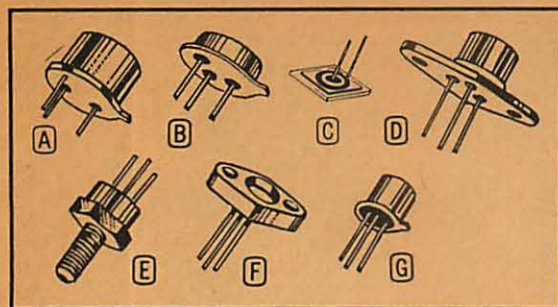




GENERAL
ELECTRIC

NPN Silicon Transistors



Microminiature package versions of discrete transistors and diodes, including TO-46, TO-50, network packages, ceramic tabs (Fig. J) and kovar tabs (Fig. C), are available in most popular types. For microminiature device types not listed, write for publication number 450.40.

NPN SILICON PLANAR EPITAXIAL SWITCHES AND AMPLIFIERS

Typical f_t , 130 Mc. Typical Power Dissipation in Free Air at 25° C (Pr at case temperature at 25° C in parenthesis) Watts: TO-5, 0.8 except 2N2195, A, 0.6 (2.8); TO-5*, 1.15 (3.1); TO-5†, 1.5 (5.0); TO-46, 0.4 (5.0), 2N2353, -A, 3.0; TO-46†, 1.0 (5.0); TO-50, 0.3 (1.0).

TO-5 Fig. A	TO-46 Fig. B	TO-50 Fig. J	hFE	Min. V _{CEO} Volts	Max. I _{CEO} at V _{CB} Volts
2N2192	2N2350	11C702	100-300	40	15 30
2N2192A	2N2350A	.....	100-300	40	15 30
2N2193	2N2351	11C704	40-120	50	25 60
2N2193A	2N2351A	.....	40-120	50	25 60
2N2194	2N2352	.....	20-60	40	25 30
2N2194A	2N2352A	.....	20-60	40	25 30
2N2195	2N2353	.....	20 min.	25	50 30
2N2195A	2N2353A	.....	20 min.	25	50 30
2N2243	2N2364	11C710	40-120	80†	15 60
2N2243A	2N2364A	.....	40-120	80†	15 60
2N2868	2N2909	.....	40-120	40	15 30

Power Types			hFE	Min. V _{CEO} Volts	Max. I _{CEO} at V _{CB} Volts
TO-5† Fig. D	TO-5* Fig. E	TO-46† Fig. F			
11C1B1	11C1F1	11C201B20	100-300	40	15 30
11C3B1	11C3F1	11C203B20	40-120	50	8 25
11C5B1	11C5F1	11C205B20	20-60	40	25 30
11C7B1	11C7F1	11C207B20	20 min.	25	50 30
11C10B1	11C10F1	11C210B20	40-120	80†	15 60
11C11B1	11C11F1	11C211B20	40-120	40†	15 30

*Stud heatsink. †Diamond heatsink. ‡V_{CEr}.

10 MC HIGH SPEED SWITCHES TO-18 (FIG. G)

G.E. Type	Min. Volts V _{CEr}	Maximum			hFE	Max. Cob, pF at V _{CB} Volts
		V _{BE} (SAT) Volts	V _{CE} (SAT) Volts	I _{CEO} 150° C μA		
2N706*	20	3	0.9	0.6	30	20 min. 6 at 10
2N706A	20	5	0.9	0.6	30	20-60 5 at 5
2N708	20	5	0.8	0.4	15	30-120 6 at 10
2N793	20	5	0.9	0.6	30	40-120 5 at 5
2N834	30	5	0.9	0.25	30	25 min. 4 at 10
2N914	20	5	0.8	0.25	15	30-120 6 at 10
2N2368	40	4.5	0.85	0.25	30	20-60 4 at 5
2N2369	40	4.5	0.85	0.25	30	40-120 4 at 5
2N3052	20	5	0.9	0.25	25	25-130 8 at 5

NPN SILICON PLANAR PASSIVATED SWITCHES

Storage temperature, -65° to +300° C. T_J, -65° C to +200° C.

TO-18 (FIG. G)

G.E. Type	Min. Volts V _{CEr}	Maximum			hFE	Max. Cob, pF at V _{CB} Volts
		V _{BE} (SAT) Volts	V _{CE} (SAT) Volts	I _{CEO} 150° C μA		
2N717	40	5	1.3	1.5	100	20-60
2N718	40	5	1.3	1.5	100	40-120
2N718A	50	7	1.3	1.5	10	40-120 30-100*
2N719	80	5	1.3	5.0	200	40-120 35-100*
2N719A	80	7	1.3	5.0	15	20-60 15 min.*
2N720	80	5	1.3	5.0	200	40-120 35-100*
2N720A	100	7	1.3	5.0	15	40-120 30-100*
2N956	50	7	1.3	1.5	10	100-300 50-200*

*h_{FE}, I = 1 kc. *MIL type available.

NPN SILICON PLANAR PASSIVATED SWITCHES (CONT'D)

TO-5 (FIG. A)

G.E. Type	Power Diss. 25° C, Watts	Max. Volts			Min. V _{CEr} Volts	Max. I _{CEO} , μA	hFE	h _{FE}
		V _{CE} (SAT)	V _{BE} (SAT)	V _{EB0}				
2N696*	0.6	1.5	1.3	5	40	100	20-60	.....
2N697*	0.6	1.5	1.3	5	40	100	40-120	.....
2N698	0.8	5.0	1.3	7	80	15	20-60	15 min.
2N699	0.6	5.0	1.3	5	80	200	40-120	35-100
2N1613*	0.8	1.5	1.3	7	50	10	40-120	30-100
2N1711*	0.8	1.5	1.3	7	50	10	100-300	50-200
2N1893	0.8	5.0	1.3	7	100	15	40-120	30-100
16X1*	0.2	1.0	0.9	4	.....	0.5	20 min.	.....
16X2*	0.2	1.0	0.9	4	.....	0.5	20 min.	.....

*Fig. K. *MIL type available.

NPN SILICON PLANAR PASSIVATED AMPLIFIERS

TO-5 (FIG. A)

T_{STG}: -65° C to +300° C; T_J: -65° C to +200° C.

G.E. Type	Power Diss. 25° C, Watts	Max. Volts			Min. V _{CEr} Volts	Max. I _{CEO} , μA	hFE	h _{FE}
		V _{CE} (SAT)	V _{BE} (SAT)	V _{EB0}				
2N1889	0.8	5.0	1.3	7	80	15	40-120	30-100
2N1890*	0.8	5.0	1.3	7	80	.....	100-300	50-200
2N1973	0.8	1.2	0.9	7	80	15	75 min.	76-200
2N1983	0.6	0.25	.....	5	30	200	.....	70-210
2N1984	0.6	0.25	.....	5	30	200	.....	35-100
2N2049	0.8	0.4	0.8	7	50	10	.....	75 min.

*MIL type available.

TO-18 (FIG. G)

G.E. Type	Min. Volts V _{CEr}	Max. V _{BE} (SAT) Volts	Max. V _{CE} (SAT) Volts	I _{CEO} 150° C nA	hFE	Max. Cob, pF at V _{CB} Volts	
2N870	0.5	5.0	1.3	7	80	15	40-120 30-100
2N871	0.4	5.0	1.3	7	80	.....	100-300 50-200
2N910	0.4	1.2	0.9	7	80	15	75 min. 76-200

G.E. Type	Maximum		I _{CEO} 150° C nA	hFE	Max. Cob, pF	Max. at V _{CB} Volts
	V _{CEr} Volts	V _{BE} (SAT) Volts				
2N759	45	8	.....	1.0	200	36-90 8
2N760, A	45	8	.....	1.0	200	76-338 8
2N915	50	5	0.9	1.0	30	40-160 3.5
2N916	25	5	0.9	0.5	10	50-200 6
2N917*	15	3	.....	.....	1	20 min. 1.7
2N918*	15	3	.....	.....	10	20 min. 1.7
2N929	45	5	0.6-1	1.0	10	40-120 5†
2N930	45	5	0.6-1	1.0	10	100-300 5†
2N2387	45	5	0.6-1	1.0	10	4-120 5†
2N2388	45	5	0.6-1	1.0	10	100-300 5†
2N2483	60	6	.....	0.35	10	40-120 5†
2N2484	60	6	.....	0.35	10	100-500 5†

*TO-18 outline but with four leads. †Typical.

NPN SILICON GROWN DIFFUSED PASSIVATED

TO-5 (FIG. A)

G.E. Type	Max. Diss., mW	Max. I _{CEO} , μA	Min. V _{BE} Volts	Typ. Cob, pF	Typ. hFE	h _{FE}
4C29*	150	2.0	40	4	30	18-40
4C30*	150	2.0	40	4	55	37-80
4C31*	150	2.0	40	4	115	76-300
4D20*	150	1.0	40	2	15-50†	.....
4D21*	150	1.0	40	2	40-135†	.....
4D24*	125	1.0	15†	2	15-50†	.....
4D25*	125	1.0	15†	2	40-135†	.....
4D26*	125	1.0	15†	2	120-250†	.....
2N332	150	1.0	45	4	14	9-22
2N332A	500	0.5	45	4	14	9-22
2N333*	150	1.0	45	4	27	18-44
2N333A	500	0.5	45	4	27	18-44
2N334	150	1.0	45	4	36	18-90
2N334A	500	0.5	45	4	36	18-90
2N335*	150	1.0	45	4	45	37-90
2N335A	500	0.5	45	4	45	37-90
2N335B	500	0.5	60	4	45	37-90
2N336*	150	1.0	45	4	75	76-333
2N336A	500	0.5	45	4	75	76-333
2N337*	125	1.0	45	2	20-55	55†
2N337A	500	0.5	45	2	20-55	55†
2N338*	125	1.0	45	2	45-150	99†
2N338A	500	0.5	45	2	45-150	99†
2N478	200	0.5	15	2	.....	40-100
2N479, A	200	0.5	30	2	.....	40-100
2N480, A	200	0.5	45	2	.....	40-100
2N541	200	0.5	15	2	.....	80-200
2N542, A	200	0.5	30	2	.....	80-200
2N543, A	200	0.5	45	2	.....	80-200
2N1248	30	0.01	6	2	15 min.	.....
2N1276	150	1.0	40	2	10	9-22
2N1277	150	1.0	40	2	20	18-44
2N1278	150	1.0	40	2	33	37-90
2N1279	150	1.0	40	2	80	76-333
2N1417	150	1.0	15	2	.....	30-200
2N1418	150	1.0	30	2	.....	30-200
2N2349	150	1.0	40	2	120-250†	.....

*TO-5 outline with fixed-bed construction. †BV_{CEO}. ‡Pulsed measurements. §Typical. *MIL type available.



GENERAL ELECTRIC Silicon Transistors

SILICON ECONOMY NPN

PLANAR TRANSISTORS (FIG. K)

PT = 200 mW; COB = 7 pF typ. at VCE = 10 V except as otherwise noted.

SMALL SIGNAL AMPLIFIERS—AUDIO TO 30 Mc

G.E. Type	Applications and Features	hFE Min.-Max.	hFE BVCE0f (typ.) Mc
2N2711	RF converter, IF, audio driver and output for AM, CB radio	30-90	18 120
2N2712		75-225	18 120
2N2923	V _{CE0} = 25 volts	90-180*	25 120
2N2924	hFE = 155 typical	150-300*	25 120
2N2925	hFE = 215 typical	150-470*	25 120
2N2926	Ultra high beta	35-470*	18 120
2N3390	Spread type, 5 beta groups†	400-800	25 120
2N3391	High beta, low noise; 1.9 db†	250-500	25 120
2N3391A	2N3391 controlled low noise	250-500	25 120
2N3392	hFE = 150 min.	150-300	25 120
2N3393	V _{CE0} = 25 volts	90-180	25 120
2N3394	Extra low price	55-110	25 120
2N3395	Spread type, 2 beta groups†	150-500	25 120
2N3396	Spread type, 3 beta groups†	90-500	25 120
2N3397	Spread type, 4 beta groups†	55-500	25 120
2N3398	Spread type, 5 beta groups†	55-800	25 120
2N3721	Low cost spread type†	60-660*	18 120

HIGH FREQUENCY AMPLIFIERS—10 Mc TO 250 Mc

G.E. Type	Applications and Features	hFE	hFE BVCE0f (typ.) Mc
16K1	COB 1.35 pF typical at V _{CE} = 10 V. Forward AGC; VHF RF and IF amplifiers (TV, FM)	60 typ.	30 560
16K2		60 typ.	30 560
16K3		60 typ.	30 560

HIGH FREQUENCY AMPLIFIERS AND OSCILLATORS

10 Mc to 950 Mc EPITAXIAL

G.E. Type	Applications and Features	hFE	hFE BVCE0f (typ.) Mc
2N3662	COB = 1.3 pF typical; TV and FM tuner, IF, UHF oscill.	20 min.	12 1200
2N3663		20 min.	12 1200

262.5 kc TO 100 Mc EPITAXIAL

G.E. Type	Applications and Features	hFE	hFE BVCE0f (typ.) Mc
2N3843A	COB = 2.5 pF typical at V _{CE} = 10 V. Very low 2 Mc noise for AM RF stages	20-40	30 135
2N3844A		35-70	30 135
2N3845A		60-120	30 135
2N3854	COB = 2.5 pF typical at V _{CE} = 10 V. General purpose types for FM and TV	35-70	18 250
2N3855		60-120	18 300
2N3856		100-200	18 350
2N3854A	COB = 2.5 pF typical at V _{CE} = 10 V. High frequency applications in FM and TV	35-70	30 250
2N3855A		60-120	30 300
2N3856A		100-200	30 350
2N3858	COB = 2.5 pF typical at V _{CE} = 10 V. Low 2 Mc noise for AM converter stages	60-120	30 135
2N3859		100-200	30 135
2N3860		150-300	30 135

LARGE SIGNAL AMPLIFIERS AND

MEDIUM SPEED SWITCH—EPITAXIAL

G.E. Type	Applications and Features	hFE	hFE BVCE0f (typ.) Mc
2N2713	Medium power and voltage, low V _{SAT} , hFE holding up to 200 mA	30-90	18 120
2N2714		75-225	18 120
2N3402	PT 900 mW; COB 8.0 pF typ. at V _{CE} 10 V; hFE holding up to 800 mA	75-225	25 120
2N3403		180-540	25 120
2N3404	Same as 2N3402, -3 except high power and voltage	75-225	50 120
2N3405		180-540	50 120
2N3414	PT 360 mW; COB 8.0 pF typ. Med. power, voltage, hFE hold to 500 mA	75-225	25 120
2N3415		180-540	25 120
2N3416	Same as 2N3414, -5 except high voltage, hFE holding up to 800 mA	75-225	50 120
2N3417		180-540	50 120

HIGH SPEED SWITCHES—EPITAXIAL—GOLD DOPED

G.E. Type	Applications and Features	hFE	hFE BVCE0f (typ.) Mc
2N3605	COB 4 pF typical; Low storage time, possible substitute for:	30 min.	14 350
2N3606		30 min.	14 350
2N3607	2N914, 2N706, 2N708, 2N753 and 2N834	30 min.	14 350

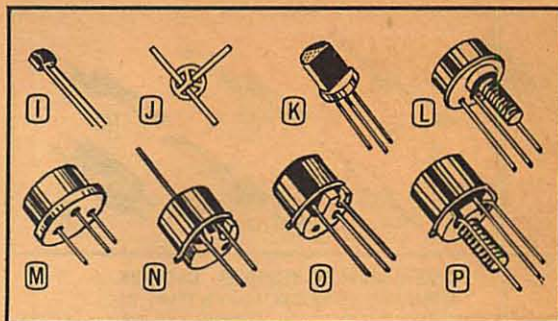
*h_{FE}. †Each type is supplied in narrow spread beta groups color coded. ‡Typical noise figure.

