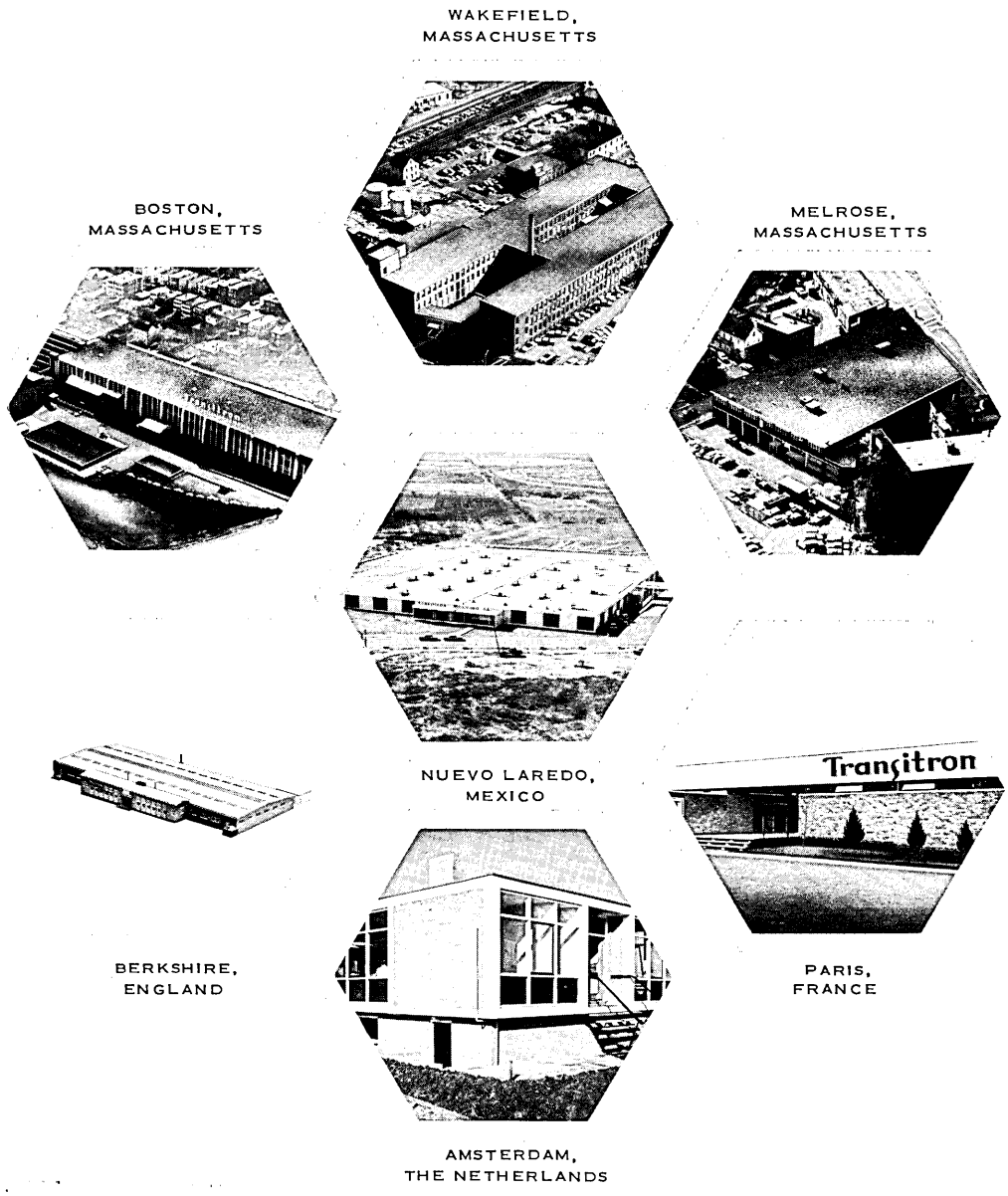
Transitron

CONDENSED CATALOG

BULLETIN SF67

Transitron electronic corporation 168 Albion Street, Wakefield, Massachusetts 01881



electronic corporation

Transitron Electronic Corporation was established in 1952, shortly after the development of the transistor, on the expectation that complex electronic systems would have to depend more and more upon quality semiconductor devices. Accordingly, Transitron decided to concentrate on advanced state-of-the-art products with reliability as a primary objective.

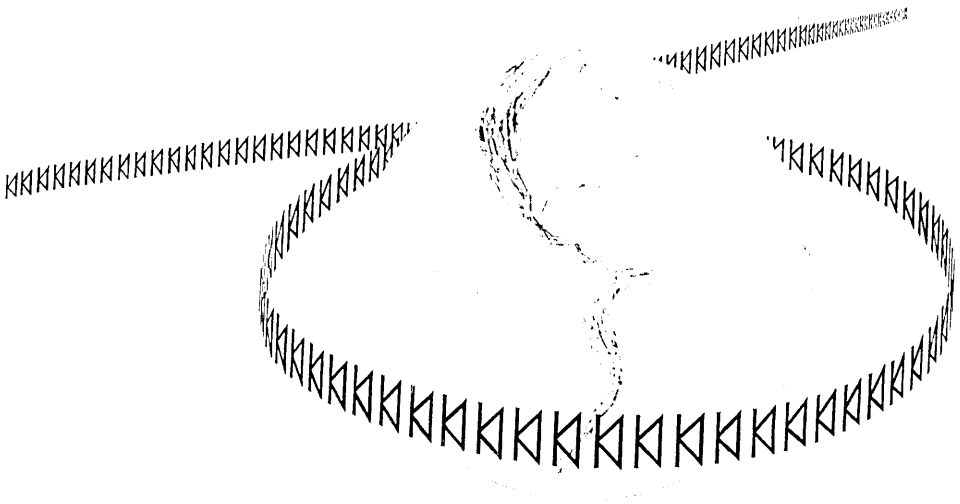
By constantly meeting the technical challenges inherent in new and advanced products, Transitron has achieved recognition throughout the industry as a leader in quality and design reliability. Through recent acquisitions, the Company has expanded its facilities and technical complement in pace with the burgeoning demand for state-of-the-art electronic components. Transitron's organization is made up of skilled and seasoned technical people. These people have sparked the growth of the Company by developing an increasing number of sophisticated and reliable devices. Major programs, such as the Minuteman Reliability Improvement Program, have exposed all levels of the organization to the disciplines which are essential in the production of high reliability components.

TABLE OF CONTENTS

50M/4/67-WEA-PMS462

TYPE NUMBER/PAGE INDEX

NOTE: Devices not listed in this Cross-Reference are as follows:



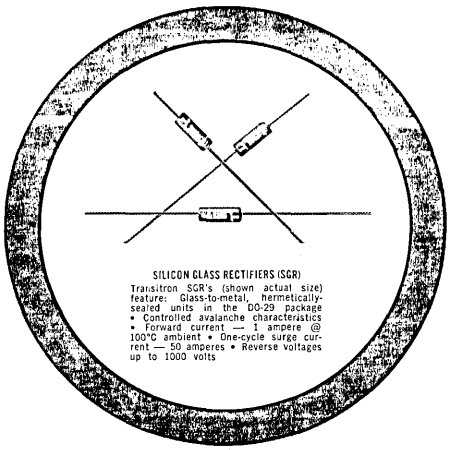
A BILLION TRANSITRON DIODES

(end-to-end they would circle the globe and go half around again)

ARE IN USE ALL OVER THE WORLD

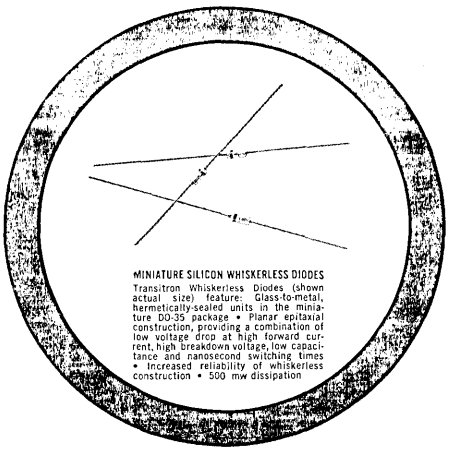
WHY?

Quality, price, performance, and the broadest selection in the industry. These features are now available in two new diode products: **Silicon Glass Rectifiers** and **Miniature Silicon Whiskerless Diodes.**



SILICON GLASS RECTIFIERS (SGR)

Transitron SGR's (shown actual size) feature: Glass-to-metal, hermetically-sealed units in the DO-29 package • Controlled avalanche characteristics • Forward current — 1 ampere @ 100°C ambient • One-cycle surge current — 50 amperes • Reverse voltages up to 1000 volts



MINIATURE SILICON WHISKERLESS DIODES

Transitron Whiskerless Diodes (shown actual size) feature: Glass-to-metal, hermetically-sealed units in the miniature DO-35 package • Planar epitaxial construction, providing a combination of low voltage drop at high forward current, high breakdown voltage, low capacitance and nanosecond switching times • Increased reliability of whiskerless construction • 500 mw dissipation

Transitron

TRANSITRON ELECTRONIC CORPORATION, 168 ALBION STREET, WAKEFIELD, MASSACHUSETTS 01880

CALL YOUR NEAREST TRANSITRON SALES ENGINEER — Baltimore: (301) 685-1070 • **Boston:** (617) 245-5640 • **Camden:** (609) ULysses 4-7082 • **Chicago:** (312) Village 8-5556 • **Dallas:** (214) FLeetwood 7-9448 • **Dayton:** (513) 224-9651 • **Detroit:** (313) 838-5884 • **Kansas City:** (913) ENdicott 2-6640 • **Los Angeles:** (213) MAdison 2-5551 • **Minneapolis:** (612) 927-7923 • **New York:** (914) 834-8000 • **Orlando:** (305) CHerry 1-4526 • **Phoenix:** (602) 277-3366 • **Poughkeepsie:** (914) 452-5250 • **Rochester:** (716) LU 6-0468 • **San Francisco:** (415) 961-1954 • **Seattle:** (206) MA 2-4115 • **Canada:** Toronto 18, (416) CLifford 9-5461

TRANSITRON INDUSTRIAL DISTRIBUTORS

Alabama, HUNTSVILLE
M G Electronics & Equipment Co., Inc., (205) 534-0608

Arizona, PHOENIX 85016
Kimball Electronics, Inc., (602) 264-4438

California, CULVER CITY 90230
Avnet Corporation, (213) 870-0111

GARDENA 90247
Bell Electronic Corp., (213) FAculty 1-5802

MENLO PARK 94025
Bell Electronic Corp., (415) DAvenport 3-9431

MOUNTAIN VIEW 94040
Avnet Corporation, (415) 961-7700

NORTH HOLLYWOOD 91601
Richey Electronics, Inc., (213) 877-2651

REDWOOD CITY 94063
Fortune Electronics Corp., (415) 365-4000

SAN DIEGO 92111
Avnet Corporation, (714) 279-1550

SAN DIEGO 92111
Bell Electronic Corp., (714) BR 8-4350

Florida, PALM BEACH GARDENS 33403
Industrial Electronics Associates, Inc. (305) 848-8686

Georgia, ATLANTA 30308
Specialty Distributing Co., Inc. (404) TRinity 3-2521

Hawaii, HONOLULU
Industrial Electronics, Inc., 506-095

Illinois, CHICAGO
Radio Distributing Co., Inc., (312) 379-2121

FRANKLIN PARK
Avnet Corporation, (312) 678-8160

SCHILLER PARK
Pace Electronic Supply (312) 678-6310

Indiana, SOUTH BEND 46624
Radio Distributing Co., Inc., (219) 287-2911

Iowa, CEDAR RAPIDS
Iowa Radio Supply Co., (319) EM 4-6154

Kansas, WICHITA 67201
Radio Supply Co., Inc., (316) AMherst 7-5214

Louisiana, NEW ORLEANS
Radio Parts, Inc., (504) 522-0217

Maryland, BALTIMORE 21211
Kann-Ellert Electronics, Inc. (301) TUxedo 9-4242

ROCKVILLE 20850
Pioneer Electric, Inc., (301) 427-3300

Massachusetts, BURLINGTON
Avnet Corporation, (617) 272-3060

CAMBRIDGE 02139
R & D Electronic Supply Co., Inc., (617) UN 4-0400

WATERTOWN
L. L. Schley Co., Inc., (617) 926-0235

Michigan, DETROIT
Pace Electronics, (313) 543-3850

Minnesota, MINNEAPOLIS
Northwest Electronic Inc., (612) 331-6350

ST. PAUL 55104
Radio Distributing Co., Inc., (612) 645-0631

Missouri, KANSAS CITY 64106
Burstein-Applebee Co., (816) BAltimore 1-1155

ST. LOUIS 63130
Ensco Distributing Corp., (314) PA 6-2233

New Jersey, CHERRY HILL
Valley Electronics, Inc. (609) NO 2-9337

New York, BINGHAMTON 13902
Federal Electronics, Inc., (607) Pioneer 8-8211

BUFFALO
Radio Equipment Corp., (716) 856-1415

BUFFALO 14202
Summit Distributors, Inc. (716) 884-3450

LONG ISLAND CITY 11106
H. L. Dalis, Inc., (212) EMpire 1-1100

NEW YORK 10013
Milo Electronics Corp., (212) BE 3-2980

WESTBURY, L.I.
Avnet Corp., (516) 333-8650

North Carolina, WINSTON-SALEM 27108
Kirkman Electronics, Inc., (919) 724-0541

Ohio, CINCINNATI
Hughes-Peters, Inc., (513) 381-7625

CLEVELAND 44115
Radio & Electronic Parts Corp., (216) UTah 1-6060

COLUMBUS 43211
Hughes-Peters, Inc., (614) 294-5351

DAYTON 45402
Stotts-Friedman Co., (513) 224-1111

Oklahoma, TULSA 74119
Radio, Inc., (918) LUther 7-9124

Pennsylvania, McKEESPORT
Barno Radio Co., Industrial Electronic Div., (412) 462-7575

PHILADELPHIA 19106
Radio Electric Service Co. of Pa., Inc., (215) WAlnut 5-6900

Texas, DALLAS 75207
Contact Electronics, Inc., (214) ME 1-9530

DALLAS
Solid State Electronics of Texas, (214) FL 2-2601

EL PASO
Mc Nicol, Inc., (915) 566-2936

HOUSTON 77019
Busacker Electronic Equip. Co., (713) JAckson 6-4661

Utah, SALT LAKE CITY 84104
Kimball Electronics, Inc., (801) 328-2075

Washington, SEATTLE 98121
Kierulff Electronics, (206) 725-1550

In Canada contact MONTREAL 9
E T R Supply Company, Ltd., (514) 735-2471

DON MILLS, ONTARIO
Western Components Supply Ltd., (416) 445-2340

VANCOUVER 9
L. A. Varah Ltd., (604) 736-6411

HLTTL INTEGRATED CIRCUITS — MILITARY & INDUSTRIAL

The Transitron philosophy in integrated circuits has resulted in the concentration of its production capability first on a family of digital monolithic circuits called High Level Transistor Logic (HLTTL). It is believed that the family of integrated circuits with the greatest appeal to circuit and system designers today and for the systems producer for the next several years is without question HLTTL. Therefore, Transitron has devoted much effort to the establishment of good manufacturing capability of such circuits. Transitron's concentration of effort on this family has resulted in an unprecedented number of different circuit functions and gates for the application of logic system designers; a strong improvement in the propagation delay, the radiation resistance and the output characteristic of the circuits; a new master slave flip-flop for single phase application; a willingness to alternate source other manufacturers' HLTTL functions and pin configurations; and finally a low cost set of HLTTL circuits for commercial application.

These High Level Logic functions are basic elements of a planar epitaxial high speed logic family characterized by very low propagation delay and a high capacitive driving capability. The output design of the circuits enables them to drive 300 pf with ease. Short circuit protection is also built into the output. These circuits maintain their outstanding characteristics over the temperature ranges of −55°C to +125°C (Military) or 0 to +75°C (Industrial).

MAXIMUM RATINGS (All Temperatures)

Maximum Supply Voltage (V_{CC})	8 Volts
Supply Voltage Operating	4.5 to 6.0 Volts
Supply Voltage, 1 Sec Surge	12 Volts
Maximum Voltage Applied to Any Gate Input	5.5 Volts
Storage Temperature	−65°C to +200°C
Operating Temperature	−55 to +125°C or 0 to 75°C
Minimum Fan Out to Similar Units (Standard Gates and Flip-Flops)	7-15
Minimum Clock Driver Fan Out	24 & 40
Maximum Lamp Driver Load Current	60 ma

TYPICAL CHARACTERISTICS (All Temperatures)

Logic "1" Output Voltage	> 3.5 Volts
Logic "0" Output Voltage	< .40 Volts
Noise Immunity	> 1.0 Volt
Propagation Delay	
	< 15 nsec (Standard Speed)
	< 10 nsec (High Speed)
Operating Frequency (Flip-Flops)	> 20 mc (Standard Speed)
	> 30 mc (High Speed)
Power Dissipation	
Gates (Per Gate)	15 mw
2 Phase Flip-Flop	30 mw
Charge Storage JK Flip-Flop	60 mw
Master Slave Flip-Flop	90 mw
Line and Lamp Drivers	30 mw

SERIES I Gates: tpd less than 18 n sec Flip-Flops: f greater than 20 mc

Circuit Description	F.O.	Temp.* Range	Transitron Type No.	Package
Single 8 input Nand/Nor Gate	15	M	TNG3011	
	15	I	TNG3012	1G-65
	7	M	TNG3013	1G-74
	7	I	TNG3014	
Single 8 input Nand/Nor Gate Expandable	15	M	TNG3051	
	15	I	TNG3052	1G-65
	7	M	TNG3053	1G-74
	7	I	TNG3054	
Dual 4 input Nand/Nor Gate	15	M	TNG3111	
	15	I	TNG3112	1G-65
	7	M	TNG3113	1G-74
	7	I	TNG3114	
Triple 3 input Nand/Nor Gate	15	M	TNG3311	
	15	I	TNG3312	1G-65
	7	M	TNG3313	1G-74
	7	I	TNG3314	
Quad 2 input Nand/Nor Gate	15	M	TNG3411	
	15	I	TNG3412	1G-65
	7	M	TNG3413	1G-74
	7	I	TNG3414	
Dual 4 And Expander	—	M	TNG3511	1G-65
	—	I	TNG3512	1G-74
Exclusive OR Gate, Expandable	15	M	TNG3211	
	15	I	TNG3212	1G-65
	7	M	TNG3213	1G-74
	7	I	TNG3214	
Exclusive OR Gate with Complement	15	M	TNG4611	
	15	I	TNG4612	1G-65
	7	M	TNG4613	1G-74
	7	I	TNG4614	
Dual Exclusive OR Gates	15	M	TNG4211	
	15	I	TNG4212	1G-65
	7	M	TNG4213	1G-74
	7	I	TNG4214	
Dual Exclusive OR Gate, Expandable	15	M	TNG4251	
	15	I	TNG4252	1G-65
	7	M	TNG4253	1G-74
	7	I	TNG4254	
Triple 3 input OR Gate, Expandable	15	M	TNG4315	
	15	I	TNG4316	1G-65
	7	M	TNG4317	1G-74
	7	I	TNG4318	
Quad 2 input OR Gate	15	M	TNG4411	
	15	I	TNG4412	1G-65
	7	M	TNG4413	1G-74
	7	I	TNG4414	
Quad 2 input OR Gate, Expandable	15	M	TNG4415	
	15	I	TNG4416	1G-65
	7	M	TNG4417	1G-74
	7	I	TNG4418	
Dual 4 input OR Expander	—	M	TNG4011	1G-65
	—	I	TNG4012	1G-74
Quad 2 input OR Expander	—	M	TNG4511	1G-65
	—	I	TNG4512	1G-74
Single 2 input Line Driver	40	M	TNG5125	
	40	I	TNG5126	1G-65
	24	M	TNG5127	1G-74
	24	I	TNG5128	
Single 2 input Lamp Driver	60 ma	M	TNG5325	1G-65
	60 ma	I	TNG5326	1G-74
Single 4 input Line Driver	40	M	TNG5121	
	40	I	TNG5122	1G-65
	24	M	TNG5123	1G-74
	24	I	TNG5124	
Single 4 input Lamp Driver	60 ma	M	TNG5321	1G-65
	60 ma	I	TNG5322	1G-74
Dual 2 input Line Driver	40	M	TNG5221	
	40	I	TNG5222	1G-65
	24	M	TNG5223	1G-74
	24	I	TNG5224	
Dual 2 input Lamp Driver	60 ma	M	TNG5421	1G-65
	60 ma	I	TNG5422	1G-74
Dual 4 input Line Driver	40	M	TNG5211	
	40	I	TNG5212	1G-65
	24	M	TNG5213	1G-74
	24	I	TNG5214	
Dual 4 input Lamp Driver	60 ma	M	TNG5411	1G-65
	60 ma	I	TNG5412	1G-74
Quad 2 input Line Driver	40	M	TNG5511	
	40	I	TNG5512	1G-65
	24	M	TNG5513	1G-74
	24	I	TNG5514	
Quad 2 input Lamp Driver	60 ma	M	TNG5611	1G-65
	60 ma	I	TNG5612	1G-74
Charge Storage JK Flip-Flop And Inputs	15	M	TFF3211	
	15	I	TFF3212	1G-65
	7	M	TFF3213	1G-74
	7	I	TFF3214	
Charge Storage JK Flip-Flop OR inputs	15	M	TFF3311	
	15	I	TFF3312	1G-65
	7	M	TFF3313	1G-74
	7	I	TFF3314	
Charge Storage JK Flip-Flop Enable OR inputs	15	M	TFF3411	
	15	I	TFF3412	1G-65
	7	M	TFF3413	1G-74
	7	I	TFF3414	
Dual Charge Storage JK Flip-Flop	7	M	TFF3273	1G-65
	7	I	TFF3274	1G-74
4 input General Purpose Master Slave Flip-Flop with Buffer	15	M	TFF3111	
	15	I	TFF3112	1G-65
	7	M	TFF3113	1G-74
	7	I	TFF3114	
2 Input General Purpose Master Slave Flip-Flop with Buffer	15	M	TFF3115	
	15	I	TFF3116	1G-65
	7	M	TFF3117	1G-74
	7	I	TFF3118	
4 input General Purpose Master Slave Flip-Flop without Buffer	15	M	TFF3121	
	15	I	TFF3122	1G-65
	7	M	TFF3123	1G-74
	7	I	TFF3124	
2 input General Purpose Master Slave Flip-Flop without Buffer	15	M	TFF3125	
	15	I	TFF3126	1G-65
	7	M	TFF3127	1G-74
	7	I	TFF3128	
3J-3K input Master Slave JK Flip-Flop	15	M	TFF3161	
	15	I	TFF3162	1G-65
	7	M	TFF3163	1G-74
	7	I	TFF3164	
2J-2K input Master Slave JK Flip-Flop	15	M	TFF3165	
	15	I	TFF3166	1G-65
	7	M	TFF3167	1G-74
	7	I	TFF3168	
Dual Master Slave JK Flip-Flop	7	M	TFF3173	1G-65
	7	I	TFF3174	1G-74
Dual 3J-3K input Master Slave JK Flip-Flop	15	M	TFF3181	
	15	I	TFF3182	1G-68
	7	M	TFF3183	
	7	I	TFF3184	
"D" Type Flip-Flop	15	M	TFF3511	
	15	I	TFF3512	1G-65
	7	M	TFF3513	1G-74
	7	I	TFF3514	
Dual 4 input And Gate with Transient Control	15	M	TNG6221	
	15	I	TNG6222	1G-65
	7	M	TNG6223	1G-74
	7	I	TNG6224	
Expandable Dual 4 input And Gate	15	M	TNG6251	
	15	I	TNG6252	1G-65
	7	M	TNG6253	1G-74
	7	I	TNG6254	
Expandable Dual 3 input And Gate with Transient Control	15	M	TNG6261	
	15	I	TNG6262	1G-65
	7	M	TNG6263	1G-74
	7	I	TNG6264	
Expandable 4 input Driver Gate with Transient Control	40	M	TNG6521	
	40	I	TNG6522	1G-65
	24	M	TNG6523	1G-74
	24	I	TNG6524	
Expandable Dual 2+2 input OR Gate	15	M	TNG7251	
	15	I	TNG7252	1G-65
	7	M	TNG7253	1G-74
	7	I	TNG7254	
8 + 3 input Expander Gates	—	M	TNG7711	1G-65
	—	I	TNG7712	1G-74
4 + 4 + 3 input Expander Gate	—	M	TNG7811	1G-65
	—	I	TNG7812	1G-74
Dual 2 + 3 input Expander Gate	—	M	TNG7911	1G-65
	—	I	TNG7912	1G-74

