep		.3	25	30 min	50	150 5
2N3638A	Ep		.3	25	100 min	50	200 5
2N3639	Ep		.2	6	30 min	10	500
2N3640	Ep		.2	12	30 min	10	500
2N3641	Ep		.7	30	40-120	150	400
2N3642	Ep		.7	45	40-120	150	400
2N3643	Ep		.7	30	100-300	150	400
2N3644	PI		.3	45	100 min	150	200
2N3645	PI		.3	60	100 min	150	200
2N3646	Ep		.2	15	30 min	30	350
2N3647	Ep		.4	10	25-150	150	46
2N3648	Ep		.4	15	30-120	150	46
2N3659				170	20 min	100	5
2N3660			.5	40	25-100	500	25 5
2N3661			.5	60	25-100	500	25 5

(Continued)

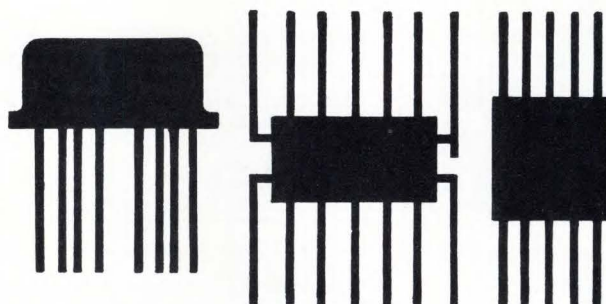
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Transistors

2N3789—2N3995

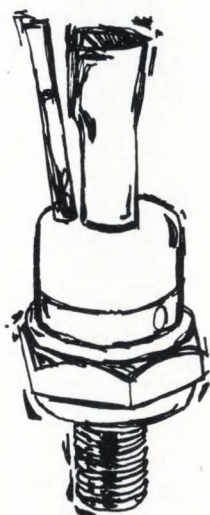
TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*		f_{ce}^* kHz	
										h_{FE}	(ma)	f_{cb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\geq 1w$	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N3914	PI								40	60 min	1	8	18
2N3915	PI								30	90 min	1	10	18
2N3916	PI	•			•			5	150	40-200	150		
2N3917	PI	•	•		•			20	40	30-120	1		3
2N3919	PI					•		15	60	40-120	2		3
2N3920	PI					•		15	60	100-300	2		3
2N3923	PI	•	•					.8	150	30-120	25	40	5
2N3924	An				•			7	18	5	.1		39
2N3925	An				•			10	18	5	.1		
2N3926	An				•			11.6	18	5	.1		60
2N3927	An				•			23.2	18	5	.2		60
2N3928													
2N3929													
2N3930									180	60 min	.01		18
2N3931									180	60 min	.01		5
2N3932	Ep		•						30	7.5 min	2	750	72
2N3933	Ep		•						40	7.5 min	2	750	72
2N3941	Ep	DUAL						1.5	60	400-1200	.01		5
2N3942	Ep	DUAL						1.5		400-1200	.01		5
2N3943	Ep	DUAL						.75		400-1200	.01		18
2N3944	Ep	DUAL						.75		400-1200	.01		18
2N3945	PL				•			5	50	40 min	150		
2N3946	An							.36	40	50-150	10	250	18
2N3947	An				•			.36	40	100-300	10	300	18
2N3948	An		•	•				5	36			700	5
3N3950	An		•	•				70	65			150	
2N3953								.2	12	30-360	2		72
2N3959	An							.4	12	40-200	10	1000	18
2N3960	An							.4	12	40-200	10	1300	18
2N3961			•					10	40			500	102
2N3962	PI	•	•		•			.36	60	100-300	.01		18
2N3963	PI	•	•		•			.36	80	100-300	.01		18
2N3964	PI	•	•		•			.36	45	250-500	.01		18
2N3965	PI	•	•		•			.36	60	250-500	.01		18
2N3973	PI				•	•		.36	30	35-100	2	350	e
2N3974	PI				•	•		.36	30	55-200	2	350	e
2N3975	PI				•	•		.36	30	35-100	2	350	e
2N3976	PI				•	•		.36	30	55-200	2	350	e
2N3977								.4	15	40 min		1	46
2N3978								.4	25	30 min		1	46
2N3979								.4	40	20 min		1	46
2N3981						•			30	30-150	150		5
2N3982						•			20	40-140	150		5
2N3983			•			•		.2	12	30	4	500	18
2N3984			•			•		.2	12	20	4	400	18
2N3985			•			•		.2	12	20	4	300	18
2N3995	Me		•					.75					39

TYPE NO.	CST	APPLICATIONS							DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD●	RF●	OSC●	LIN●	SRV●	SAT●	SW●	CHP●	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}^*$ kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	SW	CMP	≥1w	V _{CB}	h_{FE}	(ma)	$f_{\alpha b}$ MHz		
											h_{fe}	(amp)	f_T MHz	MIL	
2N3845A	Ep		●	●						.2	30	60-120	2	135	
2N3846										4	200	10-60	10		63
2N3847										4	300	10-60	10		63
2N3848										4	200	10-60	15		63
2N3849										4	300	10-60	15		63
2N3850	PI	●					●			30	80	50 min	1	40	
2N3851	PI	●					●			30	80	30 min	1	30	
2N3852	PI	●					●			30	40	50 min	1	40	
2N3853	PI	●					●			30	40	30 min	1	30	
2N3854	Ep		●	●						.2	18	35-70	2	250	
2N3854A	Ep		●	●						.2	30	35-70	2	250	
2N3855	EP		●	●						.2	18	60-120	2	300	
2N3855A	Ep		●	●						.2	30	60-120	2	300	
2N3856	Ep		●	●						.2	18	100-200	2	350	
2N3856A	Ep		●	●						.2	30	100-200	2	350	
2N3857		●								.6	45	50-200	3	4	5
2N3858	Ep		●	●						.2	30	60-120	2	135	
2N3858A	PI									.2	60	60-120	2	135	e
2N3859	Ep		●	●						.2	30	100-200	2	135	
2N3859A	PI									.2	60	100-200	2	135	e
2N3860	Ep		●	●						.2	30	150-300	2	135	
2N3862	PI					●				1.2	20	50-150	10	600	18
2N3865										.3	13	110	4	600	
2N3866	PI				●					3.5	30			800	39
2N3877	PI									.2	70	20 min	2	135	e
2N3877A	PI									.2	85	20 min	2	135	e
2N3878	Ep									35	65	50 min	.5	40	66
2N3879	Ep									35	90	40 min	.5	40	66
2N3880	Dd		●	●						.2	15	30-150	3		18
2N3881										.3	13	110	4	600	
2N3883						●				.3	15	30 min	.2	300	5
2N3898	Ep					●				30	100				
2N3899	Ep					●				30	100				
2N3900										.2	18	250-500	2		18
2N3900A										.2	18	250-500	2		18
2N3901		●	●							.2	18	250-500	2	120	98
2N3902										100	400	10 min	2.5		3
2N3903	An					●				.31	40	50-150	10	250	
2N3904	An					●				.31	40	100-300	10	300	
2N3905	An					●				.31	40	50-150	10	200	
2N3906	An					●				.31	40	100-300	10	250	
2N3907		Dual								60	60-300				79
2N3908		Dual								60	100-500				79
2N3910	PI									50	40 min	1	6	46	
2N3911	PI									40	60 min	1	8	46	
2N3912	PI									30	90 min	1	10	46	
2N3913	PI									50	40 min	1	6	18	

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	LIN	SW	CHP	<1 w	V _{CE}	$\beta @ I_c$ or I_B^*		$f_{\alpha e}^*$ kHz	
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	≥1 w	V _{CB}	h_{fe}	(amp)	f_T MHz	MIL
2N3789		•				•		150	60	25-90	1	4	3
2N3790		•				•		150	80	25-90	1	4	3
2N3791		•				•		150	60	50-150	1	4	3
2N3792		•				•		150	80	50-150	1	4	3
2N3793			•					.25	20	20 min	100		e
2N3794			•					.25	20	100 min	100		e
2N3798	Ep	•	•					.36	90	150-450	.5	100	18
2N3799	Ep	•	•					.36	90	300-900	.5	100	18
2N3800	PI	DUAL						.36	90	150-450	.5	100	18
2N3801	PI	DUAL						.36	90	300-900	.5	100	18
2N3802	PI	DUAL						.36	90	150-450	.5	100	18
2N3803	PI	DUAL						.36	90	300-900	.5	100	18
2N3804	PI	DUAL						.36	90	150-450	.5	100	18
2N3805	PI	DUAL						.36	90	300-900	.5	100	18
2N3806	PI	DUAL						.6	90	150-450	.5	100	5
2N3807	PI	DUAL						.6	90	300-900	.5	100	5
2N3808	PI	DUAL						.6	90	150-450	.5	100	5
2N3809	PI	DUAL						.6	90	300-900	.5	100	5
2N3810	PI	DUAL						.6	90	150-450	.5	100	5
2N3811	PI	DUAL						.6	90	300-900	.5	100	5
2N3812	An	Dual						.35	60	125 min	10	100	
2N3813	An	Dual						.35	60	250 min	10	100	
2N3814	An	Dual						.35	60	125 min	10	100	
2N3815	An	Dual						.35	60	250 min	10	100	
2N3816	An	Dual						.35	60	125 min	10	100	
2N3817	An	Dual						.35	60	250 min	10	100	
2N3818	An	•						25	60	5-50	.4		60
2N3825	Ep	•						.25	15				92
2N3826	PI	•	•					.2	45				92
2N3827	PI	•	•					.2	45				92
2N3828	Ep	•						.3	40				92
2N3829		Complement to 2N3014											
2N3830						•			50			250	
2N3831						•			50			250	
2N3832						•						800	
2N3836		DARLINGTON						25	60	2000 min2			
2N3837		DARLINGTON						25	60	2000 min2			
2N3838		DUAL npn/pnp similar to 2N2222, 2N2907											
2N3839		•	•						30			1000	72
2N3840						•			50			6	46
2N3841						•			100			1.5	18
2N3842						•			120			1	18
2N3843	PI	•	•					.2	30	20-40	2	135	e
2N3843A	Ep	•	•					.2	30	20-40	2	135	
2N3844	PI	•	•					.2	30	35-70	2	135	e
2N3844A	Ep	•	•					.2	30	35-70	2	135	
2N3845	PI	•	•					.2	30	60-120	2	135	e

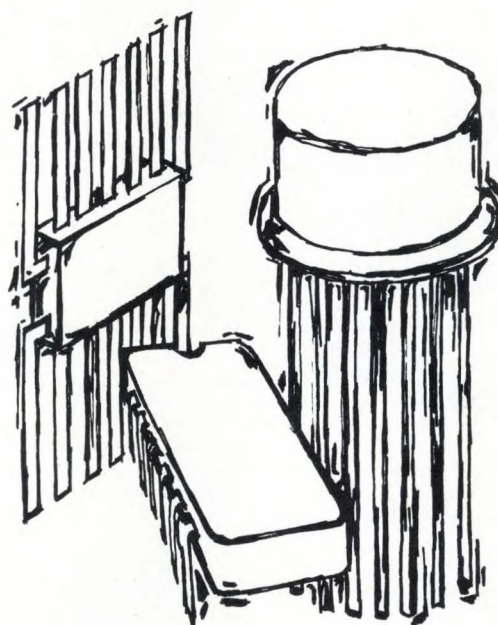
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Transistors

2N3996-2N4252

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD●	RF●	OSC●	LIN●	SAT●	CMP●	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\approx 1w$	V _{CB}	h_{FE}	(ma)	$f_{\alpha b}$ MHz	
										h_{fe}	(amp)	f_T MHz	MIL
2N4121		●	●				●		40	150-300	10	450	18
2N4122		●	●				●		40	150-300	10	450	
2N4123		●	●				●	.31	30	50-150	2	250	92
2N4124		●	●				●	.31	25	120-360	2	300	92
2N4125		●	●				●	.31	30	50-150	2	200	92
2N4126		●	●				●	.31	25	120-360	2	250	92
2N4127			●					13.5	28			175	
2N4128			●					24	28			175	
2N4130			●	●				60	65			200	3
2N4131			●	●				120	80			250	3
2N4134	PI		●						30				
2N4135	PI		●						30				
2N4136		Matched Pair 2N2430, 2N2431											
2N4138	PI		●				●	.6	15	50 min	1		46
2N4140			●				●	.3	30	40-120	150	250	18
2N4141			●				●	.3	30	100-300	150	250	18
2N4142			●				●	.3	40	40-120	150	200	18
2N4143			●				●	.3	40	100-300	150	200	18
2N4150		●			●			5	80	40-120	5		5
2N4207	PI						●		6			700	
2N4208	PI						●		12			700	
2N4209	PI						●		15			700	
2N4210	PI	●			●			100	60	20-100	10		63
2N4211	PI	●			●			100	80	20-100	10		63
2N4225	PI							5	40	25 min	2	150	5
2N4226	PI							5	60	20 min	2	150	5
2N4227			●				●	.3	30	75-150	150	250	18
2N4228			●				●	.3	40	75-150	150	200	18
2N4231	An						●	35	40	25-100	1.5	1	
2N4232	An						●	35	60	25-100	1.5	1	
2N4233	An						●	35	80	25-100	1.5	1	
2N4234	An						●	6	40	30-150	.25	4	5
2N4235	An						●	6	60	30-150	.25	4	5
2N4236	An						●	6	80	30-150	.25	4	5
2N4237	PI							5	40	30 min	.5	30	5
2N4238	PI							5	60	30 min	.5	30	5
2N4239	PI							5	80	30 min	.5	30	5
2N4240		●						35	300	30 min	.75	15	66
2N4241		●						37.5	32	30 min	5	5*	3
2N4242									60	40-80	5	5	3
2N4243									45	40-80	5	5	3
2N4244									30	40-80	5	5	3
2N4245									60	60-120	5	5	3
2N4246									45	60-120	5	5	3
2N4247									30	60-120	5	5	3
2N4251	PI						●	1.3	10	100-300	10		
2N4252			●	●				.2				600	

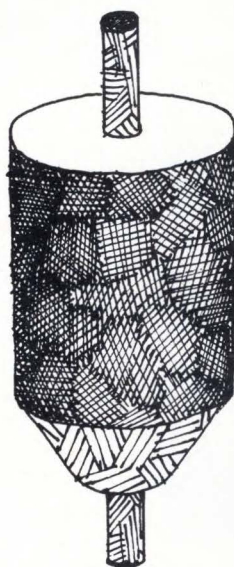
TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	RF	OSC	LIN	SW	CMP	<1w	V _{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}^*$ kHz			
PNP	GE	D-C	VHF	MIX	SRV	SAT	CMP	$\approx 1w$	V _{CB}	h_{FE}	(ma)	$f_{\alpha b}$ MHz		
										h_{fe}	(amp)	f_T MHz	MIL	
2N4044	PI	Dual							60	200 min	.01	200	78	
2N4045	PI	Dual							45	80 min	.01	150	78	
2N4046	PL							.8	30	40-150	100	250	5	
2N4047	PL							.8	50	40-150	100	250	5	
2N4048								170	30	15 min	60	2*		
2N4049								170	45	15 min	60	2*		
2N4050								170	60	15 min	60	2*		
2N4051								170	30	15 min	60	2*		
2N4052								170	45	15 min	60	2*		
2N4053								170	60	15 min	60	2*		
2N4054		•							300	30-90	2	28	P	
2N4055		•							250	30-90	2	28	P	
2N4056		•							200	30-90	2	28	P	
2N4057		•							150	30-90	2	28	P	
2N4058									200	1				
2N4059									200	1				
2N4060									200	1				
2N4061									200	1				
2N4062									200	1				
2N4063		•						10	350	40 min	20	15		
2N4064		•						10	250	40 min	20	15		
2N4068			•	•					150			50	104	
2N4069			•	•					150			50	104	
2N4070								65	100	40-120	5	60		
2N4071								65	150	40-120	5	60		
2N4072			•					.35	20	10 min	25	550	18	
2N4073			•					.35	20	10 min	25	550	5	
2N4074	Ep		•					.5	40	75 min	10			
2N4075	PI				•			30	80	30-90	1	30		
2N4076	PI				•			30	80	50-150	1	30		
2N4077		•						7.5	20	50-300	.5	1		
2N4078		•						8	32	50-300	.5	1		
2N4079		•	COMP PAIR					4.5	20	50-250	.5	1		
2N4080						•	•	.2	15	20 min	3	1000	72	
2N4099	PI	Dual							55	150	.01	150	70	
2N4100	PI	Dual							55	150	.01	150	78	
2N4104			•	•					60			60	18	
2N4105		•						1.6	25	70-350	5		1	
2N4106		•						1.6	25	70-350	5		1	
2N4107		Matched Pair 2N4105, 2N4106												
2N4106		•	COMP. PAIR					1.6	25	70-350	5			
2N4111						•		30	80				3	
2N4112						•		30	80				3	
2N4113						•		30	80				3	
2N4114						•							3	
2N4115						•		37	80				59	
2N4116						•							59	

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD ●	RF ●	OSC ●	LIN ●	SW ●	CHP ●	<1w	V _{CE}	β _{IC} or I _B [*]		f _{αe} [*] kHz	
										h _{FE}	(ma)	f _{αb} MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	≥1w	V _{CB}	h _{fe}	(amp)	f _T MHz	MIL
2N3996	Ep					●		30	100				
2N3997	Ep							2	80	80-240	1		
2N3998	Ep	●						2	80	40-120	1		
2N3999	Ep	●						2	80	80-240	1		
2N4000	PI					●			120	45	1		5
2N4001	PI					●			120	45	1		5
2N4002	Ep					●		100	100	25	30		63
2N4003	Ep					●		100	100	25	30		63
2N4004	Ep					●		40	100	25	30		
2N4005	Ep					●		40	100	25	30		
2N4006									6			20	46
2N4007									15			15	46
2N4008									30			15	46
2N4009		Matched Pair of 2N4006											
2N4010		Matched Pair of 2N4007											
2N4011		Matched Pair of 2N4008											
2N4012	Ep	●	●					11.6	40			500	60
2N4013	PI					●		.36	30	30 min	10	300	18
2N4014	PI					●		.36	50	50 min	10	300	18
2N4014	PI		DUAL					.5	60	80 min	.01		18
2N4015	PI		DUAL					.5	60	80 min	.01		
2N4016	PI		DUAL					.5	60	80 min	.01		
2N4017	PI		DUAL					.6	80	100-500	1		
2N4018	PI		DUAL					.6	60	100-600	1		
2N4019	PI		DUAL					.6	45	250-600	1		
2N4020	PI		DUAL					.6	45	250-550	.1		
2N4021	PI		DUAL					.6	60	100-400	.1		
2N4022	PI		DUAL					.6	60	250-550	.1		
2N4023	PI		DUAL					.6	45	250-550	.1		
2N4024	PI		DUAL					.6	60	100-400	.1		
2N4025	PI		DUAL					.6	60	250-550	.1		
2N4026		●							80	100-300	100	150	18
2N4027		●							80			150	18
2N4028		●							80			150	18
2N4029		●							80			150	18
2N4030	PI	●	●		●			.8	60	40-120	100	150	5
2N4031	PI	●	●		●			.8	80	40-120	100	150	5
2N4032	PI	●	●		●			.8	60	100-300	100	150	5
2N4033	PI	●	●		●			.8	80	100-300	100	150	5
2N4034	PI		●			●		.36	40	70-200	10		18
2N4035	PI		●			●		.36	40	150-300	10		18
2N4036		●						7	65	40	150	60	5
2N4037		●						7	40	50	150	60	5
2N4040	PL		●					17.5	40	10-80	100	500	
2N4041	PL		●					10	40	10-80	75	600	
2N4042	PI	Dual							60	100 min	.01	200	70
2N4043	PI	Dual							45	80 min	.01	150	70

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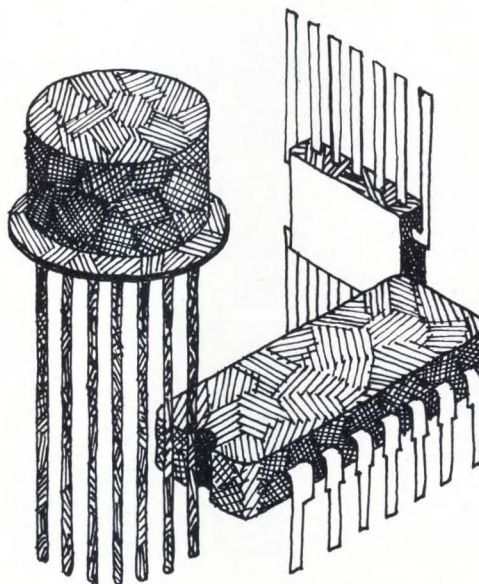
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Circle No. 45 on Reader Service Card for more information.

Transistors

2N4253-2N4919

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC MIX	SW CHP	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	SRV	h_{fe} (amp)	f_T MHz	MIL
2N4432A							
2N4433					165	50	200
2N4436							
2N4437							
2N4438	PI				5.8	300	40-120
2N4439	PI				5.8	300	100-240
2N4440					11.6	65	
2N4854							
2N4855							
2N4862					4	120	50-150
2N4863					4	120	50-150
2N4864					16.6	120	50-150
2N4865						80	10-40
2N4866						120	10-40
2N4872							
2N4873	PI				1.2	15	110-150
2N4874	Ep				6		900
2N4875	Ep				6		800
2N4876	Ep				6		650
2N4878	PI	Dual				60	200-600
2N4879	PI	Dual				55	150-600
2N4880	PI	Dual				45	80 min
2N4888	PI				.8	150	80-300
2N4889	PI				.8	150	80-300
2N4890	An				1	40	50-250
2N4895	Ep				4	60	40-120
2N4896	Ep				4	60	100-300
2N4897	Ep				4	80	40-120
2N4898	An				25	40	20-100
2N4899	An				25	60	20-100
2N4900	An				25	80	20-100
2N4901	An				87.5	40	20-80
2N4902	An				87.5	60	20-80
2N4903	An				87.5	80	20-80
2N4904	An				87.5	40	25-100
2N4905	An				87.5	60	25-100
2N4906	An				87.5	80	25-100
2N4910	An				25	40	20-100
2N4911	An				25	60	20-100
2N4912	An				25	80	20-100
2N4913					87.5	40	25-100
2N4914					87.5	60	25-100
2N4915					87.5	80	25-100
2N4916	PI				.5	30	150-300
2N4917	PI				.5	30	150-300
2N4918	An				30	40	20-100
2N4919	An				30	60	20-100

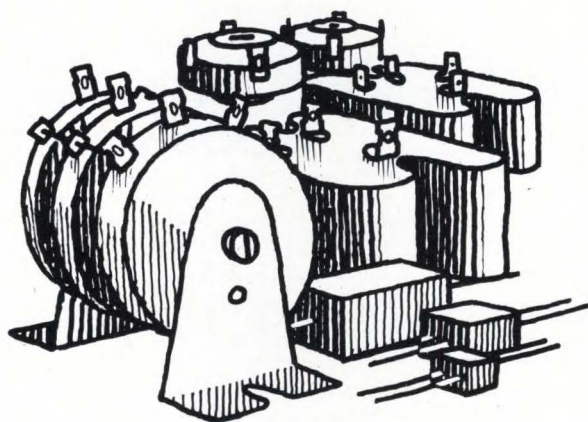
TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC MIX	SW CHP	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	SRV	h_{fe} (amp)	f_T MHz	MIL
2N4346					5	320	
2N4347					100	120	20 min
2N4348					120	120	15 min
2N4383	PI				.8	30	100-500
2N4384	PI				.5	30	100-500
2N4385	PI				.8	30	40-500
2N4386	PI				.5	30	40-500
2N4390					.5	120	20 min
2N4395					62.5	60	60 min
2N4396					75	40	15 min
2N4397					40		
2N4398	An				200	40	15-60
2N4399	An				200	60	15-60
2N4400	An				.31	40	50-150
2N4401	An				.31	40	100-300
2N4402	An				.31	40	50-150
2N4403	An				.31	40	100-300
2N4404	An				80		
2N4405	An				80		
2N4406	An				80		
2N4407	An				80		
2N4409	An				.31	50	60-400
2N4410	An				.31	80	60-400
2N4411	An				.15	12	40-160
2N4412	PI				.6	30	100-500
2N4412A	PI				.6	60	100-500
2N4413	PI				.4	30	100-500
2N4413A	PI				.4	60	100-500
2N4414	PI				.6	30	40-500
2N4414A	PI				.6	60	40-500
2N4415	PI				.4	30	40-500
2N4415A	PI				.4	60	40-500
2N4418	Ep				.25	15	
2N4419	Ep				.25	12	
2N4420	Ep				.25	20	
2N4421	Ep				.25	12	
2N4422	Ep				.25	15	
2N4423	Ep				.25	12	
2N4424	PI				.36	40	180-540
2N4425	PI				.9	40	180-540
2N4426	PI				.2	30	100-500
2N4427	OV				3.5	20	
2N4428					.75	28	
2N4429					1	28	
2N4430					2.5	28	
2N4431					5	28	
2N4432							

TYPE NO.	CST	APPLICATIONS	DISS	V	GAIN	FREQ	DIM
NPN	SI	AUD RF	OSC MIX	SW CHP	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz	
					h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	SRV	h_{fe} (amp)	f_T MHz	MIL
2N4253							600
2N4254							
2N4255							
2N4256	PI				.2	30	100-500
2N4259					40		750
2N4260	An				.2	15	30-150
2N4261	An				.2	15	30-150
2N4264	An				.31	15	40-160
2N4265	An				.31	12	100-400
2N4271							
2N4276					170	20	15 min
2N4277					170	20	15 min
2N4278					170	30	15 min
2N4279					170	30	15 min
2N4280					170	45	15 min
2N4281					170	45	15 min
2N4282					170	60	15 min
2N4283					170	60	15 min
2N4284					.25	25	35-150
2N4285					.25	35	35-150
2N4286					.25	25	150-600
2N4287					.25	45	150-600
2N4288					.25	25	150-600
2N4289					.25	45	150-600
2N4290					.25	20	50-300
2N4291					.25	30	100-300
2N4292					.25	15	20 min
2N4293					.25	15	20 min
2N4294					.2	12	30-120
2N4295					.2	15	40-120
2N4296					20	250	50 min
2N4297					20	250	75 min
2N4298					20	350	25 min
2N4299					20	350	50 min
2N4300	Ep				15	70	
2N4301	Ep				50	30	
2N4305					80		
2N4306					80		
2N4307					60		
2N4308					60		
2N4309					80		
2N4310					80		
2N4311					60		
2N4312					60		
2N4313	PI				.5	12	7 min
2N4314					7	65	50
2N4315					.6	25	175 min

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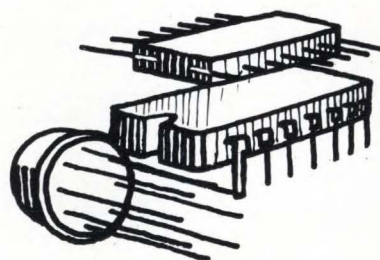
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Circle No. 46 on Reader Service Card for more information.

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SRV	SW	CHP	<1w	V _{CE}	$\beta @ I_c$ or I_B^*	$f_{\alpha e}$ kHz		
										h_{FE}	(ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SAT	CMP		$\approx 1w$	V _{CB}	h_{fe}	(amp)	f _T MHz	MIL
2N4920	An	•			•	•		30	80	20-100	.5	3	e
2N4921	An	•			•	•		30	40	20-100	.5	3	e
2N4922	An	•			•	•		30	60	20-100	.5	3	e
2N4923	An	•			•	•		30	80	20-100	.5	3	e
2N4924	An		•					5	100			100	39
2N4925	An		•					5	150			100	39
2N4926	An		•					5	200			30	39
2N4927	An		•					5	250			30	39
2N4928	An	•	•					.6	100	25-200	10	100	39
2N4929	An	•	•					1	150	25-200	10	100	39
2N4930		•						5	200	20-200	10	20	5
2N4931		•						5	250	20-200	10	20	5
2N4932				•	•			70	50				60
2N4933				•	•			70	70				60
2N4934					•				40			700	104
2N4935					•				50			700	104
2N4936					•				50			700	104
2N4937	An	Dual						.6	40	50-250	10	400	5
2N4938	An	Dual						.6	40	50-250	10	400	5
2N4939	An	Dual						.6	40	50-250	10	400	5
2N4940	An	Dual						.35	40	50-250	10	400	89
2N4941	An	Dual						.35	40	50-250	10	400	89
2N4942	An	Dual						.35	40	50-250	10	400	89
2N4943													
2N4944	Ep	•	•					.22	40	40-120	150		PL
2N4945	Ep	•	•					.22	60	40-120	150		PL
2N4946	Ep	•	•					.22	40	100-300	150		PL
2N4951	Ep				•	•		.36	30	60-200	150		P
2N4952	Ep				•	•		.36	30	100-300	150		P
2N4953	Ep				•	•		.36	30	200-600	150		P
2N4954	Ep				•	•		.36	30	60-600	150		P
2N4955	PI		DUAL					1.3	25	150 min	1		P
2N4956	PI		DUAL					1.3	25	150 min	1		P
2N4957	An	•						.2	30			1200	72
2N4958	An	•						.2	30			1000	72
2N4959	An	•						.2	30			1000	72
2N4960	Ep							.8	60	100-300	150	250	39
2N4961	Ep							.8	80	100-300	150	250	39
2N4962	Ep							.5	60	100-300	150	250	18
2N4963	Ep							.5	80	100-300	150	250	18
2N4966		•						.2	40	40-200	.01	40	106
2N4967		•						.2	40	100-600	.01	40	106
2N4968		•						.2	25	40-200	.01	40	106
2N4969		•			•			.2	30	40-120	150	200	106
2N4970		•			•			.2	30	100-300	150	200	106

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM	
NPN	SI	AUD	RF	OSC	SRV	SW	CHP	<1 w	V _{CE}	β @I _C or I _B *	f _{αE} *kHz			
PNP	GE	D-C	VHF	MIX	SAT	CMP		≥1 w	V _{CB}	h _{FE}	(ma)	f _{αB} MHz		
										h _{fe}	(amp)	f _T MHz	MIL	
2N4971			•			•		.2	40	40-120	150	200	106	
2N4972			•			•		.2	40	100-300	150	200	106	
2N4974			DARLINGTON						2.5	30	30-150k	10		12
2N4975			DARLINGTON						2.5	30	15-75k	10		12
2N4976			•	•				5	30	20-250	50	1000		
2N4994	PI		•	•				.2	45					
2N4995	PI		•	•				.2	45					
2N4996	PI		•	•				.2	18					
2N4997	PI		•					.2	18					
2N4998	PI				•			35	80	30-90	2	60	59	
2N4999														
2N5000	PI				•			35	80	70-200	2	70	59	
2N5001														
2N5002	PI				•			58	80	30-90	5	60	59	
2N5003														
2N5004	PI				•			58	80	70-200	5	70	59	
2N5005														
2N5006	PI				•			116	80	30-90	10	30	61	
2N5008	PI				•			116	80	70-200	10	40	61	
2N5010			•		•			5	500	30-180	20	35	5	
2N5011			•		•			5	600	30-180	20	35	5	
2N5012			•		•			5	700	30-180	20	35	5	
2N5013			•		•			5	800	30-180	20	35	5	
2N5014			•		•			5	900	30-180	20	35	5	
2N5015			•		•			5	1000	30-180	20	35	5	
2N5016			•	•	•			30	65			700	60	
2N5017			•	•	•			30	65				P	
2N5022	PI					•		4	50	25-100	1	170	39	
2N5023	PI					•		4	30	40-100	1	200	39	
2N5024														
2N5025	PI				•	•		45	40	20 min	2	150	60	
2N5026	PI				•	•		45	50	20 min	2	150	60	
2N5027						•		.32	30	50-150	150	250	P	
2N5028						•		.32	30	100-300	150	250	P	
2N5029						•		.32	15	40-120	10		P	
2N5030						•		.32	12	30 min	10		P	
2N5034						•		83	40	20 min	2.5	0.8	P	
2N5035						•		83	40	20 min	2.5	.8	P	
2N5036						•		83	50	20 min	2.5	.8	P	
2N5037						•		83	50	20 min	2.5	.8	P	
2N5040	PI					•		.8	25	30 min	1	80	105	
2N5041	PI					•		.8	40	40-150	1	100	105	
2N5042	PI					•		5	40	40-150	1	100	39	
2N5043			•	•				30	15			1500	72	

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	OSC	SRV	SAT	CHP	<1w	V _{CE}	β at I _C or I _B *	f _{αe} *kHz		
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	≥1w	V _{CB}	h _{FE}	(ma)	f _{αb} MHz	
										h _{fe}	(amp)	f _T MHz	MIL
2N5044			•	•				30	15			1000	72
2N5048						•	•	100	50	15-60	10		61
2N5049						•	•	100	100	15-60	10		61
2N5053			•					.2	15	25-150	2		72
2N5054			•					.2	15	25-150	2		72
2N5055	Ep					•	•	.2	12	9	20	550	P
2N5056	Ep					•	•	1.2	15	30-100	30	800	18
2N5057	Ep					•	•	1.2	15	40-100	30	800	18
2N5058		•	•					1	300	35-150			5
2N5059		•	•					1	250	35-150			5
2N5065													
2N5066	Ep					•		.4	20	5 min	1		46
2N5067		•						87.5	40	20-80	1	4	3
2N5068		•						87.5	60	20-80	1	4	3
2N5069		•						87.5	80	20-80	1	4	3
2N5070			•	•	•			70	65				60
2N5071			•	•	•			70	65				60
2N5074	PI					•		70	200	30-110	3	40	59
2N5075	PI					•		70	200	90-250	3	40	59
2N5076	PI					•		70	250	30-110	3	40	59
2N5077	PI					•		70	250	90-250	3	40	59
2N5079		•						1.8	30	100-300	150		18
2N5080		•						1.8	30	100-300	150		18
2N5083	Ep	•						35	60	40-120	2	50	59
2N5084	Ep	•						35	60	100-300	2	50	59
2N5085	Ep	•						35	80	40-120	2	50	59
2N5086	An	•						.3	50	150-500	.1	40	P
2N5087	An	•						.3	50	250-800	.1	40	P
2N5088	An	•						.3	35	300-900	.1	50	P
2N5089	An	•						.3	30	400-1200	.1	50	P
2N5090		•	•	•	•			5	30			500	60
2N5091		•				•		5	300	20-200	100		5
2N5092		•				•		5	350	15-250	100		5
2N5093		•				•		5	350	20-200	100		5
2N5094		•				•		5	400	20-200	100		5
2N5095		•				•		5	400	15-250	100		5
2N5096		•				•		5	450	20-200	100		5
2N5097		•				•		5	450	15-250	100		5
2N5098		•				•		5	500	15-250	100		5
2N5099		•				•		5	550	15-250	100		5
2N5102			•	•	•			70	100				60
2N5106													
2N5107													
2N5108		•	•	•				3.5	30			1200	39

Transistors

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	MIX	OSC	SRV	SAT	CHP	<1w	V_{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz	
											h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\approx 1w$	V_{CB}	h_{fe} (amp)	f_T MHz	MIL	
2N5109	Ov								40			1200	39
2N5126													
2N5127													
2N5128	Ep							.3	12	35-350	50	200	P
2N5129	Ep							.2	12	35-350	50	200	P
2N5130													
2N5131													
2N5132	PI							.2	20	30-400	10		P
2N5133	PI							.2	18	60-1000	1	40	P
2N5134													
2N5135	PI							.3	25	50-600	10	40	P
2N5136	Ep							.3	20	20-400	150	40	
2N5137	Ep							.22	20	20-400	150	40	
2N5138	PI							.2	30	50 min	10	30	P
2N5139													
2N5140	Ep							.2	5	20-140	10		P
2N5141	Ep							.2	6	12	20	300	P
2N5142	Ep							.3	20	30 min	50		P
2N5143	Ep							.2	20	30 min	50		P
2N5146	QUAD												
2N5147													
2N5148	Ep							6	80	30-90	1	50	39
2N5149													
2N5150	Ep							6	80	70-200	1	60	39
2N5151													
2N5152	Ep							10	80	30-90	2.5	60	39
2N5153													
2N5154	Ep							10	80	70-200	2.5	70	39
2N5155	Ad								120	25-100	8	.1	
2N5156	Ad								60	25-60	5	.15	
2N5157	Td								100	30-90	1	2.8	3
2N5160	An							5	60			900	39
2N5161	An							20	60			500	60
2N5162	An							20	60			500	60
2N5172	PI							.2	25	100-750	10	120	P
2N5177								40	35	10-150	100	500	
2N5178								70	35	10-150	200	500	
2N5179									20			1000	72
2N5180									30			650	104
2N5181									45			700	104

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	MIX	OSC	SRV	SAT	CHP	<1w	V_{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz	
											h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\approx 1w$	V_{CB}	h_{fe} (amp)	f_T MHz	MIL	
2N5182									45			700	104
2N5183								2	18	40 min	300	125	104
2N5184									120	10 min	50	50	104
2N5185									120	10 min	50	50	
2N5186									10	25 min	10	400	52
2N5187									25	30 min	10	400	52
2N5188									60			250	39
2N5189									60			250	
2N5190								40	40	25-100	1.5	4	P
2N5191								40	60	25-100	1.5	4	P
2N5192								40	80	25-100	1.5	4	P
2N5193								40	40	25-100	1.5	4	P
2N5194								40	60	25-100	1.5	4	P
2N5195								40	80	25-100	1.5	4	P
2N5202								35	120	10 min	4	60	66
2N5208	An							.31	30	20-120	2	300	P
2N5219	An							.31	20	35-500	2	150	P
2N5220	An							.31	15	30-600	50	100	P
2N5221	An							.31	15	30-600	50	100	P
2N5222	An							.31	20	20-1500	4	450	P
2N5223	An							.31	20	50-800	2	150	P
2N5224	An							.31	12	40-400	10		
2N5225	An							.31	25	30-600	50	50	P
2N5226	An							.31	25	30-600	50	50	P
2N5227	An							.31	30	50-700	2	100	P
2N5228	An							.31	5	30 min	10	300	P
2N5229													
2N5230													
2N5231													
2N5232								.36	50	250-500	2		98
2N5232A								.36	50	250-500	2		98
2N5239	Ov							100	225	20 min	2	5	3
2N5240	Ov							100	300	20 min	2	5	3
2N5241	Td							125	400	15-35	2.5	2.5	3
2N5262								1	75	20 min	1	250	
2N5276										30-90			18
2N5279								5	300	50-175	20	50	5
2N5280								15	300	50-175	20	50	14
2N5281								5	150	30-200	10	20	5

TYPE NO.	CST	APPLICATIONS						DISS	V	GAIN		FREQ	DIM
NPN	SI	AUD	RF	MIX	OSC	SRV	SAT	CHP	<1w	V_{CE}	$\beta @ I_C$ or I_B^*	$f_{\alpha e}$ kHz	
											h_{FE} (ma)	$f_{\alpha b}$ MHz	
PNP	GE	D-C	VHF	MIX	SRV	SAT	CHP	$\approx 1w$	V_{CB}	h_{fe} (amp)	f_T MHz	MIL	
2N5282								5	300	30-200	10	20	5
2N5293								.36	70	30-120	.5	.8	P
2N5294								.36	70	30-120	.5	.8	P
2N5295								.36	40	30-120	1	.8	P
2N5296								.36	40	30-120	1	.8	P
2N5297								.36	60	20-80	1.5	.8	P
2N5298								.36	60	20-80	1.5	.8	P
2N5312								50	80	30-90	10		61
2N5313								50	80	30-90	10		61
2N5314								50	100	30-90	10		61
2N5315								50	100	30-90	10		61
2N5316								50	80	30-90	5		61
2N5317								50	80	30-90	5		61
2N5318								50	100	30-90	5		61
2N5319								50	100	30-90	5		61
2N5320								10	75	30-130	.5	50	5
2N5321								10	50	40-250	.5	50	5
2N5322								10	75	30-130	.5	50	5
2N5323								10	50	40-250	.5	50	5
2N5324								56	150	20-60	5	3	3
2N5325								56	200	20-60	5	3	3
2N5332										20-80			18
2N5333								15	80	30-150	1		5
2N5368								.36	30	60-200	150	250	P
2N5369								.36	30	100-300	150	250	P
2N5370								.36	30	200-600	150	250	P
2N5371								.36	30	60-600	150	250	P
2N5372								.36	30	40-120	150	150	P
2N5373								.36	30	100-300	150	150	P
2N5374								.36	30	200-400	150	150	P
2N5375								.36	30	40-400	150	150	P
2N5376								.36	30	100-500	.01	30	P
2N5377								.36	30	40-500	.01	30	P
2N5378								.36	30	100-500	.01	20	P
2N5379								.36	30	40-500	.01	20	P
2N5380								.36	40	50-150	10	250	P
2N5381								.36	40	100-300	10	300	P
2N5382								.36	40	50-150	10	200	P
2N5383								.36	40	100-300	10	250	P

Transistors

2N5138-2N5383

TRANSISTOR CROSS-REFERENCE

This transistor cross-reference will aid in the location of devices where specific parameter values are of interest. The cross-reference is organized into three sections: power, frequency and gain.

Power—Transistors rated at a maximum collector dissipation of 1w or greater are tabulated in order of increasing power, then numerically. Most of the wattage ratings consider

the transistor attached to an infinite heat sink at 25°C. Note that many of the milliwatt types can be upgraded to 1w or better with proper heat sinking. This list is intended primarily as a guide to higher-power devices.

Frequency—Transistors with a maximum frequency parameter of 10 MHz or greater are listed in order of increasing parameter value, then numerically. The parameter listed

may be $f_{\alpha\beta}$, f_r or f_{max} .

Gain—Transistors are listed here in order of increasing common-emitter forward current gain, then numerically. Minimum values of gain have been used to determine the order. In some cases where only typical values are specified, the transistor number is followed by an asterisk (*) as 2N3374*.

Collector Dissipation

1w	2N3347	2N3765	2N657A	2N5042	2N554	14w	2N2553	2N399	2N1666	2N4233	2N5194	2N638A	2N5074	2N3179
2N101/13	2N3348	2N3997	2N1067	2N5090	2N555	2N2035	2N2554	2N401	2N1667	2N4240	2N5195	2N638B	2N5075	2N3180
2N102/13	2N3349	2N3998	2N1479	2N5091	2N1068		2N2555	2N418	2N1668	2N4998		2N1046	2N5076	2N3181
2N144/13	2N3350	2N3999	2N1480	2N5092	2N1714	15w	2N2556	2N419	2N1669	2N5000	45w	2N1073	2N5077	2N3182
2N339	2N3351	2N5183	2N1481	2N5093	2N1715	2N1658	2N2557	2N420	2N2150	2N5083	2N297	2N1073A	2N5102	2N3187
2N340	2N3352		2N1482	2N5094	2N1716	2N1659	2N2558	2N420A	2N2151	2N5084	2N1120	2N1073B	2N5178	2N3188
2N341	2N3546	2.5w	2N1613A	2N5095	2N1717	2N1709	2N2559	2N1292	2N2869	2N5085	2N1208	2N1079		2N3189
2N342	2N3576	2N3152	2N1700	2N5096	2N1718	2N1710	2N2560	2N1294	2N2870	2N5202	2N1209	2N1080	75w	2N3190
2N342A	2N3680	2N4430	2N2033	2N5097	2N1719	2N2659	2N2561	2N1296	2N2892		2N1250	2N1136	2N1487	2N3191
2N342B	2N3862	2N4974	2N2034	2N5098	2N1720	2N2660	2N2562	2N1298	2N2893	36w	2N2032	2N1136A	2N1488	2N3192
2N343	2N4873	2N4975	2N2102	2N5099	2N1721	2N2661	2N2563	2N1321	2N3220	2N5293	2N5025	2N1136B	2N1489	2N3193
2N343A			2N2102A	2N5160	2N2067	2N2662	2N2564	2N1323	2N3221	2N5294	2N5026	2N1137	2N1490	2N3194
2N343B	1.2w	3w	2N2270	2N5279	2N2067B	2N2663	2N2565	2N1325	2N3222	2N5295		2N1137A	2N1511	2N3577
2N671	2N5056		2N2282	2N5281	2N2067G	2N2664	2N2566	2N1483	2N3223	2N5296	50w	2N1137B	2N1512	2N3611
2N673	2N5057		2N2283	2N5282	2N2067.0	2N2665	2N2567	2N1484	2N3224	2N5297	2N155	2N1138	2N1513	2N3612
2N784	1.3w		2N2284		2N2067W	2N2666	2N2866	2N1485	2N3225	2N5298	2N277	2N1138A	2N1514	2N3613
2N1183	2N3504		2N2405		2N2068	2N2667	2N2867	2N1486	2N3226		2N278	2N1138B	2N1702	2N3614
2N1183A	2N3505		2N2467		2N2068G	2N2668	2N2873	2N1504/10	2N3227	37w	2N378	2N1210	2N1703	2N3615
2N1183B	2N4251		2N2468		2N2068.0	2N2669	2N2875	2N1658	2N3228	2N639	2N379	2N1211	2N2101	2N3616
2N1184	2N4955		2N2469		2N2201	2N2670	2N3138	2N1659	2N3229	2N639A	2N380	2N1212	2N2102	2N3617
2N1184A	2N4956		2N2470		2N2202	2N2781	2N3139	2N1701	2N3230	2N639B	2N441	2N1213	2N2103	2N3618
2N1184B			2N2471		2N2203	2N2782	2N3140	2N2304	2N3231	2N665	2N442	2N1214	2N2104	87.5w
2N1238		1.4w	2N2472		2N2204	2N2783	2N3141	2N2308	2N3232	2N665	2N443	2N1215	2N2105	2N1724
2N1239	2N3726		2N2473		2N2205	2N2784	2N3142	2N2309	2N3233	2N4115	2N444	2N1216	2N2106	2N1725
2N1240	2N3727		2N2474		2N2206	2N2785	2N3143	2N2310	2N3234		2N445	2N1217	2N2107	2N4901
2N1241			2N2475		2N2207	2N2786	2N3144	2N2311	2N3235	37.5w	2N446	2N1218	2N2108	2N4902
2N1242	1.5w		2N2476		2N2208	2N2787	2N3145	2N2312	2N3236	2N4241	2N447	2N1219	2N2109	2N4903
2N1243	2N2915A		2N2477		2N2209	2N2788	2N3146	2N2313	2N3237		2N448	2N1220	2N2110	2N4904
2N1244	2N2916A		2N2478		2N2210	2N2789	2N3147	2N2314	2N3238	2N178	2N1069	2N1221	2N2111	2N4905
2N1708A	2N2919A		2N2479		2N2211	2N2790	2N3148	2N2315	2N3239	2N1070	2N1070	2N1222	2N2112	2N4906
2N1711A	2N2920A		2N2480		2N2212	2N2791	2N3149	2N2316	2N3240	2N1071	2N1071	2N1223	2N2113	2N4907
2N1711B	2N3941	3.5w	2N2481		2N2213	2N2792	2N3150	2N2317	2N3241	2N1072	2N1072	2N1224	2N2114	2N4908
2N2017	2N3942		2N2482		2N2214	2N2793	2N3151	2N2318	2N3242	2N1073	2N1073	2N1225	2N2115	2N4909
2N2106		1.6w	2N2483		2N2215	2N2794	2N3152	2N2319	2N3243	2N1074	2N1074	2N1226	2N2116	2N4910
2N2107	2N3728		2N2484		2N2216	2N2795	2N3153	2N2320	2N3244	2N1075	2N1075	2N1227	2N2117	2N4911
2N2108	2N4105		2N2485		2N2217	2N2796	2N3154	2N2321	2N3245	2N1076	2N1076	2N1228	2N2118	2N4912
2N2431	2N4106		2N2486		2N2218	2N2797	2N3155	2N2322	2N3246	2N1077	2N1077	2N1229	2N2119	2N4913
2N2726	2N5108		2N2487		2N2219	2N2798	2N3156	2N2323	2N3247	2N1078	2N1078	2N1230	2N2120	2N4914
2N2727		1.8w	2N2488		2N2220	2N2799	2N3157	2N2324	2N3248	2N1079	2N1079	2N1231	2N2121	2N4915
2N2785	2N721A	4w	2N2489		2N2221	2N2800	2N3158	2N2325	2N3249	2N1080	2N1080	2N1232	2N2122	2N5067
2N2786A	2N1060		2N2490		2N2222	2N2801	2N3159	2N2326	2N3250	2N1081	2N1081	2N1233	2N2123	2N5068
2N2938	2N2895		2N2491		2N2223	2N2802	2N3160	2N2327	2N3251	2N1082	2N1082	2N1234	2N2124	2N5069
2N2983	2N2896		2N2492		2N2224	2N2803	2N3161	2N2328	2N3252	2N1083	2N1083	2N1235	2N2125	90w
2N2984	2N2897		2N2493		2N2225	2N2804	2N3162	2N2329	2N3253	2N1084	2N1084	2N1236	2N2126	2N176
2N2985	2N2898		2N2494		2N2226	2N2805	2N3163	2N2330	2N3254	2N1085	2N1085	2N1237	2N2127	2N250A
2N2986	2N2899		2N2495		2N2227	2N2806	2N3164	2N2331	2N3255	2N1086	2N1086	2N1238	2N2128	2N251A
2N2987	2N2900		2N2496		2N2228	2N2807	2N3165	2N2332	2N3256	2N1087	2N1087	2N1239	2N2129	2N350A
2N2988	2N2901		2N2497		2N2229	2N2808	2N3166	2N2333	2N3257	2N1088	2N1088	2N1240	2N2130	2N351A
2N2989	2N2902		2N2498		2N2230	2N2809	2N3167	2N2334	2N3258	2N1089	2N1089	2N1241	2N2131	2N375
2N2990	2N2903		2N2499		2N2231	2N2810	2N3168	2N2335	2N3259	2N1090	2N1090	2N1242	2N2132	2N376A
2N3244	2N3672		2N2500		2N2232	2N2811	2N3169	2N2336	2N3260	2N1091	2N1091	2N1243	2N2133	2N618
2N3245	2N5079		2N2501		2N2233	2N2812	2N3170	2N2337	2N3261	2N1092	2N1092	2N1244	2N2134	2N627
2N3252	2N5080		2N2502		2N2234	2N2813	2N3171	2N2338	2N3262	2N1093	2N1093	2N1245	2N2135	2N628
2N3253		2w	2N2503		2N2235	2N2814	2N3172	2N2339	2N3263	2N1094	2N1094	2N1246	2N2136	2N629
2N3309			2N2504		2N2236	2N2815	2N3173	2N2340	2N3264	2N1095	2N1095	2N1247	2N2137	2N630
2N3310	2N1092		2N2505		2N2237	2N2816	2N3174	2N2341	2N3265	2N1096	2N1096	2N1248	2N2138	2N669
2N3435	2N2196		2N2506		2N2238	2N2817	2N3175	2N2342	2N3266	2N1097	2N1097	2N1249	2N2139	2N677A
2N4429	2N2197		2N2507		2N2239	2N2818	2N3176	2N2343	2N3267	2N1098	2N1098	2N1250	2N2140	2N677B
2N4429	2N2380		2N2508		2N2240	2N2819	2N3177	2N2344	2N3268	2N1099	2N1099	2N1251	2N2141	2N677C
2N4890	2N2380A		2N2509		2N2241	2N2820	2N3178	2N2345	2N3269	2N1100	2N1100	2N1252	2N2142	2N678
2N4929	2N2478		2N2510		2N2242	2N2821	2N3179	2N2346	2N3270	2N1101	2N1101	2N1253	2N2143	2N678A
2N5058	2N2479		2N2511		2N2243	2N2822	2N3180	2N2347	2N3271	2N1102	2N1102	2N1254	2N2144	2N678B
2N5059	2N2491		2N2512		2N2244	2N2823	2N3181	2N2348	2N3272	2N1103	2N1103	2N1255	2N2145	2N678C
2N5262	2N2991		2N2513		2N2245	2N2824	2N3182	2N2349	2N3273	2N1104	2N1104	2N1256	2N2146	2N1029
	2N2992		2N2514		2N2246	2N2825	2N3183	2N2350	2N3274	2N1105	2N1105	2N1257	2N2147	2N1029A
	2N2993		2N2515		2N2247	2N2826	2N3184	2N2351	2N3275	2N1106	2N1106	2N1258	2N2148	2N1029B
	2N2994		2N2516		2N2248	2N2827	2N3185	2N2352	2N3276	2N1107	2N1107	2N1259	2N2149	2N1029C
	2N2995		2N2517		2N2249	2N2828	2N3186	2N2353	2N3277	2N1108	2N1108	2N1260	2N2150	2N1030
	2N2996		2N2518		2N2250	2N2829	2N3187	2N2354	2N3278	2N1109	2N1109	2N1261	2N2151	2N1030B
	2N2997		2N2519		2N2251	2N2830	2N3188							

2N1032C	2N1362	95w	106w	2N1519	2N3445	125w	2N456B	2N1016E	2N3240	2N2076A	2N3259	176w	2N2742	2N2819	2N1831
2N1146	2N1363	2N1518	2N459A	2N1520	2N3446	2N1314	2N457A	2N1021	2N3470	2N2077	2N2490	2N3429	2N2745	2N2820	2N1832
2N1146A	2N1364	2N1541		2N1521	2N3447	2N1358	2N457B	2N1021A	2N3471	2N2077A	2N2491	2N3430	2N2746	2N2821	2N1833
2N1146C	2N1365	2N1541A		2N1522	2N3448	2N1358A	2N458A	2N1022	2N3472	2N2078	2N2492	2N3431	2N2747	2N2822	2N2109
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2N1360				2N1572		2N1907	2N520A	2N2244	2N3786	2N2165	2N3329		2N2776	2N2847	2N2134
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2N499A	2N784	2N3121	2N4970	2N2863	2N502	2N2222A	2N968	2N4421	2N2097	2N4411	2N707A	2N3009	2N3011	2N3783	2N4429
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	2N1158A	2N3136	2N5129	2N3116	2N3634	2N2381	2N973	2N915	2N2218	2N4940	2N1561	2N4073	2N2369A	2N5056	2N4976
175MHz	2N1204A	2N3152	2N5382	2N3119	2N3635	2N2382	2N974	2N2487	2N2219	2N4941	2N1692	2N5055	690MHz	2N5057	2N4044
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2N1746	2N1409A	2N3252	220MHz	2N3248	2N3637	2N2481	2N2256		2N2220	2N5186	2N2710	560MHz	2N2938		
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2N3244	2N1747	2N3485	2N2087	2N3410	280MHz	2N2901	2N2270		2N2928	2N835/46	2N3280	2N2475/46	2N2964	2N918	2N5108
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2N3444	2N1963	2N3486	2N996	2N3512	2N2635	2N3249	2N3015	2N2956	2N2997	2N846A	2N3290	2N2482	2N3546	2N2729	1300MHz
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2N4128	2N2273	2N3496	235MHz	2N3724	2N705A	2N710		400MHz	2N3127	2N1562	2N3337	2N2616	2N3785	2N3321	2N2810A
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180MHz	2N2618	2N3620	2N2798	2N3830	2N711	2N3425	2N984	2N706	2N3139	2N2168	2N3375	2N2729	2N4207	2N3478	2N3960
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2N1837	2N2696	2N3622		2N3854	2N784A/46	2N3605	2N2242	2N706B	2N3141	2N2795	2N3375	2N2729	2N4208	2N3600	

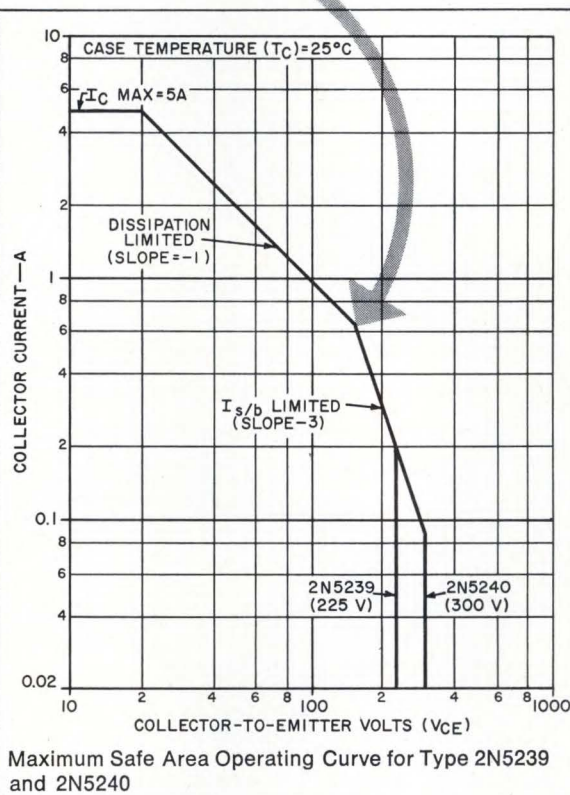
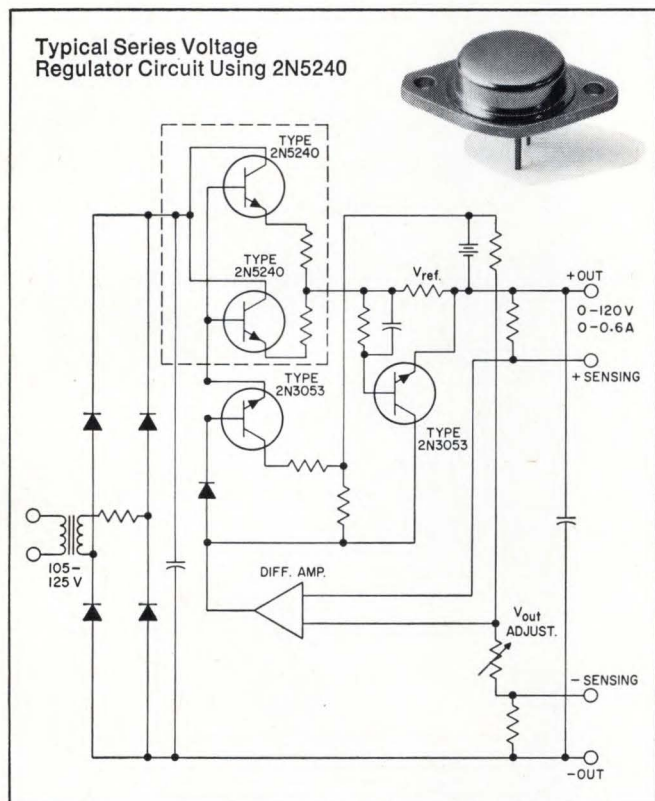
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2N2948	2N1710	2N936	2N1015B	2N1744	2N2126	2N2777	2N3193	2N4866	2N2862	2N546	2N1519	2N4049	2N333	2N316A
2N3297	2N2781	2N938	2N1015C	2N1745	2N2130	2N2778	2N3194	2N3353	2N3163	2N592	2N1616	2N4050	2N333A	2N317
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		2N1275	2N1046B	2N1816	2N2377	2N2823	2N3282	2N101/13	2N3172	2N1067	2N694	2N4281	2N928	2N357
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2N3401	2N298	2N1900	2N1588	2N1082	2N1820	2N2485	2N2970	2N3290	2N45	2N3425	2N118A	2N1789	2N4396	2N1035
5	2N194A	2N1903	2N1623	2N1141	2N1823	2N2486	2N2971	2N3291	2N44/13	2N3577	2N1119	2N1975	2N4398	2N1219
	2N211	2N1903	2N2610	2N1142	2N1824	2N2525	2N2999	2N3292		2N1156	2N1991	2N4399	2N1221	2N386
	2N2474	2N2416	2N3478*	2N1143	2N1825	2N2580	2N3079	2N3293	12	2N1662	2N1994	2N5048	2N1277	2N387
2N2949	2N2673	2N5055*	2N1205	2N1826	2N2582	2N3080	2N3294	2N297	13	2N1162A	2N2015	2N5049	2N1441	2N394
2N2950	2N2928		2N1249	2N1830	2N2649	2N3138	2N3308	2N297	2N97	2N1163	2N2016	2N5092	2N1474A	2N394A
2N3285	2N3309A		2N1338	2N1831	2N2650	2N3139	2N3310	2N389	2N149	2N1163A	2N2035	2N5095	2N1614	2N395
2N3286	2N3664		2N1339	2N1832	2N2739	2N3140	2N3374*	2N389A	2N424	2N1335	2N2036	2N5097	2N2520	2N398
2N3296	2N3717		2N1340	2N1833	2N2740	2N3141	2N4007	2N424/1	2N424	2N1336	2N2096	2N5098	2N2601	2N398A
2N3309	2N3718		2N1341	2N1840	2N2741	2N3142	2N3408</							

2N1533	2N921	2N1714	2N2564/5	2N3537	2N530	2N1514	2N5054	2N1021A	2N1853/18	2N2799	2N3883	35	2N1199A*	2N922
2N1564	2N926	2N1715	2N2565	2N3742	2N530	2N1589	2N5155	2N1022	2N1893A	2N2800	2N3917	2N173	2N1469	2N929
2N1646	2N960	2N1718	2N2565/5	2N3744	24	2N1590	2N5156	2N1022A	2N1943	2N2800/46	2N3923	2N189	2N1475	2N934
2N513A	2N961	2N1719	2N2566	2N3745	2N155	2N1591	2N5186	2N1038	2N1954	2N2800/51	2N3953	2N250A	2N2521	2N964
2N513B	2N962	2N1722	2N2566/5	2N3746	2N186	2N1615	2N5190	2N1039	2N1956	2N2835	2N3978	2N251A	2N2602	2N964A
2N514	2N963	2N1724	2N2567	2N3763	2N186A	2N1677	2N5191	2N1040	2N1957	2N2836	2N3981	2N277	37	2N965
2N514A	2N968	2N1724A	2N2567/5	2N3765	2N269	2N1790	2N5192	2N1041	2N2040	2N2837	2N4013	2N278	2N278	2N966
2N514B	2N969	2N1727	2N2595	2N3774	2N460	2N1891	2N5193	2N1049	2N2041	2N2845	2N4054	2N4055	2N335A	2N967
2N520	2N970	2N1754	2N2616	2N3775	2N924	2N1917	2N5194	2N1049A	2N2060B	2N2846	2N4056	2N376	2N335B	2N972
2N538	2N971	2N1787	2N2629	2N3776	2N530	2N1918	2N5195	2N1049B	2N2097	2N2857	2N4056	2N376A	2N1278	2N973
2N538A	2N988	2N1886	2N2677	2N3777	2N35	2N1963	26	2N1050	2N2100	2N2861	2N4057	2N381	38	2N974
2N547	2N989	2N1901	2N2729	2N3843	2N111	2N1971	2N130A	2N1050A	2N2107	2N2863	2N4075	2N403	2N533	2N975
2N548	2N1029	2N1904	2N2787	2N3843A	2N111A	2N1995	27	2N1050B	2N2137	2N2885	2N4234	2N406	2N1157	2N983
2N549	2N1029A	2N1958	2N2790	2N3783	2N141/13	2N2067B	2N465	2N1078	2N2137A	2N2890	2N4235	2N445	2N1157A	2N1000
2N550	2N1029B	2N1958A	2N2802	2N3784	2N156	2N2067G	2N519	2N1090	2N2138	2N2892	2N4236	2N519A	40	2N1008
2N551	2N1029C	2N1962	2N2803	2N3777	2N174	2N2068G	2N519	2N1101	2N2138A	2N2927	2N4237	2N586	2N98	2N1008A
2N552	2N1031	2N1964	2N2804	2N3877A	2N176	2N2075A	2N519	2N1102	2N2139	2N2927/46	2N4238	2N595	2N99	2N1008B
2N560	2N1031A	2N1985	2N2808A	2N3979	2N182	2N2076	2N519	2N1132	2N2139A	2N2927/51	2N4239	2N613	2N99	2N1012
2N561	2N1031B	2N1987	2N2809	2N4080	2N229	2N2076A	2N519	2N1132A	2N2140	2N2931	2N4240	2N636	2N99	2N1085
2N576	2N1031C	2N1989	2N2809A	2N4210	2N234A	2N2077	2N519	2N1132B	2N2140A	2N2934	2N4241	2N680	2N99	2N1091
2N576A	2N1042	2N1990	2N2810	2N4211	2N319	2N2077	2N519	2N1159	2N2141	2N2938	2N4260	2N780	2N99	2N1116
2N579	2N1043	2N2018	2N2810A	2N4226	2N330A	2N2077A	2N519	2N1171	2N2141A	2N2943	2N4261	2N859	2N99	2N1174
2N581	2N1044	2N2019	2N2811	2N4292	2N339A	2N2078	2N519	2N1186	2N2175	2N2995	2N4294	2N911	2N99	2N1183
2N583	2N1045	2N2032	2N2813	2N4293	2N340A	2N2078A	2N519	2N1191	2N2176	2N3009	2N4301	2N955A	2N99	2N1123
2N585	2N1046A	2N2033	2N2828	2N4374	2N341	2N2210	2N519	2N1253	2N2196	2N3011	2N4498	2N995	2N99	2N1124
2N587	2N1052	2N2034	2N2829	2N4390	2N351	2N2266	2N519	2N1262	2N2201	2N3012	2N5002	2N996	2N99	2N1139
2N594	2N1053	2N2042	2N2852	2N4898	2N351A	2N2267	2N519	2N1273	2N2202	2N3013	2N5006	2N1010	2N99	2N1178
2N602	2N1054	2N2042A	2N2856	2N4899	2N357A	2N2268	2N519	2N1274	2N2203	2N3014	2N5010	2N1010	2N99	2N1184
2N638	2N1065	2N2061A	2N2856-1	2N4900	2N358A	2N2269	2N519	2N1291	2N2204	2N3015	2N5011	2N1019	2N99	2N1184A
2N638A	2N1073	2N2063A	2N2856-2	2N4901	2N361	2N2309	2N519	2N1292	2N2239	2N3020	2N5012	2N1115	2N99	2N1202
2N638B	2N1073A	2N2065A	2N2856-3	2N4902	2N402	2N2425	2N519	2N1293	2N2270	2N3049	2N5013	2N1310	2N99	2N1217
2N677	2N1073B	2N2067	2N2858	2N4903	2N507	2N2451	2N519	2N1294	2N2282	2N3050	2N5014	2N1359	2N99	2N1218
2N677A	2N1079	2N2067-0	2N2859	2N4910	2N524	2N2482	2N519	2N1296	2N2283	2N3051	2N5015	2N1362	2N99	2N1255
2N677B	2N1080	2N2068	2N2864	2N4911	2N524A	2N2492	2N519	2N1297	2N2284	2N3060	2N5030	2N1364	2N99	2N1257
2N677C	2N1081	2N2068-0	2N2865	2N4912	2N559	2N2493	2N519	2N1298	2N2312	2N3065	2N5040	2N1446	2N99	2N1295
2N679	2N1084	2N2086	2N2866	2N4918	2N560A*	2N2581	2N519	2N1299	2N2313	2N3072	2N5056	2N1481	2N99	2N1295
2N696	2N1120	2N2150	2N2873	2N4919	2N563	2N2583*	2N519	2N1300	2N2318	2N3073	2N5074	2N1482	2N99	2N1304
2N696A	2N1131	2N2170	2N2875	2N4920	2N564	2N2630*	2N519	2N1301	2N2319	2N3076	2N5076	2N1485	2N99	2N1305
2N698	2N1131A	2N2194	2N2877	2N4921	2N612	2N2651	2N519	2N1311	2N2320	2N3081	2N5132	2N1486	2N99	2N1312
2N702	2N1160	2N2194A	2N2879	2N4922	2N635	2N2617	2N519	2N1321	2N2357	2N3081/46	2N5148	2N1534	2N99	2N1343
2N702A	2N1169	2N2194B	2N2881	2N4923	2N658	2N2719	2N519	2N1323	2N2358	2N3081/51	2N5152	2N1535	2N99	2N1478
2N706	2N1170	2N2195	2N2882	2N4930	2N663	2N2832	2N519	2N1325	2N2359	2N3120	2N5157	2N1536	2N99	2N1498
2N706/46	2N1183	2N2195A	2N2883	2N4931	2N663	2N2832	2N519	2N1326	2N2394	2N3121	2N5187	2N1536	2N99	2N1498
2N706/51	2N1183A	2N2195B	2N2884	2N4976	2N695	2N2834	2N519	2N1327	2N2400	2N3131	2N5220	2N1536A	2N99	2N1573
2N706A	2N1183B	2N2205	2N2909	2N5025	2N705A	2N2987	2N519	2N1328	2N2410	2N3142	2N5221	2N1537	2N99	2N1605
2N706A/46	2N1209	2N2217	2N2911	2N5026	2N710	2N2988	2N519	2N1329	2N2413	2N3143	2N5225	2N1537A	2N99	2N1605A
2N706A/51	2N1224	2N2217/51	2N2951	2N5028	2N711A	2N2991	2N519	2N1330	2N2424	2N3146	2N5226	2N1538	2N99	2N1613
2N706B	2N1225	2N2220	2N2952	2N5034	2N768	2N2992	2N519	2N1331	2N2432	2N3147	2N5228	2N1539	2N99	2N1622
2N706B/46	2N1226	2N2256	2N2955	2N5035	2N769	2N2996	2N519	2N1332	2N2445	2N3209	2N5276	2N1540	2N99	2N1706
2N706B/51	2N1261	2N2258	2N3062	2N5036	2N781	2N3010	2N519	2N1333	2N2467	2N3210	2N5281	2N1541	2N99	2N1716
2N706C	2N1302	2N2273	2N3127	2N5037	2N784	2N3054	2N519	2N1334	2N2468	2N3212	2N5282	2N1542	2N99	2N1717
2N706C/46	2N1303	2N2285	2N3137	2N5067	2N784A	2N3078	2N519	2N1372	2N2469	2N3213	2N5293	2N1543	2N99	2N1720
2N706C/51	2N1314	2N2286	2N3199	2N5068	2N784A/46	2N3158	2N519	2N1373	2N2475	2N3214	2N5294	2N1544	2N99	2N1721
2N709	2N1367	2N2287	2N3200	2N5069	2N784A/51	2N3159	2N519	2N1380	2N2475/46	2N3245	2N5295	2N1545	2N99	2N1728
2N711	2N1384	2N2288	2N3201	2N5091	2N828	2N3160	2N519	2N1381	2N2475/51	2N3252	2N5296	2N1546	2N99	2N1785
2N717	2N1387	2N2289	2N3202	2N5093	2N828A	2N3161	2N519	2N1383	2N2478	2N3303	2N5312	2N1547	2N99	2N1788
2N719	2N1427	2N2290	2N3203	2N5094	2N834	2N3215	2N519	2N1389	2N2479	2N3322	2N5313	2N1548	2N99	2N1837
2N719A	2N1437	2N2304	2N3204	2N5096	2N834/46	2N3253	2N519	2N1404	2N2480	2N3323	2N5314	2N1549	2N99	2N1837A
2N721	2N1438	2N2308	2N3205	2N5136	2N834A*	2N3263	2N519	2N1410	2N2618	2N3324	2N5315	2N1550	2N99	2N1838
2N728	2N1445	2N2314	2N3206	2N5137	2N861	2N3265	2N519	2N1410A	2N2637	2N3325	2N5316	2N1551	2N99	2N1854
2N729	2N1446	2N2339	2N3207	2N5140	2N863	2N3412*	2N519	2N1411	2N2638	2N3337	2N5317	2N1552	2N99	2N1865
2N730	2N1450	2N2352	2N3208	2N5222	2N863	2N3510	2N519	2N1417	2N2659	2N3338	2N5318	2N1553	2N99	2N1866
2N734	2N1465	2N2352A	2N3220	2N5239	2N929A	2N3527	2N519	2N1418	2N2660	2N3339	2N5319	2N1554	2N99	2N1889
2N738	2N1466	2N2353	2N3222	2N5240	2N941	2N3554	2N519	2N1430	2N2661	2N3342	2N5320	2N1555	2N99	2N1893
2N741	2N1479	2N2353A	2N3224	2N5262	2N942	2N3584	2N519	2N1442	2N2662	2N3426	2N5322	2N1556	2N99	2N1959
2N741A	2N1480	2N2368	2N3226	2N5297	2N1051*	2N3585	2N519	2N1477	2N2663	2N3492	2N5333	2N1557	2N99	2N1959A
2N742	2N1483	2N2383	2N3235	2N5298	2N1098	2N3647	2N519	2N1499A	2N2664	2N3511	2N5334	2N1558	2N99	2N1959A/51
2N742A	2N1484	2N2384	2N3264	2N5324	2N1100	2N3660	2N519	2N1553	2N2691	2N3526	2N5335	2N1559	2N99	2N1965
2N743	2N1500	2N2393	2N3266	2N5325	2N1122	2N3661	2N519	2N1553A	2N2694	2N3529	2N5336	2N1560	2N99	2N1984
2N743/46	2N1529	2N2395	2N3295	2N5332	2N1122A	2N3713	2N519	2N1554	2N2695	2N3530	2N5337	2N1561	2N99	2N1997
2N743/51	2N1529A	2N2411	2N3304	2N5332	2N1131	2N3714	2N519	2N1554A	2N2696	2N3531	2N5338	2N1562	2N99	2N2008
2N754	2N1530	2N2423	2N3307	2N5332	2N1131A	2N3719	2N519	2N1555	2N2708	2N3532	2N5339	2N1563	2N99	2N2020
2N755	2N1530A	2N2424	2N3399	2N5332	2N1145	2N3720	2N519	2N1555A	2N2711	2N3535	2N5340	2N1564	2N99	2N2021
2N761	2N1531	2N2476	2N3418	2N5332	2N1150	2N3743	2N519	2N1556	2N2713	2N3536				

Transistor Cross Reference (Cont'd)

2N2218A	2N3110	2N4386	50	2N1998	2N3516	60	2N3603	2N2910	2N3671	2N3999	2N1515	2N3666*	2N2784/51	2N3860	2N4878
2N2221	2N3115	2N4400		2N2000	2N3517		2N3604	2N2932	2N3672	2N4014	2N1516	2N3692	2N3124*	2N4035	2N4953
2N2221A	2N3132	2N4411		2N2048	2N3518	2N137	2N3613	2N2935	2N3673	2N4015	2N1711	2N3694	2N3506*	2N4099	2N5080
2N2224	2N3133	2N4414		2N2060	2N3544*	2N180	2N3614	2N2945A	2N3674	2N4016	2N1711A	2N3700	2N3547	2N4100	2N5370
2N2237	2N3135	2N4414A		2N2060A	2N3581	2N181	2N3617	2N2946	2N3675	2N4043	2N1711B	2N3704	2N4124	2N4121	2N5374
2N2240	2N3152	2N4415		2N2062A	2N3588*	2N226	2N3618	2N3688*	2N3676	2N4045	2N1890	2N3750	2N4126	2N4122	210
2N2242	2N3221	2N4415A		2N2064A	2N3633	2N226	2N3702	2N3689*	2N3677	2N4048	2N2049	2N3751		2N4286	
2N2243	2N3223	2N4438		2N2066A	2N3634	2N235B	2N3721	2N3690*	2N3678	2N4049	2N2084	2N3752	125	2N4287	
2N2243A	2N3225	2N4489		2N2066A	2N3636	2N236B	2N3745	2N4034	2N3679	2N4088	2N2085	2N3793	2N192	2N4288	
2N2244	2N3261	2N4489		2N2142	2N3705	2N257W	2N3845	2N4105	2N3680	2N4089	2N2147	2N3794	2N193	2N4289	
2N2247	2N3262	2N4494		2N2143	2N3715	2N274	2N3855	2N4106	2N3681	83	2N2192	2N3856	2N190	2N4290	
2N2250	2N3299	2N4945		2N2143A	2N3716	2N274	2N3855A	2N4106	2N3682	2N1313	2N2192A	2N3856A	2N190	2N4291	
2N2253	2N3305	2N4966		2N2144	2N3791	2N374	2N3858	2N5000	2N3683	85	2N2192B	2N3859	2N2447	2N4917	
2N2257	2N3326	2N4968		2N2144A	2N3792	2N382	2N3858A	2N5004	2N3684	2N191	2N2219	2N3859A	2N2449	2N4955	
2N2259	2N3347	2N4969		2N2145	2N3850	2N388	2N3907	2N5008	2N3685	2N1318	2N2219/51	2N3904	2N2450	2N4956	235
2N2297	2N3348	2N4971		2N2145A	2N3852	2N388A	2N3911	2N5150	2N3686	2N1357	2N2219A	2N3906	2N2903	2N5086	2N2925
2N2297/51	2N3349	2N5023		2N2146	2N3857	2N392	2N3914	2N5154	2N3687	2N2612	2N2222	2N3908	2N2903A		
2N2315	2N3420	2N5029		2N2146A	2N3862	2N414B	2N3930		2N3688		2N2222A	2N3909	2N3242A	155	240
2N2316	2N3421	2N5057		2N2152	2N3878	2N414C	2N3931		2N3689		2N2222B	2N3917	2N3409*	2N3521	2N2511
2N2351	2N3439	2N5041		2N2152A	2N3903	2N414D	2N4245		2N3690		2N2226	2N3962	2N3410*	2N3522	2N3057
2N2351A	2N3440	2N5042		2N2153	2N3905	2N414E	2N4246		2N3691		2N2227	2N3963	2N3411*	2N3523	
2N2364	2N3444*	2N5083		2N2153A	2N3946	2N414F	2N4247		2N3692		2N2228	2N4017	2N3812	2N3524	250
2N2364A	2N3445*	2N5085		2N2154	2N4014	2N414G	2N4248		2N3693		2N2229	2N4018	2N3813		
2N2369	2N3446*	2N5183		2N2154A	2N4037*	2N414H	2N4249		2N3694		2N2230	2N4021	2N3816	160	
2N2369/51	2N3450	2N5224		2N2168	2N4076	2N414I	2N4250		2N3695		2N2231	2N4024		2N3117	
2N2369A	2N3490	2N5321		2N2212	2N4077	2N414J	2N4251		2N3696		2N2232	2N4026	2N1130	2N3815	
2N2374	2N3491	2N5323		2N2223A	2N4078	2N414K	2N4252		2N3697		2N2233	2N4028	2N1426	2N3817	
2N2381	2N3494*	2N5372		2N2291	2N4123	2N414L	2N4253		2N3698		2N2234	2N4032	2N1526	2N3901	
2N2382	2N3495*	2N5375		2N2292	2N4125	2N414M	2N4254		2N3699		2N2235	2N4033	2N1527	2N3964	
2N2387	2N3496*	2N5377		2N2293	2N4138	2N414N	2N4255		2N3700		2N2236	2N4034	2N1528	2N3965	
2N2389	2N3497*	2N5379		2N2294	2N4139	2N414O	2N4256		2N3701		2N2237	2N4035	2N1529	2N4019	
2N2396	2N3545	44		2N2295	2N4140	2N414P	2N4257		2N3702		2N2238	2N4036	2N1530	2N4020	
2N2412	2N3576	2N104		2N2296	2N4141	2N414Q	2N4258		2N3703		2N2239	2N4037	2N1531	2N4021	
2N2459	2N3597	2N138		2N2297	2N4142	2N414R	2N4259		2N3704		2N2240	2N4038	2N1532	2N4022	
2N2477	2N3598	2N215		2N2298	2N4143	2N414S	2N4260		2N3705		2N2241	2N4039	2N1533	2N4023	
2N2481	2N3599			2N2299	2N4144	2N414T	2N4261		2N3706		2N2242	2N4040	2N1534	2N4024	
2N2483	2N3615	45		2N2300	2N4145	2N414U	2N4262		2N3707		2N2243	2N4041	2N1535	2N4025	
2N2509	2N3616	2N61		2N2301	2N4146	2N414V	2N4263		2N3708		2N2244	2N4042	2N1536	2N4026	
2N2515	2N3619	2N61A		2N2302	2N4147	2N414W	2N4264		2N3709		2N2245	2N4043	2N1537	2N4027	
2N2518	2N3621	2N61B		2N2303	2N4148	2N414X	2N4265		2N3710		2N2246	2N4044	2N1538	2N4028	
2N2590	2N3622	2N61C		2N2304	2N4149	2N414Y	2N4266		2N3711		2N2247	2N4045	2N1539	2N4029	
2N2596	2N3623	2N64		2N2305	2N4150	2N414Z	2N4267		2N3712		2N2248	2N4046	2N1540	2N4030	
2N2599	2N3625	2N78		2N2306	2N4151	2N414A	2N4268		2N3713		2N2249	2N4047	2N1541	2N4031	
2N2599A	2N3626	2N78A		2N2307	2N4152	2N414B	2N4269		2N3714		2N2250	2N4048	2N1542	2N4032	
2N2604	2N3627	2N106		2N2308	2N4153	2N414C	2N4270		2N3715		2N2251	2N4049	2N1543	2N4033	
2N2632	2N3629	2N113		2N2309	2N4154	2N414D	2N4271		2N3716		2N2252	2N4050	2N1544	2N4034	
2N2633	2N3630	2N131A		2N2310	2N4155	2N414E	2N4272		2N3717		2N2253	2N4051	2N1545	2N4035	
2N2634	2N3641	2N38		2N2311	2N4156	2N414F	2N4273		2N3718		2N2254	2N4052	2N1546	2N4036	
2N2656	2N3642	2N63		2N2312	2N4157	2N414G	2N4274		2N3719		2N2255	2N4053	2N1547	2N4037	
2N2657	2N3645*	2N271		2N2313	2N4158	2N414H	2N4275		2N3720		2N2256	2N4054	2N1548	2N4038	
2N2658	2N3678	2N271A		2N2314	2N4159	2N414I	2N4276		2N3721		2N2257	2N4055	2N1549	2N4039	
2N2697	2N3691	2N284		2N2315	2N4160	2N414J	2N4277		2N3722		2N2258	2N4056	2N1550	2N4040	
2N2698	2N3693	2N284A		2N2316	2N4161	2N414K	2N4278		2N3723		2N2259	2N4057	2N1551	2N4041	
2N2710*	2N3701	2N291		2N2317	2N4162	2N414L	2N4279		2N3724		2N2260	2N4058	2N1552	2N4042	
2N2728	2N3722	2N302		2N2318	2N4163	2N414M	2N4280		2N3725		2N2261	2N4059	2N1553	2N4043	
2N2788	2N3723	2N338		2N2319	2N4164	2N414N	2N4281		2N3726		2N2262	2N4060	2N1554	2N4044	
2N2791	2N3724	2N476		2N2320	2N4165	2N414O	2N4282		2N3727		2N2263	2N4061	2N1555	2N4045	
2N2805	2N3725	2N477		2N2321	2N4166	2N414P	2N4283		2N3728		2N2264	2N4062	2N1556	2N4046	
2N2806	2N3738	2N503		2N2322	2N4167	2N414Q	2N4284		2N3729		2N2265	2N4063	2N1557	2N4047	
2N2807	2N3739	2N540		2N2323	2N4168	2N414R	2N4285		2N3730		2N2266	2N4064	2N1558	2N4048	
2N2812	2N3747	2N540A		2N2324	2N4169	2N414S	2N4286		2N3731		2N2267	2N4065	2N1559	2N4049	
2N2814	2N3748	2N611		2N2325	2N4170	2N414T	2N4287		2N3732		2N2268	2N4066	2N1560	2N4050	
2N2831	2N3749	2N651		2N2326	2N4171	2N414U	2N4288		2N3733		2N2269	2N4067	2N1561	2N4051	
2N2847	2N3766	2N651A		2N2327	2N4172	2N414V	2N4289		2N3734		2N2270	2N4068	2N1562	2N4052	
2N2848	2N3767	2N762		2N2328	2N4173	2N414W	2N4290		2N3735		2N2271	2N4069	2N1563	2N4053	
2N2850	2N3879	2N843		2N2329	2N4174	2N414X	2N4291		2N3736		2N2272	2N4070	2N1564	2N4054	
2N2851	2N3910	2N865		2N2330	2N4175	2N414Y	2N4292		2N3737		2N2273	2N4071	2N1565	2N4055	
2N2853	2N3913	2N957		2N2331	2N4176	2N414Z	2N4293		2N3738		2N2274	2N4072	2N1566	2N4056	
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2N2860	2N3919	2N1387		2N2333	2N4178	2N414B	2N4295		2N3740		2N2276	2N4074	2N1568	2N4058	
2N2867	2N3945	2N1451		2N2334	2N4179	2N414C	2N4296		2N3741		2N2277	2N4075	2N1569	2N4059	
2N2868	2N3959	2N1749		2N2335	2N4180	2N414D	2N4297		2N3742		2N2278	2N4076	2N1570	2N4060	
2N2873	2N3960	2N2198		2N2336	2N4181	2N414E	2N4298		2N3743		2N2279	2N4077	2N1571	2N4061	
2N2878	2N3977	2N2434		2N2337	2N4182	2N414F	2N4299		2N3744		2N2280	2N4078	2N1572	2N4062	
2N2880	2N3982	2N2635		2N2338	2N4183	2N414G	2N4300		2N3745		2N2281	2N4079	2N1573	2N4063	
2N2894	2N3998	2N2676		2N2339	2N4184	2N414H	2N4301		2N3746		2N2282	2N4080	2N1574	2N4064	
2N2895	2N4030	2N2678		2N2340	2N4185	2N414I	2N4302		2N3747		2N2283	2N4081	2N1575	2N4065	
2N2898	2N4031	2N2933		2N2341	2N4186	2N414J	2N4303		2N3748		2N2284	2N4082	2N1576	2N4066	
2N2904	2N4036*	2N4000		2N2342	2N418										

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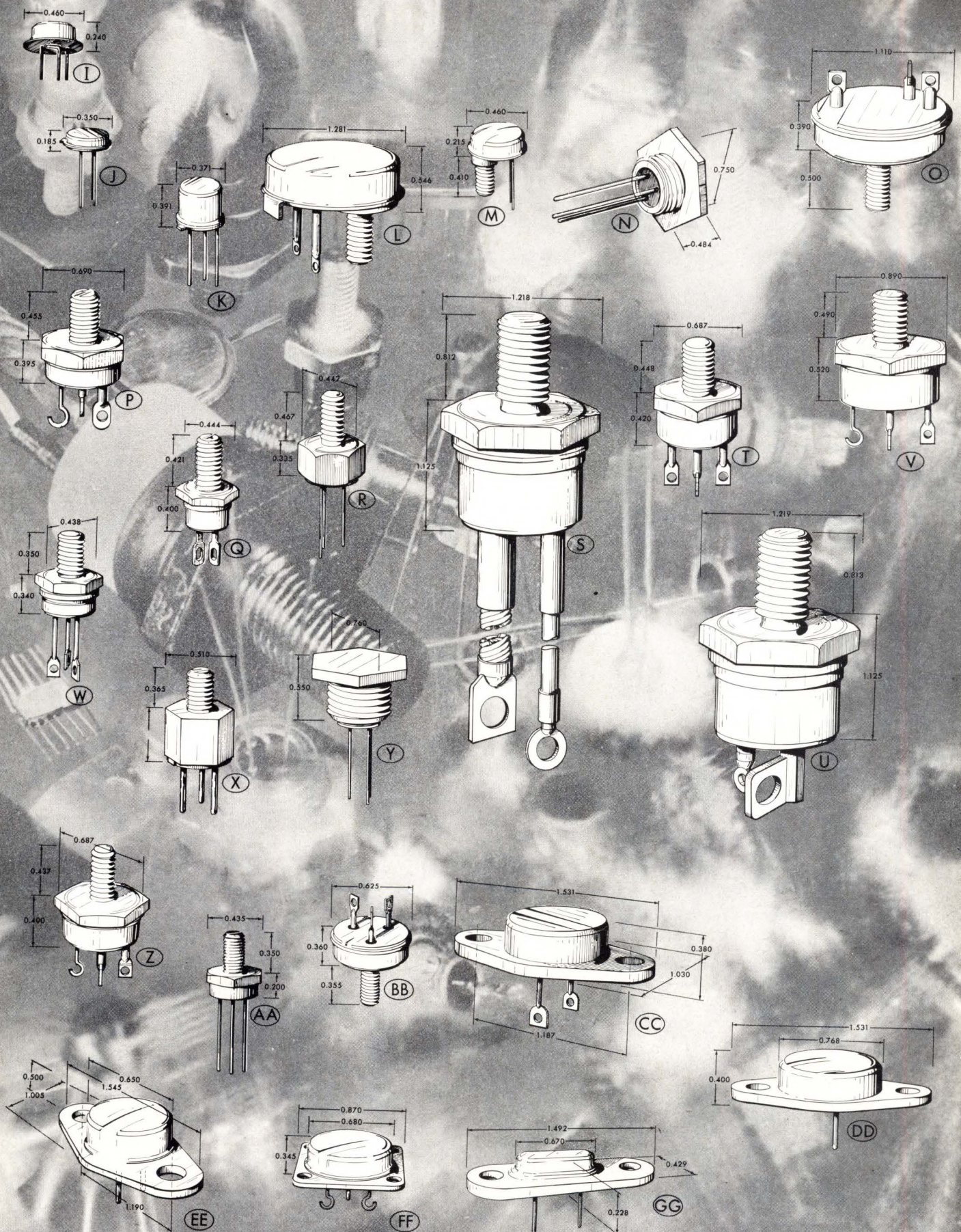
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TRANSISTOR CASE OUTLINES

DIMENSIONS SHOWN ARE MAXIMUM





TRANSISTOR MANUFACTURERS

EIA-type transistors are listed in numerical order. Each number is followed by those manufacturers currently supplying the device. Manufacturers' abbreviations can be found on pp. 22-27.

2N34 ETC SD	2N94 ETC SD	2N125 ETC SD	2N161A ETC SD	2N185 ETC SD	2N223 ETC Lns SD	2N251 Bnx ETC KSC SD TI	2N278 Dlc ETC Mot SD Sol	2N309 ETC SD	2N330A Crs High Sol Spg	2N342 ETC SD TI	2N364 ETC SD	2N389 Bnx ETC SD	2N408 ETC Lns NPC
2N34A ETC SD	2N94A ETC SD	2N126 ETC SD	2N162 ETC SD	2N186 ETC SD	2N224 ETC Lns SD	2N251A Bnx ETC KSC SD TI	2N279 ETC SD	2N310 ETC SD	2N331 ETC Mot SD	2N342A ETC SD Tns	2N365 ETC SD	2N389A Bnx ETC SD	2N409 ETC RCA SD
2N35 ETC SD	2N97 ETC SD	2N128 Lns Spg	2N162A ETC SD	2N186A ETC GE SD	2N225 ETC Lns SD	2N252 ETC SD	2N280 ETC SD	2N311 ETC SD	2N332 ETC GE SD	2N342B ETC SD	2N366 ETC SD	2N392 Dlc ETC KSC SD	2N410 ETC Lns RCA
2N36 ETC SD	2N98 ETC SD	2N130 ETC SD	2N163 ETC SD	2N187 ETC SD	2N226 ETC Lns SD	2N253 ETC SD	2N281 ETC SD	2N312 ETC SD	2N332A ETC SD TI	2N343 ETC SD	2N367 ETC SD	2N392 Dlc ETC KSC SD	2N411 ETC RCA SD
2N37 ETC SD	2N99 ETC SD	2N130A ETC SD	2N163A ETC SD	2N187A ETC GE SD	2N227 ETC Lns SD	2N254 ETC SD	2N282 ETC SD	2N315 ETC SD TI	2N333 ETC GE SD	2N343A Tns	2N368 ETC SD	2N393 Lns Spg	2N412 ETC Lns RCA
2N38 ETC SD	2N101 KSC	2N131 ETC SD	2N164 ETC SD	2N188 ETC SD	2N228 ETC SD	2N255 ETC SD	2N283 ETC SD	2N315A ETC GI SD	2N333 ETC GE SD	2N343B ETC SD Tns	2N369 ETC SD	2N394 ETC GE SD	2N413 ETC GE Mot
2N43 ETC SD	2N102 KSC SD	2N131A ETC SD	2N164A ETC SD	2N188A ETC GE SD	2N229 ETC SD	2N255A Bnx ETC KSC SD	2N284 ETC SD	2N316 ETC GI SD	2N334 ETC GE SD	2N344 Lns Spg	2N370 ETC SD	2N394A ETC SD	2N413A ETC SD
2N43A ETC GE SD	2N103 ETC SD	2N132 ETC SD	2N165 ETC SD	2N189 ETC GE SD	2N231 Lns Spg	2N255A Bnx Dlc ETC KSC SD	2N284A ETC SD	2N316A ETC GI SD	2N334 ETC GE SD	2N345 Lns Spg	2N371 ETC SD	2N395 ETC GE Lns	2N414 ETC GE Lns
2N44 ETC SD	2N104 ETC RCA SD	2N132A ETC SD	2N166 ETC SD	2N190 ETC GE SD	2N232 Lns	2N256 Bnx ETC KSC SD	2N285A ETC SD	2N317 ETC SD TI	2N334 ETC GE SD	2N346 Lns Spg	2N372 ETC SD	2N396 ETC GE Lns	2N415 ETC RCA SD
2N44A ETC GE SD	2N105 ETC SD	2N133 ETC SD	2N167 ETC SD	2N191 ETC GE SD	2N233 ETC SD	2N256 Bnx ETC KSC SD	2N285B Bnx ETC SD	2N317A ETC Lns SD	2N334A ETC GE SD	2N346 Lns Spg	2N375 Bnx ETC KSC Mot SD Sol	2N396 ETC GE Lns	2N415A ETC SD
2N45 ETC SD	2N106 ETC SD	2N133A ETC SD	2N167A ETC GE	2N192 ETC GE SD	2N233A ETC SD	2N257 Bnx ETC KSC Mot SD Sol	2N286 ETC SD	2N319 ETC GE Mot SD	2N335 ETC GE SD	2N347 Bnx ETC KSC Mot SD	2N376 Bnx ETC KSC Mot SD	2N397 ETC GE RCA	2N416 ETC SD
2N45A ETC SD	2N107 ETC SD	2N135 ETC SD	2N168 ETC SD	2N193 ETC SD	2N234A Bnx ETC KSC SD	2N257 Bnx ETC KSC Mot SD Sol	2N287 ETC SD	2N320 ETC GE Mot SD	2N335A ETC GE SD	2N347A Bnx ETC KSC Mot SD	2N377 ETC SD TI	2N398 ETC RCA TI	2N417 ETC SD TI
2N59 ETC SD	2N108 ETC SD	2N136 ETC SD	2N168A ETC SD	2N194 ETC SD	2N235A Bnx ETC KSC SD	2N257B ETC KSC SD	2N288 ETC SD	2N321 ETC GE Mot SD	2N336 ETC GE SD	2N348 Bnx ETC KSC Mot SD	2N378 ETC SD	2N398A ETC SD	2N418 ETC SD
2N59A ETC SD	2N109 ETC Lns RCA SD	2N137 ETC SD	2N169 ETC GE SD	2N194A ETC SD	2N235B Bnx ETC SD	2N257G ETC KSC SD	2N289 ETC SD	2N322 ETC GE Mot SD	2N336A ETC GE SD	2N349 Bnx ETC KSC Mot SD	2N379 ETC SD	2N399 ETC RCA	2N419 ETC SD
2N59B ETC SD	2N111 ETC SD	2N138 ETC SD	2N169A ETC GE SD	2N195 ETC SD	2N236A Bnx ETC KSC SD	2N257G ETC KSC SD	2N290 ETC SD	2N323 ETC GE Mot SD	2N337 ETC GE SD	2N350 ETC SD	2N380 ETC SD	2N399B ETC SD	2N420 ETC SD
2N59C ETC SD	2N111A ETC RCA SD	2N139 ETC SD	2N170 ETC SD	2N196 ETC Lns SD	2N236B Bnx ETC KSC SD	2N257W ETC KSC SD	2N291 ETC SD	2N324 ETC GE Mot SD	2N337A ETC GE SD	2N351 ETC SD	2N381 ETC SD	2N400 ETC SD	2N421 ETC SD
2N60 ETC SD	2N112 ETC SD	2N140 ETC RCA SD	2N172 ETC SD	2N197 ETC Lns SD	2N237 ETC SD	2N257G ETC KSC SD	2N292 ETC GE SD	2N325 ETC GE Mot SD	2N338 ETC GE SD	2N352 Lns	2N382 ETC SD	2N401 ETC SD	2N422 ETC SD
2N60A ETC SD	2N112A KSC	2N141 Dlc ETC Mot SD Sol	2N173 ETC SD	2N198 ETC Lns SD	2N238 ETC SD	2N257G ETC KSC SD	2N293 ETC SD	2N326 ETC GE Mot SD	2N339 ETC GE SD	2N353 Lns	2N383 ETC SD	2N402 ETC SD	2N423 ETC SD
2N60B ETC SD	2N113 KSC	2N143 Dlc ETC Mot RCA SD Sol	2N174 ETC SD	2N199 ETC SD	2N239 ETC SD	2N257G ETC KSC SD	2N294 ETC SD	2N327 ETC GE Mot SD	2N340 ETC GE SD	2N354 ETC SD	2N384 ETC SD	2N403 ETC SD	2N424 ETC SD
2N60C ETC SD	2N114 KSC SD	2N144 Dlc ETC Mot RCA SD Sol	2N175 ETC SD	2N200 ETC SD	2N240 Lns Spg	2N257G ETC KSC SD	2N295 ETC SD	2N328 ETC GE Mot SD	2N341 ETC GE SD	2N355 Lns	2N385 ETC SD	2N404 ETC SD	2N425 ETC SD
2N61 ETC SD	2N115 ETC SD	2N145 Dlc ETC Mot SD	2N176 ETC RCA SD	2N201 ETC SD	2N241 ETC SD	2N257G ETC KSC SD	2N296 ETC SD	2N329 ETC GE Mot SD	2N342 ETC GE SD	2N356 ETC SD	2N386 ETC SD	2N405 ETC SD	2N426 ETC SD
2N61A ETC SD	2N117 ETC SD TI	2N146 ETC SD	2N177 Bnx Dlc ETC KSC Mot RCA SD	2N202 ETC SD	2N242 ETC SD	2N257G ETC KSC SD	2N297 ETC SD	2N330 ETC GE Mot SD	2N343 ETC GE SD	2N357 ETC SD	2N387 ETC SD	2N406 ETC SD	2N427 ETC SD
2N61B ETC SD	2N118 ETC SD TI	2N147 ETC SD	2N178 Bnx Dlc ETC KSC Mot RCA SD	2N203 ETC SD	2N243 ETC SD	2N257G ETC KSC SD	2N298 ETC SD	2N331 ETC GE Mot SD	2N344 ETC GE SD	2N358 ETC SD	2N388 ETC SD	2N407 ETC SD	2N428 ETC SD
2N61C ETC SD	2N118A ETC SD TI	2N148 ETC SD	2N179 Bnx Dlc ETC KSC Mot RCA SD	2N204 ETC SD	2N244 ETC SD	2N257G ETC KSC SD	2N299 ETC SD	2N332 ETC GE Mot SD	2N345 ETC GE SD	2N359 ETC SD	2N389 ETC SD	2N408 ETC SD	2N429 ETC SD
2N63 ETC SD	2N119 ETC SD	2N149 ETC SD	2N180 ETC SD	2N205 ETC SD	2N245 ETC SD	2N257G ETC KSC SD	2N300 ETC SD	2N333 ETC GE Mot SD	2N346 ETC GE SD	2N360 ETC SD	2N390 ETC SD	2N409 ETC SD	2N430 ETC SD
2N64 ETC SD	2N120 ETC SD TI	2N150 ETC SD	2N181 ETC SD	2N206 ETC SD	2N246 ETC SD	2N257G ETC KSC SD	2N301 ETC SD	2N334 ETC GE Mot SD	2N347 ETC GE SD	2N361 ETC SD	2N391 ETC SD	2N410 ETC SD	2N431 ETC SD
2N65 ETC SD	2N121 ETC SD	2N151 ETC SD	2N182 ETC SD	2N207 ETC SD	2N247 ETC SD	2N257G ETC KSC SD	2N302 ETC SD	2N335 ETC GE Mot SD	2N348 ETC GE SD	2N362 ETC SD	2N392 ETC SD	2N411 ETC SD	2N432 ETC SD
2N66 KSC	2N122 ETC SD	2N152 ETC SD	2N183 ETC SD	2N208 ETC SD	2N248 ETC SD	2N257G ETC KSC SD	2N303 ETC SD	2N336 ETC GE Mot SD	2N349 ETC GE SD	2N363 ETC SD	2N393 ETC SD	2N412 ETC SD	2N433 ETC SD
2N77 ETC SD	2N123 ETC GE SD	2N153 ETC SD	2N184 ETC SD	2N209 ETC SD	2N249 ETC SD	2N257G ETC KSC SD	2N304 ETC SD	2N337 ETC GE Mot SD	2N350 ETC GE SD	2N364 ETC SD	2N394 ETC SD	2N413 ETC SD	2N434 ETC SD
2N78 ETC GE SD	2N124 ETC SD	2N154 ETC SD	2N185 ETC SD	2N210 ETC SD	2N250 ETC SD	2N257G ETC KSC SD	2N305 ETC SD	2N338 ETC GE Mot SD	2N351 ETC GE SD	2N365 ETC SD	2N395 ETC SD	2N414 ETC SD	2N435 ETC SD
2N78A ETC GE SD	2N125 ETC SD	2N155 ETC SD	2N186 ETC SD	2N211 ETC SD	2N251 ETC SD	2N257G ETC KSC SD	2N306 ETC SD	2N339 ETC GE Mot SD	2N352 ETC GE SD	2N366 ETC SD	2N396 ETC SD	2N415 ETC SD	2N436 ETC SD

(Continued)

Name your failure rate

this
G-E
sealed
relay
will give
it to you

But you have to let us establish:

- level of confidence
- operating conditions
- what constitutes a failure

By varying these conditions, we can give you any failure rate you want.

Doesn't make sense, does it? You're supposed to set the conditions. Not us.

That's why we don't establish failure rates till you give us application information.

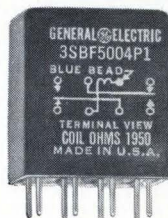
If we did, we'd hurt you. And us.

You, because you might buy the wrong relay.

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Transistor Manufacturers (Cont'd)

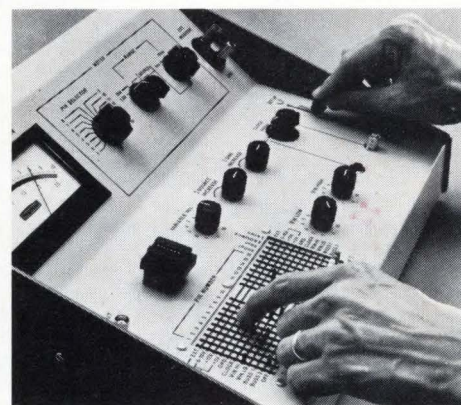
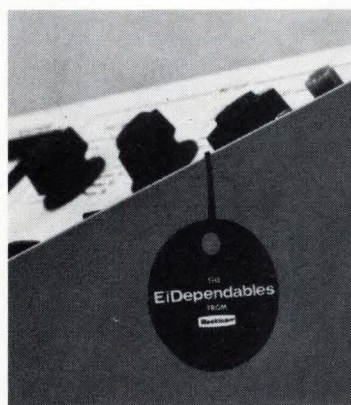
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ETC Lns SD	Bnx Dlc ETC	ETC SD	Bnx ETC SD	ETC Lns SD	ETC SD	GI	Bnx ETC KSC	Lns	Con ETC Fch	Fch High ITT	Con ETC Fch	Lns	Crs Lns Spg
TI	KSC SD Sol	2N485	TI	2N538	2N567	2N603	SD	2N677	GE GI ITT	Lns Mot Ray	GE GI ITT	2N776	2N859
2N428A	TI	ETC SD	2N513A	High KSC Sol	ETC SD	GI	2N639	Bnx ETC KSC	Mot NPC NS	TI Tns	Mot Ray SD	Lns	Crs Lns Spg
ETC SD	2N459	2N486	Bnx ETC SD	2N538A	2N568	2N604	ETC KSC SD	SD Sol	RCA Ray SD	2N722	TI Tns	2N777	2N860
2N438	ETC KSC Mot	ETC SD	TI	High KSC Sol	ETC SD	GI	2N639A	2N677A	TI Tns	ETC Fch High	2N744A	Lns	Crs Lns Spg
ETC SD TI	SD	2N495	2N513B	2N539	2N569	2N609	ETC KSC SD	Bnx ETC KSC	2N706B	ITT Lns Mot	GE Ray	2N778	2N861
2N438A	ETC GI SD	Lns Spg	Bnx ETC SD	High KSC Sol	ETC SD	ETC SD	2N639B	SD Sol	ETC Fch GI	Ray SD TI	2N752	Lns	Crs Lns Spg
ETC GI SD	ETC Mot SD	2N496	TI	2N539A	2N570	2N610	ETC KSC SD	2N677B	ITT Mot NS	Tns	ETC SD	2N779	2N862
2N439	2N460	Lns Spg	2N514	High KSC Sol	ETC SD	ETC SD	2N647	Bnx ETC KSC	Ray SD TI	2N722A	2N753	Crs Lns Spg	2N863
ETC SD TI	ETC Mot SD	2N497	Bnx ETC SD	2N540	2N571	2N611	ETC Lns RCA	SD Sol	Tns	Lns Tns	Con ETC Fch	Crs Lns Spg	2N864
2N439A	ETC GE Mot	ETC Fch GE	2N514A	High KSC Sol	ETC SD	ETC SD	SD	2N677C	ETC GI Ray	2N726	ETC Fch ITT	Crs Lns Spg	2N865
ETC GI SD	SD	Mot NS Ray	Bnx ETC SD	2N540A	2N572	2N612	2N649	Bnx ETC SD	SD	Mot TI	SD TI Tns	Crs Lns Spg	2N866
2N440	ETC SD TI	SD TI Tns	Sol TI	High KSC Sol	ETC SD	ETC SD	ETC Lns RCA	Sol	2N707	Mot TI	2N754	Crs Lns Spg	2N867
ETC SD TI	2N464	ETC Mot SD	2N514B	2N541	2N573	2N613	SD	2N678	ETC Fch Mot	2N728	ETC SD Tns	Crs Lns Spg	2N868
2N440A	ETC GI SD	ETC GE SD	Bnx ETC SD	ETC GE SD	ETC SD	ETC SD	2N650	Bnx ETC KSC	SD TRW	Mot Tns	2N755	Crs Lns Spg	2N869
ETC GI SD	2N465	Tns	Sol TI	TI Tns	2N574	2N614	ETC Mot SD	SD Sol	2N707A	ETC Mot SD	ETC SD Sol	Crs Lns Spg	2N870
2N441	ETC GI Mot	2N498	2N515	ETC GE SD	High Sol	ETC SD	TI	2N678A	Con ETC Fch	2N729	ETC SD Sol	Crs Lns Spg	2N871
Dlc ETC Mot	SD	ETC Fch GE	ETC SD	TI Tns	2N574A	2N615	2N650A	Bnx ETC KSC	GE GI ITT	Con ETC NS	2N756A	Crs Lns Spg	2N872
SD Sol	2N466	Mot NS Ray	ETC SD	2N542	High Sol	ETC SD	ETC Mot SD	SD Sol	Lns Mot NPC	Ray SD TI	ETC SD Sol	Crs Lns Spg	2N873
2N442	ETC GI Mot	SD TI Tns	2N516	ETC GE SD	2N575	2N616	TI	2N678B	NS Ray SD	TI Tns	2N757	Crs Lns Spg	2N874
Dlc ETC Mot	SD	2N498A	ETC SD	Tns	2N575A	2N617	ETC Mot SD	Bnx ETC KSC	TI Tns	Con ETC Mot	ETC SD Sol	Crs Lns Spg	2N875
SD Sol	2N467	ETC GE SD	ETC SD	2N543	High Sol	ETC SD	TI	SD Sol	NS Ray SD	TI Tns	2N758	Crs Lns Spg	2N876
2N443	ETC GI Mot	Tns	ETC SD	ETC GE SD	2N576	2N618	2N651A	Bnx ETC SD	GI Mot NS	TI Tns	2N759	Crs Lns Spg	2N877
Dlc ETC Mot	SD	2N499	2N518	TI Tns	ETC SD	Bnx ETC KSC	ETC Mot SD	Sol	TI	ETC SD Sol	2N760	Crs Lns Spg	2N878
SD Sol	2N470	ETC Lns Mot	ETC SD	2N543A	ETC SD	Mot SD	TI	2N679	ETC SD	2N734	ETC SD Sol	Crs Lns Spg	2N879
2N444	ETC SD TI	Spg	2N519	ETC GE SD	2N576A	2N627	2N652	ETC SD	2N709	ETC SD Sol	2N761	Crs Lns Spg	2N880
ETC SD	Tns	2N499A	ETC SD	Tns	ETC SD	Bnx ETC IDC	ETC Mot SD	ETC SD	ECom ETC Fch	TI Tns	2N762	Crs Lns Spg	2N881
2N444A	ETC GI SD	ETC Lns Mot	2N519A	2N545	ETC SD	KSC Mot SD	2N652A	2N696	GE Lns Mot	2N735	ETC Mot SD	Crs Lns Spg	2N882
ETC GI SD	Tns	Spg	ETC GI SD	SSP Tns	ETC SD	Sol	ETC Mot SD	Con ETC Fch	RCA Ray TI	ETC High Mot	Sol Tns	Crs Lns Spg	2N883
2N445	2N471A	ETC Lns Mot	ETC SD TI	2N546	ETC GI SD	Bnx ETC KSC	TI	GE GI ITT	Tns	NS SD Sol	2N758A	Crs Lns Spg	2N884
ETC SD	ETC SD Tns	Spg	2N520A	SSP Tns	ETC SD	Mot SD	2N653	Lns Mot NPC	2N709A	TRW TI Tns	ETC High Mot	Crs Lns Spg	2N885
2N445A	ETC GI SD	ETC Lns Mot	ETC GI SD	2N547	ETC GI SD	2N629	ETC Mot SD	NS Ray SD	ECom Fch GE	2N735A	SD Sol Tns	Crs Lns Spg	2N886
ETC SD	Tns	Spg	2N521	ETC SD SSP	Tns	2N630	2N654	TRW TI Tns	Mot Tns	ETC High NS	2N758B	Crs Lns Spg	2N887
2N446	2N472A	2N502	ETC SD	ETC Lns RCA	ETC Lns RCA	Mot SD Sol	ETC Mot SD	Con ETC Fch	2N710	SD Sol	High Sol	Crs Lns Spg	2N888
ETC SD	ETC SD Tns	ETC Lns Mot	2N521A	ETC Lns RCA	ETC Lns RCA	Bnx ETC Mot	2N655	GE GI ITT	Mot TI	ETC Mot NS	2N759	Crs Lns Spg	2N889
2N446A	ETC GI SD	Spg	ETC GI SD	ETC Lns RCA	ETC Lns RCA	SD	2N656	IDC Lns Mot	2N711	SD Sol TRW	ETC GE Mot	Crs Lns Spg	2N890
2N447	ETC SD TI	2N502A	ETC SD TI	ETC SD SSP	2N582	ETC Lns RCA	ETC Fch GE	NPC NS RCA	2N711A	TI Tns	NS SD Sol	Con ETC Fch	2N891
ETC SD	Tns	ETC Lns Mot	2N522A	Tns	2N583	ETC Lns SD	ETC Fch GE	Ray SD TRW	Mot TI	2N711B	ETC High NS	Ray SD Tns	2N892
2N447A	ETC GI SD	Spg	ETC GI SD	ETC Lns SD	2N584	ETC Lns SD	2N631	SD TRW TI	2N712	Mot TI	SD Sol	ETC High Mot	2N893
ETC SD	Tns	2N502B	2N523	ETC SD Tns	2N585	ETC Lns SD	2N632	Tns	2N715	2N736B	ETC High SD	ETC High SD	2N894
2N447B	ETC SD Tns	Spg	ETC SD	ETC Lns SD	2N586	ETC Lns SD	ETC SD	Con Fch GE	TI	Sol	2N738	ETC High SD	2N895
2N448	ETC SD Tns	2N503	2N523A	ETC SD SSP	2N587	ETC Lns SD	2N633	GI Lns Mot	2N716	ETC High SD	2N739	ETC High SD	2N896
ETC SD	2N475	ETC Lns Spg	ETC GI SD	Tns	2N588	ETC Lns SD	2N634	Ray TI Tns	TI	2N738	ETC High SD	ETC High SD	2N897
2N449	ETC SD TI	2N504	2N524	ETC SD Tns	2N589	ETC Lns SD	ETC SD TI	Con ETC Fch	2N717	ETC SD Sol	2N740A	ETC High SD	2N898
ETC SD	Tns	ETC Lns Spg	ETC GE Mot	ETC SD Tns	2N590	ETC Lns SD	2N635	GE GI Lns	Con ETC Fch	TI Tns	2N741	ETC High SD	2N899
2N450	2N475A	2N505	SD TI	ETC RCA SD	2N591	ETC Lns SD	2N636	Mot NS Ray	GE GI ITT	2N739	ETC High Mot	ETC High SD	2N900
ETC SD	ETC SD Tns	ETC SD	ETC GE Mot	ETC SD	2N592	ETC Lns SD	ETC SD TI	SD TRW TI	Mot Ray SD	ETC High Mot	SD Sol TI	ETC High SD	2N901
2N456	2N476	2N506	SD TI	ETC SD	2N593	ETC Lns SD	2N637	TI Tns	Ray SD TRW	TI Tns	SD Sol TI	ETC High SD	2N902
Bnx ETC KSC	ETC SD TI	ETC SD	SD TI	Bnx ETC KSC	2N594	ETC Lns SD	ETC SD TI	2N699	TRW TI Tns	2N718	SD Sol TI	ETC High SD	2N903
SD TI	Tns	2N507	ETC GE Mot	SD Sol	2N595	ETC Lns SD	2N638	Con ETC Fch	2N700	2N718A	SD Sol TI	ETC High SD	2N904
2N456A	ETC SD TI	ETC SD	SD TI	Bnx Dlc ETC	2N596	ETC Lns SD	2N639	GE GI Lns	Mot	Aml Con ETC	SD Sol TI	ETC High SD	2N905
Bnx Dlc ETC	ETC SD TI	ETC SD	SD TI	KSC Mot SD	2N597	ETC Lns SD	2N640	Mot NS Ray	2N701	Fch GE GI	ETC High SD	ETC High SD	2N906
KSC Mot SD	Tns	2N508	ETC GE Mot	TI	2N598	ETC Lns SD	2N641	TI Tns	ETC Mot NS	ITT Mot NS	Ray SD Sol	ETC High SD	2N907
2N456B	ETC GE SD	2N509	SD TI	ETC SD	2N599	ETC Lns SD	2N642	Con ETC Ray	SD TRW	Ray SD TRW	TI Tns	ETC High SD	2N908
Bnx Dlc ETC	TI Tns	2N510	ETC GE Mot	ETC SD	2N600	ETC Lns SD	2N643	SD TRW	2N702	TI Tns	ETC High SD	ETC High SD	2N909
KSC SD TI	2N479	2N511	SD TI	ETC SD	2N601	ETC Lns SD	2N644	ETC SD TI	Mot	Aml Con ETC	ETC High SD	ETC High SD	2N910
2N457	ETC GE SD	2N512	ETC SD	ETC SD	2N602	ETC Lns SD	2N645	ETC SD TI	ITT Mot RCA	Fch GE GI	ETC High SD	ETC High SD	2N911
Bnx ETC IDC	TI Tns	2N513	ETC SD	ETC SD	2N603	ETC Lns SD	2N646	ETC SD TI	Ray SD TRW	ITT Mot RCA	ETC High SD	ETC High SD	2N912
KSC SD TI	2N479A	2N514	ETC SD	ETC SD	2N604	ETC Lns SD	2N647	ETC SD TI	TI Tns	Ray SD TRW	ETC High SD	ETC High SD	2N913
2N457A	ETC GE SD	2N515	ETC SD	ETC SD	2N605	ETC Lns SD	2N648	ETC SD TI	TI Tns	TI Tns	ETC High SD	ETC High SD	2N914
Bnx Dlc ETC	Tns	2N516	ETC SD	ETC SD	2N606	ETC Lns SD	2N649	ETC SD TI	2N719	ETC Fch GE	ETC High SD	ETC High SD	2N915
IDC KSC Mot	2N480	2N517	ETC SD	ETC SD	2N607	ETC Lns SD	2N650	ETC SD TI	Ray SD TI	Ray SD TI	ETC High SD	ETC High SD	2N916
SD TI	ETC GE SD	2N518	ETC SD	ETC SD	2N608	ETC Lns SD	2N651	ETC SD TI	Tns	Tns	ETC High SD	ETC High SD	2N917
2N457B	TI Tns	2N519	ETC SD	ETC SD	2N609	ETC Lns SD	2N652	ETC SD TI	2N720	2N741A	ETC High SD	ETC High SD	2N918
Bnx Dlc ETC	2N480A	2N520	ETC SD	ETC SD	2N610	ETC Lns SD	2N653	ETC SD TI	ETC Fch GE	Mot	ETC High SD	ETC High SD	2N919
IDC KSC SD	ETC GE SD	2N521	ETC SD	ETC SD	2N611	ETC Lns SD	2N654	ETC SD TI	ETC Fch GE	Ray SD TI	ETC High SD	ETC High SD	2N920
TI	Tns	2N522	ETC SD	ETC SD	2N612	ETC Lns SD	2N655	ETC SD TI	TI Tns	2N721A	ETC High SD	ETC High SD	2N921
2N458	ETC SD	2N523	ETC SD	ETC SD	2N613	ETC Lns SD	2N656	ETC SD TI	2N722	ETC NS SD	ETC High SD	ETC High SD	2N922
Bnx ETC KSC	2N481	2N524	ETC SD	ETC SD	2N614	ETC Lns SD	2N657	ETC SD TI	2N723	ETC NS SD	ETC High SD	ETC High SD	2N923
SD TI	ETC SD	2N525	ETC SD	ETC SD	2N615	ETC Lns SD	2N658	ETC SD TI	2N724	ETC NS SD	ETC High SD	ETC High SD	2N924
2N458A	ETC SD	2N526	ETC SD	ETC SD	2N616	ETC Lns SD	2N659	ETC SD TI	2N725	ETC NS SD	ETC High SD	ETC High SD	2N925
Bnx Dlc ETC	2N482	2N527	ETC SD	ETC SD	2N617	ETC Lns SD	2N660	ETC SD TI	2N726	ETC NS SD	ETC High SD	ETC High SD	2N926
KSC Mot SD	ETC SD	2N528	ETC SD	ETC SD	2N618	ETC Lns SD	2N661	ETC SD TI	2N727	ETC NS SD	ETC High SD	ETC High SD	2N927
TI	ETC SD	2N529	ETC SD	ETC SD	2N619	ETC Lns SD	2N662	ETC SD TI	2N728	ETC NS SD	ETC High SD	ETC High SD	2N928
2N459	ETC SD	2N530	ETC SD	ETC SD	2N620	ETC Lns SD	2N663	ETC SD TI	2N729	ETC NS SD	ETC High SD	ETC High SD	2N929
ETC SD	2N483	2N531	ETC SD	ETC SD	2N621	ETC Lns SD	2N664	ETC SD TI	2N730	ETC NS SD	ETC High SD	ETC High SD	2N930
ETC SD	ETC SD	2N532	ETC SD	ETC SD	2N622	ETC Lns SD	2N665	ETC SD TI	2N731	ETC NS SD	ETC High SD	ETC High SD	2N931
2N460	ETC SD	2N533	ETC SD	ETC SD	2N623	ETC Lns SD	2N666	ETC SD TI	2N732	ETC NS SD	ETC High SD	ETC High SD	2N932
ETC SD	ETC SD	2N534	ETC SD	ETC SD	2N624	ETC Lns SD	2N667	ETC SD TI	2N733	ETC NS SD	ETC High SD	ETC High SD	2N933
ETC SD	ETC SD	2N535	ETC SD	ETC SD	2N625	ETC Lns SD	2N668	ETC SD TI	2N734	ETC NS SD	ETC High SD	ETC High SD	2N934
ETC SD	ETC SD	2N536	ETC SD	ETC SD	2N626	ETC Lns SD	2N669	ETC SD TI	2N735	ETC NS SD	ETC High SD	ETC High SD	2N935
ETC SD	ETC SD	2N537	ETC SD	ETC SD	2N627	ETC Lns SD	2N670	ETC SD TI	2N736	ETC NS SD	ETC High SD	ETC High SD	2N936
ETC SD	ETC SD	2N538	ETC SD	ETC SD	2N628	ETC Lns SD	2N671	ETC SD TI	2N737	ETC NS SD	ETC High SD	ETC High SD	2N937
ETC SD	ETC SD	2N539	ETC SD	ETC SD	2N629	ETC Lns SD	2N672	ETC SD TI	2N738	ETC NS SD	ETC High SD	ETC High SD	2N938
ETC SD	ETC SD	2N540	ETC SD	ETC SD	2N630	ETC Lns SD	2N673	ETC SD TI	2N739	ETC NS SD	ETC High SD	ETC High SD	2N939
ETC SD	ETC SD	2N541	ETC SD	ETC SD	2N631	ETC Lns SD	2N674	ETC SD TI	2N740	ETC NS SD	ETC High SD	ETC High SD	2N940
ETC SD	ETC SD	2N542	ETC SD	ETC SD	2N632	ETC Lns SD	2N675	ETC SD TI	2N741	ETC NS SD	ETC High SD	ETC High SD	2N941
ETC SD	ETC SD	2N543	ETC SD	ETC SD	2N633	ETC Lns SD	2N676	ETC SD TI	2N742	ETC NS SD	ETC High SD	ETC High SD	2N942
ETC SD	ETC SD	2N544	ETC SD	ETC SD	2N634	ETC Lns SD	2N677	ETC SD TI	2N743	ETC NS SD	ETC High SD	ETC High SD	2N943
ETC SD	ETC SD	2N545	ETC SD	ETC SD	2N635	ETC Lns SD	2N678	ETC SD TI	2N744	ETC NS SD	ETC High SD	ETC High SD	2N944
ETC SD	ETC SD	2N546	ETC SD	ETC SD	2N636	ETC Lns SD	2N679	ETC SD TI	2N745	ETC NS SD	ETC High SD	ETC High SD	

2N914	2N941	2N982	2N1016E
ETC Fch GE	Crs Hgh Lns	Spg	STC Wst
GI ITT IDC	Sol Spg	2N983	2N1017
Mot NPC RCA	2N942	Spg	ETC SD
SD TI Tns	Crs Hgh Lns	2N984	2N1018
2N915	Sol Spg	Spg	ETC SD
Aml ETC Fch	2N943	2N985	2N1021
GE GI Mot	Crs Hgh Lns	Mot TI	Bnx Dlc ETC
NS Ray SD	Sol Spg	2N987	KSC Mot SD
TI	2N944	Amp	TI
2N916	Crs Hgh Lns	2N988	2N1021A
ETC Fch GI	Sol Spg	Mot	Bnx Dlc ETC
Mot Ray SD	2N945	2N989	KSC SD TI
TRW TI	Crs Hgh Lns	Mot	2N1022
2N917	Sol	2N990	Bnx Dlc KSC
Aml ETC Fch	2N946	Amp	Mot Sol TI
GI ITT Mot	Crs Hgh Lns	2N993	2N1022A
NS RCA Ray	Sol	Amp	Bnx Dlc KSC
TI Tns	2N947	2N995	TI
2N918	Fch Lns Mot	2N996	2N1023
Aml Con ECom	2N948	Aml Fch GI	RCA
Fch GE GI	Tns	Mot TI Tns	2N1024
ITT Mot NPC	2N949	Fch GI Tns	Crs ETC Hgh
NS RCA Ray	Tns	2N997	Lns NS Sol
TI Tns	2N950	Fch GE Ray	Spg
2N920	Tns	TI	2N1025
ETC Mot SD	2N951	2N998	Crs ETC Hgh
2N921	Tns	Aml Fch GE	Lns NS SD
ETC Mot SD	2N956	Mot Ray	Sol Spg
2N922	Con ETC Fch	2N999	2N1026
ETC Mot SD	GE ITT Mot	Fch GE Mot	Crs ETC Hgh
2N923	Sol	Ray	Lns NS SD
2N924	NS Ray SD	2N1000	Sol Spg
Sol Spg	TRW TI Tns	2N957	2N1026A
2N925	ETC Fch Mot	ETC SD	Crs ETC
Sol Spg	Ray TRW	2N1007	2N1027
2N926	2N960	ETC SD	Crs ETC Hgh
Lns Sol Spg	Lns Mot TI	2N1008	Lns Sol Spg
2N927	Lns Mot TI	ETC Mot SD	2N1028
Lns Sol	2N962	2N1008A	Crs ETC Hgh
2N928	Lns Mot TI	ETC Mot SD	Lns Sol Spg
Lns Sol	2N963	2N1008B	2N1031
2N929	Lns Mot TI	ETC Mot SD	Bnx ETC SD
Aml Con Fch	2N964	2N1010	Sol
GE GI Hgh	Lns Mot TI	ETC Lns RCA	2N1031A
ITT Lns Mot	2N964A	SD	Bnx ETC SD
NS Ray Sol	Mot	2N1011	Sol
TI Tns UC	2N965	Bnx Dlc ETC	2N1031B
2N929A	Lns Mot TI	KSC Mot SD	Bnx ETC SD
Mot NS Ray	2N966	2N1012	Sol
Sol Tns UC	Lns Mot TI	ETC SD	2N1031C
2N930	2N967	2N1015	Bnx ETC SD
Aml Con ETC	Lns Mot TI	ETC SD STC	Sol
Fch GE GI	2N968	Wst	2N1032
Hgh ITT Lns	Mot TI	2N1015A	Bnx ETC SD
Mot NPC NS	2N969	ETC SD STC	Sol
Ray SD Sol	Mot TI	Wst	2N1032A
TI Tns UC	2N970	2N1015B	Bnx ETC SD
2N930A	Mot TI	ETC SD STC	Sol
Aml GI Hgh	2N971	Wst	2N1032B
Mot NS Ray	Mot TI	2N1015C	Bnx ETC SD
Sol Tns UC	2N972	ETC SD STC	Sol
2N935	Mot TI	Wst	2N1032C
Crs Hgh Lns	2N973	2N1015D	Bnx ETC SD
Sol	Mot TI	ETC SD STC	Sol
2N936	2N974	Wst	2N1034
Crs Hgh Lns	Mot TI	2N1015E	Crs ETC Hgh
Sol	2N975	STC Wst	Lns NS SD
2N937	Mot TI	2N1016	2N1035
Crs Hgh Lns	2N976	ETC SD STC	Crs ETC Hgh
Sol Spg	Spg	Wst	Lns NS SD
2N938	2N977	2N1016A	Sol Spg
Crs Hgh Lns	Lns Tns	ETC SD STC	2N1036
Sol Spg	2N978	Wst	Crs ETC Hgh
2N939	Fch Mot Tns	2N1016B	Lns NS SD
Crs Hgh Lns	2N979	ETC SD STC	Sol Spg
Sol Spg	Spg	Wst	2N1037
2N940	2N980	2N1016C	Crs ETC Hgh
Crs Hgh Lns	Spg	ETC SD STC	Lns SD Sol
Sol Spg	2N981	Wst	Spg
NS	NS	2N1016D	2N1038
		ETC SD STC	Bnx KSC TI
		Wst	

