

SEMICONDUCTOR HANDBOOK

INLEIDING	4
EINLEITUNG	5
INTRODUCTION	6
INTRODUCTION	7
INTRODUCCION	8

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semiconductor handbook

TRANSISTORS

4th edition
by A.E.C. van Utteren



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Dit Semiconductor Handbook (Transistoren) bevat de technische gegevens van de meeste Europese, Amerikaanse en Japanse transistoren.
De transistoren zijn alfabetisch en numeriek gerangschikt waardoor het vinden van een bepaald type zeer eenvoudig is en tevens een index overbodig maakt.
Onderaan elke pagina zijn de behuizingen opgenomen van de typen die op de desbetreffende pagina staan.

Type	Manufacturer	Sort (Note)	PNP/NPN Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case Use	Compl. (Equival.) type
				V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} (t _j) mW	t _j (t _j)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F _T (C _e) MHz	f _T (tr)	ton		
Typenummer																			Complementair type (vervangtype)	
blu = blauw brn = bruin gre = grijs grn = groen orn = oranje																			Toepassing	
red = rood vio = violet whi = wit yel = geel																			1 = laag frequent transistor 2 = laag frequent vermogenstransistor 3 = hoog frequent transistor 4 = hoog frequent vermogenstransistor 5 = schakeltransistor 6 = schakeltransistor voor grote vermogens 7 = speciaal industrietype 8 = transistor voor hoge spanningen 9 = video versterkertransistor 10 = transistoren voor computergebruik 11 = transistoren voor horz./vert. afbuiging 12 = televisieversterkers HF/LF 13 = ultra hoog frequent versterker 14 = sturing cijferbuisen 15 = chopper 16 = differentiaalversterker 17 = meng/oscillatorversterker	
Fabrikanten																			Behuizing	
At = Ates Fa = Fairchild Fe = Ferranti Ge = General Electric It = Intermittent Mo = Motorola Ns = National Semiconductor Ph = Philips Rc = RCA Se = SESCOSEM Si = Siemens So = Solitron Sp = Sprague Sy = Sylvania Te = Telefunken Ti = Texas Instruments To = Toshiba Tr = Transistron Wb = Westinghouse We = Western Electric Wh = Westinghouse Electric Corp.																			Schakeltijd (tr) stijgtijd	
Soort																			Frequentie bij ruisgetal	
du = dual transistor da = darlington qu = quad																			Ruisgetal (C _e) collectorcapaciteit	
(Noot) zie*																			Warmteweerstand van junction naar omgeving (η) alleen voor dual transistoren	
PNP/NPN																			Grensfrequentie in MHz	
G = germanium S = silicium																			Collectorstroom waarbij h _{FE} of (h _{fe}) is gemeten (I _e) emitterstroom waarbij h _{FE} of (h _{fe}) is gemeten	
Collector-basisspanning bij open emitter (plekwaarde)																			Collector-emitterspanning waarbij h _{FE} of (h _{fe}) is gemeten (V _{cb}) collector-basisspanning waarbij h _{FE} of (h _{fe}) is gemeten	
Collector-emitterspanning bij open basis																				
Emitter-basisspanning bij open collector																				
Maximaal toelaatbare collectorstroom (I _{cm}) maximaal toelaatbare collector-piekstroom																			Stroomversterkingsfactor voor grote signalen (h _{fe}) stroomversterkingsfactor voor kleine signalen	
Maximaal toelaatbare collector-dissipatie (alleen bij du en qu)																				
Temperatuur waarbij P _{tot} is gemeten in °C a = omgeving c = behuizing h = koellichaam m = montageplaat (t _j) maximaal toelaatbare junctiontemperatuur																				

MAXIMALE WAARDEN

ELECTRISCHE EIGENSCHAPPEN

1. P_{tot} en R_{thj-a} met koelvin gemonteerd op een koelplaat van 1,5 mm aluminium van tenminste 12,5 cm².
2. Met koelster.
3. P_{tot} en R_{thj-a} gemonteerd op een koelplaat van 1,5 mm aluminium van minstens 30 cm².
4. Gemonteerd op een glasfiberprint van 40 x 25 x 1 mm.
5. P_{tot} en R_{thj-a} gemonteerd op een glasfiberprint van 40 x 35 x 1,5 mm.
6. P_{tot} en R_{thj-a} met koelvin gemonteerd op een koelplaat van 1,6 mm aluminium van 7 x 7 cm.
7. V_{CE} bij een basis-emitterweerstand van R_{BE} = 100 Ω.

EINLEITUNG

Dieses Transistor-Handbuch enthält ausführliche technische Informationen über die meisten europäischen, amerikanischen und japanischen Transistortypen. Die Transistoren sind in alphabetischer numerischer Reihenfolge aufgeführt. Die Transistorgehäuse sind jeweils unten auf jeder Seite zusammengestellt.

Type	Manufacturer	Sort (Note)	PNP/NPN Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
				V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} (t _j) mW	h _{FE} min	(h _{fe}) type	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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- * 1. P_{tot} und R_{thj-a} mit Kühlkörper auf einem Kühlblech von 1,5 mm Aluminium von wenigstens 12,5 cm².
2. Mit Kühlkörper.
3. P_{tot} und R_{thj-a} montiert auf einem Kühlblech von 1,5 mm Aluminium von wenigstens 30 cm².
4. Montiert auf einer glasfiberverstärkten Platine von 40 x 25 x 1 mm.
5. P_{tot} und R_{thj-a} montiert auf einer glasfiberverstärkten Platine von 40 x 35 x 1,5 mm.
6. P_{tot} und R_{thj-a} mit Kühlkörper montiert auf einem Kühlblech von 1,6 mm Aluminium von 7 x 7 cm.
7. V_{CE} bei einem Basis-Emitterwiderstand von $R_{BE} = 100 \Omega$.

INTRODUCTION

Ce "Transistor Handbook" est une source d'information technique de la plupart des transistors Européens, Américains et Japonais, classés en liste alphabétique et numérique.
Le résumé des différents boîtiers a été donné à la fin de chaque page.

Type	Manufacturer	Sort (Note)	PNP/NPN Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
				V _{cbo}	V _{ceo}	V _{ebo}	I _c (I _{cm})	P _{tot}	t (t _j)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb})	I _c (I _e)	F _T	R _{thj-a} (η) °C/W	F (C _c)	f (MHz)	ton (tr)			
				V	V	V	mA	mW				V	mA									
Types blu = bleu brn = brun gre = gris grn = vert orn = orangé red = rouge vio = violet whi = blanc yel = jaune Fabricants At = Ates Fa = Fairchild Fe = Ferranti Ge = General Electric It = Intermetall Mo = Motorola Ns = National Semiconductor Ph = Philips Rc = RCA Se = SESCOSEM Si = Siemens So = Solitron Sp = Sprague Sy = Sylvania Te = Telefunken Ti = Texas Instruments To = Toshiba Tr = Transistron Wb = Westinghouse = Brake & Signal We = Western Electric Wh = Westinghouse Electric Corp. Type du = transistor double da = transistor darlington qu = transistor quadruple (Note) voir* PNP/NPN G = germanium S = silicium																			Type complémentaire (type équivalent) Application 1 = transistor basse fréquence 2 = transistor basse fréquence de puissance 3 = transistor haute fréquence 4 = transistor haute fréquence de puissance 5 = transistor de commutation 6 = transistor de commutation pour fortes puissances 7 = type spécial industriel 8 = transistor pour haute tension 9 = transistor d'amplification video 10 = transistor spécial pour calculateur 11 = transistor de déviation horiz./vert. 12 = amplificateur télévision HF/BF 13 = amplificateur ultrahaute fréquence 14 = commande de reproduction 15 = transistor "Chopper" 16 = amplificateur différentiel 17 = amplificateur de mélange/oscillateur			
CARACTERISTIQUES MAXIMALES	Tension collecteur-base à émetteur ouvert (Niveau de crête)																			CARACTERISTIQUES ELECTRIQUES		
	Tension collecteur-émetteur à base ouvert																					
	Tension émetteur-base à collecteur ouvert																					
	Courant collecteur maximum admissible (I _{cm}) courant collecteur maximum admissible																					
	Dissipation collecteur maximale admissible (seulement du et qu)																					
	Température à laquelle P _{tot} a été mesurée en °C a = ambiance c = boîtier h = élément de refroidissement m = plaque de montage (t _j) température de jonction maximale admissible																					
										Boîtier Temps de commutation (tr) temps de croissance Fréquence de facteur de bruit Facteur de bruit (C _c) capacité collecteur Résistance thermique jonction ambiante (η) seulement transistors doubles Fréquence de coupure en MHz Courant collecteur auquel h _{FE} ou (h _{fe}) a été mesuré (I _e) courant émetteur auquel h _{FE} ou (h _{fe}) a été mesuré Tension collecteur à émetteur à laquelle h _{FE} ou (h _{fe}) a été mesurée (V _{cb}) tension collecteur à base à laquelle h _{FE} ou (h _{fe}) a été mesurée Amplification de courant en régime grands signaux (h _{fe}) amplification de courant en régime petits signaux												

* 1. P_{tot} et R_{thj-a} avec un corps de refroidissement montés sur un refroidisseur de 1,5 mm aluminium au moins de 12,5 cm².
2. Avec un corps de refroidissement.
3. P_{tot} et R_{thj-a} montés sur un refroidisseur de 1,5 mm aluminium au moins de 30 cm².
4. Monté sur une carte imprimée renforcée à la fibre de verre de 40 x 25 x 1 mm.
5. P_{tot} et R_{thj-a} montés sur une carte imprimée renforcée à la fibre de verre de 40 x 35 x 1,5 mm.
6. P_{tot} et R_{thj-a} avec un corps de refroidissement montés sur un refroidisseur de 1,6 mm aluminium de 7 x 7 cm.
7. V_{CE} à une résistance de base-émetteur de R_{BE} = 100 Ω .

INTRODUCTION

This Transistor Handbook is a comprehensive source of technical information on most of the European, American and Japanese transistors, which are listed in alphabetical numerical fashion.
A summary of the transistor cases is given at the bottom of each page.

Type	Manufacturer	Sort (Note)	PNP/NPN Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
				V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t _j)	h _{FE} min	(h _{fe}) type	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)			
Type																			Complement type (Equivalent type)		
blu = blue red = red brn = brown vio = violet, gre = grey vio = purple grn = green whi = white orn = orange yel = yellow																			Use		
Manufacturers																			1 = low frequency transistor 2 = high power low frequency transistor 3 = high frequency transistor 4 = high power high frequency transistor 5 = switching transistor 6 = high power switching transistor 7 = special industrial type 8 = high voltage transistor 9 = video amplifier 10 = special computer type 11 = horiz./vert. deflection transistor 12 = television amplifier HF/LF 13 = ultra-high frequency amplifier 14 = display driver 15 = chopper 16 = differential amplifier 17 = mixer/oscillator amplifier		
At = Ates Fa = Fairchild Fe = Ferranti Ge = General Electric It = Internmetall Mo = Motorola Ns = National Semiconductor Ph = Phillips Rc = RCA Se = SESCOSEM Si = Siemens So = Solitron Sp = Sprague Sy = Sylvania Te = Telefunken Ti = Texas Instruments To = Toshiba Tr = Transistron Wb = Westinghouse Brake & Signal We = Western Electric Wh = Westinghouse Electric Corp.																			Case		
Configuration (Sort)																			Switching time (tr) rise time		
du = dual da = darlington qu = quad (Note) see*																			Noise number frequency		
PNP/NPN																			Noise number (C _c) Collector capacity		
G = germanium S = silicon																			Thermal resistance from junction to ambient (η) for dual transistors only		
MAXIMUM RATINGS																			Cut-off frequency in MHz		
Collector-base voltage with emitter open (max. value)																			Collector current at which h _{FE} or (h _{fe}) has been measured (I _e) Emitter current at which h _{FE} or (h _{fe}) has been measured		
Collector-emitter voltage with base open																			Collector-emitter voltage at which h _{FE} or (h _{fe}) has been measured (V _{cb}) Collector-base voltage at which h _{FE} or (h _{fe}) has been measured		
Emitter-base voltage with collector open																					
Maximum admissible collector current (I _{cm}) max. admissible collector peakcurrent																			Large signal current gain (h _{fe}) Small signal current gain		
Max. admissible collector dissipation (by du and qu only)																					
Temperature at which P _{tot} has been measured in °C a = ambient c = case h = heatsink m = mounting base (t _j) Maximum admissible junction temperature																					
																			ELECTRICAL CHARACTERISTICS		

- * 1. P_{tot} and R_{thj-a} with cooling fin mounted on 1,5 mm aluminium heatsink of at least 12,5 cm².
 2. With cooling clip.
 3. P_{tot} and R_{thj-a} mounted on 1,5 mm aluminium heatsink of at least 30 cm².
 4. Mounted on a fibre-glass print of 40 x 25 x 1 mm.
 5. P_{tot} and R_{thj-a} mounted on a fibre-glass print of 40 x 35 x 1,5 mm.
 6. P_{tot} and R_{thj-a} with cooling fin on 1,6 mm aluminium heatsink of 7 x 7 cm.
 7. V_{CE} by a base-emitter resistance of $R_{BE} = 100 \Omega$.

INTRODUCCION

Este Manual de transistores es una fuente exhaustiva de información técnica referente a la mayoría de los transistores europeos, americanos y japoneses, relacionados en orden alfabético.

Al final de cada página se da un resumen de las cápsulas de los transistores.

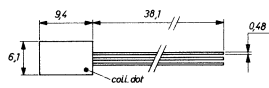
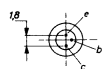
Type	Manufacturer	Sort (Note)	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case Use	Compl. (Equival.) type																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
			V _{cbo}	V _{ceo}	V _{ebo}	I _c (I _{cm})	P _{tot}	t _j	h _{FE}	(h _{fe})	V _{ce} (V _{cb})	I _c (I _e)	F _T	R _{thj-a} (η)	F (C _c)	f	ton																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			V	V	V	mA	mW	(t _j)	min	type max	V	mA	°C/W	°C/W	MHz	MHz	(tr)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
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1. P_{tot} and R_{thj-a} with cooling fin mounted on 1,5 mm aluminium heatsink of at least 12,5 cm².
2. With cooling clip.
3. P_{tot} and R_{thj-a} mounted on 1,5 mm aluminium heatsink of at least 30 cm².
4. Mounted on a fibre-glass print of 40 x 25 x 1 mm.
5. P_{tot} and R_{thj-a} mounted on a fibre-glass print of 40 x 35 x 1,5 mm.
6. P_{tot} and R_{thj-a} with cooling fin on 1,6 mm aluminium heatsink of 7 x 7 cm.
7. V_{CE} by a base-emitter resistance of R_{BE} = 100 Ω.

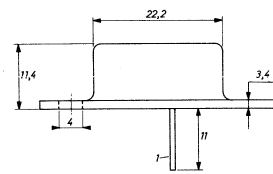
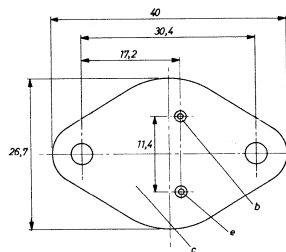
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	(h _{fe}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
A5T 3707	Ti		N	S	30	30	6	30	360	25a	(100	550)	5	0,1							518A	1	A5T 4058	
A5T 3708	Ti		N	S	30	30	6	30	360	25a	(45	800)	5	1							518A	1	A5T 4059	
A5T 3709	Ti		N	S	30	30	6	30	360	25a	(45	250)	5	1							518A	1	A5T 4060	
A5T 3710	Ti		N	S	30	30	6	30	360	25a	(90	450)	5	1							518A	1	A5T 4061	
A5T 3711	Ti		N	S	30	30	6	30	360	25a	(180	800)	5	1							518A	1	A5T 4062	
A5T 3903	Ti		N	S	60	40	6	200	310	25a	50	150	1	10			>250			(35ns)	518A	1, 5	A5T 3905	
A5T 3904	Ti		N	S	60	40	6	200	310	25a	100	300	1	10			>300			(35ns)	518A	1, 5	A5T 3906	
A5T 3905	Ti		P	S	40	40	5	200	310	25a	50	150	1	10			>200			(35ns)	518A	1, 5	A5T 3903	
A5T 3906	Ti		P	S	40	40	5	200	310	25a	100	300	1	10			>250			(35ns)	518A	1, 5	A5T 3904	
A5T 4058	Ti		P	S	30	30	6	30	360	25a	(100	550)	5	0,1							518A	1	A5T 3707	
A5T 4059	Ti		P	S	30	30	6	30	360	25a	(45	800)	5	1							518A	1	A5T 3708	
A5T 4060	Ti		P	S	30	30	6	30	360	25a	(45	800)	5	1							518A	1	A5T 3709	
A5T 4061	Ti		P	S	30	30	6	30	360	25a	(90	450)	5	1							518A	1	A5T 3710	
A5T 4062	Ti		P	S	30	30	6	30	360	25a	(180	800)	5	1							518A	1	A5T 3711	
A5T 5400	Ti		P	S	130	120	5	600	310	25a	40	180	5	10			<400				518A	8		
A5T 5401	Ti		P	S	160	150	5	600	310	25a	60	240	5	10			<300				518A	8		
A8T 3702	Ti		P	S	50	30	5	200	360	25a	60	300	5	50			>100				92E	1	A8T 3704	
A8T 3703	Ti		P	S	50	30	5	200	360	25a	30	150	5	50			>100				92E	1	A8T 3705	
A8T 3704	Ti		N	S	50	30	5	800	360	25a	100	300	2	50			>100				92E	1	A8T 3702	
A8T 3705	Ti		N	S	50	30	5	800	360	25a	50	150	2	50			>100				92E	1	A8T 3703	
A8T 3706	Ti		N	S	40	20	5	800	360	25a	30	60	2	50			>100				92E	1		
A8T 3707	Ti		N	S	30	30	6	30	360	25a	(100	550)	5	0,1							92E	1	A8T 4058	
A8T 3708	Ti		N	S	30	30	6	30	360	25a	(45	800)	5	1							92E	1	A8T 4059	
A8T 3709	Ti		N	S	30	30	6	30	360	25a	(45	250)	5	1							92E	1	A8T 4060	
A8T 3710	Ti		N	S	30	30	6	30	360	25a	(90	450)	5	1							92E	1	A8T 4061	
A8T 3711	Ti		N	S	30	30	6	30	360	25a	(180	800)	5	1							92E	1	A8T 4062	
A8T 4058	Ti		P	S	30	30	6	30	360	25a	100	400	5	0,1							92E	1	A8T 3707	
A8T 4059	Ti		P	S	30	30	6	30	360	25a	45	660	5	1							92E	1	A8T 3708	
A8T 4060	Ti		P	S	30	30	6	30	360	25a	45	165	5	1							92E	1	A8T 3709	
A8T 4061	Ti		P	S	30	30	6	30	360	25a	90	330	5	1							92E	1	A8T 3710	
A8T 4062	Ti		P	S	30	30	6	30	360	25a	180	660	5	1							92E	1	A8T 3711	
AC 107	Ph		P	G	15			(10)	80	25a	(35	160)	5	0,3				<5			801A	1		
AC 116 yel	Te		P	G	30	18	12	200	225	(90)	(55	95)	6	4			450				518D	1		
AC 116 gm	Te		P	G	30	18	12	200	225	(90)	(85	140)	6	4			450				518D	1		
AC 117	Te		P	G	32	18	10	1A	1,1W	(90)	40	115	2	150			250				518D	1		
AC 121/IV	Si		P	G	20	20	10	300	900	(90)	30	60		100	1,5		300				1A	1		
AC 121/V	Si		P	G	20	20	10	300	900	(90)	50	100		100	1,5		300				1A	1		
AC 121/VI	Si		P	G	20	20	10	300	900	(90)	75	150		100	1,5		300				1A	1		
AC 121/VII	Si		P	G	20	20	10	300	900	(90)	125	250		100	1,5		300				1A	1		
AC 122 red	Te		P	G	30	18	12	200	225	(90)	(40	65)	6	2			500				518D	1		
AC 122 yel	Te		P	G	30	18	12	200	225	(90)	(55	95)	6	2			500				518D	1		
AC 122 gm	Te		P	G	30	18	12	200	225	(90)	(85	140)	6	2			500				518D	1		
AC 122 vio	Te		P	G	30	18	12	200	225	(90)	(130	200)	6	2			500				518D	1		
AC 122 whi	Te		P	G	30	18	12	200	225	(90)	(170	300)	6	2			500				518D	1		
AC 122/30 red	Te		P	G	45	32	12	200	225	(90)	(40	65)	6	2			500				518D	1		
AC 122/30 yel	Te		P	G	45	32	12	200	225	(90)	(55	95)	6	2			500				518D	1		
AC 122/30 gm	Te		P	G	45	32	12	200	225	(90)	(85	140)	6	2			500				518D	1		
AC 122/30 vio	Te		P	G	45	32	12	200	225	(90)	(130	200)	6	2			500				518D	1		
AC 122/30 whi	Te		P	G	45	32	12	200	225	(90)	(170	300)	6	2			500				518D	1		
AC 123 yel	Te		P	G	45	32	12	200	225	(90)	(55	95)	6	4			450				1C	1		
AC 123 gm	Te		P	G	45	32	12	200	225	(90)	(85	140)	6	4			450				1C	1		
AC 124	Te		P	G	45	32	12	1A	1,1W	(90)	40	170	2	150			250				518D	2		
AC 125	(1)		P	G	32	12	10	100	500	45a	(80	170)	5	2		1,7	90	<10			1A	1		
AC 126	Ph	(1)	P	G	32	12	10	100	500	45a	(130	300)	5	2		2,3	90	<10			1A	1		
AC 127	Ph	(1)	N	G	32	12	10	500	340	45a		100	(0)	5	20	2,5	160	<10			1A	1	AC 128/132	
AC 127/01	Ph	(1)	N	G	32	12	10	500	340	45h		100	(0)	20	2,5		150	<10	1k		1B	1	AC 128/01	
AC 128	Ph	(1)	P	G	32	16	10	1A	1W	20a	55	90	175	(0)	50	1,5	80				1A	1	AC 127	
AC 128/01	Ph	(1)	P	G	32	16	10	1A	1W	20a	55	90	175	(0)	50	1,5	70,5				1B	1	AC 127/01	
AC 130	Ph		N	G	20	10	100	145	25a		1	10		1	10		450				1A	11		
AC 131	Te		P	G	30	18	10	1A	750	(90)	40	120	2	150			300				518D	2		
AC 131/30	Te		P	G	45	32	10	1A	750	(90)	40	120	2	150			300				518D	2		
AC 132	Ph	(1)	P	G	32	12	10	200	500	45a		135	(0)	20	2		90	<10		1k	1A	1	AC 127	
AC 132/01	Ph	(1)	P	G	32	12	10	200	500	45a		135	(0)	20	2		80,5	<10		1k	1B	1	AC 127/01	
AC 138	At		P	G	24	10	10	1,2A	1W	(90)	(30	250)	6	5	1,5		300				1A	1		
AC 139	At		P	G	32	10	10	1A	1W	(90)	40	110		400	1,5		300				1A	2		
AC 141	At		N	G	32	10	10	1,2A	1W	(90)	40	110		400	3		300				1A	2		
AC 141B	At		N	G	25	10	10	1,2A	1W	(90)	(30	250)	6	1	3		300				1A	1		
AC 141K	At		N	G	32	10	10	1,2A	1W	(90)	40	110		400	3		250				1B	2		
AC 142	At		P	G	32	10	10	1,2A	1W	(90)	40	110		400	1,5		300				1A	2		
AC 142K	At		P	G	32	10	10	1,2A	1W	(90)	40	110		400	1,5		250				1B	2		
AC 150 yel	Te		P	G	30	18	12	50	100	(75)	(55	95)	6	2			500				518D	1		
AC 150 gm	Te		P	G	30	18	12	50	100	(75)	(85	140)	6	2			500				518D	1		
AC 150 vio	Te		P	G	30	18	12	50	100	(75)	(130	200)	6	2			500				518D	1		
AC 150 whi	Te																							

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
AC 153K/VI	Si		P	G	32		10	1A	1W	(90)	75	150		300	1.5	250					1B	2			
AC 153K/VII	Si		P	G	32		10	1A	1W	(90)	125	250		300	1.5	250					1B	2			
AC 162	Si		P	G	32	24	10	200	900	(90)		(100)		50	1.7	300					1A	1			
AC 163	Si		P	G	32	24	10	200	900	(90)		(132)		50	2.3	300					1A	1			
AC 170	Te		P	G	32		10	200	90	(90)	50	125	5	2	1.7	500					518D	1			
AC 171	Te		P	G	32		10	200	90	(90)	65	180	5	2	2.3	500					518D	1			
AC 172	Ph		N	G	32	12	10	200	25a	(45)	110		5	0.5	2.5	370	<4	1k			1A	1			
AC 175	Te		n	g	25	18	10	1A	1.1W	(90)		165	6	50		250					518D	1			
AC 176	Si		N	G	32	18	10	1A	1W	(90)	50	250		300	3	300					1A	1			
AC 176K	Si		N	G	32	18	10	1A	1W	(90)	50	250		300	3	250					1B	1			
AC 178	Te		P	G	20	15	10	700	1W	(90)		220	2	150		250					518D	1			
AC 179	Te		N	G	20	15	10	700	1W	(90)		220	2	150		250					518D	1			
AC 186	Te		N	G	30	18	10	700	750	(90)	60	400	2	150		300					518D	1			
AC 187	Ph		N	G	25	15	10	1A	1W	35a	100	200	500	1	300	5	290				1A	1	AC 188		
AC 187/01	Ph		N	G	25	15	10	1A	1W	35a	100	200	500	1	300	5	180				1B	1	AC 188/01		
AC 187 K	At		N	G	25	15	10	1A	1W	(90)	90	400		400	5	250					1B	2			
AC 188	Ph		P	G	25	15	10	1A	1W	35a	100	200	500	1	300	1.5	290				1A	1	AC 187		
AC 188/01	Ph		P	G	25	15	10	1A	1W	35a	100	200	500	1	300	1.5	180				1B	1	AC 187/01		
AC 188K	At		P	G	25	15	10	1A	1W	(90)	90	400		400	3	250					1B	2			
AC 191	At		P	G	32		25	250	430	(90)	(30)	500	6	1	7	350					1A	1			
AC 192	At		P	G	32		10	250	430	(90)	(30)	500	6	1	7	350					1A	1			
AC 193	At		P	G	32		10	1A	1W	(90)	90	400		400	3	300					1A	2			
AC 193K	At		P	G	32		10	1A	1W	(90)	90	400		400	3	250					1B	2			
AC 194	At		N	G	32		10	1A	1W	(90)	90	400		400	5	300					1A	2			
AC 194K	At		N	G	32		10	1A	1W	(90)	90	400		400	5	250					1B	2			
ACY 16	Te		P	G	40	30	10	400	800	(85)	40	60	1	300		300					518D	2			
ACY 23/V	Si		P	G	32	30	26	200	900	(90)	(50)	100	5	1	1.5	300					1A	1			
ACY 24	Te		P	G	70	50	30	300	530	(85)		50	5	30		350					518D	2			
ACY 32/V	Si		P	G	32	30	16	200	900	(90)	(50)	100	5	1	1.5	300					1A	1			
ACY 32/VI	Si		P	G	32	30	16	200	900	(90)	(75)	150	5	1	1.5	300					1A	1			
ACY 33/VI	Si		P	G	32		10	1A	1W	(90)	75	150		300	1.5	300					1A	1			
ACY 33/VII	Si		P	G	32		10	1A	1W	(90)	125	250		300	1.5	300					1A	1			
ACY 33/VIII	Si		P	G	32		10	1A	1W	(90)	175	350		300	1.5	300					1A	1			
AC 130/III	Si		P	G	32	30	10	3A	30W	(90)	20	40		1A	0.3						3A	2			
AD 130/IV	Si		P	G	32	30	10	3A	30W	(90)	30	60		1A	0.3						3A	2			
AD 130/V	Si		P	G	32	30	10	3A	30W	(90)	50	100		1A	0.3						3A	2			
AD 131/III	Si		P	G	64	45	20	3A	30W	(90)	20	40		1A	0.3						3A	2			
AD 131/IV	Si		P	G	64	45	20	3A	30W	(90)	30	60		1A	0.3						3A	2			
AD 131/V	Si		P	G	64	45	20	3A	30W	(90)	50	100		1A	0.3						3A	2			
AD 132/III	Si		P	G	80	60	20	3A	30W	(90)	20	40		1A	0.3						3A	2			

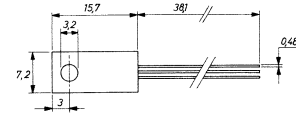
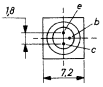
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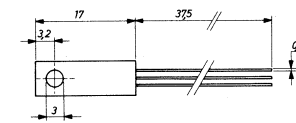
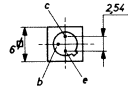
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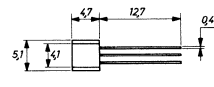
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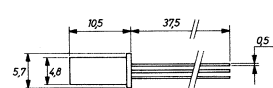
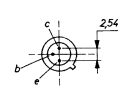
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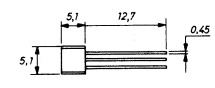
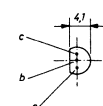
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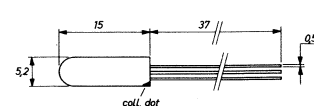
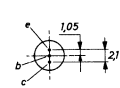
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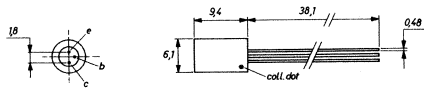


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
AD 132/IV	Si		P	G	80	60	20	3A	30W	(90)	30	60		1A	0.3						3A	2			
AD 133/III	Si		P	G	50	20	10	15A	36W	(100)	20	40		5A	0.3						41A	2			
AD 133/IV	Si		P	G	50	20	10	15A	36W	(100)	30	60		5A	0.3						41A	2			
AD 133/V	Si		P	G	50	20	10	15A	36W	(100)	50	100		5A	0.3						41A	2			
AD 136/IV	Si		P	G	40	22	10	10A	11W	(100)	30	60		5A	0.3						8A	2			
AD 136/V	Si		P	G	40	22	10	10A	11W	(100)	30	60		1A	0.3						309A	2			
AD 139	Ph		P	G	32	16	10	(3A)	13W	45m	30	110	(0)	1A	0.4						309A	2			
AD 142	At		P	G	80		10	10A	30W	(100)	30	200	2	1A	0.45						3A	2			
AD 143	At		P	G	40		10	10A	30W	(100)	30	200	2	1A	0.45						3A	2			
AD 143R	At		P	G	32	25	10	10A	30W	(100)	30	200	2	1A	0.45						3A	2			
AD 148/IV	Si		P	G	32	26	10	3.5A	13W	(100)	30	60		1A	0.46						309A	2			
AD 148/V	Si		P	G	32	26	10	3.5A	13W	(100)	50	100		1A	0.46						309A	2			
AD 149	Ph		P	G	50	30	20	3.5A	22.5W	65m	20	85	(0)	3A	>0.3						3H	2			
AD 149/IV	Si		P	G	30	20	20	3.5A	27W	(100)	30	60		1A	0.50						3A	2			
AD 149/V	Si		P	G	30	20	20	3.5A	27W	(100)	50	100		1A	0.50						3A	2			
AD 150/IV	Si		P	G	32	30	10	3.5A	27W	(100)	30	60		1A	0.45						3A	2			
AD 150/V	Si		P	G	32	30	10	3.5A	27W	(100)	50	100		1A	0.45						3A	2			
AD 152	Te		P	G	45	23	12	1A	6W	(90)	35	160	1	500							309A	2			
AD 155	Te		P	G	25	15	12	1A	6W	(90)		115	1	500							309A	2			
AD 156	Si		P	G		18		3A	6W	45c	50	250		300	>1		(100p)				309A	2	AD 157		
AD 157	Si		N	G		18		3A	4W	45c	50	250		300	>1		(100p)				309A	2	AD 156		
AD 161	Ph		N	G	32	20	10	1A	4W	72m	80	150	1	500	3						309A	2	AD 162		
AD 162	Ph		P	G	32	20	10	1A	6W	63m	80	150	1	500	1.5						309A	2	AD 161		
AD 163/II	Si		P	G	100	80	20	3A	30W	(90)	12.5	25		1A	0.35						3A	2			
AD 163/III	Si		P	G	100	80	20	3A	30W	(90)	20	40		1A	0.35						3A	2			
AD 163/IV	Si		P	G	100	80	20	3A	30W	(90)	30	60		1A	0.35						3A	2			
AD 164	Te		P	G	25	20	10	1A	6W	(90)		185	1	500							309A	2			
AD 165	Te		N	G	25	20	10	1A	5W	(90)		185	1	500							309A	2			
AD 262	At		P	G	35	20	10	4A	10W	(100)	30	100	2	500	0.3						309A	2			
AD 263	At		P	G	60	40	10	4A	10W	(100)	20	180	2	500	0.3						309A	2			
ADY 26	Ph		P	G	80	60	40	25A	100W	30m	40	120	(0)	(5A)			(350p)				25 μs	36A	2		
ADY 27/IV	Si		P	G	32	30	10	3.5A	27.5W	45c	30	45	60	1	1A	0.45					3G	2			
ADY 27/V	Si		P	G	32	30	10	3.5A	27.5W	45c	50	75	100	1	1A	0.45					3G	2			
ADZ 11	Ph		P	G	50	40	30	15A	45W	55m	40	120	(0)	1.2A							36A	2			
ADZ 12	Ph		P	G	80	60	50	15A	45W	55m	40	120	(0)	1.2A							36A	2			
AF 102	Ph		P	G	25		0.5	10	50	45a		(<20)	12	1		600	<7.5	200			7A	3			
AF 106	At		P	G	25	18	0.3	10	60	(90)	20	50	12	1	220	750					72A	3, 12			
AF 106A	At		P	G	25	18	0.3	10	60	(90)	20	50	12	1	220	750					72A	3, 12			
AF 109R	At		P	G	20	15	0.3	10	60	(90)	20	50	12	1.5		750					72A	3, 12			
AF 114	Ph		P	G	32	15		10	75	45a		(150)	6	1	75	600	<9.5	100			7A	3			
AF 115	Ph		P	G	32	15		10	75	45a		(150)	6	1	75	600	<9.5	100			7A	3			
AF 116	Ph		P	G	32	15		10	75	45a		(150)	6	1	75	600	<4.5	10.7			7A	3			
AF 117	Ph		P	G	32	15		10	75	45a		(150)	6	1	75	600	<3	1			7A	3			
AF 118	Ph	(2)	P	G	70	20		30	375	45a					250						7A	9			
AF 121	Ph	(2)	P	G	25			10	140	45a					270	450	<6	100			572A	3			
AF 124	Ph		P	G	32	15		10	60	45a		(150)	6	1	75	750	<9.5	100			72B	3			
AF 125	Ph		P	G	32	15		10	60	45a		(150)	6	1	75	750	9.5	100			72B	3			
AF 126	Ph		P	G	32	15		10	60	45a		(150)	6	1	75	750	<4.5	10.7			72B	3			
AF 127	Ph		P	G	32	15		10	60	45a		(150)	6	1	75	750	<3	1			72B	3			
AF 134	Te		P	G	25		0.7	60	(75)	(110)	6		1	55	500						572C	3			
AF 135	Te		P	G	25		0.7	60	(75)	(100)	6		1	50	500						572C	3			
AF 136	Te		P	G	25		0.7	60	(75)	(80)	6		1	40	500						572C	3			
AF 137	Te		P	G	25		0.7	60	(75)	(60)	6		1	35	500						572C	3			
AF 138	Te		P	G	25		0.7	60	(75)	(100)	6		1	40	500						572C	3			
AF 139	Ph		P	G	20	15	0.3	10	60	45a				550	750	7	800				72A	17			
AF 166	At		P	G	20		0.5	10	85	(90)	25	550	3	1		750					44A	3			
AF 170	At		P	G	20		0.5	10	85	(90)	25	550	3	1		750					44A	3			
AF 172	At		P	G	20		0.5	10	85	(90)	25	550	3	1		750					44A	3			
AF 178	Ph		P	G	25		0.5	10	75	45a		(>20)	12	1	180	600	<7.5	200			12A	3			
AF 179	Ph	(2)	P	G	25			10	180	45a					270	250					12A	3			
AF 180	Ph		P	G	25			(25)	156	25a						320	3.5	200			12A	3			
AF 181	Ph		P	G	30		0.6	20	156	25a					170	320					12A	3			
AF 185	Ph		P	G	32			30	120	45a					80	450	<4	1			12A	3			
AF 186	Ph		P	G	25			(15)	70	45a					820	650	8	800			572B	3			
AF 200	At		P	G	25		0.3	10	225	(90)		(150)	10	3		450					572A	12			
AF 200U	Si		P	G	25		0.3	10	60	45a		(85)	10	3		750					72B	12			
AF 201	At		P	G	25		0.3	10	225	(90)		20	10	3		450					572A	12			
AF 201U																									

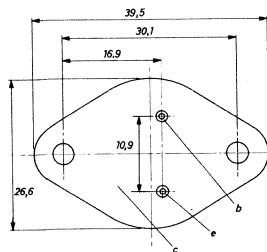


Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
AFY 15 red	Te		P	G	22	12	8	50	110	(85)	(30	65)	6	0.5	16	600					518D	3	
AFY 15 yel	Te		P	G	22	12	8	50	100	(85)	(55	100)	6	0.5	16	600					518D	3	
AFY 15 gm	Te		P	G	22	12	8	50	100	(85)	(80	150)	6	0.5	16	600					518D	3	
AFY 15 vio	Te		P	G	22	12	8	50	100	(85)	(120	250)	6	0.5	16	600					518D	3	
AFY 16	Ph		P	G	30	25	0.5	8	60	45a					550	750	7	800			72A	17	
AFY 18C	Si		P	G	30		0.7	100	500	(90)	40	120	10	10	600	250					39A	3	
AFY 18D	Si		P	G	30		0.7	100	500	(90)	100	300	10	10	600	250					39A	3	
AFY 18E	Si		P	G	30		0.7	100	500	(90)	200	600	10	10	600	250					39A	3	
AFY 19	Ph		P	G	32			150	800	65c					350	250	(12p)				39A	3	
AFY 37	Si		P	G	32		0.3	20	112	(90)		(40)	12	2	600	750					72A	3	
AFY 39	Si		P	G	32		0.3	30	225	(90)		85	10	3	500	450					572A	3	
AFY 40	Ph	(2)	P	G	32	20	0.3	20	140	30a					700	550	7	800			572B	3	
AFY 42	Si		P	G	30	25	0.3	10	112	(90)		(50)	10	2	700	750					72A	3	
AFZ 12	Ph		P	G	20	10	0.5	10	85	25a		>20	6	1	180	600	6	200			72B	3	
AL 100	At		P	G	130		2	10A	30W	(100)	40	250	2	1A	4						3A	2	
AL 102	At		P	G	130		2	6A	30W	(100)	40	250	2	1A	4						3A	2	
AL 103	At		P	G	100		1.5	6A	30W	(100)	40	250	2	1A	3						3A	2	
ASY 14	It		P	G	80	40	10	250	130	(75)	20	40	0.5	250	1.5	400					572C	5	
ASY 26	Ph		P	G	30	15	20	200	150	25a	30	80	1	20	8	400					5B	5	ASY 28
ASY 27	Ph		P	G	25	15	20	200	150	25a	30	150	1	20	14	400					5B	5	ASY 29
ASY 28	Ph		N	G	30	15	20	200	150	25a	30	80	1	20	14	400					5B	5	ASY 26
ASY 29	Ph		N	G	25	15	20	200	150	25a	30	150	1	20	20	400					5B	5	ASY 27
ASY 31	Ph		P	G	25	15	20	100	125	25a	30	80	(0)	20	>4	400					801A	5	
ASY 32	Ph		P	G	25	15	20	100	125	25a	30	150	(0)	20	>6	400					801A	5	
ASY 48/IV	Si		P	G	64	45	16	300	900	(90)	30	60	100	1.2	300						1A	5	
ASY 48/V	Si		P	G	64	44	16	300	900	(90)	50	100	100	1.2	300						1A	5	
ASY 48/VI	Si		P	G	64	45	16	300	900	(90)	75	150	100	1.2	300						1A	5	
ASY 70/IV	Si		P	G	32	30	16	300	900	(90)	30	60	100	1.5	300						1A	5	
ASY 70/V	Si		P	G	32	30	16	300	900	(90)	50	100	100	1.5	300						1A	5	
ASY 70/VI	Si		P	G	32	30	16	300	900	(90)	75	150	100	1.5	300						1A	5	
ASY 73	Ph		N	G	30	15	30	400	140	25a		>25	(0)	(50)	>4	350					5B	5	
ASY 74	Ph		N	G	30	15	30	400	140	25a		>40	(0)	50	>6	350					5B	5	
ASY 75	Ph		N	G	30	15	30	400	140	25a		>60	(0)	(50)	>10	350					5B	5	
ASY 76	Ph		P	G	40		10	500	500	25a	25	130	(0)	300	>0.5	250					5B	5	
ASY 77	Ph		P	G	60		10	500	500	25a	25	130	(0)	300	>0.5	250					5B	5	
ASY 80	Ph		P	G	40		20	500	500	25a	65	165	(0)	50	>0.7	250					5B	5	
ASY 81	Se		P	G	60			500	225		30	100	100	2	250						39A	1	
ASY 90	At		P	G	40		24	250	430	(90)	25	130	0.5	10	350						1A	5	
ASY 91	At		P	G	25		10	250	430	(90)	25	130	0.5	10	350						1A	5	
ASZ 15	Ph		P	G	100	60	40	8A	30W	45m	15	30	1	6A	0.2						(20μs)	3B	6
ASZ 16	Ph		P	G	60	32	20	8A	30W	45m	35	80	1	6A	0.25						(20μs)	3B	6
ASZ 17	Ph		P	G	60	32	20	8A	30W	45m	20	45	1	6A	0.22						(20μs)	3B	6
ASZ 18	Ph		P	G	100	32	40	8A	30W	45m	20	65	1	6A	0.22						(20μs)	3B	6
ASZ 20	Ph		P	G	40		25	110	25a			(>45)	6	1		600					7A	5	
ASZ 21	Ph		P	G	20	15		30	120	25a		>50	1	30	>300	500					(20ns)	18A	5
ASZ 23	Ph		P	G	24		2	(100)	100	25c						600					(1ns)	7A	5
AU 101	Ph		P	G	120			10A	10W	(90)	12	50	(0)	(10A)	>0.4						3B	11	
AU 102	Ph		P	G	40			10A	10W	(90)		>7	(0)	(10A)	>0.4						3B	11	
AU 104	Ph		P	G	185			(12A)	15W	77.5m		>14	1	12A	15						3C	11	
AU 106	At		P	G	320		2	10A	5W	(90)	15	80	1.3	6A	2	45					3A	12	
AU 107	At		P	G	200		2	10A	30W	(90)	35	120	2	700	2	45					3A	12	
AU 108	At		P	G	100		2	10A	30W	(90)	35	200	2	700		45					3A	12	
AU 108F	At		P	G	100		2	10A	30W	(90)	120	250	2	1A	45						3A	12	
AU 110	At		P	G	160		2	10A	30W	(100)	20	90	2	1A	45						3A	12	
AU 111	At		P	G	320		2	10A	5W	(90)	15	80	1.3	5A	2	45					3A	12	
AU 112	At		P	G	320		2	10A	5W	(90)	15	40	1.3	6A	2	45					3A	12	
AU 113	At		P	G	250		3	10A	5W	(90)	15	80	1.3	6A		45					3A	12	
AU 10	Ph		P	G	70			700	6W	50m		>40	(10)	(600)	>60						3B	6	
AUY 18/IV	Si		P	G	64	45	20	8A	11W	(100)	30	60	5A	0.3							8A	6	
AUY 18/V	Si		P	G	64	45	20	8A	11W	(100)	50	100	5A	0.3							8A	6	
AUY 19/III	Si		P	G	64	45	20	3A	30W	45c	20	40	1	1A	0.35						3G	6	
AUY 19/IV	Si		P	G	64	45	20	3A	30W	45c	30	60	1	1A	0.35						3G	6	
AUY 19/V	Si		P	G	64	45	20	3A	30W	45c	50	100	1	1A	0.35						3G	6	
AUY 20/III	Si		P	G	80	60	20	3A	30W	45c	20	40	1	1A	0.35						3G	6	
AUY 20/IV	Si		P	G	80	60	20	3A	30W	45c	30	60	1	1A	0.35						3G	6	
AUY 20/V	Si		P	G	80	60	20	3A	30W	45c	50	100	1	1A	0.35						3G	6	
AUY 21/II	Si		P	G	65	45	20	10A	36W	45c	12												

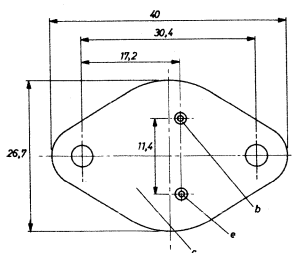
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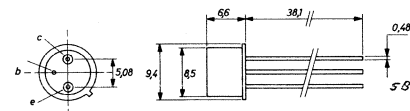
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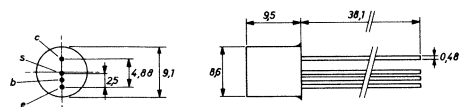
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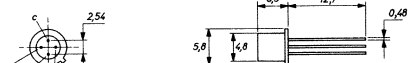
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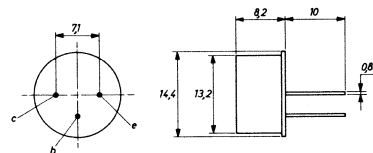
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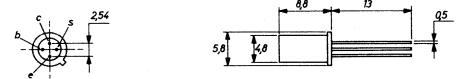
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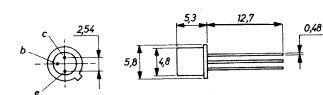
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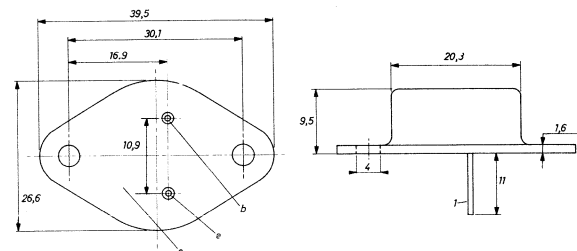
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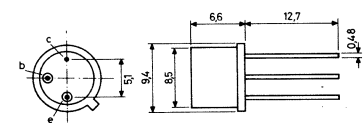
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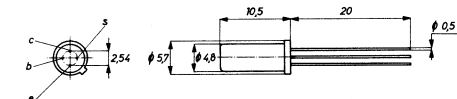
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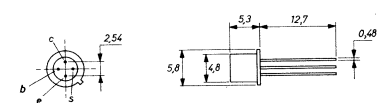
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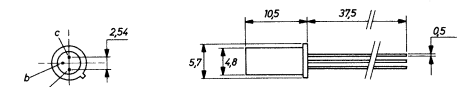
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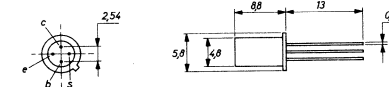
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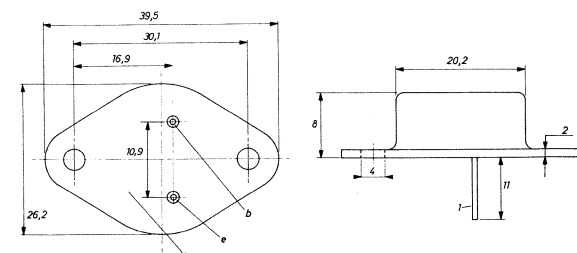
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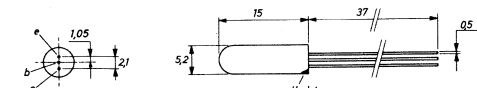
572A



3G



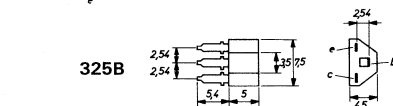
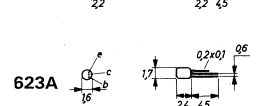
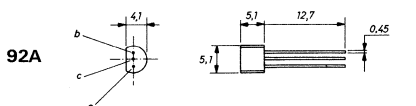
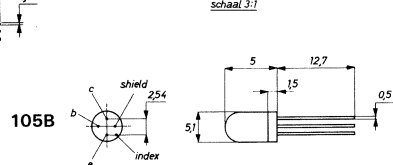
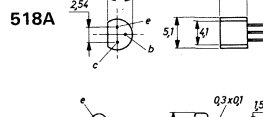
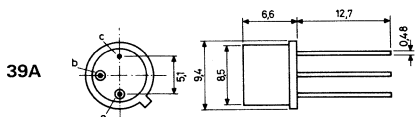
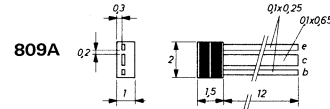
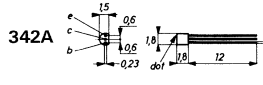
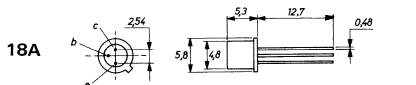
801A



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _b) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)						
B 144000	So		N	S	50	40	5	10			45	90	10	3A	50						59A	2			
B 144001	So		N	S	50	40	5	10			70	140	10	3A	50						59A	2			
B 144002	So		N	S	50	40	5	10			120	240	10	3A	50						59A	2			
B 144003	So		N	S	70	60	5	10			45	90	10	3A	50						59A	2			
B 144004	So		N	S	70	60	5	10			70	140	10	3A	50						59A	2			
B 144005	So		N	S	70	60	5	10			120	240	10	3A	50						59A	2			
B 144006	So		N	S	90	80	5	10			45	90	10	3A	50						59A	2			
B 144007	So		N	S	90	80	5	10			70	140	10	3A	50						59A	2			
B 144008	So		N	S	90	80	5	10			120	240	10	3A	50						59A	2			
B 14500	So		N	S	50	40	5	10			45	90	10	3A	50						61A	2			
B 145001	So		N	S	50	40	5	10			70	140	10	3A	50						61A	2			
B 148000	So		N	S	100	80	7	25				20	10	5A	35						61A	2			
B 148001	So		N	S	120	100	7	25				20	10	5A	35						61A	2			
B 148002	So		N	S	100	80	7	25				15	10	5A	35						61A	2			
B 148003	So		N	S	120	100	7	25				15	10	5A	35						61A	2			
B 148004	So		N	S	80	60	7	25			20		10	5A	35						61A	2			
B 148005	So		N	S	80	60	7	25			15		10	5A	35						61A	2			
B 170000	So		N	S	50	40	8	15			30		4	1A		45				3A	2				
B 170001	So		N	S	50	40	8	15			20		4	3A		45				3A	2				
B 170002	So		N	S	50	40	8	15			12		4	5A		45				3A	2				
B 170003	So		N	S	80	70	8	15A			30		4	1A		45				3A	2				
B 170004	So		N	S	80	70	8	15A			20		4	3A		45				3A	2				
B 170005	So		N	S	80	70	8	15A			12		4	5A		45				3A	2				
B 17006	So		N	S	100	100	8	15A			30		4	1A		45				3A	2				
B 170007	So		N	S	100	100	8	15A			20		4	3A		45				3A	2				
B 170008	So		N	S	100	100	8	15A			12		4	5A		45				3A	2				
B 170009	So		N	S	50	40	8	15A			30		4	1A		45				3A	2				
B 170010	So		N	S	50	40	8	15A			20		4	3A		45				3A	2				
B 170011	So		N	S	50	40	8	15A			12		4	5A		45				3A	2				
B 170012	So		N	S	80	70	8	15A			30		4	1A		45				3A	2				
B 170013	So		N	S	80	70	8	15A			20		4	3A		45				3A	2				
B 170014	So		N	S	80	70	8	15A			12		4	5A		45				3A	2				
B 170015	So		N	S	100	100	8	15A			30		4	1A		45				3A	2				
B 170016	So		N	S	100	100	8	15A			20		4	1A		45				3A	2				
B 170017	So		N	S	100	100	8	15A			12		4	5A		45				3A	2				
B 170018	So		N	S	50	40	8	15A			30		4	1A		45				3A	2				
B 170019	So		N	S	50	40	8	15A			20		4	3A		45				3A	2				
B 170020	So		N	S	50	40	8	15A			12		4	5A		45				3A	2				
B 170021	So		N	S	80	70	8	15A			30		4	1A		45				3A	2				
B 170022	So		N	S	80	70	8	15A			20		4	3A		45				3A	2				
B 170023	So		N	S	80	70	8	15A			12		4	1A		45				3A	2				
B 170024	So		N	S	100	100	8	15A			30		4	1A		45				3A	2				
B 170025	So		N	S	100	100	8	15A			20		4	3A		45				3A	2				
B 170026	So		N	S	100	100	8	15A			12		4	5A		45				3A	2				
B 176000	So		N	S	250	200	5	5A			25		5	100		45				3A	2				
B 176001	So		N	S	250	200	5	5A			20		5	500		45				3A	2				
B 176002	So		N	S	250	200	5	5A			10		5	1.5A		45				3A	2				
B 176003	So		N	S	250	200	5	5A			10		5	2.5A		45				3A	2				
B 176004	So		N	S	400	325	5	5A			25		5	100		45				3A	2				
B 176005	So		N	S	400	325	5	5A			20		5	500		45				3A	2				
B 176006	So		N	S	400	325	5	5A			10		5	1.5A		45				3A	2				
B 176007	So		N	S	400	325	5	5A			10		5	2.5A		45				3A	2				
B 176008	So		N	S	550	325	5	5A			25		5	100		45				3A	2				
B 176009	So		N	S	550	325	5	5A			20		5	500		45				3A	2				
B 176010	So		N	S	550	325	5	5A			10		5	1.5A		45				3A	2				
B 176011	So		N	S	550	325	5	5A			10		5	2.5A		45				3A	2				
B 176012	So		N	S	650	325	5	5A			25		5	100		45				3A	2				
B 176013	So		N	S	650	325	5	5A			20		5	500		45				3A	2				
B 176014	So		N	S	650	325	5	5A			10		5	1.5A		45				3A	2				
B 176015	So		N	S	650	325	5	5A			10		5	2.5A		45				3A	2				
B 176024	So		N	S	400	325	5	5A			10		5	1.5A		45				3A	2				
B 176025	So		N	S	400	325	5	5A			10		5	2.5A		45				3A	2				
B 176026	So		N	S	550	325	5	5A			10		5	1.5A		45				3A	2				
B 176027	So		N	S	550	325	5	5A			10		5	2.5A		45				3A	2				
B 176028	So		N	S	650	325	5	5A			10		5	1.5A		45				3A	2				
B 176029	So		N	S	650	325	5	5A			10		5	2.5A		45				3A	2				
B 176030	So		N	S	800	500	5	5A			10		5	3A		45				3A	2				
BC 107	Ph		N	S	50	45	6	100	300	(175)	(125	180	500)	5	2	300	500	<10	1k	18A	1	3			
BC 107A	Ph		N	S	50	45	6	100	300	25a	200	290	450	5	2	300	500	<10	1k	18A	1			BC 177	
BC 107B	Ph		N	S	50	45	6	100	300	25a	200	290	450	5	2	300	500	<10	1k	1					

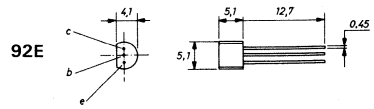
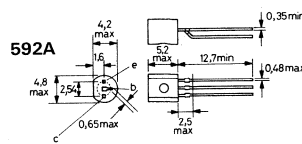
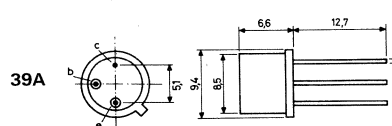
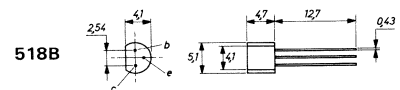
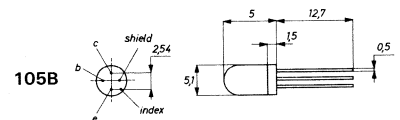
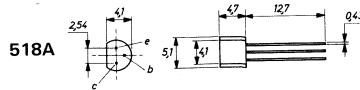
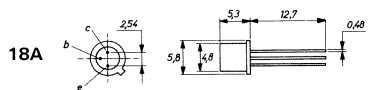
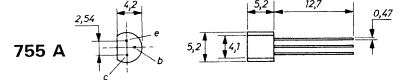
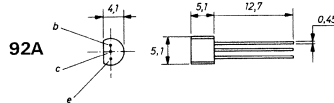
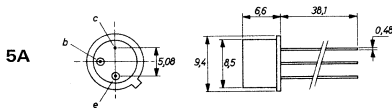
Type	Manufacturer	Sort (Note)	PNP/NPN	Ga/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
BC 147B	Ph		N	S	50	45	6	100	300	25a	200	290	450	5	2	300	330	<10	1k		325B	1		
BC 148A	Ph		N	S	30	20	5	100	300	25a	110	180	220	5	2	300	330	<10	1k		325B	1		
BC 148B	Ph		N	S	30	20	5	100	300	25a	200	290	450	5	2	300	330	<10	1k		325B	1		
BC 148C	Ph		N	S	30	20	5	100	300	25a	420	520	800	5	2	300	330	<10	1k		325B	1		
BC 149B	Ph		N	S	30	20	5	100	300	25a	200	290	450	5	2	300	330	<4	1k		325B	1		
BC 149C	Ph		N	S	30	20	5	100	300	25a	420	520	800	5	2	300	330	<4	1k		325B	1		
BC 153	Ns		P	S	40	40	5				50	500	500	5	10						105B	1		
BC 154	Ns		P	S	40	40	5				50	500	500	5	10						105B	1		
BC 155A	Te		N	S	5	5	5	50	105	(125)	(85	220)	1	0.5	50	750					613A	1		
BC 155B	Te		N	S	5	5	5	50	105	(125)	(200	500)	1	0.5	50	750					613A	1		
BC 155C	Te		N	S	5	5	5	50	105	(125)	(470	900)	1	0.5	50	750					613A	1		
BC 156A	Te		N	S	5	5	5	50	50	(125)	(85	220)	1	0.5	50	1600					623A	1		
BC 156B	Te		N	S	5	5	5	50	50	(125)	(200	500)	1	0.5	50	1600					623A	1		
BC 156C	Te		N	S	5	5	5	50	50	(125)	(470	900)	1	0.5	50	1600					623A	1		
BC 157	Ph		P	S	50	45	5	100	300	25a		140		5	2	150	330	<10	1k		325B	1		
BC 158A	Ph		P	S	30	25	5	100	300	25a		180		5	2	150	330	<10	1k		325B	1		
BC 158B	Ph		P	S	30	25	5	100	300	25a		290		5	2	150	330	<10	1k		325B	1		
BC 159A	Ph		P	S	25	20	5	100	300	25a		180		5	2	150	330	<4	1k		325B	1		
BC 159B	Ph		P	S	25	20	5	100	300	25a		290		5	2	150	330	<4	1k		325B	1		
BC 160	Ti		P	S	40	40	5	1A	5W	25c	40		250	1	100						39A	2		
BC 160/6	Ti		P	S	40	40	5	1A	5W	25c	40		100	1	100						39A	2		
BC 160/10	Ti		P	S	40	40	5	1A	5W	25c	63		160	1	100						39A	2		
BC 160/16	Ti		P	S	40	40	5	1A	5W	25c	100		250	1	100						39A	2		
BC 161	Ti		P	S	60	60	5	1A	5W	25c	40		250	1	100						39A	2		
BC 161/6	Ti		P	S	60	60	5	1A	5W	25c	40		100	1	100						39A	2		
BC 161/10	Ti		P	S	60	60	5	1A	5W	25c	63		160	1	100						39A	2		
BC 161/16	Ti		P	S	60	60	5	1A	5W	25c	100		250	1	100						39A	2		
BC 167A	Si		N	S	50	45	6	100	180	(125)	125	260	5	2	300	450					92A	1		
BC 167B	Si		N	S	50	45	6	100	180	(125)	240	500	5	2	300	450					92A	1		
BC 168A	Si		N	S	30	20	5	100	180	(125)	125	260	5	2	300	450					92A	1		
BC 168B	Si		N	S	30	20	5	100	180	(125)	240	500	5	2	300	450					92A	1		
BC 168C	Si		N	S	30	20	5	100	180	(125)	450	900	5	2	300	450					92A	1		
BC 169B	Si		N	S	30	20	5	100	180	(125)	240	500	5	2	300	450					92A	1		
BC 169C	Si		N	S	30	20	5	100	180	(125)	450	900	5	2	300	450					92A	1		
BC 170A	Ns		N	S	20	20	5				35		100	1	1	500					105B	3		
BC 170B	Ns		N	S	20	20	5				80		250	1	1	500					105B	3		
BC 170C	Ns		N	S	20	20	5				200		600	1	1	500					105B	3		
BC 171A	Ns		N	S	45	5					(125	260)	5	2	150						105B	3		
BC 171B	Ns		N	S	45	5					(240	500)	5	2	150						105B	3		
BC 172A	Ns		N	S	20	5					(125	260)	5	2	150						105B	3		
BC 172B	Ns		N	S	20	5					(240	500)	5	2	150						105B	3		
BC 172C	Ns		N	S	20	5					(450	900)	5	2	150						105B	3		
BC 173B	Ns		N	S	20	5					(240	500)	5	2	150						105B	3		
BC 173	Ns		N	S	20	5					(450	900)	5	2	150						105B	3		
BC 174A	It		N	S	70	64	5	100	300	(150)		170		5	2	250	420				92A	3, 5		
BC 174B	It		N	S	70	64	5	100	300	(150)		290		5	2	250	420				92A	3, 5		
BC 177A	Si		P	S	45	5					(120	200)	5	2	130	500	<10	1k			18A	1	BC 107A	
BC 177B	Si		P	S	45	5					(180	460)	5	2	130	500	<10	1k			18A	1	BC 107B	
BC 178A	Si		P	S	25	5					(175)	120	220)	5	2	130	500	<10	1k		18A	1	BC 108A	
BC 178B	Si		P	S	25	5					(175)	180	460)	5	2	130	500	<10	1k		18A	1	BC 108B	
BC 178C	Si		P	S	25	5					(175)	380	800)	5	2	130	500	<10	1k		18A	1	BC 108C	
BC 179B	Si		P	S	20	5					(175)	180	460)	5	2	130	500	<10	1k		18A	1	BC 109B	
BC 179C	Si		P	S	20	5					(175)	380	800)	5	2	130	500	<10	1k		18A	1	BC 109C	
BC 181	Ti		P	S	40	25	5	200	300	25a		>60		5	50						518A	1		
BC 182A	Ti		N	S	60	50	6	200	300	25a	(125	260)	5	2	280		<10	1k			518A	1	BC 212A	
BC 182B	Ti		N	S	60	50	6	200	300	25a	(240	500)	5	2	280		<10	1k			518A	1	BC 212B	
BC 182K	Ns		N	S	60	50	5				40		50	0,01		150					105B	1		
BC 182KA	Ns		N	S	60	50	5				100	480	5	2	150						105B	1		
BC 182KB	Ns		N	S	60	50	5				100		5	2	150						105B	1		
BC 183A	Ti		N	S	45	30	6	200	300	25a	(125	260)	5	2	280		<10	1k			518A	1	BC 213A	
BC 183B	Ti		N	S	45	30	6	200	300	25a	(240	500)	5	2	280		<10	1k			518A	1	BC 213B	
BC 183C	Ti		N	S	45	30	6	200	300	25a	(450	900)	5	2	280		<10	1k			518A	1	BC 213C	
BC 183K	Ns		N	S	45	30	5				100	850	5	2	150						105B	1		
BC 183KA	Ns		N	S	45	30	5				100	850	5	2	150						105B	1		
BC 183KB	Ns		N	S	45	30	5				100	850	5	2	150						105B	1		
BC 183KC	Ns		N	S	45	30	5				100	850	5	2	150									

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo}	V _{ceo}	V _{ebo}	I _c	P _{tot}	t	h _{FE}	(h _{fe})	V _{ce}	I _c	F _T	R _{thj-a}	F	f	ton						
					V	V	V	(I _{cm}) mA	mW	(tj)	min	type	max	(V _{cb}) V	(I _e) mA	°C/W	(C _c)	MHz	(tr)						
BC 199B	Te		N	S	30	20	5	100	50	(125)		290	5	2	300	1600					623A	1			
BC 199C	Te		N	S	30	20	5	100	50	(125)		520	5	2	300	1600					623A	1			
BC 200/01	Ph		P	S	20	20	5	50	50	45a	50	75	105	0.5	0.2	90	1600	2	<15k		342A	1			
BC 200/02	Ph		P	S	20	20	5	50	50	45a	85	140	200	0.5	0.2	90	1600	<4	<15k		342A	1			
BC 200/03	Ph		P	S	20	20	5	50	50	45a	165	250	400	0.5	0.2	90	1600	2	<15k		342A	1			
BC 201 whi	Si		P	S	5	5	5	75	250	(150)	(75	150)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 121 whi			
BC 201 yel	Si		P	S	5	5	5	75	250	(150)	(125	260)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 121 yel			
BC 201 grn	Si		P	S	5	5	5	75	250	(150)	(240	500)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 121 grn			
BC 201 blu	Si		P	S	5	5	5	75	250	(150)	(450	900)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 121 blu			
BC 202 whi	Si		P	S	30	20	5	75	250	(150)	(75	150)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 122 whi			
BC 202 yel	Si		P	S	30	20	5	75	250	(150)	(125	260)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 122 yel			
BC 202 grn	Si		P	S	30	20	5	75	250	(150)	(240	500)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 122 grn			
BC 202 blu	Si		P	S	30	20	5	75	250	(150)	(450	900)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 122 blu			
BC 203 whi	Si		P	S	45	30	5	75	250	(150)	(75	150)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 123 whi			
BC 203 yel	Si		P	S	45	30	5	75	250	(150)	(125	260)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 123 yel			
BC 203 grn	Si		P	S	45	30	5	75	250	(150)	(240	500)	0.5	0.25	80	1000	2.5	1k		809A	1	BC 123 grn			
BC 204	Fa		P	S		45		75				80		0.01						105B	1				
BC 204A	Fa		P	S		45						80		0.01						105B	1				
BC 204B	Fa		P	S		45						150		0.01						105B	1				
BC 205	Fa		P	S		30						80		0.01						105B	1				
BC 205A	Fa		P	S		30						80		0.01						105B	1				
BC 205B	Fa		P	S		30						150		0.01						105B	1				
BC 206	Fa		P	S		20						80		0.01						105B	1				
BC 206A	Fa		P	S		20						80		0.01						105B	1				
BC 206B	Fa		P	S		20						150		0.01						105B	1				
BC 207B	Fa		N	S		45						150		0.01						105B	1				
BC 208B	Fa		N	S		20						150		0.01						105B	1				
BC 208C	Fa		N	S		20						270		0.01						105B	1				
BC 209B	Fa		N	S		20						150		0.01						105B	1				
BC 209C	Fa		N	S		20						270		0.01						105B	1				
BC 212	Ti		P	S	60	50	5	200	300	(150)	60	300	5	2	200		<10	1k		518A	1				
BC 212A	Ti		P	S	60	50	5	200	300	25a	(100	300)	5	2	350		<10	1k		518A	1	BC 182A			
BC 212B	Ti		P	S	60	50	5	200	300	25a	(200	400)	5	2	350					518A	1	BC 182B			
BC 212K	Ns		P	S	60	50	5	500			60	300	5	2	200					105B	1				
BC 212KA	Ns		P	S	60	50	5	500			(100	300)	5	2	200					105B	1				
BC 212KB	Ns		P	S	60	50	5	500			(200	400)	5	2	200					105B	1				
BC 213	Ti		P	S	45	30	5	200	300	(150)	80	400	5	2	200		<10	1k		518A	1				
BC 213A	Ti		P	S	45	30	5	200	300	25a	(100	300)	5	2	350		<10	1k		518A	1	BC 183A			
BC 213B	Ti		P	S	45	30	5	200	300	25a	(200	400)	5	2	350		<10	1k		518A	1	BC 183B			
BC 213C	Ti		P	S	45	30	5	200	300	25a	(350	600)	5	2	350		<10	1k		518A	1	BC 183C			
BC 213K	Ns		P	S	45	30	5	500			80	400	5	2	200					105B	1				
BC 213KA	Ns		P	S	45	30	5	500			80	400	5	2	200					105B	1				
BC 213KB	Ns		P	S	45	30	5	500			80	400	5	2	200					105B	1				
BC 213KC	Ns		P	S	45	30	5	500			(350	600)	5	2	200					105B	1				
BC 214	Ti		P	S	45	30	5	200	300	(150)	140	400	5	2	200					518A	1				
BC 214A	Ti		P	S	45	30	5	200	300	(150)	140	400	5	2	200					518A	1				
BC 214B	Ti		P	S	45	30	5	200	300	25a	(200	400)	5	2	350					518A	1	BC 184B			
BC 214C	Ti		P	S	45	30	5	200	300	25a	(350	600)	5	2	350					518A	1	BC 184C			
BC 214K	Ns		P	S	45	30	5	500			140	400	5	2	200					105B	1				
BC 214KA	Ns		P	S	45	30	5	500			140	400	5	2	200					105B	1				
BC 214KB	Ns		P	S	45	30	5	500			140	400	5	2	200					105B	1				
BC 214KC	Ns		P	S	45	30	5	500			140	400	5	2	200					105B	1				
BC 223A	Ti		N	S	50	30	5	400	360	25a	100	300	2	50						518A	1				
BC 223B	Ti		N	S	50	30	5	400	360	25a	200	450	2	50						518A	1				
BC 224	Ti		P	S	30	30	6	30	250		150	450	5	1						92A	1				
BC 225	Fa		P	S		40						130		0.01						105B	1				
BC 231A	Ti		P	S	40	30	5	400	625	25a	100	300	5	50						92A	1	BC 232A			
BC 231B	Ti		P	S	40	30	5	400	625	25a	200	450	5	50						92A	1	BC 232B			
BC 231 yel	Ti		P	S	40	30	5	400	625		100	150	5	50						92A	1	BC 232 yel			
BC 231 grn	Ti		P	S	40	30	5	400	625		130	195	5	50						92A	1	BC 232 grn			



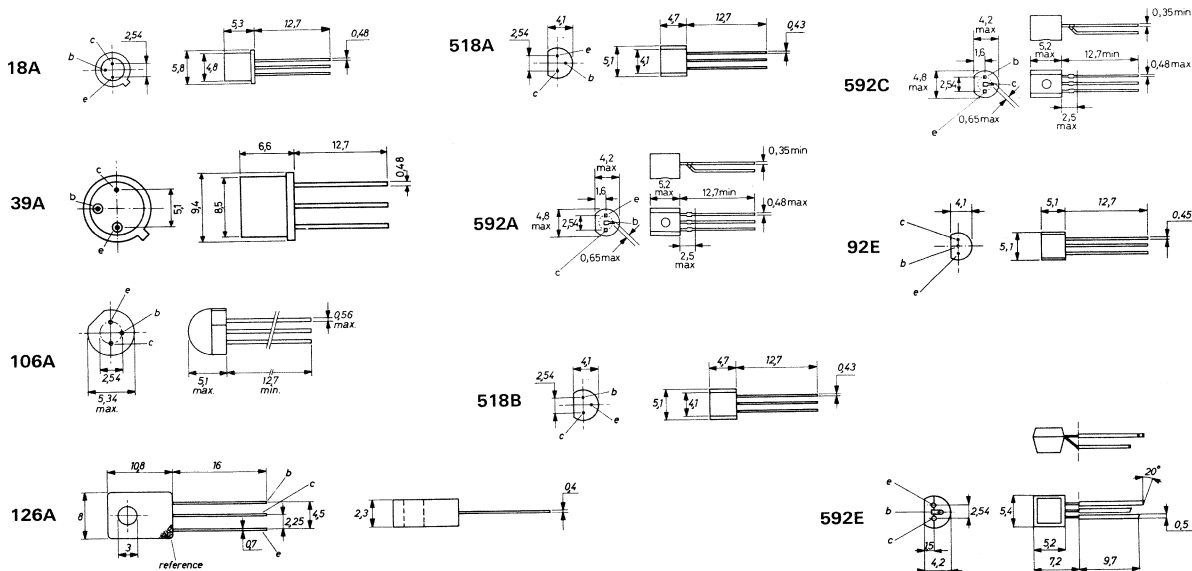
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
BC 231 blu	Ti		P	S	40	30	5	400	625		170	255	5	50							92A	1	BC 232 blu	
BC 231 vio	Ti		P	S	40	30	5	400	625		220	330	5	50							92A	1	BC 232 vio	
BC 231 gre	Ti		P	S	40	30	5	400	625		300	450	5	50							92A	1	BC 232 gre	
BC 232A	Ti		N	S	40	30	5	400	625	25a	100	300	2	50							92A	1	BC 231A	
BC 232B	Ti		N	S	40	30	5	400	625	25a	200	450	2	50							92A	1	BC 231B	
BC 232 yel	Ti		N	S	40	30	5	400	625		100	150	2	50							92A	1	BC 231 yel	
BC 232 grn	Ti		N	S	40	30	5	400	625		130	195	2	50							92A	1	BC 231 grn	
BC 232 blu	Ti		N	S	40	30	5	400	625		170	255	2	50							92A	1	BC 231 blu	
BC 232 vio	Ti		N	S	40	30	5	400	625		220	330	2	50							92A	1	BC 231 vio	
BC 232 gre	Ti		N	S	40	30	5	400	625		300	450	2	50							92A	1	BC 231 gre	
BC 237A	Ph		N	S	50	45	6	100	300	25a	110	180	220	5	2	300	330	<10	1k		755A	1	BC 307	
BC 237A	Ti		N	S	50	45	6	200	300	25a	125	260	5	2	280		<10	1k			518A	1	BC 307A	
BC 237B	Ph		N	S	50	45	6	100	300	25a	200	290	450	5	2	300	330	<10	1k		755A	1		
BC 237B	Ph		N	S	50	45	6	200	300	25a	(240	500)	5	2	280		<10	1k			518A	1	BC 307B	
BC 238A	Ph		N	S	30	20	5	100	300	25a	110	180	220	5	2	300	330	<10	1k		755A	1	BC 308A	
BC 238A	Ti		N	S	30	20	5	200	300	25a	(125	260)	5	2	270		<10	1k			518A	1	BC 308A	
BC 238B	Ph		N	S	30	20	5	100	300	25a	200	290	450	5	2	300	330	<10	1k		755A	1	BC 308B	
BC 238B	Ti		N	S	30	20	5	200	300	25a	(240	500)	5	2	270		<10	1k			518A	1	BC 308B	
BC 238C	Ph		N	S	30	20	5	100	300	25a	420	520	800	5	2	300	330	<10	1k		755A	1		
BC 238C	Ti		N	S	30	20	5	200	300	25a	(450	900)	5	2	270		<10	1k			518A	1	BC 308C	
BC 239B	Ph		N	S	30	20	5	100	300	25a	200	290	450	5	2	300	330	<4	1k		755A	1	BC 309B	
BC 239B	Ti		N	S	30	20	5	200	300	25a	(240	500)	5	2	270						518A	1	BC 309B	
BC 239C	Ph		N	S	30	20	5	100	300	25a	420	520	800	5	2	300	330	<4	1k		755A	1		
BC 239C	Ti		N	S	30	20	5	200	300	25a	(450	900)	5	2	270						518A	1	BC 309C	
BC 250A	It		P	S	20	20	5	100	300	(175)	35	100	1	1	180	500					18A	1, 5		
BC 250B	It		P	S	20	20	5	100	300	(175)	80	250	1	1	180	500					18A	1, 5		
BC 250C	It		P	S	20	20	5	100	300	(175)	200	600	1	1	180	500					18A	1, 5		
BC 251A	Ns		P	S		45	5	20	200		40	400	1	1							105B	1		
BC 251B	Ns		P	S		45	5	20	200		240	500	5	2							105B	1		
BC 251CA	Ns		P	S		45	5	20	200		450	900	5	2							105B	1		
BC 252A	Ns		P	S		20	5	20	200		125	260	5	2							105B	1		
BC 252B	Ns		P	S		20	5	20	200		240	500	5	2							105B	1		
BC 252CA	Ns		P	S		20	5	20	200		450	900	5	2							105B	1		
BC 253A	Ns		P	S		20	5	20	200		(125	260)	5	2							105B	1		
BC 253B	Ns		P	S		20	5	20	200		(240	500)	5	2							105B	1		
BC 253CA	Ns		P	S		20	5	20	200		(450	900)	5	2							105B	1		
BC 254	Ti		N	S	100	55	6	30	250	25a	50	600	5	1							92A	1, 5		
BC 255	It		N	S	100	55	6	30	625	25a	50	600	5	1							92A	1, 5		
BC 256A	It		P	S		64	5	100	300	(150)	125	260	5	2	130	420					92A	1, 5		
BC 256B	It		P	S		64	5	100	300	(150)	240	500	5	2	130	420					92A	1, 5		
BC 257A	Si		P	S		45	5	100	300	(150)	(120	220)	5	2	130	420	<10	1k			92A	1	BC 167A	
BC 257B	Si		P	S		45	5	100	300	(150)	(180	460)	5	2	130	420	<10	1k			92A	1	BC 167B	
BC 258A	Si		P	S		25	5	100	300	(150)	(120	220)	5	2	130	420	<10	1k			92A	1	BC 168A	
BC 258B	Si		P	S		25	5	100	300	(150)	(180	460)	5	2	130	420	<10	1k			92A	1	BC 168B	
BC 258C	Si		P	S		25	5	100	300	(150)	(380	800)	5	2	130	420	<10	1k			92A	1	BC 168C	
BC 259B	Si		P	S		20	5	50	300	(150)	(180	460)	5	2	130	420	<10	1k			92A	1	BC 169B	
BC 259C	Si		P	S		20	5	50	300	(150)	(380	800)	5	2	130	420	<10	1k			92A	1	BC 169C	
BC 260A	It		P	S	20	20	5	100	300	(150)	35	100	1	1	180	420					92A	1, 5		
BC 260B	It		P	S	20	20	5	100	300	(150)	80	250	1	1	180	420					92A	1, 5		
BC 260C	It		P	S	20	20	5	100	300	(150)	200	600	1	1	180	420					92A	1, 5		
BC 261A	Ns		P	S		45		20	200		(125	600)	5	2							18A	1		
BC 261B	Ns		P	S		45		20	200		(240	500)	5	2							18A	1		
BC 262A	Ns		P	S		20	5	20	200		(125	260)	5	2							18A	1		
BC 262B	Ns		P	S		20	5	20	200		(240	500)	5	2							18A	1		
BC 263A	Ns		P	S		20	5	20	200		125	260	5	2							18A	1		
BC 263B	Ns		P	S		20	5	20	200		240	500	5	2							18A	1		
BC 266A	It		P	S		64	5	100	300	(175)	125	260	5	2	130	500					18A	1		
BC 266B	It		P	S		64	5	100	300	(175)	240	500	5	2	130	500					18A	1		
BC 267A	At		N	S	50	45	6	500	375	(175)	(125	260)	5	2	200	400					18A	5, 12		
BC 267B	At		N	S	50	45	6	500	375	(175)	(240	500)	5	2	200	400					18A	5, 12		
BC 268A	At		N	S	30	20	6	500	375	(175)	(125	260)	5	2	200	400					18A	5, 12		
BC 268B	At		N	S	30	20	6	500	375	(175)	(240	500)	5	2	200	400					18A	5, 12		
BC 268C	At		N	S	30	20	6	500	375	(175)	(450	900)	5	2	200	400					18A	5, 12		
BC 269B	At		N	S	30	20	6	500	375	(175)	(240	500)	5	2	200	400					18A	5, 12		
BC 269C	At		N	S	3																			

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (I _C)	f MHz	ton (tr)			
BC 303/V	At		P	S	85	60	7	500	6W	(175)	70	140	10	150	75	175	175				39A	6	
BC 303/VI	At		P	S	85	60	7	500	6W	(175)	120	240	10	150	75	175	175				39A	6	
BC 304/IV	At		P	S	60	45	7	500	6W	(175)	40	80	10	150	75	175	175				39A	6	
BC 304/V	At		P	S	60	45	7	500	6W	(175)	70	140	10	150	75	175	175				39A	6	
BC 304/VI	At		P	S	60	45	7	500	6W	(175)	120	240	10	150	75	175	175				39A	6	
BC 307	Ph		P	S	50	45	5	100	300	25a	75	140	260	5	2	150	330	<10	1k		755A	1	BC 237A
BC 307/VI	Te		P	S	50	45	5	100	300	(150)	(75)	150	5	2	130	330					518A	1	BC 237A
BC 307A	Ti		P	S	50	45	5	200	300	25a	(125)	260	5	2	350						518A	1	BC 237B
BC 307B	Ph		P	S	50	45	5	200	300	25a	(240)	500	5	2	350						92A	1	
BC 308/VI	Te	P	S	30	25	5	100	300	(150)	(75)	150	5	2	130	330								
BC 308A	Ph		P	S	30	25	5	100	300	25a	125	180	260	5	2	150	330	<10	1k		755A	1	BC 238A
BC 308A	Ti		P	S	30	25	5	200	300	25a	(125)	260	5	2	350						518A	1	BC 238A
BC 308B	Ph		P	S	30	25	5	100	300	25a	240	290	500	5	2	150	330	<10	1k		755A	1	BC 238B
BC 308B	Ti		P	S	30	25	5	200	300	25a	(240)	500	5	2	350						518A	1	BC 238B
BC 308C	Ti		P	S	30	25	5	200	300	25a	(450)	900	5	2	350						518A	1	BC 238C
BC 309A	Ph		P	S	25	20	5	100	300	25a	125	180	260	5	2	150	330	<4	1k		755A	1	
BC 309B	Ph		P	S	25	20	5	100	300	25a	240	290	500	5	2	150	330	<4	1k		755A	1	BC 239B
BC 309B	Ti		P	S	30	20	5	200	300	25a	(240)	500	5	2	350						518A	1	BC 239B
BC 309C	Ti		P	S	30	20	5	200	300	25a	(450)	900	5	2	350						518A	1	BC 239C
BC 315	Ti		P	S	45	35	5	100	300	25a	100	350	5	2	>200						518A	1	
BC 317	Fa		N	S		45			625		(125)	500		2							92E	1	
BC 317A	Fa		N	S		45			625		(125)	260		2							92E	1	
BC 317B	Fa		N	S		45			625		(240)	500		2							92E	1	
BC 318	Fa		N	S		30			625		(125)	900		2							92E	1	
BC 318A	Fa		N	S		30			625		(125)	260		2							92E	1	
BC 318B	Fa		N	S		30			625		(240)	500		2							92E	1	
BC 318C	Fa		N	S		20			625		(450)	900		2							92E	1	
BC 319	Fa		N	S		20			625		(240)	900		2							92E	1	
BC 319B	Fa		N	S		20			625		(250)	500		2							92E	1	
BC 319C	Fa		N	S		20			625		(450)	900		2							92E	1	
BC 320	Fa		P	S		45			625		(110)	450		2							92E	1	
BC 320A	Fa		P	S		45			625		(110)	220		2							92E	1	
BC 320B	Fa		P	S		45			625		(200)	450		2							92E	1	
BC 321	Fa		P	S		30			625		(110)	800		2							92E	1	
BC 321A	Fa		P	S		30			625		(110)	220		2							92E	1	
BC 321B	Fa		P	S		30			625		(200)	450		2							92E	1	
BC 322	Fa		P	S		20			625		(200)	800		2							92E	1	
BC 322B	Fa		P	S		20			625		(200)	450		2							92E	1	
BC 323	At		N	S		100	45	5A	7W	25m	50	250	1	500	100	220					39A	11	
BC 327/16	Ph		P	S		60	5	500	625		25a	100	250	1	100	100	200				592A	1	BC 337/16
BC 327/16	Ti		P	S	50	45	5	300	625	25a	100	250	1	100	100	200					518B	7	BC 337/16
BC 327/25	Ph		P	S		45	5	500	625	25a	160	400	1	100	100	200					592A	1	BC 337/25
BC 327/25	Ph		P	S	50	45	5	300	625	25a	160	400	1	100	200						518B	7	BC 337/25
BC 327/40	Ph		P	S	50	45	5	300	625	25a	250	630	1	100	200						518B	7	BC 337/40
BC 328/16	Ti		P	S	30	25	5	300	625	25a	100	250	1	100	100	200					592A	1	BC 338/16
BC 328/25	Ph		P	S		25	5	500	625	25a	160	400	1	100	100	200					518B	7	BC 338/16
BC 328/25	Ti		P	S	30	25	5	300	625	25a	160	400	1	100	200						518B	7	BC 338/25
BC 328/40	Ti		P	S	30	25	5	300	625	25a	250	630	1	100	200						518B	7	BC 338/25
BC 329	Ti		N	S	60	60		30	250		220			2							518B	1, 5	BC 338/40
BC 329B	Ti		N	S	60	60		30	250		240	500		2							518B	1, 5	
BC 329C	Ti		N	S	60	60		30	250		450	900		2							518B	1, 5	
BC 330B	Ti		N	S	45	45	6	30	250	25a	(240)	500	5	2							518A	1	
BC 330C	Ti		N	S	45	45	6	30	250		(450)	900	5	2							518A	1	
BC 331	Ti		N	S	60	60		30	250		100			2							518B	1, 5	



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
BC 331A	Ti		N	S	60	60		30	250		120	260		2							518B	1, 5			
BC 331B	Ti		N	S	60	60		30	250		240	500		2							518B	1, 5			
BC 331C	Ti		N	S	60	60		30	250		450	900		2							518B	1, 5			
BC 332	Ti		N	S	45	45		30	250		100			2							518B	1, 5			
BC 332A	Ti		N	S	45	45		30	250		125	260		2							518B	1, 5			
BC 332B	Ti		N	S	45	45		30	250		240	500		2							518B	1, 5			
BC 332C	Ti		N	S	45	45		30	250		450	900		2							518B	1, 5			
BC 337	Ti		N	S	50	45	5	300	625	25a	100	630	1	100							518A	1			
BC 337/16	Ph		N	S		45	5	500	625	25a	100	250	1	100	200	200					592A	1	BC 327/16		
BC 337/25	Ph		N	S		45	5	500	625	25a	160	400	1	100	200	200					592A	1	BC 327/25		
BC 338	Ti		N	S	30	25	5	300	625	25a	100	630	1	100							518A	1			
BC 338/16	Ph		N	S		25	5	500	625	25a	100	250	1	100	200	200					592A	1	BC 328/16		
BC 338/25	Ph		N	S		25	5	500	625	25a	160	400	1	100	200	200					592A	1	BC 338/25		
BC 340-6	It		N	S	40	40	5	500	3W	(200)	40	100	5	50	100	220					39A	2, 6			
BC 340-10	It		N	S	40	40	5	500	3W	(200)	63	160	5	50	100	220					39A	2, 6			
BC 340-16	It		N	S	40	40	5	500	3W	(200)	100	250	5	50	100	220					39A	2, 6			
BC 341-6	It		N	S	60	60	5	500	3W	(200)	40	100	5	50	100	220					39A	2, 6			
BC 341-10	It		N	S	60	60	5	500	3W	(200)	63	160	5	50	100	220					39A	2, 6			
BC 360-6	P		N	S	40	40	5	500	3W	(200)	40	100	5	50	250	220					39A	2, 6			
BC 360-10	It		P	S	40	40	5	500	3W	(200)	63	160	5	50	250	220					39A	2, 6			
BC 360-16	It		P	S	40	40	5	500	3W	(200)	100	250	5	50	250	220					39A	2, 6			
BC 361-6	It		P	S	60	60	5	500	3W	(200)	40	100	5	50	250	220					39A	2, 6			
BC 361-10	It		P	S	60	60	5	500	3W	(200)	63	160	5	50	250	220					39A	2, 6			
BC 368	Ph		N	S		20	5	1A	1W	25a	85	375	1	500	65	156					592C	1	BC 369		
BC 369	Ph		P	S		20	5	1A	1W	25a	85	375	1	500	65	156					592C	1	BC 368		
BC 370/V	At		P	S	20	20	5	500	375	(175)	50	100	5	10	150	400					18A	1			
BC 370/VI	At		P	S	20	20	5	500	375	(175)	75	150	5	10	150	400					18A	1			
BC 370A	At		P	S	20	20	5	500	375	(175)	240	500	5	10	150	400					18A	1			
BC 377/VI	At		N	S		45	6	1A	1W	(175)	75	150	1	100	200	400					18A	2			
BC 377/VII	At		N	S		45	6	1A	1W	(175)	125	260	1	100	200	400					18A	2			
BC 377/VIII	At		N	S		45	6	1A	1W	(175)	240	500	1	100	200	400					18A	2			
BC 378/VI	At		N	S		25	6	1A	1W	(175)	75	150	1	100	200	400					18A	2			
BC 378/VII	At		N	S		25	6	1A	1W	(175)	125	260	1	100	200	400					18A	2			
BC 378/VIII	At		N	S		25	6	1A	1W	(175)	240	500	1	100	200	400					18A	2			
BC 381	Ti		P	S	40	25	5	200	625	25a		>60	5	50							518A	1			
BC 382B	Ti		N	S	50	45	6	100	300	25a	(240	500)	5	2		>150					518A	1			
BC 382C	Ti		N	S	50	45	6	100	300	25a	(450	900)	5	2		>150					518A	1			
BC 383B	Ti		N	S	45	30	6	100	300	25a	(240	500)	5	2		>150					518A	1			
BC 383C	Ti		N	S	45	30	6	100	300	25a	(450	900)	5	2		>150					518A	1			
BC 384B	Ti		N	S	45	30	6	100	300	25a	(250	500)	5	2		>150					518A	1			
BC 384C	Ti		N	S	45	30	6	100	300	25a	(450	900)	5	2		>150					518A	1			
BC 385A	Ti		N	S	45	45	6	100	300	25a	(125	260)	5	2		>150					518A	1			
BC 385B	Ti		N	S	45	45	6	100	300	25a	(240	500)	5	2		>150					518A	1			
BC 386A	Ti		N	S	30	20	6	100	300	25a	(125	260)	5	2		>150					518A	1			
BC 386B	Ti		N	S	30	20	6	100	300	25a	(240	500)	5	2		>150					518A	1			
BC 407A	Ph		N	S	50	45	5	100	250	25a	(125	220	260)	5	2		300	400	<10	1k	106A	1	BC 417		
BC 407B	Ph		N	S	50	45	6	100	250	25a	(240	330	500)	5	2		300	400	<10	1k	106A	1			
BC 408A	Ph		N	S	30	20	5	100	250	25a	(125	220	260)	5	2		300	400	<10	1k	106A	1	BC 418A		
BC 408B	Ph		N	S	30	20	5	100	250	25a	(240	330	500)	5	2		300	400	<10	1k	106A	1	BC 418B		
BC 408C	Ph		N	S	30	20	5	100	250	25a	(450	600	900)	5	2		300	400	<10	1k	106A	1			
BC 409B	Ph		N	S	30	20	5	100	250	25a	(240	330	500)	5	2		300	400	<4	1k	106A	1	BC 419B		
BC 409C	Ph		N	S	30	20	5	100	250	25a	(450	600	900)	5	2		300	400	<4	1k	106A	1			
BC 413B	Te		N	S	45	30	5	100	300	(150)	180	460	5	2		250	420				592E	1			
BC 413C	Te		N	S	45	30	5	100	300	(150)	380	800	5	2		250	420				592E	1			
BC 414B	Te		N	S	50	45	5	100	300	(150)	180	460	5	2		250	420				592E	1			
BC 414C	Te		N	S	50	45	5	100	300	(150)	380	800	5	2		250	420				592E	1			
BC 415A	Te		P	S	45	35	5	100	300	(150)	120	220	5	2		200	420				592E	1			
BC 415B	Te		P	S	45	35	5	100	300	(150)	180	460	5	2		200	420				592E	1			
BC 415C	Te		P	S	45	35	5	100	300	(150)	380	800	5	2		200	420				592E	1			
BC 416A	Te		P	S	50	45	5	100	300	(150)	120	200	5	2		200	420				592E	1			
BC 416B	Te		P	S	50	45	5	100	300	(150)	180	460	5	2		200	420				592E	1			
BC 416C	Te		P	S	50	45	5	100	300	(150)	380	800	5	2		200	420				592E	1			
BC 417	Ph		P	S	50	45	5	100	250	25a	(75	260)	5	2		150	400	<10	1k		106A	1	BC 407A		
BC 418A	Ph		P	S	30	25	5	100	250	25a	(125	260)	5	2		150	400	<10	1k		106A				

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
BC 461-5	At		P	S	75	60	5	(2A)	10W	25m	60	130	4	500	>50	175				39A	2	BC 441-5		
BC 461-6	At		P	S	75	60	5	(2A)	10W	25m	115	250	4	500	>50	175				39A	2	BC 441-6		
BC 477A	At		P	S		80	6	150	1.2W	25m	110	250	5	2		480	<10			18A	1			
BC 477VI	At		P	S		80	6	150	1.2W	25m	70	130	5	2		480	<10			18A	1			
BC 478A	At		P	S		50	6	150	1.2W	25m	110	250	5	2		480	<6			18A	1			
BC 478B	At		P	S		50	6	150	1.2W	25m	220	450	5	2		480	<6			18A	1			
BC 479B	At		P	S		40	6	150	1.2W	25m	220	450	5	2		480	<4			18A	1			
BC 512	Ti		P	S	50	45		200	300		60	300		2						518B	1, 5			
BC 513	Ti		P	S	30	25		200	300		80	400		2						518B	1, 5			
BC 514	Ti		P	S	30	20		200	300		140	400		2						518B	1, 5			
BC 516	Ti	da	N	S	40	30	10	400	625	25a	>30.000	2	20	250						518A	1	BC 517		
BC 517	Ti	da	N	S	40	30	10	400	600	25a	>30.000	2	20	220						518A	1	BC 516		
BC 520B	Fa		N	S	60	60	8	50	1W	25c	180	460	5	2		<6				92E	1			
BC 520C	Fa		N	S	60	60	8	50	1W	25c	380	800	5	2		<6				92E	1			
BC 521C	Fa		N	S	45	45	8	50	1W	25c	380	800	5	2		<6				92E	1			
BC 521D	Fa		N	S	45	45	8	50	1W	25c	750	1550	5	2		<6				92E	1			
BC 522C	Fa		N	S	20	20	6	50	1W	25c	400	800	5	2		<3				92E	1			
BC 522D	Fa		N	S	20	20	6	50	1W	25c	750	1550	5	2		<3				92E	1			
BC 522E	Fa		N	S	20	20	6	50	1W	25c	1200	2200	5	2		<3				92E	1			
BC 523B	Fa		N	S	45	45	12	50	1W	25c	180	400	5	2						92E	1			
BC 523C	Fa		N	S	45	45	12	50	1W	25c	380	800	5	2		<10				92E	1			
BC 526A	Fa		P	S	60	50	6	200	1W	25c	100	300	5	2		<4				92E	1			
BC 526B	Fa		P	S	60	50	6	200	1W	25c	200	400	5	2		<4				92E	1			
BC 526C	Fa		P	S	60	50	6	200	1W	25c	350	600	5	2						92E	1			
BC 527-6	Fa		P	S	60	60	6	1A	1W	25c	40	100	1	100						92E	1	BC 537-6		
BC 527-10	Fa		P	S	60	60	6	1A	1W	25c	63	160	1	100						92E	1	BC 537-10		
BC 527-16	Fa		P	S	60	60	6	1A	1W	25c	100	250	1	100						92E	1	BC 537-16		
BC 527-25	Fa		P	S	60	60	6	1A	1W	25c	160	400	1	100						92E	1	BC 537-25		
BC 528-6	Fa		P	S	80	80	6	1A	1W	25c	40	100	1	100						92E	1	BC 538-6		
BC 528-10	Fa		P	S	80	80	6	1A	1W	25c	63	160	1	100						92E	1	BC 538-10		
BC 528-16	Fa		P	S	80	80	6	1A	1W	25c	100	250	1	100						92E	1	BC 538-16		
BC 528-25	Fa		P	S	80	80	6	1A	1W	25c	160	400	1	100						92E	1	BC 538-25		
BC 530	Fa		P	S	130	120	6	100	1W	25c	40	180	5	10		>50				92E	8	BC 532		
BC 531	Fa		P	S	160	25c	6	100	1W	25c	60	240	5	10		>50				92E	8	BC 533		
BC 532	Fa		N	S	160	140	6	100	1W	25c	60	250	5	10		>50				92E	8	BC 530		
BC 533	Fa		N	S	180	160	6	100	1W	25c	40	250	5	10		>50				92E	8	BC 531		
BC 534	Fa		P	S	80	80	6	500	1W	25c			1	10		>50				92E	1	BC 535		
BC 535	Fa		N	S	80	80	6	500	1W	25c			1	10		>50				92E	1	BC 534		
BC 537-6	Fa		N	S	60	60	6	1A	1W	25c	40	100	1	100						92E	1	BC 527-6		
BC 537-10	Fa		N	S	60	60	6	1A	1W	25c	63	160	1	100						92E	1	BC 527-10		
BC 537-16	Fa		N	S	60	60	6	1A	1W	25c	100	250	1	100						92E	1	BC 527-16		
BC 537-25	Fa		N	S	60	60	6	1A	1W	25c	160	400	1	100						92E	1	BC 527-25		
BC 538-6	Fa		N	S	80	80	6	1A	1W	25c	40	100	1	100						92E	1	BC 528-6		
BC 538-10	Fa		N	S	80	80	6	1A	1W	25c	63	160	1	100						92E	1	BC 528-10		
BC 538-16	Fa		N	S	80	80	6	1A	1W	25c	100	250	1	100						92E	1	BC 528-16		
BC 538-25	Fa		N	S	80	80	6	1A	1W	25c	160	400	1	100						92E	1	BC 528-25		
BC 546VI	Si		N	S	80	65	6	100	500	150	(75	150)	5	2	300	250	<10	1k		592A	1	BC 556VI		
BC 546A	Ph		N	S	80	65	6	100	500	25a	(125	220	260)	5	2	300	250	<10	1k		592A	1	BC 556A	
BC 546B	Ph		N	S	80	65	6	100	500	25a	(240	330	500)	5	2	300	250	<10	1k		592A	1		
BC 547A	Ph		N	S	50	45	6	100	500	25a	(125	220	260)	5	2	300	250	<10	1k		592A	1	BC 557A	



