

EXHIBITION GUIDE

(As of April 20, 1981)

- | | | |
|--|---|---|
| <p>ADVANCED ABSORBER PRODUCTS 603
 Amesbury, MA
 <i>M. A. Pennisi, M. Cleland, R. Donahue</i></p> <p>Has available a broad range of microwave absorbers including pyramidal, convoluted, multilayer, resonant, honeycomb, ferrite, hair and multicore. Conductive foam for packaging. Radome design and manufacture.</p> | <p>AMERICAN TECHNICAL CERAMICS 214
 Huntington Station, NY
 <i>D. O'Toole, R. Wood</i></p> <p>SUPERCHIPS™ — 100 Series UHF/Microwave porcelain capacitors — offer outstanding performance under extremes of voltage, frequency, time and temperature. Rugged, self-encapsulated porcelain construction insures ultra-high Q, high power handling and ultra-stability.</p> | <p>ARRA, INC. 307
 Bayshore, NY
 <i>L. Fisher, M. Geraci, J. Ciral, G. Seiver, L. McCreddin, D. Martinson</i></p> <p>Extensive line of microwave components, coaxial and waveguide, including variable attenuators, phase shifters, power dividers, couplers, hybrids, terminations, fixed attenuators and waveguide assemblies.</p> |
| <p>AEG-TELEFUNKEN CORP. 121
 Somerville, NJ
 <i>C. Schenk, V. Pastore, R. Leonardo</i></p> <p>Direct broadcast TV-satellite traveling-wave tubes TL 12260, 12 GHz, 260 W, TL 12450, 12 GHz, 450 W; Satellite traveling-wave tubes. TL 12026, 12 GHz, 20 W (SBS), TL 12030, 12 GHz, 30 W TWT (TDRSS); Link TWT's: YH 1205, 6 GHz, 15 W; YH 1193, 11 GHz, 22 W, Ground Station TWT's, YH 1300, 6 GHz, 200 W.</p> | <p>AMPHENOL NORTH AMERICA Div. Bunker Ramo Corporation 611
 Oak Brook, IL
 <i>Amphenol® Connectors, custom cable assemblies and accessories.</i></p> | <p>ARTECH HOUSE, INC. 207
 Dedham, MA
 <i>W. Bazy, C. Berman, B. Bossard, J. Cotsworth, H. Ellowitz, C. Hangen, R. Howland, E. Johnson, S. Pasqualucci</i></p> <p>Artech House books reflect expert authorship from every perspective of technology relevant to you. Data Communications, Microwave Components, Radar and Telecommunications are areas.</p> |
| <p>AERCOM INDUSTRIES 307
 Sunnyvale, CA
 <i>J. Mitchell, J. Ciral, L. Fisher, H. Putnam, D. Martinson, L. McCreddin, G. Seiver</i></p> <p>Amplifiers to 26 GHz (Tunnel, Gunn, GaAs FET), RF Detector (Tunnel, Schottky); Isolators, Circulators, Limiters.</p> | <p>AMPLICA, INC. 621
 Newbury Park, CA
 <i>C. Abronson, C. Carnegie, J. Cole, M. Lampenfeld, J. Moore, N. Pena, E. Williams</i></p> <p>Solid state microwave amplifiers for radar, ELINT, and electronic warfare applications</p> | <p>AUTOMATIC CONNECTOR, INC. 100
 Commack, NY
 <i>L. Eichenseer, S. Eisenberg, C. Ott</i></p> <p>RF coaxial connectors, wedge-lock, cable assemblies, switches.</p> |
| <p>AIRTRON DIV. Litton Systems, Inc. 208
 Morris Plains, NJ
 <i>J. LoSchiavo, M. Grosso, J. Michalski, V. Lander</i></p> <p>Flat Plate Array Antennas, Isolators, Circulators, Loads, WRD-750 Circulators, WRD-750 Flex, WRD-750 Rigid Bends and Stripline Front Ends.</p> | <p>AMPLIFIER RESEARCH 615
 Souderton, PA
 <i>D. R. Shepherd, O'Halloran Associates</i></p> <p>Broadband amplifiers</p> | <p>AVANTEK, INC. 420
 Santa Clara, CA
 <i>Wideband GaAs FET amplifiers, dual gate GaAs FET limiting amplifiers, TWT replacement amplifiers, YIG and varactor-tuned oscillators, double balanced microwave mixers and modular products in the AvanteK® miniature flatpak.</i></p> |
| <p>ALFORD MANUFACTURING CO. INC. 307
 Woburn, MA
 <i>J. Ciral, L. Fisher, D. Martinson, L. McCreddin, G. Seiver</i></p> <p>Precision coaxial components, tuners, adapters, slotted lines.</p> | <p>ANAREN MICROWAVE, INC. 408
 Syracuse, NY
 <i>L. Buckridge, L. Nielsen, J. Stratakos</i></p> <p>Stripline microwave components, .030 — 18 GHz, including mixers, power dividers, couplers, PIN devices, phase and frequency discriminators; Digital IFMs (DFD's), 1—18 GHz and Digital ESM Receivers, 2—18 GHz.</p> | <p>AYDIN MICROWAVE 15
 San Jose, CA
 <i>H. Sawert</i></p> <p>GaAs FET amplifiers, low-noise, GaAs FET limiting amplifiers.</p> |
| <p>ALPHA INDUSTRIES 424
 Woburn, MA
 <i>F. Tarr, M. Reid, N. Bishop, J. Diesso, G. Kamnitsis, W. Ronis, A. Cardiasmenos, J. Cotton, A. DeCarolis, D. Loger</i></p> <p>Millimeter components, semiconductor devices, hybrid circuits amplifiers.</p> | <p>ANDERSEN LABORATORIES, INC. 428
 Bloomfield, CT
 <i>W. Crofut, E. Hodur, D. Lowcavage, R. Jacobs</i></p> <p>Signal processing components/subsystems with emphasis on surface acoustic wave (SAW) devices — including filters, delay lines, oscillators, correlators.</p> | <p>BAYTRON COMPANY, INC. 218
 Medford, MA
 <i>R. McLaughlin, M. F. Kozul, M. Kozul, T. Kozul</i></p> <p>Millimeter devices.</p> |
| <p>AMERICAN ELECTRONIC LABORATORIES, INC. 307
 Lansdale, PA
 <i>T. Keffer, L. Fisher, J. Ciral, G. Seiver, M. Nussbaum, L. McCreddin, D. Martinson, T. Clark</i></p> <p>Antennas, Microwave Hybrids.</p> | <p>ANZAC ELECTRONICS 302
 Adams-Russell Burlington, MA
 <i>M. Rosenzweig, N. Iocco, M. Milstein</i></p> <p>RF and microwave components and assemblies — low noise, high intercept amplifiers; mixers including Anzac's Termination Insensitive Mixers; passive devices including power dividers, hybrids and couplers; and integrated assemblies of these devices.</p> | <p>THE BENDIX CORPORATION Electrical Components Division 623
 Sidney, NY
 <i>G. Collins, W. Flanders, E. Butts, R. Penny, L. LaFornara, R. Eddy</i></p> <p>The SMA represents the latest development in Bendix Square-Cut RF connectors meeting all MIL-C-39023 requirements for material, performance and finish. These threaded coupling, sub-miniature, lightweight connectors offer excellent operating characteristics up to 18 GHz. Square-Cut termination system allows assembly time as low as 30 seconds and with a stainless steel, passivated finish, the SMA possesses excellent corrosion resistant qualities.</p> |
| <p>APPLIED ENGINEERING PRODUCTS 702
 New Haven, CT
 <i>W. McNeil, P. Perry</i></p> <p>Miniature coaxial connections, SMA, SMB and SMC launchers and cable assemblies.</p> | | |