SILICON NPN POWER TRANSISTORS

TRIPLE-DIFFUSED PASSIVATED (NOT ILLUS.)

G.E. Type	Min. V _{CE0} Volts	Min. I _{CS} at 150° C mA at V	Max. I _C Amps	Max. Pwr., Diss., Watts at PT		hFE at V _{CE} = 15 V
				25°C	100°C	
2N1616	60	10 at 60*	5	3	60	15 min.
2N1617	80	10 at 80*	5	3	60	15-75
2N1618	100	10 at 80*	5	3	60	15-75
2N1724	80	2 at 60	5	3	50	20-90
2N1724A	120	2 at 100	5	3	50	50-150
2N1725	80	2 at 60	5	3	50	30-90
2N2150	80	.1 at 120	2	2	30	20-60†
2N2151	80	.1 at 120	2	2	30	40-120†
2N3220	80	.1 at 100	2	2	30	20-60†
2N3221	80	.1 at 100	2	2	30	40-120†
2N3222	60	.1 at 80	2	2	30	20-60†
2N3223	60	.1 at 80	2	2	30	40-120†

*I_{CS} = 1 amp. †V_{CE} = 5 V. ‡Free air. *Case temp. *At IC = 2 amps.



SILICON NPN POWER TRANSISTORS

PASSIVATED MESA

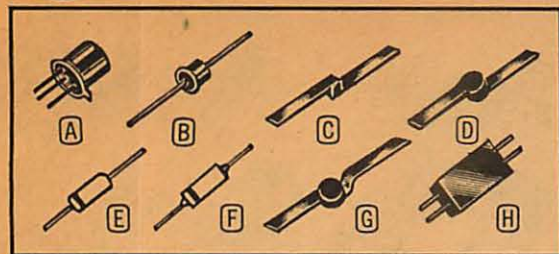
Typical f_t for all types, 15 Mc.

G.E. Type	Fig.	Min. Volts		I _{CS} = 250 mA	I _{CB0} = 30 V	Maximum		hFE* V _{CE} = 10 V IC = 200mA
		V _{CE0}	V _{CEX}			Pwr. Free Air at 25° C	Dissip. Tc at 100° C	
2N497*	A	60	85	250	0.8	4†	5	12-36
2N497A	A	60	85	250	1.0	5†	2	12-36
2N498*	A	100	85	250	0.8	4†	5	12-36
2N498A	A	100	85	250	1.0	5†	2	12-36
2N565*	A	60	85	250	0.8	4†	5	30-90
2N565A	A	60	85	250	1.0	5†	2	30-90
2N567*	A	100	85	250	0.8	4†	5	30-90
2N567A	A	100	85	250	1.0	5†	2	30-90
2N1047	L	80	65	15	1.0	40†	7.5	12-36
2N1047A	L	80	65	15	1.0	40†	7.5	12-36
2N1047B	L	80	65	200	1.0	40†	2.0	12-36
2N1048	L	120	65	15	1.0	40†	7.5	12-36
2N1048A	L	120	65	350	1.0	40†	7.5	12-36
2N1048B	L	120	65	200	1.0	40†	2.0	12-36
2N1049	L	80	65	15	1.0	40†	7.5	30-90
2N1049A	L	80	65	350	1.0	40†	7.5	30-90
2N1049B	L	80	65	200	1.0	40†	2.0	30-90
2N1050	L	120	65	15	1.0	40†	7.5	30-90
2N1050A	L	120	65	350	1.0	40†	7.5	30-90
2N1050B	L	120	65	200	1.0	40†	2.0	30-90
2N1067	M	60	12*	1000	1.0	5†	2	15-75
2N1068	M	60	12*	1000	1.0	5†	2	15-75
2N2017	A	60	85	250	1.0	10†	2	50-200
2N2106	A	60	85	200	1.0	5†	2	12-36
2N2107	A	60	85	200	1.0	5†	2	30-90
2N2108	A	60	85	200	1.0	5†	2	75-200
2N2196	D	60	80	250	2.0	10	2	30-90
2N2197	D	60	80	250	2.0	10	2	75-200
2N2201	D	100	120	200	2.0	10	1.7	30-90
2N2202	N	100	120	200	1.0	10	1.7	30-90
2N2203	O	100	120	200	1.0	10	1.7	30-90
2N2204	P	100	120	200	1.0	10	1.7	30-90
2N2239	D	50*	85	250	1.0	10	3	30-200
2N2611	D	100	120	200	2.0	10	1.7	12-36
2N2726	A	200†	108	100	1.0	5	2.0	30-90
2N2727	A	200†	108	100	1.0	5	2.0	75-150
2N2955	E	100	120	200	1.5	10	1.7	30-90
2N3589	D	200†	200†	100†	2.0	10	2	30-90
2N3590	D	200†	200†	100†	2.0	10	2	75-150
2N3591	O	200†	200†	100†	1.0	10	2	30-90
2N3592	O	200†	200†	100†	1.0	10	2	75-150
2N3593	E	200†	200†	100†	1.0	4	2	30-90
2N3594	E	200†	200†	100†	1.0	4	2	75-150
2N3595	E	200†	200†	100†	1.5	10	2	30-90
2N3596	E	200†	200†	100†	1.5	10	2	75-150
7A30	A	40	85	10	1.0	5	1.0*	12-36
7A31	A	30	85	10	1.0	5	1.0*	30-90
7A32	A	30	85	10	1.0	5	1.0*	75-200
7B1	D	60	80	200	2.0	10	1.7	12-36
7B2	D	60	80	200	2.0	10	1.7	30-90
7B3	D	60	80	250	2.0	10	1.7	75-200
7C1	N	60	80	200	1.0	10	1.7	12-36
7C2	N	60	80	200	1.0	10	1.7	30-90
7C3	N	100	120	200	1.0	10	1.7	12-36
7D1	N	60	80	250	1.0	10	2.0	75-200
7D2	O	60	80	200	1.0	10	1.7	12-36
7D3	O	100	120	200	1.0	10	1.7	30-90
7D13	O	60	80	250	1.0	10	2.0	75-200
7E1	P	60	80	200	1.0	10	1.7	12-36
7E2	P	60	80	200	1.0	10	1.7	30-90
7E3	P	100	120	200	1.0	10	1.7	12-36
7F1	E	60	80	250	1.0	10	2.0	75-200
7F2	E	60	80	200	1.0	4.0	1.7	12-36
7F3	E	100	120	200	1.0	4.0	1.7	30-90
7F4	E	100	120	200	1.0	4.0	1.7	30-90
7F13	E	60	80	250	1.0	4.0	2.0	75-200
7G1	E	60	80	200	1.5	10	1.7	12-36
7G2	E	60	80	200	1.5	10	1.7	30-90
7G3	E	100	120	200	1.5	10	1.7	12-36
7G13	E	60	80	250	1.5	10	2	75-200

*Pulse measurement: 300 μsec pulse width, 2% duty cycle. †V_{CE} at I_C = 50 mA, R_θ = 5 kohms, 25° C. ‡V_{CE} at I_C = 16 mA, R_θ = 1 kohm. §V_{BE} at I_E = 250 μA. *V_{CE} = 4 V, I_C = 750 mA. †Typical. ‡V_{CE} = 5 Kohms. †V_{CE0} at I_C = 100 μA, I_E = 0. ‡V_{CB} = 100 V. *MIL type available.



GENERAL ELECTRIC SILICON AND GERMANIUM DIODES



GERMANIUM TUNNEL DIODES GENERAL PURPOSE TO-18 (FIG. A)

Nominal series inductance, 4 nH. Typical peak voltage, 65 mV; "A" types 65 mV ± 10 except 1N2939A, 60 mV ± 10 .

G.E. Type	Peak Point IP		Maximum			Series Resis. Ohms	Typical Resis. Cutoff Freq., Gc
	mA	%	Valley Point mA	Cap. pF	*		
1N2939	1.0	10	0.14	15	4.0	6.6	2.2
1N2939A	1.0	2.5	0.14	10	4.0	6.6	2.6
1N2940	1.0	10	0.22	10	4.0	6.6	2.2
1N2940A	1.0	2.5	0.22	7	4.0	6.6	2.6
1N2941	4.7	10	1.04	50	2.0	30	2.6
1N2941A	4.7	2.5	1.04	30	2.0	30	3.9
1N2969	2.2	10	0.48	25	3.0	16	2.5
1N2969A	2.2	2.5	0.48	15	3.0	16	3.3
1N3149	10.0	10	2.2	90	1.5	60	2.6
1N3149A	10.0	2.5	2.2	50	1.5	60	3.1
1N3150	22.0	10	4.8	150	1.0	100	2.2

MINIATURE AXIAL PACKAGE (FIG. B)

Series inductance, 0.5 nH. Typical peak voltage, 65 mV except TD-9, 60 typ.; "A" types, 65 mV ± 7 .

G.E. Type	Peak Point mA	Valley Point mA	Cap. pF	Series Resis. Ohms	Typical Rise Time psec		
1N3712 (TD-1)	1.0	10	0.18	10	4.0	8	2.3
1N3713* (TD-1A)	1.0	2.5	0.14	5	4.0	8.5 ± 1	3.2
1N3714 (TD-2)	2.2	10	0.48	25	3.0	18	2.2
1N3715* (TD-2A)	2.2	2.5	0.31	10	3.0	19 ± 3	3.0
1N3716 (TD-3)	4.7	10	1.04	50	2.0	41 ± 5	1.8
1N3717* (TD-3A)	4.7	2.5	0.60	25	2.0	41	3.4
1N3718 (TD-4)	10.0	10	2.20	90	1.5	80	1.6
1N3719* (TD-4A)	10.0	2.5	1.40	50	1.5	85 ± 10	2.8
1N3720 (TD-5)	22.0	10	4.80	150	1.0	180	1.6
1N3721* (TD-5A)	22.0	2.5	3.10	100	1.0	190 ± 30	2.6
TD-9†	0.5	10	0.10	5	6.0	4.0	1.3

*Typ. negative conductance -G mhos $\times 10^{-3}$. *MIL type available.

ULTRA-HIGH SPEED SWITCHING DO-18 (FIG. C)

Subminiature epoxy package with series conductance of 1.5 nH.

G.E. Type	Peak Point mA ($\pm 10\%$)	Maximum		Voltage, mV		Typical	
		Valley Point mA	Cap. pF	Peak Point Typ.	Fwd IP = IP	Series Resis. Ohms	Rise Time psec
TD-251	2.2	0.31	3.0	70	500-650	5.0	430
TD-251A	2.2	0.31	1.0	110*	500-650	7.0	160
TD-252	4.7	0.60	4.0	80	500-650	3.5	320
TD-252A	4.7	0.60	1.0	120*	500-650	4.0	74
TD-253	10.0	1.40	9.0	75	500-650	1.7	350
TD-253A	10.0	1.40	5.0	80	520-650	2.0	190
TD-253B	10.0	1.40	2.0	120*	550-650	2.5	68
TD-254	22.0	3.80	18.0	90	600 typ.	1.8	185
TD-254A	22.0	3.80	4.0	120*	550-650	2.0	64
TD-255	50.0	8.50	25.0	110	625 typ.	1.4	100
TD-255A	50.0	8.50	5.0	130	640 typ.	1.5	35
TD-256	100	17.50	35.0	150	660 typ.	1.1	57
TD-256A	100	17.50	6.0	180	660 typ.	1.2	22

*Maximum.

MICROWAVE (FIG. D)

High performance microwave pill package with series inductance of 0.15 nH. Package capacitance, 0.25 pF. Typical peak point current, 1.85 mA. Negative resistance, 60-80 ohms.

G.E. Type	Maximum		Min. Resis. Cutoff	G.E. Type	Maximum		Min. Resis. Cutoff
	Cj pF	Rs Ohms			Cj pF	Rs Ohms	
TD-401	3.5	3	5 Gc	TD-405	60	6	25 Gc
TD-402	1.8	4	10 Gc	TD-406	48	6	30 Gc
TD-403	1.0	5	15 Gc	TD-407	37	6	35 Gc
TD-404	.75	5	20 Gc	TD-408	30	6	40 Gc

GERMANIUM BACK DIODES

GENERAL PURPOSE TYPES (FIG. B)

G.E. Type	Maximum		Minimum		Typ. V _F mV
	IP mA	Total C, pF	V _{R1} mV	V _{R2} mV	
BD-1	1.0	20	440	440	10.0
BD-2	0.5	10	420	465	5.0
BD-3	0.2	10	400	465	2.0
BD-4	0.1	10	380	465	1.0
BD-5	0.05	10	350	465	0.5
BD-6	0.02	10	330	465	0.2
BD-7	0.01	10	300	465	0.1

LOW NOISE MIXER DO-18 (FIG. C)

1N4090	0.2	1.5	430	500	2.0†	170
--------	-----	-----	-----	-----	------	-----

*IR = IP max. †IR = 1 mA. ‡VF1 = 90 mV ± 10 . §IF2 = 3 IF1. #VF1 = 100 mV ± 20 .