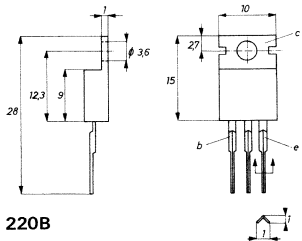
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} V	I _c (I _g) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
BC 547B	Ph		N	S	50	45	6	100	500	25a	(240 330 500)	5	2	300	250	<10	1k		592A	1	BC 557B			
BC 547C	Ph		N	S	50	45	6	100	500	25a	(450 600 900)	5	2	300	250	<10	1k		592A	1				
BC 548A	Ph		N	S	30	30	5	100	500	25a	(125 220 260)	5	2	300	250	<10	1k		592A	1	BC 558A			
BC 548B	Ph		N	S	30	30	5	100	500	25a	(240 330 500)	5	2	300	250	<10	1k		592A	1	BC 558B			
BC 548C	Ph		N	S	30	30	5	100	500	25a	(450 600 900)	5	2	300	250	<10	1k		592A	1				
BC 549B	Ph		N	S	30	30	5	100	500	25a	(240 330 500)	5	2	300	250	<4	1k		592A	1	BC 559B			
BC 549C	Ph		N	S	30	30	5	100	500	25a	(450 600 900)	5	2	300	250	<4	1k		592A	1				
BC 550B	Ph		N	S	50	45	5	100	500	25a	(240 330 500)	5	2	300	250	<4	1k		592A	1	BC 560B			
BC 550C	Ph		N	S	50	45	5	100	500	25a	(450 600 900)	5	2	300	250	<4	1k		592A	1				
BC 556	Ph		P	S	80	65	5	100	500	25a	75 250	5	2	150	250	<10	1k		592A	1				
BC 556A	Ph		P	S	80	65	5	100	500	25a	125 250	5	2	150	250	<10	1k		592A	1	BC 546A			
BC 557	Ph		P	S	50	45	5	100	500	25a	75 475	5	2	150	250	<10	1k		592A	1				
BC 557A	Ph		P	S	50	45	5	100	500	25a	125 250	5	2	150	250	<10	1k		592A	1	BC 547A			
BC 557B	Ph		P	S	50	45	5	100	500	25a	220 475	5	2	150	250	<10	1k		592A	1	BC 547B			
BC 558	Ph		P	S	30	30	5	100	500	25a	75 475	5	2	150	250	<10	1k		592A	1				
BC 558A	Ph		P	S	30	30	5	100	500	25a	125 250	5	2	150	250	<10	1k		592A	1	BC 548A			
BC 558B	Ph		P	S	30	30	5	100	500	25a	220 475	5	2	150	250	<10	1k		592A	1	BC 548B			
BC 559	Ph		P	S	30	30	5	100	500	25a	125 475	5	2	150	250	<4	1k		592A	1				
BC 559A	Ph		P	S	30	30	5	100	500	25a	125 250	5	2	150	250	<4	1k		592A	1				
BC 559B	Ph		P	S	30	30	5	100	500	25a	220 475	5	2	150	250	<4	1k		592A	1	BC 549B			
BC 560	Ph		P	S	50	45	5	100	500	25a	125 475	5	2	150	250	<4	1k		592A	1				
BC 560A	Ph		P	S	50	45	5	100	500	25a	125 250	5	2	150	250	<4	1k		592A	1				
BC 560B	Ph		P	S	50	45	5	100	500	25a	220 475	5	2	150	250	<4	1k		592A	1	BC 550B			
BC 582	Ti		N	S	50	45	5	200	300		100 480		2					518B	1, 5					
BC 583	Ti		N	S	30	20		200	300		100 850		2					518B	1, 5					
BC 635	Ph		N	S	45	45	5	1A	800	(150)	40 250	2	150	130	156			592C	1	BC 636				
BC 636	Ph		P	S	45	45	5	1A	800	(150)	40 250	2	150	50	156			592C	1	BC 635				
BC 637	Ph		N	S	60	60	5	1A	800	(150)	40 160	2	150	130	156			592C	1	BC 638				
BC 638	Ph		P	S	60	60	5	1A	800	(150)	40 160	2	150	50	156			592C	1	BC 637				
BC 639	Ph		N	S	100	80	5	1A	800	(150)	40 160	2	150	130	156			592C	1	BC 640				
BC 640	Ph		P	S	100	80	5	1A	800	(150)	40 160	2	150	50	156			592C	1	BC 639				
BC 727-10	Fa		P	S	50	40	5	1A	1W	25c	63 160	1	100					92E	1	BC 737-10				
BC 727-16	Fa		P	S	50	40	5	1A	1W	25c	100 250	1	100					92E	1	BC 737-16				
BC 727-25	Fa		P	S	50	40	5	1A	1W	25c	160 400	1	100					92E	1	BC 737-25				
BC 727-40	Fa		P	S	50	40	5	1A	1W	25c	250 630	1	100					92E	1	BC 737-40				
BC 728-10	Fa		P	S	30	25	5	1A	1W	25c	63 160	1	100					92E	1	BC 738-10				
BC 728-16	Fa		P	S	30	25	5	1A	1W	25c	100 250	1	100					92E	1	BC 738-16				
BC 728-25	Fa		P	S	30	25	5	1A	1W	25c	160 400	1	100					92E	1	BC 738-25				
BC 728-40	Fa		P	S	30	25	5	1A	1W	25c	250 630	1	100					92E	1	BC 738-40				
BC 737-10	Fa		N	S	50	40	5	1A	1W	25c	63 160	1	100					92E	1	BC 727-10				
BC 737-16	Fa		N	S	50	40	5	1A	1W	25c	100 250	1	100					92E	1	BC 727-16				
BC 737-25	Fa		N	S	50	40	5	1A	1W	25c	160 400	1	100					92E	1	BC 727-25				
BC 737-40	Fa		N	S	50	40	5	1A	1W	25c	250 630	1	100					92E	1	BC 727-40				
BC 738-10	Fa		N	S	30	25	5	1A	1W	25c	63 160	1	100					92E	1	BC 728-10				
BC 738-16	Fa		N	S	30	25	5	1A	1W	25c	100 250	1	100					92E	1	BC 728-16				
BC 738-25	Fa		N	S	30	25	5	1A	1W	25c	160 400	1	100					92E	1	BC 728-25				
BC 738-40	Fa		N	S	30	25	5	1A	1W	25c	250 630	1	100					92E	1	BC 728-40				
BCW 10	Fe		N	S	25	25	5	500	300		250 630	1	100					759A	3					
BCW 11	Fe		P	S	25	25	5	500	300		50 300	6	10	150				759A	3					
BCW 12	Fe		N	S	35	35	5	500	300		50 300	6	10	150				759A	3					
BCW 13	Fe		P	S	35	35	5	500	300		50 300	6	10	150				759A	3					
BCW 14	Fe		N	S	35	35	5	500	300		100 300	6	10	150				759A	3					
BCW 15	Fe		P	S	35	35	5	500	300		100 300	6	10	150				759A	3					
BCW 16	Fe		N	S	45	45	5	500	300		50 300	6	10	150				759A	3					
BCW 17	Fe		P	S	45	45	5	500	300		50 300	6	10	150				759A	3					
BCW 18	Fe		N	S	70	70	5	500	300		50 300	6	10	150				759A	3					
BCW 19	Fe		P	S	70	70	5	500	300		50 300	6	10	150				759A	3					
BCW 20	Fe		N	S	30	30	5	500	300		100 400	6	0.1	30				759A	3, 5					
BCW 21	Fe		P	S	30	30	5	500	300		100 400	6	0.1	30				759A	3, 5					
BCW 22	Fe		N	S	45	45	5	500	300		40 120	6	0.01	30				759A	3, 5					
BCW 23	Fe		P	S	45	45	5	500	300		40 120	6	0.01	30				759A	3, 5					
BCW 29	Ph		P	S	30	20	5	100	200	25a	120 260	5	2	150	620	<10	1k		323B	1	BCW 31			
BCW 30	Ph		P	S	30	20	5	100	200	25a	215 500	5	2	150	620	<10	1k		323B	1	BCW 32			
BCW 31	Ph		N	S	30	20	5	100	200	25a	110 220	5	2	300	620	<10	1k		323B	1	BCW 29			
BCW 32	Ph		N	S	30	20	5	100	200	25a	200 450	5	2	300	620	<10	1k		323B	1	BCW 30			
BCW 33	Ph		N	S	30	20	5	100	200	25a	420 800	5	2	300	620	<10	1k		323B	1				
BCW 46A	Ph		N	S	80	60	5	100	200	50a	110 220	5	2	3										

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (I _C)	f MHz	ton (tr)					
BCW 60A	Si		N	S		32	5	100	150	(150)	120	220	5	2	250	450					323B	1, 5	BCW 61A	
BCW 60A	Te		N	S		32	5	200	150	45a	120	220	5	2	250	700	<6				323A	1, 5		
BCW 60B	Si		N	S		32	5	100	150	(150)	180	310	5	2	250	450					323B	1, 5	BCW 61B	
BCW 60B	Te		N	S		32	5	200	150	45a	180	310	5	2	250	700	<6				323A	1, 5		
BCW 60C	Si		N	S		32	5	100	150	(150)	250	460	5	2	250	450					323B	1, 5	BCW 61C	
BCW 60C	Te		N	S		32	5	200	150	45a	250	460	5	2	250	700	<6				323A	1, 5		
BCW 60D	Si		N	S		32	5	100	150	(150)	380	630	5	2	250	450					323B	1, 5	BCW 61D	
BCW 60D	Te		N	S		32	5	200	150	45a	380	630	5	2	250	700	<6				323A	1, 5		
BCW 61A	Si		P	S		32	5	100	150	(150)	120	220	5	2	180	450					323B	1, 5	BCW 60A	
BCW 61A	Te		P	S		32	5	200	150	45a	120	220	5	2	150	700	<6				323A	1, 5		
BCW 61B	Si		P	S		32	5	100	150	(150)	180	310	5	2	180	450					323B	1, 5	BCW 60B	
BCW 61B	Te		P	S		32	5	200	150	45a	180	310	5	2	150	700	<6				323A	1, 5		
BCW 61C	Si		P	S		32	5	100	150	(150)	250	460	5	2	180	450					323B	1, 5	BCW 60C	
BCW 61C	Te		P	S		32	5	200	150	45a	250	460	5	2	150	700	<6				323A	1, 5		
BCW 61D	Si		P	S		32	5	100	150	(150)	280	630	5	2	180	450					323B	1, 5	BCW 60D	
BCW 61D	Te		P	S		32	5	200	150	45a	380	630	5	2	150	700	<6				323A	1, 5		
BCW 62A	Ti		P	S	60	50	5	200	225	25a	(100)	300	5	2	>200		2,5	1k			806A	1	BCW 82A	
BCW 62B	Ti		P	S	60	50	5	200	225	25a	(200)	400	5	2	>200		2,5	1k			806A	1		
BCW 63A	Ti		P	S	45	30	5	200	225	25a	(100)	300	5	2	>200		2,5	1k			806A	1	BCW 83A	
BCW 63B	Ti		P	S	45	30	5	200	225	25a	(200)	400	5	2	>200		2,5	1k			806A	1		
BCW 63C	Ti		P	S	45	30	5	200	225	25a	(350)	600	5	2	>200						806A	1	BCW 83C	
BCW 64B	Ti		P	S	45	30	5	200	225	25a	(200)	400	5	2	>200						806A	1		
BCW 64C	Ti		P	S	45	30	5	200	225	25a	(350)	600	5	2	>200						806A	1	BCW 84C	
BCW 69	Ph		P	S	50	45	5	100	200	25a	120	260	5	2	150	620	<10	1k			323B	1		
BCW 70	Ph		P	S	50	45	5	100	200	25a	215	500	5	2	150	620	<10	1k			323B	1	BCW 72	
BCW 71	Ph		N	S	50	45	5	100	200	25a	110	220	5	2	150	620	<10	1k			323B	1		
BCW 72	Ph		N	S	50	45	5	100	200	25a	200	450	5	2	150	620	<10	1k			323B	1	BCW 70	
BCW 82A	Ti		N	S	60	50	6	200	225	25a	(125)	260	5	2	>350		<10	1k			806A	1		
BCW 82B	Ti		N	S	60	50	6	200	225	25a	(240)	500	5	2	>350		<10	1k			806A	1	BCW 62B	
BCW 83A	Ti		N	S	45	30	6	200	225	25a	(125)	260	5	2	>150		<10	1k			806A	1		
BCW 83B	Ti		N	S	45	30	6	200	225	25a	(240)	500	5	2	>150		<10	1k			806A	1	BCW 63A	
BCW 83C	Ti		N	S	45	30	6	200	225	25a	(450)	900	5	2	>150		<10	1k			806A	1		
BCW 84B	Ti		N	S	45	30	6	200	225	25a	(240)	500	5	2	>150		<4	1k			806A	1	BCW 64C	
BCW 84C	Ti		N	S	45	30	6	200	225	25a	(450)	900	5	2	>150		<4	1k			806A	1		
BCW 85	Ti		P	S	90	60	6	200	300	25a	150	350	5	20	>200						518A	7	BCW 63B	
BCW 86	Ti		P	S	70	50	6	200	300	25a	150	350	5	20	>200						518A	7		
BCX 17	Ph		P	S	(50)	45	5	500	310	25a	100	600	1	100	100	400	(8p)				323B	7	BCX 19	
BCX 18	Ph		P	S	(30)	25	5	500	310	25a	100	600	1	100	100	400	(8p)				323B	7		
BCX 19	Ph		N	S	(50)	45	5	500	310	25a	100	600	1	100	200	400	(5p)				323B	7	BCX 17	
BCX 20	Ph		N	S	(30)	25	5	500	310	25a	100	600	1	100	200	400	(5p)				323B	7		
BCX 70G	Te		N	S		45	5	200	150	45a	120	220	5	2	250	700	<6	1k			323A	1, 5	BCX 71G	
BCX 70H	Te		N	S		45	5	200	150	45a	180	310	5	2	250	700	<6	1k			323A	1, 5		
BCX 70J	Te		N	S		45	5	200	150	45a	250	460	5	2	250	700	<6	1k			323A	1, 5	BCX 71J	
BCX 70K	Te		N	S		45	5	200	150	45a	380	630	5	2	250	700	<6	1k			323A	1, 5		
BCX 71G	Te		P	S		45	5	200	150	45a	120	220	5	2	150	700	<6	1k			323A	1, 5	BCX 70H	
BCX 71H	Te		P	S		45	5	200	150	45a	180	310	5	2	150	700	<6	1k			323A	1, 5		
BCX 71J	Te		P	S		45	5	200	150	45a	250	460	5	2	150	700	<6	1k			323A	1, 5	BCX 70K	
BCX 71K	Te		P	S		45	5	200	150	45a	380	630	5	2	150	700	<6	1k			323A	1, 5		
BCY 10	Ph	6	P	S		32	12	250	415	25a			2	30	1,5	300	<20	1k			801A	7	BCX 71G	
BCY 11	Ph	6	P	S		60	12	250	415	25a			2	30	1,5	300	<20	1k			801A	7		

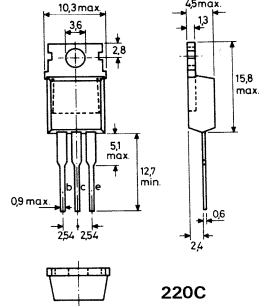
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
BCY 12	Ph	6	P	S	32		12	250	415	25a	(15	40	2	30	2	300	<20	1k		801A	7				
BCY 30A	Ph		P	S	64	64	45	(100)	600	25a	(25	25 35)	6	1	2	208	<20	1k		5A	7				
BCY 31A	Ph		P	S	64	64	45	(100)	600	25a	(25	35 60)	6	1	2	208	<20	1k		5A	7				
BCY 32A	Ph		P	S	64	64	32	(100)	600	25a	(35	55 80)	6	1	2	208	<20	1k		5A	7				
BCY 33A	Ph		P	S	32	32	32	(100)	600	25a	(15	25 35)	6	1	2	208	<20	1k		5A	7				
BCY 34A	Ph		P	S	32	32	32	(100)	600	25a	(25	35 60)	6	1	2	208	<20	1k		5A	7				
BCY 38	Ph		P	S	32	24	12	250	410	25a	10	13 30	1	150	1.5	300	<20	1k		5B	7				
BCY 39	Ph		P	S	64	60	12	250	410	25a	10	19 50	1	150	1.5	300	<20	1k		5B	7				
BCY 40	Ph		P	S	32	24	12	250	410	25a	15	23 120	1	150	1.5	300	<20	1k		5B	7				
BCY 42	Fe		N	S	40	25	5	200	300		45	90	6	10	100					18A	3				
BCY 43	Fe		N	S	40	25	5	200	300		75	150	6	10	100					18A	3				
BCY 54	Ph		N	S	50	50	12	250	410	25a	12	23 70	1	150	2	300	<20	1k		5B	7				
BCY 56	Nh		N	S	45	45	5	100	300	25a	100	200	450	5	2	250	<5	<15.7k		18A	1, 5				
BCY 57	Ph		N	S	25	20	5	100	300	25a	200	400	900	5	2	350	<5	<15.7k		18A	1, 5				
BCY 58/I	Ti		N	S	32	32	7	200	360	(200)	(125	250)	5	2		>150	<6	1k		18A	1, 5	BCY 78/VI			
BCY 58/II	Ti		N	S	32	32	7	200	360	(200)	(175	350)	5	2		>150	<6	1k		18A	1, 5	BCY 78/V			
BCY 58/III	Ti		N	S	32	32	7	200	360	(200)	(250	500)	5	2		>150	<6	1k		18A	1, 5	BCY 78/IX			
BCY 58/IV	Ti		N	S	32	32	7	200	360	(200)	(350	700)	5	2		>150	<6	1k		18A	1, 5	BCY 78/X			
BCY 58/V	Ph		N	S	32	7	200	1W	45c	120	170	220	5	2	280	450	<6	1k		18A	1, 6				
BCY 58/VII	Ph		N	S	32	7	200	1W	45c	180	250	310	5	2	280	450	<6	1k		18A	1, 6				
BCY 58/IX	Ph		N	S	32	7	200	1W	45c	250	350	460	5	2	280	450	<6	1k		18A	1, 6				
BCY 58/X	Ph		N	S	32	7	200	1W	45c	280	500	630	5	2	280	450	<6	1k		18A	1, 6				
BCY 58A	It		N	S	32	32	7	200	1W	(200)	120	220	5	2	250	450				18A	1, 6				
BCY 58B	It		N	S	32	32	7	200	1W	(200)	180	310	5	2	250	450				18A	1, 6				
BCY 58C	It		N	S	32	32	7	200	1W	(200)	380	630	5	2	250	450				18A	1, 6				
BCY 59/I	Ti		N	S	45	45	7	200	360	(200)	(125	250)	5	2		>150	<6	1k		18A	1, 5	BCY			
BCY 59/II	Ti		N	S	45	45	7	200	360	(200)	(175	350)	5	2		>150	<6	1k		18A	1, 5	BCY			
BCY 59/III	Ti		N	S	45	45	7	200	360	(200)	(250	500)	5	2		>150	<6	1k		18A	1, 5	BCY			
BCY 59/IV	Ti		N	S	45	45	7	200	360	(200)	(350	700)	5	2		>150	<6	1k		18A	1, 5	BCY			
BCY 59/VII	Ph		N	S	45	45	7	200	1W	45c	120	170	220	5	2	280	450	<6	1k		18A	1, 6			
BCY 59/VIII	Ph		N	S	45	45	7	200	1W	45c	180	250	310	5	2	280	450	<6	1k		18A	1, 6			
BCY 59/IX	Ph		N	S	45	45	7	200	1W	45c	250	350	460	5	2	280	450	<6	1k		18A	1, 6			
BCY 59/X	Ph		N	S	45	45	7	200	1W	45c	380	500	630	5	2	280	450	<6	1k		18A	1, 6			
BCY 59A	It		N	S	45	45	7	200	1W	(200)	120	220	5	2	250	450				18A	1, 6				
BCY 59B	It		N	S	45	45	7	200	1W	(200)	180	310	5	2	250	450				18A	1, 6				
BCY 59C	It		N	S	45	45	7	200	1W	(200)	250	460	5	2	250	450				18A	1, 6				
BCY 59D	It		N	S	45	45	7	200	1W	(200)	380	630	5	2	250	450				18A	1, 6				
BCY 65/VII	Si		N	S	60	7	100	1W	(200)	120	250	5	2	2	250	450				18A	1, 6				
BCY 65/VIII	Si		N	S	60	7	100	1W	(200)	180	310	5	2	2	250	450				18A	1, 6				
BCY 65/IX	Si		N	S	60	7	100	1W	(200)	250	460	5	2	2	250	450				18A	1, 6				
BCY 65E	Si		N	S	60	7	100	1W	(200)	120	460	5	2	2	250	450				18A	1, 6				
BCY 66	Si		N	S	45	7	50	1W	(200)	180	630	2	2	2	250	450				18A	1				
BCY 67	Si		P	S	45	5	50	1W	(200)	180	630	2	2	2	180	450				18A	1				
BCY 69	Se		N	S	20					(600	900)			2	150					18A	3				
BCY 70	Ph		P	S	50	40	5	200	350	25a	>100	290	1	10		>250	500	<6	<10k		18A	7			
BCY 71	Ph		P	S	45	45	5	200	350	25a	>100	290	1	10		>250	500	<2	<10k		18A	7			
BCY 71A	Nh		P	S	45	45		20	200		100	600	1	10		300				18A	1				
BCY 72	Ph		P	S	30	25	5	350	25a	>100	290		1	10		>250	500	<6	<10k		18A	7			
BCY 77/VII	Si		P	S	60	5	100	1W	(200)	120	220	5	2	2	180	450				18A	1				
BCY 77/VIII	Si		P	S	60	5	100	1W	(200)	180	310	5	2	2	180	450				18A	1				
BCY 77/IX	Si		P	S	60	5	100	1W	(200)	250	460	5	2	2	180	450				18A	1				
BCY 78/VII	Ti		P	S	32	32	5	200	350	25a	(125	250)	5	2		>100	<6	1k		18A	1, 5	BCY 58/I			
BCY 78/VIII	Ti		P	S	32	32	5	200	350	25a	(175	350)	5	2		>100	<6	1k		18A	1, 5	BCY 58/II			
BCY 78/IX	Ti		P	S	32	32	5	200	350	25a	(250	700)	5	2		>100	<6	1k		18A	1, 5	BCY 58/III			
BCY 78/X	Ti		P	S	32	32	5	200	350	25a	(350	700)	5	2		>100	<6	1k		18A	1	BCY 58/IV			
BCY 78A	It		P	S	32	32	5	200	770	(200)	120	220	5	2	180	500				18A	1, 5				
BCY 78B	It		P	S	32	32	5	200	770	(200)	180	310	5	2	180	500				18A	1, 5				
BCY 78C	It		P	S	32	32	5	200	770	(200)	250	460	5	2	180	500				18A	1, 5				
BCY 78D	It		P	S	32	32	5	200	770	(200)	380	630	5	2	180	500				18A	1, 5				
BCY 79/VII	Ti		P	S	45	45	5	200	350	25a	(125	250)	5	2		>100	<6	1k		18A	1, 5	BCY 59/I			
BCY 79/VIII	Ti		P	S	45	45	5	200	350	25a	(175	350)	5	2		>100	<6	1k		18A	1, 5	BCY 59/II			
BCY 79/IX	Ti		P	S	45	45	5	200	350	25a	(250	700)	5	2		>100	<6	1k		18A	1, 5	BCY 59/III			
BCY 79A	It		P	S	45	45	5	200	770	(200)	120	220	5	2	180	500				18A	1, 5	BCY 59/IV			
BCY 79B	It		P	S																					

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (I _C)	f MHz	ton (tr)					
BD 165	Te		N	S	45	45	5	1A	20W	(150)	40			2	150	3	100					126A	2, 12		
BD 166	Te		P	N	45	45	5	1A	20W	(150)	40			2	150	3	100					126A	2, 12		
BD 167	Te		N	S	60	60	5	1A	20W	(150)	40			2	150	3	100					126A	2, 12		
BD 168	Te		P	N	60	60	5	1A	20W	(150)	40			2	150	3	100					126A	2, 12		
BD 169	Te		N	S	80	80	5	1A	20W	(150)	40			2	150	3	100					126A	2, 12		
BD 170	Te		P	S	80	80	5	1A	20W	(150)	40			2	150	3	100					126A	2, 12		
BD 171	Te		N	S	100	90	5	500	20W	25m		60	10	50	6							332A	2		
BD 172	Te		N	S	130	120	5	500	20W	25m		60	10	50	6							332A	2		
BD 173	Te		N	S	170	160	5	500	20W	25m		60	10	50	6							332A	2		
BD 175	Te		N	S	45	45	5	3A	30W	25m	40		60	236	2	150	3	100				332A	2	BD 176	
BD 176	Te		P	S	45	45	5	3A	30W	25m	40			236	2	150	3	100				332A	2	BD 175	
BD 177	Te		N	S	60	60	5	3A	30W	25m	40			236	2	150	3	100				332A	2	BD 178	
BD 178	Te		P	N	60	60	5	3A	30W	25m	40			236	2	150	3	100				332A	2	BD 177	
BD 179	Te		N	S	80	80	5	3A	30W	25m	40			236	2	150	3	100				332A	2	BD 180	
BD 180	Te		P	N	80	80	5	3A	30W	25m	40			236	2	150	3	100				332A	2	BD 179	
BD 181	Ph		N	S	55	45	7	10A	78W	83m	20	40	70	4	3A		45					3D	2		
BD 182	Ph		N	S	70	60	7	15A	117W	25m	20	40	70	4	4A		45					3D	2		
BD 183	Ph		N	S	85	80	7	15A	117W	25m	20	40	70	4	3A		45					3D	2		
BD 185	Te		N	S	40	30	5	4A	40W	25m	40			236	2	500	2	90				332A	2		
BD 186	Te		P	S	40	30	5	4A	40W	25m	40			236	2	500	2	90				332A	2	BD 186	
BD 187	Te		N	S	55	45	5	4A	40W	25m	40			236	2	500	2	90				332A	2	BD 188	
BD 188	Te		P	S	55	45	5	4A	40W	25m	40			236	2	500	2	90				332A	2	BD 187	
BD 189	Te		N	S	70	60	5	4A	40W	25m	40			236	2	500	2	90				332A	2	BD 190	
BD 190	Te		P	S	70	60	5	4A	40W	25m	40			236	2	500	2	90				332A	2	BD 189	
BD 201	Ph		N	S	60	45	5	8A	60W	25m		>30		2	3A	3	70					220C	2	BD 202	
BD 202	Ph		P	S	60	45	5	8A	60W	25m		>30		2	3A	3	70					220C	2	BD 201	
BD 203	Ph		N	S	60	60	5	8A	60W	25m		>30		2	3A	3	70					220C	2	BD 204	
BD 204	Ph		P	N	60	60	5	8A	60W	25m		>30		2	3A	3	70					220C	2	BD 203	
BD 213/45	Te		P	N	45	45	7	15A	90W	(150)	25			2	5A	3						603A	2		
BD 213/60	Te		N	S	60	60	7	15A	90W	(150)	25			2	5A	3						603A	2		
BD 213/80	Te		N	S	80	80	7	15A	90W	(150)	15			2	5A	3						603A	2		
BD 214/45	Te		P	S	45	45	7	15A	90W	(150)	25			2	5A	3						603A	2		
BD 214/60	Te		P	S	60	60	7	15A	90W	(150)	25			2	5A	3						603A	2		
BD 214/80	Te		P	S	80	80	7	15A	90W	(150)	15			2	5A	3						603A	2		
BD 215	At		N	S	300	300	6	500	21W	(175)	40		10		100	10						309A	2, 12		
BD 220	Fa		N	S	80	70	7	4A	36W	(150)	30	120	4		500	>0.8			5μs		220B	2	BD 223		
BD 221	Fa		N	S	60	40	5	4A	36W	(150)	30	120	4		1A	>0.8			5μs		220B	2	BD 224		
BD 222	Fa		N	S	80	60	5	4A	36W	(150)	20	80	4		1.5A	>0.8			5μs		220B	2	BD 225		
BD 223	Fa		P	S	80	70	7	4A	36W	(150)	30	120	4		500	>0.8			5μs		220B	2	BD 220		
BD 224	Fa		P	S	60	40	5	4A	36W	(150)	30	120	4		1A	>0.8			5μs		220B	2	BD 221		
BD 225	Fa		P	S	80	60	5	4A	36W	(150)	20	80	4		1.5A	>0.8			5μs		220B	2	BD 222		
BD 226	Ph		N	S	45	45	5	1.5A	12.5W	62m	40	250	2		150	125	100					332A	2	BD 227	
BD 227	Ph		P	S	45	45	5	1.5A	12.5W	62m	40	250	2		150	50	100					332A	2	BD 226	
BD 228	Ph		N	S	60	60	5	1.5A	12.5W	62m	40	160	2		150	125	100					332A	2	BD 229	
BD 229	Ph		P	S	60	60	5	1.5A	12.5W	62m	40	160	2		150	50	100					332A	2	BD 228	
BD 230	Ph		N	S	100	80	5	1.5A	12.5W	62m	40	160	2		150	125	100					332A	2	BD 231	
BD 231	Ph		P	S	100	80	5	1.5A	12.5W	62m	40	160	2		150	50	100					332A	2	BD 230	
BD 232	Ph		N	S	300	300	5	250	7W	62m	25	150	5		50	20	100					332A	9		
BD 233	Ph		N	S	45	45	5	2A	25W	25m	40	250	2		150	>3	100					332A	2	BD 234	
BD 233-6	Si		N	S	45	45	5	2A	25W	25c	40	63	100	2		150	>3	(60p)				332A	2	BD 234-6	
BD 233-10	Si		N	S	45	45	5	2A	25W	25c	63	100	160	2		150	>3	(60p)				332A	2	BD 234-10	
BD 233-16	Si		N	S	45	45	5	2A	25W	25c	100	160	250	2		150	>3	(60p)				332A	2	BD 234-16	
BD 234	Ph		P	S	45	45	5	2A	25W	25m	40	250	2		150	>3	100					332A	2	BD 233	
BD 234-6	Si		P	S	45	45	5	2A	25W	25c	40	63	100	2		150	>3	(60p)				332A	2	BD 233-6	
BD 234-10	Si		P	S	45	45	5	2A	25W	25c	63	100	160	2		150	>3	(60p)				332A	2	BD 233-10	
BD 234-16	Si		P	S	45	45	5	2A	25W	25c	100	160	250	2		150	>3	(60p)				332A	2	BD 233-16	
BD 235	Ph		N	S	60	60	5	2A	25W	25m	40	250	2		150	>3	100					332A	2	BD 236	
BD 235-6	Si		N	S	60	60	5	2A	25W	25c	40	63	100	2		150	>3	(60p)				332A	2	BD 236-6	
BD 235-10	Si		N	S	60	60	5	2A	25W	25c	63	100	160	2		150	>3	(60p)				332A	2	BD 236-10	
BD 235-16	Si		N	S	60	60	5	2A	25W	25c	100	160	250	2		150	>3	(60p)				332A	2	BD 236-16	
BD 236	Ph		P	S	60	60	5	2A	25W	25m	40	250	2		150	>3	100					332A	2	BD 235	
BD 236-6	Si		P	S	60	60	5	2A	25W	25c	40	63	100	2											

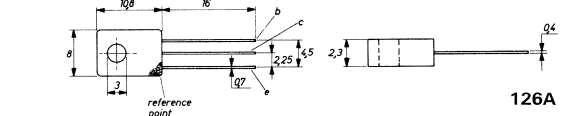
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (i _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _c)	f MHz	ton (tr)			
BD 242C	Ti		P	S	100			3A	40W	10			3A							666A	2, 6	
BD 243	Ti		N	S	45			6A	65W	30			300							666A	2, 6	
BD 243A	Ti		N	S	60			6A	65W	30			300							666A	2, 6	
BD 243B	Ti		N	S	80			6A	65W	15			3A							666A	2, 6	
BD 243C	Ti		N	S	100			6A	65W	15			3A							666A	2, 6	
BD 244	Ti		P	S	45			6A	65W	30			300							666A	2, 6	
BD 244A	Ti		P	S	60			6A	65W	30			300							666A	2, 6	
BD 244B	Ti		P	S	80			6A	65W	15			3A							666A	2, 6	
BD 244C	Ti		P	S	100			6A	65W	15			3A							666A	2, 6	
BD 245	Ti		N	S	45			10A	80W	40			1A							603A	2, 6	
BD 245A	Ti		N	S	60			10A	80W	40			1A							603A	2, 6	
BD 245B	Ti		N	S	80			10A	80W	20			3A							603A	2, 6	
BD 245C	Ti		N	S	100			10A	80W	20			3A							603A	2, 6	
BD 246	Ti		P	S	45			10A	80W	40			1A							603A	2, 6	
BD 246A	Ti		P	S	60			10A	80W	40			1A							603A	2, 6	
BD 246B	Ti		P	S	80			10A	80W	20			3A							603A	2, 6	
BD 246C	Ti		P	S	100			10A	80W	20			3A							603A	2, 6	
BD 249	Ti		N	S	45			25A	125W	25			15A							603A	2, 6	
BD 249	Ti		N	S	60			25A	125W	25			15A							603A	2, 6	
BD 249B	Ti		N	S	80			25A	125W	10			15A							603A	2, 6	
BD 249C	Ti		N	S	100			25A	125W	10			15A							603A	2, 6	
BD 250	Ti		P	S	45			25A	125W	25			15A							603A	2, 6	
BD 250A	Ti		P	S	60			25A	125W	25			15A							603A	2, 6	
BD 250B	Ti		P	S	80			25A	125W	10			15A							603A	2, 6	
BD 250C	Ti		P	S	100			25A	125W	10			15A							603A	2, 6	
BD 262	Ph	da	P	S	60	60		(6A)	36W	25m	1000	3	500	7						332A	2	BD 263
BD 262A	Ph	da	P	S	80	80		(6A)	36W	25m	1000	3	500	7						332A	2	BD 263A
BD 262B	Ph	da	P	S	100	100		(6A)	36W	25m	1000	3	500	7						332A	2	BD 263B
BD 263	Ph	da	N	S	80	60		(6A)	36W	25m	1000	3	500	7						332A	2	BD 262
BD 263A	Ph	da	N	S	100	80		(6A)	36W	25m	1000	3	500	7						332A	2	BD 262A
BD 263B	Ph	da	N	S	120	100		(6A)	36W	25m	1000	3	500	7						332A	2	BD 262B
BD 291	Ph		N	S	45	45	5	6A	60W	25m	>30	2	1A	>3	100					382A	2	BD 292
BD 292	PH		P	S	45	45	5	6A	60W	25m	>30	2	1A	>3	100					382A	2	BD 291
BD 293	Ph		N	S	60	60	5	6A	60W	25m	>30	2	1A	>3	100					382A	2	BD 294
BD 294	Ph		P	S	60	60	5	6A	60W	25m	>30	2	1A	>30	100					382A	2	BD 293



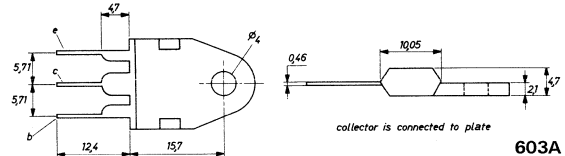
220B



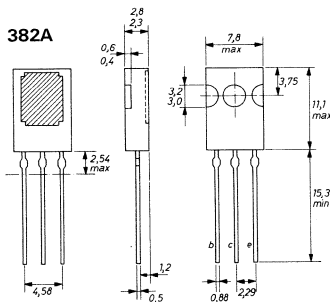
220C



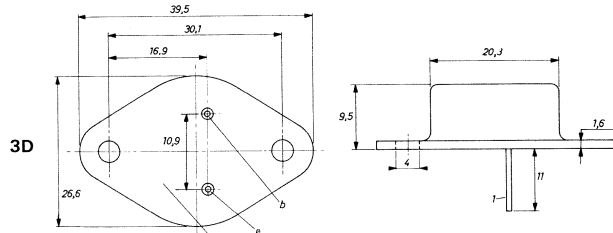
126A



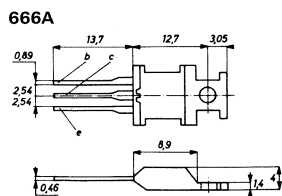
603A



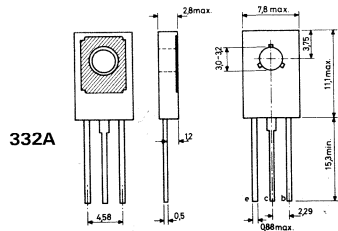
382A



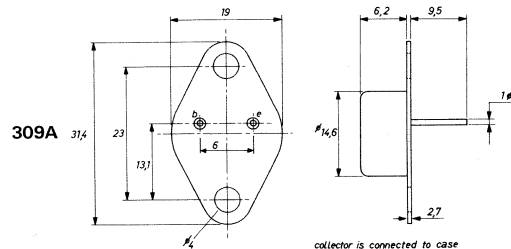
3D



666A



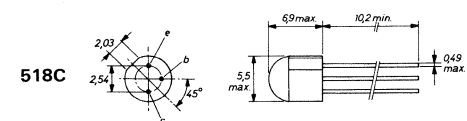
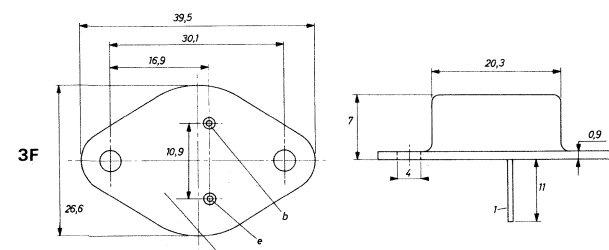
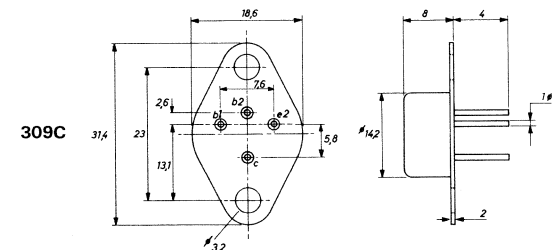
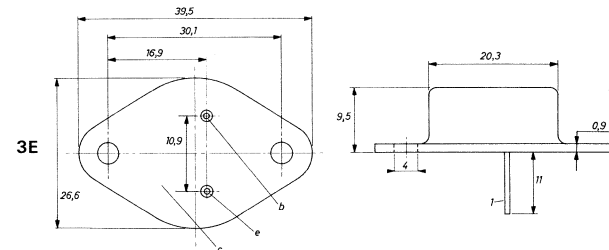
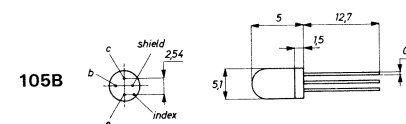
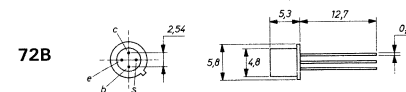
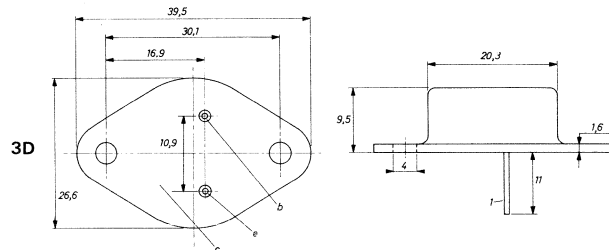
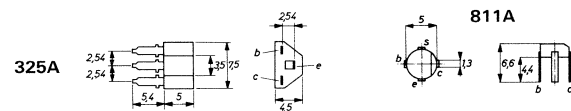
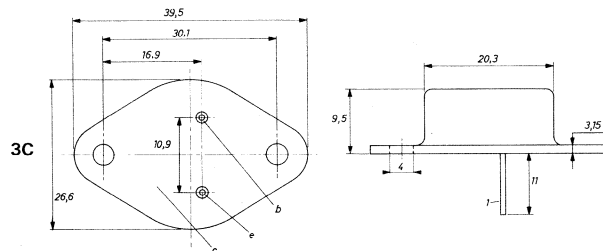
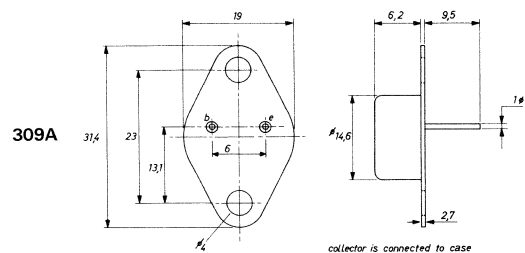
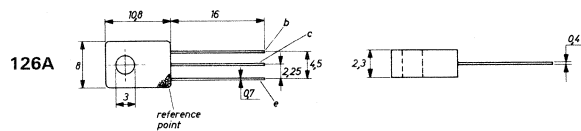
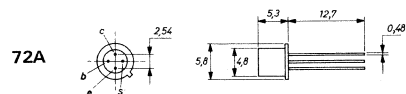
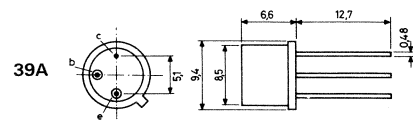
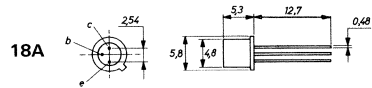
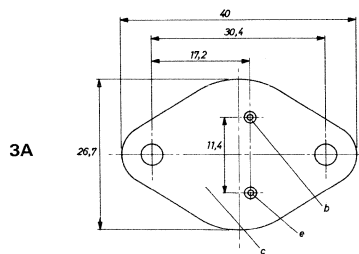
332A



309A

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
BD 329	Ph		N	S	32	20	5	3A	15W	45m	85	375	1	500	130	100					332A	2	BD 330	
BD 330	Ph		P	S	32	20	5	3A	15W	45m	85	375	1	500	100	100					332A	2	BD 229	
BD 331	Ph	da	N	S	60	60	5	6A	60W	25m		>750	3	3A	7	100					382A	2	BD 332	
BD 332	Ph	da	N	S	60	60	5	6A	60W	25m		>750	3	3A	7	100					382A	2	BD 331	
BD 333	Ph	da	N	S	80	80	5	6A	60W	25m		>750	3	3A	7	100					382A	2	BD 334	
BD 334	Ph	da	P	S	80	80	5	6A	60W	25m		>750	3	3A	7	100					382A	2	BD 333	
BD 335	Ph	da	N	S	100	100	5	6A	60W	25m		>750	3	3A	7	100					382A	2	BD 336	
BD 336	Ph	da	P	S	100	100	5	6A	60W	25m		>750	3	3A	7	100					382A	2	BD 335	
BD 400	Ti		N	S		100		1A	20W		40			500							126A	12		
BD 410	Ti		N	S		325		1A	20W		30	240		50							126A	12		
BD 433	Ph		N	S	22	22	5	4A	36W	25m	85	475	1	500	>3	100					332A	2	BD 434	
BD 434	Ph		P	S	22	22	5	4A	36W	25m	85	475	1	500	>3	100					332A	2	BD 433	
BD 435	Ph		N	S	32	32	5	4A	36W	25m	85	475	1	500	>3	100					332A	2	BD 436	
BD 436	Ph		P	S	32	32	5	4A	36W	25m	85	475	1	500	>3	100					332A	2	BD 435	
BD 437	Ph		N	S	45	45	5	4A	36W	25m	85	375	1	500	>3	100					332A	2	BD 438	
BD 438	Ph		P	S	45	45	5	4A	36W	25m	85	375	1	500	>3	100					332A	2	BD 437	
BD 439	Te		N	S	60	60	5	4A	36W	25m	40	236	1	500	3	100					332A	2	BD 440	
BD 440	Te		P	S	60	60	5	4A	36W	25m	40	236	1	500	3	100					332A	2	BD 439	
BD 441	Te		N	S	80	80	5	4A	36W	25m	40	236	1	500	3	100					332A	2	BD 442	
BD 442	Te		P	S	80	80	5	4A	36W	25m	40	236	1	500	3	100					332A	2	BD 441	
BD 461	Ti		N	S		30		4A	30W		80	320		500							126A	2, 6		
BD 462	Ti		P	S		30		4A	30W		80	320		500							126A	2, 6		
BD 463	Ti		N	S		35		4A	30W		60	320		500							126A	2, 6		
BD 464	Ti		P	S		35		4A	30W		60	320		500							126A	2, 6		
BD 466	Ti		P	S		45		1A	8W												126A	2, 6		
BD 477	Ti		N	S		45		1A	8W												126A	2, 6		
BD 585	Te		N	S	45	45	5	4A	42W	(150)	40		2	500	3						666A	2		
BD 586	Te		P	S	45	45	5	4A	42W	(150)	40		2	500	3						666A	2		
BD 587	Te		N	S	60	60	5	4A	42W	(150)	40		2	500	3						666A	2		
BD 588	Te		P	S	60	60	5	4A	42W	(150)	40		2	500	3						666A	2		
BD 589	Te		N	S	80	80	5	4A	42W	(150)	30		2	500	3						666A	2		
BD 590	Te		P	S	80	80	5	4A	42W	(150)	30		2	500	3						666A	2		
BD 595	Te		N	S	45	45	5	8A	55W	(150)	40		2	1A	3						666A	2		
BD 596	Te		P	S	45	45	5	8A	55W	(150)	40		2	1A	3						666A	2		
BD 597	Te		N	S	60	60	5	8A	55W	(150)	40		2	1A	3						666A	2		
BD 598	Te		P	S	60	60	5	8A	55W	(150)	40		2	1A	3						666A	2		
BD 599	Te		N	S	80	80	5	8A	55W	(150)	30		2	1A	3						666A	2		
BD 600	Te		P	S	80	80	5	8A	55W	(150)	30		2	1A	3						666A	2		
BD 643	Si	da	N	S	45	45	5	8A	62,5W	25m		>750	3	3A	7	80					220B	2	BD 644	
BD 644	Si	da	P	S	45	45	5	8A	62,5W	25m		>750	3	3A	7	80					220B	2	BD 643	
BD 645	Ph	da	N	S	80	60	5	8A	62,5W	25m		>750	3	3A		70					220C	2	BD 646	
BD 646	Ph	da	P	S	60	60	5	8A	62,5W	25m		>750	3	3A		70					220C	2	BD 645	
BD 647	Ph	da	N	S	100	80	5	8A	62,5W	25m		>750	3	3A		70					220C	2	BD 648	
BD 648	Ph	da	P	S	80	80	5	8A	62,5W	25m		>750	3	3A		70					220C	2	BD 647	
BD 649	Ph	da	N	S	120	100	5	8A	62,5W	25m		>750	3	3A		70					220C	2	BD 650	
BD 650	Ph	da	P	S	100	100	5	8A	62,5W	25m		>750	3	3A		70					220C	2	BD 649	
BD 675	Ph	da	N	S	45	45	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 676	
BD 676	Ph	da	P	S	45	45	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 675	
BD 677	Ph	da	N	S	60	60	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 678	
BD 678	Ph	da	P	S	60	60	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 677	
BD 679	Ph	da	N	S	80	80	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 680	
BD 680	Ph	da	P	S	80	80	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 679	
BD 681	Ph	da	N	S	100	100	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 682	
BD 682	Ph	da	P	S	100	100	5	4A	40W	25m		>750	3	1,5A	7	100					332A	2	BD 681	
BD 695	Te		N	S	45	45	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 696	
BD 696	Te		P	S	45	45	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 695	
BD 697	Te		N	S	60	60	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 698	
BD 698	Te		P	S	60	60	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 697	
BD 699	Te		N	S	80	80	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 700	
BD 700	Te		P	S	80	80	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 699	
BD 701	Te		N	S	100	100	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 702	
BD 702	Te		P	S	100	100	5	8A	70W	25m		>750	3	3A		80					808A	2	BD 701	
BDX 10/IV	At		N	S	100	60	7	15A	117W	(200)	20	50	4	500	1,3						3A	2, 6		
BDX 10/V	At		N	S	100	60	7	15A	117W	(200)	35	75	4	500	1,3						3A	2, 6		
BDX 10/VI	At		N	S	100	60	7	15A	117W	(200)	60	145	4	500	1,3						3A	2, 6		
BDX 10/VII	At		N	S	100																			

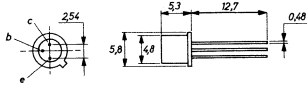
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
BDY 13-10	Si		N	S		60	5	3A	26W	(175)	63	160	1	1A	70						309A	2		
BDY 13-16	Si		N	S		60	5	3A	26W	(175)	100	250	1	1A	70						309A	2		
BDY 15A	It		N	S	36	36	5	2A	11W	(175)	50	150	2	500	100						309A	2, 6		
BDY 15B	It		N	S	36	36	5	2A	11W	(175)	100	300	2	500	100						309A	2, 6		
BDY 15C	It		N	S	36	36	5	2A	11W	(175)	200	600	2	500	100						309A	2, 6		
BDY 16A	It		N	S	64	64	5	2A	11W	(175)	50	150	2	500	100						309A	2, 6		
BDY 16B	It		N	S	64	64	5	2A	11W	(175)	100	300	2	500	100						309A	2, 6		
BDY 20	Ph		N	S	100	60	7	15A	115W	25c	20	70	4	2A	1	40					309A	2, 6		
BDY 23	Se		N	S	60	60		6A	85W		15	180		2A	10				(2μs)		3A	2		
BDY 24	Se		N	S	100	90			85W		15	180		2A	10						3A	2		
BDY 25	Se		N	S	200	180			85W		15	180		2A	10						3A	2		
BDY 26	Se		N	S	300	180			85W		15	180		2A	10						3A	2		
BDY 27	Se		N	S	300	200			85W		15	180		2A	10						3A	2		
BDY 28	Se		N	S	500	250			85W		15	180		2A	10						3A	2		
BDY 34	Te		N	S	45	40	5.5	3A	21W	(150)	30	300	2	2A	80						126A	2		
BDY 38	Ph		N	S	50	40	7	6A	115W	25m		>30	4	2A	1	40					3E	2		
BDY 39	Si		N	S	100	60	7	15A	115W	(200)	25		100	4	4A	1.1					3A	2		
BDY 42	Te		N	S	400	250	7	5A	60W	25m		>5	2	5A	12				2μs		3C	8		
BDY 43	Te		N	S	600	300	7	5A	60W	25m		>5	2	5A	12				2μs		3C	8		
BDY 44	Te		N	S	750	350	7	5A	60W	25m		>5	2	5A	12				2μs		3C	8		
BDY 45	Te		N	S	400	250	7	15A	95W	45m		>5	2	10A	13				3μs		3C	8		
BDY 46	Te		N	S	600	300	7	15A	95W	45m		>5	2	10A	13				3μs		3C	8		
BDY 47	Te		N	S	750	350	7	15A	95W	45m		>5	2	10A	13				3μs		3C	8		
BDY 55	Se		N	S	100	60			115W		20	70		4A	10						3A	2		
BDY 56	Se		N	S	180	120			115W		20	70		4A	10						3A	2		
BDY 57	Se		N	S	120	80			150W		20	60		10A	10						3A	2		
BDY 58	Se		N	S	180	125			150W		20	60		10A	10						3A	2		
BDY 60	Ph		N	S	60	60	5	5A	15W	100m		>40	2	1A	100				120ns		3F	6		
BDY 61	Ph		N	S	60	60	5	5A	15W	100m		>38	2	1A	100				120ns		3F	6		
BDY 71	Se		N	S	80	55			29W		80	200		500	0.8						309A	2		
BDY 73	Se		N	S	150	120			25W		60	180		500	0.8						309A	2		
BDY 73	Se		N	S	100	60			117W		50	150		4A	0.8						3A	2		
BDY 74	Se		N	S	150	120			117W		50	150		3A	0.8						3A	2		
BDY 75	Se		N	S	60	40			150W		40	120		15A	0.8						3A	2		
BDY 76	Se		N	S	100	60		20A	150W		40	120		10A	0.8						3A	2		
BDY 77	Se		N	S	150	120			15A	150W	40	120		8A	0.8						3A	2		
BDY 78	Se		N	S	90	55			4A	25W	25	100		500	0.8						309A	2		
BDY 79	Se		N	S	150	120			4A	25W	25	100		500	0.8						309A	2		
BDY 87	Si	da	N	S	20	20	7	8A	35W	45c		>2000	2	500							309C	2, 6		
BDY 88	Si	da	N	S	40	40	7	8A	35W	45c		>2000	2	500							309C	2, 6		
BDY 89	Si	da	N	S	60	60	7	8A	35W	45c		>2000	2	500							309C	2, 6		
BDY 90	Ph		N	S	120	100	6	10A	40W	75m	30	120	5	5A	70						<0.35μs	3C	6	
BDY 91	Ph		N	S	100	80	6	10A	40W	75m	30	120	5	5A	70						<0.35μs	3C	6	
BDY 92	Ph		N	S	80	60	6	10A	40W	75m	30	120	5	5A	70						<0.35μs	3C	6	
BDY 93	Ph		N	S		350		4A	30W	75m	30		5	1A	10						<0.5μs	3C	6	
BDY 94	Ph		N	S		300		4A	30W	75m	30		5	1A	10						<0.5μs	3C	6	
BDY 95	Ph		N	S		350		3A	30W	50m	25	80	5	1A	8						<0.5μs	3C	6	
BDY 96	Ph		N	S		250		10A	40W	90m	30		5	2A	10						<0.5μs	3C	6	
BDY 97	Ph		N	S		300		10A	40W	90m	30		5	2A	10						<0.5μs	3C	6	
BDY 98	Ph		N	S		250		10A	40W	65m	25	80	5	2A	10						<0.5μs	3C	6	
BF 110	Si		N	S			5	40	2.5W	25c		>30	10	10	150	250					39A	9		
BF 111	Si		N	S			5	80	3W	100c		>20	20	60	120	200					39A	9		
BF 115	Ph		N	S	50	30	5	30	145	45a	45	165	10	1	230	900	4	100			72B	3		
BF 117	It		N	S	140	140	5	100	1.3W	(175)	(30)	90	0.5	0.2	80									
BF 120	It		N	S		220	5	50	750	(175)	20		10	10		500					18A	12		
BF 121	It		N	S	30	4	25	330	(125)		80		10	4	350	300					811A	12		
BF 123	It		N	S	30	4	30	330	(125)		90		10	7	550	300					811A	12		
BF 125	It		N	S	30	4	30	330	(125)		90		10	7	450	300					811A	12		
BF 127	It		N	S	30	4	25	330	(125)		80		10	4	350	300					811A	12		
BF 137	It		N	S	160	160	5	100	1.3W	(175)	25		10	30	95	220					39A	12		
BF 153	Ns		N	S	30	12	2	20	200		20		6	3	300						105B	3		
BF 155	At		N	S	40	40	3	20	300	25m		70	12	2.5	600	875	<9				72A	17		
BF 158	At		N	S	30	12	2	20	500	25m	20	50	10	4	700	500	3.5				518C	12		
BF 160	Ns		N	S	30	12	2	20	200				10	3	400						105B	3		
BF 161	At		N	S	50	50	4	20	260	25m		60	10	3	550		6.5				72A	17		
BF 166	At		N	S	40	40	3		260	25m		50	12	2.5	500		3	35			72A	3		
BF 167	Ph		N	S	40	30	4	25	130	45a					350	1000					72B	3		
BF 173	Ph		N	S	40	25	4	25	260	45a														



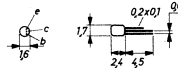
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
BF 196	Ph		N	S	40	30	4	25	250	25a							400	400	3	35		325A	12	
BF 197	Ph		N	S	40	25	4	25	250	25a							550	400				325A	9	
BF 199	Ph		N	S	40	30	4	25	500	25a							400	250	3	35		592B	12	
BF 199	N		N	S	40	25	4	25	500	25a							550	250				592B	12	
BF 199	Ti		N	S	40	25	4	25	360	25a		>40		10	7		500					518B	12	
BF 200	Ph		N	S	30	20	3	20	150	25a							650	1000	2.7	200		72A	12	
BF 222	At		N	S	50	40	4	20	175	(175)		60	7	2			400	875	<5			72A	3	
BF 223	Te		N	S	35	25	4	40	360	(150)		79	10	15			750	350				812A	3	
BF 224	N		N	S	45	30	4	50	250	25a		>30	10	7			700			200		518B	17	
BF 225	Ti		N	S	50	40	4	50	250	25a		75	10	4			700					518B	3	
BF 227	Te		N	S	40	25	4	25	50	(125)		100	10	3			600	1600				623A	3	
BF 228	Te		N	S	100	7	50	50	50	(125)		30	10	2			50	1600				623A	3	
BF 229	N		N	S	30	20	5	30	50	(125)		67	220	10	1		260	1600				623A	3	
BF 230	Te		N	S	30	20	5	30	50	(125)		36	125	10	1		200	1600				623A	3	
BF 232	Si		N	S	25	4	30	270	(175)			>30	10	7			600	650				72B	12	
BF 233-2	At		N	S	30	30	4	50	200	(125)		40	70	10	1		500	500	1.2			518C	17	
BF 233-3	At		N	S	30	30	4	50	200	(125)		60	100	10	1		500	500	1.2			518C	17	
BF 233-4	At		N	S	30	30	4	50	200	(125)		90	150	10	1		500	500	1.2			518C	17	
BF 233-5	At		N	S	30	30	4	50	200	(125)		140	220	10	1		500	500	1.2			518C	17	
BF 233-6	At		N	S	30	30	4	50	200	(125)		200	350	10	1		500	500	1.2			518C	17	
BF 234	At		N	S	30	30	4	50	200	(125)		90	330	10	1		500	500	1.2			518C	17	
BF 237	Ti		N	S	45	30	4	30	250	25a		(30)	90	10	1							518B	17	
BF 238	Ti		N	S	45	30	4	30	250	25a			(>60)	10	1							518B	17	
BF 240	Ph		N	S	40	40	4	25	250	25a							380	400	<3.5	200k		592B	17	
BF 240	Ti		N	S	40	40	4	25	255	25a		67	222	10	1		430		1.5	200k		518B	17	
BF 241	Ph		N	S	40	40	4	25	250	25a							350	400	<3.5	200k		592B	17	
BF 241	Ti		N	S	40	40	4	25	255	25a		36	115	10	1		400		1.5	200k		518B	17	
BF 254	Ph		N	S	30	20	5	30	300	25a							260	330	4	100		755B	3	
BF 254	Ph		N	S	30	20	5	30	250	25a		65	220	10	1		260		1.4			518B	3	
BF 255	Ti		N	S	30	20	5	30	300	25a		67		10	1		200	330	4	100		755B	3	
BF 255	Ti		N	S	30	20	5	30	250	25a		35	125	10	1		260		1.4	1		518B	3	
BF 257	Ph		N	S	160	160	5	100	5W	50m		25	60	10	30		90	220				39A	9	
BF 258	Ph		N	S	250	250	5	100	5W	50m		25	60	10	30		90	220				39A	9	
BF 259	Ph		N	S	300	300	5	100	5W	50m		25	60	10	30		90	220				39A	9	
BF 260	At		N	S	45	30	4	50	230	(175)			70	6	1		800	1000				72B	3	
BF 261	At		N	S	40	30	4	50	230	(175)		70		6	1		730	1000				72B	3	
BF 272A	At		P	S	40	35	3	20	200	(200)		50		10	3		850	875	3.5			72A	3	
BF 273C	At		N	S	25	20	4	30	200	(125)		70	120	10	1		600	500	2			518C	3	
BF 273D	At		N	S	25	20	4	30	200	(125)		35	75	10	1		600	500	2			518C	3	
BF 274B	At		N	S	25	20	4	30	200	(125)		100	250	10	1		700	500				518C	3	
BF 274C	At		N	S	25	20	4	30	200	(125)		70	120	10	1		700	500				518C	3	
BF 287	At		N	S	40	40	4	20	250	(200)			60	10	2		700	700				72B	17	
BF 288	At		N	S	40	40	4	20	250	(200)			90	7	1		500	700				72B	3	
BF 292A	Ti		N	S	150	150	5	300	5W	25c			70	50	10							39A	9	
BF 292B	Ti		N	S	190	190	5	300	5W	25c			70	50	10							39A	9	
BF 292C	Ti		N	S	220	220	5	300	5W	25c			70	50	10							39A	9	
BF 297	Ti		N	S	160	160	5	100	625	25a		30	150	10	30		95					518A	7	BF 397A
BF 298	Ti		N	S	250	250	5	100	625	25a		30	150	10	30		95					518A	7	BF 398A
BF 299	Ti		N	S	300	300	5	100	625	25a		30	150	10	30		95					518A	7	
BF 302	At		N	S	40	30	4	50	230	(175)		35	125	6	1		650	1000				72B	3	
BF 303	At		N	S	40	30	4	50	230	(175)		110	220	6	1		500	1000				72B	3	
BF 304	At		N	S	40	30	4	50	230	(175)		35	120	6	1		500	1000				72B	3	
BF 305	At		N	S	185	150		100	2W	(200)			75	20	30		100	220				39A	12	
BF 306	At		N	S	40	25	4	25	230	(175)							1000	415				72B	12	
BF 310	Si		N	S	30	30	4	25	300	25a							580					330A	12	
BF 311	Te		N	S	35	25	4	40	360	(150)		79		10	15		750	350				592G	3	
BF 314	Si		N	S	30	30	4	25	300	25a							580	415				330A	12	
BF 316A	At		P	S	40	35	3	20	200	(200)		50		10	3		600	875	5			72A	17	
BF 324	Ph		P	S	30	30	4	25	250	45a							450	420	3	100		592A	3	
BF 329	At		N	S	40	30	4	50	250	(125)		70		6	1		730	400				325B	12	
BF 330	At		N	S	40	25	4	25	250	(125)							1000	400				325B	12	
BF 332	At		N	S	30	20	5	30	250	(125)							600	0.4				325B	12	
BF 333	At		N	S	30	20	5	30	250	(125)							400	0.4				325B	12	
BF 334	Ph		N	S	40	30	4	25	250	(125)		65	125	10	1		370	400				325A	3	
BF 335	Ph		N	S	40	30	4	25	250	(125)		35	125	10	1		370	400				325A	3	
BF 336	Ph		N	S	185	180	5	100	3W	140m		20	60	10	30		130	220				39A	12	
BF 337	Ph		N	S	250	200	5	100	3W	140m		20	60	10	30		130	220				39A	12	
BF 338	Ph		N	S	300	225	5	100	3W	140m		20	60	10	30		130	220				39A	12	
BF 340	At		P	S	35	32	5	50	250	25a		>30		9	1		>80		2.5	1k		518B	3	
BF 341	Ti		P	S	35	32	5	50	250	25a		45	150	9	1		>80		2.5	1k		518B	3	
BF 342	Ti		P	S	35	32	5	50	250	25a		60	150	9	1		>80		2.5	1k		518B	3	
BF 343	Ti		P	S	35	32	5	50	250	25a		>30		9	1		>80		2.5	1k		518B	3	
BF 344	N		N	S	30	20	4	50	230	(175)		90	220	10	1		500					18A	3	
BF 345	At																							

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t _j)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
BF 397B	Ti		P	S	90	90	6	100	625		130	250	10	10						518A	7	BF 298		
BF 398	Ti		P	S	150	150	6	100	625	25a	30	200	10	10						518A	7			
BF 398A	Ti		P	S	150	150	6	100	625		30	100	10	10						518A	7			
BF 398B	Ti		P	S	150	150	6	100	625		80	200	10	10						518A	7			
BF 414	Te		P	S	40	30	4	25	300	(150)		80	10	1	560	350				592E	3			
BF 422	Ph		N	S	250	250	5	20	830	25a	>50	20	25	>60	150					592C	9	BF 423 BF 422		
BF 423	Ph		P	S	250	250	5	20	830	25a	>50	20	50	>60	150					592C	9			
BF 440	Te		P	S	40	40	4	25	300	(150)	60	220	10	1	250	350				592G	3			
BF 441	Te		P	S	40	40	4	25	300	(150)	30	125	10	1	250	350				592G	3			
BF 450	Ph		P	S	40	40	4	25	250	45a				325	420	2	100k			592B	17			
BF 450	Ti		P	S	40	40	4	25	250	25a	>60	10	1	325	420	2	1k			518A	17	BF 455C		
BF 451	Ph		P	S	40	40	4	25	250	45a				325	420	2	100k			592B	17			
BF 451	Ti		P	S	40	40	4	25	250	25a	>30	10	1	325	420	2	1k			518A	17			
BF 454B	At		N	S	35	25	4	20	500	25m	110	200	10	1	400	500	3			518C	3			
BF 455C	At		N	S	35	25	4	20	500	25m	68	120	10	1	400	500	3			518C	3			

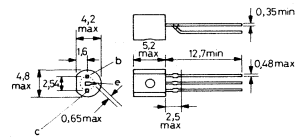
18A



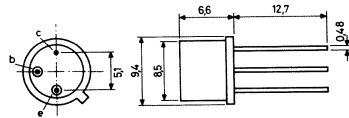
623A



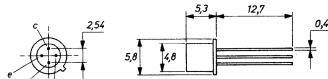
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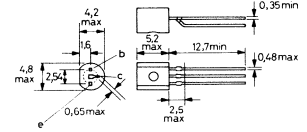
39A



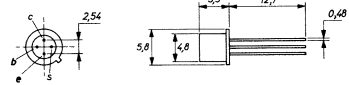
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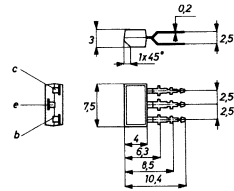
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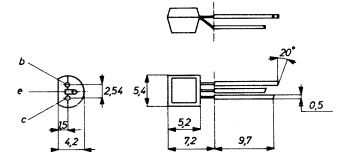
72A



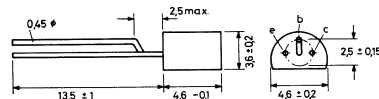
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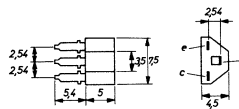
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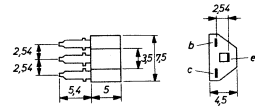
330A



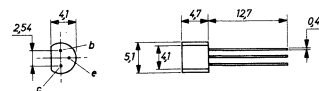
325B



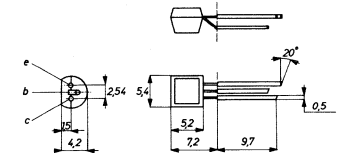
325A



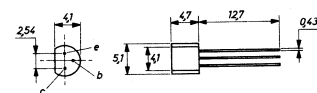
518B



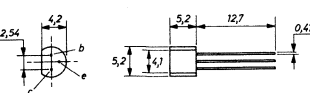
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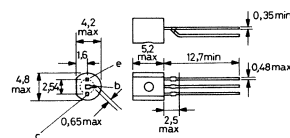
518A



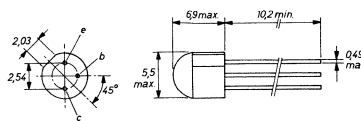
755B



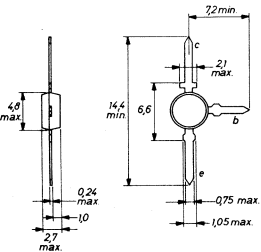
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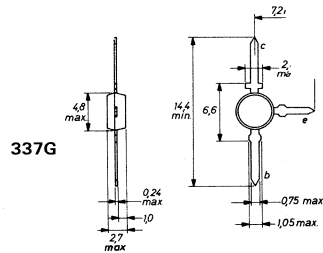
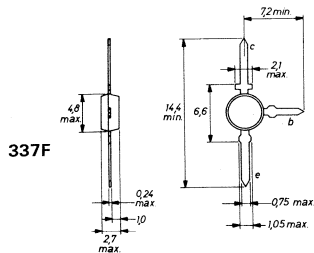
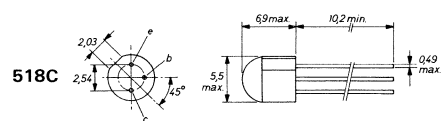
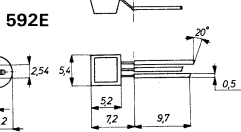
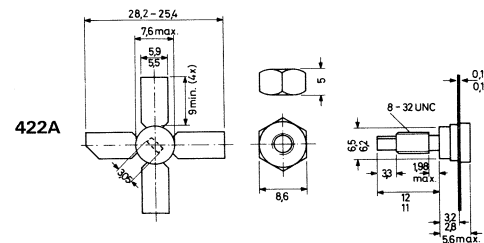
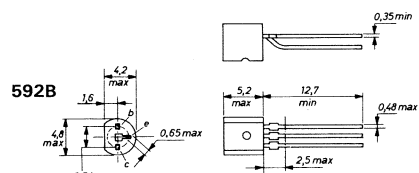
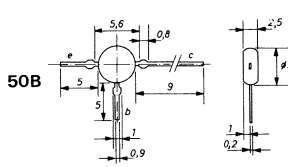
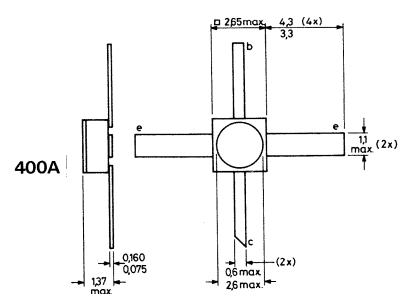
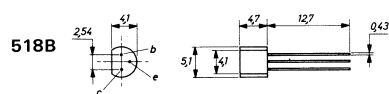
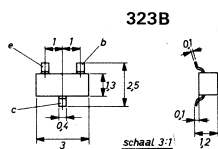
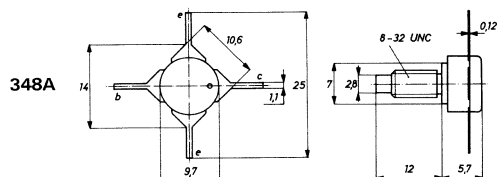
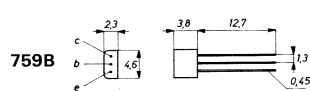
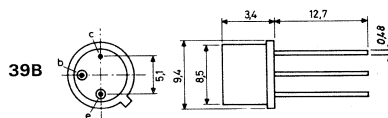
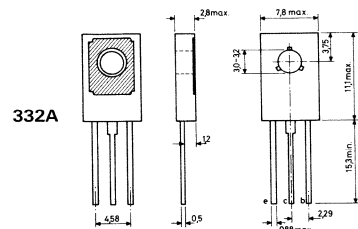
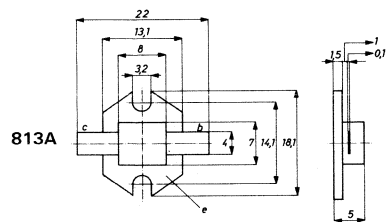
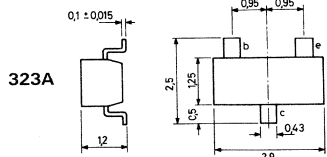
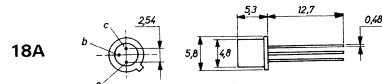
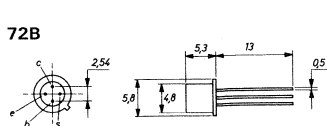
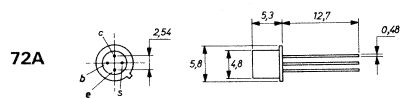
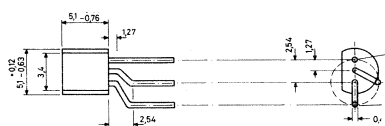
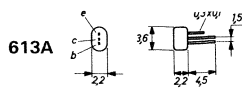
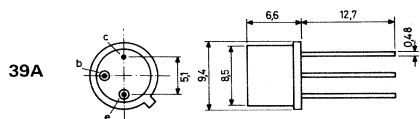
518C



337F



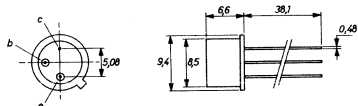
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
BF 455D	At		N	S	35	25	4	20	500	25c	38	75	10	1	400	500	3				518C	3		
BF 457	Ph		N	S	160	160	5	100	6W	90m		>26	10	30	90	104					332A	9		
BF 458	Ph		N	S	250	250	5	100	6W	90m		>26	10	30	90	104					332A	9		
BF 459	Ph		N	S	300	300	5	100	6W	90m		>26	10	30	90	104					332A	9		
BF 479	Te		N	P	30	25	3	50	160	55a		>20	(10)	10	1800	600					50B	17		
BF 480	Ph		N	S	20	15	2	20	140	55a						1600	500	3.3			337F	12		
BF 494	Ph		N	S	30	20	5	30	300	75a						260	250	4	800		592B	12		
BF 495	Ph		N	S	30	20	5	30	300	75a						200	250	4	100		592B	3		
BF 500	At		P	S	30	30	3	20	200	(125)		50	10	1	400	500					518C	17		
BF 500A	At		P	S	30	30	3	20	200	(125)		50	10	1	400	500	<4				518C	17		
BF 506	Te		P	S	40	35	4	30	300	45a		>25	10	3	550	350	<4	1k			592E	17		
BF 509	Te		P	S	40	35	4	30	300	45a		>25	10	3	750	350	2.6	1k			592E	3		
BF 516	At		P	S	50	45	3	20	200	(200)		50	10	3	850	875	<6				72A	3		
BF 523	Ti		N	S	50	45	4.5	50	625	25a		>30	10	15	500						518B	3		
BF 540	Ti		P	S	50	45	5	50	250	25a		>30	9	1	>90		2.5	1k			518B	17		
BF 541	Ti		P	S	50	45	5	50	250	25a		>45	9	1	>90		2.5	1k			518B	17		
BF 542	Ti		P	S	50	45	5	50	250	25a		>60	9	1	>90		2.5	1k			518B	17		
BF 594	Ti		N	S	30	20	5	30	250	25a						260	1.5	1k			807A	17		
BF 595	Ti		N	S	30	20	5	30	250	25a						260	1.5	1k			807A	17		
BF 679	Te		P	S	40	35	3	30	160	55a		>25	(10)	3	880	600	<5	1k			50B	3		
BF 680	Te		P	S	40	35	3	30	160	55a		>25	(10)	3	750	600	<6	1k			50B	17		
BFQ 23	Ph		P	S	15	12	2	35	180	60a		>20	5	30	5000	500	2.4	500			337G	13		
BFQ 24	Ph		P	S	15	12	2	35	150	60a		>20	5	30	5000	900	2.4	500M			72A	13		
BFQ 32	Ph		P	S	20	15	3	75	500	60a		>20	10	50	4200	230	3.75	1k			337G	13		
BFQ 34	Ph		N	S	25	18	2	150	2,25W	125m		>25	15	75	3500		8	500			422A	13		
BFR 22	At		N	S	120	65	7	1A	5W	(200)	40	120	10	150	175	175					39A	6		
BFR 23	At		P	S	90	65	7	1A	7W	(200)	40	140	10	150	165						39A	6		
BFR 24	At		P	S	60	40	7	1A	7W	(200)	50	250	1	20	50	400					39A	6		
BFR 25	At		N	S	120	120	6	375	(175)		20		1	20	50	400					400A	13		
BFR 49	Ph		N	S	20	15	2	25	180	110a		>25	10	14	5000	500	6.5	4000						
BFR 53	Ph		N	S	18	10	2.5	50	180	60a		>25	5	50	2G	500	<5	500			323B	9		
BFR 57	Ph		N	S	160	160	5	200	5W	25c		>25	10	30	100		(5.5p)				39A	9		
BFR 58	Ti		N	S	250	250	5	200	5W	25c		>25	10	30	100		(5.5p)				39A	9		
BFR 59	Ti		N	S	300	300	5	200	5W	25c		>25	10	30	100		(5.5p)				39A	9		
BFR 63	Ph		N	S	25	3.5	200	3.5W	60m			>25	5	150	1100		6	200			348A	4		
BFR 64	Ph		N	S	40	25	3.5	200	3.5W	60m		>25	5	150	1200		6	200			348A	4		
BFR 65	Ph		N	S	40	25	3.5	400	5W	125m		>30	20	200	>1200						348A	4		
BFR 90	Ph		N	S	20	15	2	25	180	60a	25	50	10	14	5000	500	2.4	500			337G	13		
BFR 91	Ph		N	S	15	12	2	35	180	60a	25	50	5	30	5000	500	1.9	500			337G	13		
BFR 92	Ph		N	S	20	15	2	25	180	60a		>25	10	14	5G	500	2.4	500			323B	3		
BFR 93	Ph		N	S	15	12	2	35	180	60a		>25	5	30	5G	500	1.9	500			323B	3		
BFR 94	Ph		N	S	30	25	3	150	2.5W	160h		>30	20	90	3500		5	500			348A	4		
BFR 95	Ph		N	S	30	25	3	150	1.5W	125m		>30	20	50	3500	250	<10	200			39A	4		
BFR 96	Ph		N	S	20	15	3	75	500	60a	25	52	10	75	5500	230	3.8	800			337G	13		
BFS 11	At		N	S	45	30	4	50	230	(175)	40	170	6	1	800	1000					72B	12		
BFS 17	Ph		N	S	(25)	15	2.5	25	200	25a	20	150	1	2	1G	620	4.5	500			323B	3		
BFS 18	Ph		N	S	30	20	5	30	200	25a	35	125	10	1	200	620	4	100			323B	3		
BFS 19	Ph		N	S	30	20	5	30	200	25a	65	225	10	1	260	620	4	100			323B	3		
BFS 20	Ph		N	S	30	20	4	25	200	25a		>40	10	7	>275	620	(0.8p)				323B	3		
BFS 20	Te		N	S	30	20	4	25	110	25a		>40	10	7	450	900	(0.8p)				323A	3		
BFS 22A	Ph		N	S	(36)	18	4	750	8W	25m		>5	5	500	700		(<20p)				39B	4		
BFS 23A	Ph		N	S	(65)	36	4	500	8W	25m		>5	5	500	500		(<15p)				39B	4		
BFS 50	Te		N	S	36	18	3.5	400	3W	(200)	10		5	120	600						39A	3		
BFS 51	Te		N	S	40	20	4	750	5W	(200)		>15	15	500	450						39A	3		
BFS 59	Fe		N	S	60	30	5	500			40	300		150	150						759B	2, 5		
BFS 60	Fe		N	S	60	40	5	500			100	300		150	150						759B	2, 5		
BFS 61	Fe		N	S	80	60	5	500			40	160		150	150						759B	2, 5		
BFS 62	Te		N	S	40	25	4	25	260	(175)		90	10	7	580	650					72B	3		
BFS 69	Te		P	S	30	25	5	100	100	(125)		>100	5	2	50	1000					613A	3		
BFS 86	Te		N	S	50	30	3	300	3W	(150)		>20	5	60							813A	3		
BFS 89	Ti		N	S	300	300	5	150	5W	25c		>25	10	50	90						39A	1, 6		
BFS 90A	Ph		P	S	140	140	6	100	800	25a	30	110	10	10							39A	5		
BFS 90B	Ti		P	S	140	140	6	100	800	25a		>90	10	10							39A	5		
BFS 91A	Ph		P	S	80	80	6	100	800	25a		&												



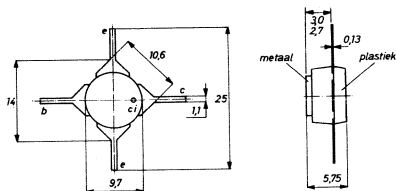
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS													Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
BFX 33	Te		N	S	55	30	3.5	400	3W	(200)		>25	15	80	600	220					39A	3			
BFX 34	Ph		N	S	120	60	6	2A	5W	25c	40		150	2	2A	>70					39A	6			
BFX 37	Fa		P	S	60	60	6	50	1.2W	25c		>100	5	1				($<100p$)		0.2μs	39A	1			
BFX 38	Fa		P	S	55	55	5	1A	4W	25c		>85	5	100						100ns	39A	1			
BFX 39	Fa		P	S	55	55	5	1A	4W	25c		>40	5	100						100ns	39A	1			
BFX 40	Ti		N	S	75	75	5	1A	5W	25c		>40	5	100							39A	8			
BFX 41	Ti		N	S	75	75	5	1A	5W	25c		>85	5	100				(20p)		33ns	39A	8			
BFX 44	Ph		N	S	40	15	4	125	360	25a	40		120	1	10	500	480	(20p)		33ns	18A	3			
BFX 55	Si		N	S	60	40	3.5	400	2W	(175)	30		160	5	50	500	220				39A	12			
BFX 59	Si		N	S	30	20	3	100	370	(175)	(30)		200	10	10	1000	650				72A	12			
BFX 59F	Si		N	S	30	20	3	100	370	(175)	(30)		200	10	10	1050	650				72A	12			
BFX 60	Si		N	S	40	25	4	25	370	(175)		>50	10	10	7	550	650				72A	12			
BFX 62	Si		N	S	30	20	4	12	130	(175)		>40	10	2	675	1000					72A	12			
BFX 65	Ns		N	P	45	45	6	350				>100	5	1							18A	1			
BFX 84	Fe		N	S	100	60	6	1A	2W			>20	10	50							39A	2, 6			
BFX 85	Fe		N	S	100	60	6	1A	2W			>50	10	50							39A	2, 6			
BFX 86	Ns		N	S	40	35	5	500	800			>50	10	10	50						39A	2			
BFX 87	Ns		P	S	50	50	4	500	500			>40	10	10	100						39A	2			
BFX 88	Ns		P	S	40	40	4	500	500			>40	10	10	100						39A	2			
BFX 89	Ph		N	S	30	15	2.5	25	200	25a	20		150	1	2	1200	880	7	800		72A	3			
BFY 22	It		N	S	5	5	3	50	50	(125)	(30)		90	0.5	0.2	20					814A	1			
BFY 23	It		N	S	5	5	3	50	50	(125)	(70)		220	0.5	0.2	20					814A	1			
BFY 24	It		N	S	5	5	3	50	50	(125)	(45)		130	0.5	0.2	20					814A	1			
BFY 29	It		N	S	45	30	5	50	50	(125)		>50	0.5	50	20						814A	1			
BFY 30	It		N	S	45	30	5	50	50	(125)		>70	0.5	50	20						814A	1			
BFY 33	Si		N	S	50	24	7	500	2.6W	45c		>40	10	150			220				39A	3			
BFY 34	Si		N	S	75	30	7	500	2.6W	45c	40		120	10	150		220				39A	3			
BFY 39	Ns		N	S	45	25	5	50	350		(35)		400	10	10	150					18A	3			
BFY 39-1	Ns		N	S	45	25	5	50	350		35		110	10	10	150					18A	3			
BFY 39-2	Ns		N	S	45	25	5	50	350		100		200	10	10	150					18A	3			
BFY 39-3	Ns		N	S	45	25	5	50	350		180		400	10	10	150					18A	3			
BFY 44	Ph		N	S	80	60	4	1A	5W	(200)		20	10	150	200						39A	3			
BFY 45	Si		N	S	90	30	5	30	2.5W	25c	40		60	10	10	130	250				39A	5			
BFY 46	Si		N	S	75	30	7	500	2.6W	45c	100		300	10	150						39A	3			
BFY 50	Ph		N	S	80	30	6	1A	5W	50m		112	10	150	140	220		($<12p$)			39A	7			
BFY 51	Ph		N	S	60	30	6	1A	5W	50m		123	10	150	160	220		($<12p$)			39A	7			
BFY 52	Ph		N	S	40	20	6	1A	5W	50m		142	10	150	185	220		($<12p$)			39A	7			
BFY 55	Ph		N	S	80	35	7	1A	4W	40a	40		120	10	150	>60	220		($<12p$)		39A	7			
BFY 56	Ti		N	S	80	45	5	1A	5W	25c	30		150	1	150					<225ns	5A	2			
BFY 56A	Te		N	S	55	7	1A	800	25a	40	95		120	1	150	60	220			225ns	39A	1, 5			
BFY 63	Ti		N	S	30	15		320							250						39A	3			
BFY 64	Fa		P	S	40	40	5	3W	25c			>80	10	10						<50ns	39A	2, 6			
BFY 65	Te		N	S	100	80	7	100	1W	(175)		>30	2	15	50	230					39A	6			
BFY 67	Ph		N	S	60	40		1A	700			>40	60	60							39A	2			
BFY 68	Ph		N	S	60	40		1A	700			>100	70	70							39A	2			
BFY 69 yel	Te		N	S	25	15	5	100	105	(125)		>50	5	2	50	750					613A	1, 3			
BFY 69 grn	Te		N	S	25	15	5	100	105	(125)	(85)		140	1	0.5	50	750				613A	1, 3			
BFY 69 vio	Te		N	S	25	15	5	100	105	(125)	(130)		200	1	0.5	50	750				613A	1, 3			
BFY 69 whi	Te		N	S	25	15	5	100	105	(125)	(190)		310	1	0.5	50	750				613A	1, 3			
BFY 69 gre	Te		N	S	25	15	5	100	105	(125)	(290)		520	1	0.5	50	750				613A	1, 3			
BFY 69A yel	Te		N	S	25	15	5	100	105	(125)	(55)		95	1	0.5	50	750				613A	1, 3			
BFY 69A grn	Te		N	S	25	15	5	100	105	(125)	(85)		140	1	0.5	50	750				613A	1, 3			
BFY 69A vio	Te		N	S	25	15	5	100	105	(125)	(130)		200	1	0.5	50	750				613A	1, 3			
BFY 69A whi	Te		N	S	25	15	5	100	105	(125)	(190)		310	1	0.5	50	750				613A	1, 3			
BFY 69A gre	Te		N	S	25	15	5	100	105	(125)	(290)		520	1	0.5	50	750				613A	1, 3			
BFY 70	Ph		N	S	60	40	4	1A	5W	(200)		20	10	150	210						39A	3			
BFY 72	Ns		N	S	50	28	5	500	500		40		150	10	150	250					39A	2, 5			
BFY 76	Ns		N	S	45	6	25	350		(80)		550	5	1	2						18A	1			
BFY 80	Te		N	S	100	80	7	100	1W	(175)		>30	2	15	50	500					18A	6			
BFY 85A	Te	du	N	S	45	45	5	100	160	45a	100		200	5	0.1	>50	500	6			77A	16			
BFY 86B	Te	du	N	S	45	45	5	100	160	45a	180		360	5	0.1	>50	500	6			77A	16			
BFY 87 yel	Te		N	S	25	15	5	100	50	(125)	(55)		95	1	0.5	1600					623A	1, 3			
BFY 87 grn	Te		N	S	25	15	5	100	50	(125)	(85)		140	1	0.5	1600					623A	1, 3			
BFY 87 vio	Te		N	S	25	15	5	100	50	(125)	(130)		200	1	0.5	1600					623A	1, 3			
BFT 87 whi	Te																								

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t) h	h _{FE} min	(h _{FE}) type	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _p)	f MHz	ton (tr)			
BLX 94	Ph		N	S	(65)	33	4	(6A)	50W	25h	50	50	5	1A	1000		(<50p)			348C	4	
BLX 94A	Ph		N	S	(65)	30	4	(6A)	50W	25h	50	80	5	1A	1000		(<80p)			348C	4	
BLX 95	Ph		N	S	(65)	33	4	(10A)	75W	25h	25		25	1A	900		(<10p)			356A	4	
BLX 96	Ph		N	S	(40)	27	3.5	400	6,25W	100h	>20	>20	20	400	>1200		(<20p)			348A	4	
BLX 97	Ph		N	S	(40)	27	3.5	800	12,5W	100h	>20	>20	20	800	>1200					348A	4	

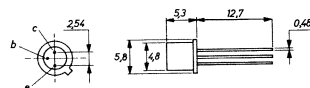
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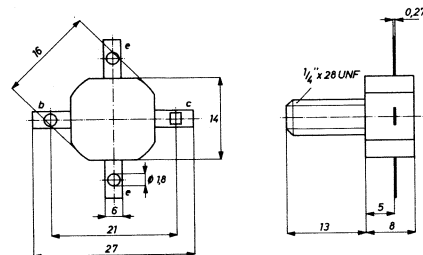
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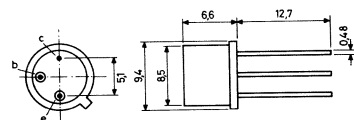
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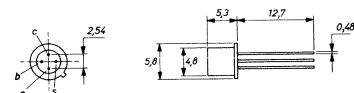
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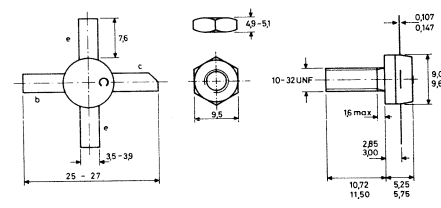
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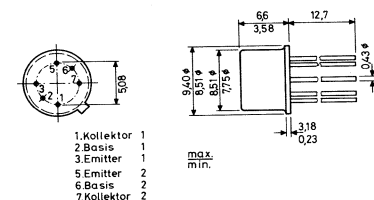
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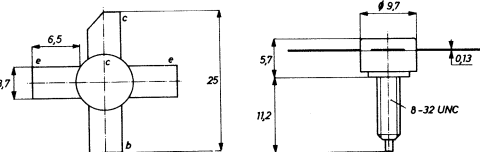
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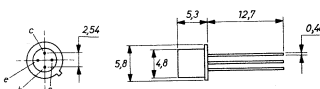
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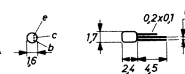
348C



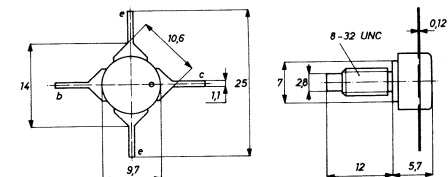
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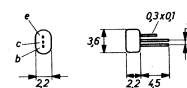
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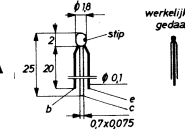
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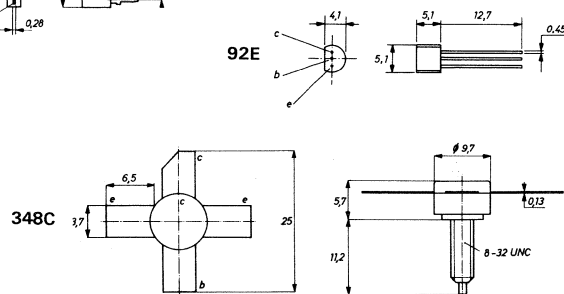
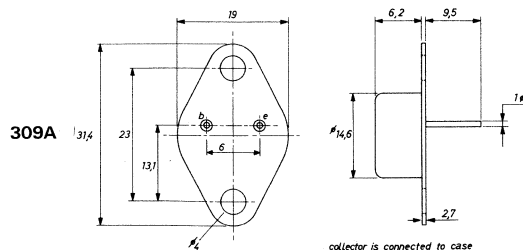
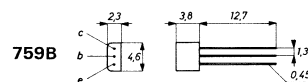
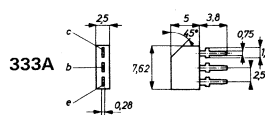
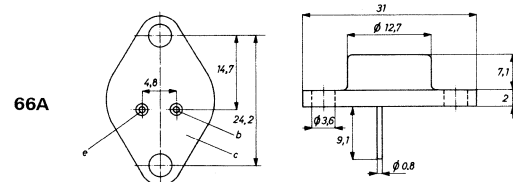
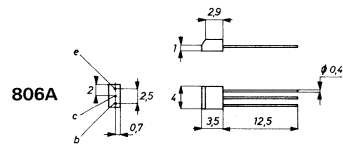
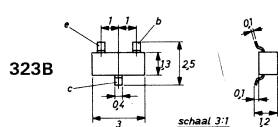
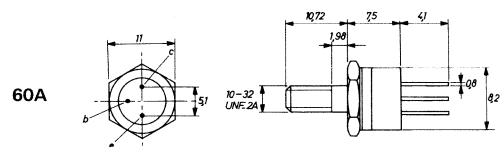
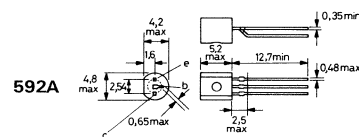
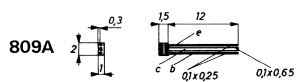
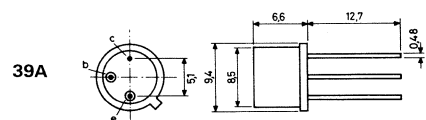
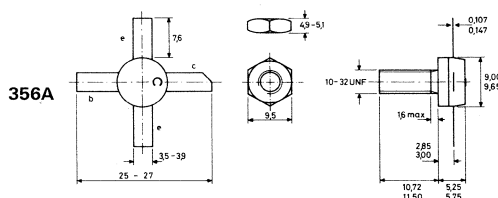
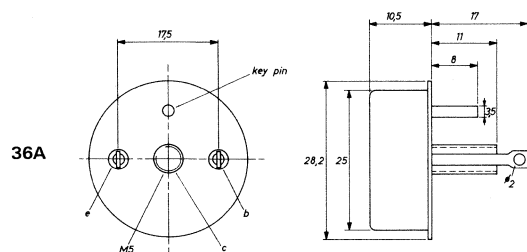
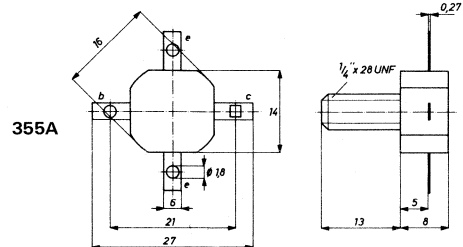
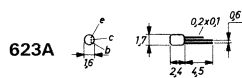
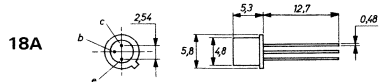
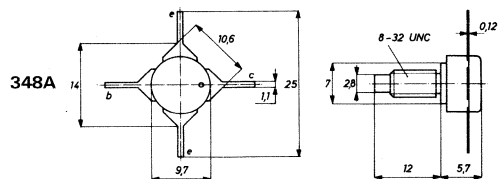
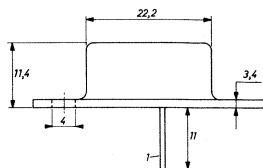
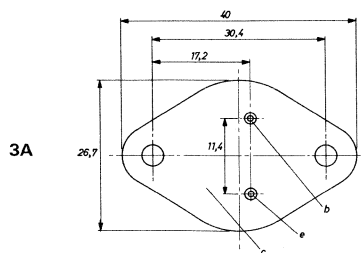
613A