- CABLEWAVE SYSTEMS, INC.** 517
North Haven, CT
S. Raucci, Jr., R. Avery, M. Caputo
Complete line of SMA, SMB and SMC coaxial connectors hermetic sealed SMA MIC launchers, terminations, miniature semi-rigid coaxial cables, coaxial cable assemblies, coaxial delay lines.
- CALIFORNIA EASTERN LABS** 312
Santa Clara, CA
J. Arden, D. Bunnell, N. Corpron, S. Sando, Y. Tateyama, G. Medley
Small signal and power bipolars small signal and power GaAs FET's. Teccia line of chip capacitors: Low noise amplifiers
- CENTRAL MICROWAVE** 519
St. Charles, MO
J. Caldwell, D. Bengfort
Gunn oscillators and amplifiers
- CLELAND & CO. INC.** 603
Playa del Rey, CA
Erik Mjorud, J. Cleland, A. McCabke, J. Tschida, M. Cleland.
Representing:
Advanced Absorber Products, EMF Systems, Locus Inc., Microwave Supply Center, Div. Cleland & Co., Sivers Lab.
- COMMUNITRONICS LTD.** 307
Bohemia, NY
R. Delia, J. Ciral, D. Martinson, L. McCreddin, G. Seiver, L. Fisher
VHF/UHF Receivers, Status/Control Systems.
- COMPAC DEVELOPMENT CORPORATION** 320
Deer Park, NY
K. Bardon, S. Desloges, S. MacDonald, K. Wicks
RF shielded enclosures, cable assemblies, RF connectors, attenuators, terminations. Complete low cost RF packaging system and accessories.
- COMPACT ENGINEERING, INC.** 324
Palo Alto, CA
L. Besser, B. Childs, C. Holmes, J. Lindauer, S. March, M. Medley, G. Szentirmai
Computer-Aided Design Programs and Training for microwave circuit designers.
- COMPEX CORPORATION** 601
Cherry Hill, NJ
G. Gordon, H. Stout, P. Simon
Manufactures single layer parallel plate microwave chip capacitors with gold electrodes for T.C. and ultrasonic bonding and pretinned electrodes for solder reflow. Split electrodes and arrays also available.
- DADEN ASSOCIATES, INC.** 519
Laguna Hills, CA
D. Henry, D. Hook
MIL-STD-810 Qualified VHF tunable band-pass filter. Range 116–15 MHz; power 50 W CW; passband. 1.5 MHz typ.; insertion
- loss 3 dB max.; attenuation: 30 dB min. @ 3 MHz BW; SWR: 1.5/1 max. Direct frequency dial plus peaking meter.
- DELTA MICROWAVE** 306
Westlake Village, CA
M. Moreno, R. Reed
The U5902 Diplexer is used in a shipboard military communication satellite system. Fully qualified, the diplexer features low passband insertion loss, high isolation between channels and low intermodulation product generation.
- DEXCEL, INC.** 108
Santa Clara, CA
T. Duder, S. Kakhmana, P. Tipon
GaAs FET's, low noise amplifiers, oscillators, wideband amplifiers.
- DIAMOND ANTENNA AND MICROWAVE CORP.** 220
Winchester, MA
A. Hovanesian, B. LaPage, P. Simon, H. Tiger
Model DIC-2505 is a high power 5-channel S and L band rotary joint typical of the larger units manufactured. The single channel unit DIC-2124 weighs less than 1 oz.
- DIELECTRIC LABS INC.** 413
Cazenovia, NY
R. Baker, D. Lupfer
RF and Microwave capacitors for use in microcircuits, hybrids and spacecraft equipment, as by-pass, coupling tuning and filtering elements, and are capable of operating over the temperature range of –55°C to +150°C and frequency ranges up to 36 GHz.
- EATON CORP.** 219
Electronic Instrumentation Div.
Los Angeles, CA
J. Molt, W. Purdy, C. Sorensen
AILETECH electronic instruments for microwave test and measurement. Frequency synthesizers, spectrum analyzers, EMI test systems, noise figure instrumentation, sweep oscillators, RF power sources, broadband amplifiers.
- EEV, INC.** 516
Elmsford, NY
I. Buick, P. Butcher, T. Soldano, J. Wadkowski
Television transmitter klystrons, magnetrons for marine airborne radars, missile applications, TWT's for telecommunications, microwave links and electronic countermeasures, TR cells, balanced duplexers, noise generators, backward wave oscillators.
- EIP MICROWAVE, INC.** 507
San Jose, CA
R. Bush, R. Loft, H. Lurie
First — and only — automatic microwave frequency counter (microprocessor based) @ 10 Hz — 110 GHz; Pulsed RF counters to 18 GHz; Source locking counters to 18 GHz.
- EMC TECHNOLOGY INC.** 701
Cherry Hill, NJ
B. Latin, M. Steidlitz
Coaxial attenuators and terminations, Stripline and microstrip attenuators and terminations; Microstrip resistors, RF Connectors, High power dissipative devices.
- EMF SYSTEMS INC.** 603
State College, PA
Marshall Cleland
Develops and manufactures solid state oscillators covering the 10 MHz to 12 GHz frequency range; these include phase-locked VCO's, crystals, multipliers and synthesizers.
- ELECTRONIC NAVIGATION INDUSTRIES, INC.** 519
Rochester, NY
L. Salmen, M. Damon, M. McDougall, R. McLaughlin
With a linear output rating of 100 watts from 1.5 to 400 MHz and a flat 50 dB gain, this extraordinary amplifier can provide 200 watt of output over the frequency range of 1.5 to 200 MHz when driven by any standard signal or sweep generator.
- ENGELMANN MICROWAVE CO.** 106
Montville, NJ
R. Hartwig, C. Schraufnagl
Coax and stripline components and transistor cavity oscillators. Attenuators, programmable and fixed, phase shifters. Terminations, couplers, dividers, hybrids, mixers, front-ends and subassemblies. Cost effective products for TVRO applications will be featured.
- EPSILON LAMBDA ELECT. CORP.** 325
Geneva, IL
Robert Knox
Gunn oscillators, microwave filters, millimeter transmitters and receivers
- EPSCO MICROWAVE, INC.** 406
Westwood, MA
W. Coffin, W. Currier, J. Shalhoub
On display will be EP250C, a CW signal source with 250 W of output power over frequency range; with plug-in heads, average of better than 300 W; the 2076, a high pulsed oscillator and a MIL-qualified ss modulator used in peak power calibration unit; and EP5000L, a high power pulsed signal source which features a MIL-qualified high power pulsed cavity oscillator and ss modulator.
- FILTRONICS** 509
- FREQUENCY SOURCES INC.** 503
Chelmsford, MA
L. Becker, L. Moore, E. Brown, D. Colletta, G. Tamas, B. Bruce
Solid state sources, control devices, microwave filters, multiplexers, gain equalizers, isolators, silicon GaAs diodes.
- FUJITSU MICROELECTRONICS, INC.** 401
Santa Clara, CA
B. Adachi, Y. Arai, S. Erickson, M. Itoh, S. Murai, T. Shintani, J. Tomaisaka