SILICON SIGNAL DIODES (PEP) STANDARD DO-7 (FIG. E)

G.E. Type	Min. SAT Volts	Max. Rev. Cur., μ A at V (at 25° C)	Max. Fwd. Cur., mA at Volts	Total Cap. pF at Volts	Rev. Recovery, Nanosec
1N251*	40	0.2 at -10	5 at 1.0	.....	150
1N252	30	0.1 at -5	10 at 1.0	.....	300
1N625	30	1 at -20	4 at 1.0	.....	1000
1N626	50	1 at -35	4 at 1.0	.....	1000
1N659	50	5 at -50	6 at 1.0	2.7 at -10	300
1N659A	75	0.025 at -50	10 at 1.0	2.7 at -10	300
1N811	30	1.0 at -10	1 at 1.0	.....	250
1N812	40	0.1 at -10	2 at 1.0	.....	250
1N813	20	0.5 at -50	5 at 1.0	.....	250
1N814	50	0.1 at -20	2 at 1.0	.....	250
1N815	20	0.5 at -5	100 at 1.5	.....	250
1N891	60	0.1 at -50	50 at 1.0	.....	300
1N903	40	0.1 at -40	10 at 1.0	1.0 at -6	4
1N903A	40	0.1 at -40	20 at 1.0	1.0 at -6	4
1N904	30	0.1 at -30	10 at 1.0	1.0 at -6	4
1N904A	30	0.1 at -30	20 at 1.0	1.0 at -6	4
1N905	20	0.1 at -20	10 at 1.1	1.0 at -6	4
1N905A	20	0.1 at -20	20 at 1.0	1.0 at -6	4
1N906	20	0.1 at -20	10 at 1.0	2.5 at -6	4
1N906A	20	0.1 at -20	20 at 1.0	2.5 at -6	4
1N907	30	0.1 at -30	10 at 1.0	2.5 at -6	4
1N907A	30	0.1 at -30	20 at 1.0	2.5 at -6	4
1N908	40	0.1 at -40	10 at 1.0	2.5 at -6	4
1N908A	40	0.1 at -40	20 at 1.0	2.5 at -6	4
1N914*	100	0.025 at -20	10 at 1.0	4.0 at 0	4
1N914A*	100	0.025 at -20	20 at 1.0	4.0 at 0	4
1N914B*	100	0.025 at -20	100 at 1.0	4.0 at 0	4
1N916*	100	0.025 at -20	10 at 1.0	2.0 at 0	4
1N916A*	100	0.025 at -20	20 at 1.0	2.0 at 0	4
1N916B*	100	0.025 at -20	30 at 1.0	2.0 at 0	4
1N917	50	0.05 at -10	10 at 1.0	2.5 at 0	4
1N997	40	0.025 at -12	10 at 1.0	.....	150
1N3062	75§	0.1 at -50	20 at 1.0	1.0 at 0	2
1N3063*	75§	0.1 at -50	10 at 1.0	2.0 at 0	2
1N3064**	75§	0.1 at -50	10 at 1.0†	2.0 at 0	4
1N3065	75§	0.1 at -50	20 at 1.0†	1.5 at 0	2
1N3066	75§	0.1 at -50	10 at 1.0	1.0 at 0	2
1N3067	30§	0.1 at -20	5 at 1.0	4.0 at 0	2
1N3068	30§	0.1 at -20	5 at 1.0	6.0 at 0	50
1N3124	40	0.1 at -40	20 at 1.0	2.0 at -6	4
1N3600*	50	0.1 at -50	200 at 1.0†	2.5 at 0	6
1N3604*	75§	0.05 at -50	50 at 1.0	2.0 at 0	2
1N3605*	40§	0.05 at -30	20 at 88*	2.0 at 0	2
1N3606*	75§	0.05 at -50	20 at 88*	2.0 at 0	2
1N3873,					
3873/HR	50	0.1 at -50	20 at 85†	4.0 at 0	4
1N4009*	35§	0.1 at -25	30 at 1.0	4.0 at 0	2
1N4726*	30§	0.1 at -20	10 at 85	4.0 at 0	.....

*mV. †Controlled conductance. ‡5V at 5 μ A. *MIL type available.

*Available in heatsink (Fig. F) diodes DHD (Double), FHD (Flat-leaded), MHD (Mini); or MSD (Micro Silicon Diode, Fig. G).

	1N914	1N914A	1N914B	1N916	1N916A	1N916B	1N3063
DHD	1N4148	1N4446	1N4448	1N4149	1N4447	1N4449	1N4305
MHD	1N4531						
DO-7	1N3064	1N3600	1N3604	1N3605	1N3606	1N4009	1N4726
DHD	1N4454	1N4150	1N4151	1N4152	1N4153	1N4154	1N4727
MHD	1N4532			1N4533	1N4534	1N4536	
MSD						1N4043	
FHD						1N4548	

DHD (FIG. F)

G.E. Type	Min. BV Volts†	Max. Rev. Cur., μ A at Volts*	Max. VF at IF‡ V at mA	Total Cap., pF at Volts	Rev. Recovery nanosec
1N4442	40	0.001 at 30	1.0 at 100	3 at 0	1000
1N4443	70	0.002 at 50	1.0 at 100	3 at 0	600
1N4444	70	0.05 at 50	1.0 at 100	2 at 0	7
1N4445	125‡	0.05 at 80	1.0 at 100	1 at 0	4
1N4450	40	0.05 at 30	1.0 at 200	4 at 0	4
1N4451	40	0.05 at 30	1.0 at 300	6 at 0	10
1N4452	40	0.05 at 30	1.20 at 1A	15 at 10	20
1N4606	85‡	0.1 at 50	1.1 at 250	2.5 at 0	4
1N4607	85‡	0.1 at 50	1.1 at 400	4 at 0	10
1N4608	85‡	0.1 at 50	1.1 at 500	4 at 0	10
1N4861	40	4.0 at 30‡	1.2 at 100	3.5 at 0	1000
1N4862	70	4.0 at 30‡	1.1 at 100	3.3 at 0	1000
1N4863	70	50 at 50‡	1.2 at 100	2 at 0	7
1N4864	125‡	100 at 80‡	1.1 at 100	1.3 at 0	9

MSD (FIG. G)

1N3607	75	0.05 at 50	1.0 at 50	2.0 at 0	2
1N3608	40	0.05 at 30	0.88* at 20	2.0 at 0	2
1N3609	75	0.05 at 50	0.88* at 20	2.0 at 0	2

DHD STABISTORS (FIG. F)

G.E. Type	Min. BV Volts†	Max. Rev. Cur., μ A at Volts*	Max. VF at IF‡ V at mA	Total Cap., pF at Volts	Rev. Recovery nanosec
1N4156	30	0.05 at -20	1.84* at 100	25 at 0	400 mW*
1N4157	30	0.05 at -20	2.66* at 100	20 at 0	400 mW*
1N4453	30	0.05 at -20	9.20* at 100	30 at 0	400 mW*
1N4828	30‡	0.1 at -20	1.10* at 100	35 at 0	400 mW*
1N4829	30‡	0.1 at -20	1.87* at 100	25 at 0	400 mW*
1N4830	30‡	0.1 at -20	2.69* at 100	20 at 0	400 mW*

MATCHED PAIRS AND QUADS (FIG. H)

Max. VF difference between diodes is 10 mV at IF = 0.1 to 10 mA at TA of -55° C to +125° C.

1N4306I	75	.05 at 50	1.0 at 100	115 mA*	.....
MP-21	40	.10 at 30	1.0 at 10	115 mA*	.....
1N4307	75	.05 at 50	1.0 at 100	115 mA*	.....
MQ-2	40	.10 at 30	1.0 at 10	115 mA*	.....

*At 25° C. †At IR = 5 μ A except †100 μ A. ‡Controlled conductance. †At 150° C. *mV. *Pd at 25° C. †Max. IF steady state DC. †Matched pairs in molded package; others in matched quads.



GENERAL ELECTRIC SPECIAL SILICON PRODUCTS

SILICON UNIUNCTION TRANSISTORS

Consist of an "N" type silicon bar mounted between two ohmic base contacts with a "P" type emitter near base two. Three-terminal package.

G.E. Types Bar Structure		R _{BB} = 3V I _E = 0 Kohms	Intrin. Stand-off Ratio*	I _V Min. mA	I _P Max. Emitter μA	I _{EO} Max.	
TO-18	TO-5					μA	T _J = 25° C at V _{B2E}
2N2417	2N489*	4.7-6.8	.51-.62	8	12	2	60
2N2417A	2N489A				12	2	60
2N2417B	2N489B				6	0.2	30
2N2418	2N490*	6.2-9.1	.51-.62	8	12	2	60
2N2418A	2N490A				12	2	60
2N2418B	2N490B				6	0.2	30
2N2419	2N491*	4.7-6.8	.56-.68	8	12	2	60
2N2419A	2N491A				12	2	60
2N2419B	2N491B				6	0.2	30
2N2420	2N492*	6.2-9.1	.56-.68	8	12	2	60
2N2420A	2N492A				12	2	60
2N2420B	2N492B				6	0.2	30
2N2421	2N493*	4.6-6.8	.62-.75	8	12	2	60
2N2421A	2N493A				12	2	60
2N2421B	2N493B				6	0.2	30
2N2422	2N494*	6.2-9.1	.62-.75	8	12	2	60
2N2422A	2N494A				12	2	60
2N2422B	2N494B				6	0.2	30
2N2422C	2N494C				2	.02	30
5G514	2N1671	4.7-9.1	.47-.62	8	25	12	30
5G515	2N1671A				25	12	30
5G516	2N1671B				6	0.2	30
2N2646*	2N2160	4.0-12.0	.47-.80	8	25	12	30
2N2647*		4.7-9.1	.56-.75	4	5	12	30
2N2840*		4.7-9.1	.68-.82	8	2	0.2	30
5E35*		4.7-9.1	.62-.82	360-440‡	12		30
5E36*		4.7-9.1	.62-.82	380-420‡	1.0		30

*Cube structure. †V_{BB} = 1.5 V. *V_{BB} = 10 V. †V_P at V_{BB} = 1.5 V. ‡Frequency. †I_V at V_{BB} = 1.5 V, 0.2-7 mA. *V_{B2E} = 30 V, I_{B1} = 0. *MIL type available.

SILICON ACTIVE FUNCTIONAL DEVICES

For complete information, ask for publication number 450.40.

NPN DIFFERENTIAL AMPLIFIERS

Six-terminal packages containing two isolated pellets.

G.E. Type				V _{CEO} Min. Volts	h _{FE} at 100 μA Minimum
TO-5	TO-18	Flat Pack	Net- work		
12A8				30	30
12E109				30	80*
2N2060	12A104	12A304	12A904	60*	30
2N2223				60	25
2N2453		2N3519	2N3520	30	80*
2N2480				40	20
2N2480A	2N3513	2N3514	2N3515	40	35
2N2652				60	35
2N2652A	2N3516	2N3517	2N3518	60	70
2N2910				25	70
2N2913				45	100
2N2914				45	225
2N2915				45	100
2N2916				45	225
2N2917				45	100
2N2918				45	225
2N2919				60	100
2N2920				60	225
2N3521	2N3522	2N3523	2N3524	45	100-300*

*At I_C = 10 μA.

NPN CHOPPERS

Five-terminal packages containing two matched pellets.

G.E. Type	JEDEC Out- line	Maximum		Min. V _{EE0} † Volts	Max. r _s ‡ Ohms	Max. I _{CB02} § mA
		V ₀ * μV	at °C			
2N2356	TO-5	300	-55 to +125	20	40	10
2N2356A	TO-5	50	-55 to +125	20	40	10
2N3082	TO-18	350	-55 to +125	20	40	10
2N3083	TO-18	75†	-50 to +125	20	40	10

*I_{B1} = I_{B2} = 1 mA, I_{E1} = I_{E2} = 0. †I_{EE2} = 1 mA, I_{B1} = I_{B2}, †I_{B1} = 1 mA, I_{EE} = 0.1 mA. ‡V_{CB1} or V_{CB2} = 25 V. §I_{B1} = I_{B2} = 0.25 mA.

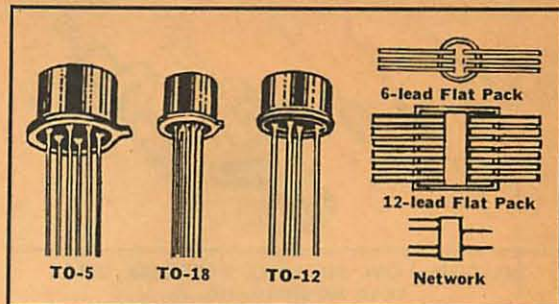
4JD12X013—Dual (4-transistor) version of 2N2356 in TO-5 pkg.

4JD12X070—Dual (4-transistor) version of 2N2356A in TO-5 pkg.

NPN DARLINGTONS

Four-terminal TO-18 package with two pellets connected in Darlington configuration.

G.E. Type	Minimum		h _{FE} at I _C of			Maximum	
	V _{CEO} Volts	At I _C mA	100 mA Min.-Max.	10 mA Min.-Max.	1 mA Min.	I _{CB0} nA	P _{VCB} Volts
	2N997	40	30	7000-70k	4000 min.	10	60
2N998	60	20	2000 min.	1600-8000	800	10	90
2N999	60	30	7000-70k	4000 min.	.....	10	60
2N2785	40	20	2000-20k	1200 min.	600	50	30



SILICON ACTIVE FUNCTIONAL CIRCUITS

Frequently referred to as hybrid circuits, consist of thin film resistors, capacitors, diode and transistor elements within a single hermetically sealed package. Three-terminal package.