*Notes: M = —55 to +125°C; I = 75°C

SERIES II

Gates: tpd less than 10 n sec Flip-Flops: f greater than 30 mc

Circuit Description	F.O.	Temp* Range	Transitron Type No.	Package
Single 8 input Nand/Nor Gate	10	M	TNG3041	
	10	I	TNG3042	1G-65
	5	M	TNG3043	1G-74
	5	I	TNG3044	
Dual 4 input Nand/Nor Gate	10	M	TNG3141	
	10	I	TNG3141	1G-65
	5	M	TNG3143	1G-74
	5	I	TNG3144	
Triple 3 input Nand/Nor Gate	10	M	TNG3341	
	10	I	TNG3342	1G-65
	5	M	TNG3343	1G-74
	5	I	TNG3344	
Quad 2 input Nand/Nor Gate	10	M	TNG3441	
	10	I	TNG3442	1G-65
	5	M	TNG3443	1G-74
	5	I	TNG3444	
Exclusive OR Gate	10	M	TNG3241	
	10	I	TNG3242	1G-65
	5	M	TNG3243	1G-74
	5	I	TNG3244	
Exclusive OR Gate, Expandable	10	M	TNG3281	
	10	I	TNG3282	1G-65
	5	M	TNG3283	1G-74
	5	I	TNG3284	
Dual Exclusive OR Gate	10	M	TNG4241	
	10	I	TNG4242	1G-65
	5	M	TNG4243	1G-74
	5	I	TNG4244	
Quad 2 input OR GATE, Expandable	10	M	TNG4445	
	10	I	TNG4446	1G-65
	5	M	TNG4447	1G-74
	5	I	TNG4448	
Dual 4 input OR Expander	—	M	TNG4041	1G-65
	—	I	TNG4042	1G-74
Quad 2 input OR Expander	—	M	TNG4541	1G-65
	—	I	TNG4542	1G-74
Charge Storage JK Flip-Flop And Inputs	10	M	TFF3241	
	10	I	TFF3242	1G-65
	5	M	TFF3243	1G-74
	5	I	TFF3244	
Charge Storage JK Flip-Flop OR Inputs	10	M	TFF3341	
	10	I	TFF3342	1G-65
	5	M	TFF3343	1G-74
	5	I	TFF3344	
Charge Storage JK Flip-Flop Enable OR Inputs	10	M	TFF3441	
	10	I	TFF3442	1G-65
	5	M	TFF3443	1G-74
	5	I	TFF3444	

SERIES III

Circuit Description	F.O.	Temp.* Range	Transitron Type No.	Package
16 Bit Memory Cell	40 ma	I	TMC3162	
	20 ma	M	TMC3163	1G-65
	20 ma	I	TMC3164	1G-74

*Notes: M = —55 to +125°C; I = 75°C

SILICON PLANAR PLASTIC-PACKAGED TRANSISTORS

TYPE	POLARITY	V_{CBO} (volts)	V_{CEO} (volts)	h_{FE} MIN.-MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (MA)	I_B (MA)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	f_T (mc)	Cob (pf)	
2N3563	NPN	30	12	20 200	8	10							600	1.7	UHF Amplifier
2N3565	NPN	30	25	150 600	1	10							40	4	low noise amplifier
SPT3605	NPN	18	14	30	10	1	.25	.85	10	1	.5	18	300	6	logic
SPT3606	NPN	18	14	30	10	1	.25	.85	10	1	.5	18	300	6	logic
SPT3607	NPN	18	14	30	10	1	.25	.85	10	1	.5	18	300	6	logic
SPT3638	PNP	25	25	20	300	2	1.0	2.0	300	30			100	20	general purpose
SPT3707	NPN	30	30	100 400	.1	5	1.0	1.0	10	.5	.1	20			low noise amplifier
SPT3708	NPN	30	30	45 660	1	5	1.0	1.0	1	5	.1	20			low noise amplifier
SPT3709	NPN	30	30	45 165	1	5	1.0	1.0	1	5	.1	20			low noise amplifier
SPT3710	NPN	30	30	90 333	1	5	1.0	1.0	1	5	.1	20			low noise amplifier
SPT3711	NPN	30	30	180 660	1	5	1.0	1.0	1	5	.1	20			low noise amplifier
2N4121	PNP	40	40	70 220	10	1	.14	.9	10	1	10	40	400	4.5	logic
2N4122	PNP	40	40	150 300	10	1	.14	.9	10	1	10	40	400	4.5	logic
2N4140	NPN	60	30	40 120	150	10	.4	1.3	150	15	.05	40	250	8	general purpose
2N4141	NPN	60	30	100 300	150	10	.4	1.3	150	15	.05	40	250	8	general purpose
2N4142	PNP	60	40	40 120	150	10	.4	1.3	150	15	.05	30	250	8	general purpose
2N4143	PNP	60	40	100 300	150	10	.4	1.3	150	15	.05	30	250	8	general purpose
2N4274	NPN	30	12	35 120	10	1	.2	.85	10	1	.4	20	400	4	logic
2N4275	NPN	40	15	35 120	10	1	.2	.85	10	1	.4	20	400	4	logic
SPT4288	PNP	30	25	150 600	1	5	.35	.8	1	0.1	.05	25	40	8	low noise amplifier
SPT4289	PNP	60	45	150 600	1	5	.35	.8	1	0.1	.01	45	40	8	low noise amplifier
SPT80-102	NPN	40	25	20 100	150	10	1.0	1.3	150	15	.05	25	150	10	general purpose
SPT80-103	NPN	30	20	40 120	150	10	1.0	1.3	150	15	.05	25	150	10	general purpose
SPT80-104	NPN	30	20	100 300	150	10	1.0	1.3	150	15	.05	25	150	10	general purpose

SILICON PLANAR TRANSISTORS — SMALL SIGNAL

TYPE	POLARITY	POWER DISSIPATION (mW)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	V_{CE} (volts) / I_C (MA)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (MA) / I_B (MA)	f_T (mc)	Cob (pf)	NOISE FIGURE (db)	I_{CBO} @ 25°C (μA) / V_{CB} (volts)	I_{CBO} @ 150°C (μA) / V_{CB} (volts)	CASE STYLE
2N726	PNP	300	25	20	15 45	10 1	.6	1	1 10	140	5	—	1 25	25 25	To-18
2N727	PNP	300	25	20	30 120	10 1	.6	1	1 10	140	5	—	1 25	25 25	To-18
2N734	NPN	500	80	60	15 50	5 5	1	1.5	2 10	30	10	—	1 40	— —	To-18
2N735	NPN	500	80	60	30 100	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-18
2N736	NPN	500	80	60	60 200	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-18
2N738	NPN	500	125	80	15 50	5 5	1	1.5	2 10	30	10	—	1 40	— —	To-18
2N739	NPN	500	125	80	30 100	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-18
2N740	NPN	500	125	80	60 200	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-18
2N754	NPN	300	60	60	20 80	5 10	0.8	—	2 10	35	8	—	1 60	50 60	To-18
2N755	NPN	300	100	80	20 80	5 10	0.8	—	2 10	35	8	—	1 100	50 100	To-18
2N756	NPN	500	45	45	(A) 12 22	1 5	1	1.1	1 10	50	8	—	0.2 30	10 30	To-18
2N756A	NPN	500	60	60	(A) 12 22	1 5	1	1.1	1 10	50	8	—	0.1 30	10 30	To-18
2N757	NPN	500	45	45	(A) 18 40	1 5	1	1.1	1 10	50	8	—	0.2 30	10 30	To-18
2N757A	NPN	500	60	60	(A) 18 40	1 5	1	1.1	1 10	50	8	—	0.1 30	10 30	To-18
2N758	NPN	500	45	45	(A) 18 90	1 5	1	1.1	1 10	50	8	—	0.2 30	10 30	To-18
2N758A	NPN	500	60	60	(A) 18 90	1 5	1	1.1	1 10	50	8	—	0.1 30	10 30	To-18
2N759	NPN	500	45	45	(A) 36 90	1 5	1	1.1	1 10	50	8	—	0.2 30	10 30	To-18
2N759A	NPN	500	60	60	(A) 36 90	1 5	1	1.1	1 10	50	8	—	0.1 30	10 30	To-18
2N760	NPN	500	45	45	(A) 76 333	1 5	1	1.1	1 10	50	8	—	0.2 30	10 30	To-18
2N760A	NPN	500	60	60	(A) 76 333	1 5	1	1.1	1 10	50	8	—	0.1 30	10 30	To-18
2N839	NPN	300	45	45	15 50	10 5	2	—	2.2 10	30	15	15	1 45	50 45	To-18
2N840	NPN	300	45	45	30 100	10 5	2	—	2.2 10	30	15	15	1 45	50 45	To-18
2N841	NPN	300	45	45	60 400	10 5	2	—	2.2 10	40	15	15	1 45	50 45	To-18
2N842	NPN	300	45	45	20 55	10 5	1.2	1	2.2 10	30	10	—	1 45	50 45	To-18
2N843	NPN	300	45	—	45 150	10 5	1.2	—	2.2 10	40	10	—			
2N844	NPN	300	60	60	40 120	5 10	0.8	—	2.2 10	50	10	15	1 60	50 60	To-18
2N845	NPN	300	100	80	40 120	5 10	0.8	—	2.2 10	50	10	—	1 80	50 80	To-18
2N869	PNP	360	25	18	20 60	10 5	1	1	1 10	160	9	—	.01 25	10 25	To-18
2N929	NPN	300	45	45	40 120	0.01 5	1.0	1.0	0.5 10	30	8	4	0.01 45	— —	To-18
2N929A	NPN	500	60	45	40 120	0.01 5	0.5	0.9	0.5 10	45	8	4	0.002 45	2 45	To-18
2N930	NPN	300	45	45	100 300	0.01 5	1	1	0.5 10	30	8	3	0.01 45	— —	To-18
2N930A	NPN	500	60	45	100 300	0.01 5	0.5	0.9	0.5 10	45	8	3	.002 45	2 45	To-18
2N957	NPN	250	40	20	45	10 5	1.5	1.2	1 10	200	6	—	.1 20	100 20	To-18
2N1564	NPN	600	80	60	15 50	5 5	1	1.5	2 10	30	10	—	1 40	— —	To-5
2N1565	NPN	600	80	60	30 100	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-5
2N1566	NPN	600	80	60	60 200	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-5
2N1572	NPN	600	125	80	15 50	5 5	1	1.5	2 10	30	10	—	1 40	— —	To-5
2N1573	NPN	600	125	80	30 100	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-5
2N1574	NPN	600	125	80	60 200	5 5	1	1.5	2 10	60	10	—	1 40	— —	To-5
2N2427	NPN	500	40	40	20 60	0.01 3				50	8	—	0.01 20	10 20	To-18
2N2483	NPN	360	60	60	40 120	0.01 5	0.35	—	0.1 1	60	6	3	0.01 45	10 45	To-18
2N2484	NPN	360	60	60	100 500	0.01 5	0.35	—	0.1 1	60	6	2	0.01 45	10 45	To-18
2N2509	NPN	360	125	80	25 —	0.01 5	1	0.9	0.5 5	45	6	7	0.005 100	10 100	To-18
2N2510	NPN	360	100	65	75 —	0.01 5	1	0.9	0.5 5	45	6	4	0.005 80	10 80	To-18
2N2511	NPN	360	80	50	80 —	0.001 5	1	0.9	0.5 5	45	6	4	0.005 60	10 60	To-18
2N2586	NPN	300	60	45	120 360	0.01 5	0.5	0.9	0.5 10	60	7	2	0.02 45	— —	To-18
2N2590	PNP	400	100	60	25	5 5	.4	.9	1 10	50	15	—	.025 80	25 80	To-46
2N2591	PNP	400	100	60	50	5 5	.4	.9	1 10	70	15	—	.025 80	25 80	To-46
2N2592	PNP	400	100	60	100	5 5	.4	.9	1 10	90	15	—	.025 80	25 80	To-46
2N2593	PNP	400	100	60	150	5 5	.4	.9	1 10	110	15	—	.025 80	25 80	To-46
2N2595	PNP	400	80	60	15 60	5 5	.5	.95	2 10	30	6	—	.025 50	25 50	To-46
2N2596	PNP	400	80	60	30 120	5 5	.5	.95	2 10	40	6	—	.025 50	25 50	To-46
2N2597	PNP	400	80	60	60 240	5 5	.5	.95	2 10	60	6	—	.025 50	25 50	To-46
2N2598	PNP	400	125	80	15 60	5 5	.5	.95	2 10	30	6	—	.025 80	25 80	To-46
2N2599	PNP	400	125	80	30 120	5 5	.5	.95	2 10	40	6	—	.025 80	25 80	To-46
2N2600	PNP	400	125	80	60 240	5 5	.5	.95	2 10	60	6	—	.025 80	25 80	To-46
2N2600A	PNP	400	125	100	60 240	5 5	.5	.95	2 10	60	6	—	.025 80	25 80	To-46
2N2601	PNP	400	60	60	12.5	1 5	.5	.9	1 10	50	6	—	.025 45	25 45	To-46
2N2602	PNP	400	60	60	25	1 5	.5	.9	1 10	50	6	—	.025 45	25 45	To-46
2N2603	PNP	400	60	60	50	1 5	.5	.9	1 10	50	6	—	.025 45	25 45	To-46

Notes: (A) h_{fe} @ f = 1 kc

SILICON PLANAR TRANSISTORS — SMALL SIGNAL . . . cont'd

TYPE	POLARITY	POWER DISSIPATION (mW)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	V_{CE} (volts) / I_C (MA)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (MA) / I_B (MA)	f_T (mc)	Cob (pf)	NOISE FIGURE (db)	I_{CBO} @ 25°C (μA) / V_{CB} (volts)	I_{CBO} @ 150°C (μA) / V_{CB} (volts)	CASE STYLE
2N2604	PNP	400	60	45	40 120	0.010 5	0.5 0.9		0.5 10	30	6	4	0.010 45	— —	To-46
2N2605	PNP	400	60	45	100 300	0.010 5	0.5 0.9		0.5 10	30	6	3	0.010 45	— —	To-46
2N2605A	PNP	400	60	45	150 300	.0- 5	.25 .9		.5 10	40	6	—	.002 45	10 45	To-46
2N2861	PNP	300	25	20	50 150	10 5	.2 —		1 10	45	6	3	.01 25	10 25	To-18
2N2862	PNP	300	25	20	25 150	10 5	.2 —		1 10	60	6	4	.01 25	10 25	To-18
2N3077	NPN	360	80	60	80 —	0.001 5	0.35 —		0.1 1	60	6	2	0.01 45	— —	To-18
2N3078	NPN	360	80	60	25 —	0.001 5	0.35 —		0.1 1	60	6	3	0.01 45	— —	To-18
2N3117	NPN	360	60	60	100 —	0.001 5	0.35 —		0.1 1	60	4.5	1	0.01 45	— —	To-18
2N3494	PNP	600	80	80	40	10 10	.3 .9		1 10	200	7	—	.1 50	— —	To-5
2N3495	PNP	600	120	120	40	10 10	.35 .9		1 10	150	6	—	.1 90	— —	To-5
2N3496	PNP	400	80	80	40	10 10	.3 .9		1 10	200	7	—	.1 50	— —	To-18
2N3497	PNP	400	120	120	40	10 10	.35 .9		1 10	150	6	—	.1 90	— —	To-18
2N3579	PNP	400	60	60	30 120	1 5	.5 .9		2 5	80	6	4	.02 30	— —	To-46
2N3580	PNP	400	60	60	60 240	1 5	.5 .9		2 5	80	6	4	.02 30	— —	To-46
2N3581	PNP	400	60	60	60	1 5	.5 .9		2 10	30	6	3	.02 30	— —	To-46
2N3582	PNP	400	60	60	120	1 5	.5 .9		2 10	30	6	3	.02 30	— —	To-46
2N4269	NPN	360	200	140	40 200	10 10	1 1.3		1 10	—	5	—	1 150	— —	To-18
2N4270	NPN	400	200	140	40 200	10 10	1 1.3		1 10	—	5	—	1 150	— —	To-5

NPN SILICON PLANAR EPITAXIAL LOGIC TRANSISTORS

TYPE	POWER DISSIPATION (mW)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	V_{CE} (volts) / I_C (MA)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (MA) / I_B (MA)	f_T (mc)	Cob (pf)	t_S (nsec)	t_{ON} (nsec)	t_{OFF} (nsec)	I_{CBO} @ 25°C (μA) / V_{CB} (volts)	I_{CBO} @ 150°C (μA) / V_{CB} (volts)	CASE STYLE
2N706	300	25	20	20 —	10 1	0.6 0.9		1 10	400	6	60	—	—	0.5 15	30 15	To-18
2N706A	300	25	20	20 60	10 1	0.6 0.9		1 10	400	5	25	40	75	0.5 15	30 15	To-18
2N706B	300	25	20	(A) 20 60	10 1	0.4 0.9		1 10	400	5	25	40	75	0.5 15	30 15	To-18
2N708	360	40	15	30 120	10 1	0.4 0.8		1 10	400	6	25	40	70	.25 20	15 20	To-18
2N709	300	15	6	20 120	10 0.5	0.3 0.85		0.15 3	600	3	6	15	15	.05 5	5 5	To-18
2N709A	300	15	6	30 90	10 0.5	0.3 0.85		0.15 3	900	3	6	15	15	.005 5	5 5	To-18
2N728	(C)300	15	15	20 200	10 6	0.7 1		1 10	100	12	—	—	—	5 15	60 15	To-18
2N729	(C)300	30	30	20 200	10 6	0.7 1		1 10	100	12	—	—	—	5 30	60 30	To-18
2N743	300	20	12	20 60	10 0.35	0.35 1.5		1 10	400	5	14	12	24	1 20	— —	To-18
2N744	300	20	12	40 120	10 0.35	0.35 1.5		1 10	400	5	18	12	24	1 20	— —	To-18
2N753	300	25	15	40 120	10 1	0.6 0.9		1 10	200	5	35	40	75	0.5 15	30 15	To-18
2N834	300	40	30	10 —	10 1	.25 0.9		1 10	350	4	25	35	75	.5 20	30 20	To-18
2N835	300	25	20	20 —	10 1	0.3 0.9		1 10	300	4	35	20	35	0.5 20	30 20	To-18
2N914	360	40	15	30 120	10 1	0.7 0.8		20 200	60	6	20	40	40	.025 20	15 20	To-18
2N2368	360	40	15	20 60	10 1	0.25 0.85		1 10	400	4	10	12	15	0.4 20	30 20	To-18
2N2369	360	40	15	40 120	10 1	0.25 0.85		1 10	500	4	13	12	18	0.4 20	30 20	To-18
2N2369A	360	40	15	40 120	10 1	0.25 1.5		3 30	500	4	13	12	18	— —	30 20	To-18
2N2475	300	15	6	30 150	20 0.4	0.4 1		0.66 20	600	3	6	20	15	0.05 5	5 5	To-18
2N2501	360	40	20	50 150	10 1	0.2 0.85		1 10	350	4	15	—	—	— —	— —	To-18
2N2784	300	15	6	40 120	10 0.5	0.26 0.85		0.15 3	1000	3	5	9	9	0.005 5	5 5	To-18
2N3010	300	15	6	25 125	10 0.4	0.25 0.85		0.1 1	600	3	6	12	12	— —	— —	To-18
2N3633	300	15	6	50 150	10 0.5	0.21 0.85		0.15 3	1300	2.5	5	9	9	0.005 5	5 5	To-18
2N3862	(B)1200	50	20	50 150	10 1	0.25 0.85		1 10	600	4	10	16	18	0.05 20	30 20	To-18

PNP SILICON PLANAR EPITAXIAL LOGIC TRANSISTORS

2N2411	300	25	20	20 60	10 .5	.2 .9		1 10	200	5	90	25	100	.01 25	— —	To-18
2N2412	300	25	20	40 120	10 .5	.2 .9		1 10	200	5	90	25	100	.01 25	— —	To-18
2N2894	360	12	12	30 —	10 0.3	.15 .98		1 10	400	6	—	60	90	.08 6	— —	To-18
2N2894A	360	12	12	30 —	10 0.3	.13 .92		1 10	800	4.5	20	25	20	.05 10	— —	To-18
2N3011	360	30	12	30 —	10 0.35				40					.01 5	— —	To-18
2N3012	360	12	12	25 —	10 0.3	.15 .98		1 10	400	6	—	60	75	.08 6	— —	To-18
2N3209	360	20	20	25 —	10 0.3	.15 .98		1 10	400	5	—	60	90	.08 10	— —	To-18
2N3248	360	15	12	80 150	10 1	.125 .90		1 10	250	8	60	15	20	.05 10	— —	To-18
2N3249	360	15	12	100 300	10 1	.125 .90		1 10	300	8	60	15	20	.05 10	— —	To-18
2N3250	360	50	40	50 .50	10 1	.25 .90		1 10	250	6	175	35	50	.02 40	— —	To-18
2N3250A	360	60	60	50 150	10 1	.25 .90		1 10	250	6	175	35	50	.02 40	— —	To-18
2N3251	360	50	40	100 300	10 1	.25 .90		1 10	300	6	200	35	50	.02 40	— —	To-18
2N3251A	360	60	60	100 300	10 1	.25 .90		1 10	300	6	200	35	50	.02 40	— —	To-18

Notes: (A) h_{fe} @ f = 1 kc (B) P.D. @ 25°C case (C) P.D. @ 100°C Amb.

SILICON PLANAR GENERAL PURPOSE TRANSISTORS

TYPE	POLARITY	POWER DISSIPATION (watts)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.		V_{CE} (volts) / I_C (MA)		$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	I_{CBO} @ 150°C (μA)	V_{CB} (volts)	CASE STYLE
2N698	NPN	.600	60	40	20	60	150	10	1.5	1.3	15	150	80	35	1	30	100	30	To-5
2N697	NPN	.600	60	40	40	120	150	10	1.5	1.3	15	150	100	35	1	30	100	30	To-5
2N698	NPN	.800	120	60	20	60	150	10	5.0	1.3	15	150	60	20	0.005	75	15	75	To-5
2N699	NPN	.800	120	80	40	120	150	10	5.0	1.3	15	150	60	20	2	60	—	—	To-5
2N717	NPN	.400	60	40	20	60	150	10	1.5	1.3	15	150	80	20	1	30	100	30	To-18
2N718	NPN	.400	60	40	40	120	150	10	1.5	1.3	15	150	90	20	1	30	100	30	To-18
2N718A	NPN	.500	75	32	40	120	150	10	1.5	1.3	15	150	60	25	0.01	60	10	60	To-18
2N719	NPN	.400	120	80	20	60	150	10	5	1.3	15	150	40	20	2	60	200	60	To-18
2N720	NPN	.400	120	80	40	120	150	10	5	1.3	15	150	50	20	2	60	200	60	To-18
2N720A	NPN	.500	120	80	40	120	150	10	5	1.3	15	150	50	15	0.01	90	15	90	To-18
2N730	NPN	.500	60	40	20	60	150	10	1.5	1.3	15	150	40	15	1	30	100	30	To-18
2N731	NPN	.500	60	40	40	120	150	10	1.5	1.3	15	150	50	15	1	30	100	30	To-18
2N870	NPN	.500	100	60	40	120	150	10	5	1.3	15	150	50	15	0.01	75	15	75	To-18
2N871	NPN	.500	100	60	—	—	—	—	5	1.3	15	150	60	15	0.01	75	15	75	To-18
2N909	NPN	(A) 1.5	60	—	100	350	50	10	.5	.9	5	50	50	35	1	30	100	30	To-18
2N910	NPN	.500	100	60	75	—	10	10	1.2	0.9	5	50	60	15	0.025	75	15	75	To-18
2N911	NPN	(A) 1.8	100	60	35	70	10	10	0.4	—	1	10	60	15	0.025	75	15	75	To-18
2N912	NPN	(A) 1.8	100	60	15	MIN	10	10	.4	.8	1	10	40	15	.025	75	15	75	To-18
2N956	NPN	.500	75	50	100	300	150	10	1.5	1.3	15	150	70	15	0.01	60	10	60	To-18
2N995	PNP	.360	20	15	35	140	20	1	0.2	0.95	2	20	100	10	0.005	15	25	15	To-18
2N996	PNP	.360	15	12	35	—	20	1	0.3	0.95	2	20	100	10	0.005	10	15	10	To-18
2N1252	NPN	(A) 2	30	—	15	45	150	10	1.5	1.3	15	150	40	45	10	600	20	20	To-5
2N1253	NPN	(A) 2	30	—	30	90	150	10	1.5	1.3	15	150	50	45	10	600	20	20	To-5
2N1254	PNP	0.275	30	30	25	50	10	1	0.3	—	2	10	—	10	0.2	—	25	—	To-5
2N1255	PNP	0.275	30	30	40	80	10	1	0.3	—	2	10	—	10	0.2	—	25	—	To-5
2N1256	PNP	0.275	40	40	25	50	10	1	0.3	—	2	10	—	10	0.2	—	35	—	To-5
2N1257	PNP	0.275	40	40	40	80	10	1	0.3	—	2	10	—	10	0.2	—	35	—	To-5
2N1258	PNP	0.275	30	30	75	150	10	1	0.6	—	2	10	—	10	0.2	—	25	—	To-5
2N1259	PNP	0.275	50	50	25	100	10	1	0.3	—	2	10	—	10	0.2	—	40	—	To-5
2N1420	NPN	(A) 2	60	—	100	300	150	10	—	—	—	—	50	35	1	30	100	30	To-5
2N1613	NPN	.800	60	50	40	120	150	10	1.5	1.3	15	150	60	25	0.010	60	10	60	To-5
2N1711	NPN	.800	75	50	100	300	150	10	1.5	1.3	15	150	70	25	0.010	60	10	60	To-5
2N1889	NPN	.5	100	60	40	120	150	10	1.5	1.3	15	150	40	15					
2N1890	NPN	.800	100	80	100	300	150	10	5	—	15	150	60	15	0.01	75	15	75	To-5
2N1893	NPN	.800	120	80	40	120	150	10	5	1.3	15	150	50	15	0.01	90	15	90	To-5
2N1958	NPN	(A) 2	60	—	20	60	150	10	.45	1.3	15	150	100	14	.5	30	300	30	To-5
2N1958A	NPN	(A) 2	60	—	20	60	150	10	.45	1.3	15	150	100	14	.2	30	200	30	To-5
2N1959	NPN	(A) 2	60	—	40	120	150	10	.45	1.3	15	150	100	14	.5	30	300	30	To-5
2N1959A	NPN	(A) 2	60	—	40	120	150	10	.45	1.3	15	150	100	14	.2	30	200	30	To-5
2N1972	NPN	.600	60	30	110	350	50	10	0.5	0.9	1	10	50	35	1	30	100	30	To-5
2N1973	NPN	.800	100	80	75	—	10	1	1.2	0.9	5	50	60	15	0.025	75	15	75	To-5
2N1974	NPN	(A) 1.8	100	60	35	70	10	10	0.4	—	1	10	60	15	0.025	75	15	75	To-18
2N1975	NPN	.800	100	60	15	—	10	10	1.2	0.9	5	50	40	15	0.025	75	15	75	To-5
2N1983	NPN	.600	50	25	(C) 70	210	1	5	—	—	—	—	40	45	5	30	200	30	To-5
2N1984	NPN	.600	50	25	(C) 35	100	1	5	—	—	—	—	40	45	5	30	200	30	To-5
2N1985	NPN	.600	50	25	(C) 15	45	1	5	—	—	—	—	40	45	5	30	200	30	To-5
2N1986	NPN	.600	40	25	60	240	150	10	1.5	1.3	15	150	40	35	5	30	200	30	To-5
2N1987	NPN	.600	40	25	35	120	30	10	2	1	3	30	40	35	5	30	200	30	To-5
2N1988	NPN	.600	100	45	20	80	150	10	1.5	1.3	15	150	40	20	5	50	400	50	To-5
2N1989	NPN	0.6	100	45	20	60	30	10	2	1	3	30	40	20	5	50	400	50	To-5
2N1990	NPN	0.6	100	45	20	—	30	10	0.5	1	0.2	2	40	15	—	—	—	—	To-5
2N2017	NPN	1.0	60	60	35	—	10	10	—	—	—	—	—	—	10	30	250	30	To-5
2N2102	NPN	(A) 5	120	65	40	120	150	10	0.5	1.1	15	150	60	15	0.002	60	2	60	To-5
2N2196	NPN	(A) 15	80	—	30	90	200	10	2	—	40	200	15	50	75	80	—	—	To-5/c
2N2197	NPN	(A) 15	80	—	75	200	200	10	2	—	10	200	15	50	75	80	—	—	To-5/c
2N2217	NPN	(A) 3.0	60	30	20	60	150	10	0.4	1.3	15	150	250	8	0.01	50	10	50	To-5
2N2218	NPN	(A) 3.0	60	30	40	120	150	10	0.4	1.3	15	150	250	8	0.01	50	10	50	To-5
2N2218A	NPN	(A) 3.0	75	40	40	120	150	10	0.3	1.2	15	150	250	8	0.01	60	10	60	To-5
2N2219	NPN	(A) 3.0	60	30	100	300	150	10	0.4	1.3	15	150	250	8	0.01	50	10	50	To-5
2N2219A	NPN	(A) 3.0	75	40	100	300	150	10	0.3	1.2	15	150	250	8	0.01	60	10	60	To-5