Small signal and power bipolar transistors, VHF-microwave, Small signal and power GaAs FET's up to GHz; GaAs FET power amplifiers to 10 W covering communication and octave bandwidths; optoelectronic diodes for fiber optic data communications.

GAMMA-f CORPORATION 315
Torrance, CA

C. Goss, L. Alford, R. Terry, M. Stupnik and L. Fox

Passive waveguide components spanning 4 to 100 GHz fabricated to customer requirements utilizing electroforming techniques. Bandpass, band stop, high pass and low pass waveguide filter designed and fabricated to customer requirements. High-sensitivity waveguide detector for K_U -Band.

GENERAL MICROWAVE CORP. 307
Farmingdale, L.I., NY

J. Ciral, L. Fisher, D. Martinson, L. McCreddin, S. Rinkel, Gordon Seiver, M. Wind

Microwave power meters, PIN diode modulators, attenuators, switches; also "RAHAM" Radiation Hazard Meters (YA Series).

W. L. GORE & ASSOCIATES, INC. 125
Newark, DE

R. Wisniewski, C. Carroll, D. Baechtel, H. Walling, T. Whitten, R. Kauffman, K. Moll, S. Dippel, T. Saia, C. Lee, B. Hasselman

Featuring GORE-TEX[®] Microwave and RF Coaxial assemblies

HEWLETT-PACKARD COMPANY 317
Network Measurement Div.
Santa Rosa, CA

RF and mw sweepers and network analyzers

HEWLETT-PACKARD CO. 317
Signal Analysis Div.
Santa Rosa, CA

RF and microwave spectrum analyzers.