G.E. Type	JEDEC Outline	Description
12X009	TO-5	Three stage low level amplifier
12X010	TO-5	Two stage amplifier
12X011	TO-5	Darlington output three stage amplifier
12X012	TO-5	Dual Darlington differential amplifier
12X014	TO-5	Darlington input three stage amplifier
12X015	TO-5	Cascaded low level DC amplifier
12X037	TO-5	Darlington amplifier
12X101	TO-5	DTL NAND/NOR gate
12X205	TO-18	Three 2N930 type transistors
12X207	TO-5	AC pulse amplifier
12X218	Flat*	High input impedance amplifier
12X235	TO-18	Very closely matched high speed diode quad
12X239	Flat†	Very closely matched high speed diode quad
12X248	TO-5	Multivibrator
12X257	TO-5	High frequency amplifier
12X264	TO-5	High frequency linear amplifier

*12 leads. †Six leads.

SILICON FUNCTIONAL COMPONENTS

Complete circuits fabricated with diffusion techniques and including resistors, transistors, diodes and capacitors. Three-terminal package.

4JPA108	TO-5	Video amplifier
4JPA112	TO-5	Video amplifier
4JPA114	TO-5	Audio frequency amplifier
4JPA116	TO-5	Summing amplifier
4JPA126	TO-5	Audio frequency amplifier
4JPA335	TO-5	Dual transistor, resistor TEG
4JPA345/358	Network	Low level switch
4JPA350	TO-5	Multiple emitter transistor, resistor, diode TEG
4JPA351	TO-5	Transistor and resistor TEG circuit
4JPA380	TO-5	Digital to analog switch
4JPA908	TO-5	Shunt diode quad
4JPA909	TO-5	Series diode quad
4JPA912	TO-5	Analog switch—common collector circuit
4JPA913	TO-5	Analog switch—common emitter configura.

SILICON CONTROLLED SWITCHES

GROWN DIFFUSED TO-12

Four-terminal package. 3N58, characterization GA is electrically open, corresponds to the conventional SCR configuration. 3N59, characterization Gc is connected to C, corresponds to the complementary SCR configuration. 3N60, characterization Is for SCR, complementary SCR and Binistor circuit configurations. Meets all specs for the 3N58 and 3N59. Dissipation, 150 mW. Peak gate current, 50 mA.

G.E. Type	Anode Bk. V	Max. Anode Ratings				Max. Gate Ratings		I _{GFC}	I _{GFA}
		I _B μA	I _R μA	V _F V	I _H mA	I _{GC} μA	I _{GA} μA		
3N58	40	20	20	1.5	1.5	20	.....	1.0	.....
3N59	40	20	.....	1.5	1.5	.....	20*	.....	1.5
3N60	40	20	20	1.5	1.5	.....	0.2†	1.0	1.5

*At 150° C. †At 25° C.

PLANAR TO-18

Four-terminal package.

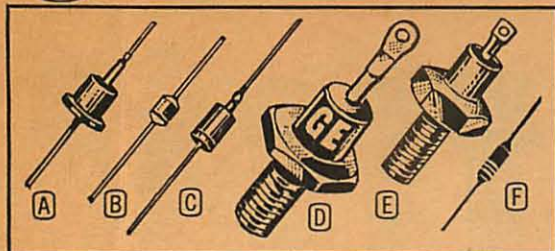
G.E. Type	Anode Bk. V	Cont. DC I _F mA	Peak Recur. I _F A*	Peak Cath. Gate Cur. mA	Dissipation mW	I _B		Maximum	
						at V _{AC} V	R _{GC} 10K μA	V _{GC} I _{GC} 20 μA	V _{GA} I _{GA} 1 μA
3N81	65	200	1.0	500	400	65	20	5	65
3N82	100	200	1.0	500	400	100	20	5	100
3N83	70	50	0.1	50	200	70	20†	5	70
3N84	40	175	0.5	100	320	40	20†	5	40
3N85	100	175	0.5	100	320	100	20†	5	100
3N86	65	200	1.0	500	400	65	20	5	65

*At 100 μsec. †Measured at 125° C; all others at 150° C.



GENERAL
ELECTRIC

SILICON AND GERMANIUM RECTIFIER CELLS, SEMICONDUCTOR MANUALS



SILICON LOW CURRENT RECTIFIER CELLS LEAD MOUNTED (FIG. A)

Max. peak 1-cycle surge, 10 amps, 1N599-1N606A: 20 amps, 1N1692-1N1697; 30 amps, A13 Series; 45 Amps, A10 Series; 15 amps, all others.

JEDEC or G.E. Type	PRV Volts	Max. IDC		Max. IR*		Max. Full Load Drop		Max. Oper. °C
		mA	°C	Cur.	At °C	V	At °C	
1N440	100	300	50	3 mA	25	1.5	25	150
1N440B	100	750	50	3 mA	25	1.5	25	165
1N441	200	300	50	7.5 mA	25	1.5	25	150
1N441B	200	750	50	7.5 mA	25	1.5	25	165
1N442	300	300	50	1.0 mA	25	1.5	25	150
1N442B	300	750	50	1.0 mA	25	1.5	25	165
1N443	400	300	50	1.5 mA	25	1.5	25	150
1N443B	400	750	50	1.5 mA	25	1.5	25	165
1N444	500	300	50	1.75 mA	25	1.5	25	150
1N444B	500	750	50	1.75 mA	25	1.5	25	165
1N445	600	300	50	2.0 mA	25	1.5	25	150
1N445B	600	750	50	2.0 mA	25	1.5	25	165
1N536	50	750	50	4 mA	150	0.5	150	165
1N537	100	750	50	4 mA	150	0.5	150	165
1N538*	200	750	50	3 mA	150	0.5	150	165
1N539	300	750	50	3 mA	150	0.5	150	165
1N540*	400	750	50	3 mA	150	0.5	150	165
1N547*	400	750	50	3 mA	150	0.5	150	165
1N560	800	600	30	3 mA	150	0.5	150	150
1N561	1000	600	30	3 mA	150	0.5	150	150
1N599, A*	50	600	25	1.0 mA	25	1.5	200	150
1N600, A*	100	600	25	1.0 mA	25	1.5	200	150
1N601, A*	150	600	25	1.0 mA	25	1.5	200	150
1N602, A*	200	600	25	1.0 mA	25	1.5	200	150
1N603, A*	300	600	25	1.0 mA	25	1.5	200	150
1N604, A*	400	600	25	1.5 mA	25	1.5	200	150
1N605, A*	500	600	25	2.0 mA	25	1.5	200	150
1N606, A*	600	600	25	2.5 mA	25	1.5	200	150
1N1095	500	675	50	3 mA	150	0.5	150	150
1N1096	600	640	50	3 mA	150	0.5	150	150
1N1100	100	750	50	3 mA	150	1.5	25	165
1N1101	200	750	50	3 mA	150	1.5	25	165
1N1102	300	750	50	3 mA	150	1.5	25	165
1N1103	400	750	50	3 mA	150	1.5	25	165
1N1487	100	750	25	4 mA	125	0.55	125	140
1N1488	200	750	25	3 mA	125	0.55	125	140
1N1489	300	750	25	3 mA	125	0.55	125	140
1N1490	400	750	25	3 mA	125	0.55	125	140
1N1491	500	750	25	3 mA	125	0.55	125	125
1N1492	600	750	25	3 mA	125	0.55	125	120
1N1692	100	600	50	5 mA	100	0.6	100	115
1N1693	200	600	50	5 mA	100	0.6	100	115
1N1694	300	600	50	5 mA	100	0.6	100	115
1N1695	400	600	50	5 mA	100	0.6	100	115
1N1696	500	600	50	5 mA	100	0.6	100	115
1N1697	600	600	50	5 mA	100	0.6	100	115
A10A	100	1.5 A	25	4 mA	150	0.5	150	165
A10B	200	1.5 A	25	4 mA	150	0.5	150	165
A10C	300	1.5 A	25	4 mA	150	0.5	150	165
A10D	400	1.5 A	25	4 mA	150	0.5	150	165
A10E	500	1.5 A	25	4 mA	150	0.5	150	165
A10M	600	1.5 A	25	4 mA	150	0.5	150	165
A10N	800	1.5 A	25	4 mA	150	0.5	150	165
A10P	1000	1.5 A	25	4 mA	150	0.5	150	165

LEAD MOUNTED (FIG. B)

JEDEC Type	PRV Volts	Max. IDC mA	Max. IR* Cur.	At °C	Max. Full Load Drop V	At °C	Max. Oper. °C
A13A2	100	1.0 A	50	10 mA	25	1.0	175
A13B2	200	1.0 A	50	10 mA	25	1.0	175
A13C2	300	1.0 A	50	10 mA	25	1.0	175
A13D2	400	1.0 A	50	10 mA	25	1.0	175
A13E2	500	1.0 A	50	10 mA	25	1.0	175
A13F2	50	1.0 A	50	10 mA	25	1.0	175
A13M2	600	1.0 A	50	10 mA	25	1.0	175

FLANGELESS (FIG. C)

Max. peak 1-cycle surge, 30 A (40 A, 1N3600 Series).

JEDEC Type	PRV Volts	Max. IDC mA	Max. IR* Cur.	At °C	Max. Full Load Drop V	At °C	Max. Oper. °C	
1N2610†	100	850	25	3 mA	150	0.5	150	175
1N2611†	200	850	25	3 mA	150	0.5	150	175
1N2612†	300	850	25	3 mA	150	0.5	150	175
1N2613†	400	850	25	3 mA	150	0.5	150	175
1N2614†	500	850	25	3 mA	150	0.5	150	175
1N2615†	600	850	25	3 mA	150	0.5	150	175
1N3189*	200	1.0 A	100	5 mA	25	1.0†	25	175
1N3190*	400	1.0 A	100	5 mA	25	1.0†	25	175
1N3191*	600	1.0 A	100	5 mA	25	1.0†	25	175
1N3639†	200	750	25	10 mA	25	0.6	25	100
1N3640†	400	750	25	10 mA	25	0.6	25	100
1N3641†	600	750	25	10 mA	25	0.6	25	100
1N3642†	800	500	25	10 mA	25	0.6	25	100

*Full cycle average. †Add suffix S for plastic sleeve. ‡Diffused. §At rated PRV. †At 750 mA. *And 500 mA. †A types for magnetic amplifier service. *MIL type available.

SILICON LOW CURRENT RECTIFIERS (Cont'd) STUD-MOUNTED (FIG. D)

JEDEC Type	PRV V	Max. IDC Cur. mA	Max. Pk. 1-cycle Surge Case °C	Max. Ir* mA	At °C	Max. Full Load Drop V	at mA
1N253**	95	1 A*	135	15 amps	.1	135	.75 135° C
1N254**	190	800	135	15 amps	.1	25	.70 135° C
1N255**	380	800	135	15 amps	.15	25	.70 135° C
1N256†*	570	600	135	15 amps	.25	25	.69 135° C
1N332*	400	400	150	15 amps	.2	150	2 800*
1N333*	400	200	150	10 amps	.2	150	2 400*
1N334*	300	400	150	15 amps	.2	150	2 800*
1N335*	300	200	150	10 amps	.2	150	2 400*
1N336*	200	400	150	15 amps	.1	150	2 800*
1N337*	200	200	150	10 amps	.1	150	2 400*
1N339*	100	400	150	15 amps	.1	150	2 800*
1N340*	100	200	150	10 amps	.1	150	2 400*
1N341*	400	400	150	15 amps	.5	150	2 800*
1N342*	400	200	150	10 amps	.5	150	2 400*
1N343*	300	400	150	15 amps	.5	150	2 800*
1N344*	300	200	150	10 amps	.5	150	2 400*
1N345*	200	400	150	15 amps	.5	150	2 800*
1N346*	200	200	150	10 amps	.5	150	2 400*
1N348*	100	400	150	15 amps	.5	150	2 800*
1N349*	100	200	150	10 amps	.1	150	2 400*
1N550	100	500	100†	4 A, 3 ms	.5 mA	25	1.5 25° C
1N551	200	500	100†	4 A, 3 ms	1.0 mA	25	1.5 25° C
1N552	300	500	100†	4 A, 3 ms	1.5 mA	25	1.5 25° C
1N553	400	500	100†	4 A, 3 ms	2.5 mA	25	1.5 25° C
1N554	500	500	100†	4 A, 3 ms	3.5 mA	25	1.5 25° C
1N555	600	500	100†	4 A, 3 ms	5.0 mA	25	1.5 25° C
1N562	800	400	100	15 amps	.3	150	.65 150° C
1N563	1000	400	100	15 amps	.3	150	.65 150° C
1N607, A	50	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N608, A	100	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N609, A	150	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N610, A	200	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N611, A	300	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N612, A	400	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N613, A	500	1 A	100†	2 A, .1 sec	.025*	25	1.5 200*
1N614, A	600	1 A	100†	2 A, .1 sec	.025†	25	1.5 200*
1N1115*	100	1.5 A	85	15 amps	.4	150	.65 150° C
1N1116*	200	1.5 A	85	15 amps	.3	150	.65 150° C
1N1117*	300	1.5 A	85	15 amps	.3	150	.65 150° C
1N1118*	400	1.5 A	85	15 amps	.3	150	.65 150° C
1N1119†	500	1.3 A	85	15 amps	.3	150	.65 150° C
1N1120†	600	1.3 A	85	15 amps	.3	150	.65 150° C

STUD MOUNTED (FIG. E)

JEDEC Type	PRV Volts	Max. IDC mA	Max. IR* Cur.	At °C	Max. Full Load Drop V	at mA	
1N1124	200	3.0 A	50†	25 amps	.3	150	1.1 1 A §
1N1125	300	3.3 A	50†	25 amps	.3	150	1.1 1 A §
1N1126	400	3.0 A	50†	25 amps	.3	150	1.1 1 A §
1N1126A	400	3.0 A	50†	25 amps	.3	150	1.1 1 A §
1N1127	500	3.0 A	50†	25 amps	.3	150	1.1 1 A §
1N1128	600	3.0 A	50†	25 amps	.3	150	1.1 1 A §
1N1128A	600	3.3 A	50†	25 amps	.3	150	1.1 1 A §

Max. operating temperature, 150° C except: *170° C; †155° C. ‡Ambient. §At 25° C. †Full cycle average. *IFM average. A Type: *.001; *.0015; *.002; 1.0025. *MIL type available.

SILICON SUBMINIATURE GLASS RECTIFIER CELLS (FIG. F)

Max. full load voltage drop, 1 V at 25° C. Max. oper. temp., 175° C for 1N600 Series, 200° C for 1N3500 Series.