814A



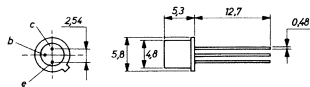
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)					
BLY 14	Ph		N	S	80	55	4	1A	9W	(200)	11		10	150	190							60A	4		
BLY 15	It		N	S	90	64	3	2A	15W	(175)	>20		10	500	200							3A	2		
BLY 16	It		N	S	64	64	3	1A		(175)	>10		10	1A	250							309A	2		
BLY 17	Ph		N	S	100	100	4	10A	100W	(175)	25			1A	70							36A	4		
BLY 47	Ti		N	S	100	75	8	3A	40W	25c					>15						0.3μs	3A	4		
BLY 47A	Ti		N	S	100	75	8	3A	40W	25c					>15						0.3μs	66A	2		
BLY 48	Ti		N	S	100	75	8	3A	40W	25c					>15						0.3μs	3A	6		
BLY 48A	Ti		N	S	100	75	8	3A	40W	25c					>15						0.3μs	66A	2		
BLY 49	Ti		N	S	250	150	8	3A	40W	25c					>15						0.3μs	3A	6		
BLY 49A	Ti		N	S	250	150	8	3A	40W	25c					>15						0.3μs	66A	2		
BLY 50	Ti		N	S	250	150	8	3A	40W	25c					>15						0.3μs	3A	2		
BLY 50A	N		N	S	250	150	8	3A	40W	25c					>15						0.3μs	66A	2		
BLY 83	Ph		N	S	(66)	33	4	(7.5A)	12W	90h	10		220	5	500			(34p)				348A	4		
BLY 84	Ph		N	S	(40)	20	4	(7.5A)	12W	90h	60			5	1A	>250		(37p)				348A	4		
BLY 87A	Ph		N	S	(36)	18	4	1.25A	17.5W	25h	>5			5	500	700		(15p)				348C	4		
BLY 88A	Ph		N	S	(36)	18	4	2.5A	32W	25h	>5			5	500	700		(34p)				348C	4		
BLY 89A	Ph		N	S	(36)	18	4	5A	70W	25m	10		120	5	1A	650		(65p)				356A	4		
BLY 90	Ph		N	S	(36)	18	4	8A	130W	25m	50			5	1A	550		(130p)				355A	4		
BLY 91A	Ph		N	S	(65)	36	4	750	17.5W	25h	>5			5	500	500		(10p)				348C	4		
BLY 92A	Ph		N	S	(65)	36	4	1.5A	32W	25h	>5			5	500	500		(20p)				348C	4		
BLY 93A	Ph		N	S	(65)	36	4	3A	70W	25m	10		120	5	1A	500		(50p)				356A	4		
BLY 94	Ph		N	S	(65)	36	4	6A	30W	25m	10		120	5	1A	500		(75p)				355A	4		
BSS 10	At		N	S	40	15	6	500	1W	(175)	40			1	10	830	500					18A	6		
BSS 11	At		N	S	40	15	4.5	200	1W	(200)	<120			1	10	500	500					18A	6		
BSS 12	At		N	S	30	12	5	200	1W	(200)	30		0.35	10	400	500					18A	6			
BSS 13	At		N	S	60	35	5	5W	(200)	>35	1			1	500	350	175					39A	6		
BSS 14	At		N	S	75	50	5	2A	5W	(200)	65			1	500	350	175					39A	6		
BSS 15	At		N	S	100	75	7	2A	10W	(200)	30		130	4	500	50	175					39A	2		
BSS 16	At		N	S	75	50	5	2A	10W	(200)	40		250	4	500	50	175					39A	2		
BSS 17	At		P	S	100	75	7	2A	10W	(200)	30		130	4	500	50	175					39A	2		
BSS 18	At		P	S	75	50	5	2A	10W	(200)	20		250	4	500	50	175					39A	2		
BSS 19	Ti		N	S	120	120		50	225		>30				4							806A	5		
BSS 20	Ti		N	S	160	160		50	225		>30				4							806A	5		
BSS 23	Te		N	S	45	40	6	1A	500	25a	>35			1	10		100				25ns	18A	6		
BSS 27	Ph		N	S	70	45	5	1A	800	25a	18		60	1	800	400	225	($<8p$)			25ns	39A	6		
BSS 28	Ph		N	S	50	30	5	1A	800	25a	>30			1	500	400	225	($<8p$)			25ns	39A	6		
BSS 29	Ph		N	S	50	30	5	1A	800	25a	>20			1	500	400	225	($<8p$)			30ns	39A	6		
BSS 38	Ph		N	S	120	100	5	100	500	25a	20		80	1	4	>60	250	($<4.5p$)				592A	5		
BSS 40	Ph		N	S	60	40	5	(1A)	360	25a	>30			5	150	>200	480	($<10p$)			<35ns	18A	5		
BSS 41	Ph		N	S	60	30	5	(1A)	360	25a	>30			5	150	>200	480	($<10p$)			<35ns	18A	5		
BSS 42	Te		N	S	120	120	6	1.5A	1W	25a	>40			5	10	100	175				40ns	39A	8		
BSS 44	Te		P	S	65	60	6	5A	5W	25c	>40			2	2A	>70	200				80ns	39A	6		
BSS 45	Te		N	S	85	80	6	5A	5W	25c	>30			2	2A	>70	200				<0.3μs	39A	6		
BSS 46	Te		P	S	85	80	6	5A	5W	25c	>30			2	2A	>70	200				<0.3μs	39A	6		
BSS 50	Ph	da	N	S	60		5	1A	5W	25c	>2000			10	500		220				<400ns	39A	6		
BSS 51	Ph	da	N	S	80		5	1A	5W	25c	>2000			10	500		220				<400ns	39A	6		
BSS 52	Ph	da	N	S	100		5	1A	5W	25c	>2000			10	500		220				<400ns	39A	6		
BSS 59	Te		N	S	140	80	7	1A	1.8W	25c	100		300	10	150	>100	350				<200ns	18A	6		
BSS 60	Ph		N	S	60		5	1A	5W	25c	>2000			10	500		220				<1μs	39A	6		
BSS 61	Ph	da	N	S	80		5	1A	5W	25c	>2000			10	500		220				<1μs	39A	6		
BSS 68	Ph		P	S	110	100	6	100	500	25a	>30			5	25	>50	250	($<5p$)				592A	5		
BSV 15-6	Ph		P	S	40	5	1A	5W	25c	40		100	1	100	>50	220	($<30p$)				<500ns	39A	6		
BSV 15-10	Ph		P	S	40	5	1A	5W	25c	63		100	160	1	100	>50	220	($<30p$)				<500ns	39A	6	
BSV 15-16	Ph		P	S	40	5	1A	5W	25c	100		160	250	1	100	>50	220	($<30p$)				500ns	39A	6	
BSV 16-6	Ph		P	S	60	5	1A	5W	25c	40		63	100	1	100	>50	220	($<30p$)				500ns	39A	6	
BSV 16-10	Ph		P	S	60	5	1A	5W	25c	63		100	160	1	100	>50	220	($<30p$)				500ns	39A	6	
BSV 16-16	Ph		P	S	60	5	1A	5W	25c	100		160	250	1	100	>50	220	($<30p$)				500ns	39A	6	
BSV 17-6	Ph		P	S	80	5	1A	5W	25c	40		63	100	1	100	>50	220	($<25p$)				39A	6		
BSV 17-10	Ph		P	S	80	5	1A	5W	25c	63		100	160	1	100	>50	220	($<25p$)				39A	6		
BSV 23	Fe		N	S	25	20	3	300		>20				10	200			($<25p$)				759B	5		
BSV 24	Fe		N	S	20	15	5	300		50		200		10	200							759B	5		
BSV 25	Fe		N	S	30	12	5	300		>40				10	400							759B	5		
BSV 26	Fe		N	S	40	15	5	300		40		120		10	500							759B	5		
BSV 27</																									



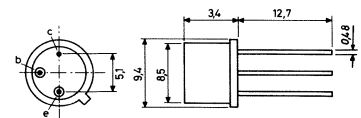
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	I _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (tj) °C/W	F (C _C)	f MHz	ton (tr)			
BSW 20/IV	Te		P	S	35	30	5	100	280	(150)	40	120	1	10	150	450					92E	5	
BSW 20A	Te		P	S	35	30	5	100	280	(150)	100	300	1	10	150	450					92E	5	
BSW 21	Se		S	S		20		200	300		75	225	2	2	150						18A	1	
BSW 21A	Se		S	S		30		200	300		75	225	2	2	150						18A	1	
BSW 22	Se		P	S		50		200	300		180	540	2	2	150						18A	1	
BSW 22A	Se		P	S		25		200	300		180	540	2	2	150						18A	1	
BSW 26	Ti		N	S	50	40	4	1A 1.8W	25c			>20	2	2	500					40ns	18A	6	
BSW 27	Se		N	S	60	50	4	1A 3W	25c			>20	2	2	500					40ns	39A	6	
BSW 28	Ti		N	S	60	50	4	1A 3W	25c			>20	2	2	500					50ns	39A	6	
BSW 29	Ti		N	S	40	30	4	1A 5W	25c			20	2	2	500					40ns	39A	6	
BSW 32	Ti		N	S	100	80	6	30 250	25a			>40	5	10	100	50	220				92A	14	
BSW 39-6	Te		N	S	100	80	7	1A 790	25a		40	100	1	100	50	220				50ns	39A	6	
BSW 39-10	Te		N	S	100	80	7	1A 790	25a		63	160	1	100	50	220				50ns	39A	6	
BSW 39-16	Te		N	S	100	80	7	1A 790	25a		100	250	1	100	50	220				50ns	39A	6	
BSW 40	Ti		P	S	100	80	7	1A 5W	25c		40	400	1	100							39A	2	
BSW 41	Ph		N	S	40	25	5	300 1W	25c			>15	1	500	>250	500	($<8p$)			<60ns	18A	6	
BSW 41A	Ph		N	S	40	25	5	300 1W	25c			>30	10	10	>150		($<8p$)			<60ns	18A	6	
BSW 42	Se		N	S		25		200 300			70	225	2	2	150						105C	1	
BSW 42A	Se		N	S		50		200 300			70	225	2	2	150						105C	1	
BSW 42B	Se		N	S		60		200 300			70	225	2	2	150						105C	1	
BSW 43	Se		N	S		25		200 300			180	540	2	2	150						105C	1	
BSW 43A	Se		N	S		50		200 300			180	540	2	2	150						105C	1	
BSW 44	Se		P	S		25		200 300			75	225	2	2	150						105C	1	
BSW 44A	Se		P	S		50		200 300			75	225	2	2	150						105C	1	
BSW 45	Se		P	S		25		200 300			180	540	2	2	150						105C	1	
BSW 45A	Se		P	S		50		200 300			180	540	2	2	150						105C	1	
BSW 66	Ph		N	S	100	100	6	1A 5W	25c			>40	5	100	80	220	($<35p$)			0.5μs	39A	6	
BSW 67	Ph		N	S	120	120	6	1A 5W	25c			>40	5	100	80	220	($<35p$)			0.5μs	39A	6	
BSW 68	Ph		N	S	150	150	6	1A 5W	25c			>40	5	100	80	220	($<35p$)			0.5μs	39A	6	
BSW 69	Ph		N	S	150		6	50 125	50a			>30	2	4	130	600	(2p)				333B	5	
BSW 72	It		P	S	40	25	5	500 2W	(200)		40	120	10	150	150	440					18A	3, 6	
BSW 73	It		P	S	40	25	5	500 2W	(200)		100	300	10	150	150	440					18A	3, 6	
BSW 74	It		P	S	75	40	5	500 2W	(200)		40	120	10	150	150	440					18A	3, 6	
BSW 75	It		P	S	75	40	5	500 2W	(200)		100	300	10	150	150	440					18A	3, 6	
BSW 82	It		N	S	40	25	5	500 2W	(175)		40	120	10	150	200	300					18A	3, 6	
BSW 83	It		N	S	40	25	5	500 2W	(175)		100	300	10	150	200	300					18A	3, 6	
BSW 84	It		N	S	75	40	5	500 2W	(175)		40	120	10	150	200	300					18A	3, 6	
BSW 85	It		N	S	75	40	5	500 2W	(175)		100	300	10	150	200	300					18A	3, 6	
BSW 88A	Te		N	S	35	30	5	100 300	(150)		100	300	1	10	200	350					92A	5	
BSW 88B	Te		N	S	35	30	5	100 300	(150)		250	750	1	10	200	350					92A	5	
BSW 89A	Te		N	S	35	30	5	100 300	(150)		100	300	1	10	200	350					92E	5	
BSW 89B	Te		N	S	35	30	5	100 300	(150)		250	750	1	10	200	350					92E	5	
BSX 12	Ph		N	S	25	12	4	1A 3W	95m		30	120	0.5	300	620	300	($<25p$)			11ns	39B	6	
BSX 12A	Ph		N	S	25	15	4	1A 3W	95m		30	120	0.5	300	620	300	($<25p$)			11ns	39B	6	
BSX 19	Ph		N	S	40	15	4.5	(500) 360	25a		40	120	1	10	>400	480	($<4p$)			<12ns	18A	5	
BSX 20	Ph		N	S	40	15	4.5	(500) 360	25a		40	120	1	10	>500	480	($<4p$)			<12ns	18A	5	
BSX 21	Ph		N	S	120	80	5	100 300	25a			82	1	10	160	500					18A	5	
BSX 22	It		N	S	40	32	5	1A 6W	(175)			>35	2	500	100	190					39A	2, 6	
BSX 23	It		N	S	90	65	5	1A 6W	(175)			>35	2	500	100	190					39A	2, 6	
BSX 25	Te		N	S	40	25	5	300 2W	(200)			>30	10	5	50	480					18A	6	
BSX 26	Fa		N	S		15		1W			40	120	0.3	10	500						18A	6	
BSX 29	Fa		N	S		12		1W			30	120	0.2	30	400						18A	6	
BSX 32	Fa		N	S	65	40	6	1A 3.5W	25c		60	150	1	100						<60ns	39A	6	2N5022
BSX 38A	Te		N	S	35	30	5	100 1000	(200)		100	300	1	10	200	450					18A	6	
BSX 38B	Te		N	S	35	30	5	100 1000	(200)		250	750	1	10	200	450					18A	6	
BSX 39	Fa		N	S		20		680			40	120	0.2	30	350						18A	5	
BSX 45-6	Ph		N	S	40	7	1A 5W	25c			40	63	100	1	100	>50	200	3.5	1k		39A	7	BSV 15-6
BSX 45-10	Ph		N	S	40	7	1A 5W	25c			63	100	1	100	>50	200	3.5	1k			39A	7	BSV 15-10
BSX 45-16	Ph		N	S	40	7	1A 5W	25c			100	160	1	100	>50	200	3.5	1k			39A	7	BSV 15-16
BSX 46-6	Ph		N	S	60	7	1A 5W	25c			40	63	100	1	100	>50	200	3.5	1k		39A	7	BSV 16-6
BSX 46-10	Ph		N	S	60	7	1A 5W	25c			63	100	1	100	>50	200	3.5	1k			39A	7	BSV 16-10
BSX 46-16	Ph		N	S	60	7	1A 5W	25c			100	160	1	100	>50	200	3.5	1k			39A	7	BSV 16-16
BSX 47-6	Ph		N	S	80	7	1A 5W	25c			40	63	100	1	100	>50	200	3.5	1k		39A	7	BSV 17-6
BSX 47-10	Ph		N	S	80	7	1A 5W	25c			63	100	1	100	>50	200	3.5	1k			39A	7	BSV 17-10
BSX 48	Si		N	S	50	25	5	600 1W	(200)			>37	1	10	400	500					18A	6	
BSX 49	Si		N	S	60	40	5	600 1W	(200)			>37	1	10	400	500					18A	6	
BSX 51	Se		N	S		25		200 300			75	225	2	2	150						18A	1	
BSX 51A	Se		N	S		50		200 300			75	225	2	2	150						18A	1	
BSX 51B	Se		N	S		60		200 300			75	225	2	2	150						18A	1	
BSX 52	Se		N	S		25		200 300			180	540	2	2	150						18A	1	
BSX 52A	Se		N	S		50		200 300			180	540	2	2	150						18A	1	
BSX 55	Ph		N	S	70	45	5	1A 800	25a		30	90	1	500	450	220	($<10p$)			<35ns	39A	5	
BSX 60	Ph		N	S	70	30	5	1A 800	25a		30	90	1	500	475	220	($<10p$)			<40ns	39A	5	
BSX 61	Ph		N	S	70	45	5	1A 800	25a		30	90</											

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz	ton (tr)			
BSX 80	Te		N	S	35	15	5	230	150	(125)	30	70	1	10	200	450				333A	5	
BSX 81A	Te		N	S	35	30	5	100	300	(150)	100	300	1	10	200	350				333A	5	
BSX 81B	Te		N	S	35	30	5	100	300	(150)	250	750	1	10	200	350				333A	5	
BSX 88	Ph		N	S	40	15	5	100	350		30	120	1	10	300					18A	5	
BSY 10	Ph		N	S	60	60		50	260			(>40)			60					39A	3	
BSY 11	Ph		N	S	45	45		50	260			(>55)			60					39A	3	
BSY 17	Si		N	S	20	12	5	200	1W	(200)	20	60	0,35	10	280	500				18A	6	
BSY 18	Si		N	S	20	12	5	200	1W	(200)	40	120	0,35	10	280	500				18A	6	
BSY 19	It		N	S	40	15	5	200	1W	(200)	30	120	1	10	400	800				18A	6	
BSY 20	It		N	S	25	15	5	50	1W	(175)	20	60	1	10	500					18A	6	
BSY 21	It		N	S	40	15	5	500	1W	(200)	30	120	1	10	480					18A	6	
BSY 22	It		N	S	45	25	5	200	1W	(200)	40	200	5	1	480					18A	6	
BSY 23	It		N	S	40		5	200	1W	(175)		>25	1	10	500					18A	6	
BSY 34	Si		N	S	60	40	5	600	3W	(200)	37		1	10	220					39A	6	
BSY 38	Ph		N	S	20		5	100	300	25a	30	60	0,35	10	350	500	(<5p)		<14ns	18A	5	
BSY 39	Ph		N	S	20		5	100	300	25a	40	120	0,35	10	350	500	(<5p)		<14ns	18A	5	
BSY 51	It		N	S	60	25	5	500	3W	(200)	40	120	10	150	100	220				39A	2,6	
BSY 52	It		N	S	60	25	5	500	3W	(200)	100	300	10	150	130	220				39A	2,6	
BSY 53	It		N	S	75	30	7	750	3W	(200)	40	120	10	150	100	220				39A	2,6	
BSY 54	It		N	S	75	30	7	750	3W	(200)	100	300	10	150	145	220				39A	2,6	
BSY 55	It		N	S	120	80	7	500	3W	(200)	40	120	10	150	100	220				39A	2,6	
BSY 56	It		N	S	120	80	7	500	3W	(200)	100	300	10	150	145	220				39A	2,6	
BSY 58	Si		N	S	50	25	5	600	3W	(200)		37	1	10	400	220				39A	6	
BSY 59	Si		P	S	30		5	800	480	45c	63	400	0,7	10	100	450				325B	5	
BSY 62A	Si		N	S	25	15	5	200	1W	(200)	20	60	1	10	200	500				18A	6	
BSY 62B	Si		N	S	25	15	5	200	1W	(200)	30	300	1	10	200	500				18A	6	
BSY 63	Si		N	S	40	15	5	200	1W	(200)	30	120	1	10	300	500				18A	6	
BSY 72	It		N	S	25	18	5	30	155	(200)	80	250	1	1	170					18A	3	
BSY 73	It		N	S	25	18	5	100	155	(200)	35	100	1	1	145					18A	3,5	
BSY 74	It		N	S	25	18	5	100	155	(200)	80	250	1	1	170					18A	3,5	
BSY 75	It		N	S	40	32	7	250	155	(200)	35	100	1	1	145					18A	3,5	
BSY 76	It		N	S	40	32	7	250	155	(200)	80	250	1	1	170					18A	3,5	
BSY 77	It		N	S	80	64	7	250	155	(200)	35	100	1	1	145					18A	5	
BSY 78	It		N	S	80	64	7	250	155	(200)	80	250	1	1	170					18A	5	
BSY 79	It		N	S	120		5	30	155	(200)		60	1	1	100					18A	5	
BSY 80	It		N	S	25	18	5	100	155		200	600	1	1	210					18A	3	
BSY 81	It		N	S	40	18	5	1A	5W	(200)	40	120	10	150	100	194				39A	2,6	
BSY 82	It		N	S	40	18	5	1A	5W	(200)	100	300	10	150	120	194				39A	2,6	
BSY 83	It		N	S	80	35	7	1A	5W	(200)	40	120	10	150	100	194				39A	2,6	
BSY 84	It		N	S	80	35	7	1A	5W	(200)	100	300	10	150	120	194				39A	2,6	
BSY 85	It		N	S	120	64	7	1A	5W	(200)	40	120	10	150	110	194				39A	2,6	
BSY 86	It		N	S	120	64	7	1A	5W	(200)	100	300	10	150	130	194				39A	2,6	
BSY 87	It		N	S	100	60	7	500	3W	(200)	40	120	10	150	100	220				39A	2,6	
BSY 88	It		N	S	100	60	7	500	3W	(200)	100	300	10	150	145	220				39A	2,6	
BSY 90	It		N	S	60	25	5	500	3W	(200)		425	10	10	170	220				39A	2,6	

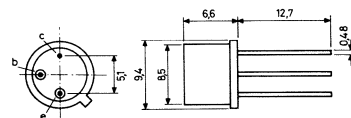
18A



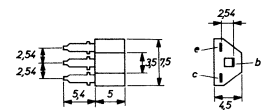
39B



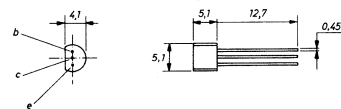
39A



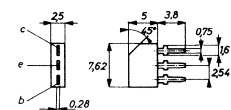
325B



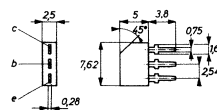
92A



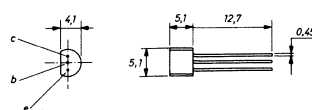
333B



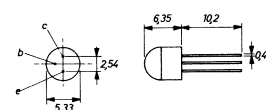
333A



92E



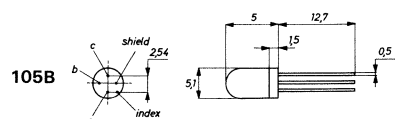
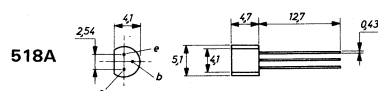
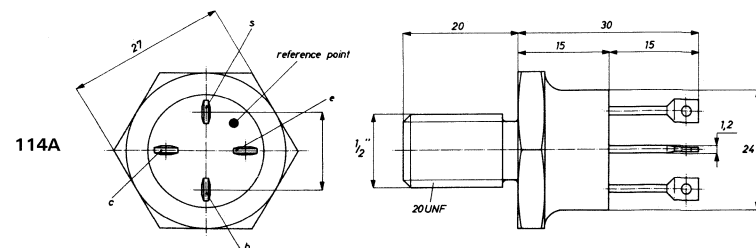
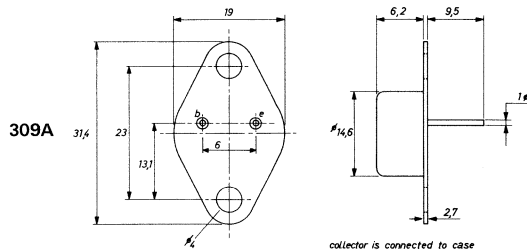
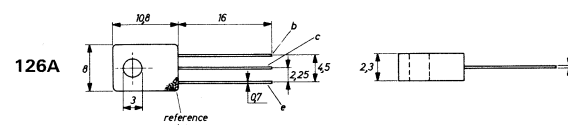
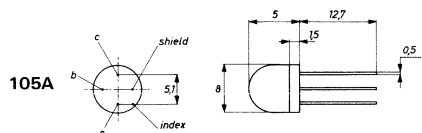
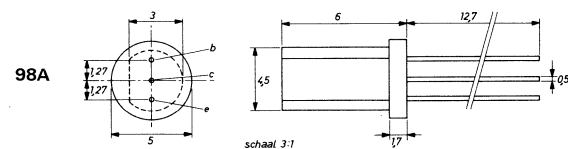
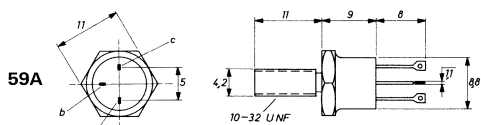
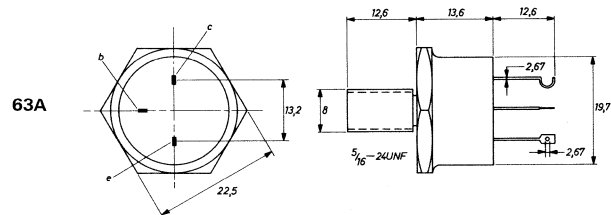
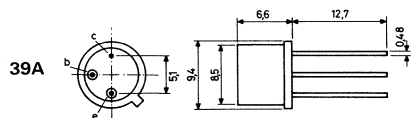
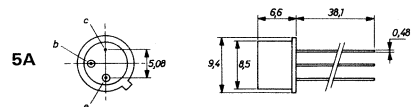
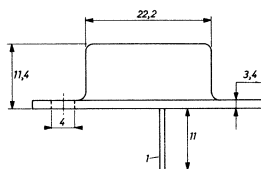
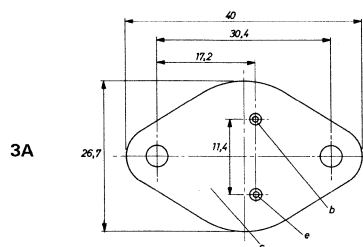
105C



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE})		V _{ce} (V _{cb}) V	I _c (I _B) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
												type	max										
BSY 92	Te		N	S	60	45	5	300	2W	(200)		>60		2	10	50	220				39A	3, 6	
BSY 93	Te		N	S	60	40	5	300	2W	(200)		>60		2	10	50	480				18A	3, 6	
BSY 95A	Fe		N	S	20	20			300		50		200		10	200					18A	5	
BU 103A	Se		N	S		80		1A	30W		50		200		100	6.5					309A	2	
BU 104	Se		N	S		400		5A	85W		10		50		5A	10					3A	2	
BU 105	Ph		N	S	750			2.5A	10W	90m						7.5					3C	11	
BU 106	Ti		N	S	325	140	8	10A	50W	25c		>8		5	4A						3A	11	
BU 107	Ti		N	S	300	120	8	10A	50W	25c		>5		1.5	7A						3A	11	
BU 108	Ph		N	S				5A	12.5W	95m						7					3C	11	
BU 109	Se		N	S		330		5A	85W		15		45		5A	10					3A	2	
BU 110	Si		N	S		150	6	10A	60W	75m		>5		1.5	7A	25					3G	11	
BU 111	Ni		N	S		300	6	6A	50W	75m		>5		5	3A	20					3G	8	
BU 114	Si		N	S		225	6	6A	50W	75m		>5		5	3A	20					3G	8	
BU 115	At		N	S	800		10	15A	50W	(150)	20		100	5	5						3A	12	
BU 116	At		N	S	400		10	15A	50W	(150)	20		100	5	5						3A	12	
BU 117	At		N	S	250		10	15A	50W	(150)	20		100	5	5						3A	12	
BU 120	At		N	S		250	8	5A	50W	(150)	35		165	5	1A	10					3A	12	
BU 121	At		N	S		200	8	10A	50W	(150)		>7		5	6A	6					3A	12	
BU 122	At		N	S		150	8	5A	50W	(150)	25		250	5	1A	10					3A	12	
BU 123	At		N	S		120	8	5A	50W	(150)	20		250	5	1A	10					3A	12	
BU 126	Ph		N	S	300			3A	30W	50m	15		60	5	1A	8					3C	6	
BU 132	Ph		N	S	600	5		1A	15W	97m	25		80	10	250	8					3C	11	
BU 133	Ph		N	S	250			3A	30W	50m	15		80	5	1A	8					3C	6	
BU 204	Ph		N	S	600			2.5A	10W	90m		>2		5	2A	7.5					3C	11	
BU 205	Ph		N	S	700			2.5A	10W	90m		>2		5	2A	7.5					3C	11	
BU 206	Ph		N	S	800			2.5A	10W	90m		>1.8		5	2A	7.5					3C	11	
BU 207	Ph		N	S	600			5A	12.5W	95m		>2.25		5	4.5A	7					3C	11	
BU 207A	Ph		N	S	600			5A	12.5W	95m		>2.25		5	4.5A	7					3C	11	
BU 208	Ph		N	S	700			5A	12.5W	95m		>2.25		5	4.5A	7					3C	11	
BU 208A	Ph		N	S	700			5A	12.5W	95m		>2.5		5	4.5A	7					3C	11	
BU 209	Ph		N	S	800			4A	12.5W	95m		>2.25		5	3A	7					3C	11	
BU 209A	Ph		N	S	800			4A	12.5W	95m		>2.25		5	3A	7					3C	11	
BU 225	Te		N	S	2200		5	6A	10W	80m											3C	9	
BU 310	Si		N	S		100		6A	25W	100m		>20	1.5	5A	25						3G	11	
BU 311	Si		N	S		100		6A	25W	100m		>15	1.5	5A	25						3G	11	
BUY 20	Si		N	S		100		6A	25W	100m		>10		1.5	5A	25					3G	11	
BUY 20	Ti		N	S	200	120	8	10A	85W	25c	20		300	5	3A	25				1μs	3A	6	
BUY 21	Ti		N	S	300	180	8	10A	85W	25c	20		300	5	3A	25				1μs	3A	6	
BUY 22	Ti		N	S	450	230	8	10A	85W	25c	20		300	5	3A	25				1μs	3A	6	
BUY 23	Ti		N	S	600	250	8	10A	85W	25c	20		200	5	2.5A	25				1μs	3A	8	
BUY 23A	Ti		N	S	700	300	8	10A	85W	25c	20		200	5	2.5A	25				1μs	3A	8	
BUY 23B	Ti		N	S	400			10A	85W		20		200		2.5A	15					3A	2	
BUY 43-6	Si		N	S	40	7	4A	31W	45c	40	63	100	1.5	500	1						309B	2, 6	
BUY 43-10	Si		N	S	40	7	4A	31W	45c	63	100	160	1.5	500	1						309B	2, 6	
BUY 43-16	Si		N	S	40	7	4A	31W	45c	100	160	250	1.5	500	1						309B	2, 6	
BUY 44	Si		N	S		150	6	7A	30W	125c		>8		1.5	6A	15					3G	6	
BUY 46-4	Si		N	S		55	7	4A	31W	45c	25	40	63	1.5	500	0.8					309B	2, 6	
BUY 46-6	Si		N	S		55	7	4A	31W	45c	40	63	100	1.5	500	0.8					309B	2, 6	
BUY 69A	Si		N	S		500		10A	100W			>15			1A						3A	6	
BUY 69B	Ti		N	S		400		10A	100W			>15			1A						3A	6	
BUY 69C	Ti		N	S		250		10A	100W			>15			1A						3A	6	
BUY 70A	Ti		N	S		500		10A	75W			>15			1A						3A	6	
BUY 70B	Ti		N	S		400		10A	75W			>15			1A						3A	6	
BUY 70C	Ti		N	S		200		10A	75W			>15			1A						3A	6	
CDT 1311	It		P	G	60	35	30	5A	33W	(95)	40		120	2	2A		30				3A	2, 6	
CTP 1313	It		P	G	100	55	50	5A	33W	(95)	40		120	2	2A		30				3A	2, 6	
CTP 1500	It		P	G	100	60	80	15A	50W	(95)	30		75	2	5A		30				3A	2, 6	
CTP 1503	It		P	G	80	50	60	15A	50W	(95)	30		75	2	5A		30				3A	2, 6	
CTP 1504	It		P	G	60	35	40	15A	50W	(95)	30		75	2	5A		30				3A	2, 6	
CTP 1508	It		P	G	40	20	20	15A	50W	(95)	30		75	2	5A		30				3A	2, 6	
CTP 1544	It		P	G	60	30	30	25A	50W	(95)	25		125	2	25A		30				3A	2, 6	
CTP 1545	It		P	G	80	40	30	25A	50W	(95)	25		125	2	25A		30				3A	2, 6	
CTP 1552	It		P	G	40	20	30	25A	50W	(95)	25		125	2	25A		30				3A	2, 6	
CTP 1553	It		P	G	100	50	30	25A	50W	(95)	25		125	2	25A		30				3A	2, 6	
D2 T918	Ti	du	N	S	30	15	3	50	(300)	25a		>20		1	3			<6	60		77A	3	
D2 T2218	Ti	du	N	S	60	30	5	800	(600)	25a	40		120	10	150		>250				77A	1	D2 T2904
D2 T2218A	Ti	du	N	S	75	40	6	800	(600)	25a	40		120	10	150		>250				77A	1	D2 T2904
D2 T2219	Ti	du	N	S	60	30	5	800	(600)	25a	100		300	10	150		>250				77A	1	D2 T290f
D2 T2219A	Ti	du	N	S	75	40	6	800	(600)	25a	100		300	10	150		>300				77A	1	D2 T290f
D2 T2904	Ti	du	P	S	60	40	5	600															

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t) s	h _{FE} min	(h _{FE}) type	V _{ce} (V _{cb}) V	I _c (I _b) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
D33 D22	Ge		N	S	35	25	5	750	1000	(150)	150	500	2	2	135						98A	12		
D33 D24	Ge		N	S	50	40	5	750	1000	(150)	60	120	2	2	80						98A	12		
D33 D25	Ge		N	S	50	40	5	750	1000	(150)	100	200	2	2	120						98A	12		
D33 D26	Ge		N	S	50	40	5	750	1000	(150)	150	300	2	2	135						98A	12		
D33 D27	Ge		N	S	50	40	5	750	1000	(150)	250	500	2	2	150						98A	12		
D33 D29	Ge		N	S	70	60	5	750	1000	(150)	60	120	2	2	80						98A	12		
D33 D30	Ge		N	S	70	60	5	750	1000	(150)	100	200	2	2	120						98A	12		
EN 697	Ns		N	S	60	30	5	500	300		40	120	10	150	50						105A	1, 5		
EN 722	Ns		P	S	50	35		500	200		30	90	10	150	60						105B	1, 5		
EN 918	Ns		N	S	30	15	3	20	200			>20	1	3	600						105B	3		
EN 930	Ns		N	S	45	45	5	25	200			<600	5	10	30						105B	1		
EN 956	Ns		N	S	75	40	7	500	200		100	300	10	150	70						105B	1, 5		
EN 1132	Ns		P	S	50	35		500	300		30	90	10	150	60						105A	1, 5		
EN 2219	Ns		N	S	60	30	5	500	300		100	300	10	150	250						105A	1, 5		
EN 2222	Ns		N	S	60	30	5	500	200		100	300	10	150	250						105B	1, 5		
EN 2484	Ns		N	S	60	60	6	25	200			>250	5	1	60						105B	1		
EN 2905	Ns		P	S	60	40		500	300		100	300	10	150	150						105A	1, 5		
EN 2907	Ns		P	S	60	40	5	500	200		100	300	10	150	150						105B	1, 5		
EN 3502	Ns		P	S	45	45	5	500	300		115	300	1	50	150						105A	1, 5		
EN 3504	Ns		P	S	45	45	5	500	200		115	300	1	50	150						105B	1, 5		
GET 929	Ge		N	S	70	50	5	100	360	(125)		>90	5	0.5	350						518A	1		
GET 930	Ge		N	S	70	50	5	100	360	(125)		>150	5	0.5	350						518A	1		
GET 2221	Ge		N	S	60	30	5	400	1W	(125)	40	120	10	150	250						518A	1, 6		
GET 2221A	Ge		N	S	75	40	5	400	1W	(125)	40	120	10	150	250						518A	1		
GET 2222	Ge		N	S	60	30	5	400	1W	(125)	100	300	10	150	250						518A	1, 6		
GET 2222A	Ge		N	S	75	40	5	400	1W	(125)	100	300	10	150	300						518A	1, 6		
GET 2484	Ge		N	S	60	60	6	100	360	(125)		>250	5	1							518A	1		
GET 2904	Ge		P	S	60	40	5	350	700	(125)	40	120	10	150							518A	1, 5		
GET 2905	Ge		P	S	60	40	5	350	700	(125)	100	300	10	150							518A	1, 5		
GET 2906	Ge		P	S	60	40	5	350	700	(125)	40	120	10	150							518A	1, 5		
GET 2907	Ge		P	S	60	40	5	350	700	(125)	100	300	10	150							518A	1, 5		
GET 3563	Ge		N	S	30	12	2	50	500	(125)	20	200	10	8							518A	3		
GET 3638	Ge		P	S	25	25	4	350	700	(125)		70	1	50	100						518A	3		
GET 3638A	Ge		P	S	25	25	4	350	700	(125)		>100	1	50	100						518A	3		
MJ 400	Mo		N	S	350	325	5	250	6.6W	(175)	30	300	10	50	15						309A	12		
MJ 413	Mo		N	S	400		5	10A	125W	(150)	20	80	5	500	2.5						3A	6		
MJ 420	Mo		N	S	275	250	6	100	2.5W	(175)	25	250	20	30	14						5A	12		
MJ 421	Mo		N	S	350	325	6	100	2.5W	(175)	25	250	20	30	14						5A	12		
MJ 423	Mo		N	S	400		5	10A	125W	(150)		>5	1A	2.5							3A	6		
MJ 430	Mo		P	S		40		1A	62W		25	150		250	2						5A	2		
MJ 431	Mo		N	S	400		5	10A	125W	(150)	15	35	5	2.5A	2.5						3A	6		
MJ 440	Mo		N	S		40		1A	6W		25	150		250	3						3A	2		
MJ 450	Mo		P	S	40	40	5	30A	150W	(200)		>20	2	10A	2						3A	6		
MJ 480	Mo		N	S	40	40	5	4A	87W	(200)	30	200	2	1A	4						3A	2		
MJ 481	Mo		N	S	60	60	5	4A	87W	(200)	30	200	2	1A	4						3A	2		
MJ 490	Mo		P	S	40	40	5	4A	87W	(200)	30	200	2	1A	4						3A	2		
MJ 491	Mo		P	S	60	60	5	4A	87W	(200)	30	200	2	1A	4						3A	2		
MJ 500	Mo		P	S	60	60	5	7A	60W	(200)	25	180	2	2A	30						59A	2, 6		
MJ 501	Mo		P	S	80	80	5	7A	60W	(200)	25	180	2	2A	30						59A	2, 6		
MJ 802	Mo		N	S		90	4	30A	200W	(200)	25	100	2	7.5A	2						3A	2		
MJ 1800	Mo		N	S		250	5	5A	100W	(150)	40	120	5	400							3A	12		
MJ 2249	Mo		N	S	60	60	6	2A	20W	(175)	25	200	4	100	10						309A	2, 6		
MJ 2250	Mo		N	S	80	80	6	2A	20W	(175)	25	200	4	100	10						309A	2, 6		
MJ 2251	Mo		N	S		225	6	500	10W	(150)	25	200	10	50							309A	12		
MJ 2252	Mo		N	S		300	6	500	10W	(150)	25	200	10	50							309A	12		
MJ 2253	Mo		P	S		60		3A	25W		20	100		250	3						309A	2		
MJ 2254	Mo		P	S		80		3A	25W		20	100		250	3						309A	2		
MJ 2267	Mo		P	S	40	40	5	5A	150W	(200)	20	100	2	4A	3						3A	2, 6		
MJ 2268	Mo		P	S	55	55	5	5A	150W	(200)	20	100	2	4A	3						3A	2, 6		
MJ 2801	Mo		N	S		40		10A	120W		15	60		8A	1						3A	2		
MJ 2840	Mo		N	S	60	60	4	10A	150W	(200)	20	100	2	3A	20						3A	2		
MJ 2841	Mo		N	S	80	80	4	10A	150W	(200)	20	100	2	4A	20						3A	2		
MJ 2901	Mo		P	S		40		10A	120W		15	60		8A	1						3A	2		
MJ 2940	Mo		P	S	60	60	4	10A	150W	(200)	20	100	2	3A	20						3A	2		
MJ 2941	Mo		P	S	80	80	4	10A	150W	(200)	20	100	2	4A	20						3A	2		
MJ 3029	Mo		N	S		250	5	3.5A	150W	(150)		>30	5	400							3A	12		
MJ 3030	Mo		N	S		325		3.5A	125W	(150)											3A	12		
MJ 3101	Mo		N	S	50	40	6	2A	20W	(175)	25	200	4	500	10						309A	2, 6		
MJ 3201	Mo		N	S	225	225	3	100	15W	(175)	30	200	10	50	15						309A	2		
MJ 3202	Mo		N	S	300	300	3	100	15W	(175)	30	200	10	50	15						309A	2		
MJ 3701	Mo		P	S		40		3A	25W		20	100		250	3						309A	2		
MJ 3771	Mo		N	S		30		30A	150W		15	60		15A	2						3A	2		
MJ 3772	Mo		N	S		60		20A	150W		15	60		10A	2						3A	2		
MJ 4502	Mo		P	S	100	90	4	30A	200W	(200)	25	100	2	7.5A	2						3A	2		
MJ 6700	Mo		P	S	60	60	5	7A	60W	(200)	25	180	2	2A	30						59A	2, 6		
MJ 6701	Mo		P	S	80	80	5	7A	60W	(200)	25	180	2	2A	30						59A	2, 6		
MJ 7000	Mo		N	S	100	100	7	30A	150W	(200)	20	100	4	10A	30						63A	2, 6		
MJ 7200	Mo																							

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	t _{on} (tr)					
MJE 103	Mo		P	S		60		5A	75W		30	150		1A	2					126A	2				
MJE 104	Mo		P	S		80		5A	75W		30	150		1A	2					126A	2				
MJE 105	Mo		P	S	50	50	4	5A	65W	(150)	25	100	2	2A						126A	2				
MJE 201	Mo		N	S		40		5A	75W		25	150		2A	2					126A	2				
MJE 202	Mo		N	S		60		5A	75W		25	150		2A	2					126A	2				
MJE 203	Mo		N	S		60		5A	75W		30	150		2A	2					126A	2				
MJE 204	Mo		N	S		80		5A	75W		30	150		2A	2					126A	2				
MJE 205	Mo		N	S	50	50	4	5A	65W	(150)	25	100	2	2A						126A	2				
MJE 340	Mo		N	S		300	3	500	21W	(150)	30	240	10	50						126A	12				
MJE 341	Mo		N	S	175	150	3	500	21W	(150)	25	200	10	50	15					126A	12				
MJE 344	Mo		N	S	200	200	5	500	21W	(150)	30	300	10	50	15					126A	12				
MJE 345	Mo		N	S		325		500	21W	(150)	30	300	1	50	15					126A	2				
MJE 370	Mo		N	S	30	30	4	3A	25W	(150)	30	>25	1	1A						126A	2				
MJE 371	Mo		P	S	40	40	4	3A	40W	(150)	30	>40	1	1A						126A	2				
MJE 488	Mo		N	S		50		4A	40W		30	>30	1	1A	4					126A	2				

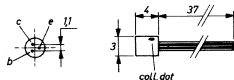


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _e)	f MHz	ton (tr)				
MJE 520	Mo		N	S	30	30	4	3A	25W	(150)		>25	1	1A							126A	2		
MJE 521	Mo		N	S	40	40	4	3A	40W	(150)		>40	1	1A							126A	2		
MJE 2801	Mo		N	S	60	60	4	10A	90W	(150)	25		100	2	3A						126A	2		
MJE 2901	Mo		P	S	60	60	4	10A	90W	(150)	25		100	2	3A						126A	2		
MJE 2955	Mo		P	S	70	60	5	10A	90W	(150)	20		70	4	4A	2					126A	2		
MJE 3055	Mo		N	S	70	60	5	10A	90W	(150)	20		70	4	4A	2					126A	2, 6		
MJE 3439	Mo		N	S	450	350	5	300	15W	(150)	40		160	10	20	15					126A	2		
MJE 3440	Mo		N	S	350	250	5	300	15W	(150)	40		160	10	20	15					126A	12		
MM 1500	Mo		N	S	30	15	4	200	3.5W	(200)						1500					816A	3		
MM 1501	Mo		N	S	30	15	4	200	3.5W	(200)						1000					816A	3		
MM 1552	Mo		N	S	65	35	4	8A	80W	(200)		>5	5	3A	175						817A	4		
MM 1553	Mo		N	S	100	70	4	8A	80W	(200)		>15	5	2A	175						817A	4		
MM 1619	Mo		N	S	48	24	4	3.5A	50W	(200)		>3	1	1A	100						356A	4		
MM 1620	Mo		N	S	48	24	4	7A	100W	(200)		>3	5	2.5A							356A	4		
MM 1748	Mo		N	S	15	6	4	100	500	(200)	20		120	0.5	10	600					52A	5		
MM 2484	Mo		N	S	60	60	6	50	1W	(200)		>250	5	1			486				18A	1		
MM 3903	Mo		N	S	60	40	6	200	360	(200)	50		150	1	10	250	490				52A	1, 5		
MM 3904	Mo		N	S	60	40	6	200	360	(200)	100		300	1	10	300	490				52A	1, 5		
MM 3905	Mo		P	S	40	40	5	200	360	(200)	50		150	1	10	200	490				52A	1, 5		
MM 3906	Mo		P	S	40	40	5	200	360	(200)	100		300	1	10	250	490				52A	1, 5		
MM 4018	Mo		P	S	40	20	4	400	5W	(200)		>10	5	50	900						39A	4		
MM 4019	Mo		P	S	60	40	4	1A	5W	(200)		>10	5	250	750						39A	4		
MM 4020	Mo		P	S	36	18	4	1A	25W	(150)		>15	5	250	175						348C	4		
MM 4021	Mo		P	S	36	18	4	2.5A	29W	(150)		>15	5	500	175						348C	4		
MM 4022	Mo		P	S	36	18	4	4A	70W	(150)		>15	5	500	175						348C	4		
MM 4023	Mo		P	S	36	18	4	6A	87W	(150)		>15	5	500	175						348C	4		
MM 4049	Mo		P	S	15	10	4	30	200	(200)	20		80	2	25	4000					72A	3		
MM 4052	Mo		P	S	30	30	30	500	2W	(200)		>20	1	10							46A	6, 15		
MM 4261H	Mo		P	S	15	15	4	30	200	(200)	30		150	1	10	2000					72A	5		
MM 4429	Mo		N	S	55	35	3.5	250	5W	(200)	20		200	15	50	800					356A	4		
MM 4430	Mo		N	S	55	35	3	250	5W	(200)	20		200	15	50	600					356A	4		
MM 4545	Mo		P	S	200	200	5	2A	25W	(200)		>20	10	10	40						37A	2, 6		
MM 4546	Mo		P	S	300	300	5	2A	25W	(200)		>20	10	10	30						37A	2, 6		
MM 4547	Mo		P	S	400	400	5	2A	25W	(200)		>20	10	10	30						37A	2, 6		
MM 4645	Mo		P	S	200	200	5	2A	25W	(200)		>25	10	100	40						39A	2, 6		
MM 4646	Mo		P	S	300	300	5	2A	25W	(200)		>25	10	100	40						39A	2, 6		
MM 4647	Mo		P	S	400	400	5	2A	25W	(200)		>25	10	100	30						39A	2, 6		
MM 5005	Mo		P	S	80	60	5	2A	8W	(200)	50		250	2.5	150	30					39A	2, 6		
MM 5006	Mo		P	S	100	80	5	2A	8W	(200)	50		250	2.5	200	30					39A	1, 6		
MM 5007	Mo		P	S	120	100	5	2A	8W	(200)	50		250	2.5	250	30					39A	1, 6		
MM 8000	Mo		N	S	40	30	3.5	400	3W	(200)		>30	15	50	550						39A	3		
MM 8001	Mo		N	S	40	30	3.5	400	3W	(200)		>30	15	50	700						39A	3		
MM 8002	Mo		N	S	40	30	3.5	400	3W	(200)		>30	15	50	1000						39A	3		
MM 8003	Mo		N	S	40	30	3.5	400	5W	(200)		>30	15	50	1000						348A	4		
MM 8006	Mo		N	S	15	10	3	20	200	(200)		>25	6	1	3500						72A	3		
MM 8007	Mo		N	S	15	10	3	20	200	(200)		>25	6	1	3500						72A	3		
MM 8008	Mo		N	S	35	30	3	20	3W	(200)						1100					816A	4		
MM 8009	Mo		N	S	55	50	3	400	3W	(200)						1000					39A	4		
MM 8010	Mo		N	S	35	30	3	100	3W	(200)						1100					816A	4		
MM 8011	Mo		N	S	35	30	3	100	3W	(200)						1100					816A	4		
MM 8012	Mo		N	S	40	30	3.5	400	5W	(200)		>30	20	50	1500						830A	4		
MPS A05	Mo		N	S	60	60	4	500	800	(135)		125	1	10	200	220					92E	1		
MPS A06	Mo		N	S	80	80	4	500	800	(135)		125	1	10	200	220					92E	1		
MPS A09	Mo		N	S	50	50	5	50	310	(135)	100		600	5	0.1	80	357				92E	1		
MPS A10	Mo		N	S	40	40	4	100	300	(135)	40		400	10	5	50	367				92E	1		
MPS A20	Mo		N	S		40	4	100	300	(135)	40		400	10	5	125	367				92E	1		
MPS A55	Mo		P	S	60	60	4	500	800	(135)		150	1	10	100	220					92E	1		
MPS A56	Mo		P	S	80	80	4	500	800	(135)		150	1	10	100	220					92E	1		
MPS A70	Mo		P	S	40	40	4	100	300	(135)	40		400	10	5	125	367				92E	1		
MPS H02	Mo		N	S	20	20	3	500	135	(135)	20		200	10	4	375	220				92B	3		
MPS H04	Mo		N	S		80	4	100	300	(135)	30		120	10	1.5	180	367				92E	3		
MPS H05	Mo		N	S		80	4	100	300	(135)	30		150	10	1.5	180	367				92E	3		
MPS H07	Mo		N	S	30	30	3	500	135	(135)		>20	10	3	400	200					92E	3		
MPS H08	Mo		N	S	30	30	3	500	135	(135)		>20	10	3	400	200					92E	3		
MPS H10	Mo		N	S	30	25	3	310	135	(135)		>60	10	4	650	367					92B	3		
MPS H11	Mo		N	S	30	25	3	310	135	(135)		>60	10	4	650	357					92B	3		
MPS H20	Mo		N	S	40	30	4	100	310	(135)		>25	10	8	620	220					92B	3		
MPS H24	Mo		N	S	40	30	4	100	500	(135)		>30	10	8	620	220					92B	3		
MPS H30	Mo		N	S	20	20	3	310	135	(135)	20		200	5	4	800	357				92B	3		
MPS H31	Mo		N	S	20	20	3	310	135	(135)	20		200	5	4	800	357				92B	3		
MPS H32	Mo		N	S	40	30	4	500	135	(135)	27		200	5	4	440	220				92B	3		
MPS H34	Mo		N	S	45	45	4	100	500	(135)		>40	15	7	720	220					92B	3		
MPS H37	Mo		N	S		40	5	100	310	(135)		>25	10	5	300	357					92B	3		
MPS H54	Mo		P	S	80	40	4	100	300	(135)			120	10	1.5	185	367				92E	3		
MPS H55	Mo		P	S	80	40	4	100	300	(135)	30		150	10	1.5	185	367				92E	3		
MPS L01	Mo		N	S	140	120	5	600	310	(135)	50		300	5	10	60	357				92E	5		
MPS L07	Mo		P	S																				

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
MPS U51	Mo		P	S		30		1A	8W	(135)		>70	1	150	50	110					831A	2		
MPS U52	Mo		P	S	60	40		800	6W	(135)	50		300	10	150	110					831A	2		
MPS U55	Mo		P	S	60	60	4	1A	5W	(135)		180	5	50	125	110					831A	2		
MPS U56	Mo		P	S	80	80	4	1A	5W	(135)		180	5	50	125	110					831A	2		
MPS 404	Mo		P	S	25	24	12	150	310	(135)	30		400	0.15	12		357				92E	5		
MPS 404A	Mo		P	S	40	35	25	150	310	(135)	30		400	0.15	12		357				92E	5		
MPS 706	Mo		N	S	25	20	3		310	(135)		>20	1	10	200						92E	5		
MPS 706A	Mo		N	S	25	20	5		310	(135)	20		60	1	10	200					92E	5		
MPS 834	Mo		N	S	40	30	5	200	500	(135)		>25	1	10	350						92E	5		
MPS 918	Mo		N	S	30	15	3		310	(135)		>20	1	3		357					92E	3		
MPS 2369	Mo		N	S	40	15	4.5	500	310	(135)	40		120	1	10		355				92E	5		
MPS 2711	Mo		N	S	18	18	5	100	310	(135)	30		90	4.5	2		357				92E	1		
MPS 2712	Mo		N	S	18	18	5	100	310	(135)	75		225	4.5	2		357				92E	1		
MPS 2713	Mo		N	S	18	18	5	200	310	(135)	30		90	4.5	2	250	357				92E	1		
MPS 2714	Mo		N	S	18	18	5	200	310	(135)	75		225	4.5	2	250	357				92E	1		
MPS 2923	Mo		N	S	25	25	5	100	200	(100)	(90		180)	10	2						92E	3, 5		
MPS 2924	Mo		N	S	25	25	5	100	200	(100)	(150		300)	10	2						92E	3, 5		
MPS 2925	Mo		N	S	25	25	5	100	200	(100)	(235		470)	10	2						92E	3, 5		
MPS 2926	Mo		N	S	18	18	5	100	310	(135)	(35		470)	10	2	300	357				92E	1		
MPS 3392	Mo		N	S	25	25	5	100	310	(135)	150		300	4.5	2		357				92E	1		
MPS 3393	Mo		N	S	25	25	5	100	310	(135)	90		180	4.5	2		357				92E	1		
MPS 3394	Mo		N	S	25	25	5	100	310	(135)	55		110	4.5	2		357				92E	1		
MPS 3395	Mo		N	S	25	25	5	100	310	(135)	150		500	4.5	2		357				92E	1		
MPS 3396	Ns		N	S	25	25	5	100	350		90		500	4.5	2						92E	1, 5		
MPS 3397	Ns		N	S	25	25	5	100	350		55		500	4.5	2						92E	1, 5		
MPS 3398	Ns		N	S	25	25	5	100	350		55		800	4.5	2						92E	1, 5		
MPS 3563	Ns		N	S	30	15	2	20	350		20		200	10	8	600					92E	3		
MPS 3638	Mo		P	S	25	25	4	500	310	(135)	(25		180)	10	10	100	357				92E	5		
MPS 3638A	Mo		P	S	25	25	4	500	310	(135)		>100	1	50	150	357					92E	5		
MPS 3639	Ns		P	S	6	6	4	50	350		30		120	0.3	10	500					92E	5		
MPS 3640	Ns		P	S	12	12	4	50	350		30		120	0.3	10	500					92E	5		
MPS 3646	Ns		N	S	40	15	5	300	350		30		120	0.4	30	350					92E	5		
MPS 3693	Ns		N	S	45	45	4	50	350		40		160	10	10	200					92E	5		
MPS 3694	Ns		N	S	45	45	4	50	350		100		400	10	10	200					92E	3		
MPS 3702	Ns		P	S	40	25	5	500	350		60		300	5	50	100					92E	1, 5		
MPS 3703	Ns		P	S	50	30	5	500	350		30		150	5	50	100					92E	1, 5		
MPS 3704	Ns		N	S	50	30	5	500	350		100		300	2	50	100					92E	1, 5		
MPS 3705	Ns		N	S	50	30	5	500	350		50		150	2	50	100					92E	1, 5		
MPS 3706	Ns		N	S	40	20	5	500	350		30		600	2	50	100					92E	1, 5		
MPS 3707	Ns		N	S	30	30	6	25	350		100		400	5	0.1						92E	1		
MPS 3708	Ns		N	S	30	30	6	25	350		40		660	5	1						92E	1		
MPS 3709	Ns		N	S	30	30	6	25	350		45		165	5	1						92E	1		
MPS 3710	Ns		N	S	30	30	6	25	350		90		330	5	1						92E	1		
MPS 3711	Ns		N	S	30	30	6	25	350		180		660	5	1						92E	1		
MPS 3721	Ns		N	S	25	25	5	500	350		60		660	10	2						92E	1, 5		
MPS 3826	Ns		N	S	60	45	4	500	350		40		160	10	10	200					92E	1, 5		
MPS 3827	Ns		N	S	60	45	4	500	350		100		400	10	10	200					92E	1, 5		
MPS 5172	Mo		N	S	25	25	5	100	210	(135)	100		500	10	10	120	524				92E	1		
MPS 6511	Mo		N	S	30	20	3	100	310	(135)		>25	10	10		357					92E	1		
MPS 6512	Ns		N	S	30	30	4	50	350		50		100	10	2						92E	1, 5		
MPS 6513	Ns		N	S	40	30	4	50	350		90		180	10	2						92E	1, 5		
MPS 6514	Ns		N	S	40	25	4	50	350		150		300	10	2						92E	1, 5		
MPS 6515	Ns		N	S	40	25	4	50	350		250		500	10	2						92E	1, 5		
MPS 6516	Ns		P	S	40	40	4	100	350		50		100	10	2						92E	1, 5		
MPS 6517	Ns		P	S	40	40	4	100	350		90		180	10	2						92E	1, 5		
MPS 6518	Ns		P	S	40	40	4	100	350		150		300	10	2						92E	1, 5		
MPS 6519	Mo		P	S	25	25	4	100	310	(135)	250		500	10	2	340	357				92E	1		
MPS 6520	Ns		N	S	40	25	4	50	350		200		300	10	2						92E	1, 5		
MPS 6521	Ns		N	S	40	25	4	50	350		300		600	10	2						92E	1, 5		
MPS 6522	Ns		P	S	25	25	4	100	350		200		400	10	2						92E	1, 5		
MPS 6523	Mo		P	S	25	25	4	100	310	(135)	300		600	10	2	420	357				92E	1		
MPS 6530	Ns		N	S	60	40	5	500	350		40		120	1	100						92E	1, 5		
MPS 6531	Ns		N	S	60	40	5	500	350		90		270	1	100						92E	1, 5		
MPS 6532	Ns		N	S	50	30	5	500	350			>30	1	100							92E	1, 5		
MPS 6533	Ns		P	S	40	40	4	500	350		40		120	1	100						92E	1, 5		
MPS 6534	Ns		P	S	40	40	4	500	350		90		270	1	100						92E	1, 5		
MPS 6535	Ns		P	S	30	30	4	500	350			>30	1	100							92E	1, 5		
MPS 6560	Mo		N	S	25																			

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)					
OC 58	Ph		P	G	7	3		5	20	45a	(>30)	0.5	0.25		1500	<10	1k			2A	1				
OC 59	Ph		P	G	7	3		5	20	45a	(>30)	0.5	0.25		1500	<10	1k			2A	1				
OC 60	Ph		P	G	7	3		5	20	45a	(60)	2	0.5		1500	<15	1k			2A	1				
OC 70	Ph		P	G				10	125	25a		53	4.5	10						801A	1				
OC 71	Ph		P	G		10		10	125	25a		35	125	4.5	1		400	<15	1k		801A	1			
OC 72	Ph		P	G	32	16	10	125	165	25m	45	120	5.4	10		400	<15	1k		801A	1				
OC 74	Ph		P	G	20		6	300	550	25a	60	150	6	50		220	<27	1k		801A	1				
OC 75	Ph		P	G	10	10		10	125	25a	50	150	4.5	3		400	<15	1k		801A	1				
OC 76	Ph		P	G	32	16	10	125	125	25a	45	330	5.4	10		400	<15	1k		801A	5				
OC 77	Ph		P	G	60	15	10	125	125	25a		>45	5.4	10		400	<15	1k		801A	5				
OC 79	Ph		P	G	26	13		300	550	25a	40	100	6	50		220				801A	1				
OC 80	Ph		P	G	32		20	300	550	40a		180	6	50		220				801A	5				
OC 122	Ph		P	G	32	12		500	300	25a		>50	6	100	1.3	220	(170p)			7A	5				
OC 123	Ph		P	G	50	15		500	300	25a		>50	6	100	1.3	220	(170p)			7A	5				
OC 139	Ph		N	G	20		20	250	145	25a	20	84	(0)	15	>3.5	350				801A	5				
OC 140	Ph		N	G	20		20	400	145	25a	50	150	(0)	15	>4.5	350				801A	5				
OC 141	Ph		N	G	20		20	400	145	25a	80	200	(0)	15	>9	350				801A	5				
OC 169	Ph		P	G	20			10	50	45a					70					7A	3				
OC 170	Ph		P	G	20			10	50	45a					70					7A	3				
OC 171	Ph		P	G	20			10	50	45a					70					7A	3				
OC 303	It		P	G	32	15	10	50	67	(75)	18	35	5	1		450				18A	1				
OC 304	It		P	G	32	15	10	50	67	(75)	(30)	130	5	1		450				18A	1				
OC 305	It		P	G	32	8	10	50	67	(75)	(110)	220	5	1		450				18A	1				
OC 306	It		P	G	32	15	10	50	67	(75)	(30)	130	5	1		450				18A	1				
OC 307	It		P	G	32	18	10	250	75	(75)	20	40	0.5	250		400				18A	5				
OC 308	It		P	G	32	18	10	250	75	(75)	30	100	0.7	80		400				18A	2				
OC 309	It		P	G	60	30	10	250	75	(75)	20	100	0.5	250		400				18A	5				
OC 430	It		P	S	10	10	10	50	200	(150)	5	20	2	10		520				18A	2				
OC 430K	It		P	S	10	10	10	50	250	(150)	5	20	2	10		420				18A	1				
OC 440	It		P	S	30	30	10	50	200	(150)	5	20	2	10		520				18A	1				
OC 440K	It		P	S	30	30	10	50	250	(150)	5	20	2	10		420				18A	1				
OC 443	It		P	S	25	25	20	50	200	(150)	9	50	2	7		520				18A	1				
OC 443K	It		P	S	25	25	20	50	250	(150)	9	50	2	7		420				18A	1				
OC 445	It		P	S	50	50	10	50	200	(150)	5	20	2	10		520				18A	1				
OC 445K	It		P	S	50	50	10	50	250	(150)	5	20	2	10		420				18A	1				

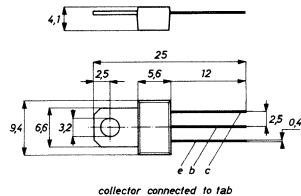
2A



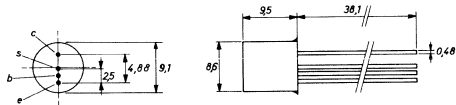
92E



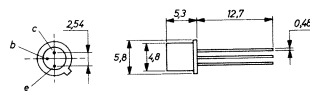
831A



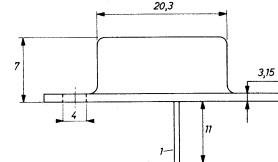
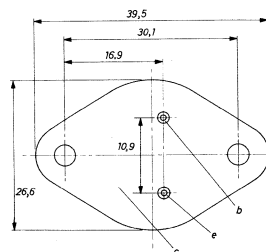
7A



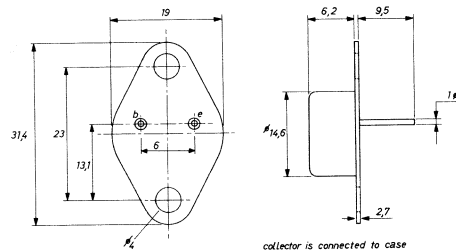
18A



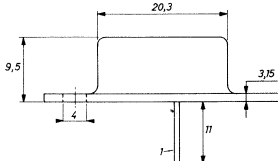
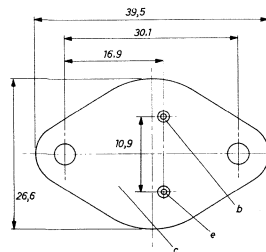
3B



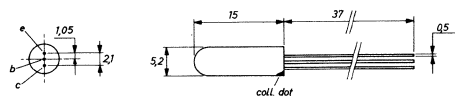
309A



3C



801A

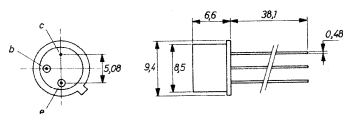


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{CEB}) V	I _c (I _E) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
OC 449	It		P	S	60	60	30	50	200	(150)		15	2	7			520				18A	1		
OC 449K	It		P	S	60	60	30	50	250	(150)		15	2	7			420				18A	1		
OC 450	It		P	S	75	75	10	50	200	(150)	5		20	2	10		520				18A	1		
OC 450K	It		P	S	75	75	10	50	250	(150)	5		20	2	10		420				18A	1		
OC 463	It		P	S	10	10	10	50	200	(150)		30	2	2	10		520				18A	1		
OC 463K	It		P	S	10	10	10	50	250	(150)		30	2	10			420				18A	1		
OC 465	It		P	S	20	20	10	50	200	(150)	10		35	2	10		520				18A	1		
OC 465K	It		P	S	20	20	10	50	250	(150)	10		35	2	10		420				18A	1		
OC 466	It		P	S	10	10	10	50	200	(150)		20	2	10			520				18A	1		
OC 466K	It		P	S	10	10	10	50	250	(150)		20	2	10			420				18A	1		
OC 467	It		P	S	25	25	20	50	200	(150)	13		50	2	7		520				18A	1		
OC 467K	It		P	S	25	25	20	50	250	(150)	13		50	2	7		420				18A	1		
OC 468	It		P	S	10	10	10	50	200	(150)		40	2	2	10		520				18A	1		
OC 468K	It		P	S	10	10	10	50	250	(150)		40	2	10			420				18A	1		
OC 469	It		P	S	32	32	10	50	200	(150)		20	2	20			520				18A	1, 5		
OC 469K	It		P	S	32	32	10	50	250	(150)		20	2	20			420				18A	1, 5		
OC 470	It		P	S	30	30	10	50	200	(150)	10		250	2	10		520				18A	1		
OC 470K	It		P	S	30	30	10	50	250	(150)	10		250	2	10		420				18A	1		
OC 480	It		P	S	125	125	10	50	200	(150)	5		20	2	10		520				18A	1		
OC 480K	It		P	S	125	125	10	50	250	(150)	5		20	2	10		420				18A	1		
PBC 107	Se		N	S	52	45		100	200		(125		500)		10		60				98A	1		
PBC 108	Se		N	S	20	20		100	200		(125		900)		10		60				98A	1		
PBC 109	Se		N	S	20	20		100	200		(240		900)		10		60				98A	1		
PBC 182	Se		N	S	55	50		100	300		100		480		10		60				98A	1		
PBC 183	Se		N	S	50	25		100	200		100		850		10		60				98A	1		
PBC 184	Se		N	S	50	30		100	300		(240		900)		10		60				98A	1		
PE 3100	Fa		N	S	30	30	3		425	65a	30		225	10	5		800				92B	3		
PE 5010	Fa		N	S	30	30	3		300	65a	25		200	5	4			<3,3			92B	3		
PE 5013	Fa		N	S	20	20	3		300	65a	20		200	5	4						92B	3		
PE 5015	Fa		N	S	20	20	3		300	65a	20		200	5	4						92B	3		
PE 5025	Fa		N	S	30	30	3		425	65a	20		100	10	10						92E	9		
PE 5029	Fa		N	S	35	30	3		425	65a	30		225	10	5			>6			92B	3		
PE 5030B	Fa		N	S	45	40	4,5		425	65a	45		150	15	7						92B	9		
PE 5031	Fa		N	S	40	30	4		425	65a	30		180	10	5			<4,5			92B	17		
PE 6020	Fa		N	S	60	60	6,5	1A	1W	25c	100		300	10	150		250			150ns	92E	1, 5		
PE 6021	Fa		N	S	80	80	6,5	1A	1W	25c	100		300	10	150		250			150ns	92E	1, 5		
PN 4357	Fa		P	S	240	240	6		625	25a	80		300	10	10			<3			92E	8		
Q2 T2222	Ti	qu	N	S	60	30	5	800	(1,5W)	25a	100		300	10	150		>250			(12ns)	116A	1, 5	Q2 T2905	
Q2 T2905	Ti	qu	P	S	60	40	5	800	(1,5W)	25a	100		300	10	150			<(8p)		(45ns)	116A	1, 5	Q2 T2222	
Q2 T3244	Ti	qu	P	S	40	40	5	1A	(1,5W)	25a	50		150	1	500					(35ns)	116A	1		
Q2 T3725	Ti	qu	N	S	60	40	6	500	(1,5W)	25a	60		200	1	100					35ns	116A	5		
SDT 1050	So		N	S	250	200	8	5A	80W			>15	5	1A			45				3A	2		
SDT 1051	So		N	S	400	325	8	5A	80W			>15	5	1A			45				3A	2		
SDT 1052	So		N	S	500	400	8	5A	80W			>15	5	1A			45				3A	2		
SDT 1053	So		N	S	600	400	8	5A	80W			>15	5	1A			45				3A	2		
SDT 1054	So		N	S	700	400	8	5A	80W			>15	5	1A			45				3A	2		
SDT 1055	So		N	S	250	200	8	5A	80W		10		50	5	2A		45				3A	2		
SDT 1056	So		N	S	400	325	8	5A	80W		10		50	5	2A		45				3A	2		
SDT 1057	So		N	S	500	400	8	5A	80W		10		50	5	2A		45				3A	2		
SDT 1058	So		N	S	600	400	8	5A	80W		10		50	5	2A		45				3A	2		
SDT 1059	So		N	S	700	400	8	5A	80W		10		50	5	2A		45				3A	2		
SDT 1060	So		N	S	250	200	8	5A	80W			>10	5	3A			45				3A	2		
SDT 1061	So		N	S	400	325	8	5A	80W			>10	5	3A			45				3A	2		
SDT 1062	So		N	S	500	400	8	5A	80W			>10	5	3A			45				3A	2		
SDT 1063	So		N	S	600	400	8	5A	80W			>10	5	3A			45				3A	2		
SDT 1064	So		N	S	700	400	8	5A	80W			>10	5	3A			45				3A	2		
SDT 1150	So		N	S	250	200	8	5A	40W			>15	5	1A							309A	2		
SDT 1151	So		N	S	400	325	8	5A	40W			>15	5	1A							309A	2		
SDT 1152	So		N	S	500	400	8	5A	40W			>15	5	1A							309A	2		
SDT 1153	So		N	S	600	400	8	5A	40W			>15	5	1A							309A	2		
SDT 1154	So		N	S	700	400	8	5A	40W			>15	5	1A							309A	2		
SDT 1155	So		N	S	250	200	8	5A	40W		10		50	5	2A						309A	2		
SDT 1156	So		N	S	400	325	8	5A	40W		10		50	5	2A						801A	2		
SDT 1157	So		N	S	500	400	8	5A	40W		10		50	5	2A						309A	2		
SDT 1158	So		N	S	600	400	8	5A	40W		10		50	5	2A						309A	2		
SDT 1159	So		N	S	700	400	8	5A	40W		10		50	5	2A						309A	2		
SDT 1160	So		N	S	250	200	8	5A	40W			>10	5	3A							309A	2		
SDT 1161	So		N	S	400	325	8	5A	40W			>10	5	3A							309A	2		
SDT 1162	So		N	S	500	400	8	5A	40W			>10	5	3A							309A	2		
SDT 1163	So		N	S	600	400	8	5A	40W			>10	5	3A							309A	2		
SDT 1164	So		N	S	700	400	8	5A	40W			>10	5	3A							309A	2		
SDT 1250	So		N	S	250	200	8	5A	80W			>15	5	1A							61A	2		
SDT 1251	So		N	S	400	325	8	5A	80W			>15	5	1A							61A	2		
SDT 1252	So		N	S	500	400	8	5A	80W			>15	5	1A							61A	2		
SDT 1253	So		N	S	600	400	8	5A	80W			>15	5	1A							61A	2		
SDT 1254	So		N	S	700	400	8	5A	80W			>15	5	1A							61A	2		
SDT 1255	So		N	S	250	200	8	5A	80W		10		50	5	2A						61A	2		
SDT 1256	So		N	S	400	325	8	5A	8															

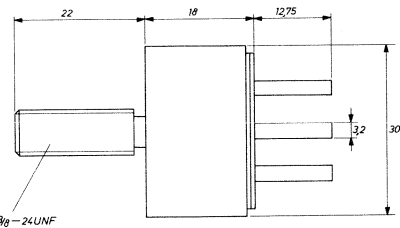
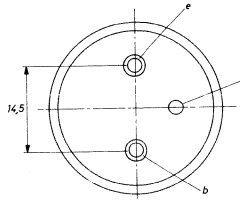
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo}	V _{ceo}	V _{ebo}	I _c	P _{tot}	t	h _{FE}	(h _{FE})	V _{ce}	I _c	F _T	R _{thja}	F	f	ton			
					V	V	V	(I _{cm}) mA	mW	(tj)	min	type	max	(V _{cb}) V	(I _e) mA	°C/W	(C _C)	MHz	(tr)			
SDT 1960	So		P	G	80	60		65A	140W			>20	2	65A						818A	2	
SDT 1961	So		P	G	60	45		65A	140W			>20	2	65A						818A	2	
SDT 1962	So		P	G	40	30		65A	140W			>20	2	65A						818A	2	
SDT 2008	So		P	G	80	60		65A	140W			>15	2	50A						819A	2	
SDT 2009	So		P	G	60	45		65A	140W			>15	2	50A						819A	2	
SDT 2010	So		P	S	40	30		65A	40W			>15	2	50A						819A	2	
SDT 3101	So		P	S		40	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3102	So		P	S		60	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3103	So		P	S		80	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3104	So		P	S		100	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3105	So		P	S		40	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3106	So		P	S		60	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3107	So		P	S		80	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3108	So		P	S		100	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3109	So		P	S		120	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3125	So		P	S		40	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3126	So		P	S		60	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3127	So		P	S		80	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3128	So		P	S		100	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3129	So		P	S		120	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3201	So		N	S		40	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3203	So		N	S		80	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3204	So		N	S		100	6	10A	50W	30		90	5	10A	50					61A	2	
SDT 3205	So		N	S		40	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3206	So		N	S		60	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3207	So		N	S		80	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3208	So		N	S		100	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3209	So		N	S		120	6	10A	30W	30		90	5	5A	50					111A	2	
SDT 3225	So		N	S		40	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3226	So		N	S		60	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3227	So		N	S		80	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3228	So		N	S		100	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3229	So		N	S		120	6	10A	30W	20		80	5	5A	50					111A	2	
SDT 3301	So		P	S		40	6	5A	30W	40		120	5	2A						111A	2	
SDT 3302	So		P	S		60	6	5A	30W	40		120	5	2A						111A	2	
SDT 3303	So		P	S		80	6	5A	30W	40		120	5	2A						111A	2	
SDT 3304	So		P	S		100	6	5A	30W	40		120	5	2A						111A	2	
SDT 3305	So		P	S		40	6	5A	30W	20		60	5	2A						111A	2	
SDT 3306	So		P	S		60	6	5A	30W	20		60	5	2A						111A	2	
SDT 3307	So		P	S		80	6	5A	30W	20		60	5	2A						111A	2	
SDT 3308	So		P	S		100	6	5A	30W	20		60	5	2A						111A	2	
SDT 3309	So		P	S		120	6	5A	30W	20		60	5	2A						111A	2	
SDT 3321	So		P	S		40	6	5A	4W	40		120	5	2A						5A	2	
SDT 3322	So		P	S		60	6	5A	4W	40		120	5	2A						5A	2	
SDT 3323	So		P	S		80	6	5A	4W	40		120	5	2A						5A	2	
SDT 3324	So		P	S		100	6	5A	4W	40		120	5	2A						5A	2	
SDT 3325	So		P	S		40	6	5A	4W	20		60	5	2A						5A	2	
SDT 3326	So		P	S		60	6	5A	4W	20		60	5	2A						5A	2	
SDT 3327	So		P	S		80	6	5A	4W	20		60	5	2A						5A	2	
SDT 3328	So		P	S		100	6	5A	4W	20		60	5	2A						5A	2	
SDT 3329	So		P	S		120	6	5A	4W	20		60	5	2A						5A	2	
SDT 3401	So		N	S		40	6	5A	30W	40		120	5	2A						111A	2	
SDT 3402	So		N	S		60	6	5A	30W	40		120	5	2A						111A	2	
SDT 3403	So		N	S		80	6	5A	30W	40		120	5	2A						111A	2	
SDT 3404	So		N	S		100	6	5A	30W	40		120	5	2A						111A	2	
SDT 3405	So		N	S		40	6	5A	30W	20		60	5	2A						111A	2	
SDT 3406	So		N	S		60	6	5A	30W	20		60	5	2A						111A	2	
SDT 3407	So		N	S		80	6	5A	30W	20		60	5	2A						111A	2	
SDT 3408	So		N	S		100	6	5A	30W	20		60	5	2A						111A	2	
SDT 3409	So		N	S		120	6	5A	30W	20		60	5	2A						111A	2	
SDT 3421	So		N	S		40	6	5A	4W	40		120	5	2A						5A	2	
SDT 3422	So		N	S		60	6	5A	4W	40		120	5	2A						5A	2	
SDT 3423	So		N	S		80	6	5A	4W	40		120	5	2A						5A	2	
SDT 3424	So		N	S		100	6	5A	4W	40		120	5	2A						5A	2	
SDT 3425	So		N	S		40	6	5A	4W	20		60	5	2A						5A	2	
SDT 3426	So		N	S		60	6	5A	4W	20		60	5	2A						5A	2	
SDT 3427	So		N	S		80	6	5A	4W	20		60	5	2A						5A	2	
SDT 3428	So		N	S		100	6	5A	4W	20		60	5	2A						5A	2	
SDT 3429	So		N	S		120	6	5A	4W	20		60	5	2A						5A	2	
SDT 3501	So		P	S	40	40	6	2A	4W		>30		5	500	50	140				5A	2	
SDT 3502	So		P	S	60	60	6	2A	4W		>30		5	500	50	140				5A	2	
SDT 3503	So		P	S	80	80	6	2A	4W		>30		5	500	50	140				5A	2	
SDT 3504	So		P	S	100	100	6	2A	4W		>30		5	500	50	140				5A	2	
SDT 3505	So		P	S	40	40	6	2A	4W	50		150	5	500	50	140				5A	2	
SDT 3506	So		P	S	60	60	6	2A	4W	50		150	5	500	50	140				5A	2	
SDT 3507	So		P	S	80	80	6	2A	4W	50		150	5	500	50	140				5A	2	
SDT 3508	So		P	S	100	100	6	2A	4W	50		150	5	500	50	140				5A	2	
SDT 3550	So		P	S	60	60	6	2A		30		100	1	250						5A	2	
SDT 3551	So		P	S	80	80	6	2A		30		100	1	250						5A	2	
SDT 3552	So		P	S	40	40	5	2A		30		100	1	500						5A	2	
SDT 3553	So		P	S	60	60	5	2A		20		100	1	500						5A	2	
SDT 3554	So		P	S	80	80	5	2A		20		100	1	500						5A	2	</

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V_{cbo} V	V_{ceo} V	V_{ebo} V	I_c (I_{cm}) mA	P_{tot} mW	t (tj)	h_{FE} min	(h_{FE}) type max	V_{ce} (V_{cb}) V	I_c (I_e) mA	F_T	R_{thja} (η) °C/W	F (C_c)	f MHz	t_{on} (tr)			
SDT 3578	So		P	S	40	30	5	2A			25	100	10	500						309A	2	
SDT 3579	So		P	S	60	50	5	2A			25	100	10	500						309A	2	
SDT 3601	So		P	S		40	5	60A	100W	10	40	40	10	40A	25					68A	2	
SDT 3602	So		P	S		60	5	60A	100W	10	40	40	10	40A	25					68A	2	
SDT 3603	So		P	S		80	5	60A	100W	10	40	40	10	40A	25					68A	2	

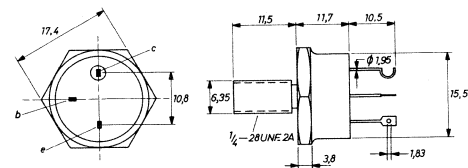
5A



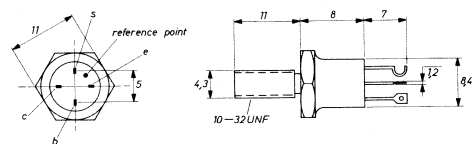
818A



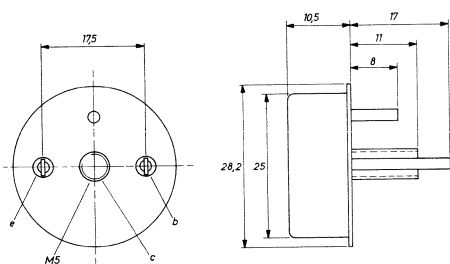
61A



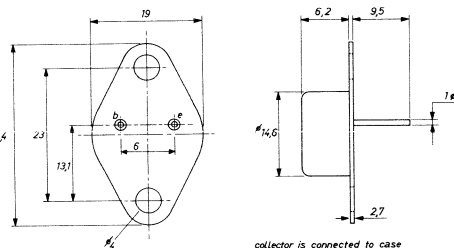
111A



68A

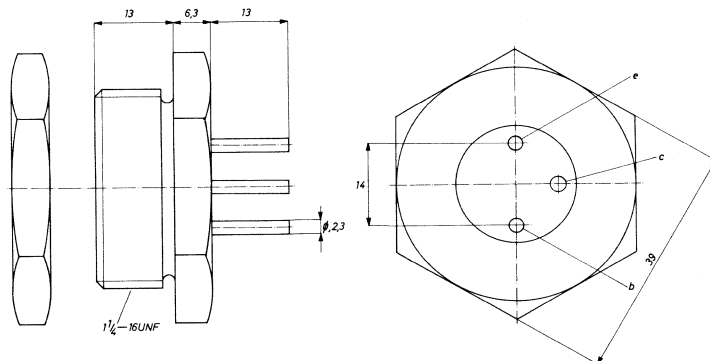


309A



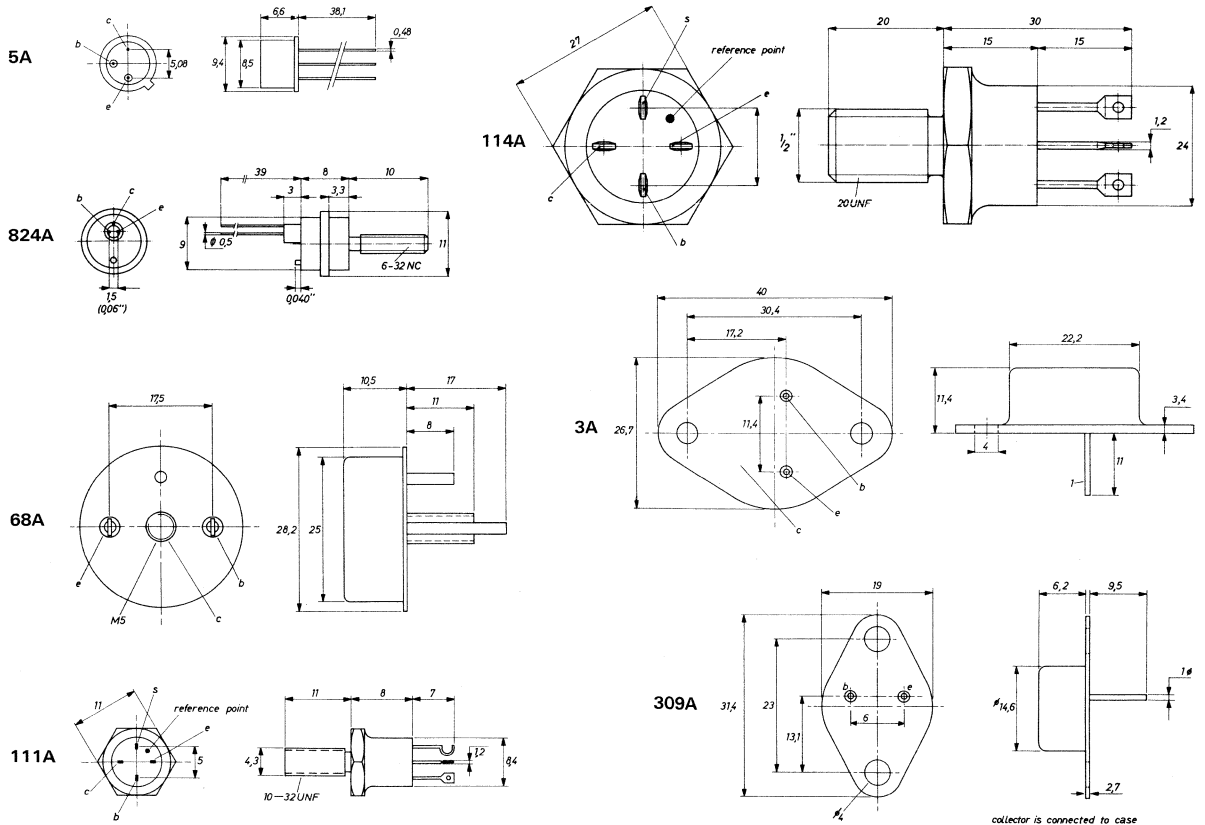
collector is connected to case

819A



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _B) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
SDT 3604	So		P	S		100	5	60A	100W			10		40	10	40A	25						68A	2	
SDT 3620	So		P	S	80	60	8	80A	100W				>10		5	75A							114A	2	
SDT 3621	So		P	S	100	80	8	80A	100W				>10		5	75A							114A	2	
SDT 3622	So		P	S	120	100	8	80A	100W				>10		5	75A							114A	2	
SDT 3623	So		P	S	140	120	8	80A	100W				>10		5	75A							114A	2	
SDT 3701	So		P	S	40	40	6	5A	40W		25		180		1,5	1A							309A	2	
SDT 3702	So		P	S	60	60	6	5A	40W		25		180		1,5	1A							309A	2	
SDT 3703	So		P	S	40	40	5	5A	40W		20		80		2	1A							309A	2	
SDT 3704	So		P	S	60	60	5	5A	40W		20		80		2	1A							309A	2	
SDT 3705	So		P	S	80	80	5	5A	40W		20		80		2	1A							309A	2	
SDT 3706	So		P	S	30	30	4	5A	40W		20		60		2	1A							309A	2	
SDT 3707	So		P	S	45	45	4	5A	40W		20		60		2	1A							309A	2	
SDT 3708	So		P	S	60	60	4	5A	40W		20		60		2	1A							309A	2	
SDT 3709	So		P	S	30	30	4	5A	40W		50		180		2	1A							309A	2	
SDT 3710	So		P	S	45	45	4	5A	40W		50		180		2	1A							309A	2	
SDT 3711	So		P	S	60	60	4	5A	40W		50		180		2	1A							309A	2	
SDT 3712	So		P	S	40	40	6	5A			20		60		2	2A							309A	2	
SDT 3713	So		P	S	60	60	6	5A			20		60		2	2A							309A	2	
SDT 3714	So		P	S	80	80	6	5A			20		60		2	2A							309A	2	
SDT 3715	So		P	S	40	40	6	5A			20		60		2	2A							309A	2	
SDT 3716	So		P	S	40	40	6	5A			12		36		3	1A							309A	2	
SDT 3717	So		P	S	60	60	6	5A			12		36		3	1A							309A	2	
SDT 3718	So		P	S	80	80	6	5A			12		36		3	1A							309A	2	
SDT 3719	So		P	S	100	100	6	5A			12		36		3	1A							309A	2	
SDT 3720	So		P	S	40	40	6	5A					>40		3	1A							309A	2	
SDT 3721	So		P	S	40	40	6	5A			10		30		3	2A							309A	2	
SDT 3722	So		P	S	60	60	6	5A			10		30		3	2A							309A	2	
SDT 3723	So		P	S	80	80	6	5A			10		30		3	2A							309A	2	
SDT 3724	So		P	S	100	100	6	5A			10		30		3	2A							309A	2	
SDT 3725	So		P	S	40	40	6	5A					>40		3	2A							309A	2	
SDT 3726	So		P	S	40	40	5	5A			25		100		2	2,5A							309A	2	
SDT 3727	So		P	S	60	60	5	5A			25		100		2	2,5A							309A	2	
SDT 3728	So		P	S	80	80	5	5A			25		100		2	2,5A							309A	2	
SDT 3729	So		P	S	40	40	6	5A			10		30		3	3A							309A	2	
SDT 3730	So		P	S	60	60	6	5A			10		30		3	3A							309A	2	
SDT 3731	So		P	S	80	80	6	5A			10		30		3	3A							309A	2	
SDT 3732	So		P	S	100	100	6	5A	20W		10		30		3	3A							309A	2	
SDT 3733	So		P	S	40	40	6	5A	20W				>40		3	3A							309A	2	
SDT 3750	So		P	S	40	40	6	5A	83W		25		180		1,5	1A		45					3A	2	
SDT 3751	So		P	S	60	60	6	5A	83W		25		180		1,5	1A		45					3A	2	
SDT 3752	So		P	S	40	40	6	5A	83W		12		36		3	1A		45					3A	2	
SDT 3753	So		P	S	60	60	6	5A	83W		12		36		3	1A		45					3A	2	
SDT 3754	So		P	S	80	80	6	5A	83W		12		36		3	1A		45					3A	2	
SDT 3755	So		P	S	100	100	6	5A	83W		12		36		3	1A		45					3A	2	
SDT 3756	So		P	S	40	40	6	5A	83W				>40		3	1A		45					3A	2	
SDT 3757	So		P	S	40	40	6	5A	83W		10		30		3	2A		45					3A	2	
SDT 3758	So		P	S	60	60	6	5A	83W		10		30		3	2A		45					3A	2	
SDT 3759	So		P	S	80	80	6	5A	83W		10		30		3	2A		45					3A	2	
SDT 3760	So		P	S	100	100	6	5A	83W		10		30		3	2A		45					3A	2	
SDT 3761	So		P	S	40	40	6	5A	83W				>40		3	2A		45					3A	2	
SDT 3762	So		P	S	40	40	6	5A	83W		10		30		3	3A		45					3A	2	
SDT 3763	So		P	S	60	60	6	5A	83W		10		30		3	3A		45					3A	2	
SDT 3764	So		P	S	80	80	6	5A	83W		10		30		3	3A		45					3A	2	
SDT 3765	So		P	S	100	100	6	5A	83W		10		30		3	3A		45					3A	2	
SDT 3766	So		P	S	40	40	6	5A	83W				>40		3	3A		45					3A	2	
SDT 3775	So		P	S	40	40	6	5A	4W		20		60		2	2A							5A	2	
SDT 3776	So		P	S	60	60	6	5A	4W		20		60		2	2A							5A	2	
SDT 3777	So		P	S	80	80	6	5A	4W		20		60		2	2A							5A	2	
SDT 3778	So		P	S	40	40	6	5A	4W		20		60		2	2A							5A	2	
SDT 3801	So		P	S	60	60	6	15A	40W		25		90		2	1A							309A	2	
SDT 3802	So		P	S	80	80	6	15A	40W		25		90		2	1A							309A	2	
SDT 3803	So		P	S	60	60	6	15A	40W		50		180		2	1A							309A	2	
SDT 3804	So		P	S	80	80	6	15A	40W		50		180		2	1A							309A	2	
SDT 3805	So		P	S	40	40	5	10A	40W		20		80		5	5A							309A	2	
SDT 3806	So		P	S	80	80	5	10A	40W		20		80		5	5A							309A	2	
SDT 3807	So		P	S	40	40	5	10A	40W				>40		5	5A							309A	2	
SDT 3825	So		P	S	40</																				

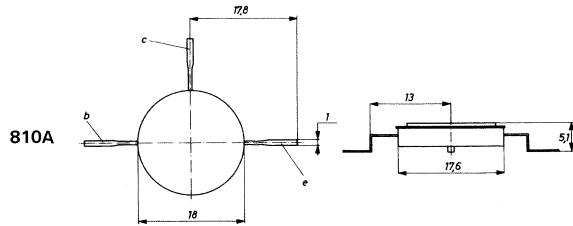
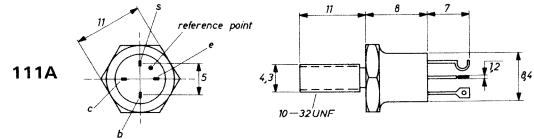
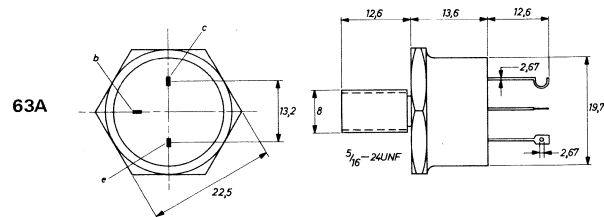
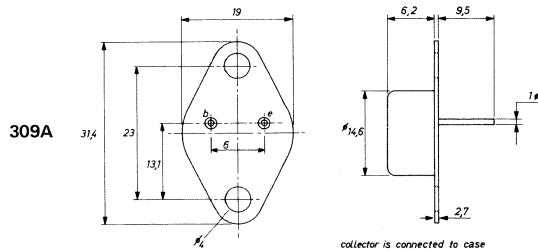
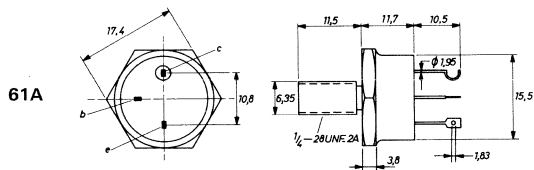
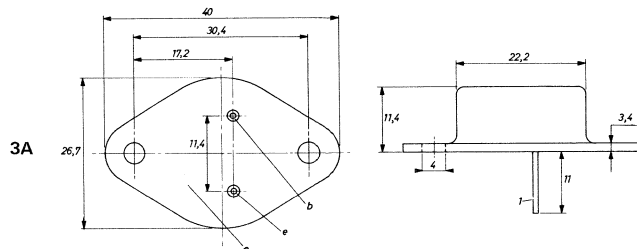
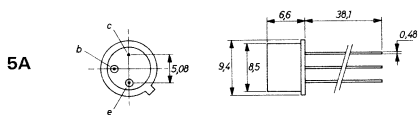
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V_{cbo} V	V_{ceo} V	V_{ebo} V	I_c (I_{cm}) mA	P_{tot} mW	t (tj)	h_{FE} min	(h_{FE}) type max	V_{ce} (V_{cb}) V	I_c (I_e) mA	F_T	R_{thja} (η) °C/W	F (C_c)	f MHz	τ_{on} (tr)			
SDT 4303	So		N	S	80	80	10	2A	4W		20	60	4	500						5A	2	
SDT 4304	So		N	S	40	40	10	2A	4W		40	120	4	500						5A	2	
SDT 4305	So		N	S	60	60	10	2A	4W		40	120	4	500						5A	2	
SDT 4306	So		N	S	80	80	10	2A	4W		40	120	4	500						5A	2	
SDT 4307	So		N	S	40	40	10	2A	4W		20	60	4	1A						5A	2	
SDT 4308	So		N	S	60	60	10	2A	4W		20	60	4	1A						5A	2	
SDT 4310	So		N	S	40	40	10	2A	4W		40	120	4	1A						5A	2	
SDT 4311	So		N	S	60	60	10	2A	4W		40	120	4	1A						5A	2	
SDT 4312	So		N	S	80	80	10	2A	4W		40	120	4	1A						5A	2	
SDT 4451	So		N	S	80	40	8	5A	4W		20	60	5	1A		140				5A	2	
SDT 4452	So		N	S	100	80	8	5A	4W		20	60	5	1A	70	140				5A	2	
SDT 4453	So		N	S	80	40	8	5A	4W		40	120	5	1A	70	140				5A	2	
SDT 4454	So		N	S	100	80	8	5A	4W		40	120	5	1A	70	140				5A	2	
SDT 4455	So		N	S	80	40	8	5A	4W			>100	5	1A	70	140				5A	2	
SDT 4456	So		N	S	100	80	8	5A	4W			>100	5	1A	70	140				5A	2	
SDT 4483	So		N	S	60	40	5	5A	4W		20	60	5	1A	70	140				5A	2	
SDT 4551	So		N	S	80	40	8	5A	20W		20	60	5	1A	70	100				824A	2	
SDT 4552	So		N	S	100	80	8	5A	20W		20	60	5	1A	70	100				824A	2	
SDT 4553	So		N	S	80	40	8	5A	20W		40	120	5	1A	70	100				824A	2	
SDT 4554	So		N	S	100	80	8	5A	20W		40	120	5	1A	70	100				824A	2	
SDT 4555	So		N	S	80	40	8	5A	20W			>100	5	1A	70	100				824A	2	
SDT 4556	So		N	S	100	80	8	5A	20W			>100	5	1A	70	100				824A	2	
SDT 4583	So		N	S	60	40	5	5A	20W		20	60	5	1A	70	100				824A	2	
SDT 4901	So		N	S	225	200	8	5A	20W		20	60	5	1A						309A	2	
SDT 4902	So		N	S	250	225	8	5A	20W		20	60	5	1A						309A	2	
SDT 4903	So		N	S	275	250	8	5A	20W		20	60	5	1A						309A	2	
SDT 4904	So		N	S	300	275	8	5A	20W		20	60	5	1A						309A	2	
SDT 4905	So		N	S	325	300	8	5A	20W		20	60	5	1A						309A	2	
SDT 4921	So		N	S	225	200	8	5A	4W		20	60	5	1A						5A	2	
SDT 4922	So		N	S	250	225	8	5A	4W		20	60	5	1A						5A	2	
SDT 4923	So		N	S	275	250	8	5A	4W		20	60	5	1A						5A	2	
SDT 4924	So		N	S	300	275	8	5A	4W		20	60	5	1A						5A	2	
SDT 4925	So		N	S	325	300	8	5A	4W		20	60	5	1A						5A	2	
SDT 4941	So		N	S	225	200	8	5A	30W		20	60	5	1A						111A	2	
SDT 4942	So		N	S	250	225	8	5A	30W		20	60	5	1A						111A	2	



Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _g) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
SDT 4943	So		N	S	275	250	8	5A	30W		20	60	5	1A								111A	2		
SDT 4944	So		N	S	300	275	8	5A	30W		20	60	5	1A								111A	2		
SDT 4945	So		N	S	325	300	8	5A	30W		20	60	5	1A								111A	2		
SDT 5001	So		N	S	60	40	8	2A	4W		50	150	5	500	85	437						46A	2		
SDT 5002	So		N	S	80	60	8	2A	4W		50	150	5	500	85	437						46A	2		
SDT 5003	So		N	S	100	80	8	2A	4W		50	150	5	500	85	437						46A	2		
SDT 5004	So		N	S	140	100	8	2A	4W		50	150	5	500	85	437						46A	2		
SDT 5005	So		N	S	180	120	8	2A	4W		50	150	5	500	85	437						46A	2		
SDT 5006	So		N	S	60	40	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5007	So		N	S	80	60	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5008	So		N	S	100	80	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5009	So		N	S	140	100	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5010	So		N	S	180	120	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5011	So		N	S	60	40	8	2A	4W			>120	5	500	85	437						46A	2		
SDT 5012	So		N	S	80	60	8	2A	4W			>120	5	500	85	437						46A	2		
SDT 5013	So		N	S	100	80	8	2A	4W			>120	5	500	85	437						46A	2		
SDT 5014	So		N	S	140	100	8	2A	4W			>120	5	500	85	437						46A	2		
SDT 5015	So		N	S	180	120	8	2A	4W			>120	5	500	85	437						46A	2		
SDT 5051	So		N	S	175	150	8	2A	4W		50		150	5	500	85	437					46A	2		
SDT 5052	So		N	S	200	175	8	2A	4W		50		150	5	500	85	437					46A	2		
SDT 5054	So		N	S	175	150	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5055	So		N	S	200	175	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5056	So		N	S	225	200	8	2A	4W			>30	5	500	85	437						46A	2		
SDT 5501	So		N	S	60	40	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5502	So		N	S	80	60	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5503	So		N	S	100	80	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5504	So		N	S	140	100	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5505	So		N	S	180	120	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5506	So		N	S	60	40	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5507	So		N	S	80	60	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5508	So		N	S	100	80	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5509	So		N	S	140	100	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5510	So		N	S	180	120	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5511	So		N	S	60	40	8	2A	4W			>120	5	500	85	140						5A	2		
SDT 5512	So		N	S	80	60	8	2A	4W			>120	5	500	85	140						5A	2		
SDT 5513	So		N	S	100	80	8	2A	4W			>120	5	500	85	140						5A	2		
SDT 5514	So		N	S	140	100	8	2A	4W			>120	5	500	85	140						5A	2		
SDT 5515	So		N	S	180	120	8	2A	4W			>120	5	500	85	140						5A	2		
SDT 5551	So		N	S	175	150	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5552	So		N	S	200	175	8	2A	4W		50		150	5	500	85	140					5A	2		
SDT 5553	So		N	S	225	200	8	2A	4W		50		150	5	500	85	140					5A	2		
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SDT 5555	So		N	S	200	175	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5556	So		N	S	225	200	8	2A	4W			>30	5	500	85	140						5A	2		
SDT 5901	So		N	S	60	40	8	2A	17W		50		150	2	500	85	87					309A	2		
SDT 5902	So		N	S	80	60	8	2A	17W		50		150	5	500	85	87					309A	2		
SDT 5903	So		N	S	100	80	8	2A	17W		50		150	5	500	85	87					309A	2		
SDT 5904	So		N	S	140	100	8	2A	17W		50		150	5	500	85	87					309A	2		
SDT 5905	So		N	S	180	120	8	2A	17W		50		150	5	500	85	87					309A	2		
SDT 5906	So		N	S	60	40	8	2A	17W			>30	5	500	85	87						309A	2		
SDT 5907	So		N	S	80	60	8	2A	17W			>30	5	500	85	87						309A	2		
SDT 5908	So		N	S	100	80	8	2A	17W			>30	5	500	85	87						309A	2		
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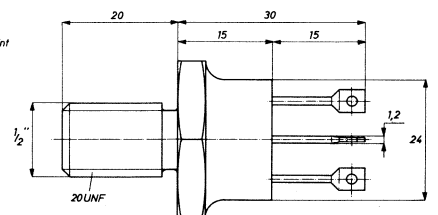
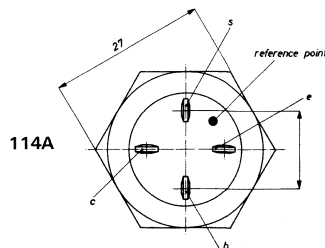
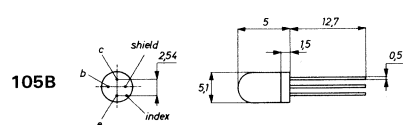
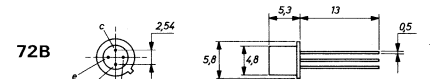
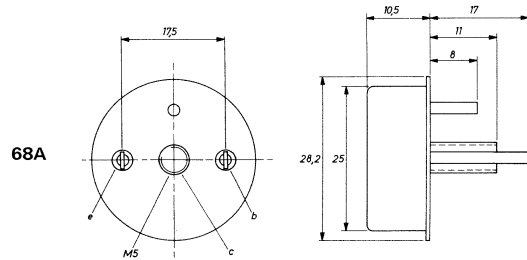
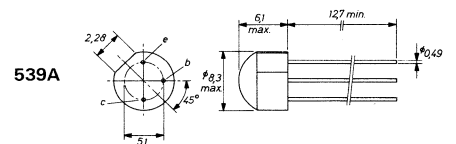
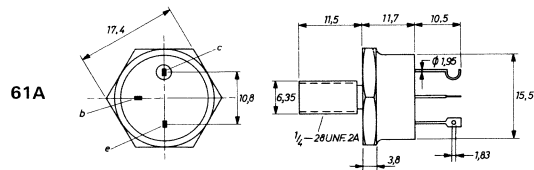
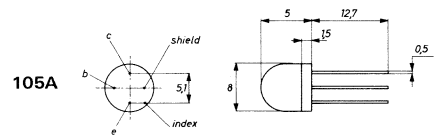
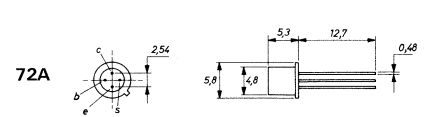
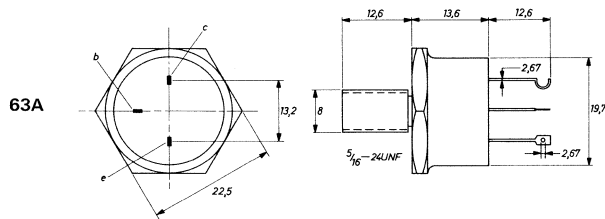
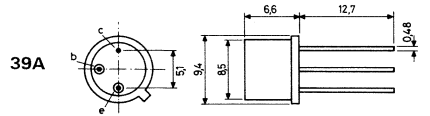
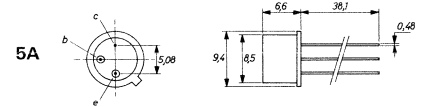
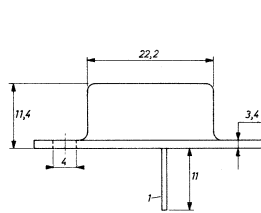
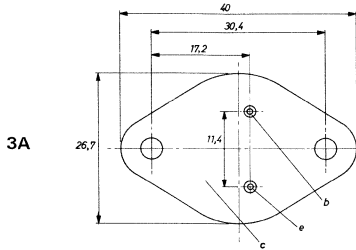
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
SDT 7016	So		N	S	100	80	5	10A	50W		40		120	5	5A	60					61A	2	
SDT 7017	So		N	S	60	40	5	10A	50W			>100		5	5A	60					61A	2	
SDT 7018	So		N	S	80	60	5	10A	50W			>100		5	5A	60					61A	2	
SDT 7019	So		N	S	100	80	5	10A	50W			>100		5	5A	60					61A	2	
SDT 7140	So		N	S	120	100	8	10A	50W		40		120	5	5A	60					61A	2	
SDT 7141	So		N	S	200	150	8	10A	50W		40		120	5	5A	60					61A	2	
SDT 7150	So		N	S	200	140	8	10A	50W		20		60	5	5A	60					61A	2	
SDT 7151	So		N	S	170	150	8	10A	50W		20		60	5	5A	60					61A	2	
SDT 7152	So		N	S	220	200	8	10A	50W		20		60	5	5A	60					61A	2	
SDT 7154	So		N	S	200	140	8	10A	50W		40		120	5	5A	60					61A	2	
SDT 7155	So		N	S	170	150	8	10A	50W		40		120	5	5A	60					61A	2	
SDT 7156	So		N	S	220	200	8	10A	50W		40		120	5	5A	60					61A	2	
SDT 7201	So		N	S	225	200	8	10A	80W		20		60	5	5A		45				3A	2	
SDT 7202	So		N	S	250	225	8	10A	80W		20		60	5	5A		45				3A	2	
SDT 7203	So		N	S	275	250	8	10A	80W		20		60	5	5A		45				3A	2	
SDT 7204	So		N	S	325	300	8	10A	80W		20		60	5	5A		45				3A	2	
SDT 7205	So		N	S	350	325	8	10A	80W		20		60	5	5A		45				3A	2	
SDT 7206	So		N	S	150	150	8	10A	80W			>10		5	5A		45				3A	2	
SDT 7207	So		N	S	200	200	8	10A	80W			>15		5	5A		45				3A	2	
SDT 7208	So		N	S	250	250	8	10A	80W			>15		5	5A		45				3A	2	
SDT 7209	So		N	S	300	300	8	10A	80W			>15		5	5A		45				3A	2	
SDT 7401	So		N	S	60	40	5	10A	5W		40		120	5	5A		140				5A	2	
SDT 7402	So		N	S	80	60	5	10A	5W		40		120	5	5A		140				5A	2	
SDT 7403	So		N	S	100	80	5	10A	5W		40		120	5	5A		140				5A	2	
SDT 7411	So		N	S	60	40	5	10A	5W		20		60	5	5A		140				5A	2	
SDT 7412	So		N	S	80	60	5	10A	5W		20		60	5	5A		140				5A	2	
SDT 7413	So		N	S	100	80	5	10A	5W		20		60	5	5A		140				5A	2	
SDT 7414	So		N	S	60	40	5	10A	5W		40		120	5	5A		140				5A	2	
SDT 7415	So		N	S	80	60	5	10A	5W		40		120	5	5A		140				5A	2	
SDT 7416	So		N	S	100	80	5	10A	5W		40		120	5	5A		140				5A	2	
SDT 7417	So		N	S	60	40	5	10A	5W			>100		5	5A		140				5A	2	
SDT 7418	So		N	S	80	60	5	10A	5W			>100		5	5A		140				5A	2	
SDT 7419	So		N	S	100	80	5	10A	5W			>100		5	5A		140				5A	2	
SDT 7601	So		N	S	60	40	8	10A	65W		40		120	5	5A	60					3A	2	
SDT 7602	So		N	S	80	60	8	10A	65W		40		120	5	5A	60					3A	2	
SDT 7603	So		N	S	100	80	8	10A	65W		40		120	5	5A	60	45				3A	2	
SDT 7604	So		N	S	140	120	8	10A	65W		40		120	5	5A	60	45				3A	2	
SDT 7605	So		N	S	170	150	8	10A	65W		40		120	5	5A	60	45				3A	2	
SDT 7607	So		N	S	60	40	8	10A	65W		20		60	5	5A	60	45				3A	2	
SDT 7608	So		N	S	80	60	8	10A	65W		20		60	5	5A	60	45				3A	2	
SDT 7609	So		N	S	100	80	8	10A	65W		20		60	5	5A	60	45				3A	2	
SDT 7610	So		N	S	140	120	8	10A	65W		20		60	5	5A	60	45				3A	2	
SDT 7611	So		N	S	170	150	8	10A	65W		20		60	5	5A	60	45				3A	2	
SDT 7612	So		N	S	220	200	8	10A	65W		20		60	5	5A	60	45				3A	2	
SDT 7711	So		N	S	60	40	20	10A	30W		20		80	5	5A						111A	2	
SDT 7712	So		N	S	80	60	20	10A	30W		20		80	5	5A						111A	2	
SDT 7713	So		N	S	100	80	20	10A	30W		20		80	5	5A						111A	2	
SDT 7714	So		N	S	120	100	20	10A	30W		20		80	5	5A						111A	2	
SDT 7715	So		N	S	140	125	20	10A	30W		20		80	5	5A						111A	2	
SDT 7716	So		N	S	165	150	20	10A	30W		20		80	5	5A						111A	2	
SDT 7731	So		N	S	60	40	20	10A	80W		20		80	5	5A		45				3A	2	
SDT 7732	So		N	S	80	60	20	10A	80W		20		80	5	5A		45				3A	2	
SDT 7733	So		N	S	100	80	20	10A	80W		20		80	5	5A		45				3A	2	
SDT 7734	So		N	S	120	100	20	10A	80W		20		80	5	5A		45				3A	2	
SDT 7735	So		N	S	140	125	20	10A	80W		20		80	5	5A		45				3A	2	
SDT 7736	So		N	S	165	150	20	10A	80W		20		80	5	5A		45				3A	2	
SDT 7741	So		N	S	60	40	20	10A	40W		20		80	5	5A						309A	2	
SDT 7742	So		N	S	80	60	20	10A	40W		20		80	5	5A						309A	2	
SDT 7743	So		N	S	100	80	20	10A	40W		20		80	5	5A						309A	2	
SDT 7744	So		N	S	120	100	20	10A	40W		20		80	5	5A						309A	2	
SDT 7745	So		N	S	140	125	20	10A	40W		20		80	5	5A						309A	2	
SDT 7746	So		N	S	165	150	20	10A	40W		20		80	5	5A						309A	2	
SDT 7761	So		N	S	60	40	20	10A	50W		20		80	5	5A						61A	2	
SDT 7762	So		N	S	80	60	20	10A	50W		20		80	5	5A						61A	2	
SDT 7763	So		N	S	100	80	20	10A	50W		20		80	5	5A						61A	2	
SDT 7764	So		N	S	120	100	20	10A	50W		20		80	5	5A						61A	2	
SDT 7765	So		N	S	140	125	20	10A	50W		20		80	5	5A						61A	2	
SDT 7766	So		N	S	165	150	20	10A	50W		20		80	5	5A						61A	2	
SDT 7801	So		N	S	225	200	8	10A	80W		20		60	5	5A						61A	2	
SDT 7802	So		N	S	250	225	8	10A	80W		20		60	5	5A						61A	2	
SDT 7803	So		N	S	275	150	8	10A	80W		20		60	5	5A						61A	2	
SDT 7804	So		N	S	325	300	8	10A	80W		20		60	5	5A						61A	2	
SDT 7805	So		N	S	350	325	8	10A	80W		20		60	5	5A						61A	2	
SDT 7806	So		N	S	150	150	8	10A	80W			>10		5	5A						61A	2	
SDT 7807	So		N	S	200	200	8	10A	80W			>15		5	5A						61A	2	
SDT 7808	So		N	S	250	250	8	10A	80W			>15		5	5A						61A	2	
SDT 7809	So		N	S	300	300	8	10A	80W			>15		5	5A						61A	2	
SDT 7901	So		N	S	225	200	8	10A	40W		20		60	5	5A								

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
SDT 7910	So		N	S	150	150	8	10A	40W			>10	5	5A							309A	2		
SDT 8002	So		N	S	80	60	8	25A	100W		40	120	5	10A	35						63A	2		
SDT 8003	So		N	S	100	80	8	25A	100W		40	120	5	10A	35						63A	2		
SDT 8012	So		N	S	80	60	8	25A	100W		20	60	5	10A	35						63A	2		
SDT 8013	So		N	S	100	80	8	25A	100W		20	60	5	10A	35						63A	2		
SDT 8014	So		N	S	80	60	8	25A	100W		40	120	5	10A	35						63A	2		
SDT 8016	So		N	S	100	80	8	25A	100W		40	120	5	10A	35						63A	2		
SDT 8045	So		N	S	40	25	8	25A	100W			>40	5	10A	35						63A	2		
SDT 8070	So		N	S	80	60	8	25A	100W			>100	5	10A	35						63A	2		
SDT 8071	So		N	S	100	80	8	25A	100W			>100	5	10A	35						63A	2		
SDT 8105	So		N	S	80	60	8	25A	65W		40	120	5	10A	35						810A	2		
SDT 8106	So		N	S	100	80	8	25A	65W		40	120	5	10A	35						810A	2		
SDT 8110	So		N	S	80	60	8	25A	65W			>100	5	10A	35						810A	2		
SDT 8112	So		N	S	80	60	8	25A	65W		20	60	5	10A	35						810A	2		
SDT 8113	So		N	S	100	80	8	25A	65W		20	60	5	10A	35						810A	2		
SDT 8114	So		N	S	40	25	5	25A	65W			>40	5	10A	35						810A	2		
SDT 8115	So		N	S	80	60	8	25A	65W		40	120	5	10A	35						810A	2		
SDT 8116	So		N	S	100	80	8	25A	65W		40	120	5	10A	35						810A	2		
SDT 8151	So		N	S	150	120	8	25A	65W		40	120	5	10A							61A	2		
SDT 8152	So		N	S	100	80	8	25A	65W		40	120	5	10A							61A	2		
SDT 8153	So		N	S	80	60	8	25A	65W		40	120	5	10A							61A	2		
SDT 8154	So		N	S	100	80	8	25A	65W			>100	5	10A							61A	2		
SDT 8155	So		N	S	80	60	8	25A	65W			>100	5	10A							61A	2		
SDT 8156	So		N	S	150	120	8	25A	65W		20	60	5	10A							61A	2		
SDT 8157	So		N	S	100	80	8	25A	65W		20	60	5	10A							61A	2		
SDT 8159	So		N	S	40	25	5	25A	65W			>20	5	10A							61A	2		
SDT 8301	So		N	S	80	60	8	30A	100W		40	120	5	10A	35						63A	2		
SDT 8302	So		N	S	100	80	8	30A	100W		40	120	5	10A	35						63A	2		
SDT 8303	So		N	S	80	60	8	30A	100W			>100	5	10A	35						63A	2		
SDT 8304	So		N	S	100	80	8	30A	100W			>100	5	10A	35						63A	2		



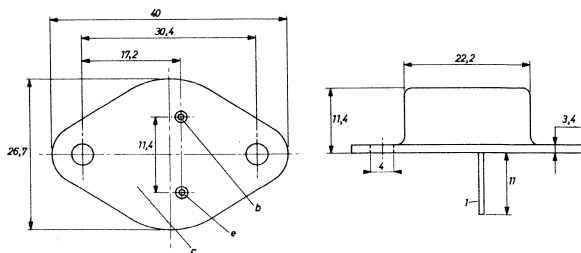
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz	ton (tr)			
SDT 8651	So		N	S	200	200	8	60A	166W		10	40	10	40A						68A	2	
SDT 8652	So		N	S	225	225	8	60A	166W		10	40	10	40A						68A	2	
SDT 8653	So		N	S	250	250	8	60A	166W		10	40	10	40A						68A	2	
SDT 8654	So		N	S	275	275	8	60A	166W		10	40	10	40A						68A	2	
SDT 8655	So		N	S	300	300	8	60A	166W		10	40	10	40A						68A	2	
SDT 8751	So		N	S	120	100	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8752	So		N	S	140	120	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8753	So		N	S	170	150	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8754	So		N	S	200	180	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8755	So		N	S	120	100	8	20A	100W		30	90	5	10A	30					63A	2	
SDT 8756	So		N	S	140	120	8	20A	100W		30	90	5	10A	30					63A	2	
SDT 8757	So		N	S	170	150	8	20A	100W		30	90	5	10A	30					63A	2	
SDT 8758	So		N	S	200	180	8	20A	100W		30	90	5	10A	30					63A	2	
SDT 8801	So		N	S	200	200	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8802	So		N	S	225	225	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8803	So		N	S	250	250	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8804	So		N	S	275	275	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8805	So		N	S	300	300	8	20A	100W		15	60	5	10A	30					63A	2	
SDT 8920	So		N	S	80	60	8	85A	125W			>10	5	75A	15					114A	2	
SDT 8921	So		N	S	100	80	8	85A	125W			>10	5	75A	15					114A	2	
SDT 8922	So		N	S	120	100	8	85A	125W			>10	5	75A	15					114A	2	
SDT 8923	So		N	S	140	120	8	85A	125W			>10	5	75A	15					114A	2	
SDT 8951	So		N	S	200	200	8	60A	125W		10	40	10	40A	15					114A	2	
SDT 8952	So		N	S	225	225	8	60A	125W		10	40	10	40A	15					114A	2	
SDT 8953	So		N	S	250	250	8	60A	125W		10	40	10	40A	15					114A	2	
SDT 8954	So		N	S	275	275	8	60A	125W		10	40	10	40A	15					114A	2	
SDT 8955	So		N	S	300	300	8	60A	125W		10	40	10	40A	15					114A	2	
SDT 9001	So		N	S	50	30	5	5A	4W			>20	5	1A	70	140				5A	1	
SDT 9002	So		N	S	70	50	5	5A	4W			>20	5	1A	70	140				5A	1	
SDT 9003	So		N	S	90	70	5	5A	4W			>20	5	1A	70	140				5A	1	
SDT 9004	So		N	S	50	30	5	5A	4W		30	90	5	1A	70	140				5A	1	
SDT 9005	So		N	S	70	50	5	5A	4W		30	90	5	1A	70	140				5A	1	
SDT 9006	So		N	S	90	70	5	5A	4W		30	90	5	1A	70	140				5A	1	
SDT 9007	So		N	S	50	30	5	5A	4W		50	150	5	1A	70	140				5A	1	
SDT 9008	So		N	S	70	50	5	5A	4W		50	150	5	1A	70	140				5A	1	
SDT 9009	So		N	S	90	70	5	5A	4W		50	150	5	1A	70	140				5A	1	
SDT 9010	So		N	S	50	30	5	5A	4W			>100	5	1A	70	140				5A	1	
SDT 9011	So		N	S	70	50	5	5A	4W			>100	5	1A	70	140				5A	1	
SDT 9012	So		N	S	90	70	5	5A	4W			>100	5	1A	70	140				5A	1	
SDT 9201	So		N	S	55	45	12	15A	115W		20	70	4	4A	45					3A	2	
SDT 9202	So		N	S	100	80	12	15A	115W		20	70	4	4A	45					3A	2	
SDT 9203	So		N	S	120	100	12	15A	115W		20	70	4	4A	45					3A	2	
SDT 9204	So		N	S	140	120	12	15A	115W		20	70	4	4A	45					3A	2	
SDT 9205	So		N	S	65	45	12	15A	115W		15	70	4	4A	45					3A	2	
SDT 9206	So		N	S	80	60	12	15A	115W		15	70	4	4A	45					3A	2	
SDT 9207	So		N	S	100	80	12	15A	115W		15	70	4	4A	45					3A	2	
SDT 9208	So		N	S	120	100	12	15A	115W		15	70	4	4A	45					3A	2	
SDT 9209	So		N	S	140	120	12	15A	115W		15	70	4	4A	45					3A	2	
SDT 9210	So		N	S	40	30	5	15A	115W			>15	2	2A	45					3A	2	
SDT 9701	So		N	S	100	80	7	20A	150W		15	60	5	8A	45					3A	2	
SDT 9702	So		N	S	120	100	7	20A	150W		15	60	5	8A	45					3A	2	
SDT 9703	So		N	S	140	120	7	20A	150W		15	60	5	8A	45					3A	2	
SDT 9704	So		N	S	100	80	7	20A	150W		20	80	5	5A	45					3A	2	
SDT 9705	So		N	S	120	100	7	20A	150W		20	80	5	5A	45					3A	2	
SDT 9706	So		N	S	140	120	7	20A	150W		20	80	5	5A	45					3A	2	
SDT 9707	So		N	S	80	60	7	20A	150W			>15	5	4A	45					3A	2	
SDT 9801	So		N	S	60	40	12	15A	83W		20	60	5	5A	45					3A	2	
SDT 9802	So		N	S	80	60	12	15A	83W		20	60	5	5A	45					3A	2	
SDT 9803	So		N	S	100	80	12	15A	83W		20	60	5	5A	45					3A	2	
SDT 9804	So		N	S	120	100	12	15A	83W		20	60	5	5A	45					3A	2	
SDT 9901	So		N	S	60	40	12	15A	65W		20	60	5	5A						61A	2	
SDT 9902	So		N	S	80	60	12	15A	65W		20	60	5	5A						61A	2	
SDT 9903	So		N	S	100	80	12	15A	65W		20	60	5	5A						61A	2	
SDT 9904	So		N	S	120	100	12	15A	65W		20	60	5	5A						61A	2	
SE 1001	Ns		N	S	45	45	4	50	200		40	160	10	10	200					105B	3	
SE 1002	Ns		N	S	45	45	4	50	200		100	400	10	10	200					105B	3	
SE 3001	Ns		N	S	30	12	2	20	200			>20	10	8	600					105B	3	
SE 3002	Ns		N	S	30	12	2	20	200			>20	10	8	600					105B	3	
SE 4001	Ns		N	S	30	25	6	25	200		60	300	10	1	40					105B	1	
SE 4002	Ns		N	S	30	25	6	25	200		200	1000	10	1	60					105B	2	
SE 4010	Ns		N	S	30	25	6	25	200		200	1000	10	1	60					105B	1	
SE 5020	Ns		N	S	20	20	3	50	350		20	200	5	4	800					72A	3	
SE 5021	Ns		N	S	20	20	3	50	350		20	200	5	4	800					72A	3	
SE 5022	Ns		N	S	20	20	3	50	350		20	200	5	4	800					72A	3	
SE 5023	Ns		N	S	20	20	3	50	350		20	200	5	4	800					72A	3	
SE 5024	Ns		N	S	20	20	3	50	350		20	200	5	4	800					72A	3	
SE 5035	Ns		N	S	40	30	4	50	350		40	180	10	5	600					72A	3	
SE 5037	Ns		N	S	46	40	4	50	200		40	180	10	10	600					72A	3	
SE 5040	Fa		N	S	30	30	3	25	175	(175)	20	220	10	4			<5			72B	3	
SE 5050	Ns		N	S	20	20	3	50	200		20	200	5	4	300					72A</		

Type	Manufacturer	Sort (Note)	PNP/NPN	Gm/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t _j)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T °C/W	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
SE 6020	Fa		N	S	60	60	6.5	1A	800	25c	100	300	10	150	250					150ns	539A	1, 5	
SE 6021	Fa		N	S	80	80	6.5	1A	800	25c	100	300	10	150	250					150ns	539A	1, 5	
SFT 187	Se		N	S	150			30	800			>25		30	70						39A	12	
SFT 223	Se		P	S	30	15		100	225		60	160		100							39A	1	
SFT 227	Se		P	S	30			250	150		35	55		10	4.5						39A	1	
SFT 228	Se		P	S	30			150	150		50	80		10	5.5						39A	1	
SFT 229	Se		P	S	18			250	150		75	120		10	10						39A	5	
SFT 232	Se		P	S	30	30		3A	500			>20		1A	225						39A	1	
SFT 233	Se		P	S		40		3A	500			>20		1A	225						39A	1	
SFT 234	Se		P	S	50			3A	500			>20		1A	700						39A	1	

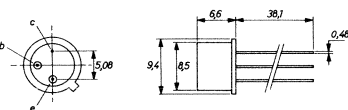


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz	ton (tr)			
SFT 234A	Se		P	S		60		3A	500			>20			1A	700					39A	1	
SFT 243	Se		P	S	60			500	225		30		100		100						39A	1	
SFT 253	Se		P	S	30			150	225		(60)		(160)		1						39A	1	
SFT 288	Se		P	S	24			500	150		40		100		400	7					39A	5	
SFT 298	Se		N	S	30			500	150			>35			350	8					39A	5	
SHA 7520	So		P	S	35	35	35	100	1W		(5	18)	5	1	0.8						821A	1	
SHA 7521	So		P	S	60	60	60	100	1W		(5	18)	5	1	0.8						821A	1	
SHA 7522	So		P	S	15	15	15	100	1W		(14	32)	5	1	0.8						821A	1	
SHA 7523	So		P	S	35	35	35	100	1W		(14	32)	5	1	0.8						821A	1	
SHA 7524	So		P	S	60	60	60	100	1W		(14	32)	5	1	0.8						821A	1	
SHA 7525	So		P	S	110	110	110	100	1W		(14	32)	5	1	0.8						821A	1	
SHA 7526	So		P	S	15	15	15	100	1W		(28	65)	5	1	0.8						821A	1	
SHA 7527	So		P	S	35	35	35	100	1W		(28	65)	5	1	0.8						821A	1	
SHA 7528	So		P	S	60	60	60	100	1W		(28	65)	5	1	0.8						821A	1	
SHA 7529	So		P	S	90	90	90	100	1W		(14	32)	5	1	0.8						821A	1	
SHA 7530	So		P	S	35	35	35	100	400		(5	18)	5	1	0.8						5A	1	
SHA 7531	So		P	S	60	60	60	100	385		(5	18)	5	1	0.8						18A	1	
SHA 7532	So		P	S	15	15	15	100	400		(14	32)	5	1	0.8						5A	1	
SHA 7533	So		P	S	35	35	35	100	400		(14	32)	5	1	0.8						5A	1	
SHA 7534	So		P	S	60	60	60	100	385		(14	32)	5	1	0.8						18A	1	
SHA 7535	So		P	S	110	110	110	100	385		(14	32)	5	1	0.8						18A	1	
SHA 7536	So		P	S	15	15	15	100	400		(28	65)	5	1	0.8						5A	1	
SHA 7537	So		P	S	35	35	35	100	400		(28	65)	5	1	0.8						5A	1	
SHA 7538	So		P	S	60	60	60	100	385		(28	65)	5	1	0.8						18A	1	
SHA 7539	So		P	S	90	90	90	100	385		(14	32)	5	1	0.8						18A	1	
SHA 7597	So		P	S	50	40	20	100	1W		9	22	0.5		0.8						821A	1	
SHA 7598	So		P	S	50	35	20	100	1W		18	44	0.5		0.8						821A	1	
SHA 7599	So		P	S	50	30	20	100	1W		36	88	0.5		0.8						821A	1	
SRF 1001	So		N	S	55	30	3.5		1.5W						600						5A	3	
SRF 1002	So		N	S	60	40	4		1W						400						5A	3	
SRF 11101	So		N	S	65	40	4		2.5W						350						5A	3	
SRF 12101	So		N	S	65	40	4		6W						400						60A	3	
SRF 12212	So		N	S	40	20	4		5W						600						60A	3	
SRF 12213	So		N	S	40	20	4		7.5W						600						60A	4	
SRF 13113	So		N	S	60	40	4		10W						350						753A	4	
SRF 13123	So		N	S	60	40	4		6.5W						400						753A	4	
SRF 13212	So		N	S	40	20	3		12W						300						753A	4	
SRF 13213	So		N	S	30	18	3		7W						400						753A	4	
SRF 21140	So		N	S	40	20	3		1.3W						1200						60A	3	
SRF 23121	So		N	S	60	35	4		1.1W						400						753A	3	
SRF 23211	So		N	S	35	20	4		1W						300						753A	3	
SRF 46123	So		N	S	60	28	3.5		10W						400						348C	4	
SRF 52101	So		N	S	65	40	4								350						60A	4	
SRF 52214	So		N	S	30	18	3		13W						100						60A	4	
SRF 53104	So		N	S	70	35	3.5		10W						300						753A	4	
SRF 53114	So		N	S	60	40	4		20W						350						753A	4	
SRF 53215	So		N	S	30	18	3		20W						360						753A	4	
SRF 54215	So		N	S	30	18	3		20W						360						348C	4	
SSS 1001	So		P	S	100	100	100		250												5A	15	
SSS 1002	So		P	S	120	120	120		250												5A	15	
SSS 1003	So		P	S	140	140	140		250												5A	15	
SSS 1004	So		P	S	160	160	160		250												5A	15	
ST 5025	Ns		N	S	30	30	3	20	600		20		200	10	10	700					92B	3	
ST 5030	Ns		N	S	45	40	4.5	20	600		45		150	15	7	600					92B	3	
ST 5056	Ns		N	S	20	20	3	10	600		20		220	10	2	300					92B	2	
TF 78/30 II	Si		P	G	32	24	10	600	3W	(90)	30		45		50		120				8A	2, 6	
TF 78/30 III	Si		P	G	32	24	10	600	3W	(90)	45		67		50		120				8A	2, 6	
TF 78/30 IV	Si		P	G	32	24	10	600	3W	(90)	67		100		50		120				8A	2, 6	
TF 78/30 V	Si		P	G	32	24	10	600	3W	(90)	100		150		50		120				8A	2, 6	
TF 78/60 II	Si		P	G	64	45	16	600	3W	(90)	30		45		50		120				8A	2, 6	
TF 78/60 III	Si		P	G	64	45	16	600	3W	(90)	45		67		50		120				8A	2, 6	
TF 78/60 IV	Si		P	G	64	45	16	600	3W	(90)	67		100		50		120				8A	2, 6	
TF 78/60 V	Si		P	G	64	45	16	600	3W	(90)	100		150		50		120				8A	2, 6	
TI 156	Ti		P	G	30	30	15	3A	25W	(100)	25		75	2	500	0.22	75				822A	12	
TI 156L	Ti		P	G	30	30	15	3A	25W	(100)	25		75	2	500	0.22	75				822B	12	
TI 159	Ti		P	G	40	40	20	3A	20W	(100)	33		200	0.5	50		53.6				823A	12	
TI 160	Ti		P	G	60	60	20	3A	20W	(100)	33		200	0.5	50		53.6				823A	12	
TI 161	Ti		P	G	80	80	20	3A	20W	(100)	33		200	0.5	50		53.6				823A	12	
TI 162	Ti		P	G	100	100	20	3A	20W	(100)	33		200	0.5	50		53.6				823A	12	
TI 486	Ti		N	S	80	60	6	1A	15W	(200)	20		80	5	200	50	175				5A	4	
TI 487	Ti		N	S	80	60	6	1A	15W	(200)	20		80	5	200	50	87.5				713A	4	
TI 1131	Ti		N	S	200	100	8	7A	80W	(175)	15		120	4	2A	7.5	50				61A	4	
TI 1132	Ti		N	S	200	100	8	7A	80W	(175)	15		60	4	2A	7.5	50				61A	4	
TI 1133	Ti		N	S	150	75	8	7A	80W	(175)	30		120	4	2A	7.5	50				61A	4	
TI 1134	Ti		N	S	150	75	8	7A	80W	(175)	15		60	4	2A	7.5	50				61A	4	
TI 1135	Ti		N	S	100	50	8	7A	80W	(175)	30		120	4	2A	7.5	50				61A	4	
TI 1136	Ti		N	S	100	50	8	7A	80W	(175)	15		60	4	2A	7.5	50				61A	4	
TI 1151	Ti		N	S	200	100	8	7A	80W	(175)	20		80	4	5A	7.5	50				61A	4	
TI 1152	Ti		N	S	200	100	8	7A	80W	(175)	10		40	4	5A	7.5	50				61A	4	
TI 1153	Ti		N	S	150	75	8	7A															

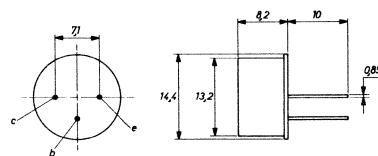
3A



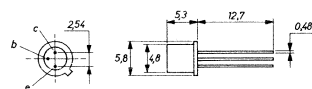
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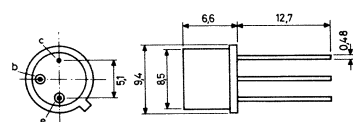
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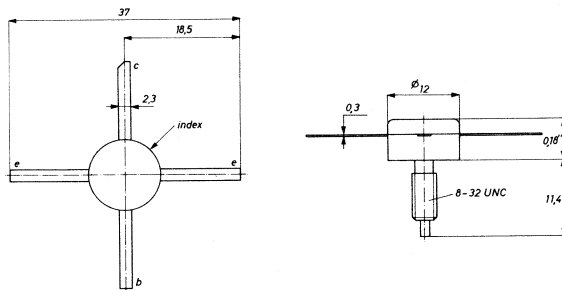
18A



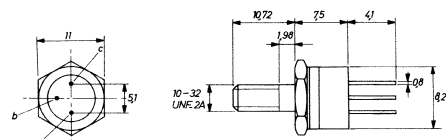
39A



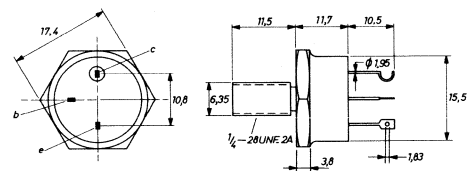
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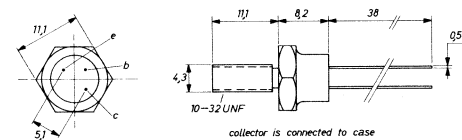
60A



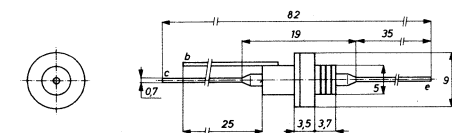
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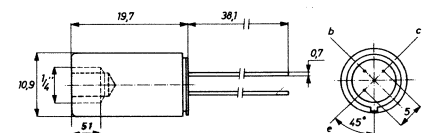
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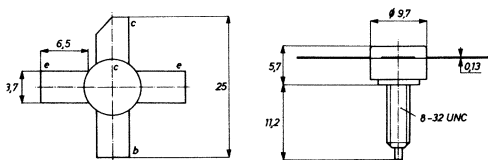
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822A

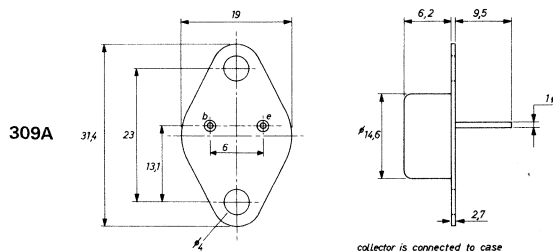
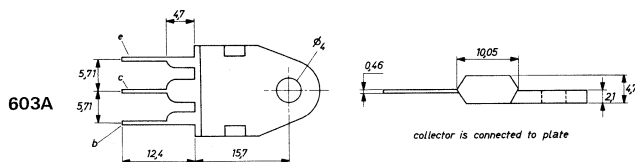
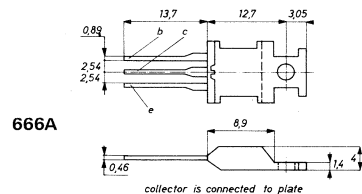
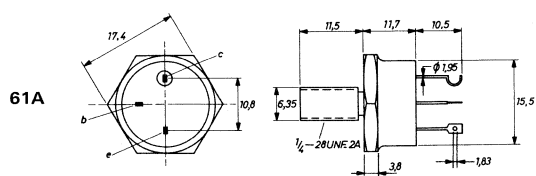
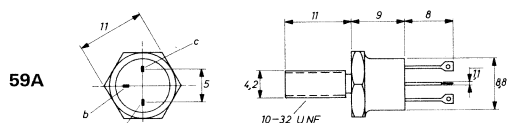
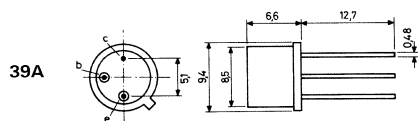
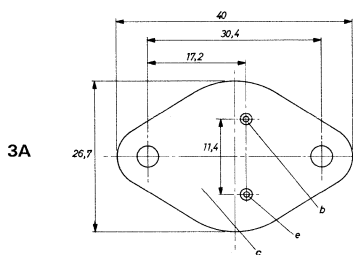


348C

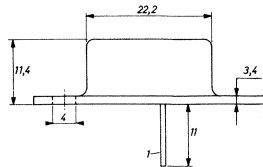
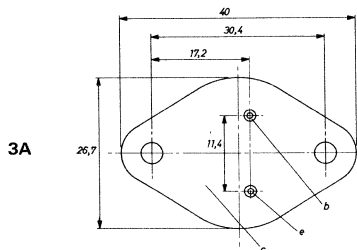


Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
TI 3027-2	Ti		P	G	45	40	20	7A	106W	25m	50	80	2	3A		42,5				3A	2		
TI 3027-3	Ti		P	G	45	40	20	7A	106W	25m	65	100	2	3A		42,5				3A	2		
TI 3027-4	Ti		P	G	45	40	20	7A	106W	25m	80	125	2	3A		42,5				3A	2		
TI 3027-5	Ti		P	G	45	40	20	7A	106W	25m	100	150	2	3A		42,5				3A	2		
TI 3027-6	Ti		P	G	45	40	20	7A	106W	25m	125	200	2	3A		42,5				3A	2		
TI 3027-7	Ti		P	G	45	40	20	7A	106W	25m	160	250	2	3A		42,5				3A	2		
TI 3028	Ti		P	G	60	50	20	7A	106W	25m	40	250	2	3A		42,5				3A	2		
TI 3028-1	Ti		P	G	60	50	20	7A	106W	25m	40	60	2	3A		42,5				3A	2		
TI 3028-2	Ti		P	G	60	50	20	7A	106W	25m	50	80	2	3A		42,5				3A	2		
TI 3028-3	Ti		P	G	60	50	20	7A	106W	25m	65	100	2	3A		42,5				3A	2		
TI 3028-4	Ti		P	G	80	50	20	7A	106W	25m	80	125	2	3A		42,5				3A	2		
TI 3028-5	Ti		P	G	80	50	20	7A	106W	25m	100	150	2	3A		42,5				3A	2		
TI 3028-6	Ti		P	G	80	50	20	7A	106W	25m	125	200	2	3A		42,5				3A	2		
TI 3028-7	Ti		P	G	80	50	20	7A	106W	25m	160	250	2	3A		42,5				3A	2		
TI 3029	Ti		P	G	80	55	20	7A	106W	25m	40	250	2	3A		42,5				3A	2		
TI 3029-1	Ti		P	G	80	55	20	7A	106W	25m	40	60	2	3A		42,5				3A	2		
TI 3029-2	Ti		P	G	80	55	20	7A	106W	25m	50	80	2	3A		42,5				3A	2		
TI 3029-3	Ti		P	G	80	55	20	7A	106W	25m	65	100	2	3A		42,5				3A	2		
TI 3029-4	Ti		P	G	80	55	20	7A	106W	25m	80	125	2	3A		42,5				3A	2		
TI 3029-5	Ti		P	G	80	55	20	7A	106W	25m	100	150	2	3A		42,5				3A	2		
TI 3029-6	Ti		P	G	80	55	20	7A	106W	25m	125	200	2	3A		42,5				3A	2		
TI 3029-7	Ti		P	G	80	55	20	7A	106W	25m	160	250	2	3A		42,5				3A	2		
TI 3030	Ti		P	G	100	60	20	7A	106W	25m	40	250	2	3A		42,5				3A	2		
TI 3030-1	Ti		P	G	100	60	20	7A	106W	25m	40	60	2	3A		42,5				3A	2		
TI 3030-2	Ti		P	G	100	60	20	7A	106W	25m	50	80	2	3A		42,5				3A	2		
TI 3030-3	Ti		P	G	100	60	20	7A	106W	25m	65	100	2	3A		42,5				3A	2		
TI 3030-4	Ti		P	G	100	60	20	7A	106W	25m	80	125	2	3A		42,5				3A	2		
TI 3030-5	Ti		P	G	100	60	20	7A	106W	25m	100	150	2	3A		42,5				3A	2		
TI 3030-6	Ti		P	G	100	60	20	7A	106W	25m	125	200	2	3A		42,5				3A	2		
TI 3030-7	Ti		P	G	100	60	20	7A	106W	25m	160	250	2	3A		42,5				3A	2		
TI 3031	Ti		P	G	120	65	20	7A	106W	25m	40	240	2	3A		42,5				3A	2		
TI 3031-1	Ti		P	G	120	65	20	7A	106W	25m	60	60	2	3A		42,5				3A	2		
TI 3031-2	Ti		P	G	120	65	20	7A	106W	25m	50	80	2	3A		42,5				3A	2		
TI 3031-3	Ti		P	G	120	65	20	7A	106W	25m	65	100	2	3A		42,5				3A	2		
TI 3031-4	Ti		P	G	120	65	20	7A	106W	25m	80	125	2	3A		42,5				3A	2		
TI 3031-5	Ti		P	G	120	65	20	7A	106W	25m	100	150	2	3A		42,5				3A	2		
TI 3031-6	Ti		P	G	120	65	20	7A	106W	25m	125	200	2	3A		42,5				3A	2		
TI 3031-7	Ti		P	G	120	65	20	7A	106W	25m	160	250	2	3A		42,5				3A	2		
TIP 29	Ti		N	S	40	40	5	1A	30W	25c	40	200	4	200		62,5			0,35µs	666A	2	TIP 30	
TIP 29A	Ti		N	S	60	60	5	1A	30W	25c	40	200	4	200		62,5			0,35µs	666A	2	TIP 30A	
TIP 29B	Ti		N	S	80	80	5	1A	30W	(150)	40	200	4	200	3	62,5			0,25µs	666A	2		
TIP 29C	Ti		N	S	100	100	5	1A	30W	(150)	40	200	4	200	3	62,5			0,25µs	666A	2		
TIP 30	Ti		N	S	40	40	5	1A	40W	25c	40	200	4	200		62,5			0,25µs	666A	2	TIP 29	
TIP 30A	Ti		N	S	60	60	5	1A	40W	25c	40	200	4	200		62,5			0,25µs	666A	2	TIP 29A	
TIP 30B	Ti		N	S	80	80	5	1A	40W	(150)	40	200	4	200	3	62,5			0,25µs	666A	2		
TIP 30C	Ti		N	S	100	100	5	1A	40W	(150)	40	200	4	200	3	62,5			0,45µs	666A	2		
TIP 31	Ti		N	S	40	40	5	3A	40W	25c	20	100	4	1A		62,5			0,45µs	666A	2	TIP 32	
TIP 31A	Ti		N	S	60	60	5	3A	40W	(150)	25	100	4	1A	3	62,5			0,45µs	666A	2	TIP 32A	
TIP 31B	Ti		N	S	80	80	5	3A	40W	(150)	25	100	4	1A	3	62,5			0,45µs	666A	2		
TIP 31C	Ti		N	S	100	100	5	3A	40W	(150)	25	100	4	1A	3	62,5			0,45µs	666A	2		
TIP 32	Ti		P	S	40	40	5	3A	40W	25c	20	100	4	1A		62,5			0,17µs	666A	2	TIP 31	
TIP 32A	Ti		P	S	60	60	5	3A	40W	25c	20	100	4	1A		62,5			0,17µs	666A	2	TIP 31A	
TIP 32B	Ti		P	S	80	80	5	3A	40W	(150)	25	100	4	1A	3	62,5			0,17µs	666A	2		
TIP 32C	Ti		P	S	100	100	5	3A	40W	(150)	25	100	4	1A	3	62,5			0,17µs	666A	2		
TIP 33	Ti		N	S	40	40	5	10A	80W	25c	25	125	4	1A		35,7			0,45µs	603A	2	TIP 34	
TIP 33A	Ti		N	S	60	60	5	10A	80W	25c	25	125	4	1A		35,7			0,45µs	603A	2	TIP 34A	
TIP 33B	Ti		N	S	80	80	5	10A	80W	(150)	40	125	4	1A	3	35,7			0,45µs	603A	2		
TIP 33C	Ti		N	S	100	100	5	10A	80W	(150)	40	125	4	1A	3	35,7			0,45µs	603A	2		
TIP 34	Ti		N	S	40	40	5	10A	80W	25c	25	125	4	1A		35,7			0,35µs	603A	2	TIP 33	
TIP 34A	Ti		N	S	60	60	5	10A	80W	25c	25	125	4	1A		35,7			0,35µs	603A	2	TIP 33A	
TIP 34B	Ti		N	S	80	80	5	10A	80W	(150)	40	125	4	1A	3	35,7			0,6µs	603A	2		
TIP 34C	Ti		N	S	100	100	5	10A	80W	(150)	40	124	4	1A	3	35,7			0,6µs	603A	2		
TIP 35	Ti		N	S	40	40	5	25A	90W	25c	20	100	4	5A	>3	35,7			0,6µs	603A	2	TIP 36	
TIP 35A	Ti		N	S	60	60	5	25A	90W	25c	20	100	4	5A	>3	35,7			0,6µs	603A	2	TIP 36A	
TIP 35B	Ti		N	S	80	80	5	25A	90W	(150)	25	100	4	1,5A	3	35,7			0,6µs	603A	2		
TIP 35C	Ti		N	S	100	100	5	25A	90W	(150)	25	100	4	1,5A	3	35,7			0,45µs	603A	2		
TIP 36	Ti		P	S	40	40	5	25A	90W	25c	20	100	4	5A	>3	35,7			0,45µs	603A	2	TIP 35	
TIP 36A	Ti		P	S	60	60	5	25A	90W	25c	20	100	4	5A	>3	35,7			0,45µs	603A	2	TIP 35A	
TIP 36B	Ti		P	S	80	80	5	25A	90W	(150)	25	100	4	1,5A	3	35,7			0,45µs	603A	2		
TIP 36C	Ti		P	S	100	100	5	25A	90W	(150)	25	100	4	1,5A	>3	35,7			0,45µs	603A	2		
TIP 41	Ti		N	S	40	40	5	6A	65W	(150)	15	75	4	3A	3	62,5				666A	2,6		
TIP 41A	Ti		N	S	60	60	5	6A	65W	(150)	15	75	4	3A	3	62,5				666A	2,6		
TIP 41B	Ti		N	S	80	80	5	6A	65W	(150)	15	75	4	3A	3	62,5				666A	2,6		
TIP 41C	Ti		N	S	100	100	5	6A	65W	(150)	15	75	4	3A	3	62,5				666A	2,6		
TIP 42	Ti		P	S	40	40	5	6A	65W	(150)	15	7											

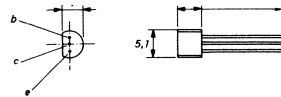
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)						
TIP 54	Ti		N	S	500	400	5	3A	100W	(150)	30		150	10	300	2.5	35.7				603A	2				
TIP 110	Ti	da	N	S	60	60	5	2A	50W	25c		>500		4	2A				2.6μs		666A	2	TIP 115			
TIP 111	Ti	da	N	S	80	80	5	2A	50W	25c		>500		4	2A				2.6μs		666A	2	TIP 116			
TIP 112	Ti	da	N	S	100	100	5	2A	50W	25c		>500		4	2A				2.6μs		666A	2	TIP 117			
TIP 115	Ti	da	P	S	60	60	5	2A	50W	25c		>500		4	2A				2.6μs		666A	2	TIP 110			
TIP 116	Ti	da	P	S	80	80	5	2A	50W	25c		>500		4	2A				2.6μs		666A	2	TIP 111			
TIP 117	Ti	da	P	S	100	100	5	2A	50W	25c		>500		4	2A				2.6μs		666A	2	TIP 112			
TIP 120	Ti	da	N	S	60	60	5	5A	65W	25c		>1000		3	3A				1.5μs		666A	2	TIP 125			
TIP 121	Ti	da	N	S	80	80	5	5A	65W	25c		>1000		3	3A				1.5μs		666A	2	TIP 126			
TIP 122	Ti	da	N	S	100	100	5	5A	65W	25c		>1000		3	3A				1.5μs		666A	2	TIP 127			
TIP 125	Ti	da	P	S	60	60	5	5A	65W	25c		>1000		3	3A				1.5μs		666A	2	TIP 120			
TIP 126	Ti	da	P	S	80	80	5	5A	65W	25c		>1000		3	3A				1.5μs		666A	2	TIP 121			
TIP 127	Ti	da	P	S	100	100	5	5A	65W	25c		>1000		3	3A				1.5μs		666A	2	TIP 122			
TIP 140	Ti	da	N	S	60	60	5	10A	125W	25c		>500		4	10A				0.9μs		603A	2	TIP 145			
TIP 141	Ti	da	N	S	80	80	5	10A	125W	25c		>500		4	10A				0.9μs		603A	2	TIP 146			
TIP 142	Ti	da	N	S	100	100	5	10A	125W	25c		>500		4	10A				0.9μs		603A	2	TIP 147			
TIP 145	Ti	da	P	S	60	60	5	10A	125W	25c		>500		4	10A				0.9μs		603A	2	TIP 140			
TIP 146	Ti	da	P	S	80	80	5	10A	125W	25c		>500		4	10A				0.9μs		603A	2	TIP 141			
TIP 147	Ti	da	P	S	100	100	5	10A	125W	25c		>500		4	10A				0.9μs		603A	2	TIP 142			
TIP 501	Ti		N	S	40	40	4	3A	6W	25c	25		180	1.5	1A	60	175				39A	2, 6				
TIP 502	Ti		N	S	60	60	4	3A	6W	25c	25		180	1.5	1A	60	175				39A	2, 6				
TIP 503	Ti		N	S	130	120	6	2A	20W	100c	40		200	4	1A	70	87.5				309A	2, 6				
TIP 504	Ti		N	S	160	150	6	2A	20W	100c	40		200	4	1A	70	87.5				309A	2, 6				
TIP 505	Ti		N	S	130	120	6	2A	20W	100c	40		200	4	1A	70	87.5				59A	2, 6				
TIP 506	Ti		N	S	160	150	6	2A	20W	100c	40		200	4	1A	70	87.5				59A	2, 6				
TIP 507	Ti		P	S	150	150	5	2A	20W	100c	30		120	4	1A	50	87.5				59A	2, 6				
TIP 508	Ti		P	S	150	150	5	2A	4W	100c	30		120	4	1A	50	175				39A	2, 6				
TIP 509	Ti		N	S	130	120	6	4A	30W	100c	40		200	4	2A	70	44				3A	2, 6				
TIP 510	Ti		N	S	160	150	6	4A	30W	100c	40		200	4	2A	70	44				3A	2, 6				
TIP 511	Ti		N	S	130	120	6	4A	30W	100c	40		200	4	2A	70	44				61A	2, 6				
TIP 512	Ti		N	S	160	150	6	4A	30W	100c	40		200	4	2A	70	44				61A	2, 6				
TIP 513	Ti		P	S	150	150	5	5A	30W	100c	30		150	4	2.5A	40	87				59A	2, 6				
TIP 514	Ti		P	S	150	150	5	5A	20W	100c	30		150	4	2.5A	40	87				309A	2, 6				
TIP 515	Ti		N	S	130	120	6	12A	80W	100c	40		200	4	6A	70	43.7				3A	2, 6				
TIP 516	Ti		N	S	160	150	6	12A	80W	100c	40		200	4	6A	70	43.7				3A	2, 6				
TIP 517	Ti		N	S	130	120	6	12A	80W	100c	40		200	4	6A	70	50				61A	2, 6				
TIP 518	Ti		N	S	160	150	6	12A	80W	100c	40		200	4	6A	70	50				61A	2, 6				
TIP 519	Ti		P	S	150	150	5	8A	50W	100c	30		150	4	4A	40	43.8				3A	2, 6				
TIP 520	Ti		P	S	150	150	5	8A	50W	100c	30		150	4	4A	40	50				61A	2, 6				
TIP 521	Ti		P	S	200	200	5	2A	20W	100c	20		100	4	1A	50	87.5				59A	2, 6				



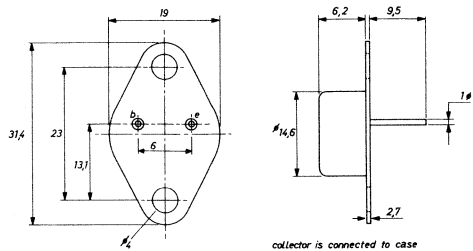
Type	Manufacturer	Sort (Note)	PNP/NPN	Gai/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equival.) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
TIP 522	Ti		P	S	200	200	5	2A	4W	100c	20	100	4	1A	50	175					39A	2, 6		
TIP 523	Ti		P	S	200	200	5	5A	30W	100c	20	100	4	2.5A	40	87.5					59A	2, 6		
TIP 524	Ti		P	S	200	200	5	5A	6W	100c	20	100	4	2.5A	40	175					59A	2, 6		
TIP 525	Ti		N	S	250	200	6	5A	60W	100c	30	150	4	2.5A	40	43.8					3A	2, 6		
TIP 526	Ti		N	S	250	200	6	5A	60W	100c	30	150	4	2.5A	40	50					61A	2, 6		
TIP 527	Ti		P	S	200	200	5	8A	60W	100c	20	100	4	4A	40	43.8					3A	2, 6		
TIP 528	Ti		P	S	200	200	5	8A	60W	100c	20	100	4	4A	40	50					61A	2, 6		
TIP 529	Ti		P	S	400	300	6	3A	67W	100c	25	125	4	1.5A	20	44					309A	2, 6		
TIP 530	Ti		N	S	400	300	6	3A	20W	100c	25	125	4	1.5A	20	87.5					3A	2, 6		
TIP 531	Ti		N	S	340	300	6	15A	150W	100c	20	120	4	7.5A	50	37.5					3A	2, 6		
TIP 532	Ti		N	S	450	400	6	15A	150W	100c	20	120	4	7.5A	50	37.5					3A	2, 6		
TIP 533	Ti		N	S	340	300	6	15A	150W	100c	20	120	4	7.5A	50	37.5					63A	2, 6		
TIP 534	Ti		N	S	450	400	6	15A	150W	100c	20	120	4	7.5A	50	37.5					63A	2, 6		
TIP 535	Ti		N	S	300	200	5	7A	100W	100c	20	100	4	5A	10	35					3A	2, 6		
TIP 536	Ti		N	S	400	300	5	7A	100W	(200)	20	100	4	5A	10	35					3A	2, 6		
TIP 537	Ti		N	S	500	400	5	7A	100W	(200)	20	100	4	5A	10	35					3A	2, 6		
TIP 538	Ti		N	S	300	200	5	15A	125W	(200)	20	100	4	7.5A	10	35					3A	2, 6		
TIP 539	Ti		N	S	400	300	5	15A	125W	(200)	20	100	4	7.5A	10	35					3A	2, 6		
TIP 540	Ti		N	S	500	400	5	15A	125W	(200)	20	100	4	7.5A	10	35					3A	2, 6		
TIP 541	Ti		N	S	50	45	5	2A	4W	(220)	40	200	4	1A	150	175					39A	2, 6		
TIP 542	Ti		N	S	50	45	5	10A	40W	(220)	40	200	4	5A	150	87.5					59A	2, 6		
TIP 543	Ti		N	S	75	65	6	10A	40W	(220)	40	200	4	5A	120	87.5					59A	2, 6		
TIP 544	Ti		P	S	100	100	7	6A	150W	(200)	25	100	2	3A	1						3A	2, 6		
TIP 545	Ti		P	S	120	120	7	6A	150W	(200)	20	80	2	3A	1						3A	2, 6		
TIP 546	Ti		P	S	140	140	7	6A	150W	(200)	15	60	2	3A	1						3A	2, 6		
TIP 640	Ti	da	N	S	80	60	5	10A	175W	25c		>500	4	10A		0.9μs					3A	2	TIP 645	
TIP 641	Ti	da	N	S	60	80	5	10A	175W	25c		>500	4	10A		0.9μs					3A	2	TIP 646	
TIP 642	Ti	da	N	S	100	100	5	10A	175W	25c		>500	4	10A		0.9μs					3A	2	TIP 647	
TIP 645	Ti	da	P	S	60	60	5	10A	175W	25c		>500	4	10A		0.9μs					3A	2	TIP 640	
TIP 646	Ti	da	P	S	80	80	5	10A	175W	25c		>500	4	10A		0.9μs					3A	2	TIP 641	
TIP 647	Ti	da	P	S	100	100	5	10A	175W	25c		>500	4	10A		0.9μs					3A	2	TIP 642	
TIP 2955	Ti		P	S	100	70	7	15A	90W	(150)	20	70	4	4A		35.7					603A	2, 6		
TIP 3055	Ti		N	S	100	70	7	15A	90W	(150)	20	70	4	4A		35.7					603A	2		
TIP 5530	Ti		P	S	100	70	7	15A	90W	(150)	20	70	4	4A		35.7					603A	2		
TIS 39	Ti		N	S	30	20		200	4W		20	200		50		1800					5A	3		
TIS 56	Ti		N	S	30	20		30	200		>20			4	500						72A	12		
TIS 57	Ti		N	S	30	20		30	200		>20			4	500						72A	12		
TIS 60 blu	Ti		N	S	40	25	5	400	300	25a	140	190	2	50							92A	1	TIS 61 blu	
TIS 60 gre	Ti		N	S	40	25	5	400	300	25a	215	300	2	50							92A	1	TIS 61 gre	
TIS 60 grn	Ti		N	S	40	25	5	400	300	25a	115	150	2	50							92A	1	TIS 61 grn	
TIS 60 vio	Ti		N	S	40	25	5	400	300	25a	170	235	2	50							92A	1	TIS 61 vio	
TIS 60 yel	Ti		N	S	40	25	5	400	300	25a	100	125	2	50							92A	1	TIS 61 yel	
TIS 61 blu	Ti		P	S	40	25	5	400	300	25a	140	190	5	50							92A	1	TIS 60 blu	
TIS 61 gre	Ti		P	S	40	25	5	400	300	25a	215	300	5	50							92A	1	TIS 60 gre	
TIS 61 grn	Ti		P	S	40	25	5	400	300	25a	115	150	5	50							92A	1	TIS 60 grn	
TIS 61 vio	Ti		P	S	40	25	5	400	300	25a	170	235	5	50							92A	1	TIS 60 vio	
TIS 61 yel	Ti		P	S	40	25	5	400	300	25a	100	125	5	50							92A	1	TIS 60 yel	
TIXP 39	Ti		N	S	80	80	5	10A	10W	100c	40	200	4	5A		87.5					111C	2, 6	(2N 5939)	
TIXP 40	Ti		N	S	70	70	5	10A	40W	100c	40	200	4	5A		87.5					111C	2, 6	(2N 5940)	
TIXP 547	Ti		N	S	80	60	5	100A	200W	(200)	15	100	4	50A	3	20.6					114A	2, 6		
TIXP 548	Ti		N	S	100	80	5	100A	200W	(200)	15	100	4	50A	3	20.6					114A	2, 6		
TIXP 549	Ti		N	S	120	100	5	100A	200W	(200)	15	100	4	50A	3	20.6					114A	2, 6		
WT 400	Wb		N	S	100	80	12	4A	25W	(200)	25	100	4	500	0.8	40					309A	2		
WT 401	Wb		N	S	100	80	12	4A	25W	(200)	80	200	4	500	0.8	40					309A	2		
WT 402	Wb		N	S	90	80	12	5A	80W	(150)	15	30	4	1A	0.5	35					3A	2		
WT 403	Wb		N	S	100	80	12	15A	125W	(150)	20	70	4	4A	0.8	35					3A	2		
WT 411	Wb		N	S	160	120	7	16A	150W	(150)	15	60	4	8A	0.8						825A	6		
WT 411A	Wb		N	S	160	120	7	16A	150W	(150)	15	60	4	8A	0.8						826A	6		
ZT 20	Fe		N	S	20	20	6	50	350		18	42	6	10	70						5A	1, 5		
ZT 21	Fe		N	S	20	20	6	50	350		38	82	6	10	70						5A	1, 5		
ZT 22	Fe		N	S	45	45	6	50	350		18	42	6	10	70						5A	1, 5		
ZT 23	Fe		N	S	45	45	6	50	350		38	82	6	10	70						5A	1, 5		
ZT 24	Fe		N	S	45	45	6	50	350		78	160	6	10	70						5A	1, 5		
ZT 40	Fe		N	S	20	20	6	50	300		18	42	6	10	70						18A	1, 5		
ZT 41	Fe		N	S	20	20	6	50	300		38	82	6	10	70						18A	1, 5		
ZT 42	Fe		N	S	45	45	6	50	300		18	42	6	10	70						18A	1, 5		
ZT 43	Fe		N	S	45	45	6	50	300		38	82	6	10	70						18A	1, 5		
ZT 44	Fe		N	S	45	45	6	50	300		78	160	6	10	70						18A	1, 5		
ZT 80	Fe		N	S	25	25	4	500	300		38	162	6	10	150						18A	1, 5		
ZT 81	Fe		N	S	45	35	4	500	300		38	162	6	10	150						18A	1, 5		
ZT 82	Fe		N	S	45	35	4	500	300		75	250	6	10	150						18A	1, 5		
ZT 83	Fe		N	S	60	45	5	500	300		38	85	6	10	150						18A	1, 5		
ZT 84	Fe		N	S	60	45	5	500	300		75	170	6	10	150						18A	1, 5		
ZT 86	Fe		N	S	100	80	5	500	300		38	85	6	10	150						18A	1, 5		
ZT 8																								



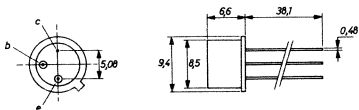
92A



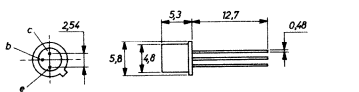
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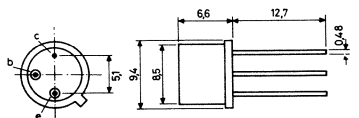
5A



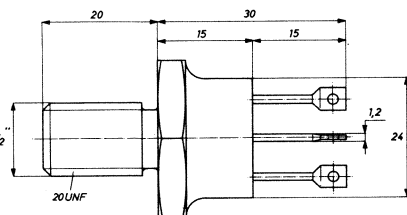
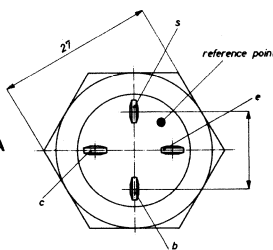
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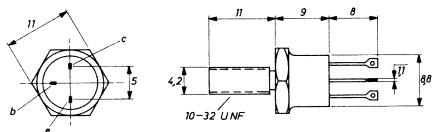
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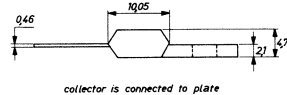
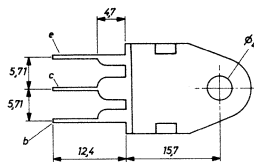
114A



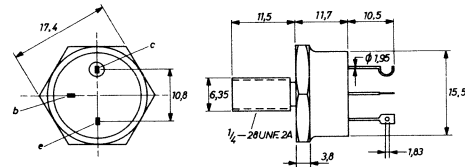
59A



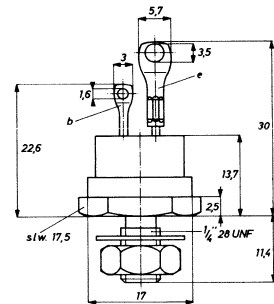
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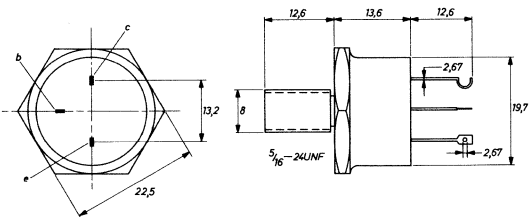
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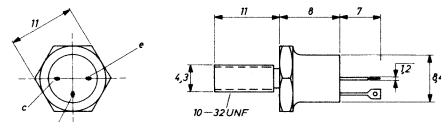
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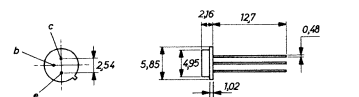
63A



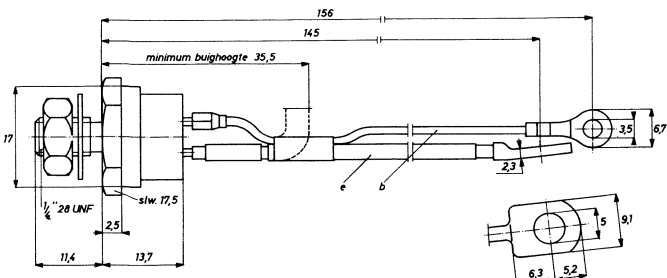
111C



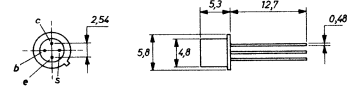
46A



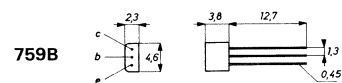
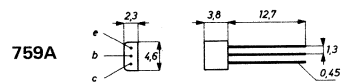
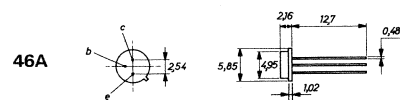
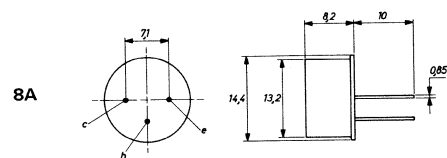
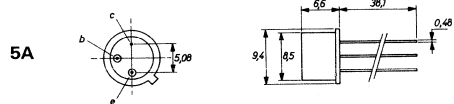
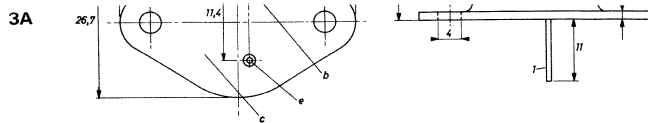
826A



72A

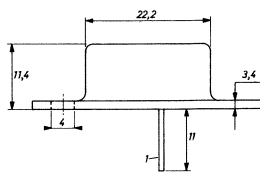
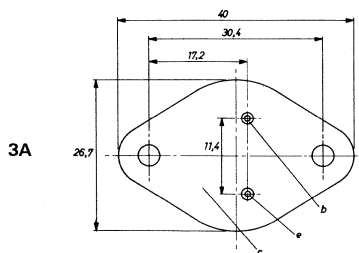


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
ZT 112	Fe		N	S	45	35	4	500	300		75	250	6	10	150						46A	1, 5			
ZT 113	Fe		N	S	60	45	5	500	300		38	85	6	10	150						46A	1, 5			
ZT 114	Fe		N	S	60	45	5	500	300		75	170	6	10	150						46A	1, 5			
ZT 116	Fe		N	S	100	80	5	500	300		38	85	6	10	150						46A	1, 5			
ZT 117	Fe		N	S	25	25	4	500	300		75	250	6	10	150						46A	1, 5			
ZT 118	Fe		N	S	100	80	5	500	300		75	170	6	10	150						46A	1, 5			
ZT 119	Fe		N	S	70	70	5	500	300		75	250	6	10	150						46A	1, 5			
ZT 180	Fe		P	S	25	25	4	300	300		38	162	6	10	150						18A	1, 5			
ZT 181	Fe		P	S	45	35	4	300	300		38	162	6	10	150						18A	1, 5			
ZT 182	Fe		P	S	45	35	4	300	300		75	250	6	10	150						18A	1, 5			
ZT 183	Fe		P	S	45	45	4	300	300		38	85	6	10	150						18A	1, 5			
ZT 184	Fe		P	S	45	45	4	300	300		75	170	6	10	150						18A	1, 5			
ZT 187	Fe		P	S	25	25	4	300	300		75	250	6	10	150						18A	1, 5			
ZT 189	Fe		P	S	70	70	4	300	300		75	250	6	10	150						18A	1, 5			
ZT 210	Fe		P	S	60	40	7	1W			20	100	10	150	60						5A	1, 6			
ZT 211	Fe		P	S	90	65	7	1W			40	120	10	150	60						5A	1, 6			
ZT 280	Fe		P	S	25	25	4	300	300		38	162	6	10	150						46A	1, 5			
ZT 281	Fe		P	S	45	35	4	300	300		38	162	6	10	150						46A	1, 5			
ZT 282	Fe		P	S	45	35	4	300	300		75	250	6	10	150						46A	1, 5			
ZT 283	Fe		P	S	45	45	4	300	300		38	85	6	10	150						46A	1, 5			
ZT 284	Fe		P	S	45	45	4	300	300		75	170	6	10	150						46A	1, 5			
ZT 287	Fe		P	S	25	25	4	300	300		75	250	6	10	150						46A	1, 5			
ZT 600	Fe		N	S	24	20	5	800			50	150		150	250						5A	1, 5			
ZT 1479	Fe		N	S	60	40		1,5A	5W		20	60	4	200							5A	2			
ZT 1480	Fe		N	S	100	55		1,5A	5W		20	60	4	200							5A	2			
ZT 1481	Fe		N	S	60	40		1,5A	5W		35	100	4	200							5A	2			
ZT 1482	Fe		N	S	100	55		1,5A	5W		35	100	4	200							5A	2			
ZT 1483	Fe		N	S	60	40		3A	25W		20	60	4	750							8A	2			
ZT 1484	Fe		N	S	100	55		3A	25W		20	60	4	750							8A	2			
ZT 1485	Fe		N	S	60	40		3A	25W		35	100	4	750							8A	2			
ZT 1486	Fe		N	S	100	55		3A	25W		35	100	4	750							8A	2			
ZT 1487	Fe		N	S	60	40		6A	75W		15	45	4	1,5A							3A	2			
ZT 1489	Fe		N	S	60	40		6A	75W		25	75	4	1,5A							3A	2			
ZT 1490	Fe		N	S	100	55		6A	75W		25	75	4	1,5A							3A	2			
ZT 1700	Fe		N	S	60	40		1A	5W		20	80	4	100							5A	2			
ZT 1701	Fe		N	S	60	40		2A	25W		20	80	4	300							8A	2			
ZT 1702	Fe		N	S	60	40		5A	75W		15	60	4	800							3A	2			
ZTX 107	Fe		N	S	60	50	5	100	300		125	500	5	2	350						759A	3			
ZTX 107A	Fe		N	S	60	50	5	100	300		125	260	5	2	350						759A	3			
ZTX 107B	Fe		N	S	60	50	5	100	300		240	500	5	2	350						759A	3			
ZTX 108	Fe		N	S	45	30	5	100	300		125	500	5	2	350						759A	1			
ZTX 108A	Fe		N	S	45	30	5	100	300		125	260	5	2	350						759A	3			
ZTX 108B	Fe		N	S	45	30	5	100	300		240	500	5	2	350						759A	3			
ZTX 108C	Fe		N	S	45	30	5	100	300		450	900	5	2	350						759A	3			
ZTX 109	Fe		N	S	45	30	5	100	300		240	900	5	2	350						759A	3			
ZTX 109B	Fe		N	S	45	30	5	100	300		240	500	5	2	350						759A	3			
ZTX 109C	Fe		N	S	45	30	5	100	300		450	900	5	2	350						759A	3			
ZTX 114	Fe		N	S	30	26	6	300	300		>200		5	2	350						759A	3			
ZTX 300	Fe		N	S	25	25	5	500	300		50	300	6	10	150						759A	3			
ZTX 301	Fe		N	S	35	35	5	500	300		50	300	6	10	150						759A	3			
ZTX 302	Fe		N	S	35	35	5	500	300		100	300	6	10	150						759A	3			
ZTX 303	Fe		N	S	45	45	5	500	300		50	300	6	10	150						759A	3			
ZTX 304	Fe		N	S	70	70	5	500	300		50	300	6	10	150						759A	3			
ZTX 310	Fe		N	S	25	20	3	300	300		>20			10	200						759B	5			
ZTX 311	Fe		N	S	20	15	5	300	300		50	200		10	200						759B	5			
ZTX 312	Fe		N	S	30	12	5	300	300		>40			10	400						759B	5			
ZTX 313	Fe		N	S	40	15	5	300	300		40	120		10	600						759B	5			
ZTX 314	Fe		N	S	40	15	5	300	300		40	120		10	500						759B	5			
ZTX 320	Fe		N	S	30	15	3	250	300		>20		1	3	600						759B	3			
ZTX 321	Fe		N	S	30	15	3	250	300		>20		1	3	600						759A	3			
ZTX 325	Fe		N	S	30	15	1,5	200	200		25	150			1000						759A	3			
ZTX 326	Fe		N	S	25	12	2,5	200	200		25	150			1000						759A	3			
ZTX 327	Fe		N	S	55	30	3,5	500	500					800							759A	3			
ZTX 330	Fe		N	S	30	30	5	500	300		100	400	6	0,1	30						759A	3, 3			
ZTX 331	Fe		N	S	45	45	5	500	300		40	120	6	0,01	30						759A	3, 5			
ZTX 341	Fe		N	S	100	100	5	100	300		>30		6	2							759B	5			
ZTX 342	Fe		N	S	120	120	5	100	300		>30		6	2							759B	5			
ZTX 360	Fe		N	S	60	40	5	500	500		25	150	5	500	250						759A	5			
ZTX 382	Fe		N	S	50	45	6	100	450		100</														

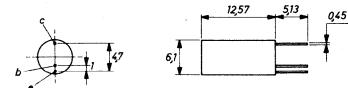


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _d)	f MHz	ton (tr)			
2N 21	We		P	G	100				120	(85)												5	
2N 22	We		P	G	100	100			145	(55)												5	
2N 23	We		P	G	40	50			105	(55)												5	
2N 24	We		P	G	30	30			145	(50)												1	
2N 25	We		P	G	50	50			200	(60)												3	
2N 27	We		N		35				50	(85)												1	
2N 28	We		N		30				50	(85)												1	
2N 29	We		N		35				50	(85)												1	
2N 30	Ge		P	G	35				100	(40)												1	
2N 31	Ge		P	G	35				100	(40)												1	
2N 32	Rc		P	G	40				50													5	
2N 33	Rc		P	G	8.5				30													3	
2N 34	Rc		P	G	25				50													1	
2N 35	Rc		P	G	25				50													1	
2N 36	Tr		P	G	20				50	(50)												1	
2N 37	Tr		P	G					50	(20)			(>30)									1	
2N 38	Tr		P	G					50				(>15)									1	
2N 38A			P	G	20				50	(20)												1	
2N 41			P	G	25				50													1	
2N 43	Ge		P	G	45	30			240	(85)			>34		20							1	
2N 43A	Ge		P	G	45	30			240	(85)	34		65		20							1	
2N 44	Ge		P	G	45	30			240	(85)	18		43		20							1	
2N 45	Tr		P	G	45	30			240	(85)			>18		20							1	
2N 46	Rc		P	G	25				50													1	
2N 47			P	G	35				50													1	
2N 48			P	G	25				50													1	
2N 49			P	G	25				50													1	
2N 50					15				50	(50)												5	
2N 51					50				100	(50)												5	
2N 52					50				120	(50)												5	
2N 53					50				100	(50)												5	
2N 54	Wh		P	G	45				200	(60)												1	
2N 55	Wh		P	G	45				200	(60)												1	
2N 56	Wh		P	G	45				200	(60)												1	
2N 57			P	G	60				20W													2	
2N 59	Wh		P	G	25	25			180	(85)												1	
2N 59A	Wh		P	G	40	40			180	(85)												1	
2N 59B	Wh		P	G	50	50			180	(85)												1	
2N 59C	Wh		P	G	60	60			180	(85)												1	
2N 60	Wh		P	G	25	25			180	(85)												1	
2N 60A	Wh		P	G	40	40			180	(85)												1	
2N 60B	Wh		P	G	50	50			180	(85)												1	
2N 60C	Wh		P	G	60	60			180	(85)												1	
2N 61	Wh		P	G	25	25			180	(85)												1	
2N 61A	Wh		P	G	40	40			180	(85)												1	
2N 61B	Wh		P	G	50	50			180	(85)												1	
2N 61C	Wh		P	G	60	60			180	(85)												1	
2N 62			P	G	35				50													1	
2N 63	Tr		P	G	44	44			102	(85)												1	
2N 64	Tr		P	G	30	30			102	(85)												1	
2N 65	Tr		P	G	24	24				(85)												1	
2N 66	We		P	G	60	40			27W	(80)												2	
2N 67	We		P	G	50				100	(85)												5	
2N 68	Sy		P	G	25				2W	(70)												2	
2N 71	Wh		P	G	75	50			1W	(60)												2	
2N 72	Rc		P	G	40				50													5	
2N 73	Wh		P			50			200													5	15
2N 74	Wh		P			50			200													5	
2N 75	Wh		P			20			200													5	
2N 76	Ge		P	G	20				5	(60)												5	
2N 77	Rc		P	G	25				35													1	
2N 78	Ge		N	G	15	15			65	(85)	45		135		1							3	
2N 79	Rc		P	G	35				35													1	
2N 80			P	G	25				50													1	
2N 81			P	G		20			50	(100)			(>20)									1	
2N 82			P	G	20				35	(71)	20		60		1							1	
2N 94	Sy		N	G	20	20			150	(85)	20		80		1							3	
2N 94A	Sy		N	G	20	20			150	(85)	20		80		1							3	
2N 95	Sy		N		25				2W	(70)												2	
2N 96	Rc		P	G	30				50													1	
2N 97			N	G	30				50	(75)			(>5)									1	
2N 98			N	G	40				50	(75)			(>19)									1	
2N 98A			N	G	40				50	(85)			(>24)									1	
2N 99			N	G	40				50	(75)			(>18)									1	
2N 100			N		25				25	(50)			(>99)									1	
2N 101	Sy		P	G	25				1W	(70)												2	
2N 102	Sy		N	G	25				1W	(70)												2	
2N 103			N	G	35				50	(75)												1	
2N 104	Rc		P	G	30			50	150	(70)			(>44)									1	
2N 105	Rc		P	G	35				35	(50)			>55		6		400				40A	1	
2N 106			P	G	6				102	(85)												1	
2N 107	Ge		P	G	12	6			50	(60)												1	
2N 108			P	G					50													1	
2N 109	Rc		P	G	35	25	12	150		(71)	65		115	1	50							1	
2N 110	We		P	G	50				200	(85)												40A	5

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type			
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)							
2N 111	Ti		P	G	30	15			150	(85)		>15		1										3		
2N 111A			P	G	30	15			150	(85)		>15		1										3		
2N 112			P	G	30	15			150	(85)		>15		1										3		
2N 112A			P	G	30	15			150	(85)		>15		1										3		
2N 113			P	G	10				96	(85)															3	
2N 114			P	G	10				96	(85)															3	
2N 115			P	G	32	32			50W	(75)		<110		30											6	
2N 117			N	S	30				150	(150)															5	
2N 118			N	S	30				150	(150)															5	
2N 119			N	S	30				150	(150)															5	
2N 120	Ti	Ge	N	S	45			150	(175)	76	333												3			
2N 122	N		G	20	15	9W	(150)	>3	100	2																
2N 123	N		G	10		50	(85)				5															
2N 124	N		G	10		50	(75)	12	24	24	5															
2N 125	Ti		N	G	10			50	(75)	24	48			5								5				
2N 126	Ti	Sp	N	G	10			50	(75)	48	100												5			
2N 127	N		G	10		50	(75)	100	200	5																
2N 128	P		G	10	4,5	30	(85)	>19																		
2N 129	P		G	10	4,5	30	(85)	>11,5																		
2N 130			P	G	44			85	(85)														1			
2N 130A			P	G	45	40			100	(85)		>14											1			
2N 131			P	G	30				85	(85)															1	
2N 131A			P	G	45	30			100	(85)		>27													1	
2N 132			P	G	24				85	(85)															1	
2N 132A			P	G	35	20			100	(85)															1	
2N 133			P	G	30				85	(85)															1	
2N 133A			P	G	35	20			100	(85)															1	
2N 135			P	G	20	12			100	(85)		>20													3	
2N 136			P	G	20	12			100	(85)		>40													3	
2N 137			P	G	10	6			100	(85)		>60													3	
2N 138			P	G	24				50	(50)													1			
2N 138A			P	G	45	30			150	(85)													>10	50	1	
2N 138B			P	G	45				100	(85)																1
2N 139			P	G	16				80	(70)													>55			1
2N 140	Rc	Rc	P	G	16		15	80	(70)		>75			10								3				
2N 141		Sy	P	G	60	30			1W	(25)													2			
2N 142			N	G	60	30			1W	(25)													2			
2N 143			P	G	60	30			1W	(25)													2			
2N 144			N	G	60	30			1W	(25)													2			
2N 145			N	G		20			65	(75)													3			
2N 146	Ti		N	G		20			65	(75)													3			
2N 147	N		G		20	65			(75)	3																
2N 148	N		G		16	65			(75)	3																
2N 148A	N		G		32	65			(75)	3																
2N 149	N		G		16	65			(75)	3																
2N 149A	Ti	Ti	N	G		32			65	(75)													3			
2N 150	N		G		16	65			(75)	3																
2N 150A	N		G		32	65			(75)	3																
2N 155	P		G	30	15	1W			(85)	>24													2	500	3A	2
2N 156	P		G	30		1W			(85)	>24														500	2	
2N 157			P	G	60				1W	(85)		>20		500									2			
2N 157A			P	G	90				1W	(85)		>20		500									2			
2N 158			P	G	60				1W	(85)		>21		500									2			
2N 158A			P	G	80	60			1W	(95)		>21		500									2			
2N 160			N	S	40				150			9		19										1		
2N 160A			N	S	40				150			9		19										1		
2N 161			N	S	40				150			19		39										1		
2N 161A			N	S	40				150			19		39										1		
2N 162			N	S	40				150			19		199										1		
2N 162A			N	S	40				150			19		199										1		
2N 163	Ge		N	S	40				150			39	199										1			
2N 163A			N	S	40				150			30	199										1			
2N 166			N	G		6			50															3		
2N 167			N	G	30	30			75	(85)														3		
2N 167A			N	G	30				75	(85)		17	90										8	3		



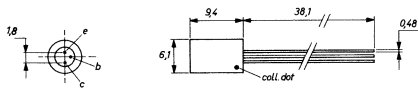
40A



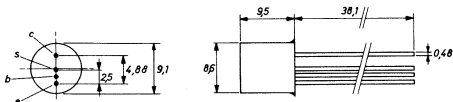
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type	
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (I _C)	f MHz	ton (tr)			
2N 168	Ge		N	G	15	15			55	(75)		>20										3	
2N 168A	Ge		N	G	15	15			65	(85)		>20										3	
2N 169	Ge		N	G	15	15			65	(85)		>30										3	
2N 169A	Ge		N	G	25	25			65	(85)		>30										3	
2N 170	Ge		N	G		6			25	(50)												3	
2N 172	Ti		N	G		16			65	(75)												3	
2N 173	Mo		P	G	60		40	15A	170	(110)	35	70	2	5						(15μs)		2	
2N 174	Ph		P	G			60		150W	25m	25	50	2	5A								2	
2N 175	Rc		P	G	10			2	50	(71)												1	
2N 176	Mo		P	G	40	30		3A	90W	(100)		>25	2	500								2	
2N 178			P	G	30		20	3A	10W	(90)	15	45	2	500							3A	2	
2N 180			P	G	30				150	(75)												1	
2N 181			P	G	30				250	(75)												1	
2N 182			N	G	25				100	(75)												5	
2N 183			N	G	25				100	(75)												5	
2N 184			N	G	25				100	(75)												5	
2N 185	P		P	G	20				150	(50)		>35										1	
2N 186	Ge		P	G	25	25			100	(85)												1	
2N 186A	Ge		P	G	25	25			200	(85)												1	
2N 187	Ge		P	G	25	25			200	(85)												1	
2N 187A	Ge		P	G	25	25			200	(85)												1	
2N 188	Ge		P	G	25	25			100	(85)												1	
2N 188A	Ge		P	G	25	25			200	(85)												1	
2N 189	Ge		P	G	25	25			75	(85)												1	
2N 190	Ge		P	G	25	25			75	(85)												1	
2N 191	Ge		P	G	25	25			75	(85)												1	
2N 192	Ge		P	G	25	25			75	(85)												1	
2N 193	Sy		N	G	18	18			150	(85)												3	
2N 194	Sy		N	G	15	15			50	(75)												3	
2N 194A	Sy		N	G	20	20			50	(75)												3	
2N 206	Rc		P	G	30			50	75	(85)		>33									1A	1	
2N 207			P	G	12	12		50	65			>35										1	
2N 207A			P	G	12	12		50	65			>35										1	
2N 207B			P	G	12	12		50	65			>35										1	
2N 211	Sy		N	G	10	10			50	(75)												3	
2N 212	Sy		N	G	18	18			150	(85)		>10		1								3	
2N 213	Sy		N	G	40	25			50	(75)		>70										1	
2N 215	P		P	G	30			50	150	(70)		>44		6	1						1A	1	
2N 216	Sy		P	G	15				50	(75)		>3.9										3	
2N 217	Rc		P	G	35	25	12	150	150	(71)	65	115	1	50							1A	1	
2N 218	Rc		P	G	16			15	80	(70)		>48									1A	1	
2N 219	Rc		P	G	16			15	80	(70)		>75									1A	1	
2N 220	Rc		P	G	10		2		50	(71)											1A	1	
2N 223			P	G		18			100	(65)		>39										1	
2N 224			P	G	25				250	(75)	60		120		100							1	
2N 225			P	G	25				250	(75)	60		120		100							1	
2N 226			P	G	30				250	(75)	35		105		100							1	
2N 227			P	G	30				250	(75)	35		105		100							1	
2N 228	Sy		P	G	25				50	(75)	50		100		35							1	
2N 229	Sy		N	G	10				50	(75)												1	
2N 230			P	G	60	30			15W	(85)	60		106		500							2	
2N 231	Sp		P	G	4.5	4.5			9	(55)		>19										3	
2N 232			P	G	4.5	4.5			9	(55)		>9										3	
2N 233	Sy		N	G	10				50	(75)		>3										3	
2N 234			P	G		25				(90)												2	
2N 234A	So		P	G	25	25	15	420	25W	(90)		>25	2	420							3A	2	
2N 235			P	G						(90)												2	
2N 235A	So		P	G	50	40	15	750	25W	(90)	20	80	2	750							3A	2	
2N 235B	So		P	G	50	35			25W	(85)												2	
2N 236	So		P	G		35				(95)												2	
2N 236A	So		P	G	50	35	15	750	25W	(95)	20	80	2	750							3A	2	
2N 236B	So		P	G	50	35	15	750	25W	(95)	40	120	2	750							3A	2	
2N 237			P	G	45				150	(55)												1	
2N 238	Ti		P	G	20				50	(60)												1	
2N 240	Sp		P	G	6				25	(85)		>16				25						5	
2N 241	Ge		P	G	25	25			100	(85)												1	
2N 241A	Ge		P	G	25	25			200	(85)												1	
2N 242	Mo		P	G	45	45		5A	106W	(110)	30	120	12	500							3A	2	
2N 243	Ti		N	S	60				750	(150)												1	
2N 244	Ti		N	S	60				750	(150)												1	
2N 247	Rc		P	G	40			10	80	(71)		>60									7A	1	
2N 248	Ti		P	G	25					(75)												1	
2N 249	Ti		P	G		25			350	(60)		>30										1	
2N 250	So		P	G	30	20	15	500	12W	(80)		>30	2	500							3A	2	
2N 250A	So		P	G	40	35	20	3A	90W	(100)	25		100	1.5	3A	0.2					3A	2	
2N 251	So		P	G	60	40	15	500	12W	(80)		>30	2	500							3A	2	
2N 251A	So		P	G	60	55	20	3A	90W	(100)	25		100	1.5	3A	0.2					3A	2	
2N 252	Ti		P	G		16			30	(55)												3	
2N 253	Ti		N	G		12			65	(75)												3	
2N 254	Ti		N	G		20			65	(75)												3	
2N 255	So		P	G	15	15		500	1W	(85)	20			2	500						3A	2	
2N 255A	So		P	G	15	15	15	420	20W	(85)		>25		2	420							2	
2N 256	So		P	G	30	30		500	1W	(85)	20		100	2	500							2	
2N 256A	So		P	G	30	25	15	420	20W	(85)		>25		2	420							2	
2N 257	So		P	G	40	35	20	420	25W	(85)		>20		2	420							2	

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 258	Ti		P	S	30	30			250	(160)		>15												1	
2N 259			P	S	30	30			250	(160)		>32											1		
2N 280			P	S	10				200	(150)													1		
2N 260A			P	S	30				200	(150)													1		
2N 261			P	S	75				200	(150)													1		
2N 262			P	S	10				200	(150)													1		
2N 262A			P	S	30				200	(150)													1		
2N 263			N	S	45	30			150	(150)	45		150		10								1		
2N 264			N	S	45	30			125	(150)	20		55		10								1		
2N 265			Ge		P	G		25		75	(85)												1		
2N 266	Rc		P	G		18		75	(85)													1			
2N 267			P	G	40			80													3				
2N 268			P	G	80	60	40	500	25W	(85)		>28	2	500							2				
2N 268A			P	G	80	60	20	2A	10W	(90)	20		80	2	2A						2				
2N 269	Rc		P	G	25	24	12	100	120	(85)		>24									5				
2N 270	Rc		P	G	25		12	150	150	(50)	50		140	1	150	1	240					7A	1		
2N 271			P	G	30	10		150	150	(85)												3			
2N 272			P	G	30	24		150	150	(85)		>60										1			
2N 273			P	G	45	25		150	150	(85)		>30		50								1			
2N 274	Rc		P	G	40	40	0.5	19	120	(100)	20		175		1.5		620					44A	3		
2N 277	Ph	Mo	P	G			20		150W	25m	35		70	2	5A								36A	2	
2N 278			P	G	50		30	15A	170W	(110)	35		70		5A							36A	6		
2N 279			P	G		20			125	(75)		>20											1		
2N 280			P	G		20			125	(75)		>30											1		
2N 281			P	G	16	16			167	(75)	45		120									1			
2N 283	So		P	G	20	20			125	(75)		>30											5		
2N 284			P	G	32	32			125	(75)		>15										5			
2N 284A			P	G	60	60			125	(75)		>15										5			
2N 285			P	G		35	15	420	25W	(95)		>38	2	420								2			
2N 285A			P	G	35	35			25W	(95)		>38	2	420								2			
2N 285B	So		P	G	35	35	15	420	25W	(95)		>38	2	420								3A	2		
2N 290	Ti		P	G	70				55W	(95)													2		
2N 291			P	G	25				180	(50)		>30										1			
2N 292			N	G	15	15			65	(85)	6		44									3			
2N 293			N	G	15	15			65	(85)	6		55									3			
2N 296	Ge		P	G	60	60	15	1A	20W	(85)		>19	2	1A								3A	1		
2N 297			P	G	60	50			35W	(95)	40		100	2	500							2			
2N 297A			P	G	60	40	40	5A	85W	(110)	40		100		500							3A	6		
2N 299			P	G	5	4.5			20	(85)		>11											3		
2N 300			P	G	5	4.5			20	(85)												3			
2N 301	Rc		P	G	40		10	3A	11W	(85)		>70											2		
2N 301A			P	G	60		10	3A	11W	(85)		>70										2			
2N 302			P	G	30	10			150	(85)		>45										3			
2N 303			P	G	30	10			150	(85)		>75										3			
2N 306	Sy		N	S	20	15			50	(75)		>25										1			
2N 307	Mo		P	G	35	35	10	5A	106W	(110)		>20	1	200								3A	6		
2N 307A			P	G	35	35	10	5A	106W	(110)		>30		200								3A	6		
2N 308			P	G	20				30	(55)												3			
2N 309			Ti		P	G	20			30	(55)											3			
2N 310			Ti		P	G	30			30	(55)											3			