Notes: (A) P.D. @ 25°C case (C) h @ f = 1 kc

SILICON PLANAR GENERAL PURPOSE TRANSISTORS . . . cont'd

TYPE	POLARITY	POWER DISSIPATION (watts)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	I_{CBO} @ 150°C (μA)	V_{CB} (volts)	CASE STYLE
2N2220	NPN	(A) 1.8	60	30	20 60	150	10	0.4 1.3		15 150		250	8	0.01	50	10	50	To-18
2N2221	NPN	(A) 1.8	60	30	40 120	150	10	0.4 1.3		15 150		250	8	0.01	50	10	50	To-18
2N2221A	NPN	(A) 1.8	75	40	40 120	150	10	0.3 1.2		15 150		250	8	0.01	60	10	60	To-18
2N2222	NPN	(A) 1.8	60	30	100 300	150	10	0.4 1.3		15 150		250	8	0.01	50	10	50	To-18
2N2222A	NPN	(A) 1.8	75	40	100 300	150	10	0.3 1.2		15 150		250	8	0.01	60	10	60	To-18
2N2243	NPN	(A) 2.3	120	80	40 120	150	10	.35 1.3		15 150		50	15	10	60	15	60	To-5
2N2243A	NPN	(A) 2.3	120	80	40 120	150	10	.25 1.3		15 150		50	15	10	60	15	60	To-5
2N2270	NPN	(A) 5	60	45	50 200	150	10	0.9 1.2		15 150		100	15	0.05	60	50	60	To-5
2N2297	NPN	(A) 5	80	35	40 120	150	10	1 2		100 1000		60	12	0.01	60	10	60	To-5
2N2410	NPN	(A) 3	60	30	30 120	150	10	.45 1.2		15 150		300	9	—	—	—	—	To-5
2N2537	NPN	(A) 3	60	30	50 150	150	10	.45 1.3		15 150		250	8	.25	40	200	40	To-5
2N2538	NPN	(A) 3	60	30	100 300	150	10	.45 1.3		15 150		250	8	.25	40	200	40	To-5
2N2539	NPN	(A) 1.8	60	30	50 150	150	10	.45 1.3		15 150		250	8	.25	40	200	40	To-18
2N2540	NPN	(A) 1.8	60	30	100 300	150	10	.45 1.3		15 150		250	8	.25	40	200	40	To-18
2N2594	NPN	(A) 5	80	80	50 150	100	5	1 2		20 200		40	20	0.1	60	50	60	To-5
2N2695	PNP	(A) 2.0	25	—	30 130	50	1	— —		— —		100	20	0.025	10	5	10	To-46
2N2696	PNP	(A) 1.5	25	—	30 130	50	1	— —		— —		100	20	0.025	10	5	10	To-18
2N2726	NPN	(A) 5	200	180	30 90	200	10	2 —		40 200		5	—	1	100	100	100	To-5
2N2727	NPN	(A) 5	200	180	75 150	200	10	2 —		40 200		5	—	1	100	100	100	To-5
2N2904	PNP	0.6	60	40	40 120	150	10	0.4 1.3		15 150		200	8	0.02	50	20	50	To-5
2N2904A	PNP	0.6	60	60	40 120	150	10	0.4 1.3		15 150		200	8	0.01	50	10	50	To-5
2N2905	PNP	0.6	60	40	100 300	150	10	0.4 1.3		15 150		200	8	0.02	50	20	50	To-5
2N2905A	PNP	.600	60	60	100 300	150	10	0.4 1.3		15 150		200	8	0.01	50	10	50	To-5
2N2906	PNP	.400	60	40	40 120	150	10	0.4 1.3		15 150		200	8	0.02	50	20	50	To-18
2N2906A	PNP	.400	60	60	40 120	150	10	0.4 1.3		15 150		200	8	0.01	50	10	50	To-18
2N2907	PNP	.400	60	40	100 300	150	10	0.4 1.3		15 150		200	8	0.02	50	20	50	To-18
2N2907A	PNP	.400	60	60	100 300	150	10	0.4 1.3		15 150		200	8	0.01	50	10	50	To-18
2N3019	NPN	(A) 5	140	80	100 300	150	10	0.2 1.1		15 150		100	12	0.01	90	10	90	To-5
2N3020	NPN	(A) 5	140	80	40 120	150	10	0.2 1.1		15 150		100	12	0.01	90	10	90	To-5
2N3053	NPN	(A) 5	60	40	50 250	150	10	1.4 1.7		15 150		100	15	—	—	—	—	To-5
2N3056	NPN	(A) 5	100	60	40 120	150	10	.25 1.1		15 150		80	12	.01	60	10	60	To-46
2N3056A	NPN	(A) 5	140	80	30 120	150	10	.25 1.1		15 150		80	12	.01	80	10	80	To-46
2N3057	NPN	(A) 5	100	60	100 300	150	10	.25 1.1		15 150		100	12	.01	60	10	60	To-46
2N3057A	NPN	(A) 5	140	80	80 300	150	10	.25 1.1		15 150		100	12	.01	80	10	80	To-46
2N3072	PNP	(A) 3.0	60	60	30 130	50	1	.25 1.2		2.5 50		130	10	(B) 0.01	30	10	30	To-5
2N3073	PNP	(A) 1.2	60	60	30 130	50	1	.25 1.2		2.5 50		130	10	(B) 0.01	30	10	30	To-18
2N3108	NPN	(A) 5	100	60	40 120	150	1	.25 1.1		15 150		60	20	—	—	10	60	To-5
2N3110	NPN	(A) 5	80	40	40 120	150	1	.25 1.1		15 150		60	25	—	—	10	60	To-5
2N3116	NPN	0.4	60	20	100 300	150	10	0.5 1.3		15 150		250	8	0.025	50	15	50	To-18
2N3120	PNP	(A) 3.0	45	45	30 130	50	1	.25 1.2		2.5 50		130	10	(B) 0.01	30	(B) 10	30	To-5
2N3121	PNP	(A) 1.2	45	45	30 130	50	1	.25 1.2		2.5 50		130	10	(B) 0.01	30	10	30	To-18
2N3133	PNP	(A) 3	50	35	40 120	150	10	0.6 1.5		15 150		200	10	0.05	30	30	30	To-5
2N3134	PNP	(A) 3	50	35	100 300	150	10	0.6 1.5		15 150		200	10	0.05	30	30	30	To-5
2N3135	PNP	(A) 1.8	50	35	40 120	150	10	0.6 1.5		15 150		200	10	0.05	30	30	30	To-18
2N3136	PNP	(A) 1.8	50	35	100 300	150	10	0.6 1.5		15 150		200	10	0.05	30	30	30	To-18
2N3502	PNP	(A) 3.0	45	45	100 300	150	10	0.25 1		2.5 50		200	8	—	—	10	30	To-5
2N3503	PNP	(A) 3.0	60	60	100 300	150	10	0.25 1		2.5 50		200	8	—	—	10	50	To-5
2N3504	PNP	(A) 1.2	45	45	100 300	150	10	0.25 1		2.5 50		200	8	—	—	10	30	To-18
2N3505	PNP	(A) 1.2	60	60	135 —	1	10	0.25 1		2.5 50		200	8	—	—	10	50	To-18
2N3665	NPN	(A) 5	120	80	40 120	150	10	0.5 1.2		15 150		—	12	0.05	60	50	60	To-5
2N3666	NPN	(A) 5	120	80	100 300	150	10	0.5 1.2		15 150		—	12	0.05	60	50	60	To-5
2N3945	NPN	(A) 5	70	50	40 250	150	10	0.5 1.2		15 150		60	12	—	—	—	—	To-5

Notes: (A) P.D. @ 25°C case (B) I_{CES} (C) h_{fe} @ f = 1 kc

SILICON PLANAR TRANSISTORS — MEDIUM POWER

TYPE	POLARITY	POWER DISSIPATION (watts)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	V_{CE} (volts) / I_C (MA)	$V_{CE(SAT)}$ (volts) / V_{BE} (volts)	I_C (MA) / I_B (MA)	f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA) / V_{CB} (volts)	I_{CBO} @ 150°C (μA) / V_{CB} (volts)	CASE STYLE
2N339	NPN	1	55	55	(A) 9 99	5 10	6 —	3 20	10	—	1 30	250 30	To-11
2N339A	NPN	(C) 3	60	60	20 80	50 10	1.0 —	3 20	10	—	1 30	200 30	To-11
2N340	NPN	1	85	85	(A) 9 99	5 10	7 —	3 20	10	—	1 30	250 30	To-11
2N340A	NPN	(C) 3	85	85	20 80	50 10	1.4 —	3 20	10	—	1 30	200 30	To-11
2N341	NPN	1	125	85	(A) 9 99	5 10	8 —	3 20	10	—	1 30	250 30	To-11
2N341A	NPN	(C) 3	125	100	20 80	50 10	1.4 —	3 20	10	—	1 30	200 30	To-11
2N342	NPN	1	60	60	(A) 9 32	5 10	7 —	3 20	—	—	1 30	250 30	To-11
2N342A	NPN	(B) 1	85	85	(A) 9 32	5 10	7 —	3 20	—	—	1 30	250 30	To-11
2N342B	NPN	0.75	85	85	(A) 9 32	5 10	7 —	3 20	—	—	1 30	50 30	To-11
2N343	NPN	1	60	60	(A) 29 90	5 10	7 —	3 20	—	20	1 30	250 30	To-11
2N343A	NPN	(B) 1	60	60	(A) 28 90	5 10	7 —	3 20	—	20	1 30	250 30	To-11
2N343B	NPN	(B) 1	60	60	(A) 28 90	5 10	7 —	3 20	—	20	1 30	50 30	To-11
2N497	NPN	(B) 4	60	60	12 36	200 10	2 —	40 200	—	60	10 30	250 30	To-5
2N497A	NPN	(B) 5	60	60	12 36	200 10	2 —	40 200	—	60	10 30	250 30	To-5
2N498	NPN	(B) 4	100	100	12 36	200 10	2 —	40 200	—	60	10 30	— —	To-5
2N498A	NPN	(B) 5	100	100	12 36	200 10	2 —	40 200	—	60	10 30	250 30	To-5
2N545	NPN	(C) 5	60	40	15 80	500 6	5 6	50 500	—	100	15 60	200 60	To-5
2N546	NPN	(C) 5	30	30	15 80	500 6	3 4	50 500	—	*80	15 30	200 30	To-5
2N547	NPN	(C) 5	60	60	20 80	500 6	5 6	50 500	4	*80	15 60	200 60	To-5
2N548	NPN	(C) 5	30	30	20 80	500 6	3 4	50 500	4	*80	15 30	200 30	To-5
2N549	NPN	(C) 5	60	60	20 80	200 6	4 5	20 200	—	100	15 60	200 60	To-5
2N550	NPN	(C) 5	30	30	20 80	200 6	4 5	20 200	—	100	15 30	200 30	To-5
2N551	NPN	(C) 3	60	60	20 80	50 6	2 2.5	5 50	—	100	15 60	200 60	To-5
2N552	NPN	(C) 3	30	30	20 80	50 6	2 2.5	5 50	—	60	15 30	200 30	To-5
2N656	NPN	(B) 4	60	60	30 90	200 10	5 —	40 200	12	60	10 30	60 30	To-5
2N656A	NPN	(B) 5	60	60	30 90	200 10	2 —	10 200	—	60	10 30	250 30	To-5
2N657	NPN	(B) 4	100	100	30 90	200 10	5 —	40 200	12	60	10 30	60 30	To-5
2N657A	NPN	(B) 5	100	100	30 90	200 10	2 —	10 200	—	60	10 30	250 30	To-5
2N721	PNP	0.4	50	35	20 45	150 10	1.5 1.3	15 150	50	45	1 30	100 30	To-18
2N722	PNP	0.4	50	35	30 90	150 10	1.5 1.3	15 150	60	45	1 30	100 30	To-18
2N722A	PNP	0.5	50	35	30 90	150 10	1.5 1.3	15 150	60	45	0.1 30	10 30	To-18
2N726	PNP	(B) 1	25	20	15 45	10 1	0.6 1	1 10	140	5	1 25	25 25	To-18
2N727	PNP	(B) 1	25	20	30 120	10 1	0.6 1	1 10	140	5	1 25	25 25	To-18
2N978	PNP	(B) 1.25	30	20	15 60	150 10	1.5 1.5	15 150	40	45	5 10	200 10	To-5
2N1052	NPN	(C) 5	200	155	20 80	200 6	5 4	20 200	8	*50	10 200	100 200	To-5
2N1053	NPN	(C) 5	180	135	20 80	200 6	5 4	20 200	8	*50	10 180	100 180	To-5
2N1054	NPN	(C) 5	125	115	20 —	200 6	4 4	20 200	8	*50	5 125	— —	To-5
2N1055	NPN	0.15	100	100	20 80	50 6	2 —	5 50	3	—	15 100	200 100	To-5
2N1084	PNP	(C) 5	60	50	15 60	1500 10	1.5 3	50 500	25	—	1 30	200 30	To-5
2N1116	NPN	(C) 5	60	60	40 150	500 6	5 4	50 500	6	*80	15 60	200 60	To-5
2N1117	NPN	(C) 5	60	60	40 150	200 6	4 3	20 200	4	—	15 60	200 60	To-5
2N1131	PNP	0.6	50	35	20 45	150 10	1.5 1.3	15 150	90	45	1 30	100 30	To-5
2N1131A	PNP	0.6	60	40	20 45	150 10	1.5 1.3	15 150	90	45	0.5 45	50 45	To-5
2N1132	PNP	0.6	50	35	30 90	150 10	1.5 1.3	15 150	90	45	1 30	100 30	To-5
2N1132A	PNP	0.6	60	40	30 90	150 10	1.5 1.3	15 150	90	45	0.5 45	50 45	To-5
2N1132B	PNP	0.6	70	50	30 75	150 10	1.5 1.3	15 150	90	30	0.010 50	10 50	To-5
2N1206	NPN	0.55	60	60	20 80	50 10	1 —	3 20	10	—	1 30	200 30	To-5
2N1207	NPN	0.55	125	100	20 80	50 10	1.4 —	3 20	10	—	1 30	200 30	To-5
2N1445	NPN	(B) 4	120	120	20 80	200 10	4 —	40 200	—	—	10 120	200 30	To-5
2N1479	NPN	(B) 5	60	40	20 60	200 4	1.4 —	20 200	1.5	—	10 30	500 30	To-5
2N1480	NPN	(B) 5	100	55	20 60	200 4	1.4 —	20 200	1.5	—	10 30	500 30	To-5
2N1481	NPN	(B) 5	60	40	35 100	200 4	1.4 —	10 200	1.5	—	10 30	500 30	To-5
2N1482	NPN	(B) 5	100	55	35 100	200 4	1.4 —	10 200	1.5	—	10 30	500 30	To-5

Notes: (A) h_{fe} @ f = 1 kc (B) P.D. @ 25°C case (C) P.D. @ 100°C case

* Typical

SILICON PLANAR TRANSISTORS — MEDIUM POWER . . . cont'd

TYPE	POLARITY	POWER DISSIPATION (watts)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	I_{CBO} @ 150°C (μA)	V_{CB} (volts)	CASE STYLE
2N1615	NPN	(C) 5	100	100	25 —	5	10	5	5	5	50	2	100	2	60	200	60	To-5
2N1647	NPN	(B) 40	80	60	15 45	500	10	3	—	100	1000	10	—	100	60	1000	60	1G-39
2N1648	NPN	(B) 40	120	80	15 45	500	10	3	—	100	1000	10	—	100	60	1000	60	1G-39
2N1649	NPN	(B) 40	80	60	30 90	500	10	3	—	100	1000	10	—	100	60	1000	60	1G-39
2N1650	NPN	(B) 40	120	80	30 90	500	10	3	—	100	1000	10	—	100	60	1000	60	1G-39
2N1690	NPN	(B) 40	80	80	20 60	500	10	7.5	—	100	500	—	—	15	30	350	30	To-57
2N1691	NPN	(B) 40	120	120	20 60	500	10	7.5	—	100	500	—	—	15	30	350	30	To-57
2N1700	NPN	(B) 5	60	40	20 80	100	4	10	—	10	100	—	100	500	60	—	60	To-5
2N1714	NPN	(C) 10	60	60	20 60	200	5	2	—	20	200	16	50	(D) 2	60	—	—	To-5
2N1715	NPN	(C) 10	100	100	20 60	200	5	2	—	20	200	16	50	(D) 2	60	—	—	To-5
2N1716	NPN	(C) 10	60	60	40 120	200	5	2	—	20	200	16	50	(D) 2	60	—	—	To-5
2N1717	NPN	(C) 10	100	100	40 120	200	5	2	1.6	20	200	16	50	—	—	—	—	To-5
2N1718	NPN	(C) 10	60	60	20 60	200	5	2	1.6	20	200	16	50	—	—	—	—	To-5
2N1719	NPN	(C) 10	100	100	20 60	200	5	2	—	20	200	16	50	(D) 2	60	—	—	1G-32
2N1720	NPN	(C) 10	60	60	40 120	200	5	2	—	20	200	16	50	(D) 2	60	—	—	1G-32
2N1721	NPN	(C) 10	100	100	40 120	200	5	2	1.6	20	200	16	50	—	—	—	—	To-5
2N1768	NPN	(B) 40	60	40	35 100	750	4	7.5	—	40	750	—	—	15	30	750	30	To-57
2N1769	NPN	(B) 40	100	55	35 100	750	4	7.5	—	40	750	—	—	15	30	750	30	To-57
2N1886	NPN	(B) 40	80	60	20 80	500	10	5	—	100	1000	10	—	350	60	1000	60	1G-39
2N1991	PNP	0.6	30	20	15 60	150	10	1.5	1.5	15	150	40	—	5	10	200	10	To-5
2N2018	NPN	(B) 40	150	125	20 60	500	10	6	—	100	1000	10	—	100	100	3000	100	1G-39
2N2019	NPN	(B) 40	200	140	20 60	500	10	6	—	100	1000	10	—	100	100	3000	100	1G-39
2N2020	NPN	(B) 40	150	125	40 90	500	10	6	—	100	1000	10	—	100	100	3000	100	1G-39
2N2021	NPN	(B) 4	200	140	40 90	500	10	6	—	100	1000	10	—	100	100	3000	100	1G-39
2N2038	NPN	(C) 3	45	35	12 36	200	6	6	—	20	200	2	80	15	30	—	—	To-5
2N2039	NPN	(C) 3	75	60	30 90	200	6	6	—	20	200	2	80	15	30	—	—	To-5
2N2040	NPN	(C) 3	45	35	12 36	200	6	6	—	20	200	2	80	15	30	—	—	To-5
2N2041	NPN	(C) 3	75	60	30 90	200	6	6	—	20	200	2	80	15	30	—	—	To-5
2N2106	NPN	1	60	60	12 36	200	10	5	—	40	200	—	—	10	30	—	—	To-5
2N2107	NPN	1	60	60	30 90	200	10	2	—	40	200	—	—	10	30	—	—	To-5
2N2108	NPN	1	60	60	75 200	200	10	2	—	10	200	—	—	10	30	—	—	To-5
2N2150	NPN	(C) 30	125	80	20 60	1(A)	5	1.25	2	100	1000	10	—	10	120	100	120	1G-57†
2N2151	NPN	(C) 30	125	80	40 120	1(A)	5	1.25	2	100	1000	10	—	10	120	100	120	1G-57†
2N2201	NPN	(B) 15	120	100	30 90	200	10	1.7	—	40	200	—	75	50	120	200	30	To-5
2N2303	NPN	0.6	50	35	75 200	150	10	1.5	1.3	15	150	60	45	1	30	100	30	To-5
2N2866	NPN	(C) 20	120	80	20 60	500	5	2	—	200	2000	10	*170	100	120	—	—	1G-57†
2N2867	NPN	(C) 20	120	80	40 120	500	5	2	—	200	2000	10	*170	100	120	—	—	1G-57†
2N2890	NPN	(B) 5	100	80	30 90	1000	2	.5	1.2	100	1000	30	70	.1	60	100	60	To-5
2N2891	NPN	(B) 5	100	80	50 150	1000	2	.5	1.2	100	1000	30	70	.1	60	100	60	To-5
2N2892	NPN	(B) 30	100	80	30 90	1000	2	.5	1.2	100	1000	30	70	.1	60	100	60	1G-57
2N2893	NPN	(B) 30	100	80	50 150	1000	2	.5	1.2	100	1000	30	70	.1	60	100	60	1G-57
2N3054	NPN	(B) 25	90	60	25 100	500	4	1	1.7	50	500	—	—	—	—	—	—	To-66
2N3441	NPN	(B) 25	160	140	20 80	500	4	6	6.7	900	2700	—	—	—	—	—	—	To-66
2N3766	NPN	(B) 20	80	60	40 160	500	5	1	—	50	500	15	50	.1	80	—	—	To-66
2N3660	PNP	(C) 5	40	30	25 100	500	10	1.2	—	50	500	30	275	0.1	100	20	20	To-5
2N3661	PNP	(C) 5	60	50	25 100	500	10	1.2	1.8	50	500	30	275	0.1	100	20	20	To-5
2N3767	NPN	(B) 20	100	80	40 160	500	5	1	—	50	500	15	50	.1	100	—	—	To-66
2N4271	NPN	(C) 5	175	140	20 140	200	10	.8	1	20	200	20	25	.5	30	—	—	To-5
2N4272	NPN	(C) 5	175	140	20 140	200	10	2	1.1	667	2000	10	75	.1	50	100	175	To-5
2N4273	NPN	(B) 25*	175	140	20 140	1000	10	2	1.1	667	2000	10	75	.1	50	100	175	To-66
2N4387	PNP	(B) 20	40	40	25 100	500	10	3	1.5	100	1000	25	275	—	—	—	—	To-66
2N4388	PNP	(B) 20	60	60	25 100	500	10	3	1.5	100	1000	25	275	—	—	—	—	To-66

Notes: (A) h_{fe} @ f = 1 kc (B) P.D. @ 25°C case (C) P.D. @ 100°C case † Also available in TO-59 package