JEDEC Type	Repet. PRV Volts	Max. IDC at 25° C mA	JEDEC Type	Repet. PRV Volts	Max. IDC at 25° C mA
1N645*	225	400	1N683	400	200
1N645A	225	400	1N684	400	400
1N646	300	400	1N685	500	200
1N647*	400	400	1N686	500	400
1N648	500	400	1N687	600	200
1N649*	600	400	1N689	600	400
1N676	100	200	1N3544	100	600
1N677	100	400	1N3545	200	600
1N678	200	200	1N3546	300	600
1N679	200	400	1N3547	400	600
1N681	300	200	1N3548	500	600
1N682	300	400	1N3549	600	600

GERMANIUM LOW CURRENT RECTIFIER CELLS

Max. peak 1-cycle surge, 25 amps.

JEDEC Type	Fig.	PRV Volts	Max. IDC at 55° C mA	Max. Rev. Cur., mA	Max. Full Load Voltage Drop	Max. Oper. Temp.
1N91	A	100	150	1.35	.22 V	95° C
1N92	A	200	100	0.95	.19 V	95° C
1N93*	A	300	75	0.6	.18 V	95° C
1N315	A	300	75	700*	.....	85° C



**GENERAL
ELECTRIC**

SILICON RECTIFIER CELLS, LIGHT ACTIVATED AND CONTROLLED SWITCHES

SILICON MEDIUM CURRENT RECTIFIER CELLS

Mount directly to a chassis or fin; insulation kit supplied. All units except 1N3569, 1N3670A-73A and 1N3765-1N3768 are also, A, B thru 1N250, A, B, JAN, USA and Series 1N191-1N1206 also available; complete specs on request.

JEDEC or G.E. Type	Fig.	Maximum			JEDEC or G.E. Type	Fig.	Maximum		
		PRV V*	IDC† A	Peak 1 Cy. Surge			PRV V*	IDC† A	Peak 1 Cy. Surge
1N248C	J	55	20	350	1N2157	J	300	25	400
1N249C	J	110	20	350	1N2158	J	400	25	400
1N250C	J	220	20	350	1N2159	J	500	25	400
1N1183	K	50	35	500	1N2160	J	600	25	400
1N1184	K	100	35	500	1N3208	H	50	15	250
1N1185	K	150	35	500	1N3209	H	100	15	250
1N1186	K	200	35	500	1N3210	H	200	15	250
1N1187	K	300	35	500	1N3211	H	300	15	250
1N1188	K	400	35	500	1N3212	H	400	15	250
1N1189	K	500	35	500	1N3213	H	500	15	250
1N1190	K	600	35	500	1N3214	H	600	15	250
1N1195A	J	300	20	350	1N3569	D	100	3.5†	35
1N1196A	J	400	20	350	1N3570	D	200	3.5†	35
1N1197A	J	500	20	350	1N3571	D	300	3.5†	35
1N1198A	J	600	20	350	1N3572	D	400	3.5†	35
1N1199A	D	50	12	240	1N3573	D	500	3.5†	35
1N1200A	D	100	12	240	1N3574	D	600	12	240
1N1201A	D	150	12	240	1N3670A	G	700	12	240
1N1202A	D	200	12	240	1N3671A	G	800	12	240
1N1203A	D	300	12	240	1N3672A	G	900	12	240
1N1204A	D	400	12	240	1N3673A	G	1000	12	240
1N1205A	D	500	12	240	1N3765	K	700	35	500
1N1206A	D	600	12	240	1N3766	K	800	35	500
1N1341A	D	50	6	150	1N3767	K	900	35	500
1N1342A	D	100	6	150	1N3768	K	1000	35	500
1N1343A	D	150	6	150	A40A	H	100	20	300
1N1344A	D	200	6	150	A40B	H	200	20	300
1N1345A	D	300	6	150	A40C	H	300	20	300
1N1346A	D	400	6	150	A40D	H	400	20	300
1N1347A	D	500	6	150	A40E	H	500	20	300
1N1348A	D	600	6	150	A40F	H	50	20	300
1N1612	D	50	5	150	A40M	I	600	20	300
1N1613	D	100	5	150	A44A	I	100	20	300
1N1614*	D	200	5	150	A44B	I	200	20	300
1N1615*	D	400	5	150	A44C	I	300	20	300
1N1616*	D	600	5	150	A44D	I	400	20	300
1N2154	J	50	25	400	A44E	I	500	20	300
1N2155	J	100	25	400	A44F	I	50	20	300
1N2156	J	200	25	400	A44M	I	600	20	300

FAST RECOVERY TYPES

Max. recovery time, 200 nsec except A28 Series, 100 nsec.

1N3879	D	50	6	75	A	300	20	225	A
1N3880	D	100	6	75	A	400	20	225	A
1N3881	D	200	6	75	A	50	30	300	A
1N3882	D	300	6	75	A	100	30	300	A
1N3883	D	400	6	75	A	200	30	300	A
1N3889	D	50	12	150	A	300	30	300	A
1N3890	D	100	12	150	A	400	30	300	A
1N3891	D	200	12	150	A	100	12	240	A
1N3892	D	300	12	150	A	200	12	240	A
1N3893	D	400	12	150	A	300	12	240	A
1N3899	J	50	20	225	A	400	12	240	A
1N3900	J	100	20	225	A	50	12	240	A
1N3901	J	200	20	225	A				

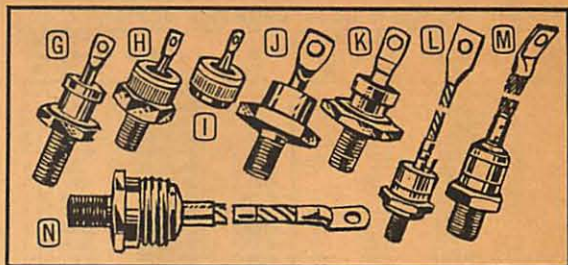
*Repetitive. †Stud single phase at 100° C except; †85° C; †110° C; †135° C; †140° C; †145° C; †150° C; †150° C Tc. For reverse polarity, change to: IA41; IA45. *MIL type available.

SILICON HIGH CURRENT RECTIFIER CELLS

Large area junction rectifiers for applications requiring DC output up to 500 amps per rectifying element at rms input voltages up to 700 V. Max. full load fwd. voltage drop, single phase, 0.4 V at 130° C Tc except A70 Series, 0.6 V. Max. operating Tj = 200° C. All A70 and A90 rectifiers are also available in forward or reverse polarity. Use A71, A91 or add suffix R to JEDEC no. A291 and A295 available reverse polarity only.

G.E. Type	JEDEC No.	Fig.	PRV Volts			Max. Cur., Amps			1-phase Ir†
			Repetitive	Transient	IDC	1-phase	1 Cycle Surge*		
A70B	1N3289*	L	200	300	100	1600	9.0		
A70C	1N3290*	L	300	400	100	1600	9.0		
A70D	1N3291*	L	400	525	100	1600	9.0		
A70E	1N3292	L	500	650	100	1600	8.0		
A70M	1N3293*	L	600	800	100	1600	6.5		
A70N	1N3294*	L	800	1050	100	1600	5.5		
A70P	1N3295*	L	1000	1300	100	1600	4.5		
A70PA		L	1100	1400	100	1600	4.0		
A70PB	1N3296	L	1200	1500	100	1600	4.0		
A70S		L	700	900	100	1600	6.0		
A70T		L	900	1100	100	1600	5.0		
A90B	1N3736	M	200	300	250	4500	16		
A90C	1N3737	M	300	400	250	4500	16		
A90D	1N3738	M	400	525	250	4500	16		
A90E	1N3739	M	500	650	250	4500	15		
A90M	1N3740	M	600	800	250	4500	12.5		
A90N	1N3741	M	800	1050	250	4500	10		
A90P	1N3742	M	1000	1300	250	4500	8		
A90PA		M	1100	1400	250	4500	8		
A90PB		M	1200	1500	250	4500	8		
A90S		M	700	900	250	4500	11		
A90T		M	900	1100	250	4500	9		
A291PC		N	1300	1500	250	4500	8		
A291PD		N	1400	1600	250	4500	8		
A291PE		N	1500	1700	250	4500	8		

*At 130° C Tc. †Max. mA; Tj = 200° C. *MIL type available.



SILICON HIGH CURRENT CELLS (CONT'D)

G.E. Type	JEDEC No.	Fig.	PRV Volts		Max. Cur., Amps		1-phase Ir†
			Repetitive	Transient	IDC 1-phase	1 Cycle Surge*	
A291PM		N	1600	1800	250	4500	8
A291PN		N	1800	2000	250	4500	8
A291PS		N	1700	1900	250	4500	8
A295B		N	200	400	500	7000	15
A295C		N	300	500	500	7000	15
A295D		N	400	600	500	7000	15
A295E		N	500	700	500	7000	15
A295M		N	600	800	500	7000	15
A295N		N	800	1000	500	7000	15
A295P		N	1000	1300	500	7000	15
A295S		N	700	900	500	7000	15
A295T		N	900	1200	500	7000	15

*At 130° C Tc. †Max. mA; Tj = 200° C.

Max. Idc single phase, 160 amps, Fig. L.

JEDEC No.	Repetitive PRV, V	JEDEC No.	Repetitive PRV, V	JEDEC No.	Repetitive PRV, V
1N3260	50	1N3265	300	1N3270	700
1N3261	100	1N3266	350	1N3271	800
1N3262	150	1N3267	400	1N3272	900
1N3263	200	1N3268	500	1N3273	1000
1N3264	250	1N3269	600		

Max. Idc single phase, 250 amps, Fig. M.

1N4044	50	1N4049	300	1N4054	800
1N4045	100	1N4050	400	1N4055	900
1N4046	150	1N4051	500	1N4056	1000
1N4047	200	1N4052	600		
1N4048	250	1N4053	700		

LIGHT ACTIVATED SILICON SCR'S

Photo-operated switch can be triggered by incident light and/or an electrical gate current. Max. temp. range, 100° C oper.; 150° C storage. Effective irradiance (mW/cm²) to trigger at 25° C Tj, 6 VDC, 0.68-10.0 (L9 and L911 Series, 0.68-4.2). Effective irradiance to trigger decreases with increasing anode voltage and increasing gate to cathode resistance. L5, L9, TO-5 outline; others same except soldered to a diamond base heatsink.

PRV/VBO	(Max. IDC = .44 A, 25° C)		(Max. IDC = .77 A, 25° C)	
	Type	Type	Type	Type
25	L8U	L9U	L811U	L911U
50	L8F	L9F	L811F	L911F
100	L8A	L9A	L811A	L911A
150	L8G	L9G	L811G	L911G
200	L8B	L9B	L811B	L911B

SILICON GATE-TURN-OFF SWITCHES

G5 and G6 Series: TO-5 outline, three-terminal PNP switch can be turned "off" as well as "on" from gate input terminal. Ideally suited for low power, high speed DC switching applications. Min. turn-off gain at Ip = 5. G511 and G611 Series: Identical to G5 and G6 Series but are soldered to a diamond shaped mounting base for increased dissipation capability. When ordering, change 5 or 6 in type number listed to 511 or 611 respectively, e.g., G511U, G611U, etc.

VBO	PRV	Type	Ip	Ih, Max.	Type	Ip	Ih, Max.
25	25	G5U		40 mA	G6U		60 mA
50	25	G5F	1 amp	40 mA	G6F	5 amps	60 mA
100	25	G5A	at Ip =	40 mA	G6A	at Ip =	60 mA
200	25	G5B	.2-1 A	40 mA	G6B	.5-2 A	60 mA
300	25	G5C		40 mA	G6C		60 mA
400	25	G5D		40 mA	G6D		60 mA

SILICON GATE-CONTROLLED AC SWITCHES

BI-DIRECTIONAL TRIODES—TRIAC

For gate control of AC power.

G.E. Type		Brkover V at 100° C Tj	Pk Gate Pd	Rms Current	Typical Triggering Requirements	Oper. Temp. Tj
Fig. H	Fig. I*					
SC40B	SC41B	≈200 V	5.0	6 A	Ig = +50 mA	-40° C
SC40D	SC41D	≈400 V	W	6 A	Vg = +3 V	to 10° C
SC45B	SC46B	≈200 V	5.0	10 A	Tj = 25° C	100° C
SC45D	SC46D	≈400 V	W	10 A		

*Similar, has two terminals.

BI-DIRECTIONAL TRIGGER DIODE—DIAC (FIG. B)

For gate trigger of TRIAC's or silicon controlled rectifiers. G.E. Type ST2—Breakover Voltage: ≈28 V min., ≈36 V max. Breakover Current: ≈200 μA, max. Pulse Output: ≈3 V, peak min., across 20-ohm load resistor when discharging 0.1 μF capacitor, TA = 50° C. Peak Current: ≈2 amps max., 10 μsec duration, 120 cps repetition rate, TA = 50° C.



**GENERAL
ELECTRIC**

SILICON CONTROLLED RECTIFIERS

SILICON LOW CURRENT SCR'S

G.E. Type	JEDEC No.	PRV and VBO	Max. IDC A	G.E. Type	JEDEC No.	PRV and VBO	Max. IDC A
.....	2N877	30	.5	.....	2N1595	50	1.6
.....	2N878	60	.5	.....	2N1596	100	1.6
.....	2N879	100	.5	.....	2N1597	200	1.6
.....	2N880	150	.5	.....	2N1598	300	1.6
.....	2N881	200	.5	.....	2N1599	400	1.6
.....	2N885	30	.5	C9U†	2N1929	25	1.1
.....	2N886	60	.5	C9F†	2N1930	50	1.1
.....	2N887	100	.5	C9A†	2N1931	100	1.1
.....	2N888	150	.5	C9G†	2N1932	150	1.1
.....	2N889	200	.5	C9B†	2N1933	200	1.1
C5U*	2N2322	25	1.6	C9H†	2N1934	250	1.1
C5F*	2N2323	50	1.6	C9C†	2N1935	300	1.1
C5A*	2N2324	100	1.6	C10U	2N1770A	25	7
C5B*	2N2325	150	1.6	C10F	2N1771A	50	7
C5C*	2N2326	200	1.6	C10A	2N1772A	100	7
C5H*	2N2327	250	1.6	C10G	2N1773A	150	7
C5C*	2N2328	300	1.6	C10B	2N1774A	200	7
C5D*	2N2329	400	1.6	C10H	2N1775A	250	7
.....	2N2322A	25	1.6	C10C	2N1776A	300	7
.....	2N2323A	50	1.6	C10D	2N1777A	400	7
.....	2N2324A	100	1.6	C11U	2N1770	25	6
.....	2N2325A	150	1.6	C11F	2N1771	50	6
.....	2N2326A	200	1.6	C11A	2N1772	100	6
.....	2N2327A	250	1.6	C11G	2N1773	150	6
.....	2N2328A	300	1.6	C11B	2N1774	200	6
.....	.....	.....	.....	C11H	2N1775	250	6
C6U†	.....	25	1.6	C11C	2N1776	300	6
C6F†	.....	50	1.6	C11D	2N1777	400	6
C6A†	.....	100	1.6	C11E	2N1778	500	6
C6G†	.....	150	1.6	C11M	2N2619	600	6
C6B†	.....	200	1.6	C12U†	.....	25	6
.....	.....	.....	.....	C12F†	.....	50	6
C7U	2N2344	25	.6	C12A†	.....	100	6
C7F	2N2345	50	.6	C12G†	.....	150	6
C7A	2N2346	100	.6	C12B†	.....	200	6
C7B	2N2347	150	.6	C12H†	.....	250	6
C7C	2N2348	200	.6	C12C†	.....	300	6

*For diamond base heatsink version of C5 Series change number to C511-. †For diamond base heatsink version of C6 Series change number to C611-. †Turn-off time guaranteed at less than 12 μ sec. Designed for inverter applications. *MIL type available.