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2N1039 Bnx KSC TI	2N1067 ETC SD STC	2N1115 ETC SD	2N1137B Bnx ETC KSC SD	2N1156 ETC SD TI	2N1180 Lns RCA	2N1217 ETC SD	2N1251 ETC SD	2N1298 KSC	2N1332 KSC	2N1365 Bnx ETC KSC Mot SD	2N1413 ETC GE Mot SD TI	2N1471 ETC SD	2N1496 Mot
2N1040 Bnx KSC TI	2N1068 ETC SD STC	2N1116 ETC STC Sit	2N1138 Bnx ETC KSC SD	2N1157 Tns	2N1183 RCA	2N1218 KSC	2N1252 Bnx ETC Fch Mot Ray SD	2N1299 ETC SD	2N1333 KSC	2N1366 ETC SD	2N1414 ETC GE IDC Mot SD TI	2N1472 ETC Lns SD	2N1499 ETC Lns Mot
2N1041 Bnx KSC TI	2N1069 Bnx ETC SD STC	2N1117 ETC SD STC	2N1138A Bnx ETC KSC SD	2N1157A High Sol	2N1183A RCA	2N1219 Crs ETC High Lns NS SD	2N1252A Mot	2N1300 RCA	2N1334 KSC	2N1367 ETC SD	2N1415 ETC GE Mot SD TI	2N1473 ETC SD	2N1499A ETC Lns Mot
2N1042 Bnx KSC TI	2N1070 Bnx ETC SD STC	2N1117 SIT SSP Sol Tns	2N1138B Bnx ETC KSC SD	2N1158 ETC Lns	2N1183B RCA	2N1220 Crs ETC High Lns NS SD	2N1253 Mot Ray SD TI	2N1301 RCA	2N1335 TRW	2N1370 ETC SD TI	2N1416 ETC Lns SD	2N1474 Crs ETC High NS SD Sol	2N1499B ETC Mot Spg
2N1043 Bnx KSC TI	2N1073 Bnx Dlc ETC SD	2N1118 Crs Lns Sol Spg	2N1139 Bnx ETC KSC ETC	2N1159 KSC SD	2N1184 RCA	2N1221 Crs ETC High Lns NS SD	2N1253 Bnx ETC Fch Mot Ray SD	2N1302 Amp ETC NPC RCA SD TI	2N1336 TRW	2N1371 ETC SD TI	2N1417 ETC Lns SD	2N1475 NS SD Sol	2N1500 ETC Lns Spg
2N1044 Bnx KSC TI	2N1073A Bnx Dlc ETC Mot SD	2N1118A Crs Lns Sol Spg	2N1139 Bnx Dlc ETC KSC SD	2N1160 ETC Mot SD	2N1184B RCA	2N1222 Crs ETC High Lns NS SD	2N1253 High KSC Sol	2N1303 NPC RCA SD TI	2N1337 TRW	2N1372 ETC SD TI	2N1417 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1501 High KSC Sol
2N1045 Bnx KSC TI	2N1073B Bnx Dlc Mot ETC SD	2N1119 Crs Lns Sol Spg	2N1141 Mot TI	2N1160 Bnx Dlc ETC KSC SD Sol	2N1185 ETC Mot SD	2N1222 Crs ETC High Lns NS SD	2N1253 High KSC Sol	2N1304 Amp ETC NPC RCA SD TI	2N1338 TRW	2N1373 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1502 High KSC Sol
2N1046 ETC SD TI	2N1073B Bnx Dlc Mot ETC SD	2N1120 Bnx ETC Mot SD	2N1141A TI	2N1162 Bnx ETC KSC Mot SD Sol	2N1186 ETC Mot SD	2N1222 Crs ETC High Lns NS SD	2N1253 High KSC Sol	2N1305 Amp ETC GE NPC RCA SD	2N1339 TRW	2N1374 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1504 KSC
2N1046B ETC SD	2N1078 KSC	2N1120 Bnx ETC Mot SD	2N1142 TI	2N1162A Bnx ETC KSC Mot SD Sol	2N1187 ETC Mot SD	2N1223 Crs ETC High Lns NS SD	2N1253 High KSC Sol	2N1305 Amp ETC GE NPC RCA SD	2N1340 TRW	2N1375 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1505 NPC NS TRW
2N1047 ETC SD STC	2N1079 ETC SD Tns	2N1121 ETC SD	2N1143 Mot TI	2N1162A Bnx ETC KSC Mot SD Sol	2N1188 ETC Mot SD	2N1223 Crs ETC High Lns NS SD	2N1253 High KSC Sol	2N1306 Amp ETC GE NPC RCA SD	2N1341 TRW	2N1376 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1506 Bnx ECom NPC NS TRW
2N1047A ETC SD STC	2N1080 ETC SD Tns	2N1122 Lns Spg	2N1143A TI	2N1163 Bnx ETC KSC Mot SD Sol	2N1189 ETC Mot SD	2N1224 Amp RCA	2N1253 High KSC Sol	2N1307 Amp ETC GE NPC RCA SD	2N1342 TRW	2N1377 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1507 Con ETC GI Mot Ray SD
2N1047B ETC SD STC	2N1084 Tns	2N1122A Lns Spg	2N1144 ETC GE SD	2N1163A Bnx ETC KSC Mot SD Sol	2N1191 ETC Mot SD	2N1225 Amp RCA	2N1253 High KSC Sol	2N1307 Amp ETC GE NPC RCA SD	2N1343 ETC SD	2N1378 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1508 RCA STC Tns
2N1048 ETC SD STC	2N1086 ETC GE SD	2N1123 Lns	2N1146 Bnx ETC KSC Mot SD Sol	2N1192 ETC Mot SD	2N1191 ETC Mot SD	2N1226 Amp RCA	2N1253 High KSC Sol	2N1308 Amp ETC GE NPC RCA SD	2N1345 ETC SD	2N1379 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1509 Dlc ETC SD
2N1048A ETC SD STC	2N1087 ETC GE SD	2N1124 ETC Lns SD	2N1146 Bnx ETC KSC Mot SD Sol	2N1193 ETC Mot SD	2N1192 ETC Mot SD	2N1227 Bnx ETC KSC SD	2N1253 High KSC Sol	2N1308 Amp ETC GE NPC RCA SD	2N1346 ETC SD	2N1380 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1510 ETC SD
2N1048B ETC SD STC	2N1087 ETC GE SD	2N1125 ETC Lns SD	2N1146 Bnx ETC KSC Mot SD Sol	2N1193 ETC Mot SD	2N1192 ETC Mot SD	2N1227 Bnx ETC KSC SD	2N1253 High KSC Sol	2N1308 Amp ETC GE NPC RCA SD	2N1347 ETC SD	2N1381 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1511 ETC SD
2N1049 ETC SD STC	2N1090 ETC RCA SD	2N1126 ETC Lns SD	2N1147 Bnx ETC KSC Mot SD Sol	2N1194 ETC Mot SD	2N1193 ETC Mot SD	2N1228 Crs ETC High SD Sol	2N1253 High KSC Sol	2N1309 Amp ETC NPC RCA SD TI	2N1348 ETC SD	2N1382 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1512 ETC SD
2N1049A ETC SD STC	2N1091 ETC RCA SD	2N1127 ETC Lns SD	2N1147A Bnx ETC KSC Mot SD Sol	2N1195 ETC Mot SD	2N1194 ETC Mot SD	2N1229 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1310 GI	2N1349 ETC SD	2N1383 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1513 ETC SD
2N1049B ETC SD STC	2N1092 ETC SD	2N1128 ETC Lns SD	2N1147B Bnx ETC KSC Mot SD Sol	2N1196 ETC Mot SD	2N1195 ETC Mot SD	2N1230 Crs ETC High SD Sol	2N1253 High KSC Sol	2N1311 GI	2N1350 ETC SD	2N1384 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1514 ETC SD
2N1050 ETC SD STC	2N1093 ETC SD	2N1129 ETC Lns SD	2N1147C Bnx ETC KSC Mot SD Sol	2N1197 ETC Mot SD	2N1196 ETC Mot SD	2N1231 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1312 GI	2N1351 ETC SD	2N1385 ETC SD TI	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1515 ETC SD
2N1050A ETC SD STC	2N1095 ETC SD	2N1130 ETC Lns SD	2N1147D Bnx ETC KSC Mot SD Sol	2N1198 ETC Mot SD	2N1197 ETC Mot SD	2N1232 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1313 GI	2N1352 ETC SD	2N1386 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1516 ETC SD
2N1050B ETC SD STC	2N1096 ETC SD	2N1131 ETC Lns SD	2N1147E Bnx ETC KSC Mot SD Sol	2N1199 ETC Mot SD	2N1198 ETC Mot SD	2N1233 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1314 GI	2N1353 ETC SD	2N1387 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1517 ETC SD
2N1051 ETC SD STC	2N1097 ETC GE SD	2N1132 ETC Lns SD	2N1147F Bnx ETC KSC Mot SD Sol	2N1200 Lns	2N1199 ETC Mot SD	2N1234 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1315 GI	2N1354 ETC SD	2N1388 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1518 ETC SD
2N1052 Sol Tns	2N1098 ETC GE SD	2N1133 ETC Lns SD	2N1147G Bnx ETC KSC Mot SD Sol	2N1201 Lns	2N1200 Lns	2N1235 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1316 GI	2N1355 ETC SD	2N1389 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1519 ETC SD
2N1053 Tns	2N1099 ETC GE SD	2N1134 ETC Lns SD	2N1147H Bnx ETC KSC Mot SD Sol	2N1202 High KSC Sol	2N1201 Lns	2N1236 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1317 ETC SD	2N1356 ETC SD	2N1390 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1520 ETC SD
2N1054 ETC SD SSP	2N1100 Dlc ETC Mot SD Sol	2N1135 ETC Lns SD	2N1147I Bnx ETC KSC Mot SD Sol	2N1203 High KSC Sol	2N1202 High KSC Sol	2N1237 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1318 ETC SD	2N1357 ETC SD	2N1391 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1521 ETC SD
2N1055 SSP Tns	2N1101 Dlc ETC Mot SD Sol	2N1136 ETC Lns SD	2N1147J Bnx ETC KSC Mot SD Sol	2N1204 Lns Mot	2N1203 High KSC Sol	2N1238 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1319 TI	2N1358 ETC SD	2N1392 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1522 ETC SD
2N1056 ETC SD	2N1102 ETC SD	2N1137 ETC Lns SD	2N1147K Bnx ETC KSC Mot SD Sol	2N1205 ETC SD	2N1204 Lns Mot	2N1239 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1320 KSC	2N1359 ETC SD	2N1393 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1523 ETC SD
2N1057 ETC GE SD	2N1103 ETC SD	2N1138 ETC Lns SD	2N1147L Bnx ETC KSC Mot SD Sol	2N1206 ETC SD Tns	2N1205 ETC SD	2N1240 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1321 KSC	2N1360 ETC SD	2N1394 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1524 ETC SD
2N1058 ETC SD	2N1104 ETC SD	2N1139 ETC Lns SD	2N1147M Bnx ETC KSC Mot SD Sol	2N1207 ETC SD Tns	2N1206 ETC SD	2N1241 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1322 KSC	2N1361 ETC SD	2N1395 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1525 ETC SD
2N1059 ETC SD	2N1105 ETC SD	2N1140 ETC Lns SD	2N1147N Bnx ETC KSC Mot SD Sol	2N1208 ETC SD Tns	2N1207 ETC SD	2N1242 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1323 KSC	2N1362 ETC SD	2N1396 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1526 ETC SD
2N1060 ETC SD	2N1106 ETC SD	2N1141 ETC Lns SD	2N1147O Bnx ETC KSC Mot SD Sol	2N1209 ETC SD Tns	2N1208 ETC SD	2N1243 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1324 KSC	2N1363 ETC SD	2N1397 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1527 ETC SD
2N1061 ETC SD	2N1107 ETC SD	2N1142 ETC Lns SD	2N1147P Bnx ETC KSC Mot SD Sol	2N1210 ETC SD Tns	2N1209 ETC SD	2N1244 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1325 KSC	2N1364 ETC SD	2N1398 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1528 ETC SD
2N1062 ETC SD	2N1108 ETC SD	2N1143 ETC Lns SD	2N1147Q Bnx ETC KSC Mot SD Sol	2N1211 ETC SD Tns	2N1210 ETC SD	2N1245 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1326 KSC	2N1365 ETC SD	2N1399 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1529 ETC SD
2N1063 ETC SD	2N1109 ETC SD	2N1144 ETC Lns SD	2N1147R Bnx ETC KSC Mot SD Sol	2N1212 ETC SD Tns	2N1211 ETC SD	2N1246 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1327 KSC	2N1366 ETC SD	2N1400 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1530 ETC SD
2N1064 ETC SD	2N1110 ETC SD	2N1145 ETC Lns SD	2N1147S Bnx ETC KSC Mot SD Sol	2N1213 ETC SD Tns	2N1212 ETC SD	2N1247 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1328 KSC	2N1367 ETC SD	2N1401 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1531 ETC SD
2N1065 ETC SD	2N1111 ETC SD	2N1146 ETC Lns SD	2N1147T Bnx ETC KSC Mot SD Sol	2N1214 ETC SD Tns	2N1213 ETC SD	2N1248 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1329 KSC	2N1368 ETC SD	2N1402 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1532 ETC SD
2N1066 ETC SD	2N1112 ETC SD	2N1147 ETC Lns SD	2N1147U Bnx ETC KSC Mot SD Sol	2N1215 ETC SD Tns	2N1214 ETC SD	2N1249 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1330 KSC	2N1369 ETC SD	2N1403 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1533 ETC SD
2N1067 ETC SD	2N1113 ETC SD	2N1148 ETC Lns SD	2N1147V Bnx ETC KSC Mot SD Sol	2N1216 ETC SD Tns	2N1215 ETC SD	2N1250 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1331 KSC	2N1370 ETC SD	2N1404 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1534 ETC SD
2N1068 ETC SD	2N1114 ETC SD	2N1149 ETC Lns SD	2N1147W Bnx ETC KSC Mot SD Sol	2N1217 ETC SD Tns	2N1216 ETC SD	2N1251 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1332 KSC	2N1371 ETC SD	2N1405 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1535 ETC SD
2N1069 ETC SD	2N1115 ETC SD	2N1150 ETC Lns SD	2N1147X Bnx ETC KSC Mot SD Sol	2N1218 ETC SD Tns	2N1217 ETC SD	2N1252 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1333 KSC	2N1372 ETC SD	2N1406 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1536 ETC SD
2N1070 ETC SD	2N1116 ETC SD	2N1151 ETC Lns SD	2N1147Y Bnx ETC KSC Mot SD Sol	2N1219 ETC SD Tns	2N1218 ETC SD	2N1253 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1334 KSC	2N1373 ETC SD	2N1407 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1537 ETC SD
2N1071 ETC SD	2N1117 ETC SD	2N1152 ETC Lns SD	2N1147Z Bnx ETC KSC Mot SD Sol	2N1220 ETC SD Tns	2N1219 ETC SD	2N1254 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1335 KSC	2N1374 ETC SD	2N1408 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1538 ETC SD
2N1072 ETC SD	2N1118 ETC SD	2N1153 ETC Lns SD	2N1147A Bnx ETC KSC Mot SD Sol	2N1221 ETC SD Tns	2N1220 ETC SD	2N1255 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1336 KSC	2N1375 ETC SD	2N1409 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1539 ETC SD
2N1073 ETC SD	2N1119 ETC SD	2N1154 ETC Lns SD	2N1147B Bnx ETC KSC Mot SD Sol	2N1222 ETC SD Tns	2N1221 ETC SD	2N1256 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1337 KSC	2N1376 ETC SD	2N1410 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1540 ETC SD
2N1074 ETC SD	2N1120 ETC SD	2N1155 ETC Lns SD	2N1147C Bnx ETC KSC Mot SD Sol	2N1223 ETC SD Tns	2N1222 ETC SD	2N1257 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1338 KSC	2N1377 ETC SD	2N1411 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1541 ETC SD
2N1075 ETC SD	2N1121 ETC SD	2N1156 ETC Lns SD	2N1147D Bnx ETC KSC Mot SD Sol	2N1224 ETC SD Tns	2N1223 ETC SD	2N1258 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1339 KSC	2N1378 ETC SD	2N1412 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1542 ETC SD
2N1076 ETC SD	2N1122 ETC SD	2N1157 ETC Lns SD	2N1147E Bnx ETC KSC Mot SD Sol	2N1225 ETC SD Tns	2N1224 ETC SD	2N1259 Crs ETC High NS SD Sol	2N1253 High KSC Sol	2N1340 KSC	2N1379 ETC SD	2N1413 ETC SD	2N1418 ETC GE SD	2N1475 Crs ETC High NS SD Sol	2N1543 ETC SD

2N1532	2N1545	2N1557	2N1594	2N1647	2N1708	2N1748	2N1823	2N1904	2N1975	2N2004	2N2063	2N2084	2N2145
Bnx ETC KSC	Bnx Dlc ETC	Bnx Dlc ETC	ETC SD TI	ETC SD STC	Fch Mot	ETC Lns Spg	Wst	TRW	Bnx ETC Fch	Crs Sol Spg	ETC Mot SD	Amp	ETC KSC Mot
Mot SD	KSC Mot SD	KSC Mot SD	Tns	Tns	2N1709	2N1748A	2N1825	2N1905	GE NS SD	2N2005	2N2063A	2N2085	SD Sol
2N1532A	Sol	Sol	2N1605	2N1648	NPC TRW	ETC Spg	Wst	Lns RCA	TI Tns	Crs Sol	ETC SD	ETC SD	2N2145A
Bnx ETC KSC	2N1545A	2N1557A	ETC RCA SD	ETC SD STC	2N1710	2N1749	2N1826	2N1906	2N1980	2N2006	2N2064	2N2086	ETC Mot SD
Mot SD	Bnx KSC Mot	Bnx ETC KSC	TI	Tns	NPC TRW	ETC Lns Spg	Wst	RCA	ETC Mot SD	Crs Sol Spg	ETC Mot SD	ETC Lns SD	2N2146
2N1533	Sol	Mot SD Sol	2N1605A	2N1649	2N1711	2N1750	2N1830	2N1907	Sol	2N2007	2N2064A	2N2087	ETC KSC Mot
Bnx ETC KSC	2N1546	2N1558	ETC RCA SD	ETC SD STC	Aml Con ETC	Lns	Wst	TI	2N1981	Crs Sol Spg	ETC SD	ETC Lns SD	SD Sol
Mot SD	Bnx Dlc ETC	Bnx Dlc ETC	2N1606	2N1650	Fch GE GI	2N1751	2N1831	2N1908	ETC Mot SD	2N2008	2N2065	2N2088	2N2146A
2N1534	KSC Mot SD	KSC Mot SD	Lns	ETC SD STC	ITT Lns Mot	Bnx	Wst	IDC TI	Sol	Fch	ETC Mot SD	Lns	ETC Mot SD
Bnx Dlc ETC	Sol	Sol	2N1607	Tns	NS RCA Ray	SD TI Tns	2N1752	2N1917	2N1982	2N2015	2N2065A	2N2089	2N2147
KSC Mot SD	2N1546A	Bnx ETC KSC	Lns	2N1651	2N1711A	ETC Lns Spg	Wst	Crs High Lns	ETC Mot SD	RCA	ETC SD	Amp	ETC Lns RCA
2N1534A	Bnx KSC Mot	Mot SD Sol	2N1608	Bnx ETC SD	Ray	Lns	2N1753	Sol Spg	Sol	2N2016	2N2066	2N2092	ETC Lns RCA
Bnx ETC KSC	Sol	2N1559	Lns	2N1652	2N1714	2N1754	2N1833	2N1918	2N1983	RCA	ETC Mot SD	Amp	2N2148
Mot SD	2N1547	Bnx Dlc ETC	2N1613	Bnx ETC SD	2N1714	2N1754	2N1837	Crs High Lns	Con ETC GE	2N2017	2N2066A	2N2096	ETC Lns RCA
2N1535	Bnx Dlc ETC	KSC Mot SD	2N1613	Aml Con ETC	Bnx ETC SSP	ETC Spg	2N1837	Sol Spg	Lns Mot SD	GE NS Tns	ETC SD	MOT	SD
Bnx Dlc ETC	KSC Mot SD	Sol	2N1653	Fch GE GI	TI Tns	2N1755	2N1837A	2N1919	Tns	2N2018	2N2067	2N2097	2N2150
KSC Mot SD	Sol	Sol	ITT IDC Lns	2N1654	ETC SSP TI	KSC	Con ETC SD	Crs High Sol	2N1984	ETC SD Tns	KSC	Mot	GE Sol TI
2N1535A	2N1547A	Bnx ETC KSC	Mot RCA Ray	2N1654	Tns	2N1756	2N1838	Spg	Lns Mot SD	2N2019	2N2067B	2N2099	Tns
Bnx ETC KSC	Mot SD Sol	Mot SD Sol	Tns	2N1655	2N1716	KSC	2N1838	Crs High Sol	Tns	ETC SD Tns	KSC	Mot	2N2151
Mot SD	2N1548	2N1560	2N1613A	2N1655	Bnx ETC SSP	2N1757	2N1839	Spg	2N1985	2N2020	2N2067G	2N2100	GE Sol TI
2N1536	Bnx Dlc ETC	Bnx Dlc ETC	Ray	2N1655	Sol TI Tns	KSC	2N1839	ST TRW	ETC GE Lns	ETC SD Tns	KSC	Mot	Tns
Bnx Dlc ETC	KSC Mot SD	IDC KSC Mot	2N1614	2N1656	ETC SSP TI	2N1758	2N1839	ETC Mot SD	Mot SD Tns	2N2021	2N2067H	2N2101	2N2152
KSC Mot SD	Sol	SD Sol	ETC GE SD	2N1656	Tns	2N1759	ETC Mot SD	TRW	2N1986	ETC SD Tns	KSC	Bnx ETC SD	ETC Mot SD
2N1536A	2N1549	2N1560A	2N1615	2N1656	Crs ETC Lns	2N1759	2N1840	2N1922	Con ETC GI	2N2032	2N2067W	2N2102	2N2152A
Bnx ETC KSC	Bnx ETC KSC	Bnx ETC KSC	ETC SD Tns	2N1656	Mot SD Sol	2N1759	Con ETC Mot	Crs High Sol	ITT Lns SD	Bnx ETC SD	KSC	Con RCA Ray	ETC Mot SD
Mot SD	Mot SD Sol	Mot SD Sol	2N1616	2N1658	2N1718	2N1760	SD	2N1924	TRW Tns	STC Slt Tns	2N2068	TRW TI Tns	2N2153
2N1537	Bnx ETC KSC	2N1561	ETC GE STC	KSC	Bnx SSP TI	High IDC KSC	2N1853	ETC GE Mot	2N1987	2N2033	KSC	2N2102A	ETC Mot SD
Mot SD	Mot SD Sol	Mot	Tns	2N1659	Tns	2N1719	RCA	SD TI	Con ETC GI	STC Slt Tns	KSC	Con Ray	Sol
2N1537A	2N1549A	2N1562	2N1616A	2N1659	SSP TI Tns	2N1719	2N1854	2N1925	ITT Lns Mot	2N2034	2N2068G	2N2106	2N2153A
Bnx ETC KSC	Mot SD Sol	Mot	ETC STC Tns	2N1663	2N1720	2N1762	2N1854	ETC GE Mot	SD Tns	STC Slt Sol	KSC	GE Tns	ETC Mot SD
Mot SD	Bnx ETC KSC	2N1564	2N1617	Lns	Bnx SSP TI	KSC	2N1864	SD TI	Con ETC GI	Tns	2N2068H	2N2107	2N2154
2N1538	Mot SD Sol	ETC NS SD	ETC GE SD	2N1672	Tns	2N1768	2N1864	ETC Lns Spg	Lns Mot SD	2N2035	2N2075	ETC GE Tns	ETC Mot SD
Bnx ETC KSC	2N1550A	2N1565	2N1617	ETC SD	2N1721	ETC SD STC	ETC Lns Spg	ETC GE Mot	Tns	ETC SD STC	2N2075	2N2108	Sol
Mot SD	Bnx ETC KSC	ETC NS SD	2N1617A	2N1672A	SSP TI Tns	Slt Tns	2N1865	NPC SD TI	2N1989	2N2036	SD Sol	GE Tns	2N2154A
2N1539	Mot SD Sol	TRW TI Tns	ETC SD STC	ETC SD	2N1722	2N1769	2N1866	2N1936	Con ETC GI	STC	2N2075A	2N2137	ETC Mot SD
Bnx Dlc ETC	2N1551	Bnx ETC KSC	Tns	2N1674	2N1722A	ETC SD STC	2N1867	ETC SD	Lns Mot SD	2N2038	ETC Mot SD	ETC Mot SD	2N2155
KSC Mot SD	Bnx ETC KSC	ETC Mot NS	2N1618	Tns	ETC SD STC	2N1769	2N1868	ETC Lns Spg	TRW Tns	ETC SD Tns	2N2076	Sol	Mot
Sol TI	Mot SD Sol	ETC Mot NS	ETC GE SD	2N1676	TI Tns	2N1772A	2N1868	ETC Lns Spg	2N1990	ETC SD Tns	Dlc ETC Mot	2N2137A	2N2155A
2N1539A	Bnx ETC KSC	Tns	Tns	Lns Spg	ETC SD STC	TI Tns	2N1868	ETC Lns Spg	Con ETC GI	2N2040	SD Sol	ETC Mot SD	ETC SD
Bnx ETC KSC	Mot SD Sol	2N1566A	2N1618A	2N1677	2N1723	Bnx ETC SD	2N1868	ETC Lns Spg	Lns Mot NPC	ETC SD Tns	2N2076A	ETC KSC Mot	2N2156
Mot SD Sol	Mot SD Sol	ETC SD TI	ETC SD STC	Lns Spg	TI Tns	ETC SD STC	2N1868	ETC SD STC	Ray SD TRW	2N2041	ETC SD Tns	SD Sol	ETC Mot SD
2N1540	2N1552	2N1566	2N1620	2N1681	Bnx ETC SD	2N1724	2N1868	ETC SD	Tns	2N2042	ETC SD Tns	2N2138A	2N2156A
Bnx Dlc ETC	Bnx ETC KSC	ETC NS SD	ETC SD STC	ETC SD	ETC SD	GE Mot SD	2N1868	ETC SD	2N1991	Fch GI Mot	Dlc ETC Mot	ETC Mot SD	ETC Mot SD
IDC KSC Mot	Mot SD Sol	ETC NS SD	2N1623	2N1683	2N1681	STC Sol TI	2N1868	ETC SD	Tns	Tns	SD Sol	2N2138A	2N2156A
SD Sol TI	2N1552A	TI Tns	2N1623	2N1683	ETC SD	ETC SD STC	2N1868	ETC SD	2N1992	Mot	2N2077A	2N2139	2N2157
2N1540A	Bnx ETC KSC	2N1573	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	GI	2N2042A	ETC Mot SD	ETC KSC Mot	ETC Mot SD
Bnx ETC KSC	Mot SD Sol	ETC Mot SD	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1992	Mot	2N2078	SD Sol	Sol
Mot SD Sol	2N1553	TI Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1992A	GI	2N2078	2N2139A	2N2157A
2N1541	Bnx Dlc ETC	2N1574	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1992B	GI	2N2078	2N2140	2N2158
Bnx Dlc ETC	KSC Mot SD	ETC Mot SD	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1993	GI	2N2078	2N2140A	Mot Sol
KSC Mot SD	Sol	TI Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1993	ETC SD TI	2N2078	2N2140A	2N2158A
Sol TI	2N1553A	2N1586	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1994	ETC SD TI	2N2078	2N2140A	Mot
2N1541A	Bnx ETC KSC	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1994	ETC SD TI	2N2078	2N2140A	2N2159
Bnx ETC KSC	Mot SD Sol	Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	Mot
Mot SD Sol	2N1554	2N1587	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2162
2N1542	Bnx Dlc ETC	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	Crs Lns Spg
Bnx Dlc ETC	KSC Mot SD	Sol	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2163
KSC Mot SD	Sol	2N1588	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	Crs Lns Spg
Sol TI	2N1554A	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2164
2N1542A	Bnx ETC KSC	2N1589	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	Crs Lns Spg
Bnx ETC KSC	Mot SD Sol	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2165
Mot SD Sol	2N1555	Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	Crs Lns Spg
2N1543	Bnx Dlc ETC	2N1590	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2166
Bnx Dlc ETC	KSC Mot SD	ETC TI Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	Crs Lns Spg
KSC Mot SD	Sol	2N1591	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2167
Sol TI	2N1555A	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2168
2N1544	Bnx ETC KSC	Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg
Bnx Dlc ETC	Mot SD Sol	2N1592	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2169
KSC Mot SD	2N1556	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg
Sol	Bnx Dlc ETC	Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	2N2170
2N1544A	KSC Mot SD	2N1593	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg
Bnx KSC Mot	Sol	ETC SD TI	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg
Sol	2N1556A	Tns	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg
	Bnx ETC KSC	Con	2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg
	Mot SD Sol		2N1623	2N1683	2N1681	ETC SD STC	2N1868	ETC SD	2N1995	ETC SD TI	2N2078	2N2140A	ETC Lns Spg

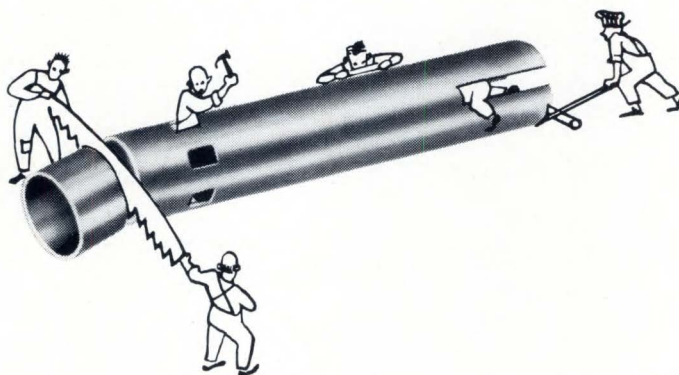
(Continued)

How can Uniform do so much with small tubing?



ACTUAL SIZE

Would you believe... Little Men?



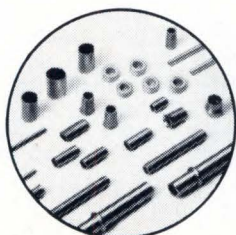
Uniform Tube's technology in Tubing makes it possible to perform seeming miracles in machine production. The part shown above, for example, presented a stiff challenge to our fabrication department but they soon designed semi-automatic machinery to produce it by the thousands within very strict tolerances.

The piece is 70/30 brass with an OD .186/.1866 X .1655/.1665 ID X .940 $\pm$.005 long. We are averaging between 4 and 12 microinch finish on the ID, at no premium in cost to the customer.

In spite of the "windows", the customer specifies ovality tolerance of .0005. We are holding between .0001 and .0004, throughout a run of many thousands of pieces.

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800



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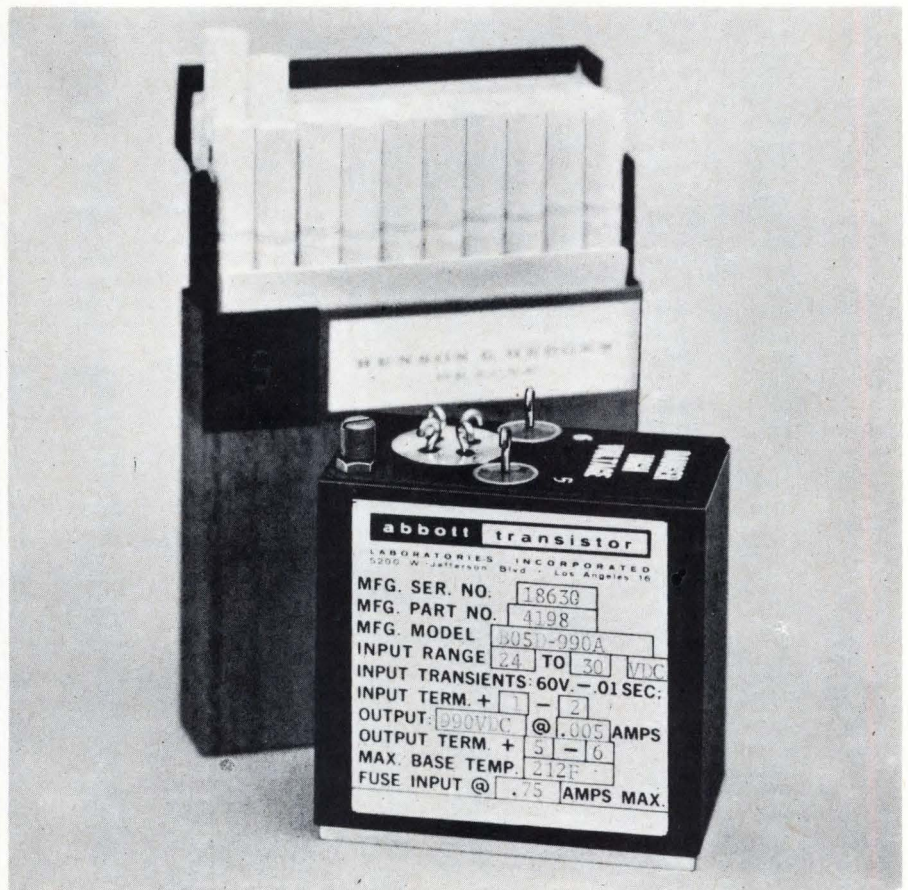
Transistor Manufacturers (Cont'd)

2N2171	2N2194B	2N2220	2N2243A
ETC Mot SD	Aml Con Fch	Aml Con Fch	Aml Con GE
2N2172	ITT Mot Ray	GE GI ITT	Mot NS Ray
ETC SD	Tns	Lns Mot NS	TI Tns
2N2175	2N2195	Ray Spg TRW	2N2256
Crs Lns Spg	Aml Con ETC	TI Tns	Mot
Sol	Fch GE ITT	2N2221	2N2257
2N2176	Mot NS Ray	Aml Con ETC	Mot
Crs Lns Spg	SD Tns	Fch GE GI	2N2258
Sol	2N2195A	ITT Lns Mot	Mot
2N2177	Aml Con ETC	NPC NS Ray	2N2259
Crs Lns Sol	Fch GE ITT	SD Spg TRW	Mot
Spg	Mot NS Ray	TI Tns	2N2266
2N2178	SD Tns	2N2221A	High KSC Sol
Crs Lns Sol	2N2195B	Aml Fch GE	2N2267
Spg	Aml Con ETC	GI ITT Lns	High KSC Sol
2N2180	Fch ITT Mot	Mot NS Ray	2N2268
Lns	Ray SD Tns	Spg TRW TI	High KSC Sol
2N2181	2N2196	2N2222	2N2269
Lns	GE Tns	Aml Con ETC	High KSC Sol
2N2182	2N2197	Fch GE GI	2N2270
Lns	GE	ITT Lns Mot	Con ETC NS
2N2183	2N2198	NPC NS Ray	RCA Ray SD
Lns	ETC SD	SD Spg TRW	TI Tns
2N2184	2N2199	2N2222A	2N2271
Lns	ETC Lns	Aml Con ETC	ETC SD
2N2185	2N2201	Fch GE GI	2N2272
Crs Lns Spg	GE Tns	ITT Lns Mot	ETC
2N2186	2N2202	NS Ray SD	2N2273
Crs Lns Spg	GE	Spg TRW TI	Mot
2N2187	2N2203	Tns	2N2274
Crs Lns Spg	GE	2N2222B	Crs Lns Spg
2N2188	2N2204	Aml	2N2275
TI	GE	2N2223	Crs Lns Spg
2N2189	2N2205	Aml Fch GE	2N2276
TI	ETC Fch Mot	Mot Ray TRW	Crs Lns Spg
2N2190	Ray SD	TI	2N2277
TI	2N2206	2N2223A	Crs Lns Spg
2N2191	Fch Mot	Aml Fch GE	2N2278
TI	2N2207	Mot Ray TRW	Crs Spg
2N2192	TI	TI	2N2279
Aml Con Fch	2N2210	2N2224	Crs Spg
GE ITT Mot	ETC Mot SD	Mot	2N2280
NS Ray TI	2N2212	2N2226	Crs Lns Spg
Tns	Bnx	Dlt ETC SD	2N2281
2N2192A	2N2217	Wst	Crs Lns Spg
Aml Con Fch	Aml Fch GE	2N2227	2N2282
GE ITT Mot	GI ITT Lns	Dlt SD Wst	Bnx Lns
NS Ray TI	Mot NS Ray	2N2228	2N2283
Tns	Spg TRW TI	Dlt SD Wst	Bnx
2N2192B	Tns	2N2229	2N2284
Aml Con Fch	2N2218	Dlt SD Wst	Bnx
ITT Mot Ray	Aml Con ETC	2N2230	2N2285
Tns	Fch GE GI	Dlt SD Wst	Bnx ETC SD
2N2193	ITT Lns Mot	2N2231	2N2286
Aml Con Fch	NPC NS Ray	Dlt SD Wst	Bnx ETC SD
GE ITT Mot	SD Spg TRW	2N2232	2N2287
NS Ray TI	TI Tns	Dlt SD Wst	Bnx
Tns	2N2218A	2N2233	2N2288
2N2193A	Aml Fch GE	Dlt SD Wst	Bnx ETC SD
Aml Con Fch	GI ITT Lns	2N2236	2N2289
GE ITT Mot	Mot NS Ray	Ray	Bnx ETC SD
NS Ray TI	Spg TRW TI	2N2237	2N2290
Tns	Tns	Ray	Bnx
2N2193B	2N2219	2N2239	2N2291
Aml Con Fch	Aml Con ETC	GE	Bnx ETC SD
ITT Mot Ray	Fch GE GI	2N2240	2N2292
Tns	ITT Lns Mot	Mot	Bnx ETC SD
2N2194	NPC NS Ray	2N2241	2N2293
Aml Con Fch	SD Spg TRW	Mot	Bnx
GE ITT Mot	TI Tns	2N2242	2N2294
NS Ray TI	2N2219A	Fch GI Mot	Bnx ETC SD
Tns	Aml Con Fch	2N2243	2N2295
2N2194A	GE GI ITT	Aml Con GE	Bnx ETC SD
Aml Con Fch	Lns Mot NS	Mot NS Ray	
GE ITT Mot	Ray Spg TRW	TI Tns	
NS Ray TI	TI Tns		
Tns			

A Smart Way to Beat Your Power Supply Size Problem

2N2296	2N2352	2N2386	2N2439
Bnx	Fch GE ITT	IDC TI	Con Tns
2N2297	Ray TRW	2N2387	2N2440
Aml Fch ITT	2N2352A	GE TI	Con Mot TRW
Ray Tns	Fch GE ITT	2N2388	2N2443
2N2303	Ray	GE TI	Con Fch Mot
ETC Fch GI	2N2353	2N2389	TRW
Mot Ray SD	Fch GE ITT	TI	2N2444
TI Tns	Ray	2N2390	Bnx
2N2304	2N2353A	TI	2N2445
ETC SD STC	Fch GE ITT	2N2393	Bnx
2N2305	Ray	TI	2N2451
Bnx ETC SD	2N2356	2N2394	Spg
STC	GE	TI	2N2453
2N2308	2N2356A	2N2395	Aml Fch GE
ETC SD STC	GE	TI	Mot NS Ray
2N2309	2N2357	2N2396	Sol Spg TI
Ray	Bnx	TI	Tns UC
2N2310	2N2358	2N2398	2N2453A
ETC Ray SD	Bnx	Lns Spg	Aml Fch GE
2N2311	2N2359	2N2399	Mot NS Sol
Ray	Bnx	Lns Spg	Tns UC
2N2312	2N2360	2N2400	2N2459
ETC Ray SD	Lns Spg	Spg	High Sol
TRW	2N2361	2N2401	2N2460
2N2313	Lns Spg	Spg	High Sol
Ray TRW	2N2362	2N2402	2N2461
2N2314	Lns Spg	IDC Spg	High Sol
ETC Ray SD	2N2364	2N2405	2N2462
TRW	GE Mot Ray	High Sol	2N2463
2N2315	2N2364A	2N2463	High Sol Tns
ETC Ray SD	GE Ray	2N2464	High Sol Tns
TRW	2N2368	Fch Lns Mot	2N2465
2N2316	Aml ETC Fch	Ray TI	High Sol Tns
Ray TRW	GE GI ITT	2N2411	2N2466
2N2317	Lns Mot Ray	TI	High Sol Tns
ETC Ray SD	SD TI Tns	2N2412	High Sol Tns
TRW	2N2369	TI	2N2467
2N2318	Aml Con ETC	2N2413	Bnx
ETC Mot SD	Fch GE GI	TI	2N2468
2N2319	ITT Lns Mot	2N2415	Bnx
Mot	NPC NS Ray	2N2416	2N2469
2N2320	SD TI Tns	Mot TI	Bnx
Mot	2N2369A	2N2416	2N2474
2N2330	Aml Con Fch	Mot TI	Crs
ETC Mot SD	ITT Lns Mot	2N2423	2N2475
2N2331	NS RCA Ray	Bnx Mot	ETC Fch RCA
ETC Mot SD	Tns	2N2424	Tns
2N2332	2N2370	Crs	2N2476
Crs Sol Spg	Crs Spg	2N2425	ETC Fch Mot
2N2333	2N2371	Crs	RCA Ray Spg
Crs Sol Spg	Crs Spg	2N2427	2N2477
2N2334	2N2372	Tns	ETC Fch Mot
Crs Sol Spg	Crs Spg	2N2428	RCA Ray Spg
2N2335	2N2373	Amp	2N2478
Crs Sol Spg	Crs Spg	2N2429	ETC Lns SD
2N2336	2N2374	Amp NPC	2N2479
Crs Sol Spg	ETC Lns SD	2N2430	ETC Lns NS
2N2337	2N2375	Amp NPC	Ray SD
Crs Sol Spg	ETC Lns SD	2N2431	2N2480
2N2338	2N2376	Amp NPC	Con Fch GE
RCA	ETC Lns SD	2N2432	Mot Ray TRW
2N2349	2N2377	Crs NS TI	2N2480A
ETC GE	Crs Spg	2N2433	Con Fch GE
2N2350	2N2378	Con	Mot Ray
GE ITT Ray	Crs Spg	2N2434	2N2481
TRW	2N2380	Con TRW	Fch ITT Mot
2N2350A	Lns Mot Ray	2N2435	NS Ray TI
GE ITT Ray	2N2380A	Con TRW Tns	2N2483
TRW	Lns Ray	2N2436	AMI Con Fch
2N2351	2N2381	Con TRW Tns	GE GI Hgh
Fch GE ITT	Mot	2N2437	ITT NS Ray
Mot Ray	2N2382	Con Tns	Sol TI Tns
2N2351A	Mot	2N2438	UC
Fch GE ITT	2N2383	Con Tns	
Ray TRW	ETC SD		

(Continued)



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2N2484	2N2538	2N2594	2N2640	2N2668	2N2727	2N2775	2N2816	2N2861	2N2894A	2N2913	2N2938	2N2975	2N3017
Aml Con Fch	ETC GE GI	Mot Tns	Aml Con Fch	KSC TI	GE Tns	Wst	ETC SD STC	Ray TI	Fch	Aml Amp Fch	ETC Mot RCA	Aml ECom FchBnx	
GE GI Hgh	Lns Mot Spg		GE Hgh Ind	2N2669	2N2728	2N2776	2N2817	2N2862	2N2895	GE Hgh Ind	2N2944	High Mot NS	2N3018
ITT NS Ray	TI	Hgh Sol	Mot NS Ray	KSC TI	Mot	Wst	ETC SD STC	Ray TI	Con Mot RCA	Mot Ray Sol	Crs Hgh Ray	Ray Sol UC	Bnx
Sol TI Tns	2N2539	2N2596	Sol TI Tns	2N2670	2N2729	2N2777	2N2818	2N2863	Ray Tns	TI Tns UC	Sol Spg TI	2N2976	2N3019
UC	ETC GE Lns	Hgh Sol	UC	KSC TI	Aml Fch ITT	Wst	ETC SD STC	TI Tns	2N2896	2N2914	2N2944A	Aml Fch Hgh	ETC Fch Mot
2N2487	Mot NS SD	2N2597	2N2641	2N2671	2N2730	2N2778	2N2819	2N2864	Con Mot RCA	Aml Amp Fch	Crs	Mot NS Ray	NS Ray SD
Spg	Spg TI	Hgh Sol	Aml Con Fch	Amp	Hgh Sol	Wst	STC	TI Tns	Ray Tns	GE Hgh Ind	2N2945	Sol UC	TRW Tns
2N2488	2N2540	2N2598	GE Hgh Ind	2N2672	2N2731	2N2781	2N2820	2N2865	2N2897	Mot NS Ray	Crs Hgh NS	2N2977	2N3020
Spg	ETC GE GI	Hgh Sol	Mot NS Ray	Amp	Hgh Sol	TRW	STC	Aml Ray TI	Con Mot RCA	So TI Tns	Ray Sol Spg	Aml Fch Hgh	Fch Mot NS
2N2489	Lns Mot SD	2N2599	Sol TI Tns	2N2691	2N2732	2N2782	2N2821	2N2866	Ray Tns	UC	TI	Mot NS Ray	Ray TRW Tns
Spg	Spg TI	Hgh Sol	UC	Bnx	Hgh Sol	TRW	STC	Tns	2N2898	2N2915	2N2945A	Sol UC	2N3021
2N2490	2N2541	2N2599A	2N2642	2N2691A	2N2733	2N2783	2N2822	2N2867	Con Mot Ray	Aml Amp Fch	Crs	2N2978	Mot Tns
Dlc ETC Mot	ETC SD	GE Hgh Ind	Aml Con Fch	GE Hgh Ind	2N2734	2N2784	2N2823	2N2868	Con Mot Ray	GE Hgh Ind	2N2946	Aml ECom Fch	2N3022
SD Sol	2N2551	Hgh Sol	Bnx	Bnx	Hgh Sol	TRW	STC	Tns	Con Mot Ray	Mot NS Ray	Crs Hgh NS	High Mot NS	Mot Tns
2N2491	Hgh Sol	2N2600	Mot NS Ray	2N2692	2N2735	2N2785	2N2824	2N2869	2N2900	Sol TI Tns	Sol Spg TI	Ray Sol UC	2N3023
Dlc ETC Mot	2N2552	Hgh Sol	Sol TI Tns	TI	Hgh Sol	ECom GE Tns	STC	Fch GE ITT	Con Mot Ray	UC	2N2946A	2N2979	Mot Tns
SD Sol	Bnx KSC TI	2N2600A	UC	2N2693	2N2736	2N2786	2N2825	2N2870	Con Mot Ray	Aml Fch Ray	Crs	Aml ECom Fch	2N3024
2N2492	2N2553	2N2601	2N2643	2N2694	2N2737	2N2787	2N2826	2N2871	2N2903	UC	2N2947	High Mot NS	2N3025
Dlc ETC Mot	Bnx KSC TI	GE Hgh Ind	Aml Con Fch	TI	Hgh Sol	ETC Lns SD	STC	Lns RCA SD	Aml Amp Fch	2N2916	Mot	Fch	2N3026
SD Sol	2N2554	Mot NS Ray	GE Hgh Ind	2N2695	2N2738	2N2788	2N2827	Sol	Mot NS Ray	Aml Amp Fch	2N2948	2N2981	Mot Tns
2N2493	Bnx KSC TI	Sol TI Tns	Sol TI Tns	TI Tns	High Sol	ETC Lns Mot	ETC SD STC	Bnx ETC Hgh	NS Ray Sol	GE Hgh Ind	Mot	Fch	2N3027
Dlc ETC Mot	2N2555	UC	UC	2N2696	2N2739	SD	SSP	KSC Lns RCA	Tns UC	Mot NS Ray	UC	2N2982	2N3028
SD	Bnx KSC TI	2N2602	2N2644	Fch Mot Ray	2N2740	2N2789	2N2829	SD Sol	2N2904	NS Ray Sol	2N2950	Fch	2N3029
2N2495	2N2556	2N2603	Aml Con Fch	TI Tns	ETC SD Wst	ETC Lns Mot	ETC SD STC	2N2873	2N2905	UC	2N2951	2N2983	2N3030
Amp	Bnx KSC TI	Aml High Sol	GE Hgh Ind.	2N2697	2N2741	SD	SSP	Tns	Aml Fch GE	GI ITT Lns	ETC Mot Spg	TI Tns	2N3031
2N2496	2N2557	NS Ray Sol	Mot NS Ray	Bnx Hgh Sol	2N2742	2N2790	2N2831	2N2874	GI ITT Lns	UC	2N2952	2N2984	2N3032
Amp	Bnx KSC TI	TI Tns	Sol TI Tns	UC	ETC SD Wst	Lns	Mot	TRW	Mot NS Ray	2N2917	ETC Mot SD	2N2985	2N3033
2N2501	2N2558	2N2605	2N2645	2N2698	2N2743	2N2791	2N2832	2N2875	Spg TI Tns	Aml Amp Fch	2N2953	2N2986	2N3034
GI Mot Tns	Bnx KSC TI	Aml Fch GI	Fch ITT Mot	ETC SD Wst	2N2744	ETC Lns Mot	Mot	ECom RCA	2N2904A	GE Hgh Ind	2N2954	2N2987	2N3035
2N2509	2N2559	Hgh NS Ray	Ray	2N2706	2N2745	SD	2N2833	2N2876	Aml Fch GE	Mot NS Ray	2N2955	2N2988	2N3036
Aml Fch GI	Bnx KSC TI	Sol TI Tns	2N2648	Amp	2N2746	ETC Lns Mot	Mot	2N2877	GI ITT Lns	Sol TI Tns	2N2956	2N2989	Mot Ray TRW
ITT NS Ray	2N2560	ETC SD	2N2649	2N2707	Wst	SD	2N2834	2N2878	Mot NS Ray	UC	2N2957	2N2990	TI
Tns UC	Bnx KSC TI	Hgh Sol	2N2650	Amp	2N2747	2N2792	Mot	2N2879	Spg TI Tns	2N2918	2N2958	2N2991	2N3037
2N2510	2N2561	Mot	2N2651	2N2708	Wst	SD	2N2835	2N2880	2N2905	Aml Amp Fch	2N2959	2N2992	TI
Aml Fch GI	Bnx KSC TI	2N2652	2N2652A	Aml Con GI	2N2748	2N2793	Amp	Bnx Hgh NS	Aml Con Fch	GE Hgh Ind	2N2960	2N2993	2N3038
ITT NS Ray	2N2562	Mot	Fch GE Mot	Mot RCA Ray	Wst	Spg	2N2836	STC SSP Sol	GE GI ITT	Mot NS Ray	2N2961	2N2994	TI
Tns UC	Bnx KSC TI	Bnx	Ray	2N2709	2N2749	Spg	2N2837	Tns	Lns Mot NS	Sol TI Tns	2N2962	2N2995	2N3039
2N2511	2N2563	2N2611	2N2653	Ray	2N2750	Fch ITT Mot	2N2838	2N2881	Ray Spg TI	UC	2N2963	2N2996	2N3040
Aml Fch GI	Bnx KSC TI	2N2612	2N2613	2N2709A	Wst	Ray	Fch GI ITT	2N2882	Tns	2N2919	2N2964	2N2997	2N3041
ITT NS Ray	2N2564	2N2613	NPC RCA	Mot SD	2N2751	Fch ITT Mot	2N2839	2N2883	2N2905A	Aml Amp Fch	2N2965	2N2998	2N3042
UC	Bnx KSC TI	2N2614	2N2652	Ray	2N2752	2N2800	2N2840	2N2884	Aml Con Fch	GE Hgh Ind	2N2966	2N2999	2N3043
2N2514	2N2565	2N2615	NPC RCA	2N2710	Wst	Ray	2N2841	2N2885	GE GI ITT	Mot NS Ray	2N2967	2N3000	Fch Mot TI
Sol	Bnx KSC TI	ITT	2N2652A	ITT Lns Mot	2N2753	Fch ITT Mot	2N2842	2N2886	Lns Mot NS	Sol TI Tns	2N2968	2N3001	2N3044
2N2515	2N2566	2N2616	2N2653A	Ray	2N2754	2N2801	2N2843	2N2887	Ray Spg TI	UC	2N2969	2N3002	Fch Mot TI
Hgh Sol	Bnx KSC TI	2N2617	Fch GE Mot	2N2710A	Wst	Ray	2N2844	2N2888	Bnx Hgh NS	2N2919A	2N2970	2N3003	2N3045
2N2516	2N2567	2N2618	2N2654	Ray	2N2755	2N2802	2N2845	2N2889	STC SSP Sol	Tns	2N2971	2N3004	2N3046
Hgh Sol	Bnx KSC TI	2N2619	2N2655	2N2711	2N2756	High Mot Ray	2N2846	2N2890	Spg	2N2906	2N2972	2N3005	2N3047
2N2517	2N2568	2N2620	2N2656	2N2712	2N2757	Sol TI UC	2N2847	2N2891	2N2907	Aml Fch GE	2N2973	2N3006	2N3048
Sol	KSC	Mot	2N2657	2N2713	Wst	2N2803	2N2848	2N2892	GI ITT Lns	2N2908	2N2974	2N3007	2N3049
2N2518	2N2569	2N2621	2N2658	2N2714	2N2758	High Mot Ray	2N2849	2N2893	Mot NS Ray	2N2909	2N2975	2N3008	2N3050
Hgh Sol	Amp KSC	ECom RCA	2N2659	2N2715	2N2759	Sol TI UC	2N2850	2N2894	Spg TI Tns	2N2910	2N2976	2N3009	2N3051
2N2519	2N2570	2N2622	2N2660	2N2716	2N2760	2N2804	2N2851	2N2895	2N2911	Aml Con Fch	2N2977	2N3010	2N3052
Hgh Sol	2N2571	2N2623	2N2661	2N2717	2N2761	Sol TI UC	2N2852	2N2896	2N2912	GE GI ITT	2N2978	2N3011	2N3053
2N2520	2N2572	2N2624	2N2662	2N2718	2N2762	2N2805	2N2853	2N2897	2N2913	Lns Mot NS	2N2979	2N3012	2N3054
Hgh Sol	2N2573	2N2625	2N2663	2N2719	2N2763	High Mot Ray	2N2854	2N2898	2N2914	Ray Spg TI	2N2980	2N3013	2N3055
2N2521	2N2574	2N2626	2N2664	2N2720	2N2764	Sol TI UC	2N2855	2N2899	2N2915	Tns	2N2981	2N3014	2N3056
Hgh Sol	2N2575	2N2627	2N2665	2N2721	2N2765	2N2806	2N2856	2N2900	2N2916	2N2907	2N2982	2N3015	2N3057
2N2522	2N2576	2N2628	2N2666	2N2722	2N2766	2N2807	2N2857	2N2901	2N2917	Aml Fch Fch	2N2983	2N3016	2N3058
Sol	2N2577	2N2629	2N2667	2N2723	2N2767	2N2808	2N2858	2N2902	2N2918	GE GI ITT	2N2984	2N3017	2N3059
2N2523	2N2578	2N2630	2N2668	2N2724	2N2768	2N2809	2N2859	2N2903	2N2919	Lns Mot NS	2N2985	2N3018	2N3060
Hgh Sol	2N2579	2N2631	2N2669	2N2725	2N2769	2N2810	2N2860	2N2904	2N2920	Ray Spg TI	2N2986	2N3019	2N3061
2N2524	2N2580	2N2632	2N2670	2N2726	2N2770	2N2811	2N2861	2N2905	2N2921	Tns	2N2987	2N3020	2N3062
Hgh Sol	2N2581	2N2633	2N2671	2N2727	2N2771	2N2812	2N2862	2N2906	2N2922	2N2906	2N2988	2N3021	2N3063
2N2525	2N2582	2N2634	2N2672	2N2728	2N2772	2N2813	2N2863	2N2907	2N2923	2N2907	2N2989	2N3022	2N3064
2N2526	2N2583	2N2635	2N2673	2N2729	2N2773	2N2814	2N2864	2N2908	2N2924	2N2908	2N2990	2N3023	2N3065
2N2527	2N2584	2N2636	2N2674	2N2730	2N2774	2N2815	2N2865	2N2909	2N2925	2N2909	2N2991	2N3024	2N3066
Mot	2N2585	2N2637	2N2675	2N2731	2N2775	2N2816	2N2866	2N2910	2N2926	2N2910	2N2992	2N3025	2N3067
2N2528	2N2586	2N2638	2N2676	2N2732	2N2776	2N2817	2N2867	2N2911	2N2927	2N2911	2N2993	2N3026	2N3068
Mot	2N2587	2N2639	2N2677	2N2733	2N2777	2N2818	2N2868	2N2912	2N2928	2N2912	2N2994	2N3027	2N3069
2N2529	2N2588	2N2640	2N2678	2N2734	2N2778	2N2819	2N2869	2N2913	2N2929	2N2913	2N2995	2N3028	2N3070
2N2530	2N2589	2N2641	2N2679	2N2735	2N2779	2N2820	2N2870	2N2914	2N2930	2N2914	2N2996	2N3029	2N3071
2N2531	2N2590	2N2642	2N2680	2N2736	2N2780	2N2821	2N2871	2N2915	2N2931	2N2915	2N2997	2N3030	2N3072
2N2532	2N2591	2N2643	2N2681	2N2737	2N2781	2N2822	2N2872	2N2916	2N2932	2N2916	2N2998	2N3031	2N3073
2N2533	2N2592	2N2644	2N2682	2N2738	2N2782	2N2823	2N2873	2N2917	2N2933	2N2917	2N2999	2N3032	2N3074
2N2534	2N2593	2N2645	2N2683	2N2739	2N2783	2N2824	2N2874	2N2918	2N2934	2N2918	2N3000	2N3033	2N3075
2N2535	2N2594	2N2646	2N2684	2N2740	2N2784	2N2825	2N2875	2N2919	2N2935	2N2919	2N3001	2N3034	2N3076
2N2536	2N2595	2N2647	2N2685	2N2741	2N2785	2N2826	2N2876	2N2920	2N2936	2N2920	2N3002	2N3035	2N3077
2N2537	2N2596	2N2648	2N2686	2N2742	2N2786	2N2827	2N2877	2N2921	2N2937	2N2921	2N3003	2N3036	2N3078
2N2538	2N2597	2N2649	2N2687	2N2743	2N2787	2N2828	2N2878	2N2922	2N2938	2N2922	2N3004	2N3037	2N3079
2N2539	2N2598	2N2650	2N2688	2N2744	2N2788	2N2829	2N2879	2N2923	2N2939	2N2923	2N3005	2N3038	2N3080
2N2540	2N2599	2N2651	2N2689	2N2745	2N2789	2N2830	2N2880	2N2924	2N2940	2N2924	2N3006	2N3039	2N3081
2N2541	2N2600	2N2652	2N2690	2N2746	2N2790	2N2831	2N2881	2N2925	2N2941	2N2925	2N3007	2N3040	2N3082
2N2542	2N2601	2N2653	2N2691	2N2747	2N2791	2N2832	2N2882	2N2926	2N2942	2N2926	2N3008	2N3041	2N3083
2N2543	2N2602	2N2654	2N2692	2N2748	2N2792	2N2833	2N2883	2N29					

2N3056A Fch ITT Ray Tns	2N3120 Fch ITT Mot Ray Tns	2N3156 KSC 2N3157 KSC	2N3194 STC	2N3233 ETC Sol Wst Mot	2N3286 Mot	2N3301 Fch ITT Mot NS Ray	2N3319 Spg	2N3342 High Lns Sol Spg	2N3374 ECom Mot	3N3399 Amp	2N3418 Bnx SSP TI Tns	2N3432 Wst	2N3467 Fch Mot Ray TI	2N3486 Fch Mot Ray TI
2N3057 Fch ITT Ray Tns	2N3121 Fch ITT Mot Ray	2N3158 KSC	2N3195 Mot STC	2N3234 Sol Wst Mot	2N3287 Mot	2N3302 Fch ITT Mot NS Ray	2N3320 Spg	2N3343 Lns Sol Spg Spg	2N3375 Amp ECom Fch Sol RCA	2N3401 Con GE Spg Tns	2N3419 Bnx SSP TI Tns	2N3433 Wst	2N3468 Fch Mot TI	2N3486A Fch Mot Ray TI
2N3057A Fch ITT Ray Tns	2N3122 Ray	2N3159 KSC	2N3196 Mot STC	2N3235 Bnx ETC Mot Mot	2N3288 Mot	2N3303 Fch ITT Mot TI	2N3321 Spg	2N3344 High Lns Sol Spg	2N3388 Ray	2N3402 Con GE Spg Tns	2N3420 Bnx SPP TI Tns	2N3439 Ind RCA	2N3469 High Sol Tns	2N3487 Mot Tns
2N3058 Crs Spg	2N3123 Mot	2N3160 KSC	2N3197 Mot STC	2N3236 Sol Wst Aml Mot	2N3289 Aml Mot	2N3304 Fch Mot TI	2N3322 Spg	2N3345 High Lns Sol Spg	2N3389 Mot	2N3403 Con GE Spg Tns	2N3421 Bnx SSP TI Tns	2N3440 RCA Tns	2N3470 Wst	2N3488 Mot Tns
2N3059 Crs Spg	2N3127 Mot	2N3161 KSC	2N3198 Crs STC	2N3237 Sol Wst Aml Mot	2N3290 Aml Mot	2N3307 Mot	2N3323 Mot	2N3346 High Lns Sol Spg	2N3390 Con	2N3404 Con GE Spg Tns	2N3422 RCA Sol Wst	2N3441 Fch ITT Mot	2N3471 Wst	2N3489 Mot Tns
2N3060 Crs NS Ray Spg	2N3128 NS	2N3163 KSC	2N3199 Crs STC	2N3238 Sol Wst Aml Mot	2N3291 Aml Mot	2N3308 Mot	2N3324 Mot	2N3347 High Lns Sol Spg	2N3391 Con GE Spg Tns	2N3405 Con GE IDC Spg	2N3423 Aml Fch Mot	2N3442 Ray TI	2N3472 Wst	2N3490 Mot Tns
2N3061 Crs NS Ray Spg	2N3129 NS	2N3164 STC	2N3200 Crs STC	2N3239 Sol Wst Aml Mot	2N3292 Aml Mot	2N3309 Mot NPC	2N3325 Mot	2N3348 Aml NS Ray TI UC	2N3392 Con GE Spg Tns	2N3408 Mot	2N3424 Fch ITT Mot	2N3443 Ray TI	2N3473 Wst	2N3491 Mot Tns
2N3062 Crs NS Ray	2N3130 NS	2N3165 STC	2N3201 Crs STC	2N3240 Wst	2N3293 Aml Mot	2N3309A Mot	2N3326 Fch ITT Mot Ray	2N3349 Aml NS Ray TI UC	2N3393 Con GE Spg Tns	2N3409 Fch Mot	2N3425 Fch Mot	2N3444 Mot Sol Tns	2N3474 Wst	2N3492 Mot Tns
2N3063 Crs NS Ray	2N3131 NS	2N3166 STC	2N3202 Crs STC Tns	2N3241A RCA	2N3294 Aml Mot	2N3311 ETC Mot SD	2N3333 TI	2N3350 Aml NS Ray TI UC	2N3394 Con GE Spg Tns	2N3410 Fch Mot	2N3426 Fch ITT	2N3445 Mot Sol Tns	2N3475 Wst	2N3493 Mot
2N3064 Crs	2N3133 GI ITT Lns	2N3167 STC	2N3203 Crs STC Tns	2N3242A RCA	2N3295 Mot	2N3312 ETC Mot SD	2N3334 TI	2N3351 Aml NS Ray TI UC	2N3395 Con GE Spg Tns	2N3411 Fch Mot	2N3427 Mot	2N3446 Mot Sol Tns	2N3476 Wst	2N3494 Mot TI
2N3065 Crs	2N3134 GI Lns Mot	2N3168 STC	2N3204 Crs STC Tns	2N3244 Mot Ray TI	2N3296 Mot	2N3313 ETC Mot SD	2N3335 TI	2N3352 Aml NS Ray TI UC	2N3396 Con GE Spg Tns	2N3412 Fch Mot	2N3428 Mot	2N3447 Mot Sol Tns	2N3477 Wst	2N3495 Mot TI
2N3072 Fch Mot Tns	2N3135 ETC GI ITT	2N3169 STC	2N3205 Crs STC	2N3245 Mot Ray TI	2N3297 Mot Tns	2N3314 ETC Mot SD	2N3336 TI	2N3353 Aml NS Ray TI UC	2N3397 Con GE Spg Tns	2N3413 Fch Mot	2N3429 Wst	2N3448 Mot Sol Tns	2N3478 RCA	2N3496 Mot TI
2N3073 Fch Mot Tns	2N3136 Lns Mot NS	2N3170 STC	2N3206 Crs STC	2N3246 Mot Tns	2N3298 Mot Tns	2N3315 ETC Mot SD	2N3337 Fch	2N3354 Aml NS Ray TI UC	2N3398 Con GE Spg Tns	2N3414 Fch Mot	2N3430 Wst	2N3449 Mot Sol Tns	2N3479 Fch Mot Ray TI	2N3497 Mot TI
2N3077 Tns	2N3137 ETC GI Lns	2N3171 STC	2N3207 Crs STC	2N3247 Mot NS Ray	2N3299 ETC Fch ITT	2N3316 ETC Mot SD	2N3338 Fch	2N3355 Aml NS Ray TI UC	2N3399 Con GE Spg Tns	2N3415 Fch Mot	2N3431 Wst	2N3450 Mot Sol Tns	2N3480 Fch Mot Ray TI	2N3498 Mot Tns
2N3078 Tns	2N3138 Lns Mot NS	2N3172 STC	2N3208 Crs STC Tns	2N3248 Mot	2N3300 Fch ITT Mot NS Ray	2N3317 Spg	2N3339 Fch	2N3356 High Sol	2N3400 TI	2N3416 Fch Mot	2N3432 Wst	2N3451 Mot Sol Tns	2N3481 Fch Mot Ray TI	2N3499 Mot Tns
2N3079 Dlc	2N3139 Ray SD Spg	2N3173 STC	2N3209 Fch ITT Mot Ray	2N3249 Mot	2N3301 Fch ITT Mot NS Ray	2N3318 Spg	2N3340 High Sol	2N3357 High Sol	2N3401 TI	2N3417 Fch Mot	2N3433 Wst	2N3452 Mot Sol Tns	2N3482 Fch Mot Ray TI	2N3500 Mot Tns
2N3080 Dlc	2N3140 SD Spg Tns	2N3174 STC	2N3210 Crs STC	2N3250 Fch ITT Mot Ray TI	2N3302 Fch ITT Mot NS Ray	2N3319 Spg	2N3341 High Sol	2N3358 High Sol	2N3402 TI	2N3418 Fch Mot	2N3434 Wst	2N3453 Mot Sol Tns	2N3483 Fch Mot Ray TI	2N3501 Mot Tns
2N3081 Ray	2N3141 Fch ITT Mot NPC	2N3175 STC	2N3211 Mot	2N3251 Mot Ray	2N3303 Fch ITT Mot NS Ray	2N3320 Spg	2N3342 High Sol	2N3359 High Sol	2N3403 TI	2N3419 Fch Mot	2N3435 Wst	2N3454 Mot Sol Tns	2N3484 Fch Mot Ray TI	2N3502 Mot Tns
2N3082 GE	2N3142 Fch ITT Mot Tns	2N3176 STC	2N3212 Dlc	2N3252 Fch ITT Mot Ray TI	2N3304 Fch ITT Mot NS Ray	2N3321 Spg	2N3343 High Sol	2N3360 High Sol	2N3404 TI	2N3420 Fch Mot	2N3436 Wst	2N3455 Mot Sol Tns	2N3485 Fch Mot Ray TI	2N3503 Mot Tns
2N3083 GE	2N3143 Fch ITT Mot Tns	2N3177 STC	2N3213 Dlc	2N3253 Fch ITT Mot Ray TI	2N3305 Fch ITT Mot NS Ray	2N3322 Spg	2N3344 High Sol	2N3361 High Sol	2N3405 TI	2N3421 Fch Mot	2N3437 Wst	2N3456 Mot Sol Tns	2N3486 Fch Mot Ray TI	2N3504 Mot Tns
2N3107 Fch ITT Ray	2N3144 Fch ITT Mot Tns	2N3178 STC	2N3214 Dlc	2N3254 Fch ITT Mot NPC Ray TI	2N3306 Fch ITT Mot NS Ray	2N3323 Spg	2N3345 High Sol	2N3362 High Sol	2N3406 TI	2N3422 Fch Mot	2N3438 Wst	2N3457 Mot Sol Tns	2N3487 Fch Mot Ray TI	2N3505 Mot Tns
2N3108 Fch ITT Mot Ray NS	2N3145 Fch ITT Mot Tns	2N3179 STC	2N3215 Dlc	2N3255 Fch ITT Mot NPC Ray TI	2N3307 Fch ITT Mot NS Ray	2N3324 Spg	2N3346 High Sol	2N3363 High Sol	2N3407 TI	2N3423 Fch Mot	2N3439 Wst	2N3458 Mot Sol Tns	2N3488 Fch Mot Ray TI	2N3506 Mot Tns
2N3109 Fch ITT NS Ray	2N3146 Fch ITT Mot Tns	2N3180 STC	2N3216 Dlc	2N3256 Fch ITT Mot NPC Ray TI	2N3308 Fch ITT Mot NS Ray	2N3325 Spg	2N3347 High Sol	2N3364 High Sol	2N3408 TI	2N3424 Fch Mot	2N3440 Wst	2N3459 Mot Sol Tns	2N3489 Fch Mot Ray TI	2N3507 Mot Tns
2N3110 Fch ITT Mot NS Ray	2N3147 Fch ITT Mot Tns	2N3181 STC	2N3217 Dlc	2N3257 Fch ITT Mot NPC Ray TI	2N3309 Fch ITT Mot NS Ray	2N3326 Spg	2N3348 High Sol	2N3365 High Sol	2N3409 TI	2N3425 Fch Mot	2N3441 Wst	2N3460 Mot Sol Tns	2N3490 Fch Mot Ray TI	2N3508 Mot Tns
2N3114 Fch Mot TRW TI	2N3148 Fch ITT Mot Tns	2N3182 STC	2N3218 Dlc	2N3258 Fch ITT Mot NPC Ray TI	2N3310 Fch ITT Mot NS Ray	2N3327 Spg	2N3349 High Sol	2N3366 High Sol	2N3410 TI	2N3426 Fch Mot	2N3442 Wst	2N3461 Mot Sol Tns	2N3491 Fch Mot Ray TI	2N3509 Mot Tns
2N3115 ETC Mot Ray Spg	2N3149 Fch ITT Mot Tns	2N3183 STC	2N3219 Dlc	2N3259 Fch ITT Mot NPC Ray TI	2N3311 Fch ITT Mot NS Ray	2N3328 Spg	2N3350 High Sol	2N3367 High Sol	2N3411 TI	2N3427 Fch Mot	2N3443 Wst	2N3462 Mot Sol Tns	2N3492 Fch Mot Ray TI	2N3510 Mot Tns
2N3116 ETC Mot Ray Spg Tns	2N3150 Fch ITT Mot Tns	2N3184 STC	2N3220 Dlc	2N3260 Fch ITT Mot NPC Ray TI	2N3312 Fch ITT Mot NS Ray	2N3329 Spg	2N3351 High Sol	2N3368 High Sol	2N3412 TI	2N3428 Fch Mot	2N3444 Wst	2N3463 Mot Sol Tns	2N3493 Fch Mot Ray TI	2N3511 Mot Tns
2N3117 Aml Fch Hgh ITT NS Ray	2N3151 Fch ITT Mot Tns	2N3185 STC	2N3221 Dlc	2N3261 Fch ITT Mot NPC Ray TI	2N3313 Fch ITT Mot NS Ray	2N3330 Spg	2N3352 High Sol	2N3369 High Sol	2N3413 TI	2N3429 Fch Mot	2N3445 Wst	2N3464 Mot Sol Tns	2N3494 Fch Mot Ray TI	2N3512 Mot Tns
2N3118 RCA	2N3152 Fch ITT Mot Tns	2N3186 STC	2N3222 Dlc	2N3262 Fch ITT Mot NPC Ray TI	2N3314 Fch ITT Mot NS Ray	2N3331 Spg	2N3353 High Sol	2N3370 High Sol	2N3414 TI	2N3430 Fch Mot	2N3446 Wst	2N3465 Mot Sol Tns	2N3495 Fch Mot Ray TI	2N3513 Mot Tns
2N3119 Mot RCA	2N3153 Fch ITT Mot Tns	2N3187 STC	2N3223 Dlc	2N3263 Fch ITT Mot NPC Ray TI	2N3315 Fch ITT Mot NS Ray	2N3332 Spg	2N3354 High Sol	2N3371 High Sol	2N3415 TI	2N3431 Fch Mot	2N3447 Wst	2N3466 Mot Sol Tns	2N3496 Fch Mot Ray TI	2N3514 Mot Tns
	2N3154-61 KSC	2N3188 STC	2N3224 Dlc	2N3264 Fch ITT Mot NPC Ray TI	2N3316 Fch ITT Mot NS Ray	2N3333 Spg	2N3355 High Sol	2N3372 High Sol	2N3416 TI	2N3432 Fch Mot	2N3448 Wst	2N3467 Mot Sol Tns	2N3497 Fch Mot Ray TI	2N3515 Mot Tns
	2N3155 KSC	2N3189 STC	2N3225 Dlc	2N3265 Fch ITT Mot NPC Ray TI	2N3317 Fch ITT Mot NS Ray	2N3334 Spg	2N3356 High Sol	2N3373 High Sol	2N3417 TI	2N3433 Fch Mot	2N3449 Wst	2N3468 Mot Sol Tns	2N3498 Fch Mot Ray TI	2N3516 Mot Tns
		2N3190 STC	2N3226 Dlc	2N3266 Fch ITT Mot NPC Ray TI	2N3318 Fch ITT Mot NS Ray	2N3335 Spg	2N3357 High Sol	2N3374 High Sol	2N3418 TI	2N3434 Fch Mot	2N3450 Wst	2N3469 Mot Sol Tns	2N3499 Fch Mot Ray TI	2N3517 Mot Tns
		2N3191 STC	2N3227 Dlc	2N3267 Fch ITT Mot NPC Ray TI	2N3319 Fch ITT Mot NS Ray	2N3336 Spg	2N3358 High Sol	2N3375 High Sol	2N3419 TI	2N3435 Fch Mot	2N3451 Wst	2N3470 Mot Sol Tns	2N3500 Fch Mot Ray TI	2N3518 Mot Tns
		2N3192 STC	2N3228 Dlc	2N3268 Fch ITT Mot NPC Ray TI	2N3320 Fch ITT Mot NS Ray	2N3337 Spg	2N3359 High Sol	2N3376 High Sol	2N3420 TI	2N3436 Fch Mot	2N3452 Wst	2N3471 Mot Sol Tns	2N3501 Fch Mot Ray TI	2N3519 Mot Tns
		2N3193 STC	2N3229 Dlc	2N3269 Fch ITT Mot NPC Ray TI	2N3321 Fch ITT Mot NS Ray	2N3338 Spg	2N3360 High Sol	2N3377 High Sol	2N3421 TI	2N3437 Fch Mot	2N3453 Wst	2N3472 Mot Sol Tns	2N3502 Fch Mot Ray TI	2N3520 Mot Tns

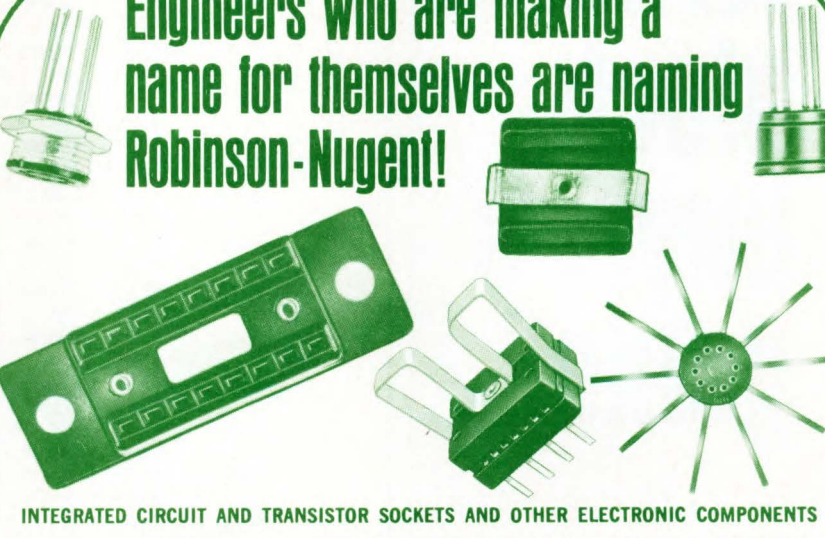
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Transistor Manufacturers (Cont'd)

2N3499	2N3547	2N3600	2N3638A	2N3693	2N3728	2N3775	2N3817
Mot TRW Tns	NS	RCA	Con Fch NS	Con Fch GI	Fch Ray	Crs STC	Mot
2N3500	2N3548	2N3605	Phl Ray	NS Phl	2N3729	2N3776	2N3818
Mot Tns	NS	Con GE	2N3639	2N3694	Fch Ray	Crs STC	Mot
2N3501	2N3549	2N3606	Fch Ray	Con Fch GI	2N3730	2N3777	2N3825
Mot Tns	NS	Con GE	2N3640	NS Phl	Lns Ray RCA	Crs STC	TI
2N3502	2N3550	2N3607	Fch Ray	2N3700	2N3731	2N3778	2N3826
Fch GE ITT	NS	Con GE	2N3641	Fch ITT Ray	Lns Ray RCA	Crs STC	TI
Mot NS Ray	2N3551	2N3611	Con Fch NS	TRW Tns	2N3732	2N3779	2N3827
TI Tns	TI	Bnx ETC Hgh	Phl	2N3701	Lns RCA	Crs STC	TI
2N3503	2N3552	Mot SD Sol	2N3642	Fch ITT Ray	2N3733	2N3780	2N3828
Fch GE ITT	TI		Con Fch NS	Tns	ECom ITT Mot	Crs STC	TI
Mot NS Ray	2N3553	Bnx ETC Hgh	Phl	2N3702	RCA	2N3781	2N3829
TI Tns	Amp ECom Fch	Mot SD Sol	2N3643	Con TI	2N3734	Crs STC	TI
2N3504	ITT Mot NS	2N3613	Con Fch NS	2N3703	Fch ITT Mot	2N3782	2N3830
Fch GE ITT	RCA	Bnx ETC Hgh	Phl	Con TI	2N3735	Crs STC	TI
Mot NS Ray	2N3554	Mot SD Sol	2N3644	2N3704	Mot	2N3783	2N3831
TI Tns	Mot Ray TI	2N3614	Fch NS Ray	Con TI	2N3736	Mot	TI
2N3505	Tns	Bnx ETC Hgh	2N3645	2N3705	Fch ITT Mot	2N3784	2N3832
Fch GE ITT	2N3563	Mot SD Sol	Fch NS Ray	Con TI	2N3737	Mot	Amp Mot TI
Mot NS Ray	Con Fch GI	2N3615	2N3647	2N3706	IDC Mot	2N3785	2N3838
TI Tns	NS Phl Ray	Bnx ETC Hgh	Fch ITT Mot	Con TI	2N3738	Mot	Mot TI
2N3506	2N3564	Mot SD Sol	2N3648	2N3707	Mot	2N3788	2N3839
Bnx Mot Tns	Con Fch GI	2N3616	Fch ITT Mot	Con TI	2N3739	Bnx	Mot RCA
2N3507	NS Ray	Bnx ETC Hgh	2N3659	2N3708	Mot	2N3789	2N3840
Bnx Mot Tns	2N3565	Mot SD Sol	Mot TRW Tns	Con TI	2N3740	Mot	Crs NS Spg
2N3508	Con Fch GI	2N3617	2N3660	2N3709	Mot	2N3790	2N3841
Mot	NS Phl Ray	Bnx ETC Hgh	Mot Tns	Con TI	2N3741	Mot	Crs NS
2N3509	2N3566	Most SD Sol	2N3661	2N3710	Mot	2N3791	2N3842
Mot	Con Fch NS	2N3618	Mot Tns	Con TI	2N3742	Mot	Crs NS
2N3510	Phl Ray	Bnx ETC Hgh	2N3662	2N3711	Mot	2N3792	2N3843
Fch Mot	2N3567	Mot SD Sol	Con GE	Con TI	2N3743	Mot	GE Spg
2N3511	Con Fch NS	2N3619	2N3663	2N3712	Mot	2N3793	2N3843A
Fch Mot	Ray	Bnx	Con GE	Mot TI	2N3744	NS	GE Spg
2N3512	2N3568	2N3620	2N3664	2N3713	Bnx Hgh Sol	2N3794	2N3844
ETC Mot RCA	Con Fch Ray	Bnx	Mot	ETC Mot Sol	2N3745	NS	GE Spg
2N3513	2N3569	2N3621	2N3665	TI	Bnx Hgh Sol	2N3798	2N3844A
GE	Con Fch NS	Bnx	Fch ITT Mot	2N3714	2N3746	Mot TI	GE Spg
2N3514	Ray	2N3622	NS Tns	ETC Mot Sol	2N3747	Mot TI	GE Spg
GE	2N3570	Bnx	2N3666	TI	2N3748	Mot TI	GE Spg
2N3515	KMC TI	2N3623	Fch ITT Mot	2N3715	Bnx Hgh Sol	2N3800	2N3845A
Fch GE Mot	2N3571	Bnx	NS Tns	ETC Mot Sol	2N3749	Aml Mot	Spg
2N3516	KMC Mot TI	2N3624	2N3671	TI	2N3750	2N3801	2N3846
GE	2N3572	Bnx	Fch ITT Mot	2N3716	2N3749	Aml Mot	TI
2N3517	KMC TI	2N3625	Ray	ETC Mot Sol	Bnx Hgh Sol	2N3802	2N3847
GE	2N3576	Bnx	2N3672	TI	2N3750	Aml Mot	TI
2N3518	Mot Ray TI	2N3626	Fch ITT Mot	2N3717	Bnx Hgh Sol	2N3803	2N3850
Fch GE Mot	2N3579	Bnx	Ray	Mot	2N3751	Aml Mot	SSP
2N3519	Hgh Sol	2N3627	2N3673	2N3718	Bnx Hgh Sol	2N3804	2N3851
GE	2N3580	Bnx	Fch Mot Ray	Mot	2N3752	Aml Mot	SSP
2N3520	Hgh Sol	2N3628	2N3677	2N3719	Bnx Hgh Sol	2N3805	2N3852
GE	2N3581	Bnx	Crs	Mot	2N3762	Aml Mot	Bnx SSP
2N3521	Hgh Sol	2N3629	2N3678	2N3720	Mot	2N3806	2N3853
GE	2N3582	Bnx	ITT TRW	Mot	2N3763	Aml Mot TI	SSP
2N3522	Hgh Sol	2N3630	2N3680	2N3721	Mot	2N3807	2N3854
GE	2N3583	Bnx	Aml Fch TI	GE Spg	2N3764	Aml Mot TI	GE Spg
2N3523	RCA Tns	2N3632	UC	2N3722	Mot	2N3808	2N3854A
GE	2N3584	Amp ECom ITT	2N3683	Fch GE Ray	2N3765	Aml Mot TI	GE Spg
2N3524	RCA Tns	Mot NS RCA	KMC	2N3723	Mot	2N3809	2N3855
GE	2N3585	2N3633	2N3688	Fch GE	2N3766	Aml Mot TI	GE
2N3526	RCA Tns	ECom Tns	Fch GI IDC	2N3724	Mot Sol	2N3810	2N855A
Fch	2N3587	2N3634	2N3689	Fch ITT Mot	2N3767	Aml Mot TI	GE Spg
2N3527	Fch	Mot	Fch GI	TI	Mot Sol	2N3811	2N3856
Crs	2N3588	2N3635	2N3690	2N3725	2N3771	Aml Mot TI	GE Spg
2N3544	Amp	Mot	Fch GI	Fch ITT Mot	Bnx ETC Hgh	2N3812	2N3856A
Mot	2N3597	2N3636	2N3691	TI	RCA Sol TI	Mot	GE Spg
2N3545	Hgh Sol Tns	Mot	Con Fch GI	2N3726	Wst	2N3813	2N3857
Ray	2N3598	2N3637	NS Phl	Fch Mot NS	2N3772	Mot	NS
2N3546	Hgh Sol Tns	Mot	2N3692	Ray	Bnx Hgh RCA	2N3814	2N3858
Mot Ray	2N3599	2N3638	Con Fch GI	2N3727	Sol TI Wst	2N3815	2N3858A
	Hgh Sol Tns	Con Fch GI	NS Phl	Fch Mot NS	2N3773	Mot	GE Spg
		NS Phl Ray		Ray	Hgh Sol Wst	2N3816	2N3859
					2N3774	Mot	GE Spg
					Crs STC	2N3816	2N3859
						Mot	GE Spg

2N3859A	2N3930	2N4000	2N4037	2N4078	2N4208	2N4257	2N4308
GE Spg	Fch	Sol TI	RCA	Amp	Fch Mot	Fch	TRW
2N3860	2N3931	2N4001	2N4040	2N4079	2N4209	2N4258	2N4309
GE Spg	Fch	Sol TI	TRW	Amp	Fch Mot	Fch	TRW
2N3862	2N3932	2N4002	2N4041	2N4080	2N4210	2N4259	2N4310
Mot Tns	RCA	TI	TRW	Ray	Tns	RCA	TRW
2N3866	2N3933	2N4003	2N4042	2N4099	2N4211	2N4260	2N4311
ECom IDC ITT	RCA	TI	UC	UC	Tns	Mot	TRW
Mot NS RCA	2N3941	2N4004	2N4043	2N4100	2N4225	2N4261	2N4312
TI	UC	TI	UC	UC	Bnx Mot	Mot	TRW
2N3877	2N3942	2N4005	2N4044	2N4104	2N4226	2N4264	2N4313
GE Spg	UC	TI	Ind UC	GI TI	Bnx Mot	Mot	Fch
2N3877A	2N3943	2N4006	2N4045	2N4106	2N4227	2N4265	2N4314
GE Spg	UC	Crs NS	Ind UC	Amp	GI NS	Mot	RCA
2N3878	2N3944	2N4007	2N4046	2N4107	2N4228	2N4271	2N4315
RCA Sol	UC	Crs NS	Fch ITT Mot	Amp	GI NS	Mot	Amp
2N3879	2N3945	2N4008	Ray	2N4111	2N4231	2N4274	2N4346
RCA Sol	Mot NS Tns	Crs NS	2N4047	Fch	Mot	Fch NS Ray	RCA
2N3880	2N3946	2N4009	Fch ITT Mot	2N4112	2N4232	2N4275	2N4347
KMC	Mot	Crs NS	Ray	Fch	Mot	Fch NS Ray	RCA Sol
2N3881	2N3947	2N4010	2N4048	2N4113	2N4233	2N4276	2N4348
Mot	Mot	Crs	Mot Sol	Fch	Mot	Mot	RCA Sol
2N3883	2N3948	2N4011	2N4049	2N4114	2N4234	2N4277	2N4354
Mot	Mot	Crs	Mot Sol	Fch	Mot	Mot	Fch
2N3900	2N3950	2N4012	2N4050	2N4115	2N4235	2N4278	2N4355
Con GE Spg	Mot	ECom ITT Mot	Mot Sol	Fch	Mot	Mot	Fch
2N3900A	2N3953	RCA	2N4051	2N4116	2N4236	2N4279	2N4356
Con GE Spg	KMC	2N4013	Mot Sol	Fch	Mot	Mot	Fch
2N3901	2N3959	Fch ITT Mot	2N4052	2N4121	2N4237	2N4280	2N4357
Con	Mot	2N4014	Mot Sol	Con Fch	Bnx Fch Mot	Mot	Fch
2N3902	2N3960	Fch ITT Mot	2N4053	2N4122	Sol	2N4281	2N4358
Bnx Dlc Sol	Mot	2N4015	Mot Sol	Con Fch	2N4238	Mot	Fch
2N3903	2N3961	Fch	2N4054	2N4123	Bnx Fch Mot	2N4282	2N4359
Mot	Mot	2N4016	GE	Mot	Sol	Mot	Fch
2N3904	2N3962	Fch	2N4055	2N4124	2N4239	2N4283	2N4383
Mot	Fch ITT NS	2N4017	GE	Mot	Bnx Fch Mot	Mot	Spg
2N3905	TI	Aml Fch NS	2N4056	2N4125	Sol	2N4284	2N4384
Mot	2N3963	2N4018	GE	Mot	2N4240	NS	Spg
2N3906	Fch ITT NS	Aml Fch NS	2N4057	2N4126	RCA	2N4285	2N4385
IDC Mot	TI	2N4019	GE	Mot	2N4241	NS	Spg
2N3907	2N3964	Aml Fch NS	2N4058	2N4127	Amp	2N4286	2N4386
Fch NS Tns	Fch ITT NS	2N4020	TI	TRW	2N4242	NS	Spg
2N3908	TI	Fch NS	2N4059	2N4128	High	2N4287	2N4389
Fch NS Tns	2N3965	2N4021	TI	TRW	2N4243	NS	Fch
2N3910	Fch ITT NS	Fch NS	2N4060	2N4130	High	2N4288	2N4390
Crs Ray	TI	2N4022	TI	ITT	2N4244	NS	RCA
2N3911	2N3973	Fch NS	2N4061	2N4131	High	2N4289	2N4395
Crs Ray	GE Spg	2N4023	TI	ITT	2N4245	NS	RCA
2N3912	2N3974	Fch NS	2N4062	2N4132	High	2N4290	2N4396
Crs Ray	GE Spg	2N4024	TI	ITT	2N4246	NS	RCA
2N3913	2N3975	Fch NS	2N4063	2N4133	High	2N4291	2N4397
Crs Ray	GE Spg	2N4025	Ind RCA	ITT	2N4247	NS	RCA
2N3914	2N3976	Fch NS	2N4064	2N4134	High	2N4292	2N4398
Crs Ray	GE Spg	2N4026	Ind RCA	Fch ITT	2N4248	NS	Mot
2N3915	2N3977	Fch Mot	2N4068	2N4135	Con Fch GI	2N4293	2N4399
Crs Ray	NS Spg	2N4027	RCA	Fch ITT	NS Phil	NS	Mot
2N3919	2N3978	Fch	2N4069	2N4136	2N4249	2N4296	2N4400
Fch	NS Spg	2N4028	RCA	Amp	Fch GI NS	RCA	Mot
2N3920	2N3979	Fch	2N4070	2N4137	Phil	2N4297	2N4401
Fch	NS Spg	2N4029	Hgh Sol	Fch ITT Ray	2N4250	RCA	Mot
2N3923	2N3981	Fch Mot	2N4071	2N4138	Fch GI NS	2N4298	2N4402
Fch Mot	Mot	2N4030	Hgh Sol	Crs TI	Phil	RCA	Mot
2N3924	2N3982	Fch Mot Ray	2N4072	2N4140	2N4251	2N4299	2N4403
Amp Mot	Mot	2N4031	Mot	GI NS	ECom Fch	RCA	Mot
2N3925	2N3995	Fch Mot	2N4073	2N4141	2N4252	2N4300	2N4404
Mot	TI	2N4032	Mot	GI NS	TI	Bnx TI	Mot
2N3926	2N3996	Fch Mot Ray	2N4074	2N4142	2N4253	2N4301	2N4405
Amp Mot	Sol TI	2N4033	Mot RCA	GI NS	TI	TI	Mot
2N3927	2N3997	Fch Mot	2N4075	2N4143	2N4254	2N4305	2N4406
Amp Mot	Sol TI	2N4034	Fch	GI NS	TI	TRW	Mot
2N3928	2N3998	Fch ITT	2N4076	2N4150	2N4255	2N4306	2N4407
Mot	Sol TI	2N4035	Fch	Bnx Hgh Sol	TI	TRW	Mot
2N3929	2N3999	Fch ITT	2N4077	2N4207	2N4256	2N4307	2N4409
Mot	Sol TI	2N4036	Amp	Fch Mot	Con	TRW	Con Mot
		RCA					

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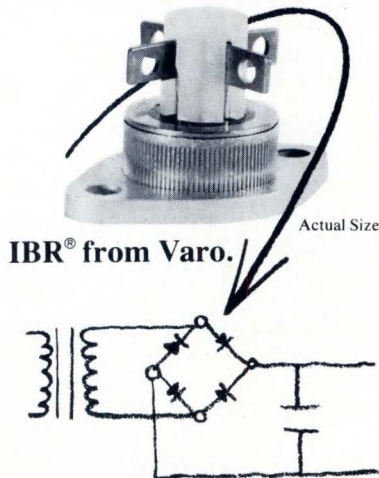
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Circle No. 55 on Reader Service
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Transistor Manufacturers (Cont'd)

2N4410	2N4866	2N4923	2N4964	2N5017	2N5075	2N5135	2N5188	2N5295
Con Mot	Hgh Sol	Mot	NS	RCA	Fch	Fch NS Ray	RCA	RCA
2N4411	2N4872	2N4924	2N4965	2N5022	2N5076	2N5136	2N5189	2N5296
Mot	Fch	Mot	NS	Fch	Fch	Fch NS Ray	RCA	RCA
2N4412	2N4873	2N4925	2N4966	2N5023	2N5077	2N5137	2N5190	2N5297
Spg	Fch	Mot	NS Ray	Fch	Fch	Fch NS Ray	Mot	RCA
2N4412A	2N4874	2N4926	2N4967	2N5024	2N5079	2N5138	2N5191	2N5298
Spg	TI	Mot	NS Ray	Mot	Aml	Fch NS Ray	Mot	RCA
2N4413	2N4875	2N4927	2N4968	2N5025	2N5080	2N5139	2N5192	2N5312
Spg	TI	Mot	NS Ray	Fch	Aml	Fch NS	Mot	Sol
2N4413A	2N4876	2N4928	2N4969	2N5026	2N5083	2N5140	2N5193	2N5313
Spg	TI	Mot	NS Ray	Fch	Fch	Fch	Mot	Sol
2N4414	2N4878	2N4929	2N4970	2N5027	2N5084	2N5141	2N5194	2N5314
Spg	UC	Mot	NS Ray	GE Spg	Fch	Fch Ray	Mot	Sol
2N4414A	2N4879	2N4930	2N4971	2N5028	2N5085	2N5142	2N5195	2N5315
Spg	UC	Ind Mot	NS Ray	GE Spg	Fch	Fch NS	Mot	Sol
2N4415	2N4880	2N4931	2N4972	2N5029	2N5086	2N5143	2N5202	2N5316
Spg	UC	Ind Mot	NS Ray	GE	Mot	Fch NS	RCA	Sol
2N4415A	2N4888	2N4932	2N4974	2N5030	2N5087	2N5146	2N5208	2N5317
Spg	Fch	RCA	Mot	GE	Mot	Mot	Mot	Sol
2N4418	2N4889	2N4933	2N4975	2N5034	2N5088	2N5147	2N5219	2N5318
TI	Fch	RCA	Mot	RCA	Mot	Fch	Mot	Sol
2N4419	2N4890	2N4934	2N4976	2N5035	2N5089	2N5148	2N5220	2N5319
TI	Mot	RCA	TRW	RCA	Mot	Bnx Fch	Mot	Sol
2N4420	2N4895	2N4935	2N4980	2N5036	2N5090	2N5149	2N5221	2N5320
TI	Fch	RCA	NS Sol	RCA	RCA	Fch	Mot	RCA
2N4421	2N4896	2N4936	2N4981	2N5037	2N5091	2N5150	2N5222	2N5321
TI	Fch	RCA	NS Sol	RCA	Ind	Bnx Fch	Mot	RCA
2N4422	2N4897	2N4937	2N4982	2N5040	2N5092	2N5151	2N5223	2N5322
TI	Fch	Mot	NS Sol	Fch	Ind	Fch	Mot	RCA
2N4423	2N4898	2N4938	2N4994	2N5041	2N5093	2N5152	2N5224	2N5323
TI	Mot	Mot	TI	Fch	Ind	Bnx Fch	Mot	RCA
2N4424	2N4899	2N4939	2N4995	2N5042	2N5094	2N5153	2N5225	2N5324
Con GE Spg	Mot	Mot	TI	Fch	Ind	Fch	Mot	Mot
2N4425	2N4900	2N4940	2N4996	2N5043	2N5095	2N5154	2N5226	2N5325
Con GE Spg	Mot	Mot	TI	TI	Ind	Bnx Fch	Mot	Mot
2N4427	2N4901	2N4941	2N4997	2N5044	2N5096	2N5155	2N5227	2N5332
Amp RCA	Mot	Mot	TI	TI	Ind	Bnx Dlc	Mot	TI
2N4428	2N4902	2N4942	2N4998	2N5048	2N5097	2N5156	2N5228	2N5333
TRW	Mot	Mot	Fch	GE	Ind	Bnx Dlc	Mot	TI
2N4429	2N4903	2N4943	2N4999	2N5049	2N5098	2N5157	2N5229	2N5368
TRW	Mot	Mot NS	Fch	GE	Ind	Dlc	Mot	Spg
2N4430	2N4904	2N4944	2N5000	2N5053	2N5099	2N5160	2N5230	2N5369
TRW	Mot	Fch	Fch	Amp	Ind	Mot	Mot	Spg
2N4431	2N4905	2N4945	2N5001	2N5054	2N5102	2N5161	2N5231	2N5370
TRW	Mot	Fch	Fch	Amp	RCA	Mot	Mot	Spg
2N4432	2N4906	2N4946	2N5002	2N5055	2N5106	2N5162	2N5232	2N5371
Mot	Mot	Fch	Fch	Fch	Fch	Mot	Spg	Spg
2N4432A	2N4910	2N4951	2N5003	2N5056	2N5107	2N5172	2N5232A	2N5372
Mot	Mot	GE Spg	Fch	Fch	Fch	GE Spg	Spg	Spg
2N4433	2N4911	2N4952	2N5004	2N5057	2N5108	2N5177	2N5239	2N5373
Amp	Mot	GE Spg	Fch	Fch	RCA	TRW	RCA	Spg
2N4436	2N4912	2N4953	2N5005	2N5058	2N5109	2N5178	2N5240	2N5374
Fch	Mot	GE Spg	Fch	TI	RCA	TRW	RCA	Spg
2N4437	2N4913	2N4954	2N5006	2N5059	2N5126	2N5179	2N5241	2N5375
Fch	Mot	GE Spg	Fch	TI	Fch NS	RCA	Dlc	Spg
2N4438	2N4914	2N4955	2N5008	2N5065	2N5127	2N5180	2N5262	2N5376
Fch	Mot	Fch	Fch	Fch	Fch NS	RCA	RCA	Spg
2N4439	2N4915	2N4956	2N5010	2N5066	2N5128	2N5181	2N5276	2N5377
Fch	Mot	Fch	STC	Crs	Fch NS	RCA	TI	Spg
2N4440	2N4916	2N4957	2N5011	2N5067	2N5129	2N5182	2N5279	2N5378
ECom ITT RCA	Fch	Mot	STC	Mot	Fch NS	RCA	Ind	Spg
2N4854	2N4917	2N4958	2N5012	2N5068	2N5130	2N5183	2N5280	2N5379
Mot Ray TI	Fch	Mot	STC	Mot	Fch NS	RCA	Ind	Spg
2N4855	2N4918	2N4959	2N5013	2N5069	2N5131	2N5184	2N5281	2N5380
Mot Ray TI	Mot	Mot	STC	Mot	Fch NS	RCA	Ind	Spg
2N4862	2N4919	2N4960	2N5014	2N5070	2N5132	2N5185	2N5282	2N5381
Hgh Sol	Mot	Fch	STC	RCA	Fch NS	RCA	Ind	Spg
2N4863	2N4920	2N4961	2N5015	2N5071	2N5133	2N5186	2N5293	2N5382
Hgh Sol	Mot	Fch	STC	RCA	Fch NS Ray	RCA	RCA	Spg
2N4864	2N4921	2N4962	2N5016	2N5074	2N5134	2N5187	2N5294	2N5383
Hgh Sol	Mot	Fch	ECom RCA	Fch	Fch	RCA	RCA	Spg
2N4865	2N4922	2N4963						
Hgh Sol	Mot	Fch						

FIELD-EFFECT TRANSISTORS

Field-effect transistors are listed in ascending numerical order according to the EIA JEDEC part number.

Following this data, manufacturers' types are listed in alphabetical sequence. □

KEY

TYPE NO. □=Pair	DISS (mw)	BV(min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C 125C ⊕ 100C △ 85C * 65C ●							
N	JUNC					TYP					
P ●	IGFET ●		TYP ●			MAX ●					

TYPE
Number identifies field-effect transistor.

P—channel units are keyed by ●, others are N-channel.

Prefix □ covers pairs.

DISS — Dissipation in milliwatts at 25C ambient. Insulated-gate (IGFET) types are designated by ●, others are diffused junction.

BV—Minimum breakdown voltage.

I_{GSS} — Maximum gate-to-source leakage current at 25C, and at elevated temperature. Leakage at 25C in nanoamps maximum unless marked ●, denoting typical. Current at elevated temperature in microamps at 150C unless keyed.

I_{DSS} — Drain current in milliamperes, with gate shorted to source.

NF—Noise figure in db. Typical unless marked ● for maximum.

g_m—Common source forward transconductance in micromhos.

V_p—Maximum pinch-off voltage.

C_{DG}—Maximum capacitance from drain to gate in picofarads.

C_{is} *—Maximum common-source input capacitance with output shorted (picofarads).

DIM—Case dimensions are referred to TO cases.

MFR—Manufacturer supplying the type. Abbreviations are listed on p. 92.

(Continued)

FET's

40467-2N3452

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C 125C⊕ 100CΔ 85C* 65C●							
			TYP●								
N	Junc					TYP					
P●	IGFET●					MAX●					
40467	400●	20⊕	.2			4.5	7500 min			72	RCA
40467A	400●	20	1		20	3.5	7500 typ			72	RCA
40468	375●	20⊕	.2			4	7500 min			72	RCA
40468A	375●	20	1		15	3.5	7500 typ	5.5*		72	RCA
40559	400●	20⊕	1				7500 min			72	RCA
40559A	375●	20	1		15		2800 typ	5.5*		72	RCA
□40600	400●	20	1		18	5●	10,000 typ	5.5*		72	RCA
□40601	400●	20	1		18		10,000 typ	5.5*		72	RCA
□40602	400●	20	1		18		10,000 typ	5.5*		72	RCA
□40603	400●	20	1		18	3.5	10,000 typ	5.5*		72	RCA
□40604	400●	20	1		18		2800 typ	5.5*		72	RCA
2N2386●	500	20●	10	1Δ	.9-9	.5	1000 min	8	50*	5	Scx, TI, UC
2N2497●	500	20●	10	10	1-3	3●	1-2k	5	32*	5	Scx, TI, UC
2N2498●	500	20●	10	10	2-6	3●	1.5-3k	6	32*	5	Scx, TI, UC
2N2499●	500	20●	10	10	5-15	4●	2-4k	8	32*	5	Scx, TI, UC
2N2500●	500	20●	10	10	1-6	1●	1-2.2k	6	32*	5	TI, UC
2N2606●	300	30●	1	1	1-5	3●	110 min	4	6*	18	Aml, Fch, Scx, UC
2N2607●	300	30●	3	3	.3-1.5	3●	330 min	4	10*	18	Aml, Scx, UC
2N2608●	300	30●	10	10	.9-4.5	3●	1000 min	4	17*	18	Aml, Scx, UC
2N2609●	300	30●	30	30	2-10	3●	2500 min	4	30*	18	Aml, Fch, Scx, UC
2N2841●	300	30●	1	1	.025-.125	3●	60 min	1.7	6*	18	Scx, UC
2N2842●	300	30●	3	3	.065-.325	3●	180 min	1.7	10*	18	Scx, UC
2N2843●	300	30●	10	10	2-1	3●	540 min	1.7	17*	18	Scx, UC
2N2844●	300	30●	30	30	.44-2.2	3●	1400 min	1.7	30*	18	Scx, UC
2N3066	300	50●	1	1	.8-4	3●	400-1000	10	1.5	18	Aml, Dks, Scx, UC
2N3067	300	50●	1	1	.2-1	3●	300-1000	5	1.5	18	Aml, Dks, Scx, UC
2N3068	300	50●	1	1	.05-.25	3●	200-1000	2.5	1.5	18	Aml, Dks, Scx, UC
2N3069	300	50●	1	1	2-10	4●	1-2.5k	10	2.5	18	Aml, Dks, Scx, UC
2N3070	300	50●	1	1	.5-2.5	4●	750-2500	5	2.5	18	Aml, Dks, Scx, UC
2N3071	300	50●	1	1	1-6	4●	500-2500	2.5	2.5	18	Aml, Dks, Scx, UC
2N3084	400	30	.1	20 naΔ	.8-3	2	400-1200	10	1	5	Crs
2N3085	400	30	.1	20 naΔ	.8-3	2	400-1200	10	1	18	Crs, Dks
2N3086	400	40	1	.2Δ	.8-3	2	400-1200	10	1	5	Crs
2N3087	400	40	1	.2Δ	.8-3	2●	400-1200	10	1	18	Crs, Dks
2N3088	400	15	1	.2Δ	.5-2	3●	300 min	5	1	5	Crs
2N3088A	400	15	1	.2Δ	.5-2	5●	300-1500	5	1	5	Crs

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C 125C⊕ 100CΔ 85C* 65C●							
			TYP●								
N	Junc					TYP					
P●	IGFET●					MAX●					
2N3089	400	15	1	.2Δ	.5-2	3●	300-2000	5	14*	18	Crs, Dks, Scx
2N3089A	400	15	1	.2Δ	.5-2	.5●	300-2000	5	14*	18	Crs, Dks, Scx
2N3112●	300	20●	.05	.15	.035-.175		50-115	4	3.5	72	Scx
2N3113●	50	20●	.05	.15	.035-1.75		50-115	4	2*	FP	Scx
2N3277●	22.5	25					150 typ		3*	33	Fch
2N3278●	22.5	25					200 typ		3*	33	Fch
2N3328●	20	20●	1		1 max	3●	100 min	6	4*	72	Scx, TI
2N3329●	300	20●	10	10	1-3	3●	1-2k	5	20*	72	Scx, TI, UC
2N3330●	300	20●	10	10	2-6	3●	1.5-3k	6	20*	72	Scx, TI, UC
2N3331●	300	20●	10	10	5-15	4●	2-4k	8	20*	72	Scx, TI, UC
2N3332●	300	20●	10	10	1-6	1●	1-2.2k	6	20*	72	TI, UC
□2N3333●		20●	10				600-1800		30*	89	TI
□2N3334●		20●	10				600-1800		30*	89	TI
□2N3335●		20●	10				600-1800		30*	89	TI
□2N3336●		20●	10				600-1800		30*	89	TI
2N3365	300	40●	5	1Δ	.8-4		400-2000	12	15*	18	Aml, Dks, Scx UC
2N3366	300	40●	5	1Δ	.2-1		250-1000	7	15*	18	Aml, Dks, Scx UC
2N3367	300	40●	5	1Δ	.05-.25		100-1000	2.5	15*	18	Aml, Dks, Scx, UC
2N3368	300	40●	5	1.5Δ	2-12		1-4k	12	20*	18	Aml, Dks, Scx, UC
2N3369	300	40●	5	1.5Δ	.5-2.5		600-2500	7	20*	18	Aml, Dks, Scx, UC
2N3370	300	40●	5	1.5Δ	.1-6		300-2500	3.5	20*	18	Aml, Dks, Scx, UC
2N3376●	300	30●	3		.6-6		800-2300	5	5*	72	Scx, UC
2N3377●	150	30●	3		.6-6	5	800-2300	5	4*	FP	Scx
2N3378●	300	30●	3		3-6	5	1.5-2.3k	5	5*	72	Scx
2N3379●	150	30●	3	3	3-6	5	1.5-2.3k	5	4*	FP	Scx
2N3380●	300	30●	3	3	3-20		1.5-3k	9.5	5*	72	Scx
2N3381●	150	30●	3	3	3-20	9.5	1.5-3k	9.5	4*	FP	Scx
2N3382●	300	30●	15	15	3-30		4.5-12.5k	5	16*	72	Scx
2N3383●	150	30●	15	15	3-30		4.5-12.5k	5	15*	FP	Scx
2N3384●	300	30●	15	15	15-30		7.5-12.5k	5	16*	72	Scx
2N3385●	150	30●	15	15	15-30		7.5-12.5k	5	15*	FP	Scx
2N3386●	300	30●	15	15	15-50		7.5-15k	9.5	16*	72	Scx
2N3387●	150	30●	15	15	15-50		7.5-15k	9.5	15*	FP	Scx
2N3436	300	50●	.5	1	3-15	2●	2.5-10k	10	18*	18	Aml, Scx, UC
2N3437	300	50●	.5	1	.8-4	2●	1.5-6k	5	18*	18	Aml, Scx, UC
2N3438	300	50●	.5	1	.2-1	2●	800-4500	2.5	18*	18	Aml, Scx, UC
2N3452	300	50●	.1	.4	.8-4	2●	200-1200	10	6*	72	Aml, Scx, UC

TYPE NO.	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} • BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C							
				125C⊕ 100CΔ 85C* 65C•							
N	Junc					TYP					
P•	IGFET•		TYP•			MAX•					
2N3453	300	50•	.1	.4	.2-1	2•	150-900	5	6*	72	Aml, Scx, UC
2N3454	300	50•	.1	.4	.05-.25	2•	100-600	2.5	6*	72	Aml, Scx, UC
2N3455	300	50•	.04	.15	.8-4	1•	400-1200	10	5*	72	Aml, Scx, UC
2N3456	300	50•	.04	.15	.2-1	1•	300-900	5	5*	72	Aml, Scx, UC
2N3457	300	50•	.04	.15	.05-.25	1•	150-600	2.5	5*	72	Aml, Scx, UC
2N3458	300	50•	.25	.5	3-15	1•	2.5-10k	8	18*	18	Aml, Scx, UC
2N3459	300	50•	.25	.5	.8-4	1•	1.5-6k	4	18*	18	Aml, Scx, UC
2N3460	300	50•	.25	.5	.2-1	1•	800-4500	2	18*	18	Aml, Scx, UC
2N3573•		25•	.6		.02-1	3•	100-300	2	6*	18	TI, UC
2N3574•		25•	.6		.075-.375	3•	200-600	2	6*	18	TI, UC
2N3575•		25•	.6		.2-1	3•	2-6.5k	4	6*	18	TI, UC
2N3578•	300	20•	.15		.5-2.5		1500 min	4	65*	18	Scx
2N3608•	350•	30⊕			5 na		850 typ	2.5	5	5	Phl
2N3610•	•	20⊕			5 na		70 typ	4	18	18	Phl
2N3631	300•	20*			2-10		1400 min	6	7.5*	18	Scx
2N3684	350	50•	.1	.5	2.5-7.5		2-3k	5	4*	72	Ilnc, UC
2N3685	150	50•	.1	.5	1-3.5		1.5-2.5k	3.5	4*	72	Ilnc, UC
2N3686	60	50•	.1	.5	4-1.2		1-2k	2	4*	72	Ilnc, UC
2N3687	25	50•	.1	.5	1-1.5		500-1500	1.2	4*	72	Ilnc, UC
2N3695•	112.5	30•	.1	.5	1.25-3.75		1-1.75k	5	5*	72	UC
2N3696•	45	30•	.1	.5	5-1.5		750-1250	3.5	5*	72	UC
2N3697•	18	30•	.1	.5	2-6		500-1000	2	5*	72	UC
2N3698•	7.5	30•	.1	.5	.05-.25		250-750	1.2	5*	72	UC
2N3796	200•	20*	1 pa	200 pa	.5-3	4	900-1800	7*	18	72	Mot
2N3797	200•	25*	1 pa	200 pa	2-6	4	1.5-3k	8*	18	72	Mot
2N3819		25•	2		2-20		800-5000	8*	92	92	TI
2N3820•	200	20•	20	2Δ	3-15		300-900	32*	92	92	Fch, TI
2N3821	300	50•	.1	.1	.5-2.5	5•	1.5-4.5k	4	6*	72	Mot, Scx, TI, UC
2N3822	300	50•	.1	.1	2-10	5•	3-6.5k	6	6*	72	Mot, Scx, TI, UC
2N3823	300	30•	.5	.5	4-20	2.5•	3.5-6.5k	6	6*	72	Aml, Amp, Mot, Scx, TI, UC
2N3824	300	50•	.1	.1				8	6*	72	Mot, Scx, TI, UC
2N3882•	200•	25*	100 pa			4•	1-2.4k			72	Hgh
2N3909•	300	20•	10	1Δ	3-15		1-5k	8	32*	72	Fch, Scx, TI, UC
□2N3921	300	50•	1	1Δ	1-10	2•	1.5-7.5k	3	18*	71	Aml, Scx, UC
□2N3922	300	50•	1	1Δ	1-10	2•	1.5-7.5k	3	18*	71	Aml, Scx, UC
□2N3934	300	50•	.4	.4Δ	.25-1.3	2•	300-900	3	7*	71	Aml, UC
□2N3935	300	50•	.4	.4Δ	.25-1.3	2•	300-900	3	7*	71	Aml, UC
□2N3954		50•	.1		.5-5	5•	1000 min		4*	71	UC

(Continued)

TYPE NO.	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} • BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C							
				125C⊕ 100CΔ 85C* 65C•							
N	Junc					TYP					
P•	IGFET•		TYP•			MAX•					
□2N3955		50•	.1		.5-5	.5•	1000 min		4*	71	UC
□2N3956		50•	.1		.5-5	.5•	1000 min		4*	71	UC
□2N3957		50•	.1		.5-5	.5•	1000 min		4*	71	UC
□2N3958		50•	.1		.5-5	.5•	1000 min		4*	71	UC
2N3966	300	30	.1	.2	2 min			6	6*	18	Aml
2N3967	300	30	.1	.2	2.5-10	1.5•	1.6-2.4k	5	1.5	18	Aml
2N3967A	300	30	.1	.2	2.5-10				5*	72	Aml
2N3968	300	30	.1	.2	1-5	1.5•	1.4-2k	3	1.5	18	Aml
2N3968A	300	30	.1	.2	1-5				5*	72	Aml
2N3969	300	30	.1	.2	4-2	1.5•	950-1450	1.7	1.5	18	Aml
2N3969A	300	30	.1	.2	4-2				5*	72	Aml
2N3970	1800	40•	.25	.5	50-150			10	25*	18	Aml, Scx, TI, UC
2N3971	1800	40•	.25	.5	25-75			5	25*	18	Aml, Scx, TI, UC
2N3972	1800	40•	.25	.5	5-30			3	25*	18	Aml, Scx, TI, UC
2N3993•	300	25•	1.2						16*	72	TI
2N3994•	300	25•	1.2						16*	72	TI
2N4038	•	15*	.1		.1	4	1.5-1.9k		2		TRW
2N4039	•	15*	.1		1.5	4	1.5-1.9k		.2		TRW
2N4065•	350•	25			.01 na		600 typ		4.5*	73	Fch
□2N4066•	600•	25			.05 na		2300 typ		5.5*	76	Fch
□2N4067•	600•	25			.05 na		3100 typ		5.5*	76	Fch
□2N4082	300	50•	.4	.4Δ	.25-1.3	2•	300-900	3	7*	18	Aml, UC
□2N4083	300	50•	.4	.4Δ	.25-1.3	2•	300-900	3	7*	18	Aml, UC
□2N4084	300	50•	1	1Δ	1-10	2•	1.5-7.5k	3	18*	18	Aml, Scx, UC
□2N4085	300	50•	1	1Δ	1-10	2•	1.5-7.5k	3	18*	18	Aml, Scx, UC
2N4091	1800	40•	.2		30 min			10	5	18	Aml, TI, UC
2N4092	1800	40•	.2		15 min			7	5	18	Aml, TI, UC
2N4093	1800	40•	.2		8 min			5	5	18	Aml, TI, UC
2N4117	300	40•	.01	.25	.03-.09		70-210	1.8	3*	72	Scx, UC
2N4117A		40•	.001		.03-.09		70-210	1.8	3*	72	Scx, UC
2N4118	300	40•	.01	.25	.08-.24		80-250	3	3*	72	Scx, UC
2N4118A		40•	.001		.08-.24		80-250	3	3*	72	Scx, UC
2N4119	300	40•	.01	.25	.2-6		100-330	6	3*	72	Scx, UC
2N4119A		40•	.001		.2-6		100-330	6	3*	72	Scx, UC
2N4120•	350•	25			.01 na		800 typ		4.5*	73	Fch
2N4139	300	50	1	1⊕	8-11	2•	3.5-7k	8	5	18	Aml
2N4220	300	30•	.1	.1	.5-3		1-4k	4	6*	72	Mot, Scx, UC
2N4220A	300	30•	.1	.1	.5-3	2.5•	1-4k	4	6*	72	Mot, Scx, UC
2N4221	300	30•	.1	.1	.2-6		2-5k	6	6*	72	Amp, Mot, Scx, UC

FET'S
2N3453-2N4221

FET'S

2N4221A-3N97

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} ● BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C 125C⊕ 100CΔ 85C* 65C●							
	N		Junc		TYP●		TYP	MAX●			
P●	IGFET●										
2N4860		30●	.25						18*	18	TI
2N4861		30●	.25						18*	18	TI
2N4867	300	40●	.25	.25	4-1.2	1●	700-2000	2	25*	72	Scx
2N4867A	300	40	.25	.25	4-1.2	1		2		72	Scx
2N4868	300	40●	.25	.25	1-3	1●	1-3k	3	25*	72	Scx
2N4868A	300	40	.25	.25	1-3	1		3		72	Scx
2N4869	300	40●	.25	.25	2.5-7.5	1●	1.3-4k	5	25*	72	Scx
2N4869A	300	40	.25	.25	2.5-7.5	1		5		72	Scx
2N4881	800		2	4	4-2	3●	350-1000		15*	5	Aml
2N4882	800		2	4	1.5-7.5	3●	600-1500		15*	5	Aml
2N4883	800		1	2	4-2	3●	350-1000		15*	5	Aml
2N4884	800		1	2	1.5-7.5	3●	600-1500		15*	5	Aml
2N4885	800		1	2	4-2	3●	350-1000		15*	5	Aml
2N4886	800		1	2	1.5-7.5	3●	600-1500		15*	5	Aml
2N4978	1800	30	.5		15 min				35*	18	Aml
2N4979	1800	30	.5		7.5 min				35*	18	Aml
2N5018●	1800	30	2		10 min				45*	18	Aml
2N5019●	1800	30	2		5 min				45*	18	Aml
2N5033●	200	20●	10	.5●	3-3.5	.2	1-5k		25*	106	Fch
□2N5045		50●	.25				1.5-6k		8*	72	TI
□2N5046		50●	.25				1.5-6k		8*	72	TI
□2N5047		50●	.25				1.5-6k		8*	72	TI
2N5078	300	30	.25	.25	4-25	5●	4.5-10k		6*	72	Aml
2N5103	300	25●	.1	.2	1-8	1.5●	2-8k	4	5*	72	Amp, UC
2N5104	300	25●	.1	.2	2-6	1.5●	3.5-7.5k	4	5*	72	Amp, UC
2N5105	300	25●	.1	.2	5-15	1.5●	5-10k	4	5*	72	Amp, UC
2N5114	500	30●	.5	1	30-90				25*	18	UC
2N5115	500	30●	.5	1	15-60				25*	18	UC
2N5116	500	30●	.5	1	5-25				25*	18	UC
2N5163	200	25	10	.6*	14	3●	2-9k	8	12*	106	Con, Fch
□2N5196		50●	.025		.7-7		1000 min	4	6*	SI-71	Scx
□2N5197		50●	.025		.7-7		1000 min	4	6*	SI-71	Scx
□2N5198		50●	.025		.7-7		1000 min	4	6*	SI-71	Scx
□2N5199		50●	15 pa		.7-7		1000 min	4		SI-71	Scx
2N5397	300	25	.1	.1	10-30	3.5	6-10k		5*	72	Scx
2N5398	300	25	.1	.1	5-40		5.5-10k		5.5*	72	Scx
3N89●	300	30●	5		5-2.5		450-1300	4	3*	72	Scx
□3N96●		30●			5-2.5		450 min	4		78	Scx
□3N97●		30●			5-2.5		450 min	4		78	Scx
3N124	300	50●	.25	.25	2-2	4	500-2000			72	Mot
3N125	300	50●	.25	.25	1.5-4.5	4	800-2400			72	Mot
3N126	300	50●	.25	.25	3-9	4	1.2-3.6k			72	Mot
3N128	400●	20⊕	.05			3.5	5000 min			72	RCA

TYPE NO.	DISS (mw)	BV (min) BV _{DGO} • BV _{GSS} • BV _{DSS} • BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C							
				125C• 100CΔ 85C* 65C•							
N	Junc										
P•	IGFET•		TYP•			TYP					
						MAX•					
2N4221A	300	30•	.1	.1	2-6	2.5•	2-5k	6	6*	72	Amp, Mot, Scx, UC
2N4222	300	30•	.1	.1	5-15		2.5-6k	8	6*	72	Amp, Mot, Scx, UC
2N4222A	300	30•	.1	.1	5-15	2.5•	2.5-6k	8	6*	72	Amp, Mot, Scx, UC
2N4223	300	30•	.25	.25Δ	3-18	5•	3-7k	8	6*	72	Aml, Mot, Scx, UC
2N4224	300	30•	.5	.5Δ	2-20		2-7.5k	8	6*	72	Amp, Mot, Scx, UC
2N4267•	400•	25			.2 na		4600 typ		11*	72	Fch
2N4268•	400•	25			.2 na		6200 typ		11*	72	Fch
2N4302	300	30	1	.1*	.5-5	2•	1000 min	4	2	106	Aml, Con
2N4303	300	30	1	.1*	4-10	2•	2000 min	6	2	106	Aml, Con
2N4304	300	30	1	.1*	.5-15	3•	1000 min	10	2	106	Aml, Con
2N4338	50•	.1			.2-6	1•	600-1800	1	7*	18	Scx, UC
2N4339	50•	.1			.5-1.5	1•	800-2400	1.8	7*	18	Scx, UC
2N4340	50•	.1			1.2-3.6	1•	1.3-3k	3	7*	18	Scx, UC
2N4341	50•	.1			3-9	1•	2-4k	6	7*	18	Scx, UC
2N4342•	200	25	10	.5•	4-12	1.5•	2-6k		15*		Fch
2N4343•	200	25	10	.5•	10-30	1.5•	4-8k		15*		Fch
2N4351	300•	25•	10 pa		10 na		1000 min		5*	72	Mot
2N4352•	300•	25•	10 pa		10 na		1000 min		5*	72	Mot
2N4353•	•	30•	.1•		.5 na		2500 typ	2	72		GI
2N4360•	200	20	10	.5•	3-30		2-8k		15*	106	Fch
2N4391	500	40•	.1	.2	50-150			10	14*	18	Amp, Ilnc, TI, UC
2N4392	500	40•	.1	.2	25-75			5	14*	18	Amp, Ilnc, TI, UC
2N4393	500	40•	.1	.2	5-30			3	14*	18	Amp, Ilnc, TI, UC
2N4416	300	30•	.1	.2	5-15	4•	4.5-7.5k	6	4*	72	Amp, Ilnc, Mot, TI, UC
2N4416A		35•	.1		5-15	4•	4.5-7.5k		4*	72	TI
2N4417	175	30•	.1	.1	5-15	2•	4.5-7.5k	6	3.5*	CC-3	UC
2N4445	400	25	3	.6Δ	150 min			10	25		Crs
2N4446	400	25	3	.6Δ	100 min			10	25		Crs
2N4447	400	20	3	.6Δ	150 min			10	25		Crs
2N4448	400	20	3	.6Δ	100 min			10	25		Crs
2N4856	40•	.25							18*	18	TI
2N4857	40•	.25							18*	18	TI
2N4858	40•	.25							18*	18	TI
2N4859	30•	.25							18*	18	TI

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C 125C⊕ 100CΔ 85C* 65C●							
			TYP●								
N	Junc				TYP						
P●	IGFET●				MAX●						
3N138	400●	35⊕	.1 pa				6000 typ			72	RCA
3N139	400●	35 ⊕	1			4	3000 min			72	RCA
3N140	150●	20 ⊕	1			3.5	10,000 typ	5.5*		72	RCA
3N141	150●	20⊕	1				10,000 typ	5.5*		72	RCA
3N142	400●	20⊕	1			4	4000 min			72	RCA
3N143	100●	20⊕	1				5000 min			72	RCA
□3N151●	●	30●	.05●		.2 na		2000 typ			77	GI
3N152	400●	20⊕	1			2.5	5000 min			72	RCA
3N153	400●	20⊕	50 pa	1 na⊕			10,000 typ	6*		72	RCA
3N159	400●	20	1	.2⊕	18	2.5	10,000 typ	5.5*		72	RCA
A190		30⊕	.5		2-8		2-6k	2.5 5*		72	Amp
A191		20⊕	.5		.5-10		2-6k	3.5 5*		72	Amp
A192		30⊕	.5		4-20		3.5-6.5k	8 6*		72	Amp
A193		30⊕	.5		.5-10		1.5-6.5k	6 6*		72	Amp
A194	150	25●	.5	.5⊕	1-8		2-8k	5*			Amp
A195	150	25●	.5	.5⊕	2-6		1-6k	5*			Amp
A196	150	25●	.5	.5⊕	5-15		4-10k	5*			Amp
A197	200	30●	.5	.5 typ⊕	50-150			16*			Amp
A198	200	30●	.5	.5 typ⊕	25-75			16*			Amp
A199	200	30●	.5	.5 typ⊕	5-30			16*			Amp
□A610		30⊕			2-8		2-8k			72	Amp
□A611		30⊕			2-8		2-8k			72	Amp
C413N	400	15	3	100na*	10 min		40 typ	3 8*			Crs
C680		30	10		.08-.4	2	200-500	2.5 1.5	5		Crs
C680A		30	1		.08-.4	2	200-500	2.5 1.5	5		Crs
C681		30	10		.08-.4	2	200-500	2.5 1.5	18		Crs
C681A		30	1		.08-.4	2	200-500	2.5 1.5	18		Crs
C682		30	10		.4-1.6	2	400-1000	5 1.5	5		Crs
C682A		30	1		.4-1.6	2	400-1000	5 1.5	5		Crs
C683		30	10		.4-1.6	2	400-1000	5 1.5	18		Crs
C683A		30	1		.4-1.6	2	400-1000	5 1.5	18		Crs
C684		30	10		1.5-6	2	600-1500	10 1.5	5		Crs
C684A		30	1		1.5-6	2	600-1500	10 1.5	5		Crs
C685		30	10		1.5-6	2	600-1500	10 1.5	18		Crs
C685A		30	1		1.5-6	2	600-1500	10 1.5	18		Crs
C6690		45	1					10 5	18		Crs
C6691		25	1					10 5	18		Crs
C6692		25	1					6 5	18		Crs
CM600	300	10	3	.6Δ	50		10-30k	7 6.5	18		Crs
CM601	300	15	3	.6Δ	70		10-30k	10 6.5	18		Crs
CM602	300	30	10	1Δ	70		10-30k	10 6.5	18		Crs
CM603	300	15	3	.6Δ	100		20-60k	10 6.5	18		Crs
CM640	300	20	.4	.4Δ	.5		5000 typ	1.5 5	18		Crs

(Continued)

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μ a @ 150C 125C⊕ 100CΔ 85C* 65C●							
			TYP●								
N	Junc				TYP						
P●	IGFET●				MAX●						
CM641	300	20	.4	.4Δ	3		10,000 typ	2.2	5	18	Crs
CM642	300	20	.4	.4Δ	10		20,000 typ	3	5	18	Crs
CM643	300	20	.4	.4Δ	50		30,000 typ	5	5	18	Crs
CM644	300	30	.4	.4Δ	10		20,000 typ	3	5	18	Crs
CM645	300	30	.4	.4Δ	15		20,000 typ	5	5	18	Crs
CM646	300	30	.4	.4Δ	30		30,000 typ	7	5	18	Crs
CM647	300	30	.4	.4Δ	50		30,000 typ	10	5	18	Crs
CM697	400	25	3	.6Δ	30 min			3	16	18	Crs
CP600	3600	20	50		60-180		10-30k	8	10	7/16"	Crs
	25C (Case)									Hex	
CP601	5400	30	50		60-180		10-30k	8	10	7/16"	Crs
	25C (Case)									Hex	
CP602	6000	20	50		100-300		20-60k	15	10	7/16"	Crs
	25C (Case)									Hex	
CP603	9000	30	50		100-300		20-60k	15	10	7/16"	Crs
	25C (Case)									Hex	
CP650	8000	25	10	1Δ	300-1200		.1-.25	10	25	5	Crs
	25C (Case)										
CP651	8000	20	10	1Δ	100-500		.075-.2	10	25	5	C _{ts}
	25C (Case)										
CP652	8000	20	3	.6Δ	100 min		.1 typ	10	25	5	Crs
	25C (Case)										
CP653	8000	20	3	.6Δ	60 min		.06 typ	10	25	5	Crs
	25C (Case)										
D1101	400	25	10		8-4		400-2000	10	2	18	Dks
D1102	400	25	10		.2-1		300-1000	5	2	18	Dks
D1103	400	25	10		.05-.25		200-1000	2.5	2	18	Dks
D1177	400	50	5	.3Δ	8-4		400-1000	10	2	18	Dks
D1178	400	50	5	.3Δ	.2-1		300-1000	5	2	18	Dks
D1179	400	50	5	.3Δ	.05-.25		200-1000	2.5	2	18	Dks
D1180	400	50	5	.5Δ	2-10		1-4k	10	3.5	18	Dks
D1181	400	50	5	.5Δ	.5-2.5		750-2500	5	3.5	18	Dks
D1182	400	50	5	.5Δ	1-6		500-2500	2.5	3.5	18	Dks
D1183	400	50	5		3-15		2.5-10k	8	6	18	Dks
D1184	400	50	5		8-4		1.5-6k	4	6	18	Dks

FET'S
3N138-D1184

FET'S

D1185-MFE2000

TYPE NO.	DISS (mw)	BV (min)	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{OG} (pf)	DIM	MFR
☐ = Pair		BV _{DGO} BV _{GSS} • BV _{DSS} ⊕ BV _{DSX} *	na @ 25C	μa @ 150C 125C⊕ 100CΔ 85C* 65C•					C _{is} * (pf)		
N	Junc										
P•	IGFET•		TYP•		MAX•						
HA2010•	350•	35*									
HA2020	350•	35*									
HRN1030	200•	15*	100 pa			1•					
HRN8318D	200•	15*	10	10⊕							
HRN8338D	200•	15*	10	10⊕							
HRN8346D	200•	15*	10	10⊕							
HRN8348D	200•	15*	10	10⊕							
HRN8350	200•	15*	100 pa								
HRN8353	200•	15*	100 pa								
HRN8360	200•	25*	100 pa			4•	1-2.4k				
HRN8363	200•	30*	100 pa			4•	1-2.4k				
IT200	120	50•	100 pa	.5	10-30		6000 min	6	2		IIInc
IT210	120	50•	100 pa	.5	4-12		4500 min	4	2		IIInc
IT220	120	50•	100 pa	.5	1-8		3000 min	2.5	2		IIInc
K1001	150•					4.5	2-5k	6		18	KMC
K1002	150•					6	1-2.5k	6		18	KMC
K1003	150•					3.5	4000 min	6		18	KMC
K1004	150•						800-2500	12		18	KMC
K1201	75•					4.5	1-2k	5		18	KMC
K1202	75•					6	1-2k	5		18	KMC
K1501•	150•				.01		1-2k	7	1	18	KMC
K1502•	150•				10	5	1000 min			18	KMC
K1504•	150•				10	6	800 min			18	KMC
M100	300•	20*			1.5-4.5		1000 min	5	7.5*	18	Scx
M101	300•	20*			4-12		1500 min	8	7.5*	18	Scx
M103•	225•	30•	.1						2	72	Scx
M104•	•	30•	.1						.5	72	Scx
M106•	•	30•								99	Scx
M511•	225•	30•	1							72	Scx
MEM511•	225•	30•	.1•	.5 na			2500 typ	2		72	GI
MEM517•	•	25•	.1•	.8 na			12,000 typ	10		33	GI
MEM517A•	•	25•	.1•	.8 na			12,000 typ	10		5	GI
MEM517B•	•	25•	.1•	.8 na			12,000 typ	10		72	GI
MEM520•	•	30⊕	.03•	.5 na			2500 typ	2		72	GI
□MEM550•	•	25•	.1•	.1 na			1400 typ	1.1		77	GI
□MEM551•	•	30⊕	.03•	.5 na			1400 typ	1		77	GI
MEM554	•	20⊕			3.2		12,000 typ			72	GI
MEM554C	•	20⊕			3.2		10,000 typ			72	GI
MEM556•	•	70•	.1•	.1 na			950 typ	.3		72	GI
MEM557	•	20⊕			3.2		10,000 typ			72	GI
MEM562	•	30⊕	.01•	1 na			4000 typ	1		72	GI
MEM563	•	20⊕	.01•	1 na			7000 typ	1		72	GI
MFE2000		25•	.1	4-10			2.5-6k			72	Mot

TYPE NO.	DISS (mw)	BV (min)	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{OG} (pf)	DIM	MFR
☐ = Pair		BV _{DGO} BV _{GSS} • BV _{DSS} ⊕ BV _{DSX} *	na @ 25C	μa @ 150C 125C⊕ 100CΔ 85C* 65C•					C _{is} * (pf)		
N	Junc										
P•	IGFET•		TYP•		MAX•						
D1185	400	50	5		.2-1		800-4500	2	6	18	Dks
D1201	400	25	10		2-10		1-4k	10	5	18	Dks
D1202	400	25	10		5-2.5		600-2500	5	5	18	Dks
D1203	400	25	10		.1-6		300-2500	2.5	5	18	Dks
D1301	400	25	10		3-15		2.5-10k	8	6	18	Dks
D1302	400	25	10		.8-4		1.5-6k	4	6	18	Dks
D1303	400	25	10		.2-1		800-4500	2	6	18	Dks
D1420	400	25	1		.5-5	1•	1000 min	4	5	18	Dks
D1421	400	25	1		4-10	1•	2000 min	6	6	18	Dks
D1422	400	25	5		.5-15	2•	1000 min	10	5	18	Dks
DD07P•	225•	30	1		1 na		5400 typ			72	AMI
DD08P•	225•	70	.1 typ		1 na		5400 typ			72	AMI
□DFNA3-50	300	50	1	1Δ	.35-2.5	2•	750-2000	4	6*	18	Dks
DFNA3-100	300	50	1	1Δ	.35-2.5	2•	750-2000	4	6*	18	Dks
□DM01B	120•	30	.1 pa		.5 na		500 typ	1.5	5	AMI	
□DM02B	120•	30	.1 pa		.5 na		500 typ	1.5	5	AMI	
□DM03B	120•	30	.1 pa		.5 na		500 typ	1.5	5	AMI	
□DM05N•	112•	30	1		1 na		2700 typ			77	AMI
□DM06N•	112•	70	.1 na typ		1 na		2700 typ			77	AMI
DN3066A	400	50	1		.8-4	.25•	400-1000	10	1.5	18	Dks
DN3067A	400	50	1	1	.2-1	.25•	300-1000	5	1.5	18	Dks
DN3068A	400	50	1	1	.05-.25	.25•	200-1000	2.5	1.5	18	Dks
DN3069A	400	50	1	1	2-10	.25	1-2.5k	10	2.5	18	Dks
DN3070A	400	50	1	1	.5-2.5	.25	750-2500	5	2.5	18	Dks
DN3071A	400	50	1	1	.1-6	.25	500-2500	2.5	2.5	18	Dks
DNX1	400	50	1		.8-6		400-1500	8	2	18	Dks
DNX2	400	50	1		.1-1		300-1000	4	2	18	Dks
DNX3	400	50	1		.025-.25		200-700	2	2	18	Dks
DNX4	400	50	1		2-10		1-2.5k	8	2	18	Dks
DNX5	400	50	1		.5-2.5		750-2500	4	2	18	Dks
DNX6	400	50	1		.1-6		500-2500	2	2	18	Dks
DNX7	400	50	1		3-15		2.5-10k	8	6	18	Dks
DNX8	400	50	1		.8-4		1.5-6k	4	6	18	Dks
DNX9	400	50	1		.2-1		800-4500	2	6	18	Dks
E100	250	30	.5		2-20		500 min	10	8*	e	Scx
E101	250	30	.5		.2-1		500 min	1.5	8*	e	Scx
E102	250	30	.5		.9-4.5		1000 min	4	8*	e	Scx
E103	250	30	.5		4-20		1500 min	10	8*	e	Scx
FT57	375	25			9-26	2.7				72	Fch
□FT701•	600•	30⊕			1 na		2000 typ		7*	72	Fch
FT704•	350•	25			.01 na		600 typ		4.5*	72	Fch
HA2000•	350•	30*							4	72	Hgh
HA2001•	350•	35*					1-2k		4	72	Hgh

(Continued)

Silicon Power PNP... of Age in '68



RCA PNP Type	NPN Complement	V _{CEO} (sus) V	I _C A	P _T W	H _{FE}		Pkg
					@ -50 mA	@ -500 mA	
2N5415	2N3440	-200	-1	10	30-150	—	TO-5
2N5416	2N3439	-300	-1	10	30-120	—	TO-5
2N5322	2N5321	-75	-2	10	—	30-130	TO-5
2N5323	2N5320	-50	-2	10	—	40-250	TO-5

Featuring high-voltage capability up to 300 volts. This is the year of PNP at RCA as the industry's silicon power leader sets up a program that successfully meets your product needs for complementary designs in commercial, industrial, and military applications.

For example, do your high-speed switching and linear amplifier designs need PNP power with 300-volt capability? Check RCA's new 2N5415 and 2N5416. If you're working with audio amplifier and industrial power switching circuits, try 2N5322 and 2N5323. They're "beefed-up" versions of the popular 2N4036.

There's more coming in '68. Look for low-cost silicon power PNP audio devices with gain up to 1.5 A, P_T of 5 W—at economy levels that really count. Watch, too, for types with I_C = 5 A and P_T = 45 W... and voltage handling capability up to 75 V. Details from your RCA Representative or your RCA Distributor.

Technical data from Commercial Engineering, Section I-F-6. RCA Electronic Components, Harrison, N.J. 07029.

RCA

Circle No. 56 on Reader Service Card for more information.