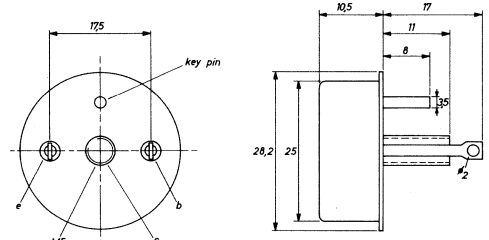
1A



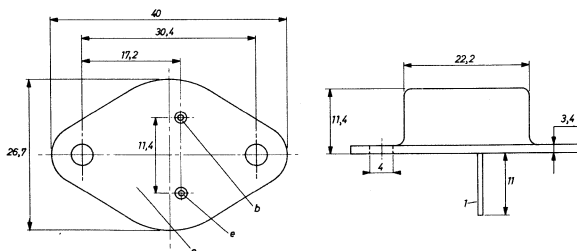
7A



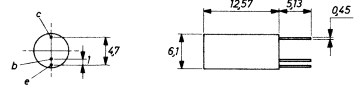
36A



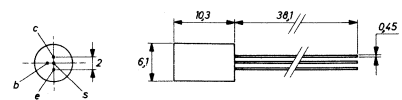
3A



40A

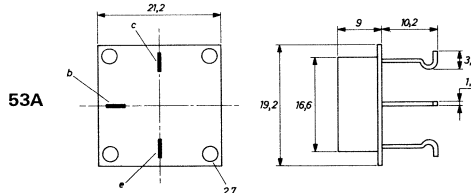
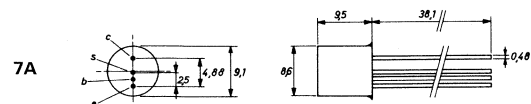
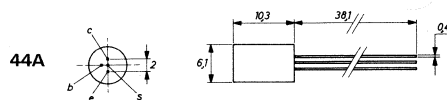
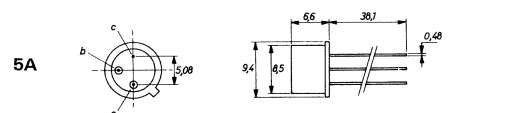
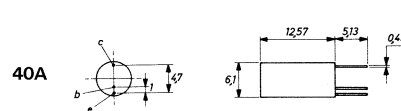
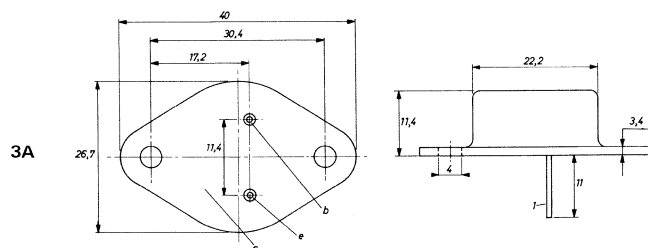
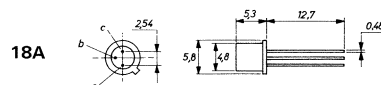
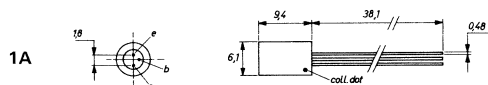


44A



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 311	Sy		P	G	15	15			75	(85)	25	75		10								5
2N 312			N	G	15	15			75	(85)	25	75		10								5
2N 315			P	G	20	15			100	(100)	15	30		100								5
2N 315A			P	G	30	20			150	(100)	20	50		100								5
2N 315B			P	G	30	20			150	(100)	20	50		100								5
2N 316	Mo		P	G	20	10			100	(85)	20	50		200								5
2N 316A			P	G	30	15			150	(100)	20	50		200								5
2N 317			P	G	20	6			100	(85)	20	60		400								5
2N 317A			P	G	25	10			150	(100)	20	60		400								5
2N 319			P	G	25	20	5	500	225	(100)	25	42	1	20						5A		1
2N 320	Mo		P	G	25	20	5	500	225	(100)	34	65	1	20						5A		1
2N 321	Mo		P	G	25	20	5	500	225	(100)	53	121	1	20						5A		1
2N 322	Mo		P	G	18	18	5	500	225	(100)	34	65	1	20						5A		1
2N 323	Mo		P	G	18	18	5	500	225	(100)	53	121	1	20						5A		1
2N 324	Mo		P	G	18	18	5	500	225	(100)	72	198	1	20						5A		1
2N 325	Sy		P	G	35	35			12W	(85)	30	60		500								2
2N 326	Sy		N	S	35	35			7W	(85)	30	60		500								2
2N 327			P	S	50				350	(160)		>9)										1
2N 327A	So		P	S	50	40	20		385	(160)	9	22	0.5	3						18A		1
2N 327B	So		P	S	50	40	20		385	(200)	9	22	0.5	3						18A		1
2N 328	So		P	S	35				350	(160)		>18)										1
2N 328A			P	S	50	35	20		385	(160)	18	44	0.5	3						5A		1
2N 328B	So		P	S	50	35	20		385	(200)	18	44	0.5	3						5A		1
2N 329	So		P	S	30				350	(160)		>36)										1
2N 329A			P	S	50	30	20		385	(160)	36	88	0.5	3						5A		1
2N 329B	So		P	S	50	30	20		385	(200)	36	88	0.5	3						5A		1
2N 330	So		P	S	45				350	(160)		>9)										1
2N 330A			P	S	50	30	20		385	(160)	(9	42)	5	3						5A		1
2N 331	Mo		P	G	30		12		200	(100)	(30	70)	6	1		375				5A		1
2N 332	Ti		N	S	45				150	(175)	9	20								5A		3
2N 332A	Ti		N	S	45	45			500	(175)												1
2N 333	Ti		N	S	45				150	(175)	18	40										3
2N 333A	Ti		N	S	45	45			500	(175)												1
2N 334	Ti		N	S	45				150	(175)	18	86										3
2N 334A	Ti		N	S	45	45			500	(175)												1
2N 334B	Ti		N	S	60	60			500	(175)	15	85		1								1
2N 335			N	S	45				150	(175)	36	86										3
2N 335A	Ti		N	S	45	45			500	(175)												1
2N 335B	Ge		N	S	60	60			500	(175)	28	90		1								3
2N 336	Ti		N	S	45				150	(175)	76	333										1
2N 336A	Ti		N	S	45	45			500	(175)												5
2N 337	Ti		N	S	45				125	(150)	20	55		10								1
2N 337A	Ti		N	S	45				500	(175)	20	55		10								5
2N 338	Ti		N	S	45				125	(150)	45	150		10								5
2N 338A	Ge		N	S	45				500	(175)	45	150		10								1
2N 339	Ti		N	S	55	55			1W	(150)												1
2N 339A	Tr		N	S	60	60			3W	(200)	20	80			10							3
2N 340	Tr		N	S	85	85			1W	(150)												1
2N 340A	Tr		N	S	85	85			3W	(200)	20	80			10							3
2N 341	Tr		N	S	125	85			1W	(150)												1
2N 341A	Tr		N	S	125	125			3W	(200)	20	80			10							3
2N 342	Tr		N	S	60	60			1W	(150)												1
2N 342A	Tr		N	S	85	85			1W	(150)												1
2N 342B	Tr		N	S	85	85			750	(175)		>9)										1
2N 343	Tr		N	S	60	60			1W	(150)												1
2N 343A	Tr		N	S	60	60			1W	(150)												1
2N 343B	Tr		N	S	85	85			750	(175)		>28)										1
2N 344	Sp		P	G	5	5			20	(55)		>11)										3
2N 345	Sp		P	G	5	5			20	(55)		>25)										3
2N 346	Sp		P	G	5	5			20	(55)		>10)										3
2N 350	So		P	G	50	40	10	700	10W	(100)	20	60	2	700						3A		2
2N 350A	So		P	G	50	40	10	700	90W	(100)	20	60	2	700						3A		2
2N 351	So		P	G	50	40	10	700	10W	(100)	25	90	2	700						3A		2
2N 351A	So		P	G	50	40	10	700	90W	(100)	25	90	2	700						3A		2
2N 352			P	G	50	40			25W	(100)	30	140		1A								2
2N 353	Rc Sy		P	G		40			30W	(100)	40	150		1A								2
2N 354			P	G	25	25			150	(140)		>9)										3
2N 355			P	S	10	10			150	(140)		>9)										5
2N 356			N	G	20	18	20	500	100	(85)	20	50		100								5
2N 256A			N	G	30	20			150	(100)	20	50		100								5
2N 357	Rc		N	G	20	15	20	500	100	(85)	20	50		200								5
2N 357A	Sy		N	G	30	20			150	(100)	25	75		200								5
2N 358	Rc		N	G	20	12	20	500	100	(85)	20	50		300								5
2N 358A	Sy		N	G	30	15			150	(100)	25	75		300								5
2N 359			P	G	25	18			170	(85)	100	300		50								1
2N 360	Ti		P	G	32	30			170	(85)	50	150		50								1
2N 361			P	G	32	30			170	(85)	25	75		50								1
2N 362			P	G	25	18			170	(85)		>50)										1
2N 363			P	G	32	28			170	(85)		>25)										1
2N 364			N	G	30				150	(100)		>9)										5
2N 365	Ti		N	G	30				150	(100)		>19)										5
2N 366	Ti		N	G	30				150	(100)		>49)										5
2N 367	Ti		P	G	30				100	(75)		>9)										5
2N 368	Ti		P	G	30				100	(75)		>19)										5
2N 369	Ti		P	G	30				100	(75)		>49)										5

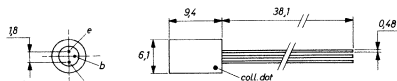
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 370	Rc		P	G	24		0,5	10	80	(71)		>60	12	1	30						7A	1			
2N 371	Rc		P	G	24		0,5	10	80	(71)		>80									7A	1			
2N 372	Rc		P	G	24		0,5	10	80	(71)		>60	12	1							7A	3			
2N 373	Rc		P	G	25		0,5	10	80	(71)		>60									7A				
2N 374	Rc		P	G	25		0,5	10	80	(71)		>60									7A				
2N 375	Mo		P	G	80	60	40	3A	106W	(110)	35	90	4	1A							3A	2, 6			
2N 376	Rc		P	G	50	40		3A	10W	(100)	35	120	2	700							3A	2			
2N 376A	Mo		P	G	50	40		3A	90W	(100)	35	120	2	700							3A	2			
2N 377	Sy		N	G	25	20			150	(100)	20	60		30							5A	5			
2N 377A	Sy		N	G	40	40			150	(100)	20	60		30							5A	5			
2N 378	Mo		P	G		20		5A	106W	(110)	40	80	2	2A							3A	2, 6			
2N 379	Mo		P	G		40		5A	106W	(110)	20	70	2	2A							3A	2, 6			
2N 380	Mo		P	G		30		5A	106W	(110)	30	70	2	2A							3A	2, 6			
2N 381	Mo		P	G	50	25	20	400	500	(100)	35	65	1	20							5A	1, 5			
2N 382	Mo		P	G	50	25	20	400	500	(100)	60	95	1	20							5A	1, 5			
2N 383	Mo		P	G	50	25	20	400	500	(100)	75	120	1	20							5A	1, 5			
2N 384	Rc		P	G	40	40	0,5	10	120	(100)	20	175	12	1,5			620				44A	3			
2N 385	Sy		N	G	25	25			150	(100)	30	110		30							5A	5			
2N 385A	Sy		N	G	40	40			150	(100)	30	110		30							5A	5			
2N 386			P	G	60	60			500	(100)		>20		2,5A							5A	2			
2N 387			P	G	80	80			500	(100)		>20		2,5A							5A	2			
2N 388	Rc		N	G	25	20	15	200	150	(100)	60	180	0,5	30							5A	5			
2N 388A	Rc		N	G	40	40	15	200	150	(100)	60	200	0,5	30							5A	5			
2N 389	Ti		N	S			10		85W	25c	12	60	15	1A							53A	2			
2N 389A	Ti		N	S		60			85W	(200)	12	60		1A							5A	2			
2N 392	So		P	G	60	40	40		48W	(95)	60	150		3A							3A	2			
2N 393	Sp		P	G	6	6			25	(100)		>20		50		25					5A	5			
2N 394	Ge		P	G	10	10			150	(85)	20	150		10							5A	5			
2N 394A	Ge		P	G	10	30			150	(85)	30	120		10							5A	5			
2N 395	Rc		P	G	30	15	20	200	100		20	150		10							5A	5			
2N 396	Rc		P	G	30	20			200	(100)	30	150	1	10							5A	5			
2N 396A	Rc		P	G	30	20	20	200	200	(100)	30	150	1	10							5A	5			
2N 397	Rc		P	G	30	15	20	200	200	(100)	40	150	1	10							5A	5			
2N 398	Mo		P	G	105	105	50	100	50	(85)		65	0,35	5							5A	1			
2N 398A	Mo		P	G	105	105	50	200	150	(100)		65	0,35	5							5A	1			
2N 398B	Rc		P	G	105	105	75	200	250	(100)		>20	0,25	5							5A	1			
2N 399	So		P	G	35	35	15	420	25W	(90)	36	40	2	420							3A	2			
2N 400	So		P	G	35	20	15	1,3	35W	(95)	40	300		500							3A	2			
2N 401	So		P	G	35	35	15	420	25W	(90)	31	36	2	420							3A	2			
2N 402	Wh		P	G	25	20			180	(85)											3A	1			
2N 403	Wh		P	G	25	20			180	(85)											5A	1			
2N 404	Ti		P	G	25	24	12	100	150	(100)	30	100	0,15	12							5A	3, 5			
2N 404A	Rc		P	G	40	35	25		150	(100)		>30	0,15	12							5A	5			
2N 405	Rc		P	G	20			35	150	(71)		>35	6	1							40A	1			
2N 406	Rc		P	G	20			35	150	(71)		>35	6	1							1A	1			



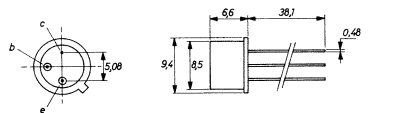
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 407	Rc		P	G	20			70	150	(71)		65	1	50						40A	1	
2N 408	Rc		P	G	20			70	150	(71)		65	1	50						1A	1	
2N 409	Rc		P	G	13			15	80	(71)		48	9	1						40A	1	
2N 410	Rc		P	G	13			15	80	(71)		48	9	1						1A	1	
2N 411	Rc		P	G	13			15	80	(71)		75	9	0.6						40A	3	
2N 412	Rc		P	G	13			15	80	(71)		75	9	0.6						1A	3	
2N 413	Ge		P	G	30	18			150	(85)											3	
2N 413A	Ge		P	G	30	15			150	(85)											3	
2N 414	Rc		P	G	30	15		200	150	(85)	(80)		6	1						5A	5	
2N 414A	Sy		P	G	30	15			150	(85)											3	
2N 414B			P	G	30	24			200	(100)		(≥40)									3	
2N 414C			P	G	30	24			200	(100)		(≥40)									3	
2N 415			P	G	30	10			150	(85)											3	
2N 415A	Sy		P	G	30	12			150	(85)											3	
2N 416			P	G	30	10			150	(85)											3	
2N 417			P	G	100	75	15	4A	25W	(100)		>40	2	4A							3	
2N 418	So		P	G	25	20	15	4A	35W	(95)	50	350	1.5	500							2	
2N 419	So		P	G	65	40	15	4A	25W	(100)		>40	2	4A							2	
2N 420	So		P	G	90	65	15	4A	25W	(100)		>40	2	4A							2	
2N 420A	So		P	G																	2	
2N 422			P	G	35	20			150	(85)											1	
2N 422A			P	G	35	20			175	(100)		(≥30)									1	
2N 424	Ti		N	S			10		85W	25c	12	60	15	1A							2	
2N 424A	Fa		N	S					85W	(200)	12	60		1A							2	
2N 425	Ti		P	G	30	20			175	(85)	20	40									5	
2N 426	Ti		P	G	30	10			175	(85)	30	60									5	
2N 427	Ti		P	G	30	15			175	(85)	40	80									5	
2N 428	Ti		P	G	30	12			175	(85)		>60									5	
2N 428A			P	G	30	18			150	(100)		>80									5	
2N 438	Sy		N	G	30	25			100	(85)		>20		50							5	
2N 438A	Sy		N	G	30	25			150	(85)		>20		50							5	
2N 439			N	G	30	20			100	(85)		>30		50							5	
2N 439A	Sy		N	G	30	20			150	(85)		>30		50							5	
2N 440			N	G	30	15			100	(85)		>40		50							5	
2N 440A	Sy		N	G	30	15			150	(85)		>40		50							5	
2N 441	Ph		P	G			20		150W	25m	20	40	2	5A							2	
2N 442	Mo		P	G	50	45	30		150W	(95)	20	40	2	5A							2	
2N 443	Mo		P	G	60	50	40		150W	(95)	20	40	2	5A							2	
2N 444			P	G	15	15			100	(85)											1	
2N 444A			N	G	40	25			150	(100)	20	40		20							1	
2N 445			N	G	15	12			100	(85)											1	
2N 445A			N	G	30	18			150	(100)	40	160		20							1	
2N 446			N	G	15	10			100	(85)											5	
2N 446A			N	G	30	15			150	(100)	60	250		20							5	
2N 447			N	G	15	6			100	(85)											5	
2N 447A			N	G	30	12			150	(100)	80	300		20							5	
2N 447B			N	G	25	12			150	(100)	80	300		20							5	
2N 448	Ge		N	G	15	15			65	(85)	8	51		1							3	
2N 449	Ge		N	G	15	15			65	(85)		>34		1							3	
2N 450	Ge		P	G	20	12			150	(85)		>30		10							5	
2N 456	So		P	G	40	40	20	5A	50W	(95)		>10	1.5	5A							2	
2N 456A	Ti		P	G	40	30	30	7A	150W	25c	30	90	1.5	5A							2	
2N 456B	So		P	G	40	30	30	5A	150W	(100)	30	90	1.5	5A							2	
2N 457	So		P	G	60	60	20	5A	50W	(95)	30	>10	1.5	5A							2	
2N 457A	Ti		P	G	60	40	30	7A	150W	25c	30	90	1.5	5A							2	
2N 457B	So		P	G	60	40	30	5A	150W	(100)	30	90	1.5	5A							2	
2N 458	So		P	G	80	80	20	5A	50W	(95)		>10	1.5	5A							2	
2N 458A	Ti		P	G	80	45	30	7A	150W	25c	30	90	1.5	5A							2	
2N 458B	So		P	G	80	45	30	5A	150W	(100)	30	90	1.5	5A							2	
2N 459	Mo		P	G		60	10	5A	106W	(110)	20	70	2	2A							2	
2N 459A	Mo		P	G	105	60	25	5A	106W	(110)	40	70	2	2A							2	
2N 460	Mo		P	G	45	35	10	400	500	(100)	(17	36)	6	1							5A	
2N 461	Mo		P	G	45	35	10	400	500	(100)	(31	200)	6	1							5A	
2N 462			P	G	40				150	(75)		>20		200							5	
2N 463	We		P	G	60	60			37W	(100)	20	60		2A							2	
2N 464	Mo		P	G	45	40	12	500	200	(100)	(14	26)	6	1							5A	
2N 465	Mo		P	G	45	30	12	500	200	(100)	(27	45)	6	1							5A	
2N 466	Mo		P	G	35	20	12	500	200	(100)	(56	90)	6	1							5A	
2N 467	Mo		P	G	35	15	12	500	200	(100)	(112	180)	6	1							5A	
2N 470	Tr		N	S	15	15			200	(200)		(≥10)									3	
2N 471	Tr		N	S	30	30			200	(200)		(≥10)									1	
2N 471A	Tr		N	S	30	30			200	(200)		(≥10)									1	
2N 472	Tr		N	S	45	45			200	(200)		(≥10)									3	
2N 472A	Tr		N	S	45	45			200	(200)		(≥10)									1	
2N 473	Tr		N	S	15	15			200	(200)		(≥20)									1	
2N 474	Tr		N	S	30	30			200	(200)		(≥20)									1	
2N 474A	Tr		N	S	30	30			200	(200)		>10									1	
2N 475	Tr		N	S	45	45			200	(200)		(≥20)									1	
2N 475A	Tr		N	S	45	45			200	(200)		>10									1	
2N 476	Tr		N	S	15	15			200	(200)		(≥30)									1	
2N 477	Tr		N	S	30	30			200	(200)		(≥30)									1	
2N 478	Tr		N	S	15	15			200	(200)		(≥40)									3	
2N 479	Tr		N	S	30	30			200	(200)		(≥40)									3	
2N 479A	Tr		N	S	30	30			200	(200)		>10									1	
2N 480	Tr		N	S	45	45			200	(200)		(≥40)									3	

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 480A	Tr		N	S	45	45			200	(200)		>10				20							1		
2N 481	Sy		P	G	12	12			150	(85)													3		
2N 482		P	G	12	12			150	(85)													3			
2N 483		P	G	12	12			150	(85)													3			
2N 484		P	G	12	12			150	(85)													3			
2N 485			P	G	12	12			150	(85)													3		
2N 486			P	G	12	12			150	(85)													3		
2N 487			P	G	18	18			100	(85)						10							1		
2N 495			P	S	25	25			150	(140)		>20 (>15) >15											3		
2N 496			P	S	10	10			150	(140)						15	7.2						5		
2N 497	Ti		N	S	60	60	8		4W	25c	12	36	10	200							5A	2.5			
2N 497A	Ti		N	S	60	60			5W	(200)	12	36		200								1			
2N 498	Ti		N	S	100	100	8		4W	25c	12	36	10	200							5A	2.6			
2N 498A	Mo		N	S	100	100			5W	(200)	12	36		200								3			
2N 499		P	G	30		0.5	50	60	(100)	(20	80)	9	1	120							1A	1			
2N 499A	Mo		P	G	30		0.5	50	60	(100)	(20	80)	9	1	120						1A	3			
2N 500			P	G	20	15			50	(85)												5			
2N 501	Sp		P	G	15	12			60	(100)		>20		10	90							5			
2N 501A	Sp		P	G	15	12			60	(100)		>30		10	90							5			
2N 502	Mo		P	G	20		0.5	50	60	(100)		>9		10	2	600					5A	3			
2N 502A	Mo		P	G	30		0.5	50	75	(100)		>15		10	2	600					5A	3			
2N 502B	Mo		P	G	30		0.5	50	75	(100)	(20	80)	10	2	600						5A	3			
2N 503	Sp		P	G	20	20			25	(85)		>9				168						5			
2N 504	Sp		P	G	35	25			30	(85)	20		200	10								5			
2N 506	Sy		P	G	40				50	(85)	25		50	50								1			
2N 507	Sy		N	G	40				50	(85)	25	50		50								1			
2N 508	Mo		P	G	18	18	5	500	225	(100)	99	198	1	20							5A	1			
2N 508A	Mo		P	G	30	30	10	200	200	(100)	100	200	1	20								1			
2N 509			P	G	30				225	(100)												3			
2N 511	Ti		P	G	40	30	30	25A	150W	(100)	20	60	2	10A	0.26							2			
2N 511A	Ti		P	G	60	40	30	25A	150W	(100)	20	60	2	10A	0.26							2			
2N 511B	Ti		P	G	80	45	30	25A	150W	(100)	20	60	2	10A	0.26							2			
2N 512	Ti		P	G	40	30	30	25A	150W	25m	20	60	2	20A	300k						3A	2.6			
2N 512A	Ti		P	G	60	40	30	25A	150W	25m	20	60	2	20A	300k						3A	2.6			
2N 512B	Ti		P	G	80	45	30	25A	150W	25m	20	60	2	20A	300k						3A	2.6			
2N 513	Ti		P	G	40	30	30	25A	150W	25c	20	60	2	20A	300k						41A	2.6			
2N 513A	Ti		P	G	60	40	30	25A	150W	25c	20	60	2	20A	300k						41A	2.6			
2N 513B	Ti		P	G	80	45	30	25A	150W	25c	20	60	2	20A	300k						41A	2.6			
2N 514	Ti		P	G	40	30	30	25A	150W	25c	20	60	2	25A	430k						41A	2.6			
2N 514A	Ti		P	G	60	40	30	25A	150W	25c	20	60	2	25A	430k						41A	2.6			

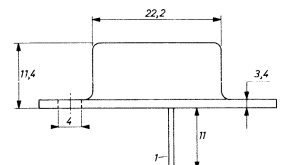
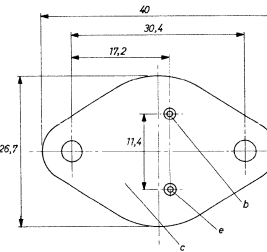
1A



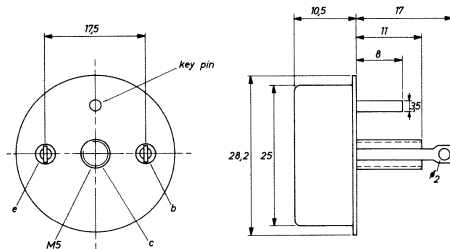
5A



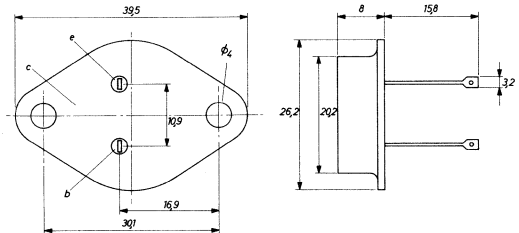
3A



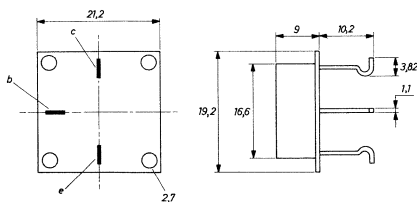
36A



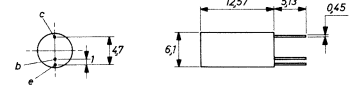
41A



53A



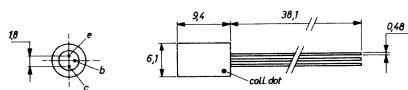
40A



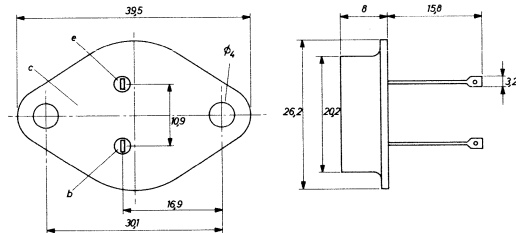
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 514B	Ti		P	G	80	45	30	25A	150W	25c	20		60	2	25A	430k					41A	2, 6		
2N 515	Sy		N	G	20	18			50	(75)		>4										3		
2N 516	Sy		N	G	20	18			50	(75)		>4										3		
2N 517	Sy		N	G	20	18			50	(75)		>4										3		
2N 518	Ge		P	G	45	12			150	(85)		>60			10							5		
2N 519	Sy		P	G	15	15			100	(85)		>15										5		
2N 519A			P	G	25	18			150	(100)	20		50			20						5		
2N 520	Sy		P	G	15	12			100	(85)		>20										5		
2N 520A			P	G	25	15			150	(100)	40		170			20						5		
2N 521			P	G	15	10			100	(85)		>35										5		
2N 521A			P	G	25	12			150	(100)	60		250			20						5		
2N 522			P	G	15	8			100	(85)		>60										5		
2N 522A			P	G	25	10			150	(100)	80		320			20						5		
2N 523			P	G	15	6			100	(85)		>80										5		
2N 523A			P	G	20	6			150	(100)	100		400			20						5		
2N 524	Mo		P	G	45	30	15	500	225	(100)	25		42	1		20		333				5A	1	
2N 524A			P	G	45	30			225	(100)	25		42			20						1		
2N 525	Mo		P	G	45	30	15	500	225	(100)	34		65	1		20		333				5A	1	
2N 525A			P	G	45	30			225	(100)	34		65			20						1		
2N 526	Mo		P	G	45	30	15	500	225	(100)	53		90	1		20		333				5A	1	
2N 526A			P	G	45	30			225	(100)	53		90			20						1		
2N 527	Mo		P	G	45	30	15	500	225	(100)	72		121	1		20		333				5A	1	
2N 527A			P	G	45	30			225	(100)	72		121			20						1		
2N 529	We		P	G	40	40			2.5W	(100)		>20			500							1		
2N 529			P	G	15	15			100	(85)												1		
2N 530			P	G	15	15			100	(85)												1		
2N 531			P	G	15	15			100	(85)												1		
2N 532			P	G	15	15			100	(85)												1		
2N 533			P	G	15	15			100	(85)												1		
2N 534			P	G	50	50			25	(65)		>35										1		
2N 535			P	G	20	20			50	(85)		>35										1		
2N 535A			P	G	20	20			50	(85)		>35										1		
2N 535B			P	G	20	20			50	(85)		>35										1		
2N 536			P	G	20	20			50	(85)		>100			30							5		
2N 537	We		P	G	30					(100)												3		
2N 538	So		P	G	80	60		5A	34W	(95)	20		50	2		2A						2		
2N 538A	So		P	G	80	60		5A	34W	(95)	20		50	2		2A						2		
2N 539	So		P	G	80	55		5A	34W	(95)	30		75	2		2A						2		
2N 539A	So		P	G	80	55		5A	34W	(95)	30		75	2		2A						2		
2N 540	So		P	G	80	55		5A	34W	(95)	45		113	2		2A						2		
2N 540A	So		P	G	80	55		5A	34W	(95)	45		113	2		2A						2		
2N 541	Ti		N	S	15	15			200	(200)		<80				100						3		
2N 541A			N	S	15	15			200	(200)		>20				8						3		
2N 542	Ti		N	S	30	30			200	(200)		>80				10						3		
2N 542A	Ge		N	S	30	30			200	(200)		>20				10						3		
2N 543	Tr		N	S	50	50			200	(200)		>80				10						3		
2N 543A	Tr		N	S	45	45			200	(200)		>20										3		
2N 544	Rc		P	G	34		10		80	(71)		>60										3		
2N 545	Tr		N	S	60	60			5W	(200)	15		80			500						3		
2N 546	Tr		N	S	30	30			5W	(200)	15		80			500						3		
2N 547	Tr		N	S	60	60			5W	(200)	20		80			500	4					3		
2N 548	Tr		N	S	30	30			5W	(200)	20		80			500	4					3		
2N 549	Tr		N	S	60	60			5W	(200)	20		80			200	4					3		
2N 550	Tr		N	S	30	30			5W	(200)	20		80			200	4					3		
2N 551	Tr		N	S	60	60			5W	(200)	20		80			50	3					3		
2N 552	Tr		N	S	30	30			5W	(200)	20		80			50	3					3		
2N 553	So		P	G	80	40			35W	(95)	40		80	2		500						6		
2N 554	Mo		P	G	15	16		3A	10W	(90)		50		2		500						3A	2	
2N 555	Mo		P	G	30	30		3A	10W	(90)		50		2		500						2		
2N 556	Sy		N	G	25	20			100	(85)	35		70			1						5		
2N 557	Sy		N	G	20	20			100	(85)		>20				1						5		
2N 558	Sy		N	G	15	15			100	(75)		>60				1						5		
2N 559	We		P	G	15	15			150	(100)		>20				100						5		
2N 560			N	S					500	(150)												5		
2N 561	Rc		P	G	80	50	60	10A	50W	(100)	20		50			4A						309A	6	
2N 563			P	G	30	25			150	(85)	10		30									5		
2N 564			P	G	30	25			120	(85)	10		30									5		
2N 565			P	G	30	25			150	(85)	30		50									5		
2N 566			P	G	30	25			120	(85)	30		50									5		
2N 567			P	G	30	25			150	(85)	50		70									5		
2N 568			P	G	30	25			120	(85)	50		70									5		
2N 569			P	G	30	25			150	(85)	70		100									5		
2N 570			P	G	30	20			120	(85)	70		100									5		
2N 571			P	G	30	10			150	(85)		>100										5		
2N 572			P	G	30	10			120	(85)		>100										5		
2N 573			P	G	40	25			200	(100)	30		300			50						1		
2N 574	So		P	G	60	55		45A	180W	(100)	9		22	2		10A								

Type	Manufacturer	Sort (Note)	PNP/NPN	Gen/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)					
2N 581	Rc		P	G	18	15	10		80	(71)		>20	0.3	20						5A	5			
2N 582	Rc		P	G	25	14			120	(71)		>40	0.2	20						5A	5			
2N 583	Rc		P	G	18		10	100	80	(71)		>20		20						1A	5			
2N 584	Rc		P	G	25		12	100	120	(71)	40			20						1A	1			
2N 585	Rc		N	G	25	15	20	200	120	(71)	20		0.2	20						5A	5			
2N 586	Rc		P	G	45		12	250	250	(85)	35		0.2	250						7A	5			
2N 587	Sy		N	G	40	20			150	(100)	20			200							5			
2N 588	Sp		P	G	15	15			30	(85)											3			
2N 588A			P	G	15	15			60	(85)	30			10							3			
2N 589			P	G	100	75			90W	(100)	20	40		3A							2			
2N 591	Rc		P	G	32	32		40	200	(71)	(40)	120	12	2		353				1A	1			
2N 592			P	G	20	20			125	(85)		>20									5			
2N 593			P	G	40	30			125	(89)		>30									5			
2N 594	Ti		N	G	20	20			100	(85)		>20									5			
2N 595	Ti		N	G	15	15			100	(85)		>35												
2N 596	Ti		N	G	10	10			100	(85)		>50									5			
2N 597			P	G	45	40			250	(100)		>40		100							5			
2N 598			P	G	35	35			250	(100)	70	225		100	5.6						5			
2N 599			P	G	30	20			250	(100)		>100		100	10						5			
2N 600			P	G	35	35			750	(100)	70	225		100	5.6						5			
2N 601			P	G	30	20			750	(100)		>100		100	10						5			
2N 602	Sy		P	G	20	20			120	(85)	20	80		10							5			
2N 603	Sy		P	G	30	20			120	(85)	30	100		30							5			
2N 604	Sy		P	G	30	20			120	(85)	40	140		50							5			
2N 605			P	G	15	15			120	(85)											3			
2N 606			P	G	15	15			120	(85)											3			
2N 607			P	G	15	15			120	(85)											3			
2N 608			P	G	15	15			120	(85)											1			
2N 609	Wh		P	G	25	15			180	(85)											1			
2N 610	Wh		P	G	25	15			180	(85)														
2N 611	Wh		P	G	25	15			180	(85)											1			
2N 612	Wh		P	G	25	15			180	(85)											1			
2N 613	Wh		P	G	25	15			180	(85)											1			
2N 614	Wh		P	G	20	15			180	(85)											3			
2N 615	Wh		P	G	20	15			180	(85)											3			
2N 616	Wh		P	G	15	12			180	(85)											3			
2N 617	Wh		P	G	15	12			180	(85)											3			
2N 618	Mo		P	G	80	60	40	3A	106W	(110)	60	140	4	1A							2			
2N 619			N	S	50	40			175	(160)	9	22		5							1			
2N 620			N	S	50	35			175	(160)	18	44		5							1			
2N 621			N	S	50	30			175	(160)	36	88		5							1			
2N 624			P	G	30	20			100	(100)		>20									3			
2N 625	Sy		N	G	40	30			1.5W	(100)		>20		500							6			
2N 627	So		P	G	40	30	20		90W	(100)	10		30	10A						3A	2			
2N 628	So		P	G	60	45	30		90W	(100)	10		30	10A						3A	2			

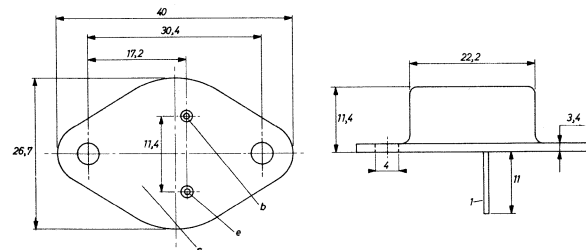
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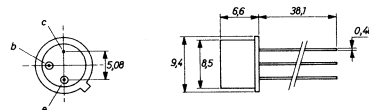
41A



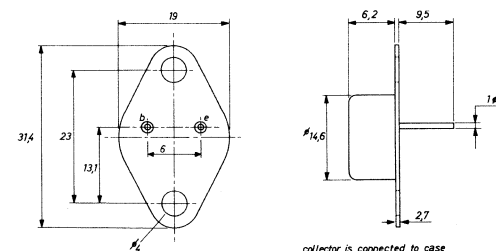
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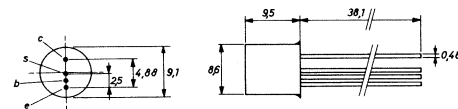
5A



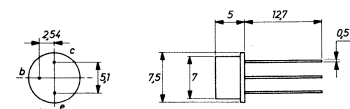
309A



7A

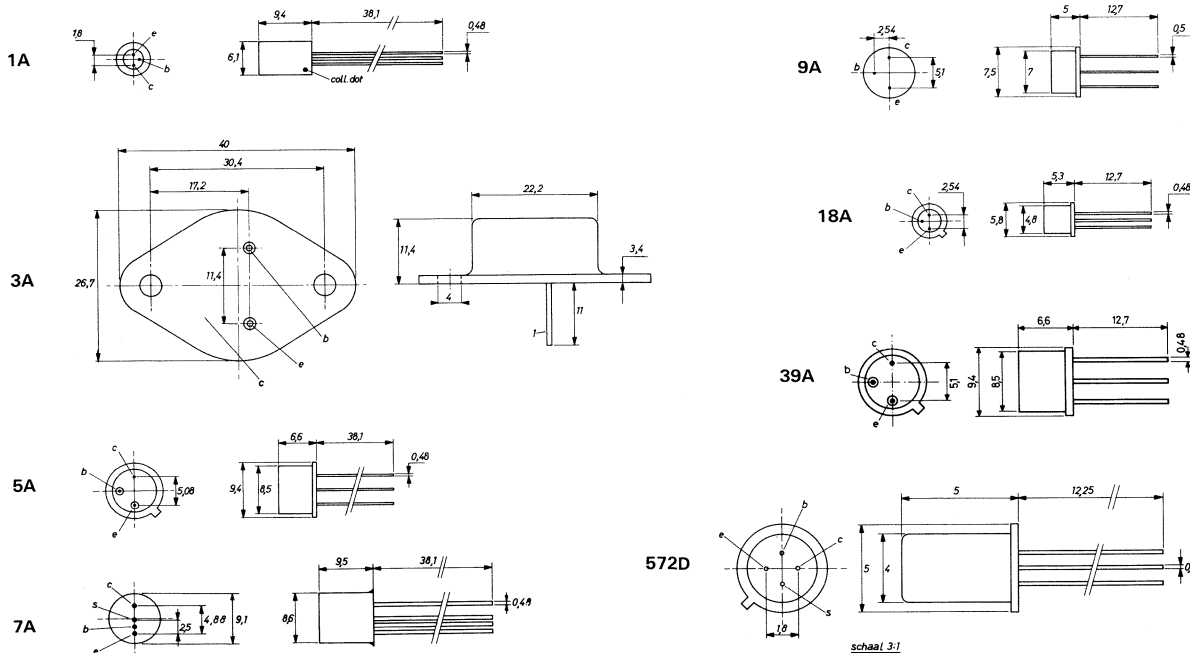


9A



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)			
2N 629	So		P	G	80	60	40		90W	(100)	10	30	2						3A	2			
2N 630	So		P	G	100	75	50		90W	(100)	10	30	2						3A	2			
2N 631			P	G	25	20			167	(85)										1			
2N 632			P	G	25	20			167	(85)										1			
2N 633			P	G	35	30			167	(85)										1			
2N 634	Ge		N	G	20	20			150	(85)		>15		200						5			
2N 634A	Ge		N	G	25	20			2.5	(85)	40	120		10						5			
2N 635	Ge		N	G	20	20			150	(85)		>25		200						5			
2N 635A	Ge		N	G	25	20			2.5	(85)	80	240		10						5			
2N 636	Ge		N	G	20	20			150	(85)		>35		200						5			
2N 636A	Ge		N	G	25	15			2.5	(85)	100	300		10						5			
2N 637	So		P	G	60	35	15	3A	60W	(100)	30	60	5	3A		45			3A	6			
2N 637A	So		P	G	90	65	15	3A	60W	(100)	30	60	5	3A		45			3A	6			
2N 637B	So		P	G	100	75	15	3A	60W	(100)	30	60	5	3A		45			3A	6			
2N 638	So		P	G	60	35	15	3A	60W	(100)	20	40	5	3A		45			3A	6			
2N 638A	So		P	G	90	65	15	3A	60W	(100)	20	40	5	3A		45			3A	6			
2N 638B	So		P	G	100	75	15	3A	60W	(100)	20	40	5	3A		45			3A	6			
2N 639			P	G		35			37W	(100)		>15		3A						6			
2N 639A			P	G		65			37W	(100)		>15		3A						6			
2N 639B			P	G		75			37W	(100)		>15		3A						6			
2N 640	Rc		P	G	34		1	10	80	(71)		>50							7A	1			
2N 641	Rc		P	G	34		1	10	80	(71)		>50							7A	1			
2N 642	Rc		P	G	34		1	10	80	(71)		>50							7A	1			
2N 643	Rc		P	G	30		2	100	120	(71)		>20			20				9A	5			
2N 644	Rc		P	G	30		2	100	120	(71)		>20			20				9A	5			
2N 645	Rc		P	G	30		2	100	120	(71)		>20		10	20								
2N 646			N	G	25	25			100	(85)	50	150		30					9A	5			
2N 647	Rc		N	G	25	15	12	100	100	(71)	50	150	1	50	2				1A	1			
2N 649	Rc		N	G	20	18	2.5	100	100	(71)	50	150	1	50	2				1A	1			
2N 650	Mo		P	G	45	30	30	500	200	(100)		44	1	10		375			5A	1			
2N 650A	Mo		P	G	45	30	30	500	200	(100)	30	90	1	10		375			5A	1			
2N 651	Mo		P	G	45	30	30	500	200	(100)		75	1	10		375			5A	1			
2N 651A	Mo		P	G	45	30	30	500	200	(100)	45	150	1	10		375			5A	1			
2N 652	Mo		P	G	45	30	30	500	200	(100)		115	1	10		375			5A	1			
2N 652A	Mo		P	G	45	30	30	500	200	(100)	80	250	1	10		375			5A	1			
2N 653	Mo		P	G	30	25	25	250	200	(100)	(30	70)	6	1		375			5A	1			
2N 654	Mo		P	G	30	25	25	250	200	(100)	(50	125)	6	1		375			5A	1			
2N 655	Mo		P	G	30	25	25	250	200	(100)	(100	250)	6	1		375			5A	1			
2N 656	Ti		N	S	60	60	8		4W	25c	30	90	10	200					5A	2, 6	(BSX 46-6)		
2N 657	Ti		N	S	100	100	8		4W	25c	30	90	10	200					5A	2, 6	(BSW 66)		
2N 657A	Ge		N	S	100	100			5W	(200)	30	90								1			
2N 658	Ti		P	G	25	16			167	(85)	25	80		200						5			
2N 659	Ti		P	G	25	14			167	(85)	40	110								5			
2N 660	Ti		P	G	25	11			167	(85)	60	150								5			
2N 661	Ti		P	G	25	9			167	(85)		>80								5			
2N 662	Ti		P	G	25	11			167	(85)		>30								5			
2N 663	So		P	G	50	25	20		35W	(100)	25	75	2	500					3A	6			
2N 665	Mo		P	G	80		40	3A	35W	(95)	40	80	2	500					3A	6			
2N 669	Mo		P	G	40	30		3A	90W	(100)	75	250	2	500					3A	2			
2N 670			P	G	40	40			300	(85)	40	250		1A						1			
2N 671			P	G	40	40			800	(85)	40	250		1A						1			
2N 672			P	G	25	25			300	(85)										1			
2N 673			P	G	25	25			800	(85)										1			
2N 674			P	G	75	75			300	(85)	40	250		1A						1			
2N 675			P	G	75	75			800	(85)	40	250		1A						1			
2N 677	So		P	G	50	30	25	10A	90W	(100)	20	60	2	10A					3A	2			
2N 677A	So		P	G	60	40	25	10A	90W	(100)	20	60	2	10A					3A	2			
2N 677B	So		P	G	90	70	25	10A	90W	(100)	20	60	2	10A					3A	2			
2N 677C	So		P	G	100	80	25	10A	90W	(100)	20	60	2	10A					3A	2			
2N 678	So		P	G	50	20	25	10A	90W	(100)	50	100	2	10A					3A	2			
2N 678A	So		P	G	60	30	25	10A	90W	(100)	50	100	2	10A					3A	2			
2N 678B	So		P	G	90	60	25	10A	90W	(100)	50	100	2	10A					3A	2			
2N 678C	So		P	G	100	80	25	10A	90W	(100)	50	100	2	10A					3A	2			
2N 679	So		N	S	25	20			150	(85)		>20		30						5			
2N 680	Ti		P	G	20	20			150	(75)	18	165		50						1			
2N 694			P	G	30	15			100	(100)		>10		2	340					3			
2N 695			P	G	15	15			75	(100)		>25		10						5			
2N 696	Mo		N	S	60		5		600	25a	20	60	10	150		(35p)			5A	1, 5			
2N 696A			N	S	60	35			800	(300)	20	60	10	150						5			
2N 697	Ti		N	S	60		5		600	25a	40	120	10	150		(35p)			5A	1, 5			
2N 697A			N	S	60	35			800	(300)	40	120		150						5			
2N 698	Ti		N	S	120	60	7		800	25a	20	60	10	150		(15p)			39A	1, 5			
2N 699	Ti		N	S	120		5		600	25a	40	120	10	150		(20p)			39A	1, 5			
2N 699A			N	S	120	80			800	(300)	40	120		150						5			
2N 699B			N	S	120	100			870	(200)	40	120		150						5			
2N 700	Mo		P	G	25	20	0.2	50	75	(100)		(10)	6	2	270				572D	3			
2N 7																							

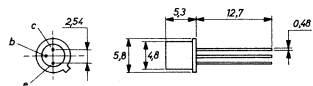
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)					
2N 706C	Mo		N	S	40	20			360	(200)	20	60		10	200						18A	5			
2N 707	Mo		N	S	56	28			1W	(175)		12		10	350						18A	4			
2N 707A	Mo		N	S	70	40	5		1,2W	(175)	9	50	1	10	350						18A	3			
2N 708	Ph		N	S	40	15	5	(500)	360	25a	30	120	1	10	>300	480					18A	5			
2N 708	Ti		N	S	40	15	5		360	(200)	30	120	1	10							18A	5			
2N 708A			N	S	50	30			360	(200)	40	120		10	300						15ns	5			
2N 709	Ti		N	S	15	6	4		300	25a	20	120	0,5	10	>600						18A	5			
2N 709A	Tr		N	S	15	6			300	(200)	30	90		10	800						18A	5			
2N 710	Rc		P	G	15	15	2	50	300	(100)		>25		10							18A	5			
2N 710A	Ti		P	G	15	15			150	(100)		>25		10							18A	5			
2N 711	Mo		P	G	12	12	1	50	300	(100)		30	0,5	10	150						18A	5			
2N 711A	Mo		P	G	15	7	1,5	100	300	(100)	25	150	0,5	10	150						18A	5			
2N 711B	Mo		P	G	18	7	2	100	300	(100)	30	150	0,5	10	150						18A	5			
2N 715	Ns		N	S	50	35			500	(175)	10	50		15							18A	3			
2N 716	Ns		N	S	70	40			500	(175)	10	50		15							18A	3			
2N 717	Ti		N	S	60		5		400	25a	20	60	10	150		(35p)					18A	1,5			
2N 718	Ti		N	S	60		5	(1A)	400	25c	40	120	10	150		(35p)					18A	1,5			
2N 718A	Ti		N	S	75	32	7		500	25a	40	120	10	150		<12		1k			18A	1,5			
2N 719	Ti		N	S	120		5		400	25a	20	60	10	150		<20p					18A	1,5			
2N 719A	Ti		N	S	120	60	7	1A	500	25a	20	60	10	150		<15p					18A	1,5			
2N 720	Ti		N	S	120		5		400	25a	40	120	10	150		<20p					18A	1,5			
2N 720A	Ti		N	S	120	80	7		500	25a	40	120	10	150		<15p					18A	1,5			
2N 721	P		P	S	50	35	5		400	25a	20	45	10	150		<45p					18A	1,5			
2N 721A			P	S	50	50			500	(200)	20	45		150	50						18A	3			
2N 722	Ti		P	S	50	35	5		400	25a	30	90	10	150	>60		<45p				18A	1,5			
2N 722A	Ti		P	S	50	50			500	(200)	30	90		150	60						18A	3			
2N 725	Sy		P	G	15	12			150	(100)		>20		10							18A	5			
2N 726	Mo		P	S	25	20	5	50	1W	(200)	15	45	1	10	140						18A	1			
2N 727	Mo		P	S	25	20	5	50	1W	(200)	30	120	1	10	140						18A	1			
2N 728	Tr		N	S	15	15			4	(175)	20	200		10	100						18A	5			
2N 729	Tr		N	S	30	30			4	(175)	20	200		10	100						18A	5			
2N 730	Ti		N	S	60		5	1A	500	25a	20	60	10	150		<35p					18A	1,5			
2N 731	Ti		N	S	60		5	1A	500	25a	40	120	10	150		<35p					18A	1,5			
2N 734	So		N	S	80	60	6	400	500	(175)	15	50	5	5	30						18A	1			
2N 734A	So		N	S	80	60	5	400	500	(200)	15	50	5	5	30						18A	1			
2N 735	So		N	S	80	60	5	400	500	(175)	30	100	5	5	50						18A	1			
2N 735A	So		N	S	80	60	6	400	500	(200)	40	100	5	5	60						18A	1			
2N 736	So		N	S	80	60	5	400	500	(175)	60	200	5	5	100						18A	1			
2N 736A	So		N	S	80	60	8	400	500	(175)	60	200	5	5	200						18A	1			
2N 736B	So		N	S	80	60	8	400	500	(200)	60	200	5	5	200						18A	1			
2N 738	So		N	S	120	80	5	400	500	(175)	15	50	5	5	30						18A	1			
2N 738A	So		N	S	125	80	8	400	500	(200)	15	50	5	5	30						18A	1			
2N 739	So		N	S	125	80	8	400	500	(175)	30	100	5	5	60						18A	1			
2N 739A	So		N	S	125	80	8	400	500	(200)	30	100	5	5	60						18A	1			
2N 740	So		N	S	125	80	5	400	500	(200)	60	200	5	5	200						18A	1			



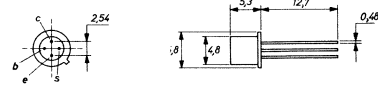
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (ti)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _Q)	f MHz	ton (tr)				
2N 740A	So		N	S	125	80	8	400	500	(200)	60		200	5	5	200						18A	1	
2N 741	Mo		P	G	15	15	1	100	300	(100)		25		6	5	360						18A	3	
2N 741A	Mo		P	G	20	20	1	100	300	(100)		25		6	5	360						18A	3	
2N 742			N	S	60	60			600	(200)		>25			10								5	
2N 742A	Ns		N	S	60	60			500	(200)		>25			10								5	
2N 743	Ph		N	S	20	12	5	200	300	25a	20	60	0,35	10	10	>300	500				<16ns	18A	5	
2N 743	Ti		N	S	20	12	5	200	300	(175)		>9	10	10	10							18A	5	
2N 743A			N	S	40	15			360	(200)	20	60	10	10	10	500							5	
2N 744	Ph		N	S	20	12	5	200	300	25a	40	120	0,35	10	10	>300	500				<16ns	18A	5	
2N 744	Ti		N	S	20	12	5	200	300	(175)		>9	10	10	10						26ns	18A	5	
2N 745			N	S	45	30			150	(175)	20		55		10								1	
2N 746			N	S	45	30			150	(175)	45		150		10								1	
2N 747			N	S	25	25			200	(175)	30	90	10		10								5	
2N 748			N	S	30	30			200	(175)	20	40	10		10								5	
2N 749			N	S	45	25			200	(175)	15	55	10		10								3	
2N 751			N	S	20	20			200	(175)	30	150		10									3	
2N 752			N	S	85	45			500	(200)		>40											3	
2N 753	Ns		N	S	25	15	5	50	300	25a	40	120	1	10	10	>200	500				<40ns	18A	5	
2N 753	Ti		N	S	25	15	5	50	300	(170)	40	120	1	10	10						40ns	18A	5	
2N 754	Tr		N	S	60	60			300	(175)	20	80		5	30								5	
2N 755	Tr		N	S	100	80			300	(175)	20	80		5	30								5	
2N 756	So		N	S	45	45	6		500	(200)	12	22	5	1	50							18A	1	
2N 756A	So		N	S	60	60	6		500	(200)	12	22	5	1	50							18A	1	
2N 757	So		N	S	45	45	6		500	(200)	18	40	5	1	50							18A	1	
2N 757A	So		N	S	60	60	6		500	(200)	18	40	5	1	50							18A	1	
2N 758	So		N	S	45	45	8		500	(200)	18	90	5	1	50							18A	1	
2N 758A	So		N	S	60	60	8		500	(200)	18	90	5	1	50							18A	1	
2N 758B	So		N	S	60	60	8		500	(200)	18	90	5	1	50							18A	1	
2N 759	So		N	S	45	45	8		500	(200)	36	90	5	1	75							18A	1	
2N 759A	So		N	S	60	60	8		500	(200)	36	90	5	1	175							18A	1	
2N 759B	So		N	S	60	60	8		500	(200)	36	90	5	1	175							18A	1	
2N 760	So		N	S	45	45	8		500	(200)	76	333	5	1	60							18A	1	
2N 760A	So		N	S	60	60	8		500	(200)	76	333	5	1	200							18A	1	
2N 760B	So		N	S	60	60	8		500	(200)	50	333	5	1	200							18A	1	
2N 761	Ns		N	S	50	30			500	(200)	20	55		10								18A	1	
2N 762	Ns		N	S	50	30			500	(200)	45	150		10									1	
2N 768	Sp		P	G	12	10			35	(100)		>25		2	125								5	
2N 769	Sp		P	G	12	7			35	(100)		>25		20	100								5	
2N 770			N	S	20	15			150	(150)	12	60		20	75								5	
2N 771			N	S	20	15			150	(150)	30	150		20	100								5	
2N 772			N	S	25	25			150	(150)		>20		10	75								5	
2N 773			N	S	20	15			150	(150)	4	16		1,5									3	
2N 774			N	S	20	15			150	(150)	7	30		1,5									3	
2N 775			N	S	20	15			150	(150)	20	80		1,5									3	
2N 776			N	S	20	15			150	(150)	4	16		1,5									3	
2N 777			N	S	20	15			150	(150)	7	30		1,5									3	
2N 778			N	S	20	15			150	(150)	20	80		1,5									3	
2N 779			P	G	15	15			60	(100)	50	200		10	320								5	
2N 779A	Sp		P	G	15	15			60	(100)	50	200		10	320								5	
2N 779B			P	G	15	15			150	(100)	50	200		10	320								5	
2N 780	Ti		N	S	45	45			1W	(175)	35	140		0,5	60								1	
2N 781	Sy		P	G	15	15			150	(100)		>25		10									5	
2N 782	Sy		P	G	12	12			150	(100)		>20		10									5	
2N 783	Sy		N	S	40	20			300	(175)	20	60		10	200								5	
2N 784	Sy		N	S	30	15			300	(175)		>25		10	200								5	
2N 785			P	G	12	12			50	(85)		>40											1	
2N 789			N	S	45	30			150	(175)		>9											1	
2N 790			N	S	45	30			150	(175)		>18											1	
2N 791			N	S	45	30			150	(175)		>18											1	
2N 792			N	S	45	30			150	(175)		>36											1	
2N 793			N	S	45	30			150	(175)		>76											1	
2N 794	Rc		P	G	13		1	100	120	(85)		>30		10	25							18A	5	
2N 795	Rc		P	G	13		4	100	120	(85)		>30		10	35							18A	5	
2N 796	Ti		P	G	13		4	100	120	(85)		>60		10	50							18A	5	
2N 797			N	G	20	7	4	150	150	(100)		>40	0,25	10	600							18A	5	
2N 799			P	G	25	12			75	(85)		>30											5	
2N 800			P	G	25	12			75	(85)		>30		12									5	
2N 801			P	G	30	18			75	(85)	30	60											5	
2N 802			P	G	30	18			75	(85)	30	60											5	
2N 803			P	G	30	15			75	(85)	40	60											5	
2N 804			P	G	30	15			75	(85)	40	80											5	
2N 805			P	G	30	12			75	(85)		>60											5	
2N 806			P	G	30	12			75	(85)		>60											5	
2N 807			P	G	25	14			70	(85)		>40		20									5	
2N 808			P	G	25	14			70	(85)		>40		20									5	
2N 809			P	G	30	15			75	(85)	25	110		25									3	
2N 810			P	G	30	15			75	(85)	25	110		25									3	
2N 811			P	G	30	12			75	(85)	45	180		45									3	
2N 812			P	G	30	12			75	(85)	45	180		45									3	
2N 813			P	G	30	10			75	(85)	55	220		55									3	
2N 814			P	G	30	10			75	(85)	55													

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{ceo}	V _{ceo}	V _{ebo}	I _c	P _{tot}	t	h _{FE}	(h _{fe})	V _{ce}	I _c	F _T	R _{thj-a}	F	f	ton			
					V	V	V	(I _{cm}) mA	mW	(t) s	min	type	max	(V _{cb}) V	(I _e) mA	°C/W	(η) %	(C _c) MHz	(tr) ns			
2N 819			N	G	30	20			75	(85)		>30		50								5
2N 820			N	G	30	20			75	(85)		>30		50								5
2N 821			N	G	30	25			75	(85)		>40		50								5
2N 822			N	G	30	25			75	(85)		>40		50								5
2N 823			N	G	25	12			75	(85)		>40		20								5
2N 824			P	G	30	18			70	(85)												3
2N 825			P	G	30	20			70	(85)		40										5
2N 826			P	G	30	20			70	(85)	20	40										5
2N 827	Mo		P	G	20	20	4	100	150	(150)		150	0.3	10						18A		5
2N 828	Mo		P	G	15	15	2.5	200	300	(100)		40	0.3	10	400					18A		5
2N 828A	Mo		P	G	15	15	2.5	200	300	(100)		40	0.3	10	400					18A		5
2N 829	Mo		P	G	15	15	2.5	200	300	(100)		80	0.3	10	400					18A		5
2N 834	Mo		N	S	40	30	5	200	1W	(175)		>25	1	10	350					18A		6
2N 834A			N	S	40	30			360	(200)		>25		10	500							6
2N 835	Mo		N	S	25	20	3	200	1W	(175)		>20	1	10	300					18A		5
2N 837			P	G	12	12			150	(100)		>30		10								5
2N 838	Mo		P	G	30	30	2.5	100	150	(150)			0.3	10						18A		5
2N 839	Tr		N	S	45	45			300	(175)	15		50	10	30							3
2N 840	Mo		N	S	45	45	2	1A	500	(200)	30	100	5	10	1.5					18A		3
2N 841	Mo		N	S	45	45	2	1A	500	(200)	60		400	5	10	2				18A		3
2N 842	Tr		N	S	45	45			300	(175)	20	55		10	30							3
2N 843	Tr		N	S	45	45			300	(175)	45	150		10	40							3
2N 844	Tr		N	S	60	60			300	(175)	40	120		5	50							3
2N 845	Tr		N	S	100	80			300	(175)	40	120		5	50							3
2N 846			N	G	15	15			60	(100)	25	125		10	320							5
2N 846A	Sp		P	G	15	15			60	(100)	25	125		10	320							5
2N 846B			P	G	15	15			150	(100)	25	125		10	320							5
2N 847			N	S	20	15			200	(175)												5
2N 848			N	S	40	25			200	(175)												5
2N 849	Ti		N	S	25	15			300	(175)	20	60		10	600							5
2N 850	Ti		N	S	25	15			300	(175)	40	120		10	600							5
2N 851	Ti		N	S	20	12			300	(175)	20	60		10	300							5
2N 852	Ti		N	S	20	12			300	(175)	40	120		10	300							5
2N 858	Sp		P	S	40	40			150	(140)	10	60		5	5							5
2N 859	Sp		P	S	40	40			150	(140)	25	100		5	6							5
2N 860	Sp		P	S	25	25			150	(140)	10	40		5	6.5							5
2N 861	Sp		P	S	25	25			150	(140)	25	75		5	7.5							5
2N 862	Sp		P	S	15	15			150	(140)	12	48		5	8							5
2N 863	Sp		P	S	15	15			150	(140)	25	100		5	10							5
2N 864	Sp		P	S	6	6			150	(140)	20	100		5	16							5
2N 864A			P	S	6	6			300		20	250		5	16							5
2N 865	Sp		P	S	10	6			150	(140)	45	125		5	24							5
2N 865A			P	S	10	10			300		45	400		5	24							5
2N 866			N	S	30	20			500	(175)	15	45		150	40							5
2N 867			N	S	30	20			500	(175)	30	90		150	50							5
2N 869	Mo		P	S	25	18	5	5	1W	(200)	20	120	5	10						18A		3
2N 869A	Mo		P	S	25	18	5	5	1W	(200)	40	120	5	10						18A		6
2N 870	Ti		N	S	100	60	7	7	500	25a	40	120	10	150								1.5
2N 871	Ti		N	S	100	60	7	7	500	25a	100	300	10	150						18A		1.5
2N 902			N	S	45	30			150	(175)		(≥9)										1
2N 903			N	S	45	30			150	(175)		(≥18)										1
2N 904			N	S	45	30			150	(175)		(≥18)										1
2N 905			N	S	45	30			150	(175)		(≥36)										1
2N 906			N	S	45	30			150	(175)		(≥76)										1
2N 907			N	S	45	30			150	(175)	20	55		10	12							1
2N 908			N	S	45	30			150	(175)	45	150		10	25							1
2N 909	Fa		N	S	60	30			400	(175)	110	350		10	50							1
2N 910	Mo		N	S	100	60	7	7	2W	(200)		>35		0.1	60					18A		1
2N 911	Mo		N	S	100	60	7	7	2W	(200)		>20	10	0.1	50					18A		1
2N 912	Fa		N	S	100	80			500	(200)		>15		10	40							1
2N 914A			N	S	40	20			360	(200)	30	120		10	300							5
2N 915	Mo		N	S	70	50	5	5	1W	(200)	50	200	5	10						18A		3
2N 915A			N	S	70	50			1W	(200)	50	250		5	600							4
2N 916	Ti		N	S	45	25	5	5	360	25a	50	200	1	10						18A		3
2N 916A			N	S	45	25			360	(200)	50	200		10	300							3
2N 916B			N	S	60	30			1W	(200)	50	200		10	500							4
2N 917	Ti		N	S	30	15	3	3	200	25a	20	200	1	3						72A		3
2N 917A			N	S	30	15	3	3	200	(200)	20	200	1	3						72A		3
2N 918	Ph		N	S	30	15	3	3	200	25a		>20	1	3						72A		3
2N 919			N	S	25	15			360	(200)	20	60		10								5
2N 920			N	S	25	15			360	(200)	40	120		10	200							5
2N 921			N	S	50	20			360	(200)	20	60		10	200							5
2N 922			N	S	50	20			360	(200)	40	120		10	200							5
2N 923	So		P	S	40	25	40	40	250	(200)	(12	30)	6	1						18A		1
2N 924	So		P	S	40	25	40	40	250	(200)	(24	70)	6	1						18A		1

18A

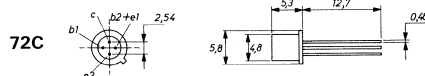
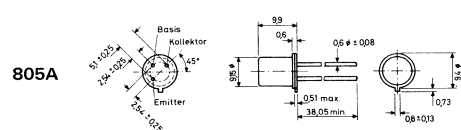
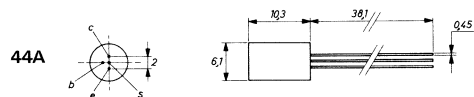
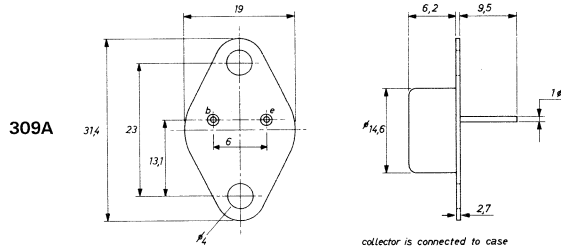
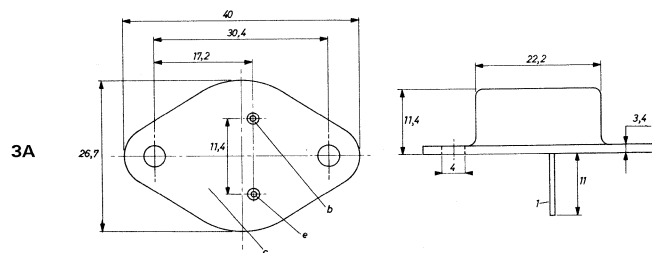
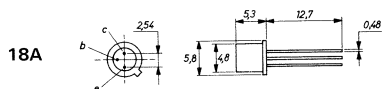
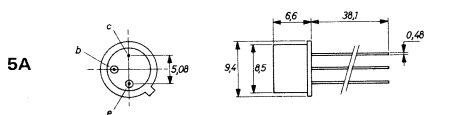
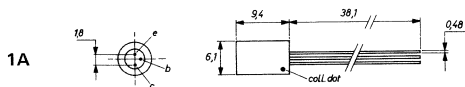


72A



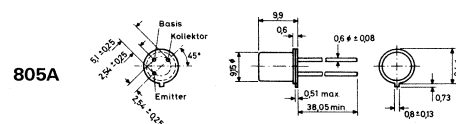
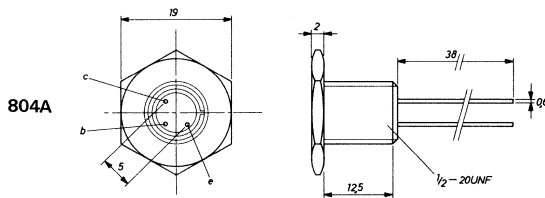
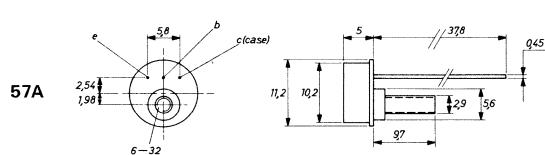
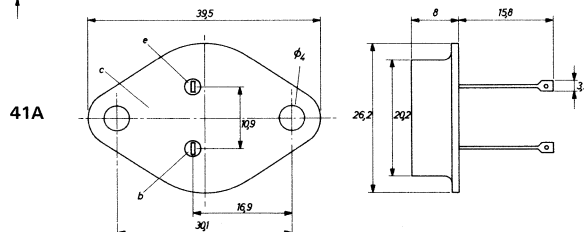
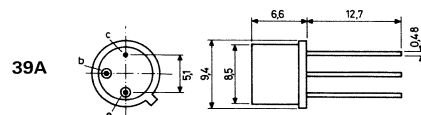
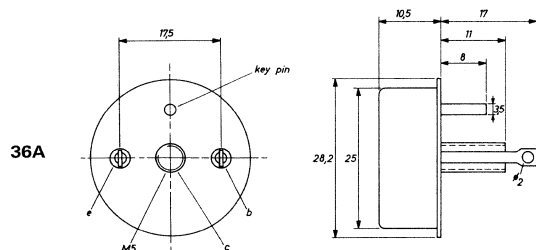
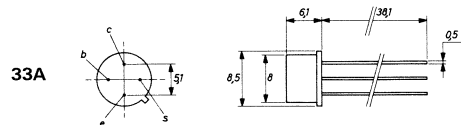
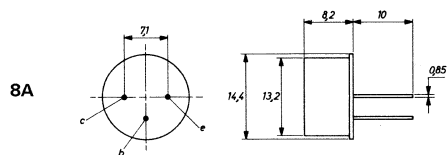
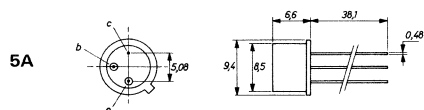
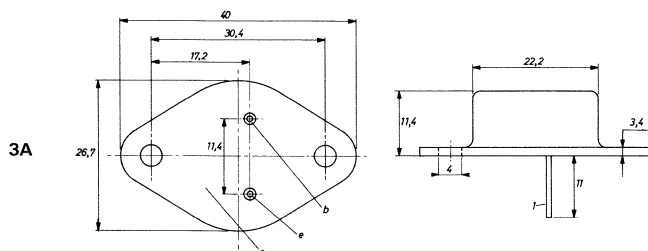
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 925	So		P	S	50	40	50		250	(200)	(10	24)	6	1							18A	1	2N 2604	
2N 926	So		P	S	50	40	50		250	(200)	(20	50)	6	1							18A	1		
2N 927	So		P	S	70	60	70		250	(200)	(8	22)	6	1							18A	1		
2N 928	So		P	S	70	60	70		250	(200)	(18	50)	6	1							18A	1		
2N 929	Ph		N	S	45	45	5	30	300	25a	100	350	5	10	>50	500	<4	<15k			18A	1		
2N 929A	Mo		N	S	60	60	6	30	2W	(175)		600	5	10	45						18A	1	2N 2605	
2N 930	Ph		P	S	45	45	5	30	300	25a	150	600	5	10	>50	500	<3	<15k			18A	1		
2N 930A	Mo		N	S	60	60	6	30	2W	(175)		600	5	10	45						18A	1		
2N 930B	So		N	S	60	45	6	30	500		100	300	5	0.01	45						18A	1		
2N 934	Rc		P	G	13	12			150	(85)		>40		40	35							5		
2N 935	So		P	S	50	40	20		250	(160)	(9	22)	0.5								18A	1	2N 2605	
2N 936	So		P	S	50	35	20		250	(160)	(18	44)	0.5								18A	1		
2N 937	So		P	S	50	30	20		250	(160)	(36	88)	0.5								18A	1		
2N 938	So		P	S	40	35	40		250	(175)	9	22	6	1							18A	1		
2N 939	So		P	S	40	35	40		250	(175)	18	44	6	1							18A	1		
2N 940	So		P	S	40	35	40		250	(175)		88	6	1							18A	1	2N 2605	
2N 941	So		P	S	25	8	25		250	(175)		>10		1	16						18A	5, 2		
2N 942	So		P	S	25	8	25		250	(175)		>10		1	10						18A	5, 2		
2N 943	So		P	S	40	18	40		250	(175)		>10									18A	5, 2		
2N 944	So		P	S	40	18	40		250	(175)		>10									18A	5, 2		
2N 945	So		P	S	50	50	50		250	(175)		>10									18A	5, 2	2N 2605	
2N 946	So		P	S	80	80	80		250	(175)		>10									18A	5, 2		
2N 947			N	S	20	15			360	(150)		>20		10	200						18A	5		
2N 955	Rc		N	G	12	8	2	100	150	(100)		>30		30	5						18A	5		
2N 956	Ti		N	S	75	7	7		500	25a	100	300	10	150		<8	1k				18A	1, 5		
2N 957			N	S	40	20			250	(150)		>45		10	200							3	2N 2605	
2N 958			N	S	25	15			250	(150)		>20		10	200							5		
2N 959			N	S	25	15			250	(150)		>40		10	200							5		
2N 960	Mo		P	G	15	15	2.5		300	(100)		40	0.3	10	460						18A	5		
2N 961	Mo		P	G	12	12	2		300	(100)		40	0.3	10	460						18A	5		
2N 962	Mo		P	G	12	12	1.3		300	(100)		40	0.3	10	460						18A	5	2N 2605	
2N 963	Mo		P	G	12	12			300	(100)		>20	0.3	10	300						18A	5		
2N 964	Mo		P	G	15	15	2.5		300	(100)		70	0.3	10	460						18A	5		
2N 964A	Mo		P	G	15	7	2.5	100	300	(100)		>40	0.3	10	460						18A	5		
2N 965	Mo		P	G	12	12	2		300	(100)		70	0.3	10	460						18A	5		
2N 966	Mo		P	G	12	12	1.3		300	(100)		70	0.3	10	460						18A	5	2N 2605	
2N 967	Mo		P	G	12	12			300	(100)		>40	0.3	10	300						18A	5		
2N 968	Mo		P	G	15	15	2.5		300	(100)		35	0.5	10	320						18A	5		
2N 969	Mo		P	G	12	12	2		300	(100)		35	0.5	10	320						18A	5		
2N 970	Mo		P	G	12	12	1.3		300	(100)		35	0.5	10	320						18A	5		
2N 971	Mo		P	G	7	7	1.3		300	(100)		35	0.5	10	320						18A	5	2N 2605	
2N 972	Mo		P	G	15	15	2.5		300	(100)		75	0.5	10	320						18A	5		
2N 973	Mo		P	G	12	12	2		300	(100)		75	0.5	10	320						18A	5		
2N 974	Mo		P	G	12	12	1.3		300	(100)		75	0.5	10	320						18A	5		
2N 975	Mo		P	G	7	7	1.3		300	(100)		75	0.5	10	320						18A	5		
2N 976	Sp		P	G	15	10			100	(100)		>30		20	249							5	2N 2605	
2N 977			P	G	15	10			150	(100)		>50		40	400							5		
2N 978	Mo		P	S	30	20	6	600	1W	(200)	15	60	10	150							18A	3		
2N 979	Sp		P	G	20	15			60	(100)		>30		10	100							5		
2N 980	Sp		P	G	20	12			60	(100)		>30		10	100							5		
2N 981	Ns		N	S	80	80			500	(200)		>36)										1	2N 2605	
2N 982	Sp		P	G	20	15			60	(100)		>50		10								5		
2N 983	Sp		P	G	15	15			60	(100)		>40		10								5		
2N 984	Sp		P	G	15	10			60	(100)		>50		10								5		
2N 985	Mo		P	G	15	7	3	200	300	(100)		>40	0.25	10							18A	5		
2N 987			P	G	40	40			100	(100)	40	250		1								3	2N 2605	
2N 988			N	S	20	10			300	(175)	20	120		10	300							3		
2N 989			N	S	20	10			300	(175)	20	120		10	300							3		
2N 990			P	G	20	20			67	(75)		>40		1	44							3		
2N 991			P	G	20	20			67	(75)		>40		1	44							3		
2N 992			P	G	20	20			67	(75)		>40		1								3	2N 2605	
2N 993			P	G	20	20			67	(75)		>40		1								3		
2N 994			P	G	15	6			200	(150)	45	140		10								5		
2N 995	Mo		P	S	20	15	4		360	(200)	35	140	1	20	100						18A	3		
2N 995A	Fa		P	S	20	15			360	(200)	35	140		20	100							3		
2N 996	Mo		P	S	15	12	4	200	1W	(200)		>35	1	20	100						18A	3	2N 2605	
2N 997	Ti	da	N	S	75	40	7	300	500	25a	7000	70000	10	100							18A	1		
2N 998			N	S	100	60	15	500	500	25a	1600	8000	5	10							72C	1		
2N 999	Ti	da	N	S	60	60	15	500	500	25a		>4000	10								72C	1		
2N 1000			N	G	40	25			150	(100)		>40		10								5		
2N 1003			P	G	35	20			120	(100)		>10)										3	2N 2605	
2N 1004			P	G	35	20			120	(100)		>10)												
2N 1005			N	S	15	15			150	(175)	10	25		10								1		
2N 1006			N	S	15	15			150	(175)	25	150		10								1		
2N 1007			P	G	25	20			35W	(95)	50	250		1A		0.06						2		
2N 1008	Mo		P	G	20	20	15	300	200	(100)	(40	150)	5	10							5A	1	2N 2605	
2N 1008A	Mo		P	G	40	40	15	300	200</															

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t) min	h _{FE} type	(h _{fe}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 1015C	Wh		N	S	150	150			150W	(150)	>10			2A								6		
2N 1015D	Wh		N	S	200	200			150W	(150)	>10			2A								6		
2N 1015E	Wh		N	S	250	250			150W	(150)	>10			2A								6		
2N 1015F	Wh		N	S	300	300			150W	(150)	>10			2A								6		
2N 1016	Wh		N	S	30	30			150W	(150)	>10			5A								6		
2N 1016A	Wh		N	S	60	60			150W	(150)	>10			5A								6		
2N 1016B	Wh		N	S	100	100			150W	(150)	>10			5A								6		
2N 1016C	Wh		N	S	150	150			150W	(150)	>10			5A								6		
2N 1016D	Wh		N	S	200	200			150W	(150)	>10			5A								6		
2N 1016E	Wh		N	S	250	250			150W	(150)	>10			5A								6		
2N 1016F	Wh		N	S	300	300			150W	(150)	>10			5A								6		
2N 1017			P	G	30	10			150	(85)	>70			20								5		
2N 1018			P	G	30	6			200	(100)	>70			70								5		
2N 1021	Ti		P	G	100	30	30	7A	150W	25c	30	90	1.5	5A	430k						3A	2, 6		
2N 1021A	Ti		P	G	100	50	30	7A	150W	(100)	30	90	1.5	5A	0.2						3A	2		
2N 1022	Ti		P	G	120	55	30	7A	150W	25c	30	90	1.5	5A	430k						3A	2, 6		
2N 1022A	Ti		P	G	120	55	30	7A	150W	(100)	30	90	1.5	5A	0.2						3A	2		
2N 1023	Rc		P	G	40	40	0.5	10	120	(100)	20	175	1.5	1		620					44A	1		
2N 1024	So		P	S	18	15	18		250	(175)	>9	6	1								5A	1		
2N 1025	So		P	S	40	35	40		250	(175)	(9)	22	6	1							5A	1		
2N 1026	So		P	S	40	35	40		250	(175)	(18)	44	6	1							5A	1		
2N 1027	So		P	S	12	10	12		250	(175)	>9	6	1		7.2						5A	1		
2N 1028	So		P	G	50	20			90W	(100)	20	60	10A								5A	1		
2N 1029	So		P	G	60	30			90W	(100)	20	60	10A								5A	1		
2N 1029A	So		P	G	60	30			90W	(100)	20	60	10A								5A	1		
2N 1029B	So		P	G	90	60			90W	(100)	20	60	10A								5A	1		
2N 1029C	So		P	G	100	70			90W	(100)	20	60	10A								5A	1		
2N 1030	So		P	G	50	20			90W	(100)	50	100	10A								5A	1		
2N 1030A	So		P	G	60	30			90W	(100)	50	100	10A								5A	1		
2N 1030B	So		P	G	90	60			90W	(100)	50	100	10A								5A	1		
2N 1030C	So		P	G	100	70			90W	(100)	50	100	10A								5A	1		
2N 1031	So		P	G	50	30	25	10A	90W	(100)	20	60	2	10A							3A	2		
2N 1031A	So		P	G	60	40	25	10A	90W	(100)	20	60	2	10A							3A	2		
2N 1031B	So		P	G	90	70	25	10A	90W	(100)	20	60	2	10A							3A	2		
2N 1031C	So		P	G	100	80	25	10A	90W	(100)	20	60	2	10A							3A	2		
2N 1032	So		P	G	50	30	25	10A	90W	(100)	50	100	2	10A							3A	2		
2N 1032A	So		P	G	60	40	25	10A	90W	(100)	50	100	2	10A							3A	2		
2N 1032B	So		P	G	90	70	25	10A	90W	(100)	50	100	2	10A							3A	2		
2N 1032C	So		P	G	100	80	25	10A	90W	(100)	50	100	2	10A							3A	2		
2N 1034	So		P	S	50	40	20		250	(160)	(9)	22	6	1							18A	1		
2N 1035	So		P	S	50	35	20		250	(160)	(18)	42	6	1							5A	1		
2N 1036	So		P	S	50	30	20		250	(160)	(34)	88	6	1							5A	1		
2N 1037	So		P	S	50	35	20		250	(160)	(9)	42	6	1							5A	1		
2N 1038	Ti		P	G	40	40	20	3A	20W	25m	15	60	0.5	1A							805A	6		
2N 1039	Ti		P	G	60	60	20	3A	20W	25m	15	60	0.5	1A							805A	6		



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 1040	Ti		P	G	80	80	20	3A	20W	25m	15	60	0.5	1A							805A	6		
2N 1041	Ti		P	G	100	100	20	3A	20W	25m	15	60	0.5	1A							805A	6		
2N 1042	Mo		P	G	40	30	20	3A	20W	(100)	20	60	1	3A							804A	2		
2N 1043	Mo		P	G	60	40	20	3A	20W	(100)	20	60	1	3A							804A	2		
2N 1044	Mo		P	G	80	50	20	3A	20W	(100)	20	60	1	3A							804A	2		
2N 1045	Mo		P	G	100	60	20	3A	20W	(100)	20	60	1	3A										
2N 1046	Ti		P	G	100	50	2	12A	50W	(100)		>40	1.5	3A	15						804A	2		
2N 1046A	Ti		P	G	130	50			50W	(100)		>40		5A	15						3A	4		
2N 1046B	Ti		P	G	130	50			50W	(100)		>20		10A	15						3A	4		
2N 1047	Ti		N	S	80	80	6	500	40W	25c	12	36	10	500		175					57A	2.6		
2N 1047A	Ti		N	S	80	80	10	500	40W	25c	12	36	10	500		175					57A	2.6		
2N 1047B	Ti		N	S	80	80	10	750	40W	25c	12	36	10	500		175					57A	2.6		
2N 1048	Ti		N	S	120	120	6	500	40W	25c	12	36	10	500		175					57A	2.6		
2N 1048A	Ti		N	S	120	120	10	500	40W	25c	12	36	10	500		175					57A	2.6		
2N 1048B	Ti		N	S	120	120	10	750	40W	25c	12	36	10	500		175					57A	2.6		
2N 1049	Ti		N	S	80	80	6	500	40W	25c	30	90	10	500		175					57A	2.6		
2N 1049A	Ti		N	S	80	80	10	500	40W	25c	30	90	10	500		175					57A	2.6		
2N 1049B	Ti		N	S	80	80	10	750	40W	25c	30	90	10	500		175					57A	2.6		
2N 1050	Ti		N	S	120	120	6	500	40W	25c	30	90	10	500		175					57A	2.6		
2N 1050A	Ti		N	S	120	120	10	500	40W	25c	30	90	10	500		175					57A	2.6		
2N 1050B	Ti		N	S	120	120	10	750	40W	25c	30	90	10	500		175					57A	2.6		
2N 1050C	Ti		N	S	120	80			40W	(200)	30	90		500		175					57A	2.6		
2N 1051	We		N	S	40	40			500	(150)		>25		50	80						2			
2N 1052	Tr		N	S	200	200			0.6	(200)	20	80		200							3			
2N 1054	Tr		N	S	125	115			800	(200)		>20		200	8						3			
2N 1055	Tr		N	S	100	100			5.5	(200)	20	80		50	3						3			
2N 1056	Ge		P	G	70	50			240	(100)	18	43		20							1			
2N 1057	Ge		P	G	45	45			240	(100)	34	90		20							1			
2N 1058	Sy		N	G	20	20			50	(75)											1			
2N 1059	Sy		N	G	40	15			180	(75)											1			
2N 1060	We		N	S	40	40			250	(150)		>17		5							5			
2N 1066	Rc		P	G	40	40	0.5	10	120	(100)	20	175	12	1.5							33A	5		
2N 1067	Rc		N	S	60	30	12	500	5W	(175)	15	75		200							8A	6		
2N 1068	Rc		N	S	60	30	12	1.5A	10W	(175)	15	75		750							8A	6		
2N 1069	Rc		N	S	60	45		4A	50W	(175)	20	50		1.5A							3A	6		
2N 1070	Rc		N	S	60	45	9	4A	50W	(175)	20	50		1.5A							3A	6		
2N 1072	We		N	S	75	30			2W	(150)		>20		750							6			
2N 1073	Mo		P	G	40	40	1.5	10A	85W	(110)	20	60	2	5A							41A	2		
2N 1073A	Mo		P	G	80	80	1.5	10A	85W	(110)	20	60	2	5A							41A	2		
2N 1073B	Mo		P	G	120	120	1.5	10A	85W	(110)	20	60	2	5A							41A	2		
2N 1074			N	S	50	40			250	(160)		(>9)									1			
2N 1075			N	S	50	35			250	(160)		(>18)									1			
2N 1076			N	S	50	30			250	(160)		(>36)									1			
2N 1077			N	S	50	35			250	(160)		(>9)									1			
2N 1078			P	G	60	60			20W	(85)		>40		500							2			
2N 1079	Tr		N	S	60	60			60W	(200)	20	80		1A	10						4			
2N 1080	Tr		N	S	60	60			60W	(200)	20	80		2A	10						4			
2N 1081	N		N	S	40	40			6	(200)	20	100		500							5			
2N 1082			N	S	25	25			200	(200)	10	50		10							3			
2N 1086	Ge		N	G	9	9			65	(85)	17	195		1							3			
2N 1086A	Ge		N	G	9	9			65	(85)	17	195		1							3			
2N 1087	Ge		N	G	9	9			65	(85)	17	195		1							3			
2N 1090	Rc		N	G	25	15	20	400	120	(85)		>30	0.2	20							5A	5		
2N 1091	Rc		N	G	25	12			120	(85)		>40	0.2	20							5A	5		
2N 1092	Rc		N	G	60	30	12	500	2W	(175)	15	75		200							5A	6		
2N 1093	Ti		P	G	30	15			150	(95)	50	150		20							1			
2N 1094	We		P	G	30	15			150	(100)		>15		4							3			
2N 1097	Ge		P	G	18	18			200	(100)	34	90		20							1			
2N 1098	Ge		P	G	18	18			200	(100)	25	90		20							1			
2N 1099	Mo		P	G	80		40		170W	(110)	35	70	2	5A							36A	2		
2N 1100	Ph		P	G			80		150W		25	50	2	5A							(15μs)	36A	2	
2N 1101	Sy		N	G	20	15			180	(75)	25	50		35							1			
2N 1102	Sy		N	G	40	25			180	(75)	25	50		35							1			
2N 1103			N	S	45	35			125	(150)	30	65		10							1			
2N 1104			N	S	45	35			125	(150)	45	150		10							1			
2N 1105			N	S	60	60			800	(200)	12	36		200							1			
2N 1106	Ti		N	S	100	100			800	(200)	12	36		200							1			
2N 1107	Ti		P	G	16				30												3			
2N 1108	Ti		P	G	16				30												3			
2N 1109	Ti		P	G	16				30												3			
2N 1110	Ti		P	G	16				30												3			
2N 1111																								

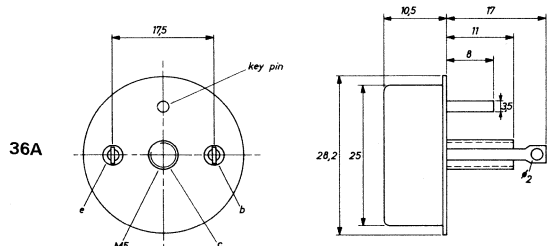
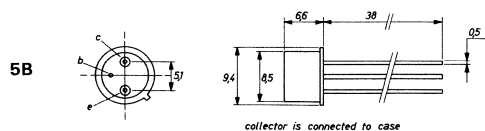
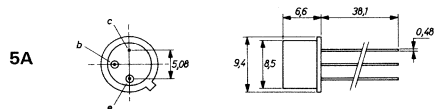
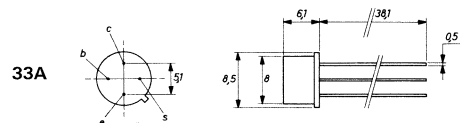
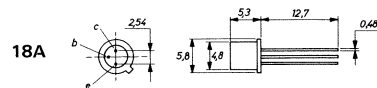
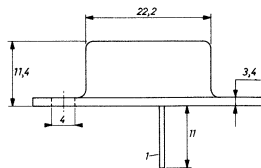
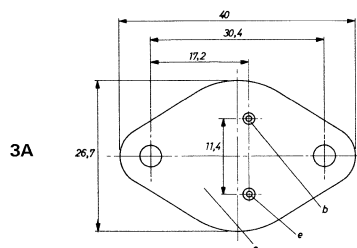
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V_{cbo} V	V_{ceo} V	V_{ebo} V	I_c (I_{cm}) mA	P_{tot} mW	t (tj)	h_{FE} min	(h_{fe}) type max	V_{ce} (V_{cb}) V	I_c (I_e) mA	F_T	R_{thj-a} (η) °C/W	F (C_c)	f MHz	t_{on} (tr)			
2N 1125			P	G	40	40			300	(85)	50	150		500							5	6
2N 1126			P	G	40	35			1W	(85)		>40		500							6	1
2N 1127			P	G	40	40			1W	(85)	50	150									1	1
2N 1128			P	G	25	18			150	(85)		>70		200								
2N 1129			P	G	25	25			150	(85)	100			100								
2N 1130			P	G	30				150	(85)	50	165		100							1	1
2N 1131			P	S	50	35	5	600	2W	25c	20	45	10	150						39A	5	5
2N 1131A			P	S	60	40			600	(175)	20	45		50						39A	1	6
2N 1132			P	S	50	35	5	600	2W	25c	30	90	10	150								
2N 1132A			P	S	60	40	5	600	2W	(175)	30	90	10	150								
2N 1132B			P	S	70	45			600	(175)	30	90		150							5	5
2N 1135			P	S	12	12			100	(140)				5,6							5	5
2N 1135A			P	S	12	12			100	(140)				5,6							2	2
2N 1136			P	G	60	35	15	3A		(100)		100	5	3A						3A	2	2
2N 1136A			P	G	90	55	15	3A		(100)	50	100	5	3A						3A	2	2
2N 1136B			P	G	100	75	15	3A		(100)	50	100	5	3A						3A	2	2
2N 1137			P	G	60	25	15	3A		(100)	75	150	5	3A						3A	2	2
2N 1137A			P	G	90	55	15	3A		(100)	75	150	5	3A						3A	2	2
2N 1137B			P	G	100	65	15	3A		(100)	75	150	5	3A						3A	2	2
2N 1138			P	G	60	40	15	3A		(100)	100	200	5	3A						3A	2	2
2N 1138A			P	G	90	70	15	3A		(100)	100	200	5	3A						3A	2	2
2N 1138B			P	G	100	80	15	3A		(100)	100	200	5	3A						3A	2	2
2N 1139			N	S	15	15			6,6	(175)	20	200		10						5A	3	3
2N 1141			P	G	35		1	100	750	(100)		25	10	10							5	5
2N 1141A			P	G	35	25			750	(100)		>15	10	10							3	3



Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	(h _{fe}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 1142	Mo		P	G	30		0.7	100	750	(100)		25		10	10						5A	3		
2N 1142A			P	G	30	25			750	(100)		>15										5A	3	
2N 1143	Mo		P	G	25		0.5	100	750	(100)		25		10	10							5A	3	
2N 1143A			P	G	30	25			750	(100)		>15			10								3	
2N 1144	Ge		P	G	16	16			750	(100)					10								1	
			P	G	30	25			175	(85)	34	90			20									
2N 1145	Ge		P	G	16	16			175	(85)	25	90			20								1	
2N 1146	It		P	G	40	20			87W	(95)	60	150			5A								6	
2N 1146A	It		P	G	60	30			87W	(95)	60	150			5A								6	
2N 1146B	It		P	G	80	40			87W	(95)	60	150			5A								6	
2N 1146C	It		P	G	100	50			87W	(95)	60	150			5A								6	
2N 1147	So		P	G	40	30	30	5A	87W	(95)	60	150	2	2	5A		45					3A	6	
2N 1147A	So		P	G	60	45	30	5A	87W	(95)	60	150	2	2	5A		45					3A	6	
2N 1147B	So		P	G	80	60	30	5A	87W	(95)	60	150	2	2	5A		45					3A	6	
2N 1147C	So		P	G	100	75	30	5A	87W	(95)	60	150	2	2	5A		45					3A	6	
2N 1149	Ti		N	S	45				150	(175)	9	20			25								1	
2N 1150	Ti		N	S	45				150	(175)	18	40			25								1	
2N 1151	Ns		N	S	45				150	(175)	18	90			25								1	
2N 1152	Ns		N	S	45				150	(175)	36	90			25								1	
2N 1153	Ns		N	S	45				150	(175)	76	333			25								1	
2N 1154	Ns		N	S	50				750	(150)		>9			60								1	
2N 1155	Ns		N	S	80				750	(150)		>9			50								1	
2N 1156	Ns		N	S	120				750	(150)		>9			40								1	
2N 1157	So		P	G	60	45	45A		187W	(100)	38	84			10A		0.75						6	
2N 1157A	So		P	G	80	50	45A		187W	(100)	38	84			10A		0.75						6	
2N 1158			P	G	20	20			60	(100)		>5.7											3	
2N 1158A			P	G	20	20			75	(100)		>9											3	
2N 1159	So		P	G	80	60	20	3A	35W	(95)	30	75	2	2	3A		45					3A	6	
2N 1160	So		P	G	80	60	20	5A	35W	(95)	20	50	2	2	5A		45					3A	6	
2N 1162	Mo		P	G	50	35	25		106W	(110)	15	125	2	2	5A							3A	6	
2N 1162A	Mo		P	G	50	35	25		106W	(110)	65	125	2	2	5A							3A	6	
2N 1163	Mo		P	G	50	35	25		106W	(110)	15	125	2	2	5A							41A	6	
2N 1163A	Mo		P	G	50	35	25		106W	(110)	65	125	2	2	5A							41A	6	
2N 1164	Mo		P	G	80	60	40		106W	(110)	15	125	2	2	5A							3A	6	
2N 1164A	Mo		P	G	80	60	40		106W	(110)	65	125	2	2	5A							3A	6	
2N 1165	Mo		P	G	80	60	40		106W	(110)	15	125	2	2	5A							41A	6	
2N 1165A	Mo		P	G	80	60	40		106W	(110)	65	125	2	2	5A							41A	6	
2N 1166	Mo		P	G	100	75	50		106W	(110)	15	125	2	2	5A							3A	6	
2N 1166A	Mo		P	G	100	75	50		106W	(110)	65	125	2	2	5A							3A	6	
2N 1167	Mo		P	G	100	75	50		106W	(110)	15	125	2	2	5A							41A	6	
2N 1167A	Mo		P	G	100	75	50		106W	(110)	65	125	2	2	5A							41A	6	
2N 1168	So		P	G	50	30	20	1A	45W	(95)	70	110	2	2	1A		45					3A	2	
2N 1169	Rc		N	G	40	20	25	400	120	(71)		>20			200							5A	5	
2N 1170	Rc		N	G	40	20	40	400	120	(71)		>20			200							5A	5	
2N 1171			P	G	30	12			170	(85)		>30			30								5	
2N 1172			P	G	40	30				(95)	30	90			100								5	
2N 1173			N	G	35	20			250	(100)	50	200			10								5	
2N 1174			P	G	35	20			250	(100)	50	200			10								5	
2N 1175	Ge		P	G	35	25	10	200	200	(85)	70	140	1	1	20							5A	1	
2N 1175A	Ge		P	G	35	25	10	200	200	(85)	70	140	1	1	20							5A	1	
2N 1176			P	G	10	10			300	(85)		>20											1	
2N 1177	Rc		P	G	30			10	80	(71)		>100		12	1	140						45A	3	
2N 1178	Rc		P	G	30			10	80	(71)		>40		12	1	140						45A	3	
2N 1179	Rc		P	G	30			10	80	(71)		>80		12	1	140						45A	3	
2N 1180	Rc		P	G	30			10	80	(71)		>80		12	1	100						45A	3	
2N 1182			P	G	50	60			106W	(100)	30	85			500								6	
2N 1183	Rc		P	G	45	20	20	3A	1W	(100)	20	60	2	2	400		0.5					8A	6	
2N 1183A	Rc		P	G	60	30	20	3A	1W	(100)	20	60	2	2	400		0.5					8A	6	
2N 1183B	Rc		P	G	80	40	20	3A	1W	(100)	20	60	2	2	400		0.5					8A	6	
2N 1184	Rc		P	G	45	20	20	3A	1W	(100)	40	120	2	2	400		0.5					8A	6	
2N 1184A	Rc		P	G	60	30	20	3A	1W	(100)	40	120	2	2	400		0.5					8A	6	
2N 1184B	Rc		P	G	80	40	20	3A	1W	(100)	40	120	2	2	400		0.5					8A	6	
2N 1185	Mo		P	G	45	30			500	(100)		170		1	10		375					5A	1	
2N 1186	Mo		P	G	60	45	30		500	(100)		44		1	10		375					5A	1	
2N 1187	Mo		P	G	60	45	30		500	(100)		75		1	10		375					5A	1	
2N 1188	Mo		P	G	60	45	30		500	(100)		115		1	10		375					5A	1	
2N 1189	Mo		P	G	45	30	15		500	(100)		115		1	10		375					5A	1	
2N 1190	Mo		P	G	45	30	15		500	(100)		170		1	10		375					5A	1	
2N 1191	Mo		P	G	40	25	25		200	(100)	20	80	1	1	10		375					5A	1	
2N 1192	Mo		P	G	40	25	25		200	(100)	40	135	1	1	10		375					5A	1	
2N 1193	Mo		P	G	40	25	25		200	(100)	70	300	1	1	10		375					5A	1	
2N 1194	Mo		P	G	40	25	25	200	200	(100)	125	600	1	1	10		375					5A	1	
2N 1195	Mo		P	G	30			40		(100)		25		10	10							5A	3	
2N 1196			P	S	70	70			350	(200)	5	30			2								3	
2N 1197			P	S	70	70			350	(200)	5	30			2								3	
2N 1198	Ge		N	G	25	25			65	(85)	17	90			8								5	
2N 1199			N	S	20	15			150	(150)	12	60			20		75						5	
2N 1199A			N	S	20	15			150	(150)	12	60			20		75						5	
2N 1200			N	S</																				