* Typical

SILICON PLANAR POWER TRANSISTORS

TYPE	POLARITY	POWER DISSIPATION (WATTS) (B)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.	I_C (amps)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (amps)	I_B (amps)	f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	I_{CBO} @ 150°C (μA)	V_{CB} (volts)	CASE STYLE
2N389	NPN	45	60	60	12 60	1	15	5	—	0.2	1	8	—	—	—	—	—	To-53
2N389A	NPN	45	60	60	12 60	1	4	0.75	—	0.2	1	8	—	—	—	—	—	To-53
2N424	NPN	45	80	80	12 60	1	15	10	—	0.2	1	8	—	—	—	—	—	To-53
2N424A	NPN	45	80	80	12 60	1	4	0.75	—	0.2	1	8	—	—	—	—	—	To-53
2N1079	NPN	45	60	60	20 80	1	5	3	—	0.1	1	—	—	10	60	—	—	To-53
2N1080	NPN	45	60	60	20 80	2	10	5	—	0.1	1	—	—	10	60	—	—	To-53
2N1208	NPN	45	60	60	15 —	2	12	5	—	.25	2	—	—	10	60	—	—	To-61
2N1209	NPN	45	45	45	20 80	2	12	5	—	0.25	2	—	—	20	45	—	—	To-61
2N1210	NPN	30	60	60	15 75	2	12	2	—	0.25	2	—	—	—	—	10	60	To-53
2N1211	NPN	30	80	80	15 75	2	12	2	—	0.25	2	—	—	—	—	10	80	To-53
2N1212	NPN	45	60	60	12 36	1	15	5	—	0.2	1	—	—	—	—	—	—	To-61
2N1235	NPN	45	120	120	12 60	1	15	5	—	0.2	1	—	—	—	—	—	—	To-53
2N1250	NPN	45	60	60	15 —	2	12	5	—	.25	2	—	—	20	45	—	—	To-53
2N1260	NPN	50	120	120	12 60	1	15	10	—	.2	1	3	—	—	—	10	60	To-61
2N1616	NPN	30	60	60	15 75	2	12	2	—	0.25	2	—	—	(C) 10	120	—	—	To-53
2N1616A	NPN	30	60	60	20 60	2	4	—	—	—	—	3	—	—	—	1	60	To-61
2N1617	NPN	30	80	70	15 75	2	12	2	—	0.25	2	3	—	—	—	10	80	To-61
2N1617A	NPN	30	80	70	20 60	2	4	—	—	—	—	3	—	—	—	1	80	To-61
2N1618	NPN	30	100	80	15 75	2	12	2	—	0.25	2	3	—	—	—	10	100	To-61
2N1618A	NPN	30	100	80	20 60	2	4	—	—	—	—	3	—	—	—	1	100	To-61
2N1620	NPN	30	100	80	15 75	2	12	2	—	0.25	2	3	—	—	—	10	100	To-53
2N1722	NPN	50	120	80	20 90	2	15	1	2	0.25	2	10	550	(A) 1	60	(A) 2	60	To-53
2N1722A	NPN	50	180	120	30 90	2	15	1.5	2	0.5	5	10	550	0.5	9	—	—	To-53
2N1723	NPN	50	120	80	50 150	2	15	1.0	2	0.2	2	10	550	0.1	30	—	—	To-53
2N1724	NPN	50	120	80	20 90	2	15	1.0	2	0.2	2	10	550	(A) 1	60	(A) 2	60	To-61
2N1724A	NPN	50	180	120	30 90	2	15	1.5	2	0.5	5	10	550	0.5	9	—	—	To-61
2N1725	NPN	50	120	80	50 150	2	15	1.0	2	0.2	2	10	550	0.1	30	—	—	To-61
2N1936	NPN	150	125	60	7 50	10	3	.75	1.5	1.6	10	4	1800	—	—	—	—	To-63
2N1937	NPN	150	125	80	7 50	10	3	.75	1.5	1.6	10	4	1800	—	—	—	—	To-63
2N2032	NPN	45	45	45	20 —	2	12	5	—	0.25	2	3	—	20	45	—	—	To-53
2N2875	PNP	20	60	50	20 60	0.5	6	1.5	—	0.05	0.5	25	—	0.001	30	0.2	30	1G-57 †
2N4210	NPN	100	80	60	20 100	10	6	1	—	1	10	10	850	(A) 0.5	60	—	—	To-63
2N4211	NPN	100	100	80	20 100	10	6	1	—	1	10	10	850	(A) 0.5	80	—	—	To-63

Notes: (A) I_{CES} (B) 100°C case (C) ma † Also available in TO-59 package

SILICON PLANAR — GROWN JUNCTION REPLACEMENT TRANSISTORS

TYPE	POLARITY	POWER DISSIPATION (mW)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{fe} MIN.-MAX.	V_{CE} (volts) / I_C (MA)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (MA) / I_B (MA)	f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA) / V_{CB} (volts)	I_{CBO} @ 150°C (μA) / V_{CB} (volts)	CASE STYLE
2N117	NPN	150	45	—	9 20	1 5	1 —	2.2 5		4	20	1 50	15 5	1G-30
2N118	NPN	150	45	—	18 40	1 5	1 —	2.2 5		5	20	1 50	15 5	1G-30
2N118A	NPN	150	45	—	18 90	1 5	1 —	2.2 5		8	20	1 50	15 5	1G-30
2N119	NPN	150	45	—	36 90	1 5	1.5 —	2.2 5		6	—	10 50	30 5	1G-30
2N120	NPN	150	45	—	76 333	1 5	1 —	2.2 5		7	—	2 50	30 5	1G-30
2N243	NPN	750	60	—	9 30	5 10	7 —	3 20		—	—	1 —	30 —	1G-30
2N244	NPN	750	60	—	9 30	5 10	7 —	3 20		—	—	1 —	30 —	1G-30
2N263	NPN	125	45	—	45 —	10 5	— —	— —		—	—	50 —	20 —	1G-30
2N264	NPN	125	45	30	20 55	10 5	1.5 —	1 10		10	—	1 50	20 20	1G-30
2N332	NPN	150	45	—	9 20	1 5	1 —	2.2 5		4	—	2 50	30 5	To-5
2N332A	NPN	500	45	45	9 20	1 5	— —	— —		2.5	15	.5 30	20 30	To-5
2N333	NPN	150	45	—	18 40	1 5	1 —	2.2 5		5	—	2 50	30 5	To-5
2N333A	NPN	500	45	45	18 40	1 5	— —	— —		2.5	15	.5 30	20 30	To-5
2N334	NPN	150	45	—	18 90	1 5	1 —	2.2 5		8	—	2 50	30 5	To-5
2N334A	NPN	500	45	45	18 90	1 5	— —	— —		2.5	15	.5 30	20 30	To-5
2N335	NPN	150	45	—	37 90	1 5	1 —	2.2 5		6	—	2 50	30 5	To-5
2N335A	NPN	500	45	45	37 90	1 5	— —	— —		2.5	15	.5 30	20 30	To-5
2N336	NPN	150	45	—	78 333	1 5	1 —	2.2 5		7	—	2 50	30 5	To-5
2N336A	NPN	500	45	45	76 332	1 5	— —	— —		2.5	15	.5 30	20 30	To-5
2N337	NPN	150	45	—	(B) 20 55	10 5	1.5 —	1 10		20	—	1 100	20 20	To-5
2N337A	NPN	500	45	45	(B) 40 55	10 5	— —	— —		15	3	.5 30	20 30	To-5
2N338	NPN	125	45	—	(B) 45 150	10 5	1.5 —	0.5 10		30	—	1 100	20 20	1G-30
2N338A	NPN	500	45	45	(B) 45 150	10 5	— —	— —		25	3	.5 30	20 30	To-5
2N470	NPN	200	15	15	30 60	1 6	1.5 —	2.2 5		12	—	0.5 50	15 15	To-5
2N471	NPN	200	30	30	30 60	1 6	1.5 —	2.2 5		12	—	0.5 50	30 30	To-5
2N471A	NPN	200	30	30	10 25	1 5	1 —	2.2 5		8	—	0.5 50	30 30	To-5
2N472	NPN	200	45	45	30 60	1 6	1.5 —	2.2 5		12	—	0.5 50	45 45	To-5
2N472A	NPN	200	45	45	10 25	1 5	1 —	2.2 5		8	—	0.5 50	45 45	To-5
2N473	NPN	200	15	15	20 50	1 5	1.5 —	2.2 5		8	—	0.5 50	15 15	To-5
2N474	NPN	200	30	30	20 50	1 5	1.5 —	2.2 5		8	—	0.5 50	30 30	To-5
2N474A	NPN	200	30	30	20 50	1 5	1 —	2.2 5		8	—	0.50 50	30 30	To-5
2N475	NPN	200	45	45	20 50	1 5	1.5 —	2.2 5		8	—	0.5 50	45 45	To-5
2N475A	NPN	200	45	45	20 50	1 5	1.0 —	2.2 5		8	—	0.5 50	45 45	To-5
2N476	NPN	200	15	15	30 60	1 5	1.5 —	2.2 5		12	—	0.5 50	15 15	To-5
2N477	NPN	200	30	30	30 60	1 5	1.5 —	2.2 5		12	—	0.5 50	30 30	To-5
2N478	NPN	200	15	15	40 100	1 5	1.5 —	2.2 5		8	—	0.5 50	15 15	To-5
2N479	NPN	200	30	30	40 100	1 5	1.5 —	2.2 5		8	—	0.5 50	30 30	To-5
2N479A	NPN	200	30	30	40 100	1 5	1 —	2.2 5		20	—	0.5 50	30 30	To-5
2N480	NPN	200	45	45	40 100	1 5	1.5 —	2.2 5		8	—	0.5 50	45 45	To-5
2N480A	NPN	200	45	45	40 100	1 5	1 —	2.2 5		20	—	0.5 50	45 45	To-5
2N541	NPN	200	15	15	(A) 80 200	1 6	1.5 —	2.2 5		10	—	0.5 50	15 —	To-5
2N542	NPN	200	30	30	(A) 80 200	1 6	1.5 —	2.2 5		10	—	0.5 50	30 —	To-5
2N542A	NPN	200	30	30	20 —	0.1 5	1 —	2.2 5		10	—	0.5 50	30 —	To-5
2N543	NPN	200	45	45	(A) 80 200	1 6	1.5 —	2.2 5		10	—	0.5 50	45 —	To-5
2N543A	NPN	200	50	50	20 —	0.1 5	1 —	2.2 5		10	—	0.5 50	45 —	To-5
2N1149	NPN	150	45	—	9 20	1 5	1 —	2.2 5		4	—	2 50	30 5	1G-30
2N1150	NPN	150	45	—	18 40	1 5	1 —	2.2 5		5	—	2 50	30 5	1G-30
2N1151	NPN	150	45	—	18 90	1 5	1 —	2.2 5		8	—	2 50	30 5	1G-30
2N1152	NPN	150	45	—	36 90	1 5	1 —	2.2 5		6	—	2 50	30 5	1G-30
2N1153	NPN	150	45	—	76 333	1 5	1 —	2.2 5		7	—	2 5	30 5	1G-30
2N1154	NPN	150	50	—	9 —	5 10	6 —	2.2 20		—	—	5 —	50 —	1G-30
2N1155	NPN	150	80	—	9 —	5 10	1 —	2.2 15		—	—	6 —	80 —	1G-30
2N1156	NPN	150	120	—	9 —	5 10	4 —	2.2 10		—	—	8 —	120 —	1G-30
2N1247	NPN	30	6	6	15 —	.005 3	— —	— —		5	20	.005 10	3 3	To-5
2N1248	NPN	30	6	6	15 —	.02 3	— —	— —		—	—	.01 20	3 3	To-5
2N1249	NPN	30	6	6	20 —	.03 3	— —	— —		—	—	.01 —	3 —	To-5
2N1276	NPN	150	40	30	10 —	10 5	1 —	2.2 5		30	5	1 50	30 30	To-5

Notes: (A) h_{fe} @ f = 1 kc (B) H_{FE}

GROWN JUNCTION REPLACEMENT TRANSISTORS . . . cont'd

TYPE	POLARITY	POWER DISSIPATION (mW)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE} MIN.-MAX.		V_{CE} (volts) / I_C (MA)		$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_C (MA) / I_B (MA)		f_T (mc)	Cob (pf)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	I_{CBO} @ 150°C (μA)	V_{CB} (volts)	CASE STYLE
2N1277	NPN	150	40	30	20	—	10	5	1	—	2.2	5	30	5	1	50	30	30	To-5
2N1278	NPN	150	40	30	33	—	10	5	1	—	2.2	5	30	5	1	50	30	30	To-5
2N1279	NPN	150	40	30	80	—	10	5	1	—	2.2	5	34	5	1	50	30	30	To-5
2N1417	NPN	150	15	15	30	200	1	6	3	—	2.2	5	—	—	1	—	15	—	To-5
2N1418	NPN	150	30	30	30	200	1	6	3	—	2.2	5	—	—	10	—	30	—	To-5
2N1586	NPN	125	15	10	5	27	1	5	1	—	2.2	5	5	—	1	10	15	15	1G-30
2N1587	NPN	125	30	20	5	27	1	5	1	—	2.2	5	5	—	1	10	30	30	1G-30
2N1588	NPN	150	60	40	9	27	1	5	1	—	2.2	5	5	30	1	60	10	60	To-5
2N1589	NPN	125	15	10	20	75	1	5	1.5	—	2.2	5	—	30	1	—	15	—	1G-30
2N1590	NPN	125	30	20	20	75	1	5	1.5	—	2.2	5	—	30	1	—	30	—	1G-30
2N1591	NPN	125	60	40	20	75	1	5	1.5	—	2.2	5	—	30	1	—	60	—	1G-30
2N1592	NPN	125	15	10	40	210	1	5	1.5	—	2.2	5	—	30	1	—	15	—	1G-30
2N1593	NPN	125	30	20	40	210	1	5	1.5	—	2.2	5	—	30	1	—	30	—	1G-30
2N1594	NPN	125	60	40	40	210	1	5	1.5	—	2.2	5	—	30	1	—	60	—	1G-30
2N1674	NPN	200	45	45	(A) 50	100	1	5	1.5	—	2.2	5	—	20	0.5	50	45	45	To-5
2N2610	NPN	150	45	40	9	20	1	5	1	—	2.2	5	—	20	2	30	50	30	To-5

Notes: (A) h_{fe} @ f = 1 kc

SILICON PLANAR DUAL TRANSISTORS

Case Style — TO-79 (6 lead)

TYPE	BV_{CEO} (volts)	BV_{CBO} (volts)	I_{CBO} (na)	h_{FE} MIN.-MAX.	h_{FE1} / h_{FE2}	$\lvert V_{BE1} - V_{BE2} \rvert$ (MV)	$\Delta (V_{BE1} - V_{BE2}) / \Delta T_A$ (μV/°C)	$V_{CE(SAT)}$ (volts)	I_C (MA)	I_B (MA)	NOISE FIGURE (db)
2N2453	30	60	5 @ 50V	80 min	.90	3	10	.9	5	0.5	7
2N2453A	50	80	5 @ 60V	80 min	.90	3	5	1.0	5	0.5	4
2N2639	45	45	10 @ 45V	50-300	.90	5	10	1.0	10	1.0	4
2N2640	45	45	10 @ 45V	50-300	.80	10	20	1.0	10	1.0	4
2N2641	45	45	10 @ 45V	50-300	—	—	—	1.0	10	1.0	4
2N2642	45	45	10 @ 45V	100-300	.90	5	10	1.0	10	1.0	4
2N2643	45	45	10 @ 45V	100-300	.80	10	20	1.0	10	1.0	4
2N2644	45	45	10 @ 45V	100-300	—	—	—	1.0	10	1.0	4
2N2903	30	60	10 @ 50V	60 min	.80	10	20	1.0	5	0.5	7
2N2903A	30	60	10 @ 50V	60 min	.90	5	20	1.0	5	0.5	7
2N2910	25	45	10 @ 20V	70 min @100 ua	.80	10	20	1.0 .35	1	0.1	10
2N2913	45	45	10 @ 45V	60-240	—	—	—	.35	1	0.1	4
2N2914	45	45	10 @ 45V	150-600	—	—	—	.35	1	0.1	3
2N2915	45	45	10 @ 45V	60-240	.90	3	10	.35	1	0.1	4
2N2916	45	45	10 @ 45V	150-600	.90	3	10	.35	1	0.1	3
2N2917	45	45	10 @ 45V	60-240	.80	5	20	.35	1	0.1	4
2N2918	45	45	10 @ 45V	150-600	.80	5	20	.35	1	0.1	3
2N2919	60	60	2 @ 45V	60-240	.90	3	10	.35	1	0.1	4
2N2920	60	60	2 @ 45V	150-600	.90	3	10	.35	1	0.1	3
2N3423	15	30	10 @ 15V	20-200	.80	10	40	.4	10	0.1	—
2N3424	15	30	10 @ 15V	20-200	.90	5	20	.4	10	0.1	—
2N3680	50	60	10 @ 45V	300 min	.90	3	5	.7	10	0.5	3
2N3907	45	60	10 @ 45V	60-300	.90	1	5	.35	1	0.1	4
3N3908	60	60	2 @ 45V	100-500	.90	1	5	.35	1	0.1	3

DUAL EMITTER INTEGRATED CHOPPERS

Case Style — TO-72

TYPE	BV_{EEO} (volts)	BV_{CBO} (volts)	I_{EEO} (μA)	V_{EE} (volts)	V_O, OFFSET VOLTAGE (μV) —25°C to +100°C	I_O, OFFSET CURRENT (MA)	V_O/T (μV/°C)	I_O, OFFSET CURRENT (MA) Rd (ohms)	Ceb (pf)	V_{EB} (volts)
3N62	6	10	5 @	5		200 @ 2	—	100 @ 2	5 @	5
3N63	6	10	5 @	5		100 @ 2	—	100 @ 2	5 @	5
3N64	6	10	5 @	5		50 @ 2	—	100 @ 2	5 @	5
3N65	10	10	5 @	5		200 @ 2	—	100 @ 2	5 @	5
3N66	10	10	5 @	5		100 @ 2	—	100 @ 2	5 @	5
3N67	10	10	5 @	5		50 @ 2	—	100 @ 2	5 @	5
3N68	10	12	5 @	5		200 @ 2	—	50 @ 2	5 @	5
3N68A	10	10	.5 @	10		200 @ 2	—	50 @ 2	5 @	6
3N69	10	12	5 @	5		100 @ 2	—	50 @ 2	5 @	5
3N70	10	12	5 @	5		50 @ 2	—	50 @ 2	5 @	5
3N71	8	15	5 @	5		50 @ 2	—	15 @ 2	12 @	0
3N72	8	15	5 @	5		100 @ 2	—	15 @ 2		
3N73	8	15	5 @	5		200 @ 2	—	25 @ 2		
3N74	18	50	2 @	15		50 @ 1	.6 @ 1	40 @ 1	5 @	5
3N75	18	50	2 @	15		100 @ 1	1.0 @ 1	40 @ 1	5 @	5
3N76	18	50	2 @	15		200 @ 1	1.4 @ 1	50 @ 1	5 @	5
3N77	12	40	5 @	10		50 @ 1	.6 @ 1	50 @ 1	5 @	5
3N78	12	40	5 @	10		100 @ 1	1.0 @ 1	50 @ 1	5 @	5
3N79	12	40	10 @	10		200 @ 1	1.4 @ 1	60 @ 1	6 @	5
3N87	10	20	.02 @	5		50 @ 0.5	1.0 @ 0.5	100 @ 0.5	2 @	5
3N88	10	20	.02 @	5		100 @ 0.5	1.0 @ 0.5	150 @ 0.5	2 @	5
3N120	20	30	.5 @	10		10 @ 0.2 to 3	.2 @ 1	25 @ 1	4 @	10
3N121	20	30	.5 @	10		10 @ 0.2 to 3	.2 @ 1	25 @ 1	4 @	10
3N127	20	30	.5 @	10		10 @ 0.2 to 3	0.2 @ 1	50 @ 1	2 @	5
ST5610	18	25	.5 @	10		50 @ 0.75	.5 @ 0.75	50 @ 0.75	4 @	5
ST5611	18	25	10 @	10		100 @ 0.75	1.0 @ 0.75	100 @ 0.75	4 @	5
ST5612	12	25	.5 @	6		50 @ 0.75	1.0 @ 0.75	50 @ 0.75	4 @	5
ST5613	12	25	1.0 @	6		100 @ 0.75	1.0 @ 0.75	100 @ 0.75	4 @	5
ST5614	8	15	10 @	5		150 @ 0.75	1.5 @ 0.75	150 @ 0.75	4 @	5

SINGLE EMITTER CHOPPER

Case Style — To-18

TYPE	BV_{CBO} (volts)	BV_{CEO} (volts)	I_{EBO} (μA)	V_{EB} (volts)	h_{FE} MIN-MAX I_C (MA)	V_{CE} (volts)	h_{FE} (INVERTED) MIN-MAX I_E (MA)	V_{EC} (volts)	V_{EC} OFFSET (mV) MAX I_B (MA)	I_B (MA) Rd (ohms)	V_{EB} (volts) Ceb (pf)
2N2432	30	30	.002 @	15	50 —	1 5	2 —	.2 5	.5 @ 0.2	20 @ 1	12 @ 0
2N2432A	45	45	.002 @	15	50 —	1 5	3 —	.2 5	.4 @ 0.2	15 @ 1	12 @ 0

SILICON PLANAR LINEAR AMPLIFIER TRANSISTORS

Case Style — TO-72

TYPE	POLARITY	POWER DISSIPATION (mW)	BV_{CBO} (volts)	BV_{CEO} (volts)	h_{FE}	V_{CE} (volts) I_C (MA)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	NOISE FIGURE (db)	I_{CBO} @ 25°C (μA)	V_{CB} (volts)	I_{CBO} @ 150°C (μA)	V_{CB} (volts)
2N917	NPN	300	30	15	20	3 1	0.5	0.87	0.15	3	800	3	—	0.001	15	0.1	15
2N918	NPN	300	30	15	20	3 1	0.4	1	1	10	900	3	6	0.01	15	1	15

LID PACKAGED TRANSISTORS — PNP AMPLIFIER, SWITCH

TYPE	BV_{CBO} (volts)	BV_{CEO} (volts)	BV_{EBO} (volts)	h_{FE} MIN.	h_{FE} MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	I_{CBO} (μA)	@ V_{CB} (volts)
LID-2906	60	40	5	40	120	150	10	0.4	1.3	15	150	200	8	.02	50
LID-2906A	60	60	5	40	120	150	10	0.4	1.3	15	150	200	8	.01	50
LID-2907	60	40	5	100	300	150	10	0.4	1.3	15	150	200	8	.02	50
LID-2907A	60	60	5	100	300	150	10	0.4	1.3	15	150	200	8	.01	50
LID-3504	45	45	5	100	300	150	10	0.25	1.0	2.5	50	200	8	—	—
LID-3505	60	60	5	135	—	1	10	0.25	1.0	2.5	50	200	8	—	—
ST8229/LID	50	30	5	40	240	150	10	0.4	1.3	15	150	150	11	.05	30
ST8181/LID	50	35	5	20	120	150	10	0.4	1.3	15	150	100	11	.05	30
ST8182/LID	50	35	5	100	300	150	10	0.4	1.3	15	150	100	11	.05	30

LID PACKAGED TRANSISTORS — PNP LOGIC SWITCH

TYPE	BV_{CBO} (volts)	BV_{CEO} (volts)	BV_{EBO} (volts)	h_{FE} MIN.	h_{FE} MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	t_s (nsec)	t_D (nsec)	*t_{ff} (nsec)	**t_{ff} (nsec)	I_{CEX} @ V_{CE} (μA)	(volts)
LID-2894	12	12	4	30	—	10	0.3	.15	.98	1	10	400	6	—	—	60*	90**	.08	6
LID-2894A	12	12	4.5	30	—	10	0.3	.13	.92	1	10	800	4.5	20	—	25*	20**	.05	10
LID-3012	12	12	4.0	25	—	10	0.3	.15	.98	1	10	400	6	—	—	60*	75**	.08	6
LID-3209	20	20	4.0	25	—	10	0.3	.15	.98	1	10	400	5	—	—	60*	90**	.08	10
LID-3248	15	12	5	50	150	10	1	.125	.90	1	10	250	8	60	5	15	20	.05	10
LID-3249	15	12	5	100	300	10	1	.125	.90	1	10	300	8	60	5	15	20	.05	10
LID-3250	50	40	5	50	150	10	1	.25	.90	1	10	250	6	175	35	35	50	.02	40
LID-3250A	60	60	5	50	150	10	1	.25	.90	1	10	250	6	175	35	35	50	.02	40
LID-3251	50	40	5	100	300	10	1	.25	.90	1	10	300	6	200	35	35	50	.02	40
LIP-3251A	60	60	5	100	300	10	1	.25	.90	1	10	300	6	200	35	35	50	.02	40

* t_{OFF} (nsec) ** t_{ON} (nsec)

LID PACKAGED TRANSISTORS — PNP LOW LEVEL, LOW NOISE

TYPE	BV_{CBO} (volts)	BV_{CEO} (volts)	BV_{EBO} (volts)	h_{FE} MIN.	h_{FE} MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	NOISE FIGURE (db)	I_{CBO} @ V_{CB} (μA)	(volts)
LID-2604	60	45	6	40	120	.01	5	0.5	0.9	0.5	10	30	6	4	.01	45
LID-2605	60	45	6	100	300	.01	5	0.5	0.9	0.5	10	30	6	3	.01	45
LID-2605A	60	45	6	150	300	.01	5	0.25	0.9	0.5	10	45	6	3	.002	45
ST8700/LID	50	30	5	20	—	.01	5	1.0	1.0	1	10	30	10	4	.02	30