FET'S

MFE2001—U146

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} • BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C							
				125C⊕ 100CΔ 85C* 65C•							
N	Junc					TYP					
P•	IGFET•		TYP•			MAX•					
MFE2001		25•	.1		8-20		4-8k			72	Mot
MFE2002•		30•	.5		4-20		3.5-6.5			72	Mot
MFE2093	300	50•	.1	.1	1-7		250-500			72	Mot
MFE2094	300	50•	.1	.1	4-1.4		350-700			72	Mot
MFE2095	300	50•	.1	.1	1-3		400-800			72	Mot
MFE2097	1500	50•	1	1	15-50		10-20k	20*		39	Mot
MFE2098	1500	50•	1	1	40-100		14-25k	20*		39	Mot
MFE2133	1500	30•	1	1	25 min		12000 min	20*		72	Mot
MFE3001	200•	20*	10 pa		5-6		700-3500	5*		39	Mot
MFE3002	•	15⊕	100 pa		10 na max					72	Mot
MFE3003•	•	15⊕	100 pa		10 na max					72	Mot
MFE3004	•	20*	50 pa		2-10		2000 min			72	Mot
MFE3005	•	20*	50 pa		2-10		2000 min			72	Mot
□MMF1	300•	30•	50 pa	50 na	5-10	2.5•	1.5-6.5k	6*		72	Mot
□MMF2	300•	30•	50 pa	50 na	5-10	2.5•	1.5-6.5k	6*		72	Mot
□MMF3	300•	30•	50 pa	50 na	5-10	2.5•	1.5-6.5k	6*		72	Mot
□MMF4	300•	30•	50 pa	50 na	5-10	2.5•	1.5-6.5k	6*		72	Mot
□MMF5	300•	30•	50 pa	50 na	5-10	2.5•	1.5-6.5k	6*		72	Mot
□MMF6	300•	30•	50 pa	50 na	5-10	2.5•	1.5-6.5k	6*		72	Mot
MPF102	200	25•	2	2	2-20		2-7.5k	7*		92	Mot
MPF103	200	25•	1	.2	1-5		1-5k	7*		92	Mot
MPF104	200	25•	1	.2	2-9		1.5-5.5k	7*		92	Mot
MPF105	200	25•	1	.2	4-16		2-6k	7*		92	Mot
MPF106		25•	1		4-10		2.5-6k			92	Mot
MPF107		25•	1		8-20		4-8k			92	Mot
MPF151•		40•	10		1-5		1-4k			92	Mot
MPF152•		40•	10		2-9		1.5-5k			92	Mot
MPF153•		40•	10		4-16		2-6k			92	Mot
MPF154•		60•	10		1-5		1-4k			92	Mot
MPF155•		60•	10		2-9		1.5-5k			92	Mot
MPF156•		60•	10		4-16		2-6k			92	Mot
MPF157	•	20*	1 pa		2-10					92	Mot
MPF158	•	20*	1 pa		2-10					92	Mot
MPF159	•	20⊕	1 pa		10 na max					92	Mot
MPF160•	•	20⊕	1 pa		10 na max					92	Mot
RT10					6-30		5-10k	7.5			Scx
RT20	•				10-30		2-5k	10			Scx
□SC1600• 350•		30⊕			5 na		400 min	2			Phi
□SC1601• 350•		20⊕			100 na		400 min	2			Phi
□SC1608• 350•		30⊕			35 na		400 min	2			Phi
SC1611•	350•	20⊕			35 na		430 min	2.5	5		Phi
SC1612•	350•	20⊕			35 na		430 min	2.5	46		Phi
SC1613•	350•	20⊕			100 na		430 min	2.5	5		Phi

TYPE NO. □ = Pair	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} • BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{DG} (pf) C _{is} * (pf)	DIM	MFR
			na @ 25C	μa @ 150C							
				125C⊕ 100CΔ 85C* 65C•							
N	Junc					TYP					
P•	IGFET•		TYP•			MAX•					
SC1614•	350•	20⊕			100 na		430 min		2.5	46	Phi
□SC1625• 350•		30⊕			35 na		400 min		2		Phi
□SD5010• 112•		25•	1		10 na max		500 min		1.1	77	SSS
□SD5011• 112•		40•			10 na max		500 min		1.1	77	SSS
□SD5012• 112•			1		10 na max		1200 min		1.1	77	SSS
□SD5013• 112•					10 na max		1200 min		1.1	77	SSS
□SU2078	300	50	.25	25 naΔ	.25-2		300 min	4	7*	18	Aml
□SU2079	300	50	.25	25 naΔ	.25-2		300 min	4	7*	18	Aml
□SU2080	300	50	.5	50 naΔ	1-10		1500 min	4	18*	18	Aml
□SU2081	300	50	.5	50 naΔ	1-10		1500 min	4	18*	18	Aml
□SU2098	300	30	.4	.4Δ	1-8	2•	1000 min	4	7*	18	Aml
□SU2099	300	30	.4	.4Δ	1-8	2•	1000 min	4	7*	18	Aml
TIS14		30	1		5-15		1-7.5k		8*	72	TI
□TIS25			.25				1.5-6k		8*		TI
□TIS26			.25				1.5-6k		8*		TI
□TIS27			.25				1.5-6k		8*		TI
TIS34		30			4-20	4•	3.5-6.5k		6*	92	TI
TIS41		30•	.2				3.5-6.5k		18*	18	TI
TIS42		25•	5						18*	92	TI
TIS58		25•			2.5-8	4•	1.3-4k		6*	92	TI
TIS59		25•			6-25	4•	2.3-5k		6*	92	TI
□TIS68			2				1-6k		8*		TI
□TIS69			2				1-6k		8*		TI
□TIS70			2				1-6k		8*		TI
TIS73		30•	2						18*		TI
TIS74		30•	2						18*		TI
TIS75		30•	2						18*		TI
TIS88		30•	1		5-15	4•	4.5-7.5k		4.5*		TI
TI XM12•		20•	(Germanium)		5-25	2	6-20k	3.5			TI
TI XM301•		20•	(Germanium)		5-25	1.8	6.5-20k	3.5		72	TI
TI XS35		30	10		10-50		10-20k		12*	12	TI
TI XS36		30•	10		40-200		10-20k		12*	12	TI
TI XS67•	•		.05		.01		3.5-6.5k		10*		TI
TI XS78		300•	2		2-10		750-3000		15*		TI
TI XS79		200•	2		2-10		750-3000		18*		TI
TI XS80			10		5-25		2.5-10k		17*	72	TI
TI XS81			10		15-75		2.5-10k		17*	72	TI
U110•	300	20•	4	10	1-1		110 min	6	6*	18	Scx
U112•	300	20•	10	10	9-9		1000 min	8	17*	18	Scx
U133•	300	50•	3		3-1.5	.5	330 min	4	10*	18	Scx
U139•	300	30•	10		9-35		7000 min	7	16*	78	Scx
U139D•	300	20•	10		4-50		5000 min	10	16*	78	Scx
U146•	300	20•	10		.025 min		60 min	6	6*	18	Scx

TYPE NO.	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{OG} (pf) C _{is} * (pf)	DIM	MFR
			na @	μa @							
			25C	150C							
				125C⊕ 100CΔ 85C*							
N	Junc										
P●	IGFET●		TYP●			TYP					
						MAX●					
UC201		50●	.1		15 min			8	7*	72	UC
UC210	350	50●	.1	.5	4-12	.5●	4500 min	4	7*	72	UC
UC220	250	50●	.1	.5	1-5	.5●	3000 min	2.5	7*	72	UC
UC240		50●	.1	.5	1-10		1200 min	5	18*	18	UC
UC250	500	30●	1	1	50-150		20,000 min	10	25*	18	UC
UC251	500	30●	1	1	7.5-75		12 000 min	6	25*	18	UC
UC400●	350	30●	.1	.5	5-15	.5●	3000 min	6	8*	72	UC
UC401●		30●	.1		8 min			8	8*	72	UC
UC410●	180	30●	.1	.5	2-6	.5●	2250 min	4	8*	72	UC
UC420●	75	30●	.1	.5	.5-2.5	.5●	1500 min	2.5	8*	72	UC
UC450●		25●	.25		25-75		10 000 min	10	25*	18	UC
UC451●	500	25●	.25	1	3.75-37.5		6000 min	6	25*	18	UC
UC701		40●	.2		1-3	4●	150-1500	6	3*	72	UC
UC703		40●	.5		1-10	2●	500-5000	6	6*	72	UC
UC704		40●	.5		.2-24	2●	1-10k	8	8*	72	UC
UC705		40●	1		.5-50	2●	2-20k	8	12*	72	UC
UC707		20●	2		2.5-250		5-50k	12	30*	18	UC
UC714		30●	1		2-20	2●	2-6.5k	8	8*	72	UC
UC734		30●	5	1.5Δ	4-20		3.5-6.5k	8	4*		UC
UC750		30●	2		.05 min		120 min	6	6*	18	UC
UC751		30●	2		.1 min		350 min	6	10*	18	UC
UC752		30●	6		.3 min		1000 min	6	17*	18	UC
UC753		30●	10		.9 min		2500 min	6	25*	18	UC
UC801●		25●	.2		.05-15	4●	75-750	6	3*	72	UC
UC803●		25●	.5		.05-5	2●	250-2500	6	6*	72	UC
UC804●		25●	.5		.1-12	2●	500-5000	8	8*	72	UC
UC805●		25●	1		.3-25	2●	1-10k	8	12*	72	UC
UC807●		20●	2		1-125		2.5-25k	12	30*	18	UC
UC814●		25●	2		.3-15	2●	800-5000	8	16*	72	UC
UC850●		20	2		.1-1		110 min	6	6*	18	UC
UC851●		20	4		.9-9		1000 min	6	17*	18	UC
UC852●		25●	2		.025 min		60 min	6	6*	18	UC
UC853●		25●	4		.065 min		180 min	6	10*	18	UC
UC854●		25●	15		.2 min		540 min	6	17*	18	UC
UC855●		25●	50		.44 min		1400 min	6	25*	18	UC
□UC2130		50●	.1		.5-4.5	.5	1000 min		4*	CO-71 UC	
□UC2132		50●	.1		.5-4.5	.5	1000 min		4*	CO-71 UC	
□UC2134		50●	.1		.5-4.5	.5	1000 min		4*	CO-71 UC	
□UC2136		50●	.1		.5-4.5	.5	1000 min		4*	CO-71 UC	
□UC2138		50●	.1		.5-4.5	.5	1000 min		4*	CO-71 UC	
□UC2139		30●	.2		.2-6	2	750 min		5*	CO-71 UC	
□UC2149		30●	.2		.5-15	2	1000 min		6*	CO-71 UC	

TYPE NO.	DISS (mw)	BV (min) BV _{DGO} BV _{GSS} ● BV _{DSS} ⊕ BV _{DSX} *	I _{GSS} (max)		I _{DSS} (ma)	NF (db)	g _m (μmhos)	V _p (max)	C _{OG} (pf) C _{is} * (pf)	DIM	MFR
			na @	μa @							
			25C	150C							
				125C⊕ 100CΔ 85C*							
N	Junc										
P●	IGFET●		TYP●			TYP					
						MAX●					
U147●	300	20●	20		.065 min		180 min	6	10*	18	Scx
U148●	300	20●	60		.2 min		540 min	6	17*	18	Scx
U149●	300	20●	200		.44 min		1400 min	6	30*	18	Scx
U168●	300	20●	30		.6-6		800 min	5	65*	18	Scx
U183	200	25●	2		2-20		2-6.5k	8	8*	72	Scx
U197	300	30●	.5		.1-1		200 min	1	7*	18	Scx
U198	300	30●	.5		.6-6		600 min	4	7*	18	Scx
U199	300	30●	.5		3-20		1500 min	10	7*	18	Scx
U200		30●	1		3-25			3	30*	18	Scx
U201		30●	1		15-75			5	30*	18	Scx
U202		30●	1		30-150			10	30*	18	Scx
U203	300	30●	1		.5-2	3●	300-2000	5	6*	72	Scx
U204	300	30●	1		.5-2	.5●	300-2000	5	6*	72	Scx
U221	3000	50	1		50-110			8	20	5	Scx
U222	3000	50	1		100-250			10	20	5	Scx
□U231		50●			.5-5		1000 min	4.5		SI-71	Scx
□U232		50●			.5-5		1000 min	4.5		SI-71	Scx
□U233		50●			.5-5		1000 min	4.5		SI-71	Scx
□U234		50●	50 pa		.5-5		1000 min	4.5		SI-71	Scx
□U235		50●	50 pa		.5-5		1000 min	4.5		SI-71	Scx
U1277	300	50	.1	.2	1.5-8	2●	450 min	8	1.2	18	Aml
U1278	300	50	.1	.2	.5-3	2●	350 min	4.5	1.2	18	Aml
U1279	300	50	.1	.2	.2-1.5	2●	250 min	2.5	1.2	18	Aml
U1280	300	50	.1	.2	.1-10	2●	250 min	10	1.2	18	Aml
U1281	300	50	.5	1	8 min		3000 min	8	5	18	Aml
U1282	300	50	.5	1	4-20		2500 min	4.5	5	18	Aml
U1283	300	50	.5	1	1-10		1500 min	2.5	5	18	Aml
U1284	300	50	.5	1	.2-40		1000 min	10	5	18	Aml
U1285	300	30	5		.1 min		200-1200	8	2	18	Aml
U1286	300	30	10		.2 min		1-10k	8	8	18	Aml
U1325	300	30	.1	.2	.1-5		500 min	1.2	1.3	18	Aml
UC20		30	.01		.4-2		300 min	5	2*	72	UC
UC21		30	.01		.12-6		200 min	2.5	2*	72	UC
UC22		30●	.01		.4-2		300 min	5	1.3*	CC-3	UC
UC23		30●	.01		.12-6		200 min	2.5	1.3*	CC-3	UC
UC40●		30●	.01		.2-1		150 min	5	2.5*	72	UC
UC41●		30●	.01		.06-3		100 min	2.5	2.5*	72	UC
UC42●		30●	.01		.2-1		150 min	5	1.4*	CC-3	UC
UC43●		30●	.01		.06-3		100 min	2.5	1.4*	CC-3	UC
UC155		30●	.1		10 min			10	4*	72	UC
UC155W		30●	.1		10 min			10	3.5*	CC-3	UC
UC200	350	50●	.1	.5	10-30	.5●	6000 min	6	7*	72	UC

UNIUNCTION TRANSISTORS

Unijunction transistors are listed in numerical order according to EIA-JEDEC type. Manufacturers' type designations follow.

KEY

TYPE NO.	DISS	R _{BB}	η	I _V (ma min)	I _P (μ a max)	V _{E SAT} (@ 50 ma)	I _{EO} @ V _{EB2} (μ a/vmax)	DIM	MFR
TYPE NO. Number identifying unijunction transistor.	DISS —Power dissipation at 25C ambient expressed in milliwatts.	R_{BB} —Interbase resistance expressed in kilohms.	η —Intrinsic standoff ratio.	Min I_V —Minimum valley current in milliamps.	Max I_P —Maximum peak point current in microamps.	V_{E (SAT)} —Emitter saturation voltage with 50-ma emitter current and 10v interbase voltage.	Max I_{EO} @ V_{EB2} —Maximum emitter reverse current in microamps with V _{EB2} applied.	DIM —Case dimensions are given by relating to similar TO case.	MFR Manufacturers currently supplying the type. Abbreviations are listed on pp. 22-27.

BISSETT BERMAN E-CELL*

Timing & Integrating Components

- μ Watt Power Drain
- One-Shot or Reusable
- Military or Commercial Specs
- Timing Range: Seconds to Months
- Integrating Range: 1 to near ∞ Events



1. WHAT IS AN E-CELL DEVICE?

*An E-CELL device is a new kind of circuit element that looks like a discrete electronic component but does the work of a complex assembly. Its main functional part is a center electrode, which is surrounded by an electrolyte; the metallic container also serves as the second electrode. In terms of its physical operation, an E-CELL unit is a reversible micro-coulometer, i.e. it converts the current-time integral of an electrical function into an equivalent mass integral (or the converse operation) up to a maximum of several thousand microampere-hours. Exactly one atom is transferred for each electron impressed on the E-CELL unit. Power drain is normally in the microwatt region. The mass integral can be read out at a known current, the time to read it out being proportional to the original integral. When a mass is given as part of the initial condition, this same process generates a precise time interval.

2. WHAT DOES AN E-CELL DEVICE DO?

For *timing* applications a constant current is applied to a *pre-charged* E-CELL unit. The selected time delay is determined by a combination of the E-CELL type and the specific constant current being used. The range of timing is from seconds to months. The output voltage swing that occurs when the mass has been completely transferred is normally used as a bias transition with semiconductor devices. For *integration* applications an *uncharged* E-CELL unit accepts d-c, periodic, or random inputs in any waveshape and stores these as the mass equivalent of a current-time integral. Readout is handled in essentially the same manner that the timing function is handled for a pre-charged E-CELL unit, i.e. the measured time required to reach the point of the abrupt voltage swing, multiplied by the readout current, will be the accumulated charge integral. This could represent the total "count" of a series of events analogous to the input pulses.

3. APPLICATIONS

The scope of applications is as broad as timing and counting functions themselves. New uses are continually being devised. Here are two prime applications areas:

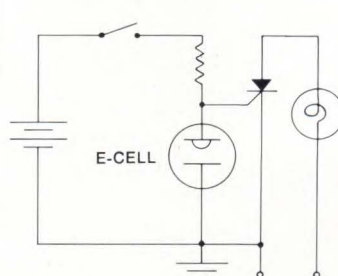
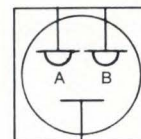
Control: You can use E-CELL devices in circuits for timing, gating, starting, stopping, delaying, relaying, monitoring, actuating, sequencing, measuring—wherever the control condition can be represented by an electrical signal.

Information Handling: You can use E-CELL devices in circuits for data capture, totaling and subtotaling time periods or discrete events, elapsed time logging, running time monitoring, out-of-limits logging, maintenance status reporting, real-time analog computing—wherever the input data can be represented by an electrical signal. Readout can be formatted as either analog or digital data.

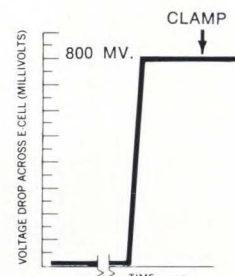
PART NUMBER	PHYSICAL CHARACTERISTICS
400 SERIES 	Single anode cell with leads; mil specs; $\pm 4\%$ charge accuracy; -55°C to $+75^{\circ}\text{C}$.
410† SERIES 	Dual anode cell, with leads; mil specs; $\pm 5\%$ anode B charge accuracy; -55°C to $+75^{\circ}\text{C}$.
450 SERIES 	Single anode cell, plug-in, commercial specs; $\pm 10\%$ charge accuracy, -10°C to $+50^{\circ}\text{C}$. Sockets available: order Part No. SK-10449.
460 SERIES 	Single anode cell, with leads, commercial specs; $\pm 10\%$ charge accuracy, -10°C to $+50^{\circ}\text{C}$.

Actual size shown. E-CELL trademark and patents applied for.

†No. 410 Dual cells are available on special order with anode A charges from 0 to 40 $\mu\text{amp-hr}$ and anode B charges from 0 to 6400 $\mu\text{amp-hr}$.



Typical circuit using E-CELL timing component.



Typical E-CELL voltage rise.

E-CELL TIMING COMPONENTS		
TYPE	NOMINAL CHARGE	NOMINAL RANGE
400-0040	4 $\mu\text{amp-hr}$	0.04-0.5 hr
450-0040	4 $\mu\text{amp-hr}$	0.04-0.5 hr
460-0040	4 $\mu\text{amp-hr}$	0.04-0.5 hr
400-0400	40 $\mu\text{amp-hr}$	0.4-20 hr
450-0400	40 $\mu\text{amp-hr}$	0.4-20 hr
460-0400	40 $\mu\text{amp-hr}$	0.4-20 hr
400-2400	240 $\mu\text{amp-hr}$	2.4-80 hr
450-2400	240 $\mu\text{amp-hr}$	2.4-80 hr
460-2400	240 $\mu\text{amp-hr}$	2.4-80 hr
400-1441	1440 $\mu\text{amp-hr}$	14-480 hr
450-1441	1440 $\mu\text{amp-hr}$	14-480 hr
460-1441	1440 $\mu\text{amp-hr}$	14-480 hr
400-3001	3000 $\mu\text{amp-hr}$	30-1000 hr
450-3001	3000 $\mu\text{amp-hr}$	30-1000 hr
460-3001	3000 $\mu\text{amp-hr}$	30-1000 hr

E-CELL INTEGRATING COMPONENTS		
TYPE	CHARGE	NOMINAL INTEGRATING RANGE
400-0001	None	0-100 $\mu\text{amp-hr}$
450-0001	None	0-100 $\mu\text{amp-hr}$
460-0001	None	0-100 $\mu\text{amp-hr}$
400-0002	None	100-500 $\mu\text{amp-hr}$
450-0002	None	100-500 $\mu\text{amp-hr}$
460-0002	None	100-500 $\mu\text{amp-hr}$

Specifications subject to change without notice.

For additional technical information and applications notes, contact: Components Division, The Bissett-Berman Corporation, 3860 Centinela Avenue, Los Angeles, California 90066; Telephone (213) 390-3585; TWX: 910-342-6880.

Circle No. 57 on Reader Service Card for more information.

UJT'S

2N489-5G516

TYPE NO.	DISS (mw)	R _{BB} (kilohms)	η	I _V (ma min)	I _P (μ a max)	V _E SAT (@ 50 ma)	I _{EO} @ V _{EB2} (μ a/v max)	DIM	MFR
2N2420B	390	6.2-9.1	.56-.68	8	6	4.3	2 @ 30	18	GE
2N2421	390	4.7-6.8	.62-.75	8	12	5	2 @ 60	18	GE
2N2421A	390	4.7-6.8	.62-.75	8	12	4.6	2 @ 60	18	GE
2N2421B	390	4.7-6.8	.62-.75	8	6	4.6	2 @ 30	18	GE
2N2422	390	6.2-9.1	.62-.75	8	12	5	2 @ 60	18	GE
2N2422A	390	6.2-9.1	.62-.75	8	12	4.6	2 @ 60	18	GE
2N2422B	390	6.2-9.1	.62-.75	8	6		2 @ 30	18	GE
2N2646	300	4.7-9.1	.56-.75	4	5	3.5	12 @ 30	18	GE, Mot, NPC
2N2647	300	4.7-9.1	.68-.82	8	2	3.5	2 @ 30	18	GE, Mot, NPC
2N2840	300	4.7-9.1	1.3-1.5	2-7	10		1 @ 30	18	GE
2N3980	360	4-8	.68-.82	1	2	3	.01 @ 30	18	Mot, TI
2N4851	300	4.7-9.1	.56-.75	2	2	2.5	.1 @ 30	18	Mot
2N4852	300	4.7-9.1	.70-.85	4	2	2.5	.1 @ 30	18	Mot
2N4853	300	4.7-9.1	.70-.85	6	4	2.5	.05 @ 30	18	Mot
2N4870	300	4-9.1	.56-.75	2	5	2.5	1 @ 30	92	Mot
2N4871	300	4-9.1	.70-.85	4	5	2.5	1 @ 30	92	Mot
2N4891		4-9.1	.55-.82				.01	92	TI
2N4892		4-9.1	.51-.69				.01	92	TI
2N4893		4-12	.55-.82				.01	92	TI
2N4894		4-12	.74-.86				.01	92	TI
2N4947		4-9.1	.51-.69				.01		TI
2N4948	360	4-12	.55-.82	2	2	3	.01 @ 30	18	Mot, TI
2N4949	360	4-12	.74-.86	2	1	3	.01 @ 30	18	Mot, TI
D5E29		4.7-9.1	.68-.82	4	25		12 @ 30	18	GE
D5E35		4.7-9.1	.68-.82	Frequency 360-440			12 @ 30	18	GE
D5E36		4.7-9.1	.68-.82	380-420			1 @ 30	18	GE
D5K1	300	5.5-8.2	.58-.62	1	5	1.5	.01 @ V _{EB1} = 5	18	GE
D5K2	200	5-15	.58-.62	1	15	1.5	.1 @ V _{EB1} = 5	18	GE
MU4891	300	4-9.1	.55-.82	2	5	4	.01 @ 30	92	Mot
MU4892	300	4-9.1	.51-.69	2	2	4	.01 @ 30	92	Mot
MU4893	300	4-12	.55-.82	2	2	4	.01 @ 30	92	Mot
MU4894	300	4-12	.74-.86	2	1	4	.01 @ 30	92	Mot
TIS43		4-9.1	.55-.82	2	5	4	.01	92	TI
5G514		4.7-9.1	.47-.62	8	25		12 @ 30	18	GE
5G515		4.7-9.1	.47-.62	8	25		12 @ 30	18	GE
5G516		4.7-9.1	.47-.62	8	6		.2 @ 30	18	GE

TYPE NO.	DISS (mw)	R _{BB} (kilohms)	η	I _V (ma min)	I _P (μ a max)	V _E SAT (@ 50 ma)	I _{EO} @ V _{EB2} (μ a/v max)	DIM	MFR
2N489	450	4.7-6.8	.51-.62	8	12	5	2 @ 60	5	GE, TI
2N489A	450	4.7-6.8	.51-.62	8	12	4	2 @ 60	5	GE, TI
2N489B	450	4.7-6.8	.51-.62	8	6	4	2 @ 30	5	GE, TI
2N490	450	6.2-9.1	.51-.62	8	12	5	2 @ 60	5	GE, TI
2N490A	450	6.2-9.1	.51-.62	8	12	4	2 @ 60	5	GE, TI
2N490B	450	6.2-9.1	.51-.62	8	6	4	2 @ 30	5	GE, TI
2N490C	600	6.2-9.1	.51-.62	8	2	4	.02 @ 30	5	GE
2N491	450	4.7-6.8	.56-.68	8	12	5	2 @ 60	5	GE, TI
2N491A	450	4.7-6.8	.56-.68	8	12	4.3	2 @ 60	5	GE, TI
2N491B	450	4.7-6.8	.56-.68	8	6	4.3	2 @ 30	5	GE, TI
2N492	450	6.2-9.1	.56-.68	8	12	5	2 @ 60	5	GE, TI
2N492A	450	6.2-9.1	.56-.68	8	12	4.3	2 @ 60	5	GE, TI
2N492B	450	6.2-9.1	.56-.68	8	6	4.3	2 @ 30	5	GE, TI
2N492C	600	6.2-9.1	.56-.68	8	2	4.3	.02 @ 30	5	GE
2N493	450	4.7-6.8	.62-.75	8	12	5	2 @ 60	5	GE, TI
2N493A	450	4.7-6.8	.62-.75	8	12	4.6	2 @ 60	5	GE, TI
2N493B	450	4.7-6.8	.62-.75	8	6	4.6	2 @ 30	5	GE, TI
2N494	450	6.2-9.1	.62-.75	8	12	5	2 @ 60	5	GE, TI
2N494A	450	6.2-9.1	.62-.75	8	12	4.6	2 @ 60	5	GE, TI
2N494B	450	6.2-9.1	.62-.75	8	6	4.6	2 @ 30	5	GE, TI
2N494C	600	6.2-9.1	.62-.75	8	2	4.6	.02 @ 30	5	GE, TI
2N1671	450	4.7-9.1	.47-.62	8	25	5	12 @ 30	5	GE, TI
2N1671A	450	4.7-9.1	.47-.62	8	25	5	12 @ 30	5	GE, TI
2N1671B	450	4.7-9.1	.47-.62	8	6	5	2 @ 30	5	GE, TI
2N16710	450	4.7-9.1	.47-.62	8	2	5	.02 @ 30	5	GE
2N2160	450	4-12	.47-.80	8	25		12 @ 30	18	GE, TI
2N2417	390	4.7-6.8	.51-.62	8	12	5	2 @ 60	18	GE
2N2417A	390	4.7-6.8	.51-.62	8	12	4	2 @ 60	18	GE
2N2417B	390	4.7-6.8	.51-.62	8	6	4	2 @ 30	18	GE
2N2418	390	6.2-9.1	.51-.62	8	12	5	2 @ 60	18	GE
2N2418A	390	6.2-9.1	.51-.62	8	12	4	2 @ 60	18	GE
2N2418B	390	6.2-9.1	.51-.62	8	6	4	2 @ 30	18	GE
2N2419	390	4.7-6.8	.56-.68	8	12	5	2 @ 60	18	GE
2N2419A	390	4.7-6.8	.56-.68	8	12	4.3	2 @ 60	18	GE
2N2419B	390	4.7-6.8	.56-.68	8	6	4.3	2 @ 30	18	GE
2N2420	390	6.2-9.2	.56-.68	8	12	5	2 @ 60	18	GE
2N2420A	390	6.2-9.1	.56-.68	8	12	4.3	2 @ 60	18	GE

General Electric introduces the smallest 50mw, 2-amp relay on the market



Tiny, powerful
and turned on with the touch of a feather

This extra-small, 2-pole, 2-amp relay needs only the slightest tickle to operate—50 milliwatts. With this impulse, it performs standard high-level output switching from low-level, microelectronic input.

Sizewise, it's only 0.32" high, 0.31" wide, and 0.61" long. And, it meets or exceeds all MIL-Spec environmental and electrical requirements of relays many times larger.

Because of its low operate power and size, this relay is ideally suited for microelectronic applications. Its low profile lets you stack many more circuit boards in the same space.

Like all General Electric 150-grid relays, this new 50mw type is available with a number of options to suit your individual application. You have a choice of coil ratings for a wide range of system voltages, a choice of popular mounting forms and header types.

If this new relay tickles your fancy, contact your General Electric Electronic Components Sales Engineer. Or, write for Bulletin GEA-8589, Section 792-43, General Electric Company, Schenectady, New York 12305.



GENERAL  ELECTRIC

SPECIALTY CONTROL DEPARTMENT, WAYNESBORO, VIRGINIA

Circle No. 58 on Reader Service
Card for more information.

DIODES AND RECTIFIERS

Semiconductor diodes and rectifiers carrying numbers registered with the EIA are listed in numerical order. Construction, service classifications, performance ratings and case types are shown. Only those devices currently being manufactured are included in the listing. A list of manufacturers for these devices appears on p. 144.

KEY

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	• GP	• BLK	• MIX	• DET	• REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	SAT			MAG	V_{op}	(amp/v)		(ma/v)	MIL
TYPE—Diode identification number. Shading over the number indicates that diode is made of germanium. Others are silicon unless otherwise noted. CMP GP—• Dot indicates general-purpose diode. Shading indicates suitability for high-speed computer switching. SAT BLK—• Dot indicates high back resistance. Shading indicates high forward conductance. MIX—• Dot indicates suitability for general RF mixer service. DET—• Dot indicates suitability for general RF detector service. DIM—Refers to case outlines on p. 143. Some only approximate case type and specs should be referred to for exact dimensions. Sp indicates that the case is unlike any outline listed. Shading indicates that a military-approved version is available. I_R/V_R—Point on reverse characteristic in microamps and volts. Shading denotes milliamps and volts. AV indicates full cycle average or average reverse current. TEMP—Temperature at which characteristic points are taken. Applies particularly to reverse characteristic. I_f/V_f—Point on forward characteristic in milliamps and volts. Shading indicates amps and volts. AV indicates full cycle average or average forward current. PRV V_{op}—Peak inverse voltage. Shading indicates maximum continuous working volts, which is less than PIV. MAG RECT—• Dot indicates rectifier. Shading indicates suitability for magnetic amplifiers.										

(Continued)

announcing: the new standard of computer diode reliability

NITRODES™

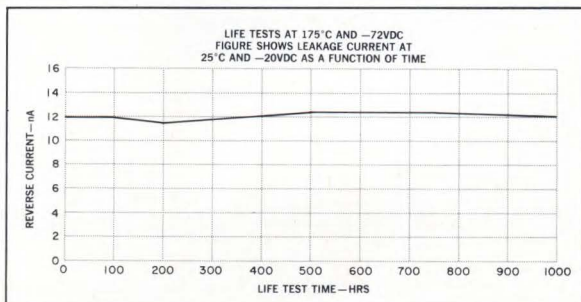
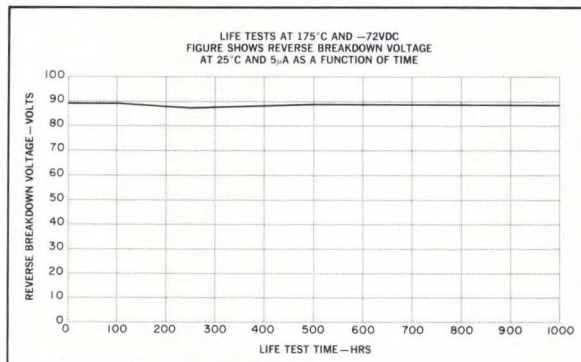
a General Instrument exclusive



Millions of NITRODES currently in customer equipments and extensive testing have shown conclusively that which had previously been generally hypothesized:—that semiconductor devices passivated with silicon nitride rather than with silicon dioxide would demonstrate unprecedented reliability. General Instrument NITRODES are the industry's first and only silicon nitride passivated computer diodes. Their inherent reliability is derived from the total imperviousness of silicon nitride to the migration of sodium ions, and its extreme chemical inertness. As a result, many of the most common modes of diode failure — unstable reverse breakdown, increasing leakage current and the effects of contamination occurring during chip handling and packaging — are minimized. *In fact, the failure rates measured on NITRODES are an order of magnitude less than those obtained with oxide passivated units.*

Now in mass production, NITRODES are available in a series of epitaxial planar diodes having tightly controlled forward characteristics as well as low capacitance and ultra-fast switching speeds. NITRODES' reliability is parametrically defined by operational ratings at 175°C, the highest such rating available in standard diodes today. They are packaged in the popular DO-35 size employing whiskerless, unitized construction. Although primarily intended for fast switching computer applications, they are also ideal for general purpose applications including low power rectification, RF switching, voltage regulation and a large number of other uses.

Write for full information. (In Europe, to: General Instrument Europe, Via Turati 28, Milano, Italy.)



The figures above show the extreme stability of NITRODES under high temperature DC blocking test conditions.



GENERAL INSTRUMENT CORPORATION • 600 WEST JOHN STREET, HICKSVILLE, L. I., NEW YORK

Circle No. 59 on Reader-Service Card for more information.

Diodes and Rectifiers

1N34-1N191

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N107	•	10	150/1	25	200/10	C1
1N108	•	50	50/1	25	200/10	C1
1N109	Harmonic Gen.	15	1/1		100/3	C1
1N111	•	60	5/1	25	25/10	C1
1N112	•	60	5/1	25	50/10	C1
1N113	•	60	5/1	25	25/10	C1
1N114	•	60	5/1	25	50/10	C1
1N115	•	60	5/1	25	100/10	C1
1N116	•	75	5/1	25	100/50	C1
1N116A	•	75	10/1	25	100/50	C1
1N117	•	75	10/1	25	100/50	C1
1N117A	•	75	20/1	25	100/50	C1
1N118	•	60	20/1	25	100/50	C1
1N118A	•	60	40/1	25	100/50	C1
1N119	•	90	5/1	25	500/50	C7
1N119A	•	75	5/1	55	500/50	C1
1N120	•	90	5/1	25	250/50	C7
1N120A	•	75	5/1	55	250/50	C1
1N125	•	25	.05/.25	25	25/1.5	C1
1N126	•	75	5/1	25	850/50	C1
1N126A	•	75	5/1	25	50/10	C1
1N127	•	100	5/1	25	300/50	C1
1N127A	•	125	3/1	25	25/10	C1
1N128	•	50	3/1	25	10/10	C1
1N128A	•	50	3/1	25	10/10	C1
1N132	•			25	500/50	C1
1N133	•		3/5	25	30/6	C1
1N134	•					
1N135	•	75	5/1	25	850/50	C1
1N137A,B	•	36	3/1	25	.03/20	C9
1N138A,B	•	18	5/1	25	.01/10	C9
1N139	•	40	20/1	25	1500/50	C1
1N140	•	70	40/1	25	300/50	C1
1N141	•	70	20/1	25	50/50	C1
1N142	•	100	5/1	25	100/100	C1
1N143	•	100	40/1	25	100/100	C1
1N144	•	30	100/1	25	200/20	C1
1N145	•	40	40/1	25	100/10	C1
1N147A	•		200/3	25	35/5	C1
1N148	•		0.26/0.25	25	350/10	C1
1N151	•	100			1 AV	T1
1N152	•	200			1 AV	T1
1N153	•	300			1 AV	T1
1N158	•	400			1 AV	T1
1N175	•	125	5/1	25	50/50	C1
1N191	•	90	5/1	25	125/50	C1

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N67	•	100	35AV	25	50/50	C1
1N67A	•	100	4/1		5/5	C1
1N68	•	120	35 AV	25	625/100	C1
1N68A	•	130	3/1		625/100	C7
1N69	•	75	40 AV	25	50/10	C1
1N69A	•	75	5/1	25	500/50	C1
1N70	•	125	3/1	25	300/50	C1
1N70A	•	125	3/1	25	300/50	C1
1N71	• 4 matched diodes	100	15/1	25	300/30	C1
1N73	• 4 matched diodes	75	15/1.3	25	5/10	C1
1N74	• 4 matched diodes	75	15/1.3		5/10	SP
1N75	•	100	5/1	25	50/50	C1
1N75A	•	125	5/1	25	50/50	C1
1N76		7.5v min. output				R3
1N76A,C		40v min output				R3
1N79		Meter rectifier				R1
1N81	•	50	3/1	25	10/10	C1
1N81A	•	50	3/1	25	10/10	C1
1N82A	•	5	5/0.5	25	100/0.5	C1
1N83	•	375	5/1	25	30/60	C1
1N84	•	30	60/1	25	750/15	C1
1N86	•	85	4/1	25	833/50	C1
1N87	•	30	.1/.25		30/1.5	C1
1N87A	•	30	10/1		30/1.5	C1
1N88	•	110	5/1		100/50	C1
1N89	•	100	3.5/1		100/50	C1
1N90	•	75	5/1		500/50	C1
1N91	•	100	150 AV		1.35 AV	C1
1N92	•	200	100 AV		.95 AV	C1
1N93	•	300	75 AV		.6 AV	C1
1N95	•	75	10/1	25	500/50	C1
1N96	•	60	20/1	25	500/50	C1
1N96A	•	60	40/1	25	500/50	C1
1N97	•	80	10/1	25	100/50	C1
1N97A	•	100	20/1	25	100/50	C1
1N98	•	80	20/1	25	100/50	C1
1N98A	•	80	40/1	25	100/50	C1
1N99	•	100	10/1	25	50/50	C1
1N99A	•	100	20/1	25	50/50	C1
1N100	•	80	20/1	25	50/50	C1
1N100A	•	40	40/1	25	50/50	C1
1N101	•	250	10/1	25	10/40	C1
1N102	•	125	50 AV	25	3/25	C1
1N103	•	20	30/1	25	750/15	C1
1N104	•	25	30/1	25	750/15	C1
1N105	•	30	$R_{rec} = 150k$			C1
1N106	•	375	20/1	25	200/300	C1

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N34	•	75	5/1		500/50	C7
1N34A	•	75	5/1		500/50	C1
1N35	•	Matched pair of 1N34's				SP
1N36	•	40	4/1	25	100/25	SP
1N37A,B	•	36	3/1	25	30/20	C7
1N38	•	120	4/1		5/3	C7
1N38A,B	•	120	4/1		5/3	C7
1N39	•	225	3/1	25	200/100	C1
1N39A,B	•	225	3/1	25	600/200	C1
1N40	• 4 matched diodes	75	12.8/1.5	25	30/10	C1
1N41	• 4 matched diodes	75	12.8/1.5	25	30/10	C1
1N42	• 4 matched diodes	120	12.8/1.5	25	25/10	C1
1N43	•	60	5/1	25	900/50	C1
1N44	•	115	3/1	25	1000/50	C1
1N45	•	110	3/1	25	410/50	C1
1N46	•	80	3/1	25	1500/50	C1
1N47	•	115	3/1	25	410/50	C1
1N48	•	85	4/1	25	660/40	C1
1N49	•	50	4/1		200/20	C1
1N50	•	50	4/1		80/20	C1
1N51	•	50	25 AV	25	500/100	C1
1N52	•	70	5/1	25	150/50	C1
1N52A	•	85	5/1	25	100/50	C1
1N54	•	75	5/1	25	10/10	C1
1N54A	•	75	5/1	25	10/10	C1
1N55	•	150	5/1	25	300/100	C1
1N55A,B	•	150	5/1	25	500/150	C1
1N56	•	30	15/1	25	300/30	C1
1N56A	•	40	15/1	25	300/30	C1
1N57	•	100	3.6/1	24	300/75	C1
1N57A	•	90	4/1	25	300/75	C1
1N58	•	120	4/1		600/100	C1
1N58A	•	120	4/1		600/100	C1
1N59	•	275	3/1	25	800/250	C1
1N60	•	30	5/1		40/20	C7
1N60A	•	30	3/1	25	1/40	C1
1N61	•	140	5/1	25	700/125	C1
1N62	•	140	5/1	25	700/100	C1
1N63	•	125	4/1		50/50	C7
1N63A	•	120	4/1	25	50/50	C1
1N64	•	25	50/1	25	100/10	C1
1N64A	•	30	.01 AV		800/50	C1
1N65	•	70	5/1	25	200/50	C1
1N65A	•	110	5/1	25	200/50	C1
1N66	•	60	5/1	25	800/50	C1
1N66A	•	70	30 AV	25	50/10	C1

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	• GP • • BLK • • MIX • • DET • • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N192		90	5/1	25	50/10	C1
1N194	•	50	1.5/2	25	60/40	C1
1N194A	•	50	40/1	25	10/40	C1
1N195	•	50	2/2	25	80/40	C1
1N196	•	50	1/2	25	40/40	C1
1N198	•	100	5/1	75	250/50	C1
1N198A,B	•	100	4/1	25	50/50	C1
1N200	•	7.5	50/1	25	5/6.8	C9
1N201	•	9	35/1	25	5/8.2	C9
1N202	•	11	30/1	25	5/10	C9
1N203	•	13.5	23/1	25	5/12	C9
1N204	•	17	17/1	25	5/15	C9
1N205	•	20	12/1	25	1/18	C9
1N206	•	25	9/1	25	1/22	C9
1N207	•	30	7/1	25	1/27	C9
1N208	•	37	5.5/1	25	1/33	C9
1N209	•	43	4.5/1	25	1/39	C9
1N210	•	52	3.5/1	25	1/47	C9
1N211	•	62	2.7/1	25	1/56	C9
1N212	•	75	2/1	25	1/68	C9
1N213	•	90	1.5/1	25	1/82	C9
1N214	•	110	1.2/1	25	1/100	C9
1N215	•	135	.9/1	25	1/120	C9
1N216	•	170	.7/1	25	5/150	C9
1N217	•	200	6.5/4	25	5/180	C9
1N218	•	250	6/4	25	5/220	C9
1N219	•	300	3/4	25	5/270	C9
1N220	•	370	2.2/4	25	5/330	T4
1N221	•	430	2/4	25	5/390	T4
1N222	•	520	1.5/4	25	5/470	T4
1N248	•	50	10 AV	150	5 AV	S2
1N248A,B,C	•	50	20 AV	150	5 AV	S2
1N249	•	100	10 AV	150	5 AV	S2
1N249A,B,C	•	100	20 AV	150	5 AV	S2
1N250	•	200	10 AV	150	5 AV	S2
1N250A,B,C	•	200	20 AV	150	5 AV	S2
1N251	•	30	5/1	25	2/10	C1
1N251A	•		5/1	25	1/10	C1
1N252	•	20	10/1	25	1/5	C1
1N252A	•		10/1	25	1/10	C1
1N253	•	95	1000/1.5	135	10/75	S1
1N254	•	190	500/1.5	135	10/150	S1
1N255	•	380	500/1.5	135	10/350	S1
1N256	•	570	500/2	135	20/500	S1
1N265	•	100	4/1	25	1/60	C1
1N266	•	60	5/1	25	.75/30	C1

(Continued)

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	• GP • • BLK • • MIX • • DET • • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N267	•	50	5/1	25	.12/10	C1
1N268	•	50	6/1	25	25/10	C1
1N270	•	80	200/1	25	100/50	C1
1N273	•	30	100/1	25	20/20	C1
1N276	•	50	40/1	25	20/10	C1
1N277	•	100	100/1	25	250/50	C1
1N278	•	50	20/1	25	125/50	C1
1N279	•	30	100/1	25	200/20	C1
1N281	•	60	100/1	25	30/10	C1
1N282	•	15	40/1			
1N283	•	20	200/1	25	20/10	C1
1N287	•	47	20/1	25	1500/50	C1
1N288	•	70	40/1	25	350/50	C1
1N289	•	70	20/1	25	50/50	C1
1N290	•	100	5/1	25	100/100	C1
1N291	•	100	40/1	25	100/100	C1
1N292	•	60	100/1	25	200/50	C1
1N294	•	60	5/1	25	800/50	C1
1N294A	•	70	30 AV	25	10/10	C1
1N295	•	50	3/1	25	200/10	C1
1N295A	•	50	35 AV	25	200/10	C1
1N296	•	25	5/1	25	200/10	C1
1N297	•	80	3.5/1	25	100/100	C1
1N297A	•	120	3.5/1	25	10/5	C1
1N298	•	70	30/2	50	250/40	C1
1N298A	•	85		50	250/40	C1
1N299	•	50	3/5	25	200/6	C1
1N300	•	15	15/1	25	.001/10	C1
1N300A,B	•	15	30/1	25	.001/10	C1
1N301	•	70	5/1	25	.01/10	SP
1N301A,B	•	70	18/1	25	.01/10	
1N302	•	225	1/1	25	.01/10	SP
1N302A,B	•	225	5/1	25	.01/10	
1N303	•	125	3/1	25	.01/1	SP
1N303A,B	•	125	12/1	25	.01/10	
1N304	•	70	2/1.5	25	2/10	C1
1N305	•	60	100/8	25	2/10	C1
1N306	•	15	100/8	25	2/10	C1
1N307	•	125	100/1	25	5/10	C1
1N308	•	8	300/1	25	500/8	C1
1N309	•	30	100/1	25	100/20	C1
1N310	•	100	15/1	25	100/100	C1
1N312	•	50	30/1	25	50/50	C1
1N313	•	100	20/1	25	10/20	C1
1N314	•	75	15/1	85	50/10	C1
1N315	•	300	100/48	55	107 AV	T2
1N316	•	50	.25 AV	100	300 AV	T2

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	• GP • • BLK • • MIX • • DET • • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N316A	•	50	250 AV	25	1/PIV	T2
1N317	•	100	.25 AV	100	300 AV	T2
1N317A	•	100	250 AV	25	1/PIV	T2
1N318	•	200	.25 AV	100	300 AV	T2
1N318A	•	200	250 AV	25	1/PIV	T2
1N319	•	350	.2 AV	150	300 AV	T2
1N319A	•	350	250 AV	25	1/PIV	T2
1N320	•	400	.25 AV	100	300 AV	T2
1N320A	•	500	250 AV	25	2/PIV	T2
1N321	•	850	.25AV	100	300AV	T2
1N321A	•	850	250 AV	25	2/PIV	T2
1N322	•	1000	.25 AV	100	300 AV	T2
1N322A	•	1000	250 AV	25	2/PIV	T2
1N323	•	50	.40 AV	100	300 AV	T2
1N323A	•	50	400 AV	25	1/PIV	T2
1N324	•	100	.40 AV	100	300 AV	T2
1N324A	•	100	400 AV	25	1/PIV	T2
1N325	•	200	.40 AV	100	300 AV	T2
1N325A	•	200	400 AV	25	1/PIV	T2
1N326	•	350	.40 AV	100	300 AV	T2
1N326A	•	350	400 AV	25	1/PIV	T2
1N327	•	500	.40 AV	100	300 AV	T2
1N327A	•	500	400 AV	25	2/PIV	T2
1N328	•	850	.40 AV	100	300 AV	T2
1N328A	•	850	400 AV	25	2/PIV	T2
1N329	•	1000	.40 AV	100	300 AV	T2
1N329A	•	1000	400 AV	25	2/PIV	T2
1N330	•	32	3/1	25	.03/20	
1N331	•	16	5/1	25	.01/10	
1N332	•	400	.40 AV	150	200 AV	S1
1N333	•	400	.20 AV	150	200 AV	S1
1N334	•	300	.40 AV	150	200 AV	S1
1N335	•	300	.20 AV	150	200 AV	S1
1N336	•	200	.40 AV	150	100 AV	S1
1N337	•	200	.20 AV	150	100 AV	S1
1N338	•	100	1 AV	150	200 AV	S1
1N339	•	100	.4 AV	150	100 AV	S1
1N340	•	100	.20 AV	150	100 AV	S1
1N341	•	400	.40 AV	150	500 AV	S1
1N342	•	400	.20 AV	150	500 AV	S1
1N343	•	300	.40 AV	150	500 AV	S1
1N344	•	300	.20 AV	150	500 AV	S1
1N345	•	200	.40 AV	150	500 AV	S1
1N346	•	200	.20 AV	150	500 AV	S1
1N347	•	100	1 AV	150	500 AV	S1
1N348	•	100	.40 AV	150	500 AV	S1

Diodes and Rectifiers

1N192-1N348

Diodes and Rectifiers

1N349-1N534

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N459	•	200	3/1	25	.025/175	C1
1N459A	•	175	100/1	25	.025/175	C1
1N460	•	90	5/1	25	.01/10	Sp
1N460A,B	•	90	15/1	25	.01/10	Sp
1N461	•	30	15/1	25	.5/25	C1
1N461A	•	25	100/1	25	.5/25	C1
1N462	•	70	5/1	25	.5/60	C1
1N462A	•	60	100/1	25	.5/60	C1
1N463	•	200	1/1	25	.5/175	C1
1N463A	•	175	100/1	25	.5/175	C1
1N464	•	150	3/1	25	.5/125	C1
1N464A	•	125	100/1	25	.5/125	C1
1N476	•	115	2.5/5	60	.275/100	C1
1N477	•	115	2.5/5	60	.275/100	C1
1N478	•	115	5/5	60	.250/100	C1
1N479	•	115	5/5	60	.250/100	C1
1N480	•	90	5/1	25	.400/20	C1
1N482	•	36	100/1.1	25	.25/30	C1
1N482A,B,C	•	36	100/1	25	.025/30	C1
1N483	•	70	100/1.1	25	.25/60	C1
1N483A,B,C	•	70	100/1	25	.025/60	C1
1N484	•	130	100/1.1	25	.25/125	C1
1N484A,B,C	•	130	100/1	25	.025/125	C1
1N485	•	180	100/1.1	25	.25/175	C1
1N485A,B,C	•	180	100/1	25	.025/175	C1
1N486	•	225	100/1.1	25	.25/225	C1
1N486A,B	•	225	100/1	25	.025/225	C1
1N487	•	300	100/1.1	25	.25/300	C1
1N487A,B	•	300	100/1	25	.025/300	C1
1N488	•	380	100/1.1	25	.25/380	C1
1N488A,B	•	380	100/1	25	.025/380	C1
1N490	•	90	5/1	25	.250/50	C1
1N497	•	20	100/1	25	.20/20	C1
1N498	•	40	100/1	25	.25/40	C1
1N499	•	50	100/1	25	.30/50	C1
1N500	•	60	100/1	25	.40/60	C1
1N501	•	80	100/1	25	.40/80	C1
1N502	•	100	100/1	25	.50/100	C1
1N527	•	20	1/3	25	.50/10	C1
1N530	•	100	.3 AV	25	3/PIV	T2
1N531	•	200	.3 AV	25	7.5/PIV	T2
1N532	•	300	.3 AV	25	10/PIV	T2
1N533	•	400	.3AV	25	15/PIV	T2
1N534	•	500	.3AV	25	17.5/PIV	T2

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N411B	•	50	100/1.3	150	5 AV	S9
1N412B	•	100	100/1.3	150	5 AV	S9
1N413B	•	150	100/1.3	150	5 AV	S9
1N417	•	70	5/3.5	25	120/60	C1
1N418	•	70	8/1	25	120/60	C1
1N419	•	100	150/1	25	180/90	C1
1N429	•	5.9-6.5				T4
1N431	•	68	10 AV	25	.1/15	C1
1N432	•	40	10/1	25	.005/10	C1
1N432A,B	•	40	20/1	25	.005/10	C1
1N433	•	145	3/1	25	.01/10	C1
1N433A,B	•	145	50/1	25	.01/10	C1
1N434	•	180	2/1	25	.01/10	C1
1N434A,B	•	180	20/1	25	.01/10	C1
1N435	•	50	.225/15	25	300/30	C1
1N440	•	100	300/1.5	25	.3/PIV	T2
1N440B	•	100	750/1.5	25	.3/PIV	T2
1N441	•	200	300/1.5	25	.75/PIV	T2
1N441B	•	200	750/1.5	25	.75/PIV	T2
1N442	•	300	300/1.5	25	1/PIV	T2
1N442B	•	300	750/1.5	25	1/PIV	T2
1N443	•	400	300/1.5	25	1.5/PIV	T2
1N443B	•	400	750/1.5	25	1.5/PIV	T2
1N444	•	500	300/1.5	25	1.75/PIV	T2
1N444B	•	500	750/1.5	25	1.75/PIV	T2
1N445	•	600	300/1.5	25	2/PIV	T2
1N445B	•	600	750/1.5	25	2/PIV	T2
1N447	•	30	25/1	25	60/30	C1
1N448	•	100	25/1	25	100/100	C1
1N449	•	30	50/1	25	30/30	C1
1N450	•	100	50/1	25	30/30	C1
1N451	•	150	50/1	25	150/150	C1
1N452	•	30	100/1	25	30/30	C1
1N453	•	100	100/1	25	30/30	C1
1N454	•	50	200/1	25	50/50	C1
1N455	•	30	300/1	25	30/30	C1
1N456	•	30	40/1	25	.025/25	C1
1N456A	•	25	100/1	25	.025/25	C1
1N457	•	70	20/1	25	.025/60	C1
1N457A	•	60	100/1	25	.025/60	C1
1N458	•	150	7/1	25	.025/125	C1
1N458A	•	125	100/1	25	.025/125	C1

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N349	•	100	.20 AV	150	500 AV	S1
1N350	•	70	20/1	25	.03/60	C9
1N351	•	120	20/1	25	.03/100	C9
1N352	•	170	20/1	25	.05/150	C9
1N353	•	225	20/1	25	.1/200	C9
1N354	•	325	20/1	25	.1/300	C9
1N355	•	100	4/1	25	50/50	C1
1N359	•	50	.10 AV	100	.25/PIV	T2
1N359A	•	50	150 AV	25	1/PIV	T2
1N360	•	100	.10 AV	100	.25/PIV	T2
1N360A	•	100	150 AV	25	1/PIV	T2
1N361	•	200	.10 AV	100	.25/PIV	T2
1N361A	•	200	150 AV	25	1/PIV	T2
1N362	•	350	.10 AV	100	.25/PIV	T2
1N362A	•	350	150 AV	25	1/PIV	T2
1N363	•	500	.10 AV	100	.25/PIV	T2
1N363A	•	500	150 AV	25	2/PIV	T2
1N364	•	850	.10 AV	100	.25/PIV	T2
1N364A	•	850	150 AV	25	2/PIV	T2
1N365	•	1000	.10 AV	25		T2
1N365A	•	1000	150 AV	25	2/PIV	T2
1N367	•	60	2.5/1	25	25/10	C1
1N368	•	200	100/48	55	300/150	T2
1N378	•	7.5	50/1	25	.5/6.8	C1
1N379	•	8.2	35/1	25	.5/8.2	C1
1N380	•	10	30/1	25	.5/10	C1
1N381	•	12	23/1	25	.5/12	C1
1N382	•	15	17/1	25	.5/15	C1
1N383	•	18	12/1	25	.1/18	C1
1N384	•	22	9/1	25	.1/22	C1
1N385	•	27	7/1	25	.1/27	C1
1N386	•	33	5.5/1	25	.1/33	C1
1N387	•	39	4.5/1	25	.1/39	C1
1N388	•	47	3.5/1	25	.1/47	C1
1N389	•	56	2.7/1	25	1/56	C1
1N390	•	68	2/1	25	1/68	C1
1N391	•	82	1.5/1	25	1/82	C1
1N392	•	100	1.2/1	25	1/100	C1
1N393	•	120	9/1	25	1/120	C1
1N394	•	150	.7/1	25	5/150	C1
1N395	•	200	6.5/4	25	5/180	C1
1N396	•	250	6/4	25	5/220	C1
1N397	•	300	3/4	25	5/270	C1
1N398	•	370	2.2/4	25	5/330	C1
1N399	•	430	2/4	25	5/390	C1
1N400	•	520	1.5/4	25	5/470	C1

Diodes and Rectifiers

1N535-1N699

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	CMP GP BLK MIX DET REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N636		60	30AV	25	10/10	C1
1N643		200	10/1	25	.025/5	C1
1N643A		200	100/1	25	.025/10	C1
1N645		225	400/1	25	.2/225	C1
1N645A,B		225	400/1	25	.2/225	C1
1N646		300	400/1	25	.2/300	C1
1N647		400	400/1	25	.2/400	C1
1N648		500	400/1	25	.2/500	C1
1N649		600	400/1	25	.2/600	C1
1N658		120	100/1	25	.05/50	C1
1N658A			100/1	25	.25/50	M
1N659		50	6/1	25	5/50	C1
1N659A			10/1	25	.25/50	C1
1N660		100	6/1	25	5/100	C1
1N660A			10/1	25	.025/100	M
1N661		200	6/1	25	10/200	C1
1N661A			10/1	25	.025/100	M
1N662		100	10/1	25	1/10	C1
1N662A		100	100/1	25	1/10	C1
1N663		100	100/1	25	5/75	C1
1N663A		100	100/1	25	100/100	C1
1N673		400	250/.82	25	10/450	T3
1N676		100	200/1	25	1/100	C1
1N677		100	400/1	25	1/100	C1
1N678		200	200/1	25	1/100	C1
1N679		200	400/1	25	1/100	C1
1N681		300	200/1	25	1/300	C1
1N682		300	400/1	25	1/300	C1
1N683		400	200/1	25	1/400	C1
1N684		400	400/1	25	1/400	C1
1N685		500	200/1	25	1/500	C1
1N686		500	400/1	25	1/500	C1
1N687		600	200/1	25	1/600	C1
1N689		600	400/1	25	1/600	C1
1N690		36	400/1	25	.25/30	C1
1N691		70	400/1	25	.25/60	C1
1N692		100	400/1	25	.25/90	C1
1N693		130	400/1	25	.25/120	C1
1N695		20	100/1	70	20/10	C1
1N695A		20	100/1	70	2/10	C1
1N696		40	10/1	25	.015/20	SP
1N697		120	250/1	25	1/50	T3
1N698		25	30/.54	25	30/25	C1
1N699		105	100/1	70	250/75	C1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	CMP GP BLK MIX DET REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N603A		300	.60AV	25	1/PIV	T2
1N604		400	.60AV	25	25/PIV	T2
1N604A		400	.60AV	25	1.5/PIV	T2
1N605		500	.60AV	25	25/PIV	T2
1N605A		500	.60AV	25	2/PIV	T2
1N606		600	.60AV	25	25/PIV	T2
1N606A		600	.60AV	25	2.5/PIV	T2
1N607		50	1.8AV	25	25/PIV	S1
1N607A		50	1.8AV	25	1/PIV	S1
1N608		100	1.8AV	25	25/PIV	S1
1N608A		100	1.8AV	25	1/PIV	S1
1N609		150	1.8AV	25	25/PIV	S1
1N609A		150	1.8AV	25	1/PIV	S1
1N610		200	1.8AV	25	25/PIV	S1
1N610A		200	1.8AV	25	1/PIV	S1
1N611		300	1.8AV	25	25/PIV	S1
1N611A		300	1.8AV	25	1/PIV	S1
1N612		400	1.8AV	25	25/PIV	S1
1N612A		400	1.8AV	25	1.5/PIV	S1
1N613		500	1.8AV	25	25/PIV	S1
1N613A		500	1.8AV	25	2/PIV	S1
1N614		600	1.8AV	25	25/PIV	S1
1N614A		600	1.8AV	25	2.5/PIV	S1
1N616		40	8/1	25	350/45	C1
1N617		115	7/1	60	275/100	C1
1N618		115	10/1	60	250/100	C1
1N619		27	3/1	25	8/10	C1
1N622		150	6.5/4	25	.2/150	C1
1N625		30	4/1.5	25	1/20	C1
1N625A		30	10/1.5	25	.1/20	C1
1N626		50	4/1.5	25	1/35	C1
1N626A		50	10/1.5	25	.1/35	C1
1N627		100	4/1.5	25	1/75	C1
1N627A		100	10/1.5	25	.1/75	C1
1N628		150	4/1.5	25	1/125	C1
1N628A		150	10/1.5	25	.1/125	C1
1N629		200	4/1.5	25	1/175	C1
1N629A		200	10/1.5	25	.1/175	C1
1N631		90	.60AV	25	20/10	C1
1N632		90	.16AV	25	20/10	C1
1N633		120	.60AV	25	40/20	C1
1N634		100	50/1	25	35/30	C1
1N635		150	50/1	25	35/30	C1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	CMP GP BLK MIX DET REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N535		600	.3AV	25	20/PIV	T2
1N536		50	.25AV	150	400AV	T2
1N537		100	.25AV	150	400AV	T2
1N538		200	.25AV	150	300AV	T2
1N539		300	.25AV	150	300AV	T2
1N540		400	.25AV	150	300AV	T2
1N541		45	10/1.5	25	350/45	C1
1N542		Matched pair		1N541		
1N543A		1250	50/8			
1N547		600	.25AV	150	300AV	T2
1N548		900	.30AV	25	.50AV	
1N550		100	.4AV	125		S1
1N551		200	.4AV	125		S1
1N552		300	.4AV	125		S1
1N553		400	.4AV	125		S1
1N554		500	.4AV	125		S1
1N555		600	.4AV	125		S1
1N560		800	.25AV	100		T2
1N561		1000	.25AV	100		T2
1N562		800	.40AV	100		S1
1N563		1000	.40AV	100		S1
1N566		275	20/1	25	200/200	C1
1N567		125	150/1	25	150/100	C1
1N568		50	5/32	25	100/5	C1
1N569		25	250/.5	25	50/10	C1
1N570		1500	75/4			SP
1N571		15	200/1	55	100/10	C1
1N588		1500	25AV	25	1/1500	T2
1N589		1500	50AV	25	1/1500	T2
1N590		1500	50/8			
1N591		1500	50/8			
1N593		250	5/1	25	65/100	C1
1N596		600	125AV	75	25/PIV	C4
1N597		800	125AV	75	25/PIV	C4
1N598		1000	125AV	75	25/PIV	C4
1N599		50	.60AV	25	25/PIV	T2
1N599A		50	.60AV	25	1/PIV	T2
1N600		100	.60AV	25	25/PIV	T2
1N600A		100	.60AV	25	1/PIV	T2
1N601		150	.60AV	25	25/PIV	T2
1N601A		150	.60AV	25	1/PIV	T2
1N602		200	.60AV	25	25/PIV	T2
1N602A		200	.60AV	25	1/PIV	T2
1N603		300	.60AV	25	25/PIV	T2

(Continued)

Diodes and Rectifiers

1N760-1N916

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N875	•	700	.10 AV	25	20/PIV	C1
1N876	•	800	.10 AV	25	20/PIV	C1
1N877	•	900	.10 AV	25	20/PIV	C1
1N878	•	1000	.10 AV	25	20/PIV	C1
1N879	•	50	.05 AV	25	20/PIV	C1
1N880	•	50	.05 AV	25	20/PIV	C1
1N881	•	200	.05 AV	25	20/PIV	C1
1N882	•	300	.05 AV	25	20/PIV	C1
1N883	•	400	.05 AV	25	20/PIV	C1
1N884	•	500	.05 AV	25	20/PIV	C1
1N885	•	600	.05 AV	25	20/PIV	C1
1N886	•	700	.05 AV	25	20/PIV	C1
1N887	•	800	.05 AV	25	20/PIV	C1
1N888	•	900	.05 AV	25	20/PIV	C1
1N889	•	1000	.05 AV	25	20/PIV	C1
1N890	•	60	20/1	25	.025/60	C1
1N891	•	60	50/1	25	.1/50	C1
1N892	•	120	50/1	25	.1/100	C1
1N893	•	240	50/1	25	.1/200	C1
1N897	•	50	5/1	25	.1/40	M
1N898	•	50	100/1	25	.5/40	M
1N899	•	100	5/1	25	.1/80	M
1N900	•	100	50/1	25	.1/80	M
1N901	•	100	100/1	25	.5/80	M
1N902	•	20	20/1	25	100/25	M
1N903	•	40	10/1	25	.1/40	C1
1N903A	•	50	20/1	25	.1/40	C1
1N904	•	30	10/1	25	.1/30	C1
1N904A	•	40	20/1	25	.1/40	C1
1N905	•	20	10/1	25	.1/20	C1
1N905A	•	30	20/1	25	.1/20	C1
1N906	•	20	10/1	25	.1/20	C1
1N906A	•	30	20/1	25	.1/20	C1
1N907	•	30	10/1	25	.1/30	C1
1N907A	•	40	20/1	25	.1/30	C1
1N908	•	40	10/1	25	.1/40	C1
1N908A	•	50	20/1	25	.1/40	C1
1N909	•	60	100 AV	25	10/10	C1
1N910	•	40	100 AV	25	10/10	C1
1N911	•	30	100 AV	25	10/10	C1
1N914	•	90	10/1	25	.025/20	C1
1N914A,B	•	75	20/1	25	.025/20	C1
1N915	•	50	50/1	25	.025/10	C1
1N916	•	90	10/1	25	.025/20	C1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N815	•	15	100/1.5	25	.5/5	C1
1N816	•	6				C1
1N817	•	200	6/1.5	25	20/175	C1
1N818	•	70	30/1.5	25	.25/60	C1
1N835	•	30	100/1	75	200/30	C1
1N837	•	100	150/1	25	0.1/75	C1
1N837A	•	100	150/1	25	0.1/80	C1
1N838	•	150	150/1	25	0.1/125	C1
1N839	•	200	150/1	25	0.1/175	C1
1N840	•	50	150/1	25	0.1/40	C1
1N841	•	150	150/1	25	0.1/120	C1
1N842	•	200	150/1	25	0.1/160	C1
1N843	•	250	150/1	25	0.1/200	C1
1N844	•	100	200/1	25	0.1/80	C1
1N845	•	200	200/1	25	0.1/160	C1
1N846	•	50	.20 AV	25	20/PIV	C1
1N847	•	100	.20 AV	25	20/PIV	C1
1N848	•	200	.20 AV	25	20/PIV	C1
1N849	•	300	.20 AV	25	20/PIV	C1
1N850	•	400	.20 AV	25	20/PIV	C1
1N851	•	500	.20 AV	25	20/PIV	C1
1N852	•	600	.20 AV	25	20/PIV	C1
1N853	•	700	.20 AV	25	20/PIV	C1
1N854	•	800	.20 AV	25	20/PIV	C1
1N855	•	900	.20 AV	25	20/PIV	C1
1N856	•	1000	.20 AV	25	20/PIV	C1
1N857	•	50	.15 AV	25	20/PIV	C1
1N858	•	100	.15 AV	25	20/PIV	C1
1N859	•	200	.15 AV	25	20/PIV	C1
1N860	•	300	.15 AV	25	20/PIV	C1
1N861	•	400	.15 AV	25	20/PIV	C1
1N862	•	500	.15 AV	25	20/PIV	C1
1N863	•	600	.15 AV	25	20/PIV	C1
1N864	•	700	.15 AV	25	20/PIV	C1
1N865	•	800	.15 AV	25	20/PIV	C1
1N866	•	900	.15 AV	25	20/PIV	C1
1N867	•	1000	.15 AV	25	20/PIV	C1
1N868	•	50	.15 AV	25	20/PIV	C1
1N869	•	100	.10 AV	25	20/PIV	C1
1N870	•	200	.10 AV	25	20/PIV	C1
1N871	•	300	.10 AV	25	20/PIV	C1
1N872	•	400	.10 AV	25	20/PIV	C1
1N873	•	500	.10 AV	25	20/PIV	C1
1N874	•	600	.10 AV	25	20/PIV	C1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N760	•	60	40/1	25	500/50	C1
1N770	•	25	15/.5	40	40/10	C1
1N771	•	100	50 AV	25	25/50	C1
1N771A,B	•	100	200/1	25	25/50	C1
1N772	•	80	50 AV	25	50/50	C1
1N772A	•	80	200/1	25	50/50	C1
1N773	•	75	50 AV	25	10/10	C1
1N773A	•	75	200/1	25	10/10	C1
1N774	•	70	50 AV	25	15/10	C1
1N774A	•	70	200/1	25	15/10	C1
1N775	•	70	50 AV	25	20/10	C1
1N776	•	30	45 AV	25	200/10	C1
1N777	•	70	100/1	55	25/10	C1
1N778	•	100	10/1	25	.5/100	C1
1N779	•	175	10/1	25	.5/175	C1
1N781	•	40	10/0.45	65	60/10	C1
1N781A	•	40	10/0.45	65	60/10	C1
1N788	•	60	100/1	25	500/50	C1
1N789	•	200	10/1	25	.5/175	C1
1N790	•	30	10/1	25	5/20	C1
1N791	•	30	50/1	25	5/20	C1
1N792	•	30	100/1	25	5/20	C1
1N793	•	60	10/1	25	1/30	C1
1N794	•	60	10/1	25	5/30	C1
1N795	•	60	50/1	25	5/30	C1
1N796	•	60	100/1	25	5/30	C1
1N797	•	120	10/1	25	1/100	C1
1N798	•	120	10/1	25	5/100	C1
1N799	•	120	50/1	25	5/100	C1
1N800	•	120	100/1	25	5/100	C1
1N801	•	150	10/1	25	1/125	C1
1N802	•	150	50/1	25	5/125	C1
1N803	•	200	10/1	25	5/175	C1
1N804	•	200	50/1	25	10/175	C1
1N805	•	40	3/1	25	100/10	C1
1N806	•	100	4/1	25	.5/100	C1
1N807	•	180	4/1	25	.5/175	C1
1N808	•	110	100/1	25	1/100	C1
1N809	•	200	100/1	25	1/200	C1
1N810	•	50	10/1	25	1/40	C1
1N811	•	20	1/1	25	1/10	C1
1N812	•	30	2/1	25	10/10	C1
1N813	•	15	5/1	25	.5/5	C1
1N814	•	40	2/1	25	.1/20	C1

TYPE NO.	APPLICATIONS					VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	SAT	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N916A,B	•	•	•	•	•		75	20/1	25	.025/20 C1
1N917							30	10/1	25	.05/10 C1
1N919	•						150	100/1	25	.5/150 C1
1N920							36	500/1	25	.25/30 C1
1N921							70	500/1	25	.25/60 C1
1N922							100	500/1	25	.25/90 C1
1N923							130	500/1	25	.25/120 C1
1N924							60	30/1	25	.025/60 C1
1N925	•						36	5/1	25	1.0/10 C1
1N926	•						36	5/1	25	1.0/10 C1
1N927	•						58	10/1	25	1/10 C1
1N928	•						108	10/1	25	1/10 C1
1N929	•						20	20/1	25	100/25 C1
1N930	•						50	20/1	25	100/75 C1
1N931	•						100	20/1	25	100/125 C1
1N932	•						200	20/1	25	100/250 C1
1N933	•						80	4/1	25	10/10 C1
1N934							70	30/1	25	.025/60 C1
1N947						•	600	.40 AV	25	2/PIV T3
1N948							40	100/1.5	25	.25/30 C1
1N949	•						50	10/0.34	55	50/10 C1
1N950								6 to 88 pf		C1
1N951								12 to 120 pf		C1
1N952								20 to 170 pf		C1
1N953								46 to 240 pf		C1
1N954								14 to 88 pf		C1
1N955								22 to 120 pf		C1
1N956								32 to 170 pf		C1
1N993							8	10/1.5	25	1/6 C1
1N994	•						8	10/1	25	30 AV C1
1N995	•						15	10/0.5		10/6 C1
1N996								40/8		15/15 C1
1N997							35	10/1	25	.25/12 C1
1N998								200/1	25	.001/125 C1
1N1028	•						50	.50 AV	100	200/PIV SP
1N1029	•						100	.50 AV	100	500/PIV SP
1N1030	•						150	.50 AV	100	200/PIV SP
1N1031	•						200	.50 AV	100	200/PIV SP
1N1032	•						300	.50 AV	100	200/PIV SP
1N1033	•						400	.50 AV	100	200/PIV SP
1N1034	•						50	370/1		50/PIV S1
1N1035	•						100	370/1		50/PIV S1
1N1036	•						150	370/1		50/PIV S1
1N1037	•						200	370/1		50/PIV S1

(Continued)

TYPE NO.	APPLICATIONS					VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	SAT	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N1038						•	300	370/1		50/PIV S1
1N1039						•	400	370/1		50/PIV S1
1N1040						•	50	370/1		50/PIV S1
1N1041						•	100	370/1		50/PIV S1
1N1042						•	150	370/1		50/PIV S1
1N1043						•	200	370/1		50/PIV S1
1N1044						•	300	370/1		50/PIV S1
1N1045						•	400	370/1		50/PIV S1
1N1046						•	50	1 AV		S9
1N1047						•	100	1 AV		S9
1N1048						•	150	1 AV		S9
1N1049						•	200	1 AV		S9
1N1050						•	300	1 AV		S9
1N1052						•	50	1.5/1	4/PIV	C4
1N1053						•	100	1.5/1	4/PIV	C4
1N1054						•	150	1.5/1	4/PIV	C4
1N1055						•	200	1.5/1	4/PIV	C4
1N1056						•	300	1.5/1	4/PIV	C4
1N1057						•	400	1.5/1	4/PIV	C4
1N1058						•	50	1.5/1	800/PIV	S1
1N1059						•	100	1.5/1	800/PIV	S1
1N1060						•	150	1.5/1	800/PIV	S1
1N1062						•	300	1.5/1	800/PIV	S1
1N1063						•	400	1.5/1	800/PIV	S1
1N1064						•	50	1.5/1	800/PIV	S1
1N1065						•	100	1.5/1	800/PIV	S1
1N1066						•	150	1.5/1	800/PIV	S1
1N1067						•	200	1.5/1	800/PIV	S1
1N1068						•	300	1.5/1	800/PIV	S1
1N1069						•	400	1.5/1	800/PIV	S1
1N1070						•	50	5 AV		
1N1071						•	100	5 AV		
1N1072						•	150	5 AV		
1N1073						•	200	5 AV		
1N1074						•	300	5 AV		
1N1075						•	400	5 AV		
1N1081						•	100	750 AV	100	500/PIV SP
1N1082						•	200	750 AV	100	500/PIV SP
1N1083						•	300	750 AV	100	500/PIV SP
1N1084						•	400	750 AV	100	500/PIV SP
1N1085						•	100	3/1	25	25 AV SP
1N1086						•	200	3/1	25	25 AV SP
1N1087						•	300	3/1	25	25 AV SP
1N1088						•	400	3/1	25	25 AV SP

TYPE NO.	APPLICATIONS					VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	SAT	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N1089						•	100	3/1	25	25 AV SP
1N1090						•	200	3/1	25	25 AV SP
1N1091						•	300	3/1	25	25 AV SP
1N1092						•	400	3/1	25	25 AV SP
1N1093	•						15	5/4	25	25/5 C1
1N1095						•	500	.25 AV	150	300 AV T2
1N1096						•	600	.25 AV	150	300 AV T2
1N1100						•	100	.25 AV	150	300 AV T2
1N1101						•	200	.25 AV	150	300 AV T2
1N1102						•	300	.25 AV	150	300 AV T2
1N1103						•	400	.25 AV	150	300 AV T2
1N1104						•	500	.25 AV	150	200 AV T2
1N1105						•	600	.25 AV	150	200 AV T2
1N1108						•	800		25	2/PIV C8
1N1109						•	1200		25	2/PIV C8
1N1110						•	1600*		25	2/PIV C8
1N1111						•	2000		25	2/PIV C8
1N1112						•	2400		25	2/PIV C8
1N1113						•	2800		25	2/PIV C8
1N1115						•	100	.60 AV	150	400 AV S1
1N1116						•	200	.60 AV	150	300 AV S1
1N1117						•	300	.60 AV	150	300 AV S1
1N1118						•	400	.60 AV	150	300 AV S1
1N1119						•	500	.60 AV	150	300 AV S1
1N1120						•	600	.60 AV	150	300 AV S1
1N1124						•	200	6/1.1	25	10/PIV S1
1N1124A						•	200	1/1.1	25	10/PIV S1
1N1125						•	300	6/1.1	25	10/PIV S1
1N1125A						•	300	1/1.1	25	10/PIV S1
1N1126						•	400	6/1.1	25	10/PIV S1
1N1126A						•	400	1/1.1	25	10/PIV S1
1N1127						•	500	6/1.1	25	10/PIV S1
1N1127A						•	500	1/1.1	25	10/PIV S1
1N1128						•	600	6/1.1	25	10/PIV S1
1N1128A						•	600	1/1.1	25	10/PIV S1
1N1130	•						1500	.3/15	25	50/1500 S1
1N1131	•						1500	.3/15	25	50/1500 S1
1N1133						•	1500		25	25/PIV C8
1N1134						•	1500		25	25/PIV C8
1N1135						•	1800		25	25/PIV C8
1N1136						•	1800		25	25/PIV C8
1N1137						•	2400		25	25/PIV C8
1N1138						•	2400		25	25/PIV C8
1N1139						•	3600		25	25/PIV C8

1N916A, B-1N1139

Diodes and Rectifiers

Diodes and Rectifiers

1N1140-1N1282

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP SAT	V_{op}	(amp/v)		(ma/v)	MIL
1N1228	•	100	1.6 AV	25		
1N1228A	•	100	1.6 AV	25		S1
1N1229	•	150	1.6 AV	25		
1N1229A	•	150	1.6 AV	25		S1
1N1230	•	200	1.6 AV	25		
1N1230A	•	200	1.6 AV	25		S1
1N1231	•	300	1.6 AV	25		
1N1231A	•	300	1.6 AV	25		S1
1N1232	•	400	1.6 AV	25		
1N1232A	•	400	1.6 AV	25		S1
1N1233	•	500	1.6 AV	25		
1N1233A	•	500	1.6 AV	25		S1
1N1234	•	600	1.6 AV	25		
1N1234A	•	600	1.6 AV	25		S1
1N1235	•	700	1.6 AV	25		
1N1236	•	800	1.6 AV	25		
1N1237	•	1600	.75 AV			Tube
1N1238	•	1600	.75 AV			Tube
1N1239	•	2800	.5 AV			Tube
1N1251	•	50	.50 AV	25	500/PIV	T2
1N1252	•	100	.50 AV	25	500/PIV	T2
1N1253	•	200	.50 AV	25	500/PIV	T2
1N1254	•	300	.50 AV	25	500/PIV	T2
1N1255	•	400	.50 AV	25	500/PIV	T2
1N1256	•	500	.32 AV	25	400/PIV	T2
1N1257	•	600	.30 AV	25	300/PIV	T2
1N1258	•	700	.28 AV	25	200/PIV	T2
1N1259	•	800	.26 AV	25	100/PIV	T2
1N1260	•	900	.25 AV	25	100/PIV	T2
1N1261	•	1000	.24 AV	25	100/PIV	T2
1N1262	•	4500	.25 AV			Tube
1N1263	•	50				SP
1N1264	•	100				SP
1N1265	•	200				SP
1N1266	•	300				SP
1N1271	•	50			40/PIV	S9
1N1272	•	100			40/PIV	S9
1N1273	•	150			40/PIV	S9
1N1274	•	200			40/PIV	S9
1N1275	•	300			40/PIV	S9
1N1276	•	400			40/PIV	S9
1N1277	•	500			40/PIV	S9
1N1281	•	50			40/PIV	S9
1N1282	•	100			40/PIV	S9

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP SAT	V_{op}	(amp/v)		(ma/v)	MIL
1N1195	•	300	18 AV	145	10/PIV	S2
1N1195A	•	300	20/6	150	3.2 AV	S2
1N1196	•	400	18 AV	145	10/PIV	S2
1N1196A	•	400	20/6	150	2.5 AV	S2
1N1197	•	500	18 AV	145	10/PIV	S2
1N1197A	•	500	20/6	150	2.2 AV	S2
1N1198	•	600	18 AV	145	10/PIV	S2
1N1198A	•	600	20/6	150	1.5 AV	S2
1N1199	•	50	6/5	150	2.5 AV	S1
1N1199A,B	•	50	12 AV	150	3 AV	S1
1N1200	•	100	6/5	150	2.5 AV	S1
1N1200A,B	•	100	12 AV	150	2.5 AV	S1
1N1201	•	150	12/1.25	150		S1
1N1201A,B	•	150	12 AV	150	2.25 AV	S1
1N1202	•	200	6/5	150	2.5 AV	S1
1N1202A,B	•	200	12 AV	150	2.0 AV	S1
2N1203	•	300	6/5	150	2.5 AV	S1
1N1203A,B	•	300	12 AV	150	1.75 AV	S1
1N1204	•	400	6/5	150	2.5 AV	S1
1N1204A,B	•	400	12 AV	150	1.5 AV	S1
1N1205	•	500	6/5	10	2.5 AV	S1
1N1205A,B	•	500	12 AV	150	1.25 AV	S1
1N1206	•	600	6/5	150	2.5 AV	S1
1N1206A,B	•	600	12 AV	150	1.0 AV	S1
1N1217	•	50	1.0 AV	25	500/PIV	T2
1N1217A	•	50	1.0 AV	25	50/PIV	T2
1N1218	•	100	1.0 AV	25	500/PIV	T2
1N1218A	•	100	1.0 AV	25	50/PIV	T2
1N1219	•	150	1.0 AV	25	500/PIV	T2
1N1219A	•	150	1.0 AV	25	50/PIV	T2
1N1220	•	200	1.0 AV	25	500/PIV	T2
1N1220A	•	200	1.0 AV	25	50/PIV	T2
1N1221	•	300	1.0 AV	25	500/PIV	T2
1N1221A	•	300	1.0 AV	25	50/PIV	T2
1N1222	•	400	1.0 AV	25	500/PIV	T2
1N1222A	•	400	1.0 AV	25	50/PIV	T2
1N1223	•	500	1.0 AV	25	500/PIV	T2
1N1223A	•	500	1.0 AV	25	50/PIV	T2
1N1224	•	600	1.0 AV	25	500/PIV	T2
1N1224A	•	600	1.0 AV	25	50/PIV	T2
1N1225	•	700	1.0 AV	25	500/PIV	T2
1N1226	•	800	1.0 AV	25	500/PIV	T2
1N1227	•	50	1.6 AV	25		
1N1227A	•	50	1.6 AV	25		S1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP SAT	V_{op}	(amp/v)		(ma/v)	MIL
1N1140	•	3600		25	25/PIV	C8
1N1141	•	4800		25	25/PIV	C8
1N1142	•	4800		25	25/PIV	C8
1N1143	•	6000		25	25/PIV	C8
1N1143A	•	6000		25	25/PIV	C8
1N1144	•	7200		25	25/PIV	C8
1N1145	•	7200		25	25/PIV	C8
1N1146	•	8000		25	25/PIV	C8
1N1147	•	12000		25	25/PIV	C8
1N1148	•	14000		25	25/PIV	C8
1N1149	•	16000		25	25/PIV	C8
1N1150	•	1600	.75 AV			Tube
1N1150A	•	1600	.75 AV			Tube
1N1169	•	400	.5 AV	25	500/PIV	T2
1N1169A	•	400	.5 AV	25	100/PIV	T2
1N1170	•	75	5/1	25	100/25	C1
1N1183	•	50	15/1		20/PIV	S2
1N1183A	•	50	40 AV	175	5/PIV	S1
1N1184	•	100	15/1		20/PIV	S2
1N1184A	•	100	40 AV	175	5/PIV	S1
1N1185	•	150	15/1		20/PIV	S2
1N1185A	•	150	40 AV	175	5/PIV	S1
1N1186	•	200	15/1		20/PIV	S2
1N1186A	•	200	40 AV	175	5/PIV	S1
1N1187	•	300	15/1		20/PIV	S2
1N1187A	•	300	40 AV	150	5/PIV	S2
1N1188	•	400	15/1		20/PIV	S2
1N1188A	•	400	40 AV	150	5/PIV	S2
1N1189	•	500	15/1		20/PIV	S2
1N1189A	•	500	40 AV	150	5/PIV	S2
1N1190	•	600	15/1		20/PIV	S2
1N1190A	•	600	40 AV	150	5/PIV	S2
1N1191	•	50	18 AV	145	10/PIV	S2
1N1191A	•	50	22 AV	175	5/PIV	S1
1N1192	•	100	18 AV	145	10/PIV	S2
1N1192A	•	100	22AV	175	5/PIV	S1
1N1193	•	150	18 AV	145	10/PIV	S2
1N1193A	•	150	22 AV	175	5/PIV	S1
1N1194	•	200	18 AV	145	10/PIV	S2
1N1194A	•	200	22 AV	175	5/PIV	S1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N1283	•	150			40/PIV	S9
1N1284	•	200			40/PIV	S9
1N1285	•	300			40/PIV	S9
1N1286	•	400			40/PIV	S9
1N1287	•	500			40/PIV	S9
1N1291	•	50			40/PIV	S9
1N1292	•	100			40/PIV	S9
1N1293	•	150			40/PIV	S9
1N1294	•	200			40/PIV	S9
1N1295	•	300			40/PIV	S9
1N1296	•	400			40/PIV	S9
1N1297	•	500			40/PIV	S9
1N1301	•	50	17.5 AV	150	2 AV	S1
1N1302	•	100	17.5 AV	150	2 AV	S1
1N1304	•	200	17.5 AV	150	2 AV	S1
1N1306	•	300	17.5 AV	150	2 AV	S1
1N1341	•	50	10/1.2	150	2.5 AV	S1
1N1341A,B	•	50	6.0 AV	150	3.0 AV	S1
1N1342	•	100	10/1.2	150	2.5 AV	S1
1N1342A,B	•	100	6.0 AV	150	2.5 AV	S1
1N1343	•	150	6/1.5	25		S1
1N1343A,B	•	150	6.0 AV	150	2.25 AV	S1
1N1344	•	200	10/1.2	150	2.5 AV	S1
1N1344A,B	•	200	6.0 AV	150	2.0 AV	S1
1N1345	•	300	10/1.2	150	2.5 AV	S1
1N1345A,B	•	300	6.0 AV	150	1.75 AV	S1
1N1346	•	400	10/1.2	150	2.5 AV	S1
1N1346A,B	•	400	6.0 AV	150	1.5 AV	S1
1N1347	•	500	10/1.2	150	2.5 AV	S1
1N1347A,B	•	500	6.0 AV	150	1.25 AV	S1
1N1348	•	600	10/1.2	150	2.5 AV	S1
1N1348A,B	•	600	6.0 AV	150	1.0 AV	S1
1N1379		150			50/PIV	S9
1N1380		300			50/PIV	S9
1N1381		400			50/PIV	S9
1N1382		500			50/PIV	S9
1N1396	•	50	70 AV			S2
1N1397	•	100	70 AV			S2
1N1398	•	150	70 AV			S2
1N1399	•	200	70 AV			S2
1N1400	•	300	70 AV			S2
1N1401	•	400	70 AV			S2
1N1402	•	500	70 AV			S2
1N1403	•	600	70 AV			S2
1N1406	•	600	10 AV	75	100/PIV	C2
1N1407	•	800	10 AV	75	100/PIV	C2

(Continued)

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N1408	•	1000	10 AV	75	100/PIV	C2
1N1409	•	1200	100/5	25		C2
1N1410	•	1500	100/6.25	25		C2
1N1411	•	1800	100/7.5	25		C2
1N1412	•	2000	100/6.25	25		C2
1N1413	•	2400	100/7.5	25		C2
1N1414	•	350	10/1.25	25	10/350	S5
1N1415	•	400	1.0 AV	25	2/PIV	T2
1N1434	•	50	30 AV	150	5/50	S1
1N1435	•	100	30 AV	150	5/100	S1
1N1436	•	200	30 AV	150	5/200	S1
1N1437	•	400	30 AV	150	5/400	S1
1N1438	•	600	30 AV	150	5/600	S1
1N1439	•	100	500 AV			
1N1440	•	200				
1N1440B	•	200				
1N1441	•	300				
1N1442	•	400				
1N1443	•	1000	1/1.2	25	500/PIV	T4
1N1444	•	1000	1.6 AV	150	1.5/1000	S1
1N1446	•	100	2/1.2	25	2000/100	
1N1447	•	200	2/1.2	25	2000/200	
1N1448	•	300	2/1.2	25	2000/300	
1N1449	•	400	2/1.2	25	2000/400	
1N1450	•	100	2.4/1	25	5000/100	
1N1451	•	200	2.4/1	25	5000/200	
1N1452	•	300	2.4/1	25	5000/300	
1N1453	•	400	2.4/1	25	5000/400	
1N1454	•	100	25 AV		25/PIV	SP
1N1455	•	200	25 AV		25/PIV	SP
1N1456	•	300	25 AV		25/PIV	SP
1N1457	•	400	25 AV		25/PIV	SP
1N1458	•	100	35 AV		25/PIV	SP
1N1459	•	200	35 AV		25/PIV	SP
1N1460	•	300	35 AV		25/PIV	SP
1N1461	•	400	35 AV		25/PIV	SP
1N1466	•	100	75 AV		50/PIV	SP
1N1467	•	200	75 AV		50/PIV	SP
1N1468	•	300	75 AV		50/PIV	SP
1N1469	•	400	75 AV		50/PIV	SP
1N1478	•	100	200 AV		100/PIV	SP
1N1479	•	200	200 AV		100/PIV	SP
1N1480	•	300	200 AV		100/PIV	SP
1N1481	•	400	200 AV		100/PIV	SP
1N1486	•	500	1.0 AV	25		T2
1N1487	•	100	1.0 AV	25		T2

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N1488	•	200	1.0 AV	25		T2
1N1489	•	300	1.0 AV	25		T2
1N1490	•	400	1.0 AV	25		T2
1N1491	•	500	1.0 AV	25		T2
1N1492	•	600	1.0 AV	25		T2
1N1537	•	50	1.6 AV	75		S1
1N1538	•	100	1.6 AV	75		S1
1N1539	•	150	1.6 AV	75		S1
1N1540	•	200	1.6 AV	75		S1
1N1541	•	300	1.6 AV	75		S1
1N1542	•	400	1.6 AV	75		S1
1N1543	•	500	1.6 AV	75		S1
1N1544	•	600	1.6 AV	75		S1
1N1551	•	100	.75 AV	100	1/PIV	S1
1N1552	•	200	.75 AV	100	1/PIV	S1
1N1553	•	300	.75 AV	100	1/PIV	S1
1N1554	•	400	.75 AV	100	1/PIV	S1
1N1555	•	500	.75 AV	100	1/PIV	S1
1N1556	•	100	.50 AV	100	1/PIV	T2
1N1557	•	200	.50 AV	100	1/PIV	T2
1N1558	•	300	.50 AV	100	1/PIV	T2
1N1559	•	400	.50 AV	100	1/PIV	T2
1N1560	•	500	.50 AV	100	1/PIV	T2
1N1561	•	25	5/1	25	30/25	C1
1N1562	•	25	10/1	25	25/25	C1
1N1563	•	100		25	5/PIV	T4
1N1563A	•	100		25	5/PIV	T4
1N1564	•	200		25	5/PIV	T4
1N1564A	•	200		25	5/PIV	T4
1N1565	•	300		25	5/PIV	T4
1N1565A	•	300		25	5/PIV	T4
1N1566	•	400		25	5/PIV	T4
1N1566A	•	400		25	5/PIV	T4
1N1567	•	500		55	5/PIV	T4
1N1567A	•	500		55	3/PIV	T4
1N1568	•	600		55	5/PIV	T4
1N1568A	•	600		55	3/PIV	T4
1N1575		100	1 AV	125		S1
1N1576		200	1 AV	125		S1
1N1577		300	1 AV	125		S1
1N1578		400	1 AV	125		S1
1N1581	•	50	6/1.5	150	10/50	S1
1N1582	•	100	6/1.5	150	10/100	S1
1N1583	•	200	6/1.5	150	10/200	S1
1N1584	•	300	6/1.5	150	10/300	S1
1N1585	•	400	6/1.5	150	10/400	S1

Diodes and Rectifiers

1N1283-1N1585

Diodes and Rectifiers

1N1586-1N1913

TYPE NO.	APPLICATIONS	VOLT	I_T/V_T	TEMP	I_R/V_R	DIM
SI	GP • BLK • SAT • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • GP • SAT • MIX • DET • REC •	V_{op}	(amp/v)		(ma/v)	MIL
1N1731		• 1500	.20 AV	25	10/PIV	C2
1N1732		• 2000	.20 AV	25	10/PIV	C2
1N1733		• 3000	.15 AV	25	10/PIV	C2
1N1734		• 5000	.10 AV	25	10/PIV	C2
1N1745		• 1500	300/15	75		C8
1N1746		• 1500	360/7.5	75		C8
1N1747		• 1800	270/18	75		C8
1N1748		• 1800	330/9	75		C8
1N1749		• 2400	220/24	75		C8
1N1750		• 2400	270/12	75		C8
1N1751		• 3600	290/27	75		C8
1N1752		• 3600	280/18	75		C8
1N1753		• 4800	230/36	75		C8
1N1754		• 4800	220/24	75		C8
1N1755		• 6000	210/45	75		C8
1N1756		• 6000	280/30	75		C8
1N1757		• 7200	240/54	75		C8
1N1758		• 7200	230/36	75		C8
1N1759		• 8000	220/60	75		C8
1N1760		• 12 Kv	220/60	75		C8
1N1761		• 14 Kv	240/52	75		C8
1N1762		• 16 Kv	220/60	75		C8
1N1763		• 400	.50 AV	75	1/PIV	T2
1N1764		• 500	.50 AV	75	1/PIV	T2
1N1839	•	6.8	50/1	150	.5/6.8	T4
1N1840	•	10	35/1	150	.5/10	T4
1N1841	•	15	23/1	150	.5/15	T4
1N1842	•	22	12/1	150	.1/22	T4
1N1843	•	33	7/1	150	.1/33	T4
1N1844	•	47	4.5/1	150	.1/47	T4
1N1845	•	68	2.7/1	150	1/68	T4
1N1846	•	100	1.5/1	150	1/100	T4
1N1847	•	150	1/1	150	3/150	T4
1N1848	•	220	6.5/4	150	5/220	T4
1N1849	•	330	3/4	150	5/330	T4
1N1850	•	470	2/4	150	5/470	T4
1N1907		• 50	1.5 AV	25	10/PIV	T3
1N1908		• 100	1.5 AV	25	10/PIV	T3
1N1909		• 200	1.5 AV	25	10/PIV	T3
1N1910		• 300	1.5 AV	25	10/PIV	T3
1N1911		• 400	1.5 AV	25	10/PIV	T3
1N1912		• 500	1.5 AV	25	10/PIV	T3
1N1913		• 600	1.5 AV	25	10/PIV	T3

TYPE NO.	APPLICATIONS	VOLT	I_T/V_T	TEMP	I_R/V_R	DIM
SI	GP • BLK • SAT • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • GP • SAT • MIX • DET • REC •	V_{op}	(amp/v)		(ma/v)	MIL
1N1651		• 400	.75 AV	50	300/PIV	T1
1N1652		• 500	.75 AV	50	300/PIV	T1
1N1653		• 600	.75 AV	50	300/PIV	T1
1N1660		• 50	200/1.3	150	10 AV	S9
1N1661		• 100	200/1.3	150	10 AV	S9
1N1662		• 150	200/1.3	150	10 AV	S9
1N1663		• 200	200/1.3	150	10 AV	S9
1N1664		• 300	200/1.3	150	10 AV	S9
1N1665		• 400	200/1.3	150	10 AV	S9
1N1666		• 500	200/1.3	150	10 AV	S9
1N1670		• 50			50/PIV	S9
1N1671		• 100			50/PIV	S9
1N1672		• 150			50/PIV	S9
1N1673		• 200			50/PIV	S9
1N1674		• 300			50/PIV	S9
1N1675		• 400			50/PIV	S9
1N1676		• 500			50/PIV	S9
1N1680		• 150				S2
1N1681		• 250				S2
1N1682		• 300				S2
1N1683		• 350				S2
1N1684		• 400				S2
1N1686		• 500				S2
1N1687		• 600				S2
1N1692		• 100	250 AV	100	.50 AV	T2
1N1693		• 200	250 AV	100	.50 AV	T2
1N1694		• 300	250 AV	100	.50 AV	T2
1N1695		• 400	250 AV	100	.50 AV	T2
1N1696		• 500	250 AV	100	.50 AV	T2
1N1697		• 600	250 AV	100	.50 AV	T2
1N1700		12 Kv	50 AV			
1N1701		• 50	.15 AV	100	400/PIV	T1
1N1702		• 100	.15 AV	100	400/PIV	T1
1N1703		• 200	.15 AV	100	300/PIV	T1
1N1704		• 300	.15 AV	100	300/PIV	T1
1N1705		• 400	.15 AV	100	300/PIV	T1
1N1706		• 500	.15 AV	100	300/PIV	T1
1N1707		• 50	.175 AV	150	400/PIV	T1
1N1708		• 100	.175 AV	150	400/PIV	T1
1N1709		• 200	.175 AV	150	300/PIV	T1
1N1710		• 300	.175 AV	150	300/PIV	T1
1N1711		• 400	.175 AV	150	300/PIV	T1
1N1712		• 500	.125 AV	150	300/PIV	T1
1N1730		• 1000	.20 AV	25	10/PIV	C2

TYPE NO.	APPLICATIONS	VOLT	I_T/V_T	TEMP	I_R/V_R	DIM
SI	GP • BLK • SAT • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • GP • SAT • MIX • DET • REC •	V_{op}	(amp/v)		(ma/v)	MIL
1N1586		• 500	6/1.5	150	10/500	S1
1N1587		• 600	6/1.5	150	10/600	S1
1N1612		• 50	10/1.5	25	1 AV	S1
1N1612A		• 50	5 AV			S1
1N1613		• 100	10/1.5	25	1 AV	S1
1N1613A		• 100	5 AV			S1
1N1614		• 200	10/1.5	25	1 AV	SP
1N1614A		• 200	5 AV			S1
1N1615		• 400	10/1.5	25	1 AV	SP
1N1615A		• 400	5 AV			S1
1N1616		• 600	10/1.5	25	1 AV	SP
1N1616A		• 600	5 AV			S1
1N1617		• 100	1.5/7		3.8/PIV	SP
1N1618		• 200	1.5/7		3.8/PIV	SP
1N1619		• 300	1.5/7		3.8/PIV	SP
1N1620		• 400	1.5/7		3.8/PIV	SP
1N1625		• 48	.25/33	25		SP
1N1625A		• 48	.5/33	25		SP
1N1626		• 96	.25/66	25		SP
1N1626A		• 96	.5/66	25		SP
1N1627		• 48	3.75/33	25		SP
1N1628		• 96	3.75/66	25		SP
1N1629		• 144	3.75/99	25		SP
1N1630		• 192	3.75/132	25		SP
1N1631		• 240	3.75/165	25		SP
1N1632		• 288	3.75/198	25		SP
1N1633		• 336	3.75/231	25		SP
1N1634		• 384	3.75/264	25		SP
1N1635		• 48	12.5/33	25		SP
1N1636		• 96	12.5/66	25		SP
1N1637		• 144	12.5/99	25		SP
1N1638		• 192	12.5/132	25		SP
1N1639		• 240	12.5/165	25		SP
1N1640		• 48	28/33	25		SP
1N1641		• 96	28/66	25		SP
1N1642		• 144	28/99	25		SP
1N1644		• 50	.75 AV	50	400/PIV	T1
1N1645		• 100	.75 AV	50	400/PIV	T1
1N1646		• 150	.75 AV	50	300/PIV	T1
1N1647		• 200	.75 AV	50	300/PIV	T1
1N1648		• 250	.75 AV	50	300/PIV	T1
1N1649		• 300	.75 AV	50	300/PIV	T1
1N1650		• 350	.75 AV	50	300/PIV	T1

(Continued)

NOW...RCA tunnel diodes are "axially" wrapped in gold

It's true. But the real story of RCA's new tunnel diodes lies *inside* the practical, axial-lead package. There you'll find RCA-pioneered TD-II technology—a unique process of epitaxially-grown junctions that has brought to these devices a new standard of stability, performance, and reliability. Life tests exceeding 1 million hours prove it.

Leads are gold-plated for soldering efficiency. No pretinning is necessary. And the package lends itself well for high-volume PC-board mounting operations.

In all 14 types, the TD-II process assures low capacitance and mechanical ruggedness. Thermal resistance is improved. Because TD-II is a "batch" production process, you benefit further from low cost and uniform characteristics.

Designed for high-speed switching and high-frequency, signal-processing applications, these units are ideal as threshold detectors and in computer circuitry.

AVAILABLE THROUGH YOUR RCA DISTRIBUTOR

Type	I_p (mA)		I_p/I_V	C (pF)		t_r (ps)
	Min.	Max.		Min.	Max.	
40561	4.5	5.5	6/1	25		1800
40562	9	11	6/1	25		900
40563	18	22	6/1	30		600
40564	45	55	6/1	40		350
40565	90	110	6/1	40		150
40566	4.75	5.25	8/1	15		1200
40567	9.5	10.5	8/1	15		600
40568	19	21	8/1	20		400
40569	47.5	52.5	8/1	25		200
40570	95	105	8/1	25		100
40571	4.75	5.25	8/1	8		600
40572	9.5	10.5	8/1	8		300
40573	19	21	8/1	10		200
40574	47.5	52.5	8/1	12		100

RCA



Diodes and Rectifiers

1N1914-1N2154

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2112	• 300	3 AV	25			S1
1N2113	• 400	3 AV	25			S1
1N2114	• 500	3 AV	25			S1
1N2115	• 365	.20 AV	85		250/PIV	
1N2116	• 400	1/1.2	100		400/PIV	T1
1N2117	• 720	750 AV	25		1/PIV	T2
1N2128	• 50					S1
1N2128A	• 50					S1
1N2129	• 100					S1
1N2129A	• 100					S1
1N2130	• 150					S1
1N2130A	• 150					S1
1N2131	• 200					S1
1N2131A	• 200					S1
1N2132	• 250					S1
1N2132A	• 250					S1
1N2133	• 300					S1
1N2133A	• 300					S1
1N2134	• 350					S1
1N2134A	• 350					S1
1N2135	• 400					S1
1N2135A	• 400	20 AV	150			S1
1N2136	• 450					S1
1N2136A	• 450					S1
1N2137	• 500					S1
1N2137A	• 500					S1
1N2138	• 600					S1
1N2138A	• 600					S1
1N2139						
1N2146	• 120	5/1.1	25		1/5	T2
1N2147	• 50	6 AV	150		500 AV	S3
1N2147A	• 500	6 AV	150		100/PIV	S3
1N2148	• 100	6 AV	150		500 AV	S3
1N2148A	• 100	6 AV	150		100/PIV	S3
1N2149	• 200	6 AV	150		500 AV	S3
1N2149A	• 200	6 AV	150		100/PIV	S3
1N2150	• 300	6 AV	150		500 AV	S3
1N2150A	• 300	6 AV	150		100/PIV	S3
1N2151	• 400	6 AV	150		500 AV	S3
1N2151A	• 400	6 AV	150		100/PIV	S3
1N2152	• 500	6 AV	150		500 AV	S3
1N2152A	• 500	6 AV	150		100/PIV	S3
1N2153	• 600	6 AV	150		500 AV	S3
1N2153A	• 600	6 AV	150		100/PIV	S3
1N2154	• 50	50/1.5	150			S2

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2062	• 450					S9
1N2063	• 500					S9
1N2064	• 600					S9
1N2065	• 700					S9
1N2066	• 800					S9
1N2067	• 900					S9
1N2068	• 1000					S9
1N2069	• 200	.75 AV	25		200/PIV	C5
1N2069A	• 200	.75 AV	25		5/PIV	C5
1N2070	• 400	.75 AV	25		200/PIV	C5
1N2070A	• 400	.75 AV	25		5/PIV	C5
1N2071	• 600	.75 AV	25		200/PIV	C5
1N2071A	• 600	.75 AV	25		5/PIV	C5
1N2072	• 50	.75 AV	25			C5
1N2073	• 100	.75 AV	25			C5
1N2074	• 150	.75 AV	25			C5
1N2075	• 200	.75 AV	25			C5
1N2076	• 250	.75 AV	25			C5
1N2077	• 300	.75 AV	25			C5
1N2078	• 400	.75 AV	25			C5
1N2079	• 500	.75 AV	25			C5
1N2080	• .50	500 AV	25		350 AV	T2
1N2081	• 100	500 AV	25		350 AV	T2
1N2082	• 200	500 AV	25		350 AV	T2
1N2083	• 300	500 AV	25		350 AV	T2
1N2084	• 400	500 AV	25		350 AV	T2
1N2085	• 500	500 AV	25		350 AV	T2
1N2086	• 600	500 AV	25		350 AV	T2
1N2088	• 500	500 AV				
1N2089	• 600	500 AV				
1N2090	• 50	500/.5	85		.25/50	SP
1N2091	• 100	500/.5	85		.25/100	SP
1N2092	• 200	500/.5	85		.25/200	SP
1N2093	• 300	500/.5	85		.25/300	SP
1N2094	• 400	500/.5	85		.25/400	SP
1N2095	• 500	500/.5	85		.25/500	SP
1N2096	• 600	500/.5	85		.25/600	SP
1N2103	• 50	.75 AV	25		300/PIV	S6
1N2104	• 100	.75 AV	25		300/PIV	S6
1N2105	• 200	.75 AV	25		300/PIV	S6
1N2106	• 300	.75 AV	25		300/PIV	S6
1N2107	• 400	.75 AV	25		300/PIV	S6
1N2108	• 500	.75 AV	25		300/PIV	S6
1N2109	• 50	3 AV	25			S1
1N2110	• 100	3 AV	25			S1
1N2111	• 200	3 AV	25			S1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N1914	• 700	1.5 AV	25		10/PIV	T3
1N1915	• 800	1.5 AV	25		10/PIV	T3
1N1916	• 900	1.5 AV	25		10/PIV	T3
1N1917	• 35	1/1	25		10/50	S6
1N1918	• 70	1/1	25		10/100	S6
1N1919	• 140	1/1	25		10/200	S6
1N1920	• 210	1/1	25		10/300	S6
1N1921	• 280	1/1	25		10/400	S6
1N1922	• 350	1/1	25		10/500	S6
1N1923	• 420	1/1	25		10/600	S6
1N1924	• 480	1/1	25		10/700	S6
1N1960	• .40	12				C1
1N1961	• .40	14.5				C1
1N1962	• .40	18				C1
1N1963	• .40	22				C1
1N1964	• .40	27				C1
1N1965	• .40	33				C1
1N2013	• 50	.20 AV	150		500/PIV	T1
1N2014	• 100	.20 AV	150		500/PIV	T1
1N2015	• 150	.20 AV	150		500/PIV	T1
1N2016	• 200	.20 AV	150		500/PIV	T1
1N2017	• 250	.20 AV	150		500/PIV	T1
1N2018	• 300	.20 AV	150		500/PIV	T1
1N2019	• 350	.20 AV	150		500/PIV	T1
1N2020	• 400	.20 AV	150		500/PIV	T1
1N2021	• 150	10 AV	150		5 AV	S1
1N2022	• 250	10 AV	150		5 AV	S1
1N2023	• 300	10 AV	150		5 AV	S1
1N2024	• 350	10 AV	150		5 AV	S1
1N2025	• 400	10 AV	150		5 AV	S1
1N2026	• 50	1.0 AV	150		500 AV	S1
1N2027	• 200	1.0 AV	150		500 AV	S1
1N2028	• 300	1.0 AV	150		500 AV	S1
1N2029	• 400	1.0 AV	150		500 AV	S1
1N2030	• 500	1.0 AV	150		500 AV	S1
1N2031	• 600	1.0 AV	150		500 AV	S1
1N2049A,B,C	• 10	22				S1
1N2054	• 50					S9
1N2055	• 100					S9
1N2056	• 150					S9
1N2057	• 200					S9
1N2058	• 250					S9
1N2059	• 300					S9
1N2060	• 350					S9
1N2061	• 400					S9

(Continued)

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2155	• 100	50/1.5	150			S2
1N2156	• 200	50/1.5	150			S2
1N2157	• 300	50/1.5	150			S2
1N2158	• 400	50/1.5	150			S2
1N2159	• 500	50/1.5	150			S2
1N2160	• 600	50/1.5	150			S2
1N2216	• 50	1.5 AV	25	3/PIV		S1
1N2217	• 50	1.5 AV	25	3/PIV		S3
1N2218	• 500	1.5 AV	25	3/PIV		S1
1N2219	• 500	1.5 AV	25	3/PIV		S3
1N2220	• 600	1.5 AV	25	3/PIV		S1
1N2221	• 600	1.5 AV	25	3/PIV		S3
1N2222	• 800	.3 AV	150	750 AV		S1
1N2222A	• 800	.3 AV	150	350 AV		S1
1N2223	• 800	.3 AV	150	750 AV		S3
1N2223A	• 800	.3 AV	150	350 AV		S3
1N2224	• 1000	.3 AV	150	750 AV		S1
1N2224A	• 1000	.3 AV	150	350 AV		S1
1N2225	• 1000	.3 AV	150	750 AV		S3
1N2225A	• 1000	.3 AV	150	350 AV		S3
1N2226	• 1200	1/1.2	25	3/PIV		S1
1N2226A	• 1200	1/1.2	25	3/PIV		S1
1N2227	• 1200	1 AV	25	3/PIV		S3
1N2227A	• 1200	1 AV	25	3/PIV		S3
1N2228	• 50	1 AV	150	500 AV		S1
1N2228A	• 50	5 AV	25	3/PIV		S1
1N2229	• 50	5 AV	25			S1
1N2229A	• 50	5 AV	25	3/PIV		S1
1N2230	• 200	5 AV	25	3/PIV		S1
1N2230A	• 200	5 AV	25	3/PIV		S1
1N2231	• 200	5 AV	25	3/PIV		S3
1N2231A	• 200	5 AV	25	3/PIV		S3
1N2232	• 300	5 AV	25	3/PIV		S1
1N2232A	• 300	5 AV	25	3/PIV		S1
1N2233	• 300	5 AV	25	3/PIV		S3
1N2233A	• 300	5 AV	25	3/PIV		S3
1N2234	• 400	5 AV	25	3/PIV		S1
1N2234A	• 400	5 AV	25	3/PIV		S1
1N2235	• 400	5 AV	25	3/PIV		S3
1N2235A	• 400	5 AV	25	3/PIV		S3
1N2236	• 500	5 AV	25	3/PIV		S1
1N2236A	• 500	5 AV	25	3/PIV		S1
1N2237	• 500	5 AV	25	3/PIV		S3

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2237A	• 500	5 AV	25	3/PIV		S3
1N2238	• 600	5 AV	25	3/PIV		S1
1N2238A	• 600	5 AV	25	3/PIV		S1
1N2239	• 600	5 AV	25	3/PIV		S3
1N2239A	• 600	5 AV	25	3/PIV		S3
1N2240	• 800	1.5/1.2	25			S1
1N2240A	• 800	1.6/1.2	25	3/PIV		S1
1N2241	• 800	5 AV	25	3/PIV		S3
1N2241A	• 800	5 AV	25	3/PIV		S3
1N2242	• 1000	1.5/1.2	25	3/PIV		S1
1N2242A	• 1000	1.6/1.2	25	3/PIV		S1
1N2243	• 1000	5 AV	25	3/PIV		S3
1N2243A	• 1000	5 AV	25	3/PIV		S3
1N2244	• 1200	5/1.2	25	3/PIV		S1
1N2244A	• 1200	5/1.2	25	3/PIV		S1
1N2245	• 1200	5/1.2	25	3/PIV		S1
1N2245A	• 1200	5/1.2	25	3/PIV		S1
1N2246	• 50	10 AV	25	5/PIV		S1
1N2246A	• 50	10 AV	25	3/PIV		S1
1N2247	• 50	10 AV	25	5/PIV		S3
1N2247A	• 50	10 AV	25	3/PIV		S3
1N2248	• 100	10 AV	25	5/PIV		S1
1N2248A	• 100	10 AV	25	3/PIV		S1
1N2249	• 100	10 AV	25	5/PIV		S3
1N2249A	• 100	10 AV	25	3/PIV		S3
1N2250	• 200	10 AV	25	5/PIV		S1
1N2250A	• 200	10 AV	25	3/PIV		S1
1N2251	• 200	10 AV	25	5/PIV		S3
1N2251A	• 200	10 AV	25	3/PIV		S3
1N2252	• 300	10 AV	25	5/PIV		S1
1N2252A	• 300	10 AV	25	3/PIV		S1
1N2253	• 300	10 AV	25	5/PIV		S3
1N2253A	• 300	10 AV	25	3/PIV		S3
1N2254	• 400	10 AV	25	5/PIV		S1
1N2254A	• 400	10 AV	25	3/PIV		S1
1N2255	• 400	10 AV	25	5/PIV		S3
1N2255A	• 400	10 AV	25	3/PIV		S3
1N2256	• 500	10 AV	25	5/PIV		S1
1N2256A	• 500	10 AV	25	3/PIV		S1
1N2257	• 500	10 AV	25	5/PIV		S3
1N2257A	• 500	10 AV	25	3/PIV		S3
1N2258	• 600	10 AV	25	5/PIV		S1
1N2258A	• 600	10 AV	25	3/PIV		S1
1N2259	• 600	10 AV	25	5/PIV		S3

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2259A	• 600	10 AV	25	3/PIV		S3
1N2260	• 800	3/1.2	25	10/PIV		S1
1N2260A	• 800	3/1.2	25	5/PIV		S1
1N2261	• 800	10 AV	25	10/PIV		S3
1N2261A	• 800	10 AV	25	5/PIV		S3
1N2262	• 1000	3/1.2	25	10/PIV		S1
1N2262A	• 1000	3/1.2	25	5/PIV		S1
1N2263	• 1000	10 AV	25	10/PIV		S3
1N2263A	• 1000	10 AV	25	5/PIV		S3
1N2266	• 50	1 AV	25	3/PIV		S1
1N2267	• 50	1 AV	25	3/PIV		S3
1N2268	• 500	1 AV	25	3/PIV		S1
1N2269	• 500	1 AV	25	3/PIV		S3
1N2270	• 600	1 AV	25	3/PIV		S1
1N2271	• 600	1 AV	25	3/PIV		S3
1N2272	• 50	6 AV	150			S1
1N2273	• 100	6 AV	150			S1
1N2274	• 200	6 AV	150			S1
1N2275	• 300	6 AV	150			S1
1N2276	• 400	6 AV	150			S1
1N2277	• 500	6 AV	150			S1
1N2278	• 600	6 AV	150			A1
1N2279	• 800	6 AV	150			S1
1N2282	• 300	20 AV	150	2 AV		S1
1N2283	• 400	20 AV	150	2AV		S1
1N2284	• 500	20 AV	150	2 AV		S1
1N2285	• 600	20 AV	150	2 AV		S1
1N2286	• 800	20 AV	150	2 AV		S1
1N2289	• 100	4 AV	150	500 AV		S3
1N2289A	• 100	4 AV	150	100 AV		S3
1N2290	• 100	1 AV	150	500 AV		S3
1N2290A	• 100	1 AV	150	200 AV		S3
1N2291	• 200	4 AV	150	500 AV		S3
1N2291A	• 200	4 AV	150	100 AV		S3
1N2292	• 300	4 AV	150	500 AV		S3
1N2292A	• 300	4 AV	150	200 AV		S3
1N2293	• 400	4 AV	150	500 AV		S3
1N2293A	• 400	4 AV	150	200 AV		S3
1N2327	• 1100	400/2	25	25/1100		T2
1N2328	• 2200	400/2	25	25/2200		T2
1N2335A	•					
1N2348	• 50	3 AV	25	0.1/50		S1
1N2349	• 100	3 AV	25	0.1/100		S1
1N2350	• 150	3 AV	25	0.1/150		S1

1N2155-1N2350

Diodes and Rectifiers

Diodes and Rectifiers

1N2357-1N2495

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	SAT	BLK	MIX	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N2439						•	200	200/1.3	150	5 AV S9
1N2440						•	250	200/1.3	150	5 AV S9
1N2441						•	300	200/1.3	150	5 AV S9
1N2442						•	350	200/1.3	150	5 AV S9
1N2443						•	400	200/1.3	150	5 AV S9
1N2444						•	500	70 AV		30/PIV S9
1N2445						•	600	70 AV		30/PIV S9
1N2446						•	50	20 AV	150	S3
1N2447						•	100	20 AV	150	S3
1N2448						•	150	20 AV	150	S3
1N2449						•	200	20 AV	150	S3
1N2450						•	250	20 AV	150	S3
1N2451						•	300	20 AV	150	S3
1N2452						•	350	20 AV	150	S3
1N2453						•	400	20 AV	150	S3
1N2454						•	500	20 AV	150	S3
1N2455						•	600	20 AV	150	S3
1N2456						•	700	20 AV	150	S3
1N2457						•	800	20 AV	150	S3
1N2458						•	50	30 AV	150	S3
1N2460						•	150	30 AV	150	S3
1N2461						•	200	30 AV	150	S3
1N2462						•	250	30 AV	150	S3
1N2463						•	300	30 AV	150	S3
1N2464						•	350	30 AV	150	S3
1N2465						•	400	30 AV	150	S3
1N2466						•	500	30 AV	150	S3
1N2467						•	600	30 AV	150	S3
1N2468						•	700	30 AV	150	S3
1N2469						•	800	30 AV	150	S3
1N2482						•	200	.75 AV	55	1/PIV C2
1N2483						•	400	.75 AV	55	1/PIV C2
1N2484						•	600	.75 AV	55	1/PIV C2
1N2485						•	200	.75 AV	55	1/PIV C2
1N2486						•	300	.75 AV		T2
1N2487						•	100	.50 AV	150	400/PIV T2
1N2488						•	500	.75 AV	55	1/PIV T2
1N2489						•	600	.75 AV		T2
1N2490						•	1600	.5 AV		Tube
1N2491						•	50	6/1.1	25	S1
1N2492						•	100	6/1.1	25	S1
1N2493						•	200	6/1.1	25	S1
1N2494						•	300	6/1.1	25	S1
1N2495						•	400	6/1.1	25	S1

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	SAT	BLK	MIX	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N2391						•	100	1.5 AV		SP
1N2392							200	1.5 AV		SP
1N2393						•	300	1.5 AV		SP
1N2394						•	400	1.5 AV		SP
1N2395						•	500	1.5 AV		SP
1N2396						•	600	1.5 AV		SP
1N2397						•	700	1.5 AV		SP
1N2398						•	800	1.5 AV		SP
1N2399						•	50	1.5 AV		SP
1N2400						•	100	1.5 AV		SP
1N2401						•	200	1.5 AV		SP
1N2402						•	300	1.5 AV		SP
1N2403						•	400	1.5 AV		SP
1N2404						•	500	1.5 AV		SP
1N2405						•	600	1.5 AV		SP
1N2406						•	700	1.5 AV		SP
1N2407						•	800	1.5 AV		SP
1N2408						•	50	1.5 AV		SP
1N2409						•	100	1.5 AV		SP
1N2410						•	200	1.5 AV		SP
1N2411						•	300	1.5 AV		SP
1N2412						•	400	1.5 AV		SP
1N2413						•	400	1.5 AV		SP
1N2414						•	500	1.5 AV		SP
1N2415						•	600	1.5 AV		SP
1N2416						•	700	1.5 AV		SP
1N2417						•	800	1.5 AV		SP
1N2418						•	50	1.5 AV		SP
1N2419						•	200	1.5 AV		SP
1N2420						•	300	1.5 AV		SP
1N2421						•	400	1.5 AV		SP
1N2422						•	500	1.5 AV		SP
1N2423						•	600	1.5 AV		SP
1N2424						•	700	1.5 AV		SP
1N2425						•	800	1.5 AV		SP
1N2426						•	50	100/1.3	150	5 AV S9
1N2427						•	100	100/1.3	150	5 AV S9
1N2428						•	150	100/1.3	150	5 AV S9
1N2429						•	200	100/1.3	150	5 AV S9
1N2430						•	250	100/1.3	150	5 AV S9
1N2431						•	300	100/1.3	150	5 AV S9
1N2432						•	350	100/1.3	150	5 AV S9
1N2433						•	400	100/1.3	150	5 AV S9
1N2436						•	50	200/1.3	150	5 AV S9
1N2437						•	100	200/1.3	150	5 AV S9
1N2438						•	150	100/1.3	150	5 AV S9

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	SAT	BLK	MIX	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N2357							1400	.4 AV	25	1/PIV T2
1N2358						•	1500	.4 AV	25	1/PIV T2
1N2359						•	1600	.4 AV	25	1/PIV T2
1N2360						•	1800	.4 AV	25	1/PIV T2
1N2361						•	2000	.4 AV	25	1/PIV T2
1N2362						•	1400			S1
1N2362A,B						•	1400			S1
1N2363						•	1400			S1
1N2363A,B						•	1400			S1
1N2364						•	1500			S1
1N2364A,B						•	1500			S1
1N2365						•	1500			S1
1N2365A,B						•	1500			S1
1N2366						•	1600			S1
1N2366A,B						•	1600			S1
1N2367						•	1600			S1
1N2367A,B						•	1600			S1
1N2368						•	1800			S1
1N2368A,B						•	1800			S1
1N2369						•	1800			S1
1N2369A,B						•	1800			S1
1N2370						•	2000			S1
1N2370A,B						•	2000			S1
1N2371						•	2000			S1
1N2371A,B						•	2000			S1
1N2372						•	1000			S1
1N2372A,B						•	1000			S1
1N2373						•	600	.10 AV	100	100/PIV C2
1N2374						•	1000	.10 AV	100	100/PIV C2
1N2375						•	1500	.10 AV	100	100/PIV C2
1N2376						•	2000	.10 AV	100	100/PIV C2
1N2377						•	2400	75 AV	100	100/PIV C2
1N2378						•	3000	75 AV	100	100/PIV C2
1N2379						•	4000	50 AV	100	100/PIV C2
1N2380						•	6000	50 AV	100	100/PIV C2
1N2381						•	10000	25 AV	100	100/PIV C2
1N2382						•	4000	75 AV	100	100/PIV C2
1N2382A						•	4000	350 AV	25	0.2/PIV
1N2383						•	6000	50 AV	100	100/PIV C2
1N2383A						•	6000	350 AV	25	0.2/PIV
1N2384						•	8000	35 AV	100	100/PIV C2
1N2384A						•	8000	275 AV	25	0.2/PIV
1N2385						•	10000	35 AV	100	100/PIV C2
1N2385A						•	10000	200 AV	25	0.21/PIV
1N2389						•	1600	.6 AV		Tube
1N2390						•	50	1.5 AV		SP

TYPE NO.	APPLICATIONS					VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N2496						•	500	6/1.1	25	S1
1N2497						•	600	6/1.1	25	S1
1N2501							800	150 AV	150	S3
1N2502							1000	150 AV	150	S3
1N2503						•	1200	150 AV	150	T2
1N2504						•	1500	150 AV	150	T2
1N2505						•	800	300 AV	150	T2
1N2506						•	1000	300 AV	150	T2
1N2507						•	1200	300 AV	150	T2
1N2508						•	1500	300 AV	150	T2
1N2512						•	100	2.25 AV	100	S1
1N2513						•	200	2.25 AV	100	S1
1N2514						•	300	2.25 AV	100	S1
1N2515						•	400	2.25 AV	100	S1
1N2516						•	500	2.25 AV	100	S1
1N2517						•	600	2.25 AV	100	S1
1N2518						•	100	1.0 AV	150	250/PIV
1N2519							200	1.0 AV	150	250/PIV
1N2520						•	300	1.0 AV	150	300/PIV
1N2521						•	400	1.0 AV	150	300/PIV
1N2522						•	500	1.0 AV	150	350/PIV
1N2523						•	600	1.0 AV	150	400/PIV
1N2524						•	50	2.5 AV	150	500 AV
1N2525						•	100	2.5 AV	150	500 AV
1N2526						•	200	2.5 AV	150	500 AV
1N2527						•	300	2.5 AV	150	500 AV
1N2528						•	400	2.5 AV	150	500 AV
1N2529						•	500	2.5 AV	150	500 AV
1N2530						•	600	2.5 AV	150	500 AV
1N2531						•	700	2.5 AV	150	500 AV
1N2532						•	800	2.5 AV	150	500 AV
1N2533						•	900	2.5 AV	150	500 AV
1N2534						•	1000	2.5 AV	150	500 AV
1N2535						•	50	2.5 AV	150	100 AV
1N2536						•	100	2.5 AV	150	100 AV
1N2537						•	200	2.5 AV	150	100 AV
1N2538						•	300	2.5 AV	150	100 AV
1N2539						•	400	2.5 AV	150	100 AV
1N2540						•	500	2.5 AV	150	100 AV
1N2541						•	600	2.5 AV	150	100 AV
1N2542						•	700	2.5 AV	150	100 AV
1N2543						•	800	2.5 AV	150	100 AV
1N2544						•	900	2.5 AV	150	100 AV

(Continued)

TYPE NO.	APPLICATIONS					VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N2545						•	1000	2.5 AV	150	100 AV
1N2546						•	50	2.5 AV	150	1000 AV
1N2547						•	100	2.5 AV	150	1000 AV
1N2547A						•	50	6 AV	150	100 AV
1N2548						•	200	2.5 AV	150	1000 AV
1N2548A						•	100	6 AV	150	100 AV
1N2549						•	300	2.5 AV	150	1000 AV
1N2549A						•	200	6 AV	150	100 AV
1N2550						•	400	2.5 AV	150	1000 AV
1N2550A						•	300	6 AV	150	100 AV
1N2551						•	500	2.5 AV	150	1000 AV
1N2551A						•	400	6 AV	150	100 AV
1N2552						•	600	2.5 AV	150	1000 AV
1N2552A						•	500	6 AV	150	100 AV
1N2553						•	700	2.5 AV	150	1000 AV
1N2553A						•	600	6 AV	150	100 AV
1N2554						•	800	2.5 AV	150	1000 AV
1N2555						•	900	2.5 AV	150	1000 AV
1N2556						•	1000	2.5 AV	150	1000 AV
1N2557						•	700	6 AV	150	500 AV
1N2558						•	800	6 AV	150	500 AV
1N2559						•	900	6 AV	150	500 AV
1N2560						•	1000	6 AV	150	500 AV
1N2561						•	700	6 AV	150	100 AV
1N2562						•	800	6 AV	150	100 AV
1N2563						•	900	6 AV	150	100 AV
1N2564						•	1000	6 AV	150	100 AV
1N2565						•	50	6 AV	150	1000 AV
1N2566						•	100	6 AV	150	1000 AV
1N2567						•	200	6 AV	150	1000 AV
1N2568						•	300	6 AV	150	1000 AV
1N2569						•	400	6 AV	150	1000 AV
1N2570						•	500	6 AV	150	1000 AV
1N2571						•	600	6 AV	150	1000 AV
1N2572						•	700	6 AV	150	1000 AV
1N2573						•	800	6 AV	150	1000 AV
1N2574						•	900	6 AV	150	1000 AV
1N2575						•	1000	6 AV	150	1000 AV
1N2576						•	50	12 AV	150	1000 AV
1N2577						•	100	12 AV	150	1000 AV
1N2578						•	200	12 AV	150	1000 AV
1N2579						•	300	12 AV	150	1000 AV
1N2580						•	400	12 AV	150	1000 AV
1N2581						•	500	12 AV	150	1000 AV

TYPE NO.	APPLICATIONS					VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N2582						•	600	12 AV	150	1000 AV
1N2583						•	700	12 AV	150	1000 AV
1N2584						•	800	12 AV	150	1000 AV
1N2585						•	900	12 AV	150	1000 AV
1N2586						•	1000	12 AV	150	1000 AV
1N2587						•	50	12 AV	150	200 AV
1N2588						•	100	12 AV	150	200 AV
1N2589						•	200	12 AV	150	200 AV
1N2590						•	300	12 AV	150	200 AV
1N2591						•	400	12 AV	150	200 AV
1N2592						•	500	12 AV	150	200 AV
1N2593						•	600	12 AV	150	200 AV
1N2594						•	700	12 AV	150	200 AV
1N2595						•	800	12 AV	150	200 AV
1N2596						•	900	12 AV	150	200 AV
1N2597						•	1000	12 AV	150	200 AV
1N2598						•	50	12 AV	150	2000 AV
1N2599						•	100	12 AV	150	2000 AV
1N2600						•	200	12 AV	150	2000 AV
1N2601						•	300	12 AV	150	2000 AV
1N2602						•	400	12 AV	150	2000 AV
1N2603						•	500	12 AV	150	2000 AV
1N2604						•	600	12 AV	150	2000 AV
1N2605						•	700	12 AV	150	2000 AV
1N2606						•	800	12 AV	150	2000 AV
1N2607						•	900	12 AV	150	2000 AV
1N2608						•	1000	12 AV	150	2000 AV
1N2609						•	50	500/1.1	25	10/PIV
1N2610						•	100	.75 AV	50	500/PIV
1N2611						•	200	.75 AV	50	500/PIV
1N2612						•	300	.75 AV	50	500/PIV
1N2613						•	400	.75 AV	50	500/PIV
1N2614						•	500	.75 AV	50	500/PIV
1N2615						•	600	.75 AV	50	500/PIV
1N2616						•	800	.75 AV	50	10/PIV
1N2617						•	1000	.75 AV	50	10/PIV
1N2618						•	1200	.75 AV	50	10/PIV
1N2619						•	1500	.75 AV	50	10/PIV
1N2620						•	9.3			C6
1N2620A,B						•	9.3			C6
1N2621						•	9.3			C6
1N2621A,B						•	9.3			C6
1N2622						•	9.3			C6
1N2622A,B						•	9.3			C6

Diodes and Rectifiers

1N2496-1N2622A, B

Diodes and Rectifiers

1N2623-1N2888

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2781	•	1600	.75 AV	150	100/PIV	C2
1N2784	•	200	30/1.5	150	1 AV	S1
1N2785	•	400	30/1.5	150	1 AV	S1
1N2788	•	20	100/1.5	150	2 AV	S1
1N2789	•	40	100/1.5	150	2 AV	S1
1N2791	•	350	50/1.3	25	012/200	
1N2793	•	50	5 AV	150		S1
1N2794	•	100	5 AV	150		S1
1N2795	•	150	5 AV	150		S1
1N2796	•	200	5 AV	150		S1
1N2797	•	300	5 AV	150		S1
1N2798	•	400	5 AV	150		S1
1N2799	•	500	5 AV	150		S1
1N2800	•	600	5 AV	150		S1
1N2801	•	20	100/.5	25	2/10	C1
1N2847	•	100	1.5 AV	140		S3
1N2848	•	200	1.5 AV	140		S3
1N2849	•	300	1.5 AV	140		S3
1N2850	•	400	1.5 AV	140		S3
1N2851	•	500	1.5 AV	50		S3
1N2852	•	600	1.5 AV	50		S3
1N2858	•	100	.5 AV	100	400/PIV	T2
1N2859	•	100	.5 AV	100	400/PIV	T2
1N2860	•	200	.5 AV	100	400 AV	T2
1N2861	•	300	.5 AV	100	300 AV	T2
1N2862	•	400	.5 AV	100	300 AV	T2
1N2863	•	500	.5 AV	100	300 AV	T2
1N2864	•	600	.5 AV	100	300 AV	T2
1N2865	•	690	.5/2.5	25	50/1000	T1
1N2866	•	1000	.50 AV	25	50/PIV	C6
1N2867	•	690	.5/2.5		50/1000	C6
1N2868	•	1000	.5/2.5		50/1200	C6
1N2878	•	700	.25 AV	25	500/PIV	SP13
1N2879	•	700	.25 AV	25	500/PIV	SP14
1N2880	•	1000	.25 AV	25	500/PIV	SP13
1N2881	•	1000	.25 AV	25	500/PIV	SP14
1N2882	•	1050	250/3	25	.5/PIV	SP13
1N2883	•	1050	250/3	25	.5/PIV	SP14
1N2884	•	1400	250/4	25	.5/PIV	SP13
1N2885	•	1400	250/4	25	.5/PIV	SP14
1N2886	•	1500	250/3	25	.5/PIV	SP13
1N2887	•	1500	250/3	25	.5/PIV	SP14
1N2888	•	1750	250/5	25	.5/PIV	SP13

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2714	•	420	3/188	25		SP
1N2717	•	560	3/250	25		SP
1N2720	•	840	3/376	25		SP
1N2722	•	1120	3/500	25		SP
1N2723	•	1400	3/625	25		SP
1N2724	•	1680	3/750	25		SP
1N2725	•	70	3/62	25		SP
1N2728	•	140	3/125	25		SP
1N2731	•	210	3/188	25		SP
1N2734	•	280	3/250	25		SP
1N2737	•	420	3/376	25		SP
1N2738	•	560	3/376	25		SP
1N2739	•	840	3/750	25		SP
1N2740	•	70	3.6/93	25		SP
1N2742	•	140	3.6/188	25		SP
1N2744	•	210	3.6/283	25		SP
1N2746	•	280	3.6/376	25		SP
1N2748	•	420	3.6/575	25		SP
1N2749	•	560	3.6/750	25		SP
1N2750	•	70	3/62	25		SP
1N2753	•	140	3/125	25		SP
1N2756	•	210	3/188	25		SP
1N2759	•	280	3/250	25		SP
1N2762	•	420	3/376	25		SP
1N2763	•	560	3/500	25		SP
1N2764	•	840	3/750	25		SP
1N2767		20.4				C1
1N2767A		20.4				C1
1N2768		27.2				C1
1N2768A		27.2				C1
1N2769		34				C1
1N2769A		34				C1
1N2770		40.8				C1
1N2770A		40.8				C1
1N2772	•	700	.75 AV	150	100/PIV	C2
1N2773	•	800	.75 AV	150	100/PIV	C2
1N2774	•	900	.75 AV	150	100/PIV	C2
1N2775	•	1000	.75 AV	150	100/PIV	C2
1N2776	•	1100	.75 AV	150	100/PIV	C2
1N2777	•	1200	.75 AV	150	100/PIV	C2
1N2778	•	1300	.75 AV	150	100/PIV	C2
1N2779	•	1400	.75 AV	150	100/PIV	C2
1N2780	•	1500	.75 AV	150	100/PIV	C2

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP GP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N2623	•	9.3				C6
1N2623A,B	•	9.3				C6
1N2624	•	9.3				C6
1N2624A,B	•	9.3				C6
1N2630	•	1500	85/1050			Tube
1N2631	•	1600	.6/1130			Tube
1N2632	•	2800	.25/1950			Tube
1N2633	•	1600	.6/1130			Tube
1N2634	•	1600	.6/1130			Tube
1N2635	•	1500	85/1050			Tube
1N2636	•	1500	85/1050			Tube
1N2637	•	6400	250 AV			
1N2638	•	70	1.5/31	25		SP
1N2641	•	140	1.5/31	25		SP
1N2644	•	210	1.5/94	25		SP
1N2647	•	280	1.5/125	25		SP
1N2650	•	420	1.5/188	25		SP
1N2653	•	560	1.5/250	25		SP
1N2656	•	840	1.5/376	25		SP
1N2659	•	1120	1.5/500	25		SP
1N2662	•	1400	1.5/625	25		SP
1N2664	•	1680	1.5/750	25		SP
1N2666	•	2240	1.5/1000	25		SP
1N2667	•	2800	1.5/1250	25		SP
1N2668	•	3360	1.5/1500	25		SP
1N2669	•	70	3.6/46	25		SP
1N2673	•	140	3.6/93	25		SP
1N2677	•	210	3.6/140	25		SP
1N2681	•	280	3.6/186	25		SP
1N2685	•	420	3.6/280	25		SP
1N2687	•	560	3.6/370	25		SP
1N2689	•	630	3.6/420	25		SP
1N2690	•	840	3.6/556	25		SP
1N2691	•	1120	3.6/740	25		SP
1N2692	•	70	7.2/46	25		SP
1N2694	•	140	7.2/93	25		SP
1N2696	•	210	7.2/141	25		SP
1N2698	•	280	7.2/188	25		SP
1N2700	•	420	7.2/283	25		SP
1N2701	•	560	7.2/376	25		SP
1N2702	•	70	3/31	25		SP
1N2705	•	140	3/62	25		SP
1N2708	•	210	3/94	25		SP
1N2711	•	280	3/125	25		SP

Take a look at one of the world's smallest Solid-State IR Emitters

New! RCA-40598 is not only one of the world's smallest infrared emitters, it is a new source of focused "light" for remote switching applications where the tungsten bulb reigned as king. No more. In such applications, this tiny gallium p-n junction optical diode—just 0.095 inch in diameter—can replace and outperform that tungsten bulb in many applications while handing you bonus benefits of solid-state reliability and remarkably small size.