HEWLETT-PACKARD COMPANY 317
Stanford Park Div.
Palo Alto, CA

RF and mw signal generation equipment and passive microwave equipment.

HONEYWELL, INC. 515
Santa Barbara, CA

E. Speer, M. Zepeda

Millimeter-wave components, mixers, receivers, converters, assemblies, subsystems, radiometers, MIC mixers.

HORIZON HOUSE 207
Dedham, MA

W. Bazy, C. Berman, B. Bossard, J. Cotsworth, H. Ellowitz, C. Hagen, R. Howland, E. Johnson, S. Pasqualucci.

Artech House, Journal of Electronic Defense, Microwave Journal, Telecommunications, INTELECT.

HUBER + SUHNER LTD. 520
Herisau, Switzerland

P. Schlappfer, A. Bosshard

High directivity couplers with minimum 50 dB directivity. Six Models available covering 5, 8 to 40 GHz. These couplers drastically increase accuracy of return loss measurements without the need for expensive ANA-systems.

HUGHES AIRCRAFT CO. 409
Electron Dynamics Division
Torrance, CA

P. Crandell, R. Johnson, R. Larson, J. Kuno, D. Rasmussen, L. Forant, L. Mohrfeld, M. Talley

Pulsed transmitter module, 94 GHz receiver module, CW transmitter, 3 head full W-Band sweeper (75-110 GHz), phase locked oscillator, 9000H Series of communication HPAs, 1077H 26-40 GHz TWTA.

INTERNATIONAL MICROWAVE CORP. 216
Cos Cob, CT

Arnold Newton, Bruce Smith

Low noise amplifiers, Gunn and tunnel diode oscillators, noise sources, downconverters, electronic journalism system, mixer-preamps.

ITM SYSTEMS INC. 12
Sunnyvale, CA

W. I. Berg, D. T. Mounts

Featuring Model PK-38, Peak RF Power Meter (\$2,200 price), with 1-14 5 GHz frequency range, 20 dB single range, zero drift, LED and digital RF meter; MP-24, CW RF Power Meter (\$545 price) with 20 dB range and digital readout of power in milliwatts; and Model ITM-141, an automatic 3 kW switching system which is one for one totally self-contained.

INTEGRA MICROWAVE 213
Santa Clara, CA

L. Johnson, W. Schuerch

Microwave sweepers (2-40 GHz), wide dispersion spectrum analyzers, YIG-tuned wavemeters (1-26 5 GHz), YIG-tuned filters (2-26.5 GHz), VCO test set (2-18 GHz), mixer/down converter test set (3.7-4.2 GHz).

ISOTRONICS 109
New Bedford, MA

M. LoFrumento, C. Roellig, A. Kirkaldy

High reliability, all metal hybrid microcircuit packages.

JOHANSON MANUFACTURING CORP. 400
Boonton, NJ

E. Fagerlund, R. Kappner, R. Goldstein

Variable air capacitors and variable ceramic capacitors, microwave tuning elements.

JOURNAL OF ELECTRONIC DEFENSE 207
(see Horizon House)
Dedham, MA

W. Bazy, C. Berman, B. Bossard, J. Cotsworth, H. Ellowitz, C. Hagen,

R. Howland, E. Johnson, S. Pasqualucci

Journal of Electronic Defense, editorial and Association of Old Crows information.

KDI PYROFILM CORP. 201
Whippany, NJ

A. Arfin, J. Crowley, B. Friedman, J. Henn, J. Lahey, D. Louro

Micro-resistive products such as microstrip and stripline attenuators, resistors and terminations in flat flange type, pill shape, chip and rod configurations. Power levels up to 800 W are available.

K&L MICROWAVE 215
Salisbury, MD

R. Bernstein, C. Schaub

Complete line RF and Microwave filters, K&L featuring new line (Series FV) of evanescent mode filters, microminiature filters, digitally controlled tunable bandpass filters

KEENE CORPORATION/ Chase Foster Div. 418
Bear, DE

M. Johnson, R. Tull, J. Martin

Di-Clad[®] teflon impregnated glass fabric and ceramic filled teflon copper clad laminates.

KEENE CORP./Ray Proof Div. 613
Norwalk, CT

B. Lawrence, K. Makowski, E. Kesney

Ray Proof System 86/3 Shielded Anechoic Range, an indoor ground reflection EMC measurement facility with RF shielding from 14 kHz up to 100 GHz to 120 dB attenuation. RF Anechoic treatment to provide controlled ambient amplitude levels to below ± 2 dB from 30 MHz to -1 GHz and above. Custom systems and turnkey installation available.

KEVLIN 307
Woburn, MA

L. Fisher, J. Ciral, D. Martinson, L. McCreddin, G. Seiver, E. Lattanzi

Rotary joints, hybrids, high frequency coaxial connectors

KRYTAR, INC. 212
Sunnyvale, CA

T. Russell, C. Gentile, M. Molley, D. Yoshii

Broadband directional couplers, directional detectors and crystal detectors.

KW ENGINEERING, INC. 119
San Diego, CA

A. Brand, P. Kovacich, K. Wittig, D. Clark

Miniature microwave filters, miniature microwave frequency multipliers, microwave subassemblies.