LID PACKAGED TRANSISTORS — NPN LOW LEVEL, LOW NOISE

LID-929	45	45	5	40	120	.01	5	1.0	1.0	0.5	10	30	8	4	.01	45
LID-929A	60	45	6	40	120	.01	5	0.5	0.9	0.5	10	45	8	4	.002	45
LID-930	45	45	5	100	300	.01	5	1.0	1.0	0.5	10	30	8	3	.01	45
LID-930A	60	45	6	100	300	.01	5	0.5	0.9	0.5	10	45	8	3	.002	45
LID-2483	60	60	6	40	120	.01	5	0.35	—	0.1	1	60	6	3	.01	45
LID-2484	60	60	6	100	500	.01	5	0.35	—	0.1	1	60	6	2	.01	45
LID-2586	60	45	6	120	360	.01	5	0.5	0.9	0.5	10	60	7	2	.02	45
LID-3117	60	60	6	100	—	.001	5	0.35	—	0.1	1	60	4.5	1	.01	45
ST1700/LID	60	30	5	20	—	.01	5	1.0	1.0	1	10	60	8	4	.02	30

LID PACKAGED TRANSISTORS — NPN UHF/VHF AMPLIFIER AND NON-SATURATED SWITCH

LID-917	30	15	3	20	200	3	1	0.5	0.87	.15	3	500	3.0	6.0	.001	15
LID-918	30	15	3	20	—	3	1	0.4	1.0	1	10	600	3.0	6.0	.01	15
ST2110/LID	25	12	2	20	—	8	5	0.6	—	1	10	950	2.0	—	0.5	15
ST2120/LID	30	15	4	50	—	3	1	0.2	0.9	1	10	1000	3.0	4.0	.005	15
ST2130/LID	25	12	2	20	—	3	1	0.4	1.0	1	10	550	2.0	6.0	0.5	15

LID PACKAGED TRANSISTORS — NPN AMPLIFIER, SWITCH

TYPE	BV_{CBO} (volts)	BV_{CEO} (volts)	BV_{EBO} (volts)	h_{FE} MIN.	h_{FE} MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	I_{CBO} @ V_{CB} (μA)	(volts)
LID-2220	60	30	5	20	60	150	10	0.4	1.3	15	150	250	8	.01	50
LID-2221	60	30	5	40	120	150	10	0.4	1.3	15	150	250	8	.01	50
LID-2221A	75	40	6	40	120	150	10	0.3	1.2	15	150	250	8	.01	60
LID-2222	60	30	5	100	300	150	10	0.4	1.3	15	150	250	8	.01	50
LID-2222A	75	40	6	100	300	150	10	0.3	1.2	15	150	250	8	.01	60
ST6593/LID	60	30	5	20	120	150	10	0.4	1.3	15	150	100	10	.05	40
ST6594/LID	60	30	5	100	300	150	10	0.4	1.3	15	150	100	10	.05	40
ST6600/LID	50	30	5	40	250	150	10	0.4	1.3	15	150	150	11	.05	30
ST6623/LID	60	30	5	100	300	150	10	0.4	1.3	15	150	250	8	.01	50

LID PACKAGED TRANSISTORS — NPN LOGIC

TYPE	BV_{CBO} (volts)	BV_{CEO} (volts)	BV_{EBO} (volts)	h_{FE} MIN.	h_{FE} MAX.	I_C (MA)	V_{CE} (volts)	$V_{CE(SAT)}$ (volts)	V_{BE} (volts)	I_B (MA)	I_C (MA)	f_T (mc)	Cob (pf)	t_s (nsec)	t_{ON} (nsec)	t_{OFF} (nsec)	I_{CBO} @ V_{CB} (μA)	(volts)
LID-706	25	20	3	20	—	10	1.0	0.6	0.9	1	10	400	6	60	—	—	.05	15
LID-708	40	15	5	30	120	10	1.0	0.4	0.8	1	10	400	6	25	40	70	.25	20
LID-709	15	6	4	20	120	10	0.5	0.3	0.85	.15	3	600	3	6	15	15	.05	5
LID-709A	15	6	4	30	90	10	.5	0.3	0.85	.15	3	900	3	6	15	15	.005	5
LID-743	20	12	5	20	60	10	0.35	0.35	0.85	1	10	400	5	14	12	24	1	20
LID-744	20	12	5	40	120	10	0.35	0.35	0.85	1	10	400	5	18	12	24	1	20
LID-753	25	15	5	40	120	10	1.0	0.6	0.9	1	10	200	5	35	40	75	0.5	15
LID-834	40	30	5	10	—	10	1.0	0.25	0.9	1	10	350	4	25	35	75	0.5	20
LID-835	25	20	3	20	—	10	1.0	0.3	0.9	1	10	300	4	35	20	25	0.5	20
LID-2368	40	15	4.5	20	60	10	1.0	0.25	0.85	1	10	400	4	10	12	15	0.4	20
LID-2369	40	15	4.5	40	120	10	1.0	0.25	0.85	1	10	500	4	13	12	18	0.4	20
LID-2369A	40	15	4.5	40	120	10	1.0	0.25	1.5	3	30	500	4	13	12	18	—	—
LID-2475	15	6	4	30	150	20	0.4	0.4	1	.66	20	600	3	6	20	15	.05	5
LID-2784	15	6	4	40	120	10	0.5	0.26	0.85	.15	3	1000	3	5	9	9	.005	5
LID-3010	15	6	4	25	125	10	0.4	0.25	0.85	0.1	1	600	3	6	12	12	—	—
LID-3633	15	6	4	50	150	10	0.5	0.21	0.85	0.15	3	1300	2.5	5	9	9	.005	5
ST6110/LID	10	5	3	20	—	10	0.5	0.35	0.90	0.15	3	500	—	10	—	—	.05	5
ST6120/LID	10	5	3	20	—	10	0.5	0.35	0.90	0.15	3	1000	—	10	—	—	.05	5
ST6125/LID	10	5	3	20	200	10	0.5	0.35	0.90	0.15	3	800	—	10	—	—	.05	5
ST6130/LID	25	10	4	30	150	10	1.0	0.35	0.90	1	10	400	4	20	—	—	.05	15

LID PACKAGED TRANSISTORS — NPN CORE DRIVER

LID-1958	60	40	5	20	60	150	10	.45	1.3	15	150	100	18	25	65	45	0.5	30
LID-1959	60	40	5	40	120	150	10	.45	1.3	15	150	100	18	25	65	45	0.5	30
LID-2410	60	30	5	25	100	500	10	1.3	1.6	50	500	200	11	40	65	40	0.3	30
LID-2539	60	30	5	20	—	500	10	1.6	2.6	50	500	250	8	—	—	—	0.25	40
LID-2540	60	30	5	30	—	500	10	1.6	2.6	50	500	250	8	—	—	—	0.25	40

Note: Products now in development for introduction in LID packages during 1967 include integrated circuits, diodes, zeners, choppers, SCR's and medium power transistors. By proper choice of LID package size and material it will be possible to supply any semiconductor device in this style package.

GERMANIUM DIODES

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	POWER DISSIPATION (mW)
1N34	75	1.0	5	50	10	130
1N34A	75	1.0	5	30	10	130
1N36	36	1.0	4	100	25	130
1N38	125	1.0	3	6	3	130
1N38A	125	1.0	5	5	3	130
1N38B	125	1.0	4-25	6	3	130
1N44	115	1.0	3	1000	50	130
1N45	110	1.0	3	410	50	130
1N46	80	1.0	3	1500	50	130
1N48	85	1.0	5	800	50	130
1N49	75	1.0	5	200	20	130
1N50	75	1.0	5	80	20	130
1N51	50	1.0	2.5	1500	50	130
1N52	85	1.0	5	150	50	130
1N52A	85	1.0	5-25	100	50	130
1N54	75	1.0	5	10	10	130
1N54A	75	1.0	5	7	10	130
1N56	45	1.0	15	300	30	130
1N56A	50	1.0	15	300	30	130
1N57	100	1.0	3.6	300	75	130
1N57A	80	1.0	4	500	75	130
1N58	125	1.0	5	800	100	130
1N58A	125	1.0	5	600	100	130
1N60	40	1.0	5	200	10	80
1N60A	40	1.0	5	60	10	80
1N61	140	1.0	5	300	100	80
1N62	140	1.0	5	700	100	80
1N63	125	1.0	5	50	50	130
1N63A	100	1.0	4	50	50	80
1N65	80	1.0	2.5	200	50	80
1N66	60	1.0	5	50	10	80
1N66A	60	1.0	5	50	10	80
1N67	90	1.0	4	5	5	80
1N67A	100	1.0	5	5	5	80
1N68	100	1.0	3	625	100	80
1N68A	130	1.0	5	625	100	80
1N69	85	1.0	5	50	10	130
1N69A	75	1.0	5	30	10	80
1N70	125	1.0	5	25	10	130
1N70A	125	1.0	3	25	10	130
1N75	125	1.0	5	50	50	130
1N81	50	1.0	5	10	10	130
1N81A	55	1.0	3	10	10	130
1N84	25	1	60	750	15	80
1N86	70	1	4	50	10	80
1N87	23	.25	.1	30	1.5	80
1N87A	23	.25	.1	10	1.5	80
1N88	90	1	5	75	100	80
1N89	100	1	5	8	5	80
1N90	75	1	5	500	50	80

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	POWER DISSIPATION (mW)
1N95	75	1	10	500	50	80
1N96	75	1	20	500	50	80
1N96A	75	1	40	500	50	80
1N97	100	1	10	8	5	80
1N97A	90	1	20	8	5	80
1N98	100	1	20	8	5	80
1N98A	100	1	40	8	5	80
1N99	100	1	10	5	5	80
1N99A	90	1	20	5	5	80
1N100	100	1	20	5	5	80
1N100A	100	1	40	50	50	80
1N103	20	1	30	750	15	80
1N104	25	1	30	750	15	80
1N107	10	1	150	200	10	80
1N108	50	1	50	200	50	80
1N111	75	1	5	25 (1)	10	80
1N112	75	1	5	50 (1)	10	80
1N113	75	1	5	25 (1)	10	80
1N114	75	1	5	50 (1)	10	80
1N115	75	1	5	100 (1)	10	80
1N116	75	1	5	100	50	80
1N117	75	1	10	100	50	80
1N118	75	1	20	100	50	80
1N118A	75	1	40	100	50	80
1N119	60	1	5	125 (1)	50	80
1N120	60	1	5	250 (1)	50	80
1N126	75	1.0	5	50	10	80
1N127	125	1.0	3	25	10	80
1N127A	125	1.0	3	25	10	80
1N135	75	1.0	5	850	50	80
1N139	50	1.0	20	1500	50	130
1N140	85	1.0	40	300	50	130
1N144	40	1.0	100	200	20	130
1N145	40	1.0	40	100	10	130
1N175	125	1.0	5	50	50	80
1N191	75	1.0	5	125 (1)	50	80
1N192	75	1.0	5	250 (1)	50	80
1N198	80	1.0	4	10	10	80
1N198A	80	1.0	4	50	50	80
1N198B	100	1.0	4	50	50	80
1N270	100	1.0	200	100	50	80
JAN/1N270	100	1.0	200	100	50	80
1N273	35	1.0	100	20	20	80
1N276	75	1.0	40	100	50	80
JAN/1N276	75	1.0	40	100	50	80
1N277	125	1.0	100	250	50	80
JAN/1N277M	125	1.0	100	400	100	80
1N278	60	1.0	20	125 (2)	50	80
1N279	35	1.0	100	200	20	80
1N281	75	1.0	100	30	10	80

Notes: (1) $T_A = +55°C$

(2) $T_A = +75°C$

GERMANIUM DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	POWER DISSIPATION (mW)
JAN/1N281	75	1.0	100	30	10	80
1N282	15	1.0	40	—	—	80
1N283	25	1.0	200	20	10	80
1N287	40	1.0	20	1500	50	80
1N288	70	1.0	40	350	50	80
1N289	80	1.0	20	50	50	80
1N290	100	1.0	5	100	100	80
1N291	100	1.0	40	100	100	80
1N294	60	1.0	5	10	10	80
1N294A	60	1.0	5	10	10	80
1N295	40	—	—	200	10	80
1N297	80	1.0	3.5	10	5	80
1N297A	80	1.0	3.5	10	5	80
1N298	70	2.0	30	250	40	80
1N298A	70	2.0	30	10	5	80
1N304	55	1.5	2	2	10	80
1N305	60	0.8	100	2	10	150
1N306	15	0.8	100	2	10	150
1N307	125	1.0	100	5	10	150
1N308	8	1.0	300	500	8	80
1N309	30	1.0	100	100	20	80
1N310	100	1.0	15	20	20	80
1N312	50	1.0	30	50	50	80
1N313	100	1.0	20	10	20	80
1N314	75	1.0	15	50 (3)	10	80
1N355	80	1.0	4	5	5	80
1N417	60	1.0	50	120	60	80
1N418	60	1.0	7	120	60	80
1N419	80	1.0	125	180	90	80
1N447	40	1.0	25	60	30	80
1N448	100	1.0	25	30	30	80
1N449	40	1.0	50	30	30	80
1N450	100	1.0	50	50	50	80
1N451	175	1.0	50	150	150	80
1N452	35	1.0	100	30	30	130
1N453	115	1.0	100	30	30	130
1N454	60	1.0	200	50	50	130
1N455	35	1.0	300	30	30	130
1N476	90	1.0	3	180	75	80
1N477	90	1.0	3	180	75	80
1N478	90	1.0	5	155	75	80
1N479	90	1.0	5	155	75	80
1N497	25	1.0	100	20	20	75
1N498	45	1.0	100	25	40	75
1N499	60	1.0	100	30	50	75
1N500	70	1.0	100	40	60	75
1N501	90	.8	100	20	80	75
1N502	115	.8	100	20	100	75
1N527	20	.3	1	50	10	80
1N571	15	1.0	200	100 (1)	10	80
1N616	30	1.0	8	18	1.5	80
1N617	90	1.0	3	11	10	80

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	POWER DISSIPATION (mW)
1N618	90	1.0	5	7	10	80
1N631	60	3.5	50	—	—	80
1N632	60	1.0	7	120	60	80
1N633	90	—	—	—	—	80
1N634	125	1.0	50	35	30	80
1N636	50	1.0	2.5	10	10	80
1N695	25	1.0	100	2	10	80
1N695A	25	0.5	10	2	10	100
1N699	105	1.0	100	250 (4)	75	80
1N770	20	0.5	15	15	10	80
1N771	90	1.0	100	25	50	80
1N771A	90	1.0	200	25	50	80
1N771B	90	1.0	400	25	50	80
1N772	80	1.0	100	50	50	80
1N772A	80	1.0	200	50	50	80
1N773	75	1.0	100	10	10	80
1N773A	75	1.0	200	10	10	80
1N774	70	1.0	100	15	10	80
1N774A	60	1.0	200	15	10	80
1N775	70	1.0	100	20	10	80
1N776	20	1.0	50	200	10	80
1N777	75	1.0	100	125 (1)	50	80
1N781	40	.45	10	5	10	80
1N805	40	1.0	3	100	10	80
1N911	30	1.0	100	10	10	80
1N949	50	.39	10	10	10	80
1N994	6.5	1.0	10	30	6	80
1N995	15	1.0	10	10	6	80
USN/1N995M	—	—	—	—	—	80
1N996	20	0.8	40	15	15	80
1N1093	15	0.4	5	75 (1)	15	80
1N3110	8	0.45	5	20	8	80
1N3466	40	1.0	200	15	30	80
1N3467	18	0.5	20	15	15	80
1N3468	18	0.5	20	60	15	80
1N3469	35	1.0	600	15	20	80
1N3470	35	1.0	600	30	20	80
1N3666	80	.5-1	200	10	20	75
USN/1N3666M	80	1.0	200	10	20	75
USN/IN3666M-1	80	1.0	200	20	20	75
USN/1N3666M-2	80	1.0	200	20	20	75
T1/1N139	50	1.0	20	1500	50	130
T2/1N140	85	1.0	40	300	50	130
T6/IN144	40	1.0	100	200	20	130
T7	75	1.0	200	100	50	130
T9	75	1.0	100	2	10	130
T11	40	1.0	100	20	20	130
T12	75	1.0	20	30	10	130
T13	25	1.0	40	2	10	130
T14	25	1.0	40	5	10	130
T15	125	1.0	125	180	90	130
T16	75	1.0	40	100	50	130
T17	125	1.0	5	5	3	130
T18	—	1.0	20	125 (2)	50	130
T20	—	1.0	20	500 (2)	50	130

Notes: (1) $T_A = +55°C$ (3) $T_A = +85°C$
(2) $T_A = +75°C$ (4) $T_A = +70°C$

GERMANIUM DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	POWER DISSIPATION (mW)
T21	—	1.0	20	50 (2)	20	130
T22	—	1.0	20	20 (2)	10	130
T23	—	1.0	20	200 (1)	50	130
T26	—	—	—	—	—	—
T27	—	—	—	—	—	—
T1G	50	1.0	20	1500	50	80
T2G	75	1.0	40	300	50	80
T3G	75	1.0	20	50	50	80
T4G	125	1.0	5	100	100	80
T5G	125	1.0	40	100	100	80
T6G/IN279	35	1.0	100	200	20	80
T7G/IN270	100	1.0	200	100	50	80
T8G	125	1.0	100	5	10	80
T9G	75	1.0	100	2	10	80
T11G/IN273	35	1.0	100	20	20	80

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	POWER DISSIPATION (mW)
T12G	75	1.0	20	30	10	80
T13G	25	1.0	40	2	10	80
T14G	25	1.0	40	5	10	80
T15G	125	1.0	125	180	90	80
T16G/1N276	75	1.0	40	100	50	80
T17G/1N277	125	1.0	100	250	50	80
T18G/1N278	—	1.0 (2)	20	125	50	80
T19G	—	1.0 (2)	200	225 (2)	40	80
T20G	—	1.0 (2)	20	30 (2)	10	80
T21G	—	1.0 (2)	20	50 (2)	20	80
T22G	—	1.0 (2)	40	20 (2)	10	80
T23G	—	1.0 (5)	20	200 (5)	50	80
T24G	—	1.0 (5)	20	300 (5)	30	80
T25G/IN283	25	1.0	200	20	10	80
T26G	25	1.0	40	10	10	80
T27G	—	1.0 (2)	40	100 (2)	10	80

Notes: (1) $T_A = +55°C$ (2) $T_A = +75°C$ (5) $T_A = +60°C$

SILICON DIODES

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA) 150°C	REVERSE VOLTAGE (volts)	CAPACITANCE (pf)	RECOVERY TIME (μ sec)	POWER DISSIPATION (mW)
1N251*	30	1.0	5	.1	10 (1)	10	—	0.15	150 (P)
1N252	20	1.0	10	.1	10 (1)	5	—	0.15	150 (P)
1N432	40	1.0	10	.005	3	10	4	—	250 (A)
1N434	180	1.0	2	.01	.4 (2)	10	—	—	250 (A)
1N456	30	1.0	40	.025	5	25	—	—	250 (A)
1N456A	30	1.0	100	.025	5	25	—	—	250 (A)
1N457*	70	1.0	20	.025	5	60	—	—	250 (A)
IN457A	70	1.0	100	.025	5	60	—	—	250 (A)
1N458*	150	1.0	7	.025	5	125	—	—	250 (A)
1N458A	150	1.0	100	.025	5	125	—	—	250 (A)
1N459*	200	1.0	3	.025	5	175	—	—	250 (A)
1N459A	200	1.0	100	.025	5	175	—	—	250 (A)
1N461	30	1.0	15	.5	30	25	—	—	250 (A)
1N461A	30	1.0	100	.5	30	25	—	—	250 (A)
1N462	70	1.0	5	.5	30	60	—	—	250 (A)

Notes: * Available in mil. version (A) Silicon alloy construction (P) Silicon planar construction

(1) +125°C (2) +100°C

SILICON DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA) 150°C	REVERSE VOLTAGE (volts)	CAPACITANCE (pf)	RECOVERY TIME (μ sec)	POWER DISSIPATION (mW)
1N462A	70	1.0	100	.5	30	60	—	—	250 (A)
1N463	200	1.0	1	.5	30	175	—	—	250 (A)
1N463A	200	1.0	100	.5	30	175	—	—	250 (A)
1N464	150	1.0	3	.5	30	125	—	—	250 (A)
1N464A	150	1.0	100	.5	30	125	—	—	250 (A)
1N482	40	1.1	100	.25	30	30	—	—	250 (A)
1N482A	40	1.0	100	.025	15	30	—	—	250 (A)
1N482B	40	1.0	100	.025	5	30	—	—	250 (A)
1N483	80	1.1	100	.25	30	60	—	—	250 (A)
1N483A	80	1.0	100	.025	15	60	—	—	250 (A)
1N483B*	80	1.0	100	.025	5	60	—	—	250 (A)
1N484	150	1.1	100	.25	30	125	—	—	250 (A)
1N484A	150	1.0	100	.025	15	125	—	—	250 (A)
1N484B	150	1.0	100	.025	5	125	—	—	250 (A)
1N485	200	1.1	100	.25	30	175	—	—	250 (A)
1N485A	200	1.0	100	.025	15	175	—	—	250 (A)
1N485B*	200	1.0	100	.025	5	175	—	—	250 (A)
IN486	250	1.1	100	.25	50	225	—	—	250 (A)
1N486A	250	1.0	100	.05	25	225	—	—	250 (A)
1N486B*	250	1.0	100	.05	10	225	—	—	250 (A)
1N487	330	1.1	100	.25	50	300	—	—	250 (A)
1N487A	330	1.0	100	.1	25	300	—	—	250 (A)
1N488	420	1.1	100	.25	50	380	—	—	250 (A)
1N488A	420	1.0	100	.1	25	380	—	—	250 (A)
1N625	35	1.5	4	1.0	30	20	—	1.0	200 (P)
1N626	50	1.5	4	1.0	30	35	—	1.0	200 (P)
1N627	100	1.5	4	1.0	30	75	—	1.0	200 (P)
1N628	150	1.5	4	1.0	30	125	—	1.0	200 (P)
1N629	200	1.5	4	1.0	30	175	—	1.0	200 (P)
1N643*	200	1	10	.025	5 (1)	10	—	.3	200 (P)
1N645	275 (2)	1	400	.2	15 (2)	275	—	—	400 (A)
1N646	360 (2)	1	400	.2	15 (2)	360	—	—	400 (A)
1N647	480 (2)	1	400	.2	20 (2)	480	—	—	400 (A)
1N648	600 (2)	1	400	.2	20 (2)	600	—	—	400 (A)
1N649	720 (2)	1	400	.2	25 (2)	720	—	—	400 (A)
1N658*	120	1	100	.05	25	50	—	.3	200 (P)
1N659	55	1	6	5	25 (1)	50	—	.3	200 (P)
1N660*	110	1	6	5	50 (1)	100	—	.3	200 (P)
1N661*	220	1	6	10	100 (1)	200	—	.3	200 (P)
1N662*	100	1	10	1	20 (1)	10	—	.5	200 (P)
1N663*	100	1	100	5	50 (1)	75	—	.5	200 (P)
1N673	350	1	250	1	—	300	—	—	400 (A)
1N676	115	1	200	1.0	—	115	—	—	400 (A)
1N677	115	1	400	1.0	—	115	—	—	400 (A)
1N678	230	1	200	1.0	—	230	—	—	400 (A)
1N679	230	1	400	1.0	—	230	—	—	400 (A)
1N681	340	1	200	1.0	—	340	—	—	400 (A)
1N682	340	1	400	1.0	—	340	—	—	400 (A)
1N683	455	1	200	1.0	—	455	—	—	400 (A)
1N684	455	1	400	1.0	—	455	—	—	400 (A)
1N685	565	1	200	1.0	—	565	—	—	400 (A)
1N686	565	1	400	1.0	—	565	—	—	400 (A)
1N687	680	1	200	1.0	—	680	—	—	400 (A)
1N689	680	1	400	1.0	—	680	—	—	400 (A)
1N690	40	1	400	.25	50	30	—	.8	250 (P)

Notes: * Available in mil. version (A) Silicon alloy construction (P) Silicon planar construction (1) +125°C (2) +100°C