Field tested for more than a year as RCA Dev. Type TA7008 before being introduced commercially as 40598, this unit concentrates the emitted radiation into a $15^{\circ} \frac{1}{2}$ angle cone—of high radiant intensity. Compatible with silicon photo-detectors and integrated circuit drivers, it is ideal for computer-card read-outs, instrumentation, intrusion alarm systems, indexing systems, artillery shell fuses, isolated switching, shaft encoders, and burglar alarms.

Featuring a miniature but highly efficient parabolic reflection system, this tiny device is intended for either continuous or pulse service at temperatures of -73°C to $+75^{\circ}\text{C}$. Check out this performance data:

Output wavelength = $9100 \text{ \AA} + 200, -100 \text{ typ.}$, average radiant power output = 0.3 mW min. at 50 mA, typical forward voltage = 1.4 Vdc, at operating current = 50 mA dc.

Find out more about RCA-40598 and other solid-state light sources from your RCA Representative or your RCA Distributor. For technical data, write: RCA Electronic Components, Commercial Engineering, Section S-F-6, Harrison, N.J. 07029.

RCA



Circle No. 61 on Reader Service Card for more information.

Diodes and Rectifiers

1N2889-1N3189

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N3118			TUNNEL DIODE $I_p/I_r = 10$			
1N3121	•	50	10/.35	25	150/50	C1
1N3122		20	10/.35	25	50/50	C1
1N3123	• • •	60	10/1	25	50/40	C1
1N3124	• • •	60	20/1	25	50/40	C1
1N3125	• • •	55	5/0.4	71	125/20	C1
1N3128	•		TUNNEL DIODE $I_p/I_r = 5/4.5$			SP
1N3129			TUNNEL DIODE $I_p/I_r = 20/1.8$			SP
1N3130			TUNNEL DIODE $I_p/I_r = 50/4.5$			SP
1N3138			TUNNEL DIODE $I_p/I_r = 50/2.5$			SP
1N3139	•	50	200/1.3	150	5 AV	S9
1N3140	•	100	200/1.3	150	5 AV	S9
1N3141	•	150	200/1.3	150	5 AV	S9
1N3142	•	200	200/1.3	150	5 AV	S9
1N3146	•	25	50/1	25	100/20	C1
1N3147	•	60	100/1	25	20/10	C1
1N3151	•	7200	250 AV	25	0.5/PIV	
1N3161	•	50	300/1.2	150	10 AV	S9
1N3162	•	100	300/1.2	150	10 AV	S9
1N3163	•	150	300/1.2	150	10 AV	S9
1N3164	•	200	300/1.2	150	10 AV	S9
1N3165	•	250	300/1.2	150	10 AV	S9
1N3166	•	300	300/1.2	150	10 AV	S9
1N3167	•	350	300/1.2	150	10 AV	S9
1N3168	•	400	300/1.2	150	10 AV	S9
1N3169	•	500	300/1.2	150	10 AV	S9
1N3170	•	600	300/1.2	150	10 AV	S9
1N3171A	•	700	300/1.2	150	10 AV	S9
1N3172A	•	800	300/1.2	150	10 AV	S9
1N3173A	•	900	240 AV	190	50 AV	S9
1N3174A	•	1000	240 AV	190	50 AV	S9
1N3175	•	1200	240 AV	100		S9
1N3176	•	1400	240 AV	100		S9
1N3177	•	1600	240 AV	100		S9
1N3179		240	100/1.0	25	10/200	C1
1N3180		130	500/1.5	25	5/100	C1
1N3182		.20	Variable Capacitance			C1
1N3183	•	350	250/1	25	.3/PIV	SP
1N3184	•	500	250/1	25	.3/PIV	SP
1N3185	•	700	250/2	25	.3/PIV	SP
1N3186	•	1000	250/2	25	.3/PIV	SP
1N3187	•	1500	250/3	25	.3/PIV	SP
1N3188	•	2000	250/4	25	.3/PIV	SP
1N3189	• • •	200	.75/1	25	5/200	TI

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N3057		22000	100 AV	25	10/PIV	SP
1N3058		24000	100 AV	25	10/PIV	SP
1N3059		26000	100 AV	25	10/PIV	SP
1N3060		28000	100 AV	25	10/PN	SP
1N3061		30000	100 AV	25	10/PIV	SP
1N3062		50	20/1	25	1/50	C1
1N3063		50	.25/.58	25	1/50	C1
1N3064		50	10/1	25	1/50	C1
1N3065		50	1/.53	25	1/50	C1
1N3066		50	10/1	25	1/50	C1
1N3067		20	5/1	25	1/20	C1
1N3068	•	20	5/1	25	1/20	C1
1N3069	•	50	50/1	25	1/50	C1
1N3070		175	100/1	25	1/175	C1
1N3071		150	.5/.92	25	1/150	C1
1N3072		50	.20 AV	150	1/PIV	T1
1N3073		100	.20 AV	150	1/PIV	T1
1N3074		150	.20 AV	150	1/PIV	T1
1N3075		200	.20 AV	150	1/PIV	T1
1N3076		250	.20 AV	150	1/PIV	T1
1N3077		300	.20 AV	150	1/PIV	T1
1N3078		350	.20 AV	150	1/PIV	T1
1N3079		400	.20 AV	150	1/PIV	T1
1N3080		500	.20 AV	150	1/PIV	T1
1N3081		600	.20 AV	150	1/PIV	T1
1N3082		200	750/1	150	200/200	T1
1N3083		400	750/1	150	200/400	T1
1N3084		600	750/1	150	200/600	T1
1N3085		100				S9
1N3086		200				S9
1N3087		300				S9
1N3088		400				S9
1N3089		500				S9
1N3090		600				S9
1N3091		800				S9
1N3092		1000				S9
1N3097		40	40/1	25	20/30	C1
1N3106		550	.5/1	25	50/800	T1
1N3107		840	.5/2.5	25	50/1200	T1
1N3108		550	.5/1	25	50/800	S6
1N3109		840	.5/2.5	25	50/1200	S6
1N3110	•	10	.5/.45	25	20/8	C1
1N3111		50				S9

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N2889		1750	250/5	25	.5/PIV	SP14
1N2890		2000	250/4	25	.5/PIV	SP13
1N2891		2000	250/4	25	.5/PIV	SP14
1N2892		2100	250/6	25	.5/PIV	SP13
1N2893		2100	250/6	25	.5/PIV	SP14
1N2894		2450	250/7	25	.5/PIV	SP13
1N2895		2450	250/7	25	.5/PIV	SP14
1N2896		2500	250/5	25	.5/PIV	SP13
1N2897		2500	250/5	25	.5/PIV	SP14
1N2898		2800	250/8	25	.5/PIV	SP13
1N2899		2800	250/8	25	.5/PIV	SP14
1N2900		3000	250/6	25	.5/PIV	SP13
1N2901		3000	250/6	25	.5/PIV	SP14
1N2902		3150	250/9	25	.5/PIV	SP13
1N2903		3150	250/9	25	.5/PIV	SP14
1N2904		3500	250/7	25	.5/PIV	SP13
1N2905		3500	250/7	25	.5/PIV	SP14
1N2906		3500	250/10	25	.5/PIV	SP13
1N2907		3500	250/10	25	.5/PIV	SP14
1N2908		3850	250/11	25	.5/PIV	SP13
1N2909		3850	250/11	25	.5/PIV	SP14
1N2910		4000	250/8	25	.5/PIV	SP13
1N2911		4000	250/8	25	.5/PIV	SP14
1N2912		4200	250/12	25	.5/PIV	SP13
1N2913		4200	250/12	25	.5/PIV	SP14
1N2914		4500	250/9	25	.5/PIV	SP13
1N2915		4500	250/9	25	.5/PIV	SP14
1N2916		4550	250/13	25	.5/PIV	SP13
1N2917		4550	250/13	25	.5/PIV	SP14
1N2918		5000	250/10	25	.5/PIV	SP13
1N2919		5000	250/10	25	.5/PIV	SP14
1N2920		5500	250/11	25	.5/PIV	SP13
1N2921		5500	250/11	25	.5/PIV	SP14
1N2922		6000	250/12	25	.5/PIV	SP13
1N2923		6000	250/12	25	.5/PIV	SP14
1N2924		6500	250/13	25	.5/PIV	SP13
1N2925		6500	250/13	25	.5/PIV	SP14
1N3052		12000	100 AV	25	10/PIV	SP
1N3053		14000	100 AV	25	10/PIV	SP
1N3054		16000	100 AV	25	10/PIV	SP
1N3055		18000	100 AV	25	10/PIV	SP
1N3056		20000	100 AV	25	10/PIV	SP

(Continued)

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N3190	• • • • •	400	.75/1	25	5/400	TI
1N3191	• • • • •	600	.75/1	25	5/600	TI
1N3193	• • • • •	200	.75 AV	75	10/PIV	C5
1N3194	• • • • •	400	.75 AV	75	10/PIV	C5
1N3195	• • • • •	600	.75 AV	75	10/PIV	C5
1N3196	• • • • •	800	.50 AV	75	10/PIV	C5
1N3203	• • • • •	25	100/1.0	25	50/25	C1
1N3204	• • • • •	30	35/4	25	50/25	C1
1N3206	• • • • •	85	10/1	25	.025/20	M
1N3207	• • • • •		150/1	25	.05/20	M
1N3208	• • • • •	50	15 AV	150	10 AV	S1
1N3209	• • • • •	100	15 AV	150	10 AV	S1
1N3210	• • • • •	200	15 AV	150	10 AV	S1
1N3211	• • • • •	300	15 AV	150	10 AV	S1
1N3212	• • • • •	400	1/1.1	25	10/PIV	S1
1N3213	• • • • •	500	15	150	1/500	S1
1N3214	• • • • •	600	15	150	1/600	S1
1N3227	• • • • •	100	.50 AV	25	500/PIV	C1
1N3228	• • • • •	200	.50 AV	25	500/PIV	C1
1N3229	• • • • •	500	.50 AV	25	500/PIV	C1
1N3230	• • • • •	600	.50 AV	25	500/PIV	C1
1N3231	• • • • •	800	.50 AV	25	500/PIV	C1
1N3232	• • • • •	1000	.50 AV	25	500/PIV	C1
1N3233	• • • • •	1200	.50 AV	25		C1
1N3234	• • • • •	1500	.50 AV	25		C1
1N3235	• • • • •	1800	.50 AV	25		C1
1N3236	• • • • •	2000	.50 AV	25		C1
1N3237	• • • • •	50	.75 AV	25	500/PIV	C1
1N3238	• • • • •	100	.75 AV	25	500/PIV	C1
1N3239	• • • • •	200	.75 AV	25	500/PIV	C1
1N3240	• • • • •	400	.75 AV	25	500/PIV	C1
1N3241	• • • • •	600	.75 AV	25	500/PIV	C1
1N3242	• • • • •	800	.75 AV	25	500/PIV	C1
1N3243	• • • • •	1000	.75 AV	25	500/PIV	C1
1N3244	• • • • •	1200	.75 AV			C1
1N3245	• • • • •	1500	.75 AV			C1
1N3246	• • • • •	50	1 AV	25	500/PIV	C1
1N3247	• • • • •	100	1 AV	25	500/PIV	C1
1N3248	• • • • •	200	1 AV	25	500/PIV	C1
1N3249	• • • • •	400	1 AV	25	500/PIV	C1

(Continued)

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N3250	• • • • •	600	1 AV	25	500/PIV	C1
1N3251	• • • • •	800	1 AV	25	500/PIV	C1
1N3252	• • • • •	1000	1 AV	25	500/PIV	C1
1N3253	• • • • •	200	.75 AV	75	10/PIV	M1
1N3254	• • • • •	400	.75 AV	75	10/PIV	M1
1N3255	• • • • •	600	.75 AV	75	10/PIV	M1
1N3256	• • • • •	800	.50 AV	75	10/PIV	M1
1N3257	• • • • •	100	30/1	25	.025/20	C1
1N3258	• • • • •	100	100/1	25	.025/20	C1
1N3260	• • • • •	50	160	190	40/50	S9
1N3261	• • • • •	100	160	190	40/100	S9
1N3262	• • • • •	150	160	190	40/150	S9
1N3263	• • • • •	200	160	190	40/200	S9
1N3264	• • • • •	250	160	190	40/250	S9
1N3266	• • • • •	350	160	190	40/350	S9
1N3267	• • • • •	400	160	190	40/400	S9
1N3268	• • • • •	500	160	190	40/500	S9
1N3269	• • • • •	600	160	190	40/600	S9
1N3270	• • • • •	700	160	190	40/700	S9
1N3271	• • • • •	800	160	190	40/800	S9
1N3272	• • • • •	900	160	190	40/900	S9
1N3273	• • • • •	1000	160	190	40/1000	S9
1N3277	• • • • •	200	.75 AV	25	5/PIV	C1
1N3278	• • • • •	400	.75 AV	25	5/PIV	C1
1N3279	• • • • •	600	.75 AV	25	5/PIV	C1
1N3280	• • • • •	800	.75 AV	25	5/PIV	C1
1N3281	• • • • •	1000	.75 AV	25	5/PIV	C1
1N3282	• • • • •	1000	100 AV	25	1/PIV	C1
1N3283	• • • • •	1500	100 AV	25	1/PIV	C1
1N3284	• • • • •	2000	100 AV	25	1/PIV	C1
1N3285	• • • • •	2500	100 AV	25	1/PIV	C1
1N3286	• • • • •	3000	100 AV	25	1/PIV	C1
1N3287	• • • • •	6	1/2		15/2	C1
1N3289	• • • • •	300	100 AV	130	9.5 AV	S9
1N3290	• • • • •	400	100 AV	130	9.0 AV	S9
1N3291	• • • • •	525	100 AV	130	9.0 AV	S9
1N3292	• • • • •	650	100 AV	130	8.0 AV	S9
1N3293	• • • • •	800	100 AV	130	6.5 AV	S9
1N3294	• • • • •	1050	100 AV	130	5.5 AV	S9
1N3295	• • • • •	1300	100 AV	130	4.5 AV	S9
1N3296	• • • • •	1500	100 AV	130	3.5 AV	S9
1N3298	• • • • •	70	500/9	25	.2/60	C1

TYPE NO.	APPLICATIONS	VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG •	V_{op}	(amp/v)		(ma/v)	MIL
1N3300	• • • • •	30				C1
1N3301	• • • • •	30				C1
1N3302	• • • • •	40				C1
1N3303	• • • • •	50				C1
1N3304	• • • • •	50				C1
1N3465	• • • • •	50	200/1	26	20/45	C1
1N3466	• • • • •	35	200/1	25	15/30	C1
1N3467	• • • • •	20	20/5	25	15/15	C1
1N3468	• • • • •	20	20/5	25	60/15	C1
1N3469	• • • • •	30	25/5	25	15/20	C1
1N3470	• • • • •	30	25/5	25	30/20	C1
1N3471	• • • • •	40	10/1	25	.02/40	SP
1N3473	• • • • •	200	.75 AV	50	.5 AV	SP
1N3474	• • • • •	400	.75 AV	50	.5 AV	SP
1N3475	• • • • •	600	.75 AV	50	.5 AV	SP
1N3476	• • • • •	800	.75 AV	50	.5 AV	SP
1N3483	• • • • •	8	10/5	25		C1
1N3484	• • • • •	75	250/7	25	25/75	C1
1N3486	• • • • •	1000	.40 AV	25	35/PIV	T2
1N3487	• • • • •	1200	.40	25	50/PIV	T2
1N3491	• • • • •	50	18 AV	150	10 AV	SP
1N3492	• • • • •	100	18 AV	150	10 AV	SP
1N3493	• • • • •	200	18 AV	150	8 AV	SP
1N3494	• • • • •	300	18 AV	150	6 AV	SP
1N3495	• • • • •	400	18 AV	150	4 AV	SP
1N3535	• • • • •	200	100/0.55	75	1/150	C1
1N3536	• • • • •	70	1/0.65	25	0.025/60	C1
1N3544	• • • • •	100	.60 AV	25	2/PIV	C1
1N3545	• • • • •	200	.60 AV	25	2/PIV	C1
1N3546	• • • • •	300	.60 AV	25	2/PIV	C1
1N3547	• • • • •	400	.60 AV	25	2/PIV	C1
1N3548	• • • • •	500	.60 AV	25	2/PIV	C1
1N3549	• • • • •	600	.60 AV	25	2/PIV	C1
1N3563	• • • • •	1000	400 AV	75	200 AV	C9
1N3567	• • • • •	60	100/1	25	.05/50	M
1N3568	• • • • •		20/1	25	75/1	M
1N3569	• • • • •	150	3.5/5	150	400 AV	S1
1N3570	• • • • •	275	3.5/5	150	400 AV	S1
1N3571	• • • • •	400	3.5/5	150	400 AV	S1
1N3572	• • • • •	525	3.5/5	150	400 AV	S1
1N3573	• • • • •	650	3.5/5	150	400 AV	S1
1N3574	• • • • •	775	3.5/5	150	400 AV	S1

1N3190-1N3574

Diodes and Rectifiers

Diodes and Rectifiers

1N3575-1N3878

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N3757	•	200	1000 AV	25	5/200	C1
1N3758	•	400	1000 AV	25	5/400	C1
1N3759	•	600	1000 AV	25	5/600	C1
1N3760	•	800	1000 AV	25	5/800	C1
1N3761	•	1000	1000 AV	25	5/1000	C1
1N3765	•	700	35 AV	190	20/PIV	S1
1N3766	•	800	35 AV	140	10/800	S1
1N3767	•	900	35 AV	140	10/900	S1
1N3768	•	1000	35 AV	140	10/1000	S1
1N3769	•		100/1.0	25	5/5	C1
1N3773	•	25	2/0.35	25	4/3	C1
1N3775	•	1500	3.3 AV	25	.1/1050	S1
1N3777	•	800	35 AV	190	20/PIV	S1
1N3831		Four layer diode $V_S = 20$, $I_h = 0.5-15$ ma				
1N3832		Four layer diode $V_S = 25$, $I_h = 0.5-15$ ma				
1N3833		Four layer diode $V_S = 30$, $I_h = 0.5-15$ ma				
1N3834		Four layer diode $V_S = 35$, $I_h = 0.5-15$ ma				
1N3835		Four layer diode $V_S = 40$, $I_h = 0.5-15$ ma				
1N3836		Four layer diode $V_S = 45$, $I_h = 0.5-15$ ma				
1N3837		Four layer diode $V_S = 50$, $I_h = 0.5-15$ ma				
1N3838		Four layer diode $V_S = 100$, $I_h = 0.5-15$ ma				
1N3839		Four layer diode $V_S = 20$, $I_h = 14-50$ ma				
1N3840		Four layer diode $V_S = 25$, $I_h = 14-50$ ma				
1N3841		Four layer diode $V_S = 30$, $I_h = 14-50$ ma				
1N3842		Four layer diode $V_S = 35$, $I_h = 14-50$ ma				
1N3843		Four layer diode $V_S = 40$, $I_h = 14-50$ ma				
1N3844		Four layer diode $V_S = 45$, $I_h = 14-50$ ma				
1N3845		Four layer diode $V_S = 50$, $I_h = 14-50$ ma				
1N3846		Four layer diode $V_S = 100$, $I_h = 14-50$ ma				
1N3866	•	200	1000 AV	55	.01/PIV	C1
1N3867	•	400	1000 AV	55	.01/PIV	C1
1N3868	•	600	1000 AV	55	.01/PIV	C1
1N3869	•	1000	500 AV	55	.01/PIV	C1
1N3870	•	1500	500 AV	55	.01/PIV	C1
1N3871	•	2500	250 AV	55	.01/PIV	C1
1N3872	•	90	150/1	25	.1/75	C1
1N3873	•		20/7		.1/50	C1
1N3874	•	50	6 AV	25	15/50	S3
1N3875	•	100	6 AV	25	15/100	S3
1N3876	•	200	6 AV	25	15/200	S3
1N3877	•	300	6 AV	25	15/300	S3
1N3878	•	400	6 AV	25	15/400	S3

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N3653	•	100	400/1	25	.025/75	C1
1N3654	•	100	50/1	25	.025/75	C1
1N3656	•	200	.75 AV	25	10/PIV	M1
1N3657	•	400	.75 AV	25	10/PIV	M1
1N3658	•	600	.75 AV	25	10/PIV	M
1N3659	•	50	25 AV	150	5 AV	SP
1N3660	•	100	25 AV	150	4.5 AV	SP
1N3661	•	200	25 AV	150	4 AV	SP
1N3662	•	300	25 AV	150	3.5 AV	SP
1N3663	•	400	25 AV	150	3 AV	SP
1N3664	•	500	25 AV	150	2.5 AV	SP
1N3665	•	600	25 AV	150	2 AV	SP
1N3666	•		200/1.0	25	150/20	C1
1N3669	•	70	400/1.1	25	0.25/PIV	C1
1N3670	•	700	12/490			S1
1N3670A	•	700	12/490			S1
1N3671	•	800	12/560			S1
1N3671A	•	800	12/560			S1
1N3672	•	900	12/630			S1
1N3672A	•	900	12/630			S1
1N3673	•	1000	12/700			S1
1N3673A	•	1000	12/700			S1
1N3722	•		20/1	25	.1/50	M
1N3728	•		400/1.2	25	.005/20	C1
1N3729	•		5/1	25	.1/500	C1
1N3730	•		750/1	25	.1/60	C1
1N3731	•	100	100/1	25	.05/50	C1
1N3736	•	300	250 AV	130	16 AV	S9
1N3737	•	400	250 AV	130	16 AV	S9
1N3738	•	525	250 AV	130	16 AV	S9
1N3739	•	650	250 AV	130	16 AV	S9
1N3740	•	800	250 AV	130	12.5 AV	S9
1N3741	•	1050	250 AV	130	10 AV	S9
1N3742	•	1300	250 AV	130	8 AV	S9
1N3743	•	1200	250/1200	130		S9
1N3744	•	1400	255/1200	130		S9
1N3748	•	200	500 AV	25	5/200	C1
1N3749	•	400	500 AV	25	5/400	C1
1N3750	•	600	500 AV	25	5/600	C1
1N3751	•	800	500 AV	25	5/800	C1
1N3752	•	1000	500 AV	25	5/1000	C1
1N3754	•	125	125/1	25	5/100	C1
1N3755	•	250	125/1	25	5/200	C1
1N3756	•	500	125/1	25	5/400	C1

TYPE NO.	APPLICATIONS	VOLT	I_F/V_F	TEMP	I_R/V_R	DIM
SI	GP • BLK • MIX • DET • REC •	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP • SAT • MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N3575	•	60	100/1	25		C1
1N3576	•	125	100/1	25		C1
1N3577	•	175	100/1	25		C1
1N3578	•	225	100/1	25		C1
1N3579	•	275	100/1	25		C1
1N3592	•	30	2/35		20/20	C1
1N3593	•	40	10/1	25	.025/10	M1
1N3594	•	60	50/1	25	50/0.1	M
1N3595	•		200/1			M1
1N3596	•	30	30/1	25	0.1/20	C1
1N3598	•	75	10/0.7	25	0.1/50	C1
1N3600	•		200/1			M1
1N3604	•	75	50/1	25	50/50	C1
1N3605	•	40	20/8	25	50/50	C1
1N3606	•	75	20/8	25	50/50	C1
1N3607	•	75	50/1	25	50/50	M
1N3608	•	40	20/8	25	50/50	M
1N3609	•	75	20/8	25	50/50	M
1N3611	•	200	2 AV	25	10 AV	M1
1N3612	•	400	2 AV	25	10 AV	M1
1N3613	•	600	2 AV	25	10 AV	M1
1N3615	•	50	16/35			S1
1N3616	•	100	16/70			S1
1N3617	•	150	16/105			S1
1N3618	•	200	16/140			S1
1N3619	•	300	16/210			S1
1N3620	•	400	16/280			S1
1N3621	•	500	16/350			S1
1N3622	•	600	16/420			S1
1N3623	•	800	16/560			S1
1N3624	•	1000	16/700			S1
1N3639	•	200	.75 AV	75	10/PIV	T3
1N3640	•	400	.75 AV	75	10/PIV	T3
1N3641	•	600	.75 AV	75	10/PIV	T3
1N3642	•	800	.50 AV	75	10/PIV	T3
1N3643	•	1000	250 AV	125	.1/1000	C1
1N3644	•	1500	250 AV	125	.1/1500	C1
1N3645	•	2000	250 AV	125	.1/2000	C1
1N3646	•	2500	250 AV	125	.1/2500	C1
1N3647	•	3000	250 AV	125	.1/3000	C1
1N3649	•	800	1/1.1	25		S1
1N3650	•	1000	1/1.1	25		S1

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N3879						• 50	6 AV	100	1/50	S1
1N3880						• 100	6 AV	100	1/100	S1
1N3881						• 200	6 AV	100	1/200	S1
1N3882						• 300	6 AV	100	1/300	S1
1N3883						• 400	6 AV	100	1/400	S1
1N3884						• 50	12 AV	25	25/50	S3
1N3885						• 100	12 AV	25	25/100	S3
1N3886						• 200	12 AV	25	25/200	S3
1N3887						• 300	12 AV	25	25/300	S3
1N3888						• 400	12 AV	25	25/400	S3
1N3889						• 50	12 AV	100	25/50	S1
1N3890						• 100	12 AV	100	25/100	S1
1N3891						• 200	12 AV	100	25/200	S1
1N3892						• 300	12 AV	100	25/300	S1
1N3893						• 400	12 AV	100	25/400	S1
1N3894	•					400	200/1	25	2/400	C1
1N3895						• 350	200/1	25	5/350	C1
1N3899						• 50	20 MAX	100	10/PRV	S1
1N3900						• 100	20 MAX	100	10/PRV	S1
1N3901						• 200	20 MAX	100	10/PRV	S1
1N3902						• 300	20 MAX	100	10/PRV	S1
1N3903						• 400	20 MAX	100	10/PRV	S1
1N3909						• 50	30 MAX	100	15/PRV	S1
1N3910						• 100	30 MAX	100	15/PRV	S1
1N3911						• 200	30 MAX	100	15/PRV	S1
1N3912						• 300	30 MAX	100	15/PRV	S1
1N3913						• 400	30 MAX	100	15/PRV	S1
1N3929						• 1000	1/2	25		SP
1N3930						• 1500	1/2	25		SP
1N3931						• 2000	1/2	25		SP
1N3932						• 2500	1/2	25		SP
1N3938						• 200	.5 AV	150		T3
1N3939						• 400	.5 AV	150		T3
1N3940						• 600	.5 AV	150		T3
1N3941						• 800	2 AV	25	5/PIV	C6
1N3942						• 1000	2 AV	25	5/PIV	C6
1N3944						15	10/4			C1
1N3956	•					40	20/74	25	.05/30	C1
1N3958						• 150		150	400 AV	S1
1N3959						• 275		150	400 AV	S1
1N3960						• 400		150	400 AV	S1
1N3961						• 525		150	400 AV	S1

(Continued)

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N3962						• 650		150	400 AV	S1
1N3963						• 775		150	400 AV	S1
1N3964						• 200	30/1.5	150	1 AV	S1
1N3965						• 400	30/1.5	150	1 AV	S1
1N3966						• 600	30/1.5	150	1 AV	S1
1N3967						• 800	30/1.5	150	1 AV	S1
1N3968						• 200	100/1.5	150	2 AV	S1
1N3969						• 400	100/1.5	150	2 AV	S1
1N3970						• 600	100/1.5	150	2 AV	S1
1N3971						• 800	100/1.5	150	2 AV	S1
1N3972						• 200	200/1.3	150	5 AV	S9
1N3973						• 400	200/1.3	150	5 AV	S9
1N3974						• 600	200/1.3	150	5 AV	S9
1N3975						• 800	200/1.3	150	5 AV	S9
1N3976						• 200	300/1.2	150	10 AV	S9
1N3977						• 400	300/1.2	150	10 AV	S9
1N3978						• 600	300/1.2	150	10 AV	S9
1N3979						• 800	300/1.2	150	10 AV	S9
1N3987						• 700	6/490			S1
1N3988						• 800	6 AV	150	1.4	S1
1N3989						• 900	6/930			S1
1N3990						• 1000	6/700			S1
1N3992						• 4000	250 AV	125	1/4000	C1
1N4001						• 50	750 AV	100	30 AV	C1
1N4002						• 100	750 AV	100	30 AV	C1
1N4003						• 200	750 AV	100	30 AV	C1
1N4004						• 400	750 AV	100	30 AV	C1
1N4005						• 600	750 AV	100	30 AV	C1
1N4006						• 800	750 AV	100	30 AV	C1
1N4007						• 1000	750 AV	100	30 AV	C1
1N4008						25	10/0.5	45	100/20	C1
1N4009						• 25	30/1.0	25	0.1/PIV	C1
1N4043						35	30/1.0	25	0.1/25	C1
1N4044						• 50				S8
1N4045						• 100				S8
1N4046						• 150				S8
1N4047						• 200				S8
1N4048						• 250				S8
1N4049						• 300				S8
1N4050						• 400				S8
1N4051						• 500				S8
1N4052						• 600				S8

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	MAG	V_{op}	(amp/v)	(ma/v)	MIL
1N4053						• 700				S8
1N4054						• 800				S8
1N4055						• 900				S8
1N4056						• 1000				S8
1N4063	•					75	10/0.70	25	0.1/50	
1N4087						50	30/0.975	100	10/50	C1
1N4092	•					50	5/1	25	1/10	C1
1N4093	•					50	5/1	25	1/10	C1
1N4136						• 200	70 AV	100		S2
1N4137						• 400	70 AV	100		S2
1N4138						• 600	70 AV	100		S2
1N4139						• 50	3/1	50	0.1/50	
1N4140						• 100	3/1	50	0.1/100	
1N4141						• 200	3/1	50	0.1/200	
1N4142						• 400	3/1	50	0.1/400	
1N4143						• 600	3/1	50	0.1/600	
1N4144						• 800	3/1	50	0.1/800	
1N4145						• 1000	3/1	50	0.1/1000	
1N4146						• 1200	3/1	50	0.1/1200	
1N4147	•					30	30/1	25	0.1/20	C1
1N4148						75	150 AV	25	0.025/20	C1
1N4149						75	150 AV	25	0.025/20	C1
1N4150						50	150 AV	25	0.1/50	C1
1N4151						50	150 AV	25	0.05/50	C1
1N4152						30	150 AV	25	0.05/30	C1
1N4153						50	150 AV	25	0.05/50	C1
1N4154						25	75 AV	25	0.1/25	C1
1N4244	•					20	20/1	25	0.25/15	C1
1N4156	•					30	100/1.54	25	0.05/20	
1N4157	•					30	100/2.36	25	0.05/20	
1N4245	•					200	1000 AV	55	1/PIV	C1
1N4246	•					400	1000 AV	55	1/PIV	C1
1N4247	•					600	1000 AV	55	1/PIV	C1
1N4248	•					800	1000 AV	55	1/PIV	C1
1N4249	•					1000	1000 AV	55	1/PIV	C1
1N4250						• 800	500 AV	55	1/PIV	C1
1N4251						• 1000	500 AV	55	1/PIV	C1
1N4252						• 1200	500 AV	55	1/PIV	C1
1N4253						• 1500	500 AV	55	1/PIV	C1
1N4254						• 1500	250 AV	55	1/PIV	C1
1N4255						• 2000	250 AV	55	1/PIV	C1
1N4256						• 2500	250 AV	55	1/PIV	C1

1N3879-1N4256

Diodes and Rectifiers

Diodes and Rectifiers

1N4257-1N4937

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	V_{op}	(amp/v)		(ma/v)	MIL
1N4792							22 pf			C10
1N4793							27 pf			C10
1N4794							33 pf			C10
1N4795							39 pf			C10
1N4796							47 pf			C10
1N4797							56 pf			C10
1N4798							68 pf			C10
1N4799							82 pf			C10
1N4800							100 pf			C10
1N4801							6.8 pf			C10
1N4802							8.2 pf			C10
1N4803							10 pf			C10
1N4804							12 pf			C10
1N4805							15 pf			C10
1N4806							18 pf			C10
1N4807							22 pf			C10
1N4808							27 pf			C10
1N4809							33 pf			C10
1N4810							39 pf			C10
1N4811							47 pf			C10
1N4812							56 pf			C10
1N4813							68 pf			C10
1N4814							82 pf			C10
1N4815							100 pf			C10
1N4828	•						100/0.77	25	0.1/20	C1
1N4829	•						1.35/1.87	25	0.1/20	C1
1N4830	•						2.15/2.69	25	0.1/20	C1
1N4863						70	100/0.83	150	50/50	C1
1N4864						125	100/0.83	150	100/80	C1
1N4878						• 100	100/100	120		S9
1N4879						• 100	160/100	120		S9
1N4933						• 50	1 AV		5/50	C1
1N4934						• 100	1 AV		5/100	C1
1N4935						• 200	1 AV		5/200	C1
1N4936						• 400	1 AV		5/400	C1
1N4937						• 600	1 AV		5/600	C1

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	V_{op}	(amp/v)		(ma/v)	MIL
1N4517						• 200	2/1.2	175	1/200	
1N4523	•					15	100/1	25	30/10	C1
1N4524	•					10	10/0.65	25	12/6	C1
1N4531	•					75	10/1.0	25	.025/20	C1
1N4532	•					75	2/1.0	25	0.1/50	C1
1N4533	•					30	10/.81	25	.05/30	C1
1N4534	•					50	10/.81	25	.05/50	C1
1N4536	•					25	30/1	25	0.1/25	C1
1N4537						• 1500	3 AV	150	300/PIV	
1N4538						• 2000	3 AV	150	300/PIV	
1N4539						• 2500	3 AV	150	300/PIV	
1N4540						• 3000	3 AV	150	300/PIV	
1N4541						225	400 AV	25	.02/PIV	
1N4542						400	400 AV	25	.02/PIV	
1N4543						600	400 AV	25	.02/PIV	
1N4544						800	400 AV	25	.02/PIV	
1N4545						1000	400 AV	25	.02/PIV	
1N4548	•						30/1	25	0.1/25	C1
1N4585						800	1.0 AV	50	10/PIV	C1
1N4586						1000	1.0 AV	50	10/PIV	C1
1N4606							250/1.1	25	0.1/50	C1
1N4607							400/1.1	25	0.1/50	C1
1N4608							500/1.1	25	0.1/50	C1
1N4610						55	300/1.1	150	100/55	C1
1N4719						• 50	3.0	75	1.5	T2
1N4720						• 100	3.0	75	1.5	T2
1N4721						• 200	3.0	75	1.5	T2
1N4722						• 400	3.0	75	1.5	T2
1N4723						• 600	3.0	75	1.5	T2
1N4724						• 800	3.0	75	1.5	T2
1N4725						• 1000	3.0	75	1.5	T2
1N4726							10/0.85	25	0.1/20	C1
1N4727							10/0.85	25	0.1/20	C1
1N4785						320	7 AV	85	0.15/320	SP15
1N4786							6.8 pf			C10
1N4787							8.2 pf			C10
1N4788							10 pf			C10
1N4789							12 pf			C10
1N4790							15 pf			C10
1N4791							18 pf			C10

TYPE NO.	APPLICATIONS					VOLT	I_f/V_f	TEMP	I_R/V_R	DIM
SI	•	•	•	•	•	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP	GP	BLK	MIX	DET	V_{op}	(amp/v)		(ma/v)	MIL
1N4257						• 3000	250 AV	55	1/PIV	C1
1N4305						50	10/.85	25	0.1/50	C1
1N4306						Matched pair				
1N4307						Matched quad				
1N4308						100	200/1	25	1/75	C1
1N4309						50	400/1	25	1/30	C1
1N4310						75	400/1	25	1/50	C1
1N4311						100	300/1	25	1/75	C1
1N4312						150	200/1	25	1/100	C1
1N4364						• 100	750 AV	25	1/PIV	T2
1N4365						• 200	750 AV	25	1/PIV	T2
1N4366						• 300	750 AV	25	1/PIV	T2
1N4367						• 400	750 AV	25	1/PIV	T2
1N4368						• 500	750 AV	25	1/PIV	T2
1N4369						• 600	750 AV	25	1/PIV	T2
1N4374						• 1500	750 AV	150	300/PIV	T2
1N4376						10	50/1.10	150	100/10	C1
1N4381						25	2/0.25	25	100/20	C1
1N4383						• 200	1 AV	100	10/200	C1
1N4384						• 400	1 AV	100	10/200	C1
1N4385						• 600	1 AV	100	10/200	C1
1N4436						• 200	1018 AV	100	1/PIV	
1N4437						• 400	10 AV	100	1/PIV	
1N4441						• 1500	25 AV	25	.3 AV	
1N4442	•					30	200 AV	25	.001/30	C1
1N4443	•					50	200 AV	25	.001/30	C1
1N4444	•					50	100/1.0	25	.05/50	C1
1N4445	•					100	100/1.0	25	.05/80	C1
1N4446						75	150 AV	25	0.025/20	C1
1N4447						75	150 AV	25	0.025/20	C1
1N4448						75	150 AV	25	0.025/20	C1
1N4449						75	150 AV	25	0.025/20	C1
1N4450	•					30	200 AV	25	0.05/30	C1
1N4451	•					30	200 AV	25	0.05/30	C1
1N4452	•					30	200 AV	25	0.05/30	C1
1N4453	•					30	100/0.80	25	0.05/20	C1
1N4454	•					50	150 AV	25	0.05/50	C1
1N4502						20	3/0.3	55	10/6	C1
1N4513						• 2000	.25/4.5	175	0.5/2000	
1N4514						• 800	1.1/1	175	0.5/800	

Diodes and Rectifiers

2N4942-2N5331

TYPE NO.	APPLICATIONS	VOLT	I_F/V_f	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N5145			27 pf			
1N5145A			27 pf			
1N5146			33 pf			
1N5146A			33 pf			
1N5147			39 pf			
1N5147A			39 pf			
1N5148			47 pf			
1N5148A			47 pf			
1N5179			100/3	150	50/20	
1N5181	• 4000	60 AV	100		20/4000	C1
1N5182	• 5000	60 AV	100		20/5000	C1
1N5183	• 7500	60 AV	100		20/7500	C1
1N5184	• 10000	60 AV	100		20/10000	C1
1N5197	• 50	2 AV	100		100/50	C1
1N5198	• 100	2 AV	100		100/100	C1
1N5199	• 200	2 AV	100		100/200	C1
1N5200	• 400	2 AV	100		100/400	C1
1N5201	• 600	2 AV	100		100/600	C1
1N5282	• 80	400	25		0.1/55	M1
1N5318	• 75	400	25		0.1/50	M1
1N5331	•	12 AV	150		0.5 AV	S2

TYPE NO.	APPLICATIONS	VOLT	I_F/V_f	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N5058		• 600	1/1.3	25	5/600	
1N5059		• 200	1 AV	75	5/200	M
1N5060		• 400	1 AV	75	5/400	M
1N5061		• 600	1 AV	75	5/600	M
1N5062		• 800	1 AV	75	5/800	M
1N5135		• 75	500/1.3	100	75/50	C1
1N5139			6.8 pf			
1N5139A			6.8 pf			
1N5140			10 pf			
1N5140A			10 pf			
1N5141			12 pf			
1N5141A			12 pf			
1N5142			15 pf			
1N5142A			15 pf			
1N5143			18 pf			
1N5143A			18 pf			
1N5144			22 pf			
1N5144A			22 pf			

TYPE NO.	APPLICATIONS	VOLT	I_F/V_f	TEMP	I_R/V_R	DIM
SI	• GP • BLK • MIX • DET • REC	PRV	(ma/v)	(°C)	(μ a/v)	
GE	CMP SAT MAG	V_{op}	(amp/v)		(ma/v)	MIL
1N4942		• 200	1 AV	25	0.1/200	C1
1N4943		• 300	1 AV	25	0.1/300	C1
1N4944		• 400	1 AV	25	0.1/400	C1
1N4945		• 500	1 AV	25	0.1/500	C1
1N4946		• 600	1 AV	25	0.1/600	C1
1N4947		• 800	1 AV	25	0.1/800	C1
1N4948		• 1000	1 AV	25	0.1/1000	C1
1N4950	•	25	1/0.53	25	1.5 AV	T4
1N4997		• 50	3/50	75	1.5 AV	T4
1N4998		• 100	3/100	75	1.5 AV	T4
1N4999		• 200	3/200	75	1.5 AV	T4
1N5000		• 400	3/400	75	1.5 AV	T4
1N5001		• 600	3/600	75	1.5 AV	T4
1N5002		• 800	3/800	75	1.5 AV	T4
1N5003		• 1000	3/1000	75	1.5 AV	T4
1N5055		• 100	1/1.3	25	5/100	
1N5056		• 200	1/1.3	25	5/200	
1N5057		• 400	1/1.3	25	5/400	

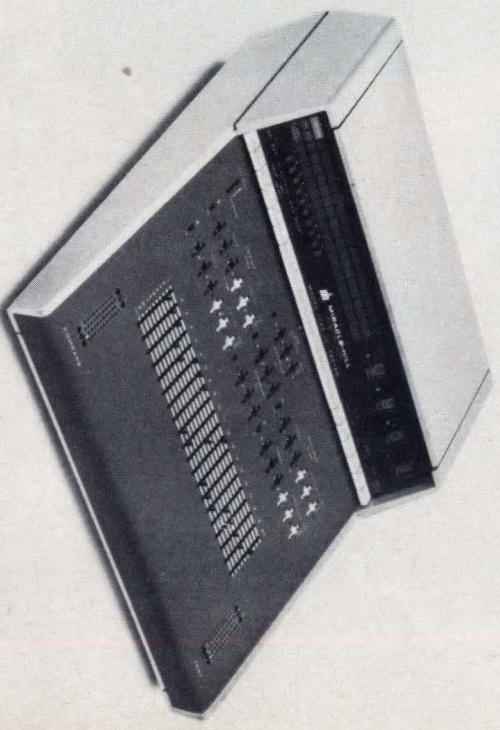
Circle No. 62 on Reader Service
Card for more information.

With the New Miracle-Hill Automatic IC Tester, incoming inspection can test like the manufacturers test: Fast, Routine, Comprehensive...

You program the Miracle-Hill Model 1740 in 2 minutes or less: 1. Determine forcing conditions and limits from manufacturer's specifications. 2. Establish pin configuration for the circuits to be tested. 3. At crossbar switch, program the inputs and outputs to their respective pins.

Testing starts automatically when you plug a circuit into the Model 1740 test socket. Variable test speed control provides a testing range from one to two hundred tests per second. The economy built into a Miracle-Hill IC Tester now becomes apparent. For full information write Miracle-Hill, 320 Martin Avenue, Santa Clara, Calif. 95050. Tel. (408) 296-1730.

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ELECTRONICS



If Freon[®] is the "high-priced" cleaning agent

...how come it paid for itself in one year at Hazeltine?

Nearly all the printed circuits produced by Hazeltine at its plant in Riverhead, New York, go to customers in the space industry... who demand flawless components in spotlessly clean circuits.

Until two years ago, Hazeltine cleaned its printed circuits manually in other solvents. This system was effective, however, it was not very efficient...too expensive and time-consuming. In the spring of 1965, an all new printed-circuit-board cleaning system using FREON[®] TMC was installed. This new system cleaned 50 pieces of equipment in the same time it took the old system to clean one. The total outlay for the new equipment was less than \$5,000. By the following spring it was completely amortized. Since then, FREON has been *making* money for Hazeltine.

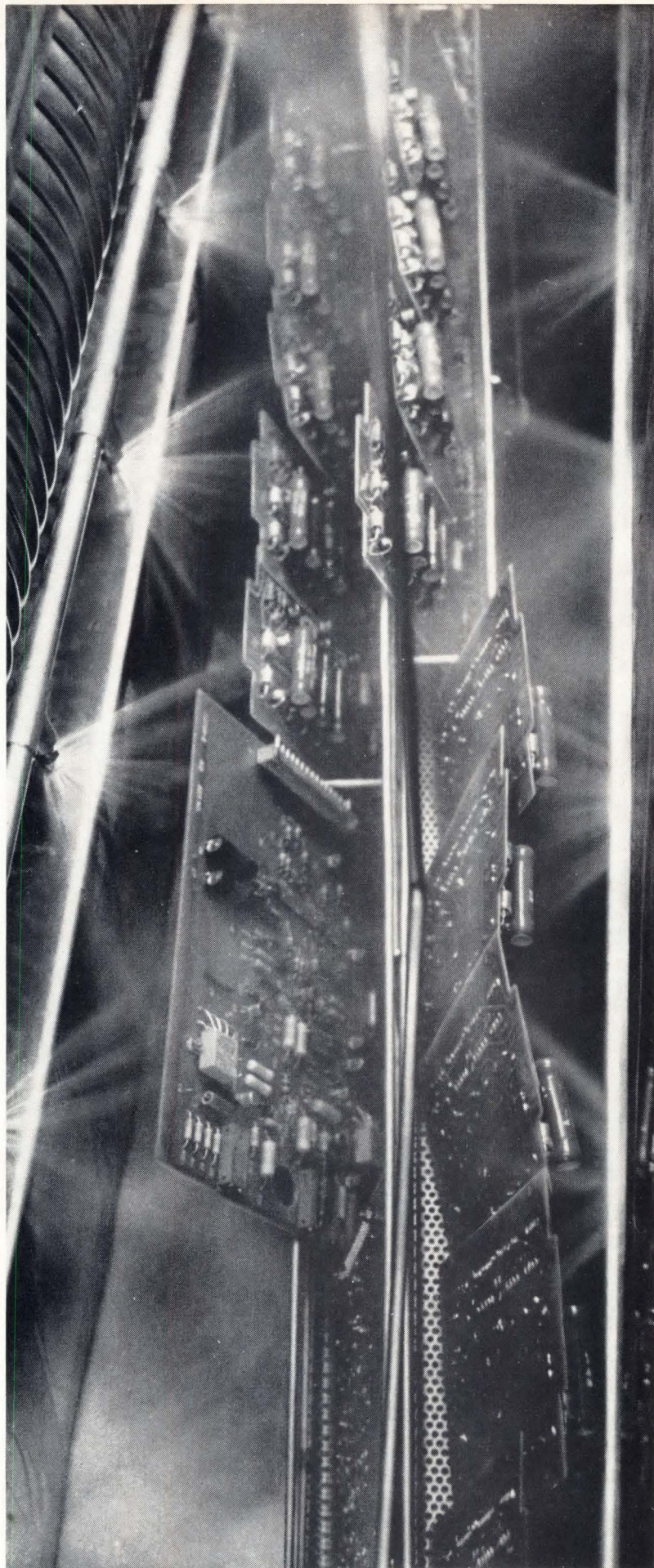
The entire cleaning operation is done with the dissipation of only three gallons of FREON a day, compared with 28 gallons of the former solvent, which had to be discarded daily because of contaminant buildup. The reason for the better than nine-to-one advantage is that FREON itself can be cleaned. A small distilling and filtration tank reclaims FREON and returns it to the vapor degreaser crystal-clear.

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Better Things for Better Living... through Chemistry



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DIODE CASE OUTLINES

CASE OUTLINES ARE SHOWN APPROXIMATELY ACTUAL SIZE



EIA-type diodes and rectifiers are listed in numerical order. Each is followed by manufacturers currently supplying the device. Manufacturers' abbreviations can be found on pp. 22-27.

EDN June 24, 1968

1N442 Brd ETC GE GI IRC Smc Tns	1N456A CmD Eri GI ITT NPC Ray Syl TRW TI Tns	1N463 CmD Con Eri GI IDC NPC Ray SD Smi Syl TRW TI Tns	1N483B CmD Con Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N486A CmD Con ETC Eri GI IDC NPC Ray SD Syl TRW TI Tns	1N530 Brd ETC GI IRC IDC Smc Tns	1N553 Brd ETC IRC IDC Smi Smc Tns	1N601 Brd ETC GE GI IRC IDC Smc Tns	1N609 Bnx Brd ETC IRC IDC Smc Tns	1N626A IDC Sol 1N627 CmD Con GI ITT IDC Ray SD Sol Syl TI Tns	1N647 CmD Eri GI ITT NPC SD TRW TI Tns	1N678 CmD ETC Eri GE ITT Smi Tns	1N699 IDC Sol Tns 1N770 Eri GI ITT IDC Sol Syl Tns	1N791 CmD Con GI ITT IDC Ray SD
1N442B Brd ETC GE GI IRC RCA Smc Tns	1N457 CmD Con ETC Eri Fch GI ITT IDC NPC Ray SD Syl TRW TI Tns	1N463A CmD Eri GI NPC Ray SD Syl TRW Tns	1N483C CmD Con Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N486B CmD Con ETC Eri GI IDC NPC Ray SD Syl TRW TI Tns	1N531 Brd ETC GI IRC IDC Smi Smc Tns	1N554 Brd ETC IRC IDC Smi Smc Tns	1N601A Brd ETC GE GI IRC IDC Smc Tns	1N609A Bnx Brd ETC IRC IDC Smc Tns	1N627A IDC SD 1N628 CmD Con GI IDC Ray SD TI Tns	1N648 CmD Eri GI NPC TRW TI Tns	1N679 CmD ETC Eri GE ITT Smi Tns	1N771 GI ITT IDC Sol Tns	1N792 CmD Con GI ITT IDC Ray SD
1N443 Brd ETC GE GI IRC Smi Smc Tns	1N457A CmD Eri GI ITT NPC Ray Syl TRW TI Tns	1N464 CmD Con Eri NPC Ray SD Syl TRW TI Tns	1N484 CmD Con ETC NPC Ray SD Syl TRW TI Tns	1N487 CmD Con ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N532 Brd ETC GI IRC Smc Tns	1N555 Brd ETC IRC Smc Tns	1N602 Brd ETC GE GI IRC IDC Smc Tns	1N610 Brd ETC IRC IDC Smc Tns	1N628A IDC SD 1N629 CmD Con GI IDC Ray SD TI Tns	1N649 CmD Eri GI NPC SD TRW TI Tns	1N681 CmD ETC Eri GE ITT IDC Smi Tns	1N771A Eri GI ITT IDC Sol Tns	1N793 CmD Con GI ITT Ray SD
1N443B Brd ETC GE GI IRC RCA Smi Smc Tns	1N458 CmD Con ETC Eri Fch GI IDC NPC Ray SD Syl TRW TI Tns	1N464A CmD Eri GI NPC Ray SD Syl TRW TI Tns	1N484A CmD Con ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N487A CmD Con Eri GI IDC NPC Ray SD Syl TRW Tns	1N533 Brd ETC GI IRC IDC Smc Tns	1N560 Brd ETC GE GE GI IRC IRec Smc TI Tns	1N602A Brd ETC GE GI IRC Smc Tns	1N610A Brd ETC IRC IDC Smc Tns	1N629A IDC SD 1N630 CmD Con GI IDC Ray SD TI Tns	1N658 CmD Con Fch GI ITT IDC Ray SD TI Tns	1N682 CmD ETC Eri GE ITT Smi Tns	1N771B Eri GI ITT IDC Sol Tns	1N794 CmD Con GI ITT IDC Ray SD
1N444 Brd ETC GE GI IRC IDC Smi Smc Tns	1N458A CmD Eri GI ITT NPC Ray Syl TRW TI Tns	1N467 CmD Con Eri NPC Ray SD Syl TRW TI Tns	1N484B CmD Con ETC Eri GI IDC NPC Ray SD Syl TRW TI Tns	1N487B CmD Con Eri GI IDC NPC Ray SD Syl TRW Tns	1N535 Brd ETC GI IRC Smc Tns	1N561 Brd Dlt ETC GE GI IRC Smc Tns	1N603 Brd ETC GE GI IRC Smc Tns	1N611A Brd ETC IRC IDC Smc Tns	1N631 Bnx Brd ETC IRC Smc Tns	1N658A CmD Dlt ETC Eri GE ITT Smi Tns	1N683 CmD Dlt ETC Eri GE ITT Smi Tns	1N772A Eri GI ITT IDC Sol Tns	1N795 CmD Con GI ITT Ray SD
1N444B Brd ETC GE GI IRC RCA Smi Smc Tns	1N458A CmD Eri GI ITT NPC Ray Syl TRW TI Tns	1N477 CmD Con Eri NPC Ray SD Syl TRW TI Tns	1N484B CmD Con ETC Eri GI IDC NPC Ray SD Syl TRW TI Tns	1N487B CmD Con Eri GI IDC NPC Ray SD Syl TRW Tns	1N536 Brd ETC GE GI IRC RCA Smi Smc Tns	1N562 Brd ETC GE GI IRC Smc Tns	1N603A Brd ETC GE GI IRC Smc Tns	1N612 Bnx Brd ETC IRC Smc Tns	1N631 Bnx Brd ETC IRC Smc Tns	1N659 CmD Con GI ITT IDC Ray SD Sol Syl TI Tns	1N684 CmD ETC Eri GE ITT Smi Tns	1N773 GI ITT IDC Smi Sol Tns	1N796 CmD Con GI ITT Ray SD
1N445 Brd ETC GE GI IRC IDC Smc Tns	1N459 CmD Con ETC Eri Fch GI IDC NPC Ray SD Syl TRW TI Tns	1N478 CmD Con Eri NPC Ray SD Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488 CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N537 Brd ETC GE GI IRC RCA Smi Smc Tns	1N567 Brd ETC GE ITT IDC	1N604 Brd ETC GE GI IRC Smc Tns	1N613 Bnx Brd ETC IRC IDC Smc Tns	1N632 Eri GI ITT IDC Tns	1N659A CmD Eri GE IDC Ray SD Tns	1N685 CmD Eri GE IDC Smi Tns	1N773A Eri GI ITT IDC Smi Sol Tns	1N797 CmD Con GI ITT Ray SD
1N445B Brd ETC GE GI IRC IDC RCA Smc Tns	1N459A CmD Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N479 CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488A CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N538 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N568 Brd ETC GE ITT IDC	1N604A Brd ETC GE GI IRC Smc Tns	1N613A Bnx Brd ETC IRC IDC Smc Tns	1N633 Eri GI ITT IDC SD Syl TI Tns	1N660 CmD Con GI IDC Ray SD TI Tns	1N686 CmD Eri GE IDC Smi Tns	1N774 GI ITT IDC Smi Sol Tns	1N798 CmD Con GI ITT Ray SD
1N447 ITT Smi Sol Tns	1N459A CmD Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N480 CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488A CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N539 Brd ETC GE GI IRC RCA Smi Smc Tns	1N570 Smc	1N605 Brd ETC GE GI IRC Smc Tns	1N614 Bnx Brd ETC IRC IDC Smc Tns	1N633 Eri GI ITT IDC Tns	1N660A CmD ETC Eri GE IDC Smi Tns	1N687 CmD Eri GE IDC Smi Sol Tns	1N774A Eri GI ITT IDC Smi Sol Tns	1N800 CmD Con GI Ray SD
1N448 ITT Smi Sol Tns	1N460 CmD Con ETC Syl TRW TI Tns	1N482A CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N540 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N605A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661 CmD Con GI IDC Ray Syl TI Tns	1N688 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N801 CmD Con GI Ray SD
1N449 ITT Smi Sol Tns	1N460A CmD Con ETC Syl TRW TI Tns	1N482A CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N541 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N605A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N450 ITT IDC Smi Sol Tns	1N460B CmD Con ETC Syl TRW TI Tns	1N482B CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N542 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606 Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N451 ITT IDC Sol Tns	1N461 CmD Con Eri IDC NPC Ray SD Syl TRW TI Tns	1N482C CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N543 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N452 ITT IDC Smi Sol Tns	1N461A CmD Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N482C CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N544 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N453 ITT IDC Smi Sol Tns	1N462 CmD Con Eri IDC NPC Ray SD Syl TRW TI Tns	1N482C CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N545 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N454 ITT Smi Sol Tns	1N462A CmD Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N482C CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N546 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N455 ITT Smi Sol Tns	1N462A CmD Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N482C CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N547 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD
1N456 CmD Con ETC Eri GI ITT IDC NPC Ray SD Syl TRW TI Tns	1N462A CmD Eri GI ITT NPC Ray SD Syl TRW TI Tns	1N482C CmD Con ETC Syl TRW TI Tns	1N484C CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N488B CmD ETC Eri GI IDC NPC Ray SD Syl TRW Tns	1N548 Brd ETC Eri GE GI IRC RCA Smi Smc Tns	1N571 ITT IDC Tns	1N606A Brd ETC GE GI IRC Smc Tns	1N614A Bnx Brd ETC IRC Smc Tns	1N634 CmD Con GI IDC Ray Syl TI Tns	1N661A CmD Con GI IDC Ray Syl TI Tns	1N689 CmD Eri GE IDC Smi Tns	1N775 Eri GI ITT IDC Smi Sol Tns	1N802 CmD Con GI Ray SD

146 Diodes and Rectifiers

EDN June 24, 1968

1N1348 AMD Bnx Brd Hgh IRC IRec PC Sol Tns	1N1440 ETC	1N1491 Brd GE Smi Smc Tns	1N1566 Mot
1N1348A Bnx ETC GE Hgh IRC IRec PC RCA Sol Tns Wst	1N1441 ETC IDC	1N1492 Brd GE Smi Smc Tns	1N1566A Mot
1N1348B Bnx ETC GE Hgh IRC IRec PC RCA Sol Tns Wst	1N1443 Brd ETC IRC PC Smc Tns	1N1537 Bnx Brd ETC IRC IDC Smc Tns	1N1567 Mot
1N1374 ETC	1N1446 Smc	1N1538 Bnx Brd ETC IRC Smc Tns	1N1567A Mot
1N1377 ETC	1N1447 Smc	1N1539 Bnx Brd ETC IRC IDC Smc Tns	1N1568 Mot
1N1378 ETC	1N1448 Smc	1N1540 Bnx Brd ETC IRC Smc Tns	1N1568A Mot
1N1379 ETC	1N1449 Smc	1N1541 Bnx Brd ETC IRC IDC Smc Tns	1N1581 AMD Bnx Brd ETC IRC IDC PC Sol Tns
1N1380 ETC	1N1450 Smc	1N1542 Bnx Brd ETC IRC IDC Smc Tns	1N1582 AMD Bnx Brd ETC IRC PC Sol Tns
1N1381 ETC	1N1451 Smc	1N1543 Bnx Brd IRC IDC Smc Tns	1N1583 AMD Bnx Brd ETC IRC IDC PC Sol Tns
1N1396 Wag	1N1452 Smc	1N1544 Bnx Brd ETC IRC IDC Smc Tns	1N1584 AMD Bnx Brd ETC IRC IDC PC Sol Tns
1N1397 Wag	1N1453 Smc	1N1545 Bnx Brd IRC IDC Smc Tns	1N1585 AMD Bnx Brd ETC IRC PC Sol Tns
1N1398 Wag	1N1454 AMD	1N1546 Bnx Brd ETC IRC IDC Smc Tns	1N1586 AMD Bnx Brd ETC IRC PC Sol Tns
1N1399 Wag	1N1455 AMD	1N1551 Brd ETC IDC Smc Tns	1N1587 AMD Bnx Brd ETC IRC PC Sol Tns
1N1400 Wag	1N1456 AMD	1N1552 Brd ETC IDC Smc Tns	1N1611A Mo
1N1401 Wag	1N1457 AMD	1N1553 Brd ETC IDC Smc Tns	1N1611B Mo
1N1402 Wag	1N1458 AMD	1N1554 Brd ETC IDC Smc Tns	1N1612 Bnx Brd ETC GE Hgh IRC IDC PC RCA Sol Wst
1N1403 Wag	1N1459 AMD	1N1555 Brd ETC IDC Smc Tns	1N1612A Bnx Brd ETC IDC Sol
1N1406 Hgh Smi Smc Tns	1N1460 AMD	1N1556 Brd ETC IDC Tns	1N1613 Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1407 Hgh Smi Smc Tns	1N1461 AMD	1N1557 Brd ETC IDC Smc Tns	1N1613A Bnx ETC Hgh Sol
1N1408 Hgh Smi Smc Tns	1N1466 AMD	1N1558 Brd ETC IDC Smc Tns	1N1614 Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1409 AS Hgh Smc Tns	1N1467 AMD	1N1559 Brd ETC IDC Smc Tns	1N1615 Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1410 AS Hgh Smc Tns	1N1468 AMD	1N1560 Brd ETC IDC Smc Tns	1N1615A Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1411 AS Hgh Smc Tns	1N1478 AMD	1N1563A Mot	1N1615A Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1412 AS Hgh Smc Tns	1N1479 AMD	1N1564 Mot	1N1615A Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1413 AS Hgh ITT Smi Smc	1N1480 AMD	1N1565 Mot	1N1615A Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst
1N1415 IDC	1N1481 AMD	1N1565A Mot	
1N1434 IRC Tns	1N1486 Brd GE Smi Smc Tns		
1N1435 IRC Tns	1N1487 Brd GE Smi Smc Tns		
1N1436 IRC Tns	1N1488 Brd GE Smi Smc Tns		
1N1437 IRC Tns	1N1489 Brd GE Smi Smc Tns		
1N1438 IRC Tns	1N1490 Brd GE Smi Smc Tns		



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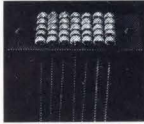
Total radiated power ($I_f = 100$ mA)	TYP 1.5 mW
Forward voltage ($I_f = 100$ mA)	1.3 volts
Forward current continuous	150 (max.) mA
Power dissipation	200 (max.) mW
Reverse current @ $V_R = 3$ V	.030 μ A
Peak emission wavelength	9000 Å

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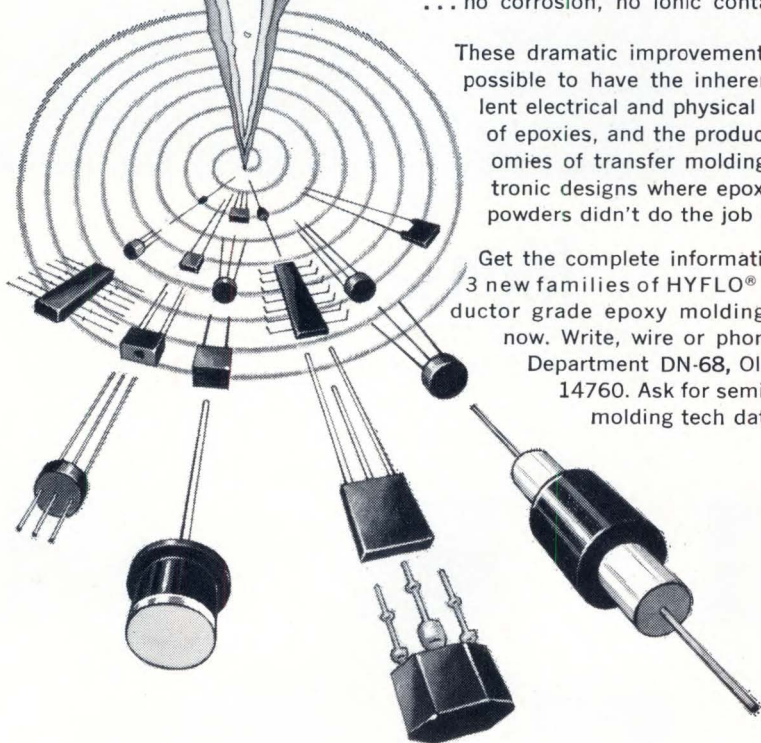


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Diodes and Rectifiers (Cont'd)

1N1616 Bnx Brd ETC GE Hgh IRC PC RCA Sol Wst	1N1697 Brd ETC GE GE GI IRC Smi Smc Tns	1N1748 AS Dks Hgh IRC PC Smc Sol	1N1910 IRC IRec Smc
1N1616A Bnx ETC Hgh Sol	1N1698 AS	1N1749 AS Dks Hgh IRC PC Smc Sol	1N1911 IRC IRec Smc
1N1644 IDC Smi Smc Tns	1N1699 AS	1N1750 AS Dks Hgh IRC PC Smc Sol	1N1912 IRC IDC IRec Smc
1N1645 Smi Smc Tns	1N1701 IRC IDC Smi Smc Tns	1N1751 AS Dks Hgh IRC PC Smc Sol	1N1913 IRC IRec Smc
1N1646 Smi Smc Tns	1N1702 IRC IDC Smi Smc Tns	1N1752 AS Dks Hgh IRC PC Smc Sol	1N1914 IRC IDC IRec Smc
1N1647 Smi Smc Tns	1N1703 IRC IDC Smi Smc Tns	1N1753 AS Dks Hgh IRC PC Smc Sol	1N1915 IRC IRec Smc
1N1648 Smi Smc Tns	1N1704 IRC Smi Smc Tns	1N1754 AS Dks Hgh IRC PC Smc Sol	1N1916 IRC IRec Smc
1N1649 Smi Smc Tns	1N1705 IRC Smi Smc Tns	1N1755 AS Dks Hgh IRC PC Smc Sol	1N2013 IRC IDC Smc
1N1650 Smi Smc Tns	1N1706 IRC IDC Smi Smc Tns	1N1756 AS Dks Hgh IRC PC Smc Sol	1N2014 IRC IDC Smc
1N1651 Smi Smc Tns	1N1707 IRC IDC Smc Tns	1N1757 AS Dks Hgh IRC PC Smc Sol	1N2015 IRC IDC Smc
1N1652 Smi Smc Tns	1N1708 IRC Smc Tns	1N1758 AS Dks Hgh IRC PC Smc Sol	1N2016 IRC IDC Smc
1N1653 Smi Smc Tns	1N1709 IRC Smc Tns	1N1759 AS Dks Hgh IRC PC Smc Sol	1N2017 IRC IDC Smc
1N1660 ETC	1N1710 IRC Smc Tns	1N1760 AS Dks Hgh IRC PC Smc Sol	1N2018 IRC Smc
1N1661 ETC	1N1711 IRC Smc Tns	1N1761 AS Dks Hgh IRC PC Smc Sol	1N2019 IRC Smc
1N1662 ETC	1N1712 IRC Smc Tns	1N1762 AS Dks Hgh IRC PC Smc Sol	1N2020 IRC IDC Smc
1N1663 ETC	1N1713 AS Dks ED Hgh IRC Mot	1N1763 AS Dks Hgh IRC PC Smc Sol	1N2021 ETC IRC Tns
1N1664 ETC	1N1714 PC ST Smc Sol	1N1764 AS Dks Hgh IRC PC Smc Sol	1N2022 ETC IRC Tns
1N1665 ETC	1N1715 AS Dks ED Hgh IRC Mot	1N1765 AS Dks Hgh IRC PC Smc Sol	1N2023 ETC IRC Tns
1N1670 ETC	1N1716 PC ST Smc Sol	1N1766 AS Dks Hgh IRC PC Smc Sol	1N2024 ETC IRC Tns
1N1671 ETC	1N1717 AS Dks ED Hgh IRC Mot	1N1767 AS Dks Hgh IRC PC Smc Sol	1N2025 ETC IRC Tns
1N1672 ETC	1N1718 PC ST Smc Sol	1N1768 AS Dks Hgh IRC PC Smc Sol	1N2026 Bnx Brd ETC IRC IDC Smc Tns
1N1673 ETC	1N1719 AS Dks ED Hgh IRC Mot	1N1769 AS Dks Hgh IRC PC Smc Sol	1N2027 Bnx Brd ETC IRC Smc Tns
1N1674 ETC	1N1720 PC ST Smc Sol	1N1770 AS Dks Hgh IRC PC Smc Sol	1N2028 Bnx Brd ETC IRC Smc Tns
1N1675 ETC	1N1721 AS Dks ED Hgh IRC Mot	1N1771 AS Dks Hgh IRC PC Smc Sol	1N2029 Bnx Brd ETC IRC IDC Smc Tns
1N1692 Brd ETC GE GI IRC Smi Smc Tns	1N1722 PC ST Smc Sol	1N1772 AS Dks Hgh IRC PC Smc Sol	1N2030 Bnx Brd ETC IRC IDC Smc Tns
1N1693 Brd ETC GE GI IRC Smi Smc Tns	1N1723 AS Dks ED Hgh IRC Mot	1N1773 AS Dks Hgh IRC PC Smc Sol	1N2031 Bnx Brd ETC IRC Smc Tns
1N1694 Brd ETC GE GI IRC Smi Smc Tns	1N1724 PC ST Smc Sol	1N1774 AS Dks Hgh IRC PC Smc Sol	1N2054 ETC IRC IRec
1N1695 Brd ETC GE GI IRC Smi Smc Tns	1N1725 AS Dks ED Hgh IRC Mot	1N1775 AS Dks Hgh IRC PC Smc Sol	1N2055 ETC IRC IRec
1N1696 Brd ETC GE GI IRC IDC Smi Smc Tns	1N1726 PC ST Smc Sol	1N1776 AS Dks Hgh IRC PC Smc Sol	1N2056 ETC IRC IRec
	1N1727 AS Dks ED Hgh IRC Mot	1N1777 AS Dks Hgh IRC PC Smc Sol	1N2057 ETC IRC IRec
	1N1728 PC ST Smc Sol	1N1778 AS Dks Hgh IRC PC Smc Sol	1N2058 ETC IRC IRec
	1N1729 AS Dks ED Hgh IRC Mot	1N1779 AS Dks Hgh IRC PC Smc Sol	1N2059 ETC IRC IRec
	1N1730 PC ST Smc Sol	1N1780 AS Dks Hgh IRC PC Smc Sol	1N2060 ETC IRC IRec
	1N1731 AS Dks ED Hgh IRC Mot	1N1781 AS Dks Hgh IRC PC Smc Sol	
	1N1732 PC ST Smc Sol	1N1782 AS Dks Hgh IRC PC Smc Sol	
	1N1733 AS Dks ED Hgh IRC Mot	1N1783 AS Dks Hgh IRC PC Smc Sol	
	1N1734 PC ST Smc Sol	1N1784 AS Dks Hgh IRC PC Smc Sol	
	1N1735 AS Dks ED Hgh IRC Mot	1N1785 AS Dks Hgh IRC PC Smc Sol	
	1N1736 PC ST Smc Sol	1N1786 AS Dks Hgh IRC PC Smc Sol	
	1N1737 AS Dks ED Hgh IRC Mot	1N1787 AS Dks Hgh IRC PC Smc Sol	
	1N1738 PC ST Smc Sol	1N1788 AS Dks Hgh IRC PC Smc Sol	
	1N1739 AS Dks ED Hgh IRC Mot	1N1789 AS Dks Hgh IRC PC Smc Sol	
	1N1740 PC ST Smc Sol	1N1790 AS Dks Hgh IRC PC Smc Sol	
	1N1741 AS Dks ED Hgh IRC Mot	1N1791 AS Dks Hgh IRC PC Smc Sol	
	1N1742 PC ST Smc Sol	1N1792 AS Dks Hgh IRC PC Smc Sol	
	1N1743 AS Dks ED Hgh IRC Mot	1N1793 AS Dks Hgh IRC PC Smc Sol	
	1N1744 PC ST Smc Sol	1N1794 AS Dks Hgh IRC PC Smc Sol	
	1N1745 AS Dks ED Hgh IRC Mot	1N1795 AS Dks Hgh IRC PC Smc Sol	
	1N1746 PC ST Smc Sol	1N1796 AS Dks Hgh IRC PC Smc Sol	
	1N1747 AS Dks ED Hgh IRC Mot	1N1797 AS Dks Hgh IRC PC Smc Sol	
	1N1748 PC ST Smc Sol	1N1798 AS Dks Hgh IRC PC Smc Sol	
	1N1749 AS Dks ED Hgh IRC Mot	1N1799 AS Dks Hgh IRC PC Smc Sol	
	1N1750 PC ST Smc Sol	1N1800 AS Dks Hgh IRC PC Smc Sol	
	1N1751 AS Dks ED Hgh IRC Mot	1N1801 AS Dks Hgh IRC PC Smc Sol	
	1N1752 PC ST Smc Sol	1N1802 AS Dks Hgh IRC PC Smc Sol	
	1N1753 AS Dks ED Hgh IRC Mot	1N1803 AS Dks Hgh IRC PC Smc Sol	
	1N1754 PC ST Smc Sol	1N1804 AS Dks Hgh IRC PC Smc Sol	
	1N1755 AS Dks ED Hgh IRC Mot	1N1805 AS Dks Hgh IRC PC Smc Sol	
	1N1756 PC ST Smc Sol	1N1806 AS Dks Hgh IRC PC Smc Sol	
	1N1757 AS Dks ED Hgh IRC Mot	1N1807 AS Dks Hgh IRC PC Smc Sol	
	1N1758 PC ST Smc Sol	1N1808 AS Dks Hgh IRC PC Smc Sol	
	1N1759 AS Dks ED Hgh IRC Mot	1N1809 AS Dks Hgh IRC PC Smc Sol	
	1N1760 PC ST Smc Sol	1N1810 AS Dks Hgh IRC PC Smc Sol	
	1N1761 AS Dks ED Hgh IRC Mot	1N1811 AS Dks Hgh IRC PC Smc Sol	
	1N1762 PC ST Smc Sol	1N1812 AS Dks Hgh IRC PC Smc Sol	
	1N1763 AS Dks ED Hgh IRC Mot	1N1813 AS Dks Hgh IRC PC Smc Sol	
	1N1764 PC ST Smc Sol	1N1814 AS Dks Hgh IRC PC Smc Sol	
	1N1765 AS Dks ED Hgh IRC Mot	1N1815 AS Dks Hgh IRC PC Smc Sol	
	1N1766 PC ST Smc Sol	1N1816 AS Dks Hgh IRC PC Smc Sol	
	1N1767 AS Dks ED Hgh IRC Mot	1N1817 AS Dks Hgh IRC PC Smc Sol	
	1N1768 PC ST Smc Sol	1N1818 AS Dks Hgh IRC PC Smc Sol	
	1N1769 AS Dks ED Hgh IRC Mot	1N1819 AS Dks Hgh IRC PC Smc Sol	
	1N1770 PC ST Smc Sol	1N1820 AS Dks Hgh IRC PC Smc Sol	
	1N1771 AS Dks ED Hgh IRC Mot	1N1821 AS Dks Hgh IRC PC Smc Sol	
	1N1772 PC ST Smc Sol	1N1822 AS Dks Hgh IRC PC Smc Sol	
	1N1773 AS Dks ED Hgh IRC Mot	1N1823 AS Dks Hgh IRC PC Smc Sol	
	1N1774 PC ST Smc Sol	1N1824 AS Dks Hgh IRC PC Smc Sol	
	1N1775 AS Dks ED Hgh IRC Mot	1N1825 AS Dks Hgh IRC PC Smc Sol	
	1N1776 PC ST Smc Sol	1N1826 AS Dks Hgh IRC PC Smc Sol	
	1N1777 AS Dks ED Hgh IRC Mot	1N1827 AS Dks Hgh IRC PC Smc Sol	
	1N1778 PC ST Smc Sol	1N1828 AS Dks Hgh IRC PC Smc Sol	
	1N1779 AS Dks ED Hgh IRC Mot	1N1829 AS Dks Hgh IRC PC Smc Sol	
	1N1780 PC ST Smc Sol	1N1830 AS Dks Hgh IRC PC Smc Sol	
	1N1781 AS Dks ED Hgh IRC Mot	1N1831 AS Dks Hgh IRC PC Smc Sol	
	1N1782 PC ST Smc Sol	1N1832 AS Dks Hgh IRC PC Smc Sol	
	1N1783 AS Dks ED Hgh IRC Mot	1N1833 AS Dks Hgh IRC PC Smc Sol	
	1N1784 PC ST Smc Sol	1N1834 AS Dks Hgh IRC PC Smc Sol	
	1N1785 AS Dks ED Hgh IRC Mot	1N1835 AS Dks Hgh IRC PC Smc Sol	
	1N1786 PC ST Smc Sol	1N1836 AS Dks Hgh IRC PC Smc Sol	
	1N1787 AS Dks ED Hgh IRC Mot	1N1837 AS Dks Hgh IRC PC Smc Sol	
	1N1788 PC ST Smc Sol	1N1838 AS Dks Hgh IRC PC Smc Sol	
	1N1789 AS Dks ED Hgh IRC Mot	1N1839 AS Dks Hgh IRC PC Smc Sol	
	1N1790 PC ST Smc Sol	1N1840 AS Dks Hgh IRC PC Smc Sol	
	1N1791 AS Dks ED Hgh IRC Mot	1N1841 AS Dks Hgh IRC PC Smc Sol	
	1N1792 PC ST Smc Sol	1N1842 AS Dks Hgh IRC PC Smc Sol	
	1N1793 AS Dks ED Hgh IRC Mot	1N1843 AS Dks Hgh IRC PC Smc Sol	
	1N1794 PC ST Smc Sol	1N1844 AS Dks Hgh IRC PC Smc Sol	
	1N1795 AS Dks ED Hgh IRC Mot	1N1845 AS Dks Hgh IRC PC Smc Sol	
	1N1796 PC ST Smc Sol	1N1846 AS Dks Hgh IRC PC Smc Sol	
	1N1797 AS Dks ED Hgh IRC Mot	1N1847 AS Dks Hgh IRC PC Smc Sol	
	1N1798 PC ST Smc Sol	1N1848 AS Dks Hgh IRC PC Smc Sol	
	1N1799 AS Dks ED Hgh IRC Mot	1N1849 AS Dks Hgh IRC PC Smc Sol	
	1N1800 PC ST Smc Sol	1N1850 AS Dks Hgh IRC PC Smc Sol	

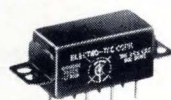
1N2061	1N2085	1N2138	1N2221	1N2236	1N2251A	1N2269	1N2364
ETC IRC IRec	Brd IDC Smi	IRec Slit	Brd Smc Tns	Bnx Brd ETC	Brd Sol	Brd IDC Smc	ED
1N2062	Smc Tns	1N2139	1N2222	PC Smc Tns	1N2252	Tns	1N2364A
IRC IRec	1N2086	AS Smc	Brd ETC IDC	1N2236A	Bnx Brd ETC	1N2270	ED PC
1N2063	Brd IDC Smi	1N2146	Smc Tns	Bnx Brd ETC	PC Sol	Brd ETC IDC	1N2364B
IRC IRec	Smc Tns	SD	1N2222A	PC Smc Tns	1N2252A	Smc Tns	ED PC
1N2064	1N2090	1N2147	Brd ETC IDC	1N2237	Bnx Brd ETC	1N2271	1N2366
IRC IRec	IDC Smi	Brd High Sol	Smc Tns	Brd Smc Tns	PC Sol	Brd Smc Tns	ED
1N2065	1N2091	1N2147A	1N2223	1N2237A	1N2253	1N2272	1N2366A
IRC IRec	Smi	Brd High Sol	Brd Smc Tns	Brd Smc Tns	Brd Sol	Bnx ETC Tns	ED PC
1N2066	1N2092	1N2148	1N2223A	1N2238	1N2253A	1N2273	1N2366B
IRC IRec	Smi	Brd High Sol	Brd IDC Smc	Bnx Brd ETC	Brd Sol	ETC Tns	ED PC
1N2067	1N2093	1N2148A	Tns	PC Smc Tns	1N2254	1N2274	1N2368
IRC IRec	Smi	Brd High Sol	1N2224	1N2238A	Bnx Brd ETC	Bnx ETC Tns	ED
1N2068	1N2094	1N2149	Brd ETC Smc	Bnx Brd ETC	PC Sol	1N2275	1N2368A
IRC IRec	Smi	Brd High Sol	Tns	PC Smc Tns	1N2254A	ETC Tns	ED PC
1N2069	1N2095	1N2149A	1N2224A	1N2239	Bnx Brd ETC	1N2276	1N2368B
CmD ETC Eri	IDC Smi	Brd High Sol	Brd ETC Smc	Brd Smc Tns	PC Sol	Bnx ETC Tns	ED PC
GI ITT IRec	1N2096	1N2150	Tns	1N2239A	1N2255	1N2277	1N2370
PC Smi Smc	Smi	Brd High Sol	1N2225	Brd Smc Tns	Brd Sol	ETC Tns	ED
Syl Tns	1N2103	1N2150A	Brd Smc Tns	1N2240	1N2255A	1N2278	1N2370A
1N2069A	IRC IDC IRec	Brd High Sol	1N2225A	Brd ETC PC	Brd Sol	Bnx ETC Tns	ED PC
ETC GI ITT	Smi Smc Tns	1N2151	Brd Smc Tns	Smc	1N2256	1N2279	1N2370B
IRec PC Smc	1N2104	Brd High Sol	1N2226	1N2240A	Bnx Brd ETC	ETC Tns	ED PC
Syl Tns	IRC IRec Smi	1N2151A	ETC Smc Tns	Brd ETC PC	PC Sol	1N2280	1N2372
1N2070	Smc Tns	Brd High Sol	1N2226A	Smc	1N2256A	ETC	ETC Tns
CmD ETC Eri	1N2105	1N2152	ETC Smc Tns	1N2241	Bnx Brd ETC	1N2281	1N2373
GI ITT IRec	IRC IRec Smi	Brd High Sol	1N2227	Brd Smc	PC Sol	ETC	ED High PC
PC Smi Smc	Smc Tns	1N2152A	Smc Tns	1N2241A	1N2257	1N2283	ST Smi Smc
Syl Tns Wsn	1N2106	Brd High Sol	1N2227A	Brd Smc	Brd Sol	ETC	Sol Tns
1N2070A	IRC IRec Smi	1N2153	Smc Tns	1N2242	1N2257A	1N2289	1N2374
ETC GI ITT	Smc Tns	Brd High Sol	1N2228	Brd PC Smc	Brd Sol	Brd Smc	AS Dks ED
IRec PC Smc	1N2107	1N2153A	Bnx Brd Dlt	1N2242A	1N2258	1N2289A	High PC ST
Syl Tns	IRC IRec Smi	Brd High Sol	ETC IDC PC	Brd ETC PC	Bnx Brd ETC	Brd ETC Smc	Smi Smc Sol
1N2071	Smc Tns	1N2154	Smc Tns	Smc	PC Sol	1N2290	Tns
CmD ETC Eri	1N2108	1N2154	1N2228A	1N2243	1N2258A	Brd Smc	1N2375
GI ITT IDC	IRC IRec Smi	AMD GE IRC	Bnx Brd Dlt	Brd Smc	Bnx Brd ETC	AS Dks ED	(1.35" high)
IRec PC Smi	Smc Tns	Sol Tns Wag	ETC IDC PC	1N2243A	PC Sol	1N2290A	SERIES 410 (1" high)
Smc Syl Tns	1N2115	Wst	Smc Tns	Brd Smc	1N2259	Brd ETC	MIL-R-5757/8
1N2071A	IDC Smi Tns	1N2155	1N2229	1N2244	Brd Sol	1N2291	1N2376
ETC GI ITT	1N2116	AMD GE IRC	Brd IDC Smc	ETC PC Smc	1N2259A	Brd Smc	AS Dks ED
IRec PC Smc	Smc	Sol Tns Wag	Tns	1N2244A	Brd Sol	1N2291A	High PC ST
Syl Tns	1N2117	Wst	1N2229A	ETC PC Smc	1N2260	Brd ETC Smc	Smc Sol
1N2072	Brd ETC Smc	1N2156	Tns	1N2245	Brd ETC PC	1N2292	1N2377
IDC Smi Smc	Tns	AMD GE IRC	1N2230	Smc	Sol	Brd Smc	AS Dks ED
1N2073	1N2128	Sol Tns Wag	Bnx Brd PC	1N2245A	1N2260A	1N2292A	High PD ST
Smi Smc Tns	ETC IRec Slit	Wst	Smc Tns	Smc	Brd ETC PC	Brd ETC Smc	Smc Sol
1N2074	Tns	1N2157	1N2230A	1N2246	Sol	1N2293	1N2378
Smi Smc Tns	1N2129	AMD GE IRC	Bnx Brd ETC	Bnx Brd ETC	1N2261	Brd Smc	AS Dks ED
1N2075	ETC IRec Slit	Sol Tns Wag	PC Smc Tns	PC Sol	Brd Sol	1N2293A	High PC ST
Smi Smc Tns	Tns	Wst	1N2231	1N2246A	1N2261A	Brd ETC Smc	Smc Sol
1N2076	1N2130	1N2158	Brd Smc Tns	Bnx Brd ETC	Brd Sol	1N2326	1N2379
Smi Smc Tns	ETC IRec Slit	AMD GE IRC	1N2231A	PC Sol	1N2262	RCA	AS Dks ED
1N2077	Tns	Sol Tns Wag	Brd Smc Tns	1N2247	Brd ETC PC	1N2348	High PC ST
Smi Smc Tns	1N2131	Wst	1N2232	Brd Sol	Sol	IRec	Sol
1N2078	ETC IRec Slit	1N2159	1N2232A	1N2247A	1N2262A	1N2349	1N2380
Smi Smc Tns	Tns	AMD GE IRC	Bnx Brd ETC	Brd Sol	Brd ETC PC	IRec	AS Dks ED
1N2079	1N2132	Sol Tns Wag	PC Smc Tns	1N2248	Sol	1N2350	High PC ST
Smi Smc Tns	ETC IRec Slit	Wst	1N2232A	1N2248	1N2263	IRec	Sol
1N2080	Tns	1N2160	Bnx Brd ETC	Bnx Brd ETC	Brd Sol	1N2357	1N2381
Brd IDC Smi	1N2133	AMD GE IRC	PC Smc Tns	PC Sol	1N2263A	ED Smc	AS Dks ED
Smc Tns	ETC IRec Slit	Sol Tns Wag	1N2233	1N2248A	Brd Sol	1N2358	High PC ST
1N2081	Tns	Wst	Brd Smc Tns	Bnx Brd ETC	PC Sol	ED Smc	Sol
Brd IDC Smi	1N2134	1N2216	1N2233A	PC Sol	1N2249	1N2359	1N2382
Smc Tns	ETC IRec Slit	Brd ETC IDC	Brd Smc Tns	1N2249	Brd Sol	ED	AS CmD Dks
1N2082	Tns	Smc Tns	1N2234	1N2249A	1N2264A	1N2360	ED Hgh IRC
Brd Smi Smc	1N2135	Brd IDC Smc	Bnx Brd ETC	Brd Sol	ETC PC	ED	Mot PC ST
Tns	ETC IRec Slit	Tns	PC Smc Tns	1N2250	1N2266	1N2361	Smc Sol
1N2083	Tns	1N2218	1N2234A	Bnx Brd ETC	Brd ETC IDC	ED	1N2382A
Brd Smi Smc	1N2135A	Bnx Brd ETC	Bnx Brd ETC	PC Sol	Smc Tns	1N2362	CmD Smc TRW
Tns	ETC IRec Tns	Smc Tns	PC Smc Tns	1N2250A	1N2267	ED ETC	1N2383
1N2084	Wst	1N2219	1N2235	Bnx Brd ETC	Tns	1N2362A	AS CmD Dks
Brd Smi Smc	ETC IRec Slit	Brd Smc Tns	Brd Smc Tns	PC Sol	1N2268	ED ETC PC	ED Hgh IRC
Tns	1N2137	1N2220	1N2235A	1N2251	Brd ETC IDC	1N2362B	Mot PC ST
	ETC IRec Slit	IDC Smc Tns	Brd Smc Tns	Brd Sol	Smc Tns	ED ETC PC	Smc Sol
							1N2383A
							CmD Smc TRW

Wedge-Action*



Relays

Hermetically-sealed, electromagnetic relays that provide high performance and reliability under the most difficult operating conditions in dry-circuit to 2 amp applications.



2 PDT
MARK II, SERIES 500
MIL-R-5757/9



2 PDT
MARK II, SERIES 400
(1.35" high)
SERIES 410 (1" high)
MIL-R-5757/8



6PDT 4PDT
(1" x 1")
MARK II, SERIES 300
(6 PDT).
SERIES 350 (4 PDT).
MIL-R-5757/1 and
MIL-R-5757/7



6PDT
MARK II, SERIES 085
(-55°C to +85°C)
SERIES 100
(-65°C to +125°C),
SERIES 200
(-65°C to +200°C).
MIL-R-5757/1.

*Wedge-Action



The moving contacts are mounted between two stationary contacts. On actuation, they drive into the stationary contacts, creating high pressures and low

contact resistance at all current levels. In addition, wedge-action contact wipe provides self-cleaning of the precious-metal contacts.

*Patent No. 2,866,046 and others pending.

For complete data write Relay Sales and Engineering Office, P. O. Box 667, Ormond Beach, Fla. 32074, Phone 904-677-1771, TWX 810-857-0305.

Electro-Tec Corp.

SLIP RINGS • RELAYS • SWITCHES
Circle No. 66 on Reader Service

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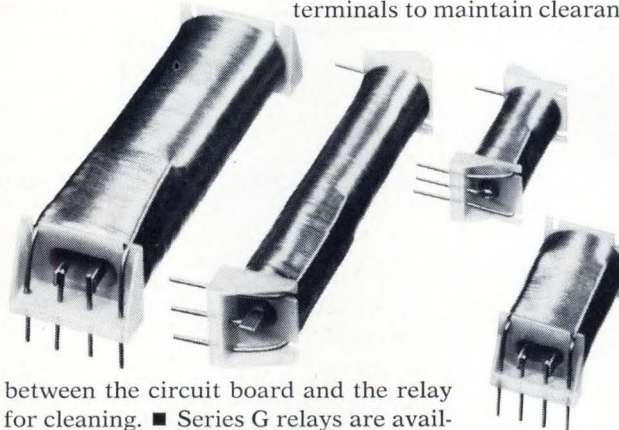
Diodes and Rectifiers (Cont'd)

1N2384	1N2454	1N2482	1N2493	1N2506	1N2522	1N2537	1N2553	1N2588	1N2630	1N2862	1N2906	1N3059
AS Cnd Dks	ETC Sol	Cnd ETC PC	Bnx Brd ETC	Brd Smi Smc	Brd Smc	Brd Hgh Smc	Brd Hgh Smc	Brd Hgh Sol	Cnd PC Smc	Brd ETC Eri	AS	AS Cnd Dks
ED Hgh IRC	1N2455	Smc Tns	IRC PC Sol	Tns	1N2523	1N2538	1N2554	1N2589	Sol	Smc Tns	1N2907	ED Hgh PC
Mot PC ST	Sol	1N2483	Tns	1N2507	Brd ETC Smc	Brd Hgh Smc	Brd Hgh Smc	Brd Hgh Sol	1N2631	ETC RCA Tns	AS	Smc Slt Sol
Smc Sol	1N2456	Cnd ETC PC	1N2494	Smc Tns	1N2524	1N2539	1N2555	1N2590	Cnd PC Smc	1N2863	1N2908	TRW Wsn
1N2384A	Sol	Smc Tns	Bnx Brd ETC	1N2508	Brd Hgh IDC	Brd Hgh Smc	Brd Hgh Smc	Brd Hgh Sol	Sol	1N2863	AS	1N3060
Cnd Smc TRW	1N2457	1N2484	IRC PC Sol	Smc Tns	1N2512	1N2525	1N2556	1N2591	1N2632	Brd ETC Eri	1N2909	AS Cnd Dks
1N2385	Sol	Cnd ETC PC	Tns	1N2495	Brd Hgh Smc	Brd Hgh Smc	Brd Hgh Smc	Brd Hgh Sol	Cnd PC Smc	AS	AS	ED Hgh PC
AS Cnd Dks	1N2458	Smc Tns	1N2485	Bnx Brd ETC	1N2526	1N2541	1N2557	1N2592	Sol	1N2863A	1N2910	Smc Slt Sol
ED Hgh IRC	ETC Sol	Smc Tns	IRC PC Sol	IRC Smc	1N2527	Brd Hgh Smc	Brd Hgh Sol	Brd Hgh Sol	1N2633	ETC RCA Tns	AS	TRW Wsn
Mot PC ST	1N2459	Smc Tns	Tns	1N2513	Brd Hgh Smc	1N2542	1N2558	1N2593	Cnd PC Smc	1N2864	1N2911	1N3061
Smc Sol	ETC Sol	1N2486	1N2496	Bnx Brd ETC	1N2528	Brd Hgh Smc	Brd Hgh Sol	Brd Hgh Sol	Sol	Brd ETC Eri	AS	AS Cnd Dks
1N2385A	ETC Sol	IDC Smc	IRC Smc	IRC Smc	1N2529	Brd Hgh Smc	Brd Hgh Sol	Brd Hgh Sol	1N2634	Smc Tns	1N2912	ED Hgh PC
Cnd Smc TRW	1N2460	1N2487	1N2497	1N2514	Brd Hgh Smc	1N2531	1N2543	1N2594	Cnd PC Smc	1N2864A	AS	Smc Slt Sol
1N2389	ETC Sol	Smc Tns	Bnx Brd ETC	1N2515	Brd Hgh Smc	1N2532	1N2544	1N2595	Sol	ETC RCA Tns	1N2913	TRW Wsn
PC Smc Sol	1N2461	Smc Tns	IRC PC Sol	1N2516	Brd Hgh Smc	1N2533	1N2545	1N2596	1N2635	AS	AS	1N3062
1N2393	ETC Sol	1N2488	Tns	1N2517	Brd Hgh Smc	1N2534	1N2546	1N2597	Cnd PC Smc	1N2865	1N2914	Cnd Con Fch
PC	1N2462	Smc Tns	1N2499	1N2518	Brd Hgh Smc	1N2535	1N2547	1N2598	Sol	Smc	AS	GI ITT IDC
1N2446	ETC Sol	1N2489	1N2501	1N2519	Brd Hgh Smc	1N2536	1N2548	1N2599	1N2636	1N2866	1N2915	Ray Syl Tns
ETC Sol	1N2463	Cnd Smc Tns	Bnx Brd ETC	1N2520	Brd Hgh Smc	1N2537	1N2549	1N2600	Cnd PC Smc	Smc	1N2916	1N3063
1N2447	ETC Sol	1N2490	IRC PC Sol	1N2521	Brd Hgh Smc	1N2538	1N2550	1N2601	Sol	AS Cnd	AS	Cnd Con GI
ETC Sol	1N2464	Cnd PC Smc	Tns	1N2522	Brd Hgh Smc	1N2539	1N2551	1N2602	1N2637	1N2878	1N2917	ITT IDC Ray
1N2448	ETC Sol	Sol	1N2502	1N2523	Brd Hgh Smc	1N2540	1N2552	1N2603	PC Smc Sol	AS Cnd IDC	AS	Syl Tns
ETC Sol	1N2465	Bnx Brd ETC	Bnx Brd ETC	1N2524	Brd Hgh Smc	1N2541	1N2553	1N2604	1N2784	AS	1N2918	1N3064
1N2449	ETC Sol	IRC PC Sol	IRC Smc	1N2525	Brd Hgh Smc	1N2542	1N2554	1N2605	ETC	1N2880	AS	Cnd Con Fch
ETC Sol	1N2466	Tns	Tns	1N2526	Brd Hgh Smc	1N2543	1N2555	1N2606	1N2785	AS Cnd	1N2919	GI ITT IDC
1N2450	ETC Sol	1N2492	1N2503	1N2527	Brd Hgh Smc	1N2544	1N2556	1N2607	ETC	1N2881	AS	Ray Syl Tns
ETC Sol	1N2467	Bnx Brd ETC	Brd Smc	1N2528	Brd Hgh Smc	1N2545	1N2557	1N2608	AS Cnd IDC	1N2882	1N2920	1N3065
1N2451	Sol	IRC PC Sol	1N2504	1N2529	Brd Hgh Smc	1N2546	1N2558	1N2609	1N2793	Cnd	AS	Cnd GI ITT
ETC Sol	1N2468	Tns	Smc Tns	1N2530	Brd Hgh Smc	1N2547	1N2559	1N2610	ETC Tns	1N2883	1N2921	ITC Ray Tns
1N2452	Sol	1N2493	1N2505	1N2531	Brd Hgh Smc	1N2548	1N2560	1N2611	1N2794	AS Cnd	1N2922	1N3066
ETC Sol	1N2469	Brd IDC Smi	Brd Smc	1N2532	Brd Hgh Smc	1N2549	1N2561	1N2612	ETC Tns	1N2884	AS	Cnd Con GI
1N2453	Sol	Smc Tns	1N2521	1N2533	Brd Hgh Smc	1N2550	1N2562	1N2613	1N2795	AS Cnd	1N2923	ITC Ray Tns
ETC Sol			Brd ETC Smc	1N2534	Brd Hgh Smc	1N2551	1N2563	1N2614	1N2796	1N2885	1N2924	1N3067
				1N2535	Brd Hgh Smc	1N2552	1N2564	1N2615	1N2797	AS Cnd	AS	Cnd GI ITT
				1N2536	Brd Hgh Smc	1N2553	1N2565	1N2616	1N2798	1N2886	1N2925	ITC Ray SD
				1N2537	Brd Hgh Smc	1N2554	1N2566	1N2617	1N2799	AS Cnd	AS	Sol Tns
				1N2538	Brd Hgh Smc	1N2555	1N2567	1N2618	1N2800	1N2887	1N2926	1N3068
				1N2539	Brd Hgh Smc	1N2556	1N2568	1N2619	ETC Tns	AS Cnd	AS	Cnd GI ITT
				1N2540	Brd Hgh Smc	1N2557	1N2569	1N2620	1N2801	1N2888	1N2927	ITC Ray SD
				1N2541	Brd Hgh Smc	1N2558	1N2570	1N2621	1N2802	1N2889	1N2928	Sol Tns
				1N2542	Brd Hgh Smc	1N2559	1N2571	1N2622	1N2803	AS Cnd Dks	1N2929	1N3069
				1N2543	Brd Hgh Smc	1N2560	1N2572	1N2623	1N2804	ED Hgh PC	AS	Cnd Con GI
				1N2544	Brd Hgh Smc	1N2561	1N2573	1N2624	1N2805	Smc Slt Sol	AS	ITC Ray
				1N2545	Brd Hgh Smc	1N2562	1N2574	1N2625	1N2806	TRW Wsn	1N2930	1N3070
				1N2546	Brd Hgh Smc	1N2563	1N2575	1N2626	1N2807	1N2891	AS	Cnd Con Fch
				1N2547	Brd Hgh Smc	1N2564	1N2576	1N2627	1N2808	AS Cnd Dks	AS	GI IDC Ray
				1N2548	Brd Hgh Smc	1N2565	1N2577	1N2628	1N2809	ED Hgh PC	AS	Smc Slt Sol
				1N2549	Brd Hgh Smc	1N2566	1N2578	1N2629	1N2810	Smc Slt Sol	AS	TRW Wsn
				1N2550	Brd Hgh Smc	1N2567	1N2579	1N2630	1N2811	1N2892	1N2931	1N3071
				1N2551	Brd Hgh Smc	1N2568	1N2580	1N2631	1N2812	AS Cnd Dks	AS	Cnd Con IDC
				1N2552	Brd Hgh Smc	1N2569	1N2581	1N2632	1N2813	ED Hgh PC	AS	Ray Tns
				1N2553	Brd Hgh Smc	1N2570	1N2582	1N2633	1N2814	Smc Slt Sol	AS	1N3072
				1N2554	Brd Hgh Smc	1N2571	1N2583	1N2634	1N2815	TRW Wsn	1N2932	Smc Tns
				1N2555	Brd Hgh Smc	1N2572	1N2584	1N2635	1N2816	1N2893	1N2933	1N3073
				1N2556	Brd Hgh Smc	1N2573	1N2585	1N2636	1N2817	AS Cnd Dks	AS	IDC Smc Tns
				1N2557	Brd Hgh Smc	1N2574	1N2586	1N2637	1N2818	ED Hgh PC	AS	1N3074
				1N2558	Brd Hgh Smc	1N2575	1N2587	1N2638	1N2819	Smc Slt Sol	AS	IDC Smc Tns
				1N2559	Brd Hgh Smc	1N2576	1N2588	1N2639	1N2820	1N2894	1N2934	1N3075
				1N2560	Brd Hgh Smc	1N2577	1N2589	1N2640	1N2821	AS Cnd Dks	AS	1N3076
				1N2561	Brd Hgh Smc	1N2578	1N2590	1N2641	1N2822	ED Hgh PC	AS	Smc Tns
				1N2562	Brd Hgh Smc	1N2579	1N2591	1N2642	1N2823	Smc Slt Sol	AS	1N3077
				1N2563	Brd Hgh Smc	1N2580	1N2592	1N2643	1N2824	TRW Wsn	1N2935	Smc Tns
				1N2564	Brd Hgh Smc	1N2581	1N2593	1N2644	1N2825	1N2895	1N2936	1N3078
				1N2565	Brd Hgh Smc	1N2582	1N2594	1N2645	1N2826	AS	AS	Smc Tns
				1N2566	Brd Hgh Smc	1N2583	1N2595	1N2646	1N2827	AS Cnd Dks	AS	1N3079
				1N2567	Brd Hgh Smc	1N2584	1N2596	1N2647	1N2828	ED Hgh PC	AS	IDC Smc Tns
				1N2568	Brd Hgh Smc	1N2585	1N2597	1N2648	1N2829	Smc Slt Sol	AS	1N3080
				1N2569	Brd Hgh Smc	1N2586	1N2598	1N2649	1N2830	TRW Wsn	1N2937	1N3081
				1N2570	Brd Hgh Smc	1N2587	1N2599	1N2650	1N2831	1N2896	1N2938	IDC Smc Tns
				1N2571	Brd Hgh Smc	1N2588	1N2600	1N2651	1N2832	AS	AS	1N3082
				1N2572	Brd Hgh Smc	1N2589	1N2601	1N2652	1N2833	AS Cnd Dks	AS	Smc Tns
				1N2573	Brd Hgh Smc	1N2590	1N2602	1N2653	1N2834	ED Hgh PC	AS	1N3083
				1N2574	Brd Hgh Smc	1N2591	1N2603	1N2654	1N2835	Smc Slt Sol	AS	1N3084
				1N2575	Brd Hgh Smc	1N2592	1N2604	1N2655	1N2836	TRW Wsn	1N2939	1N3085
				1N2576	Brd Hgh Smc	1N2593	1N2605	1N2656	1N2837	1N2897	1N2940	1N3086
				1N2577	Brd Hgh Smc	1N2594	1N2606	1N2657	1N2838	AS	AS	1N3087
				1N2578	Brd Hgh Smc	1N2595	1N2607	1N2658	1N2839	AS Cnd Dks	AS	1N3088
				1N2579	Brd Hgh Smc	1N2596	1N2608	1N2659	1N2840	ED Hgh PC	AS	1N3089
				1N2580	Brd Hgh Smc	1N2597	1N2609	1N2660	1N2841	Smc Slt Sol	AS	1N3090
				1N2581	Brd Hgh Smc	1N2598	1N2610	1N2661	1N2842	TRW Wsn	1N2941	1N3091
				1N2582	Brd Hgh Smc	1N2599	1N2611	1N2662	1N2843	1N2898	1N2942	1N3092
				1N2583	Brd Hgh Smc	1N2600	1N2612	1N2663	1N2844	AS	AS	1N3093
				1N2584	Brd Hgh Smc	1N2601	1N2613	1N2664	1N2845	AS Cnd Dks	AS	1N3094
				1N2585	Brd Hgh Smc	1N2602	1N2614	1N2665	1N2846	ED Hgh PC	AS	1N3095
				1N2586	Brd Hgh Smc	1N2603	1N2615	1N2666	1N2847	Smc Slt Sol	AS	1N3096
				1N2587	Brd Hgh Smc	1N2604	1N2616	1N2667	1N2848	TRW Wsn	1N2943	1N3097
				1N2588	Brd Hgh Smc	1N2605	1N2617	1N2668	1N2849	1N2899	1N2944	1N3098
				1N2589	Brd Hgh Smc	1N2606	1N2618	1N2669	1N2850	AS	AS	1N3099
				1N2590	Brd Hgh Smc	1N2607	1N2619	1N2670	1N2851	AS Cnd Dks	AS	1N3100
				1N2591	Brd Hgh Smc	1N2608	1N2620	1N2671	1N2852	ED Hgh PC	AS	1N3101
				1N2592	Brd Hgh Smc	1N2609	1N2621	1N2672	1N2853	Smc Slt Sol	AS	1N3102
				1N2593	Brd Hgh Smc	1N2610	1N2622	1N2673	1N2854	TRW Wsn	1N2945	1N3103
				1N2594	Brd Hgh Smc	1N2611	1N2623	1N2674	1N2855	1N2899	1N2946	1N3104
				1N2595	Brd Hgh Smc	1N2612	1N2624	1N2675	1N2856	AS	AS	1N3105
				1N2596	Brd Hgh Smc	1N2613	1N2625	1N2676	1N2857	AS Cnd Dks	AS	1N3106
				1N2597	Brd Hgh Smc	1N2614	1N2626	1N2677	1N2858	ED Hgh PC	AS	1N3107
				1N2598	Brd Hgh Smc	1N2615	1N2627	1N2678	1N2859	Smc Slt Sol	AS	1N3108
				1N2599	Brd Hgh Smc	1N2616	1N2628	1N2679	1N2860	TRW Wsn	1N2947	1N3109
				1N2600	Brd Hgh Smc	1N2617	1N2629	1N2680	1N2861	1N2899	1N2948	1N3110
				1N2601	Brd Hgh Smc	1N2618	1N2630	1N2681	1N2862	AS	AS	1N3111
				1N2602	Brd Hgh Smc	1N2619	1N2631	1N2682	1N2863	AS Cnd Dks	AS	1N3112
				1N2603	Brd Hgh Smc	1N2620	1N26					

1N3083	1N3174A	1N3254	1N3289	1N3547	1N3570	1N3575	1N3587	1N3594	1N3601	1N3606	1N3613	1N3620	1N3639
Smc Tns	IRC Wst	RCA Smc Tns	GE IRC IRec	GE	ETC GE IRec	SD	AMD	IDC	SD	CmD Con GI	Msm Mot Unt	ETC IRec	GE IRec Smc
1N3084	1N3175	1N3255	Wst	1N3548	Smc	1N3576	1N3588	1N3595	1N3602	ITT IDC Ray	1N3614	1N3621	Tns
Smc Tns	IRC	RCA Smc Tns	1N3290	GE	1N3571	SD	AMD	ETC Fch Ray	SD	Tns	Msm Unt	ETC IRec	1N3640
1N3085	1N3176	1N3256	GE IRC IRec	1N3549	Bnx ETC GE	1N3577	1N3589	1N3596	1N3603	1N3607	1N3615	1N3622	GE IRec Smc
IRC IRec	IRC	RCA Smc Tns	Wst	GE	IRec Smc	SD	AMD	IDC Ray	SD	CmD ITT IDC	ETC IRec	ETC IRec	Tns
1N3086	1N3177	1N3257	1N3291	1N3555	Bnx ETC GE	1N3578	1N3590	1N3598	1N3604	1N3608	1N3616	1N3623	1N3641
IRC IRec	IRC	Tns	GE IRC IRec	Hgh Sol	IRec Smc	IDC SD	AMD	IDC Ray	CmD Con GI	CmD IDC	ETC IRec	ETC IRec	GE IDC IRec
1N3087	1N3182	1N3258	Wst	1N3556	1N3573	1N3579	1N3591	1N3599	1N3609	1N3609	1N3617	1N3624	Smc Tns
IRC IRec	Amp Hgh NPC	Tns	1N3292	Hgh Sol	SD	SD	AMD	Ray	Syl Tns	CmD	ETC IRec	ETC IRec	1N3642
1N3088	Sol Syl	1N3260	GE IRC IRec	1N3563	Bnx ETC GE	1N3585	1N3592	1N3600	1N3605	1N3611	1N3618	1N3627	1N3643
IRC IRec	1N3189	ETC GE IRC	Wst	RCA Smc	IRec Smc	AMD	GI ITT IDC	Con Fch GI	CmD Con GI	Msm Mot Unt	ETC IRec	Crs Hgh Sol	AS CmD IRC
1N3089	ASC GE GI	Wst	1N3293	1N3569	1N3574	1N3586	1N3593	ITT IDC NPC	ITT IDC Ray	1N3612	1N3619	1N3628	PC Smit
IRC IRec	IRC IRec Smc	1N3261	GE IRC IRec	ETC GE IRec	Bnx ETC GE	AMD	IDC	Ray Tns	SD Syl Tns	Msm Mot Unt	IRc	Crs Hgh Sol	
1N3090	Tns	ETC GE IRC	Wst	Smc	IRec Smc								
1N3090	1N3190	Wst	1N3294										
IRC IRec	ASC GE GI	1N3262	GE IRC IRec										
1N3091	IRC IDC IRec	ETC GE IRC	Wst										
IRC IRec	Smc Tns	Wst	1N3295										
1N3092	1N3191	1N3263	GE IRC IRec										
IRC IRec	ASC GE GI	ETC GE IRC	Wst										
1N3106	IDC IRC IRec	Wst	1N3296										
Smc	Smc Tns	1N3264	GE IRC IRec										
1N3107	1N3193	ETC GE IRC	Wst										
IDC Smc	RCA Smc Tns	Wst	1N3297										
1N3110	1N3194	1N3265	IRC Wst										
ITT IDC Tns	IDC RCA Smc	ETC GE IRC	1N3298										
1N3111	Tns	Wst	ITT IDC Ray										
IRC IRec	1N3195	1N3266	1N3465										
1N3121	RCA Smc Tns	ETC GE IRC	GI ITT IDC										
IDC	1N3196	Wst	1N3466										
1N3122	IDC RCA Smc	1N3267	GI ITT Tns										
IDC	Tns	ETC GE IRC	1N3467										
1N3123	1N3203	Wst	GE ITT IDC										
ITT IDC	GI IDC	1N3268	Tns										
1N3124	1N3206	GE IRC Wst	1N3468										
CmD ITT IDC	CmD ITT TRW	1N3269	GI ITT IDC										
1N3125	1N3207	GE IRC Wst	Tns										
IDC Sol Syl	CmD IDC TRW	1N3270	1N3469										
1N3146	1N3208	GE IRC Wst	ITT IDC Tns										
ITT IDC	Dlc Smc Tns	1N3271	1N3470										
1N3161	Wag	GE IRC Wst	ITT IDC Tns										
IRC Wst	1N3209	1N3272	1N3471										
1N3162	Dlc IDC IRec	GE IRC Wst	IDC SD										
IRC Wst	Mot Smc Tns	1N3273	1N3483										
1N3163	Wag	GE IRC Wst	ITT IDC										
IRC Wst	1N3210	1N3274	1N3484										
1N3164	Dlc IDC IRec	IRC Wst	IDC										
ETC IRC Wst	Mot Smc Tns	1N3275	1N3485										
1N3165	Wag	IRC Wst	Ray										
IRC Wst	1N3211	1N3276	1N3486										
1N3166	IRec Mot Smc	IRC Wst	CmD ED ETC										
IRC Wst	Tns Wag	1N3277	IDC Smc										
1N3167	1N3212	ETC	1N3487										
IRC Wst	IDC IRec Mot	1N3278	CmD ED Smc										
1N3168	Smc Tns Wag	ETC	1N3488										
ETC IRC Wst	1N3213	1N3279	Tns										
1N3169	IRec Mot Smc	ETC	1N3491										
IRC Wst	Tns Wag	1N3280	Dlc Mot Smc										
1N3170	1N3214	ETC	Tns Wag										
IRC Wst	IRec Mot Smc	1N3282	1N3492										
1N3171	Tns Wag	Dlc Mot Smc	Tns Wag										
IRC	1N3227	Tns Wag	1N3493										
1N3171A	IDC	1N3283	1N3494										
IRC Wst	1N3232	AS CmD Mot	Dlc Mot Smc										
1N3172	IDC	1N3284	Tns Wag										
IRC	1N3237	AS CmD Mot	1N3495										
1N3172A	IDC	1N3285	Mot Smc Tns										
IRC Wst	1N3241	AS CmD Mot	Wag										
1N3173	IDC	1N3286	1N3496										
IRC	1N3246	AS CmD Mot	Mot Smc Tns										
1N3173A	IDC	1N3287	Wag										
IRC Wst	1N3251	ITT IDC Tns	1N3544										
1N3174	IDC	1N3288	GE										
IRC	1N3253	IRC IRec Wst	1N3545										
	RCA Smc Tns	GE	1N3546										
		GE											

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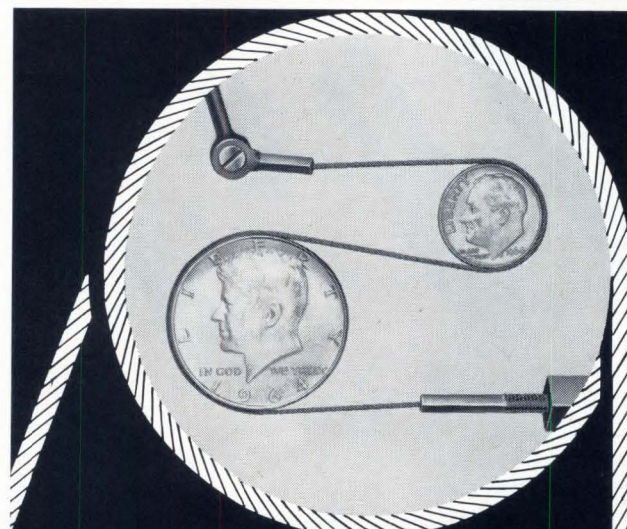
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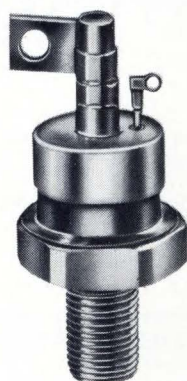
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Diodes and Rectifiers (Cont'd)

1N3644 AS Cnd IRC PC Smt	1N3711 AS 1N3722 IDC	1N3768 GE Slt Tns Wst	1N3880 Dks ED GE IRC Mot Tns	1N3913 GE IRC Mot Tns Wst	1N3987 ETC Wst	1N4053 GE IRC IRec Wst
1N3645 AS Cnd IRC PC Smt	1N3728 SD 1N3729 IDC	1N3769 GI ITT IDC Tns	1N3881 Dks ED GE IRC Mot Tns	1N3914 IDC 1N3919 ETC	1N3988 ETC Wst	1N4054 GE IRC IRec Wst
1N3646 AS Cnd IRC PC Smt	1N3730 IDC Ray 1N3731 ITT IDC SD	1N3773 GI ITT IDC Wst	1N3882 Dks ED GE IRC Mot Tns	1N3924 ETC 1N3934 ETC	1N3989 ETC Wst	1N4055 GE IRC IRec Wst
1N3647 AS Cnd IRC PC Smt	1N3736 ETC GE IRC IRec	1N3831 Dlt ITT Wsn 1N3832 Dlt ITT Wsn	1N3883 Dks ED GE IRC Mot Tns	1N3944 IDC 1N3945 High Sol	1N3990 ETC Wst	1N4056 GE IRC IRec Wst
1N3649 ETC IRec Smc Tns	1N3737 ETC GE IRC IRec	1N3833 Dlt ITT Wsn 1N3834 Dlt ITT Wsn	1N3884 Tns 1N3885 Tns	1N3946 High Sol 1N3947 High Sol	1N3992 AS Cnd IRC	1N4057 GE IRC IRec Wst
1N3650 ETC IRec Tns	1N3740 GE IRC IRec Msm	1N3837 Dlt ITT Wsn 1N3838 Dlt ITT Wsn	1N3886 Tns 1N3887 Tns	1N3952 ETC 1N3956 IDC	1N4001 CmD Eri ITT	1N4086 IDC SD Syl
1N3653 IDC Tns	1N3741 GE IRC IRec Wag	1N3839 Dlt ITT Wsn 1N3840 Dlt ITT Wsn	1N3888 Tns 1N3889 ED GE IRC	1N3957 Msm Unt 1N3958 IRC	1N4002 CmD Eri ITT	1N4087 IDC Syl Tns
1N3654 ITT IDC SD	1N3742 GE IRC IRec Wag	1N3841 Dlt ITT Wsn 1N3842 Dlt ITT Wsn	1N3890 ED GE IRC Mot Tns Wst	1N3959 IRC 1N3960 IRC	1N4003 CmD Eri ITT	1N4092 ETC Syl Tns
1N3656 Msm	1N3743 IRC IRec Wag	1N3843 Dlt ITT Wsn 1N3844 Dlt ITT Wsn	1N3891 ED GE IRC Mot Tns Wst	1N3961 IRC 1N3962 IRC	1N4004 CmD Eri ITT	1N4093 ETC Syl
1N3657 Msm	1N3744 IRC IRec Wag	1N3845 Dlt ITT Wsn 1N3846 Dlt ITT Wsn	1N3892 ED GE IRC Mot Tns Wst	1N3963 IRC 1N3964 ETC PC	1N4005 CmD Eri ITT	1N4136 Wag
1N3658 Msm	1N3745 ETC 1N3746 ETC	1N3847 Dlt ITT Wsn 1N3848 Dlt ITT Wsn	1N3893 ED GE IRC Mot Tns Wst	1N3965 ETC PC 1N3966 ETC PC	1N4006 CmD Eri ITT	1N4137 ETC Wag
1N3659 Mot Smc Tns Wag	1N3747 ETC 1N3748 ETC	1N3849 Dlt ITT Wsn 1N3850 Dlt ITT Wsn	1N3894 SD 1N3895 SD	1N3967 ETC PC 1N3968 ETC	1N4007 CmD Eri ITT	1N4138 Wag
1N3660 Mot Smc Tns Wag	1N3749 ETC 1N3750 ETC	1N3851 Dlt ITT Wsn 1N3852 Dlt ITT Wsn	1N3896 CmD 1N3897 CmD	1N3969 ETC 1N3970 ETC	1N4008 GI IDC	1N4139 IDC PC Sol
1N3661 Mot Smc Tns Wag	1N3751 Smt 1N3752 Smt	1N3853 Dlt ITT Wsn 1N3854 Dlt ITT Wsn	1N3898 CmD 1N3899 CmD	1N3971 ETC 1N3972 ETC	1N4009 CmD GI ITT	1N4140 PC Sol
1N3662 Mot Smc Tns Wag	1N3753 GI IDC 1N3754 IDC RCA	1N3855 Dlt ITT Wsn 1N3856 Dlt ITT Wsn	1N3900 GE Mot Tns Wst	1N3973 IRC 1N3974 IRC	1N4010 CmD GI ITT	1N4141 PC Sol
1N3663 Mot Smc Tns Wag	1N3755 IDC RCA 1N3756 IDC RCA	1N3857 Dlt ITT Wsn 1N3858 Dlt ITT Wsn	1N3901 GE Mot Tns Wst	1N3975 IRC 1N3976 IRC	1N4011 CmD GI ITT	1N4142 PC Sol
1N3664 Smt	1N3757 ETC 1N3758 ETC	1N3859 Dlt ITT Wsn 1N3860 Dlt ITT Wsn	1N3902 GE Mot Tns Wst	1N3977 ETC IRC 1N3978 ETC IRC	1N4012 CmD GI ITT	1N4143 PC Sol
1N3665 Smt	1N3759 ETC 1N3760 ETC	1N3861 Dlt ITT Wsn 1N3862 Dlt ITT Wsn	1N3903 GE Mot Tns Wst	1N3979 ETC IRC 1N3980 ETC IRC	1N4013 CmD GI ITT	1N4144 PC Sol
1N3666 GI High ITT IDC Tns	1N3761 ETC 1N3762 ETC	1N3863 Dlt ITT Wsn 1N3864 Dlt ITT Wsn	1N3904 GE Mot Tns Wst	1N3981 Msm 1N3982 Msm	1N4014 CmD GI ITT	1N4145 PC Sol
1N3668 SD	1N3763 ETC 1N3764 ETC	1N3865 Dlt ITT Wsn 1N3866 Dlt ITT Wsn	1N3905 GE Mot Tns Wst	1N3983 Msm 1N3984 Msm	1N4015 CmD GI ITT	1N4146 PC Sol
1N3669 ITT IDC SD Syl	1N3765 ETC 1N3766 ETC	1N3867 Dlt ITT Wsn 1N3868 Dlt ITT Wsn	1N3906 GE Mot Tns Wst	1N3985 Msm 1N3986 Msm	1N4016 CmD GI ITT	1N4147 PC Sol
1N3670 ETC IRec Tns	1N3767 ETC 1N3768 ETC	1N3869 Dlt ITT Wsn 1N3870 Dlt ITT Wsn	1N3907 GE Mot Tns Wst	1N3987 Msm 1N3988 Msm	1N4017 CmD GI ITT	1N4148 PC Sol
1N3670A ETC GE IRec Tns Wst	1N3769 ETC 1N3770 ETC	1N3871 Dlt ITT Wsn 1N3872 Dlt ITT Wsn	1N3908 GE Mot Tns Wst	1N3989 Msm 1N3990 Msm	1N4018 CmD GI ITT	1N4149 PC Sol
1N3671 ETC IRec Tns	1N3771 ETC 1N3772 ETC	1N3873 Dlt ITT Wsn 1N3874 Dlt ITT Wsn	1N3909 GE Mot Tns Wst	1N3991 Msm 1N3992 Msm	1N4019 CmD GI ITT	1N4150 PC Sol
1N3671A ETC GE IRec Tns Wst	1N3773 ETC 1N3774 ETC	1N3875 Dlt ITT Wsn 1N3876 Dlt ITT Wsn	1N3910 GE Mot Tns Wst	1N3993 Msm 1N3994 Msm	1N4020 CmD GI ITT	1N4151 PC Sol
1N3672 ETC IRec Tns	1N3775 ETC 1N3776 ETC	1N3877 Dlt ITT Wsn 1N3878 Dlt ITT Wsn	1N3911 GE Mot Tns Wst	1N3995 Msm 1N3996 Msm	1N4021 CmD GI ITT	1N4152 PC Sol
1N3672A ETC GE IRec Tns Wst	1N3777 ETC 1N3778 ETC	1N3879 Dlt ITT Wsn 1N3880 Dlt ITT Wsn	1N3912 GE Mot Tns Wst	1N3997 Msm 1N3998 Msm	1N4022 CmD GI ITT	1N4153 PC Sol
1N3673 ETC IRec Tns	1N3779 ETC 1N3780 ETC	1N3881 Dlt ITT Wsn 1N3882 Dlt ITT Wsn	1N3913 GE Mot Tns Wst	1N3999 Msm 1N4000 Msm	1N4023 CmD GI ITT	1N4154 PC Sol
1N3673A ETC GE IRec Tns Wst	1N3781 ETC 1N3782 ETC	1N3883 Dlt ITT Wsn 1N3884 Dlt ITT Wsn	1N3914 GE Mot Tns Wst	1N4001 Msm 1N4002 Msm	1N4024 CmD GI ITT	1N4155 PC Sol

1N4244	1N4385	1N4517	1N4723	1N4816	1N4999	1N5141
Fch IDC	GI ITT Smt	PC	IDC Mot Smt	IDC IRec Slt	Mot	Crs Mot
1N4245	Syl	1N4523	1N4724	Wst	1N5000	1N5141A
GI Smt	1N4389	ITT IDC	Mot Smt	1N4817	Mot	Crs Mot
1N4246	ETC IDC SD	1N4524	1N4725	ETC IRec Slt	1N5001	1N5142
GI Smt	1N4390	ITT IDC	Mot Smt	Wst	Mot	Crs Mot
1N4247	IDC	1N4525	1N4726	1N4818	1N5002	1N5142A
GI Smt	1N4391	ETC	IDC	ETC IRec Slt	Mot	Crs Mot
1N4248	IDC	1N4526	1N4727	Wst	1N5003	1N5143
ETC GI IDC	1N4392	ETC	Fch IDC Syl	1N4819	Mot	Crs Mot
Smt	IDC	1N4531	TI	ETC IRec Slt	1N5006	1N5143A
1N4249	1N4436	Msm TI	1N4785	Wst	IDC	Crs Mot
GI Smt	Var	1N4532	RCA	1N4820	1N5007	1N5144
1N4250	1N4437	Msm TI	1N4786	ETC IRec Slt	IDC	Crs Mot
Cmd ETC GI	Var	1N4533	Crs TRW	Wst	1N5052	1N5144A
IDC Smt	1N4438	IDC Msm TI	1N4787	ETC IRec Slt	Wst	1N5145
1N4251	Var	1N4534	Crs TRW	Wst	1N5053	Crs Mot
Cmd ETC GI	1N4441	IDC Msm TI	1N4788	1N4822	ETC IRec Slt	1N5145A
Smt	Var	1N4536	Crs TRW	ETC IRec Slt	Wst	Crs Mot
1N4252	1N4444	IDC Msm TI	1N4789	Wst	1N5054	1N5146
Cmd GI Smt	GI ITT IDC	1N4541	Crs TRW	1N4823	ETC IRec Slt	Crs Mot
1N4253	TI	TRW	1N4790	Slt	Wst	1N5146A
Cmd GI Smt	1N4445	1N4542	Crs TRW	1N4824	1N5055	Crs Mot
1N4254	GI	TRW	1N4791	Slt	GI	1N5147
AS GI Smt	1N4446	1N4543	Crs TRW	1N4825	1N5056	Crs Mot
1N4255	Fch GI ITT	TRW	1N4792	Slt	GI	1N5147A
AS GI Smt	NPC Syl TI	1N4544	Crs TRW	1N4826	1N5057	Crs Mot
1N4256	1N4447	TRW	1N4793	Slt	GI	1N5148
AS GI Smt	Con Fch GI	1N4545	Crs TRW	1N4828	1N5058	Crs Mot
1N4257	ITT NPC Syl	TRW	1N4794	Cmd	GI	1N5148A
AS GI Smt	TI	1N4548	Crs TRW	1N4829	1N5059	Crs Mot
1N4261	1N4448	IDC	1N4795	Cmd	GE IDC	1N5162
ETC	Con Fch GI	1N4585	Crs TRW	1N4878	1N5060	IRC IRec
1N4305	ITT NPC Syl	GI ITT IDC	1N4796	IRC	GE	1N5181
Con GI ITT	TI	Smt Syl	Crs TRW	1N4879	1N5061	Smt
IDC NPC Syl	1N4449	1N4586	1N4797	ETC IRC	GE	1N5182
TI	Con GI ITT	GI ITT Smt	Crs TRW	1N4880	1N5062	Smt
1N4306	NPC Syl TI	Syl	1N4798	ETC IRC	1N5132	1N5183
Fch IDC	1N4450	1N4587	Crs TRW	1N4885	Amp	Crs Mot
1N4307	GI ITT IDC	IRC Wst	1N4799	1N4886	Crs Mot	1N5184
Fch IDC	NPC	1N4588	Crs TRW	Amp	1N5132A	Smt
1N4308	1N4451	IRC Wst	1N4800	1N4933	1N5133	1N5197
IDC Ray Tns	GI ITT IDC	1N4589	Crs TRW	IDC Mot	Crs Mot	1N5198
1N4309	NPC	1N4590	Crs High TRW	1N4934	1N5133A	Smt Slt
IDC Tns	1N4452	ETC IRC Wst	1N4802	Mot	Crs Mot	1N5199
IDC Tns	IDC NPC	1N4591	Crs High TRW	1N4935	1N5134	Smt Slt
1N4310	ITT IDC NPC	1N4803	Mot	1N4936	Crs Mot	1N5200
IDC Tns	1N4454	Crs High TRW	1N4804	Mot	1N5134A	Smt Slt
1N4311	Fch GI ITT	1N4592	Crs High TRW	1N4937	1N5135	1N5201
IDC Ray Tns	NPC Syl TI	IRC Wst	1N4805	Mot	Crs Mot	Smt Slt
1N4312	1N4455	1N4593	Crs High TRW	1N4938	1N5135A	1N5211
ETC GI Smt	ETC	IRC Wst	1N4806	Syl	Crs Mot	RCA
1N4365	1N4458	1N4594	Crs High TRW	1N4942	1N5136	1N5212
ETC GI Smt	Bnx ETC	IRC Wst	1N4807	Smt	Crs Mot	RCA
1N4366	1N4459	1N4595	Crs High TRW	1N4943	1N5136A	1N5213
ETC GI Smt	Bnx ETC	IRC Wst	1N4808	Smt	Crs Mot	RCA
1N4367	1N4502	1N4596	Crs High TRW	1N4944	1N5137	1N5214
ETC GI Smt	Eri GI	IRC Wst	1N4809	Smt	Crs Mot	RCA
1N4368	1N4505	1N4606	Crs High TRW	1N4945	1N5137A	1N5215
ETC GI Smt	AS	GI	1N4810	Smt	Crs Mot	RCA
1N4369	1N4506	1N4607	Crs High TRW	1N4946	1N5138	1N5216
ETC GI Smt	ETC	GI	1N4811	Smt	Crs Mot	RCA
1N4376	1N4507	1N4608	Crs High TRW	1N4947	1N5138A	1N5217
Fch IDC	ETC	GI	1N4812	Smt	Crs Mot	RCA
1N4380	1N4508	1N4610	Crs High TRW	1N4948	1N5139	1N5218
ITT IDC	ETC	Fch IDC	1N4813	Smt	Crs Mot	RCA
1N4381	1N4510	1N4719	Crs High TRW	1N4950	1N5139A	1N5282
GI IDC	ETC	IDC Mot Smt	1N4814	Fch IDC	Crs Mot	Fch GI
1N4383	1N5411	Mot Smt	1N4815	1N4997	1N5140	1N5318
GI ITT Smt	ETC	1N4721	Crs High TRW	IDC Mot	Crs Mot	Fch
Syl	1N4513	Mot Smt	1N4816	1N4998	1N5140A	1N5331
1N4384	1N4514	1N4722	Crs High TRW	Mot	Crs Mot	GE
GI ITT Smt	IDC PC	Mot Smt				
Syl						

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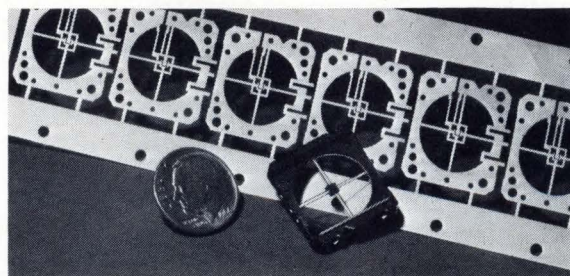
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REVERSE-BLOCKING-TRIODE THYRISTORS (SCR's)

SCR's and SCS's are listed first in ascending numerical order according to the EIA-JEDEC type numbers followed by manufacturers'-type designations. Manu-

facturers'-type designations are listed first in their numerical order followed by alphabetical listing (see pp. 22-27).