SILICON HIGH CURRENT SCR'S

Max. IDC = 235 amps except C50, C52 and C60 Series, 110 amps.

G.E. Type	JEDEC No.	PRV & VBO	G.E. Type	JEDEC No.	PRV & VBO
C50U	2N1909	25	C80E	2N2547	500
C50F	2N1910*	50	C80M	2N2548	600
C50A	2N1911*	100	C180A	.....	100
C50G	2N1912	150	C180B	.....	200
C50B	2N1913*	200	C180C	.....	300
C50H	2N1914	250	C180D	.....	400
C50C	2N1915*	300	C180E	.....	500
C50D	2N1916*	400	C180M	.....	600
C50E	.....	500	C180S	.....	700
C50M	.....	600	C180N	.....	800
C50S	.....	700	C180T	.....	900
C50N	.....	800	C180P	.....	1000
C50T	.....	900	C180PA	.....	1100
C52F	2N1792*	50	C180PB	.....	1200
C52A	2N1793*	100	C180PC	.....	1300
C52G	2N1794*	200	C181A	.....	100
C52B	2N1795*	250	C181B	.....	200
C52H	2N1796*	300	C181C	.....	300
C52C	2N1797*	400	C181D	.....	400
C52D	2N1798*	500	C181E	.....	500
C52E	.....	600	C181M	.....	600
C52M	.....	700	C181S	.....	700
C52S	.....	800	C181N	.....	800
C52N	.....	900	C181T	.....	900
C52T	.....	900	C181P	.....	1000
C60U	2N2023	25	C181PA	.....	1100
C60F	2N2024	50	C181PB	.....	1200
C60A	2N2025	100	C181PC	.....	1300
C60G	2N2026	150	C185A†	.....	100
C60B	2N2027	200	C185B†	.....	200
C60H	2N2028	250	C185C†	.....	300
C60D	2N2029	300	C185D†	.....	400
C60E	2N2030	400	C185E†	.....	500
.....	.....	500	C185M†	.....	600
C80U	.....	25	C280S	.....	700
C80F	2N2542	50	C280N	.....	800
C80A	2N2543	100	C280T	.....	900
C80G	.....	150	C280P	.....	1000
C80B	2N2544	200	C280PA	.....	1100
C80H	.....	250	C280PB	.....	1200
C80C	2N2545	300	C280PC	.....	1300
C80D	2N2546	400	.....	.....	.....

*PRV rating (given) is 20% higher than VBO rating. †Inverter type. *MIL type available.

SILICON MEDIUM CURRENT SCR'S

G.E. Type	JEDEC No.	PRV and VBO	Max. IDC A	G.E. Type	JEDEC No.	PRV and VBO	Max. IDC A
C20U	.....	25	7.4	.....	2N1842A	25	25
C20F	.....	50	7.4	.....	2N1843A	50	25
C20A	.....	100	7.4	.....	2N1844A	100	25
C20B	.....	200	7.4	.....	2N1845A	150	25
C20C	.....	300	7.4	.....	2N1846A	200	25
C20D	.....	400	7.4	.....	2N1847A	250	25
C22U	.....	25	7.4	.....	2N1848A	300	25
C22F	.....	50	7.4	.....	2N1849A	400	25
C22A	.....	100	7.4	.....	2N1850A	500	25
C22B	.....	200	7.4	C38U	.....	25	35
C22C	.....	300	7.4	C38F	.....	50	35
C22D	.....	400	7.4	C38A	.....	100	35
C30U*	.....	25	25	C38G	.....	150	35
C30F*	.....	50	25	C38B	.....	200	35
C30A*	.....	100	25	C38H	.....	250	35
C30B*	.....	200	25	C38C	.....	300	35
C30C*	.....	300	25	C38D	.....	400	35
C30D*	.....	400	25	C38E	.....	500	35
C32U†	.....	25	25	C40U†	.....	25	25
C32F†	.....	50	25	C40F†	.....	50	25
C32A†	.....	100	25	C40A†	.....	100	25
C32B†	.....	200	25	C40G†	.....	150	25
C32C†	.....	300	25	C40H†	.....	200	25
C32D†	.....	400	25	C40I†	.....	250	25
C35U	2N681*	25	25	C40J†	.....	300	25
C35F	2N682*	50	25	C40K†	.....	400	25
C35A	2N683*	100	25	C40L†	.....	500	25
C35G	2N684*	150	25	C40E†	.....	50	25
C35B	2N685*	200	25	C135F	.....	50	25
C35H	2N686*	250	25	C135A	.....	100	25
C35C	2N687*	300	25	C135B	.....	200	25
C35D	2N688*	400	25	C135C	.....	300	25
C35E	2N689*	500	25	C135D	.....	400	25
C35M	2N690	600	25	C135E	.....	500	25
C35S	2N691	700	25	C135M	.....	600	25
C35N	2N692	800	25	C135S	.....	700	25
.....	.....	.....	.....	C135N	.....	800	25
C36U	2N1842	25	16	C140F	2N3649	50	25
C36F	2N1843	50	16	C140A	2N3650	100	25
C36A	2N1844	100	16	C140B	2N3651	200	25
C36G	2N1845	150	16	C140C	2N3652	300	25
C36B	2N1846	200	16	C140D	2N3653	400	25
C36H	2N1847	250	16	C141F§	2N3654§	50	25
C36C	2N1848	300	16	C141A§	2N3655§	100	25
C36D	2N1849	400	16	C141B§	2N3656§	200	25
C36E	2N1850	500	16	C141C§	2N3657§	300	25
C36M	.....	600	16	C141D§	2N3658§	400	25
C36S	.....	700	16	.....	.....	.....	.....
C36N	.....	800	16	.....	.....	.....	.....

For max. required gate signal of 9 mA change no. to: *C31-; †C33-. †Inverter type; turn-off time guaranteed at less than 12 μ sec. †Inverter type; turn-off time guaranteed at 10 μ sec max. *MIL type available.

Max. IDC 110 amps except C290 and C291 Series, 470 amps.

G.E. Type	PRV & VBO	G.E. Type	PRV & VBO
C55U, C56U*	25	C151PA, C153PA	1100
C55F, C56F*	50	C151PB, C153PB	1200
C55A, C56A*	100	C151PC, C153PC	1300
C55B, C56B*	150	C154A, C156A†	100
C55H, C56H*	200	C154B, C156B†	200
C55C, C56C*	250	C154C, C156C†	300
C55D, C56D*	300	C154D, C156D†	400
C55E, C56E*	400	C154E, C156E†	500
C55M, C56M*	500	C155A, C157A†	100
C55S, C56S*	600	C155B, C157B†	200
C55N, C56N*	700	C155C, C157C†	300
.....	800	C155D, C157D†	400
.....	.....	C155E, C157E†	500
C150E, C152E	500	C290F, C291F	50
C150M, C152M	600	C290A, C291A	100
C150S, C152S	700	C290G, C291G	150
C150N, C152N	800	C290B, C291B	200
C150T, C152T	900	C290H, C291H	250
C150P, C152P	1000	C290C, C291C	300
C150PA, C152PA	1100	C290J, C291J	350
C150PB, C152PB	1200	C290D, C291D	400
C150PC, C152PC	1300	C290E, C291E	500
C151E, C153E	500	C290M, C291M	600
C151M, C153M	600	C290S, C291S	700
C151S, C153S	700	C290N, C291N	800
C151N, C153N	800	C290T, C291T	900
C151T, C153T	900	C290P, C291P	1000
C151P, C153P	1000	.....	.....

*Turn-off guaranteed at less than 20 μ sec. †Inverter type; guaranteed turn-off time of 10 μ sec or less. †Inverter type; guaranteed turn-off time of 20 μ sec or less.

SILICON CONTROLLED AVALANCHE RECTIFIERS

G.E. Type	Wkg. PRV V	Avalanche Volts		Max. I A	Max. Rev. Cur. mA
		Min. V, 25° C	Max. V, 25° C		
A7G	150	200	450	.500	100 μ A
A7B	200	300	at 50	.500	100 μ A
A7C	300	400	550/500	.500	100 μ A
A7D	400	500	650 μ A	.500	100 μ A
A7E	500	600	750	.500	100 μ A
1N4506	200	250	515	12	2.5
1N4507	400	500	770	12	2.5
1N4508	600	750	1030	12	2.5
1N4509	800	1000	1290	12	2.0
1N4510	1000	1250	1550	12	1.75
1N4511	1200	1500	1930	12	1.5
1N4525	200	250	515	35	3.5
1N4526	400	500	770	35	3.5
1N4527	600	750	1030	35	3.5
1N4528	800	1000	1290	35	3.0
1N4529	1000	1250	1550	35	2.5
1N4530	1200	1500	1930	35	2.0