SILICON DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA) 150°C	REVERSE VOLTAGE (volts)	CAPACITANCE (pf)	RECOVERY TIME (μ sec)	POWER DISSIPATION (mW)
1N691	80	1	400	.25	50	60	—	.8	250 (P)
1N692	150	1	400	.25	50	120	—	.8	250 (P)
1N693	200	1	400	.25	50	160	—	.8	250 (P)
1N696	40	1	10	.015	20	20	—	.005	250 (P)
1N697	120	1	250	1	800	50	25	.100	250 (P)
1N806	110	1.0	4	.5	50 (1)	100	—	.3	200 (P)
1N807	200	1.0	4	.5	50 (1)	175	—	.3	200 (P)
1N811	20	1.0	1	1.0	10 (1)	10	—	.25	150 (P)
1N812	30	1.0	2	.1	10 (1)	10	—	.25	150 (P)
1N813	15	1.0	5	.5	10 (1)	5	—	.25	150 (P)
1N814	40	1.0	2	.1	10 (1)	20	—	.25	150 (P)
1N815	15	1.5	100	.5	10 (1)	5	—	.25	150 (P)
1N816*	—	0.64 ± 10%	1	.1	—	4	—	—	250 (A)
1N846	50	1	200	20	—	35	—	—	400 (A)
1N847	100	1	200	20	—	70	—	—	400 (A)
1N848	200	1	200	20	—	140	—	—	400 (A)
1N849	300	1	200	20	—	210	—	—	400 (A)
1N850	400	1	200	20	—	280	—	—	400 (A)
1N851	500	1	200	20	—	350	—	—	400 (A)
1N852	600	1	200	20	—	420	—	—	400 (A)
1N853	700	1	200	20	—	490	—	—	400 (A)
1N854	800	1	200	20	—	560	—	—	400 (A)
1N855	900	1	200	20	—	630	—	—	400 (A)
1N856	1000	1	200	20	—	700	—	—	400 (A)
1N857	50	1	150	20	—	35	—	—	400 (A)
1N858	100	1	150	20	—	70	—	—	400 (A)
1N859	200	1	150	20	—	140	—	—	400 (A)
1N860	300	1	150	20	—	210	—	—	400 (A)
1N861	400	1	150	20	—	280	—	—	400 (A)
1N862	500	1	150	20	—	350	—	—	400 (A)
1N863	600	1	150	20	—	420	—	—	400 (A)
1N864	700	1	150	20	—	490	—	—	400 (A)
1N865	800	1	150	20	—	560	—	—	400 (A)
1N866	900	1	150	20	—	630	—	—	400 (A)
1N867	1000	1	150	20	—	700	—	—	400 (A)
1N868	50	1	150	20	—	35	—	—	400 (A)
1N869	100	1	100	20	—	100	—	—	400 (A)
1N870	200	1	100	20	—	140	—	—	400 (A)
1N872	400 @ 20μa	1	300	—	—	—	—	—	400 (A)
1N873	500	1	100	20	—	350	—	—	400 (A)
1N874	—	1	100	100	—	600	—	—	400 (A)
1N875	700 @ 20	1	100	—	—	—	—	—	400 (A)
1N876	800	1	100	20	—	560	—	—	400 (A)
1N877	900	1	100	20	—	630	—	—	400 (A)
1N878	1000	1	100	20	—	700	—	—	400 (A)
1N879	—	1	200	20	—	50	—	—	400 (A)
1N880	100	1	50	20	—	70	—	—	400 (A)
1N881	200	1	50	20	—	140	—	—	400 (A)
1N882	300	1	50	20	—	210	—	—	400 (A)
1N883	400	1	50	20	—	280	—	—	400 (A)
1N884	500	1	50	20	—	350	—	—	400 (A)
1N886	—	1	200	20	—	700	—	—	400 (A)
1N887	800	1	50	20	—	560	—	—	400 (A)
1N888	900 @ 20μa	1	200	—	—	—	—	—	400 (A)
1N889	1000	1	400	20	—	700	—	—	400 (A)

Notes: * Available in mil. version (A) Silicon alloy construction (P) Silicon planar construction (1) +125°C

SILICON DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA) 150°C	REVERSE VOLTAGE (volts)	CAPACITANCE (pf)	RECOVERY TIME (μ sec)	POWER DISSIPATION (mW)
1N891	60	1	50	.1	25 (3)	50	10	.3	250 (P)
1N903	—	1	10	.1	10 (2)	40	—	4	250 (P)
1N903A	—	1	20	.1	10 (2)	40	—	4	250 (P)
1N904	—	1	10	.1	10 (2)	30	1	.004	250 (P)
1N904A	40	1	20	.1	10 (2)	30	1	.004	250 (P)
1N905	—	1	10	.1	10 (2)	20	1	.004	250 (P)
1N905A	30	1	20	.1	10 (2)	20	1	.004	250 (P)
1N906	—	1	10	.1	10 (2)	20	2.5	.004	250 (P)
1N906A	—	1	20	.1	10 (2)	20	2.5	.004	250 (P)
1N907	—	1	10	.1	10 (2)	30	2.5	.004	250 (P)
1N907A	—	1	20	.1	10 (2)	30	2.5	.004	250 (P)
1N908	—	1	10	.1	10 (2)	40	2.5	.004	250 (P)
1N908A	—	1	20	.1	10 (2)	40	2.5	.004	250 (P)
1N914	100	1	10	.025	50	20	4	.004	250 (P)
1N914A	100	1	20	.025	50	20	4	.004	250 (P)
1N914B	100	1	100	.025	50	20	4	.004	250 (P)
1N916	100	1	10	.025	50	20	2	.004	250 (P)
1N916A	100	1	20	.025	50	20	2	.004	250 (P)
1N916B	75	1	20	.025	50	20	2	.004	250 (P)
1N919	200	1	100	.5	25 (2)	150	—	.3	200 (P)
1N925	40	1	5	1	20 (2)	10	4	.15	250 (P)
1N926	40	1	5	.1	10 (2)	10	4	.15	250 (P)
1N927	65	1	10	.1	10 (2)	10	4	.15	250 (P)
1N928	—	1	10	.1	10 (2)	10/100	—	.15	250 (P)
1N948	40	1.5	100	.25	20	30	—	1	250 (P)
1N993	8	1.5	10	1	—	6	—	.004	50 (P)
1N3062	75 @ 5μa	1	20	.1	100	50	1	.002	250 (P)
1N3063	75 @ 5μa	.505 min./.575 max.	.25	.1	100	50	2	.004	250 (P)
	—	.550 min./.650 max.	1						
	—	.610 min./.710 max.	2	—	—	—	—	—	—
	—	.700 min./.850 max.	10	—	—	—	—	—	—
1N3064*	75 @ 5μa	1	10	.1	100	50	2	.004	250 (P)
1N3065	75 @ 5μa	.460 min./.530 max.	.1	.1	100	50	1.5	.004	250 (P)
	—	.570 min./.670 max.	1	—	—	—	—	—	—
	—	.730 min./.880 max.	10	—	—	—	—	—	—
1N3065	—	.800 min./1.00 max.	20	—	—	—	—	—	—
1N3066	75 @ 5μa	1	10	.1	100	50	1	.002	250 (P)
1N3067	30 @ 5μa	1	5	.1	100	20	4	.004	250 (P)
1N3068	30 @ 5μa	1	5	.1	100	20	6	.050	250 (P)
1N3069	65 @ 5μa	1	50	.1	100	50	6	.050	250 (P)
1N3070	200	1	100	.1	100	175	5	.050	250 (P)
1N3071	200	.530 min./.630 max.	1	.1	100	150	5	.050	250 (P)
	—	.640 min./.740 max.	10	—	—	—	—	—	—
	—	.760 min./.920 max.	50	—	—	—	—	—	—
	—	.800 min./1.00 max.	100	—	—	—	—	—	—
1N3257	100	1	30	.025	25	20/50	2	.003	250 (P)
1N3258	100	1	100	.025	25	20/50	4	.004	250 (P)
1N3600*	—	.54 min./.62 max.	1	.1	100	50	2.5	.004	250 (P)
	—	.66 min./.74 max.	10	—	—	—	—	—	—
	—	.76 min./.86 max.	50	—	—	—	—	—	—
	—	.82 min./.92 max.	100	—	—	—	—	—	—
	—	.87 min./1.0 max.	200	—	—	—	—	—	—
1N3604	75 @ 5μa	1	50	.05	50	50	2	.004	250 (P)

Notes: * Available in mil. version (A) Silicon alloy construction (P) Silicon planar construction (2) +100°C (3) +50°C

SILICON DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA) 150°C	REVERSE VOLTAGE (volts)	CAPACITANCE (pf)	RECOVERY TIME (μ sec)	POWER DISSIPATION (mW)
1N3605	40 @ 5μa	.490 min./.550 max.	.1	.05	50	30	2	.004	250 (P)
	—	.530 min./.590 max.	.25	—	—	—	—	—	—
	—	.590 min./.670 max.	1	—	—	—	—	—	—
	—	.620 min./.700 max.	2	—	—	—	—	—	—
	—	.700 min./.810 max.	10	—	—	—	—	—	—
	—	.750 min./.880 max.	20	—	—	—	—	—	—
1N3606	75 @ 5μa	.490 min./.550 max.	.1	.05	50	50	2	.004	250 (P)
	—	.530 min./.590 max.	.25	—	—	—	—	—	—
	—	.590 min./.670 max.	1	—	—	—	—	—	—
	—	.620 min./.700 max.	2	—	—	—	—	—	—
	—	.700 min./.810 max.	10	—	—	—	—	—	—
	—	.740 min./.880 max.	20	—	—	—	—	—	—
1N3653	100	1	400	.025	25	75	4	.004	250 (P)
1N3731	—	1	100	.05	50	50	2	.003	250 (P)
1N4009	35 @ 5μa	1	30	.1	100	25	4	.004	250 (P)
1N4087	—	.700 min./.750 max.	5	.09	100	50	1.8	.030	250 (P)
	—	.975 max.	30	—	—	—	—	—	—
1N4092	50 @ 10μa	1	5	1	—	10	10	—	250 (A)
	—	—	—	—	5 (4)	20	—	—	—

Case Style — Do-35 Whiskerless

1N4148	100	1	10	.025	50	20	4	.004	500 (P)
1N4149	100	1	10	.025	50	20	2	.004	500 (P)
1N4150	50	.54 min./.62 max.	1	.1	100	50	2.5	.004	500 (P)
		.66 min./.74 max.	10	—	—	—	—	—	—
		.76 min./.86 max.	50	—	—	—	—	—	—
		.82 min./.92 max.	100	—	—	—	—	—	—
		.87 min./1.0 max.	200	—	—	—	—	—	—
1N4151	75	1	50	.05	50	50	2	.004	500 (P)
1N4152	40	.490 min./.550 max.	.1	.05	50	30	2	.004	500 (P)
		.530 min./.590 max.	.25	—	—	—	—	—	—
		.590 min./.670 max.	1	—	—	—	—	—	—
		.620 min./.700 max.	2	—	—	—	—	—	—
		.700 min./.810 max.	10	—	—	—	—	—	—
		.740 min./.880 max.	20	—	—	—	—	—	—
1N4153	75	.490 min./.550 max.	.1	.05	50	50	2	.004	500 (P)
		.530 min./.590 max.	.25	—	—	—	—	—	—
		.590 min./.670 max.	1	—	—	—	—	—	—
		.620 min./.700 max.	2	—	—	—	—	—	—
		.700 min./.810 max.	10	—	—	—	—	—	—
		.740 min./.880 max.	20	—	—	—	—	—	—
1N4154	35	1	30	.1	100	25	4	.004	500 (P)
1N4305	75	.505 min./.575 max.	.25	.1	100	50	2	.004	500 (P)
		.550 min./.650 max.	1	—	—	—	—	—	—
		.610 min./.710 max.	2	—	—	—	—	—	—
		.700 min./.850 max.	10	—	—	—	—	—	—

Notes: (A) Silicon alloy construction (P) Silicon planar construction (4) +70°C

SILICON DIODES . . . cont'd

Case Style — DO-7

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA) 150°C	REVERSE VOLTAGE (volts)	CAPACITANCE (pf)	RECOVERY TIME (μ sec)	POWER DISSIPATION (mW)
1N4308	100 @ 5μa	1	200	.1	100	75	2	.002	250 (P)
	—	.47 min./.53 max.	.25	—	—	—	—	—	—
	—	.52 min./.60 max.	1	—	—	—	—	—	—
	—	.64 min./.72 max.	10	—	—	—	—	—	—
	—	.67 min./.77 max.	20	—	—	—	—	—	—
1N4309	50 @ 5μa	1	400	.1	100	30	4	.002	250 (P)
	—	.47 min./.53 max.	.25	—	—	—	—	—	—
	—	.52 min./.60 max.	1	—	—	—	—	—	—
	—	.64 min./.72 max.	10	—	—	—	—	—	—
	—	.67 min./.77 max.	20	—	—	—	—	—	—
1N4310	75 @ 5μa	1	400	.1	100	50	4	.002	250 (P)
	—	.47 min./.53 max.	.25	—	—	—	—	—	—
	—	.52 min./.60 max.	1	—	—	—	—	—	—
	—	.64 min./.72 max.	10	—	—	—	—	—	—
	—	.67 min./.77 max.	20	—	—	—	—	—	—
1N4311	100 @ 5μa	1	300	.1	100	75	2	.002	250 (P)
	—	.47 min./.53 max.	.25	—	—	—	—	—	—
	—	.52 min./.60 max.	1	—	—	—	—	—	—
	—	.64 min./.72 max.	10	—	—	—	—	—	—
	—	.67 min./.77 max.	20	—	—	—	—	—	—
1N4312	150 @ 5μa	1	200	.1	100	100	2	.002	250 (P)
	—	.47 min./.53 max.	.25	—	—	—	—	—	—
	—	.52 min./.60 max.	1	—	—	—	—	—	—
	—	.64 min./.72 max.	10	—	—	—	—	—	—
	—	.67 min./.77 max.	20	—	—	—	—	—	—
SG22	—	.64 ± 10%	1	.1	—	2	—	—	250 (A)
SG22	—	1	100	—	—	—	—	—	—
SG211	80	1.5	5	.25	20 (2)	60	—	.3	200 (P)
SG212	150	1.5	5	.25	20 (2)	125	—	.3	200 (P)
SG213	200	1.5	5	.25	50 (2)	175	—	.3	200 (P)
SG215	40	1.5	5	.25	20 (2)	30	—	1	200 (P)
SG216	80	1.5	5	.25	20 (2)	60	—	1	200 (P)
SG217	150	1.5	5	.25	20 (2)	125	—	1	200 (P)
SG218	200	1.5	5	.25	50 (2)	175	—	1	200 (P)
SG221	80	1.5	30	.25	20 (2)	60	—	.5	200 (P)
SG222	150	1.5	30	.25	20 (2)	125	—	.5	200 (P)
SG223	200	1.5	30	.25	50 (2)	175	—	.5	200 (P)
SG225	40	1.5	100	.25	20 (2)	30	—	1	200 (P)
SG226	80	1.5	100	.25	20 (2)	60	—	1	200 (P)
SG227	150	1.5	100	.25	20 (2)	125	—	1	200 (P)
SG228	200	1.5	100	.25	50 (2)	175	—	1	200 (P)
SG5250	50 @ 5μa	.90	100	.025	100	20	6	.004	200 (P)
SG5260	75 @ 5μa	.90	100	.025	100	20	6	.004	200 (P)
SG5270	100 @ 5μa	.90	100	.10	100	75	6	.004	200 (P)

Notes: (A) Silicon alloy construction (P) Silicon planar construction (2) +100°C

ULTRA STABLE CERTIFIED VOLTAGE REFERENCES

Certified for observed voltage stability during 1000 hours operation. Each unit serialized for positive identification.

Case Style — DO-7

TYPE	CERTIFIED STABILITY Per 1000 hrs. (PPM)	NOM. ZENER VOLTAGE, V_Z (volts)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	TEMP. COEFFICIENT (% per °C)	TEMP. RANGE (°C)	POWER DISSIPATION (mW)
1N3501	±100	6.35	12	7.5	±0.001	+25/+100	250
1N3502	±100	6.35	12	7.5	±0.0005	+25/+100	250
1N3503	± 50	6.35	12	7.5	±0.001	+25/+100	250
1N3503A	± 50	6.35	12	7.5	±0.0005	+25/+100	250
1N3504	± 20	6.35	12	7.5	±0.001	+25/+100	250
1N3504A	± 20	6.35	12	7.5	±0.0005	+25/+100	250
1N4890	± 50	6.35	10	7.5	±0.001	+25/+100	250
1N4890A	± 50	6.35	10	7.5	±0.001	−55/+100	250
1N4891	± 50	6.35	10	7.5	±0.0005	+25/+100	250
1N4891A	± 50	6.35	10	7.5	±0.0005	−55/+100	250
1N4892	± 20	6.35	10	7.5	±0.001	+25/+100	250
1N4892A	± 20	6.35	10	7.5	±0.001	−55/+100	—
1N4893	± 20	6.35	10	7.5	±0.0005	+25/+100	—
1N4893A	± 20	6.35	10	7.5	±0.0005	−55/+100	—
1N4894	± 10	6.35	10	7.5	±0.001	+25/+100	—
1N4894A	± 10	6.35	10	7.5	±0.001	−55/+100	—
1N4895	± 10	6.35	10	7.5	±0.0005	+25/+100	—
1N4895A	± 10	6.35	10	7.5	±0.0005	−55/+100	—
SV7401	± 20	6.35	12	7.5	±0.001	+25/+100	—
SV7402	± 20	6.35	12	7.5	±0.0005	+25/+100	—
SV7403	± 10	6.35	12	7.5	±0.001	+25/+100	—
SV7404	± 10	6.35	12	7.5	±0.0005	+25/+100	—
SV7405	± 5	6.35	12	7.5	±0.001	+25/+100	250
SV7406	± 5	6.35	12	7.5	±0.0005	+25/+100	250
SVC910	±100	9.0	16	7.5	±0.001	+25/+100	250
SVC905	± 50	9.0	16	7.5	±0.001	+25/+100	250
SVC1110	±100	11.7	24	7.5	±0.001	+25/+100	250
SVC1105	± 50	11.7	24	7.5	±0.001	+25/+100	250

CERTIFIED VOLTAGE REFERENCES

Industrial Applications

Case Style — DO-7

TYPE	CERTIFIED STABILITY Per 1000 hrs. (PPM)	NOM. ZENER VOLTAGE, V_Z (volts)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	TEMP. COEFFICIENT (% per °C)	TEMP. RANGE (°C)	POWER DISSIPATION (mW)
SVC650	±500	6.2	15	7.5	±0.001	+25/+100	500
SVC625	±250	6.2	15	7.5	±0.001	+25/+100	500
SVC950	±500	9.0	20	7.5	±0.001	+25/+100	500
SVC925	±250	9.0	20	7.5	±0.001	+25/+100	500
SVC1150	±500	11.7	30	7.5	±0.001	+25/+100	500
SVC1125	±250	11.7	30	7.5	±0.001	+25/+100	500

MULTI-CURRENT RANGE REFERENCE DIODES Temperature coefficient specified over entire I_Z range

Case Style — DO-7

TYPE	ZENER VOLTAGE ±5% @ 7.5 mA, 25°C (volts)	TEMP. COEFFICIENT (% per °C)	I_Z RANGE (mA) MIN.	I_Z RANGE (mA) MAX.	MAX. DYNAMIC RESISTANCE OVER I_Z RANGE @ 25°C @ I_Z MIN	@ I_Z MID	@ I_Z MAX
SVM61	6.2	±0.01	2	15	50	15	12
SVM605	6.2	±0.005	2	15	50	15	12
SVM6020	6.2	±0.002	3	7.5	30	15	15
SVM6021	6.2	±0.002	7.5	15	15	15	12
SVM6010	6.2	±0.001	3	7.5	30	15	15
SVM6011	6.2	±0.001	7.5	12	15	15	12
SVM81	8.4	±0.01	2	15	75	20	15
SVM805	8.4	±0.005	2	15	75	20	15
SVM8020	8.4	±0.002	3	7.5	50	20	20
SVM8021	8.4	±0.002	7.5	15	20	20	15
SVM8010	8.4	±0.001	3	7.5	50	20	20
SVM8011	8.4	±0.001	7.5	12	20	20	15
SVM91	9.0	±0.01	2	15	75	20	15
SVM905	9.0	±0.005	2	15	75	20	15
SVM9020	9.0	±0.002	3	7.5	50	20	20
SVM9021	9.0	±0.002	7.5	15	20	20	15
SVM9010	9.0	±0.001	3	7.5	50	20	20
SVM9011	9.0	±0.001	7.5	12	20	20	15
SVM111	11.7	±0.01	2	12	100	30	24
SVM1105	11.7	±0.005	3	12	75	30	24
SVM11020	11.7	±0.002	3	7.5	75	30	30
SVM11021	11.7	±0.002	7.5	12	30	30	24

SILICON VOLTAGE REFERENCE DIODES

Temperature compensated — military and commercial

Case Style — DO-7

TYPE	NOM. ZENER VOLTAGE, V_Z (volts)	DYNAMIC IMPEDANCE, Z_Z (ohms)	ZENER CURRENT I_Z (MA)	TEMP. COEFFICIENT (% per °C)	TEMP. RANGE (°C)	POWER DISSIPATION (mW)	MIL TYPE
IN429 *	6.2	20	7	± .01	−55/+100	200	USAF/JAN
IN821	6.2	15	7.5	± .01	−55/+100	250	USN/JAN
1N821A	6.2	10	7.5	± .01	−55/+100	250	
1N822	6.2	15	7.5	± .01	−55/+100	250	
1N823	6.2	15	7.5	± .005	−55/+100	250	USN/JAN
1N823A	6.2	10	7.5	± .005	−55/+100	250	
1N824	6.2	15	7.5	± .005	−55/+100	250	
1N825	6.2	15	7.5	± .002	−55/+100	250	USN/JAN
1N825A	6.2	10	7.5	± .002	−55/+100	250	
1N827	6.2	15	7.5	± .001	−55/+100	250	USN/JAN
1N827A	6.2	10	7.5	± .001	−55/+100	250	
1N829	6.2	15	7.5	± .0005	−55/+100	250	USN/JAN
1N935	9.0	20	7.5	± .01	0/+ 75	500	
1N935A	9.0	20	7.5	± .01	−55/+100	500	
1N935B	9.0	20	7.5	± .01	−55/+150	500	USN/JAN
1N936	9.0	20	7.5	± .005	0/+ 75	500	
1N936A	9.0	20	7.5	± .005	−55/+100	500	
1N936B	9.0	20	7.5	± .005	−55/+150	500	
1N937	9.0	20	7.5	± .002	0/+ 75	500	
1N937A	9.0	20	7.5	± .002	−55/+100	500	

Notes: * Available only in 1G-4

SILICON VOLTAGE REFERENCE DIODES . . . cont'd

Case Style — DO-7

TYPE	NOM. ZENER VOLTAGE, V_Z (volts)	DYNAMIC IMPEDANCE, Z_Z (ohms)	ZENER CURRENT I_Z (MA)	TEMP. COEFFICIENT (% per °C)	TEMP. RANGE (°C)	POWER DISSIPATION (mW)	MIL TYPE
1N937B	9.0	20	7.5	± .002	−55/+150	500	USN/JAN
1N938	9.0	20	7.5	± .001	0/+ 75	500	
1N938A	9.0	20	7.5	± .001	−55/+100	500	
1N938B	9.0	20	7.5	± .001	−55/+150	500	USN/JAN
1N939	9.0	20	7.5	± .0005	0/+ 75	500	
1N939A	9.0	20	7.5	± .0005	−55/+100	500	
1N939B	9.0	20	7.5	± .0005	−55/+150	500	
1N940	9.0	20	7.5	± .0002	0/+ 75	500	
1N940A	9.0	20	7.5	± .0002	−55/+100	500	
1N940B	9.0	20	7.5	± .0002	−55/+150	500	
1N941	11.7	30	7.5	±0.01	0/+ 75	500	
1N941A	11.7	30	7.5	±0.01	−55/+100	500	
1N941B	11.7	30	7.5	±0.01	−55/+150	500	
1N942	11.7	30	7.5	±0.005	0/+ 75	500	
1N942A	11.7	30	7.5	±0.005	−55/+100	500	
1N942B	11.7	30	7.5	±0.005	−55/+150	500	
1N943	11.7	30	7.5	±0.002	0/+ 75	500	
1N943A	11.7	30	7.5	±0.002	−55/+100	500	
1N943B	11.7	30	7.5	±0.002	−55/+150	500	
1N944	11.7	30	7.5	±0.001	0/+ 75	500	
1N944A	11.7	30	7.5	±0.001	−55/+100	500	
1N944B	11.7	30	7.5	±0.001	−55/+150	500	
1N945	11.7	30	7.5	±0.0005	0/+ 75	500	
1N945A	11.7	30	7.5	±0.0005	−55/+100	500	
1N945B	11.7	30	7.5	±0.0005	−55/+150	500	
1N946	11.7	30	7.5	±0.0002	0/+ 75	500	
1N946A	11.7	30	7.5	±0.0002	−55/+100	500	
1N946B	11.7	30	7.5	±0.0002	−55/+150	500	
1N3154	8.4	15	10.0	±0.01	−55/+100	400	USN/JAN
1N3154A	8.4	15	10.0	±0.01	−55/+150	400	
1N3155	8.4	15	10.0	±0.005	−55/+100	400	USN/JAN
1N3155A	8.4	15	10.0	±0.005	−55/+150	400	
1N3156	8.4	15	10.0	±0.002	−55/+100	400	USN/JAN
1N3156A	8.4	15	10.0	±0.002	−55/+150	400	
1N3157	8.4	15	10.0	±0.001	−55/+100	400	USN/JAN
1N3157A	8.4	15	10.0	±0.001	−55/+150	400	
SV9785	8.4	15	10.0	±0.0005	−55/+100	400	
SV9786	8.4	15	10.0	±0.0005	−55/+150	400	
1N3496	6.2	15	7.5	±0.005	0/+ 75	250	
1N3497	6.2	15	7.5	±0.002	0/+ 75	250	
1N3498	6.2	15	7.5	±0.001	0/+ 75	250	
1N3499	6.2	15	7.5	±0.0005	0/+ 75	250	
1N3500	6.2	15	7.5	±0.01	0/+ 75	250	
SVR12A	12.6	30	7.5	±0.01	−55/+100	400	
SVR12B	12.6	30	7.5	±0.005	−55/+100	400	
SVR12C	12.6	30	7.5	±0.002	−55/+100	400	
SVR19A	19.0	45	7.5	±0.01	−55/+100	400	
SVR19B	19.0	45	7.5	±0.005	−55/+100	400	