LITCHFIELD MICROWAVE LABORATORY 12
Campbell, CA

M. Litchfield, J. Barinka

Detectors, limiters, diode switches (less drivers), limiter-detectors, switch-limiter-

- detectors, isodetectors, comb generators, coupler detectors, low frequency VCO's to 2 GHz.
- LOCUS, INC.** 603
State College, PA
W. L. Coyle, J. Hess
RF devices, featuring image-reject mixers (MC2008 Series), active power dividers (MC200 Series) as well as high power, broadband quadrature hybrids (3C200 Series), and communications simulator (Model SG-122)
- LOGIMETRICS, INC.** 304
Plainview, NY
J. Deutsch, M. Feigenbaum
TWT amplifiers, signal generators, wideband power amplifiers, systems and subsystems, including: EM field generating system, militarized systems; susceptibility test set, transceiver test set
- LORCH ELECTRONICS** 15
Englewood, NJ
J. Lorch
Amplifiers, attenuators, hybrid functions, filters, passive microwave components, IF mixers, power splitters, digital attenuators, and RF switches.
- LUXTRON CORPORATION** 703
Mountain View, CA
A. Cheng, K. Wickersheim
Will demonstrate the Fluoroptic Thermometer — the first instrument designed for precise temperature measurement within microwave or RF fields. The sensor is a non-metallic, fiberoptic probe
- 3M ELECTRONIC PRODUCTS** 204
St. Paul, MN
E. Bond, J. Cavanaugh, R. Goff, C. Johnson, T. McCauley
Cu Clad 217, 233 and 250 types LX, GX and GT low loss microwave substrates, Epsilam 6 and 10 high dielectric constant bonding film
- M/A-COM COMPONENT COMPANIES** 301
Burlington, MA
D. Gallagher, T. Rose, T. Pina, T. Argiropoulos
Microwave semiconductor devices; solid state circuits, sources, amplifiers; microwave ferrite devices; high power control devices; transmission line components; precision investment castings; microwave subsystems; coaxial cable, connectors, adapters; antennas, earth stations.
- MAGNUM MICROWAVE CORP.** 118
Sunnyvale, CA
D. Fealkoff, H. McGrath, H. Soza
Microwave signal processing components, mixers, oscillators, amplifiers
- MAST MICROWAVE** 217
Burlington, MA
C. Theophile
Complete line rotary joints from dc to 40 GHz, single and multichannel, waveguide and coaxial type transmission line.
- MATERIALS RESEARCH** 101
Orangeburg, NY
V. Borase, F. Lavelle, R. McPhillips, T. Pappas, T. Stensgard
Ceramic substrates, coded and uncoded; High purity materials for evaporation and sputtering; IOCHROME[®], highest purity chromium produced.
- MAURY MICROWAVE CORP.** 115
Cucamonga, CA
M. A. Maury, Jr., M. A. Maury, D. Payette, D. A. Smith
Complete line of microwave components and instruments, including such items as APC3.5 precision coaxial connectors and components and measuring instruments; broadband dc to 18 GHz noise measurement equipment including cold, hot, and ambient loads; state-of-the-art full bandwidth rotary joints in WR42 and WR28 waveguide featuring low SWR and insertion loss; double-ridged waveguide isolator covering 18-40 GHz in WRD180D24 waveguide. Calibration kit line for automatic network analyzers will be featured, as well as coaxial and waveguide adapters, high directivity directional couplers, connector gauges, ferrite devices, broadband coaxial slide screw tuners and other coaxial and waveguide devices.
- McDOUGALL/McLAUGHLIN CO.** 519
Los Angeles, CA
Merle McDougall, Dick McLaughlin.
Representing.
Central Microwave, Daden Associates, Electronic Navigation Industries, Passive Microwave Technology, Spacekom
- MERRIMAC INDUSTRIES, INC.** 405
West Caldwell, NJ
M. Asnes, A. Egger, G. Tahlmore
This comprehensive 320-page catalog describes our complete line of IF and RF frequency components and subassemblies using distributed element and lumped element designs.
- METELICS** 15
Sunnyvale, CA
R. Dorilag
Microwave diodes, beam lead, beam lead quad diodes, step recovery diodes, varactor diodes; high voltage.
- MICROLAB/FXR** 521
Livingston, NJ
A. Augenblick, M. Bruno, R. Vincent
Miniature 3 dB couplers, octave and multi-octave, 50 W average.
- MICRONETICS INC.** 307
Norwood, NJ
G. Simonyan, L. Fisher, J. Ciral, G. Seiver, D. Martinson, L. McCreddin
Solid state noise sources — diodes, generators and programmable noise sources; Microwave Components — WG and coax switches; Dummy loads, crystal detectors; bolometers.
- MICRO-NOW INSTRUMENT CO., INC.** 524
Chicago, IL
Clarence L. Arnow, Dick McLaughlin, Merle McDougall
Millimeter-Wave Sweeper Model No. 705 Microprocessor-based and IEEE 488 Compatible Shown with Siemens BWO type RWO 170 covering 110 to 170 GHz. Features direct digital frequency displays.
- MICROPHASE CORPORATION** 518
Cos Cob, CT
J. Chiappetta, P. Ferri, F. Parin, H. Schumacker
Miniature band pass, low pass and high pass filters, contiguous multiplexers, (both comb-line and stub types) back detectors, Schottky detectors, video detector logarithmic amplifiers, threshold detector amplifiers, microwave integrated assemblies and 18 to 40 GHz components.
- MICROTEK CO. LTD.** 13
Bangkok, Thailand
Microwave ferrite isolators and circulators.
- MICROWAVE APPLICATIONS GROUP** 308
Santa Maria, CA
C. Boyd, W. R. Reed, T. Stokes
Rotary-field phase shifter and dual-mode phase shifter line.
- MICROWAVE EXHIBITIONS & PUBLISHERS LTD.** 617
Sevenoaks, Kent, UK
R. Marriott
International exhibition and conference organizers for the microwave community.
- MICROWAVE JOURNAL** 207
(see Horizon House)
Dedham, MA
W. Bazy, C. Berman, B. Bossard, J. Cotsworth, H. Ellowitz, C. Hangen, R. Howland, E. Johnson, S. Pasqualucci
Microwave Journal Magazine, subscription and editorial information.
- MICROWAVE POWER DEVICES, INC.** 300
Hauppauge, NY
D. Mazziota, W. Liebman, R. Sheloff
Solid state RF and microwave power amplifiers and related subsystems for military space and industrial applications.