GENERAL ELECTRIC

OEM Semiconductor Pricing

G.E. Type	Net Each, Lots		G.E. Type	Net Each, Lots		G.E. Type	Net Each, Lots		G.E. Type	Net Each, Lots	
	1-99	100-999		1-99	100-999		1-99	100-999		1-9	10-29
1N34	\$0.35	\$0.23	1N553	\$ 1.73	\$1.15	1N1126, A	\$ 3.87	\$2.58	1N1730	\$ 4.48	\$ 3.68
1N34A	.35	.23	1N554	1.80	1.20	1N1126A	5.25	3.50	1N1731	6.30	5.18
1N35	1.82	1.21	1N555	2.40	1.60	1N1127, A	4.98	3.32	1N1732	8.12	6.67
1N38	.57	.38	1N560	1.80	1.20	1N1128, A	5.90	3.92	1N1733	11.76	9.66
1N38A, B	.57	.38	1N561	3.53	2.35	USN 1N1128A	7.50	5.00	1N1734	19.04	15.64
1N48	.30	.20	1N562	5.36	3.57	1N1183*	1.95	1.30			
1N51	.30	.20	1N563	10.73	7.15	1N1184*	2.40	1.60			
1N52	.38	.25	1N599	.47	.31	1N1185*	2.93	1.95			
1N52A	.38	.25	1N599A	.54	.36	1N1186*	3.45	2.30			
1N54, A	.48	.32	1N600	.53	.35	1N1187*	5.13	3.42			
1N56A	.38	.25	1N600A	.63	.42	1N1188	5.85	3.90	1N1765-1N1768	\$2.40	\$1.60
1N58, A	.62	.41	1N601	.54	.36	1N1189	6.45	4.30	1N1765A-1768A	3.00	2.00
1N60	.32	.23	1N601A	.65	.43	1N1190	6.90	4.60	1N1769-1N1776	3.00	2.00
1N60A	.38	.25	1N602	.63	.42	1N1191*	1.65	1.10	1N1769A-1776A	3.60	2.40
1N60C	.42	.28	1N602A, 1N603	.66	.44	1N1192*	1.73	1.15	JAN 1N2135A*	6.45	4.30
1N63	.42	.28	1N603A	.79	.53	1N1193*	2.10	1.40	USA 1N2135A	7.05	4.70
1N64	.35	.23	1N604	.81	.54	1N1194*	2.48	1.65	1N2154*	2.39	1.59
1N65	.53	.35	1N604A	1.28	.85	1N1195, A*	4.02	2.68	1N2155*	3.00	2.00
1N67, A	.32	.21	1N605	.90	.60	1N1196, A*	4.95	3.30	1N2156*	4.38	2.92
1N68A	.72	.48	1N605A	1.43	.95	1N1197, A*	6.15	4.10	1N2157*	5.25	3.50
1N69	.35	.23	1N606	1.19	.79	1N1198, A*	7.50	5.00	1N2158*	5.92	3.95
1N69A	.35	.23	1N606A	2.03	1.35	1N1199, A*	1.25	.83	1N2159*	6.15	4.10
1N70, A	.57	.38	1N607, A	1.01	.67	1N1200, A*	1.41	.94	1N2160*	6.30	4.20
1N75	.77	.51	1N608, A	1.05	.70	1N1201, A*	1.82	1.21			
1N81	.54	.36	1N609, A	1.05	.70	1N1202, A*	2.63	1.75			
1N81A	.54	.36	1N610, A	1.12	.75	JAN 1N1202*	3.96	2.64			
1N87A	.24	.16	1N611, A	1.43	.95	1N1203, A*	2.40	1.60			
1N90	.33	.22	1N612, A	1.73	1.15	1N1204, A*	4.58	3.05			
1N91	.85	.55	1N613, A	1.80	1.20	JAN 1N1204*	5.55	3.70			
1N92	1.95	1.30	1N614, A	2.40	1.60	1N1205, A*	5.33	3.55			
1N93	2.70	1.80	1N616	.39	.26	1N1206, A*	6.38	4.25			
USN 1N93A	3.45	2.30	1N625	.43	.29	1N1217, A, B	.38	.25			
1N96A	.39	.26	1N626	.43	.30	1N1218, A, B	.42	.28			
1N97A	.50	.33	1N636	.39	.26	1N1219, A, B	.43	.29			
1N98A	.36	.24	1N645	1.40	.93	1N1220, A, B	.45	.30			
1N99A	.59	.39	JAN 1N645	2.40	1.60	1N1221, A, B	.58	.39			
1N116	.54	.36	USAF 1N645	1.50	1.00	1N1222, A, B	.74	.49			
1N117A	.57	.38	1N645A, 1N646	1.65	1.10	1N1223, A, B	.85	.57			
1N118A	.30	.20	1N647	1.80	1.20	1N1224, A, B	1.02	.68			
1N125, A	.36	.24	JAN 1N647	4.05	2.70	1N1225, A, B	1.67	1.11			
1N127, A	.57	.38	USAF 1N647	1.95	1.30	1N1226, A, B	1.83	1.22			
1N128	.37	.25	1N648	1.95	1.30	1N1227	1.17	.78			
1N191	.42	.28	1N649	2.90	1.65	1N1227A, B	1.50	1.00			
1N192	.39	.26	JAN 1N649	5.25	3.50	1N1228	1.25	.83			
1N198, A	.42	.28	USAF 1N649	2.63	1.75	1N1228A, B	1.65	1.10			
1N248, A, B, C*	1.65	1.10	1N659	.58	.39	1N1229	1.46	.97			
1N249, A, B*	1.73	1.15	1N659A	1.18	.79	1N1229A, B	1.97	1.31			
JAN 1N249B*	3.00	2.00	1N676	.93	.62	1N1230	1.58	1.05			
USA 1N249B	3.30	2.20	1N677	1.05	.70	1N1230A, B	2.03	1.35			
1N249C*	2.03	1.35	1N678	1.23	.82	1N1231	1.94	1.29			
1N250, A, B*	2.48	1.65	1N679	1.35	.90	1N1231A, B	2.52	1.68			
JAN 1N250B*	3.66	2.45	1N681	1.53	1.02	1N1232	2.19	1.46			
USA 1N250B	4.55	3.03	1N682	1.65	1.10	1N1232A, B	2.94	1.96			
1N250C*	2.78	1.85	1N683	1.80	1.20	1N1233	2.64	1.76			
1N251, 1N252	.65	.43	1N684	1.88	1.25	1N1233A, B	3.60	2.40			
JAN 1N251	.72	.48	1N685	2.10	1.40	1N1234	3.14	2.09			
1N253	1.05	.70	1N686	2.25	1.50	1N1234A, B	4.04	2.69			
JAN 1N253	1.57	1.05	1N687	2.40	1.60	1N1235	5.10	3.40			
1N254	1.25	.83	1N689	2.50	1.65	1N1235A, B	6.53	4.35			
JAN 1N254	1.63	1.09	1N776	.38	.25	1N1236	6.38	4.25			
1N255	1.80	1.20	1N811	.82	.54	1N1236A, B	8.25	5.50			
JAN 1N255	2.35	1.57	1N812	1.18	.79	1N1341, A*	1.13	.75			
1N256	2.55	1.70	1N813	1.05	.70	1N1342, A*	1.28	.85			
JAN 1N256	3.24	2.16	1N814	1.18	.79	1N1343, A*	1.64	1.09			
1N273	.41	.27	1N815	.80	.53	1N1344, A*	2.22	1.48			
1N279	.33	.22	1N891	1.32	.88	1N1345, A*	3.17	2.11			
1N281	.36	.24	1N903	1.02	.68	1N1346, A*	4.11	2.74			
1N292	.50	.33	1N903A	1.17	.78	1N1347, A*	4.97	3.31			
1N295, A	.41	.27	1N904	.99	.66	1N1348, A*	5.93	3.95			
1N298A	.45	.30	1N904A	1.14	.76	1N1443	4.43	2.95			
1N309	.44	.29	1N905	1.14	.76	1N1443A, B	5.70	3.80			
1N315	3.00	2.00	1N905A	1.55	1.09	1N1444	10.20	6.80			
1N332, 1N333	1.73	1.15	1N907	.90	.60	1N1444A, B	13.13	8.75			
1N334, 1N335	1.43	.95	1N906A	1.13	.75	1N1487	.63	.42			
1N336, 1N337	1.12	.75	1N907	.89	.59	1N1488	.63	.42			
1N339, 1N340	1.05	.70	1N907A	1.52	1.01	1N1489	.66	.44			
1N341, 1N342	1.73	1.15	1N908	.87	.58	1N1490	.81	.54			
1N343, 1N344	1.43	.95	1N908A	1.02	.68	1N1491	.90	.60			
1N345, 1N346	1.12	.75	1N914 (1N4148)	.45	.30	1N1492	1.19	.79			
1N348, 1N349	1.05	.70	1N914A (1N4446)	.50	.33	1N1581	1.13	.75			
1N368	2.55	1.70	1N914B (1N4448)	1.35	.90	1N1582	1.28	.85			
1N440, B	.66	.44	JAN 1N914	.45	.30	1N1583	2.22	1.48			
1N441, B	.69	.46	USN 1N914	.45	.30	1N1584	3.17	2.11			
1N442, B	.79	.53	1N916 (1N4149)	.67	.44	1N1585	4.11	2.74			
1N443, B	.98	.65	1N916A (1N4447)	.75	.50	1N1586	4.97	3.31			
1N444, B	1.05	.70	1N916B (1N4449)	.92	.61	1N1587	5.93	3.95			
1N445, B	1.43	.95	1N917	2.05	1.37	1N1612*	1.08	.72			
1N499	.42	.28	1N917	.98	.64	1N1613*	1.25	.83			
1N497	.45	.30	1N1095	.77	.51	1N1614*	1.91	1.27			
1N536	.45	.30	1N1096	.96	.64	JAN 1N1614*	3.03	2.02			
1N537	.50	.33	1N1100	.53	.35	USA 1N1614*	3.03	2.02			
1N538	.53	.35	1N1101	.63	.42	1N1615*	3.75	2.50			
JAN 1N538	.75	.50	1N1102	.66	.44	JAN 1N1615*	5.25	3.50			
1N539	.60	.40	1N1103	.81	.54	USA 1N1615*	5.25	3.50			
1N540	.68	.45	1N1115	1.05	.70	1N1616*	5.55	3.70			
1N541	.60	.40	1N1116	1.12	.75	JAN 1N1616*	7.16	4.77			
1N542	.32	.20	1N1117	1.43	.95	USA 1N1616*	7.16	4.77			
1N547	.96	.64	1N1118	1.73	1.15	1N1692	.45	.30			
JAN 1N547	1.28	.85	1N1119	1.80	1.20	1N1693	.48	.32			
1N550	1.05	.70	1N1120	2.40	1.60	1N1694	.56	.37			
1N551	1.12	.75	1N1124, A	2.10	1.40	1N1695	.66	.44			
1N552	1.43	.95	USN 1N1124A	3.38	2.25	1N1696	.48	.32			
			1N1125, A	2.55	1.70	1N1697	.93	.62			

*Available in reverse polarity at same price; to order, add suffix R, e.g., 1N248R, 1N248RA, 1N248RB, etc. Price includes mounting hardware. For insulating hardware, add 5c per unit, any quantity. Continued, following pages.

GE Semiconductors Stocked in Depth at New York City



GENERAL ELECTRIC

OEM Semiconductor Pricing

G.E. Type	Net Each, Lots		G.E. Type	Net Each, Lots		G.E. Type	Net Each, Lots		G.E. Type	Net Each, Lots	
	1-99	100-499		1-99	100-999		1-99	100-999		1-99	100-999
1N3285* (A70B, A71B)	\$12.95	\$10.15	1N3879*	\$10.00	\$ 6.67	1N4861	\$ 0.75	\$0.50	2N508	\$ 0.69	\$ 0.46
JAN 1N3289*	14.90	12.10	1N3880*	12.51	8.34	1N4862	1.05	.61	2N508A	.73	.49
USA 1N3289*	14.90	12.10	1N3881*	15.00	10.00	1N4863	.48	.32	2N524, 2N525	1.10	.73
1N3290* (A70C, A71C)	14.15	10.80	1N3882*	17.61	11.74	1N4864	.58	.39	2N526	1.11	.74
1N3291* (A70D, A71D)	15.40	11.90	1N3883*	20.01	13.34	2N43, A	4.15	2.75	JAN 2N526	1.18	.79
JAN 1N3291*	17.35	13.85	1N3889*	12.51	8.34	JAN 2N43A	5.00	3.33	USN 2N526	1.18	.79
USA 1N3291	17.35	13.85	1N3890*	14.51	9.67	2N44	2.95	1.95	2N527	1.35	.90
1N3292* (A70E, A71E)	17.10	13.20	1N3891*	17.70	11.80	JAN 2N44A	4.67	3.11	2N541	6.00	4.00
1N3293* (A70M, A71M)	20.10	15.50	1N3892*	20.10	13.40	2N78	2.50	1.65	2N542	6.20	4.10
JAN 1N3293*	22.05	17.45	1N3893*	21.60	14.40	2N78A	2.70	1.80	2N542A	9.85	6.55
USA 1N3293	22.05	17.45	1N3899*	22.20	14.80	USAF 2N78A	3.10	2.10	2N543	7.95	5.30
1N3294* (A70N, A71N)	25.40	19.50	1N3900*	27.60	18.40	2N123	3.65	2.45	2N543A	12.65	8.45
JAN 1N3294*	29.30	23.40	1N3901*	34.65	23.10	USAF 2N123	4.50	3.00	2N566†	2.03	1.35
USA 1N3294	29.30	23.40	1N3902*	39.00	26.00	2N167, A	5.10	3.40	JAN 2N656	2.10	1.40
1N3295* (A70P, A71P)	30.20	23.20	1N3903*	44.40	29.60	JAN 2N167A	5.65	3.78	2N656A	2.40	1.60
JAN 1N3295*	34.10	27.10	1N3909*	36.00	24.00	USAF 2N167A	5.65	3.78	2N657†	2.20	1.47
USA 1N3295*	34.10	27.10	1N3910*	48.60	31.20	2N169	1.57	1.05	JAN 2N657	2.28	1.52
			1N3911*	57.30	38.20	2N169A	2.40	1.60	2N657A	2.92	1.94
			1N3912*	47.52	43.20	2N187A	1.50	1.00	2N681 (C35U)	8.55	5.70
			1N3913*	72.00	48.00	2N188A	1.64	1.09	JAN 2N681	9.70	6.45
			1N3958	1.49	.99	2N189	.70	.47	USN 2N681	9.70	6.45
			1N3959	1.80	1.20	2N190	.75	.50	2N682 (C35F)	9.40	6.25
			1N3960	2.33	1.55	2N191	.83	.55	JAN 2N682	10.45	6.95
			1N3961	2.85	1.90	2N192	1.57	1.05	USN 2N682	10.45	6.95
			1N3962	4.28	2.85	2N21A	6.92	6.92	2N683 (C35A)	10.20	7.00
			1N3963	6.35	4.10	2N292	.75	.50	JAN 2N683	11.55	7.70
			1N3987	8.38	5.59	2N293	.83	.55	USN 2N683	11.55	7.70
			1N3988	10.20	6.80	2N319	.44	.29	2N684 (C35G)	12.70	8.45
			1N3989	12.35	8.23	2N320	.59	.39	JAN 2N684	13.80	9.20
			1N3990	14.94	9.96	2N321	.65	.43	USN 2N684	13.80	9.20
			1N4009 (1N4154)	.42	.28	2N322	.42	.28	2N685 (C35B)	14.25	9.50
			1N4043	2.50	1.65	2N323	.59	.39	JAN 2N685	16.05	10.70
						2N324	.63	.42	USN 2N685	16.05	10.70
						2N332, 3, 4	4.65	3.10	2N686 (C35H)	18.00	12.00
						2N332A, 3A, 4A	4.95	3.30	JAN 2N686	19.05	12.70
						JAN 2N333	4.95	3.30	USN 2N686	19.05	12.70
						USN 2N333	4.95	3.30	2N687 (C35C)	21.00	14.00
						2N335	4.95	3.30	JAN 2N687	22.05	14.70
						JAN 2N335	5.25	3.50	USN 2N687	22.05	14.70
						USN 2N335	5.25	3.50	2N688 (C35D)	25.50	17.00
						2N35A	3.55	3.55	JAN 2N688	27.30	18.20
						2N335B	8.90	5.95	USN 2N688	27.30	18.20
						2N336	6.00	4.00	2N689 (C35E)	31.90	21.25
						JAN 2N336	6.30	4.20	JAN 2N689	32.90	21.95
						2N336A	6.30	4.20	2N690 (C35M)	37.50	25.00
						2N337	4.85	3.20	2N691 (C35S)	42.75	28.50
						JAN 2N337	5.15	3.40	2N692 (C35N)	48.00	32.00
						USN 2N337	5.15	3.40	2N696, 2N697	.93	.62
						2N337A	5.15	3.40	JAN 2N696	.93	.62
						2N338	5.50	3.65	JAN 2N697	.93	.62
						JAN 2N338	5.80	3.85	2N698	2.50	1.67
						USN 2N338	5.80	3.85	2N699	1.68	1.12
						2N338A	5.80	3.85	2N706	9.00	6.00
						2N394, A, 2N395	.50	.33	JAN 2N706	1.03	.69
						2N396	.62	.41	2N706A	.97	.64
						2N396A	.62	.41	2N706B	1.49	.99
						JAN 2N396A	.65	.43	2N708	1.08	.72
						USN 2N396A	.65	.43	2N717	1.09	.66
						2N397	1.11	.74	2N718	1.30	.86
						2N404	.47	.31	2N718A	1.52	1.01
						2N404A	.66	.44	2N719	2.35	1.56
						2N413, 2N414	.42	.29	2N719A	2.50	1.67
						2N450	2.10	1.40	2N720	1.83	1.22
						2N461	1.52	1.01	2N720A	2.48	1.65
						USAF 2N461	1.92	1.28	2N743	6.20	4.15
						2N478	3.60	2.40	2N743A	6.65	4.45
						2N479	6.95	4.60	2N744	2.90	1.95
						2N479A	7.15	4.80	2N744A	3.40	2.25
						2N480	9.30	6.20	2N753	5.17	3.44
						2N480A	9.60	6.40	2N759	1.75	1.17
						2N489	7.10	4.75	2N760	1.80	1.20
						USAF 2N489	7.80	5.20	2N760A	1.83	1.22
						2N489A	7.65	5.10	2N834	2.58	1.72
						2N489B	9.15	6.10	2N870	5.25	3.50
						2N490	7.80	5.20	2N871	5.33	3.56
						USAF 2N490	8.55	5.70	2N877	7.55	5.05
						2N490A	8.35	5.55	2N878	8.85	5.90
						2N490B	9.85	6.55	2N879	11.10	7.40
						2N490C	11.85	7.90	2N880	15.00	10.00
						2N491	8.40	5.60	2N881	19.15	12.75
						USAF 2N491	9.15	6.10	2N885	9.00	6.00
						2N491A	8.90	5.95	2N886	11.00	7.30
						2N491B	10.40	6.95	2N887	13.35	8.90
						2N492	9.90	6.60	2N888	19.15	12.75
						USAF 2N492	10.55	7.05	2N889	22.50	15.00
						2N492A	10.40	6.95	2N910	2.37	1.58
						2N492B	11.90	7.95	2N914	1.40	.93
						2N492C	13.90	9.20	2N915	5.08	3.39
						2N493	10.75	7.00	2N916	4.90	3.25
						USAF 2N493	11.40	7.60	2N917, 2N918	8.67	5.78
						2N493A	11.20	7.50	2N929	3.67	2.44
						2N493B	12.75	8.50	2N930	4.00	2.67
						2N494	10.90	7.30	2N956	2.17	1.44
						USAF 2N494	11.60	7.70	2N997	14.90	9.95
						2N494A	11.40	7.60	2N998	14.65	9.80
						2N494B	12.90	8.60	2N999	15.85	10.55
						2N494C	14.95	9.95	2N1047, A	14.30	9.55
						2N497†	1.89	1.26	2N1047B	26.00	17.30
						JAN 2N497	1.96	1.31	2N1048, A	18.10	12.05
						2N497A	2.05	1.37	2N1048B	38.30	25.50
						2N498†	2.12	1.41	2N1049, A	16.70	11.15
						JAN 2N498	2.18	1.46	2N1050, A	33.80	22.50
						2N498A	3.45	2.30		22.10	14.20