SILICON ZENER DIODES

Case Style — DO-7

TYPE	ZENER VOLTAGE V_Z (volts)	DYNAMIC IMPEDANCE, Z_Z (ohms)	ZENER CURRENT I_Z (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	POWER DISSIPATION (mW)	MIL TYPE
1N702	2.0/3.2	60	10	75	1.0	—	—	250	—
1N703	3.0/3.9	55	10	50	1.0	—	—	250	—
1N704	3.7/4.5	45	10	5	1.0	—	—	250	—
1N705	4.3/5.4	35	10	5	1.5	—	—	250	—
1N706	5.2/6.4	20	10	5	1.5	—	—	250	—
1N707	6.2/8.0	10	10	5	3.5	—	—	250	—
1N708	5.6	2.6	25	5	3.5	—	—	250	—
1N709	6.2	4.1	25	5	3.5	—	—	250	—
1N710	6.8	4.7	25	5	3.5	—	—	250	—
1N711	7.5	5.3	25	5	3.5	—	—	250	—
1N712	8.2	6.0	25	5	3.5	—	—	250	—
1N713	9.1	7.0	12	5	3.5	—	—	250	—
1N714	10.0	8.0	12	5	8.0	—	—	250	—
1N715	11.0	9.0	12	5	8.0	—	—	250	—
1N716	12.0	10.0	12	5	9.0	—	—	250	—
1N717	13.0	11.0	12	—	—	—	—	250	—
1N718	15.0	13.0	12	—	—	—	—	250	—
1N719	16.0	15.0	12	—	—	—	—	250	—
1N720	18.0	17.0	12	—	—	—	—	250	—
1N721	20.0	20.0	4	—	—	—	—	250	—
1N722	22.0	24.0	4	—	—	—	—	250	—
1N723	24.0	28.0	4	—	—	—	—	250	—
1N724	27.0	35.0	4	—	—	—	—	250	—
1N725	30.0	42.0	4	—	—	—	—	250	—
1N726	33.0	50.0	4	—	—	—	—	250	—
1N727	36.0	60.0	4	—	—	—	—	250	—
1N728	39.0	70.0	4	—	—	—	—	250	—
1N729	43.0	84.0	4	—	—	—	—	250	—
1N730	47.0	98.0	4	—	—	—	—	250	—
1N731	51.0	115	4	—	—	—	—	250	—
1N732	56.0	140	4	—	—	—	—	250	—
1N733	62.0	170	2	—	—	—	—	250	—
1N734	68.0	200	2	—	—	—	—	250	—
1N735	75.0	240	2	—	—	—	—	250	—
1N736	82.0	280	2	—	—	—	—	250	—
1N737	91.0	340	1	—	—	—	—	250	—
1N746	3.3	28	20	10	1.0	1.0	100	400	USN
1N747	3.6	24	20	10	1.0	1.0	100	400	USN
1N748	3.9	23	20	10	1.0	1.0	100	400	USN
1N749	4.3	22	20	2	1.0	1.0	100	400	USN
1N750	4.7	19	20	2	1.0	1.0	100	400	USN
1N751	5.1	17	20	1	1.0	1.0	100	400	USN
1N752	5.6	11	20	1	1.0	1.0	100	400	USN
1N753	6.2	7	20	0.1	1.0	1.0	100	400	USN
1N754	6.8	5	20	0.1	1.0	1.0	100	400	USN
1N755	7.5	6	20	0.1	1.0	1.0	100	400	USN
1N756	8.2	8	20	0.1	1.0	1.0	100	400	USN
1N757	9.1	10	20	0.1	1.0	1.0	100	400	USN
1N758	10.0	17	20	0.1	1.0	1.0	100	400	USN
1N759	12.0	30	20	0.1	1.0	1.0	100	400	USN

Notes: Standard V_Z tolerance ±10%; for ±5%, add suffix A

SILICON ZENER DIODES . . . cont'd

Case Style — DO-7

TYPE	ZENER VOLTAGE V_Z (volts)	DYNAMIC IMPEDANCE, Z_Z (ohms)	ZENER CURRENT I_Z (MA)	DYNAMIC IMPEDANCE, Z_Z (ohms)	ZENER CURRENT I_Z (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	POWER DISSIPATION (mW)	MIL TYPE
1N761	4.3/5.4	40	10.0	—	—	—	—	—	—	250	—
1N762	5.2/6.4	18	10.0	—	—	—	—	—	—	250	—
1N763	6.2/8.0	7	10.0	—	—	—	—	—	—	250	—
1N764	7.5/10.0	12	10	—	—	—	—	—	—	250	—
1N765	9.0/12.0	45	5	—	—	—	—	—	—	250	—
1N766	11.0/14.5	55	5	—	—	—	—	—	—	250	—
1N767	13.5/18.0	70	5	—	—	—	—	—	—	250	—
1N768	17.0/21.0	100	5	—	—	—	—	—	—	250	—
1N769	20.0/27.0	150	5	—	—	—	—	—	—	250	—
1N957	6.8	4.5	18.5	700	1.0	150	4.9	1.5	200	400	—
1N958	7.5	5.5	16.5	700	0.5	75	5.4	1.5	200	400	—
1N959	8.2	6.5	15.0	700	0.5	50	5.9	1.5	200	400	—
1N960	9.1	7.5	14.0	700	0.5	25	6.6	1.5	200	400	—
1N961	10.0	8.5	12.5	700	0.25	10	7.2	1.5	200	400	—
1N962	11.0	9.5	11.5	700	0.25	5	8.0	1.5	200	400	USN
1N963	12.0	11.5	10.5	700	0.25	5	8.6	1.5	200	400	USN
1N964	13.0	13.0	9.5	700	0.25	5	9.4	1.5	200	400	USN
1N965	15.0	16.0	8.5	700	0.25	5	10.8	1.5	200	400	USN
1N966	16.0	17.0	7.8	700	0.25	5	11.5	1.5	200	400	USN
1N967	18.0	21.0	7.0	750	0.25	5	13.0	1.5	200	400	USN
1N968	20.0	25.0	6.2	750	0.25	5	14.4	1.5	200	400	USN
1N969	22.0	29.0	5.6	750	0.25	5	15.8	1.5	200	400	USN
1N970	24.0	33.0	5.2	750	0.25	5	17.3	1.5	200	400	USN
1N971	27.0	41.0	4.6	750	0.25	5	19.4	1.5	200	400	USN
1N972	30.0	49.0	4.2	1000	0.25	5	21.6	1.5	200	400	USN
1N973	33.0	58.0	3.8	1000	0.25	5	23.8	1.5	200	400	USN
1N974	36.0	70.0	3.4	1000	0.25	5	25.9	1.5	200	400	USN
1N975	39.0	80.0	3.2	1000	0.25	5	28.1	1.5	200	400	USN
1N976	43.0	93.0	3.0	1500	0.25	5	31.0	1.5	200	400	USN
1N977	47.0	105	2.7	1500	0.25	5	33.8	1.5	200	400	USN
1N978	51.0	125	2.5	1500	0.25	5	36.7	1.5	200	400	USN
1N979	56.0	150	2.2	2000	0.25	5	40.3	1.5	200	400	USN
1N980	62.0	185	2.0	2000	0.25	5	44.6	1.5	200	400	USN
1N981	68.0	230	1.8	2000	0.25	5	49.0	1.5	200	400	USN
1N982	75.0	270	1.7	2000	0.25	5	54.0	1.5	200	400	USN
1N983	82.0	330	1.5	3000	0.25	5	59.0	1.5	200	400	USN
1N984	91.0	400	1.4	3000	0.25	5	65.5	1.5	200	400	—
1N3506	3.3	24	20	—	—	4	1	—	—	400	—
1N3507	3.6	22	20	—	—	2	1	—	—	400	—
1N3508	3.9	20	20	—	—	0.4	1	—	—	400	—
1N3509	4.3	18	20	—	—	0.1	1	—	—	400	—
1N3510	4.7	16	20	—	—	5.0	2	—	—	400	—
1N3511	5.1	14	20	—	—	2.0	2	—	—	400	—
1N3512	5.6	8	20	—	—	5.0	3	—	—	400	—
1N3513	6.2	3	20	—	—	5.0	4	—	—	400	—
1N3514	6.8	3	20	—	—	1.0	5	—	—	400	—
1N3515	7.5	4	10	—	—	0.5	6	—	—	400	—
1N3516	8.2	5	10	—	—	0.25	7	—	—	400	—
1N3517	9.1	6	10	—	—	0.025	7	—	—	400	—
1N3518	10	7	10	—	—	0.010	8	—	—	400	—
1N3519	11	8	10	—	—	0.010	9	—	—	400	—
1N3520	12	10	10	—	—	0.010	10	—	—	400	—
1N3521	13	12	5	—	—	0.010	11	—	—	400	—
1N3522	15	14	5	—	—	0.010	13	—	—	400	—
1N3523	16	16	5	—	—	0.010	14	—	—	400	—

Notes: 1N957 through 1N984 — Standard V_Z tolerance ±20%; for ±10%, add suffix A; for ±5%, add suffix B

1N3506 through 1N3523 — Standard V_Z tolerance ±5%

SILICON ZENER DIODES . . . cont'd

Case Style — DO-7

TYPE	ZENER VOLTAGE V_Z (volts)	DYNAMIC IMPEDANCE, Z_Z (ohms)	ZENER CURRENT I_Z (MA)	REVERSE CURRENT (μA)	REVERSE VOLTAGE (volts)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (MA)	MAX. AVERAGE REVERSE CURRENT (MA)	POWER DISSIPATION (mW)
1N3524	18	18	5	0.010	16	—	—	—	400
1N3525	20	20	5	0.010	18	—	—	—	400
1N3526	22	35	5	0.010	19	—	—	—	400
1N3527	24	38	5	0.010	20	—	—	—	400
1N3528	27	40	4	0.010	22	—	—	—	400
1N3529	30	48	4	0.010	24	—	—	—	400
1N3530	33	50	3	0.010	26	—	—	—	400
1N3531	36	75	3	0.010	28	—	—	—	400
1N3532	39	100	3	0.010	30	—	—	—	400
1N3533	43	130	2	0.010	35	—	—	—	400
1N3534	47	150	2	0.010	38	—	—	—	400
1N4099	6.8	200	0.25	10.0	5.17	1.0	200	40	250
1N4100	7.5	200	0.25	10.0	5.70	1.0	200	40	250
1N4101	8.2	200	0.25	1.0	6.24	1.0	200	40	250
1N4102	8.7	200	0.25	1.0	6.61	1.0	200	40	250
1N4103	9.1	200	0.25	1.0	6.92	1.0	200	40	250
1N4104	10	200	0.25	1.0	7.60	1.0	200	40	250
1N4105	11	200	0.25	0.05	8.44	1.0	200	40	250
1N4106	12	200	0.25	0.05	9.12	1.0	200	40	250
1N4107	13	200	0.25	0.05	9.87	1.0	200	40	250
1N4108	14	200	0.25	0.05	10.65	1.0	200	40	250
1N4109	15	100	0.25	0.05	11.40	1.0	200	40	250
1N4110	16	100	0.25	0.05	12.15	1.0	200	40	250
1N4111	17	100	0.25	0.05	12.92	1.0	200	40	250
1N4112	18	100	0.25	0.05	13.67	1.0	200	40	250
1N4113	19	150	0.25	0.05	14.44	1.0	200	40	250
1N4114	20	150	0.25	0.01	15.20	1.0	200	40	250
1N4115	22	150	0.25	0.01	16.72	1.0	200	40	250
1N4116	24	150	0.25	0.01	18.25	1.0	200	40	250
1N4117	25	150	0.25	0.01	19.00	1.0	200	40	250
1N4118	27	150	0.25	0.01	20.46	1.0	200	40	250
1N4119	28	200	0.25	0.01	21.28	1.0	200	40	250
1N4120	30	200	0.25	0.01	22.80	1.0	200	40	250
1N4121	33	200	0.25	0.01	25.08	1.0	200	40	250
1N4122	36	200	0.25	0.01	27.38	1.0	200	40	250
1N4123	39	200	0.25	0.01	29.65	1.0	200	40	250
1N4124	43	250	0.25	0.01	32.65	1.0	200	40	250
1N4125	47	250	0.25	0.01	35.75	1.0	200	40	250
1N4126	51	300	0.25	0.01	38.76	1.0	200	40	250
1N4127	56	300	0.25	0.01	42.60	1.0	200	40	250
1N4128	60	400	0.25	0.01	45.60	1.0	200	40	250
1N4129	62	500	0.25	0.01	47.10	1.0	200	40	250
1N4130	68	700	0.25	0.01	51.68	1.0	200	40	250
1N4131	75	700	0.25	0.01	57.0	1.0	200	40	250
1N4132	82	800	0.25	0.01	62.32	1.0	200	40	250
1N4133	87	1000	0.25	0.01	66.12	1.0	200	40	250
1N4134	91	1200	0.25	0.01	69.16	1.0	200	40	250
1N4135	100	1500	0.25	0.01	76.00	1.0	200	40	250
1N4370	2.4	30	20	100	1.0	1.5	200	—	400
1N4371	2.7	30	20	75	1.0	1.5	200	—	400
1N4372*	3.0	29	20	50	1.0	1.5	200	—	400

Notes: 1N3524 through 1N4135 — Standard V_Z tolerance ±5%

1N4370 through 1N4372 — Standard V_Z tolerance ±10%; for ±5%, add suffix A

* Military Type — USN

50 WATT SILICON ZENER DIODES

Case Style — DO-5, TO-3

FLANGE MOUNTED (TO-3) TYPE	STUD MOUNTED (DO-5) TYPE	NOM. ZENER VOLTAGE, V_Z (volts)	ZENER CURRENT I_Z (MA)	DYNAMIC RESISTANCE (R_o) (ohms)	POWER DISSIPATION @ 75°C (watts)
1N2804	1N3305	6.8	1850	0.2	50
1N2805	1N3306	7.5	1700	0.3	50
1N2806	1N3307	8.2	1500	0.4	50
1N2807	1N3308	9.1	1370	0.5	50
1N2808	1N3309	10	1200	0.6	50
1N2809	1N3310	11	1100	0.8	50
1N2810	1N3311	12	1000	1.0	50
1N2811	1N3312	13	960	1.1	50
1N2812	1N3313	14	890	1.2	50
1N2813	1N3314	15	830	1.4	50
1N2814	1N3315	16	780	1.6	50
1N2815	1N3316	17	740	1.8	50
1N2816	1N3317	18	700	2.0	50
1N2817	1N3318	19	660	2.2	50
1N2818	1N3319	20	630	2.4	50
1N2819	1N3320	22	570	2.5	50
1N2820	1N3321	24	520	2.6	50
1N2821	1N3322	25	500	2.7	50
1N2822	1N3323	27	460	2.8	50
1N2823	1N3324	30	420	3.0	50
1N2824	1N3325	33	380	3.2	50
1N2825	1N3326	36	350	3.5	50
1N2826	1N3327	39	320	4.0	50
1N2827	1N3328	43	290	4.5	50
1N2828	1N3329	45	280	4.5	50
1N2829	1N3330	47	270	5.0	50
1N2830	1N3331	50	250	5.0	50
1N2831	1N3332	51	245	5.2	50
	1N3333	52	240	5.5	50
1N2832	1N3334	56	220	6.0	50
1N2833	1N3335	62	200	7.0	50
1N2834	1N3336	68	180	8.0	50
1N2835	1N3337	75	170	9.0	50
1N2836	1N3338	82	150	11	50
1N2837	1N3339	91	140	15	50
1N2838	1N3340	100	120	20	50
1N2839	1N3341	105	120	25	50
1N2840	1N3342	110	110	30	50
1N2841	1N3343	120	100	40	50
1N2842	1N3344	130	95	50	50
	1N3345	140	90	60	50
1N2843	1N3346	150	85	75	50
1N2844	1N3347	160	80	80	50
	1N3348	175	70	85	50
1N2845	1N3349	180	68	90	50
1N2846	1N3350	200	65	100	50

Notes: Standard tolerance ±20%; for ±10% add suffix A; for ±5% add suffix B.
Standard polarity is anode-to-case. Add suffix R for reverse polarity.

AXIAL LEAD POWER REGULATORS

TYPE	CASE STYLE	ZENER VOLTAGE V_Z (volts)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	POWER DISSIPATION (watts)
1N1765	Do-12	5.6	1.2	100	1.0
1N1766	Do-12	6.2	1.5	100	1.0
1N1767	Do-12	6.8	1.7	100	1.0
1N1768	Do-12	7.5	2.1	100	1.0
1N1769	Do-12	8.2	2.4	100	1.0
1N1770	Do-12	9.1	3.0	50	1.0
1N1771	Do-12	10.0	3.5	50	1.0
1N1772	Do-12	11.0	4.2	50	1.0
1N1773	Do-12	12.0	5.0	50	1.0
1N1774	Do-12	13.0	5.8	50	1.0
1N1775	Do-12	15.0	7.6	50	1.0
1N1776	Do-12	16.0	8.6	50	1.0
1N1777	Do-12	18.0	11	50	1.0
1N1778	Do-12	20.0	13	15	1.0
1N1779	Do-12	22.0	16	15	1.0
1N1780	Do-12	24.0	18	15	1.0
1N1781	Do-12	27.0	23	15	1.0
1N1782	Do-12	30.0	28	15	1.0
1N1783	Do-12	33.0	33	15	1.0
1N1784	Do-12	36.0	39	15	1.0
1N1785	Do-12	39.0	45	15	1.0
1N1786	Do-12	43.0	54	15	1.0
1N1787	Do-12	47	64	15	1.0
1N1788	Do-12	51	74	15	1.0
1N1789	Do-12	56	88	15	1.0
1N1790	Do-12	62	105	5	1.0
1N1791	Do-12	68	125	5	1.0
1N1792	Do-12	75	150	5	1.0
1N1793	Do-12	82	175	5	1.0
1N1794	Do-12	91	220	5	1.0
1N1795	Do-12	100	260	5	1.0
1N2032	Do-12	4.8	55	10	1.0
1N2033	Do-12	5.8	20	10	1.0
1N2034	Do-12	7.1	8.0	10	1.0
1N2035	Do-12	8.75	15.0	10	1.0
1N2036	Do-12	10.5	50.0	5	1.0
1N2037	Do-12	12.75	70.0	5	1.0
1N2038	Do-12	15.75	120.0	5	1.0
1N2039	Do-12	19.0	200.0	5	1.0
1N2040	Do-12	23.5	300.0	5	1.0
1N2032-1	Do-12	4.5	55	10.0	1.0
1N2032-2	Do-12	5.0	55	10.0	1.0
1N2033-1	Do-12	5.5	20	10.0	1.0
1N2033-2	Do-12	6.0	20	10.0	1.0
1N2034-1	Do-12	6.5	8.0	10.0	1.0
1N2034-2	Do-12	7.0	8.0	10.0	1.0
1N2034-3	Do-12	7.5	8.0	10.0	1.0
1N2035-1	Do-12	8.0	15.0	10.0	1.0
1N2035-2	Do-12	8.5	15.0	10.0	1.0
1N2035-3	Do-12	9.0	15.0	10.0	1.0
1N2035-4	Do-12	9.5	15.0	10.0	1.0
1N2036-1	Do-12	10.0	50	5	1.0
1N2036-2	Do-12	11.0	50	5	1.0
1N2037-1	Do-12	12.0	70	5	1.0
1N2037-2	Do-12	13.0	70	5	1.0
1N2037-3	Do-12	14.0	70	5	1.0
1N2038-1	Do-12	15.0	120	5	1.0
1N2038-2	Do-12	16.0	120	5	1.0
1N2038-3	Do-12	17.0	120	5	1.0
1N2039-1	Do-12	18.0	200	5	1.0
1N2039-2	Do-12	19.0	200	5	1.0
1N2039-3	Do-12	20.0	200	5	1.0
1N2040-1	Do-12	22.0	300	5	1.0
1N2040-2	Do-12	24.0	300	5	1.0
1N2040-3	Do-12	26.0	300	5	1.0
1N3016	Do-12	6.8	3.5	37.0	1.0
1N3017	Do-12	7.5	4.0	34.0	1.0
1N3018	Do-12	8.2	4.5	31.0	1.0
1N3019	Do-12	9.1	5.0	28.0	1.0
1N3020	Do-12	10.0	7.0	25.0	1.0
1N3021	Do-12	11.0	8.0	23.0	1.0
1N3022	Do-12	12.0	9.0	21.0	1.0
1N3023	Do-12	13.0	10.0	19.0	1.0
1N3024	Do-12	15.0	14.0	17.0	1.0
1N3025	Do-12	16.0	16.0	15.5	1.0
1N3026	Do-12	18.0	20.0	14.0	1.0
1N3027	Do-12	20.0	22.0	12.5	1.0
1N3028	Do-12	22.0	23.0	11.5	1.0
1N3029	Do-12	24.0	25.0	10.5	1.0
1N3030	Do-12	27.0	35.0	9.5	1.0
1N3031	Do-12	30.0	40.0	8.5	1.0
1N3032	Do-12	33.0	45.0	7.5	1.0
1N3033	Do-12	36.0	50.0	7.0	1.0
1N3034	Do-12	39.0	60.0	6.5	1.0
1N3035	Do-12	43.0	70.0	6.0	1.0
1N3036	Do-12	47.0	80.0	5.5	1.0
1N3037	Do-12	51.0	95.0	5.0	1.0
1N3038	Do-12	56	110	4.5	1.0
1N3039	Do-12	62	125	4.0	1.0
1N3040	Do-12	68	150	3.7	1.0
1N3041	Do-12	75	175	3.3	1.0
1N3042	Do-12	82	200	3.0	1.0
1N3043	Do-12	91	250	2.8	1.0
1N3044	Do-12	100	350	2.5	1.0
1N3045	Do-12	110	450	2.3	1.0
1N3046	Do-12	120	550	2.0	1.0
1N3047	Do-12	130	700	1.9	1.0
1N3048	Do-12	150	1000	1.7	1.0
1N3049	Do-12	160	1100	1.6	1.0
1N3050	Do-12	180	1200	1.4	1.0
1N3051	Do-12	200	1500	1.2	1.0
EVR4	IG-21	5.6	9.0	45	1.0
EVR5	IG-21	6.2	10	40	1.0
EVR6	IG-21	6.8	11	37	1.0
EVR7	IG-21	7.5	12	34	1.0
EVR8	IG-21	8.2	13	31	1.0
EVR9	IG-21	9.1	14	28	1.0
EVR10	IG-21	10.0	15	25	1.0
EVR11	IG-21	11.0	16	23	1.0
EVR12	IG-21	12.0	17	21	1.0

Notes: 1N1765 through 1N1795 — Standard V_Z tolerance ±10%; for ±5%, add suffix A

1N2032 through 1N2040 — Standard V_Z tolerance ±15% 1N2032-1 through 1N2040-3 — Standard V_Z tolerance ±5%

1N3016 through 1N3051 — Standard V_Z tolerance ±20%; for ±10%, add suffix A; for ±5%, add suffix B

1N3016B through 1N3032B available as JAN and TX types.