- MICROWAVE SEMICONDUCTOR CORP.** 402
Somerset, NJ
J. Holmquest, M-S Zapsky, C. Lump, A. Middlecamp, H. Bruning
Microwave bipolar power transistors, mw GaAs FET's, GaAs and Si power amplifiers, ss noise sources, ss low noise transistors, PIN and Schottky diodes and diode modules.
- MICROWAVE SUPPLY CENTER** 603
DIV. Cleland & Co. Inc.
Los Angeles, CA
M. Cleland, J. Tschida, E. Mjorud, A. Scott, A. McCabe, J. Cleland, C. Goshay
Manufactures and designs simple waveguide assemblies, machined parts, microwave devices and electro/mechanical assemblies.
- MICROWAVE SYSTEMS NEWS** 607
Palo Alto, CA
J. Collins, B. Eustace, H. Eustace, J. Fawcette, C. Flinn, H. Martin, M. Smith, A. St. John, Mr. and Mrs. A. Yaconetti
Magazine.
- MICROWAVES** 114
Rochelle Park, NJ
S. Bearse, H. Bierman, W. Bojsza
MicroWaves Magazine, MicroWaves Product Data Directory.
- MIDISCO** 526
Commack, NY
A. L. Leiman, D. Leiman
RF components, including attenuators, cable assemblies, coaxial detectors, shorts, terminations, directional couplers, hybrids, mixers, phase adjusters, RFI shielded cases, and inter/intra-series adapters.
- MILLIS RESEARCH** 307
Millis, MA
J. Ciral, L. Fisher, D. Martinson, L. McCreddin, L. Searle, G. Seiver
Polished quartz substrates, with thin-film chrome gold, chrome copper gold coating. Precision thin-film nichrome nickel gold chip resistors and large area substrates.
- MITEC ELECTRONICS** 11
Montreal, Quebec, CANADA
M. Bentob, T. Robinson
Waveguide, coaxial components and sub-systems, transmission line systems, complete antenna systems for terrestrial microwave systems and ground satellite stations, and microwave instrumentation.
- MITEQ, INC.** 410
Hauppauge, NY
A. and H. Kiiss
Amplifiers, oscillators, synthesized sources, mixers, mixer-preamplifiers, signal processing components (including limiters, log-amplifiers, phase detectors) and completely integrated signal processing section of receivers. Components and subsystems for satellite communications, including upconverters, downconverters, frequency translators and video receivers.
- MITSUBISHI ELECTRONICS AMERICA, INC.** 112
Sunnyvale, CA
J. Iizuka, T. Ishii
Low noise and high power GaAs FET and oscillator
- MOTOROLA SEMICONDUCTORS** 14
Mesa, AZ
- THE NARDA MICROWAVE CORPORATION** 502
Plainview, NY
J. Coppola, W. Bourke, A. LeMay, G. DeBella, G. Gianatasio, C. Buntschuh, E. McSweeney, J. Reid, W. Lamb, R. Vaccarino
The Microwave Multimeter, a completely self-contained microwave test station; the first GaAs FET amplifier to cover the entire frequency range from 6-18 GHz; Gunn Oscillators; Radiation Monitoring Systems.
- NORSAL INDUSTRIES, INC.** 414
Central Islip, NY
N. Spector, K. Kraker, T. Mendolia
Will be showing full line of microwave components and passive systems along with a line demonstration on PIN diode switches and RF mixers.
- OKI** 307
Ft. Lauderdale, FL
L. Fisher, J. Ciral, G. Seiver, (All are R.F. Associates Personnel) L. McCreddin, D. Martinson.
Klystrons provide highly stable, high-power service throughout their long life. Available from 15 to 178 GHz, each klystron may be mechanically tuned $\pm 5\%$ off center frequency.
- OMEGA LABORATORIES** 307
Rowley, MA
L. Fisher, L. McCreddin, J. Ciral, D. Martinson, G. Seiver
Waveguide components.
- OMNI-WAVE ELECTRONICS** 307
Gloucester, MA
J. Ciral, M. Hamilton, L. Fisher, D. Martinson, J. Fossiano, L. McCreddin, G. Seiver, S. Brennan
Microwave radar components, duplexers, klystrons.
- PACIFIC MEASUREMENTS INC.** 102
Sunnyvale, CA
D. Armann, D. Bradley, E. Mendel
The Model 1038-D14 mainframe has refresh memory (and IEEE Bus capability). Our new 1038-N10 plug-in, when used with the 1038-D14, is capable of fully automating all swept measurements. Frequency range is 1 MHz to 220 GHz; dynamic range is 76 dB.
- PARAMETRIC INDUSTRIES, INC.** 104
Winchester, MA
R. Fallon, G. Sotiropoulos, L. Covino
Tuning varactors, harmonic generator varactors, PIN and PN junction switching diodes, limiter diodes, parametric amplifier varactors, point contact mixer and detector diodes, Schottky barrier mixer and detector diodes, noise diodes, military approved point contact mixer and detector diodes, diode chips.
- PASSIVE MICROWAVE TECHNOLOGY** 519
Canoga Park, CA
George Grund, Bob Weiss
Coaxial and waveguide isolators and circulators.
- PLESSEY OPTOELECTRONICS AND MICROWAVE** 528
Irvine, CA
P. Minett, E. Bell, D. Bell, G. Youngdahl
IMPATT oscillators cover the range 40-140 GHz with power levels up to 200-10 mW. Wideband tunable versions with excellent noise characteristics are also available, particularly in the 80 to 120 GHz region.
- POLARAD ELECTRONICS, INC.** 513
New York, NY
J. Schindler, E. Kushner, S. Abrams
Microwave Signal Generators;
RF/Microwave Spectrum Analyzers.
- PREMIER MICROWAVE** 307
Port Chester, NY
J. Simmonds, L. Fisher, J. Ciral, G. Seiver, L. McCreddin, D. Martinson
Ferrite devices, rotary joints, antenna feeds, duplexers, fitters and other passive microwave devices from 400 MHz to 40 GHz.
- Q-BIT CORPORATION** 412
Palm Bay, FL
M. Rogers, D. Harney, G. Callaway, H. Mead
RF Amplifiers, both Hybrid TO-8 packaged and connectorized units in the .5 to 1300 MHz frequency range CATV Receivers and Preamplifiers.
- RAYTHEON COMPANY** 314
Waltham, MA
R. Roberts, A. Elicone, J. Hieber, M. LaPrelle, T. White, R. Mattson, W. Berwick, R. Bishop, R. Mason
Microwave tubes, solid state microwave products, ferrite devices.
- RF ASSOCIATES, INC.** 307
Los Angeles, CA
Louis H. Fisher, Jerome L. Ciral, Gordon Seiver, F. Larry McCreddin, Darryl Martinson
Representing
General Microwave, Texscan, OKI, Aercom,