KEY

TYPE NO.	MAXIMUM RATING				I_{GF} (ma)	V_{GF} (volts)	DIM	MFR
	I_F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μ sec)	Maximum			
					Typical			
TYPE Number by which SCR is identified. I_F — Maximum continuous rms or d-c forward anode current. PRV — Maximum instantaneous value of repetitive reverse voltage applied to anode with gate open. OPERATING TEMPERATURE — Maximum operating junction temperature measured in degrees Celsius. TURN-OFF TIME—Time interval required for gate to regain control of forward blocking characteristic after interruption of I_F. Typical unless shading indicates maximum value. I_{GF}—Typical value of gate current required to fire SCR. Shading indicates maximum value. *indicates at T_j max. MANUFACTURER Manufacturers currently supplying the type. (Abbreviations are listed on the Manufacturers' Chart) Manufacturers supplying JEDEC types are listed in table at end of this section. DIM. — TO-case types refer to JEDEC-case sizes. Dimensions are expressed in inches and, unless otherwise indicated, give the distance measured across flats of hex base on stud-mounted types. When shown with SE (single-ended leads), DE (double-ended leads), PF (pressfit case) or SM (stud mount), dimension indicates approximate diameter of round case. ■ indicates diamond base available. (Spec) = special case or mounting. V_{GF} — Typical value of gate-to-cathode voltage with I_{GF} flowing, but prior to start of anode conduction. Shading indicates maximum value. *indicates at T_j max.								

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SERIES 74N	FUNCTION	SPRAGUE PART NO.
SN7400N	Quad 2-Input NAND	USN-7400A
SN7401N	Quad 2-Input NAND (No Collector Load)	USN-7401A
SN7402N	Quad 2-Input NOR	USN-7402A
SN7410N	Triple 3-Input NAND	USN-7410A
SN7420N	Dual 4-Input NAND	USN-7420A
SN7430N	Single 8-Input NAND	USN-7430A
SN7440N	Dual 4-Input NAND Buffer	USN-7440A
SN7450N	2-Wide 2-Input Expandable AND-OR-INVERT	USN-7450A
SN7451N	2-Wide 2-Input AND-OR-INVERT	USN-7451A
SN7453N	4-Wide 2-Input Expandable AND-OR-INVERT	USN-7453A
SN7454N	4-Wide 2-Input AND-OR-INVERT	USN-7454A
SN7460N	Dual 4-Input Expander	USN-7460A
SN7470N	D-C Clocked J-K Flip Flop	USN-7470A
SN7472N	J-K Master Slave Flip Flop	USN-7472A
SN7473N	Dual J-K Master Slave Flip Flop (single chip, pin 11 GND)	USN-7473A
SN7474N	Dual D-Type Edge-Triggered Flip Flop	USN-7474A
—	Dual AC Clocked J-K Flip Flop	USN-7479A
—	Dual J-K Master Slave Flip Flop (single chip, pin 7 GND)	USN-74107A

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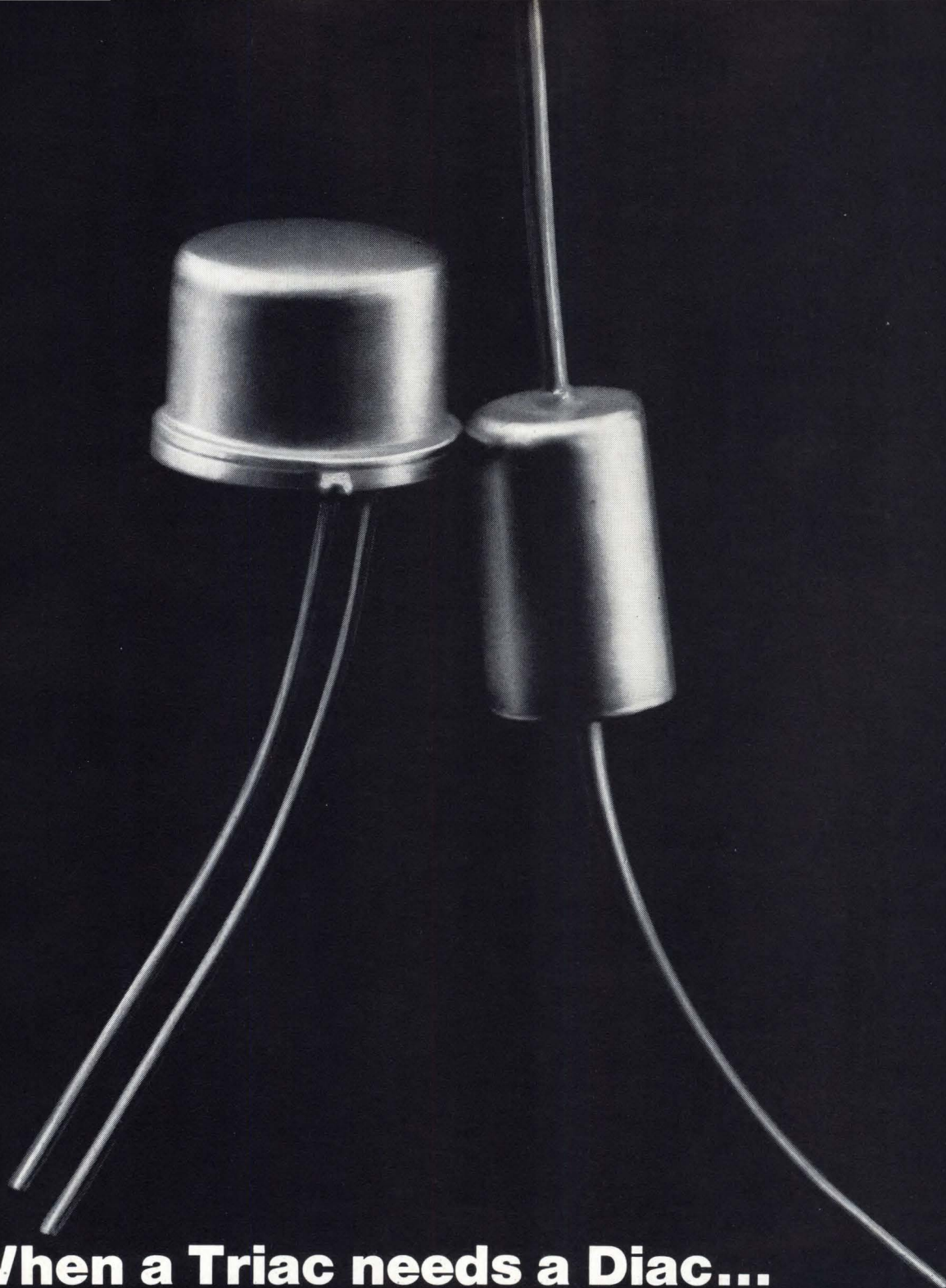
SCR's

2N681—2N2025

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
	Typical							
2N681	25	25	125		40	2	9/16	
2N681A	25	25	125		40	2	9/16	
2N682	25	50	125		40	2	9/16	
2N682A	25	50	125		40	2	9/16	
2N683	25	100	125		40	2	9/16	
2N683A	25	100	125		40	2	9/16	
2N684	25	150	125		40	2	9/16	
2N684A	25	150	125		40	2	9/16	
2N685	25	200	125		40	2	9/16	
2N685A	25	200	125		40	2	9/16	
2N686	25	250	125		40	2	9/16	
2N686A	25	250	125		40	2	9/16	
2N687	25	300	125		40	2	9/16	
2N687A	25	300	125		40	2	9/16	
2N688	25	400	125		40	2	9/16	
2N688A	25	400	125		40	2	9/16	
2N689	25	500	125		40	2	9/16	
2N689A	25	500	125		40	2	9/16	
2N690	25	600	125		40	2	T0-48	
2N691	25	700	125		40	2	T0-48	
2N692	25	800	125		40	2	T0-48	
2N764	0.25	30	125		1	1	T0-18	
2N765	0.25	60	125		1	1	T0-18	
2N766	0.25	100	125		1	1	T0-18	
2N767	0.25	200	125		1	1	T0-18	
2N876	0.28	15	150		0.05	0.55	T0-18	
2N877	0.28	30	150		0.05	0.55	T0-18	
2N878	0.28	60	150		0.05	0.55	T0-18	
2N879	0.28	100	150		0.05	0.55	T0-18	
2N880	0.28	150	150		0.05	0.55	T0-18	
2N881	0.28	200	150		0.05	0.55	T0-18	
2N882	0.28	300	150		0.05	0.55	T0-18	
2N883	0.28	400	150		0.05	0.55	T0-18	
2N884	0.28	15	150		0.005	0.52	T0-18	
2N885	0.28	30	150		0.005	0.52	T0-18	
2N886	0.28	60	150		0.005	0.52	T0-18	
2N887	0.28	100	150		0.005	0.52	T0-18	
2N888	0.28	150	150		0.005	0.52	T0-18	
2N889	0.28	200	150		0.005	0.52	T0-18	
2N890	0.28	300	150		0.005	0.52	T0-18	
2N891	0.28	400	150		0.005	0.52	T0-18	
2N948	0.28	30	125		0.002	0.5	T0-18	
2N949	0.28	60	125		0.002	0.5	T0-18	
2N950	0.28	100	125		0.002	0.5	T0-18	
2N951	0.28	200	125		0.002	0.5	T0-18	
2N1595	1.6	50	150		0.9	0.6	T0-5	
2N1595A	1.0	50	150		3.0	0.002	T0-5	
2N1596	1.6	100	150		0.9	0.6	T0-5	
2N1596A	1.0	100	150		3.0	0.002	T0-5	
2N1597	1.6	200	150		0.9	0.6	T0-5	
2N1597A	1.0	200	150		3.0	0.002	T0-5	
2N1598	1.6	300	150		0.9	0.6	T0-5	
2N1598A	1.0	300	150		3.0	0.002	T0-5	
2N1599	1.6	400	150		0.9	0.6	T0-5	
2N1599A	1.0	400	150		3.0	0.002	T0-5	
2N1600	4	50	125		25	3	7/16	
2N1601	4	100	125		25	3	7/16	
2N1602	4	200	125		25	3	7/16	
2N1603	4	300	125		25	3	7/16	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2N1604	4	400	125		25	3	7/16	
2N1686	0.5	30	125		1	1	T0-5	
2N1687	0.5	60	125		1	1	T0-5	
2N1688	0.5	100	125		1	1	T0-5	
2N1689	0.5	200	125		1	1	T0-5	
2N1770	7.4	25	125		10	1.3	7/16	
2N1770A	7	25	150		15	2		
2N1771	7.4	50	125		10	1.3		
2N1771A	7	50	150		15	2	7/16	
2N1772	7.4	100	125		10	1.3	7/16	
2N1772A	7	100	150		15	2	7/16	
2N1773	7.4	150	125		10	1.3	7/16	
2N1773A	7	150	150		15	2	7/16	
2N1774	7.4	200	125		10	1.3	7/16	
2N1774A	7	200	150		15	2	7/16	
2N1775	7.4	250	125		10	1.3	7/16	
2N1775A	7	250	150		15	2	7/16	
2N1776	7.4	300	125		10	1.3	7/16	
2N1776A	7	300	150		15	2	7/16	
2N1777	7.4	400	125		10	1.3	7/16	
2N1777A	7	400	150		15	2	7/16	
2N1778	7.4	500	125		10	1.3	7/16	
2N1778A	7.0	500	150		15	2	7/16	
2N1792	110	60	125		70	3	1-1/16	
2N1793	110	120	125		70	3	1-1/16	
2N1794	110	180	125		70	3	1-1/16	
2N1795	110	240	125		70	3	1-1/16	
2N1796	110	300	125		70	3	1-1/16	
2N1797	110	360	125		70	3	1-1/16	
2N1798	110	480	125		70	3	1-1/16	
2N1799	110	600	125		70	3	1-1/16	
2N1800	110	720	125		70	3	1-1/16	
2N1801	110	700	125		70	3	1-1/16	
2N1802	110	800	125		70	3	1-1/16	
2N1803	110	900	125		70	3	1-1/16	
2N1804	110	1000	125		70	3	1-1/16	
2N1805	110	600	125		70	3	1-1/16	
2N1806	110	720	125		70	3	1-1/16	
2N1807	110	840	125		70	3	1-1/16	
2N1842	16	25	100		15	0.8	T0-48	
2N1842A	16	25	125		15	0.8	T0-48	
2N1842B	25	25	125		75	3	9/16	
2N1843	16	50	100		15	0.8	T0-48	
2N1843A	16	50	125		15	0.8	T0-48	
2N1843B	25	50	125		75	3	9/16	
2N1844	16	100	100		15	0.8	T0-48	
2N1844A	16	100	125		15	0.8	T0-48	
2N1844B	25	100	125		75	3	9/16	
2N1845	16	150	100		15	0.8	T0-48	
2N1845A	16	150	125		15	0.8	T0-48	
2N1845B	25	150	125		75	3	9/16	
2N1846	16	200	100		15	0.8	T0-48	
2N1846A	16	200	125		15	0.8	T0-48	
2N1846B	25	200	125		75	3	9/16	
2N1847	16	250	100		15	0.8	T0-48	
2N1847A	16	250	125		15	0.8	T0-48	
2N1847B	25	250	125		75	3	9/16	
2N1848	16	300	100		15	0.8	T0-48	
2N1848A	16	300	125		15	0.8	T0-48	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2N1848B	25	300	125		75	3	9/16	
2N1849	16	400	100		15	0.8	T0-48	
2N1849A	16	400	125		15	0.8	T0-48	
2N1849B	25	400	125		75	3	9/16	
2N1850	16	500	100		15	0.8	T0-48	
2N1850A	16	500	125		15	0.8	T0-48	
2N1850B	25	500	125		75	3	9/16	
2N1851	16	600	105		15	1.5	T0-48	
2N1869	1.25	15	150		0.05	0.55	T0-5	
2N1870	1.25	30	150		0.05	0.55	T0-5	
2N1870A	1.25	30	150		0.03	0.55	T0-5	
2N1871	1.25	60	150		0.05	0.55	T0-5	
2N1871A	1.25	60	150		0.03	0.55	T0-5	
2N1872	1.25	100	150		0.05	0.55	T0-5	
2N1872A	1.25	100	150		0.03	0.55	T0-5	
2N1873	1.25	150	150		0.05	0.55	T0-5	
2N1874	1.25	200	150		0.05	0.55	T0-5	
2N1874A	1.25	200	150		0.03	0.55	T0-5	
2N1875	1.25	15	150		0.005	0.52	T0-5	
2N1875A	1.25	15	150		0.005	0.52	T0-5	
2N1876	1.25	30	150		0.005	0.52	T0-5	
2N1876A	1.25	30	150		0.005	0.52	T0-5	
2N1877	1.25	60	150		0.005	0.52	T0-5	
2N1877A	1.25	60	150		0.005	0.52	T0-5	
2N1878	1.25	100	150		0.005	0.52	T0-5	
2N1878A	1.25	100	150		0.005	0.52	T0-5	
2N1879	1.25	150	150		0.005	0.52	T0-5	
2N1879A	1.25	150	150		0.005	0.52	T0-5	
2N1880	1.25	200	150		0.005	0.52	T0-5	
2N1880A	1.25	200	150		0.005	0.52	T0-5	
2N1881	1.25	30	150		0.2	1	T0-5	
2N1882	1.25	60	150		0.2	1	T0-5	
2N1883	1.25	100	150		0.2	1	T0-5	
2N1884	1.25	150	150		0.2	1	T0-5	
2N1885	1.25	200	150		0.2	1	T0-5	
2N1909	110	25	125		70	3	1-1/16	
2N1910	110	50	125		70	3	1-1/16	
2N1911	110	100	125		70	3	1-1/16	
2N1912	110	150	125		70	3	1-1/16	
2N1913	110	200	125		70	3	1-1/16	
2N1914	110	250	125		70	3	1-1/16	
2N1915	110	300	125		70	3	1-1/16	
2N1916	110	400	125		70	3	1-1/16	
2N1929	1.1	25	125		15	2	3/8 DE	
2N1930	1.1	50	125		15	2	3/8 DE	
2N1931	1.1	100	125		15	2	3/8 DE	
2N1932	1.1	150	125		15	2	3/8 DE	
2N1933	1.1	200	125		15	2	3/8 DE	
2N1934	1.1	250	125		15	2	3/8 DE	
2N1935	1.1	300	125		15	2	3/8 DE	
2N2009	1.3	25	150		0.2	1	T0-5	
2N2010	1.3	50	150		0.2	1	T0-5	
2N2011	1.3	100	150		0.2	1	T0-5	
2N2012	1.3	200	150		0.2	1	T0-5	
2N2013	1.3	300	150		0.2	1	T0-5	
2N2014	1.3	400	150		0.2	1	T0-5	
2N2023	110	25	150		35	1.2	T049	
2N2024	110	50	150		35	1.2	T049	
2N2025	110	100	150		35	1.2	T049	



When a Triac needs a Diac...

Try your Triac Leader! You've asked for it...and we have it. To complement the largest Triac line in the industry, we've added the trigger diode. RCA's new silicon Diac (1N5411) is packaged in a hermetic DO-26 case. It has a typical break-over voltage of 32 volts, with a symmetry of ± 3 volts.

Manufactured by the same RCA assembly line that has produced millions of lead-mount rectifiers, our Diac is available right now in production quantities at attractive low prices.

RCA

Circle No. 74 on Reader Service Card for more information.

RCA's TRIAC FAMILY

Look to RCA for your component needs in AC circuit design ... 20 top-performing Triacs *plus* our new Diac trigger!

Current Rating I _T (rms)	Low Voltage (100V)	120V Line (200V)	240V Line (400V)	Package
2.5A (I _{ET} = 3mA max)	40525	40526	40527	TO-5*
2.5A (I _{ET} = 10mA max)	40528	40529	40530	TO-5*
6A		40429	40430	TO-66
6A		40485	40486	TO-5+
6A		40431 (with integral trigger)	40432	TO-5+
8A		TA7364	TA7365	Plastic "TO-66"
15A		40575	40576	TO-66
40A		2N5441 2N5444	2N5442 2N5445	Press-fit Stud

*Modified 3-lead

+Modified 2-lead

SCR's

2N2026-2N4101

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
Maximum								
Typical								
2N2026	110	150	150	40	35	1.2	T049	
2N2027	110	200	150		35	1.2	T049	
2N2028	110	250	150		35	1.2	T049	
2N2029	110	300	150		35	1.2	T049	
2N2030	110	400	150		70	2	T049	
2N2322	1.6	25	125		0.01	0.5	T0-5	
2N2322A	1.6	25	125		0.002	0.4	T0-5	
2N2323	1.6	50	125		0.01	0.5	T0-5	
2N2323A	1.6	50	125		0.002	0.4	T0-5	
2N2324	1.6	100	125		0.01	0.5	T0-5	
2N2324A	1.6	100	125		0.002	0.4	T0-5	
2N2325	1.6	150	125		0.01	0.5	T0-5	
2N2325A	1.6	150	125		0.002	0.4	T0-5	
2N2326	1.6	200	125		0.01	0.5	T0-5	
2N2326A	1.6	200	125		0.002	0.4	T0-5	
2N2327	1.6	250	125		0.01	0.5	T0-5	
2N2327A	1.6	250	125	0.002	0.4	T0-5		
2N2328	1.6	300	125	0.01	0.5	T0-5		
2N2328A	1.6	300	125	0.002	0.4	T0-5		
2N2329	1.6	400	125	0.01	0.5	T0-5		
2N2329A	1.6	400	125	0.002	0.4	T0-5		
2N2344	1.6	25	100	0.005	0.5	T0-5		
2N2345	1.6	50	100	0.005	0.5	T0-5		
2N2346	1.6	100	100	0.005	0.5	T0-5		
2N2347	1.6	150	100	0.005	0.5	T0-5		
2N2348	1.6	200	100	0.005	0.5	T0-5		
2N2503	235	75	125	30	100	3	T094	
2N2504	235	125	125	100	3	T0-94		
2N2505	235	225	125	100	3	T0-94		
2N2506	235	325	125	100	3	T0-94		
2N2507	235	425	125	100	3	T0-94		
2N2508	235	525	125	100	3	T0-94		
2N2573	25	25	125	20	1	T0-41		
2N2574	25	50	125	20	1	T0-41		
2N2575	25	100	125	20	1	T0-41		
2N2576	25	200	125	20	1	T0-41		
2N2577	25	300	125	20	1	T0-41		
2N2578	25	400	125	20	1	T0-41		
2N2579	25	500	125	20	1	T0-41		
2N2619	7.4	600	125	10	1.3	7/16		
2N2653	3	400	105	20	3	7/16		
2N2679	0.35	30	150	0.01	0.6	T0-18		
2N2680	0.35	60	150	0.01	0.6	T0-18		
2N2681	0.35	100	150	0.01	0.6	T0-18		
2N2682	0.35	200	150	0.01	0.6	T0-18		
2N2683	0.28	30	125	0.01	0.65	T0-18		
2N2684	0.28	60	125	0.01	0.65	T0-18		
2N2685	0.28	100	125	0.01	0.65	T0-18		
2N2686	0.28	200	125	0.01	0.65	T0-18		
2N2687	0.28	30	125	0.04	0.75	T0-18		
2N2688	0.28	60	125	0.04	0.75	T0-18		
2N2689	0.28	100	125	0.04	0.75	T0-18		
2N2690	0.28	200	125	0.04	0.75	T0-18		
2N2888	25	200	125	12	15	1.5	9/16	
2N2889	25	500	125	12	15	1.5	9/16	
2N3001	0.35	30	150	0.005	0.55	T0-18		
2N3002	0.35	60	150	0.005	0.55	T0-18		
2N3003	0.35	100	150	0.005	0.55	T0-18		
2N3004	0.35	200	150	0.005	0.55	T0-18		

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
Maximum								
Typical								
2N3005	0.35	30	150		0.09	0.6	T0-18	
2N3006	0.35	60	150		0.09	0.6	T0-18	
2N3007	0.35	100	150		0.09	0.6	T0-18	
2N3008	0.35	200	150		0.09	0.6	T0-18	
2N3027	0.5	30	150	0.7	0.05	0.55	T0-18	
2N3028	0.5	60	150	0.7	0.05	0.55	T0-18	
2N3029	0.5	100	150	0.7	0.05	0.55	T0-18	
2N3030	0.5	30	150	0.7	0.008	0.52	T0-18	
2N3031	0.5	60	150	0.7	0.008	0.52	T0-18	
2N3032	0.5	100	150	0.7	0.008	0.52	T0-18	
2N3091	110	600	125		70	2	1-1/16	
2N3092	110	700	125		70	2	1-1/16	
2N3093	110	800	125		70	2	1-1/16	
2N3094	110	900	125		70	2	1-1/16	
2N3095	110	1000	125		70	2	1-1/16	
2N3096	110	1100	125		70	2	1-1/16	
2N3097	110	1200	125		70	2	1-1/16	
2N3098	110	1300	125		70	2	1-1/16	
2N3099	110	600	125		70	2	1-1/16	
2N3100	110	700	125		70	2	1-1/16	
2N3101	110	800	125		70	2	1-1/16	
2N3102	110	900	125		70	2	1-1/16	
2N3103	110	1000	125		70	2	1-1/16	
2N3104	110	1100	125		70	2	1-1/16	
2N3105	110	1200	125		70	2	1-1/16	
2N3106	110	1300	125		70	2	1-1/16	
2N3228	5	200	100		8	1.2	(Spec)	
2N3254	0.25	15			0.2	0.75	T0-46	
2N3255	0.25	30			0.2	0.75	T0-46	
2N3256	0.25	60			0.2	0.75	T0-46	
2N3257	0.25	15			0.2	0.75	T0-46	
2N3258	0.25	30			0.2	0.75	T0-46	
2N3259	0.25	60			0.2	0.75	T0-46	
2N3269	8	100	150	22	0.1	0.6	7/16	
2N3270	8	200	150	22	0.1	0.6	7/16	
2N3271	8	300	150	22	0.1	0.6	7/16	
2N3272	8	400	150	22	0.1	0.6	7/16	
2N3273	2.2	100	150	22	0.1	0.6	7/16	
2N3274	2.2	200	150	22	0.1	0.6	7/16	
2N3275	2.2	300	150	22	0.1	0.6	7/16	
2N3276	2.2	400	150	22	0.1	0.6	7/16	
2N3353	400	50	125		400	4	(Spec)	
2N3354	400	100	125		400	4	(Spec)	
2N3355	400	200	125		400	4	(Spec)	
2N3356	400	300	125		400	4	(Spec)	
2N3357	400	400	125		400	4	(Spec)	
2N3358	400	500	125		400	4	(Spec)	
2N3359	400	600	125		400	4	(Spec)	
2N3360	400	700	125		400	4	(Spec)	
2N3361	400	800	125		400	4	(Spec)	
2N3362	400	900	125		400	4	(Spec)	
2N3363	400	1000	125		400	4	(Spec)	
2N3364	400	1200	125				1-1/2	
2N3525	5	400	100		8	1.2	T0-66	
2N3528	2	200	100		8	1.2	T0-8	
2N3529	2	400	100		8	1.2	T0-8	
2N3530	400	50	125		300	4	Spec	
2N3531	400	100	125		300	4	Spec	
2N3532	400	200	125		300	4	Spec	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2N3533	400	300	125		300	4	Spec	
2N3534	400	400	125		300	4	Spec	
2N3535	400	500	125		300	4	Spec	
2N3536	400	600	125		300	4	Spec	
2N3537	400	700	125		300	4	Spec	
2N3538	400	800	125		300	4	Spec	
2N3539	400	900	125		300	4	Spec	
2N3540	400	1000	125		300	4	Spec	
2N3541	400	1200	125				Spec	
2N3555	1.6	30	150		0.005	0.55	T0-5	
2N3556	1.6	60	150		0.005	0.55	T0-5	
2N3557	1.6	100	150		0.005	0.55	T0-5	
2N3558	1.6	200	150		0.005	0.55	T0-5	
2N3559	1.6	30	150		0.09	0.6	T0-5	
2N3560	1.6	60	150		0.09	0.6	T0-5	
2N3561	1.6	100	150		0.09	0.6	T0-5	
2N3562	1.6	200	150		0.09	0.6	T0-5	
2N3649	35	50	120	15	80	1.5	T0-48	
2N3650	35	100	120	15	80	1.5	T0-48	
2N3651	35	200	120	15	80	1.5	T0-48	
2N3652	35	300	120	15	80	1.5	T0-48	
2N3653	35	400	120	15	80	1.5	T0-48	
2N3654	35	50	120	10	80	1.5	T0-48	
2N3655	35	100	120	10	80	1.5	T0-48	
2N3656	35	200	120	10	80	1.5	T0-48	
2N3657	35	300	120	10	80	1.5	T0-48	
2N3658	35	400	120	10	80	1.5	T0-48	
2N3668	12.5	100	100		25	1.5	T0-3	
2N3669	12.5	200	100		25	1.5	T0-3	
2N3670	12.5	400	100		25	1.5	T0-3	
2N3870	35	100	100	20	25	1.1	1/2 PF	
2N3871	35	200	100	20	25	1.1	1/2 PF	
2N3872	35	400	100	20	25	1.1	1/2 PF	
2N3873	35	600	100	20	25	1.1	1/2 PF	
2N3884	275	50	125		300	4	1-1/4	
2N3885	275	100	125		300	4	1-1/4	
2N3886	275	200	125		300	4	1-1/4	
2N3887	275	300	125		300	4	1-1/4	
2N3888	275	400	125		300	4	1-1/4	
2N3889	275	500	125		300	4	1-1/4	
2N3890	275	600	125		300	4	1-1/4	
2N3891	275	700	125		300	4	1-1/4	
2N3892	275	800	125		300	4	1-1/4	
2N3893	275	900	125		300	4	1-1/4	
2N3894	275	1000	125		300	4	1-1/4	
2N3895	275	1200	125				1-1/16	
2N3896	35	100	100	20	25	1.1	9/16	
2N3897	35	200	100	20	25	1.1	9/16	
2N3898	35	400	100	20	25	1.1	9/16	
2N3899	35	600	100	20	25	1.1	9/16	
2N3936	7	100	125	6	60	3	T0-64	
2N3937	7	200	125	6	60	3	T0-64	
2N3938	7	300	125	6	60	3	T0-64	
2N3939	7	400	125	6	60	3	T0-64	
2N3940	7	500	125	6	60	3	T0-64	
2N4096	0.2	50	125	15	0.2	0.8	T0-46	
2N4097	0.2	100	125	15	0.2	0.8	T0-46	
2N4098	0.2	200v	125	15	0.2	0.8	T0-46	
2N4101	5	600	100		15	2	T0-66	

SCR's

2N4102-3RC60A

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2N4102	2	600	100		15	2	TO-8	
2N4103	12.5	600	100		40	2	TO-3	
2N4108		50	125				TO-18	
2N4109		100	125				TO-18	
2N4110		200v	125				TO-18	
2N4144	0.25	15			1		TO-52	
2N4145	0.25	30			1		TO-52	
2N4146	0.25	60			1		TO-52	
2N4147	0.25	100			1		TO-52	
2N4148	0.25	150			1		TO-52	
2N4149	0.25	200			1		TO-52	
2N4151	8	25	100	15	20	1.5	Spec	
2N4152	8	50	100	15	20	1.5	Spec	
2N4153	8	100	100	15	20	1.5	Spec	
2N4154	8	200	100	15	20	1.5	Spec	
2N4155	8	300	100	15	20	1.5	Spec	
2N4156	8	400	100	15	20	1.5	Spec	
2N4157	8	500	100	15	20	1.5	Spec	
2N4158	8	600	100	15	20	1.5	Spec	
2N4159	8	25	100	15	20	1.5	Spec	
2N4160	8	50	100	15	20	1.5	Spec	
2N4161	8	100	100	15	20	1.5	Spec	
2N4162	8	200	100	15	20	1.5	Spec	
2N4163	8	300	100	15	20	1.5	Spec	
2N4164	8	400	100	15	20	1.5	Spec	
2N4165	8	500	100	15	20	1.5	Spec	
2N4166	8	600	100	15	20	1.5	Spec	
2N4167	8	25	100	15	20	1.5	7/16	
2N4168	8	50	100	15	20	1.5	7/16	
2N4169	8	100	100	15	20	1.5	7/16	
2N4170	8	200	100	15	20	1.5	7/16	
2N4171	8	300	100	15	20	1.5	7/16	
2N4172	8	400	100	15	20	1.5	7/16	
2N4173	8	500	100	15	20	1.5	7/16	
2N4174	8	600	100	15	20	1.5	7/16	
2N4175	8	25	100	15	20	1.5	7/16	
2N4176	8	50	100	15	20	1.5	7/16	
2N4177	8	100	100	15	20	1.5	7/16	
2N4178	8	200	100	15	20	1.5	7/16	
2N4179	8	300	100	15	20	1.5	7/16	
2N4180	8	400	100	15	20	1.5	7/16	
2N4181	8	500	100	15	20	1.5	7/16	
2N4182	8	600	100	15	20	1.5	7/16	
2N4183	8	25	100	15	20	1.5	Spec	
2N4184	8	50	100	15	20	1.5	Spec	
2N4185	8	100	100	15	20	1.5	Spec	
2N4186	8	200	100	15	20	1.5	Spec	
2N4187	8	300	100	15	20	1.5	Spec	
2N4188	8	400	100	15	20	1.5	Spec	
2N4189	8	500	100	15	20	1.5	Spec	
2N4190	8	600	100	15	20	1.5	Spec	
2N4191	8	25	100	15	20	1.5	Spec	
2N4192	8	50	100	15	20	1.5	Spec	
2N4193	8	100	100	15	20	1.5	Spec	
2N4194	8	200	100	15	20	1.5	Spec	
2N4195	8	300	100	15	20	1.5	Spec	
2N4196	8	400	100	15	20	1.5	Spec	
2N4197	8	500	100	15	20	1.5	Spec	
2N4198	8	600	100	15	20	1.5	Spec	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2N4199	2	300	105		50	1.5	7/16	
2N4200	2	400	105		50	1.5	7/16	
2N4201	2	500	105		50	1.5	7/16	
2N4202	2	600	105		50	1.5	7/16	
2N4203	2	700	105		50	1.5	7/16	
2N4204	2	800	105		50	1.5	7/16	
2N4212	1.6	25	125		0.1	1.5	TO-5	
2N4213	1.6	50	125		0.1	1.5	TO-5	
2N4214	1.6	100	125		0.1	1.5	TO-5	
2N4215	1.6	150	125		0.1	1.5	TO-5	
2N4216	1.6	200	125		0.1	1.5	TO-5	
2N4217	1.6	250	125		0.1	1.5	TO-5	
2N4218	1.6	300	125		0.1	1.5	TO-5	
2N4219	1.6	400	125		0.1	1.5	TO-5	
2N4316	9.2	100	150		15	1.2	TO-66	
2N4317	9.2	200	150		15	1.2	TO-66	
2N4318	9.2	300	150		15	1.2	TO-66	
2N4319	9.2	400	150		15	1.2	TO-66	
2N4320	0.05	30	125		0.5	1	TO-18	
2N4321	0.05	60	125		0.5	1	TO-18	
2N4322	0.05	100	125		0.5	1	TO-18	
2N4323	0.05	150	125		0.5	1	TO-18	
2N4324	0.05	200	125		0.5	1	TO-18	
2N4325	0.05	250	125		0.5	1	TO-18	
2N4326	0.05	30	125		0.5	1	TO-18	
2N4327	0.05	60	125		0.5	1	TO-18	
2N4328	0.05	100	125		0.5	1	TO-18	
2N4329	0.05	150	125		0.5	1	TO-18	
2N4330	0.05	200	125		0.5	1	TO-18	
2N4331	0.05	250	125		0.5	1	TO-18	
2N4332	0.05	30	125		0.5	1	TO-18	
2N4333	0.05	60	125		0.5	1	TO-18	
2N4334	0.05	100	125		0.5	1	TO-18	
2N4335	0.05	150	125		0.5	1	TO-18	
2N4336	0.05	200	125		0.5	1	TO-18	
2N4337	0.05	250	125		0.5	1	TO-18	
2N4361	110	100					1-1/16	
2N4362	110	200					1-1/16	
2N4363	110	400					1-1/16	
2N4364	110	600					1-1/16	
2N4365	110	800					1-1/16	
2N4366	110	1000					1-1/16	
2N4367	110	1200					1-1/16	
2N4368	110	1400					1-1/16	
2N4371	110	100					1-1/16	
2N4372	110	200					1-1/16	
2N4373	110	400					1-1/16	
2N4374	110	600					1-1/16	
2N4375	110	800					1-1/16	
2N4376	110	1000					1-1/16	
2N4377	110	1200					1-1/16	
2N4378	110	1400					1-1/16	
2N4441	8	50	100	15	10	0.7	Spec	
2N4442	8	200	100	15	10	0.7	Spec	
2N4443	8	400	100	15	10	0.7	Spec	
2N4444	8	600	100	15	10	0.7	Spec	
2N5060	0.8	30	125		0.2		Spec	
2N5061	0.8	60	125		0.2		Spec	
2N5062	0.8	100	125		0.2		Spec	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2N5063	0.8	150	125		0.2		Spec	
2N5164	20	50	100	20	40	1.5	5/8PF	
2N5165	20	200	100	20	40	1.5	5/8PF	
2N5166	20	400	100	20	40	1.5	5/8PF	
2N5167	20	600	100	20	40	1.5	5/8PF	
2N5168	20	50	100	20	40	1.5	11/16	
2N5169	20	200	100	20	40	1.5	11/16	
2N5170	20	400	100	20	40	1.5	11/16	
2N5171	20	600	100	20	40	1.5	11/16	
2N5257	200	400	105		500	2.5	TO-93	
2N5258	200	600	105		500	2.5	TO-93	
2N5259	200	800	105		500	2.5	TO-93	
2N5260	200	1000	105		500	2.5	TO-93	
2N5273	25	200			150		TO-48	
2N5274	25	400			150		TO-48	
2N5275	25	600			150		TO-48	
3A3030	0.8	30	150		3	0.8	TO-9	SSP
3A3030A	0.8	30	150		3	0.8	TO-9	SSP
3A3060	0.8	60	150		3	0.8	TO-9	SSP
3A3060A	0.8	60	150		3	0.8	TO-9	SSP
3A3100	0.8	100	150		3	0.8	TO-9	SSP
3A3100A	0.8	100	150		3	0.8	TO-9	SSP
3A3150	0.8	150	150		3	0.8	TO-9	SSP
3A3150A	0.8	150	150		3	0.8	TO-9	SSP
3A3200	0.8	200	150		3	0.8	TO-9	SSP
3A3200A	0.8	200	150		3	0.8	TO-9	SSP
3B30S	1	30	150	1	0.2	1	3/8SM	SSP
3B60S	1	60	150	1	0.2	1	3/8SM	SSP
3B100S	1	100	150	1	0.2	1	3/8SM	SSP
3B150S	1	150	150	1	0.2	1	3/8SM	SSP
3B200S	1	200	150	1	0.2	1	3/8SM	SSP
3B3100	3	100	150		0.05	0.6	3/8 SM	SSP
3B3200	3	200	150		0.05	0.6	3/8 SM	SSP
3C1030, A	0.1	30			5	1.5	TO-9	SSP
3C1060, A	0.1	60			5	1.5	TO-9	SSP
3C1100, A	0.1	100			5	1.5	TO-9	SSP
3C1200, A	0.1	200			5	1.5	TO-9	SSP
3C6030	0.5	30	125		10	2	TO-9	SSP
3C6060	0.5	60	125		10	2	TO-9	SSP
3C6100	0.5	100	125		10	2	TO-9	SSP
3C6200	0.5	200	125		10	2	TO-19	SSP
3F15	0.35	15	150	1	0.1	0.8	TO-18	SSP
3F30	0.35	30	150	1	0.1	0.8	TO-18	SSP
3F60	0.35	60	150	1	0.1	0.8	TO-18	SSP
3F100	0.35	100	150	1	0.1	0.8	TO-18	SSP
3F150	0.35	150	150	1	0.1	0.8	TO-18	SSP
3F200	0.35	150	150		0.1	0.8	TO-18	SSP
3L1030	0.5	30	200	30	0.0005	0.48	TO-18	SSP
3L1060	0.5	60	200	30	0.0005	0.48	TO-18	SSP
3L1100	0.5	100	200	30	0.0005	0.48	TO-18	SSP
3L2030	0.5	30	150	10	0.0005	0.48	TO-18	SSP
3L2060	0.5	60	150	10	0.0005	0.48	TO-18	SSP
3L2100	0.5	100	150	10	0.0005	0.48	TO-18	SSP
3RC10A	4.7	100	125	30	15	3	TO-64	IRec
3RC20A	4.7	200	125	30	15	3	TO-64	IRec
3RC30A	4.7	300	125	30	15	3	TO-64	IRec
3RC40A	4.7	400	125	30	15	3	TO-64	IRec
3RC50A	4.7	500	125	30	15	3	TO-64	IRec
3RC60A	4.7	600	125	30	15	3	TO-64	IRec

SCR's

5A30-151REA60

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
	Typical				Typical			
5A30	0.35	30	150	10	0.0005	0.48	Spec	SSP
5A60	0.35	60	150	10	0.0005	0.48	Spec	SSP
5A100	0.35	100	150	10	0.0005	0.48	Spec	SSP
5RC10A	7.4	100	125	30	15	1.35	T0-64	IRec
5RC20A	7.4	200	125	30	15	1.35	T0-64	IRec
5RC30A	7.4	300	125	30	15	1.35	T0-64	IRec
5RC40A	7.4	400	125	30	15	1.35	T0-64	IRec
5RC50A	7.4	500	125	30	15	1.35	T0-64	IRec
5RC60A	7.4	600	125	30	15	1.35	T0-64	IRec
10RC60A	25	600	125	30	90	2.5	T0-48	IRec
10RC80A	25	800	125	30	90	2.5	T0-48	IRec
10RC100A	25	1000	125	30	90	2.5	T0-48	IRec
10RC120A	25	1200	125	30	90	2.5	T0-48	IRec
10RCF10A	16	100	125		75	2.5	1/4	IRec
10RCF20A	16	200	125		75	2.5	1/4	IRec
10RCF30A	16	300	125		75	2.5	1/4	IRec
10RCF40A	16	400	125		75	2.5	1/4	IRec
10RCF50A	16	500	125		75	2.5	1/4	IRec
10RCF60A	16	600	125		75	2.5	1/4	IRec
16RC10A	35	100	125	75	40	2	T0-48	IRec
16RC20A	35	200	125	75	40	2	T0-48	IRec
16RC30A	35	300	125	75	40	2	T0-48	IRec
16RC40A	35	400	125	75	40	2	T0-48	IRec
16RC50A	35	500	125	75	40	2	T0-48	IRec
16RC60A	35	600	125	75	40	2	T0-48	IRec
16RC80A	35	800	125	75	40	2	T0-48	IRec
16RC100A	35	1000	125	75	40	2	T0-48	IRec
18RC10	28	100	125	15	40	2	1/4	IRec
18RC20	28	200	125	15	40	2	1/4	IRec
18RC30	28	300	125	15	40	2	1/4	IRec
18RC40	28	400	125	15	40	2	1/4	IRec
18RC50	28	500	125	15	40	2	1/4	IRec
18RC60	28	600	125	15	40	2	1/4	IRec
18RC80	28	800	125	15	40	2	1/4	IRec
18RC100	28	1000	125	15	40	2	1/4	IRec
22RC10	35	100	150	24	15	1.5	9/16	IRec
22RC20	35	200	150	24	15	1.5	9/16	IRec
22RC30	35	300	150	24	15	1.5	9/16	IRec
22RC40	35	400	150	24	15	1.5	9/16	IRec
22RC50	35	500	150	24	15	1.5	9/16	IRec
22RC60	35	600	150	24	15	1.5	9/16	IRec
36/37RA50	55	500	125	40	150	2.5	1-1/16	IRec
36/37RA60	55	600	125	40	150	2.5	1-1/16	IRec
36/37RA80	55	800	125	40	150	2.5	1-1/16	IRec
36/37RA100	55	1000	125	40	150	2.5	1-1/16	IRec
36/37RA110	55	1100	125	40	150	2.5	1-1/16	IRec
36/37RA120	55	1200	125	40	150	2.5	1-1/16	IRec
36/37RA130	55	1300	125	40	150	2.5	1-1/16	IRec
36/37RC10A	55	100	125	30	70	2.5	1-1/16	IRec
36/37RC20A	55	200	125	30	70	2.5	1-1/16	IRec
36/37RC30A	55	300	125	30	70	2.5	1-1/16	IRec
36/37RC40A	55	400	125	30	70	2.5	1-1/16	IRec
36/37RC50A	55	500	125	30	70	2.5	1-1/16	IRec
36/37RC60A	55	600	125	30	70	2.5	1-1/16	IRec
36/37RC80A	55	800	125	30	70	2.5	1-1/16	IRec
36/37RE60	55	600	125	40	150	2.5	1-1/16	IRec
36/37RE80	55	800	125	40	150	2.5	1-1/16	IRec
36/37RE100	55	1000	125	40	150	2.5	1-1/16	IRec
36/37RE110	55	1100	125	40	150	2.5	1-1/16	IRec
36/37RE120	55	1200	125	40	150	2.5	1-1/16	IRec
36/37RE130	55	1300	125	40	150	2.5	1-1/16	IRec
36/37REH60	55	600	150	40	150	2.5	1-1/16	IRec
36/37REH80	55	800	150	40	150	2.5	1-1/16	IRec
36/37REH100	55	1000	150	40	150	2.5	1-1/16	IRec
36/37REH110	55	1100	150	40	150	2.5	1-1/16	IRec
36/37REH120	55	1200	150	40	150	2.5	1-1/16	IRec
36/37REH130	55	1300	150	40	150	2.5	1-1/16	IRec
40RCS5	63	50	105		110	3	22/32	IRec
40RCS10	63	100	105		110	3	22/32	IRec
40RCS20	63	200	105		110	3	22/32	IRec
40RCS30	63	300	105		110	3	22/32	IRec
40RCS40	63	400	105		110	3	22/32	IRec
40RCS50	63	500	105		110	3	22/32	IRec
40RCS60	63	600	105		110	3	22/32	IRec
51/52RCG10	80	100	125	20	150	2.5	1-1/16	IRec
51/52RCG20	80	200	125	20	150	2.5	1-1/16	IRec
51/52RCG30	80	300	125	20	150	2.5	1-1/16	IRec
51/52RCG40	80	400	125	20	150	2.5	1-1/16	IRec
51/52RCG50	80	500	125	20	150	2.5	1-1/16	IRec
51/52RCG60	80	600	125	20	150	2.5	1-1/16	IRec
70C35	70	375			70	1.5	T0-49	Syn
70C45	70	475			70	1.5	T0-49	Syn
71/71RA50	110	500	125	50	25	1	1-1/16	IRec
71/72RA60	110	600	125	50	25	1	1-1/16	IRec
71/72RA80	110	800	125	50	25	1	1-1/16	IRec
71/72RA100	110	1000	125	50	25	1	1-1/16	IRec
71/72RA110	110	1100	125	50	25	1	1-1/16	IRec
71/72RA120	110	1200	125	50	25	1	1-1/16	IRec
71/72RA130	110	1300	125	50	25	1	1-1/16	IRec
71/72RB50	110	500	125	30	25	1	1-1/16	IRec
71/72RB60	110	600	125	30	25	1	1-1/16	IRec
71/72RB80	110	800	125	30	25	1	1-1/16	IRec
71/72RB100	110	1000	125	30	25	1	1-1/16	IRec
71/72RB110	110	1100	125	30	25	1	1-1/16	IRec
71/72RB120	110	1200	125	30	25	1	1-1/16	IRec
71/72RB130	110	1300	125	30	25	1	1-1/16	IRec
71/72RC10A	110	100	125	40	70	2.5	1-1/16	IRec
71/72RC20A	110	200	125	40	70	2.5	1-1/16	IRec
71/72RC30A	110	300	125	40	70	2.5	1-1/16	IRec
71/72RC40A	110	400	125	40	70	2.5	1-1/16	IRec
71/72RC50A	110	500	125	30	70	2.5	1/2	IRec
71/72RC60A	110	600	150	40	70	2.0	1/2	IRec
71/72RC80A	110	800	150	40	70	2	1/2	IRec
71/72RCG10	110	100	125	15	90	2.5	1-1/16	IRec
71/72RCG20	110	200	125	15	90	2.5	1-1/16	IRec
71/72RCG30	110	300	125	15	90	2.5	1-1/16	IRec
71/72RCG40	110	400	125	15	90	2.5	1-1/16	IRec
71/72RCG50	110	500	125	15	90	2.5	1-1/16	IRec
71/72RCG60	110	600	125	15	90	2.5	1-1/16	IRec
71/72REA60	110	600	125	50	25	1	1-1/16	IRec
71/72REA80	110	800	125	50	25	1	1-1/16	IRec
71/72REA100	110	1000	125	50	25	1	1-1/16	IRec
71/72REA110	110	1100	125	50	25	1	1-1/16	IRec
71/72REA120	110	1200	125	50	25	1	1-1/16	IRec
71/72REA130	110	1300	125	50	25	1	1-1/16	IRec
71/72REB60	110	600	125	30	25	1	1-1/16	IRec
71/72REB80	110	800	125	30	25	1	1-1/16	IRec
71/72REB100	110	1000	125	30	25	1	1-1/16	IRec
71/72REB110	110	1100	125	30	25	1	1-1/16	IRec
71/72REB120	110	1200	125	30	25	1	1-1/16	IRec
71/72REB130	110	1300	125	30	25	1	1-1/16	IRec
71/72REH60	110	600	150	60	25	1	1-1/16	IRec
71/72REH80	110	800	150	60	25	1	1-1/16	IRec
71/72REH100	110	1000	150	60	25	1	1-1/16	IRec
71/72REH110	110	1100	150	60	25	1	1-1/16	IRec
71/72REH120	110	1200	150	60	25	1	1-1/16	IRec
71/72REH130	110	1300	150	60	25	1	1-1/16	IRec

SCR's

151REA80-229H

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
Typical								
151REA80	235	800	125	60	25	1	1-1/2	IRec
151REA100	235	1000	125	60	25	1	1-1/2	IRec
151REA110	235	1100	125	60	25	1	1-1/2	IRec
151REA120	235	1200	125	60	25	1	1-1/2	IRec
151REA130	235	1300	125	60	25	1	1-1/2	IRec
151REB60	235	600	125	40	150	2	T0-93	IRec
151REB80	235	800	125	40	150	2	T0-93	IRec
151REB100	235	1000	125	40	150	2	T0-93	IRec
151REB110	235	1100	125	40	150	2	T0-93	IRec
151REB120	235	1200	125	40	150	2	T0-93	IRec
151REB130	235	1300	125	40	150	2	T0-93	IRec
250RA50	400	500	125	60	40	1.2	1-11/16	IRec
250RA60	400	600	125	60	40	1.2	1-11/16	IRec
250RA80	400	800	125	60	40	1.2	1-11/16	IRec
250RA100	400	1000	125	60	40	1.2	1-11/16	IRec
250RA110	400	1100	125	60	40	1.2	1-11/16	IRec
250RA120	400	1200	125	60	40	1.2	1-11/16	IRec
300RA50	470	500	125	100	40	1.2	1-11/16	IRec
300RA60	470	600	125	100	40	1.2	1-11/16	IRec
300RA80	470	800	125	100	40	1.2	1-11/16	IRec
300RA100	470	1000	125	100	40	1.2	1-11/16	IRec
300RA110	470	1100	125	100	40	1.2	1-11/16	IRec
300RA120	470	1200	125	100	40	1.2	1-11/16	IRec
300RB50	470	500	125	40	40	1.2	1-11/16	IRec
300RB60	470	600	125	40	40	1.2	1-11/16	IRec
300RB80	470	800	125	40	40	1.2	1-11/16	IRec
300RB100	470	1000	125	40	40	1.2	1-11/16	IRec
300RB110	470	1100	125	40	40	1.2	1-11/16	IRec
300RB120	470	1200	125	40	40	1.2	1-11/16	IRec
350RA50	550	500	125	100	40	1.2	1-11/16	IRec
350RA60	550	600	125	100	40	1.2	1-11/16	IRec
350RA80	550	800	125	100	40	1.2	1-11/16	IRec
350RA100	550	1000	125	100	40	1.2	1-11/16	IRec
350RA110	550	1100	125	100	40	1.2	1-11/16	IRec
350RA120	550	1200	125	100	40	1.2	1-11/16	IRec
201V	25	900	125		40	2.6	9/16	Wst
201Z	25	1000	125		40	2.6	9/16	Wst
201ZB	25	1100					7/16	Wst
201ZD	25	1200					7/16	Wst
202M	16	600	100		80	3.5	9/16	Wst
202P	16	700	100		80	3.5	9/16	Wst
202S	16	800	100		80	3.5	9/16	Wst
202V	16	900	100		80	3.5	9/16	Wst
202Z	16	1000	100		80	3.5	9/16	Wst
202ZB	16	1100					7/16	Wst
202ZD	16	1200					7/16	Wst
203M	16	600	100		80	3.5	9/16	Wst
203P	16	700	100		80	3.5	9/16	Wst
203S	16	800	100		80	3.5	9/16	Wst
203V	16	900	100		80	3.5	9/16	Wst
203Z	16	1000	100		80	3.5	9/16	Wst
209/211A	55	60	125		70	3	1-1/16	Wst
209/211B	55	120	125		70	3	1-1/16	Wst
209/211C	55	180	125		70	3	1-1/16	Wst
209/211D	55	240	125		70	3	1-1/16	Wst
209/211F	55	360	125		70	3	1-1/16	Wst
209/211H	55	480	125		70	3	1-1/16	Wst
209/211K	55	500	125		70	3	1-1/16	Wst
209/211M	55	600	125		70	3	1-1/16	Wst
209/211P	55	700	125					
209/211S	55	800	125					
209/211V	55	900	125					
209/211Z	55	1000	125					
209/211ZB	55	1100						
209/211ZD	55	1200	125					
209/211ZF	55	1300	125					
209/211ZH	55	1400	125					
209/211ZK	55	1500	125					
218A	200	50						
218B	200	100						
218C	200	150						
218D	200	200						
218F	200	300						
218H	200	400						
218K	200	500						
218M	200	600						
218P	200	700						
218S	200	800						
218V	200	900						
218Z	200	1000						
218ZB	200	1100						
218ZD	200	1200						
218ZF	200	1300						
218ZH	200	1400						
218ZK	200	1500						
219A	55	50						
219B	55	100						
219C	55	150						
219D	55	200						
219F	55	300						
219H	55	400						
219K	55	500						
219M	55	600						
219P	55	700						
219S	55	800						
219V	55	900						
219Z	55	1000						
219ZB	55	1100						
219ZD	55	1200						
219ZF	55	1300						
219ZH	55	1400						
219ZK	55	1500						
220C	275	150						
220ZB	275	1100						
220ZF	275	1300						
220ZH	275	1400						
220ZK	275	1500						
221C	400	150						
221ZB	400	1100						
223A	470	50						
223B	470	100						
223C	470	150						
223D	470	200						
223F	470	300						
223H	470	400						
223K	470	500						
223M	470	600						
223P	470	700						
223S	470	800						
223V	470	900						
223Z	470	1000						
223ZB	470	1100						
223ZD	470	1200						
224A	400	50	125		400*	4	(Spec)	Wst
224B	400	100	125		400*	4	(Spec)	Wst
224C	400	150	125		400*	4	Spec	Wst
224D	400	200	125		400*	4	(Spec)	Wst
224F	400	300	125		400*	4	(Spec)	Wst
224H	400	400	125		400*	4	(Spec)	Wst
224K	400	500	125		400*	4	(Spec)	Wst
224M	400	600	125		400*	4	(Spec)	Wst
224P	400	700	125		400*	4	(Spec)	Wst
224S	400	800	125		400*	4	(Spec)	Wst
224V	400	900	125		400*	4	(Spec)	Wst
224Z	400	1000	125		400*	4	(Spec)	Wst
224ZB	400	1100					(Spec)	Wst
224ZD	400	1200	125		400*	4	(Spec)	Wst
227A	180	50					1-1/2PF	Wst
227B	180	100					1-1/2PF	Wst
227C	180	150					1-1/2PF	Wst
227D	180	200					1-1/2PF	Wst
227F	180	300					1-1/2PF	Wst
227H	180	400					1-1/2PF	Wst
227K	180	500					1-1/2PF	Wst
227M	180	600					1-1/2PF	Wst
227P	180	700					1-1/2PF	Wst
227S	180	800					1-1/2PF	Wst
227V	180	900					1-1/2PF	Wst
227Z	180	1000					1-1/2PF	Wst
227ZB	180	1100					1-1/2PF	Wst
227ZD	180	1200					1-1/2PF	Wst
227ZF	180</							

SCR's

229K-AD100

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
229K	400	500					1-1/2PF	Wst
229M	400	600					1-1/2PF	Wst
229P	400	700					1-1/2PF	Wst
229S	400	800					1-1/2PF	Wst
229V	400	900					1-1/2PF	Wst
229Z	400	1000					1-1/2PF	Wst
229ZB	400	1100					1-1/2PF	Wst
229ZD	400	1200					1-1/2PF	Wst
229ZF	400	1300					1-1/2PF	Wst
229ZH	400	1400					1-1/2PF	Wst
229ZK	400	1500					1-1/2PF	Wst
250A	125	50					1-1/16	Wst
250B	125	100					1-1/16	Wst
250C	125	150					1-1/16	Wst
250D	125	200					1-1/16	Wst
250F	125	300					1-1/16	Wst
250H	125	400					1-1/16	Wst
250K	125	500					1-1/16	Wst
250M	125	600					1-1/16	Wst
250P	125	700					1-1/16	Wst
250S	125	800					1-1/16	Wst
250V	125	900					1-1/16	Wst
250ZB	125	1000					1-1/16	Wst
250ZD	125	1100					1-1/16	Wst
250ZF	125	1200					1-1/16	Wst
250ZH	125	1300					1-1/16	Wst
250ZK	125	1400					1-1/16	Wst
251A	63	50					1-1/16	Wst
251B	63	100					1-1/16	Wst
251C	63	150					1-1/16	Wst
251D	63	200					1-1/16	Wst
251F	63	300					1-1/16	Wst
251H	63	400					1-1/16	Wst
251K	63	500					1-1/16	Wst
251M	63	600					1-1/16	Wst
251P	63	700					1-1/16	Wst
251S	63	800					1-1/16	Wst
251V	63	900					1-1/16	Wst
251ZB	63	1000					1-1/16	Wst
251ZD	63	1100					1-1/16	Wst
251ZF	63	1200					1-1/16	Wst
251ZH	63	1300					1-1/16	Wst
251ZK	63	1400					1-1/16	Wst
254A	110	50					(Spec)	Wst
254F	110	300					(Spec)	Wst
254K	110	500					1-1/16	Wst
254P	110	700					1-1/16	Wst
254V	110	900					1-1/16	Wst
254ZB	110	1100					1-1/16	Wst
254ZF	110	1300					1-1/16	Wst
809P	110	840	125		70	3	1-1/16	Wst
809S	110	960	125		70	3	1-1/16	Wst
809V	110	1080	125		70	3	1-1/16	Wst
809Z	110	1200	125		70	3	1-1/16	Wst
809ZB	110	1100	125	20	70	3	1-1/16	Wst
809ZD	110	1200	125	20	70	3	1-1/16	Wst
809ZF	110	1300	125	20	70	3	1-1/16	Wst
809ZH	110	1400	125	20	70	3	1-1/16	Wst
809ZK	110	1500	125	20	70	3	1-1/16	Wst

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
809U51	110	30	125		70	3	1-1/16	Wst
809ZB51	110	1100					1-1/16	Wst
809ZD51	110	1200	125	20	70	3	1-1/16	Wst
809ZF51	110	1300	125	20	70	3	1-1/16	Wst
809ZH51	110	1400	125	20	70	3	1-1/16	Wst
809ZK51	110	1500	125	20	70	3	1-1/16	Wst
2181A	200	50		20			1-1/16	Wst
2181B	200	100		20			1-1/16	Wst
2181D	200	200		20			1-1/16	Wst
2181F	200	300		20			1-1/16	Wst
2181H	200	400		20			1-1/16	Wst
2181K	200	500		20			1-1/16	Wst
2181M	200	600		20			1-1/16	Wst
2181S	200	800		20			1-1/16	Wst
2182A	200	50		30			1-1/4	Wst
2182B	200	100		30			1-1/4	Wst
2182D	200	200		30			1-1/4	Wst
2182F	200	300		30			1-1/4	Wst
2182H	200	400		30			1-1/4	Wst
2182K	200	500		30			1-1/4	Wst
2182M	200	600		30			1-1/4	Wst
2182S	200	800		30			1-1/4	Wst
2182V	200	900		30			1-1/4	Wst
2182Z	200	1000		30			1-1/4	Wst
2191A	55	50		15			1-1/16	Wst
2191B	55	100		15			1-1/16	Wst
2191D	55	200		15			1-1/16	Wst
2191F	55	300		15			1-1/16	Wst
2191H	55	400		15			1-1/16	Wst
2191K	55	500		15			1-1/16	Wst
2191M	55	600		15			1-1/16	Wst
2191S	55	800		15			1-1/16	Wst
2192A	55	50		20			1-1/16	Wst
2192B	55	100		20			1-1/16	Wst
2192D	55	200		20			1-1/16	Wst
2192F	55	300		20			1-1/16	Wst
2192H	55	400		20			1-1/16	Wst
2192K	55	500		20			1-1/16	Wst
2192M	55	600		20			1-1/16	Wst
2192S	55	800		20			1-1/16	Wst
2192V	55	900		20			1-1/16	Wst
2192Z	55	1000		20			1-1/16	Wst
2201A	275	50		25			1-1/16	Wst
2201B	275	100		25			1-1/16	Wst
2201D	275	200		25			1-1/16	Wst
2201F	275	300		25			1-1/16	Wst
2201H	275	400		25			1-1/16	Wst
2201K	275	500		25			1-1/16	Wst
2201M	275	600		25			1-1/16	Wst
2201S	275	800		25			1-1/16	Wst
2202A	275	50		40			1-1/4	Wst
2202B	275	100		40			1-1/4	Wst
2202D	275	200		40			1-1/4	Wst
2202F	275	300		40			1-1/4	Wst
2202H	275	400		40			1-1/4	Wst
2202K	275	500		40			1-1/4	Wst
2202M	275	600		40			1-1/4	Wst
2202S	275	800		40			1-1/4	Wst
2202V	275	900		40			1-1/4	Wst

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS amps	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
2202Z	275	1000		40			1-1/4	Wst
2231A	470	50		30			Spec	Wst
2231B	470	100		30			Spec	Wst
2231D	470	200		30			Spec	Wst
2231F	470	300		30			Spec	Wst
2231H	470	400		30			Spec	Wst
2231K	470	500		30			Spec	Wst
2231M	470	600		30			Spec	Wst
2231S	470	800		30			Spec	Wst
2232A	475	50		40			Spec	Wst
2232B	475	100		40			Spec	Wst
2232D	475	200		40			Spec	Wst
2232F	475	300		40			Spec	Wst
2232H	475	400		40			Spec	Wst
2232K	475	500		40			Spec	Wst
2232M	475	600		40			Spec	Wst
2232S	475	800		40			Spec	Wst
2232V	475	900		40			Spec	Wst
2232Z	475	1000		40			Spec	Wst
2541A	110	50		15			1-1/16	Wst
2541B	110	100		15			1-1/16	Wst
2541D	110	200		15			1-1/16	Wst
2541F	110	300		15			1-1/16	Wst
2541H	110	400		15			1-1/16	Wst
2541K	110	500		15			1-1/16	Wst
2541M	110	600		15			1-1/16	Wst
2541S	110	800		15			1-1/16	Wst
2542A	110	50		20			1-1/16	Wst
2542B	110	100		20			1-1/16	Wst
2542D	110	200		20			1-1/16	Wst
2542F	110	300		20			1-1/16	Wst
2542H	110	400		20			1-1/16	Wst
2542K	110	500		20			1-1/16	Wst
2542M	110	600		20			1-1/16	Wst
2542S	110	800		20			1-1/16	Wst
2542V	110	900		20			1-1/16	Wst
2542Z	110	1000		20			1-1/16	Wst
40216	900	600	125				TO-48	RCA
40504	5	200	100		15	2	Spec	RCA
40505	5	400	100		15	2	Spec	RCA
40506	5	600	100		15	2	Spec	RCA
40507	7	200	100		15	15	Spec	RCA
40508	7	400	100		2	2	Spec	RCA
40553	5	200	100		40	3.5	TO-66	RCA
40554	5	400	100		40	3.5	TO-66	RCA
40555	5	600	100		40	3.5	TO-66	RCA
AA100	0.5	60	150	20	0.0002	0.52	TO-18	SSP
AA101	0.5	100	150	20	0.0002	0.52	TO-18	SSP
AA102	0.5	200	150	20	0.0002	0.52	TO-18	SSP
AA104	0.5	400	150	20	0.0002	0.52	TO-18	SSP
AA107	0.5	60	150	20	0.002	0.52	TO-18	SSP
AA108	0.5	100	150	20	0.002	0.52	TO-18	SSP
AA109	0.5	200	150	20	0.002	0.52	TO-18	SSP
AA111	0.5	400	150	20	0.002	0.52	TO-18	SSP
AA114	0.5	60	150	20	0.0002	0.52	TO-18	SSP
AA115	0.5	100	150	20	0.0002	0.52	TO-18	SSP
AA116	0.5	200	150	20	0.0002	0.52	TO-18	SSP
AA118	0.5	400	150	20	0.002	0.52	TO-18	SSP
AD100	1.6	60	150	20	0.0002	0.52	TO-5	SSP

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Centralab's Little Giant zeners thrive in tight spots. Their performance and competitive pricing have opened new product miniaturization possibilities in entertainment, industrial and high reliability military and aerospace applications.

Our 400 mW regulator has a zener voltage breakdown of 6.8 through 200 volts; the 1 watt from 6.8 through 200 volts; and the 1.5 watt from 6.2 through 200 volts. So the Little Giants do a big job in cramped quarters. What else? They're tough. So tough that gruelling tests of acceleration, mechanical and thermal shock, vibration, lead and body strength, temperature, humidity, salt spray and altitude leave them unscathed. Centralab's Little Giant zeners.

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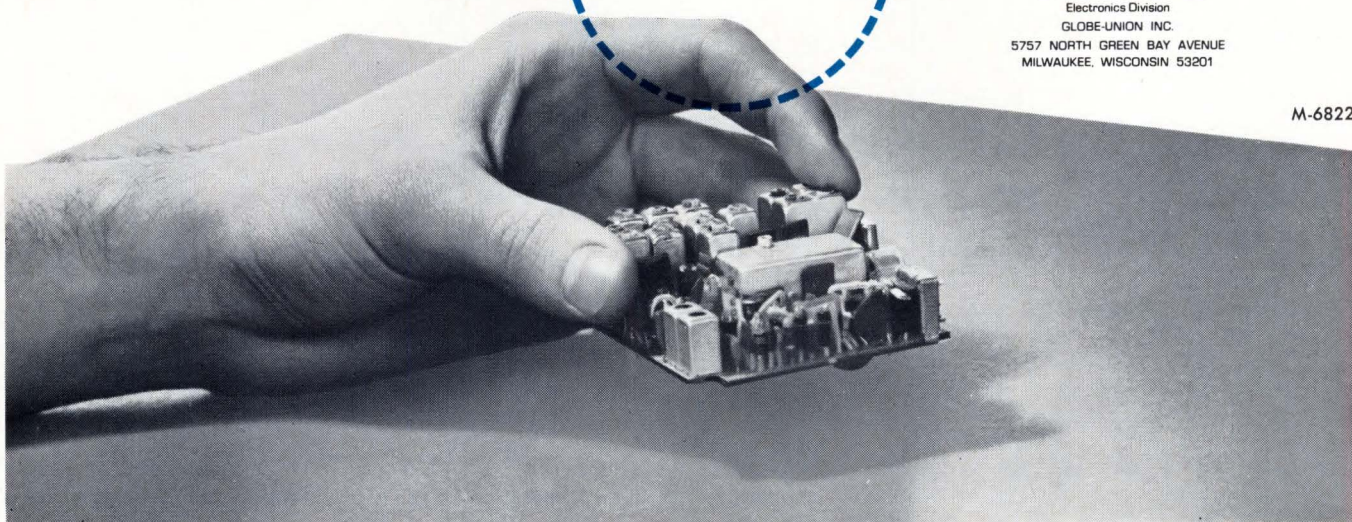


CENTRALAB

Electronics Division
GLOBE-UNION INC.

5757 NORTH GREEN BAY AVENUE
MILWAUKEE, WISCONSIN 53201

M-6822



Circle No. 75 on Reader Service Card for more information.

SCR's

AD101-C137M

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR				
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)								
									Maximum			
									Typical			
AD101	1.6	100	150	20	0.0002	0.52	T0-5	SSP				
AD102	1.6	200	150	20	0.0002	0.52	T0-5	SSP				
AD104	1.6	400	150	20	0.0002	0.52	T0-5	SSP				
AD107	1.6	60	150	20	0.0002	0.52	T0-5	SSP				
AD108	1.6	100	150	20	0.0002	0.52	T0-5	SSP				
AD109	1.6	200	150	20	0.0002	0.52	T0-5	SSP				
AD111	1.6	400	150	20	0.0002	0.52	T0-5	SSP				
AD114	1.6	60	150	20	0.0002	0.52	T0-5	SSP				
AD115	1.6	100	150	20	0.0002	0.52	T0-5	SSP				
AD116	1.6	200	150	20	0.0002	0.52	T0-5	SSP				
AD118	1.6	400	150	20	0.0002	0.52	T0-5	SSP				
B150	0.2	30		8	0.2	0.8	T0-46	SSP				
B151	0.2	60		8	0.2	0.8	T0-46	SSP				
B152	0.2	100		8	0.2	0.8	T0-46	SSP				
BA150	0.25	30		8	0.2	0.8	T0-18	SSP				
BA151	0.25	60		8	0.2	0.8	T0-18	SSP				
BA152	0.25	100		8	0.2	0.8	T0-18	SSP				
BD100	2	30		3	0.2	0.8	7/16	SSP				
BD101	2	60		3	0.2	0.8	7/16	SSP				
BD102	2	100		3	0.2	0.8	7/16	SSP				
BTX471000R	25	900	125	50	65	3.5	T0-48	Amp				
BTX471200R	25	1100	125	50	65	3.5	T0-48	Amp				
BTX471400R	25	1300	125	50	65	3.5	T0-48	Amp				
BTX481000R	25	900	125	50	65	3.5	T0-48	Amp				
BTX481200R	25	1100	125	50	65	3.5	T0-48	Amp				
BTX481400R	25	1300	125	50	65	3.5	T0-48	Amp				
BTX491000R	110	900	125	50	80	3	T0-94	Amp				
BTX491200R	110	1100	125	50	80	3	T0-94	Amp				
BTX491400R	110	1300	125	50	80	3	T0-94	Amp				
BTX501000R	110	900	125	50	80	3	T0-94	Amp				
BTX501200R	110	1100	125	50	80	3	T0-94	Amp				
BTX501400R	110	1300	125	50	80	3	T0-94	Amp				
C6U	1.6	25	125		1	0.8	T0-5	GE				
C6F	1.6	50	125		1	0.8	T0-5	GE				
C6A	1.6	100	125		1	0.8	T0-5	GE				
C6G	1.6	150	125		1	0.8	T0-5	GE				
C6B	1.6	200	125		1	0.8	T0-5	GE				
C12A	7.4	100	125	<12	10	1.3	7/16	GE				
C12B	7.4	200	125	<12	10	1.3	7/16	GE				
C12C	7.4	300	125	<12	10	1.3	7/16	GE				
C12F	7.4	50	125	<12	10	1.3	7/16	GE				
C12G	7.4	150	125	<12	10	1.3	7/16	GE				
C12H	7.4	250	125	<12	10	1.3	7/16	GE				
C12U	7.4	25	125	<12	10	1.3	7/16	GE				
C15A	7	100	105		25	2.5	7/16	GE				
C15B	7	200	105		25	2.5	7/16	GE				
C15C	7	300	105		25	2.5	7/16	GE				
C15D	7	400	105		25	2.5	7/16	GE				
C15E	8	500	105		25	2.5	7/16	GE				
C15F	7	50	105		25	2.5	7/16	GE				
C15G	7	150	105		25	2.5	7/16	GE				
C15M	7	600	105		25	2.5	7/16	GE				
C20A	7.4	100	100		4	0.8	9/16	GE				
C20B	7.4	200	100		4	0.8	9/16	GE				
C20C	7.4	300	100		4	0.8	9/16	GE				
C20D	7.4	400	100		4	0.8	9/16	GE				
C20F	7.4	50	100		4	0.8	9/16	GE				
C20U	7.4	25	100		4	0.8	9/16	GE				
C22A	7.4	100	100		4	0.8	1/2 PF	GE				
C22B	7.4	200	100		4	0.8	1/2 PF	GE				
C22C	7.4	300	100		4	0.8	1/2 PF	GE				
C22D	7.4	400	100		4	0.8	1/2 PF	GE				
C22F	7.4	50	100		4	0.8	1/2 PF	GE				
C22U	7.4	25	100		4	0.8	1/2 PF	GE				
C30A	25	100	100		4	0.8	9/16	GE				
C30B	25	200	100		4	0.8	9/16	GE				
C30C	25	300	100		4	0.8	9/16	GE				
C30D	25	400	100		4	0.8	9/16	GE				
C30F	25	50	100		4	0.8	9/16	GE				
C30U	25	25	100		4	0.8	9/16	GE				
C31A	25	100	100		9	2.5	9/16	GE				
C31B	25	200	100		9	2.5	9/16	GE				
C31C	25	300	100		9	2.5	9/16	GE				
C31D	25	400	100		9	2.5	9/16	GE				
C31F	25	50	100		9	2.5	9/16	GE				
C31U	25	25	100		9	2.5	9/16	GE				
C32A	25	100	100		4	0.8	1/2 PF	GE				
C32B	25	200	100		4	0.8	1/2 PF	GE				
C32C	25	300	100		4	0.8	1/2 PF	GE				
C32D	25	400	100		4	0.8	1/2 PF	GE				
C32F	25	50	100		4	0.8	1/2 PF	GE				
C32U	25	25	100		4	0.8	1/2 PF	GE				
C33A	25	100	100		9	2.5	1/2 PF	GE				
C33B	25	200	100		9	2.5	1/2 PF	GE				
C33C	25	300	100		9	2.5	1/2 PF	GE				
C33D	25	400	100		9	2.5	1/2 PF	GE				
C33F	25	50	100		9	2.5	1/2 PF	GE				
C33U	25	25	100		9	2.5	1/2 PF	GE				
C35A	35	100	125	75	40	3	T0-48	GE				
C35B	35	200	125	75	40	3	T0-48	GE				
C35C	35	300	125	75	40	3	T0-48	GE				
C35D	35	400	125	75	40	3	T0-48	GE				
C35E	35	500	125	75	40	3	T0-48	GE				
C35F	35	50	125	75	40	3	T0-48	GE				
C35G	35	150	125	75	40	3	T0-48	GE				
C35H	35	250	125	75	40	3	T0-48	GE				
C35M	35	600	125	75	40	3	T0-48	GE				
C35N	35	800	125	75	40	3	T0-48	GE				
C35S	35	700	125	75	40	3	T0-48	GE				
C35U	35	25	125	75	40	3	T0-48	GE				
C36M	16	600	100	15	80	3.5	9/16	GE				
C36N	16	800	100	15	80	3.5	9/16	GE				
C36S	16	700	100	15	80	3.5	9/16	GE				
C37A	25	100	105		20	2	T0-48	GE				
C37B	25	200	105		20	2	T0-48	GE				
C37C	25	300	105		20	2	T0-48	GE				
C37D	25	400	105		20	2	T0-48	GE				
C37E	25	500	105		20	2	T0-48	GE				
C37F	25	50	105		20	2	T0-48	GE				
C37G	25	150	105		80	3.5	9/16	GE				
C37H	25	250	105		80	3.5	9/16	GE				
C37U	25	25	105		20	2	T0-48	GE				
C37M	25	600	105		20	2	T0-48	GE				
C37N	25	800	105		20	2	T0-48	GE				
C37S	25	700	105		20	2	T0-48	GE				
C38A	35	100	150	24	15	1.2	T0-48	GE				
C38B	35	200	150	24	15	1.2	T0-48	GE				
C38C	35	300	150	24	15	1.2	T0-48	GE				
C38D	35	400	150	24	15	1.2	T0-48	GE				
C38E	35	500	150	24	15	1.2	T0-48	GE				
C38F	35	50	150	24	15	1.2	T0-48	GE				
C38G	35	150	150	24	15	1.2	T0-48	GE				
C38H	35	250	150	24	15	1.2	T0-48	GE				
C38U	35	25	150	24	15	1.2	T0-48	GE				
C45A, C46A	55	100	125	30	30	1.5	1-1/16	GE				
C45B, C46B	55	200	125	30	30	1.5	1-1/16	GE				
C45C, C46C	55	300	125	30	30	1.5	1-1/16	GE				
C45D, C46D	55	400	125	30	30	1.5	1-1/16	GE				
C45E, C46E	55	500	125	30	30	1.5	1-1/16	GE				
C45F, C46F	55	50	125	30	30	1.5	1-1/16	GE				
C45G, C46G	55	150	125	30	30	1.5	1-1/16	GE				
C45H, C46H	55	250	125	30	30	1.5	1-1/16	GE				
C45M, C46M	55	600	125	30	30	1.5	1-1/16	GE				
C45N, C46N	55	800	125	30	30	1.5	1-1/16	GE				
C45S, C46S	55	700	125	30	30	1.5	1-1/16	GE				
C45T, C46T	55	900	125	30	30	1.5	1-1/16	GE				
C45U, C46U	55	25	125	30	30	1.5	1-1/16	GE				
C50E, C52E	110	500	1									

SCR's

C137N-K1038

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
C137N	35	800	120		40	3	9/16	GE
C137P	35	1000	120		40	3	9/16	GE
C137PB	35	1100	120		40	3	9/16	GE
C145E	55	500	125		100	3	3/4	GE
C145M	55	600	125		100	3	3/4	GE
C145N	55	800	125		100	3	3/4	GE
C145P	55	1000	125		100	3	3/4	GE
C145PA	55	1100	125		100	3	3/4	GE
C145PB	55	1200	125		100	3	3/4	GE
C145S	55	700	125		100	3	3/4	GE
C145T	55	900	125		100	3	3/4	GE
C150E,C152E	110	500	125	100 50	1.25	1-1/16	GE	
C150M,C152M	110	600	125	100 50	1.25	1-1/16	GE	
C150N,C152N	110	800	125	100 50	1.25	1-1/16	GE	
C150P,C152P	110	1000	125	100 50	1.25	1-1/16	GE	
C150S,C152S	110	700	125	100 50	1.25	1-1/16	GE	
C150T,C152T	110	900	125	100 50	1.25	1-1/16	GE	
C150PA,C152PA	110	1100	125	100 50	1.25	1-1/16	GE	
C150PB,C152PB	110	1200	125	100 50	1.25	1-1/16	GE	
C150PC,C152PC	110	1300	125	100 50	1.25	1-1/16	GE	
C151E,C153E	110	500	125	<50 50	1.25	1-1/16	GE	
C151M,C153M	110	600	125	<50 50	1.25	1-1/16	GE	
C151N,C153N	110	800	125	<50 50	1.25	1-1/16	GE	
C151P,C153P	110	1000	125	<50 50	1.25	1-1/16	GE	
C151S,C153S	110	700	125	<50 50	1.25	1-1/16	GE	
C151T,C153T	110	900	125	<50 50	1.25	1-1/16	GE	
C151PA,C153PA	110	1100	125	<50 50	1.25	1-1/16	GE	
C151PB,C153PB	110	1200	125	<50 50	1.25	1-1/16	GE	
C151PC,C153PC	110	1300	125	<50 50	1.25	1-1/16	GE	
C154A,C156A	110	100	125	<10 50	1.25	1-1/16	GE	
C154B,C156B	110	200	125	<10 50	1.25	1-1/16	GE	
C154C,C156C	110	300	125	<10 50	1.25	1-1/16	GE	
C154D,C156D	110	400	125	<10 50	1.25	1-1/16	GE	
C154E,C156E	110	500	125	<10 50	1.25	1-1/16	GE	
C155A,C157A	110	100	125	<20 50	1.25	1-1/16	GE	
C155B,C157B	110	200	125	<20 50	1.25	1-1/16	GE	
C155C,C157C	110	300	125	<20 50	1.25	1-1/16	GE	
C155D,C157D	110	400	125	<20 50	1.25	1-1/16	GE	
C155E,C157E	110	500	125	<20 50	1.25	1-1/16	GE	
C178A	200	100	125			1-1/4	GE	
C178B	200	200	125			1-1/4	GE	
C178C	200	300	125			1-1/4	GE	
C178D	200	400	125			1-1/4	GE	
C178E	200	500	125			1-1/4	GE	
C178M	200	600	125			1-1/4	GE	
C178S	200	700	125			1-1/4	GE	
C178N	200	800	125			1-1/4	GE	
C178T	200	900	125			1-1/4	GE	
C178P	200	1000	125			1-1/4	GE	
C178PA	200	1100	125			1-1/4	GE	
C178PB	200	1200	125			1-1/4	GE	
C180A	235	100	125	30	100	1.25	1-1/4	GE
C180B	235	200	125	30	100	1.25	1-1/4	GE
C180C	235	300	125	30	100	1.25	1-1/4	GE
C180D	235	400	125	30	100	1.25	1-1/4	GE
C180E	235	500	125	30	100	1.25	1-1/4	GE
C180M	235	600	125	75	100	1.25	1-1/4	GE
C180N	235	800	125	75	100	1.25	1-1/4	GE
C180P	235	1000	125	75	100	1.25	1-1/4	GE

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
C180S	235	700	125	75	100	1.25	1-1/4	GE
C180T	235	900	125	75	100	1.25	1-1/4	GE
C180PA	235	1100	125	125	100	1.25	1-1/4	GE
C180PB	235	1200	125	125	100	1.25	1-1/4	GE
C180PC	235	1300	125	125	100	1.25	1-1/4	GE
C181A	235	100	125	8	125	1.5	1-1/4	GE
C181B	235	200	125	8	125	1.5	1-1/4	GE
C181C	235	300	125	8	125	1.5	1-1/4	GE
C181D	235	400	125	8	125	1.5	1-1/4	GE
C181E	235	500	125	8	125	1.5	1-1/4	GE
C181M	235	600	125	8	125	1.5	1-1/4	GE
C181N	235	800	125	8	125	1.5	1-1/4	GE
C181P	235	1000	125	8	125	1.5	1-1/4	GE
C181S	235	700	125	8	125	1.5	1-1/4	GE
C181T	235	900	125	8	125	1.5	1-1/4	GE
C181PA	235	1100	125	8	125	1.5	1-1/4	GE
C181PB	235	1200	125	8	125	1.5	1-1/4	GE
C185A	235	100	125	15	125	1.5	1-1/4	GE
C185B	235	200	125	15	125	1.5	1-1/4	GE
C185C	235	300	125	15	125	1.5	1-1/4	GE
C185D	235	400	125	15	125	1.5	1-1/4	GE
C185E	235	500	125	15	125	1.5	1-1/4	GE
C280/281PC	235	1300	125		100	1.25	1-5/8	GE
C280/281PD	235	1400	125		100	1.25	1-5/8	GE
C280/281PE	235	1500	125		100	1.25	1-5/8	GE
C280/281PM	235	1600	125		100	1.25	1-5/8	GE
C280/281PS	235	1700	125		100	1.25	1-5/8	GE
C280PN,C281PN	235	1800	125		150	3	1-5/8	GE
C290A,291A	470	100	125		150	3.5	1-5/8	GE
C290B,291B	470	200	125		150	3.5	1-5/8	GE
C290C,291C	470	300	125		150	3.5	1-5/8	GE
C290D,291D	470	400	125		150	3.5	1-5/8	GE
C290E,291E	470	500	125		150	3.5	1-5/8	GE
C290F,291F	470	50	125		150	3.5	1-5/8	GE
C290G,291G	470	150	125		150	3.5	1-5/8	GE
C290H,291H	470	250	125		150	3.5	1-5/8	GE
C290M,291M	470	600	125		150	3.5	1-5/8	GE
C290N,291N	470	800	125		150	3.5	1-5/8	GE
C290P,291P	470	1000	125		150	3.5	1-5/8	GE
C290PA,C291PA	470	1100	125		150	3.5	1-5/8	GE
C290PB,C291PB	470	1200	125		150	3.5	1-5/8	GE
C290S,291S	470	700	125		150	3.5	1-5/8	GE
C290T,291T	470	900	125		150	3.5	1-5/8	GE
C350A	110	100	125		dv/dt- 200 v/μsec minimum		1-1/2PF	GE
C350B	110	200	125				1-1/2PF	GE
C350C	110	300	125				1-1/2PF	GE
C350D	110	400	125				1-1/2PF	GE
C350E	110	500	125				1-1/2PF	GE
C350M	110	600	125				1-1/2PF	GE
C350S	110	700	125				1-1/2PF	GE
C350N	110	800	125				1-1/2PF	GE
C350T	110	900	125				1-1/2PF	GE
C350P	110	1000	125				1-1/2PF	GE
C350PA	110	1100	125				1-1/2PF	GE
C350PB	110	1200	125				1-1/2PF	GE
C350PC	110	1300	125				1-1/2PF	GE
C380A	230	100	125			1-1/2PF	GE	
C380B	230	200	125			1-1/2PF	GE	
C380C	230	300	125			1-1/2PF	GE	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
C380D	230	400	125		dv/dt = 200 v/μsec minimum	1-1/2PF	GE	
C380E	230	500	125			1-1/2PF	GE	
C380M	230	600	125			1-1/2PF	GE	
C380S	230	700	125			1-1/2PF	GE	
C380N	230	800	125			1-1/2PF	GE	
C380T	230	900	125			1-1/2PF	GE	
C380P	230	1000	125			1-1/2PF	GE	
C380PA	230	1100	125			1-1/2PF	GE	
C380PB	230	1200	125			1-1/2PF	GE	
C380PC	230	1300	125		1-1/2PF	GE		
C511A	1.6	100	125	40	0.2	0.8	TO-5	GE
C511B	1.6	200	125	40	0.2	0.8	TO-5	GE
C511C	1.6	300	125	40	0.2	0.8	TO-5	GE
C511D	1.6	400	125	40	0.2	0.8	TO-5	GE
C511F	1.6	50	125	40	0.2	0.8	TO-5	GE
C511G	1.6	150	125	40	0.2	0.8	TO-5	GE
C511H	1.6	250	125	40	0.2	0.8	TO-5	GE
C511U	1.6	25	125	40	0.2	0.8	TO-5	GE
C611A	1.6	100	125	40	1	0.8	TO-5	GE
C611B	1.6	200	125	40	1	0.8	TO-5	GE
C611F	1.6	150	125	40	1	0.8	TO-5	GE
C611G	1.6	50	125	40	1	0.8	TO-5	GE
C611U	1.6	25	125	40	1	0.8	TO-5	GE
CB200	0.25	30		20	0.4	0.8	TO-18	SSP
CB201	0.25	60		20	0.4	0.8	TO-18	SSP
CB202	0.25	100		20	0.4	0.8	TO-18	SSP
CB203	0.25	200		20	0.4	0.8	TO-18	SSP
CD200	1.6	30		20	0.4	0.8	TO-5	SSP
CD201	1.6	60		20	0.4	0.8	TO-5	SSP
CD202	1.6	100		20	0.4	0.8	TO-5	SSP
CD203	1.6	200		20	0.4	0.8	TO-5	SSP
FT1869	1.57	15	150		0.2	0.8	TO-5	Fch
FT1870	1.57	30	150		0.2	0.8	TO-5	Fch
FT1871	1.57	60	150		0.2	0.8	TO-5	Fch
FT1872	1.57	100	150		0.2	0.8	TO-5	Fch
FT1873	1.57	150	150		0.2	0.8	TO-5	Fch
FT1874	1.57	200	150		0.2	0.8	TO-5	Fch
FT1881	1.57	30	150		2	2	TO-5	Fch
FT1882	1.57	60	150		2	2	TO-5	Fch
FT1883	1.57	100	150		2	2	TO-5	Fch
FT1884	1.57	150	150		2	2	TO-5	Fch
FT1885	1.57	200	150		2	2	TO-5	Fch
FT2009	1.57	25	150		0.2	1	TO-5	Fch
FT2010	1.57	50	150		0.2	1	TO-5	Fch
FT2011	1.57	100	150		0.2	1	TO-5	Fch
FT2012	1.57	200	150		0.2	1	TO-5	Fch
FT2013	1.57	300	150		0.2	1	TO-5	Fch
FT2014	1.57	400	150		0.2	1	TO-5	Fch
GA100	0.2	30		2.5	20	1.5	TO-18	SSP
GA101	0.2	60		2.5	20	1.5	TO-18	SSP
GA102	0.2	80		2.5	20	1.5	TO-18	SSP
HR3027	0.5	30		7	0.2	0.8	TO-18	SSP
HR3028	0.5	60		7	0.2	0.8	TO-18	SSP
HR3029	0.5	100		7	0.2	0.8	TO-18	SSP
HR3030	0.25	30	200	0.7	0.008	0.52	TO-18	SSP
HR3031	0.25	60	200	0.7	0.008	0.52	TO-18	SSP
HR3032	0.25	100	200	0.7	0.008	0.52	TO-18	SSP
K1030	1.0	200	80		10	2.0	TO-5	Cen
K1038	1.0	50	100	20	0.57	2.7	TO-5	Cen

SCR's

K1039—NL-C55/56A

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
	Typical							
K1039	1.0	100	100	20	0.57	2.7	T0-5	Cen
K1040	1.0	200	100	20	0.57	2.7	T0-5	Cen
K1097	0.2	50	80		50		T0-5	Cen
K1881	1.25	30	150	20	2	2	T0-5	Cen
K1882	1.25	60	150	20	2	2	T0-5	Cen
K1883	1.25	100	150	20	2	2	T0-5	Cen
K1884	1.25	150	150	20	2	2	T0-5	Cen
K1885	1.25	200	150	20	2	2	T0-5	Cen
MCR649-1	20	25	100		30	1	T0-41	Mot
MCR649-2	20	50	100		30	1	T0-41	Mot
MCR649-3	20	100	100		30	1	T0-41	Mot
MCR649-4	20	200	100		30	1	T0-41	Mot
MCR649-5	20	300	100		30	1	T0-41	Mot
MCR649-6	20	400	100		30	1	T0-41	Mot
MCR649-7	20	500	100		30	1	T0-41	Mot
MCR846-1	2	25	105		10	0.8	7/16	Mot
MCR846-2	2	50	105		10	0.8	7/16	Mot
MCR846-3	2	100	105		10	0.8	7/16	Mot
MCR846-4	2	200	105		10	0.8	7/16	Mot
MCR1336-5	300	300	105	7	40	2.0	7/16	Mot
MCR1336-6	300	400	105	7	40	2.0	7/16	Mot
MCR1336-7	300	500	105	7	40	2.0	7/16	Mot
MCR1336-8	300	600	105	7	40	2.0	7/16	Mot
MCR1336-9	300	700	105	7	40	2.0	7/16	Mot
MCR1336-10	300	800	105	7	40	2.0	7/16	Mot
MCR1718-5	25	300	125		50		T0-48	Mot
MCR1718-6	25	400	125		50		T0-48	Mot
MCR1718-7	25	500	125		50		T0-48	Mot
MCR1718-8	25	600	125		50		T0-48	Mot
MCR1906-1	1.6	25	100		1.0	1.75	T0-5	Mot
MCR1906-2	1.6	50	100		1.0	1.75	T0-5	Mot
MCR1906-3	1.6	100	100		1.0	1.75	T0-5	Mot
MCR1906-4	1.6	200	100		1.0	1.75	T0-5	Mot
MCR1907-1	25	25	125	12	30	1.5	T0-48	Mot
MCR1907-2	25	50	125	12	30	1.5	T0-48	Mot
MCR1907-3	25	100	125	12	30	1.5	T0-48	Mot
MCR1907-4	25	200	125	12	30	1.5	T0-48	Mot
MCR1907-5	25	300	125	12	30	1.5	T0-48	Mot
MCR1907-6	25	400	125	12	30	1.5	T0-48	Mot
MCR2604-1	8	25	100	15	20	1.5	Spec	Mot
MCR2604-2	8	50	100	15	20	1.5	Spec	Mot
MCR2604-3	8	100	100	15	20	1.5	Spec	Mot
MCR2604-4	8	200	100	15	20	1.5	Spec	Mot
MCR2604-5	8	300	100	15	20	1.5	Spec	Mot
MCR2604-6	8	400	100	15	20	1.5	Spec	Mot
MCR2604-7	8	500	100	15	20	1.5	Spec	Mot
MCR2604-8	8	600	100	15	20	1.5	Spec	Mot
MCR2605-1	8	25	100	15	20	1.5	Spec	Mot
MCR2605-2	8	50	100	15	20	1.5	Spec	Mot
MCR2605-3	8	100	100	15	20	1.5	Spec	Mot
MCR2605-4	8	200	100	15	20	1.5	Spec	Mot
MCR2605-5	8	300	100	15	20	1.5	Spec	Mot
MCR2605-6	8	400	100	15	20	1.5	Spec	Mot
MCR2605-7	8	500	100	15	20	1.5	Spec	Mot
MCR2605-8	8	600	100	15	20	1.5	Spec	Mot
MCR2818-1	18	25	100		40	1.4	1/2PF	Mot
MCR2818-3	18	100	100		40	1.4	1/2PF	Mot
MCR2818-5	18	300	100		40	1.4	1/2PF	Mot
MCR2818-7	18	500	100		40	1.4	1/2PF	Mot

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR	
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)					
					Maximum				
						Typical			
MCR2835-6	35	400	100		40	1.6	1/2PF	Mot	
MCR2835-7	35	500	100		40	1.6	1/2PF	Mot	
MCR2835-8	35	600	100		40	1.6	1/2PF	Mot	
MCR2918-1	20	25	100		20	40	1.5	5/8PF	Mot
MCR2918-3	20	100	100		20	40	1.5	5/8PF	Mot
MCR2918-5	20	300	100		20	40	1.5	5/8PF	Mot
MCR2918-7	20	500	100		20	40	1.5	5/8PF	Mot
MCR2935-1	35	25	100			40	1.6	11/16	Mot
MCR2935-2	35	50	100	40		1.6	11/16	Mot	
MCR2935-3	35	100	100	40		1.6	11/16	Mot	
MCR2935-4	35	200	100	40		1.6	11/16	Mot	
MCR2935-5	35	300	100	40		1.6	11/16	Mot	
MCR2935-6	35	400	100	40		1.6	11/16	Mot	
MCR2935-7	35	500	100	40		1.6	11/16	Mot	
MCR2935-8	35	600	100			40	1.6	11/16	Mot
NCF5A	1.6	50	100	12	10	3	TO-5	IRC	
NCF6A	1.6	100	100	12	10	3	TO-5	IRC	
NCF7A	1.6	200	100	12	10	3	TO-5	IRC	
NCF8A	1.6	300	100	12	10	3	TO-5	IRC	
NCF9A	1.6	400	100	12	10	3	TO-5	IRC	
NCF020C	6	25	100	12	8	2	7/16	IRC	
NCF050C	6	50	100	12	8	2	7/16	IRC	
NCF100C	6	100	100	12	8	2	7/16	IRC	
NCF150C	6	150	100	12	8	2	7/16	IRC	
NCF200C	6	200	100	12	8	2	7/16	IRC	
NCF250C	6	250	100	12	8	2	7/16	IRC	
NCF300C	6	300	100	12	8	2	7/16	IRC	
NCF400C	6	400	100	12	8	2	7/16	IRC	
NCF500C	6	500	100	12	8	2	7/16	IRC	
NCF600C	6	600	100	12	8	2	7/16	IRC	
NCF020D	16	25	100	12	80	3.5	9/16	IRC	
NCF050D	16	50	100	12	80	3.5	9/16	IRC	
NCF100D	16	100	100	12	80	3.5	9/16	IRC	
NCF150D	16	150	100	12	80	3.5	9/16	IRC	
NCF200D	16	200	100	12	80	3.5	9/16	IRC	
NCF250D	16	250	100	12	80	3.5	9/16	IRC	
NCF300D	16	300	100	12	80	3.5	9/16	IRC	
NCF400D	16	400	100	12	80	3.5	9/16	IRC	
NCF500D	16	500	100	12	80	3.5	9/16	IRC	
NCF600D	16	600	100	12	80	3.5	9/16	IRC	
NCM50C	3	50	100	10	8	0.8	7/16	IRC	
NCM100C	3	100	100	10	8	0.8	7/16	IRC	
NCM200C	3	200	100	10	8	0.8	7/16	IRC	
NCM300C	3	300	100	10	8	0.8	7/16	IRC	
NCM400C	3	400	100	10	8	0.8	7/16	IRC	
NCM500C	3	500	100	10	8	0.8	7/16	IRC	
NCM600C	3	600	100	10	8	0.8	7/16	IRC	
NCM700C	3	700	100	10	8	0.8	7/16	IRC	
NCM100E	7	100	100	10	20	1.5	9/16	IRC	
NCM200E	7	200	100	10	20	1.5	9/16	IRC	
NCM300E	7	300	100	10	20	1.5	9/16	IRC	
NCM400E	7	400	100	10	20	1.5	9/16	IRC	
NCM500E	7	500	100	10	20	1.5	9/16	IRC	
NCM600E	7	600	100	10	20	1.5	9/16	IRC	
NCM700E	7	700	100	10	20	1.5	9/16	IRC	
NCR020B	3	25	100		25	2.5	7/16	IRC	
NCR050B	3	50	100		25	2.5	7/16	IRC	
NCR100B	3	100	100		25	2.5	7/16	IRC	
NCR150B	3	150	100		25	2.5	7/16	IRC	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
NCR200B	3	200	100		25	2.5	7/16	IRC
NCR250B	3	250	100		25	2.5	7/16	IRC
NCR300B	3	300	100		25	2.5	7/16	IRC
NCR400B	3	400	100		25	2.5	7/16	IRC
NCR500B	3	500	100		25	2.5	7/16	IRC
NCR600B	3	600	100		25	2.5	7/16	IRC
NLC35P	35	1000	125	30	15	1.5	9/16	NE
NLC35T	35	900	125	30	15	1.5	9/16	NE
NL-C36M/516M	16	600	100	15	20*	1.5*	9/16	NE
NL-C36N/516N	16	800	100	15	20*	1.5*	9/16	NE
NL-C36S/516S	16	700	100	15	20*	1.5*	9/16	NE
NL-C37U	25	30	105		80	3.5	TO-48	NE
NL-C37F	25	60	105		80	3.5	TO-48	NE
NL-C37A	25	120	105		80	3.5	TO-48	NE
NL-C37B	25	240	105		80	3.5	TO-48	NE
NL-C37C	25	360	105		80	3.5	TO-48	NE
NL-C37D	25	480	105		80	3.5	TO-48	NE
NL-C37E	25	600	105		80	3.5	TO-48	NE
NL-C37M	25	720	105		80	3.5	TO-48	NE
NL-C37S	25	840	105		80	3.5	TO-48	NE
NL-C37N	25	960	105		80	3.5	TO-48	NE
NL-C38U	35	30	150		80	3	9/16	NE
NL-C38F	35	60	150		80	3	9/16	NE
NL-C38A	35	120	150		80	3	9/16	NE
NL-C38G	35	180	150		80	3	9/16	NE
NL-C38B	35	240	150		80	3	9/16	NE
NL-C38H	35	300	150		80	3	9/16	NE
NL-C38C	35	360	150		80	3	9/16	NE
NL-C38D	35	480	150		80	3	9/16	NE
NL-C38E	35	600	150		80	3	9/16	NE
NL-C40A	35	100	125	12	10*	1.5*	9/16	NE
NL-C40B	35	200	125	12	10*	1.5*	9/16	NE
NL-C40C	35	300	125	12	10*	1.5*	9/16	NE
NL-C40D	35	400	125	12	10*	1.5*	9/16	NE
NL-C40E	35	500	125	12	10*	1.5*	9/16	NE
NL-C40F	35	50	125	12	10*	1.5*	9/16	NE
NL-C40G	35	150	125	12	10*	1.5*	9/16	NE
NL-C40H	35	250	125	12	10*	1.5*	9/16	NE
NL-C40M	35	720	125	12	10*	1.5*	9/16	NE
NL-C40N	35	960	125	12	10*	1.5*	9/16	NE
NL-C40S	35	840	125	12	10*	1.5*	9/16	NE
NL-C40U	35	25	125	12	10*	1.5*	9/16	NE
NL-C45/46A	55	120	125	30	30	1.5	1-1/16	NE
NL-C45/46B	55	240	125	30	30	1.5	1-1/16	NE
NL-C45/46C	55	360	125	30	30	1.5	1-1/16	NE
NL-C45/46D	55	480	125	30	30	1.5	1-1/16	NE
NL-C45/46E	55	600	125	30	30	1.5	1-1/16	NE
NL-C45/46F	55	60	125	30	30	1.5	1-1/16	NE
NL-C45/46G	55	180	125	30	30	1.5	1-1/16	NE
NL-C45/46H	55	300	125	30	30	1.5	1-1/16	NE
NL-C45/46M	55	720	125	30	30	1.5	1-1/16	NE
NL-C45/46N	55	960	125	30	30	1.5	1-1/16	NE
NL-C45/46S	55	840	125	30	30	1.5	1-1/16	NE
NL-C45/46T	55	1080	125	30	30	1.5	1-1/16	NE
NL-C45/46U	55	30	125	30	30	1.5	1-1/16	NE
NL-C52U	110	30	125	30	30	1.5	1-1/16	NE
NL-C55/56U	110	30	125	20			TO-49	NE
NL-C55/56F	110	60	125	20			TO-49	NE
NL-C55/56A	110	120	125	20			TO-49	NE

SCR's

NL-C55/56G

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
Maximum				Typical				
NL-C55/56G	110	180	125	20			TO-49	NE
NL-C55/56B	110	240	125	20			TO-49	NE
NL-C55/56H	110	300	125	20			TO-49	NE
NL-C55/56C	110	360	125	20			TO-49	NE
NL-C55/56D	110	480	125	20			TO-49	NE
NL-C55/56E	110	600	125	20			TO-49	NE
NL-C55/56M	110	720	125	20			TO-49	NE
NL-C60E	110	600	150		70	3	TO-49	NE
NL-C62U	110	30	150		70	3	TO-83	NE
NL-C62F	110	60	150		70	3	TO-83	NE
NL-C62A	110	120	150		70	3	TO-83	NE
NL-C62G	110	180	150		70	3	TO-83	NE
NL-C62B	110	240	150		70	3	TO-83	NE
NL-C62H	110	300	150		70	3	TO-83	NE
NL-C62C	110	360	150		70	3	TO-83	NE
NL-C62D	110	480	150		70	3	TO-83	NE
NL-C62E	110	600	150		70	3	TO-83	NE
NL-C150/152E	110	600	125	100	50	1.25	1-1/16	NE
NL-C150/152M	110	720	125	100	50	1.25	1-1/16	NE
NL-C150/152N	110	960	125	100	50	1.25	1-1/16	NE
NL-C150/152P	110	1200	125	100	50	1.25	1-1/16	NE
NL-C150/152PA	110	1320	125	100	50	1.25	1-1/16	NE
NL-C150/152PB	110	1440	125	100	50	1.25	1-1/16	NE
NL-C150/152PC	110	1560	125	100	50	1.25	1-1/16	NE
NL-C150/152S	110	840	125	100	50	1.25	1-1/16	NE
NL-C150/152T	110	1080	125	100	50	1.25	1-1/16	NE
NL-C151E	110	600	125		150	3	TO-49	NE
NL-C151M	110	720	125		150	3	TO-49	NE
NL-C151S	110	840	125		150	3	TO-49	NE
NL-C151N	110	960	125		150	3	TO-49	NE
NL-C151T	110	1080	125		150	3	TO-49	NE
NL-C151P	110	1200	125		150	3	TO-49	NE
NL-C151PA	110	1320	125		150	3	TO-49	NE
NL-C151PB	110	1440	125		150	3	TO-49	NE
NL-C151PC	110	1560	125		150	3	TO-49	NE
NL-C153E	110	600	125		150	3	TO-83	NE
NL-C153M	110	720	125		150	3	TO-83	NE
NL-C153S	110	840	125		150	3	TO-83	NE
NL-C153N	110	960	125		150	3	TO-83	NE
NL-C153T	110	1080	125		150	3	TO-83	NE
NL-C153P	110	1200	125		150	3	TO-83	NE
NL-C153PA	110	1320	125		150	3	TO-83	NE
NL-C153PB	110	1440	125		150	3	TO-83	NE
NL-C153PC	110	1560	125		150	3	TO-83	NE
NL-C180A	235	120	125		150	3	1-1/4	NE
NL-C180B	235	240	125		150	3	1-1/4	NE
NL-C180C	235	360	125		150	3	1-1/4	NE
NL-C180D	235	480	125		150	3	1-1/4	NE
NL-C180E	235	600	125		150	3	1-1/4	NE
NL-C180M	235	720	125		150	3	1-1/4	NE
NL-C180S	235	840	125		150	3	1-1/4	NE
NL-C180N	235	960	125		150	3	1-1/4	NE
NL-C180T	235	1080	125		150	3	1-1/4	NE
NL-C180P	235	1200	125		150	3	1-1/4	NE
NL-C180PA	235	1320	125		150	3	1-1/4	NE
NL-C180PB	235	1440	125		150	3	1-1/4	NE
NL-C180PC	235	1560	125		150	3	1-1/4	NE
NL-511-3	16	800	100		80	3	TO-48	NE
NL-511-4	16	1000	100		80	3	TO-48	NE

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
NL-511-6	16	1200	100		80	3	TO-48	NE
NL-555/556A	55	120	125	100	50	1.25	1-1/16	NE
NL-555/556B	55	240	125	100	50	1.25	1-1/16	NE
NL-555/556C	55	360	125	100	50	1.25	1-1/16	NE
NL-555/556D	55	480	125	100	50	1.25	1-1/16	NE
NL-555/556E	55	600	125	100	50	1.25	1-1/16	NE
NL-555/556F	55	60	125	100	50	1.25	1-1/16	NE
NL-555/556G	55	180	125	100	50	1.25	1-1/16	NE
NL-555/556H	55	300	125	100	50	1.25	1-1/16	NE
NL-555/556M	55	720	125	100	50	1.25	1-1/16	NE
NL-555/556N	55	960	125	100	50	1.25	1-1/16	NE
NL-555/556P	55	1200	125	100	50	1.25	1-1/16	NE
NL-555/556PA	55	1320	125	100	50	1.25	1-1/16	NE
NL-555/556PB	55	1440	125	100	50	1.25	1-1/16	NE
NL-555/556PC	55	1560	125	100	50	1.25	1-1/16	NE
NL-555/556S	55	840	125	100	50	1.25	1-1/16	NE
NL-555/556T	55	1080	125	100	50	1.25	1-1/16	NE
PSI-A-35-1	35	100	125	75	40	3	9/16	PSI
PSI-A-35-2	35	200	125	75	40	3	9/16	PSI
PSI-A-35-3	35	300	125	75	40	3	9/16	PSI
PSI-A-35-4	35	400	125	75	40	3	9/16	PSI
PSI-A-35-5	35	500	125	75	40	3	9/16	PSI
PSI-A-35-6	35	600	125	75	40	3	9/16	PSI
PSI-A-35-7	35	700	125	75	40	3	9/16	PSI
PSI-A-35-8	35	800	125	75	40	3	9/16	PSI
PSI-B-55-1	55	100	125	40	75	3	1-1/16	PSI
PSI-B-55-2	55	200	125	40	75	3	1-1/16	PSI
PSI-B-55-3	55	300	125	40	75	3	1-1/16	PSI
PSI-B-55-4	55	400	125	40	75	3	1-1/16	PSI
PSI-B-55-5	55	500	125	40	75	3	1-1/16	PSI
PSI-B-55-6	55	600	125	40	75	3	1-1/16	PSI
PSI-B-55-7	55	700	125	40	75	3	1-1/16	PSI
PSI-B-55-8	55	800	125	40	75	3	1-1/16	PSI
PSI-B-55-9	55	900	125	40	75	3	1-1/16	PSI
PSI-B-55-10	55	1000	125	40	75	3	1-1/16	PSI
PSI-B-55-11	55	1100	125	40	75	3	1-1/16	PSI
PSI-B-55-12	55	1200	125	40	75	3	1-1/16	PSI
PSI-B-110-1	110	100	125	40	150	3	1-1/16	PSI
PSI-B-110-2	110	200	125	40	150	3	1-1/16	PSI
PSI-B-110-3	110	300	125	40	150	3	1-1/16	PSI
PSI-B-110-4	110	400	125	40	150	3	1-1/16	PSI
PSI-B-110-5	110	500	125	40	150	3	1-1/16	PSI
PSI-B-110-6	110	600	125	40	150	3	1-1/16	PSI
PSI-B-110-7	110	700	125	40	150	3	1-1/16	PSI
PSI-B-110-8	110	800	125	40	150	3	1-1/16	PSI
PSI-B-110-9	110	900	125	40	150	3	1-1/16	PSI
PSI-B-110-10	110	1000	125	40	150	3	1-1/16	PSI
PSI-B-110-11	110	1100	125	40	150	3	1-1/16	PSI
PSI-B-110-12	110	1200	125	40	150	3	1-1/16	PSI
PSI-B-110-13	110	1300	125	40	150	3	1-1/16	PSI
PSI-E-220-1	220	100	125	150	150	3	1-3/4PF	PSI
PSI-E-220-2	220	200	125	150	150	3	1-3/4PF	PSI
PSI-E-220-3	220	300	125	150	150	3	1-3/4PF	PSI
PSI-E-220-4	220	400	125	150	150	3	1-3/4PF	PSI
PSI-E-220-5	220	500	125	150	150	3	1-3/4PF	PSI
PSI-E-220-6	220	600	125	150	150	3	1-3/4PF	PSI
PSI-E-220-7	220	700	125	150	150	3	1-3/4PF	PSI
PSI-E-220-8	220	800	125	150	150	3	1-3/4PF	PSI
PSI-E-220-9	220	900	125	150	150	3	1-3/4PF	PSI

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
	Typical							
PSI-E-220-10	220	1000	125	150	150	3	1-3/4PF	PSI
PSI-E-220-11	220	1100	125	150	150	3	1-3/4PF	PSI
PSI-E-220-12	220	1200	125	150	150	3	1-3/4PF	PSI
PSI-E-220-13	220	1300	125	150	150	3	1-3/4PF	PSI
PSI-E-220-14	220	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-220-1	220	100	125	150	150	3	1-3/4PF	PSI
PSI-F-220-2	220	200	125	150	150	3	1-3/4PF	PSI
PSI-F-220-3	220	300	125	150	150	3	1-3/4PF	PSI
PSI-F-220-4	220	400	125	150	150	3	1-3/4PF	PSI
PSI-F-220-5	220	500	125	150	150	3	1-3/4PF	PSI
PSI-F-220-6	220	600	125	150	150	3	1-3/4PF	PSI
PSI-F-220-7	220	700	125	150	150	3	1-3/4PF	PSI
PSI-F-220-8	220	800	125	150	150	3	1-3/4PF	PSI
PSI-F-220-9	220	900	125	150	150	3	1-3/4PF	PSI
PSI-F-220-10	220	1000	125	150	150	3	1-3/4PF	PSI
PSI-F-220-11	220	1100	125	150	150	3	1-3/4PF	PSI
PSI-F-220-12	220	1200	125	150	150	3	1-3/4PF	PSI
PSI-F-220-13	220	1300	125	150	150	3	1-3/4PF	PSI
PSI-F-220-14	220	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-220-15	220	1500	125	150	150	3	1-3/4PF	PSI
PSI-F-220-16	220	1600	125	150	150	3	1-3/4PF	PSI
PSI-F-220-17	220	1700	125	150	150	3	1-3/4PF	PSI
PSI-F-220-18	220	1800	125	150	150	3	1-3/4PF	PSI
PSI-C-235-1	235	100	125	150	150	3	1.2	PSI
PSI-C-235-2	235	200	125	150	150	3	1.2	PSI
PSI-C-235-3	235	300	125	150	150	3	1.2	PSI
PSI-C-235-4	235	400	125	150	150	3	1.2	PSI
PSI-C-235-5	235	500	125	150	150	3	1.2	PSI
PSI-C-235-6	235	600	125	150	150	3	1.2	PSI
PSI-C-235-7	235	700	125	150	150	3	1.2	PSI
PSI-C-235-8	235	800	125	150	150	3	1.2	PSI
PSI-C-235-9	235	900	125	150	150	3	1.2	PSI
PSI-C-235-10	235	1000	125	150	150	3	1.2	PSI
PSI-C-235-11	235	1100	125	150	150	3	1.2	PSI
PSI-C-235-12	235	1200	125	150	150	3	1.2	PSI
PSI-C-235-13	235	1300	125	150	150	3	1.2	PSI
PSI-D-235-1	235	100	125	150	150	3	1.6	PSI
PSI-D-235-2	235	200	125	150	150	3	1.6	PSI
PSI-D-235-3	235	300	125	150	150	3	1.6	PSI
PSI-D-235-4	235	400	125	150	150	3	1.6	PSI
PSI-D-235-5	235	500	125	150	150	3	1.6	PSI
PSI-D-235-6	235	600	125	150	150	3	1.6	PSI
PSI-D-235-7	235	700	125	150	150	3	1.6	PSI
PSI-D-235-8	235	800	125	150	150	3	1.6	PSI
PSI-D-235-9	235	900	125	150	150	3	1.6	PSI
PSI-D-235-10	235	1000	125	150	150	3	1.6	PSI
PSI-D-235-11	235	1100	125	150	150	3	1.6	PSI
PSI-D-235-12	235	1200	125	150	150	3	1.6	PSI
PSI-D-235-13	235	1300	125	150	150	3	1.6	PSI
PSI-E-300-1	300	100	125	150	150	3	1-3/4PF	PSI
PSI-E-300-2	300	200	125	150	150	3	1-3/4PF	PSI
PSI-E-300-3	300	300	125	150	150	3	1-3/4PF	PSI
PSI-E-300-4	300	400	125	150	150	3	1-3/4PF	PSI
PSI-E-300-5	300	500	125	150	150	3	1-3/4PF	PSI
PSI-E-300-6	300	600	125	150	150	3	1-3/4PF	PSI
PSI-E-300-7	300	700	125	150	150	3	1-3/4PF	PSI
PSI-E-300-8	300	800	125	150	150	3	1-3/4PF	PSI
PSI-E-300-9	300	900	125	150	150	3	1-3/4PF	PSI
PSI-E-300-10	300	1000	125	150	150	3	1-3/4PF	PSI

PSI-E-300-11—PSI-G-950-4

TYPE NO.	MAXIMUM RATING				I _G F (ma)	V _G F (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
	Typical							
PSI-E-300-11	300	1100	125	150	150	3	1-3/4PF	PSI
PSI-E-300-12	300	1200	125	150	150	3	1-3/4PF	PSI
PSI-E-300-13	300	1300	125	150	150	3	1-3/4PF	PSI
PSI-E-300-14	300	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-300-1	300	100	125	150	150	3	1-3/4PF	PSI
PSI-F-300-2	300	200	125	150	150	3	1-3/4PF	PSI
PSI-F-300-3	300	300	125	150	150	3	1-3/4PF	PSI
PSI-F-300-4	300	400	125	150	150	3	1-3/4PF	PSI
PSI-F-300-5	300	500	125	150	150	3	1-3/4PF	PSI
PSI-F-300-6	300	600	125	150	150	3	1-3/4PF	PSI
PSI-F-300-7	300	700	125	150	150	3	1-3/4PF	PSI
PSI-F-300-8	300	800	125	150	150	3	1-3/4PF	PSI
PSI-F-300-9	300	900	125	150	150	3	1-3/4PF	PSI
PSI-F-300-10	300	1000	125	150	150	3	1-3/4PF	PSI
PSI-F-300-11	300	1100	125	150	150	3	1-3/4PF	PSI
PSI-F-300-12	300	1200	125	150	150	3	1-3/4PF	PSI
PSI-F-300-13	300	1300	125	150	150	3	1-3/4PF	PSI
PSI-F-300-14	300	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-300-15	300	1500	125	150	150	3	1-3/4PF	PSI
PSI-F-300-16	300	1600	125	150	150	3	1-3/4PF	PSI
PSI-F-300-17	300	1700	125	150	150	3	1-3/4PF	PSI
PSI-F-300-18	300	1800	125	150	150	3	1-3/4PF	PSI
PSI-D-350-1	350	100	125	150	150	3	1.6	PSI
PSI-D-350-2	350	200	125	150	150	3	1.6	PSI
PSI-D-350-3	350	300	125	150	150	3	1.6	PSI
PSI-D-350-4	350	400	125	150	150	3	1.6	PSI
PSI-D-350-5	350	500	125	150	150	3	1.6	PSI
PSI-D-350-6	350	600	125	150	150	3	1.6	PSI
PSI-D-350-7	350	700	125	150	150	3	1.6	PSI
PSI-D-350-8	350	800	125	150	150	3	1.6	PSI
PSI-D-350-9	350	900	125	150	150	3	1.6	PSI
PSI-D-350-10	350	1000	125	150	150	3	1.6	PSI
PSI-D-350-11	350	1100	125	150	150	3	1.6	PSI
PSI-D-350-12	350	1200	125	150	150	3	1.6	PSI
PSI-D-350-13	350	1300	125	150	150	3	1.6	PSI
PSI-D-400-1	400	100	125	150	150	3	1.6	PSI
PSI-D-400-2	400	200	125	150	150	3	1.6	PSI
PSI-D-400-3	400	300	125	150	150	3	1.6	PSI
PSI-D-400-4	400	400	125	150	150	3	1.6	PSI
PSI-D-400-5	400	500	125	150	150	3	1.6	PSI
PSI-D-400-6	400	600	125	150	150	3	1.6	PSI
PSI-D-400-7	400	700	125	150	150	3	1.6	PSI
PSI-D-400-8	400	800	125	150	150	3	1.6	PSI
PSI-D-400-9	400	900	125	150	150	3	1.6	PSI
PSI-D-400-10	400	1000	125	150	150	3	1.6	PSI
PSI-D-400-11	400	1100	125	150	150	3	1.6	PSI
PSI-D-400-12	400	1200	125	150	150	3	1.6	PSI
PSI-D-400-13	400	1300	125	150	150	3	1.6	PSI
PSI-E-400-1	400	100	125	150	150	3	1-3/4PF	PSI
PSI-E-400-2	400	200	125	150	150	3	1-3/4PF	PSI
PSI-E-400-3	400	300	125	150	150	3	1-3/4PF	PSI
PSI-E-400-4	400	400	125	150	150	3	1-3/4PF	PSI
PSI-E-400-5	400	500	125	150	150	3	1-3/4PF	PSI
PSI-E-400-6	400	600	125	150	150	3	1-3/4PF	PSI
PSI-E-400-7	400	700	125	150	150	3	1-3/4PF	PSI
PSI-E-400-8	400	800	125	150	150	3	1-3/4PF	PSI
PSI-E-400-9	400	900	125	150	150	3	1-3/4PF	PSI
PSI-E-400-10	400	1000	125	150	150	3	1-3/4PF	PSI
PSI-E-400-11	400	1100	125	150	150	3	1-3/4PF	PSI

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
PSI-E-400-12	400	1200	125	150	150	3	1-3/4PF	PSI
PSI-E-400-13	400	1300	125	150	150	3	1-3/4PF	PSI
PSI-E-400-14	400	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-400-1	400	100	125	150	150	3	1-3/4PF	PSI
PSI-F-400-2	400	200	125	150	150	3	1-3/4PF	PSI
PSI-F-400-3	400	300	125	150	150	3	1-3/4PF	PSI
PSI-F-400-4	400	400	125	150	150	3	1-3/4PF	PSI
PSI-F-400-5	400	500	125	150	150	3	1-3/4PF	PSI
PSI-F-400-6	400	600	125	150	150	3	1-3/4PF	PSI
PSI-F-400-7	400	700	125	150	150	3	1-3/4PF	PSI
PSI-F-400-8	400	800	125	150	150	3	1-3/4PF	PSI
PSI-F-400-9	400	900	125	150	150	3	1-3/4PF	PSI
PSI-F-400-10	400	1000	125	150	150	3	1-3/4PF	PSI
PSI-F-400-11	400	1100	125	150	150	3	1-3/4PF	PSI
PSI-F-400-12	400	1200	125	150	150	3	1-3/4PF	PSI
PSI-F-400-13	400	1300	125	150	150	3	1-3/4PF	PSI
PSI-F-400-14	400	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-400-15	400	1500	125	150	150	3	1-3/4PF	PSI
PSI-F-400-16	400	1600	125	150	150	3	1-3/4PF	PSI
PSI-F-400-17	400	1700	125	150	150	3	1-3/4PF	PSI
PSI-F-400-18	400	1800	125	150	150	3	1-3/4PF	PSI
PSI-D-470-1	470	100	125	150	150	3	1.6	PSI
PSI-D-470-2	470	200	125	150	150	3	1.6	PSI
PSI-D-470-3	470	300	125	150	150	3	1.6	PSI
PSI-D-470-4	470	400	125	150	150	3	1.6	PSI
PSI-D-470-5	470	500	125	150	150	3	1.6	PSI
PSI-D-470-6	470	600	125	150	150	3	1.6	PSI
PSI-D-470-7	470	700	125	150	150	3	1.6	PSI
PSI-D-470-8	470	800	125	150	150	3	1.6	PSI
PSI-D-470-9	470	900	125	150	150	3	1.6	PSI
PSI-D-470-10	470	1000	125	150	150	3	1.6	PSI
PSI-D-470-11	470	1100	125	150	150	3	1.6	PSI
PSI-D-470-12	470	1200	125	150	150	3	1.6	PSI
PSI-D-470-13	470	1300	125	150	150	3	1.6	PSI
PSI-E-500-1	500	100	125	150	150	3	1-3/4PF	PSI
PSI-E-500-2	500	200	125	150	150	3	1-3/4PF	PSI
PSI-E-500-3	500	300	125	150	150	3	1-3/4PF	PSI
PSI-E-500-4	500	400	125	150	150	3	1-3/4PF	PSI
PSI-E-500-5	500	500	125	150	150	3	1-3/4PF	PSI
PSI-E-500-6	500	600	125	150	150	3	1-3/4PF	PSI
PSI-E-500-7	500	700	125	150	150	3	1-3/4PF	PSI
PSI-E-500-8	500	800	125	150	150	3	1-3/4PF	PSI
PSI-E-500-9	500	900	125	150	150	3	1-3/4PF	PSI
PSI-E-500-10	500	1000	125	150	150	3	1-3/4PF	PSI
PSI-E-500-11	500	1100	125	150	150	3	1-3/4PF	PSI
PSI-E-500-12	500	1200	125	150	150	3	1-3/4PF	PSI
PSI-E-500-13	500	1300	125	150	150	3	1-3/4PF	PSI
PSI-E-500-14	500	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-500-1	500	100	125	150	150	3	1-3/4PF	PSI
PSI-F-500-2	500	200	125	150	150	3	1-3/4PF	PSI
PSI-F-500-3	500	300	125	150	150	3	1-3/4PF	PSI
PSI-F-500-4	500	400	125	150	150	3	1-3/4PF	PSI
PSI-F-500-5	500	500	125	150	150	3	1-3/4PF	PSI
PSI-F-500-6	500	600	125	150	150	3	1-3/4PF	PSI
PSI-F-500-7	500	700	125	150	150	3	1-3/4PF	PSI
PSI-F-500-8	500	800	125	150	150	3	1-3/4PF	PSI
PSI-F-500-9	500	900	125	150	150	3	1-3/4PF	PSI
PSI-F-500-10	500	1000	125	150	150	3	1-3/4PF	PSI
PSI-F-500-11	500	1100	125	150	150	3	1-3/4PF	PSI

TYPE NO.	MAXIMUM RATING				I _G F	V _G F	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (deg C)	TURN OFF TIME (μsec)	(ma)	(volts)		
					Maximum			
					Typical			
PSI-F-500-12	500	1200	125	150	150	3	1-3/4PF	PSI
PSI-F-500-13	500	1300	125	150	150	3	1-3/4PF	PSI
PSI-F-500-14	500	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-500-15	500	1500	125	150	150	3	1-3/4PF	PSI
PSI-F-500-16	500	1600	125	150	150	3	1-3/4PF	PSI
PSI-F-500-17	500	1700	125	150	150	3	1-3/4PF	PSI
PSI-F-500-18	500	1800	125	150	150	3	1-3/4PF	PSI
PSI-F-600-1	600	100	125	150	150	3	1-3/4PF	PSI
PSI-E-600-2	600	200	125	150	150	3	1-3/4PF	PSI
PSI-E-600-3	600	300	125	150	150	3	1-3/4PF	PSI
PSI-E-600-4	600	400	125	150	150	3	1-3/4PF	PSI
PSI-E-600-5	600	500	125	150	150	3	1-3/4PF	PSI
PSI-E-600-6	600	600	125	150	150	3	1-3/4PF	PSI
PSI-E-600-7	600	700	125	150	150	3	1-3/4PF	PSI
PSI-E-600-8	600	800	125	150	150	3	1-3/4PF	PSI
PSI-E-600-9	600	900	125	150	150	3	1-3/4PF	PSI
PSI-E-600-10	600	1000	125	150	150	3	1-3/4PF	PSI
PSI-E-600-11	600	1100	125	150	150	3	1-3/4PF	PSI
PSI-E-600-12	600	1200	125	150	150	3	1-3/4PF	PSI
PSI-E-600-13	600	1300	125	150	150	3	1-3/4PF	PSI
PSI-E-600-14	600	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-600-1	600	100	125	150	150	3	1-3/4PF	PSI
PSI-F-600-2	600	200	125	150	150	3	1-3/4PF	PSI
PSI-F-600-3	600	300	125	150	150	3	1-3/4PF	PSI
PSI-F-600-4	600	400	125	150	150	3	1-3/4PF	PSI
PSI-F-600-5	600	500	125	150	150	3	1-3/4PF	PSI
PSI-F-600-6	600	600	125	150	150	3	1-3/4PF	PSI
PSI-F-600-7	600	700	125	150	150	3	1-3/4PF	PSI
PSI-F-600-8	600	800	125	150	150	3	1-3/4PF	PSI
PSI-F-600-9	600	900	125	150	150	3	1-3/4PF	PSI
PSI-F-600-10	600	1000	125	150	150	3	1-3/4PF	PSI
PSI-F-600-11	600	1100	125	150	150	3	1-3/4PF	PSI
PSI-F-600-12	600	1200	125	150	150	3	1-3/4PF	PSI
PSI-F-600-13	600	1300	125	150	150	3	1-3/4PF	PSI
PSI-F-600-14	600	1400	125	150	150	3	1-3/4PF	PSI
PSI-F-600-15	600	1500	125	150	150	3	1-3/4PF	PSI
PSI-F-600-16	600	1600	125	150	150	3	1-3/4PF	PSI
PSI-F-600-17	600	1700	125	150	150	3	1-3/4PF	PSI
PSI-F-600-18	600	1800	125	150	150	3	1-3/4PF	PSI
PSI-G-750-1	750	100	125	150	250	3	1.93PF	PSI
PSI-G-750-2	750	200	125	150	250	3	1.93PF	PSI
PSI-G-750-3	750	300	125	150	250	3	1.93PF	PSI
PSI-G-750-4	750	400	125	150	250	3	1.93PF	PSI
PSI-G-750-5	750	500	125	150	250	3	1.93PF	PSI
PSI-G-750-6	750	600	125	150	250	3	1.93PF	PSI
PSI-G-750-7	750	700	125	150	250	3	1.93PF	PSI
PSI-G-750-8	750	800	125	150	250	3	1.93PF	PSI
PSI-G-750-9	750	900	125	150	250	3	1.93PF	PSI
PSI-G-750-10	750	1000	125	150	250	3	1.93PF	PSI
PSI-G-750-11	750	1100	125	150	250	3	1.93PF	PSI
PSI-G-750-12	750	1200	125	150	250	3	1.93PF	PSI
PSI-G-750-13	750	1300	125	150	250	3	1.93PF	PSI
PSI-G-750-14	750	1400	125	150	250	3	1.93PF	PSI
PSI-G-750-15	750	1500	125	150	250	3	1.93PF	PSI
PSI-G-750-16	750	1600	125	150	250	3	1.93PF	PSI
PSI-G-950-1	950	100	125	150	250	3	1.93PF	PSI
PSI-G-950-2	950	200	125	150	250	3	1.93PF	PSI
PSI-G-950-3	950	300	125	150	250	3	1.93PF	PSI
PSI-G-950-4	950	400	125	150	250	3	1.93PF	PSI

SCR's

PSI-G-950-5—SCRJ40

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN OFF TIME (μsec)				
					Maximum			
					Typical			
PSI-G-950-5	950	500	125	150	250	3	1.93PF	PSI
PSI-G-950-6	950	600	125	150	250	3	1.93PF	PSI
PSI-G-950-7	950	700	125	150	250	3	1.93PF	PSI
PSI-G-950-8	950	800	125	150	250	3	1.93PF	PSI
PSI-G-950-9	950	900	125	150	250	3	1.93PF	PSI
PSI-G-950-10	950	1000	125	150	250	3	1.93PF	PSI
PSI-G-950-11	950	1100	125	150	250	3	1.93PF	PSI
PSI-G-950-12	950	1200	125	150	250	3	1.93PF	PSI
PSI-G-950-13	950	1300	125	150	250	3	1.93PF	PSI
PSI-G-950-14	950	1400	125	150	250	3	1.93PF	PSI
PSI-G-950-15	950	1500	125	150	250	3	1.93PF	PSI
PSI-G-950-16	950	1600	125	150	250	3	1.93PF	PSI
SCR10A	1.7	50	150		15	2	DE	Smc
SCR11A	1.7	100	150		15	2	DE	Smc
SCR12A	1.7	200	150		15	2	DE	Smc
SCR13A	1.7	300	150		15	2	DE	Smc
SCR14A	1.7	400	150		15	2	DE	Smc
SCR15A	1.7	500	150		15	2	DE	Smc
SCR16A	1.7	600	150		15	2	DE	Smc
SCR17A	1.7	700	150		15	2	DE	Smc
SCR18A	1.7	800	150		15	2	DE	Smc
SCR30A	4	50	150		15	2	7/16	Smc
SCR31A	4	100	150		15	2	7/16	Smc
SCR32A	4	200	150		15	2	7/16	Smc
SCR33A	4	300	150		15	2	7/16	Smc
SCR34A	4	400	150		15	2	7/16	Smc
SCR35A	4	500	150		15	2	7/16	Smc
SCR36A	4	600	150		15	2	7/16	Smc
SCR37A	4	700	150	15	2	7/16	Smc	
SCR38A	4	800	150	15	2	7/16	Smc	
SCR50A	7	50	150	20	2	7/16	Smc	
SCR51A	7	100	150	20	2	7/16	Smc	
SCR52A	7	200	150	20	2	7/16	Smc	
SCR53A	7	300	150	20	2	7/16	Smc	
SCR54A	7	400	150	20	2	7/16	Smc	
SCR55A	7	500	150	20	2	7/16	Smc	
SCR56A	7	600	150	20	2	7/16	Smc	
SCR57A	7	700	150	20	2	7/16	Smc	
SCR58A	7	800	150	20	2	7/16	Smc	
SCR150	1.6	500	150	10	3	TO-5	Smc	
SCR160	1.6	600	150	10	3	TO-5	Smc	
SCR160A	35	50	150	25	2	TO-48	Smc	
SCR161A	35	100	150	25	2	TO-48	Smc	
SCR162A	35	200	150	25	2	TO-48	Smc	
SCR163A	35	300	150	25	2	TO-48	Smc	
SCR164A	35	400	150	25	2	TO-48	Smc	
SCR165A	35	500	150	25	2	TO-48	Smc	
SCR166A	35	600	150	25	2	TO-48	Smc	
SCR167A	35	700	150	25	2	TO-48	Smc	
SCR168A	35	800	150	25	2	TO-48	Smc	
SCR303	4	30	150	10	2	7/16	Smc	
SCR315	4	150	125	10	2	7/16	Smc	
SCR325	4	250	125	10	2	7/16	Smc	
SCR335	4	350	125	10	2	7/16	Smc	
SCR345	4	450	125	10	2	7/16	Smc	
SCR350	4	500	125	10	2	7/16	Smc	
SCR355	4	550	125	10	2	7/16	Smc	
SCR360	4	600	125	10	2	7/16	Smc	
SCR370	4	700	125	10	2	7/16	Smc	

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum			
					Typical			
SCR380	4	800	125		10	2	7/16	Smc
SCR535	7	350	125		15	2	7/16	Smc
SCR535A	7	350	150		15	2	7/16	Smc
SCR545	7	450	125		15	2	7/16	Smc
SCR545A	7	450	150		15	2	7/16	Smc
SCR550A	7	500	150		15	2	7/16	Smc
SCR555	7	550	125		15	2	7/16	Smc
SCR555A	7	550	150		15	2	7/16	Smc
SCR560A	7	600	150		15	2	7/16	Smc
SCR570	7	700	125		15	2	7/16	Smc
SCR570A	7	700	150		15	2	7/16	Smc
SCR580	7	800	125		15	2	7/16	Smc
SCR580A	7	600	150		15	2	7/16	Smc
SCR835	16	350	100		75	3.5	TO-48	Smc
SCR845	16	450	100		75	3.5	TO-48	Smc
SCR855	16	550	100		75	3.5	TO-48	Smc
SCR865	16	650	100		75	3.5	TO-48	Smc
SCR870	16	700	100		75	3.5	TO-48	Smc
SCR880	16	800	100		75	3.5	TO-48	Smc
SCR1635	35	350	125		40	3	9/16	Smc
SCR1635A	35	350	125		40	3	9/16	Smc
SCR1645	35	450	125		40	3	9/16	Smc
SCR1645A	35	450	125		40	3	9/16	Smc
SCR1655	35	550	125		40	3	9/16	Smc
SCR1655A	35	550	125		40	3	9/16	Smc
SCR1660A	35	600	125		40	3	9/16	Smc
SCR1670A	35	700	125		40	3	9/16	Smc
SCR1680A	35	800	125		40	3	9/16	Smc
SCR110A	1.7	50	150	6	15	2	3/8 DE	Smc
SCR111A	1.7	100	150	6	15	2	3/8 DE	Smc
SCR112A	1.7	200	150	6	15	2	3/8 DE	Smc
SCR113A	1.7	300	150	6	15	2	3/8 DE	Smc
SCR114A	1.7	400	150	6	15	2	3/8 DE	Smc
SCR115A	1.7	500	150	6	15	2	3/8 DE	Smc
SCR116A	1.7	600	150	6	15	2	3/8 DE	Smc
SCR117A	1.7	700	150	6	15	2	3/8 DE	Smc
SCR118A	1.7	800	150	6	15	2	3/8 DE	Smc
SCR130A	4	50	150	6	15	2	7/16	Smc
SCR131A	4	100	150	6	15	2	7/16	Smc
SCR132A	4	200	150	6	15	2	7/16	Smc
SCR133A	4	300	150	6	15	2	7/16	Smc
SCR134A	4	400	150	6	15	2	7/16	Smc
SCR135A	4	500	150	6	15	2	7/16	Smc
SCR136A	4	600	150	6	15	2	7/16	Smc
SCR137A	4	700	150	6	15	2	7/16	Smc
SCR138A	4	800	150	6	15	2	7/16	Smc
SCR150A	7	50	150	6	20	2	7/16	Smc
SCR151A	7	100	150	6	20	2	7/16	Smc
SCR152A	7	200	150	6	20	2	7/16	Smc
SCR153A	7	300	150	6	20	2	7/16	Smc
SCR154A	7	400	150	6	20	2	7/16	Smc
SCR155A	7	500	150	6	20	2	7/16	Smc
SCR156A	7	600	150	6	20	2	7/16	Smc
SCR157A	7	700	150	6	20	2	7/16	Smc
SCR158A	7	800	150	6	20	2	7/16	Smc
SCR160A	35	50	150	6	25	2	TO-48	Smc
SCR161A	35	100	150	6	25	2	TO-48	Smc
SCR162A	35	200	150	6	25	2	TO-48	Smc
SCR163A	35	300	150	6	25	2	TO-48	Smc

SCR's

SCRJ45—TT504

TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR	TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR	TYPE NO.	MAXIMUM RATING				I _{GF} (ma)	V _{GF} (volts)	DIM	MFR
	I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)						I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)						I _F RMS (amps)	PRV (volts)	OPER TEMP (degC)	TURN- OFF TIME (μsec)				
					Maximum									Maximum									Maximum			
	Typical				Typical					Typical				Typical												
SCRJ45	7	450	105		25	2.5	7/16	Smc	TCR65C	1.3	60	125		3	1	T0-5	Tns	TCR3505	5	350	125		20	3	7/16	Tns
SCRJ50	7	500	105		25	2.5	7/16	Smc	TCR105C	1.3	100	125		3	1	T0-5	Tns	TCR3510	12	350	125		40	1.4	T0-48	Tns
SCRJ55	7	550	105		25	2.5	7/16	Smc	TCR205C	1.3	200	125		3	1	T0-5	Tns	TCR3520	22	350	125		40	1.4	T0-48	Tns
SCRJ60	7	600	105		25	2.5	7/16	Smc	TCR305C	1	300			3	1	T0-5	Tns	TCR4005	5	400	125		20	3	7/16	Tns
SCRJ70	7	700	105		25	2.5	7/16	Smc	TCR405C	1	400			3	1	T0-5	Tns	TCR4010	12	400	125		40	1.4	T0-48	Tns
SCRJ80	7	800	105		25	2.5	7/16	Smc	TCR3	3	50	100		50	3	7/16	Tns	TCR4020	22	400	125		40	1.4	T0-48	Tns
SCRJL03	1	30	100		50	2	3/8 DE	Smc	TCR8	5	50	100		20	1.5	T0-64	Tns	TI40A0	4	50	100		50	5	7/16	TI
SCRJL05	1	50	100		50	2	3/8 DE	Smc	TCR13	3	100	100		50	3	7/16	Tns	TI40A1	4	100	100		50	5	7/16	TI
SCRJL10	1	100	100		50	2	3/8 DE	Smc	TCR18	5	100	100		20	1.5	T0-64	Tns	TI40A2	4	200	100		50	5	7/16	TI
SCRJL15	1	150	100		50	2	3/8 DE	Smc	TCR23	3	200	100		50	3	7/16	Tns	TI40A3	4	300	100		50	5	7/16	TI
SCRJL20	1	200	100		50	2	3/8 DE	Smc	TCR28	5	200	100		20	1.5	T0-64	Tns	TI40A4	4	400	100		50	5	7/16	TI
SCRJL25	1	250	100		50	2	3/8 DE	Smc	TCR33	3	300	100		50	3	7/16	Tns	TI145A0	0.75	50	100		50	5	T0-5	TI
SCRJL30	1	300	100		50	2	3/8 DE	Smc	TCR38	5	300	100		20	1.5	T0-64	Tns	TI145A1	0.75	100	100		50	5	T0-5	TI
SCRJL35	1	350	100		50	2	3/8 DE	Smc	TCR43	3	400	100		50	3	7/16	Tns	TI145A2	0.75	200	100		50	5	T0-5	TI
SCRJL40	1	400	100		50	2	3/8 DE	Smc	TCR48	5	400	100		20	1.5	T0-64	Tns	TI145A3	0.75	300	100		50	5	T0-5	TI
SCRJL45	1	450	100		50	2	3/8 DE	Smc	TCR50	5	50	100		5	1	7/16	Tns	TI145A4	0.75	400	100		50	5	T0-5	TI
SCRJL50	1	500	100		50	2	3/8 DE	Smc	TCR51	5	100	100		5	1	7/16	Tns	TI3037	25	50	125	10	44	1.6	T0-48	TI
SCRJL55	1	550	100		50	2	3/8 DE	Smc	TCR52	5	150	100		5	1	7/16	Tns	TI3038	25	100	125	10	44	1.6	T0-48	TI
SCRJL60	1	600	100		50	2	3/8 DE	Smc	TCR53	5	200	100		5	1	7/16	Tns	TI3039	25	200	125	10	44	1.6	T0-48	TI
SCRJL70	1	700	100		50	2	3/8 DE	Smc	TCR54	5	250	100		5	1	7/16	Tns	TI3040	25	300	125	10	44	1.6	T0-48	TI
SCRJL80	1	800	100		50	2	3/8 DE	Smc	TCR55	5	300	100		5	1	7/16	Tns	TI3041	25	400	125	10	44	1.6	T0-48	TI
SCRJL35	1.7	350	125		15	2	3/8 DE	Smc	TCR56	5	400	100		5	1	7/16	Tns	TI3042	25	500	125	10	44	1.6	T0-48	TI
SCRJL40	1.7	400	125		15	2	3/8 DE	Smc	TCR70	5	50	100		15	1.5	7/16	Tns	TIC20	10	200			50		1/2 PF	TI
SCRJL45	1.7	450	125		15	2	3/8 DE	Smc	TCR71	5	100	100		15	1.5	7/16	Tns	TIC21	10	300			50		1/2 PF	TI
SCRJL50	1.7	500	125		15	2	3/8 DE	Smc	TCR72	5	150	100		15	1.5	7/16	Tns	TIC22	10	200			50		9/16	TI
SCRJL55	1.7	550	125		15	2	3/8 DE	Smc	TCR73	5	200	100		15	1.5	7/16	Tns	TIC23	10	300			50		9/16	TI
SCRJL60	1.7	600	125		15	2	3/8 DE	Smc	TCR74	5	250	100		15	1.5	7/16	Tns	TIC44	0.6	30	125		0.2	0.8	Spec	TI
SCRJL70	1.7	700	125		15	2	3/8 DE	Smc	TCR75	5	300	100		15	1.5	7/16	Tns	TIC45	0.6	60	125		0.2	0.8	Spec	TI
SCRJL80	1.7	800	125		15	2	3/8 DE	Smc	TCR76	5	400	100		15	1.5	7/16	Tns	TIC46	0.6	100	125		0.2	0.8	Spec	TI
SE9200	10	100	125		25	1.2	T0-66	Fch	TCR96	3.2	600	100		15	1.5	T0-66	Tns	TIC47	0.6	200	125		0.2	0.8	Spec	TI
SE9201	10	200	125		25	1.2	T0-66	Fch	TCR505	5	50	125		20	3	7/16	Tns	TPS20	0.25	20	100		1	1	T0-18	Tns
SE9202	10	300	125		25	1.2	T0-66	Fch	TCR510	12	50	125		40	1.4	T0-48	Tns	TPS50	0.25	50	100		1	1	T0-18	Tns
SE9203	10	400	125		25	1.2	T0-66	Fch	TCR520	22	50	125		40	1.4	T0-48	Tns	TPS100	0.25	100	100		1	1	T0-18	Tns
SE9205	3.8	100	125		25	1.2	T0-39	Fch	TCR730	5	50	100		15	1.5	T0-66	Tns	TPS150	0.25	150	100		1	1	T0-18	Tns
SE9206	3.8	200	125		25	1.2	T0-39	Fch	TCR731	5	100	100		15	1.5	T0-66	Tns	TPS200	0.25	200	100		1	1	T0-18	Tns
SE9207	3.8	300	125		25	1.2	T0-39	Fch	TCR732	5	200	100		15	1.5	T0-66	Tns	TSW20C	0.2	25			0.4	1	T0-46	Tns
SE9208	3.8	400	125		25	1.2	T0-39	Fch	TCR733	5	300	100		15	1.5	T0-66	Tns	TSW21C	0.2	50			0.4	1	T0-46	Tns
SE9220	5	50	125		0.4	0.8	T0-66	Fch	TCR734	5	400	100		15	1.5	T0-66	Tns	TSW22C	0.2	100			0.4	1	T0-46	Tns
SE9221	5	100	125		0.4	0.8	T0-66	Fch	TCR742	5	50	125		15	1.5	T0-66	Tns	TSW23C	0.2	200			0.4	1	T0-46	Tns
SE9222	5	200	125		0.4	0.8	T0-66	Fch	TCR743	5	100	125		15	1.5	T0-66	Tns	TSW30	0.05	30	125		1	1	T0-5	Tns
SE9223	5	300	125		0.4	0.8	T0-66	Fch	TCR744	5	200	125		15	1.5	T0-66	Tns	TSW30C	0.26	30	150		0.4	1	T0-18	Tns
SE9225	3	50	125		0.4	0.8	T0-39	Fch	TCR745	5	200	125		15	1.5	T0-66	Tns	TSW31	0.05	30	125		0.5	1	T0-18	Tns
SE9226	3	100	125		0.4	0.8	T0-39	Fch	TCR746	5	300	125		15	1.5	T0-66	Tns	TSW315	0.25	30	125		0.02	0.8	T0-18	Tns
SE9227	3	200	125		0.4	0.8	T0-39	Fch	TCR747	5	300	125		15	1.5	0-66	Tns	TSW60	0.05	60	125		1	1	T0-5	Tns
SE9228	3	300	125		0.4	0.8	T0-39	Fch	TCR748	5	400	125		15	1.5	T0-66	Tns	TSW60C	0.26	60	150		0.4	1	T0-18	Tns
SE9230	10	100	125		1	0.8	T0-66	Fch	TCR1005	5	100	125		20	3	7/16	Tns	TSW61	0.05	60	125		0.5	1	T0-18	Tns
SE9231	10	200	125		1	0.8	T0-66	Fch	TCR1010	12	100	125		40	1.4	T0-48	Tns	TSW615	0.25	60	125		0.02	0.8	T0-18	Tns
SE9232	10	300	125</																							

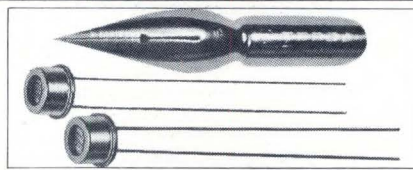
SILICON CONTROLLED RECTIFIER MANUFACTURERS

EIA-type silicon controlled rectifiers are listed in numerical order. Each is followed by manufacturers cur-

rently supplying the device. Manufacturers' abbreviations can be found on pp. 22-27.