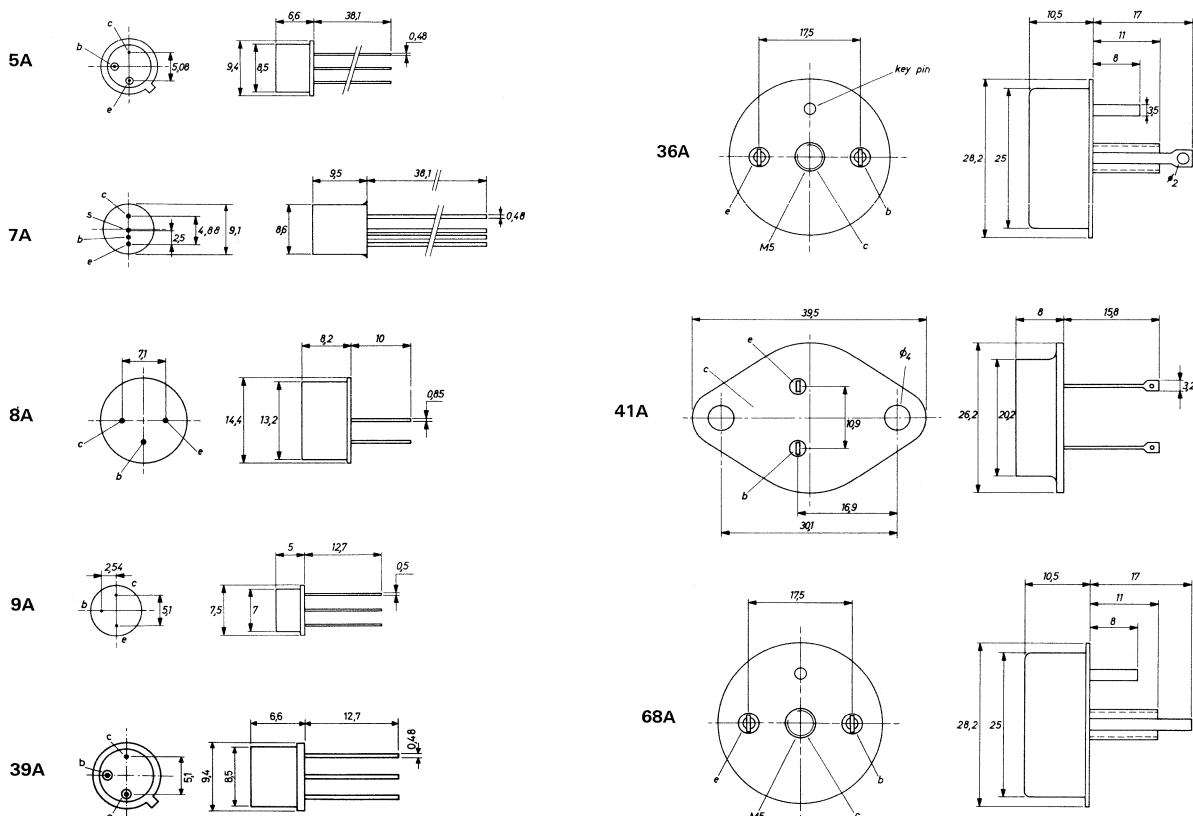
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type		
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _d)	f MHz	ton (tr)							
2N 1254	Tr		P	S	30	30			275	(200)	25	50		10	30									5		
2N 1255	Tr		P	S	30	30			275	(200)	40	80		10	50									5		
2N 1256	Tr		P	S	40	40			275	(200)	25	50		10	30									5		
2N 1257	Tr		P	S	40	40			275	(200)	40	80		10	50									5		
2N 1258	Tr		P	S	30	30			275	(200)	75	150		10	50									5		
2N 1259	Tr		P	S	50	50			275	(200)	25	100		10	40									5		
2N 1260	Tr		N	S	120	120			85W	(200)	12	60		1A										2		
2N 1261	So		P	G	80	45	5A	34W	(95)	20	50	2	2A	0.2										6		
2N 1262	So		P	G	80	45	5A	34W	(95)	30	75	2	2A	0.2										6		
2N 1263	So		P	G	80	45	5A	34W	(95)	45	113	2	2A	0.2										6		
2N 1264	Sy		P	G	20				50	(75)		(>15)												3		
2N 1265			P	G	12	10			50	(85)		(>25)												3		
2N 1266			P	G	10				80	(85)		(>10)												3		
2N 1267			N	S	20	15			150	(150)	4	15	1.5											3		
2N 1268			N	S	20	15			150	(150)	7	30	1.5											3		
2N 1269	Ti		N	S	20	15			150	(150)	20	80	1.5											3		
2N 1270			N	S	20	15			150	(150)	4	16	1.5											3		
2N 1271			N	S	20	15			150	(150)	7	30	1.5											3		
2N 1272			N	S	20	15			150	(150)	20	80	1.5											3		
2N 1273			P	G	15	15	200	250	(100)	27	165		50								5A	1				
2N 1274		Ti	P	G	25	25	200	250	(100)	27	165		50								5A	1				
2N 1275		So	P	G	100	80	60	250	(160)	9	25	0.5	1								18A					
2N 1276		Ti	N	S	40	30		150	(150)		(>9)											1				
2N 1277		Ti	N	S	40	30		150	(150)		(>18)											1				
2N 1278		Ti	N	S	40	30		150	(150)		(>37)											1				
2N 1279	Ti		N	S	40	30		150	(150)		(>76)													1		
2N 1280			P	G	16	16		200	(85)		>40		20											5		
2N 1281			P	G	16	12		200	(85)		>60		20											5		
2N 1282			P	G	16	6		200	(85)		>70		20											5		
2N 1284			P	G	20	15		150	(85)	30	150		10											5		
2N 1285	Sy		P	G	40	40		240	(71)	30	100	1.5											3			
2N 1287			P	G	25	25		300	(85)		(>40)												1			
2N 1287A			P	G	25	25		300	(85)		(>60)												1			
2N 1288		Ge	N	G	15	10		75	(100)	50	300		10										5			
2N 1289	Ge		N	G	20	15		75	(85)	50	300		10										5			
2N 1291	Sy		P	G	35	30		20W	(85)		>40		500										2			
2N 1292			N	G	35	30		25W	(100)		>30		500										2			
2N 1293			P	G	60	60		20W	(85)		>40		500										2			
2N 1294	Sy		N	G	60	45		25W	(100)		>30		500										2			
2N 1295			P	G	80	80		20W	(85)		>40		500										2			
2N 1296	Sy		N	G	80	60		25W	(100)		>30		500										2			
2N 1297			P	G	100	100		20W	(85)		>40		500										2			
2N 1298			N	G	100	80		25W	(100)		>30		500										2			
2N 1299		Sy	N	G	40	20		150	(100)	35	110		50										5			
2N 1300	Rc		P	G	13	12	1	100	150	(85)		>30	3	10	25	400					5A		5			
2N 1301	Ph	Rc	P	G	13	12	4	100	150	(85)		>30	3	10	35	400						5A	5			
2N 1302		Ph	N	G	25	25	25	200	150	25a		>20	1	10	>3	400	(<20p)		(220ns)		5B	5		2N 1303		
2N 1303		Ph	P	G	30	25	25	200	150	25a		>20	1	10	>3	400	(<20p)		(300ns)		5B	5		2N 1302		
2N 1304		Ph	N	G	25	20	25	200	150	25a	40	100	1	10	>5	400	(<20p)		(210ns)		5B	5		2N 1305		
2N 1305		Ph	P	G	30	20	25	200	150	25a	40	100	1	10	>5	400	(<20p)		(200ns)		5B	5		2N 1304		
2N 1306	Ph		N	G	25	15	25	200	150	25a	60	200	1	10	>10	400	(<20p)		(170ns)		5B	5		2N 1307		
2N 1307		Ph	P	G	30	15	25	200	150	25a	80	200	1	10	>10	400	(<20p)		(180ns)		5B	5		2N 1306		
2N 1308		Ph	N	G	25	15	25	200	150	25a	80	300	1	10	>15	400	(<20p)		(165ns)		5B	5		2N 1309		
2N 1309		Ph	P	G	30	15	25	200	150	25a	80	300	1	10	>15	400	(<20p)		(155ns)		5B	5		2N 1308		
2N 1309A			P	G	35	15		150	(85)		>80		10											5		
2N 1312	Ti		N	G	50	50		120	(85)		>20		20											5		
2N 1313			P	G	30	15		180	(100)	40	125		1A											5		
2N 1314			P	G	40	40		125W	(90)	20	55		1A											2		
2N 1315			P	G	32	16		125W	(90)	45	135													5		
2N 1316			P	G	30	15		200	(85)	50	200															
2N 1317	Rc		P	G	20	12		200	(85)	45	180													5		
2N 1318			P	G	10	6		200	(85)	40	150													5		
2N 1319			P	G	20	20	20	120	(71)		>15		400	3							5A		5			
2N 1320			P	G	35	30		20W	(85)		>40		500											2		
2N 1321			N	G	35	30		25W	(100)		>30		500											2		
2N 1322			P	G	60	60		20W	(85)		>40		500											2		
2N 1323			N	G	60	45		25W	(100)		>30		500											2		
2N 1324			P	G	80	80		20W	(85)		>40		500											2		
2N 1325			N	G	80	60		25W	(100)		>30		500											2		
2N 1326			P	G	100	100		20W	(85)		>40		500											2		
2N 1327			N	G	100	80		25W	(100)		>30		500											2		
2N 1328			P	G	35	30		20W	(85)		>40		500											2		
2N 1329			N	G	35	30		25W	(100)		>30		500													

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS								Case	Use	Compl. (Equival.) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz				ton (tr)
2N 1342			N	S	150	65			800	(175)	10		150			70						4	
2N 1343			P	G	20	16			150	(85)		>15		30								5	
2N 1344			P	G	15	10			150	(85)		>60		20								5	
2N 1345			P	G	10	8			150	(85)	30		100	400								5	
2N 1346			P	G	12	10			150	(85)	40		250	0.35								5	
2N 1347			P	G	20	12			150	(85)		>30		10								5	
2N 1352			P	G	30	20			150	(85)	40		100									1	
2N 1353			P	G	15	10			200	(85)	25		150	10								5	
2N 1355			P	G	30	20			200	(85)	30		150	10								5	
2N 1356			P	G	30	20			200	(100)	40		140	10								5	
2N 1357			P	G	30	15			200	(85)	40		150	10								5	
2N 1358	Mo		P	G	80		60			(110)	40		80	2		1.2A					36A	5	
2N 1359	Mo		P	G	50	40	25	3A	106W	(110)	35		90	4		1A					3A	2, 6	
2N 1360	Mo		P	G	50	40	25	3A	106W	(110)	60		140	4		1A					3A	2, 6	
2N 1361			P	G	25	20			150	(100)	40		100	25								5	
2N 1362	Mo		P	G	100	75	50	3A	106W	(110)	35		90	4		1A					3A	2, 6	
2N 1363	Mo		P	G	100	75	50	3A	106W	(110)	60		140	4		1A					3A	2, 6	
2N 1364	Mo		P	G	120	100	60	3A	106W	(110)	35		90	4		1A					3A	2, 6	
2N 1365	Mo		P	G	120	100	60	3A	106W	(110)	60		140	4		1A					3A	2, 6	
2N 1366			N	G	18	18			100	(85)		>20		1		5						1	
2N 1367			N	G	18	18			100	(85)		>10		1		2.5						1	
2N 1370	Ti		P	G	25	25			250	(100)	45		165	50								1	
2N 1371	Ti		P	G	45	45		200	250	(100)	45		165	50							5A	1	
2N 1372	Ti		P	G	25	25	15	200	250	(100)	25		105	1		50					5A	1	
2N 1373	Ti		P	G	45	45	25	200	250	(100)	27		105	1		50					5A	1	
2N 1374	Ti		P	G	25	25	15	200	250	(100)	45		165	1		50					5A	1	
2N 1375	Ti		P	G	45	45	25	200	250	(100)	45		165	1		50					5A	1	
2N 1376	Ti		P	G	25	25	15	200	250	(100)	67		165	1		50					5A	1	
2N 1377	Ti		P	G	45	45	25	200	250	(100)	67		165	1		50					5A	1	
2N 1378	Ti		P	G	12	12	7	200	250	(100)	85		330	1		50					5A	1	
2N 1379	Ti		P	G	25	25	15	200	250	(100)	85		330	1		50					5A	1	
2N 1380	Ti		P	G	12	12	7	200	250	(100)	27		330	1		50					5A	1	
2N 1381	Ti		P	G	25	25	15	200	250	(100)	27		330	1		50					5A	1	
2N 1382	Ti		P	G	25	25			250	(100)	45		165	50								1	
2N 1383	Ti		P	G	25	25			250	(100)	27		165	50								1	
2N 1384	Rc		P	G	30	30	1	500	240	(85)		>20		200		20					36A	5	
2N 1385	Ti		P	G	25	10			750	(100)		>10		10		250						5	
2N 1386			N	S	25	25			300	(175)	30		90	10								5	
2N 1387			N	S	30	30			300	(175)	20		40	10								5	
2N 1388			N	S	45	25			300	(175)	15		55	10								3	
2N 1389			N	S	50	50			300	(175)			150			24						3	
2N 1390			N	S	20	20			300	(175)	30		160	10								3	
2N 1391			N	G	25	18			150	(100)	40		160	20								1	
2N 1395	Rc		P	G	40	40	0.5	10	120	(100)	50		175	12		1.5					33A	3	
2N 1396	Rc		P	G	40	40	0.5	10	120	(100)	50		175	12		1.5					33A	3	
2N 1397	Rc		P	G	40	40	0.5	10	120	(100)	50		175	12		1.5					33A	3	
2N 1398	Ti		P	G	30	20			50	(85)		>10		0.5		140						3	
2N 1399	Ti		P	G	30	20			50	(85)		>3.5		0.5		140						3	
2N 1400	Ti		P	G	30	20			50	(85)	5		12	0.5		100						3	
2N 1401	Ti		P	G	30	20			50	(85)		>5		0.5		120						3	



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)						
2N 1402	Ti		P	G	30	20			50	(85)	3.5	12		1.5	100								3		
2N 1403	Ti		P	G	15	12			250	(100)	25	250		7	200								3		
2N 1404			P	G	25				150	(85)													5		
2N 1404A			P	G	25	15			150	(85)	30	200		12	3								5		
2N 1405	Ti		P	G	30	20			75	(100)	10	200		2	250								3		
2N 1406	Ti		P	G	30	20			75	(100)	10	200		2	250								3		
2N 1407	Ti		P	G	30	20			75	(100)	10	200		2	200								3		
2N 1408	Mo		P	G	50	50	10	200	150	(100)		>10	1	1								5A	5		
2N 1409			N	S	30	25			600	(200)	15	45		150	200								5		
2N 1409A			N	S	30	25			800	(200)	15	45		150	200								5		
2N 1410			N	S	45	30			600	(200)	30	90		150	130								5		
2N 1410A			N	S	30	30			800	(200)	30	90		150	130								5		
2N 1411			P	G	5	5			25	(85)		>20		50	25								5		
2N 1412	Mo		P	G	100	60	60		25	(100)	25	50	2	5A								36A	5		
2N 1413	Mo		P	G	35	25	10	500	225	(100)	25	42	1	20								5A	5		
2N 1414	Mo		P	G	35	25	10	500	225	(100)	34	65	1	20								5A	5		
2N 1415	Mo		P	G	35	25	10	500	225	(100)	53	90	1	20								5A	5		
2N 1416			P	G		18			100	(65)		>39											1		
2N 1417	Tr		N	S	15	15			150	(150)		>30											1		
2N 1418	Tr		N	S	30	30			150	(150)		>30											1		
2N 1419			P	G	80	40			87W	(95)	40	100		25A								5A	6		
2N 1420			N	S	60		5	1A	600	25A	100	300	10	150									1, 5		
2N 1420A			N	S	60	40			800	(200)	100	300		150	60								3		
2N 1421			N	S	60	60			30W	(200)	20	80		1A	10								4		
2N 1422			N	S	60	60			30W	(200)	20	80		1A	10								4		
2N 1423			N	S	60	60			60W	(200)	20	80		2A	10								4		
2N 1424			N	S	60	60			60W	(200)	20	80		2A	10								4		
2N 1425	Rc		P	G	24		0.5	10	80	(85)		>50										7A	1		
2N 1426	Rc		P	G	24		0.5	10	80	(85)		>130										7A	1		
2N 1427	Sp		P	G	6	6			25	(100)		>20		50	50								5		
2N 1428			P	S	6	6			100	(140)		>12		5	16								5		
2N 1429			P	S	6	6			100	(140)		>12		5	16								5		
2N 1430	So		P	G	120	100		10A	70W	(110)	30	90	2	5A	0.6							5A	6		
2N 1431	Sy		N	G	20	15			180	(75)	75	150		35								41A	1		
2N 1432	Sy		N	G	45	45			100	(100)		>30											1		
2N 1433			P	G	80	50				(95)	20	50		2A									2		
2N 1434			P	G	80	50				(95)	45	115		2A									2		
2N 1435			P	G	80	50				(95)	30	75		2A									2		
2N 1436			P	G	15	12			50	(100)		>20		10									5		
2N 1437			P	G	100	90			23W	(95)		>20		500									2		
2N 1438			P	G	100	90			23W	(95)		>20		500									2		
2N 1439	So		P	S	50	50	50		400	(200)	(9	22)	6	1								5A	1		
2N 1440	So		P	S	60	50	60		400	(200)	(9	22)	6	1								5A	1		
2N 1441	So		P	S	50	35	50		400	(200)	(18	45)	6	1								5A	1		
2N 1442	So		P	S	50	30	50		400	(200)	(30	65)	6	1								5A	1		
2N 1443	So		P	S	50	15	50		400	(200)		>50	6	1								5A	1		
2N 1444	We		N	S	60	20			500	(150)		>20		250									5		
2N 1445	Tr		N	S	120	120			4W	(200)	20	80		200									2		
2N 1446			P	G	45	25			200	(85)	16	45		20									1		
2N 1447			P	G	45	25			200	(85)	35	65		20									1		
2N 1448			P	G	45	25			200	(85)	50	90		20									1		
2N 1449			P	G	45	25			200	(85)	70	125		20									1		
2N 1450	Rc		P	G	30	20	1	100	120	(85)		>20		10								9A	5		
2N 1451			P	G	45	20			200	(85)	20	65		20									1		
2N 1452			P	G	45	20			200	(85)	30	90		20									1		
2N 1453			P	G	30	20				(90)	40	90		1A									2		
2N 1454			P	G	30	20				(90)	70	150		1A									2		
2N 1455			P	G	60	40				(90)	40	90		1A									2		
2N 1456			P	G	60	40				(90)	70	150		1A									2		
2N 1457			P	G	80	60				(90)	40	90		1A									2		
2N 1458			P	G	80	60				(90)	70	150		1A									2		
2N 1461			P	G	30	20				(90)	40	90		1A									2		
2N 1462			P	G	30	20				(90)	70	150		1A									2		
2N 1463			P	G	60	40				(90)	40	90		1A									2		
2N 1464			P	G	60	40				(90)	70	150		1A									2		
2N 1465			P	G	120	70			20W	(85)		>20		500									2		
2N 1466			P	G	120	70			20W	(85)		>20		500									2		
2N 1469	So		P	S	40	35	40		250	(175)	(36	88)	6	1								5A	1		
2N 1470			N	S	60	60			55W	(200)		>15		1A									2		
2N 1471			P	G	12	15			200	(85)		>100											5		

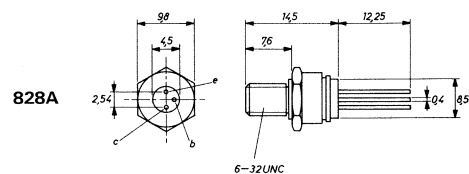
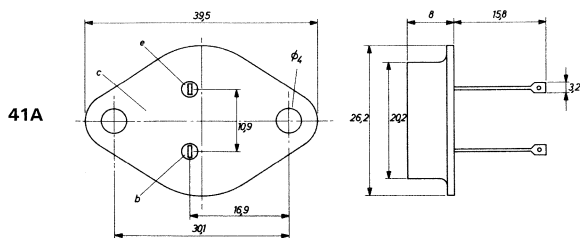
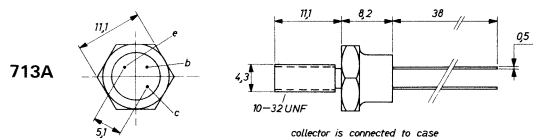
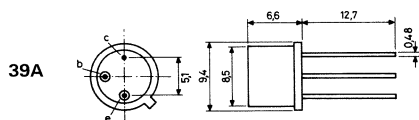
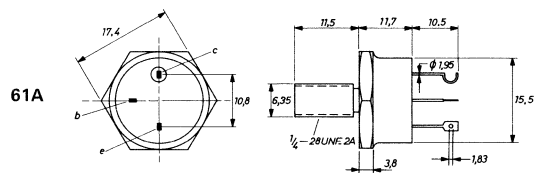
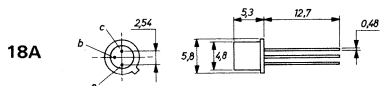
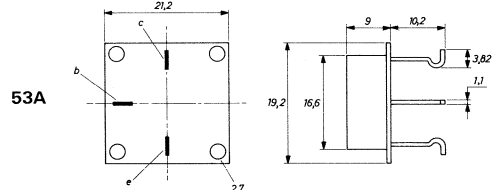
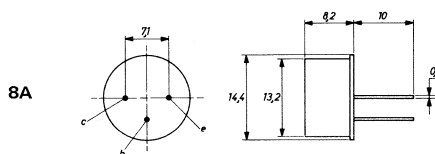
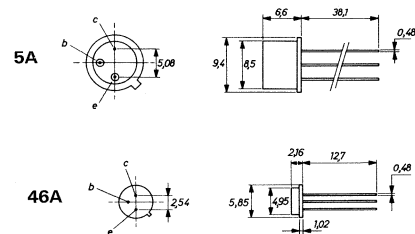
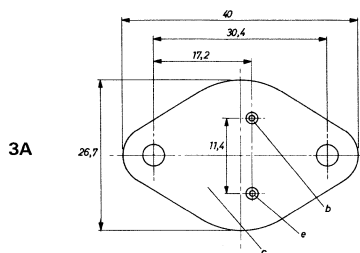
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo}	V _{ceo}	V _{ebo}	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE}	(h _{fe})	V _{ce}	I _c	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
					V	V	V			min	type	max	(V _{cb}) V	(I _e) mA									
2N 1486	Rc		N	S	100	100	2.5	3A	25W	(200)	35		100	4	750		100				8A	6	
2N 1487	Ti		N	S	60	60			75W	(200)	15		45		200							6	
2N 1488	Ti		N	S	100	100			75W	(200)	15		45		200							6	
2N 1489	Ti		N	S	60	60			75W	(200)	25		75		1.5A							6	
2N 1490	Ti		N	S	100	100			75W	(200)	25		75		1.5A							6	
2N 1491	Rc		N	S	30	30	1	100	3W	(175)	(15		200)	20	15	300					39A	3	
2N 1492	Rc		N	S	60	60	2	100	3W	(175)	(15		200)	20	15	300					39A	3	
2N 1493	Rc		N	S	100	100	4.5	100	3W	(175)	(15		200)	20	15	300					39A	3	
2N 1494	Mo		P	G	20	20	4	500	750	(100)		35		1.5	400							5	
2N 1494A	Mo		P	G	20	15	4	500	750	(100)		>25		0.5	200							5	
2N 1495	Mo		P	G	40	25	4	500	750	(100)		>25		0.5	200						5A	5	
2N 1495A			P	G	40	25			250	(100)		>25			200		150					5	
2N 1496	Mo		P	G	40	25	4	500	750	(100)		>25		0.5	200							5	
2N 1499			P	G	25	15			25	(85)		>20			10							5	
2N 1499A	Sp		P	G	20	20			60	(100)		>30			10		100					5	
2N 1499B	Sp		P	G	30	20			75	(100)		>40			10		150					5	
2N 1500	Sp		P	G	15	12			60	(100)		>20			10		120					5	
2N 1501	So		P	G	60	40	25		34W	(95)	25		100	2	2A		0.2					6	
2N 1502	So		P	G	40	40	25		34W	(95)	25		100	2	2A		0.2					6	
2N 1504			P	G	80	60			25W	(95)		>21			500							2	
2N 1505	Ns		N	S	50	20			800	(175)	7		100		100		70					4	
2N 1506	So		N	S	60	40	4	2A	800	(175)	10		100		100		140					4	
2N 1506A	So		N	S	80	80	5	2A	800	(200)			10		100		140					4	
2N 1507	Ti		N	S	60	60	5	1A	600	25a	100		300	10	150							1.5	
2N 1508	Ti		N	S	100	55			1W	(175)	20		60		600		50					6	
2N 1509	Ti		N	S	60	35			1W	(175)	20		60		600		50					6	
2N 1511	Rc		N	S	60	60	60	6A	75W	(200)		>4			6A		0.3					6	
2N 1512	Rc		N	S	100	100	100	6A	75W	(200)		>7			6A		0.3					6	
2N 1513	Rc		N	S	60	60	60	6A	75W	(200)		>7			6A		0.3					6	
2N 1514	Rc		N	S	100	100	100	6A	75W	(200)		>7			6A		0.3					6	
2N 1516			P	G	25				83	(75)		>20			1							3	
2N 1518	So		P	G	50	40		65A	50W	(95)	15		60		15A							6	
2N 1519	So		P	G	80	60		65A	50W	(95)	15		60		15A							6	
2N 1520	So		P	G	50	40		65A	50W	(95)	17		68		35A							6	
2N 1521	So		P	G	80	60		65A	50W	(95)	17		68		35A							6	



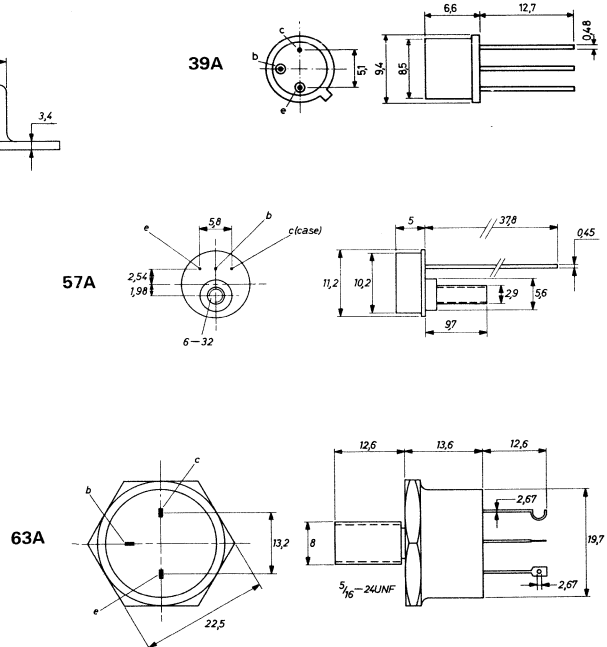
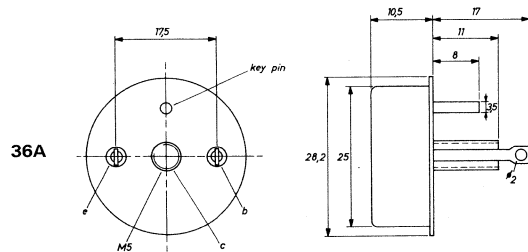
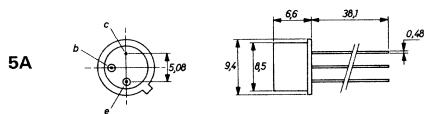
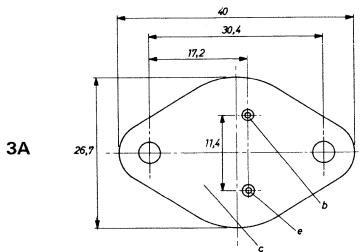
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _B) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 1522	So		P	G	50	40		65A	50W	(95)	25	100		50A								68A	6	
2N 1523	So		P	G	80	60		65A	50W	(95)	25	100		50A								68A	3	
2N 1524	Rc		P	G	24		0.5	10	80	(85)		>60	12	1		400						1A	6	
2N 1525	Rc		P	G	24		0.5	10	80	(85)		>60	12	1								40A	3	
2N 1526	Rc		P	G	24		0.5	10	80	(85)		>130	12	1								1A	3	
2N 1527	Rc		P	G	24		0.5	10	80	(85)		>130	12	1								40A	3	
2N 1528			N	S	25	25		150	(175)			>10										3	3	
2N 1529	Mo		P	G	40	20	20	5A	106W	(110)	20	40	2	3A								3A	2.6	
2N 1529A	Mo		P	G	40	20	20	5A	106W	(110)	20	40	2	3A								41A	2.6	
2N 1530	Mo		P	G	60	30	30	5A	106W	(110)	20	40	2	3A								3A	2.6	
2N 1530A	Mo		P	G	60	30	30	5A	106W	(110)	20	40	2	3A								41A	2.6	
2N 1531	Mo		P	G	80	40	40	5A	106W	(110)	20	40	2	3A								3A	2.6	
2N 1531A	Mo		P	G	80	40	40	5A	106W	(110)	20	40	2	3A								41A	2.6	
2N 1532	Mo		P	G	100	50	50	5A	106W	(110)	20	40	2	3A								3A	2.6	
2N 1532A	Mo		P	G	100	50	50	5A	106W	(110)	20	40	2	3A								41A	2.6	
2N 1533	Mo		P	G	120	60	60	5A	106W	(110)	20	40	2	3A								3A	2.6	
2N 1533A	Mo		P	G	120	60	60	5A	106W	(110)	20	40	2	3A								41A	2.6	
2N 1534	Mo		P	G	40	20	20	5A	106W	(110)	35	70	2	3A								3A	2.6	
2N 1534A	Mo		P	G	40	20	20	5A	106W	(110)	35	70	2	3A								41A	2.6	
2N 1535	Mo		P	G	60	30	30	5A	106W	(110)	35	70	2	3A								3A	2.6	
2N 1535A	Mo		P	G	60	30	30	5A	106W	(110)	35	70	2	3A								41A	2.6	
2N 1536	Mo		P	G	80	40	40	5A	106W	(110)	35	70	2	3A								3A	2.6	
2N 1536A	Mo		P	G	80	40	40	5A	106W	(110)	35	70	2	3A								41A	2.6	
2N 1537	Mo		P	G	100	50	50	5A	106W	(110)	35	70	2	3A								3A	2.6	
2N 1537A	Mo		P	G	100	50	50	5A	106W	(110)	35	70	2	3A								41A	2.6	
2N 1538	Mo		P	G	120	60	60	5A	106W	(110)	35	70	2	3A								3A	2.6	
2N 1539	Ti		P	G	40	30	20	5A	106W	(100)	50	100	2	3A		200k						41A	2.6	
2N 1539A	Mo		P	G	40	20	20	5A	106W	(110)	50	100	2	3A								3A	2	
2N 1540	Ti		P	G	60	45	30	5A	106W	(100)	50	100	2	3A		200k						3A	2	
2N 1540A	Mo		P	G	60	30	30	5A	106W	(110)	50	100	2	3A								41A	2.6	
2N 1541	Ti		P	G	80	60	40	5A	106W	(100)	50	100	2	3A		200k						3A	2	
2N 1541A	Mo		P	G	80	40	40	5A	106W	(110)	50	100	2	3A								41A	2.6	
2N 1542	Ti		P	G	100	75	50	5A	106W	(100)	50	100	2	3A		200k						3A	2	
2N 1542A	Mo		P	G	100	50	50	5A	106W	(110)	50	100	2	3A								41A	2.6	
2N 1543	Ti		P	G	120	90	60	5A	106W	(100)	50	100	2	3A		200k						3A	2	
2N 1543A	Mo		P	G	120	60	60	5A	106W	(110)	50	100	2	3A								41A	2.6	
2N 1544	Mo		P	G	40	20	20	5A	106W	(110)	75	150	2	3A								3A	2.6	
2N 1544A	Mo		P	G	40	20	20	5A	106W	(110)	75	150	2	3A								41A	2.6	
2N 1545	Mo		P	G	60	30	30	5A	106W	(110)	75	150	2	3A								3A	2.6	
2N 1545A	Mo		P	G	60	30	30	5A	106W	(110)	75	150	2	3A								41A	2.6	
2N 1546	Mo		P	G	80	40	40	5A	106W	(110)	75	150	2	3A								3A	2.6	
2N 1546A	Mo		P	G	80	40	40	5A	106W	(110)	75	150	2	3A								41A	2.6	
2N 1547	Mo		P	G	100	50	50	5A	106W	(110)	75	150	2	3A								3A	2.6	
2N 1547A	Mo		P	G	100	50	50	5A	106W	(110)	75	150	2	3A								41A	2.6	
2N 1548	Mo		P	G	120	60	60	5A	106W	(110)	75	150	2	3A								3A	2.6	
2N 1548A	Mo		P	G	120	60	60	5A	106W	(110)	75	150	2	3A								41A	2.6	
2N 1549	Mo		P	G	40	20	20	15A	106W	(110)	10	30	2	10A								3A	2.6	
2N 1549A	Mo		P	G	40	20	20	15A	106W	(110)	10	30	2	10A								41A	2.6	
2N 1550	Mo		P	G	60	30	30	15A	106W	(110)	10	30	2	10A								3A	2.6	
2N 1550A	Mo		P	G	60	30	30	15A	106W	(110)	10	30	2	10A								41A	2.6	
2N 1551	Mo		P	G	80	40	40	15A	106W	(110)	10	30	2	10A								3A	2.6	
2N 1551A	Mo		P	G	80	40	40	15A	106W	(110)	10	30	2	10A								41A	2.6	
2N 1552	Mo		P	G	100	50	50	15A	106W	(110)	10	30	2	10A								3A	2.6	
2N 1552A	Mo		P	G	100	50	50	15A	106W	(110)	10	30	2	10A								41A	2.6	
2N 1553	Mo		P	G	40	20	20	15A	106W	(110)	30	60	2	10A								3A	2.6	
2N 1553A	Mo		P	G	40	20	20	15A	106W	(110)	30	60	2	10A								41A	2.6	
2N 1554	Mo		P	G	60	30	30	15A	106W	(110)	30	60	2	10A								3A	2.6	
2N 1554A	Mo		P	G	60	30	30	15A	106W	(110)	30	60	2	10A								41A	2.6	
2N 1555	Mo		P	G	80	40	40	15A	106W	(110)	30	60	2	10A								3A	2.6	
2N 15515A	Mo		P	G	80	40	40	15A	106W	(110)	30	60	2	10A								41A	2.6	
2N 1556	Mo		P	G	100	50	50	15A	106W	(110)	30	60	2	10A								3A	2.6	
2N 1556A	Mo		P	G	100	50	50	15A	106W	(110)	30	60	2	10A								41A	2.6	
2N 1557	Mo		P	G	40	20	20	15A	106W	(110)	50	100	2	10A								3A	2.6	
2N 1557A	Mo		P	G	40	20	20	15A	106W	(110)	50	100	2	10A								41A	2.6	
2N 1558	Mo		P	G	60	30	30	15A	106W	(110)	50	100	2	10A								3A	2.6	
2N 1558A	Mo		P	G	60	30	30	15A	106W	(110)	50	100	2	10A								41A	2.6	
2N 1559																								

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{th-j-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 1643	So		P	S	25	25	20		250	(160)	10		25								5A	1	
2N 1644	We		N	S	60	40			2W	(175)	40		120		150	50						6	
2N 1645	Tr		P	S	35	20			1W	(200)		>20			200	450						4	
2N 1647	Tr		N	S	80	80			267	(175)	15		45		500	3						4	
2N 1648	Tr		N	S	120	80			267	(175)	15		45		500	2						4	
2N 1649	Tr		N	S	80	80			267	(175)	30		90		500	3						4	
2N 1650	Tr		N	S	120	80			267	(175)		>30			500	2						4	
2N 1651	Mo		P	G	60	30	1.5	25A	106W	(110)	25		140	2	10A							6	
2N 1652	Mo		P	G	100	60	1.5	25A	106W	(110)	25		140	2	10A							6	
2N 1653	Mo		P	G	120	80	1.5	25A	106W	(110)	25		140	2	10A							6	
2N 1654	So		N	S	100	80	60		250	(180)	20		45	0.5	1							18A	2
2N 1655	So		N	S	125	100	125		250	(180)	10		22	0.5	1							18A	2
2N 1656	Se		N	S	125	100			250	(180)	20		45		1							2	
2N 1657			N	S	60	60			(200)	7.3	30				850							2	
2N 1660			N	S	60	60			85W	(200)	45		135		1A	25						2	
2N 1661			N	S	80	80			85W	(200)	45		135		1A	25						2	
2N 1662			N	S	100	100			85W	(200)	45		135		1A	25						2	
2N 1663			N	S	20	15			150	(150)	30		150		20	100						5	
2N 1664	P		G	45	40				200	(100)	45		120		10							1	
2N 1665	P		G	15	12				150	(85)	5		100		10	300						3	
2N 1666	P		G	80	60				30W	(90)	15		30		6A							6	
2N 1667	P		G	60	48				30W	(90)	35		80		6A							6	
2N 1668	P		G	60	48				30W	(90)	20		45		6A							6	
2N 1669	P		G	80	60				30W	(90)	20		65		6A							6	
2N 1670	P		G	100					120	(85)		>15			10							5	
2N 1672			N	G	40	40			120	(85)		>20			1								
2N 1672A			N	G	40	40			120	(85)		>20			1								
2N 1673	Sy		P	G	35				80	(85)		>20										3	
2N 1674	Tr		N	S	45	45			200	(200)		>50				20						1	
2N 1675	We		N	S	100	100			50W	(150)	25		100		1A	120						6	
2N 1676	Sp		P	S	4.5	4.5			100	(140)						16						5, 15	
2N 1677	Sp		P	S	4.5	4.5			100	(140)						16						5, 15	
2N 1678			P	G	60	60			120	(85)		>25			20							5	
2N 1679			N	S	100	55			1W	(175)	40		120		600	50						6	
2N 1680			N	S	60	35			1W	(175)	40		120		600	50						6	
2N 1681			P	G	30	15			180	(100)	30		120		10							5	
2N 1682			N	S	25	20			500	(175)		>20		0.5	10	200						5	
2N 1683	Rc		P	G	13	12	4	100	150	(85)		>50			40	50						5	
2N 1684	Sy		P	G	25	25			100	(100)					30							5	
2N 1685	Sy		P	G	25	20			100	(100)	60		180		30							5	
2N 1690	Ti		N	S	80	80			40W	(200)	20		60		500							2	
2N 1691	Ti		N	S	120	120			40W	(200)	20		60		500							2	
2N 1692	Mo		P	G	25	25	3	250	3W	(100)						500						4	
2N 1693	Mo		P	G	25	25	2	250	3W	(100)						450						4	
2N 1694	Ge		N	G	20	20			75	(85)	17		50		1							5	
2N 1699	Sy		P	G	40	40			100	(100)	20		175		1.5							3	
2N 1700	Rc		N	S	60	60	6	1A	5W	(200)	20		80	4	100	400						6	
2N 1701	Rc		N	S	60	60	6	2.5A	25W	(200)	20		80	4	300	100						6	
2N 1702	Rc		N	S	60	60	6	5A	75W	(200)	15		60	4	800							6	
2N 1703	Rc		N	S	60	60			75W	(200)	15		60		800							6	
2N 1704			N	S	45	45			3.3	(175)	50		200		1							5	
2N 1705	Mo		P	G	18	12	5	400	200	(100)	70		150	6	1							1	
2N 1706	Mo		P	G	25	18	5	400	200	(100)	60		120	1	20							5A	1
2N 1707	Mo		P	G	30	25	10	400	200	(100)	40		150	5	10							5A	1
2N 1708	Mo		N	S	25	12	3	200	1W	(175)		>20		1	10	200						6	
2N 1708A			N	S	40	20			300	(175)	30		120		10	300						5	
2N 1709			N	S	75	30			15W	(175)	7.5		75		350	175						4	
2N 1710			N	S	80	30			15W	(175)	4		100		350	140						4	
2N 1711	Ph		N	S	75		7	(1A)	3W	25c	100		300	10	150	>70	220	<8	1k		39A	3, 5	
2N 1711	Ti		N	S	75		7	1A	800	25a	(70)		300	10	5		<8	1k			5A	3, 5	
2N 1711A	Ti		N	S	75	50			1W	(200)	100		300		150	70						3	
2N 1711B			N	S	120	55			1W	(200)	100		300		150							3	
2N 1713			P	G	30	12			80	(85)		>20			1.5								
2N 1714	Ti		N	S	90	60	6	750	10W	100c	20		60	5	200		175					5A	2
2N 1715	Ti		N	S	150	100	6	750	10W	100c	20		60	5	200		175					5A	2
2N 1716	Ti		N	S	90	60	6	750	10W	100c	40		120	5	200		175					5A	2
2N 1717	Ti		N	S	150	100	6	750	10W	100c	40		120	5	200		175					5A	2
2N 1718	Ti		N	S	90	60	6	750	10W	100c	20		60	5	200		75					713A	2
2N 1719	Ti		N	S	150	100	6	750	10W	100c	20		60	5	200		75					713A	2
2N 1720	Ti		N	S	90	60	6	750	10W	100c	40		120	5	200		75					713A	2
2N 1721	Ti		N	S	150	100	6	750	10W	100c	40		120	5	200		75					713A	2
2N 1722	Ti		N	S	80				5A	50W	100c	20	90	15	2A		>10					53A	4
2N 1722A	Ti		N	S	180	120	10	5A	50W	100c	30		90	15	2A		>10	50				53A	4
2N 1723	Ti		N	S	120	80	10	5A	50W	100c	50		150	15	2A		>10	50				53A	4
2N 1724	Ti		N	S		80	10	5A	50W	100c	20		90	15	2A		>10					61A	4
2N 1724A	Ti		N	S	180	120	10	5A	50W	100c	30		90	15	2A		>10	50				61A	4
2N 1725	Ti		N	S	120	80	10	5A	50W	100c	50		150	15	2A		>10	50				61A	4
2N 1726	Sp		P	G	20	20			60	(100)		>50			1							4	
2N 1727	Sp		P	G	20	20			60	(100)		>20			1							3	
2N 1728	Sp		P	G	20	20			60	(100)		>20			1							3	
2N 1729			P	G	25	15			150	(85)		>30			100							5	

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V_{cbo} V	V_{ceo} V	V_{ebo} V	I_c (I_{cm}) mA	P_{tot} mW	t (tj)	h_{FE} min	(h_{FE}) type	h_{FE} max	V_{ce} (V_{cb}) V	I_c (I_e) mA	F_T	R_{thja} (η) °C/W	F (C_c)	f MHz	τ_{on} (tr)			
2N 1743	Sp		P	G	20	20			60	(125)		>10		2								3	
2N 1744	Sp		P	G	20	20			60	(125)		>10		2								3	
2N 1745	Sp		P	G	20	20			60	(100)		>10		2								3	
2N 1746	Sp		P	G	20	20			60	(100)		>10		1								3	
2N 1747	Sp		P	G	20	20			60	(100)		>10		1								3	
2N 1748	Sp		P	G	25	25			60	(100)		>30				80						3	
2N 1748A	Sp		P	G	25	25			60	(100)		>50				100						3	
2N 1749	Sp		P	G	40	40			75	(100)		>30				80						3	
2N 1750			P	G	14	6			15	(75)	18		40		0,5							1	
2N 1751	Mo		P	G	80	60	2,5	25A	106W	(110)	30		90	1,5	20A							6	
2N 1752	Sp		P	G	12	12			60	(100)		>50										1	
2N 1753			P	G	30	18			30	(85)	50		220		0,1							3	
2N 1754	Sp		P	G	13	13			50	(85)		>20			10							5	
2N 1755			P	G	40	35			28W	(95)	30		75		500							6	
2N 1756			P	G	60	50			28W	(95)	30		75		500							6	
2N 1757			P	G	80	65			28W	(95)	30		75		500							6	
2N 1758			P	G	100	75			28W	(95)	30		75		500							6	
2N 1759			P	G	40	35			28W	(95)	60		150		500							6	
2N 1760			P	G	60	50			28W	(95)	60		150		500							6	
2N 1761			P	G	80	65			28W	(95)	60		150		500							6	

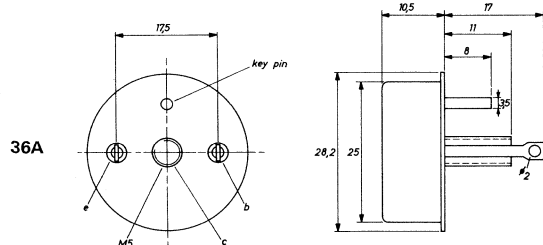
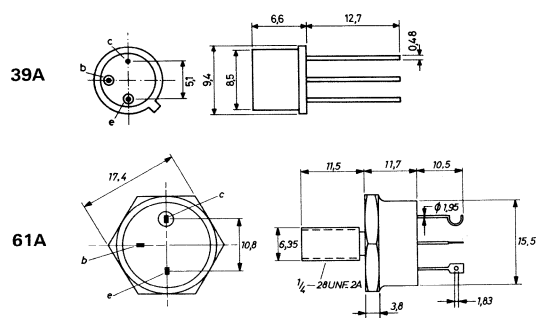
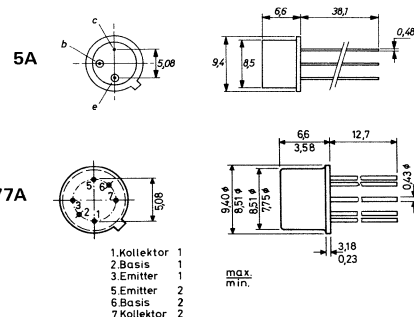
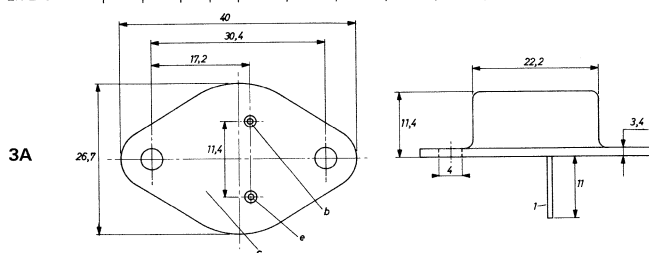


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 1923	Mo	P	N	S	85	85			750	(150)	4	90										1	
2N 1924			P	G	60	40	25	500	225	(100)	34	65	1	20								2	
2N 1925			P	G	60	40	25	500	225	(100)	53	90	1	20								2	
2N 1926			P	G	60	40	25	500	225	(100)	72	121	1	20								2	
2N 1936			N	S	125	60	6	20A	150W	100c	10	50	10	10A	>18	37,5				(40ns)	63A	2	
2N 1937	Ti	N	P	S	125	80	6	20A	150W	100c	10	50	10	10A	>18	37,5				(40ns)	63A	2	
2N 1940			P	G	30	15			3,6W	(100)		>5		40								4	
2N 1941			P	S	45	30			600	(175)	30	150		10	60							1	
2N 1942			P	G	20	10			200	(85)	20	60		200								5	
2N 1943			N	S	60	60			800	(200)	30	90		200								1	
2N 1944	N	S	N	S	20	20			600	(175)	150	450	1	60								5	
2N 1945			N	S	30	30			600	(175)	150	450	1	60								5	
2N 1946			N	S	40	40			600	(175)	150	450	60	60								5	
2N 1947			N	S	20	20			600	(175)	500	800	100	60								5	
2N 1948			N	S	30	30			600	(175)	500	800	100	60								5	
2N 1949	N	S	N	S	40	40			600	(175)	500	800	100	60								5	
2N 1950			N	S	20	20			600	(175)	250	500	100	60								5	
2N 1951			N	S	30	30			600	(175)	250	500	100	60								5	
2N 1952			N	S	40	40			600	(175)	250	500	100	60								5	
2N 1953			N	S	20	20			600	(175)	15	150		10	40							1	
2N 1954	P	G	N	S	60	20			200	(100)	30	120	20									5	
2N 1955			P	G	60	18			200	(100)	50	200	20									5	
2N 1956			P	G	60	16			200	(100)	30	120	20									5	
2N 1957			P	G	60	14			200	(100)	30	120	20									5	
2N 1958			N	S	60	40			600	(175)	20	60	150	100								5	
2N 1958A	Sy	N	N	S	60	40			600	(175)	20	60	10	150	100							5	
2N 1959			N	S	60	40	5	500	2W	(175)	40	120	150	100								6	
2N 1959A			N	S	60	40			600	(175)	40	120	150	100								5	
2N 1960			P	G	15	15			150	(100)		>25	10									5	
2N 1961			Sy	G	12	12			150	(100)		>20	10									5	
2N 1962	Sy	N	N	S	40	20			400	(175)	20	60	10	200								5	
2N 1963			N	S	30	15			400	(175)		>25	10	200								5	
2N 1964			N	S	60	40			400	(175)	20	60	150	100								5	
2N 1965			N	S	60	40			400	(175)	40	120	150	100								5	
2N 1969			P	G	30	15			150	(85)	50	200	0,2									5	
2N 1970	Mo	P	N	S	100	50	40	15A	170W	(110)	17	40	2	5A								6	
2N 1971			P	G	80	40	40	5A		(100)	25	60	2	500								2	
2N 1972			Tr	N	S	60	30		600	(175)	110	350	50	50								3	
2N 1973			N	S	100	80			800	(200)		>75	10	60								1	
2N 1974			Ti	N	S	100	80		800	(200)		>35	10	50								1	
2N 1975	Ti	N	N	S	100	80			800	(200)		>15	10	40								1	
2N 1978			Fa	N	S	60	40		30W	(200)		>20	500	40								4	
2N 1980			P	G	50	30	20	15A	170W	(110)	50	100	2	5A								6	
2N 1981			P	G	70	40	20	15A	170W	(110)	50	100	2	5A								6	
2N 1982			P	G	90	50	20	15A	170W	(110)	50	100	2	5A								6	



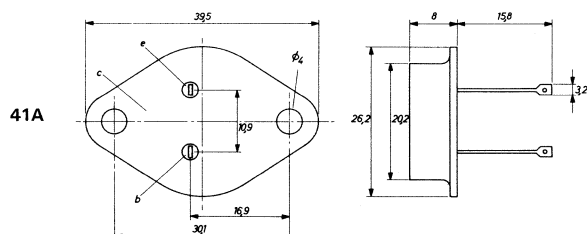
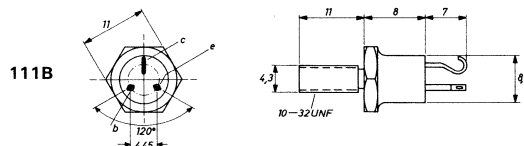
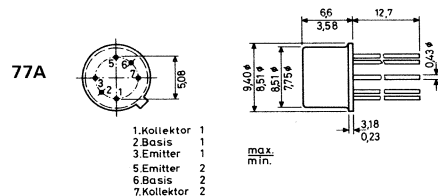
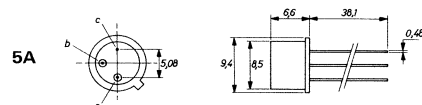
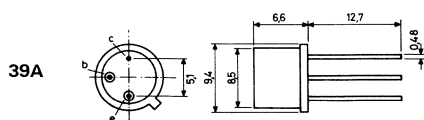
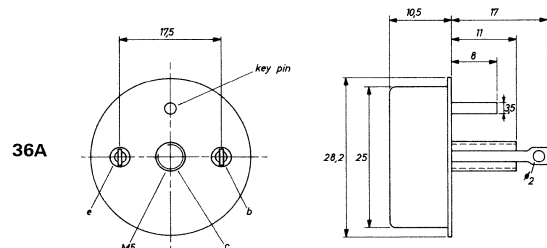
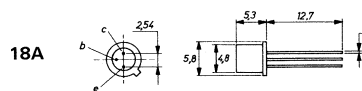
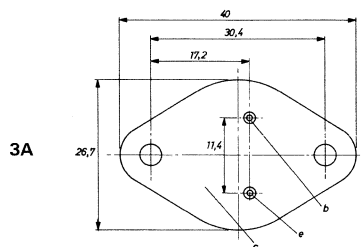
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _b) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 1983	Mo		N	S	50	25	5	1A	2W	(150)	(70	210)	5	1	40	208				5A	1		
2N 1984	Mo		N	S	50	25	5	1A	2W	(150)	(35	100)	5	1	40	208				5A	1		
2N 1985	Fa		N	S	50	25			600	(150)	(>15)				40						1		
2N 1986	Fa		N	S	50	25			600	(150)	60	240			40						3		
2N 1987	Fa		N	S	50	25			600	(150)	20	80			150						3		
2N 1988	Fa		N	S	100	45			600	(150)	35	120			40						3		
2N 1989	Fa		N	S	100	45			600	(150)	20	60			40						3		
2N 1990	Mo		N	S	100		3	1A	2W	(150)	>20		10	30		208				39A	6		
2N 1991	Mo		P	S	30	20	5	600	2W	(175)	15	60	10	150						5A	6		
2N 1992	Mo		N	S	15	15			350	(200)	30	120	10	1	300						5		
2N 1993			N	G	30	18			150	(100)	50	300			10						5		
2N 1994	Ti		N	G	30	15			150	(85)		>15			10						5		
2N 1995	Ti		N	G	25	15			150	(85)		>25			10						5		
2N 1996	Ti		N	G	20	15			150	(85)		>35			10						5		
2N 1997	Ti		P	G	45	40	45	500	250	(100)	40	200	1	100						5A	5		
2N 1998	Ti		P	G	35	35	30	500	250	(100)	70	225	1	100	5.6					5A	5		
2N 1999	Ti		P	G	30	20	20	500	250	(100)	100	350	1	100	10					5A	5		
2N 2000	Ti		P	G	50	20	7	1A	300	(100)	50	300	0.3	100						5A	5		
2N 2001	Ti		P	G	30	20		1A	300	(100)		>100	0.3	100						5A	5		
2N 2002	So		P	S	30	5	30		250	(200)										5A	5, 15		
2N 2003	So		P	S	30	5	30		250	(200)										5A	5, 15		
2N 2004	So		P	S	50	15	50		250	(175)		>12		1						5A	5, 15		
2N 2005	So		P	S	50	15	50		250	(200)										5A	5, 15		
2N 2006	So		P	S	60	35	60		250	(200)										5A	5, 15		
2N 2007	So		P	S	60	35	60		250	(200)										5A	5, 15		
2N 2008			N	S	175	110			800	(200)	30	90		10	40						1		
2N 2015	Rc		N	S	100	50	10	10A	150W	(200)	15	50	4	5A						36A	2		
2N 2016	Rc		N	S	130	65	10	10A	150W	(200)	15	50	4	5A						36A	2		
2N 2017	Ns		N	S	60	60			1W	(200)	50	200		200							1		
2N 2018	Tr		N	S	150	150			20W	(175)	20	60		500	2						4		
2N 2019	Tr		N	S	200	200			20W	(175)	20	60		500	2						4		
2N 2020	Tr		N	S	150	125			20W	(175)	40	90		500	3						4		
2N 2021	Tr		N	S	200	140			20W	(175)	40	90		500	3						4		
2N 2022	P		N	S	15	12			150	(100)	25	150		10	250						5		
2N 2032	Tr		P	N	45	45			45W	(200)		>20		2A	3						4		
2N 2033	So		N	S	80	60	10	2A	5W	(200)	20	60		500	1	20				5A	6		
2N 2034	So		N	S	80	60	10	2A	14W	(200)	20	60		1A	1	20				5A	6		
2N 2035			N	S	80	60			17W	(200)	20	60		1.5A	1						6		
2N 2036			N	S	80	60			17.5W	(200)	20	60		2A	1						6		
2N 2038	Tr		N	S	45	45			600	(200)	12	36		200	2						3		
2N 2039	Tr		N	S	75	75			600	(200)	12	36		200	2						3		
2N 2040	Tr		N	S	45	45			600	(200)	30	90		200	2						3		
2N 2041	Tr		N	S	75	75			600	(200)	30	90		200	2						3		
2N 2042	Mo		P	G	105	105	75	200	200	(100)	20	50	0.35	5		375				5A	1, 5		
2N 2043	Mo		P	G	105	105	75	200	200	(100)	40	100	0.35	5		375				5A	1, 5		
2N 2048	Sp		P	G	20	15			150	(100)	50	300		10	150						5		
2N 2048A			P	G	30	20			150	(100)	50	300		10	150						5		
2N 2049	Fa		P	N	75	50			800	(200)	100	300		150	50						5		
2N 2059			P	G	10	8			60	(100)		>20		10							5		
2N 2060	Ti	du	N	S	100	60	7	500	(600)	25a	50	150	5	10	50		(>0.9)	<8	1k	77A	16		
2N 2061			P	G	20	10			40W	(85)	10	60		500							6		
2N 2061A	It		P	G	20	15			90W	(100)	20	60		2A							6		
2N 2062			P	G	20	10			40W	(85)	20	200		2A							6		
2N 2062A	It		P	G	20	15			90W	(100)	50	140		2A							6		
2N 2063			P	G	40	15			35W	(95)	10	200		2A							6		
2N 2063A	It		P	G	40	20			90W	(100)	20	60		2A							6		
2N 2064			P	G	40	15			35W	(95)	20	200		2A							6		
2N 2064A	It		P	G	40	20			90W	(100)	50	140		2A							6		
2N 2065			P	G	80	25			35W	(95)	10	200		2A							6		
2N 2065A	It		P	G	80	40			90W	(100)	20	60		2A							6		
2N 2066			P	G	80	25			35W	(95)	20	200		2A							6		
2N 2066A	It		P	G	80	40			90W	(100)	50	140		2A							6		
2N 2067			P	G	40	25			28W	(95)	20	100		500							6		
2N 2068			P	G	80	55			28W	(95)	20	100		500							6		
2N 2069			P	G	40	30			70W	(95)	30	200		5A							6		
2N 2070			P	G	80	60			70W	(95)	30	200		5A							6		
2N 2071			P	G	40	30			70W	(95)	30	200		5A							6		
2N 2072			P	G	80	60			70W	(95)	30	200		5A							6		
2N 2075	Mo		P	G	80	65	40	15A	170W	(110)	25	100	2	1.2A						36A	2		
2N 2075A	Mo		P	G	80	80			170W	(110)	20	40		5A							2		
2N 2076	Mo		P	G	70	55	35	15A	170W	(110)	25	100	2	1.2A						36A	2		
2N 2076A	Mo		P	G	70	70			170W	(110)	20	40		5A							2		
2N 2077	Mo		P	G	50	45	25	15A	170W	(110)	25	100	2	1.2A						36A	2		
2N 2077A	Mo</																						

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 2084	Ns		P	G	40	20			125	(100)	40	250	1									3		
2N 2085		N	G	33	23			150	(100)	50	300	10										1		
2N 2086		N	S	120	80			600	(175)		>20	150	150									5		
2N 2087		N	S	120	80			600	(175)	40	120	150	150									5		
2N 2089		P	G	20	20			100	(85)		>40	1	44									3		
2N 2090			P	G	20	20			100	(85)		>40	1	44								3		
2N 2091			P	G	20	20			100	(85)		>40	1	44								3		
2N 2092			P	G	20	20			100	(85)		>40	1	44								3		
2N 2093	Sp		P	G	25	25			100	(85)		>40	1									3		
2N 2095		P	G	30	15			1W	(100)				500									4		
2N 2096	Mo		P	G	25	12	4	500	750	(100)	15	35	1.5	400										
2N 2097	Mo		P	G	40	20	4	500	750	(100)	20	50	1.5	400								3		
2N 2098	Sp		P	G	30	15			1W	(100)				500								5		
2N 2099	Mo		P	G	25	12	4	500	750	(100)	15	35	1.5	400								5		
2N 2100	Mo		P	G	40	20	4	500	750	(100)	30	70	1	200								5A 5A		
2N 2100A	Sp So Ti Ti		P	G	40	20			300	(100)		>20		400									5	
2N 2101		N	S	60	40	10	10A	1W	25A	(200)	15	60	15	1A	0.25	2							2	
2N 2102		N	S	120	65	7	1A	1W	25A	(200)	40	120	10	150		175	<6	1k					1	
2N 2102A		N	S	120	65	7	1A	1W	25A	(200)	40	120	10	150		175	<6	1k					1	
2N 2104		P	S	50	35				3W	(200)	25	80		150		60								6
2N 2105			P	S	50	35			3W	(200)	15	40		150		50							6	
2N 2106	Ge Ge Ge Wh		N	S	60	60			1W	(150)	12	36		200									1	
2N 2107		N	S	60	60			1W	(150)	30	90		200										1	
2N 2108		N	S	60	60			1W	(150)	75	200		200										1	
2N 2109		N	S	50	50			250W	(175)		>10		10A										6	
2N 2110	Wh		N	S	100	100			250W	(175)		>10		10A									6	
2N 2111		N	S	150	150			250W	(175)		>10		10A										6	
2N 2112		N	S	200	200			250W	(175)		>10		10A										6	
2N 2113		N	S	250	250			250W	(175)		>10		10A										6	
2N 2114		N	S	300	300			250W	(175)		>10		10A										6	
2N 2116	Wh		N	S	50	50			250W	(175)		>10		15A									6	
2N 2117	Wh		N	S	100	100			250W	(175)		>10		15A									6	
2N 2118	Wh		N	S	150	150			250W	(175)		>10		15A									6	
2N 2119	Wh		N	S	200	200			250W	(175)		>10		15A									6	
2N 2120	Wh		N	S	250	250			250W	(175)		>10		15A									6	
2N 2121	Wh		N	S	300	300			250W	(175)		>10		15A									6	
2N 2123		N	S	50	50			250W	(175)		>10		20A										6	
2N 2124		N	S	100	100			250W	(175)		>10		20A										6	
2N 2125		N	S	150	150			250W	(175)		>10		20A										6	
2N 2126		N	S	200	200			250W	(175)		>10		20A										6	
				N	S	250	250			250W	(175)		>10		20A									6
2N 2127			N	S	300	300			250W	(175)		>10		20A									6	
2N 2128			N	S	50	50			250W	(175)		>10		25A									6	
2N 2130	Wh		N	S	100	100			250W	(175)		>10		25A									6	
2N 2131	Wh		N	S	150	150			250W	(175)		>10		25A									6	
2N 2132	Wh		N	S	150	150			250W	(175)		>10		25A									6	
2N 2133	Wh		N	S	200	200			250W	(175)		>10		25A									6	
2N 2134		N	S	250	250			250W	(175)		>10		25A										6	
2N 2135		N	S	300	300			250W	(175)		>10		25A										6	
2N 2137		P	G	30	30			62W	(100)				500										2	
2N 2137A		Mo		P	G	30	20	15		70W	(110)	30	60	2	500								2	



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 2138	Mo		P	G	45	45			62W	(100)	30		60		500							3A	2	
2N 2138A	Mo		P	G	44	30	25		70W	(110)	30		60	2	500							3A	2	
2N 2139	Mo		P	G	60	60			62W	(100)	30		60		500							3A	2	
2N 2139A	Mo		P	G	60	45	30		70W	(110)	30		60	2	500							3A	2	
2N 2140	Mo		P	G	75	75			62W	(100)	30		60		500							3A	2	
2N 2140A	Mo		P	G	75	60	40		70W	(110)	30		60	2	500							3A	2	
2N 2141	Mo		P	G	90	90			62W	(100)	30		60		500							3A	2	
2N 2141A	Mo		P	G	90	65	45		70W	(110)		22		2	2A							3A	2	
2N 2142	Mo		P	G	30	30			62W	(100)	50		100		500							3A	2	
2N 2142A	Mo		P	G	30	20	15		70W	(110)		33		2	2A							3A	2	
2N 2143	Mo		P	G	45	45			62W	(100)	50		100		500							3A	2	
2N 2143A	Mo		P	G	45	30	25		62W	(110)		33		2	2A							3A	2	
2N 2144	Mo		P	G	60	60			70W	(100)	50		100		500							3A	2	
2N 2144A	Mo		P	G	60	45	30		70W	(110)		33		2	2A							3A	2	
2N 2145	Mo		P	G	75	75			62W	(100)	50		100		500							3A	2	
2N 2145A	Mo		P	G	75	60	40		70W	(110)		33		2	2A							3A	2	
2N 2146	Mo		P	G	90	90			62W	(100)	50		100		500							3A	2	
2N 2146A	Mo		P	G	90	65	45		70W	(110)		33		2	2A							3A	2	
2N 2147	Rc		P	G	75	50	1.5	5A	12W	(100)	100		300	2	1A							3A	2	
2N 2148	Rc		P	G	60	40	1.5	5A	12W	(100)	40		160	2	1A	4						3A	2	
2N 2150	Ti		N	S	125	80	8	2A	30W	100c	20		60	5	1A		75			130ns	111B	4		
2N 2151	Ti		N	S	125	80	8	2A	30W	100c	40		120	5	1A		75			130ns	111B	4		
2N 2152	Mo		P	G	45	30	25	30A	170W	(110)	50		100	2	5A							36A	2	
2N 2152A	Mo		P	G	45	30			170W	(110)	50		100		5A							36A	2	
2N 2153	Mo		P	G	60	45	30	30A	170W	(110)	50		100	2	5A							36A	2	
2N 2153A	Mo		P	G	60	45			170W	(110)	50		100		5A								2	
2N 2154	Mo		P	G	75	60	40	30A	170W	(110)	50		100	2	5A							36A	2	
2N 2154A	Mo		P	G	75	60			170W	(110)	50		100		5A								2	
2N 2155	Mo		P	G	90	90			170W	(110)	50		100		5A								2	
2N 2155A	Mo		P	G	90	65			170W	(110)	50		100		5A								2	
2N 2165	Mo		P	G	45	30	25	30A	170W	(110)	80		160	2	5A							36A	2	
2N 2156A	Mo		P	G	45	30			170W	(110)	80		160		5A								2	
2N 2157	Mo		P	G	60	45	30	30A	170W	(110)	80		160	2	5A							36A	2	
2N 2157A	Mo		P	G	60	45			170W	(110)	80		160		5A								2	
2N 2158	Mo		P	G	75	60	40	30A	170W	(110)	80		160	2	5A							36A	2	
2N 2158A	Mo		P	G	75	60			170W	(110)	80		160		5A								2	
2N 2159	Mo		P	G	90	90			170W	(110)	80		160		5A								2	
2N 2159A	Mo		P	G	90	65			170W	(110)	80		160		5A								2	
2N 2161		N	S	55	35				200	(150)	60		160		10							5		
2N 2162	Sp		P	G	30	30			150	(140)						14						5, 15		
2N 2163	Sp		P	G	15	15			150	(140)						14							5, 15	
2N 2164	Sp		P	G	12	8			150	(140)						24							5, 15	
2N 2165	Sp		P	G	30	30			150	(140)						10							5, 15	
2N 2166	Sp		P	G	15	15			150	(140)						10							5, 15	
2N 2167	Sp		P	G	12	8			150	(140)						16							5, 15	
2N 2168	Sp		P	G	20	15			60	(100)		>50			10								5	
2N 2169	Sp		P	G	15	15			60	(100)		>40			10								5	
2N 2170	Sp		P	G	15	10			60	(100)		>20			10								5	
2N 2171	Mo		P	G	50	25	20	400	500	(100)	110		250	1	20							5A	2, 5	
2N 2172			P	G	20	15			200	(85)	30		150		10								5	
2N 2173			P	G	25	15			240	(100)		>30			200								5	
2N 2175	Sp		P	S	6	6	6		400	(175)		>30	1.5		10							5A	1	
2N 2176	So		P	S	6	6	6		385	(175)		>30	1.5		10							18A	1	
2N 2177	So		P	S	6	6	6		100	(160)		>35	4.5									5A	1	
2N 2178	So		P	S	6	6	6		385	(160)		>35	4.5									18A	1	
2N 2180			P	G	15	6			50	(100)		>100			10	60							5	
2N 2181			P	S	25	25			150	(140)		>10			5	6							5, 15	
2N 2182			P	S	25	25			150	(140)		>10			5	6							5, 15	
2N 2183			P	S	15	10			150	(140)		>10			5	6							5, 15	
2N 2184			P	S	15	10			150	(140)		>10			5	6							5, 15	
2N 2185	Sp		P	S	30	30			150	(140)						6.5							5, 15	
2N 2186	Sp		P	S	30	30			150	(140)						6.5							5, 15	
2N 2187	Sp		P	S	30	30			150	(140)						6.5							5, 15	
2N 2188	Ti		P	G	40	25			125	(85)	40		160	1.5	60								3	
2N 2189	Ti		P	G	40	25			125	(85)	60		180	1.5	102								3	
2N 2190			P	G	60	25			125	(85)	40		160	1.5	60								3	
2N 2191	Ti		P	N	S	60	40	5	1A	800	(85)	60	180	10	150								3	
2N 2192	Ti		P	N	S	60	40	5	1A	800	25a	100	300	10	150								1, 5	
2N 2192A	Ti		N	S	60	40	5	1A	800	25a	100		300	10	150								1, 5	
2N 2192B	Mo		N	S	60	40	5	1A	3W	(200)	100		300	10	150								2, 6	
2N 2193			N	S	80	50	8	1A	800	25a	4													

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)						
2N 2203	Ge		N	S	120	100			1W	(175)	25	90	200									1			
2N 2204	Ge		N	S	120	100			1W	(175)	25	90	200									1			
2N 2205	Rc		N	S	25	12			1W	(175)		>20	10									6			
2N 2206	Rc		N	S	25	12			1W	(175)	40	120	10									6			
2N 2207	Rc		P	G	70	50			260	(75)	36	370	10									3			
2N 2208			P	G	40	10			120	(85)		>15	1,5									3			
2N 2209			P	G	30	12			150	(85)		>50	24									5			
2N 2210			P	G	100	65			75W	(100)	25	50	5A									2			
2N 2211			P	G	80	60			90W	(100)	60	140	1A									2			
2N 2212	Mo		P	G	120	120	1,5	10A	102W	(110)	50	200	1	600							41A	6			
2N 2214			N	S	25	15			250	(150)		>25	10	200								5			
2N 2216			P	S	150	100			3W	(200)	25	120	50	50								6			
2N 2217	Ti		N	S	60	30	5	800	800	25a	20	60	10	150	280						5A	1, 5	2N 2904		
2N 2218	Ph		N	S	60	30	5	800	3W	25c	40	120	10	150	>250	190	<8p)		<25ns)	39A	1, 5	2N 2904			
2N 2218	Ti		N	S	60	30	5	800	800	25a	40	120	10	150	>250				(15ns)	5A	1, 5	2N 2904			
2N 2218A	Ph		N	S	75	40	6	800	3W	25c	40	120	10	150	>250	190	<8p)		<25ns)	39A	1, 5	2N 2904A			
2N 2218A	Ti		N	S	75	40	6	800	800	25a	40	120	10	150	>250				(25ns)	5A	1, 5	2N 2904A			
2N 2219	Ph		N	S	60	30	5	800	3W	25c	100	300	10	150	>250	190	<8p)		<25ns)	39A	1, 5	2N 2905			
2N 2219	Ti		N	S	60	30	5	800	800	25a	100	300	10	150	>250				(15ns)	5A	1, 5	2N 2905			
2N 2219A	Ph		N	S	75	40	6	800	3W	25c	100	300	10	150	>300	190	<4	1k		39A	1, 5	2N 2905A			
2N 2219A	Ti		N	S	75	40	6	800	800	25a	100	300	10	150	>300				(25ns)	5A	1, 5	2N 2905A			
2N 2220	Ti		N	S	60	30	5	800	500	25a	20	60	10	150	280				(15ns)	18A	1, 5	2N 2906A			
2N 2221	Ph		N	S	60	30	5	800	1,8W	25c	40	120	10	150	>250	300	<8p)		<25ns)	18A	1, 5	2N 2906			
2N 2221A	Ph		N	S	75	40	6	800	1,8W	25c	40	120	10	150	>250	300	<8p)		<25ns)	18A	1, 5	2N 2906A			
2N 2222	Ph		N	S	60	30	5	800	1,8W	25c	100	300	10	150	>250	300	<8p)		<25ns)	18A	1, 5	2N 2907			
2N 2222A	Ph		N	S	75	40	6	800	1,8W	25c	100	300	10	150	>300	300	<4	1k		18A	1, 5	2N 2907A			
2N 2222B			N	S	75	40	6		2W		100	300	150	300							6				
2N 2223	Ti	du	N	S	100	60	7	500	(600)	25a	50	200	5	10			>0,8)			77A	16				
2N 2223A	Ti	du	N	S	100	60	7	500	(600)	25a	50	200	5	10			>0,9)			77A	16				
2N 2224	Mo		N	S	65	40	5	500	3W	(175)	40	120	1	100	250					5A	6				
2N 2225			P	G	15	4			200	(100)	100	300	100									5			
2N 2226	Wh		N	S	50	50			150W	(150)	100	500	9A									2			
2N 2227	Wh		N	S	100	100			150W	(150)	100	500	9A									2			
2N 2228	Wh		N	S	150	150			150W	(150)	100	500	9A									2			
2N 2229	Wh		N	S	200	200			150W	(150)	100	500	9A									2			
2N 2230	Wh		N	S	50	50			150W	(150)		>350	9A									2			
2N 2231	Wh		N	S	100	100			150W	(150)		>350	9A									2			
2N 2232	Wh		N	S	150	150			150W	(150)		>350	9A									2			
2N 2233	Wh		N	S	200	200			150W	(150)		>350	9A									2			
2N 2234			N	S	40	20			12W	(150)	15	60	100	50								6			



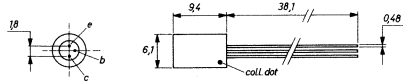
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent.) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 2235	Mo Ti Ti		N	S	40	20			12W	(150)	40	125			100	100							6	
2N 2236			N	S	40	20			575	(150)	15	60			100	50							5	
2N 2237			N	S	40	20			575	(150)	40	125			100								5	
2N 2238			P	S	30	30			300	(100)		>10		10		400							3	
2N 2239			N	S	60	50			1W	(150)	30	200			200								1	
2N 2240			N	S	25	20			600	(200)	40	100			1	50							5	
2N 2241			N	S	25	20			600	(200)	100	200			1	50							5	
2N 2242			N	S	40	15	5	225	360	(200)	40	120		1	10	250							5	
2N 2243			N	S	120	80	7	1A	800	25a	40	120		10	150								1, 5	
2N 2243A			N	S	120	80	7	1A	800	25a	40	120		10	150								1, 5	
2N 2244	Ns Ns		N	S	20	20			500	(200)	5	15			60								1	
2N 2245			N	S	20	20			500	(200)	10	30			60								1	
2N 2246			N	S	20	20			500	(200)	5	15			60								1	
2N 2247			N	S	45	45			500	(200)	5	15			60								1	
2N 2248			N	S	45	45			500	(200)	10	30			60								1	
2N 2249			N	S	45	45			500	(200)	20	60			60								1	
2N 2250			N	S	25	20			500	(200)	5	15			60								1	
2N 2251			N	S	25	20			500	(200)	10	30			60								1	
2N 2252			N	S	25	20			500	(200)	20	60			60								1	
2N 2253			N	S	45	50			500	(200)	5	15			60								1	
2N 2254	Ns Mo Mo		N	S	45	50			500	(200)	10	30			60								1	
2N 2255			N	S	45	50			500	(200)	20	60			60								1	
2N 2256			N	S	7	7	1	100	300	(175)		30	1	10	320								5	
2N 2257			N	S	7	7	1	100	300	(175)		50	1	10	320								5	
2N 2258	Mo	P	G	7	7	1	100	150	(100)		30	1	10	320								5		
2N 2259	Mo So So		P	G	7	7	1	100	150	(100)		50	1	10	320								5	
2N 2266			P	G	100	55		4A	50W	(125)	25	75	2	5A	0.2								6	
2N 2267			P	G	120	55		4A	50W	(125)	25	75	2	5A	0.2								6	
2N 2268			P	G	100	55			50W	(125)	40	120		500	0.2								6	
2N 2269								50W	(125)	40	120		500	0.2								6		
2N 2270	Rc Mo Sp		N	S	60	45	7	1A	5W	(200)	50	200	10	150		175						5A	2, 3	
2N 2271			P	S	20	15			250	(100)	50	100		35								1		
2N 2272			N	S	40	20			360	(200)	80	240		10	10								5	
2N 2273			P	G	25	15	1	100	150	(100)	20	75	10	1									3	
2N 2274	Sp	P	S	25	25			150	(140)		>10		5	6								5, 15		
2N 2275	Sp	P	S	25	25			150	(140)		>10		5	6								5, 15		
2N 2276	Sp	P	S	15	10			150	(140)		>10		5	6								5, 15		
2N 2277	Sp	P	S	15	10			150	(140)		>10		5	6								5, 15		
2N 2278	Sp	P	S	15	15			150	(140)		>10		5	7.6								5, 15		
2N 2279	Sp	P	S	15	15			150	(140)		>10		5	7.6								5, 15		
2N 2280	Sp Sp So So		P	S	10	6			150	(140)					16								5, 15	
2N 2281			P	S	10	6			150	(140)					16								5, 15	
2N 2282			P	G	60	30	1.5	3A	5W	(110)	30	75	1	500	20								4	
2N 2283			P	G	100	60	1.4	3A	5W	(110)	30	75	1	500	20								4	
2N 2284	So	P	G	200	100	1.5	3A	5W	(110)	30	75	1	500	20								4		
2N 2285	Mo Mo Mo Mo		P	G	60	30	1.5	25A	106W	(110)	35	140	2	10A								3A	6	
2N 2286			P	G	100	60	1.5	25A	106W	(110)	35	140	2	10A								3A	6	
2N 2287			P	G	120	80	1.5	25A	106W	(110)	35	140	2	10A								3A	6	
2N 2288			P	G	40	40	0.7	10A	70W	(110)	20	60	2	5A								3A	6	
2N 2289	Mo	P	G	80	80	0.7	10A	70W	(110)	20	60	2	5A								3A	6		
2N 2290	Mo Mo Mo So		P	G	120	120	0.7	10A	70W	(110)	20	60	2	5A								3A	6	
2N 2291			P	G	40	30	1.5	10A	70W	(110)	50	120	2	5A								3A	6	
2N 2292			P	G	80	50	1.5	10A	70W	(110)	50	120	2	5A								3A	6	
2N 2293			P	G	120	70	1.5	10A	70W	(110)	50	120	2	5A								3A	6	
2N 2294	So	P	G	40	40	0.7	10A	70W	(110)	50	120	2	5A	0.45							41A	6		
2N 2295	So Ph Mo		P	G	80	80	0.7	10A	70W	(110)	50	120	2	5A	0.45							41A	6	
2N 2296			P	G	120	120	0.7	10A	70W	(110)	50	120	2	5A	0.45							41A	6	
2N 2297			N	S	80	35	7	1A	5W	25c	40	120	10	150	>60							39A	17	
2N 2303			P	S	50	35	5	500	600	(175)	75	200	10	150	60							5A	5	
2N 2304	Mo	N	S	60	60			25W	(200)	20	80		300								5A	2		
2N 2305	So		N	S	60	40	10	15A	83W	(200)	15	60	4	800								3A	2	
2N 2306			N	S	75	50			13W	(175)	12	75		350								6		
2N 2308			N	S	100	80			25W	(200)	20	60		1A								2		
2N 2309			N	S	30	30			600	(200)	25	125		0.2								1		
2N 2310			N	S	60	60			350	(200)	12	36		200								1		
2N 2311			N	S	100	100			350	(200)	12	36		200								1		
2N 2312			N	S	60	60			350	(200)	30	90		200								1		
2N 2313			N	S	100	100			350	(200)	30	90		200								1		
2N 2314			N	S	60	40			350	(200)	20	60		150								1		
2N 2315			N	S	60	40			350	(200)	40	120		150								1		
2N 2316			N	S	120	80			350	(200)	40	120		150								1		
2N 2317			N	S	75	50			350	(200)	40	120		150								1		
2N 2318			N	S	30	25			360	(200)		>15		0.1	300							5		
2N 2319			N	S	30	25			300	(200)		>15		0.1	300							5		
2N 2320			N	S	30	25			600	(200)		>15		0.1	300							5		
2N 2330	Mo Mo So So		N	S	30	20	5	500	800	(175)		>50	1	10	100							5A	5, 15	
2N 2331			N	S	30	20	5	500	800	(175)		>50	1	10	100							18A	5, 15	
2N 2332			P	S	15	5	15		150	(200)												18A	5, 15	
2N 2333			P	S	15	5	15		150	(200)												18A	5, 15	
2N 2334	So	P	S	30	15	30		150	(200)												18A	5, 15		
2N 2335	So So Rc Rc		P	S	30	15	30		150	(200)</														

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo}	V _{ceo}	V _{ebo}	I _c	P _{tot}	t	h _{FE}	(h _{FE})	V _{ce}	I _c	F _T	R _{thj-a}	F	f	ton				
					V	V	V	(I _{cm}) mA	mW	(tj)	min	type	max	(V _{cb}) V	(I _g) mA	°C/W	(C _C)	MHz	(tr)				
2N 2389	Ti		N	S	75	50			450	(200)	40	120		150	60							1	
2N 2390	Ti		N	S	75	50			450	(200)	100	300		150	70							1	
2N 2391	Ti		P	S	25	20			300	(175)	15	45		10	140							1	
2N 2392	Ti		P	S	25	20			300	(175)	30	90		10	140							1	
2N 2393	Ti		P	S	50	35			450	(175)	20	45		150	50							1	
2N 2394	Ti		P	S	50	35			450	(175)	30	90		150	60							1	
2N 2395	Ti		N	S	60	40			450	(200)	20	60		150	40							1	
2N 2396	Ti		N	S	60	40			450	(200)	40	120		150	50							1	
2N 2397			N	S	35	15			300	(200)	25	120		10	200							5	
2N 2398	Sp		P	G	20	20			60	(100)		>10		2								3	
2N 2399	Sp		P	G	20	20			60	(100)		>10		2								3	
2N 2400	Sp		P	G	12	7			150	(100)		>30		10	150							5	
2N 2401	Sp		P	G	15	10			150	(100)		>50		10	200							5	
2N 2402	Sp		P	G	18	12			150	(100)		>60		10	250							5	
2N 2403			N	S	60	60			1W	(200)	20	60		600	147							6	
2N 2404			N	S	60	60			1W	(200)	40	120		600	147							6	
2N 2405	Mo		N	S	120	90	7	1A	1W	(200)	60	200	10	150	50	175					5A	6	
2N 2410	Mo		N	S	60	30	5	800	800	(200)	30	120	10	10	200						5A	5	
2N 2411	Mo		P	S	25	20	5	100	300	(200)	20	60	0.5	10	140						18A	5	
2N 2412	Mo		P	S	25	20	5	100	300	(200)	40	120	0.5	10	140						18A	5	
2N 2413	Ti		N	S	40	18			300	(175)	30	120		10	300							3	
2N 2414			N	S	60	40			500	(200)	50	250		10	50								
2N 2415	Mo		P	G	15	10	0.3	20	75	(100)	10	200	6	2	500						72A	3	
2N 2416	Mo		P	G	15	10	0.3	20	75	(100)	8	200	6	2	400						72A	3	
2N 2423	So		P	G	100	80	30	2A	90W	(100)	20	100	2	2A							3A	6	
2N 2424			P	S	40	5			375	(160)	30	200		5								5	
2N 2425			P	S	50	10			375	(160)	25	110		5								1	
2N 2426			N	G	40	25			150	(100)		>35										1	
2N 2427	Tr		N	S	40	40			500	(200)	20	60		50								3	
2N 2428			P	G	32	32			500	(75)	50	150		2								1	
2N 2429			P	G	32	32			500	(75)	65	300		2								1	
2N 2430			N	G	32	32			280	(75)	60	210		100								1	
2N 2431			P	G	32	32			550	(90)	60	175		300								1	
2N 2432	Ti		N	S	30	30	15	100	600	25c		>50	5	1							18A	15	2N 2945
2N 2432A	Ti		N	S	45	45	18	100	600	25c		>50	5	1							18A	15	2N 2946
2N 2433			N	S	75	45			500	(200)	40	120		150	80							5	
2N 2434			N	S	75	45			500	(200)	100	300		150	90							5	
2N 2435			N	S	120	80			500	(200)	40	120		150	80							5	
2N 2436			N	S	120	80			500	(200)	100	300		150	90							5	
2N 2437			N	S	100	75			500	(200)		>15		10	70							3	
2N 2438			N	S	100	75			500	(200)		>35		10	80							3	
2N 2439			N	S	100	75			500	(200)		>75		10	90							3	
2N 2440			N	S	120	80			300	(200)	100	300		150	90							5	
2N 2443	Fa		N	S	120	100			800	(200)	50	150		60	50							3	
2N 2444	So		P	G	80	80	1	10A	85W	(110)	90	120	2	3A	4.5						3A	2	
2N 2445	So		P	G	100	50	12	25A	90W	(100)	30	60	2	10A	0.1						3A	2	
2N 2446			P	G	60	50			90W	(100)	15	45		5A								6	
2N 2447	Mo		P	G	45	24			75	(85)		>25										1	
2N 2448	Mo		P	G	45	24			75	(85)		>25										1	
2N 2449	Mo		P	G	35	20			75	(85)		>50										1	
2N 2450	Mo		P	G	35	20			75	(85)		>50										1	
2N 2451	Sp		P	G	6	5			25	(85)		>25		10	80							5	
2N 2453	Tr	du	N	S	60	30	7	50	(300)	25a	150	600	5	1		>0.85	<7	1k			77A	16	
2N 2455	Sy		P	G	15	15			150	(100)	20	100		2	600							5	
2N 2456	Sy		P	G	15	15			150	(100)	20	100		2	1000							5	
2N 2459	So		N	S	100	60	8		400	(200)		>10		0.1	100						46A	1	
2N 2460	So		N	S	100	60	8		400	(200)		>20		0.1	120						46A	1	
2N 2461	So		N	S	100	60	8		400	(200)		>40		0.1	140						46A	1	
2N 2462	So		N	S	100	60	8		400	(200)		>60		0.1	160						46A	1	
2N 2463	So		N	S	100	60	8		500	(200)		>10		0.1	100						18A	1	
2N 2464	So		N	S	100	60	8		500	(200)		>20		0.1	120						18A	1	
2N 2465	So		N	S	100	60	8		500	(200)		>40		0.1	140						18A	1	
2N 2466	So		N	S	100	60	8		500	(200)		>60		0.1	160						18A	1	
2N 2467	So		P	G	60	60	1.5	3A	5W	(110)	30	90	1	500	20						5A	2	
2N 2468	So		P	G	100	110	1.5	3A	5W	(110)	30	90	1	500	20						3A	2	
2N 2469	So		P	G	200	200	1.5	3A	5W	(110)	30	90	1	500	20						3A	2	
2N 2472			N	S	120	100			1W	(175)	30	90		200	10							2	
2N 2473			N	S	120	100			1W	(175)	30	90		200	10							2	
2N 2474			P	S	30	15			250	(160)		>8										2	
2N 2475	Rc		N	S	15	6	4		300	(200)	30	150	0.4	20							18A	5	
2N 2476	Mo		N	S	60	20	5		600	(200)		>20	0.4	150	250						5A	5	
2N 2477																							

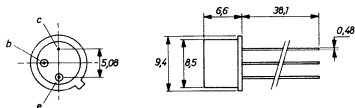
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t) min	h _{FE} type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _a) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 2552	Ti		P	G	40	40	20	3A	20W	(100)	15	60	0.5	1A							802B	6	
2N 2553	Ti		P	G	60	60	20	3A	20W	(100)	15	60	0.5	1A							802B	6	
2N 2554	Ti		P	G	80	80	20	3A	20W	(100)	15	60	0.5	1A							802B	6	
2N 2555	Ti		P	G	100	100	20	3A	20W	(100)	15	60	0.5	1A							802B	6	
2N 2556	Ti		P	G	40	40	20	3A	20W	(100)	15	60	0.5	1A							804A	6	
2N 2557	Ti		P	G	60	60	20	3A	20W	(100)	15	60	0.5	1A							804A	6	
2N 2558	Ti		P	G	80	80	20	3A	20W	(100)	15	60	0.5	1A							804A	6	
2N 2559	Ti		P	G	100	100	20	3A	20W	(100)	15	60	0.5	1A							804A	6	
2N 2560	Ti		P	G	40	40	20	3.5A	20W	(100)	20	60	1	3A		0.2					713B	2	
2N 2561	Ti		P	G	60	60	20	2.5A	20W	(100)	20	60	1	3A		0.2					713B	2	
2N 2562	Ti		P	G	80	80	20	3.5A	20W	(100)	20	60	1	3A		0.2					713B	2	
2N 2563	Ti		P	G	100	100	20	3.5A	20W	(100)	20	60	1	3A		0.2					713B	2	
2N 2564	Ti		P	G	40	40	20	3.5A	20W	(100)	20	60	1	3A		0.2					804A	2	
2N 2565	Ti		P	G	60	60	20	3.5A	20W	(100)	20	60	1	3A		0.2					804A	2	
2N 2566	Ti		P	G	80	80	20	2.5A	20W	(100)	20	60	1	3A		0.2					804A	2	
2N 2567	Ti		P	G	100	100	20	3.5A	20W	(100)	20	60	1	3A		0.2					804A	2	
2N 2568			N	S	32	32			1W	(100)	10	60		40		600						4	
2N 2569	Ph		N	S	20	5			300	(200)		>50				100						5, 15	
2N 2570	Ph		N	S	20	5			300	(200)		>50				100						5, 15	
2N 2571			N	S	20	15			300	(200)		>50				100						5, 15	
2N 2572			N	S	20	15			300	(200)		>50				100						5, 15	
2N 2580			N	S	400	400			150W	(150)	10	40		5A								6	
2N 2581			N	S	400	400			150W	(150)	15	65		5A								6	
2N 2582			N	S	500	500			150W	(150)	10	40		5A								6	
2N 2583			N	S	500	500			150W	(150)	25	65		5A								6	
2N 2584			N	S	600	600			150W	(150)	10	40		5A								6	
2N 2585			N	S	600	600			150W	(150)	25	65		5A								6	
2N 2586	Ti	da	N	S	60	45	6	30	600	25c	120	360	5	10μ			<2	10k			18A	1	
2N 2587			P	G	30	30			150	(100)	15	100		8		320						3	
2N 2588			P	G	40	20			150	(100)	50	150		1.5		75						3	
2N 2589			N	S	150	150			150W	(200)	17	51		7A		0.2						6	
2N 2590	So		P	S	100	60	7		400	(200)		>10		0.1		50						3	
2N 2591	So		P	S	100	60	7		400	(200)		>20		0.1		70						3	
2N 2592	So		P	S	100	60	7		400	(200)		>40		0.1		90						3	
2N 2593	So		P	S	100	60	7		400	(200)		>60		0.1		110						3	
2N 2594	Tr		N	S	80	60			5W	(200)	50	150		100		40						1	
2N 2595			P	S	80	60	6		400	(200)	15	60		5		30						3	
2N 2596	So		P	S	80	60	6		400	(200)	30	120		5		40						3	
2N 2597	So		P	S	80	60	6		400	(200)	60	240		5		60						3	
2N 2598	So		P	S	125	80	7		400	(200)	15	60		5		30						3	
2N 2599	So		P	S	125	80	7		400	(200)	30	120		5		40						3	
2N 2599A	So		P	S	125	100	7		400	(200)	30	120		5		40						3	
2N 2600	So		P	S	125	80	7		400	(200)	60	240		5		60						3	
2N 2601	So		P	S	60	60	6		400	(200)		>12		1		20						3	
2N 2602	So		P	S	60	60	6		400	(200)		>25		1		40						3	
2N 2603	So		P	S	60	60	6		400	(200)		>50		1		60						3	
2N 2604	Ti		P	S	60	45	6	30	400	25a	(60	350)	5	1								1	2N 929
2N 2605	Ti		P	S	60	45	6	30	400	25a	(150	600)	5	1								1	2N 930
2N 2605A	So		P	S	60	45	6		400	(200)	150	300	5	0.01		45						3	
2N 2610	Tr		N	S	45	40			150	(150)		(>4.5)										1	
2N 2611			N	S	120	100			2W	(175)	7	36		200		4						2	
2N 2612	So		P	G	65	65	30	25A	75W	(100)	85	250	2	10A								2	
2N 2613	So		P	G	30	25	25	50	120	(100)	(120	300)	4	0.5								1	
2N 2614	Rc		P	G	40	35	25	50	120	(100)	(100	250	6									1	
2N 2617			P	S	25				250	(150)	15	80		20								1	
2N 2618			N	S	60	40			600	(200)		>25		10		200						3	
2N 2621			P	G	15	15			150	(100)		>15		1								3	
2N 2622			P	G	24	24			150	(100)		>15		1								3	
2N 2623			P	G	32	32			150	(100)		>20		1								3	
2N 2624			P	G	15	15			150	(100)		>20		1								3	
2N 2625			P	G	24	24			150	(100)		>15		1								3	
2N 2626			P	G	32	32			150	(100)		>20		1								3	
2N 2627			P	G	15	15			150	(100)		>15		1								3	
2N 2628			P	G	24	24			150	(100)		>15		1								3	
2N 2629			P	G	32	32			150	(100)		>10		1								3	
2N 2631	Rc		N	S	80	80	4	1.5A	9W	(200)		>8		200		200						1	
2N 2632	So		N	S	90	60	8	5A	40W	(175)	40		2	1A		20						2	
2N 2633	So		N	S	120	80	8	5A	40W	(175)	40		2	1A		20						2	
2N 2634	So		N	S	150	100	8	5A	40W	(175)	40		2	1A		20						2	
2N 2635	Mo		P	G	30	15	2.5	100	150	(100)	45	300	1	50								5	
2N 2636	So		P	G	100	100			100W	(110)	35	140	2	10A		0.6						6	
2N 2637	So		P	G	100	100		25A	100W	(110)	35	140	2	10A		0.6						6	
2N 2638	So		P	G	100	100		25A	100W	(110)	35	140	2	10A		0.6						6	
2N 2639	Ti	du	N	S	45	45	5	30	(1.2W)	25c	(65	600)	5	1			>0.9					16	2N 2802
2N 2640	Ti	du	N	S	45	45	5	30	(1.2W)	25c	(65	600)	5	1			>0.8					16	2N 2803
2N 2641	Ti	du	N	S	45	45	5	30	(1.2W)	25c	(65	600)	5	1								16	2N 2804
2N 2642	Ti	du	N	S	45	45	5	30	(1.2W)	25c	(130	600)	5	1								16	2N 2805
2N 2643	Ti	du	N	S	45	45	5	30	(1.2W)	25c	(130	600)	5	1								16	2N 2806
2N 2644	Ti	du	N	S	45	45	5	30	(1.2W)	25c	(130	600)	5	1								16	2N 2807
2N 2648			P	G	35	10			5W	(100)	80	500		1A		10						6	
2N 2649	Ns		N	S	65																		

Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 2656	Ns	Ti	N	S	25	15			360	(200)	40	160		0,1	250							3		
2N 2657			N	S	80	60			1W	(200)	40	120		1A	20							6		
2N 2658			N	S	100	80			1W	(200)	40	120		1A	20							6		
2N 2659			P	G	50	50	20	3A	15W	(100)	30	90	0,5	500	0,3					5A	2			
2N 2660	Ti		P	G	70	70	20	3A	15W	(100)	30	90	0,5	500	0,3					5A	2			
2N 2661	Ti		P	G	90	90	20	3A	15W	(100)	30	90	0,5	500	0,3					5A	2			
2N 2662	Ti		P	G	50	50	20	3A	15W	(100)	30	90	0,5	500	0,3					713B	2			
2N 2663	Ti		P	G	70	70	20	3A	15W	(100)	30	90	0,5	500	0,3					713B	2			
2N 2664	Ti		P	G	90	90	20	3A	15W	(100)	30	90	0,5	500	0,3					713B	2			
2N 2665	Ti		P	G	50	20	20	3A	15W	(100)	50	150	0,5	500	0,3					5A	2			
2N 2666	Ti		P	G	70	70	20	3A	15W	(100)	50	150	0,5	500	0,3					5A	2			
2N 2667	Ti		P	G	90	90	20	3A	15W	(100)	50	150	0,5	500	0,3					5A	2			
2N 2668	Ti		P	G	50	50	20	3A	15W	(100)	50	150	0,5	500	0,3					713B	2			
2N 2669	Ti		P	G	70	70	20	3A	15W	(100)	50	150	0,5	500	0,3					713B	2			
2N 2670	Ti		P	G	70	70	20	3A	15W	(100)	50	150	0,5	500	0,3					713B	2			
2N 2671	Ge	Ti	P	G	25				100	(75)		>40		1							3			
2N 2672			P	G	25				100	(90)		>40		1							3			
2N 2672A			P	G	32	32			100	(90)		>40		1							3			
2N 2673			N	S	60	45			250	(200)	8	22		1							1			
2N 2674	Ge		N	S	60	45			250	(200)	12	40		1						1				
2N 2675	Ge		N	S	60	45			250	(200)	22	76		1						1				
2N 2676	Ge		N	S	60	45			250	(200)	45	290		1						1				
2N 2677	Ge		N	S	45	35			250	(200)	20	55		1						1				
2N 2678	Ge		N	S	45	35			250	(200)	45	150		1						1				
2N 2691	So		P	G	100	80	1,5	25A	100W	(110)	30	100	1,5	20A	6					41A	6			