ARRA, Premier, Kevin, AEL, Alford, Communitechnics, Millis Research, Omega, Solid State Technology, Sprague Goodman, TRM, Omni-Wave, Micronetics			
RHG ELECTRONICS LAB., INC. Deer Park, NY	15		
<i>R. Hirsch</i>			
RF broadband mixers, video transmitters and receiver links, IF log amps, IF linear amps, IF limiters and discriminators.			
R. L. COMPONENTS, INC. Marina del Rey, CA	701		
<i>Bob Latin</i>			
Representing. EMC, Struthers Electronics Corp.			
ROGERS CORPORATION Chandler, AZ	113		
<i>G. Archer, R. Desilets, F. Keahey, R. Sanders, G. Traut, L. Wigman</i>			
RT/duroid microwave laminated materials; stripline and microstrip circuits; radomes.			
SAGE LABORATORIES, INC. Natick, MA	501		
<i>H. Chapell, T. Cieri, C. Marguerite, B. McNeice, K. Paradiso, T. Saad, B. Stone, G. Ufen</i>			
Designers and manufactures of microwave amplifiers, attenuators, couplers, filters, hybrids, mixers, phase shifters, power dividers, rotary joints, switches, terminations, detectors, crystal holders, and wire-line.			
SIVERS LAB Stockholm, SWEDEN	603		
<i>M. Cleland, R. Gustafsson, P. Fredholm, A. Scott</i>			
Develops and manufactures microwave training test bench equipment as well as RF switches, RF rotary joints, YIG and microwave devices.			
SOLID STATE TECHNOLOGY Sunnyvale, CA	307		
<i>L. Fisher, J. Ciral, G. Seiver, L. McCreddin, D. Martinson</i>			
Solid state microwave signal sources.			
SOLITRON/MICROWAVE Port Salerno, FL	208		
<i>G. Van Krugel, D. Gartzke, R. Busch, J. Conroy, E. Pigdvat, A. Sokyra, N. Lee, D. McLaughlin, G. Shuf</i>			
Low cost super cubed right angle connector with improved VSWR having one piece center contact — SMA flange type coaxial field replacement units for MIC package designs.			
SPACE MICROWAVE INC. Santa Rosa, CA	523		
<i>F. Miller, J. Paul</i>			
Microwave transmitters 1000 W transmitter and 10,000 W transmitter.			
SPRAGUE GOODMAN ELECT., INC. Garden City Park, NY	307		
<i>C. Fisher, L. McCreddin, D. Martinson, J. Ciral, G. Seiver</i>			
Ceramic dielectric and sapphire dielectric trimmer capacitors, designed to work at UHF and GHz frequencies			
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<i>B. Latin, B. Damiano</i>			
Broadband couplers and power dividers, coax, waveguide and stripline, waveguide switches, attenuators, horns, adapters, high power dummy loads, switches, terminations waveguide assemblies.			
SUMMIT ENGINEERING Bozeman, MT	407		
<i>C. Curtis, A. Olson</i>			
Passive components, mixers, transformers, RF switches, power dividers			
SYSTRON-DONNER CORP. Advanced Components Div. Sunnyvale, CA	415		
<i>N. Kelley</i>			
Oscillators and filters.			
SYSTRON-DONNER CORP. Microwave Div. Van Nuys, CA	704		
<i>G. Archuleta, D. Hall, F. Brown, T. Meehan, F. Borghetti</i>			
Featuring the Model 5220 Transline Analyzer, a fully automated microprocessor-based system which uses advanced digital techniques for fault analysis along a transmission line (coaxial and waveguide). It measures the attenuation, return loss and SWR of the line under test in addition to accurately locating single and multiple faults. Human interface software provides step-by-step instructions to the user to perform the measurements. A hard copy printout of the test conditions are results of the measurement is provided.			
TECHNICAL RESEARCH & MANUFACTURING INC. Nashua, NH	307		
<i>J. Ciral, L. Fisher, D. Martinson, L. McCreddin, G. Seiver</i>			
Mixers, couplers, power dividers, amplifiers.			
TEKFORM PRODUCTS COMPANY Anaheim, CA	222		
<i>M. Byrnes, B. Gaunt, D. Scoville</i>			
Microelectronic packages for microwave circuits.			
TEKTRONIX, INC. Beaverton, OR	203		
<i>Ken Andrew, Alton Carter, Bill Green, Everett Hayes</i>			
Tektronix will display laboratory precision spectrum analyzers and related products.			
TELECOMMUNICATIONS Dedham, MA	207		
<i>W. Bazy, C. Berman, B. Bossard, J. Cotsworth, H. Ellowitz, C. Hagen, R. Howland, E. Johnson, S. Pasqualucci</i>			
The international monthly published for qualified persons working in the communication industry and covering the merging communications-data communications-computer fields.			
TELEDYNE MICROWAVE Mountain View, CA	205		
<i>R. Roy, P. Gruver, A. Campbell, P. McLaughlin, R. Jones, J. Matson</i>			
Will display a broad range of circulators and isolators, coaxial switches, filter/multiplexers, switchable filter arrays, MIC subsystems, and fast-switching voltage controlled oscillators, for ECM, communications, radar, and space applications.			
TEXSCAN CORP. Indianapolis, IN	307		
<i>John R. Shaw, J. Ciral, L. Fisher, D. Martinson, L. McCreddin, G. Seiver</i>			
Attenuators, fitters and oscillators in our RF and microwave component line. New LN-70 Logarithmic Amplifier, XR-1500A Sweep Generagor, AL-51A Spectrum Analyzer and DU-127 scope.			
THINCO Div., Hull Corp. Hatboro, PA	601		
<i>H. DePalma, H. Stout</i>			
Microminiature multilayer thin film chip inductors capacitors and LC integrated circuits.			
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<i>S. Barthelmes, J. Boulange, A. Laconti</i>			
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Complete line of RF and microwave transistors, power transistors, small signal transistors, small signal diodes, Zener diodes, rectifiers, thyristors, TRIACS, active components for hybrid circuits, moulded bridges and metal stacks.			
THORSON COMPANY Goleta, CA	15		
<i>W. Reddoch, W. Jellison, B. McMan, B. Ledindecker, D. Thomspson, H. Koch, R. Hendrickx</i>			
Representing RHG Electronics Lab., Inc., Wincom Corp.,			