2N681 GE IRC IRec Mot NE RCA Smc TI Tns Wst	2N690 GE IRC IRec NE RCA Smc Ins Wst	2N950 SSP Tns	2N1771A GE IRC Smc TI Tns	2N1800 IRec NE Wst Tns	2N1847A IRec Mot RCA Tns	2N1877 Tns	2N1935 GE Smc	2N2326 Cen Fch GE IRC Mot Smc	2N2619 IRec Smc	2N3097 IRec	2N3360 Wst
2N681A Smc TI Tns	2N691 GE IRec NE Smc Wst	2N1595 Cen Fch GE IRC Mot Smc	2N1772 GE IRC IRec Smc TI Tns	2N1802 IRec NE Wst	2N1847B TI Tns	2N1878 SSP Tns	2N2009 Smc SSP Tns	2N2326A Cen GE SSP Tns	2N2653 TI	2N3098 IRec	2N3361 Wst
2N682 GE IRC IRec Mot NE RCA Smc TI Tns Wst	2N692 GE IRec NE Smc Wst	2N1597 Cen Fch GE IRC Mot Smc	2N1772A GE IRec Smc TI Tns	2N1803 IRec NE Wst	2N1848 GE IRC IRec Mot NE Smc	2N1878A Tns	2N2010 Smc SSP Tns	2N2327 Cen Fch GE IRC Smc SSP Tns	2N2679 SSP Tns	2N3099 IRec	2N3362 Wst
2N682A Smc TI Tns	2N696 Tns	2N1596 Cen Fch GE IRC Mot Smc	2N1773 GE IRC IRec Smc TI Tns	2N1804 IRec Wst	2N1848A IRec Mot RCA Tns Wst	2N1879 Tns	2N2011 Smc SSP Tns	2N2327A GE SSP Tns	2N2680 SSP Tns	2N3100 IRec	2N3363 Wst
2N683 GE IRC IRec Mot NE RCA Smc TI Tns Wst	2N697 Tns	2N1597A Cen Fch Tns	2N1773A GE IRec Smc TI Tns	2N1805 IRec Syn Wst	2N1848B TI Tns	2N1880 SSP Tns	2N2012 Smc SSP Tns	2N2328 Cen Fch GE IRC Smc SSP Tns	2N2681 SSP Tns	2N3101 IRec	2N3364 Wst
2N683A Smc TI Tns	2N698 Cen GE SSP TI Tns	2N1598 Cen Fch GE IRC Mot Smc	2N1774 GE IRC IRec Smc TI Tns	2N1806 IRec Syn Wst	2N1849 GE IRC IRec Mot NE Smc	2N1880A Tns	2N2013 Smc SSP Tns	2N2328A GE SSP Tns	2N2682 SSP Tns	2N3102 IRec	2N3365 Fch RCA
2N684 GE IRC IRec Mot NE RCA Smc TI Tns Wst	2N699 Cen GE SSP TI Tns	2N1599 Cen Fch GE IRC Mot Smc	2N1774A GE IRec Smc TI Tns	2N1807 IRec Syn	2N1849A IRec Mot RCA Tns Wst	2N1881 Tns	2N2014 Smc SSP Tns	2N2329 IRC Smc SSP Tns	2N2683 SSP Tns	2N3103 IRec	2N3366 RCA
2N684A Smc TI Tns	2N700 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1775 GE IRC IRec Smc TI Tns	2N1807A IRec Syn	2N1849B IRec Mot RCA TI Tns	2N1882 SSP Tns	2N2015 Smc SSP Tns	2N2329A GE IRec NE Wst	2N2684 SSP Tns	2N3104 IRec	2N3367 RCA
2N685 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N701 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1775A GE IRec Smc TI Tns	2N1808 IRec Syn	2N1850 GE IRC IRec Mot NE Smc	2N1883 SSP Tns	2N2016 Smc SSP Tns	2N2330 Cen Fch GE IRC Smc SSP Tns	2N2685 SSP Tns	2N3105 IRec	2N3368 SSP TI Tns
2N685A Smc TI Tns	2N702 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1776 GE IRC IRec Smc TI Tns	2N1809 IRec Syn	2N1850A IRec Mot RCA Tns Wst	2N1884 SSP Tns	2N2017 Smc SSP Tns	2N2331 Cen Fch GE IRC Smc SSP Tns	2N2686 SSP Tns	2N3106 IRec	2N3369 SSP TI Tns
2N686 GE IRC IRec Mot NE RCA Smc Syn TI Tns	2N703 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1777 GE IRC IRec Smc TI Tns	2N1810 IRec Syn	2N1850B IRec Mot RCA TI Tns	2N1885 SSP Tns	2N2018 Smc SSP Tns	2N2332 Cen Fch GE IRC Smc SSP Tns	2N2687 SSP Tns	2N3107 IRec	2N3370 SSP TI Tns
2N686A Smc TI Tns	2N704 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1777A GE IRec Smc TI Tns	2N1811 IRec Syn	2N1851 Smc Tns	2N1886 SSP Tns	2N2019 Smc SSP Tns	2N2333 Cen Fch GE IRC Smc SSP Tns	2N2688 SSP Tns	2N3108 IRec	2N3371 SSP TI Tns
2N687 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N705 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1778 GE IRC IRec Smc TI Tns	2N1812 IRec Syn	2N1851A Smc Tns	2N1887 SSP Tns	2N2020 Smc SSP Tns	2N2334 Cen Fch GE IRC Smc SSP Tns	2N2689 SSP Tns	2N3109 IRec	2N3372 SSP TI Tns
2N687A Smc TI Tns	2N706 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1778A GE IRec Smc TI Tns	2N1813 IRec Syn	2N1852 Smc Tns	2N1888 SSP Tns	2N2021 Smc SSP Tns	2N2335 Cen Fch GE IRC Smc SSP Tns	2N2690 SSP Tns	2N3110 IRec	2N3373 SSP TI Tns
2N688 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N707 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1779 GE IRC IRec Smc TI Tns	2N1814 IRec Syn	2N1853 Smc Tns	2N1889 SSP Tns	2N2022 Smc SSP Tns	2N2336 Cen Fch GE IRC Smc SSP Tns	2N2691 SSP Tns	2N3111 IRec	2N3374 SSP TI Tns
2N688A Smc TI Tns	2N708 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1780 GE IRC IRec Smc TI Tns	2N1815 IRec Syn	2N1854 Smc Tns	2N1890 SSP Tns	2N2023 Smc SSP Tns	2N2337 Cen Fch GE IRC Smc SSP Tns	2N2692 SSP Tns	2N3112 IRec	2N3375 SSP TI Tns
2N689 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N709 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1781 GE IRC IRec Smc TI Tns	2N1816 IRec Syn	2N1855 Smc Tns	2N1891 SSP Tns	2N2024 Smc SSP Tns	2N2338 Cen Fch GE IRC Smc SSP Tns	2N2693 SSP Tns	2N3113 IRec	2N3376 SSP TI Tns
2N689A Smc TI Tns	2N710 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1782 GE IRC IRec Smc TI Tns	2N1817 IRec Syn	2N1856 Smc Tns	2N1892 SSP Tns	2N2025 Smc SSP Tns	2N2339 Cen Fch GE IRC Smc SSP Tns	2N2694 SSP Tns	2N3114 IRec	2N3377 SSP TI Tns
2N690 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N711 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1783 GE IRC IRec Smc TI Tns	2N1818 IRec Syn	2N1857 Smc Tns	2N1893 SSP Tns	2N2026 Smc SSP Tns	2N2340 Cen Fch GE IRC Smc SSP Tns	2N2695 SSP Tns	2N3115 IRec	2N3378 SSP TI Tns
2N691 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N712 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1784 GE IRC IRec Smc TI Tns	2N1819 IRec Syn	2N1858 Smc Tns	2N1894 SSP Tns	2N2027 Smc SSP Tns	2N2341 Cen Fch GE IRC Smc SSP Tns	2N2696 SSP Tns	2N3116 IRec	2N3379 SSP TI Tns
2N692 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N713 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1785 GE IRC IRec Smc TI Tns	2N1820 IRec Syn	2N1859 Smc Tns	2N1895 SSP Tns	2N2028 Smc SSP Tns	2N2342 Cen Fch GE IRC Smc SSP Tns	2N2697 SSP Tns	2N3117 IRec	2N3380 SSP TI Tns
2N693 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N714 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1786 GE IRC IRec Smc TI Tns	2N1821 IRec Syn	2N1860 Smc Tns	2N1896 SSP Tns	2N2029 Smc SSP Tns	2N2343 Cen Fch GE IRC Smc SSP Tns	2N2698 SSP Tns	2N3118 IRec	2N3381 SSP TI Tns
2N694 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N715 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1787 GE IRC IRec Smc TI Tns	2N1822 IRec Syn	2N1861 Smc Tns	2N1897 SSP Tns	2N2030 Smc SSP Tns	2N2344 Cen Fch GE IRC Smc SSP Tns	2N2699 SSP Tns	2N3119 IRec	2N3382 SSP TI Tns
2N695 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N716 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1788 GE IRC IRec Smc TI Tns	2N1823 IRec Syn	2N1862 Smc Tns	2N1898 SSP Tns	2N2031 Smc SSP Tns	2N2345 Cen Fch GE IRC Smc SSP Tns	2N2700 SSP Tns	2N3120 IRec	2N3383 SSP TI Tns
2N696 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N717 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1789 GE IRC IRec Smc TI Tns	2N1824 IRec Syn	2N1863 Smc Tns	2N1899 SSP Tns	2N2032 Smc SSP Tns	2N2346 Cen Fch GE IRC Smc SSP Tns	2N2701 SSP Tns	2N3121 IRec	2N3384 SSP TI Tns
2N697 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N718 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1790 GE IRC IRec Smc TI Tns	2N1825 IRec Syn	2N1864 Smc Tns	2N1900 SSP Tns	2N2033 Smc SSP Tns	2N2347 Cen Fch GE IRC Smc SSP Tns	2N2702 SSP Tns	2N3122 IRec	2N3385 SSP TI Tns
2N698 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N719 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1791 GE IRC IRec Smc TI Tns	2N1826 IRec Syn	2N1865 Smc Tns	2N1901 SSP Tns	2N2034 Smc SSP Tns	2N2348 Cen Fch GE IRC Smc SSP Tns	2N2703 SSP Tns	2N3123 IRec	2N3386 SSP TI Tns
2N699 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N720 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1792 GE IRC IRec Smc TI Tns	2N1827 IRec Syn	2N1866 Smc Tns	2N1902 SSP Tns	2N2035 Smc SSP Tns	2N2349 Cen Fch GE IRC Smc SSP Tns	2N2704 SSP Tns	2N3124 IRec	2N3387 SSP TI Tns
2N700 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N721 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1793 GE IRC IRec Smc TI Tns	2N1828 IRec Syn	2N1867 Smc Tns	2N1903 SSP Tns	2N2036 Smc SSP Tns	2N2350 Cen Fch GE IRC Smc SSP Tns	2N2705 SSP Tns	2N3125 IRec	2N3388 SSP TI Tns
2N701 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N722 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1794 GE IRC IRec Smc TI Tns	2N1829 IRec Syn	2N1868 Smc Tns	2N1904 SSP Tns	2N2037 Smc SSP Tns	2N2351 Cen Fch GE IRC Smc SSP Tns	2N2706 SSP Tns	2N3126 IRec	2N3389 SSP TI Tns
2N702 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N723 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1795 GE IRC IRec Smc TI Tns	2N1830 IRec Syn	2N1869 Smc Tns	2N1905 SSP Tns	2N2038 Smc SSP Tns	2N2352 Cen Fch GE IRC Smc SSP Tns	2N2707 SSP Tns	2N3127 IRec	2N3390 SSP TI Tns
2N703 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N724 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1796 GE IRC IRec Smc TI Tns	2N1831 IRec Syn	2N1870 Smc Tns	2N1906 SSP Tns	2N2039 Smc SSP Tns	2N2353 Cen Fch GE IRC Smc SSP Tns	2N2708 SSP Tns	2N3128 IRec	2N3391 SSP TI Tns
2N704 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N725 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1797 GE IRC IRec Smc TI Tns	2N1832 IRec Syn	2N1871 Smc Tns	2N1907 SSP Tns	2N2040 Smc SSP Tns	2N2354 Cen Fch GE IRC Smc SSP Tns	2N2709 SSP Tns	2N3129 IRec	2N3392 SSP TI Tns
2N705 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N726 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1798 GE IRC IRec Smc TI Tns	2N1833 IRec Syn	2N1872 Smc Tns	2N1908 SSP Tns	2N2041 Smc SSP Tns	2N2355 Cen Fch GE IRC Smc SSP Tns	2N2710 SSP Tns	2N3130 IRec	2N3393 SSP TI Tns
2N706 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N727 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1799 GE IRC IRec Smc TI Tns	2N1834 IRec Syn	2N1873 Smc Tns	2N1909 SSP Tns	2N2042 Smc SSP Tns	2N2356 Cen Fch GE IRC Smc SSP Tns	2N2711 SSP Tns	2N3131 IRec	2N3394 SSP TI Tns
2N707 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N728 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1800 GE IRC IRec Smc TI Tns	2N1835 IRec Syn	2N1874 Smc Tns	2N1910 SSP Tns	2N2043 Smc SSP Tns	2N2357 Cen Fch GE IRC Smc SSP Tns	2N2712 SSP Tns	2N3132 IRec	2N3395 SSP TI Tns
2N708 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N729 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1801 GE IRC IRec Smc TI Tns	2N1836 IRec Syn	2N1875 Smc Tns	2N1911 SSP Tns	2N2044 Smc SSP Tns	2N2358 Cen Fch GE IRC Smc SSP Tns	2N2713 SSP Tns	2N3133 IRec	2N3396 SSP TI Tns
2N709 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N730 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1802 GE IRC IRec Smc TI Tns	2N1837 IRec Syn	2N1876 Smc Tns	2N1912 SSP Tns	2N2045 Smc SSP Tns	2N2359 Cen Fch GE IRC Smc SSP Tns	2N2714 SSP Tns	2N3134 IRec	2N3397 SSP TI Tns
2N710 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N731 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1803 GE IRC IRec Smc TI Tns	2N1838 IRec Syn	2N1877 Smc Tns	2N1913 SSP Tns	2N2046 Smc SSP Tns	2N2360 Cen Fch GE IRC Smc SSP Tns	2N2715 SSP Tns	2N3135 IRec	2N3398 SSP TI Tns
2N711 GE IRC IRec Mot NE RCA Smc Syn TI Tns Wst	2N732 Cen GE SSP TI Tns	2N1599A Cen Fch Tns	2N1804 GE IRC IRec Smc TI Tns	2N1839 IRec Syn	2N1878 Smc Tns	2N1914 SSP Tns	2N2047 Smc SSP Tns	2N2361 Cen Fch GE IRC Smc SSP Tns			

NEW!



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MPY-5H79

Moririca

CdS photo-conductive cells...

Widely utilized in various industries with its high stability and power dissipation, despite of its compact size.

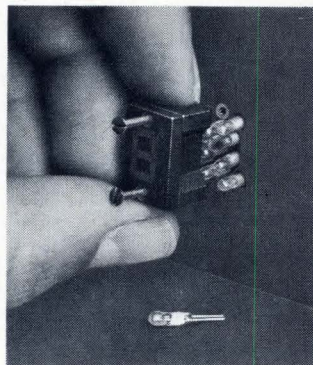
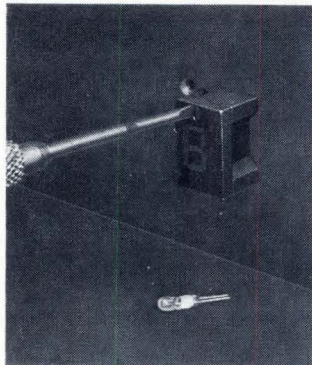
SPECIFICATIONS:

- Light resistance (at 10 Lx, 2850°K)..... 100~200KΩ
- Dark resistance (after 10 sec.) (Min.) 50MΩ
- Power dissipation (at 25°C): (continuous)..... 70mW
(demand)..... 120mW
- Falling rate (Min.)..... 400KΩ/100m sec.
- Maximum voltage..... 200V AC, DC.
- Spectral peak response..... 6000Å
- Ambient temperature range..... -30°~70°C

MORI PHYSICS & CHEMISTRY LABORATORY CO., LTD.

205 Tozuka-machi, Tozuka-ku, Yokohama, Japan. Cable Add: MORIRICA YOKOHAMA

Circle No. 76 on Reader Service Card for more information.

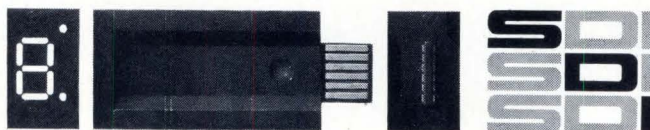


FRONT ACCESS READOUT DISPLAY

You don't have to pull the panel when you relamp with the new SDI Mono-bit readout, just loosen two screws — total maintenance time, one minute!

Front relampability is just one of the features that makes the Mono-bit today's outstanding advancement in illuminated presentation of digital information. A seven-segmented bar design, the Mono-bit displays all characters both numerically and alphabetically in the same plane assuring wide viewing angles and perfect visibility under all conditions.

Shown in its actual size below, this new miniaturized digital readout is also available in a complete electronic package. For details write Symbolic Displays Inc., 1188 North Batavia Street, Orange, California 92667 or call (714) 633-8580.



Circle No. 77 on Reader Service Card for more information.

SCR's (Cont'd)

2N3873 RCA	2N4145 Tns	2N4178 Mot	2N4217 Fch Tns	2N4368 Wst
2N3884 Wst	2N4146 Tns	2N4179 Mot	2N4218 Fch Tns	2N4371 Wst
2N3885 Wst	2N4147 Tns	2N4180 Mot	2N4219 Tns	2N4372 Wst
2N3886 Wst	2N4148 Tns	2N4181 Mot	2N4316 Fch	2N4373 Wst
2N3887 Wst	2N4149 Tns	2N4182 Mot	2N4317 Fch	2N4374 Wst
2N3888 Wst	2N4151 Mot	2N4183 Mot	2N4318 Fch	2N4375 Wst
2N3889 Wst	2N4152 Mot	2N4184 Mot	2N4319 Fch	2N4376 Wst
2N3890 Wst	2N4153 Mot	2N4185 Mot	2N4320 Tns	2N4377 Wst
2N3891 Wst	2N4154 Mot	2N4186 Mot	2N4321 Tns	2N4378 Wst
2N3892 Wst	2N4155 Mot	2N4187 Mot	2N4322 Tns	2N4441 Mot
2N3893 Wst	2N4156 Mot	2N4188 Mot	2N4323 Tns	2N4442 Mot
2N3894 Wst	2N4157 Mot	2N4189 Mot	2N4324 Tns	2N4443 Mot
2N3895 Wst	2N4158 Mot	2N4190 Mot	2N4325 Tns	2N4444 Mot
2N3896 RCA	2N4159 Mot	2N4191 Mot	2N4326 Tns	2N5060 Mot
2N3897 RCA	2N4160 Mot	2N4192 Mot	2N4327 Tns	2N5061 Mot
2N3898 RCA	2N4161 Mot	2N4193 Mot	2N4328 Tns	2N5062 Mot
2N3899 RCA	2N4162 Mot	2N4194 Mot	2N4329 Tns	2N5063 Mot
2N3936 TI	2N4163 Mot	2N4195 Mot	2N4330 Tns	2N5164 Mot
2N3937 TI	2N4164 Mot	2N4196 Mot	2N4331 Tns	2N5165 Mot
2N3938 TI	2N4165 Mot	2N4197 Mot	2N4332 Tns	2N5166 Mot
2N3939 TI	2N4166 Mot	2N4198 Mot	2N4333 Tns	2N5167 Mot
2N3940 TI	2N4167 Mot	2N4199 Mot Tns	2N4334 Tns	2N5168 Mot
2N4096 Fch	2N4168 Mot	2N4200 Mot Tns	2N4335 Tns	2N5169 Mot
2N4097 Fch Tns	2N4169 Mot	2N4201 Mot Tns	2N4336 Tns	2N5170 Mot
2N4098 Fch Tns	2N4170 Mot	2N4202 Mot Tns	2N4337 Tns	2N5171 Mot
2N4101 RCA	2N4171 Mot	2N4203 Mot	2N4361 Syn Wst	2N5257 IRec
2N4102 RCA	2N4172 Mot	2N4204 Mot	2N4362 Syn Wst	2N5258 IRec
2N4103 RCA	2N4173 Mot	2N4212 Fch Mot Tns	2N4363 Syn Wst	2N5259 IRec
2N4108 Fch Tns	2N4174 Mot	2N4213 Fch Mot Tns	2N4364 Syn Wst	2N5260 IRec
2N4109 Fch Tns	2N4175 Mot	2N4214 Fch Mot Tns	2N4365 Syn Wst	2N5273 TI
2N4110 Fch Tns	2N4176 Mot	2N4215 Fch Mot Tns	2N4366 Syn Wst	2N5274 TI
2N4144 Tns	2N4177 Mot	2N4216 Fch Mot Tns	2N4367 Syn Wst	2N5275 TI



Cleaning BIG parts
like this
can present
BIG problems...



but here is an effective solution.

Aerospace hardware that comes in contact with liquid oxygen and rocket fuels must be absolutely free of contaminants. Aerojet General Corporation, Propulsion Division, Sacramento, California, a major contractor for most of America's space programs, had the problem of achieving this absolute cleanliness in an efficient and economical way. Union Carbide provided the solution in two steps.

The required degree of cleanliness wasn't hard to attain. Union Carbide's UCON Solvent 113-LR1 was chosen to do the job in a 1360-gallon ultrasonic cleaner-vapor degreaser. It removes contamination quickly and thoroughly, dries fast, and contains less than 1 ppm of nonvolatile residue. It is nonflammable, relatively nontoxic, chemically stable, and reclaimable by simple distillation. It meets NASA MSFC Specification 237A.

Efficiency and economy were harder to achieve. A cleaner with a chamber 6½ feet square and 5 feet deep requires a lot of solvent—and a lot of solvent handling. Union Carbide designed, engineered, and installed a network of three bulk storage tanks to replace the original system of drum handling, storage, and disposal. This saved paperwork and labor, reduced the amount of materials handling equipment needed. Solvent now is always available with a simple turn of a valve.

For more information about how Union Carbide can help you with your critical cleaning and solvent-handling problems, contact the Union Carbide office nearest you, or Mr. R. J. Berta, Union Carbide Corporation, 270 Park Avenue, New York, New York 10017.



UCON® SOLVENTS

ZENER REGULATOR DIODES

Semiconductor regulator devices are listed in order of ascending voltage and separated into categories by power for ready reference. The specific wattage categories are 1, 10 and 50w ratings supplemented by the general categories of milliwatt and between 1 and 10w. Manufacturers can be determined by referring to the zener diode manufacturers' chart, p. 196. To locate

a particular device, refer to the zener diode cross-reference, p. 192. This chart provides a numerical listing of both zener diodes and temperature-compensated reference diodes. Included in the cross-reference are both the power dissipation and the breakdown voltage for each item. Data for the temperature-compensated reference diodes are presented in a separate locator chart.

KEY

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	Type NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
BREAKDOWN VOLTAGE Manufacturers' specified break-down voltage at a particular current. Limits are given in terms of percent of nominal or by allowable voltage extremes.								NOTES (1) An A suffix indicates a 5% Zener voltage tolerance. (2) An A suffix indicates a 5% Zener voltage tolerance and a B suffix indicates a 1% tolerance. (3) An A suffix indicates a 10% Zener voltage tolerance and a B suffix indicates a 5% tolerance. (4) When a 5% tolerance is required, specify a particular breakdown voltage to 0.1v within the normal breakdown range. (5) When a 1% tolerance is required, specify any voltage to 0.1v between 2.5 and 7.0v. (6) Diode is a double-anode type. It exhibits breakdown characteristics in both directions. (7) The military specification is applicable only to the version with the $\pm 5\%$ breakdown voltage tolerance. (8) Top terminal is positive with respect to stud. If reverse polarity is desired, add the suffix R to the part number.
$Z_z @ I_z$ —Dynamic impedance, usually taken at I_z ma d-c with a-c equal to 10 percent of I_z superimposed.								
DISS.—Maximum allowable dissipation in watts at 25C.								
DIM.— Case types refer to case drawings on page 143. These case sizes are only approximate, and specification sheets should be consulted for exact size and configuration.								
TYPE NO. — Diodes are listed by EIA part number with an asterisk added when the part conforms to a military specification or a military version is available.								

MILLIWATT

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
0.6	0.62	10%	1.0	60/1.0	0.5	C1	1N912	1
	0.62	10%	1.0	60/1.0	0.5	C1	1N913	1
	0.65	10%	1	40/1	0.4	C1	1N4362	
		0.71	1.0		0.4	C1	1N4453	
	0.77		50	2.5/50	0.25	C1	1N3896	
	1.15	2%	10	20/10	0.34	C2	1N3774	
		1.41	1.0		0.4	C1	1N4156	
	1.5	10%	50	10/50	0.5	C9	1N3392	6
	1.50		30	5.0/30	0.25	C1	1N3897	
	1.8	10%	50	10/50	0.5	C9	1N3393	6
1.21	1.8	5%	0.25	1200/0.25	0.25	C1	1N4614	
	1.8	5%	0.05		0.25	C1	1N4678	
	1.85	20%	20			C6	1N370	
		2.05	1.0		0.4	C1	1N4157	
	2.0	5%	0.25	1250/0.25	0.25	C1	1N4615	
	2.0	5%	0.05		0.25	C1	1N4679	
	2.10		20	10/20	0.25	C1	1N3898	
	2.2	10%	5	60/10	0.25	C1	1N3477	1
	2.2	10%	50	10/50	0.5	C9	1N3394	6
	2.2	5%	0.25	1300/0.25	0.25	C1	1N4616	
1.85	2.2	5%	0.05		0.25	C1	1N4680	
	2.25	2%	10	30/10	0.4	C2	1N3198	
	2.35	15%	20			C6	1N371	
	2.4	5%	10	60/10	0.25	C1	1N4360	1
	2.4	10%	20	30/20	0.4	C1	1N4370	1
	2.4	5%	0.25	1400/0.25	0.25	C1	1N4617	
	2.4	5%	0.05		0.25	C1	1N4681	
	2.4	10%	20	30/20	0.5	C1	1N5221	(3)
	2.5	10%	20	30/20	0.5	C1	1N5222	(3)
	2.0	3.2	5	60/10	0.2	C9	1N465	2, 4, 5
2.0	2.0	3.2	5	60/10	0.25	C1	1N702	1
	2.7	10%	50	20/50	0.5	C9	1N3395	6
	2.7	10%	20	30/20	0.4	C1	1N4371	1
	2.7	5%	0.25	1500/0.25	0.25	C1	1N4618	
	2.7	5%	0.05		0.25	C1	1N4682	
	2.7	10%	20	30/20	0.5	C1	1N5223	(3)
	2.8	10%	20	30/20	0.5	C1	1N5224	(3)
	2.9	15%	15			C6	1N372	
	3.0	10%	20	29/20	0.4	C1	1N4372	1
	3.0	5%	0.25	1600/0.25	0.25	C1	1N4619	
3.0	3.0	5%	0.05		0.25	C1	1N4683	
	3.0	10%	20	29/20	0.5	C1	1N5225	(3)

(Continued)

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
3.0	3.3	10%	20	28/20	0.4	C1	1N746*	1, 7
	3.3	10%	30	20/30	0.5	C9	1N3396	6
	3.3	5%	20	24/20	0.4	C1	1N3506	
	3.3	5%	0.25	1650/0.25	0.25	C1	1N4620	
	3.3	5%	0.05		0.25	C1	1N4684	
	3.3	10%	20	28/20	0.5	C1	1N5226	(3)
	3.45	5%	5	65/5	0.5	C1	1N4535	(6)
	3.0		3.9	55/10	0.2	C9	1N466	2, 4, 5
	3.0		3.9	65/10	0.2	C9	1N471	2, 6
	3.0		3.9	55/10	0.25	C1	1N703	1
3.0	3.5	10%	10			C6	1N373	
	3.6	10%	20	24/20	0.5	C1	1N5227	(3)
	3.6	10%	20	24/20	0.4	C1	1N747*	1, 7
	3.6	5%	20	22/20	0.4	C1	1N3507	
	3.6	5%	0.25	1700/0.25	0.25	C1	1N4621	
	3.6	5%	0.05		0.25	C1	1N4685	
	3.9	10%	35	14/35	0.75	T1	1N1507	1
	3.9	10%	20	23/20	0.4	C1	1N748*	1, 7
	3.9	10%	30	20/30	0.5	C9	1N3398	6
	3.9	5%	20	20/20	0.4	C1	1N3508	
3.6	3.9	5%	0.25	1650/0.25	0.25	C1	1N4622	
	3.9	5%	0.05		0.25	C1	1N4686	
	3.9	10%	20	23/20	0.5	C1	1N5228	(3)
	3.6		4.3	5 11/10	0.25	C5	1N1927	1
	3.6		4.3	5 11/10	0.4	C5	1N1954	1
	3.6		4.3	5 11/10	0.15	C9	1N1981	1
	4.1	10%	5	20/5		C6	1N374	
	4.1	5%	5	17.5/5		C6	1N375	
	3.7		4.5	5 45/10	0.2	C9	1N467	2, 4, 5
	3.7		4.5	5 60/10	0.2	C9	1N472	2, 6
3.7	3.7		4.5	5 45/10	0.25	C1	1N704	1
	4.3	10%	20	22/20	0.4	C1	1N749*	1, 7
	4.3	5%	20	18/20	0.4	C1	1N3509	
	4.3	5%	0.25	1600/0.25	0.25	C1	1N4623	
	4.3	5%	0.05		0.25	C1	1N4687	
	4.5	5%	10	40/10	0.25	C1	1N761-1	
	4.5	5%	10	55/10	0.75	T1	1N2032-1	
	4.7	5%	20	16/20	0.4	T1	1N674*	
	4.7	10%	20	19/20	0.4	C1	1N750*	1, 7
	4.7	10%	30	12/30	0.75	T1	1N1508	1
4.3	4.3		5.1	5 10/10	0.25	C5	1N1928	1
	4.3		5.1	5 10/10	0.4	C5	1N1955	1
	4.3		5.1	5 10/10	0.15	C9	1N1982	1
	4.3	10%	20	22/20	0.5	C1	1N5229	(3)
	4.7	10%	30	20/30	0.5	C9	1N3398	6

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
4.3	4.7	5%	20	16/20	0.4	C1	1N3510	
	4.7	5%	0.25	1550/0.25	0.25	C1	1N4624	
	4.7	5%	0.05		0.25	C1	1N4688	
	4.7	10%	20	19/20	0.5	C1	1N5230	(3)
	4.3		5.4	5 35/10	0.2	C9	1N468	2, 4, 5
	4.3		5.4	5 50/10	0.2	C9	1N473	2, 6
	4.3		5.4	5 35/10	0.25	C1	1N705	1
	4.3		5.4	40/10	0.25	C1	1N761	
	4.3		5.4	10 55/10	0.75	T1	1N2032	
	4.95	5%	5	15/5		C6	1N376	
4.3	5.0	5%	10	40/10	0.25	C1	1N761-2	
	5.0	5%	10	55/10	0.75	T1	1N2032-2	
	5	10%	40	15/40	0.275	C1	1N4095	
	5.1	10%	20	17/20	0.4	C1	1N751*	1, 7
	5.1	5%	20	14/20	0.4	C1	1N3511	
	5.1	5%	0.25	1500/0.25	0.25	C1	1N4625	
	5.1	5%	0.05		0.25	C1	1N4689	
	5.1	10%	20	17/20	0.5	C1	1N5231	(3)
	5.5	5%	10	18/10	0.25	C1	1N762-1	
	5.5	5%	10	20/10	0.75	T1	1N2033-1	
5.1	5.6	10%	25	3.6/25	0.25	C1	1N708	1
	5.6	10%	20	11/20	0.4	C1	1N752*	1, 7
	5.6	10%	26	5.2/26	0.75	T1	1N1509	1
	5.6	10%	20	20/20	0.5	C9	1N3399	6
	5.6	5%	20	8/20	0.4	C1	1N3512	
	5.6	5%	0.25	1400/0.25	0.25	C1	1N4626	
	5.6	5%	0.05		0.25	C1	1N4690	
	5.6	10%	20	11/20	0.5	C1	1N5232	(3)
	5.1		6.2	5 8/10	0.25	C5	1N1929	1
	5.1		6.2	5 8/10	0.4	C5	1N1956	1
5.2	5.1		6.2	5 8/10	0.15	C9	1N1983	1
	5.2		6.4	5 20/10	0.2	C9	1N469	2, 4, 5
	5.2		6.4	5 40/10	0.2	C9	1N474	2, 6
	5.2		6.4	5 20/10	0.25	C1	1N706	1
	5.2		6.4	10 18/10	0.25	C1	1N762	
	5.2		6.4	10 20/10	0.75	T1	1N2033	
	5.9	5%	5	10/5		C6	1N327	
	6.0	5%	10	18/10	0.25	C1	1N762-2	
	6.0	5%	10	20/10	0.75	T1	1N2033-2	
	6.0	10%	20	7/20	0.5	C1	1N5233	(3)
6.2	6.2	5%	20	3/20	0.4	T1	1N675*	
	6.2	10%	25	4.1/25	0.25	C1	1N709	1
	6.2	10%	20	7/20	0.4	C1	1N753*	1, 7
	6.2	10%	1.0	400/1.0	0.5	D	1N3411	
	6.2	5%	20	3/20	0.4	C1	1N3513	

Zener Regulator Diodes
0.62v—mw to 6.2v—mw

Zener Regulator Diodes

6.2v—mw to 13v—mw

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
9.1		11.0	5	22/10	0.25	C5	1N1932	1
9.1		11.0	5	22/10	0.4	C5	1N1959	1
9.1		11.0	5	22/10	0.15	C9	1N1986	1
9.0		12.0	0.2		0.15	C9	1N226	1, 4, 6
9.0		12.0	5	45/5	0.25	C1	1N765	
9.0		12.0	0.2	19.4/7.1	0.15	C9	1N1314	1, 4
9.0		12.0	5	50/5	0.75	T1	1N2036	
	11	10%	12	9/12	0.25	C1	1N715	1
	11	5%	5	45/5	0.25	C1	1N765-2	
	11	20%	11.5	9.5/11.5	0.4	C1	1N962*	3, 7
	11	5%	5	50/5	0.75	T1	1N2036-2	
	11	5%	10	8/10	0.4	C1	1N3519	
	11	20%	11.5	9.5/11.5	0.75	C1	1N3680	3
	11	5%	0.25	200/0.25	0.25	C1	1N4105	
	11.0	5%	0.05		0.25	C1	1N4698	
	11	10%	20	22/20	0.5	C1	1N5241	(3)
	12	5%	10	10/10	0.4	T1	1N665*	
	12	10%	12	10/12	0.25	C1	1N716*	
	12	10%	20	30/20	0.4	C1	1N759*	
	12	5%	5	55/5	0.25	C1	1N766-1	
	12	20%	10.5	11.5/10.5	0.4	C1	1N963*	3, 7
	12	10%	12	2.8/12	0.75	T1	1N1513	1
11		13	1.0	30/5	0.25	C5	1N1933	1
11		13	1.0	30/5	0.4	C5	1N1960	1
11		13	1.0	30/5	0.15	C9	1N1987	1
	12	5%	5	70/5	0.75	T1	1N2037-1	
	12	10%	10	15/10	0.5	C9	1N3403	6
	12	10%	1.0	110/1.0	0.5	D	1N3416	
	12	5%	10	10/10	0.4	C1	1N3520	
	12	20%	10.5	11.5/10.5	0.75	C1	1N3681	3
	12	5%	0.25	200/0.25	0.25	C1	1N4106	
	12	5%	0.05		0.25	C1	1N4699	
	12	10%	30		0.5	C1	1N5242	(3)
11		14.5	0.2		0.15	C9	1N227	1, 4, 6
11		14.5	5	55/5	0.25	C1	1N766	
11		14.5	0.2	26/5.8	0.15	C9	1N1315	1, 4
11		14.5	5	70/5	0.75	T1	1N2037	
	13	10%	12	11/12	0.25	C1	1N717	1
	13	5%	5	55/5	0.25	C1	1N766-2	
	13	20%	9.5	13/9.5	0.4	C1	1N964*	3, 7
	13	5%	5	70/5	0.75	T1	1N2037-2	
	13	5%	5	12/5	0.4	C1	1N3521	
	13	20%	9.5	13/9.5	0.75	C1	1N3682	3
	13	5%	0.05		0.25	C1	1N4700	
	13	5%	0.25	200/0.25	0.25	C1	1N4107	

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
	8.2	10%	10	15/10	0.5	C9	1N3401	6
	8.2	10%	1.0	60/1.0	0.5	D	1N3414	
	8.2	5%	10	5/10	0.4	C1	1N3516	
	8.2	20%	15	6.5/15	0.75	C1	1N3677	3
	8.2	5%	0.25	200/0.25	0.25	C1	1N4101	
	8.2	5%	0.05		0.25	C1	1N4694	
	8.2	10%	20	8/20	0.5	C1	1N5237	(3)
7.5		9.1	5	15/10	0.25	C5	1N1931	1
7.5		9.1	5	15/10	0.4	C5	1N1958	1
7.5		9.1	5	15/10	0.15	C9	1N1985	1
	8.5	5%	10	12/10	0.25	C1	1N764-2	
	8.5	5%	10	15/10	0.75	T1	1N2035-2	
	8.7	5%	0.25	200/0.25	0.25	C1	1N4102	
	8.7	5%	0.05		0.25	C1	1N4695	
	8.7	10%	20	8/20	0.5	C1	1N5238	(3)
7.5		10	0.2		0.15	C9	1N225	1, 4, 6
7.5		10	10	12/10	0.25	C1	1N764	
7.5		10	0.2	17.2/8.6	0.15	C9	1N1313	1, 4
7.5		10	10	15/10	0.75	T1	1N2035	
	9.0	5%	10	12/10	0.25	C1	1N764-3	
	9.0	5%	10	15/10	0.75	T1	1N2035-3	
	9.1	10%	12	7/12	0.25	C1	1N713	1
	9.1	10%	20	10/20	0.4	C1	1N757*	1, 7
	9.1	20%	14	7.5/14	0.4	C1	1N960	3
	9.1	5%	10	6/10	0.4	C1	1N3517	
	9.1	20%	14	7.5/14	0.75	C1	1N3678	3
	9.1	5%	0.25	200/0.25	0.25	C1	1N4103	
	9.1	5%	0.05		0.25	C1	1N4696	
	9.1	10%	20	10/20	0.5	C1	1N5239	(3)
	9.5	5%	10	12/10	0.25	C1	1N764-4	
	9.5	5%	10	15/10	0.75	T1	1N2035-4	
	10	5%	10	9/10	0.4	T1	1N701*	
	10	10%	12	8/12	0.25	C1	1N714	1
	10	10%	20	17/20	0.4	C1	1N758*	1, 7
	10	5%	5	45/5	0.25	C1	1N765-1	
	10	20%	12.5	8.5/12.5	0.4	C1	1N961	3
	10	10%	15	1.8/15	0.75	T1	1N1512	1
	10	5%	5	50/5	0.75	T1	1N2036-1	
	10	10%	10	15/10	0.5	C9	1N3402	6
	10	10%	1.0	80/1.0	0.5	D	1N3415	
	10	5%	10	7/10	0.4	C1	1N3518	
	10	20%	12.5	18.5/12.5	0.75	C1	1N3679	3
	10	5%	0.25	200/0.25	0.25	C1	1N4104	
	10.0	5%	0.05		0.25	C1	1N4697	
	10	10%	20	17/20	0.5	C1	1N5240	(3)

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
	6.2	5%	0.25	1200/0.25	0.25	C1	1N4627	
	6.2	5%	0.05		0.25	C1	1N4691	
	6.2	10%	20	7/20	0.5	C1	1N5234	(3)
	6.5	5%	10	7/10	0.25	C1	1N763-1	
	6.5	5%	10	8/10	0.75	T1	1N2034-1	
	6.8	10%	25	4.7/25	0.25	C1	1N710	1
	6.8	10%	20	5/20	0.4	C1	1N754*	1, 7
	6.8	20%	18.5	4.5/18.5	0.4	C1	1N957	3
	6.8	10%	22	1.2/22	0.75	T1	1N1510	1
	6.8	10%	20	20/20	0.5	C9	1N3400	6
	6.8	10%	1.0	300/1.0	0.5	D	1N3412	
	6.8	5%	20	3/20	0.4	C1	1N3514	
	6.8	20%	18.5	4.5/18.5	0.75	C1	1N3675	3
	6.8	5%	0.25	200/0.25	0.25	C1	1N4099	
	6.8	5%	0.05		0.25	C1	1N4692	
	6.8	10%	20	5/20	0.5	C1	1N5235	(3)
6.2		7.5	5	7/10	0.25	C5	1N1930	1
6.2		7.5	5	7/10	0.4	C5	1N1957	1
6.2		7.5	5	7/10	0.15	C9	1N1984	1
	7.0	5%	10	7/10	0.25	C1	1N763-2	
	7.0	5%	10	8/10	0.75	T1	1N2034-2	
6.2		8.0	5	10/10	0.2	C9	1N470	3, 4, 5
6.2		8.0	5	25/10	0.2	C9	1N475	3, 6
6.2		8.0	5	10/10	0.25	C1	1N707	1
6.2		8.0	10	7/10	0.25	C1	1N763	
6.2		8.0	10	8/10	0.75	T1	1N2034	
	7.5	10%	25	5.3/25	0.25	C1	1N711	1
	7.5	5%	10	7/10	0.25	C1	1N763-3	
	7.5	10%	20	6/20	0.4	C1	1N755*	1, 7
	7.5	20%	16.5	5.5/16.5	0.4	C1	1N958	3
	7.5	5%	10	8/10	0.75	T1	1N2034-3	
	7.5	10%	1	150/1	0.5	D	1N3413	
	7.5	5%	10	4/10	0.4	C1	1N3515	
	7.5	20%	16.5	5.5/16.5	0.75	C1	1N3676	3
	7.5	5%	0.25	200/0.25	0.25	C1	1N4100	
	7.5	5%	0.05		0.25	C1	1N4693	
	7.5	10%	20	6/20	0.5	C1	1N5236	(3)
	8.0	5%	10	12/10	0.25	C1	1N764-1	
	8.0	5%	10	15/10	0.75	T1	1N2035-1	
	8.2	5%	10	7/10	0.4	T1	1N664*	
	8.2	10%	25	6.0/25	0.25	C1	1N712	1
	8.2	10%	20	8/20	0.4	C1	1N756*	1
	8.2	20%	15	6.5/15	0.4	C1	1N959	3
	8.2	10%	18	1.5/18	0.75	T1	1N1511	1
	8.2	10%	14	10/14	0.6	SP16	1N3181	

(Continued)

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
13	13	10%	9.5	13/9.5	0.5	C1	1N5243	(3)
	14	5%	5	55/5	0.25	C1	1N766-3	
	14	5%	5	70/5	0.75	T1	1N2037-3	
	14	5%	0.25	200/0.25	0.25	C1	1N4108	
	14	5%	0.05		0.25	C1	1N4701	
	14	10%	9.0	15/9.0	0.5	C1	1N5244	3, 15
	16	1.0	50/5		0.25	C5	1N1934	1
	16	1.0	50/5		0.4	C5	1N1961	1
	16	1.0	50/5		0.15	C9	1N1988	1
	15	5%	5	24/5	0.4	T1	1N666*	
13.5	15	10%	12	13/12	0.25	C1	1N718*	1
	15	5%	5	70/5	0.25	C1	1N767-1	
	15	20%	8.5	16/8.5	0.4	C1	1N965*	3, 7
	15	10%	10	5/10	0.75	T1	1N1514	1
	15	5%	5	120/5	0.75	T1	1N2038-1	
	15	10%	10	25/10	0.5	C9	1N3404	6
	15	10%	1.0	140/1.0	0.5	D	1N3417	
	15	5%	5	14/5	0.4	C1	1N3522	
	15	20%	8.5	16/8.5	0.75	C1	1N3683	3
	15	5%	0.25	100/0.25	0.25	C1	1N4109	
13.5	15	5%	0.05		0.25	C1	1N4702	
	15	10%	8.5	16/8.5	0.5	C1	1N5245	(3)
	18	0.2			0.15	C9	1N228	1, 4, 6
	18	5	70/5		0.25	C1	1N767	
	18	0.2	29.5/4.7		0.15	C9	1N1316	1, 4
	18	5	120/5		0.75	T1	1N2038	
	16	10%	12	15/12	0.25	C1	1N719	1
	16	5%	5	70/5	0.25	C1	1N767-2	
	16	20%	7.8	17/7.8	0.4	C1	1N966*	3, 7
	16	5%	5	120/5	0.75	T1	1N2038-2	
16	16	5%	5	16/5	0.4	C1	1N3523	
	16	20%	7.8	17/7.8	0.75	C1	1N3684	3
	16	5%	0.25	100/0.25	0.25	C1	1N4110	
	16	5%	0.05		0.25	C1	1N4703	
	16	10%	7.8	17/7.8	0.5	C1	1N5246	(3)
	17	5%	5	70/5	0.25	C1	1N767-3	
	17	5%	5	120/5	0.75	T1	1N2038-3	
	17	5%	0.25	100/0.25	0.25	C1	1N4111	
	17	5%	0.05		0.25	C1	1N4704	
	17	10%	7.4	19/7.4	0.5	C1	1N5247	(3)
18	18	5%	5	26/5	0.4	T1	1N667*	
	18	10%	12	17/12	0.25	C1	1N720*	1
	18	5%	5	100/5	0.25	C1	1N768-1	
	18	20%	7	21/7	0.4	C1	1N967*	3, 7
	18	10%	8	9/8	0.75	T1	1N1515	1
	20	1.0	70/5		0.25	C5	1N1935	1

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
16	20	1.0	70/5		0.4	C5	1N1962	1
	20	1.0	70/5		0.15	C9	1N1989	1
	18	5%	5	200/5	0.75	T1	1N2039-1	
	18	10%	10	35/10	0.5	C9	1N3405	6
	18	10%	1.0	190/1.0	0.5	D	1N3418	
	18	5%	5	18/5	0.4	C1	1N3524	
	18	20%	7	21/7	0.75	C1	1N3685	3
	18	5%	0.05		0.25	C1	1N4705	
	18	10%	7.0	21/7.0	0.5	C1	1N5248	(3)
	19	5%	0.25	150/0.25	0.25	C1	1N4113	
17	21	0.2			0.15	C9	1N229	1, 4, 6
	21	5	100/5		0.25	C1	1N768	
	19	5%	5	100/5	0.25	C1	1N768-2	
	19	5%	5	200/5	0.25	T1	1N2039-2	
	21	0.2	38.5/3.9		0.15	C9	1N1317	1, 4
	21	5	200/5		0.75	T1	1N2039	
	19	5%	0.05		0.25	C1	1N4706	
	19	10%	6.6	23/6.6	0.5	C1	1N5249	(3)
	20	10%	4	20/4	0.25	C1	1N721	1
	20	5%	5	100/5	0.25	C1	1N768-3	
20	20	20%	6.2	25/6.2	0.4	C1	1N968*	3, 7
	20	5%	5	200/5	0.75	C1	1N2039-3	
	20	5%	5	20/5	0.4	C1	1N3525	
	20	20%	6.2	25/6.2	0.75	C1	1N3686	3
	20	5%	0.25	150/0.25	0.25	C1	1N4114	
	20	5%	0.05		0.25	C1	1N4707	
	20	10%	6.2	25/6.2	0.5	C1	1N5250	(3)
	22	5%	5	30/5	0.4	T1	1N668*	
	22	10%	4	24/4	0.25	C1	1N722*	1
	22	5%	5	100/5	0.25	C1	1N769-1	
22	22	20%	5.6	29/5.6	0.4	C1	1N969*	3, 7
	22	10%	6	19/6	0.75	T1	1N1516	1
	24	1.0	100/5		0.25	C5	1N1936	1
	24	1.0	100/5		0.4	C5	1N1963	1
	24	1.0	100/5		0.15	C9	1N1990	1
	22	5%	5	300/5	0.75	T1	1N2040-1	
	22	10%	3	50/3	0.5	C9	1N3406	6
	22	10%	1.0	220/1.0	0.5	D	1N3419	
	22	5%	5	35/5	0.4	C1	1N3526	
	22	20%	5.6	29/5.6	0.75	C1	1N3687	3
20	22	5%	0.25	150/0.25	0.25	C1	1N4115	
	22	5%	0.05		0.25	C1	1N4708	
	22	10%	5.6	29/5.9	0.5	C1	1N5251	(3)
	27	0.2			0.15	C9	1N230	1, 4, 6
	27	5	150/5		0.25	C1	1N769	
	27	0.2	56/3.2		0.15	C9	1N1318	1, 4

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
20	27	5	300/5		0.75	T1	1N2040	
	24	10%	4	28/4	0.25	C1	1N723	1
	24	5%	5	150/5	0.25	C1	1N769-2	
	24	20%	5.2	33/5.2	0.4	C1	1N970*	3, 7
	24	5%	5	300/5	0.75	T1	1N2040-2	
	24	5%	5	38/5	0.4	C1	1N3527	
	24	20%	5.2	33/5.2	0.75	C1	1N3688	3
	24	5%	0.25	150/0.25	0.25	C1	1N4116	
	24	5%	0.05		0.25	C1	1N4709	
	24	10%	5.2	33/5.2	0.5	C1	1N5252	(3)
24	25	5%	0.25	150/0.25	0.25	C1	1N4117	
	25	5%	0.05		0.25	C1	1N4710	
	25	10%	5.0	35/5.0	0.5	C1	1N5253	(3)
	26	5%	5	150/5	0.25	C1	1N769-3	
	26	5%	5	300/5	0.75	T1	1N2040-3	
	27	5%	5	35/5	0.4	T1	1N669*	
	27	10%	4	35/4	0.25	C1	1N724	1
	27	20%	4.6	41/4.6	0.4	C1	1N971*	3, 7
	27	10%	5	50/5	0.75	T1	1N1517	1
	30	1	200/3		0.25	C5	1N1937	1
24	30	1	200/3		0.4	C5	1N1964	1
	30	1	200/3		0.15	C9	1N1991	1
	27	10%	3	60/3	0.5	C9	1N3407	6
	27	10%	1	280/1	0.5	D	1N3420	
	27	5%	4	40/4	0.4	C1	1N3528	
	27	20%	4.6	41.0/4.6	0.75	C1	1N3689	3
	27	5%	0.25	150/0.25	0.25	C1	1N4118	
	27	5%	0.05		0.25	C1	1N4711	
	27	10%	4.6	41/4.6	0.5	C1	1N5254	(3)
	28	5%	0.25	200/0.25	0.25	C1	1N4119	
25	28	5%	0.05		0.25	C1	1N4712	
	28	10%	4.5	44/4.5	0.5	C1	1N5255	(3)
	32	0.2			0.15	C9	1N231	1, 6
	32	0.2	80/2.1		0.15	C9	1N1319	1, 4
	30	10%	4	42/4	0.25	C1	1N725	1
	30	20%	4.2	49/4.2	0.4	C1	1N972*	3, 7
	30	10%	1.0	320/1.0	0.5	D	1N3421	
	30	5%	4	48/4	0.4	C1	1N3529	
	30	20%	4.2	49/4.2	0.75	C1	1N3690	3
	30	5%	0.25	200/0.25	0.25	C1	1N4120	
30	30	5%	0.05		0.25	C1	1N4713	
	30	10%	4.2	49/4.2	0.5	C1	1N5256	(3)
	33	10%	4	50/4	0.25	C1	1N726	1
	33	20%	3.8	58/3.8	0.4	C1	1N973*	3, 7
	36	0.2	300/3		0.25	C5	1N1938	1
	36	0.2	300/3		0.4	C5	1N1965	

Zener Regulator Diodes

13v—mw to 33v—mw

Zener Regulator Diodes

33v—mw to 130v—mw

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
82	20%	1.5	330/1.5	0.4	C1	1N983*	3, 7	
82	10%	1.0	960/1.0	0.5	D	1N3427		
82	20%	1.5	330/1.5	0.75	C1	1N3701	3	
82	5%	0.25	800/0.25	0.25	C1	1N4132		
82	10%	1.5	330/1.5	0.5	C1	1N5268	(3)	
75		91	0.2	1200/1	0.25	C5	1N1943	1
75		91	0.2	1200/1	0.4	C5	1N1970	1
75		91	0.2	1200/1	0.15	C9	1N1997	1
	87	5%	0.25	1000/0.25	0.25	C1	1N4133	
87	10%	1.4	370/1.4	0.5	C1	1N5269	(3)	
75		100	0.2		0.2	C9	1N237	1, 6
75		100	0.2	3800/0.85	0.15	C9	1N1325	4
	91	10%	1	340/1	0.25	C1	1N737	1
91	20%	1.4	400/1.4	0.4	C1	1N984*	3, 7	
91	20%	1.4	400/1.4	0.75	C1	1N3702	3	
91	5%	0.25	1200/0.25	0.25	C1	1N4134		
91	10%	1.4	400/1.4	0.5	C1	1N5270	(3)	
100	5%	1.0	350/1.0	0.4	T1	1N671*		
100	10%	1.0	400/1	0.25	C1	1N738	1	
100	20%	1.3	500/1.3	0.4	C1	1N985*	3, 7	
100	10%	1.0	1200/1.0	0.5	D	1N3428		
100	20%	1.3	500/1.3	0.75	C1	1N3703	3	
100	5%	0.25	1500/0.25	0.25	C1	1N4135		
100	10%	1.3	500/1.3	0.5	C1	1N5271	(3)	
91		110	0.2	1700/1	0.25	C5	1N1944	1
91		110	0.2	1700/1	0.4	C5	1N1971	1
91		110	0.2	1700/1	0.15	C9	1N1998	1
90		120	0.2		0.2	C9	1N238	1, 6
90		120	0.2	4850/0.7	0.15	C9	1N1326	4
	110	10%	1	490/1	0.25	C1	1N739	1
	110	20%	1.1	750/1.1	0.4	C1	1N986*	3, 7
	110	20%	1.1	750/1.1	0.75	C1	1N3704	3
	110	10%	1.1	750/1.1	0.5	C1	1N5272	(3)
	120	10%	1	570/1	0.25	C1	1N740	1
	120	20%	1	900/1	0.4	C1	1N987**	3, 7
110		130	0.2	2800/1	0.25	C5	1N1945	1
110		130	0.2	2800/1	0.4	C5	1N1972	1
110		120	0.1	2800/1	0.15	C9	1N1999	1
	120	10%	1.0	1400/1.0	0.5	D	1N3429	
	120	20%	1.0	900/1.0	0.75	C1	1N3705	3
	120	10%	1.0	900/1.0	0.5	C1	1N5273	(3)
110		145	0.2		0.2	C9	1N239	1, 6
110		145	0.2	6600/0.6	0.15	C9	1N1327	4
	130	10%	1	650/1	0.25	C1	1N741	1
	130	20%	0.95	1100/0.95	0.4	C1	1N988*	3, 7
	130	20%	0.95	1100/0.95	0.75	C1	1N3706	3

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
47	20%	2.7	105/2.7	0.75	C1	1N3695	3	
47	5%	0.25	250/0.25	0.25	C1	1N4125		
47	10%	2.7	105/2.7	0.5	C1	1N5261	(3)	
43		54	0.2	0.15	C9	1N234	1, 6	
43		54	0.2	0.15	C9	1N1322	4	
51	10%	4	115/4	0.25	C1	1N731	1	
51	20%	2.5	125/2.5	0.4	C1	1N978*	3, 7	
51	20%	2.5	125/2.5	0.75	C1	1N3696	3	
51	5%	0.25	300/0.25	0.25	C1	1N4126		
51	10%	2.5	125/2.5	0.5	C1	1N5262	(3)	
56	10%	4	140/4	0.25	C1	1N732	1	
56	20%	2.2	150/2.2	0.4	C1	1N979*	3, 7	
56	10%	1.0	640/1.0	0.5	D	1N3425		
56	20%	2.2	150/2.2	0.75	C1	1N3697	3	
56	5%	0.25	300/0.25	0.25	C1	1N4127		
56	10%	2.2	150/2.2	0.5	C1	1N5263	(3)	
51		62	0.2	0.25	C5	1N1941	1	
51		62	0.2	0.4	C5	1N1968	1	
51		62	0.2	0.15	C9	1N1995	1	
52		64	0.2	0.15	C9	1N235	1, 6	
52		64	0.2	0.15	C9	1N1323	4	
	60	5%	0.25	0.25	C1	1N4128		
60	10%	2.1	170/2.1	0.5	C1	1N5264	(3)	
62	10%	2.0	170/2	0.25	C1	1N733	1	
62	20%	2.0	185/2	0.4	C1	1N980*	3, 7	
62	20%	2.0	185/2.0	0.75	C1	1N3698	3	
62	5%	0.25	500/0.25	0.25	C1	1N4129		
62	10%	2.0	185/2.0	0.5	C1	1N5265	(3)	
68	5%	1	290/1	0.4	T1	1N670*		
68	10%	2	200/2	0.25	C1	1N734	1	
68	20%	1.8	230/1.8	0.4	C1	1N981*	3, 7	
68	10%	1.0	800/1.0	0.5	D	1N3426		
68	20%	1.8	230/1.8	0.75	C1	1N3699	3	
68	5%	0.25	700/0.25	0.25	C1	1N4130		
68	10%	1.8	230/1.8	0.5	C1	1N5266	(3)	
	75	0.2	900/1	0.25	C5	1N1942	1	
	75	0.2	900/1	0.4	C5	1N1969	1	
62		75	0.2	0.15	C9	1N1996	1	
62		80	0.2	0.2	C9	1N236	1, 6	
62		80	0.2	0.15	C9	1N1324	4	
	75	10%	1.7	270/1.7	0.5	C1	1N5267	(3)
	75	10%	2	240/2	0.25	C1	1N735	1
	75	20%	1.7	270/1.7	0.4	C1	1N982*	3, 7
	75	20%	1.7	270/1.7	0.75	C1	1N3700	3
	75	5%	0.25	700/0.25	0.25	C1	1N4131	
82	10%	2	280/2	0.25	C1	1N736	1	

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
30		36	0.2	300/3	0.15	C9	1N1992	1
	33	10%	3	80/3	0.5	C9	1N3408	6
	33	10%	1.0	360/1.0	0.5	D	1N3422	
	33	5%	3	50/3	0.4	C1	1N3530	
	33	20%	3.8	58/3.8	0.75	C1	1N3691	3
	33	5%	0.25	200/0.25	0.25	C1	1N4121	
	33	5%	0.05		0.25	C1	1N4714	
	33	10%	3.8	58/3.8	0.5	C1	1N5257	(3)
30		39	0.2		0.15	C9	1N232	1, 6
30		39	0.2	128/2.2	0.15	C9	1N1320	1
	36	10%	4	60/4	0.25	C1	1N727	1
	36	20%	3.4	70/3.4	0.4	C1	1N974*	3, 7
	36	5%	3	75/3	0.4	C1	1N3531	
	36	20%	3.4	70/3.4	0.75	C1	1N3692	3
	36	5%	0.25	200/0.25	0.25	C1	1N4122	
	36	5%	0.05		0.25	C1	1N4715	
	36	10%	3.4	70/3.4	0.5	C1	1N5258	(3)
	39	10%	4	70/4	0.25	C1	1N728	1
	39	20%	3.2	80/3.2	0.4	C1	1N975*	3, 7
	39	10%	1.5	190/1.5	0.5	C9	1N3409	6
	39	10%	1.0	440/1.0	0.5	D	1N3423	
	39	5%	3.2	100/3	0.4	C1	1N3532	
	39	20%	3.2	80/3.2	0.75	C1	1N3693	3
	39	5%	0.25	200/0.25	0.25	C1	1N4123	
	39	5%	0.05		0.25	C1	1N4716	
	39	10%	3.2	80/3.2	0.5	C1	1N5259	(3)
36		43	0.2	400/3	0.25	C5	1N1939	1
36		43	0.2	400/3	0.4	C5	1N1966	1
36		43	0.2	400/3	0.15	C9	1N1993	1
37		45	0.2		0.15	C9	1N233	1, 6
37		45	0.2	215/1.8	0.15	C9	1N1321	1
	43	10%	4.0	84/4.0	0.25	C1	1N729	1
	43	20%	3.0	93/3.0	0.4	C1	1N976*	3, 7
	43	5%	2	130/2.0	0.4	C1	1N3533	
	43	20%	3.0	93/3.0	0.75	C1	1N3694	3
	43	5%	0.25	250/0.25	0.25	C1	1N4124	
	43	5%	0.05		0.25	C1	1N4717	
	43	10%	3.0	93/3.0	0.5	C1	1N5260	(3)
	47	10%	4	98/4	0.25	C1	1N730	1
	47	20%	2.7	105/2.7	0.4	C1	1N977*	3, 7
43		51	0.2	500/2	0.25	C5	1N1940	1
43		51	0.2	500/2	0.4	C5	1N1967	1
43		51	0.2	500/2	0.15	C9	1N1994	1
	47	10%	1.5	220/1.5	0.5	C9	1N3410	6
	47	10%	1.0	540/1.0	0.5	D	1N3424	
	47	5%	2	150/2	0.4	C1	1N3534	

Zener Regulator Diodes

130v—mw to 5.1v—1w

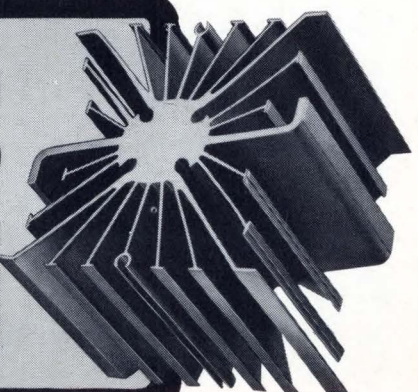
1 WATT

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
	3.3	10%	76	10/76	1.0	C6	1N3821	1, 7
	3.3	10%	76	10/76	1	C1	1N4728	1
	3.6	10%	69	10/69	1.0	C6	1N3822	1, 7
	3.6	10%	69	10/69	1	C1	1N4729	1
	3.9	10%	50	9/50	1.0	T2	1N1518	1
	3.9	10%	64	9/64	1.0	C6	1N3823*	1, 7
	3.9	10%	64	9/64	1	C1	1N4730	1
	4.3	10%	58	9/58	1.0	C6	1N3824*	1, 7
	4.3	10%	58	9/58	1	C1	1N4731	1
	4.7	5%	50	5/50	1.0	T2	1N1484*	
	4.7	10%	40	8.5/40	1.0	T2	1N1519	1
	4.7	10%	53	8/53	1.0	C6	1N3825*	1, 7
	4.7	10%	53	8/53	1	C1	1N4732	1
	5.1	5%	40	8.5/40	1.0	T2	1N3732	
	5.1	10%	49	7/49	1.0	C6	1N3826*	1, 7

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
190	10%	0.66	2400/0.66	0.5	C1	1N5280	(3)	
200	10%	1	1400/1	0.25	C1	1N745	1	
200	20%	0.65	2500/0.65	0.4	C1	1N992*	3, 7	
200	10%	1.0	2200/1.0	0.5	D	1N3432		
200	20%	0.65	2500/0.65	0.75	C1	1N3710	3	
200	10%	0.65	2500/0.65	0.5	C1	1N5281	(3)	
200	240	0.1		0.25	C5	1N1948	1	
200	240	0.1		0.4	C5	1N1975	1	
200	220	240	0.1	0.15	C9	1N2002	1	
240	300	0.1		0.25	C5	1N1949	1	
240	300	0.1		0.4	C5	1N1976	1	
240	270	300	0.1	0.15	C9	1N2003	1	
300	360	0.1		0.25	C5	1N1950	1	
300	360	0.1		0.4	C5	1N1976	1	
300	330	360	0.1	0.15	C9	1N2004	1	
360	430	0.1		0.25	C5	1N1951	1	
360	430	0.1		0.4	C5	1N1977	1	
360	390	430	0.1	0.15	C9	1N2005	1	
430	510	0.1		0.25	C5	1N1952	1	
430	510	0.1		0.4	C5	1N1979	1	
430	470	510	0.1	0.15	C9	1N2006	1	
510	620	0.1		0.25	C5	1N1953	1	
510	620	0.1		0.4	C5	1N1980	1	
510	560	620	0.1	0.15	C9	1N2007	1	

BREAKDOWN VOLTAGE				$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_z (ma)				MIL*	
130	10%	0.95	1100/0.95	0.5	C1	1N5274	(3)	
130	160	0.1		0.25	C5	1N1946	1	
130	160	0.1		0.4	C5	1N1973	1	
130	140	0.90	1300/0.90	0.5	C1	1N5275	(3)	
150	160	0.1		0.15	C9	1N2000	1	
150	5%	1.0	1000/1.0	0.4	T1	1N672*		
150	10%	1	860/1	0.25	C1	1N742	1	
150	20%	0.85	1500/0.85	0.4	C1	1N989*	3, 7	
150	10%	1.0	1800/1.0	0.5	D	1N3430		
150	20%	0.85	1500/0.85	0.75	C1	1N3707	3	
150	10%	0.85	1500/0.85	0.5	C1	1N5276	(3)	
160	10%	1	970/1	0.25	C1	1N743	1	
160	20%	0.8	1700/0.8	0.4	C1	1N990*	3, 7	
160	20%	0.80	1700/0.80	0.75	C1	1N3708	3	
160	10%	0.80	1700/0.80	0.5	C1	1N5277	(3)	
170	10%	0.74	1900/0.74	0.5	C1	1N5278	(3)	
180	10%	1	1200/1	0.25	C1	1N744	1	
180	20%	0.68	2200/0.68	0.4	C1	1N991*	3, 7	
180	10%	0.68	2200/0.68	0.5	C1	1N5279	(3)	
160	200	0.1		0.25	C5	1N1947	1	
160	200	0.1		0.2	C5	1N1974	1	
160	200	0.1		0.15	C9	1N2001	1	
180	10%	1.0	2000/1.0	0.5	D	1N3431		
180	20%	0.68	2200/0.68	0.75	C1	1N3709	3	

(Continued)



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Card for more information.

Zener Regulator Diodes

5.1v-1w to 36v-1w

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)					
20	20	10%	15	13/15	1.0	T1	1N1778	1
	18	10%	14	20/14	1	C1	1N4746	1
	20	20%	12.5	22/12.5	1.0	C6	1N3027*	3, 7
	20	20%	12.5	22/12.5	1.0	C6	1N4169	3
	20	20%	12.5	11/12.5	1.0	C1	1N4411	3
	20	20%	12.5	22/12.5	1.0	C1	1N4334	3
	20	10%	12.5	22/12.5	1	C1	1N4747	1
	22	5%	10	23/10	1.0	T2	1N1429*	
	22	10%	9	18/9	1.0	T2	1N1527	
	22	10%	15	16/15	1.0	T1	1N1779	1
24	22	24	8	24/8	1.0	T3	1N1880	1
	22	20%	11.5	23/11.5	1.0	C6	1N3028*	3, 7
	22	20%	11.5	23/11.5	1.0	C1	1N4170	3
	22	20%	11.5	12/11.5	1.0	C1	1N4412	3
	22	20%	11.5	23/11.5	1.0	C1	1N4335	3
	22	10%	11.5	23/11.5	1	C1	1N4748	1
	24	10%	15	18/15	1.0	T1	1N1780	1
	24	20%	10.5	25/10.5	1.0	C6	1N3029*	3, 7
	24	20%	10.5	25/10.5	1.0	C6	1N4171	3
	24	20%	10.5	13/10.5	1.0	C1	1N4413	3
30	24	20%	10.5	25/10.5	1.0	C1	1N4336	3
	24	10%	10.5	25/10.5	1	C1	1N4749	1
	27	5%	5	50/5	1.0	T2	1N1430*	
	27	10%	7	28/7	1.0	T2	1N1528	1
	27	10%	15	23/15	1.0	T1	1N1781	1
	27	10%	8	27/8	1.0	T3	1N1881	1
	27	20%	9.5	35/9.5	1.0	C6	1N3030*	3, 7
	27	20%	9.5	35/9.5	1.0	C6	1N4172	3
	27	20%	9.5	14/9.5	1.0	C1	1N4414	3
	27	20%	9.5	35/9.5	1.0	C1	1N4337	3
36	27	10%	9.5	35/9.5	1	C1	1N4750	1
	30	10%	15	28/15	1.0	T1	1N1782	1
	30	10%	20	29/20	1.0	C6	1N2387	1
	30	20%	8.5	40/8.5	1.0	C6	1N3031*	3, 7
	30	20%	8.5	40/8.5	1.0	C6	1N4173	3
	30	20%	8.5	15/8.5	1.0	C1	1N4415	3
	30	20%	8.5	40/8.5	1.0	C1	1N4338	3
	30	10%	8.5	40/8.5	1	C1	1N4751	1
	33	10%	15	33/15	1.0	T1	1N1783	1
	33	36	8	30/8	1.0	T3	1N1882	1
36	33	20%	7.5	45/7.5	1.0	C6	1N3032*	3, 7
	33	20%	7.5	45/7.5	1.0	C6	1N4174	3
	33	20%	7.5	17/7.5	1.0	C1	1N4416	3
	33	20%	7.5	45/7.5	1.0	C1	1N4339	3
	33	10%	7.5	45/7.5	1	C1	1N4752	1
	36	10%	15	39/15	1.0	T1	1N1784	1
	36	20%	7.0	50/7.0	1.0	C6	1N3033*	3, 7
	36	20%	7.0	50/7.0	1.0	C6	1N4175	3

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)					
10	10	20%	25	3/25	1.0	C1	1N4404	
	10	20%	25	7.0/25	1.0	C1	1N4327	3
	10	10%	25	7/25	1	C1	1N4740	1
	11	10%	52	4.2/50	1.0	T1	1N1772	1
	11	20%	23	8/23	1.0	C6	1N3021*	3, 7
	11	20%	23	8/23	1.0	C6	1N4163	3
	11	20%	23	3.5/23	1.0	C1	1N4405	3
	11	20%	23	8.0/23	1.0	C1	1N4328	3
	11	10%	23	8/23	1	C1	1N4741	1
	12	5%	20	7/20	1.0	T2	1N1426*	
11	12	10%	15	2.4/15	1.0	T2	1N1524	1
	12	10%	50	5.0/50	1.0	T1	1N1773	1
	12	13	25	7/25	1.0	T3	1N1877	1
	12	20%	21	9/21	1.0	C6	1N3022*	3, 7
	12	13	25	7/25	1.0	C1	1N3537	6
	12	20%	21	9/21	1.0	C6	1N4164	3
	12	20%	21	4/21	1.0	C1	1N4406	3
	12	20%	21	9.0/21	1.0	C1	1N4329	3
	12	10%	21	9/21	1	C1	1N4742	1
	13	10%	50	5.8/50	1.0	T1	1N1774	1
13	13	20%	19	10/19	1.0	C6	1N3023*	3, 7
	13	20%	19	10/19	1.0	C6	1N4165	3
	13	20%	19	5/19	1.0	C1	1N4407	3
	13	20%	19	10/19	1.0	C1	1N4330	3
	13	10%	19	10/19	1	C1	1N4743	1
	15	5%	10	17/10	1.0	T2	1N1427*	
	15	10%	13	5.4/13	1.0	T2	1N1525	1
	15	10%	50	7.6/50	1.0	T1	1N1775	1
	15	16	25	8/25	1.0	T3	1N1878	1, 8
	15	20%	17	14/17	1.0	C6	1N3024*	3, 7
16	15	20%	17	14/17	1.0	C6	1N4166	3
	15	20%	17	6/17	1.0	C1	1N4408	3
	15	20%	17	14/17	1.0	C1	1N4331	3
	15	10%	17	14/17	1	C1	1N4744	1
	16	10%	50	8.6/50	1.0	T1	1N1776	1
	16	20%	15.5	16/15.5	1.0	C6	1N3025*	3, 7
	16	20%	15.5	16/15.5	1.0	C1	1N4167	3
	16	20%	15.5	8/15.5	1.0	C1	1N4409	3
	16	20%	15.5	16/15.5	1.0	C1	1N4332	3
	16	10%	15.5	16/15.5	1	C1	1N4745	1
18	18	5%	10	20/10	1.0	T2	1N1428*	
	18	10%	10	11/10	1.0	T2	1N1526	1
	18	10%	50	11/50	1.0	T1	1N1777	1
	18	20	25	9/25	1.0	T3	1N1879	1
	18	20%	14	20/14	1.0	C6	1N3026*	3, 7
	18	20%	14	20/14	1.0	C1	1N4168	3
	18	20%	14	10/14	1.0	C1	1N4410	3
	18	20%	14	20/14	1.0	C1	1N4333	3

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)					
5.4	5.1	10%	49	7/49	1	C1	1N4733	1
	5.6	5.6	35/5.6	1.0	T1	1N2214		
	5.6	10%	35	5.5/35	1.0	T2	1N1520	1
	5.6	10%	100	1.2/100	1.0	T1	1N1765	1
	5.6	10%	45	5/45	1.0	C6	1N3827*	1, 7
	5.6	10%	45	5/45	1	C1	1N4734	1
	6.2	5%	20	5/20	1.0	T2	1N1485*	
	6.2	10%	100	1.5/100	1.0	C5	1N1766	1
	6.2	10%	41	2/41	1.0	C6	1N3828*	1, 7
	6.2	5%	7.5	20/7.5	1	C1	1N4499	
7.5	6.2	10%	41	2/41	1	C1	1N4735	1
	6.8	10%	30	1.6/30	1.0	T2	1N1521	1
	6.8	10%	100	1.7/100	1.0	T1	1N1767	1
	6.8	20%	37	3.5/37	1.0	C6	1N3016*	3, 7
	6.8	10%	37	1.5/37	1.0	C6	1N3829	1
	6.8	20%	37	3.5/37	1.0	C6	1N4158	3
	6.8	20%	37	2/37	1.0	C1	1N4400	3
	6.8	20%	37	3.5/37	1.0	C1	1N4323	3
	6.8	10%	37	3.5/37	1	C1	1N4736	1
	7.5	10%	100	2.1/100	1.0	T1	1N1768	1
9.1	7.5	20%	34	4.0/34	1.0	C6	1N3017*	3, 7
	7.5	5%	30	2/30	1.0	T2	1N3112	
	7.5	10%	34	1.5/34	1.0	C6	1N3830	1
	7.5	20%	34	4.0/34	1.0	C6	1N4159	3
	7.5	20%	34	2/34	1.0	C1	1N4401	3
	7.5	20%	34	4.0/34	1.0	C1	1N4324	3
	7.5	10%	34	4/34	1	C1	1N4737	1
	8.2	5%	20	5/20	1.0	T2	1N1425*	
	8.2	10%	25	1.1/25	1.0	T1	1N1522	1
	8.2	10%	100	2.4/100	1.0	T1	1N1769	1
10	8.2	9.1	25	5/25	1.0	T3	1N1875	1
	8.2	20%	31	4.5/31	1.0	C6	1N3018*	3, 7
	8.2	20%	31	4.5/31	1.0	C1	1N4160	3
	8.2	20%	31	2/31	1.0	C1	1N4402	3
	8.2	20%	31	4.5/31	1.0	C1	1N4325	3
	8.2	10%	31	4.5/31	1	C1	1N4738	1
	9.1	10%	50	3.0/50	1.0	T1	1N1770	1
	9.1	20%	28	5/28	1.0	C6	1N3019*	3, 7
	9.1	20%	28	5/28	1.0	C6	1N4161	3
	9.1	20%	28	2.5/28	1.0	C1	1N4403	3
10	9.1	20%	28	5.0/28	1.0	C1	1N4326	3
	9.1	10%	28	5/28	1	C1	1N4739	1
	10	10%	20	1.5/20	1.0	T2	1N1523	1
	10	5%	20	6/20	1.0	T2	1N1744*	
	10	10%	50	3.5/50	1.0	T1	1N1771	1
	10	11	25	6/25	1.0	T3	1N1876	1
	10	20%	25	7/25	1.0	C6	1N3020*	3, 7
	10	20%	25	7/25	1.0	C6	1N4162	3

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
36	36	20%	7.0	19/7.0	1.0	C1	1N4417	3
	36	20%	7.0	55/7.0	1.0	C1	1N4340	3
	36	10%	7.0	50/7	1	C1	1N4753	1
	39	10%	15	45/15	1.0	T1	1N1785	1
	39	43	8	35/8	1.0	T3	1N1883	1
	39	20%	6.5	60/6.5	1.0	C6	1N3034*	3, 7
	39	20%	6.5	60/6.5	1.0	C6	1N4176	3
	39	20%	6.5	21/6.5	1.0	C1	1N4418	3
	39	20%	6.5	60/6.5	1.0	C1	1N4341	3
	39	10%	6.5		1	C1	1N4754	1
	43	10%	15	54/15	1.0	T1	1N1786	1
	43	20%	6.0	70/6.0	1.0	C6	1N3035*	3, 7
	43	20%	6.0	70/6.0	1.0	C6	1N4177	3
	43	20%	6.0	23/6.0	1.0	C1	1N4419	3
43	43	20%	6.0	70/6.0	1.0	C1	1N4342	3
	43	10%	6.0	70/6	1	C1	1N4755	1
	47	10%	15	64/15	1.0	T1	1N1787	1
	47	51	8	50/8	1.0	T3	1N1884	1
	47	20%	5.5	80/5.5	1.0	C6	1N3036*	3, 7
	47	20%	5.5	80/5.5	1.0	C6	1N4178	3
	47	20%	5.5	26/5.5	1.0	C1	1N4420	3
	47	20%	5.5	80/5.5	1.0	C1	1N4343	3
	47	10%	5.5	80/5.5	1	C1	1N4756	1
	51	10%	15	74/15	1.0	T1	1N1788	1
	51	20%	5.0	95/5.0	1.0	C6	1N3037*	3, 7
	51	20%	5.0	95/5.0	1.0	C6	1N4179	3
	51	20%	5.0	30/5.0	1.0	C1	1N4421	3
	51	20%	5.0	95/5.0	1.0	C1	1N4344	3
51	51	10%	5.0	95/5	1	C1	1N4757	1
	56	10%	15	88/15	1.0	T1	1N1789	1
	56	62	8	75/8	1.0	T3	1N1885	1, 8
	56	20%	4.5	110/4.5	1.0	C6	1N3038*	3, 7
	56	20%	4.5	110/4.5	1.0	C6	1N4180	3
	56	20%	4.5	33/4.5	1.0	C1	1N4422	3
	56	20%	4.5	110/4.5	1.0	C1	1N4345	3
	56	10%	4.5	110/4.5	1	C1	1N4758	1
	62	10%	5	105/5	1.0	T1	1N1790	1
	62	20%	4.0	125/4.0	1.0	C6	1N3039*	3, 7
	62	20%	4.0	125/4.0	1.0	C1	1N4181	3
	62	20%	4.0	40/4.0	1.0	C1	1N4423	3
	62	20%	4.0	125/4.0	1.0	C1	1N4346	3
	62	10%	4.0	125/4	1	C1	1N4759	1
62	68	5%	2	150/2	1.0	T2	1N1431*	
	68	10%	5	125/5	1.0	T1	1N1791	1
	68		3	250/3	1.0	T3	1N1886	1, 8
	68							

(Continued)

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
75	68	20%	3.7	150/3.7	1.0	C6	1N3040*	3, 7
	68	20%	3.7	150/3.7	1.0	C6	1N4182	3
	68	20%	3.7	44/3.7	1.0	C1	1N4424	3
	68	20%	3.7	150/3.7	1.0	C1	1N4347	3
	68	10%	3.7	150/3.7	1	C1	1N4760	1
	75	10%	5	150/5	1.0	T1	1N1792	1
	75	20%	3.3	175/3.3	1.0	C6	1N3041*	3, 7
	75	20%	3.3	175/3.3	1.0	C6	1N4183	3
	75	20%	3.3	60/3.3	1.0	C1	1N4425	3
	75	20%	3.3	175/3.3	1.0	C1	1N4348	3
	75	10%	3.3	175/3.3	1	C1	1N4761	1
	82	10%	5	175/5	1.0	T1	1N1793	1
	82	91	3	325/3	1.0	T3	1N1887	1, 8
	82	20%	3.0	200/3.0	1.0	C6	1N3042*	3, 7
91	82	20%	3.0	200/3.0	1.0	C6	1N4184	3
	82	20%	3.0	85/3.0	1.0	C1	1N4426	3
	82	20%	3.0	200/3.0	1.0	C1	1N4349	3
	82	10%	3.0	200/3	1	C1	1N4762	1
	91	10%	5	220/5	1.0	T1	1N1794	1
	91	20%	2.8	250/2.8	1.0	C6	1N3043*	3, 7
	91	20%	2.8	250/2.8	1.0	C6	1N4185	3
	91	20%	2.8	115/2.8	1.0	C1	1N4427	3
	91	20%	2.8	250/2.8	1.0	C1	1N4350	3
	91	10%	2.8	250/2.8	1	C1	1N4763	1
	100	5%	2	350/2	1.0	T2	1N1432*	
	100	10%	5	260/5	1.0	T1	1N1795	1
	100	110	3	400/3	1.0	T3	1N1888	1, 8
	100	20%	2.5	350/2.5	1.0	C6	1N3044*	3, 7
110	100	20%	2.5	350/2.5	1.0	C6	1N4186	3
	100	20%	2.5	165/2.5	1.0	C1	1N4428	3
	100	10%	2.5	350/2.5	1	C1	1N4764	1
	100	20%	2.5	350/2.5	1.0	C1	1N4351	3
	110	10%	5	320/5	1.0	T1	1N1796	1
	110	20%	2.3	450/2.3	1.0	C6	1N3045*	3, 7
	110	20%	2.3	450/2.3	1.0	C6	1N4187	3
	110	20%	2.3	250/2.3	1.0	C1	1N4429	3
	110	20%	2.3	450/2.3	1.0	C1	1N4352	3
	120	10%	5	390/5	1.0	T1	1N1797	1
	120	20%	2.0	550/2.0	1.0	C6	1N3046*	3, 7
	120	130	3	600/3	1.0	C6	1N3098	1
	120	20%	2.0	550/2.0	1.0	C6	1N4188	3
	120	20%	2.0	350/2.0	1.0	C1	1N4430	3
130	120	20%	2.0	550/2.0	1.0	C1	1N4353	3
	130	10%	5	450/5	1.0	T1	1N1798	1
	130	20%	1.9	700/1.9	1.0	C6	1N3047*	3, 7
	130	20%	1.9	700/1.9	1.0	C6	1N4189	3
	130	20%	1.9	500/1.9	1.0	C1	1N4431	3
	130	20%	1.9	700/1.9	1.0	C1	1N4354	3

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
130	150	5%	1	1200/1	1.0	T2	1N1433*	
	150	10%	5	600/5	1.0	T1	1N1799	1
	150	20%	1.7	1000/1.7	1.0	C6	1N3048*	3, 7
	150	160	3	725/3	1.0	C6	1N3099	1
	150	20%	1.7	1000/1.7	1.0	C6	1N4190	3
	150	20%	1.7	800/1.7	1.0	C1	1N4432	3
	150	20%	1.7	1000/1.7	1.0	C1	1N4355	3
	160	10%	5	700/5	1.0	T1	1N1800	1
	160	20%	1.6	1100/1.6	1.0	C6	1N3049*	3, 7
	160	20%	1.6	1100/1.6	1.0	C6	1N4191	3
	160	20%	1.6	1000/1.6	1.0	C1	1N4433	3
	160	20%	1.6	1100/1.6	1.0	C1	1N4356	3
	180	10%	5	900/5	1.0	T1	1N1801	1
	180	20%	1.4	1200/1.4	1.0	C6	1N3050*	3, 7
160	180	200	3	850/3	1.0	C6	1N3100	1
	180	20%	1.4	1200/1.4	1.0	C6	1N4192	3
	180	20%	1.4	1100/1.4	1.0	C1	1N4434	3
	180	20%	1.4	1200/1.4	1.0	C1	1N4357	3
	200	10%	5	1100/5	1.0	T1	1N1802	1
	200	20%	1.2	1500/1.2	1.0	C6	1N3051*	3, 7
	200	20%	1.2	1500/1.2	1.0	C6	1N4193	3
	200	20%	1.2	1400/1.2	1.0	C1	1N4435	3
	200	20%	1.2	1500/1.2	1.0	C1	1N4358	3
	200	220	3	1000/3	1.0	C6	1N3101	1

OVER 1 WATT

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
5.85	3.3	10%	189	6/189	2.5	C1	1N5008	1
	3.6	10%	173	5.5/173	2.5	C1	1N5009	1
	3.9	10%	150	2.6/150	3.5	S1	1N1588	1
	3.9	10%	160	5/160	2.5	C1	1N5010	1
	4.3	10%	145	4/145	2.5	C1	1N5011	1
	4.7	10%	125	2.3/125	3.5	S1	1N1589	1
	4.7	10%	133	3.5/133	2.5	C1	1N5012	1
	5.1	10%	122	3/122	2.5	C1	1N5013	1
	5.6	10%	110	1.4/110	3.5	S1	1N1590	1
	5.6	10%	111	2.5/111	2.5	C1	1N5014	1
	6.2	6.55	40	4/40	1.5	C10	1N4460	
	6.2	10%	101	3/101	2.5	C1	1N5015	1
	6.8	10%	100	0.58/100	3.5	S1	1N1591	1
	6.8	20%	55	2.7/55	1.5	T4	1N3785	3

36v—1w to 6.8v—over 1w

Zener Regulator Diodes

Zener Regulator Diodes

6.8v—over 1w to 82v—over 1w

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
34.3	36	37.7	7.0	27/7.0	1.5	C10	1N4478	
	36		7.0	50			1N4845	
	36	10%	20	21/20	3	C10	1N4882	
	36.0	10%	17	21/17	2.5	C1	1N5037	1
	39	20%	10	40/10	1.5	T4	1N3803	3
	39	20%	32	15/32	5	S6	1N4032	3, 8
37.2	39	40.8	6.5	30/6.5	1.5	C10	1N4479	
	39		6.5	60			1N4846	
	39.0	10%	16	24/16	2.5	C1	1N5038	1
	43	20%	9.0	45/9.0	1.5	T4	1N3804	3
	43	20%	29	20/29	5	S6	1N4033	3, 8
41.1	43	44.9	6.0	40/6.0	1.5	C10	1N4480	
	43	20%	5.8	70	1.2	C1	1N4847	3, 6
	43.0	10%	15	27/15	2.5	C1	1N5039	1
	45.0	10%	14	30/14	2.5	C1	1N5040	1
	47	20%	8.0	55/8.0	1.5	T4	1N3805	3
	47	20%	27	20/27	5	S6	1N4034	3, 8
44.9	47	49.1	5.5	50/5.5	1.5	C10	1N4481	
	47	20%	5.3	80	1.2	C1	1N4848	3, 6
	47	10%	13	33/13	2.5	C1	1N5041	1
	50	20%	15	50/15	3	M1	1N4321	3
	50	10%	12	36/12	2.5	C1	1N5042	1
	51	20%	7.4	65/7.4	1.5	T4	1N3806	3
	51	20%	24.5	25/24.5	5	S6	1N4035	3, 8
48.7	51	53.3	5.0	60/5.0	1.5	C10	1N4482	
	51	20%	5.0	95	1.2	C1	1N4849	3, 6
	51	10%	12	36/12	2.5	C1	1N5043	1
	52	10%	12	39/12	2.5	C1	1N5044	1
	56	20%	6.7	75/6.7	1.5	T4	1N3807	3
	56	20%	22	30/22	5	S6	1N4036	3, 8
53.5	56	58.5	4.5	70/4.5	1.5	C10	1N4483	
	56	20%	4.5	110	1.2	C1	1N4850	3, 6
	56	10%	11	45/11	2.5	C1	1N5045	1
	62	20%	6.0	85/6.0	1.5	T4	1N3808	3
	62	20%	20	50/20	5	S6	1N4037	3, 5
59.3	62	64.7	4.0	80/4.0	1.5	C10	1N4484	
	62	20%	4.0	125	1.2	C1	1N4851	3, 6
	62	10%	10	51/10	2.5	C1	1N5046	1
	68	20%	5.5	95/5.5	1.5	T4	1N3809	3
	68	20%	18.5	75/18.5	5	S6	1N4038	3, 8
65	68	71	3.7	100/3.7	1.5	C10	1N4485	
	68	20%	3.7	150	1.2	C1	1N4852	3, 6
	68	10%	9.2	57/9.2	2.5	C1	1N5047	1
	75	20%	5.0	110/5.0	1.5	T4	1N3810	3
	75	20%	16.5	100/16.5	5	S6	1N4039	3, 8
	75	20%	3.3	175	1.2	C1	1N4853	3, 6
	75	10%	8.3	66/8.3	2.5	C1	1N5048	1
	82	20%	4.5	130/4.5	1.5	T4	1N3811	3
	82	10%	15	100/15	5	S6	1N4040	3, 8
	82	20%	3.0	200	1.2	C1	1N4854	3, 6

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
	16		16	19			1N4837	
	16.0	10%	39	6.6/39	2.5	C1	1N5026	1
	17.0	10%	37	7.2/37	2.5	C1	1N5027	1
	18	10%	35	6/35	3.5	S1	1N1596	1
	18	20%	21	13/21	1.5	T4	1N3795	3
	18	20%	70	4/70	5	S6	1N4024	3, 8
17.17	18	18.83	14	11/14	1.5	C10	1N4471	
	18		14	20			1N4838	
	18.0	10%	35	7.8/35	2.5	C1	1N5028	1
	19.0	10%	33	8.4/33	2.5	C1	1N5029	1
	20	20%	19	15/19	1.5	T4	1N3796	3
	20	5%	19	15/19	1.5	T4	1N3950	
	20	20%	65	4/65	5	S5	1N4025	3, 8
19.05	20	20.95	12.5	12/12.5	1.5	C10	1N4472	
	20		12.5	22			1N4839	
	20	10%	40	9/40	3	C10	1N4881	
	20	5%	40	9/40	3	C10	1N4884	
	20.0	10%	31	9/31	2.5	C1	1N5030	1
	22	10%	30	9/30	3.5	S1	1N1597	1
	22	20%	17	16/17	1.5	T4	1N3797	3
	22	20%	55	5/55	5	S6	1N4026	3, 8
21.0	22	23.0	11.5	14/11.5	1.5	C10	1N4473	
	22		11.3	23			1N4840	
	22.0	10%	28	9.6/28	2.5	C1	1N5031	1
	24	20%	16	17/16	1.5	T4	1N3798	3
	24	20%	50	6/50	5	S6	1N4027	3, 8
23.9	24	25.1	10.5	16/10.5	1.5	C10	1N4474	
	24		10.5	25			1N4841	
	24.0	10%	26	10/26	2.5	C1	1N5032	1
	25	5%	15	18/15	1.5	T4	1N3951	
	25.0	10%	25	11/25	2.5	C1	1N5033	1
	27	10%	25	13/25	3.5	S1	1N1598	1
	27	20%	14	20/14	1.5	T4	1N3799	3
	27	20%	45	6/45	5	S6	1N4028	3, 8
25.7	27	28.3	9.5	18/9.5	1.5	C10	1N4475	
	27		9.3	35			1N4842	
	27.0	10%	23	12/23	2.5	C1	1N5034	1
	30	20%	12	25/12	1.5	T4	1N3800	3
	30	20%	42	8/42	5	S6	1N4029	3, 8
28.6	30	31.4	8.5	20/8.5	1.5	C10	1N4476	
	30		8.3	40			1N4843	
	30.0	10%	21	15/21	2.5	C1	1N5035	1
	33	20%	11	30/11	1.5	T4	1N3801	3
	33	20%	38	10/38	5	S6	1N4030	3, 8
31.5	33	34.5	7.5	25/7.5	1.5	C10	1N4477	
	33		7.5	45			1N4844	
	33.0	10%	19	18/19	2.5	C1	1N5036	1
	36	20%	10	35/10	1.5	T4	1N3802	3
	36	20%	35	12/35	5	S6	1N4031	3, 8

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
6.5	6.8	7.1	37	2.5/37	1.5	C10	1N4461	
	6.8	10%	92	1.6/92	2.5	C1	1N5016	1
	7.5	20%	50	3.0/50	1.5	T5	1N3786	3
7.15	7.5	7.85	34	2.5/37	1.5	C10	1N4462	
	7.5	10%	83	1.8/83	2.5	C1	1N5017	1
	8.2	10%	80	0.5/80	3.5	S1	1N1592	1
	8.2	20%	46	3.5/46	1.5	T4	1N3787	3
	8.2	20%	150	1.5/150	5	S6	1N4016	3, 8
7.8	8.2	8.6	31	3/31	1.5	C10	1N4463	
	8.2	10%	76	2.1/76	2.5	C1	1N5018	1
	9.1	20%	41	4/41	1.5	T4	1N3788	3
	9.1	20%	135	2.0/135	5	S6	1N4017	3, 4, 8
8.65	9.1	9.55	28	4/28	1.5	C10	1N4464	
	9.1	20%	28	8/28	1.2	C1	1N4831	3, 6
	9.1	10%	69	2.4/69	2.5	C1	1N5019	1
	10	10%	70	0.7/70	3.5	S1	1N1593	1
	10	20%	37	5/37	1.5	T4	1N3789	3
	10	20%	125	2.0/125	5	S6	1N4018	3, 8
	10	10%	25	6/25	6	S6	1N3776	3
9.5	10	10.5	25	5/25	1.5	C10	1N4465	
	10	20%	25	9/25		C1	1N4832	3, 6
	10.0	10%	62		2.5	C1	1N5020	1
	11	20%	34	6/34	1.5	T4	1N3790	3
	11	20%	115	2.5/115	5	S6	1N4019	3, 8
10.45	11	11.55	23	6/23	1.5	C10	1N4466	
	11	20%	23	10	1.2	C1	1N4833	3, 6
	11.0	10%	57	3.6/57	2.5	C1	1N5021	1
	12	10%	50	1.4/50	3.5	S1	1N1594	1
	12	20%	31	7/31	1.5	T4	1N3791	3
	12	20%	105	2.5/105	5	S6	1N4020	3, 8
11.4	12	12.6	21	7/21	1.5	C10	1N4467	
	12		21	12			1N4834	
	12	5%	65	5/65	3	C10	1N4883	
	12.0	10%	52	4.2/52	2.5	C1	1N5022	1
	13	20%	29	9/29	1.5	T4	1N3792	3
	13	20%	95	3/95	5	S6	1N4021	3, 8
12.35	13	13.65	19	8/19	1.5	C10	1N4468	
	13		19	15			1N4835	
	13.0	10%	48	4.8/48	2.5	C1	1N5023	1
	14.0	10%	45	5.4/45	2.5	C1	1N5024	1
	15	10%	40	3.4/40	3.5	S1	1N1595	1
	15	20%	25	10/25	1.5	T4	1N3793	3
	15	20%	85	3/85	5	S6	1N4022	3, 8
14.25	15	15.75	17	9/17	1.5	C10	1N4469	
	15		17	17			1N4836	
	15.0	10%	42	6/42	2.5	C1	1N5025	1
	16	20%	23	11/23	1.5	T4	1N3794	3
	16	20%	80	3/80	5	S6	1N4023	3, 8
15.2	16	16.8	15.5	10/15.5	1.5	C10	1N4470	

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
78.4	82	10%	7.6	78/7.6	2.5	C1	1N5049	1
	90	5%	8.0	150/8	3	C10	1N4096	
	82	85.6	3.0	160/3.0	1.5	C10	1N4487	
	91	20%	4.1	150/4.1	1.5	T4	1N3812	3
87.0	91	20%	13.5	125/13.5	5	S6	1N4041	3, 8
	91	95.0	2.8	200/2.8	1.5	C10	1N4488	
	91	20%	2.8	250	1.2	C1	1N4855	3, 6
	91	10%	6.9	90/6.9	2.5	C1	1N5050	1
100	100	20%	3.7	200/3.7	1.5	T4	1N3813	3
	100	20%	12.5	150/12.5	5	S6	1N4042	3, 5
	100	5%	5.0	175/5	3	C10	1N4097	
	100	5%	5.0	175/5	3	C10	1N4097	
95.6	100	104.4	2.5	250/2.5	1.5	C10	1N4489	
	100	20%	2.5	350	1.2	C1	1N4856	3, 6
	100	10%	6.2	120/6.2	2.5	C1	1N5051	1
	110	20%	3.4	300/3.4	1.5	T4	1N3814	3
105	110	115	2.3	300/2.3	1.5	C10	1N4490	
	110	20%	2.3	450	1.2	C1	1N4857	3, 6
	120	20%	3.1	350/3.1	1.5	T4	1N3815	3
	120	125.5	2.0	400/2.0	1.5	C10	1N4491	
114.5	120	20%	2.1	550	1.2	C1	1N4858	3, 6
	130	20%	2.9	400/2.9	1.9	T4	1N3816	3
	130	136	1.9	500/1.9	1.5	C10	1N4492	
	130	20%	1.9	700	1.2	C1	1N4859	3, 6
124	150	20%	2.5	700/2.5	1.5	T4	1N3817	3
	150	5%	5.0	650/5	3	C10	1N4098	
	143	150	1.7	700/1.7	1.5	C10	1N4493	
	150	20%	1.7	1000	1.2	C1	1N4860	3, 6
152	160	20%	2.3	750/2.3	1.5	T4	1N3818	3
	160	168	1.6	1000/1.6	1.5	C10	1N4494	
	180	20%	2.1	800/2.1	1.5	T4	1N3819	3
	170	180	1.4	1300/1.4	1.5	C10	1N4495	
188	200	20%	1.9	1000/1.9	1.5	T4	1N3820	3
	200	212	1.2	1500/1.4	1.5	C10	1N4496	
	220	10%	2.0	1300/2.0	2.0		1N3463	

10 WATT

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
4.3	3.9	10%	640	2/640	10	S1	1N3993	1
	3.9	10%		0.85/500	10	S1	1N1599	1
	4.3	10%	580	1.5/580	10	S1	1N3994	1
	4.5	5%	1000	1.0/1000	10	S1	1N2041-1	
	4.7	5%	300	3/200	10	S5	1N1482*	
	4.7	10%	400	0.68/400	10	S1	1N1600	1
	4.7	10%	530	1.2/530	10	S1	1N3995	1
	5.4	10%	1000	1.0/1000	10	S1	1N2041	
	5.0	5%	1000	1.0/1000	10	S1	1N2041-2	
	5.1	10%	490	1.1/490	10	S1	1N3996	1
	5.5	5%	1000	0.7/1000	10	S1	1N2042-1	
	5.5	5%	1000	0.7/1000	10	S1	1N3984	
5.2	5.6	10%	1000	1/1000	10	S1	1N1803	1, 8
	5.6	10%	445	1.0/445	10	S1	1N3997	1
	5.6	10%	350	0.3/350	10	S1	1N1601	1
	6.4	10%	1000	0.7/1000	10	S1	1N2042	
	6.0	5%	1000	0.7/1000	10	S1	1N2042-2	
	6.0	5%	1000	0.7/1000	10	S1	1N3985	
	6.2	5%	200	2/200	10	S5	1N1483*	
	6.2	10%	1000	1/1000	10	S1	1N1804	1, 8
	6.2	5%	805	1.5/805	10	S1	1N3986	
	6.2	10%	405	1.1/405	10	S1	1N3998	1
	6.5	5%	1000	0.8/1000	10	S1	1N2043-1	
	6.8	10%	300	0.2/300	10	S1	1N1602	1
6.2	6.8	10%	1000	1/1000	10	S1	1N1805	1, 8
	6.8	20%	370	1.2/370	10	S1	1N2970	3, 8
	6.8	10%	370	1.2/370	10	S1	1N3999	1
	6.8	20%	370	1.2/370	10	S3	1N4194	3
	6.8	20%	370	1.2/370	10	S10	1N4258	3
	7.0	5%	1000	0.8/1000	10	S1	1N2043-2	
	8.0	10%	1000	0.8/1000	10	S1	1N2043	
	7.5	10%	1000	1/1000	10	S1	1N1806	1, 8
	7.5	5%	1000	0.8/1000	10	S1	1N2043-3	
	7.5	20%	335	1.3/335	10	S1	1N2971	3, 8

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
				(ohms/ma)	(@ 25C)			
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
7.5	7.5	10%	335	1.3/335	10	S1	1N4000	1
	7.5	20%	335	1.3/335	10	S3	1N4195	3
	7.5	20%	335	1.3/335	10	S10	1N4259	3
	8.0	5%	1000	0.8/1000	10	S1	1N2044-1	
	8.2	5%	200	3.0/200	10	S5	1N1416*	
	8.2	10%	200	0.55/200	10	S1	1N1603	1
	8.2	5%	1000	1/1000	10	S1	1N1807	1, 8
	8.2	9.1	25	5/25	10	S6	1N1891	1, 8
	8.2	20%	305	1.5/305	10	S1	1N2972	3, 8
	8.2	20%	305	1.5/305	10	S3	1N4196	3
	8.2	20%	305	1.5/305	10	S10	1N4260	3
	8.5	5%	1000	0.8/1000	10	S1	1N2044-2	
7.5	10	10%	1000	0.8/1000	10	S1	1N2044	
	9.0	5%	1000	0.8/1000	10	S1	1N2044-3	
	9.1	10%	500	1/500	10	S1	1N1808	1, 8
	9.1	20%	275	2.0/275	10	S1	1N2973	3, 8
	9.1	20%	275	2.0/275	10	S3	1N4197	3
	9.1	20%	275	2/275	10	S10	1N4261	3
	9.5	5%	1000	0.8/1000	10	S1	1N2044-4	
	10	10%	500	2/500	10	S1	1N1351	1, 8
	10	10%	200	0.55/200	10	S1	1N1604	1
	10	5%	200	3/200	10	S5	1N1743*	
	10	11	25	6/25	10	S6	1N1892	1, 8
	10	5%	500	1.5/500	10	S1	1N2045-1	
9.0	10	10%	500	2/500	10	S1	1N2498	1, 8
	10	10%	500	2/500	10	S1	1N2498C	6
	10	20%	250	3/250	10	S1	1N2974	3, 8
	10	20%	250	3.0/250	10	S3	1N4198	3
	10	20%	250	3/250	10	S10	1N4262	3
	12.0	500	1.5/500	10	S1	1N2045		
	11	10%	500	2/500	10	S1	1N1352	1, 8
	11	5%	500	1.5/500	10	S1	1N2045-2	
	11	10%	500	2/500	10	S1	1N2499	1, 8
	11	10%	500	2/500	10	S1	1N2499C	6
	11	20%	230	3/230	10	S1	1N2975	3, 8
	11	20%	230	3.0/230	10	S3	1N4199	3
11	11	20%	230	3/230	10	S10	1N4263	3
	12	10%	500	2/500	10	S1	1N1353	1, 8
	12	5%	200	3.5/200	10	S5	1N1417*	
	12	10%	170	0.95/170	10	S1	1N1605	1
	12	13	25	7/25	10	S6	1N1893	1, 8
	12	5%	500	2.0/500	10	S1	1N2046-1	
	12	10%	500	2/500	10	S1	1N2500	1, 8
	12	10%	500	2/500	10	S1	1N2500C	6

Zener Regulator Diodes
82V—over 1W to 12V—10W

(Continued)

Zener Regulator Diodes

12v-10w to 51v-10w

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
11	12	20%	210	3/210	10	S1	1N2976	3.8
	12	20%	210	3.0/210	10	S3	1N4200	3
	12	20%	210	3/210	10	S10	1N4264	3
	13	14.5	500	2.0/500	10	S1	1N2046	
	13	10%	500	2/500	10	S1	1N1354	1.8
	13	10%	500	2/500	10	S1	1N1816*	1.7, 8
	13	10%	500	2/500	10	S1	1N1816C	6
	13	5%	500	2/500	10	S1	1N2046-2	
	13	20%	190	3/190	10	S1	1N2977	3.8
	13	20%	190	3.0/190	10	S3	1N4201	3
13	13	20%	190	3/190	10	S10	1N4265	3
	14	5%	500	2/500	10	S1	1N2046-3	
	14	20%			10	S1	1N2978	3.8
	14	20%	180	3.0/180	10	S3	1N4202	3
	15	10%	500	2/500	10	S1	1N1355	1.8
	15	5%	100	4/100	10	S5	1N1418*	
	15	10%	140	1.5/140	10	S1	1N1606	1
	15	10%	500	2/500	10	S1	1N1817*	1.7, 8
	15	10%	500	2/500	10	S1	1N1817C	6
	15	16	25	8/25	10	S6	1N1894	1.8
13.5	15	5%	500	3/500	10	S1	1N2047-1	
	15	20%	170	3/170	10	S1	1N2979	3.8
	15	20%	170	3.0/170	10	S3	1N4203	3
	15	20%	170	3/170	10	S10	1N4266	3
	16	18.0	500	3/500	10	S1	1N2047	
	16	10%	500	3/500	10	S1	1N1356	1.8
	16	10%	500	3/500	10	S1	1N1818*	1.7, 8
	16	10%	500	3/500	10	S1	1N1818C	6
	16	5%	500	3/500	10	S1	1N2047-2	
	16	20%	155	4/155	10	S1	1N2980	3.8
16	16	20%	155	4.0/155	10	S3	1N4204	3
	16	20%	155	4/155	10	S10	1N4267	3
	17	5%	500	3/500	10	S1	1N2047-3	
	17	20%	145	4/145	10	S1	1N2981	3.8
	17	20%	145	4.0/145	10	S3	1N4205	3
	18	10%	150	3/150	10	S1	1N1357	1.8
	18	5%	100	5/100	10	S1	1N1419*	
	18	10%	110	2.0/110	10	S1	1N1607	1
	18	10%	500	3/500	10	S1	1N1819*	1.7, 8
	18	10%	500	3/500	10	S1	1N1819C	6
16	18	20	25	9/25	10	S6	1N1895	1.8
	18	5%	500	3.0/500	10	S1	1N2048-1	
	18	20%	140	4/140	10	S1	1N2982	3.8
	18	20%	140	4.0/140	10	S3	1N4206	3

(Continued)

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
17.0	18	20%	140	4/140	10	S10	1N4268	3
		21.0	500	3.0/500	10	S1	1N2048	
	19	5%	500	3.0/500	10	S1	1N2048-2	
	19	20%	130	4/130	10	S1	1N2983	3.8
	19	20%	130	4.0/130	10	S3	1N4207	3
	20	10%	150	3/150	10	S1	1N1358	1.8
	20	10%	250	3/250	10	S1	1N1820*	1.7, 8
	20	10%	250	3/250	10	S1	1N1820C	6
	20	5%	500	3.0/500	10	S1	1N2048-3	
	20	20%	125	4/125	10	S1	1N2984	3.8
20	20	5%	250	3/250	10	S1	1N3949	
	20	20%	125	4.0/125	10	S3	1N4208	3
	20	20%	125	4/125	10	S10	1N4269	3
	22	10%	150	3/150	10	S1	1N1359	1.8
	22	5%	100	5/100	10	S1	1N1420*	
	22	10%	90	3.0/90	10	S1	1N1608	1
	22	10%	250	3/250	10	S1	1N1821*	1.7, 8
	22	10%	250	3/250	10	S1	1N1821C	6
	22	24	8	24/8	10	S6	1N1896	1.8
	22	5%	150	8/150	10	S1	1N2049-1	
20.0	22	20%	115	5/115	10	S1	1N2985	3.8
	22	20%	115	5/115	10	S3	1N4209	3
	22	20%	115	5/115	10	S10	1N4270	3
	24	27.0	150	8/150	10	S1	1N2049	
	24	10%	150	3/150	10	S1	1N1360	1.8
	24	10%	250	3/250	10	S1	1N1822*	1.7, 8
	24	10%	250	3/250	10	S1	1N1822C	6
	24	5%	150	8/150	10	S1	1N2049-2	
	24	20%	105	5/105	10	S1	1N2986	3.8
	24	20%	105	5/105	10	S3	1N4210	3
24	24	20%	105	5/105	10	S10	1N4271	3
	25	20%	100	6/100	10	S1	1N2987	3.8
	25	20%	100	6/100	10	S3	1N4211	3
	26	5%	150	8/150	10	S1	1N2049	
	27	10%	150	3/150	10	S1	1N1361	1.8
	27	5%	50	8/50	10	S1	1N1421*	1.8
	27	10%	70	4.5/70	10	S1	1N1609	1
	27	10%	250	3/250	10	S1	1N1823*	1.7, 8
	27	10%	250	3/250	10	S1	1N1823C	6
	27	30	8	27/8	10	S6	1N1897	1.8
30	27	20%	95	7/95	10	S1	1N2988	3.8
	27	20%	95	7/95	10	S3	1N4212	3
	27	20%	95	7/95	10	S10	1N4272	3
	30	10%	150	4/150	10	S1	1N1362	1.8

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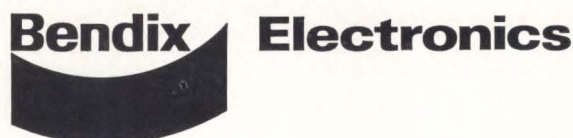
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Zener Regulator Diodes

51v—10w to 220v—10w

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)				MIL*	
	120	20%	20	75/20	10	S10	1N4288	3
	130	10%	50	65/50	10	S1	1N1811	1,8
	130	10%	50	65/50	10	S1	1N2011	1,8
	130	10%	50	65/50	10	S1	1N2011C	6
	130	20%	19	100/19	10	S1	1N3009	3,8
	130	20%	19	100/19	10	S3	1N4233	3
	130	20%	19	100/19	10	S10	1N4289	3
	140	20%	18	125/18	10	S1	1N3010	3,8
	140	20%	18	125/18	10	S3	1N4234	3
	150	5%	10	105/10	10	S1	1N1424*	
	150	10%	50	82/50	10	S1	1N1812	1,8
	150	10%	50	82/50	10	S1	1N2012	1,8
	150	10%	50	82/50	10	S1	1N2012C	6
	150	20%	17	175/17	10	S1	1N3011	3,8
	150	10%	725	725/3	10	S6	1N3103	
	150	20%	17	175/17	10	S3	1N4235	3
	150	20%	17	175/17	10	S10	1N4290	3
	160	10%	50	93/50	10	S1	1N1813	1,8
	160	20%	16	200/16	10	S1	1N3012	3,8
	160	20%	16	200/16	10	S3	1N4236	3
	160	20%	16	200/16	10	S10	1N4291	3
	175	20%	14	250/14	10	S1	1N3013	3,8
	175	20%	14	250/14	10	S3	1N4237	3
	180	10%	50	115/50	10	S1	1N1814	1,8
	180	20%	14	260/14	10	S1	1N3014	3,8
	180	10%	3	850/3	10	S6	1N3104	
	180	20%	14	260/14	10	S3	1N4238	3
	180	20%	14	260/14	10	S10	1N4292	3
	200	10%	50	140/50	10	S1	1N1815	1,8
	200	20%	12	300/12	10	S1	1N3015	3,8
	200	20%	12	300/12	10	S3	1N4239	3
	200	20%	12	300/12	10	S10	1N4293	3
	220	10%	3	1000/3	10	S6	1N3105	

BREAKDOWN VOLTAGE				Z _Z @I _Z	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I _Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
75	82	10%	50	22/50	10	S1	1N1835*	1,7,8
	82	10%	50	22/50	10	S1	1N1835C	6
	82	91	3	325/3	10	S6	1N1903	1,8
	82	20%	30	25/30	10	S1	1N3003	3,8
	82	20%	30	25/30	10	S3	1N4227	3
	82	20%	30	25/30	10	S10	1N4284	3
	91	10%	50	35/50	10	S1	1N1374	1,8
	91	10%	50	35/50	10	S1	1N1836*	1,7,8
	91	10%	50	35/50	10	S1	1N1836C	6
	91	20%	28	35/28	10	S1	1N3004	3,8
91	91	20%	28	35/28	10	S3	1N4228	3
	91	20%	28	35/28	10	S10	1N4285	3
	100	10%	50	40/50	10	S1	1N1375	1,8
	100	5%	20	30/20	10	S1	1N1423*	
	100	110	3	400/3	10	S6	1N1904	1,8
	100	10%	50	40/50	10	S1	1N2008	1,8
	100	10%	50	40/50	10	S1	1N2008C	6
	100	20%	25	40/25	10	S1	1N3005	3,8
	100	20%	25	40/25	10	S3	1N4229	3
	100	20%	25	40/25	10	S10	1N4286	3
	105	20%	25	45/25	10	S1	1N3006	3,8
	105	20%	25	45/25	10	S3	1N4230	3
	110	10%	50	47/50	10	S1	1N1809	1,8
	110	10%	50	47/50	10	S1	1N2009	1,8
	110	10%	50	47/50	10	S1	1N2009C	6
	110	20%	23	55/23	10	S1	1N3007	3,8
	110	20%	23	55/23	10	S3	1N4231	3
	110	20%	23	55/23	10	S10	1N4287	3
120	10%	50	56/50	10	S1	1N1810	1,8	
120	10%	50	56/50	10	S1	1N2010	1,8	
120	10%	50	56/50	10	S1	1N2010C	6	
120	20%	20	75/20	10	S1	1N3008	3,8	
120	10%	600	3/600	10	S6	1N3102	1	
120	20%	20	75/20	10	S3	1N4232	3	

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)	(ohms/ma)	(@ 25C)		MIL*	
51	51	10%	150	8/150	10	S1	1N1830C	6
	51	20%	50	15/50	10	S1	1N2997	3, 8
	51	20%	50	15/50	10	S3	1N4221	3
	51	20%	50	15/50	10	S10	1N4279	3
	52	20%	50	15/50	10	S1	1N2998	3, 8
	52	20%	50	15/50	10	S3	1N4222	3
	56	10%	150	9/150	10	S1	1N1369	1, 8
	56	10%	150	9/150	10	S1	1N1831*	1, 7, 8
	56	10%	150	9/150	10	S1	1N1831C	6
	56	62	8	75/8	10	S6	1N1901	1, 8
	56	20%	45	16/45	10	S1	1N2999	3, 8
	56	20%	45	16/45	10	S3	1N4223	3
	56	20%	45	16/45	10	S10	1N4280	3
	62	10%	50	12/50	10	S1	1N1370	1, 8
	62	10%	50	12/50	10	S1	1N1832*	1, 7, 8
	64	62	10%	50	12/50	10	S1	1N1832C
62		20%	40	17/40	10	S1	1N3000	3, 8
62		20%	40	17/40	10	S3	1N4224	3
62		20%	40	17/40	10	S10	1N4281	3
68		10%	50	14/50	10	S1	1N1371	1, 8
68		5%	20	15/20	10	S1	1N1422*	
68		10%	50	14/50	10	S1	1N1833*	1, 7, 8
68		10%	50	14/50	10	S1	1N1833C	6
68		75	3	250/3	10	S6	1N1902	1, 8
68		20%	37	18/37	10	S1	1N3001	3, 8
68		20%	37	18/37	10	S3	1N4225	3
68		20%	37	18/37	10	S10	1N4282	3
75		10%	50	20/50	10	S1	1N1372	1, 8
75		10%	50	20/50	10	S1	1N1834*	1, 7, 8
75		10%	50	20/50	10	S1	1N1834C	6
75		20%	33	22/33	10	S1	1N3002	3, 8
75	20%	33	22/33	10	S3	1N4226	3	
75	20%	33	22/33	10	S10	1N4283	3	
82	10%	50	22/50	10	S1	1N1373	1, 8	

50 WATT

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)					
	3.9	20	3200	0.16/3200	50	S1	1N4549	3,8
	3.9	20	3200	0.16/3200	50	SP15	1N4557	3,8
	4.3	20	2900	0.16/2900	50	S1	1N4550	3,8
	4.3	20	2900	0.16/2900	50	SP15	1N4558	3,8
	4.7	20	2650	0.12/2650	50	S1	1N4551	3,8
	4.7	20	2650	0.12/2650	50	SP15	1N4559	3,8
	5.1	20	2450	0.12/2450	50	S1	1N4552	3,8
	5.1	20	2450	0.12/2450	50	SP15	1N4560	3,8
	5.6	20	2250	0.12/2250	50	S1	1N4553	3,8
	5.6	20	2250	0.12/2250	50	SP15	1N4561	3,8
	6.2	20	2000	0.14/2000	50	S1	1N4554	3,8
	6.2	20	2000	0.14/2000	50	SP15	1N4562	3,8
	6.8	20%	1850	0.2/1850	50	SP15	1N2904*	3, 7, 8
	6.8	20%	1850	0.2/1850	50	S1	1N3305	3,8
	6.8	20	1850	0.16/1850	50	S1	1N4555	3,8
	6.8	20	1850	0.16/1850	50	SP15	1N4563	3,8
	7.5	20%	1700	0.3/1700	50	SP15	1N2805*	3, 7, 8
	7.5	20%	1700	0.3/1700	50	S1	1N3306	3,8
	7.5	20	1650	0.24/1650	50	S1	1N4556	3,8
	7.5	20	1650	0.24/1650	50	SP15	1N4564	3,8
	8.2	20%	1500	0.4/1500	50	SP15	1N2806*	3, 7, 8
	8.2	20%	1500	0.4/1500	50	S1	1N3307	3,8
	9.1	20%	1370	0.5/1370	50	SP15	1N2807*	3, 7, 8
	9.1	20%	1370	0.5/1370	50	S1	1N3308	3,8
10	20%	1200	0.6/1200	0.6/1200	50	SP15	1N2808*	3, 7, 8
10	20%	1200	0.6/1200	0.6/1200	50	S1	1N3309	3,8
11	20%	1100	0.8/1100	0.8/1100	50	SP15	1N2809*	3, 7, 8
11	20%	1100	0.8/1100	0.8/1100	50	S1	1N3310	3,8
12	20%	1000	1.0/1000	1.0/1000	50	SP15	1N2810*	3, 7, 8
12	20%	1000	1.0/1000	1.0/1000	50	S1	1N3311	3,8
13	20%	960	1.1/960	1.1/960	50	SP15	1N2811*	3, 7, 8
13	20%	960	1.1/960	1.1/960	50	S1	1N3312	3,8
14	20%	890	1.2/890	1.2/890	50	SP15	1N2812*	3, 7, 8

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)					
	14	20%	890	1.2/890	50	S1	1N3313	3,8
	15	20%	830	1.4/830	50	SP15	1N2813*	3, 7, 8
	15	20%	830	1.4/830	50	S1	1N3314	3,8
	16	20%	780	1.6/780	50	SP15	1N2814*	3, 7, 8
	16	20%	780	1.6/780	50	S1	1N3315	3,8
	17	20%	740	1.8/740	50	SP15	1N2815*	3, 7, 8
	17	20%	740	1.8/740	50	S1	1N3316	3,8
	18	20%	700	2.0/700	50	SP15	1N2816*	3, 7, 8
	18	20%	700	2.0/700	50	S1	1N3317	3,8
	19	20%	660	2.2/660	50	SP15	1N2817*	3, 7, 8
	19	20%	660	2.2/660	50	S1	1N3318	3,8
	20	20%	630	2.4/630	50	SP15	1N2818*	3, 7, 8
	20	20%	630	2.4/630	50	S1	1N3319	3,8
	22	20%	570	2.5/570	50	SP15	1N2819*	3, 7, 8
	22	20%	570	2.5/570	50	S1	1N3320	3,8
	24	20%	520	2.6/520	50	SP15	1N2820*	3, 7, 8
	24	20%	520	2.6/520	50	S1	1N3321	3,8
	25	20%	500	2.7/500	50	SP15	1N2821*	3, 7, 8
	25	20%	500	2.7/500	50	S1	1N3322	3,8
	27	20%	460	2.8/460	50	SP15	1N2822*	3, 7, 8
	27	20%	460	2.8/460	50	S1	1N3323	3,8
	30	20%	420	3.0/420	50	SP15	1N2823*	3, 7, 8
	30	20%	420	3.0/420	50	S1	1N3324	3,8
	33	20%	380	3.2/380	50	SP15	1N2824*	3, 7, 8
	33	20%	380	3.2/380	50	S1	1N3325	3,8
	36	20%	350	3.5/350	50	SP15	1N2825*	3, 7, 8
	36	20%	350	3.5/350	50	S1	1N3326	3,8
	39	20%	320	4.0/320	50	SP15	1N2826*	3, 7, 8
	39	20%	320	4.0/320	50	S1	1N3327	3,8
	43	20%	290	4.5/290	50	SP15	1N2827*	3, 7, 8
	43	20%	290	4.5/290	50	S1	1N3328	3,8
	45	20%	280	4.5/280	50	SP15	1N2828*	3, 7, 8
	45	20%	280	4.5/280	50	S1	1N3329	3,8
	47	20%	270	5.0/270	50	SP15	1N2829*	3, 7, 8
	47	20%	270	5.0/270	50	S1	1N3330	3,8
	50	20%	250	5.0/250	50	SP15	1N2830*	3, 7, 8

BREAKDOWN VOLTAGE				$Z_Z @ I_Z$ (ohms/ma)	DISS (@ 25C)	DIM	TYPE NO.	NOTES
MIN	NOM	MAX OR TOL	@ I_Z (ma)					
	50	20%	250	5.0/250	50	S1	1N3331	3,8
	51	20%	245	5.2/245	50	SP15	1N2831*	3, 7, 8
	51	20%	245	5.2/245	50	S1	1N3332	3,8
	52	20%	240	5.5/240	50	S1	1N3333	3,8
	56	20%	220	6/220	50	SP15	1N2832*	3, 7, 8
	56	20%	220	6/220	50	S1	1N3334	3,8
	62	20%	200	7/200	50	SP15	1N2833*	3, 7, 8
	62	20%	200	7/200	50	S1	1N3335	3,8
	68	20%	180	8/180	50	SP15	1N2834*	3, 7, 8
	68	20%	180	8/180	50	S1	1N3336	3,8
	75	20%	170	9/170	50	SP15	1N2835*	3, 7, 8
	75	20%	170	9/170	50	S1	1N3337	3,8
	82	20%	150	11/150	50	SP15	1N2836*	3, 7, 8
	82	20%	150	11/150	50	S1	1N3338	3,8
	91	20%	140	15/140	50	SP15	1N2837*	3, 7, 8
	91	20%	140	15/140	50	S1	1N3339	3,8
	100	20%	120	20/120	50	SP15	1N2838*	3, 7, 8
	100	20%	120	20/120	50	S1	1N3340	3,8
	105	20%	120	25/120	50	SP15	1N2839*	3, 7, 8
	105	20%	120	25/120	50	S1	1N3341	3,8
	110	20%	110	30/110	50	SP15	1N2840*	3, 7, 8
	110	20%	110	30/110	50	S1	1N3342	3,8
	120	20%	100	40/100	50	SP15	1N2841*	3, 7, 8
	120	20%	100	40/100	50	S1	1N3343	3,8
	130	20%	95	50/95	50	SP15	1N2842*	3, 7, 8
	130	20%	95	50/95	50	S1	1N3344	3,8
	140	20%	90	60/90	50	S1	1N3345	3,8
	150	20%	85	75/85	50	SP15	1N2843*	3, 7, 8
	150	20%	85	75/85	50	S1	1N3346	3,8
	160	20%	80	80/80	50	SP15	1N2844*	3, 7, 8
	160	20%	80	80/80	50	S1	1N3347	3,8
	175	20%	70	85/70	50	S1	1N3348	3,8
	180	20%	68	90/68	50	SP15	1N2845*	3, 7, 8
	180	20%	68	90/68	50	S1	1N3349	3,8
	200	20%	65	100/65	50	SP15	1N2846*	3, 7, 8
	200	20%	65	100/65	50	S1	1N3350	3,8

Zener Regulator Diodes
3.9—50w to 200—50w

TEMPERATURE-COMPENSATED REFERENCE DIODES

Semiconductor low-temperature coefficient reference devices are listed in order of ascending breakdown voltages. The effective temperature range for the compensation is included. Wattage ratings, when not available, are generally felt to be insignificant, since the precise nature of the device over-

shadows the power-handling capabilities. Manufacturers are not listed but may be found in the zener diode manufacturers' chart, p. 196. To find a particular temperature-compensated device, all zener diodes are listed numerically in the zener diode cross-reference, p. 192.