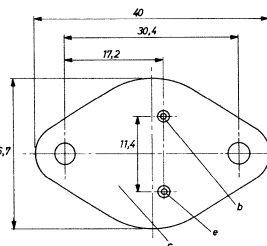
1A



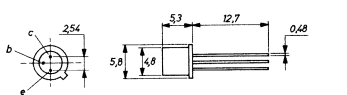
5A



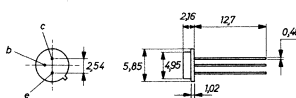
3A



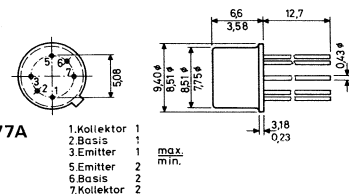
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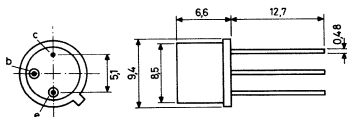
46A



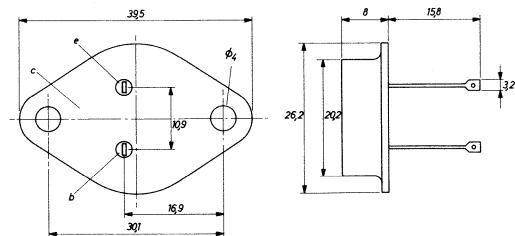
77A



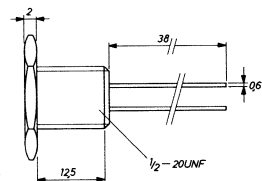
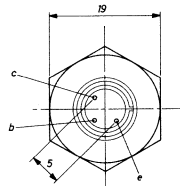
39A



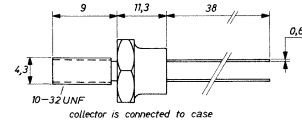
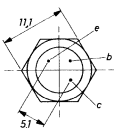
41A



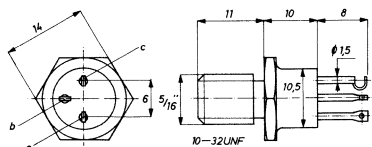
804A



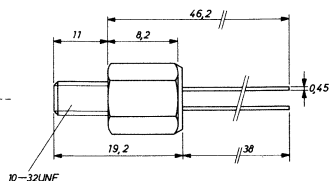
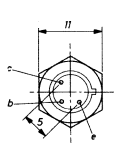
802B



62A

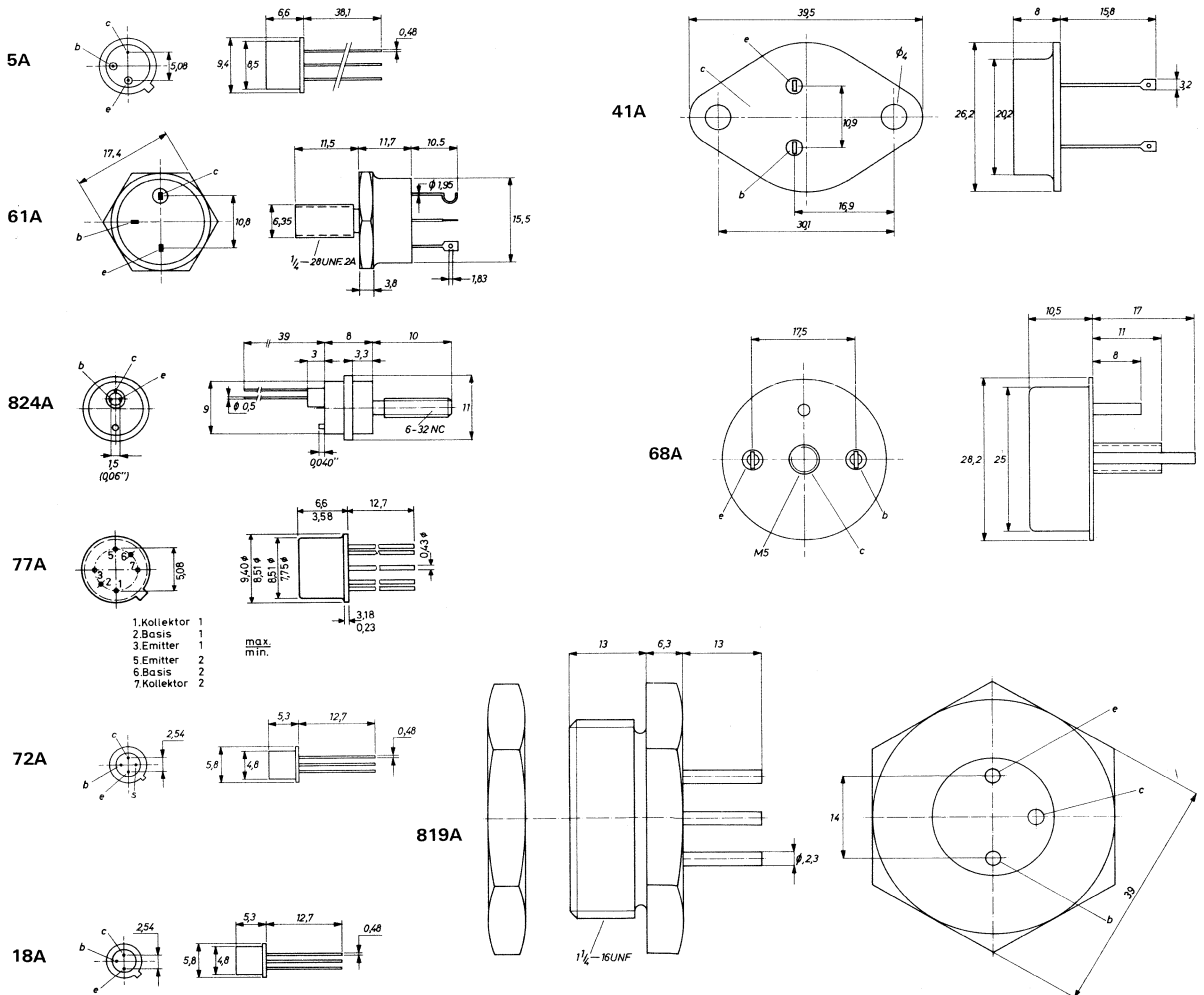


713B



Type	Manufacturer	Sort (Note)	P/N/P/N	Ger/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type			
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _B) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)							
2N 2691A 2N 2692 2N 2693 2N 2694 2N 2695	So Ti Ti Ti Ti		P N N N P	G S S S S	120 45 45 45 25	100 30 30 20 25	1.5	25A	100W 300 300 300 360	(125) (175) (175) (175) (200)	50 90 30	 40 40 40 130	100 360 200	1.5	20A	 42 42 42 100							41A	6 5 5 5 5			
2N 2696 2N 2697 2N 2698 2N 2699 2N 2708	Mo So So Mo		P N N P N	S S S G S	25 80 100 15 35	25 60 80 8 20	4 8 8 3	500 5A 5A 50	360 18W 18W 150 200	(200) (200) (200) (100) (200)	30 40 40 40 30	130 120 120 200 200	1 5 5 200 2	50 1A 1A 10 2	100 20 20 300 2									18A 824A 824A 72A	5 6 6 5 3		
2N 2709 2N 2710 2N 2711 2N 2712 2N 2713	Mo Sp Ge Se		P N N N N	S S S S S	50 40 18 18 18	35 20 18 18 18	5	500	240 360 200 200 200	(160) (200) (125) (125) (125)	10 30 30 30	22 90 75 90	1 2 2 2	0.2 50 2 2 2	500 								18A	1 5 1 1 1			
2N 2714 2N 2715 2N 2716 2N 2717 2N 2718	Se Ge Ge 		N N N P P	S S S G G	18 18 18 20 20	18 18 18 15 12			200 200 200 100 240	(125) (125) (125) (75) (100)	75 30 30 75	225 90 225 25	 	2 2 2 30 170	300 300 150										1 1 1 5 5		
2N 2719 2N 2726 2N 2727 2N 2728 2N 2729	 Ge Ge Mo Fa		N N N P N	S S S G S	25 200 200 15 30	8 200 200 5 15	15	50A	300 1W 1W 170W 300	(175) (200) (200) (110) (110)	 30 30 40 20	 90 150 130 200	 2 	60 200 200 20A 3	200 15 15 600									5 4 4 6 3			
2N 2730 2N 2731 2N 2732 2N 2733 2N 2734	So So So So So		P P P P P	G G G G G	60 60 40 80 60	60 45 30 60 45		65A 65A 65A 65A 65A	140W 140W 140W 140W 140W	(110) (110) (110) (110) (110)	30 30 30 30 30	120 120 120 120 120	2 2 2 2 2	25A 25A 25A 25A 25A	0.2 0.2 0.2 0.2 0.2									819A 819A 819A 819A 819A	6 6 6 6 6		
2N 2735 2N 2736 2N 2737 2N 2738 2N 2739	So So So So Wb		P P P P N	G G G G S	40 80 60 40 50	30 60 45 30 50		65A 65A 65A 65A	140W 140W 140W 140W 200W	(110) (110) (110) (110) (115)	30 30 30 30 	120 120 120 120 	2 2 2 2 	25A 25A 25A 25A 10A	0.2 0.2 0.2 0.2 										819A 819A 819A 819A 819A	6 6 6 6 6	
2N 2740 2N 2741 2N 2742 2N 2743 2N 2744	Wb Wb Wb 		N N N N N	S S S S S	100 150 200 250 300	100 150 200 250 300			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	10A 10A 10A 10A 10A	 										6 6 6 6 6		
2N 2745 2N 2746 2N 2747 2N 2748 2N 2749	Wb Wb Wb Wb Wb		N N N N N	S S S S S	50 100 150 200 250	50 100 150 200 250			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	15A 15A 15A 15A 15A	 										6 6 6 6 6		
2N 2750 2N 2751 2N 2752 2N 2753 2N 2754	Wb Wb Wb Wb Wb		N N N N N	S S S S S	300 50 100 150 200	300 50 100 150 200			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	15A 20A 20A 20A 20A	 										6 6 6 6 6		
2N 2755 2N 2756 2N 2757 2N 2758 2N 2759	Wb Wb Wb Wb Wb		N N N N N	S S S S S	250 300 50 100 150	250 300 50 100 150			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	20A 20A 10A 10A 10A	 										6 6 6 6 6		
2N 2760 2N 2761 2N 2762 2N 2763 2N 2764	Wb Wb Wb Wb Wb		N N N N N	S S S S S	200 250 300 50 100	200 250 300 50 100			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	10A 10A 10A 15A 15A	 										6 6 6 6 6		
2N 2765 2N 2766 2N 2767 2N 2768 2N 2769	Wb Wb Wb Wb Wb		N N N N N	S S S S S	150 200 250 300 50	150 200 250 300 50			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	15A 15A 15A 15A 20A	 										6 6 6 6 6		
2N 2770 2N 2771 2N 2772 2N 2773 2N 2774	Wb Wb Wb 		N N N N N	S S S S S	100 150 200 250 300	100 150 200 250 300			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	20A 20A 20A 20A 20A	 										6 6 6 6 6		
2N 2775 2N 2776 2N 2777 2N 2778 2N 2779	 		N N N N N	S S S S S	50 100 150 200 250	50 100 150 200 250			200W 200W 200W 200W 200W	(175) (175) (175) (175) (175)	 	 	 	25A 25A 25A 25A 25A	 										6 6 6 6 6		
2N 2780 2N 2781 2N 2782 2N 2783 2N 2784	 Tr		N N N N N	S S S S S	300 75 100 100 15	300 40 40 40 6			200W 200W 200W 200W 200W	(175) (175) (175) (175) (200)	 	 7.5 7.5 7.5 40	 75 75 75 200	25A 350 350 350 30	75 75 75 1000										6 4 4 4 6		
2N 2786 2N 2786A 2N 2787 2N 2788 2N 2789	 Ns Ns Ns Ns		P P N N N	G G S S S	35 35 75 75 75	20 20 35 35 35			1.5W 1.5W 800 800 800	(90) (90) (175) (175) (175)	33 33 20 40 100	200 200 50 120 300	100 100 150 150 150	250 250 250 250 250										3 3 5 5 5			

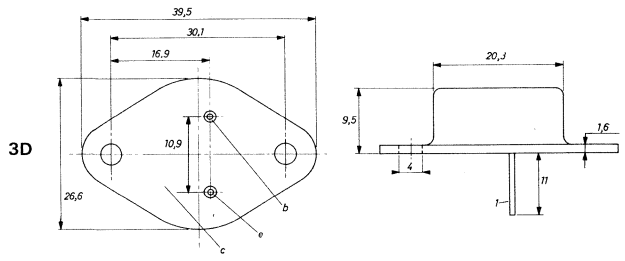
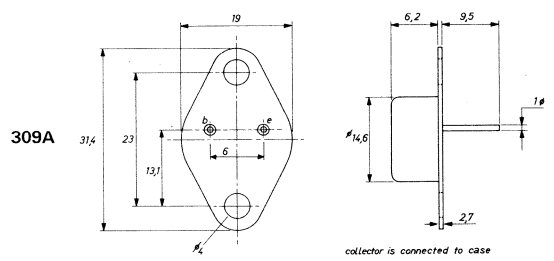
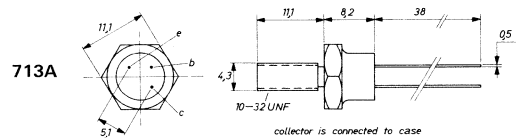
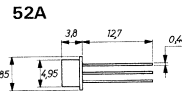
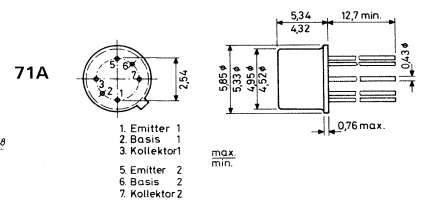
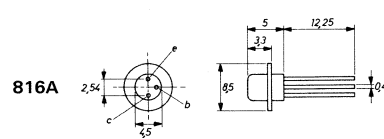
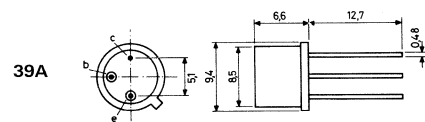
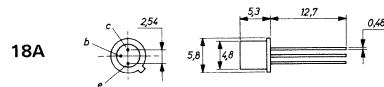
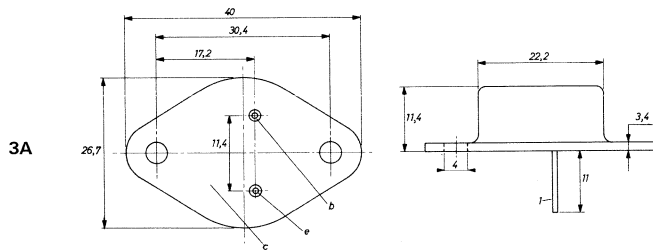
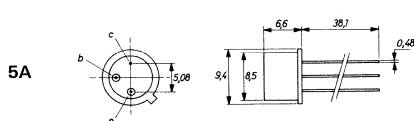
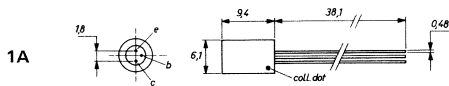
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 2790	Ns		N	S	75	35			500	(175)	20	60		150	250							5		
2N 2791	Ns		N	S	75	35			500	(175)	40	120		150								5		
2N 2792	Ns		N	S	75	35			500	(175)	100	300		150								5		
2N 2793	Sp		P	G	75	60			170W	(110)	50	100		15A								4		
2N 2795	Sp		P	G	25	15			75	(100)		>50		50	300							5		
2N 2796	Sp		P	G	18	12			75	(100)		>30		50	300							5		
2N 2797			P	G	40	20			75	(100)		>40		50	150							5		
2N 2798			P	G	60	25			75	(100)		>20		50	120							5		
2N 2799			P	G	30	15			75	(100)		>20		50	120							5		
2N 2800	Mo		P	S	50	35	5	800	800	(200)	30	90	10	150	120					5A	5	5		
2N 2801	Mo		P	S	50	35	5	800	800	(200)	75	225	10	150	120					5A	5			
2N 2802	Ti	du	P	S	25	20	5	30	(1W)	25c	(20	200)	5	1		(>0.9)				77A	16	2N 2639		
2N 2803	Ti	du	P	S	25	20	5	30	(1W)	25c	(20	200)	5	1		(>0.8)				77A	16	2N 2640		
2N 2804	Ti	du	P	S	25	20	5	30	(1W)	25c	(20	200)	5	1						77A	16	2N 2641		
2N 2805	Ti	du	P	S	25	20	5	30	(1W)	25c	(40	200)	5	1		(>0.8)				77A	16	2N 2642		
2N 2806	Ti	du	P	S	25	20	5	30	(1W)	25c	(40	200)	5	1		(>0.8)				77A	16	2N 2643		
2N 2807	Ti	du	P	S	25	20	5	30	(1W)	25c	(40	200)	5	1						77A	16	2N 2644		
2N 2808			N	S	30	10			300	(200)	20	120		2	1000							3		
2N 2808A			N	S	30	10			200	(200)	20	120		2	1500							3		
2N 2809			N	S	30	15			200	(200)	20	120		2	600							3		
2N 2809A			N	S	30	15			200	(200)	20	120		2	1000							3		
2N 2810			N	S	24	10			200	(200)	20	120		2	600							3		
2N 2810A			N	S	24	10			200	(200)	20	120		2	1000							3		
2N 2811	So		N	S	80	60	8	10A	50W	(200)	20	60	5	5A	15					61A	2	2		
2N 2812	So		N	S	80	60	8	10A	50W	(200)	40	120	5	5A	15					61A	2	2		



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	type	(h _{fe}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 2813	So		N	S	120	80	8	10A	50W	(200)	20		60	5	5A	15						61A	2		
2N 2814	So		N	S	120	80	8	10A	50W	(200)	40		120	5	5A	15						61A	2		
2N 2815	Se		N	S	80	80			200W	(200)	10		50		10A	0.6							6		
2N 2816	Se		N	S	100	100			200W	(200)	10		50		10A	0.6							6		
2N 2817	Se		N	S	150	150			200W	(200)	10		50		10A	0.6							6		
2N 2818	Se		N	S	200	200			200W	(200)	10		50		10A	0.6							6		
2N 2819	Se		N	S	80	80			200W	(200)	10		50		15A	0.6							6		
2N 2820	Se		N	S	100	100			200W	(200)	10		50		10A	0.6							6		
2N 2821	Se		N	S	150	150			200W	(200)	10		50		15A	0.6							6		
2N 2822	Se		N	S	200	200			200W	(200)	10		50		15A	0.6							6		
2N 2823	Se		N	S	80	80			200W	(200)	10		40		20A	0.6							6		
2N 2824	Se		N	S	100	100			200W	(200)	10		40		20A	0.6							6		
2N 2825	Se		N	S	150	150			200W	(200)	10		40		20A	0.6							6		
2N 2826			P	G		15			4W	(95)	75		200		100								2		
2N 2827			P	G	95				4W	(95)	75		200		100								2		
2N 2828			N	S	80	60			40W	(200)	20		60		500	1							6		
2N 2829			N	S	80	60			40W	(200)	20		60		1A	1							6		
2N 2831			N	S	40	12			360	(200)		>25			10	250							3		
2N 2832	Mo		P	G	80	50	2	20A	85W	(110)	25		100	2	10A							3A	2, 6		
2N 2833	Mo		P	G	75	120	2	20A	85W	(110)	25		100	2	10A							3A	2, 6		
2N 2834	Mo		P	G	100	140	2	20A	85W	(110)	25		100	2	10A							3A	2, 6		
2N 2835			P	G	32	32			16W	(90)	30		100		1A								1		
2N 2836			P	G	52	55			37W	(100)		>100											2		
2N 2837	Mo		P	S	50	35	5	800	500	(200)	30		90	10	150	120						18A	5		
2N 2838	Mo		P	S	50	35	5	800	500	(200)	75		225	10	150	120						18A	5		
2N 2845	Mo		N	S	60	30	5		360	(200)	30		120	10	150	250						18A	5		
2N 2846	Mo		N	S	60	30	5		800	(200)	30		120	10	150	250						5A	5		
2N 2847	Mo		N	S	60	20	5		360	(200)	40		140	10	150	250						18A	5		
2N 2849			N	S	100	80			850	(200)	100		300		1A	30							5		
2N 2854			N	S	60	40			850	(200)	100		300		1A	30							5		
2N 2857	Mo		N	S	30	15	2.5	40	200	(200)	30		150	1	3	1900						72A	3		
2N 2858			N	S	100	80			600	(200)	20		60		1A	1							5		
2N 2859			N	S	120	100			600	(200)	20		60		1A	1							5		
2N 2860	Sy		P	S	18	7			150	(100)		>40			40	250							5		
2N 2861	Ti		P	S	25	20			300	(200)	30		120			60							1		
2N 2862	Ti		P	S	26	20			300	(200)	12		120			45							1		
2N 2863	Ti		N	S	60	25			800	(200)	30		200		200	150							3		
2N 2864	Ti		N	S	60	25			800	(200)	20		200		200	150							3		
2N 2865	Ti		N	S	25	13			200	(200)	20		200		4	600							3		
2N 2866	Tr		N	S	120	80			40W	(175)	20		60		500	10							4		
2N 2867	Tr		N	S	120	80			40W	(175)	40		120		500	10							4		
2N 2868	Se		N	S	60	40			800	(200)	40		120		150	50							5		
2N 2869	Rc		P	G	60	50	10	10A	30W	(100)	50		165	2	1A	0.2						3A	2		
2N 2870	Rc		P	G	80	50	10	10A	30W	(100)	50		165	2	1A	0.2						3A	2		
2N 2873	Rc		P	G	35	35			115	(100)		>40			1	300							2		
2N 2876	Rc		N	S	80	60	4	2.5A	17W	(200)		>5		2	2.5A	200						60A	3		
2N 2880	Ti		N	S	100	80	8	5A	30W	(100)	40		120	2	1A	>50	87.5			(80ns)		111B	2, 6		
2N 2881			P	S	60	60			8W	(200)	20		60		600	2							2		
2N 2882			P	S	100	100			8W	(200)	20		60		500	2							2		
2N 2883	Ti		N	S	40	20			800	(200)		>20			100	400							4		
2N 2884	Ti		N	S	40	20			800	(200)		>20			100	400							4		
2N 2885			N	S	40	15			150	(175)	30		120		10	300							5		
2N 2886			N	S	50	40			800	(200)	22		45		5								1		
2N 2887			N	S	100	80			25W	(200)	15		80		350	140							4		
2N 2890Se			N	S	100	80			800	(200)	30		90		1A	30							2		
2N 2891	Se		N	S	100	80			800	(200)	50		150		1A	30							5		
2N 2892	So		N	S	100	80			30W	(200)	30		90		1A	30							6		
2N 2893	So		N	S	100	80			30W	(200)	50		150		1A	30							6		
2N 2894	Ph		P	S	12	12	4	200	1.2W	25c	40		150	0.5	30		486	(<6p)		<60ns		18A	5		
2N 2894A	Ph		P	S	12	12	4, 5	200	1.2W	25c	40		120	0.5	30		486	(<4, 5p)		<60ns		18A	5		
2N 2895	Mo		N	S	120	65	7	1A	500	(200)	40		120	10	150	120						18A	5		
2N 2896	Mo		N	S	140	90	7	1A	500	(200)	60		200	10	150	120						18A	5		
2N 2897	Mo		N	S	60	45	7	1A	500	(200)	50		200	10	150	120						18A	5		
2N 2898			N	S	120	65			500	(200)	40		120		150	120							5		
2N 2899	Rc		N	S	140	90			500	(200)	60		200		150	120							5		
2N 2900	Rc		N	S	60	45			500	(200)	50		200		150	120							5		
2N 2901			N	S	20	10			360	(200)		>30			10	300							5, 15		
2N 2902			N	S	120	120			40W	(200)	30		90		500	2							2		
2N 2904	Ph		P	S	60	40	5	600	3W	25c	40		120	10	150	>200	290	(<8p)		(<40ns)	39A	1, 5	2N 2218		
2N 2904	Ti		P	S	60	40	5	600																	

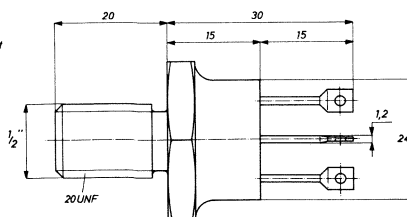
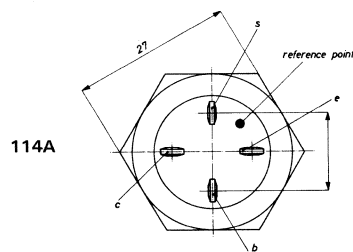
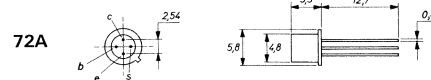
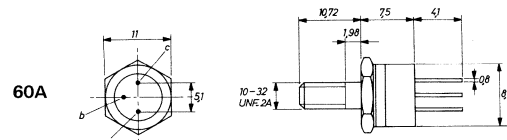
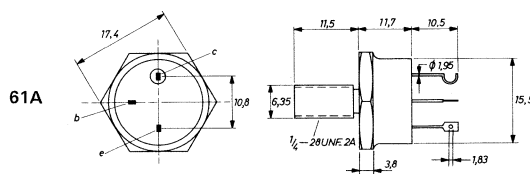
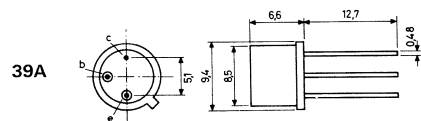
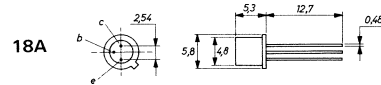
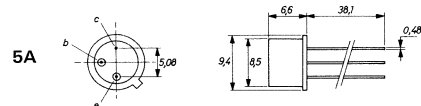
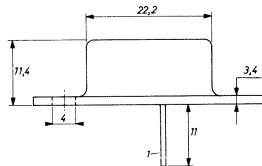
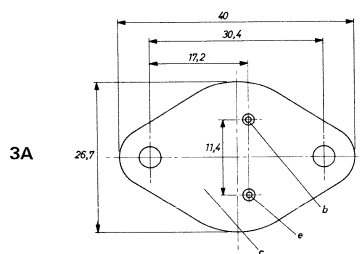
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type		
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (ti)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 2947	Mo		N	S	60	60	3	1.5A	25W	(175)	2.5	35	2	400	100						3A	4		
2N 2948	Mo		N	S	40	40	2	1.5A	25W	(175)	2.5	100	2	400	100						3A	4		
2N 2949	Mo		N	S	60	60	3	700	6W	(175)	5	100	2	40	100						816A	4		
2N 2950	Mo		N	S	60	60	3	700	6W	(175)	5	100	2	40	100							4		
2N 2951	Mo		N	S	60	60	5	250	800	(175)	20	150	10	10	100						5A	4		
2N 2952	Mo		N	S	60	60	5	250	500	(175)	20	150	10	10	100						5A	4		
2N 2953	Re		P	G	30	25	25	150	120	(100)		>100		50							1A	1		
2N 2954			N	S	30	20		200	200	(200)	25	300		2	300						5A	5		
2N 2955	Mo		P	G	40	25	3.5	100	150	(100)	20	60	1	50							18A	5		
2N 2956	Mo		P	G	40	20	3.5	100	150	(100)	40	120	1	50							18A	5		
2N 2957	Mo		P	G	40	18	3.5	100	150	(100)		>100		1							18A	5		
2N 2958	Mo		N	S	60	20	5	600	600	(175)	40	120	10	50	250						5A	3, 5		
2N 2959	Mo		N	S	60	20		600	600	(175)	100	300	10	150	250						5A	3, 5		
2N 2960			N	S	60	30		3W	3W	(200)	100	300		150	250							6		
2N 2961			N	S	60	30		3W	3W	(200)	100	300		150	250							6		
2N 2962			P	G	40	18		350	(100)							660						3		
2N 2963			P	G	40	18		350	(100)							660						3		
2N 2964			P	G	30	15		350	(100)							660						3		
2N 2965			P	G	30	15		350	(100)							660						3		
2N 2966			P	G	20	20		60	(100)		8	100		3	550							3		
2N 2967			N	S	12	6		300	(200)		20	120		10	400							5		
2N 2968			P	S	30	10		150	(140)			>15			8							5		
2N 2969	Sp		P	S	30	10		150	(140)			>15			8							5		
2N 2970	Sp		P	S	30	20		150	(140)			>10			4							5		
2N 2971	Sp		P	S	30	20		150	(140)			>10			4							5		
2N 2972		du	N	S	45	45	6	30	(750)	25c	60	240	5	10μ							71A	16		
2N 2973	Ti	du	N	S	45	45	6	30	(750)	25c	150	600	5	10μ							71A	16		
2N 2974	Ti	du	N	S	45	45	6	30	(750)	25c	60	240	5	10μ			(>0.9)				71A	16		
2N 2975	Ti	du	N	S	45	45	6	30	(750)	25c	150	600	5	10μ			(>0.9)				71A	16		
2N 2976	Ti	du	N	S	45	45	6	30	(750)	25c	60	240	5	10μ			(>0.8)				71A	16		
2N 2977	Ti	du	N	S	45	45	6	30	(750)	25c	150	600	5	10μ			(>0.8)				71A	16		
2N 2978	Ti	du	N	S	60	60	6	30	(750)	25c	60	240	5	10μ			(>0.9)				71A	16		
2N 2979	Ti	du	N	S	60	60	6	30	(750)	25c	150	600	5	10μ			(>0.9)				71A	16		
2N 2983			N	S	155	80		1W	(175)	20	60			500	60							2		
2N 2984	So		N	S	186	120		1W	(175)	20	60			500	60							2		
2N 2985	So		N	S	155	80		1W	(175)	40	120			500	60							2		
2N 2986	So		N	S	185	120		1W	(175)	40	120			500	60							2		
2N 2987	Ti		N	S	95	80		1A	15W	100c	25	75	5	500	50					140ns	5A	4		
2N 2988	Ti		N	S	155	100		1A	15W	100c	25	75	5	500	50					140ns	5A	4		
2N 2989	Ti		N	S	95	80		1A	15W	100c	60	120	5	500	50					140ns	5A	4		
2N 2990			N	S	155	100		1A	15W	100c	60	120	5	500	50					140ns	5A	4		
2N 2991	Ti		N	S	95	80		1A	15W	100c	20	75	5	500	50					140ns	713A	4		
2N 2992	Ti		N	S	155	100		1A	15W	100c	20	75	5	500	50					140ns	713A	4		
2N 2993	Ti		N	S	95	80		1A	15W	100c	60	120	5	500	50					140ns	713A	4		
2N 2994	Ti		N	S	155	100		1A	15W	100c	60	120	5	500	50					140ns	713A	4		
2N 2995	Ge		N	S	120	100		1.5W	(175)	25	90			200	10							4		
2N 2996	Ti		P	G	15	10		75	(100)	25	500			4	400							3		
2N 2997	Ti		P	G	30	15		75	(100)	40	500			4	400							3		
2N 2998	Ti		P	G	15	12		75	(100)	15	300			3	600							3		
2N 2999	Ti		P	G	15	10		75	(100)		>10			3	1400							3		
2N 3009	Mo		N	S	40	15	4		360	(200)		>25		0.5	100							52A	5	
2N 3010	Mo		N	S	15	6		50	300	(200)	25	125	0.4	10	350							5		
2N 3011			N	S	12	12	5	200	1.2W	25c	30	120	0.35	10	600						15ns	18A	5	
2N 3012	Ti		P	S	12	12	4	200	1.2W	25c	30	120	0.5	30	>400						60ns	18A	5	
2N 3013	Ti		N	S	40	15	5	200	1.2W	25c	30	120	0.4	30							15ns	52A	5	
2N 3014	Mo		N	S	40	15	5	200	360	(200)		>25		0.4	10							52A	5	
2N 3015	Ti		N	S	60	30	5		3W	25c	30	120	10	150							40ns	5A	4	
2N 3016	So		N	S	100	50			3W	(150)	60	150		1A	200							4		
2N 3017	So		N	S	100	50			3W	(150)	60	150		1A	200							4		
2N 3018	So		N	S	100	50			25W	(250)	60	150		1A	200							4		
2N 3019	Ph		N	S	140	80	7	1A	5W	25c	100	300	10	150	>100							39A	5	
2N 3020	Ph		N	S	140	80	7	1A	5W	25c	40	120	10	150	>80							39A	5	
2N 3021	Ti		P	S	30	30	4	3A	25W	25c	20	60	2	1A	60							3A	2, 6	
2N 3022	Ti		P	S	45	45	4	3A	25W	25c	20	60	2	1A	60							3A	2, 6	
2N 3023	Ti		P	S	60	60	4	3A	25W	25c	20	60	2	1A	60							3A	2, 6	
2N 3024	Ti		P	S	30	30	4	3A	25W	25c	50	180	2	1A	60							3A	2, 6	
2N 3025	Ti		P	S	45	45	4	3A	25W	25c	50	180	2	1A	60							3A	2, 6	
2N 3026	Ti		P	S	60	60	4	3A	25W	25c	50	180	2	1A	60							3A	2, 6	
2N 3033	Ti		N	S	100	100			300	(175)														
2N 3034	Ti		N	S	70	70			300	(175)														
2N 3035	Ti		N	S	50	50			300	(175)														
2N 3036	Ti		N	S	120	80			800	(200)	50	150												
2N 3037	Ti		N	S	120	70			360	(175)	40	120												
2N 3038	Ti		N	S	100	60			360	(175)	80	240												
2N 3039	Ti		P	S	50	35			360	(175)	20	80												
2N 3040	Ti		P	S	40	30			360	(175)	40	160												
2N 3051	Ti		P	S	25	20			250	(175)	20	120												
2N 3052	Ti		N	S	35	15			250	(175)	25	130												
2N 3053	N		N	S																				

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)			
2N 3057	Tr		N	S	100	60			400	(200)	100	300		150	100						3	
2N 3057A	Tr		N	S	140	80			400	(200)	100	300		150	100						3	
2N 3058	Sp		P	S	6	6			400	(200)	40	120									1	
2N 3059	Sp		P	S	10	10			400	(200)	100	300									1	
2N 3060	Sp		P	S	70	60			400	(200)	30	90		1							1	
2N 3061	Sp		P	S	70	60			400	(200)	60	180		1							1	
2N 3062	Ns		P	S	90	80			400	(200)	20	80		1							1	
2N 3063	Ns		P	S	90	80			400	(200)	20	150		1							1	
2N 3064	Ns		P	S	110	100			400	(200)	15	45		1							1	
2N 3065	Ns		P	S	110	100			400	(200)	30	90		1							1	
2N 3072	Mo		P	S	60	60	4	500	800	(200)	30	130	1	50	130					39A	1, 5	
2N 3073	Mo		P	S	60	60	4	500	360	(200)	30	130	1	50	130					18A	1, 5	
2N 3074			P	G	30	25			140	(85)	25	300		3,5							3	
2N 3075			P	G	35	25			140	(85)	20	250		3							3	
2N 3076			N	S	140	50			125W	(175)	30	90		7A	50						6	
2N 3077	Tr		N	S	80	60			360	(200)	100	400			15						1	
2N 3078	Tr		N	S	80	60			360	(200)	40	120			15						1	
2N 3079			N	S	200	200			178W	(150)	7	40		5A							6	
2N 3080			N	S	300	300			178W	(150)	7	40		5A							6	
2N 3081	Sy		P	S	70	50			600	(200)		>20		500	150						5	
2N 3082	Ge		N	S	25	7			500	(200)		>100		0,25	100						5, 15	
2N 3083	Ge		N	S	25	7			500	(200)		>100		0,25	100						5, 15	
2N 3107	Ns		N	S	100	60			800	(200)	100	300		150	70						5	
2N 3108	Ns		N	S	100	60			800	(200)	40	120		150	60						5	
2N 3109	Ns		N	S	80	40			800	(200)	100	300		150	70						5	



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equival.) type
					V _{cbo}	V _{ceo}	V _{ebo}	I _c	P _{tot}	t	h _{FE}	(h _{FE})	V _{ce}	I _c	F _T	R _{thj-a}	F	f	ton						
					V	V	V	(I _{cm}) mA	mW	(tj)	min	type	max	(V _{cb}) V	(I _g) mA	°C/W	(C _C)	MHz	(tr)						
2N 3110	Ns		N	S	80	40			800	(200)	40	120		150	60								5		
2N 3114	Ti		N	S	150	150			800	25a	30	120		30									8		
2N 3115	Mo		N	S	60	20	5	600	1.8W	(175)	40	120	10	150	250								6		
2N 3116	Mo		N	S	60	20	5	600	1.8W	(175)	100	300	10	150	250								6		
2N 3117	Ti		N	S	60	60	6	50	360	25a	250	500	5	10μ								1			
2N 3118	Rc		N	S	85	60	4	500	1W	(200)	50	275	28	25	250								3		
2N 3119	Rc		N	S	100	80	4	500	1W	(200)	50	200	10	100	250								6		
2N 3120	Ns		P	S	45	45			800	(200)	30	130		50	130								5		
2N 3121	Ns		P	S	45	45			360	(200)	30	130		50	130								5		
2N 3122			N	S	50	30			800	(200)	25	100		300	60								1		
2N 3123	Ns		N	S	60	30			800	(175)	100	300		150	400								5		
2N 3124			P	G	40	30			90W	(100)	50	100		10A									2		
2N 3125			P	G	80	80			90W	(100)	30	75		3A									2		
2N 3126			P	G	100	75			90W	(100)	10	30		10A									2		
2N 3127	Mo		P	G	25	20	0.7	50	100	(100)	20	100	10	3	400								3		
2N 3128	Ns		N	S	20	20			150	(150)	50	150		0.1	60								1		
2N 3129	Ns		N	S	45	45			150	(150)	100	300		60	60								1		
2N 3130	Ns		N	S	60	60			150	(150)	60	180		60	60								1		
2N 3131			N	S	40	15			150	(150)	30	120		10	250								5		
2N 3132			P	G	100	70			90W	(100)	40	200		2A									6		
2N 3133	Mo		P	S	50	35	4	600	3W	(200)	40	120	10	150	200								6		
2N 3134	Mo		P	S	50	35	4	600	3W	(200)	100	300	10	150	200								6		
2N 3135	Mo		P	S	50	35	4	600	1.8W	(200)	40	120	10	150	200								6		
2N 3136	Mo		P	S	50	35	4	600	1.8W	(200)	100	300	10	150	200								6		
2N 3137	Mo		N	S	40	20	4	150	800	(200)	20	120	5	50	500	153							3		
2N 3138	So		N	S	65	65			20W	(200)		>10		1A	100								4		
2N 3139	So		N	S	140	140			20W	(200)		>10		1A	100								4		
2N 3140	So		N	S	65	65			20W	(200)		>10		1A	100								4		
2N 3141	So		N	S	140	140			20W	(200)		>10		1A	100								4		
2N 3142	Ns		N	S	65	65			25W	(200)		>10		1A	100								4		
2N 3143	Ns		N	S	140	140			25W	(200)		>10		1A	100								4		
2N 3144	Ns		N	S	65	65			25W	(200)		>10		1A	100								4		
2N 3145	Ns		N	S	140	140			25W	(200)		>10		1A	100								4		
2N 3146	Ti		P	G	150	140	60	15A	150W	(100)	30	90	1.5	5A		43							2		
2N 3147	Ti		P	G	180	160	80	15A	150W	(100)	30	90	1.5	5A		43							2		
2N 3148			P	G	11	6			0.45	(100)		>70		20	25								5		
2N 3149	So		N	S	80	80	10	70A	300W	(200)		>10	3	50A	0.1								6		
2N 3150	So		N	S	100	100	10	70A	300W	(200)		>10	3	50A	0.1								6		
2N 3151	So		N	S	150	150	10	70A	300W	(200)		>10	3	50A	0.1								6		
2N 3152			N	S	120	120			25	(200)		>40		30	200								5		
2N 3153	Ns		N	S	15	15			300	(200)				30									5, 15		
2N 3154			P	G	40	25			37W	(100)	60	180		500									6		
2N 3155			P	G	60	40			37W	(100)	60	180		500									6		
2N 3156			P	G	80	55			37W	(100)	60	180		500									6		
2N 3157			P	G	100	65			37W	(100)	60	180		500									6		
2N 3158			P	G	40	25			37W	(100)	30	75		500									6		
2N 3159			P	G	60	40			37W	(100)	30	75		500									6		
2N 3160			P	G	80	55			37W	(100)	30	75		500									6		
2N 3161	So		P	S	40	40	10	5A	85W	(200)	12	36	3	1A	1								4		
2N 3162																									
2N 3163	So		P	S	40	40	10	5A	85W	(200)	12	36	3	1A	1								4		
2N 3164	So		P	S	60	60	10	5A	85W	(200)	12	36	3	1A	1								4		
2N 3165	So		P	S	80	80	10	5A	85W	(200)	12	36	3	1A	1								4		
2N 3166	So		P	S	100	100	10	5A	85W	(200)	12	36	3	1A	1								4		
2N 3167			P	S	40	40			85W	(200)	12	36		1A	1								4		
2N 3168			P	S	60	60			85W	(200)	12	36		1A	1								4		
2N 3169			P	S	80	80			85W	(200)	12	36		1A	1								4		
2N 3170			P	S	100	100			85W	(200)	12	36		1A	1								4		
2N 3171	So		P	S	40	40	10	5A	75W	(200)	12	36	3	1A	1								4		
2N 3172	So		P	S	60	60	10	5A	75W	(200)	12	36	3	1A	1								4		
2N 3173	So		P	S	80	80	10	5A	75W	(200)	12	36	3	1A	1								4		
2N 3174	So		P	S	100	100	10	5A	75W	(200)	12	36	3	1A	1								4		
2N 3175	So		P	S	40	40	10	5A	85W	(200)	10	30	3	2A	1								4		
2N 3176	So		P	S	60	60	10	5A	85W	(200)	10	30	3	2A	1								4		
2N 3177	So		P	S	80	80	10	5A	85W	(200)	10	30	3	2A	1								4		
2N 3178	So		P	S	100	100	10	5A	85W	(200)	10	30	3	2A	1								4		
2N 3179			P	S	40	40			85W	(200)	10	30		2A	1								4		
2N 3180			P	S	60	60			85W	(200)	10	30		2A	1								4		
2N 3181			P	S	80	80			85W	(200)	10	30		2A	1								4		
2N 3182			P	S	100	100																			

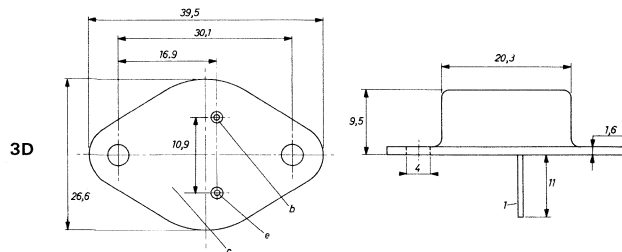
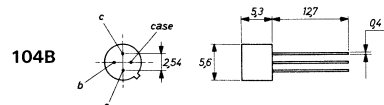
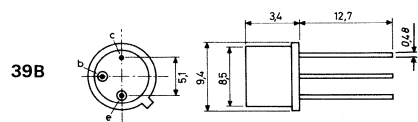
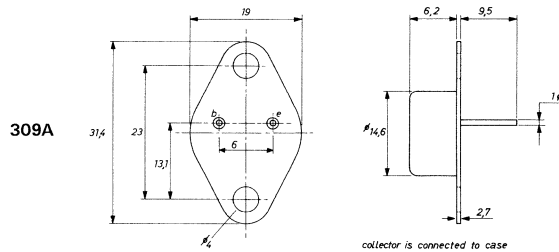
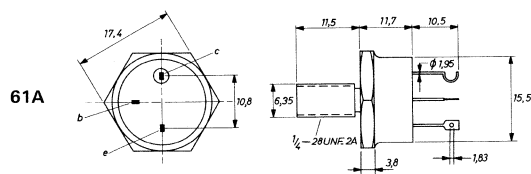
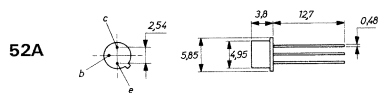
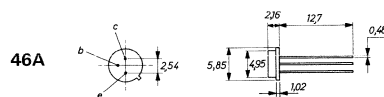
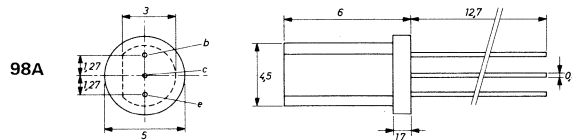
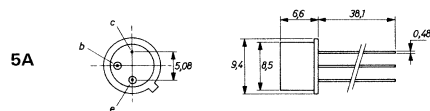
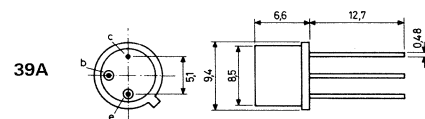
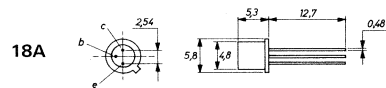
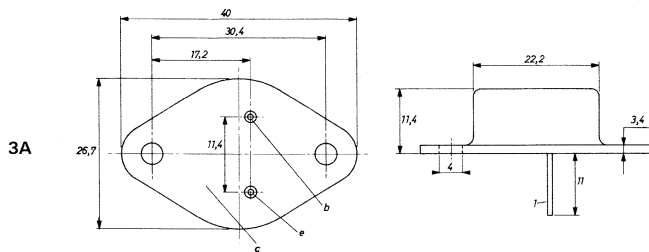
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo}	V _{ceo}	V _{ebo}	I _c	P _{tot}	t	h _{FE}	(h _{fe})	V _{ce}	I _c	F _T	R _{thj-a}	F	f	ton					
					V	V	V	(I _{cm}) mA	mW	(tj)	min	type	max	(V _{cb}) V	(I _e) mA		°C/W	(C _C)	MHz	(tr)				
2N 3199	So		P	S	40	40		40W	(200)	20	60		1A	1									4	
2N 3200			P	S	60	60		40W	(200)	20	60		1A	1								4		
2N 3201			P	S	80	80		40W	(200)	20	60		1A	1								4		
2N 3202			P	S	40	40	10	5A	9W	(200)	20	60	2	1A	1							5A	2	
2N 3203			P	S	60	60			9W	(200)	20	60	1	1A	1								5A	2
2N 3204	So		P	S	80	80	10	5A	9W	(200)	20	60	2	1A	1							5A	2	
2N 3205			P	S	40	40		40W	(200)	20	60		500	1									4	
2N 3206			P	S	60	60		40W	(200)	20	60		500	1									4	
2N 3207			P	S	100	100		40W	(200)	20	60		500	1									4	
2N 3208			P	S	40	40		9W	(200)	20	60		500	1										4
2N 3209	Mo Mo		P	S	20	20		200	360	(200)	30	120	0.5	30	400							18A	5	
2N 3210			N	S	40	15	5	500	360	(200)	30	120	1	10	300								18A	5
2N 3211			N	S	40	15	6	500	360	(200)	50	150	1	10	350								18A	5
2N 3212			P	G	100	80			14W	(110)	30	90		3A									2	
2N 3213			P	G	80	60			14W	(110)	30	90		3A										2
2N 3214	Sp Sp		P	G	60	40		14W	(110)	30	90		3A									2		
2N 3215			P	G	40	30		14W	(110)	25	110		3A										2	
2N 3216			P	G	20	10			150	(100)				200	10								5, 15	
2N 3217			P	S	15	10			400	(200)				1									5, 15	
2N 3218			P	S	25	20			400	(200)				1										
2N 3219	Sp Ge Ge Ge		P	S	40	35		400	(200)					1								5, 15		
2N 3220			N	S	100	80		6V	(175)	20	60		1A	10									4	
2N 3221			N	S	100	80		6V	(175)	40	120		1A	10									4	
2N 3222			N	S	80	60		6V	(175)	20	60		1A	10									4	
2N 3223			N	S	80	60		6V	(175)	40	120		1A	10										4
2N 3224	So Mo Rc		P	S	100	100		700	(200)	20	60		50	60								3		
2N 3225			P	S	100	100		700	(200)	40	120		50	80									3	
2N 3226			N	S	35	35		75W	(200)	20	50		2A										2	
2N 3227			N	S	40	20	6		360	(200)	100	300	1	10									5	
2N 3229			N	S	105	60	4	2.5A	17W	(200)			>5	2.5A	200									4
2N 3232	Mo Sp So Mo So		N	S	60	60	6	7.5A	117W	(200)	18	55	10	3A								3A	4	
2N 3233			N	S	110	100		117W	(200)	18	55		3A										4	
2N 3234			N	S	160	160		117W	(200)	18	55		3A										4	
2N 3235			N	S	55	55	7	15A	117W	(200)	20	70	4	4A									4	
2N 3236			N	S	90	90	7	15A	83A	(200)	17	60	4	5A			45						3A	4



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 3237	So		N	S	90	75			200W	(200)	12	36		10A								4	
2N 3238	So		N	S	80	80			150W	(200)	8.5	25		10A								4	
2N 3239	So		N	S	80	80			150W	(200)	8.5	25		10A								4	
2N 3240	So		N	S	160	160			150W	(200)	8.5	25		10A								4	
2N 3241	Rc		N	S	30	25	5	100	500	(175)	50	300		10	50						104A	1	
2N 3241A	Rc		N	S	30	25	7.5		500	(175)	100	200	10	10	175	300					104A	1	
2N 3242	Rc		N	S	30	25	5	200	500	(175)		>75		10	50						104A	1	
2N 3242A	Rc		N	S	40	40	8		500	(175)	125	300	10	10	175	300					104A	1	
2N 3244	Ti		P	S	40	40	5	1A	1W	25a	50	150	1	500	>175						39A	5	
2N 3245	Ti		P	S	50	50	5	1A	1W	25a	30	90	1	500	>200						39A	5	
2N 3246	Ns		N	S	60	45			350	(200)	200	600		60								5	
2N 3247	Ns		N	S	60	45			150	(150)	200	600		60								5	
2N 3248	Mo		N	S	15	12	5		360	(200)	50	150	1	10	250						18A	5	
2N 3249	Mo		P	S	15	12	5		360	(200)	100	300	1	10	300						18A	5	
2N 3250	Ti		P	S	50	40	5	200	360	25a	50	150	1	10	>250	<6	100				18A	5	
2N 3250A	Ti		P	S	60	60	5	200	360	25a	50	150	1	10	>250	<6	100				18A	5	
2N 3251	Ti		P	S	50	40	5	200	360	25a	100	300	1	10	>300	<6	100				18A	5	
2N 3251A	Ti		P	S	60	60	5	200	360	25a	100	300	1	10	>300	<6	100				18A	5	
2N 3252	Ti		N	S	60	30	5	1A	1W	25a	30	90	1	500	>200	86	100				39A	5	
2N 3253	Ti		N	S	75	40	5	1A	1W	25a	25	75	1	500	>175						39A	5	
2N 3260			N	S	200	200			200W	(200)	10	40		20A	0.6							6	
2N 3261	Rc		N	S	40	15	6	500	300	(175)	40	150	1	10	600						52A	5	
2N 3262	Rc		N	S	100	80	4	1.5A	8W	(200)		>40	4	500	150						39A	6	
2N 3263	Ti		N	S	90	7		25A	66.7W	100c	20	55	2	15A	>20						810A	2, 6	
2N 3264	Ti		N	S	60	7		25A	66.7W	100c	20	80	3	15A	>20						810A	2, 6	
2N 3265	Ti		N	S	90	7		25A	100W	100c	20	55	2	15A	>20						810A	2, 6	
2N 3266	Ti		N	S	60	7		25A	100W	100c	20	80	3	15A	>20						810A	2, 6	
2N 3267	Ti		P	G	15	8			75	(100)	10	500	3	900								3	
2N 3268			N	S	45	45			150	(200)	12	80	10	10								1	
2N 3279	Mo		P	G	30	20	1	50	100	(100)	10	70	10	3	800						72A	3	
2N 3280	Mo		P	G	30	20	1	50	100	(100)	10	70	10	3	800						72A	3	
2N 3281	Mo		P	G	30	15	0.5	50	100	(100)	10	100	10	3	800						72A	3	
2N 3282	Mo		P	G	30	15	0.5	50	100	(100)	10	100	10	3	800						72A	3	
2N 3283	Mo		P	G	25	25	0.5	50	100	(100)	(10	200)	10	3	800						72A	3	
2N 3284	Mo		P	G	25	25	0.5	50	100	(100)		>10	10	3	800						72A	3	
2N 3285	Mo		P	G	20	20	0.5	50	100	(100)	(5	200)	10	3	800						72A	3	
2N 3286	Mo		P	G	20	20	0.5	50	100	(100)	(5	200)	10	3	800						72A	3	
2N 3287	Mo		N	S	40	20	3	50	200	(200)	15	100	10	2	1200						72A	3	
2N 3288	Mo		N	S	40	20	3	50	200	(200)	15	100	10	2	1200						72A	3	
2N 3289	Mo		N	S	30	15	3	50	200	(200)	10	150	10	2	1200						72A	3	
2N 3290	Mo		N	S	30	15	3	50	200	(200)	10	150	10	2							72A	3	
2N 3291	Mo		N	S	25	25	3	50	200	(200)	(10	200)	10	2							72A	3	
2N 3292	Mo		N	S	25	25	3	50	200	(200)	(10	200)	10	2							72A	3	
2N 3293	Mo		N	S	20	20	3	50	200	(200)	(10	200)	10	2							72A	3	
2N 3294	Mo		N	S	20	20	3	50	200	(200)	(10	200)	10	2							72A	3	
2N 3295	Mo		N	S	60	60	5	250	800	(175)	20	60	10	10							5A	4	
2N 3296	Mo		N	S	60	60	3	700	6W	(175)	5	50	2	40	100						828A	4	
2N 3297	Mo		N	S	60	60	3	1.5A	25W	(175)	2.5	35	2	400							3A	4	
2N 3298	Mo		N	S	25	25	3	100	300	(175)	60	120	1	10	150						18A	4	
2N 3299	Mo		N	S	60	30	5	500	800	(200)	40	120	10	150	250						5A	5	
2N 3300	Mo		N	S	60	30	5	500	800	(200)	100	300	10	150	250						5A	5	
2N 3301	Mo		N	S	60	30	5	500	360	(200)	40	120	10	150	250						18A	5	
2N 3302	Mo		N	S	60	30	5	500	360	(200)	100	300	10	150	250						18A	5	
2N 3303	Ph		N	S	25	12	4	1A	3W	25c	30	120	0.5	300	>450	290					39B	6	
2N 3304	Mo		P	S	6	6	4		300	(200)	30	120	0.3	10	500						18A	5	
2N 3305			P	S	50	40			600	(200)	40	120		0.1	20							1	
2N 3306			P	S	50	40			600	(200)	100	300		0.1	20							1	
2N 3307	Mo		P	S	40	35	3	50	300	(200)	40	250	10	2	1200						72A	3	
2N 3308	Mo		P	S	30	25	3	50	300	(200)	25	250	10	2	1200						72A	3	
2N 3309	Se		N	S	50	50			3.5W	(175)	5	100		30	300							4	
2N 3309A			N	S	60	60			5W	(200)	8	80		50	300							4	
2N 3310			N	S	35	15			300	(200)		>10		20	300							4	
2N 3311	Mo		P	G	30	20		5A	170W	(110)	60	120	2	3A							36A	2	
2N 3312	Mo		P	G	45	30	25	5A	170W	(110)	60	120	2	3A							36A	2	
2N 3313	Mo		P	G	60	40	30	5A	170W	(110)	60	120	2	3A							36A	2	
2N 3314	Mo		P	G	30	20	20	5A	170W	(110)	100	200	2	3A							36A	2	
2N 3315	Mo		P	G	45	30	25	5A	170W	(110)	100	200	2										

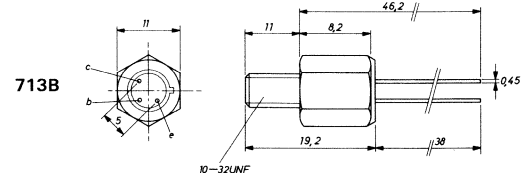
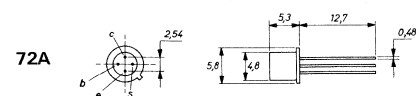
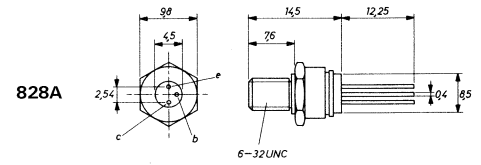
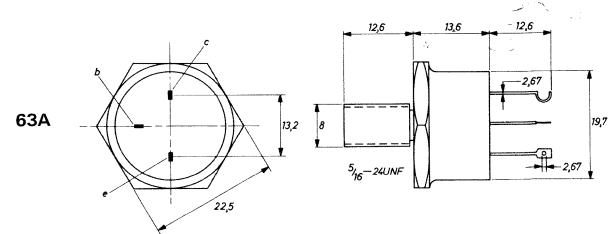
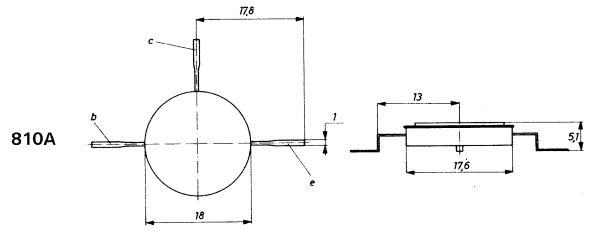
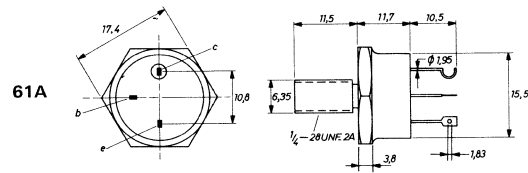
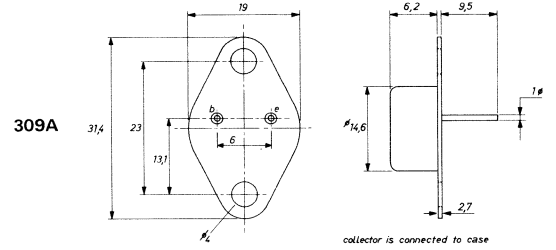
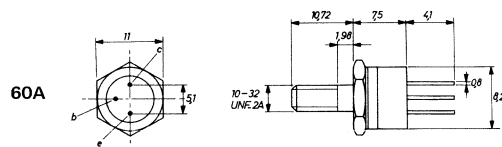
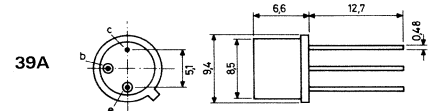
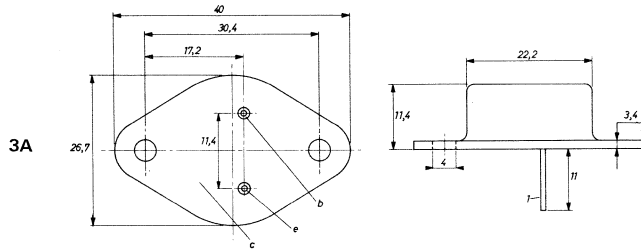
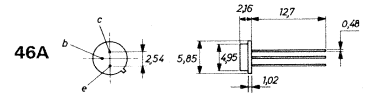
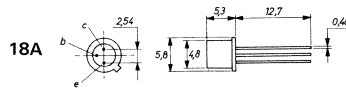
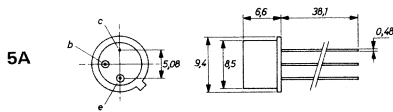
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	V _{ce} (V _{cb}) V	I _c (I _a) mA	F _T	R _{thja} (η) °C/W	F (C _c)	f MHz	ton (tr)					
2N 3390	Ge		N	S	18	18	5	100	360	(125)	400	800	4.5	2							98A	1		
2N 3391	Ge		N	S	25	25	5	100	360	(125)	250	500	4.5	2							98A	1		
2N 3391A	Ge		N	S	25	25	5	100	360	(125)	250	500	4.5	2							98A	1		
2N 3392	Ge		N	S	25	25	5	100	360	(125)	150	300	4.5	2	120						98A	1		
2N 3393	Ge		N	S	25	25	5	100	360	(125)	90	180	4.5	2	120						98A	1		
2N 3394	Ge		N	S	25	25	5	100	360	(125)	55	110	4.5	2	120						98A	1		
2N 3395	Ge		N	S	25	25	5	100	360	(125)	150	500	4.5	2							98A	1		
2N 3396	Ge		N	S	25	25	5	100	360	(125)	90	500	4.5	2							98A	1		
2N 3397	Ge		N	S	25	25	5	100	360	(125)	55	500	4.5	2							98A	1		
2N 3398	Ge		N	S	25	25	5	100	360	(125)	55	800	4.5	2							98A	1		
2N 3399			P	G	20			80	(100)			>10		1.5	400							3		
2N 3400			P	G	20	20		150	(150)		50	300		10	150							5		
2N 3401	So		P	G	25	25	25	560	(150)			>4									5A	5	15	
2N 3402	Se		P	N	25	25		560	(150)	75		225	2									1		
2N 3403	Se		N	S	25	25		560	(150)	180		540	2									1		
2N 3404	Se		N	S	50	50		560	(150)	75	225		2									1		
2N 3405	Se		N	S	50	50		560	(150)	180	540		2									1		
2N 3407			N	S	35	18		200	(200)	10	100		10	300								3		
2N 3408			P	S	40	25		4W	(200)	10	100		40	200								3		
2N 3412			P	G	20	20		60	(100)	30	200		10	100								1		
2N 3413			P	S	150	150		400	(200)	10	45		50	0.25								1		
2N 3414	Se		N	S	25	25		360	(160)	75	225		2									1		
2N 3415	Se		N	S	25	25		360	(160)	180	540		2									1		
2N 3416	Se		N	S	50	50		360	(160)	75	225		2									1		
2N 3417	Se		N	S	50	50		360	(160)	180	540		2									1		
2N 3418	Ti		N	S	85	60	8	3A	15W	100c	20	60	2	1A		>40				200ns	5A	4		
2N 3419	Ti		N	S	125	80	6	3A	15W	100c	20	60	2	1A		>40				200ns	5A	4		
2N 3420	Ti		N	S	85	60	8	3A	15W	100c	40	120	2	1A		>40				200ns	5A	4		
2N 3421	Ti		N	S	125	80	8	3A	15W	100c	40	120	2	1A		>40				200ns	5A	4		
2N 3426	Ph		N	S	25	12	4	1A	3W	25c	30	120	0.5	300		>200				(<15ns)	39B	6		
2N 3427	Mo		P	G	45	30	30	500	200	(100)	100	350	1	100							5A	1		
2N 3428	Mo		P	G	45	30	30	500	200	(100)	150	400	1	100							5A	1		
2N 3429	Wb		N	S	50			150W	(175)	10	35		5A									6		
2N 3430	Wb		N	S	100	100		150W	(175)	10	35		5A									6		
2N 3431	Wb		N	S	150	150		150W	(175)	10	35		5A									6		
2N 3432	Wb		N	S	200	200		150W	(175)	10	35		5A									6		
2N 3433	Wb		N	S	250	250		150W	(175)	10	35		5A									6		
2N 3434			N	S	300	300		150W	(175)	10	35		5A									6		
2N 3435	Rc		N	S	80	60		1W	(200)	50	200		10	140								4		
2N 3439	Ti		N	S	450	350	7	1A	5W	25c	40	160	10	20						0.3μs	5A	8		
2N 3440	Ti		N	S	300	250	7	1A	5W	25c	40	160	10	20						0.3μs	5A	8		
2N 3441	Rc		N	S	160	140	7	3A	25W	(200)	20	80	4	500							309A	2		
2N 3442	Ph		N	S	160	140	7	10A	117W	25m	20	25	70	4	3A						3D	2		
2N 3443			P	G	20	15		300	(100)	20	150		10	750								3		
2N 3444	Ti		N	S	80	50	5	1A	5W	25c	20	60	1	500							39A	6		
2N 3445	Mo		N	S	80	60	6	7.5A	115W	(200)	20	60	5	3A							3A	2		
2N 3446	Mo		N	S	100	80	10	7.5A	115W	(200)	20	60	5	3A							3A	2		
2N 3447	Mo		N	S	80	60	6	7.5A	115W	(200)	40	120	5	3A							3A	2		
2N 3448	Mo		N	S	100	80	10	7.5A	115W	(200)	40	120	5	3A							3A	2		
2N 3449			P	G	15	6		150	(100)		>20		10	300								5		
2N 3450			N	S	120	60		600	(200)	40	120		150	100								5		
2N 3451	Ns		P	S	6	6		300	(200)	30	120		10	500								5		
2N 3461	So		P	S	30	30		60	(110)	90	150		500									2		
2N 3462			N	S	50	35		300	(200)	100	300		10									1		
2N 3463			N	S	60	45		300	(200)	120	360		45									1		
2N 3464			N	S	60	40		5W	(200)	35	100		200	50								4		
2N 3467	Ti		P	S	40	40	5	1A	1W	25a	40	120	1	500		>175					39A	5		
2N 3468	Ti		P	S	50	50	5	1A	1W	25a	25	75	1	500		>150					39A	5		
2N 3469	So		N	S	35	25		1W	(200)	100	350		500	20								4		
2N 3470	Wb		N	S	50	50		150W	(150)	100	500		9A									2		
2N 3471	Wb		N	S	100	100		150W	(150)	100	500		9A									2		
2N 3472	Wb		N	S	150	150		150W	(150)	100	500		9A									2		
2N 3473	Wb		N	S	200	200		150W	(150)	100	500		9A									2		
2N 3474	Wb		N	S	50	50		150W	(150)		>700		4A									2		
2N 3475	Wb		N	S	100	100		150W	(150)		>700		4A									2		
2N 3476	Wb		N	S	150	150		150W	(150)		>700		4A									2		
2N 3477	Wb		N	S	200	200		150W	(150)		>700		4A									2		
2N 3478	Rc		N	S	30	15	2	200	(200)	25	150		8	2								3		
2N 3485	Ti		P	S	60	40	5	600	400	25a	40	120	10	150							104B	5		
2N 3485A	Ti		P	S	60	60	5	600	400	25a	40	120	10	150							46A	5		
2N 3486	Ti		P	S	60	40	5	600	400	25a	100	300	10	150							46A	5		
2N 3486A	Ti		P	S	80	60	5	600	400	25a	100	300	10	150							46A	5		
2N 3487	Mo		N	S	80	60	10	7.5A	117W	(200)	20	60	5	3A								2		
2N 3488	Mo		N	S	100	80	10	7.5A	117W	(200)	20	60	5	3A								2		
2N 3489	Mo		N	S	120	100	10	7.5A	117W	(200)	15	45	5	3A								2		
2N 3490	Mo		N	S	80	60	10	7.5A	117W	(200)	40	120	5	5A								2		
2N 3491	Mo		N	S	100	80	10	7.5A	117W	(200)	40	120	5	5A								2		
2N 3492	Mo		N	S	120	100	10	7.5A	117W	(200)	30	90	5	5A								2		
2N 3493	Mo		N	S	12	8		150	(200)	40	120		500	400								5		
2N 3494	Ti	</																						

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V_{cbo} V	V_{ceo} V	V_{ebo} V	I_c (I_{cm}) mA	P_{tot} mW	t (tj)	h_{FE} min	(h_{fe}) type max	V_{ce} (V_{cb}) V	I_c (I_e) mA	F_T	R_{thja} (η) °C/W	F (C_C)	f MHz	τ_{on} (tr)			
2N 3500	Mo		N	S	150	150	6	300	5W	(200)	40	120	10	150	150	175				5A	3	
2N 3501	Mo		N	S	150	150	6	300	5W	(200)	100	300	10	150	150	175				5A	3	
2N 3502	Ti		P	S	45	45			700	(200)	115	300		50	200						5	
2N 3503	Ti		P	S	60	60			700	(200)	115	300		50	200						5	
2N 3504	Ti		P	S	45	45			400	(200)	115	300		50	200						5	
2N 3505	Ti		P	S	60	60			400	(200)	115	300		50	200						5	
2N 3507	Mo		N	S	80	50	5	3A	5W	(200)	30	150	2	1,5A	60	175				5A	6	
2N 3508	Mo		N	S	40	20	6	500	2W	(200)	40	120	1	10		87				46A	6	
2N 3509	Mo		N	S	40	20	6	500	2W	(200)	100	300	1	10		87				46A	6	
2N 3510	Mo		N	S	40	10	6	500	1,2W	(200)	25	150	1	150						52A	6	
2N 3511	Mo		N	S	40	15	6	500	1,2W	(200)	30	120	1	150						5A	5	
2N 3512	Re		N	S	60	35	5		800	(200)			1	500	250						3	
2N 3526			N	S	130	120			800	(200)	30	120		30	40						1	
2N 3527			P	S	30	30			400	(200)	25	75			5						4	
2N 3543	It		N	S	65	60			60W	(200)	10	80		4,5A	150							
2N 3544	Mo		N	S	25	25	3	100	300	(175)			10	10						18A	3	
2N 3545	Ns		P	S	20	20			360	(200)	40	120		10	250						5	
2N 3546	Ns		P	S	15	12			360	(200)	30	120		10	750						1	
2N 3547	Ns		P	S	60	60			360	(200)	100	500		1	45							
2N 3548	Ns		P	S	60	45			400	(200)	100	300			60							



Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _a) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 3549	Ns		P	S	60	60			400	(200)	100	500			60								1	
2N 3550	Ns		P	S	60	45			400	(200)	200	600			60								1	
2N 3551	Ti		N	S	115	60	7	12A	40W	(175)	20	90	2	10A	40	125						810A	4	
2N 3552	Ti		N	S	140	80	7	12A	40W	(175)	20	90	2	10A	40	125						810A	4	
2N 3553	Ph		N	S	65	40	4	350	7W	25m	15	200	5	125	500		<10p					39A	4	
2N 3554	Ti		N	S	60	30	5	1.2A	5W	25c	25	100	1	750			(35ns)					39A	6	
2N 3563	Ns		N	S	30	12			200	(125)	20	200		8	600								3	
2N 3564	Ns		N	S	30	15			200	(125)	20	500		15	400								3	
2N 3565	Ns		N	S	30	25			200	(125)	150	600		1	40								1	
2N 3566	Ns		N	S	40	30			300	(125)	150	600		10	40								1	
2N 3567	Ns		N	S	80	40			300	(125)	40	120		150	60								1	
2N 3568	Ns		N	S	80	60			300	(125)	40	120		150	60								1	
2N 3569	Ns		N	S	80	40			300	(125)	100	300		150	60								1	
2N 3570	Ti		N	S	30	15	3	50	200	25a	20	150	6	5	>1500		<7	1G				72A	3	
2N 3571	Ti		N	S	25	15	3	50	200	25a	20	200	6	5			<4	450				72A	3	
2N 3572	Ti		N	S	25	13	3	50	200	25a	20	300	6	5			<6	450		(18ns)		72A	3	
2N 3576	Ti		P	S	20	15	5	200	1.2W	25c	40	120	0.5	10	>400							18A	5	
2N 3577			N	S	100	80			85W	(175)	12	60		1A	10							4		
2N 3579	So		P	S	80	60	6		400	(200)	30	120	5	1	80							46A	3	
2N 3580	So		P	S	80	60	6		400	(200)	60	240	5	1	80							46A	3	
2N 3581	So		P	S	50	40	6		400	(200)	50	150	5	0.1	30							46A	3	
2N 3582	So		P	S	50	40	6		400	(200)	100	300	5	0.1	30							46A	3	
2N 3583	Rc		N	S	250	175	6	2A	35W	(200)	40	200	10	500	10	70						309A	4	
2N 3584	Rc		N	S	375	250	6	2A	35W	(200)	25	100	10	1A	10							309A	6	
2N 3585	Rc		N	S	500	300	6	2A	35W	(200)	25	100	10	1A	10							309A	6	
2N 3586			P	S	45	45			125	(200)					0.1								5, 15	
2N 3589			N	S	200	200			2W	(175)	30	90		200	15								4	
2N 3590			N	S	200	200			2W	(175)	75	150		200	15								4	
2N 3591			N	S	200	200			1W	(175)	30	90		200	15								4	
2N 3592			N	S	200	200			1W	(175)	75	150		200	15								4	
2N 3593			N	S	200	200			1W	(175)	30	90		200	15								4	
2N 3594			N	S	200	200			1W	(175)	75	150		200	15								4	
2N 3595			N	S	200	200			1.5W	(175)	30	90		200	15								4	
2N 3596			N	S	200	200			1.5W	(175)	75	150		200	15								4	
2N 3597	So		N	S	60	40	8	20A	100W	(200)	40	120	2	10A	30							63A	6	
2N 3598	So		N	S	80	60	8	20A	100W	(200)	40	120	2	10A	30							63A	6	
2N 3599	So		N	S	100	80	8	20A	100W	(200)	40	120	2	10A	30							63A	6	
2N 3600	Rc		N	S	30	15	3		200	(200)	20	150	1	3	850							72A	3	
2N 3601			P	G	100	40			286	(100)	60	180		1A	20								5	
2N 3602			P	G	100	40			286	(100)	60	180		1A	20								5	
2N 3603			P	G	130	55			286	(100)	60	180		1A	20								5	
2N 3604			P	G	130	55			286	(100)	60	180		1A	20								5	
2N 3605	Se		N	S	18	14			200	(150)		>30		10	300								5	
2N 3605A			N	S	40	15			320	(120)	30	120		10	300								5	
2N 3606	Se		N	S	18	14			200	(150)		>30		10	300								5	
2N 3606A			N	S	40	15			320	(120)	30	120		10	300								5	
2N 3607	Se		N	S	18	14			200	(150)		>30		10	300								5	
2N 3611	Mo		P	G	40	25	20	7A	77W	(110)	35	70	2	3A		32.7						3A	2, 6	
2N 3612	Mo		P	G	60	35	30	7A	77W	(110)	35	70	2	3A		32.7						3A	2, 6	
2N 3613	Mo		P	G	40	25	20	7A	77W	(110)	60	120	2	3A		32.7						3A	2, 6	
2N 3614	Mo		P	G	60	35	30	7A	77W	(110)	60	120	2	3A		32.7						3A	2, 6	
2N 3615	Mo		P	G	80	50	40	7A	77W	(110)	30	60	2	3A		32.7						3A	2, 6	
2N 3616	Mo		P	G	100	60	50	7A	77W	(110)	30	60	2	3A		32.7						3A	2, 6	
2N 3617	Mo		P	G	80	50	40	7A	77W	(110)	45	90	2	3A		32.7						3A	2, 6	
2N 3618	Mo		P	G	100	60	50	7A	77W	(110)	45	90	2	3A		32.7						3A	2, 6	
2N 3619	So		N	S	75	40			7.5W	(175)		>40		1A	200								4	
2N 3620	So		N	S	75	40	4	10A	7.5W	(175)		>30	10	5A	200								4	
2N 3621	So		N	S	75	40	4	10A	30W	(175)		>40	10	5A	200							61A	4	
2N 3622	So		N	S	75	40	4	10A	30W	(175)		>40	10	5A	200							61A	4	
2N 3623	So		N	S	75	40			7.5W	(175)		>40		1A	200								4	
2N 3624	So		N	S	75	40	4	10A	7.5W	(175)		>30	10	5A	200								4	
2N 3625	So		N	S	75	40	4	10A	30W	(175)		>40	10	5A	200							61A	4	
2N 3626	So		N	S	75	40	4	10A	30W	(175)		>40	10	5A	200							61A	4	
2N 3627	So		N	S	100	50			7.5W	(175)		>40		1A	200								4	
2N 3628	So		N	S	100	50	4	10A	7.5W	(175)		>30	10	5A	200							713B	4	
2N 3629	So		N	S	100	50	4	10A	50W	(175)		>40	10	5A	200								4	
2N 3630	So		N	S	100	50	4	10A	50W	(175)		>40	10	5A	2									

Type	Manufacturer	Sort (Note)	PNP/NPN	Gen/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V_{cbo} V	V_{ceo} V	V_{ebo} V	I_c (I_{cm}) mA	P_{tot} mW	t (tj)	h_{FE} min	(h_{fe}) type max	V_{ce} (V_{cb}) V	I_c (I_e) mA	F_T	R_{th-a} (η) °C/W	F (C_c)	f MHz	t_{on} (tr)			
2N 3660	So		P	S	40	30	5	2A	5W	(200)	25	100	10	500	25					5A	4	
2N 3661	So		P	S	60	50	5	2A	5W	(200)	25	100	10	500	25					5A	4	
2N 3662	Se		N	S	18	12			200	(125)	>20	>20		8	700						3	
2N 3663	Se		N	S	30	12			200	(125)	>20	>20		8	700						3	
2N 3664	Mo		N	S	60	40	4	500	5W	(200)	8	80	2	50	500	175				828A	2.6	
2N 3665	Ns		N	S	120	80			5W	(200)	40	120		150	60						6	
2N 3666	Ns		N	S	120	80			5W	(200)	100	300		150	60						6	
2N 3667	So		N	S	50	50	5	20A	117W	(200)	15	60	5	8A	0.5					3A	4	
2N 3671	Ns		P	S	60	50			600	(200)	75	225		150	200						5	
2N 3672	Ns		P	S	60	50			400	(200)	75	225		150	200						5	
2N 3673	Ns		P	S	60	50			350	(200)	75	225		150	200						5	
2N 3675	So		N	S	90	55			9W	(200)	12	60		1A	1						6	
2N 3676	So		N	S	90	90			9W	(200)	12	60		1A	1						6	
2N 3677	So		P	S	30	20			400	(200)	12	60		5							5.15	
2N 3678	Ns		P	S	75	55			800	(200)	40	120		150	250						5	

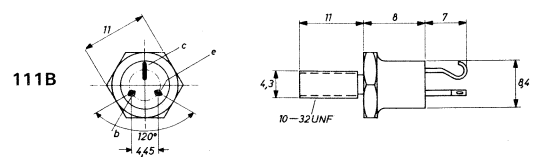
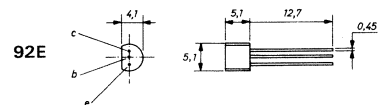
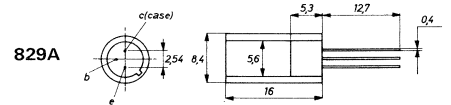
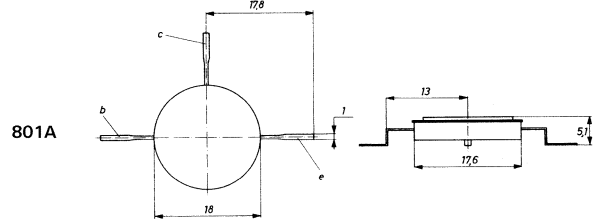
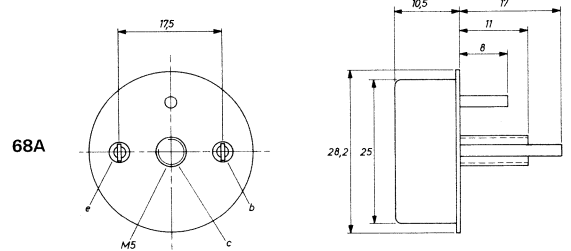
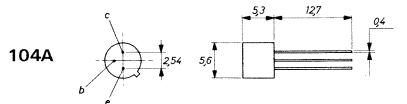
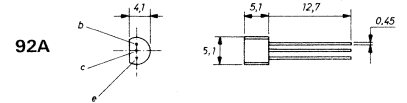
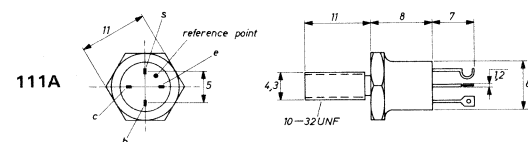
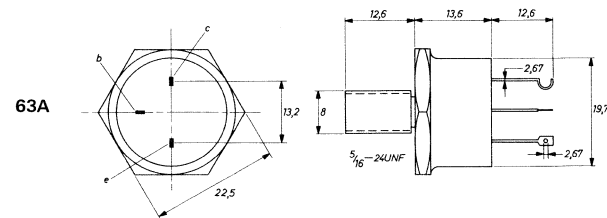
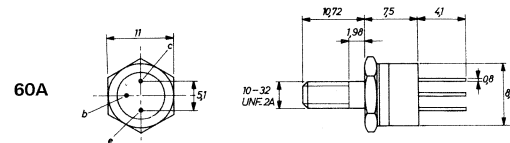
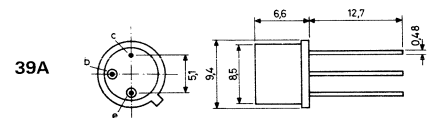
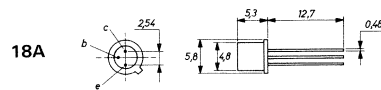
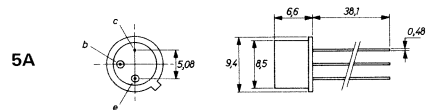
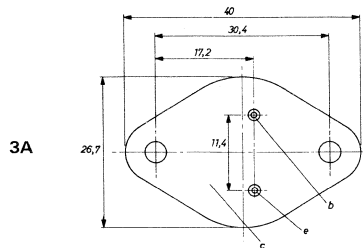


Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)				
2N 3680	Ti	du	N	S	60	50	6	30	(1,2W)	25c	(300	900)	5	1			(≥0,9)					77A	16	
2N 3681			N	S	10	7			200	(200)	20	220		2		1000							3	
2N 3682			N	S	40	15			360	(200)	40	120		10		600							3	
2N 3683			N	S	30	12			200	(200)	20	150		8		1000							3	
2N 3688			N	S	40	40			200	(125)				4		400							3	
2N 3689			N	S	40	40			200	(125)				4		400							3	
2N 3690			N	S	40	40			200	(125)				4		400							3	
2N 3691	Ns		N	S	35	20			200	(125)	40	160		10		200							1	
2N 3692	Ns		N	S	35	20			200	(125)	100	400		10		200							1	
2N 3693	Ns		N	S	45	45			200	(125)	40	160		10		200							3	
2N 3694	Ns		N	S	45	45			200	(125)	100	400		10		200							3	
2N 3700	Ph		N	S	140	80			500	(200)	100	300		150		100							3	
2N 3701	Ph		N	S	140	80			500	(200)	40	120		150		80							3	
2N 3702	Ti		P	S	40	25	5	200	360	25a	60	300	5	50		>100						92A	1	2N 3704
2N 3703	Ti		P	S	45	30	5	200	360	25a	30	150	5	50		>100						92A	1	2N 3705
2N 3704	Ti		N	S	50	30	5	800	360	25a	100	300	2	50		>100						92A	1	2N 3702
2N 3705	Ti		N	S	50	30	5	800	360	25a	50	150	2	50		>100						92A	1	2N 3703
2N 3706	Ti		N	S	40	20	5	800	360	25a	30	600	2	50		>100						92A	1	
2N 3707	Ti		N	S	30	30	6	30	360	25a	(100	550)	5	0.1		80						92A	1	2N 4058
2N 3708	Ti		N	S	30	30	6	30	360	25a	(45	800)	5	1								92A	1	2N 4059
2N 3709	Ti		N	S	30	30	6	30	360	25a	(45	250)	5	1								92A	1	2N 4060
2N 3710	Ti		N	S	30	30	6	30	360	25a	(90	450)	5	1								92A	1	2N 4061
2N 3711	Ti		N	S	30	30	6	30	360	25a	(180	800)	5	1								92A	1	2N 4062
2N 3712	Mo		N	S	150	150	5	200	5W	(200)	30	150	10	30		240						5A	3	
2N 3713	Ti		N	S	80	60	7	10A	150W	25c	25	75	2	1A		>4	43,7					450ns	3A	2, 6 2N 3789
2N 3714	Ti		N	S	100	80	7	10A	150W	25c	25	75	2	1A		>4	43,7					450ns	3A	2, 6 2N 3790
2N 3715	Ti		N	S	80	60	7	10A	150W	25c	50	150	2	1A		>4	43,7					450ns	3A	2, 6 2N 3791
2N 3716	Ti		N	S	100	80	7	10A	150W	25c	50	150	2	1A		>4	43,7					450ns	3A	2, 6 2N 3792
2N 3717			N	S	60	60			7,5W	(200)	2	100		500		250							4	
2N 3718			N	S	60	60			10W	(200)	2	100		500		250							4	
2N 3719	Mo		P	S	40	40	4	3A	6W	(200)	25	180	1,5	1A		60						5A	6	
2N 3720	Mo		P	S	60	60	4	3A	6W	(200)	25	180	1,5	1A		60						5A	6	
2N 3721	Ge		N	S	18	18	5	100	360	(125)	60	660	10	2		120						98A	1	
2N 3722	Mo		N	S	80	60	5	500	4W	(200)	40	150	1	100		300						5A	6	
2N 3723	Mo		N	S	100	80	6	500	4W	(200)	40	150	1	100		300						5A	6	
2N 3724	Ti		N	S	50	30	6	500	800	25a	60	150	1	100								35ns	39A	5
2N 3724A	Ti		N	S	50	30	6	1,2A	1W	25a	60	150	1	100								30ns	39A	5
2N 3725	Ti		N	S	80	50	6	500	800	25a	60	150	1	100								35ns	39A	5
2N 3725A	Ti		N	S	80	50	6	1,2A	1W	25a	60	150	1	100								30ns	39A	5
2N 3730	Rc		P	G	200	200	0,5	3A	10W	(200)				150	1	100						3A	2	
2N 3731	Rc		P	G	320	320	2	10A	5W	(100)					6A							3A	2	
2N 3732	Rc		P	G	100	100	0,5	3	3W	(100)	35		500		700							3A	2	
2N 3733	Mo		N	S	65	40	4	3A	23W	(200)						400						60A	4	
2N 3734	Ti		N	S	50	30	5	1,5A	1W	25a	30	120	1,5	1A								(40ns)	39A	6
2N 3734A			N	S	50	30			1W		30	120		1A									6	
2N 3735	Ti		N	S	75	50	5	1,5A	1W	25a	20	80	1,5	1A								(40ns)	39A	6
2N 3735A			N	S	75	50			1W		20	80		1A									6	
2N 3736	Mo		N	S	50	30	5	1,5A	2W	(200)	30	120	1,5	1A			350					46A	6	
2N 3736A			N	S	50	30			500		30	120		1A									5	
2N 3737	Mo		N	S	75	50	5	1,5A	2W	(200)	20	80	1,5	1A			350					46A	6	
2N 3737A			N	S	75	50			500		20	80		1,1A									5	
2N 3738	Mo		N	S	250	225	6	3A	20W	(175)	40	200	10	100			10					309A	2	
2N 3739	Mo		N	S	325	300	6	3A	20W	(175)	40	200	10	100								309A	2	
2N 3740	Mo		P	S	60	60	7	4A	25W	(200)	30	100	1	250		3						309A	2	
2N 3740A	Mo		P	S	60	60	7	4A	25W	(200)	30	100	1	250		3						309A	2	
2N 3741	Mo		P	S	80	80	7	4A	25W	(200)	30	100	1	250		3						309A	2	
2N 3741A	Mo		P	S	80	80	7	4A	25W	(200)	30	100	1	250		3						309A	2	
2N 3742	Mo		N	S	300	300	7	50	5W	(200)	20	200	10	30								5A	3	
2N 3743	Mo		P	S	300	300	5	50	5W	(200)	25	250	10	30								5A	3	
2N 3744	So		N	S	60	40	7	5A	30W	(200)	20	60		1A		70						111A	4	
2N 3745	So		N	S	80	60	8	5A	30W	(200)	20	60		1A		70						111A	4	
2N 3746	So		N	S	100	80	8	5A	30W	(200)	20	60		1A		70						111A	4	
2N 3747	So		N	S	60	40	7	5A	30W	(200)	40	120		1A		70						111A	4	
2N 3748	So		N	S	80	60	8	5A	30W	(200)	40	120		1A		70						111A	4	
2N 3749	So		N	S	100	80	8	5A	30W	(200)	40	120		1A		70						111A	4	
2N 3750	So		N	S	60	40	7	5A	30W	(200)	100	300		1A		70						111A	4	
2N 3751	So		N	S	80	60	8	5A	30W	(200)	100	300		1A		70						111A	4	
2N 3752	So		N	S	100	80	8	5A	30W	(200)	100	300		1A		70						111A	4	
2N 3762	Mo		P	S	40	40	5	1,5A	4W	(200)	30	120	1,5	1A			175					5A	6	
2N 3763	Mo		P	S	60	60	5	1,5A	4W	(200)	20	80	1,5	1A			175					5A	6	
2N 3764	Mo		P	S	40	40	5	1,5A	2W	(200)	30	120	1,5	1A			350					46A	6	
2N 3765	Mo		P	S	60	60	5	1,5A	2W	(200)	20	80	1,5	1A								46A	6	
2N 3766	Mo		N	S	80	60	6	4A	20W	(175)	40	160	5	500		10						309A	2, 6	
2N 3767	Mo		N	S	100	80	6	4A	20W	(175)	40	160	5	500		10						309A	2, 6	
2N 3770			P	G	10	6			50	(100)														

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 3806	Ti	du	P	S	60	60	5	50	(600)	25a	150	450	5	1					78A	16	2N 2913			
2N 3807	Ti	du	P	S	60	60	5	50	(600)	25a	300	900	5	1					78A	16	2N 2914			
2N 3808	Ti	du	P	S	60	60	5	50	(600)	25a	150	450	5	1					78A	16	2N 2915			
2N 3809	Ti	du	P	S	60	60	5	50	(600)	25a	300	900	5	1					78A	16	2N 2916			
2N 3810	Ti	du	P	S	60	60	5	50	(600)	25a	150	450	5	1					78A	16	2N 2917			
2N 3811	Ti	du	P	S	60	60	5	50	(600)	25a	300	900	5	1					78A	16	2N 2918			
2N 3818	Mo	N	N	S	60	30	4	2A	25W	(175)	5	50	2	400	150				60A	4				
2N 3825	Ti	N	N	S	30	15			250	(150)		>20		2	200					3				
2N 3826	Ti	N	N	S	60	45			200	(150)	40	160		10	200					3				
2N 3827	Ti	N	N	S	60	45			200	(150)	100	400		10	200					3				
2N 3828	Ti	N	N	S	40	40			300	(150)	30	200		12	360					3				
2N 3829	Ti	P	N	S	35	20	5	200	360	25a	30	120	0.4	30				(15ns)	52A	5	2N 3014			
2N 3830	Ti	N	N	S	80	50			1W	(200)		>30		150	200					6				
2N 3831	Ti	N	N	S	70	40			1W	(200)		>35		150	200					6				
2N 3832	Ti	N	N	S	15	6			200	(200)	25	125		2	800					3				
2N 3833	Ti	N	N	S	25	15						>20		30						4				
2N 3834	Ti	N	N	S	25	15						>20		30						4				
2N 3835	Ti	N	N	S	25	15						>20		30						4				
2N 3839	Rc	N	N	S	30	15	2.5				30	150	1	3	1200					3				
2N 3840	Sp	P	N	S	50	50			400	(200)		>30		0.2	6			72A	5, 15					
2N 3841		P	N	S	100	100			300	(200)		>15		0.2	1.5					5, 15				
2N 3842		P	N	S	120	120			300	(200)		>10		1						5, 15				
2N 3843	Sp	N	N	S	30	30			200	(125)	20	40		2	60				98A	3				
2N 3843A	Sp	N	N	S	30	30			200	(125)	20	40		2	60				98A	3				
2N 3844	Sp	N	N	S	30	30			200	(125)	35	70		2	90				98A	3				
2N 3844A	Sp	N	N	S	30	30			200	(125)	35	70		2	90				98A	3				
2N 3845	Sp	N	N	S	30	40			200	(125)	60	120		2	128				98A	3				
2N 3845A	Sp	N	N	S	30	30			200	(125)	60	120		2	128				98A	3				
2N 3846	Ti	N	N	S	300	200	10	20A	150W	100c	40	200	3	5A	>10	37.5		4μs	63A	2				
2N 3847	Ti	N	N	S	400	300	10	20A	150W	100c	40	200	3	5A	>10	37.5		4μs	63A	2				
2N 3848	Ti	N	N	S	300	300			4W	(175)	10	60		15A	10					2				
2N 3849	Ti	N	N	S	400	300			4W	(175)	10	60		10						2				
2N 3850	So	N	N	S	100	80	5	5A	30W	(200)	50	150	1	1A	20			111A	6					
2N 3851	So	N	N	S	100	80	5	5A	30W	(200)	30	90	1	1A	20			111A	6					
2N 3852	So	N	N	S	60	40	5	5A	30W	(200)	50	150	1	1A	20			111A	6					
2N 3853	So	N	N	S	60	40	5	5A	30W	(200)	30	90	1	1A	20			111A	6					
2N 3854	Sp	N	N	S	18	18			200	(150)	35	70	2	2	100				3					
2N 3854A	Sp	N	N	S	30	30			200	(150)	35	70	2	2	100				3					
2N 3855	Sp	N	N	S	18	18			200	(150)	60	120	2	2	130				3					
2N 3855A	Sp	N	N	S	30	30			200	(150)	60	120	2	2	130				3					
2N 3856	Sp	N	N	S	18	18			200	(150)	100	200	2	2	140				3					
2N 3856A	Sp	N	N	S	30	30			200	(150)	100	200	2	2	140				3					
2N 3857	Ns	P	N	S	45	45			600	(200)	50	200	1	4					1					
2N 3858	Sp	N	N	S	30	30			200	(125)	60	120	2	2	90				3					
2N 3858A	Sp	N	N	S	60	60			200	(100)		>45		1	90				3					
2N 3859	Sp	N	N	S	30	30			200	(125)	100	200	2	2	90				3					
2N 3859A	Sp	N	N	S	60	60			200	(100)		>75		1	90				1					
2N 3860	Sp	N	N	S	30	30			200	(125)	150	300	2	2	90				3					
2N 3861	N	N	N	S	530	530			2W	(175)	30	200	25	50					2					
2N 3862	Tr	N	N	S	50	20			360	(200)	50	150	10	600					5					
2N 3863	So	N	N	S	70	50	7	15A	117W	(200)	30	60	2	3A	0.5	45		3A	6					
2N 3864	So	N	N	S	110	90	7	15A	117W	(200)	30	90	2	3A	0.5	45		3A	6					
2N 3865	N	N	N	S	160	150			117W	(200)	30	90	3A	0.5					4					
2N 3866	Ph	N	N	S	55	30	3.5	400	5W	25m	10	200	5	50	700	200	(<3p)	39A	6					
2N 3867	P	A	0	40	40				1W	(200)	40	200		1.5A	60				4					
2N 3868	P	S	60	60					1W	(200)	30	150	1.5A	60					6					
2N 3869	N	S	40	20					2.5W	(175)	20	150	30	400					4					
2N 3876	N	S	140	50					150W	(175)	25	150	10A	50					2					
2N 3877	Ge	N	S	70	70	7	50	200	(125)	20	250	2	2	160				98A	1					
2N 3878	Rc	N	S	120	50	4	7A	35W	(200)	40	200	5	500	40				309A	3					
2N 3879	Rc	N	S	120	70	7	7A	35W	(200)	20	80	5	4A	40				309A	6					
2N 3880	N	S	30	15					200	(200)	30	200	3	1200					3					
2N 3881	N	P	G	60	35				600	(200)		>50		70					3					
2N 3883	Mo	N	S	25	15	3	300	300	(100)			>30	1	200	300			5A	5					
2N 3900	Sp	N	N	S	18	18			200	(125)	250	500	2						1					
2N 3900A	Sp	N	N	S	18	18			200	(125)	250	500	2						1					
2N 3901	Ge	N	N	S	18	18	5	100	360	(125)	350	700	4.5	2	200			98A	1					
2N 3902	Ti	N	N	S	400	40	6	1A	100W	(150)	20	100	5	1A		31		3A	6					
2N 3903	Ti	N	N	S	60	40	6	200	25	50	150	1	10	>250			(35ns)	92E	1, 5	2N 3905				
2N 3904	Ti	N	N	S	60	40	6	200	310	25a	100	300	1	10	>300			(35ns)	92E	1, 5	2N 3906			
2N 3905	Ti	P	S	40	40	5	200	310	25a	50	150	1	10	>200			(35ns)	92E	1, 5	2N 3903				
2N 3906	Ti	P	S	40	40	5	200	310	25a	100	300	1	10	>250			(35ns)	92E	1, 5	2N 3904				
2N 3907	Ns	N	N	S	60	45			300	(200)	60	300		60										
2N 3908	Ns	N	N	S	60	60			300	(200)	100	500		60										
2N 3910		P	S	60	50				500	(200)	40	160	1	4					5, 15					
2N 3911		P	S	60	40				500	(200)	60	240	1	8					5, 15					
2N 3912		P	S	60	30				500	(200)		>90	1	10					5, 15					
2N 3913		P	S	60	50				400	(200)	40	160	1	4					5, 15					
2N 3914		P	S	60	40				400	(200)	60	240	1	8					5, 15					
2N 3915		P	S	60	30				400	(200)		>90	1	10					5, 15					
2N 3916		N	N	S	150	150			5W	(150)	40	200		150	50				2					
2N 3917		N	N	S	80	40			20W	(150)	30	120		1A	50				2					
2N 3918		N	N	S	80	40			20W	(150)	100	300		1A	50				2					
2N 3919		N	N	S	120	60			15W	(150)	40	120		2A	80				6					
2N 3920		N	N	S	120	60			15W	(150)	100	300		2A	80				6					