Aydin Microwave, Metelics, Inc., Lorch Electronics.

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GaAs FET amplifiers, 2-18 GHz, coaxial and microstrip isolators and circulators, coaxial, microstrip and waveguide oscillators, especially dielectrically stabilized (DSO's); comb generators, IF and power amplifiers; frequency multipliers

TRW RF SEMICONDUCTORS 427
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S. Berger, D. Biddle, G. Brannock, L. Brown, D. Feeney, J. Humphrey

Microwave, RF linear hybrids and small signal, low noise transistors, high power microwave transistors.

TRANSCO PRODUCTS, INC. 510
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Microwave airborne antennas, coaxial and waveguide RF switches, microwave components, waveguide, stripline and integrated packages high rel. space qualified RF filters, power dividers and switch devices.

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T. Anderson, A. Tuck IV

Precision electroforming for the microwave industry, transitions, precision feeds, millimeter-wave components, overmoded waveguides, filters and miniature precision bellows

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VARIAN ASSOCIATES 225
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Modulators, microwave transistors, millimeter-wave components, klystrons TWT's.

VECTRONICS 16
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John Vogler

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V. Castellano, R. Reynolds, R. Smith, R. Hoover, R. Davenport, L. Crossman, K. Pitt

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WEINSCHEL ENGINEERING CO., INC. 131
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VM-4A Microprocessor Controlled Measurement Receiver is a high performance instrument capable of rapid single-step insertion loss measurements in excess of 100 dB over a 0.01-18 GHz frequency range. Model design is based on the principle of Automatic IF Vector Substitution. Features measurement resolutions of 0.1, 0.01, and 0.001 dB; phase measurements possible with 0.10 resolution and unit typically makes measurements at a rate of 5 frequencies per second.

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Isolators, circulators, mixers, amplifiers (bi-polar and GaAs FET's) mixer preamplifiers, voltage variable attenuators, couplers/dividers, microwave integrated subassemblies

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Hi-temp. brazing alloys — precious metals, deposition materials, electronic alloys, pure gold, platinum, palladium & silver, hi-purity copper & nickel, reclaiming service.

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Microwave passive components, filters, diplexers, power combiners, power splitters.

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RF & microwave components & subsystems, including crystal oscillators, frequency multipliers, up/down converters, signal simulators, programmable synthesizers, voltage controlled oscillators & tunable filters.