KEY

BREAKDOWN VOLTAGE			$Z_z @ I_z$ (ohms/ma)	DISS (@ 25C)	DIM	Type NO.	TEMP. COEF. (%/°C)	TEMP. RANGE (°C)	
MIN	NOM	MAX OR TOL				MIL*		LOW	HIGH
BREAKDOWN VOLTAGE Manufacturers' specified nominal voltage with limits given in terms of voltage or percent of nominal. Symbol ± with voltage indicates a double-anode configuration.								TEMP RANGE LOW and HIGH values indicate temperature range over which the temperature coefficient is applicable.	
$Z_z @ I_z$ —Dynamic impedance, usually taken at I_z ma d-c with a-c equal to 10 percent of I_z superimposed.									
DISS —Maximum allowable dissipation in watts at 25C.							TEMP COEF. Temperature coefficient in percent per degree Centigrade provides an effective figure of merit by which it is possible to predict the voltage stability for a particular temperature range.		
DIM. —Case types refer to case drawings on page 132. These case sizes are only approximate, and specification sheets should be consulted for exact size and configuration.						TYPE NO. An asterisk following the part number indicates the item is military approved or is available in a military version.			

(Continued)

MIN	NOM	MAX OR TOL	Z _Z @I _Z (ohms/ma)	DISS (@25C)	DIM	TYPE NO.	TEMP COEF. (%/°C)	TEMP RANGE (°C)	
								LOW	HIGH
	0.62	10%	60/1	0.5	C1	1N912	.0032		150
	0.62	10%	60/1	0.6	C1	1N913	.0032		150
5.9	6.2	5%	20/7.5	0.2	C3	1N429*	0.01v	-55	+100
	6.5		15/7.5	0.4	C2	1N821*	0.01	-55	+100
	6.2	5%	10/7.5	0.4	C2	1N821A*	0.01	-55	+100
±5.9		±6.5	15/7.5	0.4	C2	1N822	0.01	-55	+100
5.9		6.5	15/7.5	0.4	C2	1N823*	0.005	-55	+100
	6.2	5%	10/7.5	0.4	C2	1N823A*	0.005	-55	+100
±5.9		±6.5	15/7.5	0.25	C2	1N824	0.005	-55	+100
5.9		6.5	15/7.5	0.4	C2	1N825*	0.002	-55	+100
	6.2	5%	10/7.5	0.4	C2	1N825A*	0.002	-55	+100
5.9		6.5	15/7.5	0.4	C2	1N827*	0.001	-55	+100
	6.2	5%	10/7.5	0.4	C2	1N827A*	0.001	-55	+100
	6.2	5%	20/7.5	0.2	C3	1N1735	0.01	-55	+100
	6.2	5%	20/7.5	0.2	C3	1N1735A	0.005	-55	+100
							0.001	+25	+100
	6.2	5%	15/7.5	0.4	C1	1N4010	0.005	-55	+25
5.9		6.5	15/7.5	0.25	C1	1N3496	0.005	0	+75
5.9		6.5	15/7.5	0.25	C1	1N3497	0.002	0	+75
5.9		6.5	15/7.5	0.25	C1	1N3498	0.001	0	+75
5.9		6.5	15/7.5	0.25	C1	1N3499	0.0005	0	+75
5.9		6.5	15/7.5	0.25	C1	1N3500	0.01	0	+75
6.2		6.5	12/7.5	0.25	C2	1N3501	0.001	+25	+100
6.2		6.5	12/7.5	0.25	C2	1N3502	0.0005	+25	+100
6.2		6.5	12/7.5	0.25	C2	1N3503	0.001	+25	+100
6.2		6.5	12/7.5	0.25	C2	1N3503A	0.0005	+25	+100
6.2		6.5	12/7.5	0.25	C2	1N3504	0.001	+25	+100
6.2		6.5	12/7.5	0.25	C2	1N3504A	0.0005	+25	+100
6.2		6.9	15/7.5	0.4	C2	1N826	0.002	-50	+100
6.2		6.9	15/7.5	0.4	C2	1N828	0.001	-50	+100
	6.2	5%	15/7.5	0.4	C2	1N829	0.0005	-50	+100
	6.3	3.2%	15/7.5	0.25	C1	1N3553	0.001	-55	+100
6.3		6.7	10/7.5	0.4	C1	1N3779	0.015	-55	+100
6.3		6.7	10/7.5	0.4	C1	1N3780	0.1	-55	+100
6.3		6.7	10/7.5	0.4	C1	1N3781	0.005	-55	+100
6.3		6.7	10/7.5	0.4	C1	1N3782	0.002	-55	+100
6.3		6.7	10/7.5	0.4	C1	1N3783	0.001	-55	+100
6.3		6.7	10/7.5	0.4	C1	1N3784	0.0005	-55	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4890	0.001 ¹	+25	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4890A	0.001 ¹	-55	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4891	0.0005 ¹	+25	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4891A	0.0005 ¹	-55	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4892	0.001 ¹	+25	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4892A	0.001 ²	-55	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4893	0.0005 ²	+25	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4893A	0.0005 ²	-55	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4894	0.001 ³	+25	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4894A	0.001 ³	-55	+100
	6.35	5%	10 @ 7.5	0.4	C	1N4895	0.0005 ³	+25	+100

MIN	NOM	MAX OR TOL	Z _Z @I _Z (ohms/ma)	DISS (@25C)	DIM	TYPE NO.	TEMP COEF. (%/°C)	TEMP RANGE (°C)	
								LOW	HIGH
	6.35	5%	10 @ 7.5	0.4	C	1N4895A	0.000	-55	+100
	6.4	±5%	200/0.5	0.25	C	1N4565	.01	0	75
	6.4	±5%	200/0.5	0.25	C	1N4565A	.01	-55	100
	6.4	±5%	200/0.5	0.25	C	1N4566	.005	0	75
	6.4	±5%	200/0.5	0.25	C	1N4566A	.005	-55	100
	6.4	±5%	200/0.5	0.25	C	1N4567	.002	0	75
	6.4	±5%	200/0.5	0.25	C	1N4567A	.002	-55	100
	6.4	±5%	200/0.5	0.25	C	1N4568	.001	0	75
	6.4	±5%	200/0.5	0.25	C	1N4568A	.001	-55	100
	6.4	±5%	200/0.5	0.25	C	1N4569	.0005	0	75
	6.4	±5%	200/0.5	0.25	C	1N4569A	.0005	-55	100
	6.4	±5%	100/1.0	0.25	C	1N4570	.01	0	75
	6.4	±5%	100/1.0	0.25	C	1N4570A	.01	-55	100
	6.4	±5%	100/1.0	0.25	C	1N4571	.005	0	75
	6.4	±5%	100/1.0	0.25	C	1N4571A	.005	-55	100
	6.4	±5%	100/1.0	0.25	C	1N4572	.002	0	75
	6.4	±5%	100/1.0	0.25	C	1N4572A	.002	-55	100
	6.4	±5%	100/1.0	0.25	C	1N4573	.001	0	75
	6.4	±5%	100/1.0	0.25	C	1N4573A	.001	-55	100
	6.4	±5%	100/1.0	0.25	C	1N4574	.0005	0	75
	6.4	±5%	100/1.0	0.25	C	1N4574A	.0005	-55	100
	6.4	±5%	50/2.0	0.25	C	1N4575	.01	0	75
	6.4	±5%	50/2.0	0.25	C	1N4575A	.01	-55	100
	6.4	±5%	50/2.0	0.25	C	1N4576	.005	0	75
	6.4	±5%	50/2.0	0.25	C	1N4576A	.005	-55	100
	6.4	±5%	50/2.0	0.25	C	1N4577	.002	0	75
	6.4	±5%	50/2.0	0.25	C	1N4577A	.002	-55	100
	6.4	±5%	50/2.0	0.25	C	1N4578	.001	0	75
	6.4	±5%	50/2.0	0.25	C	1N4578A	.001	-55	100
	6.4	±5%	50/2.0	0.25	C	1N4579	.0005	0	75
	6.4	±5%	50/2.0	0.25	C	1N4579A	.0005	-55	100
	6.4	±5%	25/4.0	0.25	C	1N4580	.01	0	75
	6.4	±5%	25/4.0	0.25	C	1N4580A	.01	-55	100
	6.4	±5%	25/4.0	0.25	C	1N4581	.005	0	75
	6.4	±5%	25/4.0	0.25	C	1N4581A	.005	-55	100
	6.4	±5%	25/4.0	0.25	C	1N4582	.002	0	75
	6.4	±5%	25/4.0	0.25	C	1N4582A	.002	-55	100
	6.4	±5%	25/4.0	0.25	C	1N4583	.001	0	75
	6.4	±5%	25/4.0	0.25	C	1N4583A	.001	-55	100
	6.4	±5%	25/4.0	0.25	C	1N4584	.0005	0	75
	6.4	±5%	25/4.0	0.25	C	1N4584A	.0005	-55	100
	6.6	±5%	75/1-3	0.25	C1	1N4611	0.01	-55	+100
	6.6	±5%	75/1-3	0.25	C1	1N4611A	0.005	-55	+100
	6.6	±5%	75/1-3	0.25	C1	1N4611B	0.002	-55	+100
	6.6	±5%	75/1-3	0.25	C1	1N4611C	0.001	-55	+100
	6.6	±5%	25/3-7	0.25	C1	1N4612	0.01	-55	+100
	6.6	±5%	25/3-7	0.25	C1	1N4612A	0.005	-55	+100
	6.6	±5%	25/3-7	0.25	C1	1N4612B	0.002	-55	+100
	6.6	±5%	25/3-7	0.25	C1	1N4612C	0.001	-55	+100

MIN	NOM	MAX OR TOL	Z _Z @I _Z (ohms/ma)	DISS (@25C)	DIM	TYPE NO.	TEMP COEF. (%/°C)	TEMP RANGE (°C)	
								LOW	HIGH
	6.6	±5%	15/7-15	0.25	C1	1N4613	0.01	-55	+100
	6.6	±5%	15/7-15	0.25	C1	1N4613A	0.005	-55	+100
	6.6	±5%	15/7-15	0.25	C1	1N4613B	0.002	-55	+100
	6.6	±5%	15/7-15	0.25	C1	1N4613C	0.001	-55	+100
6.46	6.8	7.14	20/7.5		C2	1N2765	0.01	-55	+100
6.46	6.8	7.14	20/7.5		C2	1N2765A	0.005	-55	+100
6.7		7.4	10/10			1N4501	±0.2	-65	+125
	8.4	5%	15/10	0.25	SP12	1N430*	0.002	-55	+100
	8.4	5%	15/10	0.25	SP12	1N430A	0.001	-55	+100
	8.4	5%	15/10	0.25	SP12	1N430B	0.001	-55	+150
	8.4	5%	15/10	0.25	T4	1N1530	0.014	-55	+100
	8.4	5%	15/10	0.25	T4	1N1530A	0.001	-55	+100
8.0		8.8	15/10	0.4	C2	1N3154*	0.01	-55	+100
8.0		8.8	15/10	0.4	C2	1N3154A*	0.01	-55	+150
8.0		8.8	15/10	0.4	C2	1N3155*	0.005	-55	+100
8.0		8.8	15/10	0.4	C2	1N3155A*	0.005	-55	+150
8.0		8.8	15/10	0.4	C2	1N3156*	0.002	-55	+100
8.0		8.8	15/10	0.4	C2	1N3156A*	0.002	-55	+150
8.0		8.8	15/10	0.4	C2	1N3157*	0.001	-55	+100
8.0		8.8	15/10	0.4	C7	1N3157A*	0.001	-55	+150
8.0		8.8	15/10	0.27	T2	1N3199	0.005	0	+75
8.0		8.8	15/10	0.27	T2	1N3200	0.003	0	+75
8.0		8.8	15/10	0.27	T2	1N3201	0.002	0	+75
8.0		8.8	15/10	0.27	T2	1N3202	0.001	0	+75
	8.5	5%	15/10	1.0	S5	1N2790	0.002		
	8.5	5%	15/10	0.4		1N3148*	0.005		
	8.5	5%	200/0.5	0.4	C1	1N4775	0.01	0	+75
	8.5	5%	200/0.5	0.4	C1	1N4775A	0.01	-55	+100
	8.5	5%	200/0.5	0.4	C1	1N4776	0.005	0	+75
	8.5	5%	200/0.5	0.4	C1	1N4776A	0.005	-55	+100
	8.5	5%	200/0.5	0.4	C1	1N4777	0.002	0	+75
	8.5	5%	200/0.5	0.4	C1	1N4777A	0.002	-55	+100
	8.5	5%	200/0.5	0.4	C1	1N4778	0.001	0	+75
	8.5	5%	200/0.5	0.4	C1	1N4778A	0.001	-55	+100

Zener Reference Diodes

8.8V-12.8V

BREAKDOWN VOLTAGE			$Z_T @ I_Z$ (ohms/ma)	DISS (@25C)	DIM	TYPE NO.	TEMP COEF. (%/°C)	TEMP RANGE (°C)	
MIN	NOM	MAX OR TOL						LOW	HIGH
11.7	5%	30/7.5	0.5	C1	1N941	0.01	0	+75	
11.7	5%	30/7.5	0.5	C1	1N941A	0.01	-55	+100	
11.7	5%	30/7.5	0.5	C1	1N941B	0.01	-55	+150	
11.7	5%	30/7.5	0.5	C1	1N942	0.005	0	+75	
11.7	5%	30/7.5	0.5	C1	1N942A	0.005	-55	+100	
11.7	5%	30/7.5	0.5	C1	1N942B	0.005	-55	+150	
11.7	5%	30/7.5	0.5	C1	1N943	0.002	0	+75	
11.7	5%	30/7.5	0.5	C1	1N943A	0.002	-55	+100	
11.7	5%	30/7.5	0.5	C1	1N943B	0.002	-55	+150	
11.7	5%	30/7.5	0.5	C1	1N944	0.001	0	+75	
11.7	5%	30/7.5	0.5	C1	1N944A	0.001	-55	+100	
11.7	5%	30/7.5	0.5	C1	1N944B	0.001	-55	+150	
11.7	5%	30/7.5	0.5	C1	1N945	0.0005	0	+75	
11.7	5%	30/7.5	0.5	C1	1N945A	0.0005	-55	+100	
11.7	5%	30/7.5	0.5	C1	1N945B	0.0005	-55	+150	
11.7	5%	30/7.5	0.4	C1	1N946	0.0002	0	+75	
11.7	5%	30/7.5	0.4	C1	1N946A	0.0002	-55	+100	
11.7	5%	30/7.5	0.4	C1	1N946B	0.0002	-55	+150	
11.12	12.28	25/7.5	0.75	C6	1N3580	0.01	0	+75	
11.12	12.28	25/7.5	0.75	C6	1N3580A	0.01	-55	+100	
11.12	12.28	25/7.5	0.75	C6	1N3580B	0.01	-55	+150	
11.12	12.28	25/7.5	0.75	C6	1N3581	0.005	0	+75	
11.12	12.28	25/7.5	0.75	C6	1N3581A	0.005	-55	+100	
11.12	12.28	25/7.5	0.75	C6	1N3581B	0.005	-55	+150	
11.12	12.28	25/7.5	0.75	C6	1N3582	0.002	0	+75	
11.12	12.28	25/7.5	0.75	C6	1N3582A	0.002	-55	+100	
11.12	12.28	25/7.5	0.75	C6	1N3582B	0.002	-55	+150	
11.12	12.28	25/7.5	0.75	C6	1N3583	0.001	0	+75	
11.12	12.28	25/7.5	0.75	C6	1N3583A	0.001	-55	+100	
11.12	12.28	25/7.5	0.75	C6	1N3583B	0.001	-55	+150	
11.12	12.28	25/7.5	0.75	C6	1N3584	0.0005	0	+75	
11.12	12.28	25/7.5	0.75	C6	1N3584A	0.0005	-55	+100	
11.12	12.28	25/7.5	0.75	C6	1N3584B	0.0005	-55	+150	
12.4	5%	40/7.5	0.4	C3	1N1736	0.01	-55	+100	
12.4	5%	40/7.5	0.4	C3	1N1736A	0.005	-55	+100	
12.4	5%	25/10	1.5	C1	1N4057	0.005	-55	+100	
12.4	5%	25/10	1.5	C1	1N4057A	0.002	-55	+100	
12.8	5%	400/0.5	0.400	C1	1N4896	0.01	+25	+100	
12.8	5%	400/0.5	0.400	C1	1N4896A	0.01	-55	100	
12.8	5%	400/0.5	0.400	C1	1N4897	0.005	25	100	
12.8	5%	400/0.5	0.400	C1	1N4897A	0.005	-55	100	
12.8	5%	400/0.5	0.400	C1	1N4898	0.002	25	100	
12.8	5%	400/0.5	0.400	C1	1N4898A	0.002	-55	100	
12.8	5%	400/0.5	0.400	C1	1N4899	0.001	25	100	
12.8	5%	400/0.5	0.400	C1	1N4899A	0.001	-55	100	
12.8	5%	200/1.0	0.400	C1	1N4900	0.01	25	100	
12.8	5%	200/1.0	0.400	C1	1N4900A	0.01	-55	100	
12.8	5%	200/1.0	0.400	C1	1N4901	0.005	25	100	

BREAKDOWN VOLTAGE			$Z_T @ I_Z$ (ohms/ma)	DISS (@25C)	DIM	TYPE NO.	TEMP COEF. (%/°C)	TEMP RANGE (°C)	
MIN	NOM	MAX OR TOL						LOW	HIGH
9.3	5%	15/10	0.75	C8	1N2620A	0.01	-55	+100	
9.3	5%	15/10	0.75	C8	1N2620B	0.01	-55	+150	
9.3	5%	15/10	0.75	C8	1N2621	0.005	0	+75	
9.3	5%	15/10	0.75	C8	1N2621A	0.005	-55	+100	
9.3	5%	15/10	0.75	C8	1N2621B	0.005	-55	+150	
9.3	5%	15/10	0.75	C8	1N2622	0.002	0	+75	
9.3	5%	15/10	0.75	C8	1N2622A	0.002	-55	+100	
9.3	5%	15/10	0.75	C8	1N2622B	0.002	-55	+150	
9.3	5%	15/10	0.75	C8	1N2623	0.001	0	+75	
9.3	5%	15/10	0.75	C8	1N2623A	0.001	-55	+100	
9.3	5%	15/10	0.75	C8	1N2623B	0.001	-55	+150	
9.3	5%	15/10	0.75	C8	1N2624	0.0005	0	+75	
9.3	5%	15/10	0.75	C8	1N2624A	0.0005	-55	+100	
9.3	5%	15/10	0.75	C8	1N2624B	0.0005	-55	+150	
9.0	9.4	9.8	15/10	C6	1N2163	0.005	0	+70	
9.2	9.4	9.6	15/10	C6	1N2163A	0.005	0	+70	
9.0	9.4	9.8	15/10	C6	1N2164	0.005	-55	+125	
9.2	9.4	9.6	15/10	C6	1N2164A	0.005	-55	+125	
9.0	9.4	9.8	15/10	C6	1N2165	0.005	-55	+185	
9.2	9.4	9.6	15/10	C6	1N2165A	0.005	-55	+185	
9.0	9.4	9.8	15/10	C6	1N2166	0.001	0	+70	
9.2	9.4	9.6	15/10	C6	1N2166A	0.001	0	+70	
9.0	9.4	9.8	15/10	C6	1N2167	0.001	-55	+125	
9.2	9.4	9.6	15/10	C6	1N2167A	0.001	-55	+125	
9.0	9.4	9.8	15/10	C6	1N2168	0.001	-55	+185	
9.2	9.4	9.6	15/10	C6	1N2168A	0.001	-55	+185	
9.0	9.4	9.8	15/10	C6	1N2169	0.0005	0	+70	
9.2	9.4	9.6	15/10	C6	1N2169A	0.0005	0	+70	
9.0	9.4	9.8	15/10	C6	1N2170	0.0005	-55	+125	
9.2	9.4	9.6	15/10	C6	1N2170A	0.0005	-55	+125	
9.0	9.4	9.8	15/10	C6	1N2171	0.0005	-55	+185	
9.2	9.4	9.6	15/10	C6	1N2171A	0.0005	-55	+185	
9.8	10.2	20/10	0.4	C1	1N4295	0 to +0.012	-55	+100	
9.9	10.1	20/10	0.4	C1	1N4295A	0 to +0.012	-55	+100	
9.8	10.2	10/20	1.0	C6	1N4296	0 to +0.012	-55	+100	
9.9	10.1	10/20	1.0	C6	1N4296A	0 to +0.012	-55	+100	
10.74	11.86	1.4/150	10	S1	1N4299	0.01	0	+75	
10.74	11.86	1.4/150	10	S1	1N4299A	0.01	-55	+100	
10.74	11.86	1.4/150	10	S1	1N4299B	0.01	-55	+150	
10.74	11.86	1.4/150	10	S1	1N4300	0.005	0	+75	
10.74	11.86	1.4/150	10	S1	1N4300A	0.005	-55	+100	
10.74	11.86	1.4/150	10	S1	1N4300B	0.005	-55	+150	
10.74	11.86	0.8/750	50	S1	1N4303	0.01	0	+75	
10.74	11.86	0.8/750	50	S1	1N4303A	0.01	-55	+100	
10.74	11.86	0.8/750	50	S1	1N4303B	0.01	-55	+150	
10.74	11.86	0.8/750	50	S1	1N4304	0.005	0	+75	
10.74	11.86	0.8/750	50	S1	1N4304A	0.005	-55	+100	
10.74	11.86	0.8/750	50	S1	1N4304B	0.005	-55	+150	

BREAKDOWN VOLTAGE			$Z_T @ I_Z$		DISS	DIM	TYPE NO.	TEMP COEF. (%/°C)	TEMP RANGE	
			(ohms/ma)						(@25°C)	(°C)
MIN	NOM	MAX OR TOL					MIL*		LOW	HIGH
8.36		9.24	1.4/200	10	S1	1N4298	0.005	0	+75	
8.36		9.24	1.4/200	10	S1	1N4298A	0.005	-55	+100	
8.36		9.24	1.4/200	10	S1	1N4298B	0.005	-55	+150	
8.36		9.24	0.6/1000	50	S1	1N4301	0.01	0	+75	
8.36		9.24	0.6/1000	50	S1	1N4301A	0.01	-55	+100	
8.36		9.24	0.6/1000	50	S1	1N4301B	0.01	-55	+150	
8.36		9.24	0.6/1000	50	S1	1N4302	0.005	0	+75	
8.36		9.24	0.6/1000	50	S1	1N4302A	0.005	-55	+100	
8.36		9.24	0.6/1000	50	S1	1N4302B	0.005	-55	+150	
	9.0	5%	20/7.5	0.5	C2	1N935	0.01	0	+75	
	9.0	5%	20/7.5	0.5	C2	1N935A	0.01	-55	+100	
	9.0	5%	20/7.5	0.5	C2	1N935B*	0.01	-55	+150	
	9.0	5%	20/7.5	0.5	C2	1N936	0.005	0	+75	
	9.0	5%	20/7.5	0.5	C2	1N936A	0.005	-55	+100	
	9.0	5%	20/7.5	0.5	C2	1N936B	0.005	-55	+150	
	9.0	5%	20/7.5	0.5	C2	1N937	0.002	0	+75	
	9.0	5%	20/7.5	0.5	C2	1N937A	0.002	-55	+100	
	9.0	5%	20/7.5	0.5	C2	1N937B*	0.002	-55	+150	
	9.0	5%	20/7.5	0.5	C2	1N938	0.001	0	+75	
	9.0	5%	20/7.5	0.5	C2	1N938A*	0.001	-55	+100	
	9.0	5%	20/7.5	0.5	C2	1N938B*	0.001	-55	+100	
	9.0	5%	20/7.5	0.5	C2	1N939*	0.005	0	+75	
	9.0	5%	20/7.5	0.5	C2	1N939A*	0.0005	-55	+100	
	9.0	5%	20/7.5	0.5	C2	1N939B*	0.0005	-55	+150	
	9.0	5%	20/7.5	0.4	C2	1N940*	0.0002	0	+75	
	9.0	5%	20/7.5	0.4	C2	1N940A*	0.0002	-55	+100	
	9.0	5%	20/7.5	0.4	C2	1N940B*	0.0002	-55	+150	
	9.1	5%	350/0.5	0.25	C1	1N4765	0.01	0	+75	
	9.1	5%	350/0.5	0.25	C1	1N4765A	0.01	-55	+100	
	9.1	5%	350/0.5	0.25	C1	1N4766	0.005	0	+75	
	9.1	5%	350/0.5	0.25	C1	1N4766A	0.005	-55	+100	
	9.1	5%	350/0.5	0.25	C1	1N4767	0.002	0	+75	
	9.1	5%	350/0.5	0.25	C1	1N4767A	0.002	-55	+100	
	9.1	5%	350/0.5	0.25	C1	1N4768	0.001	0	+75	
	9.1	5%	350/0.5	0.25	C1	1N4768A	0.001	-55	+100	
	9.1	5%	350/0.5	0.25	C1	1N4769	0.0005	0	+75	
	9.1	5%	350/0.5	0.25	C1	1N4769A	0.0005	-55	+100	
	9.1	5%	200/1.0	0.25	C1	1N4770	0.01	0	+75	
	9.1	5%	200/1.0	0.25	C1	1N4770A	0.01	-55	+100	
	9.1	5%	200/1.0	0.25	C1	1N4771	0.005	0	+75	
	9.1	5%	200/1.0	0.25	C1	1N4771A	0.005	-55	+100	
	9.1	5%	200/1.0	0.25	C1	1N4772	0.002	0	+75	
	9.1	5%	200/1.0	0.25	C1	1N4772A	0.002	-55	+100	
	9.1	5%	200/1.0	0.25	C1	1N4773	0.001	0	+75	
	9.1	5%	200/1.0	0.25	C1	1N4773A	0.001	-55	+100	
	9.1	5%	200/1.0	0.25	C1	1N4774	0.0005	0	+75	
	9.1	5%	200/1.0	0.25	C1	1N4774A	0.0005	-55	+100	
	9.3	5%	20/7.5	0.75	C8	1N2620	0.01	0	+75	

BREAKDOWN VOLTAGE			$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	TEMP COEF.	TEMP RANGE	
			(ohms/ma)	(@25C)			(%/°C)	(°C)	
MIN	NOM	MAX OR TOL				MIL*		LOW	HIGH
12.8	5%		200/1.0	0.400	C1	1N4901A	0.005	-55	100
12.8	5%		200/1.0	0.400	C1	1N4902	0.002	25	100
12.8	5%		200/1.0	0.400	C1	1N4902A	0.002	-55	100
12.8	5%		200/1.0	0.400	C1	1N4903	0.001	25	100
12.8	5%		200/1.0	0.400	C1	1N4903A	0.001	-55	100
12.8	5%		100/2.0	0.400	C1	1N4904	0.01	25	100
12.8	5%		100/2.0	0.400	C1	1N4904A	0.01	-55	100
12.8	5%		100/2.0	0.400	C1	1N4905	0.005	25	100
12.8	5%		100/2.0	0.400	C1	1N4905A	0.005	-55	100
12.8	5%		100/2.0	0.400	C1	1N4906	0.002	25	100
12.8	5%		100/2.0	0.400	C1	1N4906A	0.002	-55	100
12.8	5%		100/2.0	0.400	C1	1N4907	0.001	25	100
12.8	5%		100/2.0	0.400	C1	1N4907A	0.001	-55	100
12.8	5%		50/4.0	0.400	C1	1N4908	0.01	25	100
12.8	5%		50/4.0	0.400	C1	1N4908A	0.01	-55	100
12.8	5%		50/4.0	0.400	C1	1N4909	0.005	25	100
12.8	5%		50/4.0	0.400	C1	1N4909A	0.005	-55	100
12.8	5%		50/4.0	0.400	C1	1N4910	0.002	25	100
12.8	5%		50/4.0	0.400	C1	1N4910A	0.002	-55	100
12.8	5%		50/4.0	0.400	C1	1N4911	0.001	25	100
12.8	5%		50/4.0	0.400	C1	1N4911A	0.001	-55	100
12.8	5%		25/7.5	0.400	C1	1N4912	0.01	25	100
12.8	5%		25/7.5	0.400	C1	1N4912A	0.01	-55	100
12.8	5%		25/7.5	0.400	C1	1N4913	0.005	25	100
12.8	5%		25/7.5	0.400	C1	1N4913A	0.005	-55	100
12.8	5%		25/7.5	0.400	C1	1N4914	0.002	25	100
12.8	5%		25/7.5	0.400	C1	1N4914A	0.002	-55	100
12.8	5%		25/7.5	0.400	C1	1N4915	0.001	25	100
12.8	5%		25/7.5	0.400	C1	1N4915A	0.001	-55	100
13.6	5%		40/7.5		C2	1N2766	0.01	-55	+100
13.6	5%		40/7.5		C2	1N2766A	0.005	-55	+100
14.6	5%		30/10	1.5	C1	1N4058	0.005	-55	+100
14.6	5%		30/10	1.5	C1	1N4058A	0.002	-55	+100
16.8	5%		30/10	1.5	C1	1N4059	0.005	-55	+100
16.8	5%		30/10	1.5	C1	1N4059A	0.002	-55	+100
18.5	5%		30/10	1.5	C1	1N4060	0.005	-55	+100
18.5	5%		30/10	1.5	C1	1N4060A	0.002	-55	+100
18.6	5%		60/7.5	0.6	C3	1N1736A	0.01	-55	+100
18.6	5%		60/7.5	0.6	C3	1N1737	0.005	-55	+100
19.2	5%		600/0.5	0.4	C1	1N4916	0.01	25	100
19.2	5%		600/0.5	0.4	C1	1N4916A	0.01	-55	100
19.2	5%		600/0.5	0.4	C1	1N4917	0.005	25	100
19.2	5%		600/0.5	0.4	C1	1N4917A	0.005	-55	100
19.2	5%		600/0.5	0.4	C1	1N4918	0.002	25	100
19.2	5%		600/0.5	0.4	C1	1N4918A	0.002	-55	100
19.2	5%		300/1.0	0.4	C1	1N4919	0.01	25	100
19.2	5%		300/1.0	0.4	C1	1N4919A	0.01	-55	100
19.2	5%		300/1.0	0.4	C1	1N4920	0.005	25	100

BREAKDOWN VOLTAGE			$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	TEMP COEF.	TEMP RANGE	
			(ohms/ma)	(@25C)			(%/°C)	(°C)	
MIN	NOM	MAX OR TOL				MIL*		LOW	HIGH
19.2	5%		300/1.0	0.4	C1	1N4920A	0.005	-55	100
19.2	5%		300/1.0	0.4	C1	1N4921	0.002	25	100
19.2	5%		300/1.0	0.4	C1	1N4921A	0.002	-55	100
19.2	5%		150/2.0	0.4	C1	1N4922	0.01	25	100
19.2	5%		150/2.0	0.4	C1	1N4922A	0.01	-55	100
19.2	5%		150/2.0	0.4	C1	1N4923	0.005	25	100
19.2	5%		150/2.0	0.4	C1	1N4923A	0.005	-55	100
19.2	5%		150/2.0	0.4	C1	1N4924	0.002	25	100
19.2	5%		150/2.0	0.4	C1	1N4924A	0.002	-55	100
19.2	5%		75/4.0	0.4	C1	1N4925	0.01	25	100
19.2	5%		75/4.0	0.4	C1	1N4925A	0.01	-55	100
19.2	5%		75/4.0	0.4	C1	1N4926	0.005	25	100
19.2	5%		75/4.0	0.4	C1	1N4926A	0.005	-55	100
19.2	5%		75/4.0	0.4	C1	1N4927	0.002	25	100
19.2	5%		75/4.0	0.4	C1	1N4927A	0.002	-55	100
19.2	5%		75/4.0	0.4	C1	1N4928	0.001	25	100
19.2	5%		75/4.0	0.4	C1	1N4928A	0.001	-55	100
19.2	5%		36/7.5	0.4	C1	1N4929	0.01	25	100
19.2	5%		36/7.5	0.4	C1	1N4929A	0.01	-55	100
19.2	5%		36/7.5	0.4	C1	1N4930	0.005	25	100
19.2	5%		36/7.5	0.4	C1	1N4930A	0.005	-55	100
19.2	5%		36/7.5	0.4	C1	1N4931	0.002	25	100
19.2	5%		36/7.5	0.4	C1	1N4931A	0.002	-55	100
19.2	5%		36/7.5	0.4	C1	1N4932	0.001	25	100
19.2	5%		36/7.5	0.4	C1	1N4932A	0.001	-55	100
20	5%		35/10	1.5	C2	1N3763	0.002	-55	+150
20.4	5%		60/7.5		S2	1N2767	0.01	-55	+100
20.4	5%		60/7.5		S2	1N2767A	0.005	-55	+100
21	5%		35/10	1.5	C1	1N4061	0.005	-55	+100
21	5%		35/10	1.5	C1	1N4061A	0.002	-55	+100
23	5%		40/10	1.5	C1	1N4062	0.005	-55	+100
23	5%		40/10	1.5	C1	1N4062A	0.002	-55	+100
24.8	5%		80/7.5	0.8	C3	1N1738	0.01	-55	+100
24.8	5%		80/7.5	0.8	C3	1N1738A	0.005	-55	+100
27	5%		45/10	1.5	C1	1N4063	0.005	-55	+100
27	5%		45/10	1.5	C1	1N4063A	0.002	-55	+100
27.2			80/7.5		C2	1N2768	0.01	-55	+100
27.2			80/7.5		C2	1N2768A	0.005	-55	+100
30	5%		50/10	1.5	C1	1N4064	0.005	-55	+100
30	5%		50/10	1.5	C1	1N4064A	0.002	-55	+100
31	5%		100/7.5	1.0	C3	1N1739	0.01	-55	+100
31	5%		100/7.5	1.0	C3	1N1739A	0.005	-55	+100
33	5%		55/10	1.5	C1	1N4065	0.005	-55	+100
33	5%		55/10	1.5	C1	1N4065A	0.002	-55	+100
34	5%		100/7.5		C2	1N2769	0.01	-55	+100
34	5%		100/7.5		C2	1N2769A	0.005	-55	+100
37	5%		80/7.5	1.5	C1	1N4066	0.005	-55	+100

BREAKDOWN VOLTAGE			$Z_Z @ I_Z$	DISS	DIM	TYPE NO.	TEMP COEF.	TEMP RANGE	
			(ohms/ma)	(@25C)			(%/°C)	(°C)	
MIN	NOM	MAX OR TOL				MIL*		LOW	HIGH
37	5%		80/7.5	1.5	C1	1N4066A	0.002	-55	+100
37.2	5%		120/7.5	1.2	C3	1N1740	0.01	-55	+100
37.2	5%		120/7.5	1.2	C3	1N1740A	0.005	-55	+100
40.8	5%		120/7.5		C2	1N2770	0.01	-55	+100
40.8	5%		120/7.5		C2	1N2770A	0.005	-55	+100
43	5%		90/7.5	1.5	C1	1N4067	0.005	-55	+100
43	5%		90/7.5	1.5	C1	1N4067A	0.002	-55	+100
43.4	5%		140/7.5	1.4	C3	1N1741	0.01	-55	+100
43.4	5%		140/7.5	1.4	C3	1N1741A	0.005	-55	+100
47	5%		100/7.5	1.5	C1	1N4068	0.005	-55	+100
47	5%		100/7.5	1.5	C1	1N4068A	0.002	-55	+100
49.6	5%		160/7.5	1.6	C3	1N1742	0.01	-55	+100
49.6	5%		160/7.5	1.6	C3	1N1742A	0.005	-55	+100
51	5%		110/7.5	2.0	C2	1N4069	0.005	-55	+100
51	5%		110/7.5	2.0	C2	1N4069A	0.002	-55	+100
56			120/7.5	2.0	C2	1N4070	0.005	-55	+100
56			120/7.5	2.0	C2	1N4070A	0.002	-55	+100
62			135/7.5	2.0	C2	1N4071	0.005	-55	+100
62			135/7.5	2.0	C2	1N4071A	0.002	-55	+100
68			230/5	2.0	C3	1N4072	0.005	-55	+100
68			230/5	2.0	C3	1N4072A	0.002	-55	+100
75			250/5	2.0	C3	1N4073	0.005	-55	+100
75			250/5	2.0	C3	1N4073A	0.002	-55	+100
82			270/5	2.0	C3	1N4074	0.005	-55	+100
82			270/5	2.0	C3	1N4074A	0.002	-55	+100
87			290/5	2.0	C3	1N4075	0.005	-55	+100
87			290/5	2.0	C3	1N4075A	0.002	-55	+100
91			310/5	2.0	C3	1N4076	0.005	-55	+100
91			310/5	2.0	C3	1N4076A	0.002	-55	+100
100			340/5	2.0	C3	1N4077	0.005	-55	+100
100			340/5	2.0	C3	1N4077A	0.002	-55	+100
105			700/2.5	2.0	C3	1N4078	0.005	-55	+100
105			700/2.5	2.0	C3	1N4078A	0.002	-55	+100
110			740/2.5	2.0	C3	1N4079	0.005	-55	+100
110			740/2.5	2.0	C3	1N4079A	0.002	-55	+100
120			800/2.5	2.0	C3	1N4080	0.005	-55	+100
120			800/2.5	2.0	C3	1N4080A	0.002	-55	+100
130			840/2.5	2.5	C3	1N4081	0.005	-55	+100
130			840/2.5	2.5	C3	1N4081A	0.002	-55	+100
140			960/2.5	2.5	C3	1N4082	0.005	-55	+100

ZENER DIODE CROSS REFERENCE

This numerical index can help in locating a particular device in either the zener regulator (pp. 174-187) or the zener temperature-compensated reference diodes (pp. 188-191) tabulations.

To use, locate the device by number, then find it on the other charts by (1) dissipation, then breakdown voltage if a zener regular diode or (2) by breakdown voltage if a zener reference diode.

TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)
1N225	0.15	8.75	1N720	0.25	18	1N937	0.5	9.0	1N1352	10	11	1N1522	1.0	8.2	1N1787	1.0	47
1N226	0.15	10.5	1N721	0.25	20	1N938	0.5	9.0	1N1353	10	12	1N1523	1.0	10	1N1788	1.0	51
1N227	0.15	12.75	1N722	0.25	22	1N939	0.5	9.0	1N1354	10	13	1N1524	1.0	12	1N1789	1.0	56
1N228	0.15	15.75	1N723	0.25	24	1N940	0.5	9.0	1N1355	10	15	1N1525	1.0	15	1N1790	1.0	62
1N229	0.15	19	1N724	0.25	27	1N941	0.5	11.7	1N1356	10	16	1N1526	1.0	18	1N1791	1.0	68
1N230	0.15	23.5	1N725	0.25	30	1N942	0.5	11.7	1N1357	10	18	1N1527	1.0	22	1N1792	1.0	75
1N231	0.15	28.5	1N726	0.25	33	1N943	0.5	11.7	1N1358	10	20	1N1528	1.0	27	1N1793	1.0	82
1N232	0.15	34.5	1N727	0.25	36	1N944	0.5	11.7	1N1359	10	22	1N1530	0.25	8.4	1N1794	1.0	91
1N233	0.15	41	1N728	0.25	39	1N945	0.5	11.7	1N1360	10	24	1N1588	3.5	3.9	1N1795	1.0	100
1N234	0.15	48.5	1N729	0.25	43	1N946	0.5	11.7	1N1361	10	27	1N1589	3.5	4.7	1N1796	1.0	110
1N235	0.15	58	1N730	0.25	47	1N957	0.4	6.8	1N1362	10	30	1N1590	3.5	5.6	1N1797	1.0	120
1N370		1.85	1N731	0.25	51	1N958	0.4	7.5	1N1363	10	33	1N1591	3.5	6.8	1N1798	1.0	130
1N371		2.35	1N732	0.25	56	1N959	0.4	8.2	1N1364	10	36	1N1592	3.5	8.2	1N1799	1.0	150
1N372		2.90	1N733	0.25	62	1N960	0.4	9.1	1N1365	10	39	1N1593	3.5	10	1N1800	1.0	160
1N373		3.50	1N734	0.25	68	1N961	0.4	10	1N1366	10	43	1N1594	3.5	12	1N1801	1.0	180
1N374		4.10	1N735	0.25	75	1N962	0.4	11	1N1367	10	47	1N1595	3.5	15	1N1802	1.0	200
1N375		4.10	1N736	0.25	82	1N963	0.4	12	1N1368	10	51	1N1596	3.5	18	1N1803	10	5.6
1N376		4.95	1N737	0.25	91	1N964	0.4	13	1N1369	10	56	1N1597	3.5	22	1N1804	10	6.2
1N377		5.90	1N738	0.25	100	1N965	0.4	15	1N1370	10	62	1N1598	3.5	27	1N1805	10	6.8
1N429	0.2	6.2	1N739	0.25	110	1N966	0.4	16	1N1371	10	68	1N1599	10	3.9	1N1806	10	7.5
1N430	0.25	8.4	1N740	0.25	120	1N967	0.4	18	1N1372	10	75	1N1600	10	4.7	1N1807	10	8.2
1N465	0.2	2.6	1N741	0.25	130	1N968	0.4	20	1N1373	10	82	1N1601	10	5.6	1N1808	10	9.1
1N466	0.2	3.45	1N742	0.25	150	1N969	0.4	22	1N1374	10	91	1N1602	10	6.8	1N1809	10	110
1N467	0.2	4.1	1N743	0.25	160	1N970	0.4	24	1N1375	10	100	1N1603	10	8.2	1N1810	10	120
1N468	0.2	4.85	1N744	0.25	180	1N971	0.4	27	1N1416	10	8.2	1N1604	10	10	1N1811	10	130
1N469	0.2	5.8	1N745	0.25	200	1N972	0.4	30	1N1417	10	12	1N1605	10	12	1N1812	10	150
1N470	0.2	7.1	1N746	0.4	3.3	1N973	0.4	33	1N1418	10	15	1N1606	10	15	1N1813	10	160
1N471	0.2	3.45	1N747	0.4	3.6	1N974	0.4	36	1N1419	10	18	1N1607	10	18	1N1814	10	180
1N472	0.2	4.1	1N748	0.4	3.9	1N975	0.4	39	1N1420	10	22	1N1608	10	22	1N1815	10	200
1N473	0.2	4.85	1N749	0.4	4.3	1N976	0.4	43	1N1421	10	27	1N1609	10	27	1N1816	10	13
1N474	0.2	5.8	1N750	0.4	4.7	1N977	0.4	47	1N1422	10	68	1N1735	0.2	6.2	1N1817	10	15
1N475	0.2	7.1	1N751	0.4	5.1	1N978	0.4	51	1N1423	10	100	1N1736	0.4	12.4	1N1818	10	16
1N664	0.4	8.2	1N752	0.4	5.6	1N979	0.4	56	1N1424	10	150	1N1737	0.6	18.6	1N1819	10	18
1N665	0.4	12	1N753	0.4	6.2	1N980	0.4	62	1N1425	1	8.2	1N1738	0.8	24.8	1N1820	10	20
1N666	0.4	15	1N754	0.4	6.8	1N981	0.4	68	1N1426	1	12	1N1739	1.0	31	1N1821	10	22
1N667	0.4	18	1N755	0.4	7.5	1N982	0.4	75	1N1427	1	15	1N1740	1.2	37.2	1N1822	10	24
1N668	0.4	22	1N756	0.4	8.2	1N983	0.4	82	1N1428	1	18	1N1741	1.4	43.4	1N1823	10	27
1N669	0.4	27	1N757	0.4	9.1	1N984	0.4	91	1N1429	1	22	1N1742	1.6	49.6	1N1824	10	30
1N670	0.4	68	1N758	0.4	10	1N985	0.4	100	1N1430	1	27	1N1743	10	10	1N1825	10	33
1N671	0.4	100	1N759	0.4	12	1N986	0.4	110	1N1431	1	68	1N1744	1.0	10	1N1826	10	36
1N672	0.4	150	1N761	0.25	4.85	1N987	0.4	120	1N1432	1	100	1N1765	1.0	5.6	1N1827	10	39
1N674	0.4	4.7	1N762	0.25	5.8	1N988	0.4	130	1N1433	1	150	1N1766	1.0	6.2	1N1828	10	43
1N675	0.4	6.2	1N763	0.25	7.1	1N989	0.4	150	1N1482	10	4.7	1N1767	1.0	6.8	1N1829	10	47
1N701	0.4	10	1N764	0.25	8.75	1N990	0.4	160	1N1483	10	6.2	1N1768	1.0	7.5	1N1830	10	51
1N702	0.25	2.6	1N765	0.25	10.5	1N991	0.4	180	1N1483	10	6.2	1N1769	1.0	8.2	1N1831	10	56
1N703	0.25	3.45	1N766	0.25	12.75	1N992	0.4	200	1N1484	1	4.7	1N1770	1.0	9.1	1N1832	10	62
1N704	0.25	4.1	1N767	0.25	15.75	1N1313	0.15	8.75	1N1485	1	6.2	1N1771	1.0	10	1N1833	10	68
1N705	0.25	4.85	1N768	0.25	19	1N1314	0.15	10.5	1N1507	0.75	3.9	1N1772	1.0	11	1N1834	10	75
1N706	0.25	5.8	1N769	0.25	23.5	1N1315	0.15	12.75	1N1508	0.75	4.7	1N1773	1.0	12	1N1835	10	82
1N707	0.25	7.1	1N821	0.4	6.2	1N1316	0.15	15.75	1N1509	0.75	5.6	1N1774	1.0	13	1N1836	10	91
1N708	0.25	5.6	1N822	0.4	6.2	1N1317	0.15	19	1N1510	0.75	6.8	1N1775	1.0	15	1N1875	1.0	8.2
1N709	0.25	6.2	1N823	0.4	6.2	1N1318	0.15	23.5	1N1511	0.75	8.2	1N1776	1.0	16	1N1876	1.0	10
1N710	0.25	6.8	1N824	0.4	6.2	1N1319	0.15	28.5	1N1512	0.75	10	1N1777	1.0	18	1N1877	1.0	12
1N711	0.25	7.5	1N825	0.4	6.2	1N1320	0.15	34.5	1N1513	0.75	12	1N1778	1.0	20	1N1878	1.0	15
1N712	0.25	8.2	1N826	0.4	6.55	1N1321	0.15	41	1N1514	0.75	15	1N1779	1.0	22	1N1879	1.0	18
1N713	0.25	9.1	1N827	0.4	6.2	1N1322	0.15	49.5	1N1515	0.75	18	1N1780	1.0	24	1N1880	1.0	22
1N714	0.25	10	1N828	0.4	6.2	1N1323	0.15	58	1N1516	0.75	22	1N1781	1.0	27	1N1881	1.0	27
1N715	0.25	11	1N829	0.4	6.2	1N1324	0.15	71	1N1517	0.75	27	1N1782	1.0	30	1N1882	1.0	33
1N716	0.25	12	1N912	0.5	0.62	1N1325	0.15	87.5	1N1518	1.0	3.9	1N1783	1.0	33	1N1883	1.0	39
1N717	0.25	13	1N913	0.6	0.62	1N1326	0.15	105	1N1519	1.0	4.7	1N1784	1.0	36	1N1884	1.0	47
1N718	0.25	15	1N935	0.5	9.0	1N1327	0.15	127.5	1N1520	1.0	5.6	1N1785	1.0	39	1N1885	1.0	56
1N719	0.25	16	1N936	0.5	9.0	1N1351	10	10	1N1521	1.0	6.8	1N1786	1.0	43	1N1886	1.0	68

TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)
1N1887	1.0	82	1N1978	0.4	395	1N2622	0.75	9.3	1N2986	10	24	1N3101	1.0	220	1N3398	0.5	4.7
1N1888	1.0	100	1N1979	0.4	470	1N2623	0.75	9.3	1N2987	10	25	1N3102	10	120	1N3399	0.5	5.6
1N1889	1.0	120	1N1980	0.4	565	1N2624	0.75	9.3	1N2988	10	27	1N3103	10	150	1N3400	0.5	6.8
1N1890	1.0	145	1N1981	0.15	3.9	1N2765	0.2	6.8	1N2989	10	30	1N3104	10	180	1N3401	0.5	8.2
1N1891	10	8.2	1N1982	0.15	4.7	1N2766	0.4	13.6	1N2990	10	33	1N3105	10	220	1N3402	0.5	10
1N1892	10	10	1N1983	0.15	5.6	1N2767	0.6	20.4	1N2991	10	36	1N3112	1.0	7.5	1N3403	0.5	12
1N1893	10	12	1N1984	0.15	6.8	1N2768	0.8	27.2	1N2992	10	39	1N3148	0.4	8.5	1N3404	0.5	15
1N1894	10	15	1N1985	0.15	8.2	1N2769	1.0	34	1N2993	10	43	1N3154	0.4	8.4	1N3405	0.5	18
1N1895	10	18	1N1986	0.15	10	1N2770	1.2	40.8	1N2994	10	45	1N3155	0.4	8.4	1N3406	0.5	22
1N1896	10	22	1N1987	0.15	12	1N2804	50	6.8	1N2995	10	47	1N3156	0.4	8.4	1N3407	0.5	27
1N1897	10	27	1N1988	0.15	15	1N2805	50	7.5	1N2996	10	50	1N3157	0.4	8.4	1N3408	0.5	33
1N1898	10	33	1N1989	0.15	18	1N2806	50	8.2	1N2997	10	51	1N3181	0.6	8.2	1N3409	0.5	39
1N1899	10	39	1N1990	0.15	22	1N2807	50	9.1	1N2998	10	52	1N3198	0.4	2.25	1N3410	0.5	47
1N1900	10	47	1N1991	0.15	27	1N2808	50	10	1N2999	10	56	1N3199	0.27	8.4	1N3411	0.5	6.2
1N1901	10	56	1N1992	0.15	33	1N2809	50	11	1N3000	10	62	1N3200	0.27	8.4	1N3412	0.5	6.8
1N1902	10	68	1N1993	0.15	39	1N2810	50	12	1N3001	10	68	1N3201	0.27	8.4	1N3413	0.5	7.5
1N1903	10	82	1N1994	0.15	47	1N2811	50	13	1N3002	10	75	1N3202	0.27	8.4	1N3414	0.5	8.2
1N1904	10	100	1N1995	0.15	56	1N2812	50	14	1N3003	10	82	1N3305	50	6.8	1N3415	0.5	10
1N1927	0.25	3.9	1N1996	0.15	68	1N2813	50	15	1N3004	10	91	1N3306	50	7.5	1N3416	0.5	12
1N1928	0.25	4.7	1N1997	0.15	82	1N2814	50	16	1N3005	10	100	1N3307	50	8.2	1N3417	0.5	15
1N1929	0.25	5.6	1N1998	0.15	100	1N2815	50	17	1N3006	10	105	1N3308	50	9.1	1N3418	0.5	18
1N1930	0.25	6.8	1N1999	0.15	120	1N2816	50	18	1N3007	10	110	1N3309	50	10	1N3419	0.5	22
1N1931	0.25	8.2	1N2000	0.15	150	1N2817	50	19	1N3008	10	120	1N3310	50	11	1N3420	0.5	27
1N1932	0.25	10	1N2001	0.15	180	1N2818	50	20	1N3009	10	130	1N3311	50	12	1N3421	0.5	30
1N1933	0.25	12	1N2002	0.15	220	1N2819	50	22	1N3010	10	140	1N3312	50	13	1N3422	0.5	33
1N1934	0.25	15	1N2003	0.15	270	1N2820	50	24	1N3011	10	150	1N3313	50	14	1N3423	0.5	39
1N1935	0.25	18	1N2004	0.15	330	1N2821	50	25	1N3012	10	160	1N3314	50	15	1N3424	0.5	47
1N1936	0.25	22	1N2005	0.5	390	1N2822	50	27	1N3013	10	175	1N3315	50	16	1N3425	0.5	56
1N1937	0.25	27	1N2006	0.5	470	1N2823	50	30	1N3014	10	180	1N3316	50	17	1N3426	0.5	68
1N1938	0.25	33	1N2007	0.5	560	1N2824	50	33	1N3015	10	200	1N3317	50	18	1N3427	0.5	82
1N1939	0.25	39	1N2008	10	100	1N2825	50	36	1N3016	1.0	6.8	1N3318	50	19	1N3428	0.5	100
1N1940	0.25	47	1N2009	10	110	1N2826	50	39	1N3017	1.0	7.5	1N3319	50	20	1N3429	0.5	120
1N1941	0.25	56	1N2010	10	120	1N2827	50	43	1N3018	1.0	8.2	1N3320	50	22	1N3430	0.5	150
1N1942	0.25	68	1N2011	10	130	1N2828	50	45	1N3019	1.0	9.1	1N3321	50	24	1N3431	0.5	180
1N1943	0.25	82	1N2012	10	150	1N2829	50	47	1N3020	1.0	10	1N3322	50	25	1N3432	0.5	220
1N1944	0.25	100	1N2032	0.75	4.85	1N2830	50	50	1N3021	1.0	11	1N3323	50	27	1N3463	2.0	220
1N1945	0.25	120	1N2033	0.75	5.8	1N2831	50	51	1N3022	1.0	12	1N3324	50	30	1N3477	0.25	2.2
1N1946	0.25	150	1N2034	0.75	7.1	1N2832	50	56	1N3023	1.0	13	1N3325	50	33	1N3496	0.25	6.2
1N1947	0.25	180	1N2035	0.75	8.75	1N2833	50	62	1N3024	1.0	15	1N3326	50	36	1N3497	0.25	6.2
1N1948	0.25	220	1N2036	0.75	10.5	1N2834	50	68	1N3025	1.0	16	1N3327	50	39	1N3498	0.25	6.2
1N1949	0.25	270	1N2037	0.75	12.75	1N2835	50	75	1N3026	1.0	18	1N3328	50	43	1N3499	0.25	6.2
1N1950	0.25	330	1N2038	0.75	15.75	1N2836	50	82	1N3027	1.0	20	1N3329	50	45	1N3500	0.25	6.2
1N1951	0.25	395	1N2039	0.75	19	1N2837	50	91	1N3028	1.0	22	1N3330	50	47	1N3501	0.25	6.35
1N1952	0.25	470	1N2040	0.75	23.5	1N2838	50	100	1N3029	1.0	24	1N3331	50	50	1N3502	0.25	6.35
1N1953	0.25	565	1N2041	10	4.85	1N2839	50	105	1N3030	1.0	27	1N3332	50	51	1N3503	0.25	6.35
1N1954	0.4	3.95	1N2042	10	5.8	1N2840	50	110	1N3031	1.0	30	1N3333	50	52	1N3504	0.25	6.35
1N1955	0.4	4.7	1N2043	10	7.1	1N2841	50	120	1N3032	1.0	33	1N3334	50	56	1N3506	0.4	3.3
1N1956	0.4	5.65	1N2044	10	8.75	1N2842	50	130	1N3033	1.0	36	1N3335	50	62	1N3507	0.4	3.6
1N1957	0.4	6.85	1N2045	10	10.5	1N2843	50	150	1N3034	1.0	39	1N3336	50	68	1N3508	0.4	3.9
1N1958	0.4	8.3	1N2046	10	12.75	1N2844	50	160	1N3035	1.0	43	1N3337	50	75	1N3509	0.4	4.3
1N1959	0.4	10.5	1N2047	10	15.75	1N2845	50	180	1N3036	1.0	47	1N3338	50	82	1N3510	0.4	4.7
1N1960	0.4	12	1N2048	10	19	1N2846	50	200	1N3037	1.0	51	1N3339	50	91	1N3511	0.4	5.1
1N1961	0.4	14.5	1N2049	10	23.5	1N2937	10	45	1N3038	1.0	56	1N3340	50	100	1N3512	0.4	5.6
1N1962	0.4	18	1N2163	0.75	9.4	1N2970	10	6.8	1N3039	1.0	62	1N3341	50	105	1N3513	0.4	6.2
1N1963	0.4	22	1N2164	0.75	9.4	1N2971	10	7.5	1N3040	1.0	68	1N3342	50	110	1N3514	0.4	6.8
1N1964	0.4	27	1N2165	0.75	9.4	1N2972	10	8.2	1N3041	1.0	75	1N3343	50	120	1N3515	0.4	7.5
1N1965	0.4	33	1N2166	0.75	9.4	1N2973	10	9.1	1N3042	1.0	82	1N3344	50	130	1N3516	0.4	8.2
1N1966	0.4	39.5	1N2167	0.75	9.4	1N2974	10	10	1N3043	1.0	91	1N3345	50	140	1N3517	0.4	9.1
1N1967	0.4	47	1N2168	0.75	9.4	1N2975	10	11	1N3044	1.0	100	1N3346	50	150	1N3518	0.4	10
1N1968	0.4	55.5	1N2169	0.75	9.4	1N2976	10	12	1N3045	1.0	110	1N3347	50	160	1N3519	0.4	11
1N1969	0.4	68.5	1N2170	0.75	9.4	1N2977	10	13	1N3046	1.0	120	1N3348	50	175	1N3520	0.4	12
1N1970	0.4	83	1N2171	0.75	9.4	1N2978	10	14	1N3047	1.0	130	1N3349	50	180	1N3521	0.4	13
1N1971	0.4	100.5	1N2214	1.0	5.5	1N2979	10	15	1N3048	1.0	150	1N3350	50	200	1N3522	0.4	15
1N1972	0.4	120	1N2387	1.0	30	1N2980	10	16	1N3049	1.0	160	1N3392	0.5	1.5	1N3523	0.4	16
1N1973	0.4	145	1N2498	10	10	1N2981	10	17	1N3050	1.0	180	1N3393	0.5	1.8	1N3524	0.4	18
1N1974	0.4	180	1N2499	10	11	1N2982	10	18	1N3051	1.0	200	1N3394	0.5	2.2	1N3525	0.4	20
1N1975	0.4	220	1N2500	10	12	1N2983	10	19	1N3098	1.0	120	1N3395	0.5	2.7	1N3526	0.4	22
1N1976	0.4	270	1N2620	0.75	9.3	1N2984	10	20	1N3099	1.0	150	1N3396	0.5	3.3	1N3527	0.4	24
1N1977	0.4	330	1N2621	0.75	9.3	1N2985	10	22	1N3100	1.0	180	1N3397	0.5	3.9	1N3528	0.4	27

(Continued)

TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)
1N3529	0.4	30	1N3796	1.5	20	1N4032	5	39	1N4124	0.25	43	1N4214	10	33	1N4301	50	8.8
1N3530	0.4	33	1N3797	1.5	22	1N4033	5	43	1N4125	0.25	47	1N4215	10	36	1N4302	50	8.8
1N3531	0.4	36	1N3798	1.5	24	1N4034	5	47	1N4126	0.25	51	1N4216	10	39	1N4303	50	11.3
1N3532	0.4	39	1N3799	1.5	27	1N4035	5	51	1N4127	0.25	56	1N4217	10	43	1N4304	50	11.3
1N3533	0.4	43	1N3800	1.5	30	1N4036	5	56	1N4128	0.25	60	1N4218	10	45	1N4323	1.0	6.8
1N3534	0.4	47	1N3801	1.5	33	1N4037	5	62	1N4129	0.25	62	1N4219	10	47	1N4324	1.0	7.5
1N3537	1.0	12	1N3802	1.5	36	1N4038	5	68	1N4130	0.25	68	1N4220	10	50	1N4325	1.0	8.2
1N3553	0.25	6.3	1N3803	1.5	39	1N4039	5	75	1N4131	0.25	75	1N4221	10	51	1N4326	1.0	9.1
1N3580	0.75	11.7	1N3804	1.5	43	1N4040	5	82	1N4132	0.25	82	1N4222	10	52	1N4327	1.0	10
1N3581	0.75	11.7	1N3805	1.5	47	1N4041	5	91	1N4133	0.25	87	1N4223	10	56	1N4328	1.0	11
1N3582	0.75	11.7	1N3806	1.5	51	1N4042	5	100	1N4134	0.25	91	1N4224	10	62	1N4329	1.0	12
1N3583	0.75	11.7	1N3807	1.5	56	1N4057	1.5	12.4	1N4135	0.25	100	1N4225	10	68	1N4330	1.0	13
1N3584	0.75	11.7	1N3808	1.5	62	1N4058	1.5	14.6	1N4156	0.4	1.31	1N4226	10	75	1N4331	1.0	15
1N3675	0.75	6.8	1N3809	1.5	68	1N4059	1.5	16.8	1N4157	0.4	1.95	1N4227	10	82	1N4332	1.0	16
1N3676	0.75	7.5	1N3810	1.5	75	1N4060	1.5	18.5	1N4158	1.0	6.8	1N4228	10	91	1N4333	1.0	18
1N3677	0.75	8.2	1N3811	1.5	82	1N4061	1.5	21	1N4159	1.0	7.5	1N4229	10	100	1N4334	1.0	20
1N3678	0.75	9.1	1N3812	1.5	91	1N4062	1.5	23	1N4160	1.0	8.2	1N4230	10	105	1N4335	1.0	22
1N3679	0.75	10	1N3813	1.5	100	1N4063	1.5	27	1N4161	1.0	9.1	1N4231	10	110	1N4336	1.0	24
1N3680	0.75	11	1N3814	1.5	110	1N4064	1.5	30	1N4162	1.0	10	1N4232	10	120	1N4337	1.0	27
1N3681	0.75	12	1N3815	1.5	120	1N4065	1.5	33	1N4163	1.0	11	1N4233	10	130	1N4338	1.0	30
1N3682	0.75	13	1N3816	1.5	130	1N4066	1.5	37	1N4164	1.0	12	1N4234	10	140	1N4339	1.0	33
1N3683	0.75	15	1N3817	1.5	150	1N4067	1.5	43	1N4165	1.0	13	1N4235	10	150	1N4340	1.0	36
1N3684	0.75	16	1N3818	1.5	160	1N4068	1.5	47	1N4166	1.0	15	1N4236	10	160	1N4341	1.0	39
1N3685	0.75	18	1N3819	1.5	180	1N4069	2	51	1N4167	1.0	16	1N4237	10	175	1N4342	1.0	43
1N3686	0.75	20	1N3820	1.5	200	1N4070	2	56	1N4168	1.0	18	1N4238	10	180	1N4343	1.0	47
1N3687	0.75	22	1N3821	1.0	3.3	1N4071	2	62	1N4169	1.0	20	1N4239	10	200	1N4344	1.0	51
1N3688	0.75	24	1N3822	1.0	3.6	1N4072	2	68	1N4170	1.0	22	1N4240	10	5	1N4345	1.0	56
1N3689	0.75	27	1N3823	1.0	3.9	1N4073	2	75	1N4171	1.0	24	1N4241	10	6	1N4346	1.0	62
1N3690	0.75	30	1N3824	1.0	4.3	1N4074	2	82	1N4172	1.0	27	1N4258	10	6.8	1N4347	1.0	68
1N3691	0.75	33	1N3825	1.0	4.7	1N4075	2	87	1N4173	1.0	30	1N4259	10	7.5	1N4348	1.0	75
1N3692	0.75	36	1N3826	1.0	5.1	1N4076	2	91	1N4174	1.0	33	1N4260	10	8.2	1N4349	1.0	82
1N3693	0.75	39	1N3827	1.0	5.6	1N4077	2	100	1N4175	1.0	36	1N4261	10	9.1	1N4350	1.0	91
1N3694	0.75	43	1N3828	1.0	6.2	1N4078	2	105	1N4176	1.0	39	1N4262	10	10	1N4351	1.0	100
1N3695	0.75	47	1N3829	1.0	6.8	1N4079	2	110	1N4177	1.0	43	1N4263	10	11	1N4352	1.0	110
1N3696	0.75	51	1N3830	1.0	7.5	1N4080	2	120	1N4178	1.0	47	1N4264	10	12	1N4353	1.0	120
1N3697	0.75	56	1N3896	0.25	0.77	1N4081	2.5	130	1N4179	1.0	51	1N4265	10	13	1N4354	1.0	130
1N3698	0.75	62	1N3897	0.25	1.5	1N4082	2.5	140	1N4180	1.0	56	1N4266	10	15	1N4355	1.0	150
1N3699	0.75	68	1N3898	0.25	2.1	1N4083	2.5	150	1N4181	1.0	62	1N4267	10	16	1N4356	1.0	160
1N3700	0.75	75	1N3949	10	20	1N4084	2.5	175	1N4182	1.0	68	1N4268	10	18	1N4357	1.0	180
1N3701	0.75	82	1N3950	1.5	20	1N4085	2.5	200	1N4183	1.0	75	1N4269	10	20	1N4358	1.0	200
1N3702	0.75	91	1N3951	1.5	25	1N4095	0.275	5.0	1N4184	1.0	82	1N4270	10	22	1N4360	0.25	2.4
1N3703	0.75	100	1N3984	10	5.5	1N4096	3	90	1N4185	1.0	91	1N4271	10	24	1N4362	0.4	0.65
1N3704	0.75	110	1N3985	10	6	1N4097	3	100	1N4186	1.0	100	1N4272	10	27	1N4370	0.4	2.4
1N3705	0.75	120	1N3986	10	6.2	1N4098	3	150	1N4187	1.0	110	1N4273	10	30	1N4371	0.4	2.7
1N3706	0.75	130	1N3993	10	3.9	1N4099	0.25	6.8	1N4188	1.0	120	1N4274	10	33	1N4372	0.4	3
1N3707	0.75	150	1N3994	10	4.3	1N4100	0.25	7.5	1N4189	1.0	130	1N4275	10	36	1N4400	1.5	6.8
1N3708	0.75	160	1N3995	10	4.7	1N4101	0.25	8.2	1N4190	1.0	150	1N4276	10	39	1N4401	1.5	7.5
1N3709	0.75	180	1N3996	10	5.1	1N4102	0.25	8.7	1N4191	1.0	160	1N4277	10	43	1N4402	1.5	8.2
1N3710	0.75	200	1N3997	10	5.6	1N4103	0.25	9.1	1N4192	1.0	180	1N4278	10	47	1N4403	1.5	9.1
1N3732	1.0	5.1	1N3998	10	6.2	1N4104	0.25	10	1N4193	1.0	200	1N4279	10	51	1N4404	1.5	10
1N3763	1.5	20	1N3999	10	6.8	1N4105	0.25	11	1N4194	10	6.8	1N4280	10	56	1N4405	1.5	11
1N3774	0.34	1.15	1N4000	10	7.5	1N4106	0.25	12	1N4195	10	7.5	1N4281	10	62	1N4406	1.5	12
1N3779	0.4	6.5	1N4010	0.4	6.2	1N4107	0.25	13	1N4196	10	8.2	1N4282	10	68	1N4407	1.5	13
1N3780	0.4	6.5	1N4016	5	8.2	1N4108	0.25	14	1N4197	10	9.1	1N4283	10	75	1N4408	1.5	15
1N3781	0.4	6.5	1N4017	5	9.1	1N4109	0.25	15	1N4198	10	10	1N4284	10	82	1N4409	1.5	16
1N3782	0.4	6.5	1N4018	5	10	1N4110	0.25	16	1N4199	10	11	1N4285	10	91	1N4410	1.5	18
1N3783	0.4	6.5	1N4019	5	11	1N4111	0.25	17	1N4200	10	12	1N4286	10	100	1N4411	1.5	20
1N3784	0.4	6.5	1N4020	5	12	1N4112	0.25	18	1N4201	10	13	1N4287	10	110	1N4412	1.5	22
1N3785	1.5	6.8	1N4021	5	13	1N4113	0.25	19	1N4202	10	14	1N4288	10	120	1N4413	1.5	24
1N3786	1.5	7.5	1N4022	5	15	1N4114	0.25	20	1N4203	10	15	1N4289	10	130	1N4414	1.5	27
1N3787	1.5	8.2	1N4023	5	16	1N4115	0.25	22	1N4204	10	16	1N4290	10	150	1N4415	1.5	30
1N3788	1.5	9.1	1N4024	5	18	1N4116	0.25	24	1N4205	10	17	1N4291	10	160	1N4416	1.5	33
1N3789	1.5	10	1N4025	5	20	1N4117	0.25	25	1N4206	10	18	1N4292	10	180	1N4417	1.5	36
1N3790	1.5	11	1N4026	5	22	1N4118	0.25	27	1N4207	10	19	1N4293	10	200	1N4418	1.5	39
1N3791	1.5	12	1N4027	5	24	1N4119	0.25	28	1N4208	10	20	1N4295	0.4	10	1N4419	1.5	43
1N3792	1.5	13	1N4028	5	27	1N4120	0.25	30	1N4209	10	22	1N4296	1.0	10	1N4420	1.5	47
1N3793	1.5	15	1N4029	5	30	1N4121	0.25	33	1N4210	10	24	1N4297	10	8.8	1N4421	1.5	51
1N3794	1.5	16	1N4030	5	33	1N4122	0.25	36	1N4211	10	25	1N4298	10	8.8	1N4422	1.5	56
1N3795	1.5	18	1N4031	5	36	1N4123	0.25	39	1N4212	10	27	1N4299	10	11.3	1N4423	1.5	62
									1N4213	10	30	1N4300	10	11.3	1N4424	1.5	68

TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)	TYPE NO.	DISS (watts)	V _Z (volts)
1N4425	1.5	75	1N4567	0.25	6.4	1N4673	1.0	33.0	1N4753	1.0	36	1N4894	0.4	6.35	1N5039	2.5	43
1N4426	1.5	82	1N4568	0.25	6.4	1N4674	1.0	36.0	1N4754	1.0	39	1N4895	0.4	6.35	1N5040	2.5	45
1N4427	1.5	91	1N4569	0.25	6.4	1N4675	1.0	39.0	1N4755	1.0	43	1N4896	0.4	12.8	1N5041	2.5	47
1N4428	1.5	100	1N4570	0.25	6.4	1N4676	1.0	43.0	1N4756	1.0	47	1N4897	0.4	12.8	1N5042	2.5	50
1N4429	1.5	110	1N4571	0.25	6.4	1N4677	1.0	47.0	1N4757	1.0	51	1N4898	0.4	12.8	1N5043	2.5	51
1N4430	1.5	120	1N4572	0.25	6.4	1N4678	0.25	1.8	1N4758	1.0	56	1N4899	0.4	12.8	1N5044	2.5	52
1N4431	1.5	130	1N4573	0.25	6.4	1N4679	0.25	2.0	1N4759	1.0	62	1N4900	0.4	12.8	1N5045	2.5	56
1N4432	1.5	150	1N4574	0.25	6.4	1N4680	0.25	2.2	1N4760	1.0	68	1N4901	0.4	12.8	1N5046	2.5	62
1N4433	1.5	160	1N4611		6.6	1N4681	0.25	2.4	1N4761	1.0	75	1N4902	0.4	12.8	1N5047	2.5	68
1N4434	1.5	180	1N4612		6.6	1N4682	0.25	2.7	1N4762	1.0	82	1N4903	0.4	12.8	1N5048	2.5	75
1N4435	1.5	200	1N4613		6.6	1N4683	0.25	3.0	1N4763	1.0	91	1N4904	0.4	12.8	1N5049	2.5	82
1N4453	0.4	0.655	1N4614	0.25	1.8	1N4684	0.25	3.3	1N4764	1.0	100	1N4905	0.4	12.8	1N5050	2.5	91
1N4460	1.5	6.2	1N4615	0.25	2.0	1N4685	0.25	3.6	1N4765	0.25	9.1	1N4906	0.4	12.8	1N5051	2.5	100
1N4461	1.5	6.8	1N4616	0.25	2.2	1N4686	0.25	3.9	1N4766	0.25	9.1	1N4907	0.4	12.8	1N5221	0.5	2.4
1N4462	1.5	7.5	1N4617	0.25	2.4	1N4687	0.25	4.3	1N4767	0.25	9.1	1N4908	0.4	12.8	1N5222	0.5	2.5
1N4463	1.5	8.2	1N4618	0.25	2.7	1N4688	0.25	4.7	1N4768	0.25	9.1	1N4909	0.4	12.8	1N5223	0.5	2.7
1N4464	1.5	9.1	1N4619	0.25	3.0	1N4689	0.25	5.1	1N4769	0.25	9.1	1N4910	0.4	12.8	1N5224	0.5	2.8
1N4465	1.5	10	1N4620	0.25	3.3	1N4690	0.25	5.6	1N4770	0.25	9.1	1N4911	0.4	12.8	1N5225	0.5	3.0
1N4466	1.5	11	1N4621	0.25	3.6	1N4691	0.25	6.2	1N4771	0.25	9.1	1N4912	0.4	12.8	1N5226	0.5	3.3
1N4467	1.5	12	1N4622	0.25	3.9	1N4692	0.25	6.8	1N4772	0.25	9.1	1N4913	0.4	12.8	1N5227	0.5	3.6
1N4468	1.5	13	1N4623	0.25	4.3	1N4693	0.25	7.5	1N4773	0.25	9.1	1N4914	0.4	12.8	1N5228	0.5	3.9
1N4469	1.5	15	1N4624	0.25	4.7	1N4694	0.25	8.2	1N4774	0.25	9.1	1N4915	0.4	12.8	1N5229	0.5	4.3
1N4470	1.5	16	1N4625	0.25	5.1	1N4695	0.25	8.7	1N4775	0.25	8.5	1N4916	0.4	19.2	1N5230	0.5	4.7
1N4471	1.5	18	1N4626	0.25	5.6	1N4696	0.25	9.1	1N4776	0.25	8.5	1N4917	0.4	19.2	1N5232	0.5	5.6
1N4472	1.5	20	1N4627	0.25	6.2	1N4697	0.25	10.0	1N4777	0.25	8.5	1N4918	0.4	19.2	1N5233	0.5	6.0
1N4473	1.5	22	1N4628	0.6	6.8	1N4698	0.25	11.0	1N4778	0.25	8.5	1N4919	0.4	19.2	1N5234	0.5	6.2
1N4474	1.5	24	1N4629	0.6	7.5	1N4699	0.25	12.0	1N4779	0.25	8.5	1N4920	0.4	19.2	1N5235	0.5	6.8
1N4475	1.5	27	1N4630	0.6	8.2	1N4700	0.25	13.0	1N4780	0.25	8.5	1N4921	0.4	19.2	1N5239	0.5	9.1
1N4476	1.5	30	1N4631	0.6	9.1	1N4701	0.25	14.0	1N4781	0.25	8.5	1N4922	0.4	19.2	1N5240	0.5	10
1N4477	1.5	33	1N4632	0.6	10.0	1N4702	0.25	15.0	1N4782	0.25	8.5	1N4923	0.4	19.2	1N5241	0.5	11
1N4478	1.5	36	1N4633	0.6	11.0	1N4703	0.25	16.0	1N4783	0.25	8.5	1N4924	0.4	19.2	1N5242	0.5	12
1N4479	1.5	39	1N4634	0.6	12.0	1N4704	0.25	17.0	1N4784	0.25	8.5	1N4925	0.4	19.2	1N5243	0.5	13
1N4480	1.5	43	1N4635	0.6	13.0	1N4705	0.25	18.0	1N4831	1.2	9.1	1N4926	0.4	19.2	1N5244	0.5	14
1N4481	1.5	47	1N4636	0.6	15.0	1N4706	0.25	19.0	1N4832	1.2	10	1N4927	0.4	19.2	1N5245	0.5	15
1N4482	1.5	51	1N4637	0.6	16.0	1N4707	0.25	20.0	1N4833	1.2	11	1N4928	0.4	19.2	1N5246	0.5	16
1N4483	1.5	56	1N4638	0.6	18.0	1N4708	0.25	22.0	1N4834	1.2	12	1N4929	0.4	19.2	1N5247	0.5	17
1N4484	1.5	62	1N4639	0.6	20.0	1N4709	0.25	24.0	1N4835	1.2	13	1N4930	0.4	19.2	1N5248	0.5	18
1N4485	1.5	68	1N4640	0.6	22.0	1N4710	0.25	25.0	1N4836	1.2	15	1N4931	0.4	19.2	1N5249	0.5	19
1N4486	1.5	75	1N4641	0.6	24.0	1N4711	0.25	27.0	1N4837	1.2	16	1N4932	0.4	19.2	1N5250	0.5	20
1N4487	1.5	82	1N4642	0.6	27.0	1N4712	0.25	28.0	1N4838	1.2	18	1N5008	2.5	3.3	1N5251	0.5	22
1N4488	1.5	91	1N4643	0.6	30.0	1N4713	0.25	30.0	1N4839	1.2	20	1N5009	2.5	3.6	1N5252	0.5	24
1N4489	1.5	100	1N4644	0.6	33.0	1N4714	0.25	33.0	1N4840	1.2	22	1N5010	2.5	3.9	1N5253	0.5	25
1N4490	1.5	110	1N4645	0.6	36.0	1N4715	0.25	36.0	1N4841	1.2	24	1N5011	2.5	4.3	1N5254	0.5	27
1N4491	1.5	120	1N4646	0.6	39.0	1N4716	0.25	39.0	1N4842	1.2	27	1N5012	2.5	4.7	1N5255	0.5	28
1N4492	1.5	130	1N4647	0.6	43.0	1N4717	0.25	43.0	1N4843	1.2	30	1N5013	2.5	5.1	1N5256	0.5	30
1N4493	1.5	150	1N4648	0.6	47.0	1N4728	1.0	3.3	1N4844	1.2	33	1N5014	2.5	5.6	1N5257	0.5	33
1N4494	1.5	160	1N4649	1.0	3.3	1N4729	1.0	3.6	1N4845	1.2	36	1N5015	2.5	6.2	1N5258	0.5	36
1N4495	1.5	180	1N4650	1.0	3.6	1N4730	1.0	3.9	1N4846	1.2	39	1N5016	2.5	6.8	1N5259	0.5	39
1N4496	1.5	200	1N4651	1.0	3.9	1N4731	1.0	4.3	1N4847	1.2	43	1N5017	2.5	7.5	1N5260	0.5	43
1N4499	1.0	6.2	1N4652	1.0	4.3	1N4732	1.0	4.7	1N4848	1.2	47	1N5018	2.5	8.2	1N5261	0.5	47
1N4501		7.05	1N4653	1.0	4.7	1N4733	1.0	5.1	1N4849	1.2	51	1N5019	2.5	9.1	1N5262	0.5	51
1N4535	0.5	3.45	1N4654	1.0	5.1	1N4734	1.0	5.6	1N4850	1.2	56	1N5020	2.5	10	1N5263	0.5	56
1N4549	50	3.9	1N4655	1.0	5.6	1N4735	1.0	6.2	1N4851	1.2	62	1N5021	2.5	11	1N5264	0.5	60
1N4550	50	4.3	1N4656	1.0	6.2	1N4736	1.0	6.8	1N4852	1.2	68	1N5022	2.5	12	1N5265	0.5	62
1N4551	50	4.7	1N4657	1.0	6.8	1N4737	1.0	7.5	1N4853	1.2	75	1N5023	2.5	13	1N5266	0.5	68
1N4552	50	5.1	1N4658	1.0	7.5	1N4738	1.0	8.2	1N4854	1.2	82	1N5024	2.5	14	1N5267	0.5	75
1N4553	50	5.6	1N4659	1.0	8.2	1N4739	1.0	9.1	1N4855	1.2	91	1N5025	2.5	15	1N5268	0.5	82
1N4554	50	6.2	1N4660	1.0	9.1	1N4740	1.0	10	1N4856	1.2	100	1N5026	2.5	16	1N5269	0.5	87
1N4555	50	6.8	1N4661	1.0	10.0	1N4741	1.0	11	1N4857	1.2	110	1N5027	2.5	17	1N5270	0.5	91
1N4556	50	7.5	1N4662	1.0	11.0	1N4742	1.0	12	1N4858	1.2	120	1N5028	2.5	18	1N5271	0.5	100
1N4557	50	3.9	1N4663	1.0	12.0	1N4743	1.0	13	1N4859	1.2	130	1N5029	2.5	19	1N5272	0.5	110
1N4558	50	4.3	1N4664	1.0	13.0	1N4744	1.0	15	1N4860	1.2	150	1N5030	2.5	20	1N5273	0.5	120
1N4559	50	4.7	1N4665	1.0	15.0	1N4745	1.0	16	1N4881	3	20	1N5031	2.5	22	1N5274	0.5	130
1N4560	50	5.1	1N4666	1.0	16.0	1N4746	1.0	18	1N4882	3	36	1N5032	2.5	24	1N5275	0.5	140
1N4561	50	5.6	1N4667	1.0	18.0	1N4747	1.0	20	1N4883	3	12	1N5033	2.5	25	1N5276	0.5	150
1N4562	50	6.2	1N4668	1.0	20.0	1N4748	1.0	22	1N4884	3	20	1N5034	2.5	27	1N5277	0.5	160
1N4563	50	6.8	1N4669	1.0	22.0	1N4749	1.0	24	1N4890	0.4	6.35	1N5035	2.5	30	1N5278	0.5	170
1N4564	50	7.5	1N4670	1.0	24.0	1N4750	1.0	27	1N4891	0.4	6.35	1N5036	2.5	33	1N5279	0.5	180
1N4565	0.25	6.4	1N4671	1.0	27.0	1N4751	1.0	30	1N4892	0.4	6.35	1N5037	2.5	36	1N5280	0.5	190
1N4566	0.25	6.4	1N4672	1.0	30.0	1N4752	1.0	33	1N4893	0.4	6.35	1N5038	2.5	39	1N5281	0.5	200

ZENER DIODE MANUFACTURERS

EIA-type zener diodes are listed in numerical order. Each is followed by manufacturers currently supply-

ing the device. Manufacturers' abbreviations can be found on pp. 22-27.

[illegible]

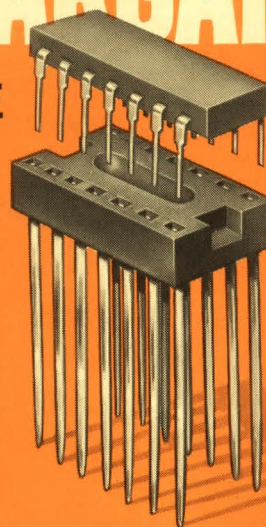
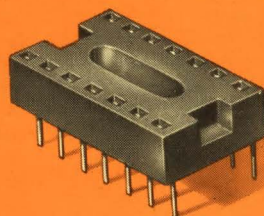
Zener Diodes (Cont'd)

[illegible]

1N3011 ASC Cen Dlt Dks DI ETC Esp GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3022 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3032 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi PC ST Smcr Tns	1N3043 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
2N3012 ASC Cen Dlt Dks DI ETC Esp GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3023 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3033 ASC Cen CmD Dlt Dks Esp GI GSI IRC IDC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3044 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3013 Dlt Dks DI ETC GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3024 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3034 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3045 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3014 ASC Cen Dlt Dks DI ETC Esp GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3025 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3035 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3046 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3015 ASC Cen Dlt Dks DI ETC Esp GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3026 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3036 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3047 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3016 ASC Cen CmD Dlt Dks Esp GSI IRC IDC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3027 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3037 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3048 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3017 ASC Cen CmD Dlt Dks Esp GSI IRC IDC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3028 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3038 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3049 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3018 ASC Cen CmD Dlt Dks Esp GSI IRC IDC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3029 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3039 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3050 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3019 ASC Cen CmD Dlt Dks Esp GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3030 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3040 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3051 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3020 ASC Cen CmD Dlt Dks Esp GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3031 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3041 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3052 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns
1N3021 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3032 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol TRW Tns	1N3042 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns	1N3053 ASC Cen CmD Dlt Dks Esp GI GSI IRC IRec Mot PC ST Smcr Smi Smc Sol Tns

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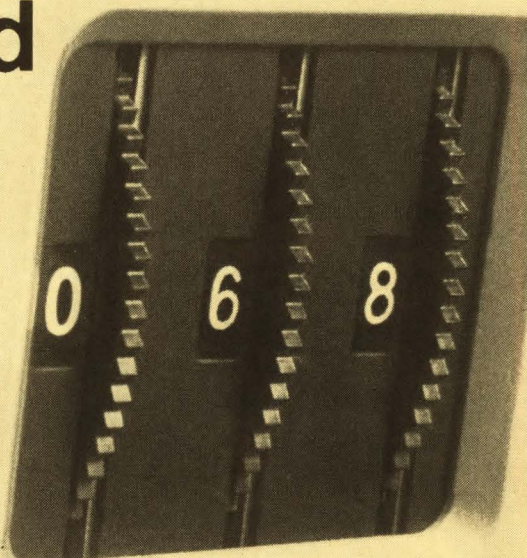
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Zener Diodes (Cont'd)

1N3154

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Dks GSI IRC

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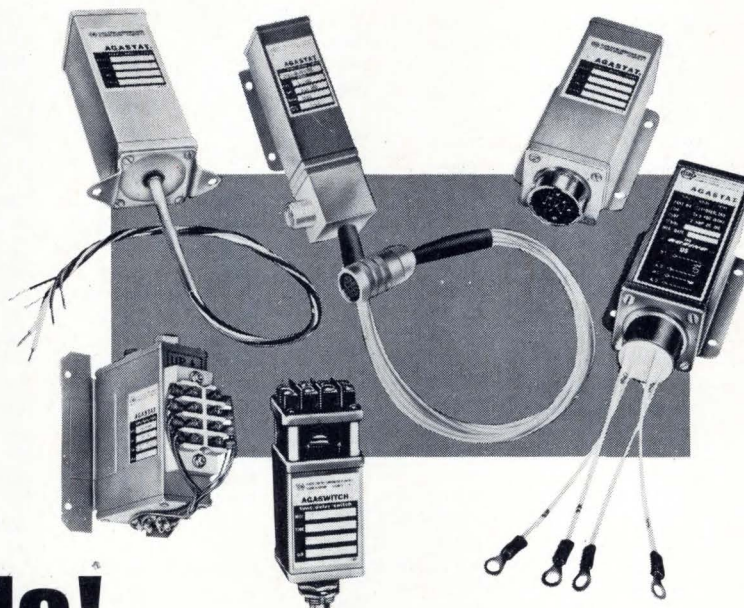
1N3154

Dks GSI IRC

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Dks GSI IRC

Costly specials?



No!
These variations
are standard!

ADVANTAGE: Now it's easy to get the exact timer you need!

Here are just some of the variations most often specified by customers in the past . . . made to fit into special places or for unusual electrical applications. Except, we've now made them standard, integrated into our basic line of 2100 Series miniature pneumatic timing relays.

Now when your application calls for a different type enclosure, mounting bracket, connector type, or even switching function, we can probably supply you from stock. Or, quickly design the exact timing relay you need from the many configurations available.

With Agastat timing relays there are no gears or clutches to wear out. Their patented mechanism has only two moving parts . . . for long lasting, trouble-free service. Our unique sealed head assures accurate repeatability . . . even under extreme conditions. You get instant recycling . . . every time! And, Agastat timers give you AC or DC operation with on-delay, off-delay or both, along with custom-designed switch mechanisms.

Write today for complete specifications.

Address: Dept. EDN-A45

AGASTAT DIVISION



ELASTIC STOP NUT CORPORATION OF AMERICA, ELIZABETH, NEW JERSEY
IN CANADA: ESNA LIMITED, BOX 250, AGINCOURT, ONTARIO

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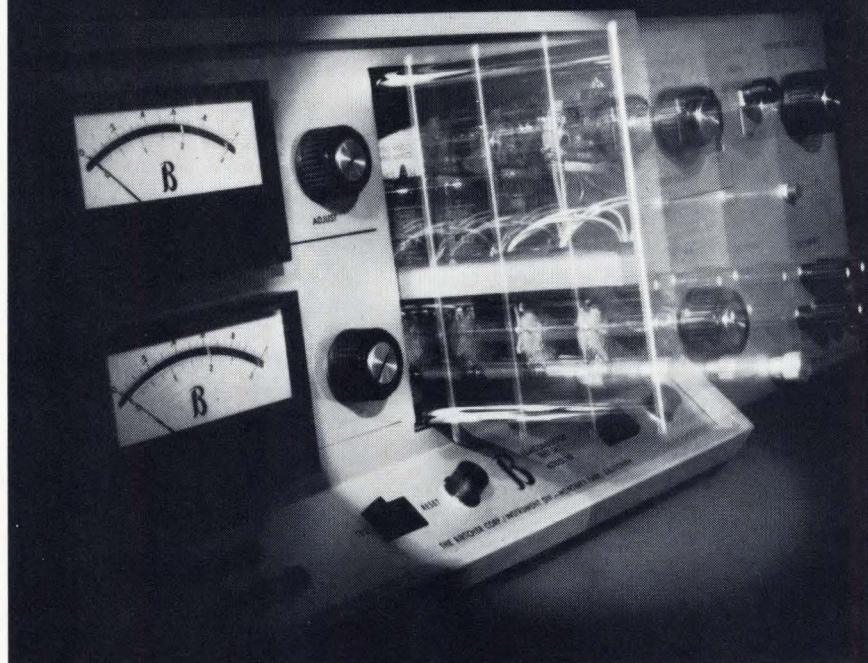
1N4115 Dlt Dks Mot TRW Tns	1N4161 CmD Dlt Dks GSI ST	1N4187 Dlt Dks GI GSI ST	1N4283 Dks GSI IRC
1N4116 Dlt Dks Mot TRW Tns	1N4162 CmD Dlt Dks GI GSI ST	1N4188 Dlt Dks GI GSI ST	1N4284 Dks GSI IRC
1N4117 Dlt Dks Mot TRW Tns	1N4163 CmD Dlt Dks GI GSI ST	1N4189 Dlt Dks GI GSI ST	1N4285 Dks GSI IRC
1N4118 Dlt Dks Mot TRW Tns	1N4164 CmD Dlt Dks GI GSI ST	1N4190 Dlt Dks GI GSI ST	1N4286 Dks GSI IRC
1N4119 Dlt Dks Mot TRW Tns	1N4165 CmD Dlt Dks GI GSI ST	1N4191 Dlt Dks GI GSI ST	1N4287 Dks GSI IRC
1N4120 Dlt Dks Mot TRW Tns	1N4166 CmD Dlt Dks GI GSI ST	1N4192 Dlt Dks GI GSI ST	1N4288 Dks GSI IRC
1N4121 Dlt Dks Mot TRW Tns	1N4167 CmD Dlt Dks GE GSI ST	1N4193 Dlt Dks GI GSI ST	1N4289 Dks GSI IRC
1N4122 Dlt Dks Mot TRW Tns	1N4168 CmD Dlt Dks GE GSI ST	1N4240 Dks GSI IDC	1N4290 Dks GSI IRC
1N4123 Dlt Dks Mot TRW Tns	1N4169 CmD Dlt Dks GE GSI ST	1N4241 CmD Dks GSI	1N4291 Dks GSI IRC
1N4124 Dlt Dks Mot TRW Tns	1N4170 CmD Dlt Dks GE GSI ST	1N4258 Dks GSI IRC	1N4292 Dks GSI IRC
1N4125 Dlt Dks Mot Tns	1N4171 Dlt Dks GI GSI ST	1N4259 Dks GSI IRC	1N4293 Dks GSI IRC
1N4126 Dlt Dks Mot Tns	1N4172 CmD Dlt Dks GI GSI ST	1N4260 Dks GSI IRC	1N4295 CmD Dlt Dks GSI IRC Smcr
1N4127 Dlt Dks Mot Tns	1N4173 CmD Dlt Dks GI GSI ST	1N4261 Dks GSI IRC	1N4296 CmD Dlt Dks GSI IRC Smcr
1N4128 Dlt Dks Mot Tns	1N4174 Dlt Dks GI GSI ST	1N4262 Dks GSI IRC	1N4297 Dks GSI Msm
1N4129 Dlt Dks Mot Tns	1N4175 Dlt Dks GI GSI ST	1N4263 Dks GSI IRC	1N4298 Dks GSI Msm
1N4130 Dlt Dks Mot Tns	1N4176 Dlt Dks GI GSI ST	1N4264 Dks GSI IRC	1N4299 Dks GSI
1N4131 Dlt Dks Mot Tns	1N4177 Dlt Dks GI GSI ST	1N4265 Dks GSI IRC	1N4300 Dks GSI
1N4132 Dlt Dks Mot Tns	1N4178 Dlt Dks GI GSI ST	1N4266 Dks GSI IRC	1N4301 Dks GSI Msm
1N4133 Dlt Dks Mot Tns	1N4179 Dlt Dks GI GSI ST	1N4267 Dks GSI IRC	1N4302 Dks GSI Msm
1N4134 Dlt Dks Mot Tns	1N4180 Dlt Dks GI GSI ST	1N4268 Dks GSI IRC	1N4303 Dks GSI
1N4135 Dlt Dks Mot Tns	1N4181 Dlt Dks GI GSI ST	1N4269 Dks GSI IRC	1N4304 Dks GSI
1N4156 CmD	1N4182 Dlt Dks GI GSI ST	1N4270 Dks GSI IRC	1N4323 CmD GSI IRC IDC
1N4157 CmD	1N4183 Dlt Dks GI GSI ST	1N4271 Dks GSI IRC	1N4324 CmD GSI IRC IDC
1N4158 Dlt Dks GSI IDC ST	1N4184 Dlt Dks GI GSI ST	1N4272 Dks GSI IRC	1N4325 CmD GSI IRC IDC
1N4159 CmD Dlt Dks GSI IDC ST	1N4185 Dlt Dks GI GSI ST	1N4273 Dks GSI IRC	1N4326 CmD GSI IRC
1N4160 CmD Dlt Dks GSI IDC ST	1N4186 Dlt Dks GI GSI ST	1N4274 Dks GSI IRC	1N4327 CmD GSI IRC
		1N4275 Dks GSI IRC	1N4328 CmD GSI IRC
		1N4276 Dks GSI IRC	1N4329 GSI IRC
		1N4277 Dks GSI IRC	1N4330 GSI IRC
		1N4278 Dks GSI IRC	1N4331 GSI IRC
		1N4279 Dks GSI IRC	1N4332 GSI IRC
		1N4280 Dks GSI IRC	1N4333 GSI IRC
		1N4281 Dks GSI IRC	1N4334 GSI IRC
		1N4282 Dks GSI IRC	1N4335 GSI IRC
			1N4336 GSI IRC

202 Zener Diodes

EDN June 24, 1968

1N4921	1N5034	1N5244
Dks	Dks GSI	Mot
1N4922	1N5035	1N5245
Dks	Dks GSI	Mot
1N4923	1N5036	1N5246
Dks	Dks GSI	Mot
1N4924	1N5037	1N5247
Dks	Dks GSI	Mot
1N4925	1N5038	1N5248
Dks	Dks GSI	Mot
1N4926	1N5039	1N5249
Dks	Dks GSI	Mot
1N4927	1N5040	1N5250
Dks	Dks GSI	Mot
1N4928	1N5041	1N5251
Dks	Dks GSI	Mot
1N4929	1N5042	1N5252
Dks	Dks GSI	Mot
1N4930	1N5043	1N5253
Dks	Dks GSI	Mot
1N4931	1N5044	1N5254
Dks	Dks GSI	Mot
1N4932	1N5045	1N5255
Dks	Dks GSI	Mot
1N5008	1N5046	1N5256
Dks GSI IDC	Dks GSI	Mot
1N5009	1N5047	1N5257
Dks GSI	Dks GSI	Mot
1N4010	1N5048	1N5258
Dks GSI IDC	Dks GSI	Mot
1N5011	1N5049	1N5259
Dks GSI	Dks GSI	Mot
1N5012	1N5050	1N5260
Dks GSI	Dks GSI	Mot
1N5013	1N5051	1N5261
Dks GSI	Dks GSI	Mot
1N5014	1N5221	1N5262
Dks GSI IDC	IDC Mot	Mot
1N5015	1N5222	1N5263
Dks GSI IDC	IDC Mot	Mot
1N5016	1N5223	1N5264
Dks GSI	IDC Mot	Mot
1N5017	1N5224	1N5265
Dks GSI	IDC Mot	Mot
1N5018	1N5225	1N5266
Dks GSI	IDC Mot	Mot
1N5019	1N5226	1N5267
Dks GSI	IDC Mot	Mot
1N5020	1N5227	1N5268
Dks GSI	IDC Mot	Mot
1N5021	1N5228	1N5269
Dks GSI	IDC Mot	Mot
1N5022	1N5229	1N5270
Dks GSI	IDC Mot	Mot
1N5023	1N5230	1N5271
Dks GSI	IDC Mot	Mot
1N5024	1N5232	1N5272
Dks GSI	IDC Mot	Mot
1N5025	1N5233	1N5273
Dks GSI	IDC Mot	Mot
1N5026	1N5234	1N5274
Dks GSI	IDC Mot	Mot
1N5027	1N5235	1N5275
Dks GSI	IDC Mot	Mot
1N5028	1N5239	1N5276
Dks GSI	IDC Mot	Mot
1N5029	1N5240	1N5277
Dks GSI	IDC Mot	Mot
1N5030	1N5241	1N5278
Dks GSI	Mot	Mot
1N5031	1N5242	1N5279
Dks GSI	Mot	Mot
1N5032	1N5243	1N5280
Dks GSI	Mot	Mot
1N5033		1N5281
Dks GSI		Mot

Caught here in the very act of changing its identity,



the Birtcher Model 70 is seen transforming itself from a transistor DC tester to a pulsed breakdown tester. (Earlier, it had been positively identified as a Zener diode test station!)

It's all done with plug-in test modules. The basic machine contains power supplies and metering circuitry for setting up bias conditions; you interchange different test modules to perform different tests. Modules cover every significant parameter of any semiconductor you're likely to meet: DC parameters, pulsed breakdown, saturation voltages, pulsed beta, Zener parameters, low leakage and breakdown, and hybrid parameters.

The basic unit and (by way of example) the module illustrated cost \$1225. For the price you get direct readout of transistor breakdown in the Latch-Up or Sustained voltage region; and the module's low, variable duty cycle permits measurement of high peak current with nominal junction heating and minimum possibility of damage. Specs: Current Ranges — 10ma to 1 amp; Voltage Ranges — 30 to 1000 v; Duty Cycle — continuously variable, 0.2 to 1.0% at 60 cps; Pulsewidth — variable, 33 to 167 μ sec; Repetition Rate — locked to line frequency; Accuracy — $\pm 2\%$ full scale. Performance standards of other modules are comparably high. Write for complete details, and specs on the 6 other test modules.

**the BIRTCHER
CORPORATION**
INSTRUMENT DIVISION

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Circle No. 85 on Reader Service Card for more information.

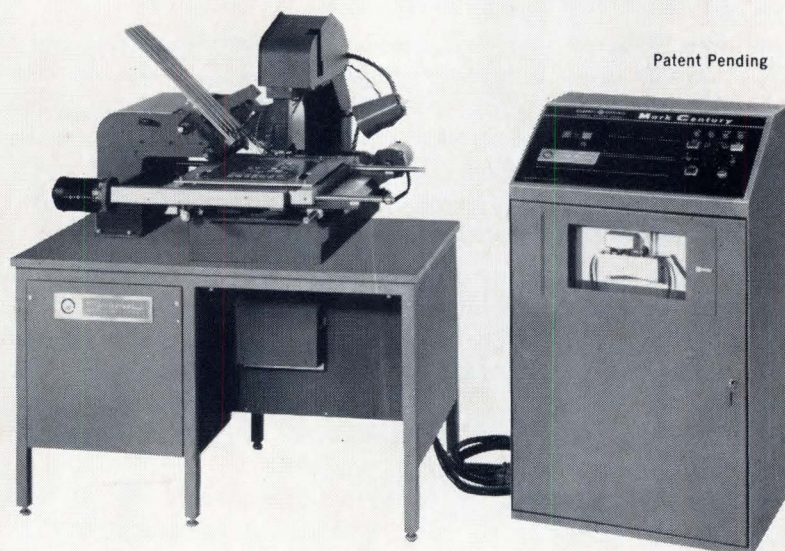
This new N/C machine selects up to 16 different DIP's and automatically inserts any quantity in sequence with one handling of the PC board. And, it can insert 5,040,000 DIP's in a year.*

We think you only need to make 1-million insertions to justify purchasing it. But some users in the office equipment, military electronics, computer and N/C system fields say far less. (They include savings for reduced inspection . . . close tolerance accuracy . . . proven reliability . . . reduced floor space.) However, we all agree that it is well suited for both long and short production runs.

Universal also sells a pantograph operated DIP insertion machine for approx. \$12,000 that has an annual capacity of about 2,520,000 DIP's. We figure 400,000 insertions are needed to justify purchasing it, so the "Pay Back" period can be under two months. Then we also produce a number of other DIP insertion machines that span these extremes.

Send for cost analysis data and 24-pages of engineering information on Universal's broad line of sequencing and insertion machines (pantograph and N/C) for DIP's, axial lead components, jumper wires, and transistors. And count on the no-obligation guidance you can get from experienced Universal sales engineers. Contact:

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MODEL 6125 N/C Insertion System for DIP's.
Available with up to 16 Slidepack Inputs.

* Based on a 7-hr. shift, 240 days a year.

MICRO-CIRCUITS

EDN reported last year that micro-circuit manufacturers were pricing their diffused standard catalog circuits in the \$1 range (1-10 quantities). In 1968 the dramatic price decline continues with one manufacturer listing these same circuits as low as \$0.50 and more manufacturers' products falling into the \$1 area.

The capability chart that follows is intended to provide the designer with information about the availability of microcircuits from domestic manufacturers and about each manufacturer's capability. Again, as in the last 3 years, some new manufacturers have been added to the list and some have dropped out.

The chart is divided into these four main categories:

1. All-diffused standard circuits described in the manufacturer's catalog. These devices include many digital elements and some of the more commonly used analog devices. In this section a general description of the manufacturing techniques employed, the logic forms available and approximate cost are indicated.

2. All-diffused custom circuits designed specifically for the customer's requirements. This section includes the approximate time required for the vendor's analysis of the customer's requirements and a proposal of suggested circuit changes to take advantage of diffusion techniques. Also indicated is the engineering time for preparation of prototype devices and production. An indication is made to show when this technique is economically competitive with some of the other production processes.

3. Hybrid circuits in which thin-film techniques or diffused techniques are combined with transis-

Circle No. 86 on Reader Service Card for more information.

tor chips to form the circuit. Again the manufacturing procedures, time required for the design and production of a special requirement and general cost are given.

4. Multichip circuits in which discrete miniature electronic components, transistor and diode chips, and thin-film or diffused passive elements are combined within a suitable package. Again manufacturing techniques and production time involved are given.

Also indicated are available packages and whether or not manufacturer's reliability data are available to the designer. Circle the Information Retrieval number for additional information from the manufacturer. Manufacturers' abbreviations can be found on pp. 22-27.

A digital microcircuit tabulation follows the capabilities chart. These circuits are listed by series. The prime characteristics of each family (series) of devices are given in its respective logic form section for easy comparison.

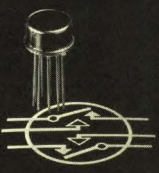
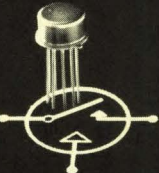
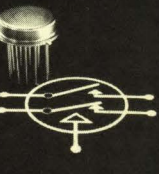
The schematics shown are typical gate-circuit configurations for each logic form depicted. They are presented as an indication of the type of circuitry performing the particular logic and are not to be construed as the only circuit arrangement available.

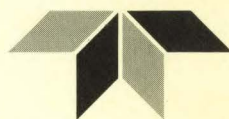
Two new sections added this year include a tabulation of shift registers and one for counters. These have been added because of the recent increase in the availability of medium-scale integrated circuits.

Linear microcircuits also have had two sections added. These are voltage regulators and converters (D/A-A/D). The remaining five categories place the linear circuit into its area of application.

For D-to-A and A-to-D, we have hybrid ICs from A-to-Z

- all military grade semiconductors
- complete D-A/A-D interface functions in one compatible package
- FET analog gates

CDA1 SERIES LOW PROFILE TO-5		BIPOLAR SPDT SWITCH HYBRIDS FOR R/2R LADDER NETWORKS IN D-to-A OR A-to-D SYSTEMS . . . OPERATE DIRECTLY FROM ALL LOGIC, INCLUDING MOS • LOW R_{SAT} (10 OHMS MAX.) • LOW V_{OFFSET} (1 mV MAX.) • 1-99 FROM \$44.00 EACH • 100-999 FROM \$29.50 EACH • AVAILABILITY: FROM STOCK
CDA2 SERIES LOW PROFILE TO-5		DUAL FET SPST SWITCH HYBRIDS FOR CURRENT SUMMING (D-to-A OR A-to-D), INTEGRATOR RESET, SERIES-SHUNT CHOPPERS, ETC. . . . 2 COMPLETELY SEPARATE SWITCHES . . . OPERATE DIRECTLY FROM ALL POSITIVE LOGIC • LOW R_{ON} (25 OHMS MAX.) • ZERO OFFSET VOLTAGE • 1-99 FROM \$50.00 EACH • 100-999 FROM \$33.50 EACH • AVAILABILITY: FROM STOCK
CAG6 LOW PROFILE TO-5		LOW R_{ON} FET SPST SWITCH HYBRID FOR ANALOG GATING • LOW R_{ON} (6 OHMS MAX.) • ZERO OFFSET VOLTAGE • 1-99 \$33.00 EACH • 100-999 \$22.00 EACH • AVAILABILITY: FROM STOCK
CAG7 LOW PROFILE MODIFIED TO-8		LOW R_{ON} FET SPDT SWITCH HYBRID FOR ANALOG GATING • LOW R_{ON} (6 OHMS MAX.) • ZERO OFFSET VOLTAGE • WORKS DIRECTLY FROM LOGIC • 1-99 \$59.40 EACH • 100-999 \$39.70 EACH • AVAILABILITY: FROM STOCK PLEASE ADDRESS SPECIAL CIRCUIT REQUIREMENTS TO JOEL M. COHEN — DIRECTOR OF ENGINEERING.



CRYSTALONICS

A TELEDYNE COMPANY

147 Sherman St. • Cambridge, Mass. • 02140

Circle No. 87 on Reader Service Card for more information.

Microcircuit Capabilities

		Trade name	Reader-Service No.	Available package	Reliability data	CATALOG DIFFUSED										
						DIGITAL		Sell chip or wafer	Analog	Planar	Other passivation	Epitaxial	1-10 units		1000 units	
													Price — dollars	Delivery — wks.	Price — dollars	Delivery — wks.
						No. of compatible families	Logic forms									
AMC	ALPHA MICROELECTRONICS CO., INC. 10307 Kensington Pkwy. Kensington, Md. 20705	MC ²	160	E	●											
Aml	AMELCO SEMICONDUCTOR Box 1030 Mountain View, Calif. 94040	OMIC Microcircuits	161	ACEGHI	●	3	abcdh	●	●	●		●	1-75	0	1-50	2-4
AMI	AMERICAN MICRO-SYSTEMS, INC. 3800 Homestead Rd. Santa Clara, Calif. 95051	Ultralogic	162	AF	●	2	j	●			●		6-70	1	4-40	2-4
Amp	AMPEREX ELECTRONIC CORP. Providence Pike Slatersville, R.I. 02876	HYBRID LIDS	163	AEC	●	2		●	●	●	●	●		0-6		6
AIE	ALANTIC INSTRUMENTS & ELECTRONICS, INC. 50 Hunt St. Watertown, Mass. 02172	Maxpax	164		●											
Bnx	BENDIX CORP. South St. Holmdel, N.J. 07733	Power Hybrid Microcircuits	165	Special												
BRC	BUNKER-RAMO CORP. 8433 Fallbrook Ave. Canoga Park, Calif. 91304	Thin-film hybrid	166	AEG	●											
Bur	BURROUGHS CORP. Box 1226 Plainfield, N.J. 07061	BIPCO	167	E												
CTS	CTS MICROELECTRONICS, INC. 1201 Cumberland Ave. West Lafayette, Ind. 47906	Cermet hybrid	168	AEG	●											
Cen	CENTRALAB 5757 N. Green Bay Ave. Milwaukee, Wis. 53201	PEC	169		●											
CT	CIRCUIT TECHNOLOGY, INC. 160 Smith St. Farmingdale, N.Y. 11735	Custom Hybrid	170	AEG	●											
CCC	COLUMBIA COMPONENTS CORP. 60 Madison Ave. Hempstead, N.Y. 11550	CCC	171	ABCD EFGHI	●											
Con	CONTINENTAL DEVICE CORP. 12515 Chadron Ave. Hawthorne, Calif. 90250		172	A		1	d		●	●		●	8-50	2-4	4-35	2-6
Crs	CRYSTALONICS 147 Sherman St. Cambridge, Mass. 02140		173	AEGI												
Dlt	DELTA SEMICONDUCTORS 225 Paularino Ave. Costa Mesa, Calif. 92626		174					●	●	●		●				
Dks	DICKSON ELECTRONICS CORP. Box 1387 Scottsdale, Ariz. 85251		175	ACDE												
ECom	ELECTRONIC COMPONENTS Trevose, Pa. 19047		176	ABCDE	●	1	b	●		●		●	25-100	0	12-60	2-4
Eri	ERIE TECHNOLOGICAL PRODUCTS, INC. 644 W. 12th St. Erie, Pa. 19013		177		●											
Fch	FAIRCHILD SEMICONDUCTOR 313 Fairchild Dr. Mountain View, Calif. 94040	Micrologic	178	AEH	●	7	abdh	●	●	●		●	0.50-100	0	0.30-50	0

Available Package

A. TO-5, B. TO-46, C. TO-18, D. TO-47, E. Flat pack, F. Round pack, G. TO-8, H. DIP, I. TO-100, J. TO-99.

Logic Form

a. DTL, b. TTL, c. DCTL, d. RTL, e. ECL, f. RCTL, g. UTI-LOGIC, h. HNIL, i. CTL, j. MOS.

	CUSTOM DIFFUSED							HYBRID FILM										MULTICHIP				
	Digital	Analog	TIME REQUIRED FOR				Number required to be competitive	SUBSTRATE		Film technique	Interconnection technique	1-10 units	5000 units	TIME REQUIRED FOR				TIME REQUIRED FOR			Interconnection technique	100 units
			Circuit analysis - days	Masking after — wks.	Prototype after - wks.	Production after - wks.		Inactive	Active			Cost — dollars	Cost — dollars	Circuit analysis- days	Masking after - wks.	Prototype after- wks.	Production after- wks.	Circuit analysis - days	Prototype after - wks.	Production after- wks.		Cost — dollars
								●		V	nrsu	2500	2-10	7	4-6	6-8	10-12					
	●	●	7	2	4	8	1000	●	●	QTV	npqstu	10-300	6-150	7	1-2	4	6-8	7	2-4	2-4	nstu	10-300
	●	●	2-21	4	3	4																
	●	●					1-1000	●	●	V	nprsu	25-100	10	10	2	4-6	6-8					
																		14	8	10	u	
								●		OT	rstv	10-100	1-10	10	2	4-6	8-10					
								●		V	nrstu	20-600	10-100	10-15	1-2	4-6	4-8					
								●		O	s	2-15	1-10	14	2-4	4-6	8-10	14	4-6	12	s	
								●		OT	nqrstu	25-100	1-50	5-10	1-2	4-5	6-8	5-10	4-6	6-8	qst	20-75
								●		T	npru	10-100	2-10	14	1	2	6-10	14	2	6-10	qr	20
								●		T	nqs	10-50	6-25	2	1	3	4	2	3	3	nqs	15
								●		OSTX	npqrstu	10-100	2-30	5	1-3	2-4	4-5	5	2-4	4-5	npqrst	10-200
	●	●	14	4	8	10		●		TV	nst	10-50		14	1	1	4	7	2	4	t	
								●	●	TV	nstu	50-200	5-30	7	2	4-8	8	7	4-8	8	stu	20-100
			10	1	4	6	1000	●	●													
								●		VW	nrstu	10-100	10-100	14	1-3	4-8	8	14	1-2	6	rst	10-100
	●	●	3-10	2	2-5	3-8	>5000	●	●	U	stu		10-100	10	1	3	5	5	3	4-8	stu	10-100
								●		T	nqru	10-100	1-10	5-10	1	2-4	6					
	●	●	14	2	2	2	100-1000	●	●	TV	nqst	3-80	2-40	13	2	4-6	6-8	14	3-6	6-8	nst	2-50

(Continued)

Film Technique

N. Ceramic capacitors, O. Ceramic metal, P. Chemical deposition, Q. Electron gun evaporation, R. Laminated, S. Pyrolytic, T. Silk screen, U. Sputtering, V. Vacuum deposition, W. Alloying, X. Conductive epoxy.

Interconnection Technique

n. Metallized, o. Multicontact, p. Plated, q. Screened, R. Soldered, S. Thermo-compression bond, t. Ultrasonic bond, u. Welded.

Microcircuit Capabilities (Cont'd)

		Trade name	Reader-Service No.	Available package	Reliability data	CATALOG DIFFUSED										
						DIGITAL		Sell chip or wafer	Analog	Planar	Other passivation	Epitaxial	1-10 units		1000 units	
													Price — dollars	Delivery — wks.	Price — dollars	Delivery — wks.
GE	GENERAL ELECTRIC CO. Electronics Park Syracuse, N.Y. 13201		179	AEF	●			●	●	●		●	3.70-100	0	2-20	1
GI	GENERAL INSTRUMENT CORP. Box 600 Hicksville, N.Y. 11802	MOSLOGIC	180	AE	●	1	j		●	●	●		4-75	0	3-50	2-4
		Nanocircuits		ABCDEG	●				●							
Hal	HALEX, INC. 3500 W. Torrance Blvd. Torrance, Calif. 90509	TF Microcircuits	181	AEGHI	●											
HD	HELIPOT 2500 Harbor Blvd. Fullerton, Calif. 92634	Cermet Hybrid	182	H	●											
Hgh	HUGHES SEMICONDUCTORS 500 Superior Ave. Newport Beach, Calif. 92663		183	AE	●	2	ab		●	●		●	25	2-3	10	
ITT	ITT SEMICONDUCTORS 3301 Electronics Way West Palm Beach, Fla. 33402	Monolithic integrated circuits	184	ABDEH	●	4	abdi	●	●	●	●	●		3-4		6
Ind	INDUSTRO TRANSISTOR CORP. 35-10 36th Ave. Long Island City, N.Y. 11106		185	ACEGH	●											
Int	INTELLUX, INC. 26 Coromar Dr. Goleta, Calif. 93017	Hybrid Microcircuit	186		●	3	df	●								
Ilnc	INTERSIL, INC. 10900 N. Tantau Ave. Cupertino, Calif. 95014		187			1	aj	●	●	●	●	●	10-100	1-4	3-50	2-4
LPM	LA POINTE MICROELECTRONICS 18225 Euclid Ave. Fountain Valley, Calif. 92708	Thin-Film Hybrids	188	ACEG	●											
Lns	LANSDALE TRANSISTOR & ELECTRONICS CORP. 1111 N. Broad St. Lansdale, Pa. 19446	LTE Linear	189	AEH					●							
Led	LEDEX DIV. 123 Webster St. Dayton, Ohio 45402		190	ABGHI												
Mal	MALLORY, P. R., & CO. 3920 E. Washington St. Indianapolis, Ind. 46206		191	AH	●			●	●	●		●				
Meg	MEGADYNE INDUSTRIES, INC. 1665 Buffalo Rd. Rochester, N.Y. 14624	Thin-Film Hybrid	192	E												
MI	MEPCO, INC. Columbia Rd. Morristown, N.J. 07960		193	AEFGH	●											
Mot	MOTOROLA SEMICONDUCTOR PRODUCTS, INC. 5005 E. McDowell Rd. Phoenix, Ariz. 85008	MECL MECL II MOS MDTL MHTL MRTL MTTL	194	AEHIJ	●	10	abdehj	●	●		●	●	1-70	0	0.75-40	0
NPC	NPC SEMICONDUCTOR DIV. 3133 E. 12th St. Los Angeles, Calif. 90023		195	I	●	10	a		●	●		●	8-72	3-4		12-14
NS	NATIONAL SEMICONDUCTOR CORP. 2950 San Ysidro Way Santa Clara, Calif. 95051		196	AE			bj	●	●	●		●	5-60	0	3-25	2-4
Phi	PHILCO-FORD CORP. 2920 San Ysidro Way Santa Clara, Calif. 95051	Millwatt III Super RTL MEL Picologic	197	ADEFHJ	●	8	abcd		●	●		●	1-50	0	1-5	2-4
RI	RADIATION, INC. Box 37 Melbourne, Fla. 32901		198	E	●	3	a	●	●	●	●	●				
RCA	RADIO CORP. OF AMERICA 415 S. Fifth St. Harrison, N.J. 07029	ECCSL	199	AEH	●	3	ae		●	●	●	●	1.55-12	2	0.98-8.50	2-12

Available Package

A. TO-5, B. TO-46, C. TO-18, D. TO-47, E. Flat pack, F. Round pack, G. TO-8, H. DIP, I. TO-100, J. TO-99.

Logic Form

a. DTL, b. TTL, c. DCTL, d. RTL, e. ECL, f. RCTL, g. UTI-LOGIC, h. HNIL, i. CTL, j. MOS.

	CUSTOM DIFFUSED							HYBRID FILM										MULTICHIP				
	Digital	Analog	TIME REQUIRED FOR				Number required- to be competitive	SUBSTRATE		Film technique	Interconnection technique	1-10 units	5000 units	TIME REQUIRED FOR				TIME REQUIRED FOR			Interconnection technique	100 units
			Circuit analysis - days	Masking after — wks.	Prototype after - wks.	Production after - wks.		Inactive	Active			Cost — dollars	Cost — dollars	Circuit analysis - days	Masking after - wks.	Prototype after - wks.	Production after- wks.	Circuit analysis - days	Prototype after - wks.	Production after- wks.		
	●	●	7	1	6-10	6-10	100-1000	●	●	TV	nst	4-100	2-50	14	1-2	4-5	6-8	14	2-6	4-5	nst	5-100
	●	●	14	4-6	4-6	6-8	100-1000															
	●	●	14	1	4	8				T				7	2	4	8	7	2	4	s	
								●		VW	rstu	25-100	10-50	7	2	4	6-8					
								●		T	qs	10-100	5-50	5-10	1-2	4-5	4-8					
	●	●	14	4-6	6-10	6-10	10,000	●	●	UV	npu	100	3-10	14	3-5	6-10	6-10	14	4-6	6-10	nsu	10-50
	●																					
	●	●	3	4	2	4	10	●	●	TV	npqstu	20-100	10-40	7	2	2	4	7	2	2	npqstu	10-100
								●		PST	pru	15	5	5	1	5	6					
	●	●	7	2-5	4-6	6-8	100-1000	●	●	UV	nst	5-100	2-50	10	2-5	4-6	8	7	2-5	6-8	nst	10-100
								●		UV	nopr stw	10-350	3-150	10	1	6	8	10	4-6	6-8	nrsu	5-200
								●		T	qrst			5	1	2	4-5					
		●	14	2	4	8	1000															
								●	●	PQV	prstu	50-100	2-10	7	2-4	4	4					
								●		OTV	nqrstu	20-80		5-10	1-2	4-6	6-8					
	●	●	7-14	3-6	3-12	6-14	1000	●	●	UV	ns			7-14	3-6	3-12	6-14	7-14	2-6	2-4	s	
	●	●	7-14	4-8	8-10	12-14																
								●		T	rsW			14	2	4	4	14	4	4	sW	
	●	●	14	2	8	24		●		TUV	s			10	2	8	16	7		2-6	qst	
	●	●	7-14	2-4	6-8	8-10	500-1000	●	●	V	nst							7-14	6-8	8-10	nst	
	●	●	14	4-6	4-6	8-10	10,000															

(Continued)

Film Technique

N. Ceramic capacitors, O. Ceramic metal, P. Chemical deposition, Q. Electron gun evaporation, R. Laminated, S. Pyrolytic, T. Silk screen, U. Sputtering, V. Vacuum deposition, W. Alloying, X. Conductive epoxy.

Interconnection Technique

n. Metallized, o. Multicontact, p. Plated, q. Screened, R. Soldered, S. Thermo-compression bond, t. Ultrasonic bond, u. Welded.

Microcircuit Capabilities (Cont'd)

		Trade name	Reader-Service No.	Available package	Reliability data	CATALOG DIFFUSED										
						DIGITAL		Sell chip or wafer	Analog	Planar	Other passivation	Epitaxial	1-10 units		1000 units	
													No. of compatible families	Logic forms	Price — dollars	Delivery — wks.
Ray	RAYTHEON CO. 350 Ellis St. Mountain View, Calif. 94040	Planex Flip-Tab	200	ABCDEH	●	2	abc	●	●	●		●	10-90	0	6.60	4
Smi	SEMI-ELEMENTS, INC. Saxonburg Blvd. Saxonburg, Pa. 16056	SEMI	201	EF												
Sgn	SIGNETICS CORP. 811 E. Arques Ave. Sunnyvale, Calif. 94086		202	AEH	●	9	abgj	●	●	●		●	1.25-60	0		0
STC	SILICON TRANSISTOR CORP. East Gate Blvd. Garden City, N.Y. 11532		203					●								
Scx	SILICONIX, INC. 1140 W. Evelyn Sunnyvale, Calif. 94086		204	AE	●	2	ab	●	●	●		●	4-44	0		
SSE	SOLID STATE ELECTRONICS CORP. 15321 Rayen St. Sepulveda, Calif. 91343	Micro mods	205	E	●											
SSP	SOLID STATE PRODUCTS, INC. 1 Pingree St. Salem, Mass. 01970		206													
SSS	SOLID STATE SCIENTIFIC CORP. Montgomeryville, Pa. 18936		207													
Sol	SOLITRON DEVICES, INC. 256 Oak Tree Rd. Tappan, N.Y. 10983	FLIP PAK	208													
Spg	SPRAGUE ELECTRIC CO. 491 Marshall St. North Adams, Mass. 01247	Ceracircuit Unicircuit Module	209	ADEH	●	6	abdj	●	●	●		●	2-40	0	1-25	0-4
SWM	STEWART-WARNER MICROCIRCUITS, INC. 730 E. Evelyn Ave. Sunnyvale, Calif. 94086	SW	210	AEH	●	1	a	●		●		●	Below 10	0	2-8	2
Syl	SYLVANIA ELECTRIC PRODUCTS, INC. 100 Sylvan Rd. Woburn, Mass. 01801	SUHL	211	AEH	●	2	b		●	●		●	1.60-35	0	1.10-25	0
TRW	TRW SEMICONDUCTORS 14520 S. Aviation Blvd. Lawndale, Calif. 90260		212	ACE	●											
TI	TEXAS INSTRUMENTS INCORPORATED Box 5012 Dallas, Tex. 75222		213	ADEHI	●	18	abdfj	●	●	●	●	●	1.60-136	1		
Tns	TRANSITRON ELECTRONIC CORP. 168-182 Albion St. Wakefield, Mass. 01881	HLTTL	214	AEH	●	4	b	●	●	●		●	4-80	0	1.50-50	1-4
UC	UNION CARBIDE ELECTRONICS 365 Middlefield Rd. Mountain View, Calif. 94040		215	ACEH	●		j	●	●	●		●	15-150	0		2-4
Var	VARO, INC. 2203 Walnut St. Garland, Tex. 75040	TF circuits	216	AEG	●											
Wst	WESTINGHOUSE ELECTRIC CORP. Box 2278 Pittsburgh, Pa. 15222	Molecular circuits	217	AEH	●	7	abj	●	●	●	●	●	2-50	0-2	1-20	1-8

Available Package

A. TO-5, B. TO-46, C. TO-18, D. TO-47, E. Flat pack, F. Round pack, G. TO-8, H. DIP, I. TO-100, J. TO-99.

Logic Form

a. DTL, b. TTL, c. DCTL, d. RTL, e. ECL, f. RCTL, g. UTI-LOGIC, h. HNIL, i. CTL, j. MOS.

	CUSTOM DIFFUSED							HYBRID FILM								MULTICHIP						
	Digital	Analog	TIME REQUIRED FOR				Number required to be competitive	SUBSTRATE		Film technique	Interconnection technique	1-10 units	5000 units	TIME REQUIRED FOR				TIME REQUIRED FOR			Interconnection technique	100 units
			Circuit analysis - days	Masking after — wks.	Prototype after — wks.	Production after — wks.		Inactive	Active			Cost — dollars	Cost — dollars	Circuit analysis - days	Masking after — wks.	Prototype after — wks.	Production after— wks.	Circuit analysis - days	Prototype after — wks.	Production after— wks.		
	●	●	10		2-6	4-16	3000	●	●	QUV	npsu			10	1	4-8		10	1-4		s	100
	●	●	20	4-6	8	12-20												8	3	6-8	r	
	●	●	14	2-4	6-8	8-12	1000															
								●		T	nqrst	10-100		10	1	4-6	6-10	14	2-4	4-6	nqrst	10-100
	●	●	7	4	8	12								7						0		
																		5	2-6	2-7	u	20-40
								●		TV	qstu	20-300	10-100	7	1-2	4-8	6-8	7	3-6	5-8	stu	10-100
	●	●	14	4	10	10		●	●		uv	25-100	10-50	7	2	4	6	7	3	6	nst	
	●	●	2-3	3	6-12	12-16		●	●	TUV	nqrsu			3-4	2	6-8	4	3-4	2-4	4-7	nrs	
	●	●	14	3	3	6	10,000	●	●	TUV	nqrstu	10-100	3-40	7	3	6	10	21	6	10	rsu	
	●		7	2	6	6-10	10,000															
	●	●	14	3	7	8	10,000	●		T	nqr	10-100	1-50	7-14	2	4-6	8-10	14	6	3	ns	
	●	●	14	2	4	8		●	●	TV	nst	10-300	5-100	7	1	2	6	14	4-6	10	st	10-200
	●	●	14	2-6	3-12	6-16	1000	●	●	UV	rs			14	2-4	4-6	6-16	14	4-6	6-16	s	
	●	●	14	2-4	8-16	4-8	5000 -10,000															
	●	●	7	4-6	4-6	4-6		●	●	TUV	nqstu	25-200		7	4-6	6-8	6-8	7	2-4	2-4	su	
								●		NTV	qrs	10-100	5-50	7	2	4	6	7	2	4	su	10-100
	●	●	14	2	8-16	10-20	1000															

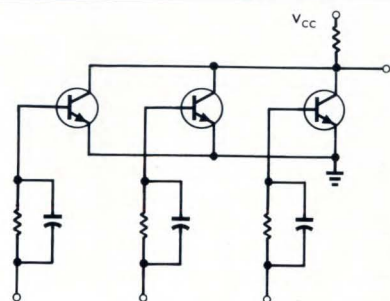
Film Technique

N. Ceramic capacitors, O. Ceramic metal, P. Chemical deposition, Q. Electron gun evaporation, R. Laminated, S. Pyrolytic, T. Silk screen, U. Sputtering, V. Vacuum deposition, W. Alloying, X. Conductive epoxy.

Interconnection Technique

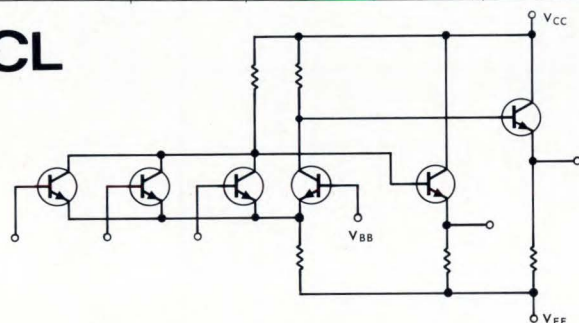
n. Metallized, o. Multicontact, p. Plated, q. Screened, R. Soldered, S. Thermo-compression bond, t. Ultrasonic bond, u. Welded.