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2N 3950	Mo		N	S	65	35	4	3.3A	70W	(200)					150	62					60A	4		
2N 3953			N	S	15	12			200	(200)	30	360		2	1300						18A	3		
2N 3959	Mo		N	S	20	12	4.5		400	(200)	40	200	1	10	1300						18A	5		
2N 3960	Mo		N	S	20	12	4.5		400	(200)	40	200	1	10	1600						18A	5		
2N 3961			N	S	65	40			10W	(200)					400							4		
2N 3962	Ti		P	S	60	60	6	200	360	25a	100	450	5	1		<3	1k			18A	1			
2N 3963	Ti		P	S	80	80	6	200	360	25a	100	450	5	1		<3	1k			18A	1			
2N 3964	Ti		P	S	45	45	6	200	360	25a	250	600	5	1		<2	1k			18A	1			
2N 3965	Ti		P	S	60	60	6	200	360	25a	250	600	5	1		<2	1k			18A	1			
2N 3973			N	S	60	30			360	(150)	35	100		10	200						1	5		
2N 3974			N	S	60	30			360	(150)	55	200		10	200						5	5		
2N 3975			N	S	60	30			360	(150)	35	100		10	200						5	5		
2N 3976	Sp		N	S	60	30			360	(150)	55	200		10	200						5	5		
2N 3977	Sp		P	S	15	10			400	(200)		>40	5	1							5, 15			
2N 3978	Sp		P	S	25	20			400	(200)		>30	5	1							5, 15			
2N 3979	Sp		P	S	40	35			400	(200)		>20	5	1							5, 15			
2N 3981	Ns		N	S	60	30			800	(200)	30	120		150	250						5	5		
2N 3982	Ns		N	S	50	20			800	(200)	40	140		150	250						5	5		
2N 3983			N	S	30	12			200	(150)		>30	4		500						3	3		
2N 3984			N	S	30	12			200	(150)		>20	4		400						3	3		
2N 3985			N	S	30	12			200	(150)		>20	4		300						3	3		
2N 3995	Ti		P	G	20	12			300	(100)	40	200		2										
2N 3996	Ti		N	S	100	80	8	5A	30W	100c	40	120	2	1A	>40	87.5			0.3μs	111A	6	2N 5384		
2N 3997	Ti		N	S	100	80	8	5A	30W	100c	40	120	2	1A	>40	87.5			0.3μs	111A	6			
2N 3998	Ti		N	S	100	80	8	5A	30W	100c	40	120	2	1A	>40	87.5			0.3μs	111B	6	2N 5385		
2N 3999	Ti		N	S	100	80	8	5A	30W	100c	80	240	2	1A	>40	87.5			0.3μs	111B	6			
2N 4000	Ti		N	S	100	80	8	1A	15W	100c	30	120	2	500	>40	175			0.3μs	5A	6			
2N 4001	Ti		N	S	120	100	8	1A	15W	100c	40	120	2	500	>40	175			0.3μs	5A	6			
2N 4002	Ti		N	S	100	80	8	30A	100W	100c	20	80	4	15A	>40	43.7			1μs	63A	2, 6			
2N 4003	Ti		N	S	120	100	8	30A	100W	100c	20	80	4	15A	>40	43.7			1μs	63A	2, 6			
2N 4004	Ti		N	S	100	80	8	20A	40W	(200)	30	150	4	10A		146				810A	2			
2N 4005	Ti		N	S	120	100	8	20A	40W	(200)	30	150	4	10A		146				810A	2			
2N 4006			P	S	10	6			400	(200)		>40			20						1			
2N 4007			P	S	20	15			400	(200)		>30			15						5			
2N 4008			P	S	35	30			400	(200)		>20			15						5			
2N 4012	Mo		N	S	65	40	4	1.5A	11W	(200)					500					60A	2			
2N 4013	Ti		N	S	50	30	6	500	360	25a	60	150	1	100					35ns	18A	5			
2N 4014	Ti		N	S	80	50	6	500	360	25a	60	150	1	100					35ns	18A	5			
2N 4017			P	S	80	80			600	(200)	100	500		1	40						1			
2N 4018			P	S	60	60			400	(200)		>100									1			
2N 4019			P	S	45	45			400	(200)		>250			50						1			
2N 4026	Ti		P	S	80	60	5	1A	2W	25c	40	120	5	100					100ns	18A	10			
2N 4027	Ti		P	S	80	80	5	1A	2W	25c	40	120	5	100					100ns	18A	10			
2N 4028	Ti		P	S	60	60	5	1A	2W	25c	100	300	5	100					100ns	18A	10			
2N 4029	Ti		P	S	80	80	5	1A	2W	25c	100	300	5	100					100ns	18A	10			
2N 4030	Ph		P	S	60	60	5	1A	4W	25c	40	120	5	100	>100	218	(<20p)		<100ns	39A	2, 7			
2N 4031	Ph		P	S	80	80	5	1A	4W	25c	40	120	5	100	>100	218	(<20p)		<100ns	39A	2, 7			
2N 4032	Ph		P	S	60	60	5	1A	4W	25c	100	300	5	100	>150	218	(<20p)		<100ns	39A	2, 7			
2N 4033	Ph		P	S	80	80	5	1A	4W	25c	100	300	5	100	>150	218	(<20p)		<100ns	39A	2, 7			
2N 4034			P	S	40	40			360	(200)	70	200		10	400						5			
2N 4035			P	S	40	40			360	(200)	150	300		10	450						5			
2N 4036	Ph		P	S	90	65	7	1A	5W	25c	20	200	2	150	>60		(<30p)		<110ns	39A	7			
2N 4037	Rc		P	S	60	40	7	1A	7W	(200)	50	250	10	150	60						6			
2N 4040	Ti		N	S	60	40			17W	(200)	10	80		100	400						4			
2N 4041	Ti		N	S	60	40			10W	(200)	10	80		75	500						4			
2N 4046	It		N	S	50	30			800	(200)		<150		100	250						5			
2N 4047	Mo		N	S	80	50			800	(200)		<150		100	250						5			
2N 4048	Mo		P	G	45	30	25	60A	170W	(110)	60	120	2	15A						68A	2			
2N 4049	Mo		P	G	60	45	30	60A	170W	(110)	60	120	2	15A						68A	2			
2N 4050	Mo		P	G	75	60	40	60A	170W	(110)	60	120	2	15A						68A	2			
2N 4051	Mo		P	G	45	30	25	60A	170W	(110)	80	180	2	15A						68A	2			
2N 4052	Mo		P	G	60	45	30	60A	170W	(110)	80	180	2	15A						68A	2			
2N 4053	Mo		P	G	75	60	40	60A	170W	(110)	80	180	2	15A						68A	2			
2N 4054			N	S	300	300			6W	(150)	30	90		50	15						2			
2N 4055			N	S	250	250			6W	(150)	30	90		50	15						2			
2N 4056			N	S	200	200			6W	(150)	30	90		50	15						2			
2N 4057			N	S	150	150			6W	(150)	30	90		50	15						2			
2N 4058	Ti		P	S	30	30	6	30	360	25a	(100	550)	5	0.1						92A	1	2N 3707		
2N 4059	Ti		P	S	30	30	6	30	360	25a	(45	800)	5	1						92A	1	2N 3708		
2N 4060																								

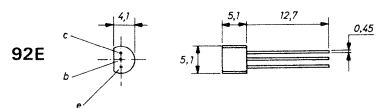
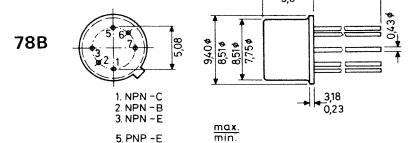
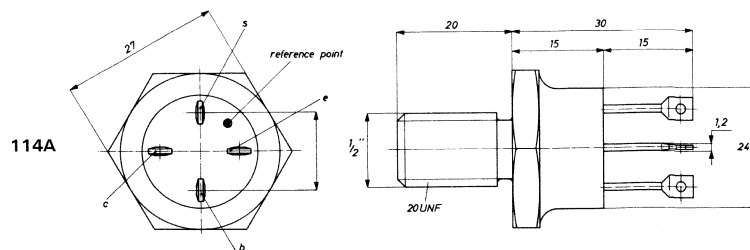
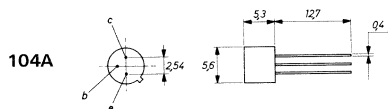
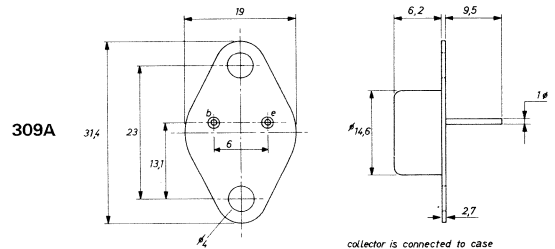
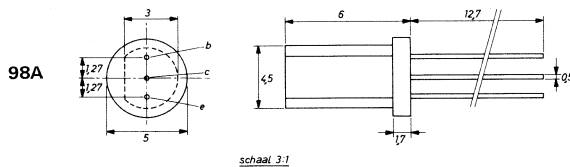
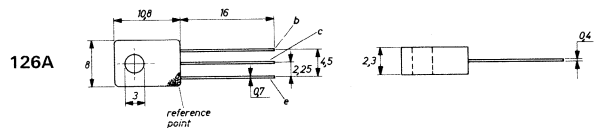
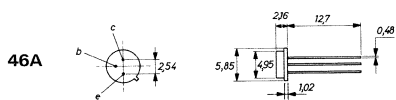
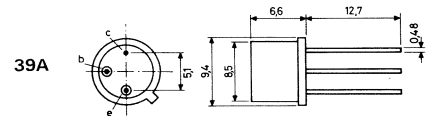
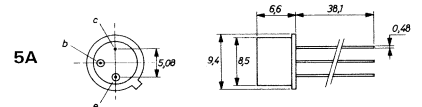
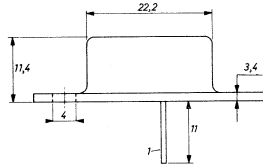
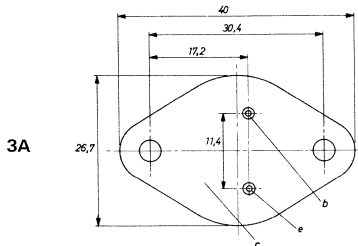
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equival.) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (ti)	h _{FE} min	(h _{FE}) type	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _o)	f MHz	ton (tr)			
2N 4086	Ti		N	S	12	12			200		150	300		2							1	
2N 4087			N	S	12	12			200		250	500		2							1	
2N 4087A			N	S	12	12			200		250	500		2							1	
2N 4104			N	S	60	60	10	50	1.2W	25c	400	800	5	10μ		<1	10k				1	
2N 4106			P	G	25				2W		70	350		5							1	
2N 4111	So		N	S	100	60	8	10A	83W		40	120	5	2A							2	
2N 4112	So		N	S	100	60	8	10A	83W		100	300	5	2A	70						2	
2N 4113	So		N	S	120	80	8	10A	83W		40	120	5	2A	80						2	
2N 4114			N	S	120	80			3W		100	300		2A	70						2	
2N 4115			N	S	120	80			37W		40	120		2A							2	
2N 4116			N	S	120	80			37W		100	300		2A							2	
2N 4121	Ns		P	S	40	40			200	(125)	>70			10	400						3	
2N 4122	Ns		P	S	40	40			200	(125)	>150			10	450						3	
2N 4123	Mo		N	S	49	30	5	200	310	(135)	50	150	1	2	250	357					1, 5	
2N 4124	Mo		N	S	30	25	5	200	310	(135)	120	360	1	2	300	357					1, 5	



Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent.) type
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2N 4125	Mo		P	S	30	30	4	200	310	(135)	50	150	1	2	200	357					92E	1, 5	
2N 4126	Mo		N	S	25	25	4	200	310	(135)	120	360	1	2	250	357					92E	1, 5	
2N 4127	Ti		N	S	60	40			25W		10	80			200	300						2	
2N 4128	Ti		N	S	60	40			40W		10	80			200	200						2	
2N 4130	So		N	S	80	65	4	10A	120W		10	60	5		2A						3A	2	
2N 4131			N	S	90	80			60W		10	80			1A							2	
2N 4132			N	S	90	80			7.5W	(175)	10	80			200	200						4	
2N 4133			N	S	90	80			3W	(175)	10	80			200	200						4	
2N 4134	Ns		N	S	30	30			200	(200)		>200			350							3	
2N 4135	Ns		N	S	30	30			200	(200)		>200			425							3	
2N 4137			N	S	40	40			360	(200)	40	120			10	500						5	
2N 4138	Ti		N	S	30	30	15	100	300	25a		>50	5	1							46A	15	
2N 4140	Ns		N	S	60	30			300	(125)		<120			150	250						3	
2N 4141	Ns		N	S	60	30			300	(125)		<300			150	250						3	
2N 4142	Ns		P	S	60	40			300	(125)		<120			150	200						3	
2N 4143	Ns		P	S	60	40			300	(125)		<300			150	200						3	
2N 4150	So		N	S	100	80			5W		40	120			5A	15						2	
2N 4207			P	S	6	6			300	(200)	50	120			10	650						5	
2N 4208			P	S	12	12			300	(200)	30	120			10	700						5	
2N 4209			P	S	15	15			300	(200)	50	120			10	850						5	
2N 4210	So		N	S	80	60	10	25A	100W		20	100	6		10A	10					63A	2	
2N 4211	So		N	S	100	80	10	25A	100W		20	100	6		10A	20					63A	2	
2N 4225	So		N	S	80	40	6	2A	5W		40	150	5		1A	150					5A	2	
2N 4226	So		N	S	100	60	6	2A	5W		40	150	5		1A	150					5A	2	
2N 4227	Ns		N	S	60	30			300	(125)		<150			150	250						5	
2N 4228	Ns		P	S	60	40			300	(125)		<150			150	200						3	
2N 4231	Mc		N	S	50	40	5	3A	35W	(200)	25	100	2		1.5A	4					309A	2, 6	
2N 4232	Mc		N	S	70	60	5	3A	35W	(200)	25	100	2		1.5A	4					309A	2, 6	
2N 4233	Mo		N	S	90	80	5	3A	35W	(200)	25	100	2		1.5A	4					309A	2, 6	
2N 4234	Mo		P	S	40	40	7	3A	6W	(200)	30	150	1		250	3					5A	2, 6	
2N 4235	Mc		P	S	60	60	7	3A	6W	(200)	30	150	1		250	3					5A	2, 6	
2N 4236	Mc		P	S	80	80	7	3A	6W	(200)	30	150	1		250	3					5A	2, 6	
2N 4237	Mo		N	S	50	40	6	1A	6W	(200)	30	150	1		250	2					5A	2, 6	
2N 4238	Mo		N	S	80	60	6	1A	6W	(200)	30	150	1		250	2					5A	2, 6	
2N 4239	Mo		N	S	100	80	6	1A	6W	(200)	30	150	1		250	2					5A	2, 6	
2N 4240	Rc		N	S	500	250	6	2A	35W		30	150	10		750	15					309A	2	
2N 4241			P	G	32	20			37W		60	300			300							1	
2N 4242	So		P	G	80	70	40	5A	105W		40	80	2		5A						3A	2	
2N 4243	So		P	G	60	55	30	5A	105W		40	80	2		5A						3A	2	
2N 4244	So		P	G	40	40	20	5A	105W		40	80	2		5A						3A	2	
2N 4245	So		P	G	80	70	40	5A	105W		60	120	2		5A						3A	2	
2N 4246	So		P	G	60	55	30	5A	105W		60	120	2		5A						3A	2	
2N 4247	So		P	G	40	40	20	5A	105W		60	120	2		5A						3A	2	
2N 4248			P	S	40	40			200	(125)		>50				40						1	
2N 4249			P	S	60	60			200	(125)		>100				40						1	
2N 4250			P	S	40	40			200	(125)		>250				40						1	
2N 4251			N	S	15	10			250	(200)		>100			10	1300						5	
2N 4252	Ti		N	S	30	18	4	50	200	(175)		>50	10	2	600						72A	3	
2N 4253	Ti		N	S	30	18	4	50	200	(175)		>30	10	2	600						72A	3	
2N 4254	Ti		N	S	30	18			220	(175)		>60			2							1	
2N 4255	Ti		N	S	30	18			200	(175)		>30			2							1	
2N 4256	Ge		N	S	30	30	5	100	360	(125)	100	500	4.5		2						98A	1	
2N 4257			P	S	6	6			200	(125)	30	120			10	500						5	
2N 4258			P	S	12	12			200	(125)	30	120			10	700						5	
2N 4259	Rc		N	S	40	30	2.5		175	(175)	60	250	8		2						104B	3	
2N 4260	Mo		P	S	15	15	4.5	30	200	(200)	30	150	1		10	1600					72A	3	
2N 4261	Mo		P	S	15	15	4.5	30	200	(200)	30	150	1		10	2000					72A	3	
2N 4262			N	S	25	10			1.5W			>75			300	600						2	
2N 4263			N	S	25	10			1.5W			>75			300	800						2	
2N 4264	Mo		N	S	30	15	6	200	310	(135)	40	160	1		10	300	357				92E	5	
2N 4265	Mo		N	S	30	12	6	200	310	(135)	100	400	1		10	300	357				92E	5	
2N 4269	Tr		N	S	200	140			360	(200)		<200			10							1	
2N 4270	Tr		N	S	200	140			580	(200)		<200			10							1	
2N 4271	Tr		N	S	175	140			5W		20	140			200	20						2	
2N 4272	Tr		N	S	175	140			5W		20	140			1A	10						2	
2N 4273	Tr		N	S	175	140			25W		20				1A	10						2	
2N 4274	Ns		N	S	30	12			280	(125)		>18			100	400						5	
2N 4275	Ns		N	S	40	15			280	(125)		>18			100	400						5	
2N 4276	Mo		P	G	30	20	20	60A	170W	(110)	60	120	2		15A						3A	2	
2N 4277	Mo		P	G	30	20	20	60A	170W	(110)	60	180	2		15A							2	
2N 4278	Mo		P	G	45	30	25	60A	170W	(110)	60	120	2		15A						3A	2	
2N 4279	Mo		P	G	45	30	25	60A	170W	(110)	80	180	2		15A						3A	2	
2N 4280	Mo		P	G	60	45	30	60A	170W	(110)	60	120	2		15A						3A	2	
2N 4281	Mo		P	G	60	45	30	60A	170W	(110)	80	180	2		15A						3A	2	
2N 4282	Mo		P	G	75	60	40	60A	170W	(110)	60	120	2		15A						3A	2	
2N 4283	Mo		P	G	75	60	40	60A	170W	(110)	80	180	2		15A						3A	2	
2N 4284	Ns		P	S	25	25			250	(165)		<600			1							1	
2N 4285	Ns		P	S	35	35			250	(165)		<600			1							1	
2N 4286	Ns		N	S	30	25			250	(150)		<600				40						1	
2N 4287	Ns		N	S	45	45			250	(150)		<600				40						1	
2N 4288	Ns		P	S	30	25			250	(150)		<600				40						1	
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2N 4290	Ns		P	S	30	20			2														

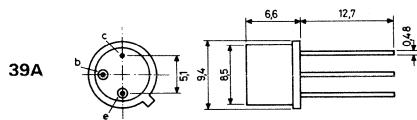
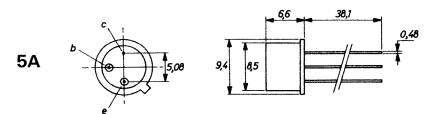
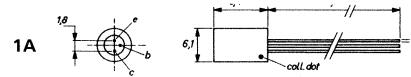
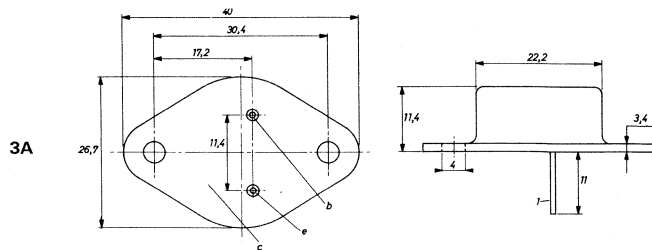
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equivalent) type	
					V _{ceo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 4356	Ns		P	S	80	80			350	(125)		>25			0,1	500								1	
2N 4357			P	S	240	240			400	(200)	80	300	10	40									1		
2N 4358			P	S	240	240			400	(200)	80	300	10	40									1		
2N 4359			P	S	44	45			360	(200)	50	600	1										1		
2N 4383			N	S	40	30			800	(200)		>1000		120										3	
2N 4384	Sp		N	S	40	30			500	(200)		>1000			120								3		
2N 4385	Sp		N	S	40	30			800	(200)		>1000			120								3		
2N 4386	Sp		N	S	40	30			500	(200)		>1000			120								3		
2N 4387	So		P	S	40	40	5	2A	20W	(200)	25	100	10	500							309A	6			
2N 4388	So		P	S	60	60	5	2A	20W	(200)	25	100	10	500							309A	6			
2N 4389			P	S	12	12			200	(125)	30	180			10								4		
2N 4390	Rc		N	S	120	120	6		500	(175)	50	>20	1	2	50						104A	5			
2N 4395	Rc		N	S	60	40			62W		40	170		2A	4							2			
2N 4396	Rc		N	S	80	60			62W		40	170		2A	4							2			
2N 4397	Rc		N	S	40	40			200		40	180		2	600							1			
2N 4398	Ti		P	S	40	40	5	30A	200W	(200)	15	60	4	15A	4	35						3A	2, 6		
2N 4399	Ti		P	S	60	60	5	30A	200W	(200)	15	60	4	15A	4	35						3A	2, 6		
2N 4400	Mo		N	S	60	40	6	600	310	(135)	50	150	1	150	200	357						92E	1, 5		
2N 4401	Mo		N	S	60	40	6	600	310	(135)	100	300	1	150	250	357						92E	1, 5		
2N 4402	Mo		P	S	40	40	5	600	310	(135)	50	150	2	150	150	357						92E	1, 5		
2N 4403	Mo		P	S	40	40	5	600	310	(135)	100	300	2	150	150	357						92E	1, 5		
2N 4404	Mo		P	S	80	80	5	1A	7W	(200)	40	120	1	150	600	140						39A	2, 6		
2N 4405	Mo		P	S	80	80	5	1A	7W	(200)	100	300	1	150	600	140						39A	2, 6		
2N 4406	Mo		P	S	80	80	5	2A	9W	(200)	25	100	1	150	750	140						39A	2, 6		
2N 4407	Mo		P	S	80	80	5	2A	9W	(200)	75	225	1	150	750	140						39A	2, 6		
2N 4409	Mo		N	S	80	50	5	250	310	(135)	60	400	1	1	300	357						92E	5		
2N 4410	Mo		N	S	120	80	5	250	310	(135)	60	400	1	1	300	357						92E	5		
2N 4411			P	S	15	12			150	(200)		>40		0,5	400							5			
2N 4412	Sp		N	S	40	30			600	(200)		>1000			100							3			
2N 4412A	Sp		P	S	60	60			600	(200)		>120			20							3			
2N 4413	Sp		P	S	40	30			400	(200)		>1000			100							3			
2N 4413A	Sp		P	S	60	60			400	(200)		>120			20							3			
2N 4414	Sp		P	S	40	30			600	(200)		>1000			100							3			
2N 4414A	Sp		P	S	60	60			600	(200)		>100			20							3			
2N 4415	Sp		P	S	40	30			400	(200)		>1000			100							3			
2N 4415A	Sp		P	S	60	60			400	(200)		>100			20							3			
2N 4418			N	S	40	40			250	(125)	40	120		10	500							5			
2N 4419			N	S	30	30			250	(125)		>30		10	400							5			
2N 4420			N	S	40	40			250	(125)	30	120		30	350							5			
2N 4421			N	S	30	30			250	(125)		>25		30	300							5			
2N 4422			N	S	40	40			250	(125)	30	120		30	350							5			
2N 4423			N	S	12	12			250	(125)	40	150		30	400							5			
2N 4424	Ge		N	S	60	40	5	500	360	(150)	100	540	4,5	2								98A	5		
2N 4425	Ge		N	S	60	40	5	500	560	(150)	180	540	4,5	2								98A	5		
2N 4427	Ph		N	S	40	20	2	400	3,5W	25m	10	200	5	100	700	200						39A	4		
2N 4428	Mo		N	S	55	35	3,5	425	3,5W	(200)	20	200	5	50	1000							39A	3		
2N 4429	Ti		N	S	55	35			5W		20	200		50	700							2			
2N 4430	Ti		N	S	55	40			10W		20	200		100	600							2			
2N 4431	Ti		N	S	55	40			18W		20	200		100	600							2			
2N 4432			N	S	50	30			600		40	130		6								3			
2N 4432A			N	S	50	30			600		80	150		6								3			
2N 4436			N	S	60	30			200	(125)	40	120		150	250							4			
2N 4437			N	S	60	30			200	(125)	100	300		150	250							4			
2N 4438			N	S	300	300			1W	(200)	40	120		50	30							1			
2N 4439			N	S	300	300			1W	(200)	100	240		50	30							1			
2N 4440	Rc		N	S	65	40	4	1,5A	12W	(200)	10	200		125	500							309A	2		
2N 4449			N	S	40	40			300			>40		10	500							5			
2N 4450			N	S	60	30			3W	(200)		>75		10	250							6			
2N 4451			P	S	12	12			300			>40		30	400							5			
2N 4452			P	S	45	45			350	(200)	115	300		50	200							5			
2N 4453			P	S	18	18			300			>40		30	400							5			
2N 4576			N	S	100	80			150W	(200)	50	150		1A								4			
2N 4854	Ti	du	N	S	60	40	5	600	250	(2W)	250	100	300	10	150							78B	2, 6		
2N 4855	Ti	du	N	S	60	40	5	600	250	(2W)	250	100	300	10	150							78B	2, 6		
2N 4862	So		N	S	140	120	8	2A	4W	(200)	50	150	2	500	85	437						46A	2		
2N 4863	So		N	S	140	120	8	2A	4W	(200)	50	150	2	500	50	140						5A	2		
2N 4864	So		N	S	140	120	8	2A	17W	(200)	50	150	2	500	50	87						309A	2		
2N 4865	So		N	S	100	80	8	80A	350W	(200)	10	40	5	70A	10							114A	6		
2N 4866	So		N	S	140	120	8	80A	350W	(200)	10	40	5	70A	10							114A	6		
2N 4872			P	S																					

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (t _j)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _c)	f MHz	t _{on} (tr)					
2N 4902	Ti		P	S	60	60	5	5A	87.5W	25c	20	80	2	1A	>4	43.7				0.35μs	3A	2, 6	2N 4913 2N 4914 2N 4915		
2N 4903	Ti		P	S	80	80	5	5A	87.5W	25c	20	80	2	1A	>4	43.7				0.35μs	3A	2, 6			
2N 4904	Ti		P	S	40	40	5	5A	87.5W	25c	25	100	2	2.5A	>4	43.7				0.4μs	3A	2, 6			
2N 4905	Ti		P	S	60	60	5	5A	87.5W	25c	25	100	2	2.5A	>4	43.7				0.4μs	3A	2, 6			
2N 4906	Ti		P	S	80	80	5	5A	87.5W	25c	25	100	2	2.5A	>4	43.7				0.4μs	3A	2, 6			
2N 4907	So		P	S	40	40	5	5A	150W	(200)	20	80	4	4A	4						3A	2			
2N 4908	So		P	S	60	60	5	5A	150W	(200)	20	80	4	4A	4						3A	2			
2N 4909	So		P	S	80	80	5	5A	150W	(200)	20	80	4	4A	4						3A	2			
2N 4910	Mo		N	S	40	40	5	1A	25W	(200)	20	100	1	500	3						309A	6			
2N 4911	Mo		N	S	60	60	5	1A	25W	(200)	20	100	1	500	3						309A	6			
2N 4912	Mo		N	S	80	80	5	1A	25W	(200)	20	100	1	500	3						309A	6			
2N 4913	Ti		N	S	40	40	5	5A	87.5W	25c	25	100	2	2.5A	>4	43.7				0.6μs	3A	2, 6	2N 4904		
2N 4914	Ti		N	S	60	60	5	5A	87.5W	25c	25	100	2	2.5A	>4	43.7				0.6μs	3A	2, 6	2N 4905		
2N 4915	Ti		N	S	80	80	5	5A	87.5W	25c	25	100	2	2.5A	>4	43.7				0.6μs	3A	2, 6	2N 4906		
2N 4916	So		P	S	30	30			500	(125)	70	200		10	400							5			
2N 4917	So		P	S	30	30			500	(125)	150	300		10	450							5			
2N 4918	Mo		P	S	40	40	5	1A	30W	(150)	20	100	1	500	3						126A	2, 6			
2N 4919	Mo		P	S	60	60	5	1A	30W	(150)	20	100	1	500	3						126A	2, 6			
2N 4920	Mo		P	S	80	80	5	1A	30W	(150)	20	100	1	500	3						126A	2, 6			
2N 4921	Mo		N	S	40	40	5	1A	30W	(150)	20	100	1	500	3						126A	2, 6			
2N 4922	Mo		N	S	60	60	5	1A	30W	(150)	20	100	1	500	3						126A	2, 6			
2N 4923	Mo		N	S	80	80	5	1A	30W	(150)	20	100	1	500	3						126A	2, 6			
2N 4924	Mo		N	S	100	100	5	200	5W	(175)	40	200	10	150	500						39A	3			
2N 4925	Mo		N	S	150	150	5	200	5W	(175)	40	200	10	150	500						39A	3			
2N 4926	Mo		N	S	200	200	7	50	5W	(175)	20	200	10	30	300						39A	3			

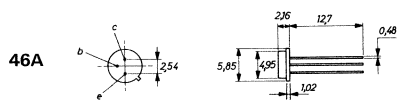
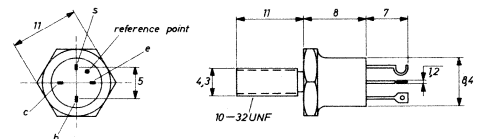


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type	
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz				ton (tr)
2N 4927	Mo		N	S	250	250	7	50	5W	(175)	20	200	10	30	300						39A	3	
2N 4928	Mo		P	S	100	100	4	100	3W	(200)	20	200	10	10	1000						39A	3	
2N 4929	Mo		P	S	150	150	4	500	5W	(200)	20	200	10	10	1000						39A	3	
2N 4930	Mo		P	S	200	200	4	500	5W	(200)	20	200	10	10	200						39A	3	
2N 4931	Mo		P	S	250	250	4	500	5W	(200)	20	200	10	10	200						39A	3	
2N 4932	Rc		N	S	50	25	4	3.3A	70W	25c	10	100	10	1A	100						60A	2	
2N 4933	Rc		N	S	70	35	4	3.3A	70W	(200)	10	100		1A	100						60A	2	
2N 4934	Rc		N	S	40	30	3		200	(200)	40	170	8	2	700						104C	3	
2N 4935	Rc		N	S	50	40	3		200	(200)	60	200	8	2	700						104C	3	
2N 4936	Rc		N	S	50	40	3		200	(200)	60	250	8	2	700						104C	3	
2N 4943	Ns		N	S	120	80			800		100	300		150	45							2	
2N 4944			N	S	80	40			600	(125)	40	100		150	60							1	
2N 4945			N	S	80	60			600	(125)	40	100		150	60							1	
2N 4946			N	S	80	40			600	(125)	100	300		150	60							1	
2N 4950			N	S	80	60			300W			>10		50A	0.1							6	
2N 4951	Sp		N	S	60	30			360	(150)	60	200		150	250							1	
2N 4952	Sp		N	S	60	30			360	(150)	100	300		150	250							1	
2N 4953	Sp		N	S	60	30			360	(150)	200	600		150	250							1	
2N 4954	Sp		N	S	40	30			360	(150)	60	600		150	250							1	
2N 4957	Mo		P	S	30	30	3	30	200	(200)		>20	10	2	1600						72A	3	
2N 4958	Mo		P	S	30	30	3	30	200	(200)		>20	10	2	1500						72A	3	
2N 4959	Mo		P	S	30	30	3	30	200	(200)		>20	10	2	1500						72A	3	
2N 4960			N	S	60	60			800	(200)	100	300		150	250							1	
2N 4961			N	S	80	80			500	(200)	100	300		150	250							1	
2N 4962			N	S	60	60			800	(200)	100	300		150	250							1	
2N 4963			N	S	80	80			500	(200)	100	300		150	250							1	
2N 4964			P	S	50	40			200		30	120										1	
2N 4965			P	S	50	40			200		80	400										1	
2N 4966	Ns		P	S	50	40			200		40	200										1	
2N 4967	Ns		N	S	50	40			200		100	600										1	
2N 4968	Ns		N	S	30	25			200		40	200										1	
2N 4969	Ns		N	S	50	30			200		40	120		150								5	
2N 4970	Ns		N	S	50	30			200		100	350		150								5	
2N 4971	Ns		P	S	50	40			200		40	120		150								5	
2N 4972	Ns		P	S	50	40			200		100	300		150								5	
2N 4973			P	S	20	15			200			>20	3	50	1000							3	
2N 4976			N	S	55	30			5W		20	250		1								4	
2N 4980			P	S	30	30			400		60	300		1	10							5, 15	
2N 4981			P	S	50	50			400		40	200		1	5							5, 15	
2N 4982			P	S	70	70			400		30	150		1	3							5, 15	
2N 4994	Ti		N	S	60	45	4	30	360	(200)	40	160	10	10							518A	3	
2N 4995	Ti		N	S	60	45	4	30	360	(200)	100	400	10	10							518A	3	
2N 4996	Ti		N	S	30	18	3	50	250	(200)		>50	10	2							518A	3	
2N 4997	Ti		N	S	30	18	4	50	250	(200)	30	150	10	2							518A	3	
2N 4998	Ti		N	S	100	80	6	2A	30W	50c	30	90	5	1A		87.5			0.1μs	59A	4	2N 4999	
2N 4999	Ti		P	S	100	80	5.5	2A	30W	50c	30	90	5	1A		87.5			0.2μs	59A	4	2N 4998	
2N 5000	Ti		P	S	100	80	6	2A	30W	50c	70	200	5	1A		87.5			0.1μs	59A	4	2N 5001	
2N 5001	Ti		P	S	100	80	5.5	2A	30W	50c	70	200	5	1A		87.5			0.2μs	59A	4	2N 5000	
2N 5002	Ti		N	S	100	80	6	5A	50W	50c	30	90	5	2.5A					0.5μs	59A	4	2N 5003	
2N 5003	Ti		P	S	100	80	5.5	5A	50W	50c	30	90	5	2.5A					0.5μs	59A	4	2N 5002	
2N 5004	Ti		N	S	100	80	6	5A	50W	50c	70	200	5	2.5A					0.5μs	59A	4	2N 5005	
2N 5005	Ti		P	S	100	80	6	5A	50W	50c	70	200	5	2.5A					0.5μs	59A	4	2N 5004	
2N 5031	Mo		N	S	15	10	3	20	200	(200)	25	300	6	1	3500						72A	3	
2N 5032	Mo		N	S	15	10	3	20	200	(200)	25	300	6	1	3500						72A	3	
2N 5036	Rc		N	S	70	50	5	8AS	83W	(150)	20	70	4	3A		2.8					219A	2, 6	
2N 5038	Rc		N	S	150	90	7	20A	140W	(200)	50	200	5	2A	60						3A	2, 6	
2N 5039	Rc		N	S	120	75	7	20A	140W	(200)	30	150	5	2A	60						3A	2, 6	
2N 5043	Ti		P	G	15	7	0.3	30	30	110a	15	150	5	3			<2.5	400			72A	3	
2N 5044	Ti		P	G	15	7	0.3	30	30	100a	15	150	5	3			<3.5	400			72A	3	
2N 5050	Mo		N	S	125	125	6	2A	40W	(175)	25	100	5	750	10						309A	2, 6	
2N 5051	Mo		N	S	150	150	6	2A	40W	(175)	25	100	5	750	10						309A	2, 6	
2N 5052	Mo		N	S	200	200	6	2A	40W	(175)	25	100	5	750	10						309A	2, 6	
2N 5058	Ti		N	S	300	300	7	150	5W	25c	75	150	25	30							39A	8	
2N 5059	Ti		N	S	250	250	6	150	5W	25c	30	150	25	30							39A	8	
2N 5067	Ti		N	S	40	40	5	5A	87W	(200)	20	80	2	1A							3A	2, 6	
2N 5068	Ti		N	S	60	60	5	5A	87W	(200)	20	80	2	1A							3A	2, 6	
2N 5069	Ti		N	S	80	80	5	5A	87W	(200)	20	80	2	1A							3A	2, 6	
2N 5071	Rc		N	S	65	4		3A	70W	(200)					76						60A	4	
2N 5086																							

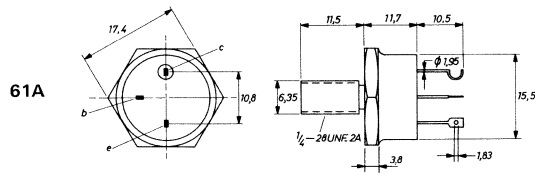
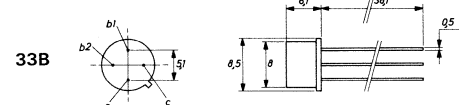
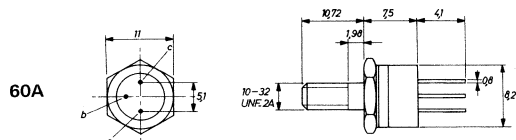
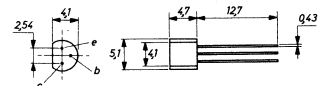
Type	Manufacturer	Sort (Note)	PNP/NPN	Ger/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _g) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
2N 5285	So		N	S	120	80	6	10A	30W	(200)	70	200	5	2.5A	70					(1μs)	111A	2			
2N 5301	Ti		N	S	40	40	5	30A	200W	25c	15	60	2	15A						(1μs)	3A	2, 6			
2N 5202	N		N	S	60	60	5	30A	200W	25c	15	60	2	15A						(1μs)	3A	2, 6			
2N 5203	Ti		N	S	80	80	5	30A	200W	25c	15	60	2	10A						(1μs)	3A	2, 6			
2N 5309	Ge		N	S	70	80	5	100	360	(125)	60	120	5								98A	1			
2N 5310	Ge		N	S	70	50	5	100	360	(125)	100	300	5								5A	2			
2N 5320	Rc		N	S	100	75	7	2A	10W	(200)	30	130	4	500							5A	2			
2N 5321	Rc		N	S	75	50	5	2A	10W	(200)	40	250	4	500	50						5A	2			
2N 5322	Rc		P	S	100	75	7	2A	10W	(200)	30	130	4	500	50						5A	2			
2N 5323	Rc		P	S	75	50	5	2A	10W	(200)	40	250	4	500	50						5A	2			
2N 5324	Mo		P	G	250	150	4	10A	56W	(110)	20	60	2	5A	2						3A	2			
2N 5325	Mo		P	G	325	200	4	10A	56W	(110)	20	60	2	5A	2						3A	2			
2N 5332	Mo		P	S	20	12	2	100	360	(200)	20	80	1	10	800						46A	3			
2N 5333	Ti		P	S	100	80	6	2A	15W	100c	30	120	4	1A	>30	175					5A	6		2N 4300	
2N 5334	Mo		N	S	60	60	8	3A	6W	(200)	30	150	2	1A	40						39A	2			
2N 5335	Mo		N	S	80	80	8	3A	6W	(200)	30	150	2	1A	40						39A	2			
2N 5365	Ge		P	S	40	40	4	300	360	(125)	40	120	1	50	250						98A	1			
2N 5375	Ge		P	S	40	30	5	500	360	(150)	40	400	10	150							518A	1			
2N 5384	Ti		P	S	100	80	6	5A	30W	100c	20	80	4	2A	>30	87.5					111A	6		2N 3996	
2N 5385	Ti		P	S	100	80	6	5A	30W	100c	20	80	4	2A	>30	87.5					111B	6		2N 3998	
2N 5386	Ti		P	S	100	80	6	12A	50W	100c	20	80	4	6A	>30	50					230ns	61A	6	2N 4301	
2N 5387	Ti		N	S	200	200	10	7.5A	100W	100c	25	100	5	2A	>15	50					0.3μs	61A	2		
2N 5388	Ti		N	S	250	250	10	7.5A	100W	100c	25	100	5	2A	>15	50					0.3μs	61A	2		
2N 5389	Ti		N	S	300	300	10	7.5A	100W	100c	25	100	5	2A	>15	50					0.3μs	61A	2		
2N 5390	Ti	da	N	S	120	80	15	2A	15W	100c		<20.000	5	2A		175					0.3μs	33B	6		
2N 5400	Ti		P	S	130	120	5	600	310	25a	40	180	5	10	>400						92E	8			
2N 5401	Ti		P	S	160	150	5	600	310	25a	60	240	5	10	>300						92E	8			
2N 5415	Ph		P	S	200	200	4	1A	10W	25c	30	150	10	50	>15	150	<15p				125ns	39A	6, 7		
2N 5416	Ph		P	S	350	300	6	1A	10W	25c	30	120	10	50	>15	150	<15p				125ns	39A	6, 7		
2N 5447	Ti		P	S	40	25	5	200	360	25a	60	300	5	50	>100						518A	1		2N 5449	
2N 5448	Ti		P	S	45	30	5	200	360	25a	30	150	5	50	>100						518A	1		2N 5450	
2N 5449	Ti		N	S	50	30	5	800	360	25a	100	300	2	50	>100						518A	1		2N 5447	
2N 5450	Ti		N	S	50	30	5	800	360	25a	50	150	2	50	>100						518A	1		2N 5450	
2N 5451	Ti		N	S	40	20	5	800	360	25a	30	600	2	50	>100						518A	1			
2N 5525	Ti	da	N	S	40	30	9	200	360	25a		>5000	10	10							92A	1			
2N 5526	Ti	da	N	S	40	30	9	200	360	25a		>1000	10	10							92A	1			
2N 5671	Ti		N	S	90	7	30A	80W	100c	20	100	2	15A	>50							(0.5μs)	3A	2, 6		
2N 5672	Ti		N	S	120	7	30A	140W	25c	20	100	2	15A	>50							(0.5μs)	3A	2, 6		
2N 5683	Ti		P	S	60	60	5	50A	300W	25c	15	60	2	25A	>2						3A	2, 6		2N 5685	
2N 5684	Ti		P	S	80	80	5	50A	300W	25c	15	60	2	25A	>2						3A	2, 6		2N 5686	
2N 5685	Ti		N	S	60	60	5	50A	300W	25c	15	60	2	25A	>2						3A	2, 6		2N 5683	
2N 5686	Ti		N	S	80	80	5	50A	300W	25c	15	60	2	25A	>2						3A	2, 6		2N 5684	
2N 5758	Ti		N	S	100	100	7	6A	150W	25c	25	100	2	3A	>1						3A	2, 6		TIP 544	
2N 5759	Ti		N	S	120	120	7	6A	150W	25c	20	80	2	3A	>1						3A	2, 6		TIP 545	
2N 5760	Ti		N	S	140	140	7	6A	150W	25c	15	60	2	3A	>1						3A	2, 6		TIP 546	
2N 5867	Ti		P	S	60	60	5	5A	87.5W	25c	20	100	4	1.5A	>4						(0.7μs)	3A	2, 6		2N 5869
2N 5868	Ti		P	S	80	80	5	5A	87.5W	25c	20	100	4	1.5A	>4						(0.7μs)	3A	2, 6		2N 5870
2N 5869	Ti		N	S	60	60	5	5A	87.5W	25c	20	100	4	1.5A	>4						(0.7μs)	3A	2, 6		2N 5867
2N 5870	Ti		N	S	80	80	5	5A	87.5W	25c	20	100	4	1.5A	>4						(0.7μs)	3A	2, 6		2N 5868
2N 5871	Ti		P	S	60	60	5	7A	115W	25c	20	100	4	2.5A	>4						(0.7μs)	3A	2, 6		2N 5873
2N 5872	Ti		P	S	80	80	5	7A	115W	25c	20	100	4	2.5A	>4						(0.7μs)	3A	2, 6		2N 5874
2N 5873	Ti		N	S	60	60	5	7A	115W	25c	20	100	4	2.5A	>4						(0.7μs)	3A	2, 6		2N 5871
2N 5874	Ti		N	S	80	80	5	7A	115W	25c	20	100	4	2.5A	>4						(0.7μs)	3A	2, 6		2N 5872
2N 5875	Ti		P	S	60	60	5	10A	150W	25c	20	100	4	4A	>4						(0.7μs)	3A	2, 6		2N 5877
2N 5876	Ti		P	S	80	80	5	10A	150W	25c	20	100	4	4A	>4						(0.7μs)	3A	2, 6		2N 5878
2N 5877	Ti		N	S	60	60	5	10A	150W	25c	20	100	4	4A	>4						(0.7μs)	3A	2, 6		2N 5875
2N 5878	Ti		N	S	80	80	5	10A	150W	25c	20	100	4	4A	>4						(0.7μs)	3A	2, 6		2N 5876
2N 5879	Ti		P	S	60	60	5	15A	160W	25c	20	100	4	6A	>4						(0.7μs)	3A	2, 6		2N 5881
2N 5880	Ti		P	S	80	80	5	15A	160W	25c	20	100	4	6A	>4						(0.7μs)	3A	2, 6		2N 5882
2N 5881	Ti		N	S	60	60	5	15A	160W	25c	20	100	4	6A	>4						(0.7μs)	3A	2, 6		2N 5879
2N 5882	Ti		N	S	80	80	5	15A																	



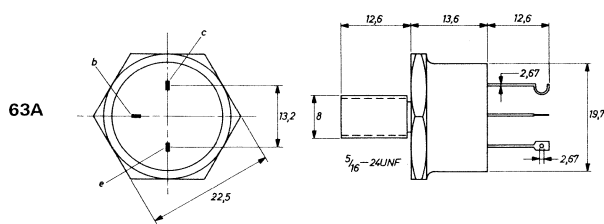
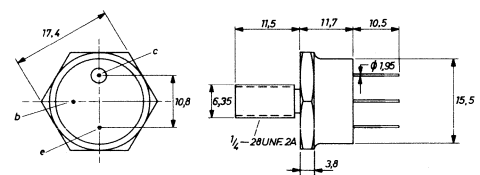
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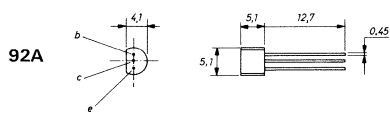
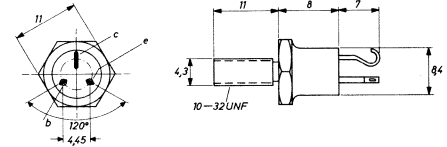
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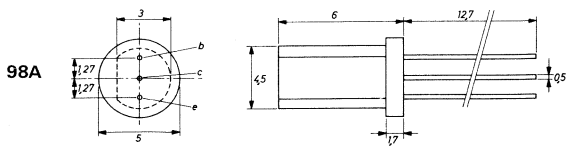
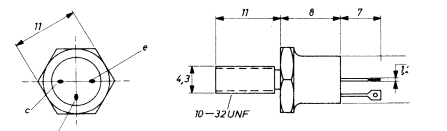
61B



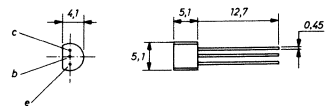
111B



111C



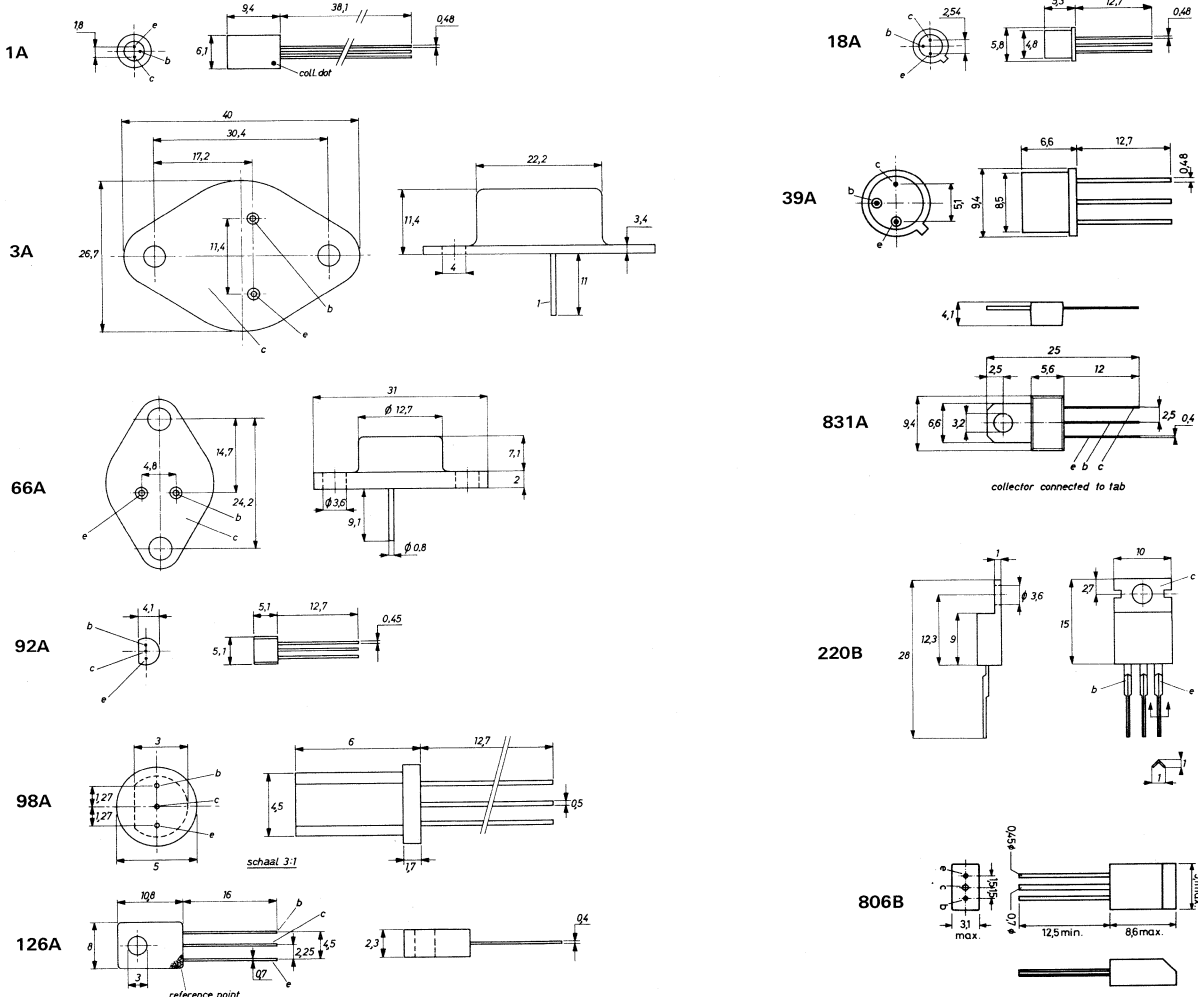
92E



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Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type	
					V _{cb0} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _b) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz				ton (tr)
2SA 52	To		P	G	18		12	5	60	(75)	(25	170)	6	1							1A	1	
2SA 53	To		P	G	18		12	5	60	(75)	(20	130)	6	1							1A	1	
2SA 429 red	To		P	S	150	150	5	30	150	(125)	40	80	3	15	50						98A	5	
2SA 429 orn	To		P	S	150	150	5	30	150	(125)	70	140	3	15	50						98A	5	
2SA 429 yel	To		P	S	150	150	5	30	150	(125)	120	240	3	15	50						98A	5	
2SA 467 red	To		P	S	40	30	5	400	300	(125)	40	80	1	100	100						98A	3	
2SA 467 orn	To		P	S	40	30	5	400	300	(125)	70	140	1	100	100						98A	3	
2SA 467 yel	To		P	S	40	30	5	400	300	(125)	120	240	1	100	100						98A	3	
2SA 473	To		P	S		30	5	3A	10W	(150)	40	400	1	500	200						220B	2	
2SA 483	To		P	S		150	5	1.5A	20W	(150)	30	250	10	100	10						66A	2	
2SA 484	To		P	S		110	5	1.5A	800	(150)	30	300	2	200	20						39A	2	
2SA 485	To		P	S		80	5	1.5A	800	(150)	30	300	2	200	20						39A	2	
2SA 486	To		P	S		50	5	1.5A	800	(150)	30	300	2	200	20						39A	2	
2SA 489	To		P	S		60	5	4A	30W	(150)	40	240	5	500	3						220B	2	
2SA 490 red	To		P	S	50	40	5	3A	25W	25c	40	80	2	500	>3						220B	2	25C 790 rec
2SA 490 orn	To		P	S	50	40	5	3A	25W	25c	70	140	2	500	>3						220B	2	25C 790 orn
2SA 490 yel	To		P	S	50	40	5	3A	25W	25c	120	240	2	500	>3						220B	2	25C 790 yel
2SA 493	To		P	S		50	5	50	200	(125)	70	400	6	2							98A	1	
2SA 494 orn	To		P	S		30	5	30	200	(125)	70	140	6	0.1	100						98A	1	
2SA 494 yel	To		P	S		30	5	30	200	(125)	120	240	6	0.1	100						98A	1	
2SA 494 gm	To		P	S		30	5	30	200	(125)	200	400	6	0.1	100						98A	1	
2SA 494G red	To		P	S	35	30	5	80	200	(125)	40	80	6	0.1	100						98A	1	
2SA 494G orn	To		P	S	35	30	5	80	200	(125)	70	140	6	0.1	100						98A	1	
2SA 494G yel	To		P	S	35	30	5	80	200	(125)	120	240	6	0.1	100						98A	1	
2SA 494 gm	To		P	S	35	30	5	80	200	(125)	200	400	6	0.1	100						98A	1	
2SA 495 red	To		P	S		30	5	100	200	(125)	40	80	1	10	200						98A	3	
2SA 495 orn	To		P	S		30	5	100	200	(125)	70	140	1	10	200						98A	3	
2SA 495 yel	To		P	S		30	5	100	200	(125)	120	240	1	10	200						98A	3	
2SA 495 red	To		P	S	35	30	5	100	200	(125)	40	80	1	10	200						98A	3	
2SA 495G orn	To		P	S	35	30	5	100	200	(125)	70	140	1	10	200						98A	3	
2SA 495G yel	To		P	S	35	30	5	100	200	(125)	120	240	1	10	200						98A	3	
2SA 495G gm	To		P	S	35	30	5	100	200	(125)	200	400	1	10	200						98A	3	
2SA 496 red	To		P	S		30	5	800	550	(125)	40	80	2	50	100						126A	3	
2SA 496 orn	To		P	S		30	5	800	550	(125)	70	140	2	50	100						126A	3	
2SA 496 yel	To		P	S		30	5	800	550	(125)	120	240	2	50	100						126A	3	
2SA 497 red	To		P	S		80	5	800	600	(150)	40	80	2	200	70						39A	1	
2SA 497 orn	To		P	S		80	5	800	600	(150)	70	140	2	200	70						39A	1	
2SA 497 yel	To		P	S		80	5	800	600	(150)	120	240	2	200	70						39A	1	
2SA 498 red	To		P	S		50	5	800	600	(150)	40	80	2	200	70						39A	1	
2SA 498 orn	To		P	S		50	5	800	600	(150)	70	140	2	200	70						39A	1	
2SA 498 yel	To		P	S		50	5	800	600	(150)	120	240	2	200	70						39A	1	
2SA 499 red	To		P	S	50	40	5	100	250	(175)	30	70	1	10	100						18A	3, 5	
2SA 499 orn	To		P	S	50	40	5	100	250	(175)	60	120	1	10	100						18A	3, 5	
2SA 499 yel	To		P	S	50	40	5	100	250	(175)	100	120	1	10	100						18A	3, 5	
2SA 500 red	To		P	S	30	20	5	100	250	(175)	30	70	1	10	100						18A	3, 5	
2SA 500 orn	To		P	S	30	20	5	100	250	(175)	60	120	1	10	100						18A	3, 5	
2SA 500 yel	To		P	S	30	20	5	100	250	(175)	100	200	1	10	100						18A	3, 5	
2SA 502 red	To		P	S	90	80	5	100	300	(125)	40	80	1	20	50						98A	5	
2SA 502 orn	To		P	S	90	80	5	100	300	(125)	70	140	1	20	50						98A	5	
2SA 502 yel	To		P	S	90	80	5	100	300	(125)	120	240	1	20	50						98A	5	
2SA 503 orn	To		P	S	60	50	5	600	800	(175)	30	90	2	150	50						39A	3, 5	
2SA 503 yel	To		P	S	60	50	5	600	800	(175)	50	150	2	150	50						39A	3, 5	
2SA 503 gm	To		P	S	60	50	5	600	800	(175)	100	300	2	150	50						39A	3, 5	
2SA 504 orn	To		P	S	40	30	5	600	800	(175)	30	90	2	150	50						39A	3, 5	
2SA 504 yel	To		P	S	40	30	5	600	800	(175)	50	150	2	150	50						39A	3, 5	
2SA 504 gm	To		P	S	40	30	5	600	800	(175)	100	300	2	150	50						39A	3, 5	
2SA 505 red	To		P	S		50	5	800	550	(125)	40	80	2	50	100						126A	1	
2SA 505 orn	To		P	S		50	5	800	550	(125)	70	140	2	50	100						126A	1	
2SA 505 yel	To		P	S		50	5	800	550	(125)	120	240	2	50	100						126A	1	
2SA 509 orn	To		P	S	35	30	5	500	600	25a	70	140	2	50	140						806B	1	25C 509 orn
2SA 509 yel	To		P	S	35	30	5	500	600	25a	70	140	2	50	140						806B	1, 5	25C 509 yel
2SA 509G orn	To		P	S	35	30	5	500	600	25a	120	240	2	50	140						806B	1, 5	25C 509G orn
2SA 509G yel	To		P	S	35	30	5	500	600	25a	120	240	2	50	140						806B	1, 5	25C 509G yel
2SA 510 red	To		P	S	120	100	5	1.5A	800	(175)	30	90	2	200	20						39A	3, 5	
2SA 510 orn	To		P	S	120	100	5	1.5A	800	(175)	50	150	2	200	20						39A	3, 5	
2SA 511 red	To		P	S	100	80	5	1.5A	800	(175)	30	90	2	2									

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	t _{on} (tr)			
2SA 661 red	To		P	S	60	50	5	200	600	25a	40	80	2	50	100					806B	1	2SC 1166 red	
2SA 661 orn	To		P	S	60	50	5	200	600	25a	70	140	2	50	100					806B	1	2SC 1166 orn	
2SA 661 yel	To		P	S	60	50	5	200	600	25a	120	240	2	50	100					806B	1	2SC 1166 yel	
2SA 661 gm	To		P	S	60	50	5	200	600	25a	200	400	2	50	100					806B	1	2SC 1166 gm	
2SA 682 orn	To		P	S	80	80	5	750	800	25a	70	140	2	150	100					126A	1	2SC 1382	
2SA 682 yel	To		P	S	80	80	5	750	800	25a	120	240	2	150	100					126A	1	2SC 1382 yel	
2SA 739	To		P	S	400	400	5	3A	50W	25c	20	300	5	500				1μs	3A	6	8		
2SA 814	To		P	S	120	120	5	1A	15W	25c	70	140	5	150	30					220B	2	2SC 1624 orn	
2SA 814 yel	To		P	S	120	120	5	1A	15W	25c	120	240	5	150	30					220B	2	2SC 1624 yel	
2SA 815 orn	To		P	S	100	100	5	1A	15W	25c	70	140	5	150	30					220B	2	2SC 1625 orn	
2SA 815 yel	To		P	S	100	100	5	1A	15W	25c	120	240	5	150	30					220B	2	2SC 1625 yel	
2SA 816 orn	To		P	S	80	80	5	750	1.5W	25a	70	140	2	150	100					220B	2	2SC 1626 orn	
2SA 816 yel	To		P	S	80	80	5	750	1.5W	25a	120	240	2	150	100					220B	2	2SC 1626 yel	
2SA 817 orn	To		P	S	80	80	5	300	600	25a	70	140	2	50	100					92A	1	2SC 1627 orn	
2SA 817 yel	To		P	S	80	80	5	300	600	25a	120	240	2	50	100					92A	1	2SC 1627 yel	
2SA 818 orn	To		P	S	180	150	5	50	1W	25a	70	140	5	10	120					831A	8	2SC 1628 orn	
2SA 818 yel	To		P	S	180	150	5	50	1W	25a	120	240	5	10	120					831A	8	2SC 1628 yel	
2SA 839 red	To		P	S	150	150	5	1.5A	25W	25c	40	80	10	500	6					220B	2	2SC 1669 red	
2SA 839 orn	To		P	S	150	150	5	1.5A	25W	25c	70	140	10	500	6					220B	2	2SC 1669 orn	
2SA 839 yel	To		P	S	150	150	5	1.5A	25W	25c	120	240	10	500	6					220B	2	2SC 1669 yel	
2SA 841 gm	To		P	S	60	60	5	50	200	25a	200	400	6	2	140			<6	10Hz	98A	1		
2SA 841 blu	To		P	S	60	60	5	50	200	25a	350	700	6	2	140			<6	10Hz	98A	1		
2SA 842 gm	To		P	S	40	40	5	50	200	25a	200	400	6	2	140			<3	1k	98A	1		
2SA 842 blu	To		P	S	40	40	5	50	200	25a	350	700	6	2	140			<3	1k	98A	1		
2SA 940	To		P	S	150	150	5	1.5A	25W	25c	40	140	10	500	4					220B	2, 12	2SC 2073	

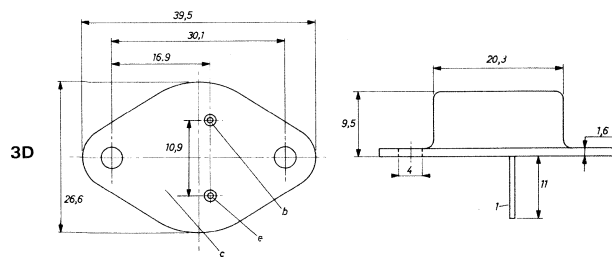
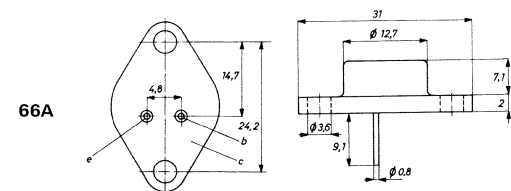
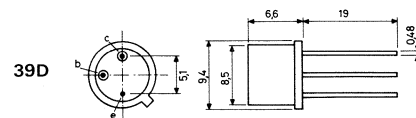
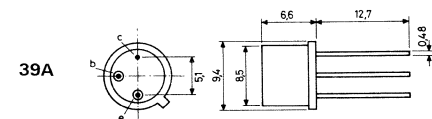
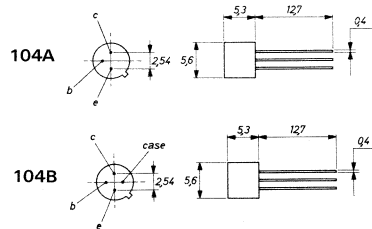
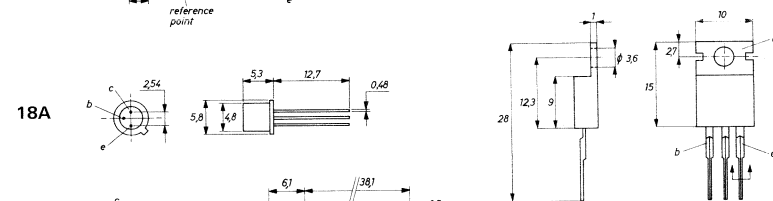
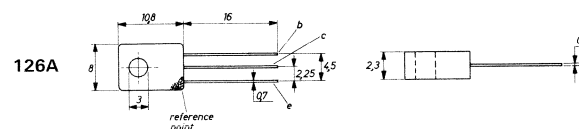
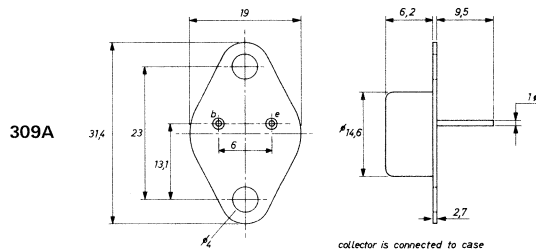
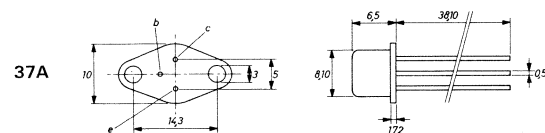
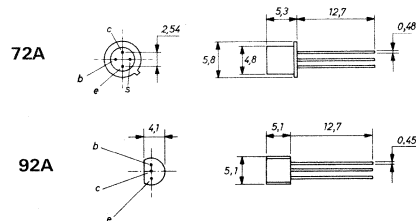
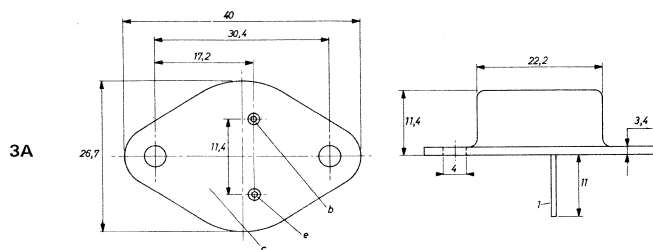


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS											Case	Use	Compl. (Equival.) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _B) mA	F _T	R _{thja} (η) °C/W	F (C _C)	f MHz	ton (tr)			
2SA 950 orn	To		P	S	30	25	5	800	600	25a	100	200	1	100	120						92A	1	2SC 2120 c
2SA 950 yel	To		P	S	30	25		800	600	25a	160	320	1	100	120						92A	1	2SC 2120 y
2SB 54	To		P	G	30		12	150	750	(75)	(80)	(300)	6	1	1						1A	1	
2SB 189	To		P	G	25		12	250	250	(75)	40	145	1	100							1A	1	
2SB 364	To		P	G	20		12	400	150	(75)	60	150		100							1A	1	
2SB 365	To		P	G	20		12	400	150	(75)	35	90		100							1A	1	
2SB 415	To		P	G	32		6	1A	200	(85)	40	180		300							1A	1	
2SB 434	To		P	S		50	5	3A	25W	(150)	40	240	5		3							2	
2SB 434G red	To		P	S	60	50	5	3A	25W	25c	40	80	1	500	3						220B	2	2SD 234G r
2SB 434G orn	To		P	S	60	50	5	3A	25W	25c	70	140	1	500	3						220B	2	2SD 234G c
2SB 434G yel	To		P	S	60	50	5	3A	25W	25c	120	240	1	500	3						220B	2	2SD 234G y
2SB 435	To		P	S	50	35	5	3A	25W	(150)	40	240	5		3						220B	2	2SD 235G r
2SB 435G red	To		P	S	50	40	5	3A	25W	25c	40	80	1	500	3						220B	2	2SD 235G r
2SB 435G orn	To		P	S	50	40	5	3A	25W	25c	70	140	1	500	3						220B	2	2SD 235G c
2SB 435G yel	To		P	S	50	40	5	3A	25W	25c	120	240	1	500	3						220B	2	2SD 235G y
2SB 440	To		P	G	30		12	150	150	(75)	(70)	(270)	6	1							1A	1	
2SB 463	To		P	G	32		12	2A	6W	(85)	30	250	1	500							309A	2	
2SB 502A red	To		P	S	110	80	10	3A	25W	25c	30	70	5	500	5					1μs	66A	2	2SD 102 red
2SB 502A orn	To		P	S	110	80	10	3A	25W	25c	50	140	5	500	5					1μs	66A	2	2SD 102 orn
2SB 502A yel	To		P	S	110	80	10	3A	25W	25c	100	280	5	500	5					1μs	66A	2	2SD 102 yel
2SB 503A red	To		P	S	80	50	10	3A	25W	25c	30	70	5	500	5					1μs	66A	2	2SD 103 red
2SB 503A orn	To		P	S	80	50	10	3A	25W	25c	50	140	5	500	5					1μs	66A	2	2SD 103 orn
2SB 503A yel	To		P	S	80	50	10	3A	25W	25c	100	280	5	500	5					1μs	66A	2	2SD 103 yel
2SB 531 red	To		P	S	100	100	5	6A	50W	25a	40	80	5	1A	8						3A	2	2SD 371 red
2SB 531 orn	To		P	S	100	100	5	6A	50W	25a	70	140	5	1A	8						3A	2	2SD 371 orn
2SB 531 yel	To		P	S	100	100	5	6A	50W	25a	120	240	5	1A	8					1μs	3A	2	2SD 371 yel
2SB 552 orn	To		P	S	220	180	5	15A	150W	25c	25	50	5	5A	3.5						3A	2, 6	2SD 552 orn
2SB 552 red	To		P	S	220	180	5	15A	150W	25c	40	80	5	5A	3.5						3A	2	2SD 552 red
2SB 554 red	To		P	S	180	180	5	15A	150W	25c	40	80	5	2A	6						3A	2	2SD 424 red
2SB 554 orn	To		P	S	180	180	5	15A	150W	25c	70	140	5	2A	6						3A	2	2SD 424 orn
2SB 555 red	To		P	S	140	140	5	12A	100W	25c	40	80	5	2A	6						3A	2	2SD 425 red
2SB 555 orn	To		P	S	140	140	5	12A	100W	25c	70	140	5	2A	6						3A	2	2SD 425 orn
2SB 556 red	To		P	S	120	120	5	12A	100W	25c	40	80	5	2A	6						3A	2	2SD 426 red
2SB 556 orn	To		P	S	120	120	5	12A	100W	25c	70	140	5	2A	6						3A	2	2SD 426 orn
2SB 557 red	To		P	S	120	120	5	8A	80W	25c	40	80	5	1A	7						3A	2	2SD 427 red
2SB 557 orn	To		P	S	120	120	5	8A	80W	25c	70	140	5	1A	7						3A	2	2SD 427 orn
2SB 558 red	To		P	S	100	100	5	7A	60W	25c	40	80	5	1A	7						3A	2	2SD 428 red
2SB 558 orn	To		P	S	100	100	5	7A	60W	25c	70	140	5	1A	7						3A	2	2SD 428 orn
2SB 595 red	To		P	S	100	100	5	5A	40W	25c	40	80	5	1A	5						220B	2	2SD 525 red
2SB 595 orn	To		P	S	100	100	5	5A	40W	25c	70	140	5	1A	5						220B	2	2SD 525 orn
2SB 595 yel	To		P	S	100	100	5	5A	40W	25c	120	240	5	1A	5						220B	2	2SD 525 yel
2SB 596 red	To		P	S	80	80	5	4A	30W	25c	40	80	5	500	>3						220B	2	2SD 526 red
2SB 596 orn	To		P	S	80	80	5	4A	30W	25c	70	140	5	500	>3						220B	2	2SD 526 orn
2SB 596 yel	To		P	S	80	80	5	4A	30W	25c	120	240	5	500	>3						220B	2	2SD 526 yel
2SC 105	To		P	N	30	20	5	80	250	(175)		>20	1		100						18A	3	
2SC 108A red	To		N	S	90	70	5	800	800	25a	40	80	2	200	150					30ns	39A	3, 5	
2SC 108 orn	To		N	S	90	70	5	800	800	25a	70	140	2	200	150					30ns	39A	3, 5	
2SC 109A red	To		N	S	70	50	5	800	800	25a	40	80	2	200	150						39A	3, 5	
2SC 109A orn	To		N	S	70	50	5	800	800	25a	70	140	2	200	150						39A	3, 5	
2SC 109A yel	To		N	S	70	50	5	800	800	25a	120	240	2	200	150						39A	3, 5	
2SC 199	To		N	S	80	45	15	50	600	(150)	12	200	3	3	50						5A	3	
2SC 366G orn	To		N	S	60	40	5	400	300	25a	70	140	1	100	150					40ns	98A	3	
2SC 366G yel	To		N	S	60	40	5	400	300	25a	120	240	1	100	150					40ns	98A	3	
2SC 367G orn	To		N	S	40	30	5	400	300	25a	70	140	1	100	150					40ns	98A	3	2SA 467G r
2SC 367G yel	To		N	S	40	30	5	400	300	25a	120	240	1	100	150					40ns	98A	3	2SA 467G y
2SC 368 grn	To		N	S	40	30	5	100	250	(175)	200	400	10		100						18A	3	
2SC 368 blu	To		N	S	40	30	5	100	250	(175)	350	800	10		100						18A	3	
2SC 368 whi	To		N	S	40	30	5	100	250	(175)	600	1200	10		100						18A	3	
2SC 369G	To		N	S	40	30	5	100	200	(125)	200	1200	10		50						98A	3	
2SC 370	To		N	S		30	4	100	200	(125)	25	50	12	2	80						98A	3	
2SC 371 red	To		N	S		30	4	100	200	(125)	40	80	12	2	80						98A	3	
2SC 371 orn	To		N	S		30	4	100	200	(125)	70	140	12	2	80						98A	3	
2SC 371G	To		N	S	35	30	5	100	200	(125)	40	140	1	10	80						98A	3	
2SC 372 orn	To		N	S	35	30	4	100	200	25a	70	140	12	2	200						98A	3	
2SC 372 yel	To		N	S	35	30	4	100	200	25a	120	240	12	2	200						98A	3	
2SC 372G orn	To		N	S	35	30	5	100	200	25a	70	140	1	10	200					50ns	98A	3, 5	2SA 495G r
2SC 372G yel	To		N	S	35	30	5	100	200	25a	120	400	1	10	200					50ns	98A	3, 5	2SA 495G y
2SC 373	To		N	S	35	30	4	100	200	25a	200	400	12	2	200						98A	3	
2SC 373G	To		N	S	35	30	5	100	200	25a	200	400	1	10	200						98A	3, 5	
2SC 380	To		N	S	35	30	4	30	200	25a	40	80	12	2	>400						98A	3	
2SC 380 orn	To		N	S	35	30	4	30	200	25a	70	140	12	2	>400						98A	3	
2SC 380 yel	To		N	S	35	30	4	30	200	25a	120	240	12	2	>400						98A	3	
2SC 380A red	To		N	S	35	30	4	30	200	25a	40	80	12	2	250						98A	3	
2SC 380A orn	To		N	S	35	30	4	30	200	25a													

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thja} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2SC 498 red	To		N	S	80	50	5	800	600	25a	40	80	2	200	50					39A	1	2SA 498 red		
2SC 498 orn	To		N	S	80	50	5	800	600	25a	70	140	2	200	50					39A	1	2SA 498 orn		
2SC 498 yel	To		N	S	80	50	5	800	600	25a	120	240	2	200	50					39A	1	2SA 498 yel		
2SC 503 orn	To		N	S	60	50	5	600	800	25a	30	90	2	150	150					39A	3, 5	2SA 503 orn		
2SC 503 yel	To		N	S	60	50	5	600	800	25a	50	150	2	150	150					39A	3, 5	2SA 503 yel		
2SC 503 grn	To		N	S	60	50	5	600	800	25a	100	300	2	150	150					39A	3, 5	2SA 503 grn		
2SC 504 orn	To		N	S	40	30	5	600	800	25a	30	90	2	150	150					39A	3, 5	2SA 504 orn		
2SC 504 yel	To		N	S	40	30	5	600	800	25a	50	150	2	150	150					39A	3, 5	2SA 504 yel		
2SC 504 grn	To		N	S	40	30	5	600	800	25a	100	300	2	150	150					39A	3, 5	2SA 504 grn		
2SC 505 red	To		N	S	300	300	3	200	600	25a	40	80	5	50	60					39A	14			
2SC 505 orn	To		N	S	300	300	3	200	600	25a	70	140	5	50	60					39A	14			
2SC 506 red	To		N	S	200	200	3	200	600	25a	40	80	5	50	60					39A	14			
2SC 506 orn	To		N	S	200	200	3	200	600	25a	70	140	5	50	60					39A	14			
2SC 507 red	To		N	S	170	120	5	100	2.3W	25c	40	80	5	10	250					39A	9			
2SC 507 orn	To		N	S	170	120	5	100	2.3W	25c	70	140	5	10	250					39A	9			
2SC 507 yel	To		N	S	170	120	5	100	2.3W	25c	120	240	5	10	250					39A	9			
2SC 508	To		N	S	180	60	5	4A	20W	25c	20	40	5	4						66A	11			
2SC 509 orn	To		N	S	35	30	5	500	600	25a	70	140	2	50	100					806B	1	2SA 509 orn		
2SC 509 yel	To		N	S	35	30	5	500	600	25a	120	240	2	50	100					806B	1	2SA 509 yel		
2SC 509G orn	To		N	S	35	50	5	500	600	25a	70	140	2	50	100					806B	1	2SA 509G orn		
2SC 509G yel	To		N	S	35	30	5	500	600	25a	120	240	2	50	100					806B	1	2SA 509G yel		
2SC 510 red	To		N	S	140	100	5	1.5A	8W	25c	30	90	2	200	60					39A	4, 6	2SA 510 red		
2SC 510 orn	To		N	S	140	100	5	1.5A	8W	25c	50	150	2	200	60					39A	4, 6	2SA 510 orn		
2SC 511	To		N	S	120	80	5	1.5A	8W	(175)	30	150	2	200	20					39A	3			
2SC 512 red	To		N	S	100	60	5	1.5A	8W	25c	30	90	2	200	60					39A	4, 6	2SA 512 red		
2SC 512 orn	To		N	S	100	60	5	1.5A	8W	25c	50	150	2	200	60					39A	4, 6	2SA 512 orn		
2SC 513	To		N	S	70	40	5	1.5A	8W	(1175)	30	150	2	200	20					39A	3			
2SC 515A	To		N	S	300	300	5	150	20	25c	40	170	10	50	100					39A	3			
2SC 517	To		N	S	60	40	4	2A	10W	25c	10	30	5	500	300					66A	2, 8			
2SC 519A	To		N	S	130	110	5	7A	50W	25c	30	300	5	1A	10					37A	4			
2SC 520A	To		N	S	100	80	5	7A	50W	25c	30	300	5	1A	10					400ns	3A	2, 6		
2SC 521A	To		N	S	70	50	5	7A	50W	25c	30	300	5	1A	10					400ns	3A	2, 6		
2SC 522 red	To		N	S	140	100	5	1.5A	10W	25c	30	90	2	200	60					130ns	37A	4, 8		
2SC 522 orn	To		N	S	140	100	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 red	To		N	S	100	60	5	1.5A	10W	25c	30	90	2	200	60					130ns	37A	4, 8		
2SC 524 orn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 brn	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 yel	To		N	S	100	60	5	1.5A	10W	25c	50	150	2	200	60					130ns	37A	4, 8		
2SC 524 grn	To		N	S	100</																			

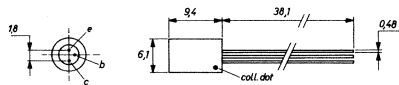
Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS					ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	I _{FE} min	(h _{FE}) type	(h _{FE}) max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	ton (tr)				
2SC 1168	To		N	S	300	300	5	150	12.5W	25a	25	240	10	50	100						66A	9		
2SC 1169	To		N	S	40	20	4	1A	10W	25c		>20	5	200	600						37A	4		
2SC 1170B	To		N	S	1500	500	5	3.5A	50W	25c	10	20	10	1A	3						3A	11		
2SC 1172	To		N	S	1500	600	5	6A	50W	25c	10	20	10	2A	3						3A	11		
2SC 1172A	To		N	S	1500	600	5	6A	50W	25c	10	20	10	2A	2						3A	11		
2SC 1172B	To		N	S	1500	600	5	7A	50W	25c	10	20	10	2A	3						3A	11		
2SC 1173 orn	To		N	S	30	30	5	3A	10W	25c	70		2	500	100						220B	2		
2SC 1173 yel	To		N	S	30	30	5	3A	10W	25c	120	240	2	500	100						220B	2		
2SC 1195	To		N	S	200	200	5	2.5A	100W	25c	30	50	150	5	1A						3D	6		
2SC 1199	To		N	S	50	35	3	300	600	25a	40	80	200	10	20	1400		<11	10k		33A	3		
2SC 1380 grn	To		N	S	55	50	5	100	200	25a	200		400	6	2	80					18A	3		
2SC 1380 blu	To		N	S	55	50	5	100	200	25a	350	700	6	2	80						18A	3		
2SC 1380A grn	To		N	S	55	50	5	100	200	25a	200		400	6	2	80		<2	100Hz		18A	3		
2SC 1380A blu	To		N	S	55	50	5	100	200	25a	350	700	6	2	80			<2	100Hz		18A	3		
2SC 1382 orn	To		N	S	80	80	5	750	800	25a	70	140	2	150	100						126A	1		
2SC 1382 yel	To		N	S	80	80	5	750	800	25a	120	240	2	150	100						126A	1		
2SC 1447	To		N	S	300	300	5	150	20W	25c	40	170	10	50	80						220B	2		
2SC 1553	To		N	S	20	20	2	150	175	25c	30		10	5				<2	500		72A	3		
2SC 1569	To		N	S	300	300	5	150	12.5W	25c	40	170	10	50	100						220B	9		
2SC 1626 orn	To		N	S	80	80	5	750	1.5W	25a	70	140	2	150	100						220B	2		
2SC 1626 yel	To		N	S	80	80	5	750	1.5W	25a	120	240	2	150	100						220B	2		
2SC 1678	To		N	S	65	4	4	3A	10W	25c	15		5	500	>100						220B	4		
2SC 1765	To		N	S	35	17	3.5	800	7.5W	25c	10		5	50							37A	4		
2SC 1892	To		N	S	1500		5	2.5A	50W	25c	8	20	30	10	1A	3					3A	11		
2SC 1895	To		N	S	1500	600	5	6A	50W	25c	8	20	30	10	2A	2					3A	11		
2SC 1923 brn	To		N	S	40	30	4	20	100	25a	25	50	6	1	550			<4	100		92A	3		
2SC 1923 red	To		N	S	40	30	4	20	100	25a	40	80	6	1	550			<4	100		92A	3		
2SC 1923 orn	To		N	S	40	30	4	20	100	25a	70	140	6	1	550			<4	100		92A	3		
2SC 1955	To		N	S	35	17	3.5	800	7.5W	25c	10		5	500							39D	4		
2SC 1959 orn	To		N	S	35	30	5	400	500	25a	70	140	1	100	300						92A	2		
2SC 1959 yel	To		N	S	35	30	5	400	500	25a	120	240	1	100	300						92A	2		
2SC 2073	To		N	S	150	150	5	1.5A	25W	25c	40	140	10	500	4						220B	2		
2SC 2088 blu	To		N	S	120	120	5	50	300	25a	350	700	6	2	150			<1	1k		92A	1		
2SC 2088 vio	To		N	S	120	120	5	50	300	25a	600	1200	6	2	150			<1	1k		92A	1		
2SC 2117	To		N	S	35	17	3.5	800	7.5W	25c	10		5	500							37A	4		
2SC 2119	To		N	S	80		4	4A	10W	50c	20	100	5	2A	>100						220B	4		
2SCD 102 red	To		N	S	110	80	10	3A	25W	25c	30	90	5	500	1					3μs	66A	2	2SB 5C	
2SD 102 orn	To		N	S	110	80	10	3A	25W	25c	50	150	5	500	1					3μs	66A	2	2SB 5C	
2SD 102 yel	To		N	S	110	80	10	3A	25W	25c	100	300	5	500	1					3μs	66A	2	2SB 5C	
2SD 103 red	To		N	S	80	50	10	3A	25W	25c	30	90	5	500	1					3μs	66A	2	2SB 5C	
2SD 103 orn	To		N	S	80	50	10	3A	25W	25c	50	150	5	500	1					3μs	66A	2	2SB 5C	
2SD 103 yel	To		N	S	80	50	10	3A	25W	25c	100	300	5	500	1					3μs	66A	2	2SB 5C	
2SD 110 red	To		N	S	130	110	10	10A	100W	25c	30	90	5	1A	1					3μs	3D	2		
2SD 110 orn	To		N	S	130	110	10	10A	100W	25c	50	150	5	1A	1					3μs	3D	2		
2SD 110 yel	To		N	S	130	110	10	10A	100W	25c	100	300	5	1A	1					3μs	3D	2		
2SD 111 red	To		N	S	100	80	10	10A	100W	25c	30	90	5	1A	1					3μs	3D	2		
2SD 111 orn	To		N	S	100	80	10	10A	100W	25c	50	150	5	1A	1					3μs	3D	2		
2SD 111 yel	To		N	S	100	80	10	10A	100W	25c	100	300	5	1A	1					3μs	3D	2		
2SD 113 orn	To		N	S	100	80	10	30A	200W	25c	50	150	5	1A	1.5					3μs	3D	2		
2SD 113 yel	To		N	S	100	80	10	30A	200W	25c	100	300	5	1A	1.5					3μs	3D	2		
2SD 114 orn	To		N	S	70	50	10	30A	200W	25c	50	150	5	1A	1.5					3μs	3D	2		
2SD 114 yel	To		N	S	70	50	10	30A	200W	25c	100	300	5	1A	1.5					3μs	3D	2		
2SD 118	To		N	S	110	110	10	7A	100W	(150)	30	200	5	1A	2						3A	2		
2SD 119	To		N	S	80	10	10	7A	100W	(150)	30	200	5	1A	2						3A	2		
2SD 129 red	To		N	S	90	80	10	8A	25W	25c	30	70	5	2.5A	1						66A	2		
2SD 129 yel	To		N	S	90	80	10	8A	25W	25c	50	120	5	2.5A	1						66A	2		
2SD 129 blu	To		N	S	90	80	10	8A	25W	25c	85	200	5	2.5A	1						66A	2		
2SD 130 red	To		N	S	60	50	10	8A	25W	25c	30	70	5	2.5A	1						66A	2		
2SD 130 yel	To		N	S	60	50	10	8A	25W	25c	50	120	5	2.5A	1						66A	2		
2SD 130 blu	To		N	S	60	50	10	8A	25W	25c	85	200	5	2.5A	1						66A	2		
2SD 234 red	To		N	S	60	50	10	3A	25W	25c	40	80	5	500	1						220B	2	2SB 434	
2SD 234 orn	To		N	S	60	50	10	3A	25W	25c	70	140	5	500	1						220B	2	2SB 434	
2SD 234 yel	To		N	S	60	50	10	3A	25W	25c	120	240	5	500	1						220B	2	2SB 434	
2SD 235 red	To		N	S	50	40	10	3A	25W	25c	40	80	5	500	1						220B	2	2SB 435	
2SD 235 orn	To		N	S	50	40	10	3A	25W	25c	70	140	5	500	1						220B	2	2SB 435	
2SD 235 yel	To		N	S	50	40	10	3A	25W	25c	120	240	5	500	1						220B	2	2SB 435	
2SD 369 orn	To		N	S	80	60	10	10A	100W	25c	50	150	5	1A	2					3μs	3D	2		
2SD 369 yel	To		N	S	80	60	10	10A	100W	25c	100	300	5	1A	2						3D	2		
2SD 371 red	To		N	S	100	100	5	6A	50W	25a	40	80	5	1A	5						3D	2	2SD 531	
2SD 371 orn	To		N	S	100	100	5	6A	50W	25a	70	140	5	1A	5						3D	2	2SD 531	
2SD 371 yel	To		N	S	100	100	5	6A	50W	25a	120	240	5	1A	5						3D	2	2SD 531	
2SD 424 red	To		N	S	180	180	5	15A	150W	25a	40	80	5	2A	5						3D	2	2SB 554	
2SD 424 orn	To		N	S	180	180	5	15A	150W	25a	70	140	5	2A	5						3D	2	2SB 554	
2SD 425 red	To		N	S	140	140	5	12A	100W	25c	40	80												

Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Sil	MAXIMUM RATINGS							ELECTRICAL CHARACTERISTICS										Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{fe}) type max	V _{ce} (V _{cb}) V	I _c (I _e) mA	F _T	R _{thj-a} (η) °C/W	F (C _c)	f MHz	t _{on} (tr)					
40022	Rc		P	G	32		5	5A	12,5W	(100)		>38	2	1A	0,3					3A	2			
40050	Rc		P	G	40	40	5	5A	12,5W	(100)		>50	5	500	0,5					3A	2			
40080	Rc		N	S		30		250	500	(200)						350				39A	2			
40082	Rc		N	S		60	2,5	1,5A	5W	(200)										39A	2			
40231	Rc		N	S	18	18	5	100	500	(175)	(55	180)	10	2	60	300				104A	1			
40232	Rc		N	S	18	18	5	100	500	(175)	(90	300)	10	2	60	300				104A	1			
40233	Rc		N	S	18	18	5	100	500	(175)	(90	300)	10	2	60	300				104A	1			
40235	Rc		N	S	45		4,5	50	180	(175)	40	170	6	1	1000				104B	3				
40236	Rc		N	S	45		4,5	50	180	(175)	40	275	6	1	1000				104B	3				
40238	Rc		N	S	45		4,5	50	180	(175)	40	70	6	1	800				104B	3				
40239	Rc		N	S	45		4,5	50	180	(175)	27	100	6	1	800				104B	3				
40240	Rc		N	S	45		4,5	50	180	(175)	27	275	6	1	800				104B	3				
40243	Rc		N	S	45	45	4,5	50	180	(175)	40	170	6	1					104B	3				
40244	Rc		N	S	45	45	4,5	50	180	(175)	27	170	6	1					104B	3				
40250	Rc		N	S	50	40	5	4A	29W	(200)	25	100	4	1,5A					309A	2				

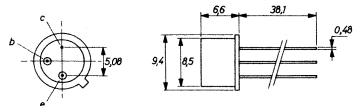


Type	Manufacturer	Sort (Note)	PNP/NPN	Ge/Si	MAXIMUM RATINGS						ELECTRICAL CHARACTERISTICS												Case	Use	Compl. (Equivalent) type
					V _{cbo} V	V _{ceo} V	V _{ebo} V	I _c (I _{cm}) mA	P _{tot} mW	t (tj)	h _{FE} min	(h _{FE}) type	max	V _{ce} (V _{cb}) V	I _c (I _B) mA	F _T	R _{thj-a} (η) °C/W	F (C _C)	f MHz	ton (tr)					
40251	Rc		N	S	50	40	5	15A	117W	(200)	15	60	4	8A							3A	2			
40254	Rc		P	G	32		5	5A	12.5W	(100)		>38	2	1A	0.3						3A	2			
40261	Rc		P	G	50			10	80		(27	170)	6	1	40						1A	3			
40263	Rc		P	G	20		2.5	50	120	(100)	(100	325)	6	1							1A	1			
40279	Rc		N	S	65	40	4	1.5A	11W	(200)		>10	5	150							60A	2			
40290	Rc		N	S		90	4	400	7W	(200)							500				39A	4			
40291	Rc		N	S		90	4	500	11W	(200)							500				60A	4			
40292	Rc		N	S		90	4	1.2A	23W	(200)							300				60A	4			
40305	Rc		N	S	40	40	4	1A	7W	(200)		>10	5	150							39A	4			
40311	Rc		N	S		30	2.5	700	5W	(200)	70	350	4	50	100	175					5A	2			
40314	Rc		N	S		40	2.5	700	5W	(200)	35	150	4	50	100	175					5A	2			
40315	Rc		N	S		35	2.5	700	5W	(200)	70	350	4	50	100	175					5A	2			
40317	Rc		N	S		40	2.5	700	5W	(200)	40	200	4	10		175					5A	2			
40319	Rc		P	S		40	2.5	700	5W	(200)	35	200	4	50	100						3A	2			
40320	Rc		N	S		40	2.5	700	5W	(200)	40	200	4	10							5A	2			
40329	Rc		P	G	25	25	2.5	100	375	(100)	50	200	1	25							1A	1			
40340	Rc		N	S	60	25	4	3.3A	70W	(200)					100						60A	2			
40341	Rc		N	S	70	35	4	3.3A	70W	(200)					100						60A	2			
40346	Rc		N	S				1A	10W			>25	10	10							5A	1, 6			
40347	Rc		N	S	60	40	7	1.5A	8.7W	(200)	25	100	4	450							5A	2			
40354	Rc		N	S		150	5	50	500	(175)		>55	10	10	50						104A	12			
40366	Rc		N	S		65	7	1A	5W	(200)		>20	10	0.1							5A	2, 6			
40397	Rc		N	S		25	7.5	200	500	(175)	165	600	10	10	80	300					104A	1, 12			
40412	Rc		N	S				1A	10W	(200)		>40	20	30							5A	6			
40458	Rc		N	S	60	40	8	1A	500	(175)	100	300	10	10	200						104A	10			
40472	Rc		N	S	45		3	50	180	(175)	40	170	6	1	900						104C	3			
40473	Rc		N	S	45		3	50	180	(175)	40	275	6	1	900						104C	3			
40481	Rc		N	S	45	45	3	50	180	(175)	70	275	6	1	860						104C	3			
40482	Rc		N	S	45	45	3	50	180	(175)	27	90	6	1	860						104C	3			
40490	Rc		P	G	20	18	2.5	20	120	(100)	(180	425)	6	1		390					1A	1			
40519	Rc		N	S		16	5	500	1W	(175)		>20	50	1							52A	1			
40537	Rc		P	S	55		5	700	5W	(200)	50	300	4	50	100	175					5A	2			
40539	Rc		N	S	55		5	700	5W	(200)	15	90	4	50	100						5A	1			
40544	Rc		N	S	50		5	700	7W	(200)	35	200	4	50	100						5A	1			
40577	Rc		N	S		60	4	500	3W	(200)	50	275	5	100							5A	1			
40594	Rc		N	S			4	2A	10W	(200)	70	350	4	300							5A	1			
40608	Rc		N	S	40	40	2	400	3.5W	(200)	35	120	15	50	700						39A	3			
40611	Rc		N	S		25	2.5	700	5W	(200)	75	500	4	50							5A	1			
40612	Rc		P	G		25	5	5A	12W	(100)	30	150	2	100							3A	2			
40616	Rc		N	S		32	2.5	700	5W	(200)	75	500	4	50							5A	1			
40623	Rc		P	G		45	5	5A	12W	(100)	50	170	2	1A							3A	2			
40626	Rc		P	G		55	5	5A	12W	(100)	50	170	2	1A							3A	2			
40633	Rc		N	S		75	5	8A	83W	(150)	20	70	4	4A							3A	2			
40634	Rc		P	S		75	7	700	5W	(200)	50	250	4	100							5A	1			
40635	Rc		N	S		75	7	700	5W	(200)	50	250	4	100							5A	1			
40636	Rc		N	S		95	7	15A	115W	(200)	20	70	4	4A							3A	2			
40637	Rc		N	S		30	5	100	1W	(200)					175						52A	3			

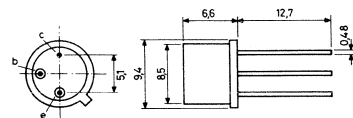
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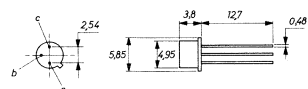
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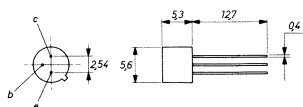
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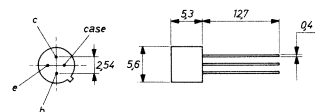
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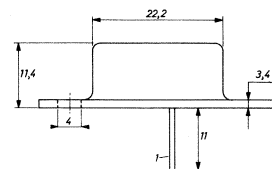
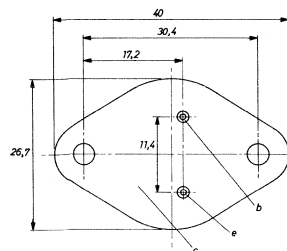
104A



104C



3A



60A