*Available in reverse polarity at same price; to order, add suffix R, e.g., 1N3289R, 1N3290R. †Recommended for replacement only; use "A" version for new designs.



GENERAL
ELECTRIC

OEM Semiconductor Pricing

G.E. Type		Net Each, Lots		G.E. Type		Net Each, Lots		G.E. Type		Net Each, Lots		G.E. Type		Net Each, Lots						
1-99		100-999		1-99		100-999		1-99		100-999		1-99		100-999						
2N1050B	\$46.90	\$31.20	2N1874A	\$16.15	\$10.75	2N2324A	\$ 6.60	\$ 4.40	2N3404	\$ 0.80	\$ 0.53	2N3405	.86	.58	2N3414	.58	.38			
2N1057	5.25	3.50	2N1848 (C36C)	16.90	11.25	2N2325 (C5G)	7.95	5.30	2N3415	.65	.43	2N3416	.65	.43	2N3417	.65	.43	2N3418	19.69	13.10
2N1067	19.85	13.20	2N1848A	18.75	12.50	2N2325A	9.60	6.40	2N3419	.65	.43	2N3420	.65	.43	2N3421	22.19	14.80	2N3422	22.19	14.80
2N1068	20.75	13.80	2N1849 (C36D)	21.30	14.20	2N2326 (C5H)	10.35	6.90	2N3423	.65	.43	2N3424	.65	.43	2N3425	19.69	13.10	2N3426	22.19	14.80
2N1086	1.07	.71	2N1849A	23.65	15.75	2N2326A	12.40	8.25	2N3427	.65	.43	2N3428	.65	.43	2N3429	19.69	13.10	2N3430	22.19	14.80
2N1086A	1.57	1.05	2N1850A (C36E)	24.40	16.25	2N2327 (C5B)	12.95	8.65	2N3431	.65	.43	2N3432	.65	.43	2N3433	19.69	13.10	2N3434	22.19	14.80
2N1087	1.57	1.05	2N1850A	27.00	18.00	2N2327A	15.75	10.50	2N3435	.65	.43	2N3436	.65	.43	2N3437	19.69	13.10	2N3438	22.19	14.80
2N1097	.47	.31	2N1889	5.25	3.50	2N2328 (C5C)	16.00	10.65	2N3439	.65	.43	2N3440	.65	.43	2N3441	19.69	13.10	2N3442	22.19	14.80
2N1098	.42	.28	2N1890	5.30	3.55	2N2328A	19.35	12.90	2N3443	.65	.43	2N3444	.65	.43	2N3445	19.69	13.10	2N3446	22.19	14.80
2N1121	1.57	1.05	USN 2N1890	8.65	5.80	2N2329 (C5D)	21.20	14.15	2N3447	.65	.43	2N3448	.65	.43	2N3449	19.69	13.10	2N3450	22.19	14.80
2N1144	.68	.45	2N1893	2.10	1.60	2N2329A	7.95	5.30	2N3451	.65	.43	2N3452	.65	.43	2N3453	19.69	13.10	2N3454	22.19	14.80
2N1145	.60	.40			2N2344 (C7U)	9.90	6.60	2N3455	.65	.43	2N3456	.65	.43	2N3457	19.69	13.10	2N3458	22.19	14.80	
2N1175	.87	.58			2N2345 (C7F)	13.95	9.30	2N3459	.65	.43	2N3460	.65	.43	2N3461	19.69	13.10	2N3462	22.19	14.80	
2N1175A	1.33	.89			2N2347 (C7G)	16.20	10.80	2N3463	.65	.43	2N3464	.65	.43	2N3465	19.69	13.10	2N3466	22.19	14.80	
2N1217	2.85	1.90			2N2348 (C7B)	19.50	13.00	2N3467	.65	.43	2N3468	.65	.43	2N3469	19.69	13.10	2N3470	22.19	14.80	
2N1227, 2N1248	13.50	9.00			2N2349 (4D22)	2.32	1.54	2N3471	.65	.43	2N3472	.65	.43	2N3473	19.69	13.10	2N3474	22.19	14.80	
2N1276	2.33	1.56			2N2350	4.80	3.20	2N3475	.65	.43	2N3476	.65	.43	2N3477	19.69	13.10	2N3478	22.19	14.80	
2N1277	2.17	1.44			2N2350A	5.05	3.35	2N3479	.65	.43	2N3480	.65	.43	2N3481	19.69	13.10	2N3482	22.19	14.80	
2N1278	2.33	1.56			2N2351	3.55	2.35	2N3483	.65	.43	2N3484	.65	.43	2N3485	19.69	13.10	2N3486	22.19	14.80	
2N1279	2.67	1.78			2N2351A	3.75	2.50	2N3487	.65	.43	2N3488	.65	.43	2N3489	19.69	13.10	2N3490	22.19	14.80	
2N1303	.49	.33			2N2352	2.95	1.97	2N3491	.65	.43	2N3492	.65	.43	2N3493	19.69	13.10	2N3494	22.19	14.80	
JAN 2N1303	.51	.34			2N2352A	3.20	2.13	2N3495	.65	.43	2N3496	.65	.43	2N3497	19.69	13.10	2N3498	22.19	14.80	
USN 2N1303	.51	.34			2N2353	1.98	1.32	2N3499	.65	.43	2N3500	.65	.43	2N3501	19.69	13.10	2N3502	22.19	14.80	
2N1305	.52	.35			2N2353A	2.13	1.42	2N3503	.65	.43	2N3504	.65	.43	2N3505	19.69	13.10	2N3506	22.19	14.80	
JAN 2N1305	.54	.37			2N2356	20.00	13.40	2N3507	.65	.43	2N3508	.65	.43	2N3509	19.69	13.10	2N3510	22.19	14.80	
USN 2N1305	.54	.37			2N2356A	23.00	15.30	2N3511	.65	.43	2N3512	.65	.43	2N3513	19.69	13.10	2N3514	22.19	14.80	
2N1307	.66	.44			2N2364	5.40	3.60	2N3515	.65	.43	2N3516	.65	.43	2N3517	19.69	13.10	2N3518	22.19	14.80	
JAN 2N1307	.71	.47			2N2364A	5.70	3.80	2N3519	.65	.43	2N3520	.65	.43	2N3521	19.69	13.10	2N3522	22.19	14.80	
USN 2N1307	.71	.47			2N2368	4.45	2.90	2N3523	.65	.43	2N3524	.65	.43	2N3525	19.69	13.10	2N3526	22.19	14.80	
2N1413	.73	.49			2N2369	4.80	3.10	2N3527	.65	.43	2N3528	.65	.43	2N3529	19.69	13.10	2N3530	22.19	14.80	
2N1414	.78	.52			2N2387	11.55	7.70	2N3531	.65	.43	2N3532	.65	.43	2N3533	19.69	13.10	2N3534	22.19	14.80	
2N1415	.92	.61			2N2388	14.40	9.65	2N3535	.65	.43	2N3536	.65	.43	2N3537	19.69	13.10	2N3538	22.19	14.80	
2N1417	.83	.56			2N2417	7.10	4.75	2N3539	.65	.43	2N3540	.65	.43	2N3541	19.69	13.10	2N3542	22.19	14.80	
2N1418	.92	.61			2N2417A	7.65	5.10	2N3543	.65	.43	2N3544	.65	.43	2N3545	19.69	13.10	2N3546	22.19	14.80	
2N1420	1.67	1.11			2N2417B	9.15	6.10	2N3547	.65	.43	2N3548	.65	.43	2N3549	19.69	13.10	2N3550	22.19	14.80	
2N1510	2.40	1.60			2N2418	7.85	5.20	2N3551	.65	.43	2N3552	.65	.43	2N3553	19.69	13.10	2N3554	22.19	14.80	
2N1539	3.00	2.00			2N2418A	8.35	5.55	2N3555	.65	.43	2N3556	.65	.43	2N3557	19.69	13.10	2N3558	22.19	14.80	
2N1596	4.60	3.05			2N2418B	9.85	6.55	2N3559	.65	.43	2N3560	.65	.43	2N3561	19.69	13.10	2N3562	22.19	14.80	
2N1597	9.35	6.25			2N2419	8.40	5.60	2N3563	.65	.43	2N3564	.65	.43	2N3565	19.69	13.10	2N3566	22.19	14.80	
2N1598	14.50	9.65			2N2419A	8.90	5.95	2N3567	.65	.43	2N3568	.65	.43	2N3569	19.69	13.10	2N3570	22.19	14.80	
2N1599	19.35	12.90			2N2419B	10.40	6.95	2N3571	.65	.43	2N3572	.65	.43	2N3573	19.69	13.10	2N3574	22.19	14.80	
2N1613	1.50	1.00			2N2420	9.80	6.55	2N3575	.65	.43	2N3576	.65	.43	2N3577	19.69	13.10	2N3578	22.19	14.80	
USN 2N1613	2.25	1.50			2N2420A	10.40	6.95	2N3579	.65	.43	2N3580	.65	.43	2N3581	19.69	13.10	2N3582	22.19	14.80	
2N1614	2.50	1.65			2N2420B	11.90	7.95	2N3583	.65	.43	2N3584	.65	.43	2N3585	19.69	13.10	2N3586	22.19	14.80	
2N1616	26.00	17.50			2N2421	10.75	7.20	2N3587	.65	.43	2N3588	.65	.43	2N3589	19.69	13.10	2N3590	22.19	14.80	
2N1617	30.00	20.00			2N2421A	11.20	7.50	2N3591	.65	.43	2N3592	.65	.43	2N3593	19.69	13.10	2N3594	22.19	14.80	
2N1618	35.00	23.50			2N2421B	12.75	8.50	2N3595	.65	.43	2N3596	.65	.43	2N3597	19.69	13.10	2N3598	22.19	14.80	
2N1671	2.95	1.97			2N2422	10.90	7.30	2N3599	.65	.43	2N3600	.65	.43	2N3601	19.69	13.10	2N3602	22.19	14.80	
2N1671A	3.20	2.13			2N2422A	11.40	7.60	2N3603	.65	.43	2N3604	.65	.43	2N3605	19.69	13.10	2N3606	22.19	14.80	
2N1671B	3.50	2.36			2N2422B	12.90	8.60	2N3607	.65	.43	2N3608	.65	.43	2N3609	19.69	13.10	2N3610	22.19	14.80	
2N1671C	8.25	5.50			2N2453	30.00	30.00	2N3611	.65	.43	2N3612	.65	.43	2N3613	19.69	13.10	2N3614	22.19	14.80	
2N1694	.99	.66			2N2453A	50.00	33.00	2N3615	.65	.43	2N3616	.65	.43	2N3617	19.69	13.10	2N3618	22.19	14.80	
2N1711	1.75	1.17			2N2480	14.30	9.50	2N3619	.65	.43	2N3620	.65	.43	2N3621	19.69	13.10	2N3622	22.19	14.80	
USN 2N1711	3.83	2.56			2N2480A	17.30	11.50	2N3623	.65	.43	2N3624	.65	.43	2N3625	19.69	13.10	2N3626	22.19	14.80	
2N1724	55.50	37.00			2N2483	7.50	5.00	2N3627	.65	.43	2N3628	.65	.43	2N3629	19.69	13.10	2N3630	22.19	14.80	
2N1724A	63.20	42.10			2N2484	10.00	6.70	2N3631	.65	.43	2N3632	.65	.43	2N3633	19.69	13.10	2N3634	22.19	14.80	
2N1725	57.00	38.00			2N2611	6.90	4.60	2N3635	.65	.43	2N3636	.65	.43	2N3637	19.69	13.10	2N3638	22.19	14.80	
2N1770 (C11U)	5.55	3.70			2N2619	30.00	20.00	2N3639	.65	.43	2N3640	.65	.43	2N3641	19.69	13.10	2N3642	22.19	14.80	
2N1770A (C10U)	6.15	4.10			2N2646	1.08	.72	2N3643	.65	.43	2N3644	.65	.43	2N3645	19.69	13.10	2N3646	22.19	14.80	
2N1771 (C11F)	6.00	4.00			2N2647	3.00	2.00	2N3647	.65	.43	2N3648	.65	.43	2N3649	19.69	13.10	2N3650	22.19	14.80	
2N1771A (C10F)	7.00	4.65			2N2652	18.80	12.50	2N3651	.65	.43	2N3652	.65	.43	2N3653						