RCTL



MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Int	H	18	6 to 12	2	-20 to 100	AGJ
Int	M	18	6 to 12	2	-55 to 125	AHJ
TI	51	14	3 or 6	.2	-55 to 125	CDHI

ECL



MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Fch	μ C100	3	-5.2	.25	0 to 70	AFGI
Mot	MC300	19	-5.2	.25	-55 to 125	AFHI
Mot	MC350	22	-5.2	.25	0 to 75	AFGI
Mot	MC1000	29	-5.2	.25	0 to 75	AFGI
Mot	MC1050	3	-5.2	.25	0 to 70	AFGI

*CHARACTERISTICS

Propagation Delay: **A.** < 10 nsec, **B.** 10-30 nsec, **C.** > 30 nsec

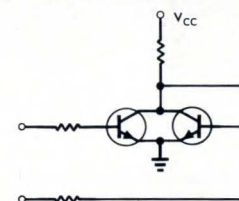
Power Dissipation: **D.** < 10 mw, **E.** 10-30 mw, **F.** > 30 mw

G. Industrial, **H.** Military, **I.** Monolithic, **J.** Hybrid, **K.** Multiple Chip

ECL (Cont'd)

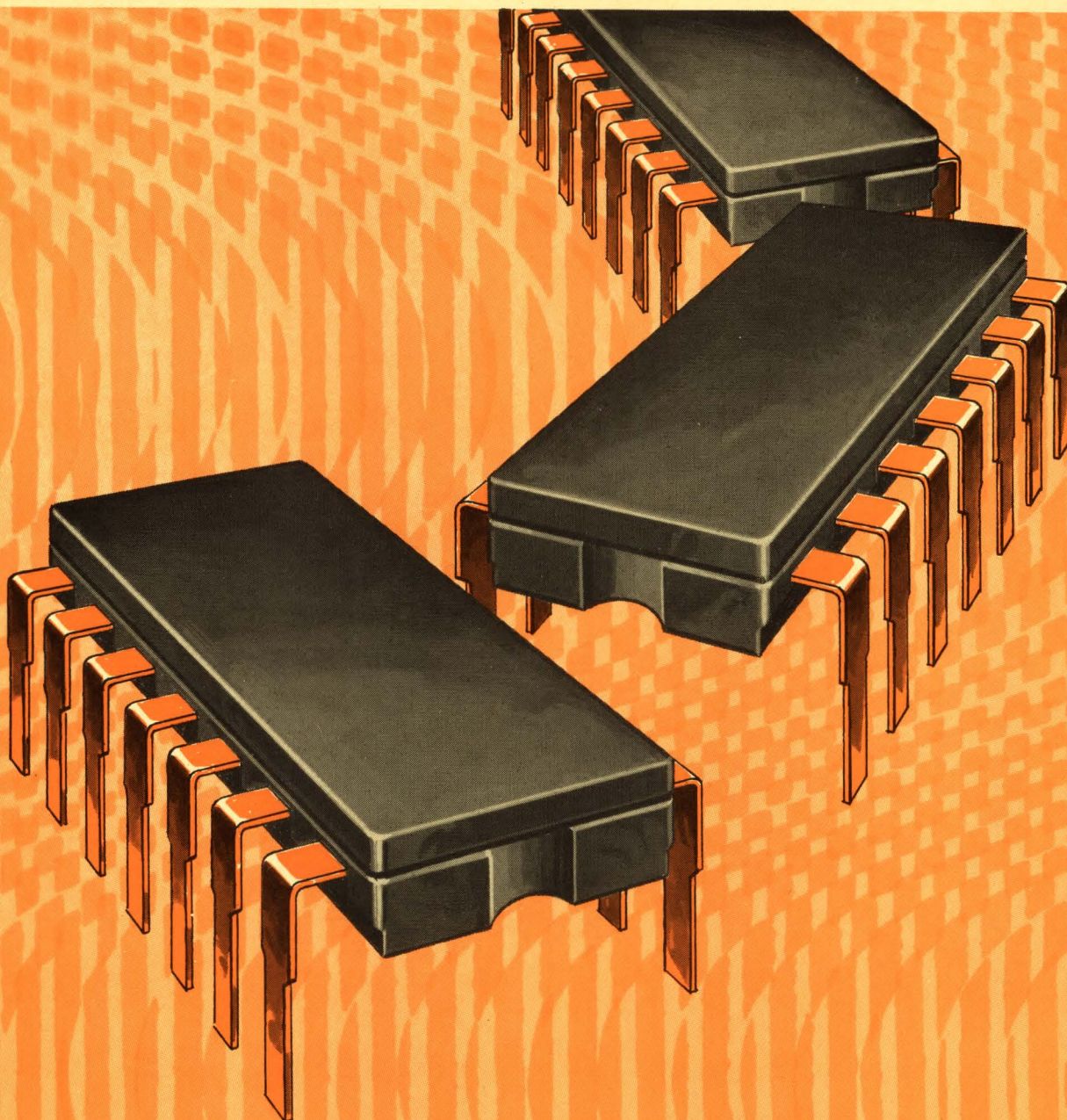
MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Mot	MC1200	27	-5.2	.25	-55 to 125	AFHI
RCA	CD2100	2	-4.68 to -5.72	.32	-55 to 125	AFHI
RCA	CD2150	3	-4.5 to -5.5	.35	10 to 60	AFGI

RTL



MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Aml	100	19	3 to 4	.4	-55 to 125	BEGHI
Con	900	3	3.6	.3	-55 to 125	BEGI
Fch	LPRT μ L	7	3 to 4	.4	-55 to 125	CDGHI
Fch	RT μ L	22	3 to 4	.4	-55 to 125	CDGHI
Int	H	18	6 to 12	2	-20 to 100	CGJ
Int	M	18	6 to 12	2	-55 to 125	CHJ
Mot	MC700F, G	54	3.6	.3	15 to 55	BEGI
Mot	MC700P	33	3.6	.3	15 to 55	BEGI
Mot	MC800F, G	32	3	.3	0 to 100	BEGI
Mot	MC800P	33	3.6	.3	0 to 75	BEGI
Mot	MC800F, G	22	3.6	.3	0 to 75	BDGI
Mot	MC900	32	3	.3	-55 to 125	BEHI
Mot	MC908	22	3	.3	-55 to 125	BDHI
Phl	MW/3	10	3		-55 to 125	BDHI
Phl	PL9900-21	13	3		-55 to 125	BEHI
Phl	PL9900-21	10	3		-55 to 125	CDHI
Phl	PL9900-23	10	3		0 to 75	CDGI
Phl	Super	6	3		-55 to 125	BEHI
Spg	US0900	9	3	.15	-55 to 125	CDHI
TI	17800L	7	3	.2	0 to 70	CDGI
TI	17900L	7	3	.2	-55 to 125	CDHI

(Continued)



Take the IC lead with a built-in heat sink

Power limitations due to the low thermal conductivity of lead frames is eliminated by employing silver-bearing copper's built-in high heat transfer capability. By reducing thermal resistance, the power ratings of integrated circuits can now match those of high power transistors.

White Pine Silver-Bearing Copper has a natural, uniformly dispersed silver content which gives it all the physical properties of ordinary copper plus superior characteristics at elevated temperatures.

Silver-bearing copper provides 100% IACS electrical conductivity . . . retains its original hard temper in leads when subjected to heat during manufacture, testing and service . . . resists oxidation better than ordinary copper . . . and enables packages to be lid-sealed by cold welding.

The next time you design or purchase integrated circuits, take the "lead" and specify White Pine Silver-Bearing Copper containing 25 ounces of silver/ton (Copper Number 116).

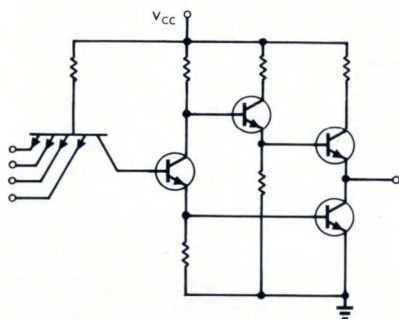
Want application assistance? Our product development engineers will welcome the opportunity to tell you more about White Pine Silver-Bearing Copper. Please contact I. B. Elman or W. J. Jenkins at 212/586-0300.

COPPER RANGE COMPANY

630 FIFTH AVENUE • NEW YORK, NEW YORK 10020

Circle No. 88 on Reader Service Card for more information.

TTL



MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
AmI	560B	8	4		-55 to 125	CDHI
Fch	9000	15	4.5	1	-55 to 125	AEGHI
			to 5.5			
Fch	9000	15	4.75 to 5.25	1	0 to 75	AEGHI
ITT	9000-1	10	4.5	1	-55 to 125	BEHI
			to 5.5			
ITT	9000-5	10	4.75 to 5.25	1	0 to 70	BEGI
Mot	MC400	17	5	1	0 to 75	BEGI
Mot	MC450	17	5	1	0 to 75	BEGI
Mot	MC500	17	5	1	-55 to 125	BEHI
Mot	MC550	17	5	1	-55 to 125	BEHI
Mot	MC2000	11	5	1.5	0 to 75	AEGI
Mot	MC2050	11	5	1.5	0 to 75	AEGI
Mot	MC2100	11	5	1.5	-55 to 125	AEHI
Mot	MC2150	11	5	1.5	-55 to 125	AEHI
Mot	MC3000	18	5	2	0 to 75	AEGI
NS	54	7	5 ± .5	1	-55 to 125	BEHI
NS	74	7	5 ± .5	1	0 to 70	BEGI
NS	DM 78					

MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
NS	DM 88					
Phi	MEL-21	3	3	.25	-55 to 125	CDHI
Phi	MEL-29	3	3	.25	0 to 75	CDGI
Ray	Ray I	40	4 to 5	1.2	-55 to 125	BEH
Ray	Ray II	40	4 to 5	1.2	-55 to 125	BEH
Sgn	N8000A	50	5	1	0 to 75	BEGI
Sgn	NE400	6	4 or 5	1	0 to 70	BDGI
Spg	NE400J	10	"	"	"	"
Sgn	S8000	50	5	1	-55 to 125	BEGI
Sgn	SE400	6	4	1	-55 to 125	BDHI
Spg	SE400J	10	"	"	"	"
Spg	USS5400	18	5	1	-55 to 125	BEHI
Spg	USS7400	21	5	1	0 to 70	BEGI
Syl	SUHL I	320	5	1	-55 to 125	BEHI
					0 to 75	BEGI
Syl	SUHL II	320	5	1	-55 to 125	AEHI
					0 to 75	AEGI
TI	54	30	5	1	-55 to 125	BEHI
TI	54H	19	5	1	-55 to 125	AEHI
TI	54L	12	5	1	-55 to 125	CDHI
TI	74	30	5	1	0 to 70	BEGI
TI	74H	19	5	1	0 to 70	AEGI
TI	74HN	19	5	1	0 to 70	AEGI
TI	74L	12	5	1	0 to 70	CDGI
TI	74N	30	5	1	0 to 70	BEGI
TI	54930	6	5	1	-55 to 125	BEHI
TI	74930	6	5	1	0 to 70	BEGI
Tns	HLTTL	52	4.5 to 6	1	-55 to 125	BEHI
Tns	HLTTL	52	4.5 to 6	1	0 to 75	BEGI
Tns	HLTTL	26	4.5 to 6	1	-55 to 125	AEHI
Tns	HLTTL	26	4.5 to 6	1	0 to 75	AEGI
Tns	HLTTL	12	4.5 to 6	1	15 to 55	BEGI
Wst	WC600	16	5	1	0 to 75	AEGI
Wst	WC600	16	5	1	-55 to 125	AEHI

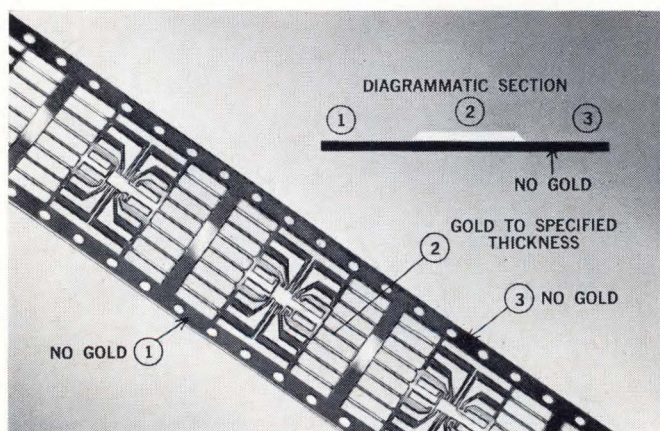
(Continued)

DIGITAL

Now there's a new and better way to plate IC lead strips.

And Burton does it!

Burton Research Labs custom plating services yield better, more uniform IC lead frames ...cut costs as much as 66%!



Zone Controlled Deposition techniques developed by Burton control both the location and thickness of gold deposits. Strip of any width can be plated continuously with gold thickness varying from specified maximum where needed to a minimum deposit at other points. In many cases, gold deposits can be held to zero on areas where it is not required. Location of gold deposits can be zone controlled to restrict maximum thickness to areas at the center, opposite edges or one-half of the strip width.

Send for a sample strip. Write on your letterhead for a sample of strip demonstrating Burton's Zone Controlled Deposition. Gold at the center, no gold on the edges or opposite side of the strip.

FREE TECHNICAL DATA. Circle the Reader Service Card to receive "Burton Plating News" containing useful data pertaining to metal plating.



Burton's unique techniques, equipment and facilities for reel-to-reel, continuous plating of wire and strip are the most advanced ever developed. They are not for sale. But the services that produce plated parts in high volume and with the highest quality and uniformity are for sale to sharply reduce IC lead frame costs.

Costs cut as much as 66%. In one case, Burton Research quoted a price-per-foot for finished plating of IC lead strip some 66% less than the customer was then paying for gold alone in his own plating department. Burton does it by cutting costs in two ways.

Zone Controlled Deposition reduces precious metal costs as much as 60-70% over conventional methods by controlling both the location and thickness of plating at specified points on the strip. As illustrated at left, gold plating can range from specified thickness where needed to an unplated surface at the selvage edges. Burton does it ... in one operation ... at high speed.

Reel-to-Reel Continuous Plating of 1000 foot or more reels of strip in any width assures plating thickness uniformity within a reel or from reel to reel ... dramatically reduces handling costs and plating production time as compared to rack plating of short lengths of strip. Strip can be plated before or after stamping to fit production sequencing. If you prefer, Burton will do both stamping and plating.

Contact Burton at the design stage before you commit your IC lead frame production to conventional (and costly) methods. Discover the alternate ways to get better parts at less cost.

**BURTON RESEARCH
LABORATORIES, INC.**

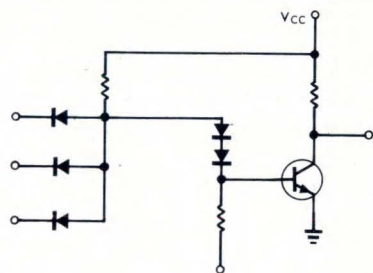
A DIVISION OF BURTON SILVER PLATING COMPANY



MAIN PLANT: 11240 PLAYA COURT • CULVER CITY, CALIFORNIA 90230 • (213) 391-6325 • EASTERN OFFICE: 11 DEBRA LANE • WESTPORT, CONNECTICUT • (203) 259-3792

Circle No. 89 on Reader Service Card for more information.

DTL



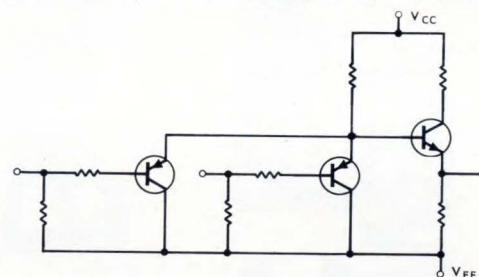
MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Fch	930	22	4.5 to 5.5	1	-55 to 125	BDGHI
Fch	930	22	4.75 to 5.25	1	0 to 75	BDGHI
Fch	9040	7	4.5 to 5.5	1	-55 to 125	CDGHI
Fch	9040	7	4.5 to 5.5	1	-20 to 100	CDGHI
GI	NC	7	4.2, 12	1	-55 to 125	BFHI
GI	PC	11	4.2, 12	1	-55 to 125	BFHI
ITT	930-1	19	4.5 to 5.5	.7	-55 to 125	BEHI
ITT	930-5	19	5	.7	0 to 70	BEGI
Mot	MC200	14	4, -2	.5	-55 to 125	CDHI
Mot	MC215	14	4, -2	.5	0 to 75	CDGI
Phl	PL930-51	11	5	1	-55 to 125	BEHI
Phl	PL930-59	11	5	1	0 to 75	BEGI
RI	200	12	5	.8	+55 to 125	AEHI
RCA	CD2200	6	3.6 to 6.3	1.2	-55 to 125	CDHI
RCA	CD2300/930	15	4.5 to 5.5	1	-55 to 125	BDHI
RCA	CD2300D/930	15	4.5 to 5.5	1	-55 to 125	BDHI
RCA	CD2300E/930	15	4.5 to 5.5	1	0 to 75	BDGI
Ray	200	42	6 to 8	1	-55 to 125	BDHI
Ray	930	19	5 ± .5	1.1	-55 to 125	CDHI
Ray	1000	6	6 to 8	1	-55 to 125	CDHI
Sgn	NE100A	9	5	1	0 to 70	BEGI
Spg	"	10	"	"	"	"
Sgn	NE100J	9	4	1	0 to 70	BEGI
Spg	"	10	"	"	"	"
Sgn	SE100J	11	4	1	-55 to 125	BEHI
Spg	"	12	"	"	"	"
Sgn	SP600A	7	5	.7 to 2	15 to 55	BEGI

*CHARACTERISTICS

Propagation Delay: **A.** < 10 nsec, **B.** 10-30 nsec, **C.** > 30 nsecPower Dissipation: **D.** < 10 mw, **E.** 10-30 mw, **F.** > 30 mw**G.** Industrial, **H.** Military, **I.** Monolithic, **J.** Hybrid, **K.** Multiple Chip

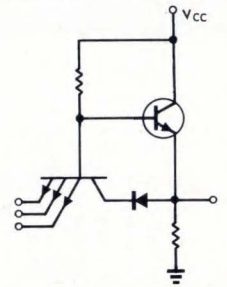
MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Spg	"	"	"	"	"	"
Sgn	CS700J	7	4	1	-55 to 125	BEHI
Spg	US700J	"	"	"	"	"
Scx	A01	16	5	1	-55 to 125	BDHI
Scx	A41	16	5	1	0 to 70	BDGI
Scx	SI830	9	5	1	0 to 70	CEGI
Scx	SI930	9	5	1	-55 to 125	CEHI
SWM	SW930-1	38	5	1	-55 to 125	BDHI
SWM	SW930-2	38	5	.8	0 to 75	BDGI
Syl	930	9	5	.75	-55 to 125	BDHI
Syl	930	9	5	.75	0 to 75	BDGI
TI	14200	15	6	1	-55 to 125	CEHI
TI	14300	15	6	1	0 to 75	CEGI
TI	15830	20	5	1	0 to 75	BEGI
TI	15830N	20	5	1	0 to 75	BEGI
TI	15930	20	5	1	-55 to 125	BEHI
Wst	WC200	29	5 or 6	1.1	0 to 75	BDGI
Wst	WCT200	13	12	.55	0 to 75	CFGI
Wst	WMWC200	29	5 or 6	1.1	-55 to 125	BDHI

CTL



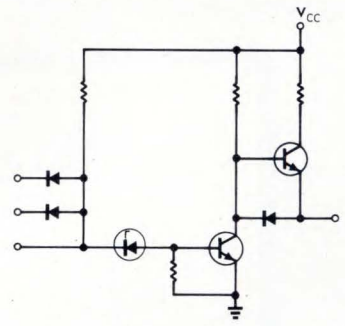
MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Fch	CT μ L	14	4.5, -12	1	0 to 70	AFGI

UTIOLOGIC



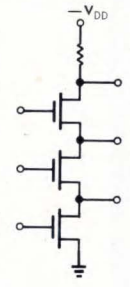
MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Sgn	LU300	9	4.5	1.2	10 to 55	BEGI
Spg	"	"	"	"	"	"
Sgn	LU300A	11	5	1.7	10 to 55	BEGI
Sgn	SU300	9	4.5	1.2	-20 to 85	BEGI
Spg	"	"	"	"	"	"
Sgn	SP300A	11	5	1.7	0 to 75	BEGI

HNIL



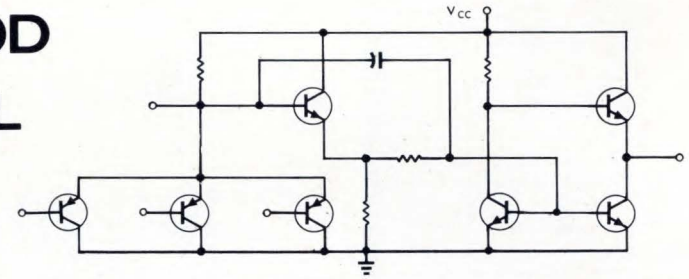
MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Aml	300	13	12 or 15	4	-55 to 125	CFGHI
Fch	9110	3	12 to 16	6.5	-55 to 125	CFGHI
Fch	9110	3	12 to 20	6.5	0 to 75	CFGHI
Mot	MC660	10	15	5	-30 to 75	CFG
Wst	WCZ200	6	12	5	0 to 75	CFG

MOS



MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
AMI	LP	6	-15, -27	1	-55 to 125	CDHI
AMI	UL	3	-15, -27		-55 to 125	CDHI
GI	MEM1000	12	-27		-55 to 85	CFG
Hgh	HRM8000	2	-12, -20	2	-55 to 85	CDG
Mot	MC1120	2	-20		0 to 75	CDGI
NS	MM480	3	-10		-55 to 125	CF
NS	MM580	3	-10	1	0 to 70	CF
Phl	PL4G	7				d-c to 2 MHz

MOD DTL



MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Mot	MC830	33	5	1	0 to 75	CEGI
Mot	MC930	33	5	1	-55 to 125	CEHI
TI	53	15	3 or 4	.3	-55 to 125	BEHI
TI	73	14	3 or 4	.3	0 to 70	BEGI

(Continued)

What's new in Linear Monolithic ICs?

This is new...

A 1-WATT AUDIO OUTPUT I. C. WITH 10mV. SENSITIVITY THAT OPERATES WITH ANY BATTERY SUPPLY FROM 4.5 TO 10.5 VOLTS.

The TAA 300 requires **no external impedance matching resistors** and **no output transformers**. Its better than 10mV. sensitivity is far better than that of any comparable power I.C. Its thermally compensated class "B" output stage gives it the best efficiency, lowest internal dissipation, and lowest current drain of any 1-watt power I.C. available today. In 10-lead, TO-5 envelope.



This is new...

AN AUDIO AMPLIFIER THAT ADAPTS CARBON MICROPHONES TO CERAMIC OR DYNAMIC TRANSDUCERS.

The TAA 500 is a unique audio amplifier circuit with a common output and D.C. supply line. With an external load of 100 ohms, it allows the use of ceramic piezoelectric transducers in circuits designed for carbon microphones. Can be used with dynamic microphones. Applications include mobile transmitters, aircraft communications, and telephone circuits. In 4-lead, TO-5 envelope.



This is new...

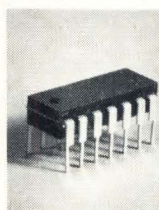
AN 80 DB GAIN I. F. AMPLIFIER FOR FM SIGNALS.



The TAA 350 is a 4-stage differential amplifier with current driven long-tailed pairs. It gives greater than 50 db AM rejection when operated in conjunction with a very simple slope detector. The input can be driven with either balanced or single ended signals. It is ideal for TV, FM and mobile radio I.F. applications. In 10-lead, TO-5 envelope.

This is new...

AN AM RADIO ON A SINGLE CHIP.



The TAD 100 delivers audio drive to the desired power output stage directly from the antenna, the only device on the market that can do that in one chip. Its sensitivity is typically 4 microvolts at the input for 10 milliwatts low-distortion audio to the output transistors. In low cost, plastic, dual-in-line, 14-lead envelope.

This is new...

AN I. F. SOUND AMPLIFIER WITH GREATER THAN 40 DB AM REJECTION PLUS RATIO DETECTOR AND AUDIO AMPLIFICATION.

The TAA 450 is an IF Sound Amplifier for frequencies up to 10.7 MHz. The circuit includes a ratio detector and a low distortion, controllable audio amplifier delivering up to 2V audio output. In 10-lead, TO-5 envelope.



This is new...

A RING MODULATOR/DEMODULATOR WITH ONLY 3 NANOWATT CARRIER LEAKAGE POWER.



The TAB 101 ring modulator consists of four matched transistors isolated and balanced for telephone communications and modulator/demodulator applications. Provides better balance and lower carrier leakage than any conventional telephone carrier ring modulator. In 10-lead, TO-5 envelope.

This is not new, but...

IT'S THE ORIGINAL AND STILL THE BEST BI-FET.



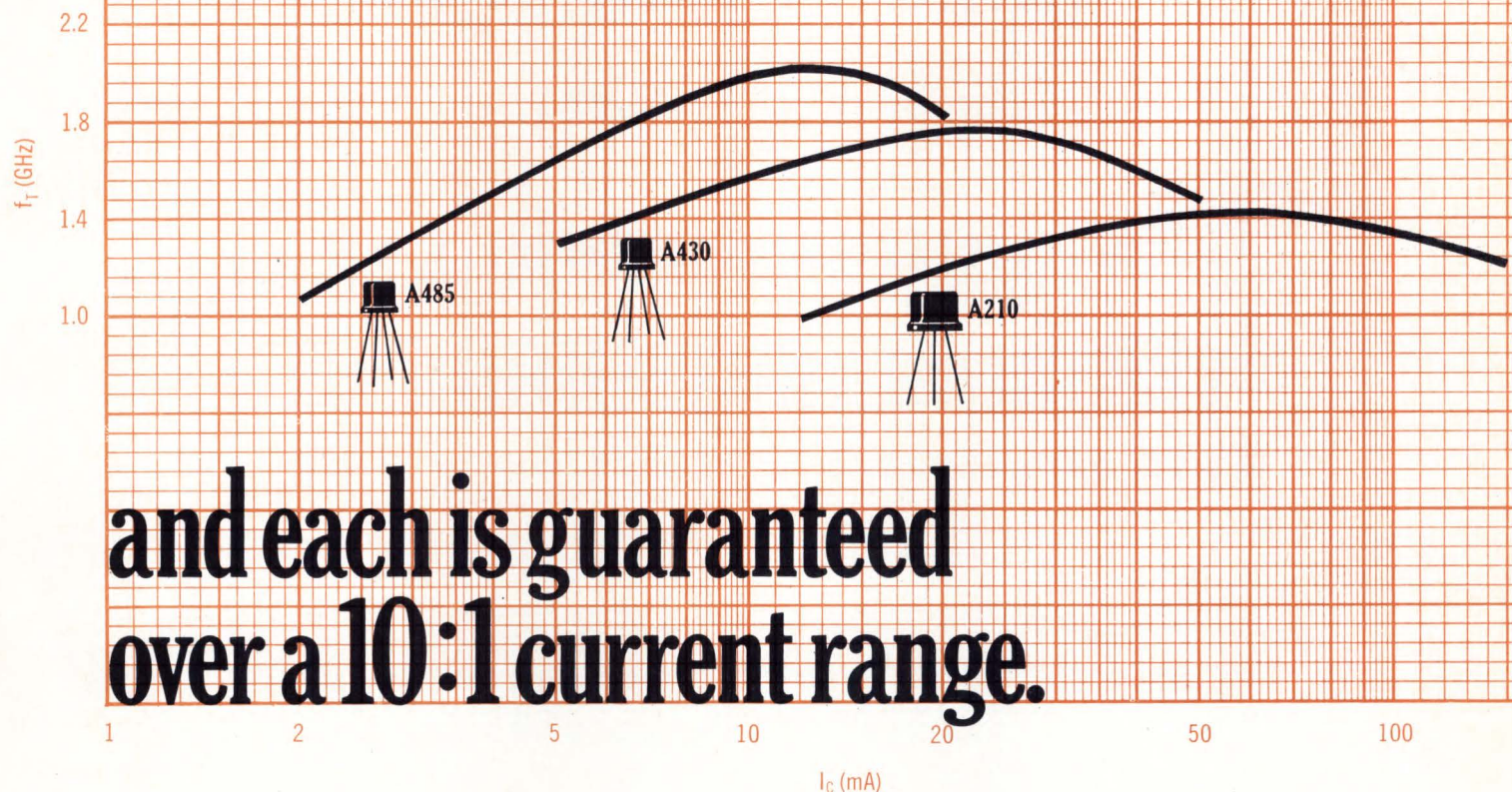
The TAA 320 introduced the concept of an MOS FET and a bi-polar transistor combined on a single chip. Available in large quantities at prices as low as 38¢, it is ideal for high impedance applications in strain gages, radiation counters, crystal transducers and in measuring and timing circuits. In 3-lead, TO-18 envelope.

For data and applications information on any of the IC's described above, write: Amperex Electronic Corporation, Semiconductor and Microcircuits Division, Slatersville, R.I. 02876.

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS

Now there are 3 low-noise UHF transistors with f_T above 1 GHz...



and each is guaranteed over a 10:1 current range.

Amperex A485, Amperex A430, Amperex A210.

The rousing success of our A485, which has linear f_T above 1 GHz for collector currents from 2 to 25 mA, has led us to develop the A430 (f_T above 1.2 GHz from 5 to 50 mA) and the A210 (f_T above 1 GHz from 15 to 150 mA). And now there are three Amperex low-noise UHF transistors with linear, high f_T and with overlapping collector current ranges in steps of 10:1.

With these transistors you can now optimize broadband, high gain UHF amplifiers to operate at any collector current from 2 to 75 mA—with extremely low intermodulation distortion and low, low noise. Until now, it simply couldn't be done.

Typical applications include broadband test instruments, (e.g., RF oscilloscopes), telemetry equipment, antenna amplifiers (say, from 40 to 860 MHz), CATV distribution amplifiers and high performance communications receivers.

If you need high gain, low noise and low intermodulation distortion anywhere in the UHF spectrum, the Amperex A485, A430 and A210 may be your answer.

For data and applications information, write: Amperex Electronic Corporation, Semiconductor and Microcircuits Division, Slatersville, Rhode Island 02876.

Amperex®

TOMORROW'S THINKING IN TODAY'S PRODUCTS

SHIFT REGISTERS

MFR.	TYPE NO.	CONSTRUCTION	BITS PER UNIT	DUAL	FREQUENCY (MHz)	TEMP. RANGE (deg C)	NO. OF CLOCKS
AmI	5551	Bipolar	20				
AmI	5552	Bipolar	16				
AmI	5620	Bipolar	12	•	1		
AmI	5621	Bipolar	10	•	1		
AmI	5622	Bipolar	8	•	1		
AmI	RD01B	MOS	20		.001 to 1	-55 to 125	2
AmI	RD02C	MOS	20	•	.001 to 1	-55 to 125	2
AmI	RD03B	MOS	50		.001 to 1	-55 to 125	2
AmI	RD04	MOS	50	•	.001 to 1	-55 to 125	2
AmI	RD05	MOS	50	•	.001 to 1	-55 to 125	2
AmI	RD06B	MOS	50		.001 to 5	-55 to 125	2
AmI	RD07C	MOS	50	•	.001 to 5	-55 to 125	2
AmI	RD08D	MOS	50		.001 to 5	-55 to 125	2
AmI	RD09B	MOS	50		.001 to 10	-55 to 125	2
AmI	RD10	MOS	50	•	.001 to 10	-55 to 125	2
Fch	3300	MOS	25	•	.25	-55 to 85	
Fch	3303	MOS			.5	-55 to 85	
Fch	3320	MOS			2	0 to 70	
GI	MEM3005PP	MTOS	5		d-c to 1	-55 to 85	2
GI	MEM3005SP	MTOS	5		d-c to 1	-55 to 85	2
GI	MEM3008PS	MTOS	8		d-c to 1	-55 to 85	2
GI	MEM3012SP	MTOS	12		d-c to 1	-55 to 85	1
GI	MEM3016-2	MTOS	16	•	d-c to 1	-55 to 85	2
GI	MEM3020	MTOS	20		d-c to 1	-55 to 85	2
GI	MEM3021	MTOS	21		d-c to .5	-55 to 85	1
GI	MEM3021B	MTOS	21		d-c to .25	-55 to 85	1
GI	MEM3032	MTOS	32		d-c to 1	-55 to 85	1
GI	MEM3040	MTOS	40		d-c to 1	-55 to 85	1
GI	MEM3050	MTOS	25	•	.01 to .05	-55 to 85	2
GI	MEM3064	MTOS	64		.01 to 5	-55 to 85	4
GI	MEM3064B	MTOS	64		.01 to 2	-55 to 85	4

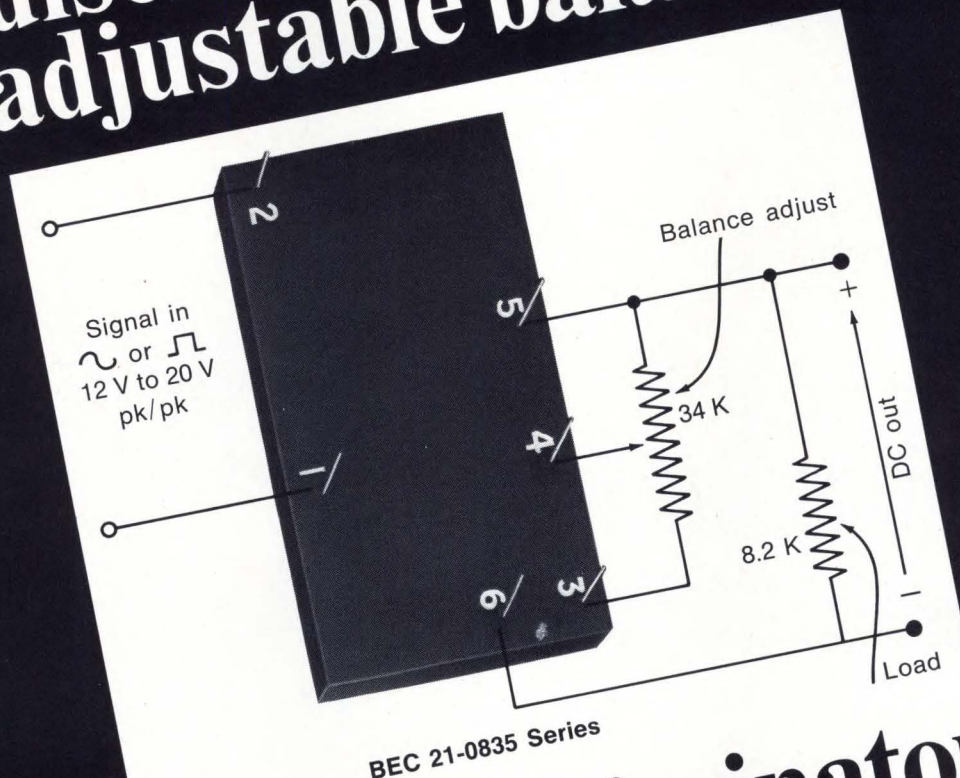
MFR.	TYPE NO.	CONSTRUCTION	BITS PER UNIT	DUAL	FREQUENCY (MHz)	TEMP. RANGE (deg C)	NO. OF CLOCKS
GI	MEM3064-2B	MTOS	64	•	.01 to 2	-55 to 85	4
GI	MEM3100	MTOS	50	•	.01 to 2	-55 to 85	2
GI	MEM3128	MTOS	128		.01 to 2	-55 to 85	2
GI	MEM3198	MTOS	66	3	.01 to 1	-55 to 85	2
Ilnc	ICM7000	MOS	20		d-c to 1	-55 to 125	2
NS	MM400	MOS	25	•	1	-55 to 125	2
NS	MM402	MOS	50	•	1	-55 to 125	2
NS	MM404	MOS	16	•	1	-55 to 125	1
NS	MM405	MOS	32	•	1	-55 to 125	1
NS	MM406	MOS	100	•	1	-55 to 125	2
NS	MM500	MOS	25	•	1	0 to 70	2
NS	MM502	MOS	50	•	1	0 to 70	2
NS	MM504	MOS	16	•	1	0 to 70	1
NS	MM505	MOS	32	•	1	0 to 70	1
NS	MM506	MOS	100	•	1	0 to 70	2
PhI	PL4R20	MOS	20		d-c to 1		
PhI	PL4R64	MOS	32	•	d-c to 5		
PhI	PL5R16	MOS	8/16		3		
PhI	PL5R32	MOS	8/16	•	3		
PhI	PL5R40	MOS	20	•	3		
PhI	PL5R75	MOS	25	3	3		
PhI	PL5R100	MOS	50	•	1		
PhI	PL5R120	MOS	64	•	8		
PhI	PL5R250	MOS	250	•	8		
PhI	PL5R256	MOS	256		8		
RCA	TA5459	COSMOS	18		4		
TI	5491A	Bipolar	8		16		
TI	TMS-1B-	MOS	16	•	1		
	3016-LA						
TI	TMS-7B-	MOS	25	•	1		
	3000-LA						
TI	TMS-7B-	MOS	32	•	1		
	3001-LA						
Tns	RSR2511	TTL	4		25		
Wst	WC837G		25	•	3		

*CHARACTERISTICS

Propagation Delay: **A.** < 10 nsec, **B.** 10-30 nsec, **C.** > 30 nsecPower Dissipation: **D.** < 10 mw, **E.** 10-30 mw, **F.** > 30 mw**G.** Industrial, **H.** Military, **I.** Monolithic, **J.** Hybrid, **K.** Multiple Chip

(Continued)

The only discriminator with adjustable balance



The Discriminator Spacesaver by Bundy.

The 21-0835—Discriminator Space-saver Series combines reliability, stability and versatility with complete output balance control.

Designed to operate over a wide temperature range (-30°C to $+71^{\circ}\text{C}^*$), this spacesaver discriminator has many built-in features to permit usage in audio circuits accepting almost any input waveform.

Balance control allows perfect adjustment after installation for both static and dynamic operations. Absolute difference between f_m and f_s output levels over the temperature range is less than 0.2 volts.

Specifications

Operating frequency range:
400 — 3000 Hz (f_o)

Shift frequencies:
(center frequency) $f_o \pm 42.5$ Hz

Input signal and level:
12 V to 20 V pk/pk either sine or square wave

DC output levels:

Normal:

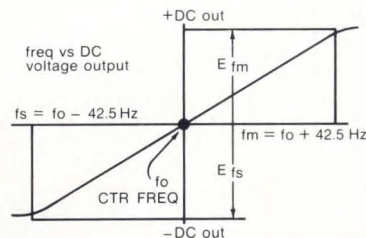
$f_m = +1.5$ V
 $f_s = -1.5$ V
 $f_o = 0$ V

Adjustable:

$f_m = 0$ to $+1.5$ V
 $f_s = 0$ to -1.5 V

Input impedance:
600 ohms to 2000 ohms (as specified)

Output load impedance:
8.2K to 50 K ohms (as specified)



Write for further information.

Bundy
ELECTRONICS
CORPORATION

44 Fadem Road, Springfield,
New Jersey 07081 / (201) 376-8150

*Also available in -40°C to $+80^{\circ}\text{C}$

Manufacturers and Designers of Toroidal Coils, Filters, Magnetic Amplifiers, Toroidal Transformers, Network and Delay Lines.

Circle No. 91 on Reader Service Card for more information.

COUNTERS

MFR.	TYPE NO.	DESCRIPTION	LOGIC FORM (TTL, DTL, MOS, Etc.)	FREQUENCY RANGE (MHz)	TEMP. RANGE (deg C)	REMARKS
Aml	5598	16-Bit Ripple		5		Low Power MEMA
Aml	5603	Binary/Decade		.2		Low Power MEMA Reversible
Aml	5604	Decade		.2		Low Power MEMA Dual
Aml	5605	16-Bit Ripple		.3		Low Power MEMA
Aml	5606	Decade Decoder				Low Power MEMA Dual
Aml	5608	Four-Bit		.2		Low Power Dual
Aml	5623	Binary/Decade		1		Medium Power MEMA Reversible
Aml	5624	Decade		1		Medium Power MEMA
Aml	5625	16-Bit Ripple		1.5		Medium Power MEMA
Aml	5626	Decade Decoder				Medium Power MEMA Dual
Aml	5627	Decade Decoder				Medium Power MEMA Dual
Aml	5628	Four-Bit		1		Medium Power MEMA Dual
Aml	5643	Binary/Decade		3		High Power MEMA Reversible
Aml	5644	Decade		3		High Power MEMA Dual
Aml	5645	16-Bit Ripple		5		High Power MEMA
Aml	5646	Decade Decoder				High Power MEMA Dual
Aml	5647	Decade Decoder				High Power MEMA Dual
Aml	5648	Four-Bit		3		High Power MEMA Dual
Fch	9306	BCD				Up-Down
Fch	9310	Decade				Preset
Fch	9316	Binary				Preset Divide by 16
Fch	Cμ1-9789	Four-Bit Binary	CCSL	15		Clear and Preset to Any State
GE	PD455	Six-Stage Divider	MOS	1		
GE	PD455	Six-Stage Divider	MOS	1	-20 to 65	3-2-1 Cascaded Stages
GI	MEM1050	Four-Stage Up-Down	MTOS	.16	-55 to 85	Supply Volts = -27
GI	MEM1050B	Four-Stage Up-Down	MTOS	2.5		Supply Volts = -27
GI	MEM1055	Four-Stage Up-Down	MTOS	2.5		Has Reset, Supply Volts = -27
Mot	MC938	Decade	DTL	30		
Mot	MC939	Divide by 16	DTL	30		
NS	DM7530 (SN5490N)	Decade	TTL	20	-55 to 125	BCD Decade Counter, Divide by 10, Divide by 5
NS	DM8530 (SN7490)	Decade	TTL	20	0 to 70	BCD Decade Counter, Divide by 10, Divide by 5
Phl	PL4C		MOS	d-c to .5		
Phl	PL4C01	BCD-Decade	MOS	.1		Divide by 6 or 10, Reset, Preset
Sgn	8T01	Decoder				BCD to seven segment decoder

MFR.	TYPE NO.	DESCRIPTION	LOGIC FORM (TTL, DTL, MOS, Etc.)	FREQUENCY RANGE (MHz)	TEMP. RANGE (deg C)	REMARKS
Sgn	S8280J	Decade	DCL	25	-55 to 125	Data Strobe
Spg	S8280J	Decade	DCL	25	0 to 75	Data Strobe
Sgn	S8281J	Binary	DCL	25	-55 to 125	Data Strobe
Spg	S8281J	Binary	DCL	25	0 to 75	Data Strobe
Spg	USN-7490	Decade	TTL	18	0 to 70	Divide by 2 and 5
Spg	USN-7492	Divide by 12	TTL	18	0 to 70	Divide by 2 and 6
Spg	USN-7493	Four-Bit Binary	TTL	18	0 to 70	Divide by 2 and 8
Syl	SM50	Decade Divider	TTL	30		Handles A-C Input
Syl	SM90	Decade Divider	TTL	40		Handles A-C Input
TI	SN7490N	Decade	TTL	18	0 to 70	Divide by 2 and 5
TI	SN7492N	Divide by 12	TTL	18	0 to 70	Divide by 2 and 6
TI	SN7493N	Four-Bit Binary	TTL	18	0 to 70	Divide by 2 and 8
Tns	TDD1100	Decoder	TTL		0 to 70	BCD-to-Decimal Decoder/Driver
Tns	TRC2521	Binary Ripple	TTL	25		
Tns	TRC2525	BCD Ripple	TTL	25		
UC	UC6000	Decoder	MOS		-55 to 125	BCD-to-Decimal Decoder
Wst	WC237	Decoder				BCD-to-Seven Segment Decoder

OTHER

MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Aml	2001BE	1	Voltage/Current Driver		-55 to 125	$V_{out} = 2 \text{ or } .3v$
Aml	2100BE	5	SPST Analog Gate $R_{ON} \leq 50, 100, 200, 300 \text{ ohms}$		-55 to 125	$V_{in} = \pm 5v, \pm 10v, \pm 25v$
Aml	2114BF	1	SPDT Analog Gate $R_{ON} \leq 200 \text{ ohms}$		-55 to 125	$V_{in} = \pm 10v$
Aml	2126BG	1	SPDT Analog Gate $R_{ON} \leq 50 \text{ ohms}$		-55 to 125	$V_{in} = \pm 9v$
Aml	2128BG	1	Quad SPST Switch $R_{ON} \leq 50 \text{ ohms}$		-55 to 125	$V_{in} = \pm 7v$
Aml	5660	2	Eight-Channel Multiplexer			50 or 60 MHz
Aml	5662	2	12-Channel Multiplexer			75 or 90 MHz
AMI	MX	4	Four-, Six-, Ten-Channel MOS Multiplexer		-55 to 125	
AMI	RM	1	Read Only Memory		-55 to 125	MOS
CT	CT115	4	Delivers 200 to 500 ma with Switching Speed of 100 nsec		-55 to 125	
Crs	CAG6	1	SPST FET Analog Gate $R_{ON} = 6 \text{ ohms}$		-55 to 125	$V_{in} = -5 \text{ to } 10$
Crs	CAG7	1	SPDT FET Analog Gate $R_{ON} = 6 \text{ ohms}$		-55 to 125	$V_{in} = -5 \text{ to } 10$

*CHARACTERISTICS

Propagation Delay: **A.** < 10 nsec, **B.** 10-30 nsec, **C.** > 30 nsec
 Power Dissipation: **D.** < 10 mw, **E.** 10-30 mw, **F.** > 30 mw
G. Industrial, **H.** Military, **I.** Monolithic, **J.** Hybrid, **K.** Multiple Chip

OTHER (Cont'd)

MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
Fch	3500	2	Read Only Memory 3 μ sec Units		-55 to 85	MOS
Fch	3700	3	Four-, Six-, Eight-Channel MOS Multiplexer		-55 to 85 0 to 70	2 μ sec units
Fch	9304		Dual Full Adder			
Fch	C μ L	4	Counting Units			CFGHI
Fch	SH2000	16	High Voltage/High Current Driver Series		-55 to 125 0 to 70	$I_{max} = 250$ ma
Fch	SH3002	1	SPDT Analog Gate Hybrid			RTL or TTL Input Levels
Fch	SH6500	4	Quad Core Drivers		-55 to 125 0 to 70	
Fch	SH9007	7	Dual Low Power Flip-Flops		-55 to 125	Hybrid LPDTL
Fch	SIC9600	5	Interface Circuits			CFGHI
GE	4JPA912	1	Dual Analog Switch $R_{ON} = 10$ ohms			Common
GE	4JPA913	1	Dual Analog Switch $R_{ON} = 10$ ohms			Collector Common
GI	MEM1000		Dual Full Adder			
GI	MEM5132	1	32-Bit Random Access Memory		-55 to 85	
GI	PC400H	2	d-c to 500 kHz			$t_{ON} = 50$ nsec
GI	PC607	3	Analog Switches High Voltage 35v			
Hgh	HRM868	1	MOS $\leftrightarrow$ DTL Buffers		-55 to 85	MOS FET
Hgh	HRM8013	1	Dual Two-Channel Commutator $R_{ON} = 190$ ohms		-55 to 85	MOS FET
Mot	MC1219		Four-Channel Commutator $R_{ON} = 190$ ohms			
NS	DM7800	1	Full Adder		-55 to 125	
NS	DM7820	1	Voltage Translator DTL or TTL $\rightarrow$ MOS		-55 to 125	Output Compatible with RTL, DTL, TTL
NS	DM7830	1	Dual Line Receiver		-55 to 125	Drives 50 to 500-ohm lines
NS	DM7880	1	Dual Differential Line Driver		-55 to 125	
NS	DM8800	1	Voltage Translator DTL or TTL $\rightarrow$ MOS		0 to 70	
NS	DM8820	1	Dual Line Receiver		0 to 75	
NS	DM8830	1	Dual Differential Line Driver		0 to 70	Drives 50 to 500 ohm lines
NS	MM450	1	Dual Differential MOS Switch		-55 to 125	$R_{ON} = 250$ ohms
NS	MM451	1	Four-Channel MOS Switch		-55 to 125	$R_{ON} = 250$ ohms

MFR.	SERIES	NO. OF CIRCUITS	SUPPLY (volts)	NOISE IMMUNITY (volts)	TEMP. RANGE (deg C)	CHARACTERISTICS*
NS	MM452	1	Four MOS Transistors		-55 to 125	$R_{ON} = 250$ ohms
NS	NS7673	1	Relay/Lamp Driver			DTL or TTL Input Levels
Phl	PH5000	3	Output Interface		-55 to 125	
Phl	PL4M	2	Circuits Bipolar $\leftrightarrow$ MOS			
Phl	PL4S	4	Binary Elements d-c to 500 kHz			MOS
Phl	PL9600-21	4	Analog Switches			MOS
Phl	PM	2	RTL-DTL Interface		-55 to 125	CFH
RI	RM	6	MOS Memory Random Access and Read Write		-55 to 125	
RI	RM	6	Diode Matrices, Fast Recovery		-55 to 125	TO-84, DIP
RI	RM	6	Diode Matrices, Medium Recovery		-55 to 125	TO-84, DIP
RCA	TA5400	2	Diode Matrices, General Purpose		-55 to 125	TO-84, DIP
Ray	2000	4	Scratch-Pad Memory			16 Bits
Sgn	L1283	1	4 to 6 1.1		-55 to 125 0 to 75	CFH
Sgn	N1283L		4			BFGI
Scx	D111F	6	Scratch-Pad Memory			Eight Bits
Scx	D123F	3	Two-Channel Analog Gate Driver		-55 to 125	
Scx	SC126	1	Six-Channel Analog Gate Driver		-55 to 125	
Scx	SC426	1	Digital Line Receiver TTL Input		-55 to 125	$t_{pd} = 40$ nsec
Spg	UD4001	1	Digital Line Receiver TTL Input		0 to 70	$t_{pd} = 40$ nsec
Spg	UD4002	1	Ladder Switch, Four-Bit Capacity			
Spg	UD4024	1	Buffer Amplifier, Four-Bit Capacity			
Spg	UD4036	1	D/A Ladder Switch, Five-Bit Capacity			
Spg	UD4037	1	D/A Buffer Amplifier, Five-Bit Capacity			
Spg	UD4074	1	Positive Reference Buffer Switch			20v Dual
Spg	UD4080	1	Positive Reference Buffer Switch			30v Dual
Spg	UD4131	1	Quad Power Driver		-55 to 125	
Spg	UT1000	1	Ladder Network, Four-Bit Capacity			
Spg	UT1001	1	D/A Ladder Network, Five-Bit Capacity			
Syl	SM10	4	Full Adder			
Syl	SM20	4	Fast Adder, Dependent Carry			
Syl	SM30	4	Fast Adder, Independent Carry			
Syl	SM40	4	Carry Decoder			
Syl	SM60	4	Storage Register, Four-Bit			
Syl	SM70	4	Storage Register, Four Bit			
Syl	SM80	4	Scratch-Pad Memory			16 Bits
TI	SN5480		Full Adder			
TI	SN5482		Dual Full Adder			
TI	SN7483N		Two Four-Bit Adder			
Tns	TMC3162	3	Scratch-Pad Memory			16 Bits
Wst	WC150Q	1	Interface Circuit-Level Shifter			
Wst	WC151Q	1	Destructive Readout Bit Driver			
Wst	WC171Q	1	Six SCR Array Common Anode			
Wst	WC193	2	Six SCR Array Common Cathode			

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μ V/ $^{\circ}$ C)	TEMP RANGE ($^{\circ}$ C)	SUPPLY (volts)	PKG TYPE
Differential Amplifiers													
Aml	831	.4		40k		2k	100	100	2.5	2		± 12	
Fch	μ A702A	30	± 5.3	40k	200	3.5k	100	90	.5	2.5	-55 to 125	12, -6	TO-5, FP
Fch	μ A702C	30	± 5.3	32k	200	3.4k	92	90	1.5	5	0 to 70	12, -6	TO-5, FP
Fch	μ A730	1	8	20k	70	145	85	114	1	3	-55 to 125	12	TO-5
Fch	μ A730C	1	8	15k	70	135	80	114	2	6	0 to 70	12	TO-5
Fch	SH3000	30	± 5.3	5M		2.6k	80	70	7.5	7.5	-55 to 125	12, -6	TO-5
Lns	LTE702		± 5.3	40k	200	3.6k	100	90	3	5	-55 to 125	12, -6	TO-5, DIP
Lns	LTE702C		± 5.3	40k	200	3.6k	100	90	3	5	0 to 70		TO-5, DIP
Mot	MC1429G	.25	5	30k	15k	75	70		12		0 to 75	± 12	TO-5
Mot	MC1519	8	14	2.6k	2.7k	67 db	89		2		-55 to 125	± 12	TO-5
Mot	MC1525G	1.4	7	2k	11k	140	80		5	5	-55 to 125	± 12	TO-5
Mot	MC1526G	.5	7	60k	11k	65	80		7		-55 to 125	± 12	TO-5
Mot	MC1529G	.3	5	40k	12k	75	70		9		-55 to 125	± 12	TO-5
NPC	SFC1525G	1.4	7	2k	11k	140	80		5		-55 to 125	± 12	TO-5, FP
NPC	SFC2525	1.4	7	2k	11k	140	80		5		-55 to 125	± 12	TO-5, FP
Phi	PA7712-31	.8	± 5.3	25k	200	2.6k	80	70	2	20	-55 to 125	21	TO-5, FP
Phi	PA7712-39	30	± 5.3	20k	200	2.6k	80	80	5		0 to 70	21	TO-5, FP
RCA	CA3028A	120				32 db		175			-55 to 125	± 12	TO-5
RCA	CA3028B	8		3k		32 db	90	175	.89		-55 to 125	± 12	TO-5
Sgn	NE515	1	6.1	2.6k	100	3.2k	100	50	.5	5	0 to 75	6, -3	TO-91, 100, 116
Sgn	SE515	1	6.1	2.6k	100	3.2k	100	50	.5	5	-55 to 125	6, -3	TO-91, 100
TI	SN523A	.18	24	15k	200	90 db	100	100	2.2	5	-55 to 125		TO-5, FP
TI	SN525	.045	18	140k	10k	66 db	77	132	1	10	-55 to 125		FP
TI	SN526	.12	11.7	1M		69 db	80	100	3	10	-55 to 125		FP
TI	SN723	.15	20	10k	250	86 db	90	100	4		0 to 70		TO-5, FP
TI	SN725	.045	16	140k	10k	57 db	70	135	2		0 to 70		FP
TI	SN726	.12	9	200k		400			3		0 to 70		FP
TI	SN1312			100k		60	75	25	1	.15	-25 to 100		TO-100
TI	SN5511			5k	700	63 db	95	165	1		-55 to 125		TO-100, FP
Wst	WC115D	.3	14.5	150k	8k	33 db	80			10	0 to 70	12, -6	DIP
Wst	WC115T	.3	14.5	150k	8k	33 db	80			10	-55 to 125	12, -6	TO-78
Wst	WC185T	.01		8k		72 db	32	120			-40 to 75		TO-78
Wst	WC750T	4 G-BW	27	40k	1k						-55 to 125	± 15	TO-100
Audio Amplifiers													
Amp	TAA293	.6				80 db		100			-20 to 100	6	TO-5
Amp	TAA300							400				10.5	
Amp	TAA310	.015				90 db		160			-20 to 75	7	TO-5
Amp	TAA320							150				20	
Fch	μ A716	2	14	10k	1	200		280			-55 to 125	21	TO-5
Fch	μ A716C	2	14	11k	1	200		250			0 to 70	21	TO-5
GE	4JPA114	1				6k							
GE	4JPA126			5k	10k	8k		90•					
GE	12X255	1											
GE	PA113	2		500	20k	60k		50•				15	TO-5
GE	PA222	.015		55k	1	72 db		1k•				22	DIL
GE	PA234	.1		100k	2			1k•				22	DIL
GE	PA237	.1		40k	.85			2k•			-55 to 125	24	DIL

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μ V/ $^{\circ}$ C)	TEMP. RANGE ($^{\circ}$ C)	SUPPLY (volts)	PKG. TYPE
Audio Amplifiers (Cont'd)													
HD	821	d-c to 10	± 16	4k	13	Unity		2.5k•			-55 to 125	± 10 to ± 20	DIL
Mal	MIC-0101	.1	1 rms	20k	2.5k	60 db		77			-30 to 60	9 to 24	T0-5, DIP
Mal	MIC-0103	.1	1 rms	20k	2.5k	60 db		180			-30 to 60	9 to 24	T0-5, DIP
Mal	MIC-0201		45 ma	1k	50	60		240			-30 to 50	10.5 to 16	T0-5, DIP
Mot	MC1302		1.7 rms	45k	1.5k	5k		100	1.5		0 to 75	± 6	T0-116
Mot	MC1303		5.5 rms	45k	1.5k	10k		300	1.5		0 to 75	± 13	Dual Preamp T0-116
Mot	MC1524	.81	10	8.5k	.58	41.2		1k•			-55 to 125	± 6	T0-5
Mot	MC1524G	.27		10k	.2	36		1k•			-55 to 125	± 8	T0-5
NS	NS7529					73 db					0 to 120	1.5	FP
NS	NS7573												
NS	NS7634	d-c to .03		10k		.5 mhos		3k•			-55 to 125		
Phi	PA7602-31	15				76		27			-55 to 125	15	T0-5, FP
RCA	CA3007	.02		4k	60		77	300			-55 to 125	± 6	T0-5
RCA	CA3020	8									-55 to 125		T0-5
RCA	CA3036							300			-55 to 125		T0-5
Ray	RM183		1.73	40k	30k	40k		2.3			0 to 70	1.55	G
TI	SN777	.01	± 2.5			72 db					0 to 70	1.5	T0-89
TI	SN1220	.007				80 db					0 to 70	1.5	T0-89
Wst	WC183G			40k		90 db		45•				9	
Wst	WC183T			40k		90 db		45•				9	
Wst	WC334AT			400k	.3	20 db					0 to 85	6 to 12	T0-78
Operational Amplifiers													
Aml	709A		± 13	400k	150	45k	90	80	.5	3	-55 to 125	± 15	T0-99
Aml	709B		± 13	400k	150	45k	90	80	1	3	-55 to 125	± 15	T0-99
Aml	800B	10	± 10	1M		20k	80	120	5	25	-55 to 125	± 12	T0-5
Aml	801B	10	± 10	1M		20k	80	120	5	25	-55 to 125	± 12	T0-5
Aml	805	1		1M		60k	90	150	3	8	-55 to 125	± 15	
Aml	806	1		1M		60k	90	120	3	8	0 to 100	± 12	
Aml	807	1		1M		60k	100	150	1	3	-55 to 125	± 15	
Aml	808A		± 12	2M	150	60k	90	180	1	5	-55 to 125	± 15	T0-100
Aml	808B		± 12	2M	150	60k	90	180	1	10	-55 to 125	± 15	T0-100
Aml	809B		± 12	200k		40k	90	100	5	10	-55 to 125	± 15	T0-99
Aml	819B		± 5	200k		40k	90	15	5	70	-55 to 125	± 6	T0-99
Aml	2404BG		± 11	10 ¹¹		100 db	90	55	3	5	-55 to 125	± 15	T0-8
Aml	2405BG		± 25	10 ¹¹		100 db	90	110	3	5	-55 to 125	± 30	T0-8
Amp	ATF401	2				50k	80					15	
Amp	ATF402	2				50k	80					15	
Amp	ATF411	10				72 db	60					18	
Amp	OM200	.02				75 db		25				5	
Amp	TAA103					75 db		70				8	
Amp	TAA263					77 db		70				8	
CT	CT138	5	± 12	100M	5k	300k	80	60	1	20	-55 to 125	± 15	T0-8
Fch	μ A709	.5	± 13	400k	150	60k	90	80	1	3	-55 to 125	± 15	T0-5 FP, DIP

(Continued)

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT ($\mu\text{V}/^\circ\text{C}$)	TEMP. RANGE ($^\circ\text{C}$)	SUPPLY (volts)	PKG. TYPE
Operational Amplifiers (Cont'd)													
Fch	$\mu\text{A}709\text{A}$	.5	± 13	700k	15	45k	110	108	.6	1.8	-55 to 125	± 15	T0-5, FP
Fch	$\mu\text{A}709\text{C}$	.5	± 13	250k	150	45k	90	80	2	6	0 to 70	± 15	T0-5, FP, DIP
Fch	$\mu\text{A}741$	Internally Compensated				100k	90	50	1	3	-55 to 125	± 15	T0-5, FP
GE	4JPA135	1	8 p-p	1M	100	2k	80		8	10			T0-5
GE	12X207	.04	6	10k		500						30	
GE	12X218			50M	1.5k	Unity					-25 to 125		FP
GE	PA223	.5	20 p-p	2.5M	100	7k	100	120	6	10	-55 to 110	± 12	DIL
GE	PA238	.5	10 p-p	35k	100	7k	90	36	2	10	-55 to 110	± 6	DIL
GI	PC-200H	.015		100k		73 db	80		1	5	-55 to 125	± 12	FP
GI	PC-201H	.015		200k		73 db	100		1	5	-55 to 125	± 12	FP
GI	PC-210H	1.5		90k		70 db	80		3	4	-55 to 125	± 12	FP
GI	PC-212H	1.2		100k		64 db	80		3	4	-55 to 125	± 12	FP
GI	PC-250	.03		10 ¹⁴		50 db	42		50	500	-55 to 125	± 12	FP
GI	PC-251	.03		10 ¹⁴		50 db	42		50	500	-55 to 85	± 12	FP
Hgh	HMC-1148	10	± 20	100k	5k	600	80	400			-55 to 125	± 26	T0-5
ITT	709	1	± 14	400k	150	45k	90	80	1	3	-55 to 125	± 15	
ITT	709A	1	± 14	700k	150	45k	90	80	.6	1.8	-55 to 125	± 15	
ITT	712	30	± 15	67k	300	3.6k	100	80	.7	2.5	-55 to 125	12, -6	
Lns	LTE709		± 13	400k	150	45k	90	80	1	3	-55 to 125	± 15	T0-5, DIP
Lns	LTE709C		± 13	400k	150	45k	90	80	1	3	0 to 70	± 15	T0-5, DIP
Mot	MC1430	1.2	± 5	15k	25	5k	75	110	2		0 to 75	± 6	T0-5, 91, 116
Mot	MC1431	.4	± 5	600k	25	3.5k	75	110	5		0 to 75	± 6	T0-5, 91, 116
Mot	MC1433	.4	± 12	600k	100	60k	100	125	1	8	0 to 75	± 15	T0-5, 91, 116
Mot	MC1435	.1	± 4	45k	1.7k	7k	90	100	1	3	0 to 75	± 6	T0-5, 86, 116, Dual
Mot	MC1437	.1	± 14	150k	30	45k	100	150	1	1.5	0 to 75	± 15	T0-116, 99, Dual
Mot	MC1439	.1	± 14	300k	4k	100k	100	90	2	3	0 to 75	± 15	T0-116, 99
Mot	MC1520	5	± 4	2M	50	1.5k	90	120	5	2	-55 to 125	± 6	T0-5, 91
Mot	MC1530	1.2	± 5.2	20k	25	5k	75	110	1	3.8	-55 to 125	± 6	T0-5, 91
Mot	MC1531	.4	± 5.2	2M	25	3.5k	65	110	3	11	-55 to 125	± 6	T0-5, 91
Mot	MC1533	.4	± 12	1M	100	60k	100	120	1	8	-55 to 125	± 15	T0-5, 91
Mot	MC1535	.1	± 3.6	45k	1.7k	7k	90	100	1	3	-55 to 125	± 15	T0-99, Dual
Mot	MC1539	.1	± 14	300k	4k	120k	100	90	1	3	-55 to 125	± 15	T0-99
Mot	MC1709	.2	± 13	400k	150	45k	90	80	1	3	-55 to 125	± 15	T0-91, 99
Mot	MC1709C	.2	± 13	250k	150	45k	90	80	2	3	0 to 75	± 15	T0-91, 99, 116
Mot	MC1712	.1	± 5.3	40k	200	3.6k	100	70	1.1	2	-55 to 125	12, -6	T0-99, 91
Mot	MC1712C	.1	± 5.3	32k	200	3.4k	95	70	1.5	5	0 to 75	12, -6	T0-99, 91
NPC	LA101		± 14	800k		160k	90	500	1	3	-55 to 125		T0-5, FP, DIP
NPC	LA201		± 14	400k		150k	90	250	3.5	6	0 to 70		T0-5, FP, DIP
NPC	LA709		± 14	400k	150	45k	90	300	6	6	-55 to 125		T0-5, FP, DIP
NPC	LA709C		± 13	250k	150	45k	90	250	10		0 to 70		T0-5, FP, DIP
NPC	SFC2430	1.2	± 5	15k	25	5k	75	600	2		0 to 75		T0-5, FP
NPC	SFC2431	.4	± 5	600k	25	3.5k	75	600	5	3.8	0 to 75		T0-5, FP

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μ V/ $^{\circ}$ C)	TEMP. RANGE ($^{\circ}$ C)	SUPPLY (volts)	PKG. TYPE
NPC	SFC2530	1.2	± 5.2	20k	25	5k	75	600	1	11	-55 to 125		T0-5, FP
NPC	SFC2531	.4	± 5.2	2M	25	3.5k	75	600	3		-55 to 125		T0-5, FP
NS	LH101	1	± 13	800k	150	160k	90	50	2	3	-55 to 125	± 5 to ± 20	T0-5, FP
NS	LH201	1	± 13	400k	150	150k	90	50	2	6	0 to 70	± 5 to ± 20	T0-5, FP
NS	LM101	1	± 13	800k	150	160k	90	50	2	3	-55 to 125	± 5 to ± 20	T0-5, FP
Scx	"	"	"	"	"	"	"	"	"	"	"	"	"
NS	LM102	10	± 13	10^{12}	.8	.9995		100	3	6	-55 to 125	12 to 15	T0-5, FP
Scx	"	"	"	"	"	"	"	"	"	"	"	"	"
NS	LM201	1	± 13	400k	150	150k	90	50	2	6	0 to 70	± 5 to ± 22	T0-5, FP
NS	LM202	10	± 13	10^{12}	.8	.9995		100	3	15	-25 to 85	12 to 15	T0-5, FP
NS	LM302	10	± 13	10^{12}	.8	.9995		100	3	20	0 to 70	12 to 15	T0-5, FP
NS	LM709	1	± 13	400k	150	45k	90	80	2	3	-55 to 125	5 to 18	T0-5, FP, DIP
NS	LM709C	1	± 13	$\pm 250k$	150	45k	90	80	2	6	0 to 70		T0-5, FP, DIP
NS	NH0001		± 10			25k	90	1.8	2		-55 to 125	± 15	
NS	NH0005	15	± 50 ma			5k							
NS	NH0005C	15	± 50 ma			2k							
NS	NS7560	15	± 5		70	2k	60	60●	5	10	-55 to 125	± 12	T0-5
NS	NS7560A	15	± 5		70	5k	66	60●	1	5	-55 to 125	± 12	T0-5
Phl	PA7709-31	.5	± 13	400k	150	45k	90	80	1	20	-55 to 125	± 18	T0-5, FP
Phl	PA7709-39	.5	± 13	250k	150	45k	90	80	2		0 to 70	± 18	T0-5
Phl	PA7712-31	.8	± 5.3	25k	200	2.6k	80	70	2	20	-55 to 125	21	T0-5, FP
Phl	PA7712-39	.8	± 5.3	20k	200	2.6k	80	80	5		0 to 70	21	T0-5, FP
Phl	PH5101	9	9.5	1000M	6k	14k	66		1		-55 to 125	40	T0-5
RI	238	7	21	250k	250	2.7k	100	90	2	5	-55 to 125		T0-84, FP
RI	239	15	21	100k	150	2.7k	100	160	2	5	-55 to 125		T0-84, FP
RI	240	6	9	150k	1k	33k	100	90	2	5	-55 to 125		T0-84, FP
RI	338	7	21	250k	250	2.7k	100	90	3	5	-55 to 125		T0-84, FP
RI	339	15	21	100k	150	2.7k	100	160	3	5	-55 to 125		T0-84, FP
RI	340	6	9	150k	1k	33k	100	90	3	5	-55 to 125		T0-84, FP
RI	538	7	21	250k	250	2.7k	100	90	3	5	0 to 75		T0-84, FP
RI	539	15	21	100k	150	2.7k	100	160	3	5	0 to 75		T0-84, FP
RI	540	6	9	150k	1k	33k	100	90	3	5	0 to 75		T0-84, FP
RI	909	7	13	600k	150	45k	96	52	2	5	-55 to 125		T0-86
RI	2909	7	13	600k	150	45k	96	52	2	5	-55 to 125		T0-99
RCA	CA3008	15	6.75 p-p	14k	200		94	300	1.08		-55 to 125	± 6	FP
RCA	CA3010	15	6.75 p-p	14k	200		94	300	1.08		-55 to 125	± 6	T0-5
RCA	CA3015	50	14 p-p	7.8k	92		103	600	1.37		-55 to 125	± 12	T0-5
RCA	CA3016	50	14 p-p	7.8k	92		103	600	1.37		-55 to 125	± 12	FP
RCA	CA3029	15	6.75 p-p	14k	200	60 db	94	300	1.08		0 to 70	± 6	DIP
RCA	CA3030	50	14 p-p	7.8k	92	70 db	103	600	1.37		0 to 70	± 12	DIP
RCA	CA3031/ 702A	40	10 p-p	25k	130	70 db	85	300	2		-55 to 125	12, -6	T0-5
RCA	CA3032/ 702C	40	10 p-p	20k	200	70 db	80	300	5		0 to 70	12, -6	T0-5
RCA	CA3033	.23	21 p-p	1.5M		90 db	100	122●	2.6	6.6	-55 to 125	± 12	T0-116
RCA	CA3033A	.36	32 p-p	1M		96 db	108	255●	2.9	6.6	-55 to 125	± 18	T0-116
Ray	RM101	1	± 15	300k		50k	70	60	5	10	-55 to 125	± 5 to ± 20	T, D, Q
Ray	RM709A	6	± 12	150k	150	25k	90	165	2	6	-55 to 125	± 9 to ± 15	T, D, Q
Ray	RM4101	1	± 15	300k	80	50k	70	60	5	10	-55 to 125	± 5 to ± 20	T, D, Q
Ray	RM4709	6	± 12	150k	150	25k	70	225	5	15	-55 to 125	± 9 to ± 15	T, J, D
Sgn	N5709		± 13	250k	150	45k	90	80	2	3	0 to 75	± 15	Dual, T0-91, 99, 116

NO OTHER COMPANY CAN

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MTOS SILICON P-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTORS ($T_A = 25^\circ\text{C}$, BODY GROUNDED)									
TYPE	V_{DSY} (VOLTS TYP)	I_{DSS} (mA TYP)	I_{SS} (mA TYP)	I_{SS} (nA TYP)	BV_{DS} (VOLTS)	BV_{DS} (VOLTS)	V_{th} (μmhos TYP)	C_{iss} (pF TYP)	$r_{DS(on)}$ (Ω TYP)
MEM 511	-4.0	-6.0	-0.5	-0.1	-30	-30	2,500	2.0	150
2N4353	-4.0	-6.0	-0.5	-0.1	-30	-30	2,500	2.0	150
MEM 517	-3.5	-60	-0.8	-0.1	-30	-25	12,000	10	30
MEM 517A	-3.5	-60	-0.8	-0.1	-30	-25	12,000	10	30
MEM 517B	-3.5	-60	-0.8	-0.1	-30	-25	12,000	10	30
MEM 520	-4.0	-6.0	-0.5	-0.3	-30	NA	2,500	2.0	150
MEM 550*	-4.0	-5.0	-0.1	-0.1	-30	-25	1,400	1.1	250
3N151*	-4.0	-7.0	-0.2	-0.5	-30	-30	2,000	NA	250
MEM 551*	-4.0	-5.0	-0.5	-0.3	-30	NA	1,400	1.1	250
MEM 556	-4.0	-7.0	-0.1	-0.1	-65	-70	950	0.3	700

*Dual Device

MTOS SILICON N-CHANNEL DEPLETION MODE FIELD EFFECT TRANSISTORS ($T_A = 25^\circ\text{C}$, BODY GROUNDED)									
TYPE	APPLICATION	FEATURES	V_{th} (μmhos TYP)	C_{iss} (pF TYP)	G_{fs} (dB TYP)	NF (dB TYP)	$V_{DS(on)}$ (VOLTS TYP)	BV_{DS} (VOLTS)	$r_{DS(on)}$ (Ω TYP)
MEM 554	LINEAR VHF AMP & MIXERS	DUAL GATE CASCODE	12,000	.02	18 @ 200 MHz	3.2 @ 200 MHz	-1.5	-20	50
MEM 554C	LINEAR VHF AMP & MIXERS	DUAL GATE CASCODE	10,000	.02	17 @ 200 MHz	3.7 @ 200 MHz	-1.5	-20	50
MEM 557	VHF AMP	SINGLE GATE	10,000	.40	16 @ 200 MHz	3.2 @ 200 MHz	-1.5	-20	25

MTOS SILICON N-CHANNEL ENHANCEMENT MODE FIELD EFFECT TRANSISTORS (T _A = 25°C, BODY GROUNDED)									
TYPE	APPLICATION	V _{DSY} (VOLTS TYP)	I _{DSS} (mA TYP)	I _{SS} (nA TYP)	I _{AS} (nA TYP)	BV _{DSS} (VOLTS)	Y _{FS} (μmhos @ 10 mA)	r _{DS(ON)} (Ω TYP)	C _{iss} (pF TYP)
MEM 562	GEN. PURPOSE SWITCH	1.2	20	1.0	.01	30	4000 @ 10 mA	150	1.0
MEM 563	HIGH GAIN SWITCH	1.2	60	1.0	.01	20	7000 @ 10 mA	50	1.0

LOGIC CIRCUITS		POWER CONSUMPTION (mW MAX)	SUPPLY VOLTAGE (VOLTS)	PROPAGATION DELAY (nS TYP)	LOGIC LEVELS				FREQUENCY
TYPE	FUNCTION				INPUT		OUTPUT		
MEM 1000	DUAL FULL ADDER	55	-13V $\pm$ 1V -27V $\pm$ 1V	350	-10V	-2.0V	-11V	-1.0V	—
MEM 1002	DUAL 3-INPUT NOR GATE	35 per Gate	-27V $\pm$ 1V	200	-10V	-2.0V	-11V	-1.0V	—
MEM 1005	R-S-T FLIP-FLOP	70	-27V $\pm$ 1V	950 (Max.)	-10V	-2.0V	-11V	-1.0V	dc to 500 kHz
MEM 1008	DUAL EXCLUSIVE OR/NOT GATE	60 per Gate	-27V $\pm$ 1V	300	-10V	-2.0V	-11V	-1.0V	—
MEM 1013	QUAD 2 INPUT NOR GATE	13 per Gate	-13V $\pm$ 1V -27V $\pm$ 1V	200	-10V	-2.0V	-11V	-1.0V	—
MEM 1014	QUAD 2 INPUT AND GATE	14 [Circ (1,2,3)] 42 [Circ 4]*	-13V $\pm$ 1V -27V $\pm$ 1V	250	-10V	-2.0V	-11V	-1.0V	—
MEM 1015	DUAL J-K FLIP-FLOP	82 per Flip-Flop	-13V $\pm$ 1V -27V $\pm$ 1V	300	-10V	-2.0V	-11V	-1.0V	dc to 1.0 MHz
MEM 1022	9-BIT PARALLEL PARITY DETECTOR	80	-27V $\pm$ 1V	500	-10V	-2.0V	-11V	-1.0V	dc to 500 kHz
MEM 1050	4 STAGE BINARY UP-DOWN COUNTER	300	-27V $\pm$ 1V	—	-10V	-2.0V	-11V	-1.0V	dc to 160 kHz
MEM 1050B	4 STAGE BINARY UP-DOWN COUNTER	300*	-27V $\pm$ 1V	—	-10V	-2.0V	-11V	-1.0V	dc to 2.5 MHz
MEM 1051	BUFFERED D/A CONVERTER	35	-13V $\pm$ 1.5V -25V $\pm$ 3V	—	-10V	-2.0V	-11V	-1.0V	dc to 500 kHz
MEM 1055	4 STAGE BINARY UP-DOWN COUNTER WITH RESET	300	-27V $\pm$ 1V	—	-10V	-2.0V	-11V	-1.0V	dc to 2.5 MHz

* The MEM 1014 provides Four 2-Input AND Gates (Circuits 1,2,3,4); Circuit 4 also provides a NAND Output

MULTIPLEXER CIRCUITS		OFF RESISTANCE (Ω TYP)	ON RESISTANCE (Ω TYP)	CAPACITANCE (pF Cgd)	BV_{DS} (VOLTS)	BV_{DS} (VOLTS)
TYPE	FUNCTION					
MEM 2002	5 CHANNELS (4 Channels —Common Drain)	10 ¹⁰	200	1.1	-30	-30
MEM 2003	4 CHANNELS (Protective Diodes)	10 ¹⁰	200	1.1	-30	-30
MEM 2004	4 CHANNELS (No Diodes)	10 ¹⁰	200	1.1	-30	$\pm$ 60
MEM 2005	4 CHANNELS (Dual 2 Channel)	10 ¹⁰	200	1.1	-30	-30
MEM 2006	3 CHANNELS (2 Channels —Common Drain)	10 ¹⁰	200	1.1	-30	-30
MEM 2009	6 CHANNELS (Protective Diodes)	10 ¹⁰	150	1.9	-30	-30
MEM 2017	6 CHANNELS (Protective Diodes)	10 ¹⁰	700	0.5	-50	-50

MAKE THIS STATEMENT:

SERIES SHUNT CHOPPER		OFFSET VOLTAGE	CLOCK ϕ	FREQUENCY (kHz)	ON RESISTANCE PER UNIT (SERIES OR SHUNT) (Ω TYP)	OFF RESISTANCE PER UNIT (SERIES OR SHUNT) (Ω TYP)	SIGNAL VOLTAGE HANDLING RANGE (VPP)
TYPE	FUNCTION						
MEM 2008	INTEGRATED SERIES SHUNT CHOP. CIRCUIT	0	1	100	6K	10 ¹²	1 μ V -10V

SHIFT REGISTERS		STATIC	DYNAMIC	FREQUENCY	NUMBER OF BITS	INPUT		OUTPUT		NO. OF CLOCKS	SUPPLY VOLTAGE (VOLTS)
TYPE	FUNCTION					PARALLEL	SERIES	PARALLEL	SERIES		
MEM 3005PP	5-BIT PARALLEL IN/ PARALLEL OUT	X		dc to 1.0MHz	5	X	X	X	X	2	-13V $\pm$ 1V
MEM 3005SP	5-BIT SERIAL IN/ PARALLEL OUT	X		dc to 1.0MHz	5		X	X	X	2	-13V $\pm$ 1V -27V $\pm$ 1V
MEM 3008PS	8-BIT 2 ϕ PARALLEL IN/SERIAL OUT	X		dc to 1.0MHz	8	X	X		X	2	-13V $\pm$ 1V -27V $\pm$ 1V
MEM 3012SP	12-BIT SERIAL IN/ PARALLEL OUT	X		dc to 100kHz	12		X	X	X	1	-27V $\pm$ 1V
MEM 3016-2	DUAL 16-BIT	X		dc to 1.0MHz	32 (16,16)		X		X	2	-13V $\pm$ 1V -27V $\pm$ 1V
MEM 3020	20-BIT	X		dc to 1.0MHz	20		X		X	2	-13V $\pm$ 1V -27V $\pm$ 1V
MEM 3021	21-BIT	X		dc to 500kHz	21 (1,4,16)		X		X	1	-27V $\pm$ 1V
MEM 3021B	21-BIT	X		dc to 250kHz	21 (1,4,16)		X		X	1	-27V $\pm$ 1V
MEM 3032	6-1 ϕ BINARY WEIGHTED	X		dc to 1.0MHz	32 (1,1,2, 4,8,16)		X		X	1	-13V $\pm$ 1V -27V $\pm$ 1V
MEM 3040	40-BIT	X		dc to 1.0 MHz	40 (4,4, 16,16)		X		X	1	-13V $\pm$ 1V -27V $\pm$ 1V
MEM 3050	DUAL 25-BIT		X	10kHz to 500kHz	50 (25,25)		X		X	2	-27V $\pm$ 1V
MEM 3064	64-BIT SERIAL ACCUMULATOR		X	10kHz to 5.0MHz	64		X		X	4	NONE
MEM 3064B	64-BIT SERIAL ACCUMULATOR		X	10kHz to 2.0MHz	64		X		X	4	NONE
MEM 3064-2B	DUAL 64-BIT SERIAL ACCUMULATOR		X	10kHz to 2.0MHz	128 (64,64)		X		X	4	NONE
MEM 3100	DUAL 50-BIT		X	10kHz to 2.0MHz	100 (50,50)		X		X	2	-18V $\pm$ 1V
MEM 3128	128-BIT		X	10kHz to 2.0MHz	128		X		X	2	-18V $\pm$ 1V
MEM 3198	TRIPLE 66-BIT		X	10kHz to 1.0MHz	198 (66,66,66)		X		X	2	-27V $\pm$ 1V

LARGE DIGITAL SUBSYSTEMS		POWER CONSUMPTION (mW)	SUPPLY VOLTAGE (VOLTS)	CLOCK RATE	DESCRIPTION
TYPE	FUNCTION				
MEM 5014	A/D-D/A CONVERTER ELEMENT	135	-27V $\pm$ 1V	dc to 200 kHz	Complete logic and analog switching for 10-bit successive approximation A/D converter.
MEM 5015	16 CHANNEL RANDOM ACCESS MULTIPLEXER	80	-27V $\pm$ 1V	dc to 100 kHz	Sixteen Channel Multiplexer with address storage and decoding.
MEM 5021	DDA ELEMENT	100	-13V $\pm$ 1V -27V $\pm$ 1V	dc to 500 kHz	Ternary type DDA performing rectangular integration.
MEM 5031	SERVO ADDER	25	-13V $\pm$ 1V -27V $\pm$ 1V	dc to 1.0 MHz	Shift Register content decision unit used in conjunction with the MEM 5021.
MEM 5035	2 INPUT DELTA "Y" SUMMER	80	-13V $\pm$ 1V	10 kHz to 500 kHz	2 Input Delta "Y" Summer used in conjunction with the MEM 5021.
MEM 5116	16 CHANNEL RANDOM SEQUENTIAL ACCESS MULTIPLEXER	100	-27V $\pm$ 1V	dc to 500 kHz	Sixteen Channel Multiplexer with parallel access counter and decoding.
MEM 5132	RANDOM ACCESS MEMORY CELL	100	+5V $\pm$ 0.5V -12V $\pm$ 1V	dc to 500 kHz	32-BIT Random Access Memory Cell for large and small Memory Systems.

4th GENERATION SYSTEMS		POWER CONSUMPTION (mW)	SUPPLY VOLTAGE (VOLTS)	CLOCK RATE	DESCRIPTION
TYPE	FUNCTION				
S-C-100	MINIATURE A/D CONVERTER SYSTEM	300	-27V $\pm$ 2V -15V $\pm$ 2V +15V $\pm$ 2V REF. VOLT	dc to 100 kHz	Complete 10-BIT A/D Converter System
S-C-101	MINIATURE D/A CONVERTER SYSTEM	300	-27V $\pm$ 2V -15V $\pm$ 2V +15V $\pm$ 2V REF. VOLT	dc to 200 kHz	Complete 10-BIT D/A Converter System

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All 61 MTOS devices listed are available off-the-shelf from your authorized General Instrument distributor.



Write for complete information. (In Europe contact General Instrument Europe, Via Turati 28, Milano, Italy.)

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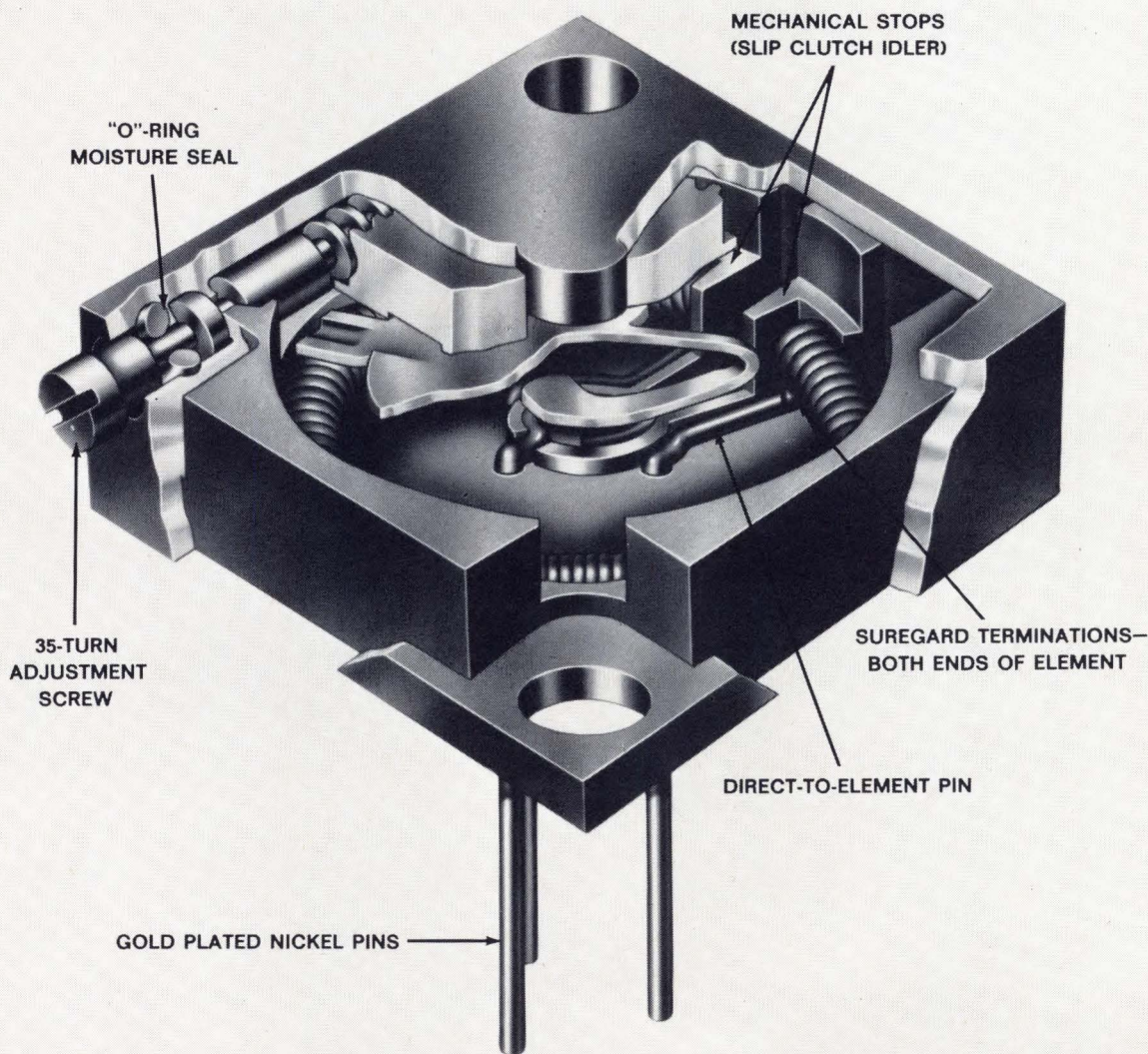
Circle No. 93 on Reader Service Card for more information.

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR (db)	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT ($\mu V/^{\circ}C$)	TEMP. RANGE ($^{\circ}C$)	SUPPLY (volts)	PKG. TYPE
Operational Amplifiers (Cont'd)													
Sgn	NE516	.3	± 10	100k	500	15k	100	150	5	10	0 to 75	± 15	TO-91, 100, 116
Sgn	NE517	.1	± 12	50k	300	10k	70	60	3	5	0 to 75	± 15	TO-88, 116
Sgn	NE530		± 14	600k	200	150k	90	25	1	3	0 to 75	± 15	TO-91, 99, 116
Sgn	S5709		± 13	400k	150	45k	90	80	1	3	-55 to 125	± 15	TO-91, 99
Sgn	SE516	.3	± 11	400k	500	18k	100	150	3	10	-55 to 125	± 15	TO-91, 100
Sgn	SE517	.1	± 12	50k	300	10k	70	60	3	5	-55 to 125	± 15	TO-88, 116
Sgn	SE530		± 14	600k	200	170k	90	25	1	3	-55 to 125	± 15	TO-91, 99
Syl	SA40	1.25	± 5	25k	125	69	80	80	1		-55 to 125	12, -6	
Syl	SA41	1.25	± 5	40k	175	59	80	80	2		-55 to 125	12, -6	
Syl	SA42	1.25	± 5	20k	175	69	80	80	5		0 to 75	12, -6	
Syl	SA43	1.25	± 5	20k	175	69	80	80	5		0 to 75	12, -6	
TI	SN521A	.05	8.2		10k	62 db	60	28	1	8	-55 to 125		FP
TI	SN522A	.05	5.4		160	62 db	60	72	1	8	-55 to 125		FP
TI	SN524A	.14	15	1M	200	63 db	55	120			-55 to 125		TO-5, FP
TI	SN724A	.14	12	800k	300	61 db	55	120			0 to 70		TO-5, FP
TI	SN52702		10.6	25k	200	68 db	80	70	2	5	-55 to 125		TO-5, FP
TI	SN52709		26	400k	150	93 db	90	80	3		-55 to 125	-55 to 125	TO-5, FP
TI	SN72702		10.6	20k	200	68 db	80	80	5		0 to 70		TO-5, FP
TI	SN72709		26	250k	150	93 db	90	80	2		0 to 70		TO-5, FP
Tns	TOA1709		± 14	400k	150	45k	90	80	1	3	-55 to 125	± 15	TO-91, 99, 116
Tns	TOA2709		± 14	250k	150	45k	90	80	2	6	0 to 70	± 15	TO-91, 99, 116
Tns	TOA3709		± 14	400k	150	45k	90	80	1	6	0 to 70	± 15	TO-91, 99, 116
Tns	TOA4709		± 14	700k	150	45k	90	80	1	3	-55 to 125	± 15	TO-91, 99, 116
Tns	TOA7709		± 14	10M	150	14k	90	80	1	6	-55 to 125	± 15	TO-91, 99, 116
Tns	TOA8709		± 14	3M	150	45k	90	80	2	6	0 to 70	± 15	TO-91, 99, 116
UC	H6000	4.5	± 10	10M		97 db				10	-55 to 125	± 15	DIP
UC	H6000A	4.5	± 10	10M		97 db				10	-55 to 125	± 15	DIP
UC	H6010	7	± 10	250k		90 db				10	-25 to 85	± 15	DIP
UC	H6010C	7	± 10	250k		90 db				10	-25 to 85	± 15	DIP
UC	H6020	7	± 10	1M		90 db				5	-40 to 100	± 15	DIP
UC	H6020C	7	± 10	1M		90 db				5	-40 to 100	± 15	DIP
UC	H7000	2.5	± 10	1M		92 db				25	-55 to 125	± 15	DIP
UC	H7000A	2.5	± 10	1M		92 db				25	-55 to 125	± 15	DIP
UC	H7010A	3	± 10	1M		92 db			1	50	-25 to 85	± 15	DIP
UC	H7010B	3	± 10	1M		92 db			1	50	-25 to 85	± 15	DIP
UC	H7020A	3	± 10	1M		92 db			1	25	-40 to 100	± 15	DIP
UC	H7020B	3	± 10	1M		92 db			1	25	-40 to 100	± 15	DIP
UC	H7030A	3	± 20	1M		97 db			1	25	-40 to 100	± 28	DIP
UC	H7030B	3	± 20	1M		97 db			1	25	-40 to 100	± 28	DIP
UC	H9000A	20	± 10	1M		100 db				5	-55 to 125	± 15	DIP
UC	H9010A	3	± 10	250k		100 db			.5	10	-25 to 85	± 15	DIP
UC	H9010B	3	± 10	250k		100 db			.5	10	-25 to 85	± 15	DIP
UC	H9020A	3	± 10	1M		100 db			.5	5	-40 to 100	± 15	DIP
UC	H9020B	3	± 10	1M		100 db			.5	5	-40 to 100	± 15	DIP
UC	H9030A	3	± 20	500k		105 db			.5	10	-40 to 100	± 28	DIP
UC	H9030B	3	± 20	500k		105 db			.5	10	-40 to 100	± 28	DIP
UC	UC709	1	± 12	3M	150	88 db	90	300	6	10	-55 to 125	± 15	TO-99
UC	UC709C	1	± 12	3M	150	88 db	90	300	10	30	0 to 70	± 15	TO-99
UC	UC709CE	1	± 12	3M	150	88 db	90		10	30	0 to 70	± 15	DIP
UC	UC4000	2	± 10	3M		92 db	100		5	10	-55 to 125	± 15	TO-101

Circle No. 94 on Reader Service Card for more information. ➤

MISSING: a few connections GAINED: new reliability at a bargain price



Design omissions can be as important as additions in product performance. An inside look at the new DAYSTROM Squaretrim® 554 Series pot, for example, shows that intermediate pin connections have been eliminated. Two of the weldable base pins are affixed directly to the resistance element. The center pin pivots directly against the rotating tap assembly. Result? A simplified design which also lowers your cost. Made in accord-

ance with MIL-R-27208, these half-inch units are rated for a full watt in still air at 70°C. Sealed models have passed Weston's 100% immersion test. Now thrifty-minded military, industrial or commercial users can have Squaretrim quality features at a bargain price: patented "wire in the groove" construction; 10 ohm to 50 K resistance range; $\pm 5\%$ standard tolerance; -55° to $+150^{\circ}\text{C}$ temperature range; your choice of

pins, flexible leads, and screw configurations; choice of sealed and unsealed models; priced competitively. Write for complete data and evaluation samples of our 550-555 Series potentiometers. Daystrom potentiometers are another product of: WESTON COMPONENTS DIVISION, Archbald, Pennsylvania 18403, Weston Instruments, Inc. a Schlumberger company

WESTON®

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT ($\mu\text{V}/^\circ\text{C}$)	TEMP. RANGE ($^\circ\text{C}$)	SUPPLY (volts)	PKG. TYPE
Operational Amplifiers (Cont'd)													
UC	UC4000C	2	± 10	3M	100	86 db	90	250	5	10	0 to 70	± 15	T0-101
UC	UC4001	2	± 10	3M		92 db	100		10	20	-55 to 125	± 15	T0-101
UC	UC4001C	2	± 10	3M	100	86 db	90	250	10	20	0 to 70	± 15	T0-101
UC	UC4002	2	± 10	3M		92 db	100		15	40	-55 to 125	± 15	T0-101
UC	UC4002C	2	± 10	3M	100	86 db	90	250	10	30	0 to 70	± 15	T0-101
UC	UC4200	1	± 20	3M	150	97 db	90	300	10	10	-55 to 125	± 24	T0-99
UC	UC4200C	1	± 20	3M	150	89 db	90	300	15	30	0 to 70	± 24	T0-99
UC	UC4200CE	1	± 20	3M	150	89 db	90		15	30	0 to 70	± 24	DIP
Wst	WC174Q	10	± 12.5	300k	75	84 db	83	450	5		0 to 75	± 15	FP
Wst	WC161/WM	.5	11	300k	40	1.1k	80		10	5	-55 to 125	± 10	FP
Wst	WC/WM306	.5	18	300k	40	4k	83	400		5	-55 to 125	± 12	FP
High Frequency Amplifiers													
Aml	901	60		520		24 db		144				12	
Aml	903	110	4			15 db		96				12, -6	
Aml	911B	100				40 db					-55 to 125	12	T0-100
Aml	5670	.5						1k				28	
Fch	$\mu\text{A}703$	150	8			28 db		110			-55 to 125	12	T0-5
Fch	$\mu\text{A}703\text{C}$	50	8			26 db		110			0 to 70	12	T0-5
Fch	$\mu\text{A}703\text{E}$	150	8			24 db		110			0 to 70	12	T0-5
Fch	$\mu\text{A}717\text{E}$	50				86 db		250			0 to 70	12	T0-5
Fch	$\mu\text{A}719$	50	10			91 db		215			-55 to 125	12	T0-5
Fch	$\mu\text{A}719\text{C}$	50	10			91 db		215			0 to 70	12	T0-5
GE	4JPA108	5		50	800	18							
GE	4JPA112	50		50	500	20							
GE	4JPA116	100				100k							
GE	12X264	100											
GE	12X292	50	3 p-p			20 db							
GE	PA189	5		500	10k	80 db					-55 to 110	12	DIP
GE	PA230	.5	10 p-p	35k	100	7k			2		-55 to 110	12	DIP
GI	PC-260	40		1M		0 db			50	500	-55 to 125	± 15	FP
Hal	HX610	100	20	350k		400		365			-65 to 65	± 12	T0-5
Mot	MC1110	300		500	1k	20					-55 to 125	± 5	T0-5
Mot	MC1509	40	± 4.5	6k	35	93	85	150		3	-55 to 125	± 6	FP
Mot	MC1510	40	± 4.5	6k	35	93	85	150		3	-55 to 125	± 6	T0-99, FP
Mot	MC1550G	22				29 db					-55 to 125	± 6	T0-5
Mot	MC1552G	40	4.2	10k	16	100	75				-55 to 125	6	T0-5
Mot	MC1553G	35	4.2	10k	16	400	75				-55 to 125	6	T0-5
NS	LM171	250	4 ma	3k	100k	27 mmhos		84	.3		-55 to 125	5 to 24	T0-5
NS	LM271	250	4 ma	3k	100k	27 mmhos	40	84	.3		0 to 70		T0-5
NS	LM703	150	4 ma	2.8k	50k	33 mmhos	28	110			-55 to 125		T0-5
NS	LM703C		3.6 ma			33 mmhos					0 to 70		T0-5
NS	LM703E		3 ma			33 mmhos					0 to 70		T0-5
NS	LM703L												
Phi	PA7600-31	160				43 db		84			-55 to 125	12	T0-5, FP
Phi	PA7601-31	150		90	95	18 db		224			-55 to 100	± 8	T0-5, FP
Phi	PA7602-31	15				76 db		27			-55 to 125	15	T0-5, FP
Phi	PA7603-31	100				28 db		110			-55 to 125	20	T0-5
Phi	PA7603-39	100				28 db		110			0 to 70	20	T0-5
Phi	PA7603-49	100				28 db		110			0 to 70	20	T0-5
Phi	PA7613-31	200				33 db		21			-55 to 125	12	T0-5, FP
RCA	CA3001	20		50k	70	19 db	70	300	1.5		-55 to 125	± 6	T0-5
RCA	CA3002	15		100k	70	24 db		300	2.2		-55 to 125	± 6	T0-5
RCA	CA3004	120		1.2k	2.2k		98	300	1.7		-55 to 125	± 6	T0-5
RCA	CA3005	120		1.4k	2k		101	300	2.6		-55 to 125	± 6	T0-5
RCA	CA3006	120		1.4k	2k		101	300	.8		-55 to 125	± 6	T0-5

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR (db)	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μ V/ $^{\circ}$ C)	TEMP. RANGE ($^{\circ}$ C)	SUPPLY (volts)	PKG. TYPE
High Frequency Amplifiers (Cont'd)													
RCA	CA3011	20		3k	31.5k	67 db		300			-55 to 125	7.5	TO-5
RCA	CA3012	20		3k	31.5k	67 db		300			-55 to 125	10	TO-5
RCA	CA3013	20		3k	31.5k	67 db		300			-55 to 125	7.5	TO-5
RCA	CA3014	20		3k	31.5k	67 db		300			-55 to 125	10	TO-5
RCA	CA3020	8		600				550●			-55 to 125		TO-5
				40k									
RCA	CA3021	6		4k	300	56 db		120			-55 to 125	6	TO-5
RCA	CA3022	20		1.3k	120	57 db		120			-55 to 125	6	TO-5
RCA	CA3023	40		300	100	53 db		120			-55 to 125	6	TO-5
RCA	CA3028	120		590	12.5k			300			-55 to 125	9	TO-5
RCA	CA3034			2k				300				10	TO-5
RCA	CA3035	.5	2 p-p	50k	270	44 db		300			-55 to 125	9	TO-5
RCA	CA3035	2.5	2.6 p-p	2k	170	46 db		300			-55 to 125	9	TO-5
RCA	CA3035	2.5	8 p-p	670	100k	42 db		300			-55 to 125	9	TO-5
RCA	CA3041	20		11k	100k	67 db		250			0 to 85		DIP
RCA	CA3042	20		11k	100k	67 db		240			0 to 85		DIP
RCA	CA3043	20		7k		80 db		225			-55 to 125		TO-5
Ray	RM702	50	± 5	8k	700	380	70	125	5	10	-55 to 125	12, -6	T, Q, D
Ray	RM703	100	10	5k	2.5k			170			-55 to 125	12	T, E
Sgn	NE510	200						130			0 to 75	12	TO-88, 116
Sgn	SE510	200						130			-55 to 125	12	TO-88
Syl	SA20	100	14 p-p	1.8k	1.5	21 db	65	430			-55 to 125	24	
TI	SN5510	40	4.5	6k	35	40 db	85	165			-55 to 125		TO-5, FP
TI	SN7510	40	4.5	6k	35	39 db	85	165			0 to 70		TO-5, FP
Wst	WC1146T	85	6	83	1.9k	23 db					0 to 75	12	TO-5
Sense Amplifiers													
Aml	710B	Differential Comparator			200	1.7k	100	110	3	3.5	-55 to 125	12, -6	TO-99, FP
Aml	711B	Dual Differential Comparator			200	1.5k		300	4.5	5	-55 to 125	12, -6	TO-99, FP
Fch	μ A710	Differential Comparator			200	1.7k	100	110	.6	3.5	-55 to 125	12, -6	TO-99, FP, DIP
Fch	μ A710C	Differential Comparator			200	1.5k	98	150	.6	5	0 to 70	12, -6	TO-99, FP, DIP
Fch	μ A711	Dual Comparator			200	1.5k	80	300	1	5	-55 to 125	12, -6	TO-5, FP
Fch	μ A711C	Dual Comparator			200	1.5k	76	130	1	5	0 to 70	12, -6	TO-5, FP
GE	PA424	Zero Voltage Switch						440			-20 to 70	15	DIL
Hal	HX620	Core Memory Amp With Strobe, $I_{OUT} = 100$ ma									-55 to 125	12, -6	FP
ITT	710				200	1.7k	100	90	.6	2.7	-55 to 125	12, -6	
ITT	711				200	1.5k		130	1	5	-55 to 125	12, -6	
Lns	LTE710	Differential Comparator			200	1.2k		110	2	5	-55 to 125	12, -6	TO-5, DIP
Lns	LTE710C	Differential Comparator			200	1.2k		110	2	5	0 to 70	12, -6	TO-5, DIP
Lns	LTE711	Dual Differential Comparator			200	1.5k		130	1	5	-55 to 125	12, -6	TO-5, DIP
Lns	LTE711C	Dual Differential Comparator			200	1.5k		130	1	5	0 to 70	12, -6	TO-5, DIP
Mot	MC1440	Sense Amp Threshold 10-25 mv, Response 20 nsec									0 to 75	± 6	TO-5, 91
Mot	MC1540	Sense Amp Threshold 10-25 mv, Response 20 nsec									-55 to 125	± 6	TO-5, 91
Mot	MC1710	Differential Comparator				1.7k	100	115	1	3	-55 to 125	12, -6	TO-91, 99
Mot	MC1710C	Differential Comparator				1.5k	100	110	1.5	5	0 to 75	12, -6	TO-91, 99, 116
Mot	MC1711	Dual Comparator				1.5k		130	1	5	-55 to 125	12, -6	TO-6, 91
Mot	MC1711C	Dual Comparator				1.5k		130	1	5	0 to 75	12, -6	TO-5, 91
NPC	LA711	Dual Comparator			200	1.5k		300	4.5	5	-55 to 125		TO-5
NS	LM710	10		150k	150	1.5k		110	1	5	-55 to 125	12, -6	TO-5, FP, DIP
NS	LM710C	10		150k	150	1.5k		110	1	5	0 to 70	12, -6	TO-5, FP, DIP

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR (db)	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μ V/ $^{\circ}$ C)	TEMP. RANGE ($^{\circ}$ C)	SUPPLY (volts)	PKG. TYPE
Sense Amplifiers (Cont'd)													
NS	LM711	10		150k	150	1.5k		130	1	5	-55 to 125	12, -6	TO-5, FP, DIP
NS	LM711C	10		150k	150	1.5k		130	1	5	0 to 70	12, -6	TO-5, FP, DIP
Phl	PA7605-39	27	3.3 p-p	200	40	250	45	95	1	1.5	-55 to 125	4.8, -6	FP
Phl	PA7606-31	27	3.3 p-p	10k	40	250	45	.25	1	1.5	-55 to 125	4.8, -6	FP
Phl	PA7710-31	Differential Comparator			200	1.5k			2		-55 to 125	14, -7	TO-5, FP
Phl	PA7710-39	Differential Comparator			200	1.5k			2		0 to 70	14, -7	TO-5, FP
Phl	PA7711-31	Dual Comparator			200	1.5k		130	1	5	-55 to 125	12, -6	TO-5
RCA	CA3000	30		195k	8k	32 db	98	300	1.4		-55 to 125	$\pm$ 6	TO-5
Ray	RM710	Differential Comparator			200	750	80	150	5	7.5	-55 to 125	12, -6	T, Q, D
Ray	RM711	Differential Comparator			200	750	80	180	3.5	10	-55 to 125	12, -6	T, Q, D
Ray	RM4710	Dual Comparator			200	750	80	180	5	10	-55 to 125	12, -6	J
Ray	RMP710	Differential Comparator			200	1.25k	80	150	2	7.5	-55 to 125	12, -6	T, Q, D
Ray	RMP4710	Dual Comparator			200	1.25k	80	180	2	10	-55 to 125	12, -6	D
Sgn	N5710	$t_{pd} =$ 40 nsec	3.5, -.5		200	1.5k	100	90	1.5	3.5	0 to 75	12, -6	TO-91, 99, 116
Sgn	N5711	$t_{pd} =$ 40 nsec	3.5, -.5		200	1.5k		130	1	5	0 to 75	12, -6	TO-100, 116
Sgn	NE518	5	5	3k	50	2.1k	80	110	1	5	0 to 75	6, -3	TO-91, 100, 116
Spg	"	"	"	"	"	"	"	"	"	"	"	"	"
Sgn	NE525	$t_{pd} =$ 30 nsec	3	1k	50	1.5k		125			0 to 75	$\pm$ 5	TO-88, 116
Sgn	NE526	$t_{pd} =$ 25 nsec	3	1k	50	1.5k		125	2	5	0 to 75	$\pm$ 5	TO-91, 100, 116
Sgn	S5710	$t_{pd} =$ 40 nsec	3.5, -.5		200	1.7k	100	90	.6	3.5	-55 to 125	12, -6	TO-91, 99
Sgn	S5711	$t_{pd} =$ 40 nsec	3.5, -.5		200	1.5k		130	1	5	-55 to 125	12, -6	TO-100
Sgn	SE518	5	5	3k	50	2.1k	80	110	1	5	-55 to 125	6, -3	TO-91, 110
Spg	"	"	"	"	"	"	"	"	"	"	"	"	"
Sgn	SE526	$t_{pd} =$ 25	Nsec 3	1k	50	1.5k		125	2	5	-55 to 125	$\pm$ 5	TO-91, 100, 116
Scx	SC150	Flip-Flop Output, Threshold 10-50 mv						125			-55 to 125		
Scx	SC151	One-Shot Output, Threshold 10-50 mv						125			-55 to 125		
Scx	SC450	Flip-Flop Output, Threshold 10-50 mv						125			0 to 70		
Scx	SC451	One-Shot Output, Threshold 10-50 mv						125			0 to 70		
Syl	SA-10	7	4	240				125			-55 to 125	-25, -12.5	FP
Syl	SA-11	7	4	240				125			-55 to 125	-25, -12.5	FP
TI	SN5500	Magnetic Core Sense Amp, Differential Input, Threshold 17 mv									-55 to 125		FP
TI	SN7500	One-Shot Output, Differential Input, Threshold 17 mv									0 to 70		FP
TI	SN7501	Flip-Flop Output, Differential Input, Threshold 17 mv									0 to 70		FP
TI	SN7502	Flip-Flop Output, Differential Input, Threshold 21 mv									0 to 70		FP
TI	SN7521	1k		2k							0 to 70		DIP
TI	SN7522	1k		2k							0 to 70		DIP
TI	SN7523	1k		2k							0 to 70		DIP
TI	SN7524	1k		2k							0 to 70		DIP
TI	SN7525	1k		2k							0 to 70		DIP
TI	SN52710	Differential Comparator			200	64 db		110	2	5	-55 to 125		TO-5, FP
TI	SN52711	Dual Differential Comparator			200	64 db		130	1	5	-55 to 125		TO-5, FP
TI	SN72710	Differential Comparator			200	62 db		110	2	7.5	0 to 70		TO-5, FP
TI	SN72711	Dual Differential Comparator			200	64 db		130	1	5	0 to 70		TO-5, FP
TI	SN72720	Dual Differential Comparator			200	39 db	98	220	2		0 to 70		DIP
Tns	TDC1710	Differential Comparator				1.7k			.6	1.7	-55 to 125	12, -6	TO-91, 100, 116
Tns	TDC1711	Dual Differential Comparator				1.5k			1	.8	-55 to 125	12, -6	TO-91, 110, 116

circuit problems?

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- Timing • Photo Choppers • Oscillators • Indicator Lights • Counters
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SEE Signalite Application News Vol. 3 No. 2 for TYPICAL APPLICATIONS.



NEON LAMPS WITH TRANSISTORS The A079 is recommended as an indicator light for transistor circuits, transistorized flip-flops, and other general low voltage operations. The advantages result from the low current and low voltage requirements, the absence of heat generated and extremely long life.

SEE Signalite Application News Vol. 2 No. 5 for TYPICAL APPLICATIONS.

SIGNALITE APPLICATION NEWS



is used to communicate new and proven techniques and applications of Signalite's neon lamps and gas discharge tubes. Signalite Application News provides a forum for an exchange of ideas to keep the design engineer aware of the versatility of neon lamps and their many applications. Copies are available from your Signalite representative or by contacting Signalite.

Circle Reader-Service Card No. 80



TRIGGER LAMPS FOR OPERATION OF SCR'S AND TRIACS The A057B lamp is recommended for use as a triggering device for both SCR'S and TRIACS in motor speed controls and light dimmer circuits. Its properties of stable operation and high current capabilities qualify it for this application.

See Signalite Application News Vol. 2 No. 4 for TYPICAL APPLICATIONS.



MEMORY SWITCHES Neon lamps have proven to be an excellent memory switch since they store information and provide visual indication. The properties of neon lamps provide a large differential between breakdown and maintaining voltages, stable electrical characteristics and high "off" resistance (20,000 meg ohms). Other applications include switching, information storage, timing circuitry, etc.

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Circle No. 95 on Reader Service Card for more information.

LINEAR

MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) p-p	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μ V/ $^{\circ}$ C)	TEMP RANGE ($^{\circ}$ C)	SUPPLY (volts)	PKG TYPE
Sense Amplifiers (Cont'd)													
Tns	TDC2710	Differential	Comparator			1.5k			1.6	1.7	0 to 70	12, -6	TO-91, 100, 116
Tns	TDC2711	Dual Differential	Comparator			1.5k			1	.8	0 to 70	12, -6	TO-91, 100, 116
Tns	TDC4711	Dual Differential	Comparator			1.5k			1	5	-55 to 125	12, -6	TO-91, 100, 116
Tns	TDC5711	Dual Differential	Comparator			1.5k			1	5	0 to 70	12, -6	TO-91, 100, 116
Tns	TDC6711	Dual Differential	Comparator			1.5k			1	.8	-55 to 125	12, -6	TO-91, 100, 116
Tns	TDC7711	Dual Differential	Comparator			1.5k			1	.8	0 to 70	12, -6	TO-91, 116
Tns	TDC8711	Dual Differential	Comparator			1.5k			1	2.5	-55 to 125	12, -6	TO-91, 116
Tns	TDC9711	Dual Differential	Comparator			1.5k			1	2.5	0 to 70	12, -6	TO-91, 116
UC	H8000A	D-C Comparator	± 10	10M		97 db				10	-55 to 125	± 15	DIP
UC	H8010C	D-C Comparator	± 10	250k		90 db				10	-25 to 85	± 15	DIP
UC	H8020A	D-C Comparator	± 10	1M		95 db				20	-40 to 100	± 15	DIP

MFR.	TYPE NO.	OUTPUT OFFSET (mv)	R _{ON} (ohms)	REFERENCE SUPPLY (VOLTS)	TEMP. RANGE ($^{\circ}$ C)	POWER DISS. (MW)	PACKAGE TYPE	REMARKS
Converters (A/D-D/A)								
AMI	SPO1C	0	700		-55 to 125	200	FP	12-Bit Parallel Output
Crs	CDA1-1	1	10	-20	-55 to 125		TO-5	D/A
Crs	CDA1-2	1	10	-20	-55 to 125		TO-5	D/A
Crs	CDA1-3	1	10	-10	-55 to 125		TO-5	D/A
Crs	CDA2-1		25		-55 to 125	250	TO-5	Dual D/A t _{ON} = 1 μ sec
Crs	CDA2-2		40		-55 to 125	250	TO-5	Dual D/A t _{ON} = 1 μ sec
Crs	CDA2-3		25		-55 to 125	250	TO-5	Dual D/A t _{ON} = 1 μ sec
Crs	CDA2-4		40		-55 to 125	250	TO-5	Dual D/A t _{ON} = 1 μ sec
Crs	CDA4-A	1	5	10	-55 to 125		TO-5	D/A t _{ON} = .3 μ sec
Crs	CDA5	2	10	± 4	-55 to 125		FP	D/A t _{ON} = .5 μ sec
Crs	CDA6	1	5	± 10	-55 to 125		TO-5	D/A t _{ON} = .4 μ sec
Fch	μ A722				-20 to 85		FP	10-Bit Current Source
Fch	μ A722B				-20 to 85		FP	10-Bit Current Source
Fch	3750				-55 to 85	190		10-Bit 2 μ sec MOS Unit
Fch	3801				-55 to 85	190		500-kHz Unit
GI	MEM1051		350	-13, -25●	-55 to 85	35	TO-5, DIP	500-kHz Buffered
GI	MEM5014			-27●	-55 to 85	135	DIP	10-Bit 200-kHz A/D-D/A
GI	S-C-100			± 15 , -27●	0 to 70	300		10-Bit 100-kHz A/D
GI	S-C-101			5	-15, -27● 5	300		10-Bit 200-kHz D/A
Spg	UM-1200				15 to 55		DIP	Four-Bit D/A
Spg	UM-1210				15 to 55		DIP	UM-1200 Expander
Spg	UM-1400				0 to 70		DIP	Four-Bit D/A
Spg	UM-1410				0 to 70		DIP	UM-1400 Expander
TRW	DAC-100	2		-20, -10, 1.6	-55 to 125			Five-Bit D/A
TRW	DAC-101	1		-20, -10, 1.6	-55 to 125			Five-Bit D/A

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MFR.	TYPE NO.	INPUT RANGE (VOLTS)	OUTPUT RANGE (volts)	OUTPUT CURRENT (ma)	LINE REGULATION (%/v)	LOAD REGULATION (%)	TEMP. RANGE (°C)	PACKAGE TYPE
Regulators								
Aml	2802BF	14 to 20	12					
Aml	2802BG		4.5 to 40		.005		-55 to 125	T0-8
Aml	2803BF	-14 to -20	-12					
Aml	2803BG		-4.5 to -40		.005		-55 to 125	T0-8
Bnx	BN-4000	10 to 31	6	1k	2%	1	-30 to 125	T0-3
Bnx	BN-4001	16 to 37	12	1k	1%	1	-30 to 125	T0-3
Bnx	BN-4002	22 to 40	18	1k	1%	1	-30 to 125	T0-3
Bnx	BN-4003	28 to 40	24	1k	1%	1	-30 to 125	T0-3
Bnx	BN-4004		6	1k		1	-30 to 125	T0-3
Bnx	BN-4005		9	1k		1	-30 to 125	T0-3
Bnx	BN-4006		12	1k		1	-30 to 125	T0-3
Bnx	BN-4008	9 to 30	5	1k	2%	1	-30 to 125	T0-3
Bnx	BN-4009		5	1k		1	-30 to 125	T0-3
Bnx	BN-4100	9 to 20	5	1k	2.5%	5	-30 to 125	T0-3
Bnx	BN-4101	10 to 21	6	1k	2.5%	5	-30 to 125	T0-3
Bnx	BN-4102	16 to 27	12	1k	2%	5	-30 to 125	T0-3
Bnx	BN-4103	22 to 33	18	1k	1.5%	5	-30 to 125	T0-3
Bnx	BN-4104	29 to 40	25	1k	1.5%	5	-30 to 125	T0-3
CT	CT107	16.5	15	200	.05%	.05	-55 to 125	T0-8
CT	CT110	8.5	5	200	.05%	.05	-55 to 125	T0-8
CT	CT122	-16.5	-15	200	.05%	.05	-55 to 125	T0-8
CT	CT126	-17	-15	200	.05%	.05	-55 to 125	T0-8
CT	CT127	17	15	200	.05%	.05	-55 to 125	T0-8
CT	CT128	±16.5	±15	200	.05%	.05	-55 to 125	T0-8
Con	CMC-500		3 to 7		.03%	.01		T0-3, T0-5
Con	CMC-510		8 to 25		.3%	.2		T0-3, T0-5
Con	CMC-513	16.5 to 40	13 to 17	100	.5%	.5	-55 to 125	T0-99
Con	CMC-513-4	16.5 to 40	15	100			0 to 75	T0-105
Con	CMC-520		8 to 25		.03%	.01		T0-3, T0-5
Con	CMC-530		10 to 25		.003%	.001		T0-3, T0-5
Fch	SH3200		8.5 to 30	100	.005	.05	-55 to 125	T0-5
Fch	SH3201		-8.5 to -30	100	.005	.05	-55 to 125	T0-5
GI	NC/PC-511H		12		.5%	.025	-55 to 125	T0-5, FP
GI	NC/PC-513H		-12		.4%	.025	-55 to 125	T0-5, FP
GI	NC/PC-521H		6		.4%	.07	-55 to 125	T0-5, FP
GI	NC/PC-523H		-6		.4%	.07	-55 to 125	T0-5, FP
GI	PC-501H		12		.5%	.025	-55 to 125	FP
GI	PC-502H		24		.5%	.05	-55 to 125	FP
GI	PC-503H		-12		.5%	.025	-55 to 125	FP
GI	PC-504H		-24		.5%	.05	-55 to 125	FP
GI	PC-512H		24		.5%	.05	-55 to 125	FP
GI	PC-514H		-24		.5%	.05	-55 to 125	FP
HD	801	15 to 40	9 to 21	500	.05%	.05	-55 to 125	DIL
HD	802	.3 to 40	9 to 21	500	.05%	.05	-55 to 125	DIL
HD	803	38 to 40	21 to 32	500	.05%	.05	-55 to 125	DIL
HD	804	24 to 40	20 to 32	500	.05%	.05	-55 to 125	DIL
HD	805	9 to 40	3 to 9	500	.1%	.1	-55 to 125	DIL
HD	806	9 to 40	3 to 9	500	.1%	.1	-55 to 125	DIL

MFR.	TYPE NO.	INPUT RANGE (VOLTS)	OUTPUT RANGE (volts)	OUTPUT CURRENT (ma)	LINE REGULATION (%/v)	LOAD REGULATION (%)	TEMP. RANGE (°C)	PACKAGE TYPE						
Regulators (Cont'd)														
HD	851	-13 to -40	-9 to -21	500	.05%	.05	-55 to 125	DIL						
HD	855	-9 to -40	-3 to -9	500	.1%	.1	-55 to 125	DIL						
LPM	LM109	24 to 32	21	1k		.5								
NPC	LA100		2 to 30				-55 to 150	T0-5, FP, DIL						
NPC	LA200		2 to 30				0 to 70	T0-5, FP, DIL						
NPC	LA300		2 to 20				0 to 70	T0-5						
NS	LM100	8.5 to 40	2 to 30	12	.1	.5	-55 to 125	T0-5, FP, DIP						
NS	LM105	8 to 30	4.5 to 30	12	.03	.05	-55 to 125	T0-5, FP						
NS	LM200	8.5 to 40	2 to 30	12	.1	.5	0 to 70	T0-5, FP, DIP						
NS	LM205	8 to 30	4.5 to 30	12	.03	.05	-20 to 80	T0-5, FP						
NS	LM300	8 to 30	2 to 20	12	.1	.5	0 to 70	T0-5, EPOXY						
Wst	WC109T	9 to 24	4 to 16	150	.3%	.2	0 to 75	T0-5						
Wst	WM110T		8 to 48	2k										
Wst	WM330R		4 to 8				-55 to 125	T0-3						
MFR.	TYPE NO.	FREQUENCY (MHz)	OUTPUT SWING (volts) P-P	INPUT Z (ohms)	OUTPUT Z (ohms)	GAIN	CMR (db)	POWER OUTPUT DISS* (mw)	INPUT OFFSET (mw)	DRIFT (μV/°C)	TEMP RANGE (°C)	SUPPLY (volts)	PKG TYPE	
Other														
Fch	μA726	Temperature Controlled Differential Pair							1	.2	-55 to 125	±15	T0-5	
Fch	μA727	Temperature Stabilized Preamp					40 db	90 db	360	1	.3	-55 to 125	±15	T0-5
Fch	μA727B	Temperature Stabilized Preamp					40 db	85 db	360	2	.6	-20 to 85	±15	T0-5
GE	PA436	Triac Triggering Phase Control Circuit									-55 to 85		DIP	
GI	MEM2000	Five-Channel, MTOS Multiplexer—Common Drain, R _{ON} = 200 ohms											FP, T0-5	
GI	MEM2003	Four-Channel MTOS Multiplexer, R _{ON} = 200 ohms											T0-5	
GI	MEM2005	Four-Channel MTOS Multiplexer, Dual Two Channel, R _{ON} = 200 ohms												
GI	MEM2006	Three-Channel MTOS Multiplexer—Common Drain, R _{ON} = 200 ohms											T0-5	
GI	MEM2016	Six-Channel MTOS Multiplexer, R _{ON} = 150 ohms											FP, DIP	
GI	MEM2017	Three-Channel MTOS Multiplexer, R _{ON} = 700 ohms											FP, DIP	
GI	MEM5015	16-Channel Random Access Multiplexer						80			-55 to 85	-27	DIP	
GI	MEM5021	DDA performs Rectangular Integration						100			-55 to 85	-13, -27	FP	
GI	MEM5031	Servo Adder SR Content Decision Unit						25			-55 to 85	-13, -27	T0-5, FP	
GI	MEM5035	Two-Input, Δy Summer						80			-55 to 85	-13	FP, DIP	
GI	MEM5116	16-Channel Random/Sequential Access Multiplexer						100			-55 to 85	-27	FP, DIP	
ITT	726	Differential Pair							1	.2	-55 to 125	±15		
Ray	RM4441	.1 Line Receiver						400			-55 to 135	5, -10	J, D, T	
Scx	DG102F	Two-Channel Drivers with FET switches												
Scx	DG110F	Two-Channel Drivers With FET Switches												
Scx	DG116L	Four-Channel Drivers With FET Switches									-55 to 125		T0-86	
Scx	DG120F	Three-Channel Drivers With FET Switches												
Scx	DG122F	Two-Channel Drivers With FET Switches												
Scx	DG123L	Five-Channel Drivers With FET Switches									-55 to 125		T0-86	
Scx	G114L	Five-Channel Multiplexer—MOS						375			-55 to 125		FP	
Scx	G116L	Five- and Six-Channel Multiplexer									-55 to 125		T0-86	
Scx	G122L	Four-Channel Multiplexer—MOS						375			-55 to 125		FP	
Scx	G123L	Four-Channel Multiplexer—MOS (Two Drain Terminal Outputs)						375			-55 to 125		FP	
Scx	G124L	Four-Channel Multiplexer—MOS (Common Drain Output)						375			-55 to 125		FP	
Spg	ULN2111A	FM Detector and Limiter									0 to 75		DIP	
Spg	ULN2300M	Amplifier—SCR Firing Circuit									0 to 70		DIP	
Spg	ULX2102	Variable Electronic Attenuator									0 to 75		FP, DIP	
TI	TXL104	Optoelectronic Pulse Amplifier									-55 to 125		T0-89	
	106													

ADVERTISER'S INDEX

Abbott Transistor Laboratories, Inc. 99
 Technical Advertising Agency
 Agastat Div.—ESNA 201
 Levy Advertising Associates, Inc.
 Allen-Bradley Co. 41
 Fensholt Advertising Agency
 American Micro-Systems, Inc. 17-20
 Guilie, Smith & Beal, Inc.
 Ampere Electronic Corp. 44-45, 218-219
 Sam Groden, Inc., Advertising
 Barnes Corp. 199
 Industrial Public Relations, Inc.
 Beckman Instruments, Inc., Electronic
 Instruments Div. 95
 Hixson & Jorgensen, Inc., Advertising
 Bendix Corp., Semiconductor Div. 185
 MacManus, John & Adams, Inc.
 Bergen Wire Rope Co. 152
 William Jenkins Advertising, Inc.
 Birtcher Corp., Instrument Div. 203
 Guerin, Johnstone, Gage, Inc.
 Bissett-Berman Corp., Components Div. 115
 S.F. Associates
 Buchanan Electrical Products Corp. 102-103
 Keyes, Martin & Co.
 Buckbee-Mears Co. 153
 Midland Associates, Inc.
 Bundy Electronics Corp. 221
 Keyes, Martin & Co.
 Burton Research Labs. 215
 William E. Wilson Co.
 Carborundum Co., R & E
 Div. Inside front cover
 Rumrill-Hoyt, Inc.
 Centralab Electronics Div., Globe-Union,
 Inc. 163
 The Brady Co.
 Cinch Manufacturing Co. 39
 Stral Advertising Co., Inc.
 Clarostat Mfg. Co., Inc. 237
 Horton, Church & Goff, Inc.
 Components Inc., Semcor Div. 59
 Marketing & Corporate Communications
 Copper Range Co. 213
 Downing Industrial Advertising, Inc.
 Crystalonics, a Teledyne Co. 205
 Impact Advertising, Inc.
 Cutler-Hammer, Inc. 47
 Campbell-Mithun
 Delco Radio Div., General Motors
 Corp. 28-31
 Campbell-Ewald Co.
 Douglas Randall Div., Walter Kidde & Co.,
 Inc. 151
 MacManus, John & Adams, Inc.
 DuPont, E. I. de Nemours, & Co.,
 Organic Chemicals Dept. "Freon" 15, 142
 Batten, Barton, Durstine & Osborn, Inc.
 E-H Research Labs., Inc. 2-5
 Steedman, Cooper and Busse
 Advertising
 Electro-Tec Corp. 149
 Wilson, Haight & Welch, Inc.
 Elmar Electronics 79
 General Electric Co.,
 Semiconductor Dept. 11-14
 Specialty Control Dept. 21, 61, 93, 117
 Robert S. Cragin, Inc.
 General Electric Co.,
 Lamp Metals & Components Dept. 152
 Dix & Eaton, Inc.
 General Electric Co.,
 Silicone Products Dept. 33
 Ross Roy of New York, Inc.
 General Instrument Corp., Semiconductor
 Products Group 35, 119, 228-229
 Norman Allen Associates, Inc.
 GTI Corp. 32
 Meek & Thomas, Inc.
 Hall-Mark Electronics Corp. 77

Hughes Aircraft Co.,
 Semiconductor Div. 48-A-D
 Vacuum Tube-Welders 199
 Foote, Cone & Belding
 Hysol Corp. 148
 Barber & Drullard, Inc.
 International Electronic Research
 Corp. (IERC). 16
 Van der Boom, McCarron, Inc.,
 Advertising
 International Telephone & Telegraph Corp.,
 Semiconductor Div. Back cover
 Neals & Hickok, Inc.
 Kidde, Walter, & Co., Douglas Randall
 Div. 151
 MacManus, John & Adams, Inc.
 Milgray Electronics, Inc. 75, Inside back cover
 Bliss/Grunewald Inc.
 Miracle-Hill Electronics 141
 Hal Lawrence Inc.
 Monsanto Co., New Enterprises 147
 Foote, Cone & Belding, Inc.
 Mori Physics & Chemistry Lab. Co., Ltd. 172
 General Advertising Agency, Inc.
 Motorola Semiconductor Products,
 Inc. 51, 62-63
 Lane & Bird Advertising, Inc.
 National Electronics, Inc. (Varian Sub.) 153
 Connor-Sager Associates, Inc.
 RCA Electronic Components & Devices
 54-55, 71, 89, 111, 129, 135, 157, 224A-H,
 240A-H
 Al Paul Lefton Co., Inc.
 Robinson/Nugent Electronics, Inc. 101
 Shine Advertising
 Semcor Div., Components Inc. 59
 Marketing & Corporate Communications
 Semtech Corp. 10
 Burrell/Advertising
 Signalite, Inc. (General Instrument) 235
 McCarthy-Scelba-DeBiasi Advertising
 Agency
 Solitron Devices, Inc. 65
 Haselmeire-Pearson Advertising, Inc.
 Sprague Electric Co., Semiconductor Div. 155
 Harry P. Bridge Co.
 Symbolic Displays Inc. 172
 Marketing Directions, Inc.
 Teledyne Relays 9
 S. Michelson Advertising
 Tempres Research Co., Inc. 43
 Hal Lawrence, Inc.
 Thermalloy Co. 179
 Phillips, Inc.
 Transistron Electronic Corp. 73
 Larcom Randall Advertising, Inc.
 Uniform Tubes, Inc. 98
 Michener Co., Advertising
 Union Carbide Corp., Solvents 173
 O. S. Tyson & Co., Inc.
 Unitrode Corp. 7
 Silton Brothers, Inc.
 Universal Instruments Corp. 204
 Caroe Marketing, Inc.
 Varian Associates, National Electronics,
 Inc. 153
 Connor-Sager Associates, Inc.
 Varo, Inc., Semiconductor Div. 104
 Tracy-Locke Company, Inc.
 Vector Electronic Co. 8
 Van der Boom, McCarron, Inc.
 Wakefield Engineering, Inc. 150
 Sales Promotion Service
 Westinghouse Electric Corp. (Distributors)
 75, 77, 79, 81
 McCann/ITSM, Inc.
 Weston Instruments, Inc., Archbald Div. 231
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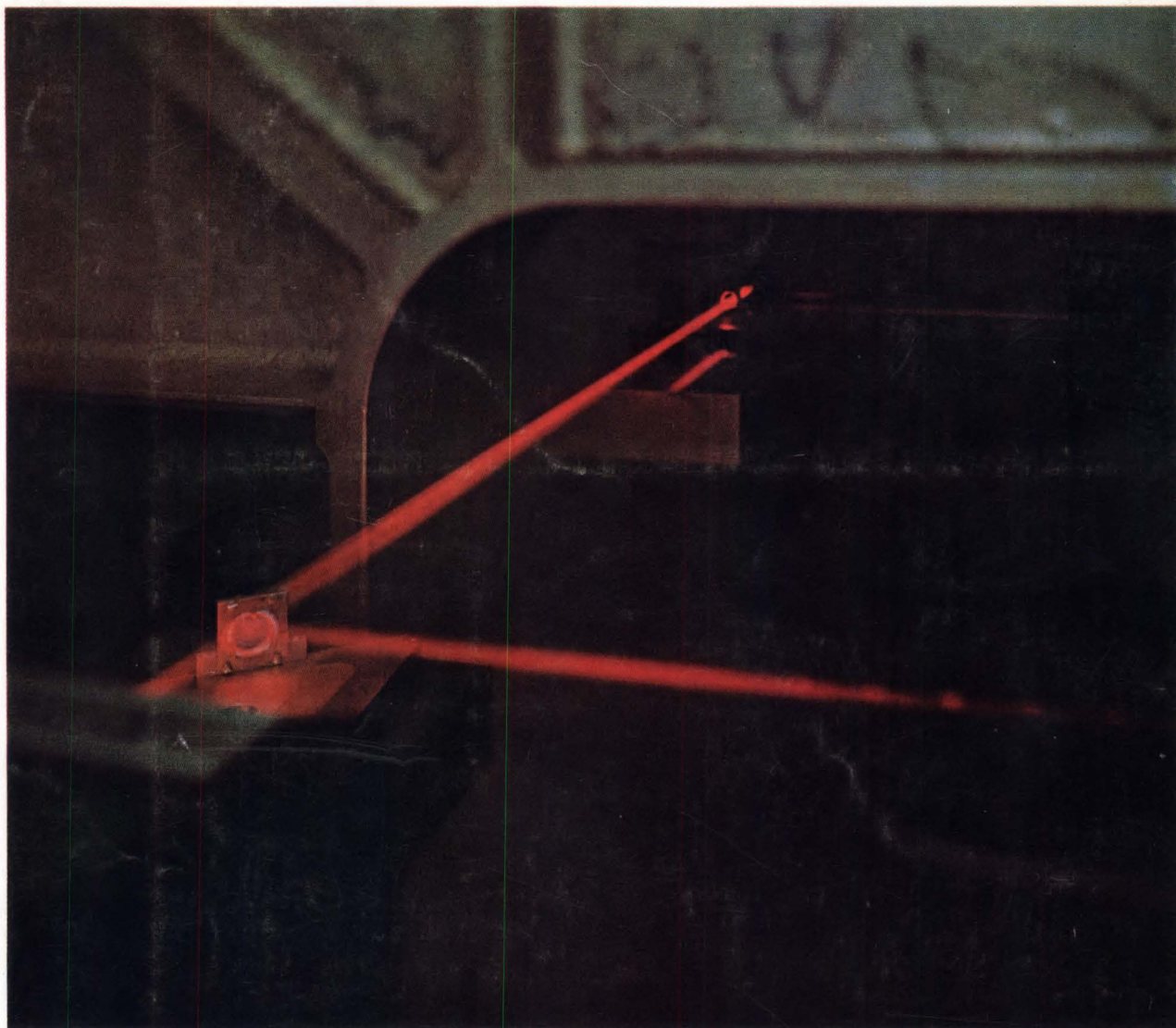
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