AXIAL LEAD POWER REGULATORS . . . cont'd

TYPE	CASE STYLE	ZENER VOLTAGE V_Z (volts)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	POWER DISSIPATION (watts)
EVR13	IG-21	13.0	18	19	1.0
EVR14	IG-21	14.0	20	18	1.0
EVR15	IG-21	15.0	22	17	1.0
EVR16	IG-21	16.0	24	16	1.0
EVR17	IG-21	17.0	26	15	1.0
EVR18	IG-21	18.0	28	14	1.0
EVR19	IG-21	19.0	30	14	1.0
EVR20	IG-21	20.0	30	13	1.0
EVR21	IG-21	21.0	32	13	1.0
EVR22	IG-21	22.0	32	12	1.0
EVR23	IG-21	23.0	34	12	1.0
EVR24	IG-21	24.0	34	11	1.0
EVR25	IG-21	25.0	39	11	1.0
EVR26	IG-21	26.0	43	10	1.0
EVR27	IG-21	27.0	45	10	1.0
EVR28	IG-21	28.0	47	10	1.0
EVR30	IG-21	30.0	50	9	1.0
EVR32	IG-21	32.0	55	8	1.0
EVR36	IG-21	36.0	60	7	1.0
EVR39	IG-21	39.0	75	6	1.0
EVR43	IG-21	43.0	90	6	1.0
EVR47	IG-21	47.0	110	5	1.0
EVR50	IG-21	50.0	125	5	1.0
EVR56	IG-21	56.0	130	4.5	1.0
EVR60	IG-21	60.0	150	4	1.0
EVR68	IG-21	68.0	200	3	1.0
EVR75	IG-21	75.0	225	3	1.0
EVR82	IG-21	82.0	235	3	1.0
EVR91	IG-21	91.0	275	2.5	1.0
EVR100	IG-21	100.0	400	2.5	1.0
EVR110	IG-21	110.0	450	2.5	1.0
EVR150	IG-21	150.0	1000	2	1.0

Notes: EVR 4 through EVR 150 — Standard V_Z tolerance ±20%; for ±10%, add suffix A; for ±5%, add suffix B

STUD MOUNTED POWER REGULATORS

Case Style — DO-4

TYPE	ZENER VOLTAGE V_Z (volts)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	POWER DISSIPATION (watts)
1N1351	10 ± 10%	2	500	10.0
1N1352	11 ± 10%	2	500	10.0
1N1353	12 ± 10%	2	500	10.0
1N1354	13 ± 10%	2	500	10.0
1N1355	15 ± 10%	2	500	10.0
1N1356	16 ± 10%	3	500	10.0
1N1357	18 ± 10%	3	150	10.0
1N1358	20 ± 10%	3	150	10.0
1N1359	22 ± 10%	3	150	10.0
1N1360	24 ± 10%	3	150	10.0
1N1361	27 ± 10%	3	150	10.0
1N1362	30 ± 10%	4	150	10.0
1N1363	33 ± 10%	4	150	10.0
1N1364	36 ± 10%	5	150	10.0
1N1365	39 ± 10%	5	150	10.0
1N1366	43 ± 10%	6	150	10.0
1N1367	47 ± 10%	7	150	10.0
1N1368	51 ± 10%	8	150	10.0
1N1379	56 ± 10%	9	150	10.0
1N1370	62 ± 10%	12	50	10.0
1N1371	68 ± 10%	14	50	10.0
1N1372	75 ± 10%	20	50	10.0
1N1373	82 ± 10%	22	50	10.0
1N1374	91 ± 10%	35	50	10.0
1N1375	100 ± 10%	40	50	10.0
1N1803	5.6	1.0	1000	10.0
1N1804	6.2	1.0	1000	10.0
1N1805	6.8	1.0	1000	10.0
1N1806	7.5	1.0	1000	10.0
1N1807	8.2	1.0	1000	10.0
1N1808	9.1	1.0	500	10.0
1N1809	110.0	47.0	50	10.0
1N1810	120.0	56.0	50	10.0
1N1811	130.0	65.0	50	10.0
1N1812	150.0	82.0	50	10.0
1N1813	160.0	93.0	50	10.0
1N1814	180.0	115.0	50	10.0
1N1815	200.0	140.0	50	10.0
1N1816	13.0	2.0	500	10.0
1N1817	15.0	2.0	500	10.0
1N1818	16.0	3.0	500	10.0
1N1819	18.0	3.0	500	10.0
1N1820	20.0	3.0	250	10.0
1N1821	22.0	3.0	250	10.0
1N1822	24.0	3.0	250	10.0
1N1823	27.0	3.0	250	10.0
1N1824	30.0	4.0	250	10.0
1N1825	33.0	4.0	150	10.0
1N1826	36.0	5.0	150	10.0
1N1827	39.0	5.0	150	10.0

Notes: Standard polarity is anode to stud; for cathode to stud, add suffix R; for ±5% Vz tolerance, add suffix A

STUD MOUNTED POWER REGULATORS . . . cont'd

Case Style — DO-4

TYPE	ZENER VOLTAGE V_Z (volts)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	POWER DISSIPATION (watts)
1N1828	43.0	6.0	150	10.0
1N1829	47.0	7.0	150	10.0
1N1830	51.0	8.0	150	10.0
1N1831	56.0	9.0	150	10.0
1N1832	62.0	12.0	50	10.0
1N1833	68.0	14.0	50	10.0
1N1834	75.0	20.0	50	10.0
1N1835	82.0	22.0	50	10.0
1N1836	91.0	35.0	50	10.0
1N2041	4.8	1.0	1000	10.0
1N2042	5.8	0.7	1000	10.0
1N2043	7.1	0.8	1000	10.0
1N2044	8.75	0.8	1000	10.0
1N2045	10.5	1.5	500	10.0
1N2046	12.75	2.0	500	10.0
1N2047	15.75	3.0	500	10.0
1N2048	19.0	3.0	500	10.0
1N2049	23.5	8.0	150	10.0
1N2041-1	4.5	1.0	1000	10.0
1N2041-2	5.0	1.0	1000	10.0
1N2042-1	5.5	0.7	1000	10.0
1N2042-2	6.0	0.7	1000	10.0
1N2043-1	6.5	0.8	1000	10.0
1N2043-2	7.0	0.8	1000	10.0
1N2043-3	7.5	0.8	1000	10.0
1N2044-1	8.0	0.8	1000	10.0
1N2044-2	8.5	0.8	1000	10.0
1N2044-3	9.0	0.8	1000	10.0
1N2044-4	9.5	0.8	1000	10.0
1N2045-1	10.0	1.5	500	10.0
1N2045-2	11.0	1.5	500	10.0
1N2046-1	12.0	2.0	500	10.0
1N2046-2	13.0	2.0	500	10.0
1N2046-3	14.0	2.0	500	10.0
1N2047-1	15.0	3.0	500	10.0
1N2047-2	16.0	3.0	500	10.0
1N2047-3	17.0	3.0	500	10.0
1N2048-1	18.0	3.0	500	10.0
1N2048-2	19.0	3.0	500	10.0
1N2048-3	20.0	3.0	500	10.0
1N2049-1	22.0	8.0	150	10.0
1N2049-2	24.0	8.0	150	10.0
1N2049-3	26.0	8.0	150	10.0
1N2970	6.8	1.2	370	10.0
1N2971	7.5	1.3	335	10.0
1N2972	8.2	1.5	305	10.0
1N2973	9.1	2.0	275	10.0
1N2974	10.0	3.0	250	10.0
1N2975	11.0	3.0	230	10.0
1N2976	12.0	3.0	210	10.0
1N2977	13.0	3.0	190	10.0
1N2979	15.0	3.0	170	10.0
1N2980	16.0	4.0	155	10.0
1N2982	18.0	4.0	140	10.0
1N2984	20.0	4.0	125	10.0
1N2985	22.0	5.0	115	10.0
1N2986	24.0	5.0	105	10.0
1N2988	27.0	7.0	95	10.0
1N2989	30.0	8.0	85	10.0
1N2990	33.0	9.0	75	10.0
1N2991	36.0	10.0	70	10.0
1N2992	39.0	11.0	65	10.0
1N2993	43.0	12.0	60	10.0
1N2995	47.0	14.0	55	10.0
1N2997	51.0	15.0	50	10.0
1N2999	56.0	16.0	45	10.0
1N3000	62.0	17.0	40	10.0
1N3001	68.0	18.0	37	10.0
1N3002	75.0	22.0	33	10.0
1N3003	82.0	25.0	30	10.0
1N3004	91.0	35.0	28	10.0
1N3005	100.0	40.0	25	10.0
1N3007	110.0	55.0	23	10.0
1N3008	120.0	75.0	20	10.0
1N3009	130.0	100.0	19	10.0
1N3011	150.0	175.0	17	10.0
1N3012	160	200	16	10.0
1N3014	180	260	14	10.0
1N3015	200	300	12	10.0

Notes: 1N1828 through 1N1836, standard polarity is anode to stud; for cathode to stud, add suffix R. Standard tolerance is ±10%; for ±5% tolerance, add suffix A.
1N2041 through 1N2049, standard polarity is cathode to stud, for anode to stud, add suffix R. Tolerance is ±15%.
1N2041-1 through IN2049-3, standard polarity is cathode to stud; for anode to stud, add suffix R. Tolerance is ±5%.
1N2970 through 1N3015, standard polarity is anode to stud; for cathode to stud, add suffix R. Standard Vz tolerance is ±20%; for ±10%, add suffix A; for ±5%, add suffix B.

PRECISION VOLTAGE REFERENCES

Encapsulated strings of closely matched "zener" diodes, selected for precision tolerance, low current use

Case Style — 1G-80-02

TYPE	ZENER VOLTAGE V_Z (volts)	ZENER CURRENT I_Z (MA)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	MAX. AVERAGE REVERSE CURRENT (MA)
SV4010	10	@ 1.0	90	@ 10	50
SV4011	11	@ 1.0	50	@ 10	45
SV4012	12	@ 1.0	30	@ 10	40
SV4013	13	@ 1.0	30	@ 10	40
SV4014	14	@ 1.0	20	@ 10	35
SV4015	15	@ 1.0	20	@ 10	30
SV4016	16	@ 1.0	30	@ 10	30
SV4017	17	@ 1.0	30	@ 10	30
SV4018	18	@ 1.0	40	@ 10	25
SV4019	19	@ 1.0	120	@ 5	25
SV4020	20	@ 1.0	120	@ 5	25
SV4021	21	@ 1.0	120	@ 5	20
SV4022	22	@ 1.0	120	@ 5	20
SV4023	23	@ 1.0	140	@ 5	20
SV4024	24	@ 1.0	160	@ 5	20
SV4025	25	@ 1.0	160	@ 5	20
SV4026	26	@ 1.0	180	@ 5	18
SV4027	27	@ 1.0	200	@ 5	18
SV4028	28	@ 1.0	240	@ 5	18
SV4029	29	@ 1.0	240	@ 5	16
SV4030	30	@ 1.0	240	@ 5	16
SV4031	31	@ 1.0	240	@ 5	16
SV4032	32	@ 1.0	240	@ 5	16
SV4033	33	@ 1.0	240	@ 5	14
SV4034	34	@ 1.0	300	@ 5	14
SV4035	35	@ 1.0	350	@ 5	14
SV4036	36	@ 1.0	400	@ 5	14
SV4037	37	@ 1.0	400	@ 5	14
SV4038	38	@ 1.0	400	@ 5	12
SV4039	39	@ 1.0	400	@ 5	12
SV4040	40	@ 1.0	600	@ 5	12
SV4041	41	@ 1.0	600	@ 5	12
SV4042	42	@ 1.0	600	@ 5	12
SV4043	43	@ 1.0	600	@ 5	12
SV4044	44	@ 1.0	600	@ 5	10
SV4045	45	@ 1.0	600	@ 5	10
SV4046	46	@ 1.0	600	@ 5	10
SV4047	47	@ 0.5	600	@ 5	10
SV4048	48	@ 0.5	800	@ 5	10
SV4049	49	@ 0.5	800	@ 5	10
SV4050	50	@ 0.5	800	@ 5	10
SV4051	51	@ 0.5	800	@ 5	9
SV4052	52	@ 0.5	800	@ 5	9
SV4053	53	@ 0.5	800	@ 5	9
SV4054	54	@ 0.5	800	@ 5	9

TYPE	ZENER VOLTAGE V_Z (volts)	ZENER CURRENT I_Z (MA)	DYNAMIC RESISTANCE (R_D) (ohms)	ZENER CURRENT I_Z (MA)	MAX. AVERAGE REVERSE CURRENT (MA)
SV4055	55	@ 0.5	800	@ 5	9
SV4056	56	@ 0.5	800	@ 5	9
SV4057	57	@ 0.5	1000	@ 5	8
SV4058	58	@ 0.5	1000	@ 5	8
SV4059	59	@ 0.5	1000	@ 5	8
SV4060	60	@ 0.5	1000	@ 5	8
SV4061	61	@ 0.5	1000	@ 5	8
SV4062	62	@ 0.5	1000	@ 5	8
SV4063	63	@ 0.5	1000	@ 5	8
SV4064	64	@ 0.5	1000	@ 5	8
SV4065	65	@ 0.5	1000	@ 5	8
SV4066	66	@ 0.5	1000	@ 5	7
SV4067	67	@ 0.5	1000	@ 5	7
SV4068	68	@ 0.5	1000	@ 5	7
SV4069	69	@ 0.5	1200	@ 5	7
SV4070	70	@ 0.5	1200	@ 5	7
SV4071	71	@ 0.5	1200	@ 5	7
SV4072	72	@ 0.5	1200	@ 5	7
SV4073	73	@ 0.5	1200	@ 5	6
SV4074	74	@ 0.5	1200	@ 5	6
SV4075	75	@ 0.5	1200	@ 5	6
SV4076	76	@ 0.5	1500	@ 5	6
SV4077	77	@ 0.5	1500	@ 5	6
SV4078	78	@ 0.5	1500	@ 5	6
SV4079	79	@ 0.5	1500	@ 5	6
SV4080	80	@ 0.5	1500	@ 5	6
SV4081	81	@ 0.5	1500	@ 5	6
SV4082	82	@ 0.5	1500	@ 5	6
SV4083	83	@ 0.5	1500	@ 5	6
SV4084	84	@ 0.5	1500	@ 5	6
SV4085	85	@ 0.5	1500	@ 5	5.5
SV4086	86	@ 0.5	1500	@ 5	5.5
SV4087	87	@ 0.5	1500	@ 5	5.5
SV4088	88	@ 0.5	1500	@ 5	5.5
SV4089	89	@ 0.5	1500	@ 5	5.5
SV4090	90	@ 0.5	1500	@ 5	5.5
SV4091	91	@ 0.5	1500	@ 5	5.5
SV4092	92	@ 0.5	2000	@ 5	5
SV4093	93	@ 0.5	2000	@ 5	5
SV4094	94	@ 0.5	2000	@ 5	5
SV4095	95	@ 0.5	2000	@ 5	5
SV4096	96	@ 0.5	2000	@ 5	5
SV4097	97	@ 0.5	2000	@ 5	5
SV4098	98	@ 0.5	2000	@ 5	5
SV4099	99	@ 0.5	2000	@ 5	5
SV4100	100	@ 0.5	2000	@ 5	5

Notes: Standard V_Z tolerance ±2%; for ±1%, add suffix A

VOLTAGE REFERENCES

Case Style — 1G-80-02

TYPE	ZENER VOLTAGE V_Z (volts)	TEMP. COEFFICIENT (% per °C)	DYNAMIC RESISTANCE (R_D) (ohms)
SV8221	12.6	±.01	30
SV8223	12.6	±.005	30
SV8227	12.6	±.001	30
SV8229	12.6	±.0005	30
SV8231	18.9	±.01	45
SV8233	18.9	±.005	45
SV8237	18.9	±.001	45
SV8239	18.9	±.0005	45
SV8241	25.2	±.01	60
SV8243	25.2	±.005	60
SV8247	25.2	±.001	60
SV8249	25.2	±.0005	60

Notes: Zener test current: 7.5 MA;
operating temperature range: —65 to +125°C.
Standard V_Z tolerance ±5%;
for ±2%, add suffix A;
for ±1% add suffix B

TYPE	ZENER VOLTAGE, V_Z (volts) MIN./MAX.		TEMP. COEFFICIENT (% per °C)	DYNAMIC RESISTANCE (R_D) (ohms)
SV3170	6.7	7.4	±.02	10
1N4501	6.7	7.4	±0.2	10
1N3199	8	8.8	±.005	15
1N3200	8	8.8	±.003	15
1N3201	8	8.8	±.002	15
1N3202	8	8.8	±.001	15
SV3206*	16	17.6	±.002	30
SV3207*	16	17.6	±.001	30

Notes: Zener test current: 10 MA;
operating temperature range: —65 to +125°C.
* Matched pair — low voltage assemblies

HIGH VOLTAGE ASSEMBLIES

Case Style — 1G-80

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	REVERSE CURRENT (μA) 25°C	REVERSE CURRENT (μA), 100°C	MAX. FORWARD VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT (MA), 25°C	MAX. AVERAGE FORWARD CURRENT (MA), 100°C	CASE STYLE
SE1730	1000	2.5	40	4	200	100	1G-80-04
SE1731	1500	2.5	40	5	200	100	1G-80-04
SE1732	2000	2.5	40	7	200	100	1G-80-05
SE1733	3000	5	75	10	150	75	1G-80-05
SE1734	5000	5	75	15	100	50	1G-80-06
SE2382	4000	5	75	14	150	75	1G-80-07
SE2383	6000	5	75	20	100	50	1G-80-07
SE2384	8000	5	75	25	75	40	1G-80-07
SE2385	10000	5	75	30	75	40	1G-80-09

Notes: Operating temperature range: —55 to +150°C

HIGH VOLTAGE SILICON CARTRIDGE RECTIFIERS

TYPE	MAX. PEAK REVERSE VOLTAGE (volts)	REVERSE CURRENT (MA)	MAX. FORWARD VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT (MA), 75°C	PEAK RECURRENT FORWARD CURRENT (MA)	CASE STYLE
1N1133	1500	.025	15.0	75	500	1G-81-02
1N1134	1500	.025	7.5	100	650	1G-81-01
1N1135	1800	.025	18.0	65	500	1G-81-02
1N1136	1800	.025	9.0	85	500	1G-81-01
1N1137	2400	.025	24.0	50	400	1G-81-02
1N1138	2400	.025	12.0	60	400	1G-81-01
1N1139	3600	.025	27.0	65	500	1G-81-03
1N1140	3600	.025	18.0	65	400	1G-81-02
1N1141	4800	.025	36.0	50	400	1G-81-03
1N1142	4800	.025	24.0	60	400	1G-81-02
1N1143	6000	.025	45.0	50	500	1G-81-03
1N1143A	6000	.025	30.0	65	500	1G-81-03
1N1144	7200	.025	54.0	50	400	1G-81-04
1N1145	7200	.025	36.0	60	400	1G-81-03
1N1146	8000	.025	60.0	45	400	1G-81-04
1N1147	12000	.025	60.0	45	400	1G-81-04
1N1148	14000	.025	52.0	50	400	1G-81-04
1N1149	16000	.025	60.0	45	400	1G-81-04

LEAD MOUNTED SILICON POWER RECTIFIERS

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (μA)	AMBIENT TEMP. (°C)	NOTES
1N316, A	Do-1	50	.25 @ 100		1.5 @ .25	240 @ 100		—
1N317, A	Do-1	100	.25 @ 100		1.5 @ .25	240 @ 100		—
1N318, A	Do-1	200	.25 @ 100		1.5 @ .25	240 @ 100		—
1N319, A	Do-1	350	.25 @ 100		1.5 @ .25	240 @ 100		—
1N320, A	Do-1	500	.25 @ 100		1.5 @ .25	240 @ 100		—
1N321, A	Do-1	850	.25 @ 100		1.5 @ .25	240 @ 100		—
1N322, A	Do-1	1000	.25 @ 100		1.5 @ .25	240 @ 100		—
1N323, A	Do-1	50	.40 @ 100		1.5 @ .40	240 @ 100		—
1N324, A	Do-1	100	.40 @ 100		1.5 @ .40	240 @ 100		—
1N325, A	Do-1	200	.40 @ 100		1.5 @ .40	240 @ 100		—
1N326, A	Do-1	350	.40 @ 100		1.5 @ .40	240 @ 100		—
1N327, A	Do-1	500	.40 @ 100		1.5 @ .40	240 @ 100		—
1N328, A	Do-1	850	.40 @ 100		1.5 @ .40	240 @ 100		—
IN329, A	Do-1	1000	.40 @ 100		1.5 @ .40	240 @ 100		—
IN359	Do-1	50	.15 @ 25		2 @ .20	250 @ 100		3
1N359A	Do-1	50	.15 @ 100		1.2 @ .5	1 @ 25		—
1N360	Do-1	100	.15 @ 25		2 @ .20	250 @ 100		3
1N360A	Do-1	100	.15 @ 100		1.2 @ .5	1 @ 25		—
1N361	Do-1	200	.15 @ 25		2 @ .20	250 @ 100		3
1N361A	Do-1	200	.15 @ 100		1.2 @ .5	1 @ 25		—
1N362	Do-1	350	.15 @ 25		2 @ .20	250 @ 100		3
1N362A	Do-1	350	.15 @ 100		1.2 @ .5	1 @ 25		—
1N363	Do-1	500	0.2 @ 25		2 @ 0.2	250 @ 100		3
1N363A	Do-1	500	0.2 @ 100		1.2 @ 0.5	2 @ 25		—
1N364	Do-1	850	0.1 @ 100		1.2 @ .30	60 @ 100		3
1N364A	Do-1	850	0.1 @ 125		1.2 @ .50	10 @ 25		—
1N365	Do-1	1000	0.1 @ 100		1.2 @ .30	60 @ 100		3
1N365A	Do-1	1000	0.1 @ 125		1.2 @ .50	10 @ 25		—
1N440	Do-1	100	0.3 @ 25		1.5 @ 0.3	0.3 @ 25		—
1N440B	Do-1	100	0.5 @ 100		1.5 @ 0.75	0.3 @ 25		—
1N441	Do-1	200	0.3 @ 25		1.5 @ 0.3	0.75 @ 25		—
1N441B	Do-1	200	0.5 @ 100		1.5 @ 0.75	0.75 @ 25		—
1N442	Do-1	300	0.3 @ 25		1.5 @ 0.3	1 @ 25		—
1N442B	Do-1	300	0.5 @ 100		1.5 @ 0.75	1 @ 25		—
1N443	Do-1	400	0.3 @ 25		1.5 @ 0.3	1.5 @ 25		—
1N443B	Do-1	400	0.5 @ 100		1.5 @ 0.75	1.5 @ 25		—
1N444	Do-1	500	0.3 @ 25		1.5 @ 0.3	1.75 @ 25		—
1N444B	Do-1	500	0.4 @ 100		1.5 @ 0.75	1.75 @ 25		—
1N445	Do-1	600	0.3 @ 25		1.5 @ 0.3	2 @ 25		—
1N445B	Do-1	600	0.4 @ 100		1.5 @ 0.75	2 @ 25		—
1N530	Do-1	100	0.3 @ 100		1.5 @ 0.3	300 @ 25		—
1N531	Do-1	200	0.3 @ 100		1.5 @ 0.3	300 @ 25		—
1N532	Do-1	300	0.3 @ 100		1.5 @ 0.3	300 @ 25		—
1N533	Do-1	400	0.3 @ 100		1.5 @ 0.3	300 @ 25		—
1N534	Do-1	500	0.3 @ 100		1.5 @ 0.3	300 @ 25		—
1N535	Do-1	600	0.3 @ 100		1.5 @ 0.3	300 @ 25		—
1N536	Do-1	50	0.25 @ 150		1.1 @ 0.5	300 @ 150		3
1N537	Do-1	100	0.25 @ 150		1.1 @ 0.5	300 @ 150		3
1N538	Do-1	200	0.25 @ 150		1.1 @ 0.5	300 @ 150		3
1N539	Do-1	300	0.25 @ 150		1.1 @ 0.5	300 @ 150		3
1N540	Do-1	400	0.25 @ 150		1.1 @ 0.5	300 @ 150		3
1N547	Do-1	600	0.25 @ 150		1.2 @ 0.5	300 @ 150		3
1N560	Do-1	800	0.25 @ 100		1.3 @ 0.25	300 @ 100		3
1N561	Do-1	1000	0.25 @ 100		1.3 @ 0.25	300 @ 100		3
1N588	Do-1	1500	0.1 @ 50		1.5 @ 0.1	300 @ 150		3

Notes: (3) I_R averaged over one cycle

1N538, 1N540 and 1N547 available as JAN types.

LEAD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FORWARD CURRENT (amps.) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (μA)	AMBIENT TEMP. (°C)	NOTES
1N589	Do-1	1500	0.25	50	1.5	0.25	300	150	3
1N599	Do-1	50	0.3	100	1.5	0.2	25	25	—
1N599A	Do-1	50	0.3	100	1.5	0.4	1	25	—
1N600	Do-1	100	0.3	100	1.5	0.2	25	25	—
1N600A	Do-1	100	0.3	100	1.5	0.4	1	25	—
1N601	Do-1	150	0.3	100	1.5	0.2	25	25	—
1N601A	Do-1	150	0.3	100	1.5	0.4	1	25	—
1N602	Do-1	200	0.3	100	1.5	0.2	25	25	—
1N602A	Do-1	200	0.3	100	1.5	0.4	1	25	—
1N603	Do-1	300	0.3	100	1.5	0.2	25	25	—
1N603A	Do-1	300	0.3	100	1.5	0.4	1	25	—
1N604	Do-1	400	0.3	100	1.5	0.2	25	25	—
1N604A	Do-1	400	0.3	100	1.5	0.4	1	25	—
1N605	Do-1	500	0.3	100	1.5	0.2	25	25	—
1N605A	Do-1	500	0.3	100	1.5	0.4	1	25	—
1N606	Do-1	600	0.3	100	1.5	0.2	25	25	—
1N606A	Do-1	600	0.3	100	1.5	0.4	1	25	—
1N1095	Do-1	500	0.25	150	1.1	500	300	150	3
1N1096	Do-1	600	0.25	150	1.1	500	300	150	3
1N1100	Do-1	100	0.25	150	1.5	0.75	300	150	3
1N1101	Do-1	200	0.25	150	1.5	0.75	300	150	3
1N1102	Do-1	300	0.25	150	1.5	0.75	300	150	3
1N1103	Do-1	400	0.25	150	1.5	0.75	300	150	3
1N1104	Do-1	500	0.25	150	1.5	0.75	300	150	3
1N1105	Do-1	600	0.25	150	1.5	0.75	300	150	3
1N1108	Do-1	800	0.25	150	1.5	0.75	300	150	3
1N1169A	Do-1	400	0.5	100	1.1	1	100	25	—
1N1217	Do-1	50	0.6	100	1.15	1	500	25	—
1N1217A	Do-1	150	0.6	100	1.15	1	50	25	—
1N1218	Do-1	100	0.6	100	1.15	1	500	25	—
1N1218A	Do-1	100	0.6	100	1.15	1	50	25	—
1N1219	Do-1	150	0.6	100	1.15	1	500	25	—
1N1219A	Do-1	150	0.6	100	1.15	1	50	25	—
1N1220	Do-1	200	0.6	100	1.15	1	500	25	—
1N1220A	Do-1	200	0.6	100	1.15	1	50	25	—
1N1221	Do-1	300	0.5	100	1.15	1	500	25	—
1N1221A	Do-1	300	0.5	100	1.15	1	50	25	—
1N1222	Do-1	400	0.5	100	1.15	1	500	25	—
1N1222A	Do-1	400	0.5	100	1.15	1	50	25	—
1N1223	Do-1	500	0.5	100	1.15	1	500	25	—
1N1223A	Do-1	500	0.5	100	1.15	1	50	25	—
1N1224	Do-1	600	0.45	100	1.15	1	500	25	—
1N1224A	Do-1	600	0.45	100	1.15	1	50	25	—
1N1225	Do-1	700	0.45	100	1.15	1	500	25	—
1N1225A	Do-1	700	0.45	100	1.15	1	50	25	—
1N1226	Do-1	800	0.4	100	1.15	1	500	25	—
1N1226A	Do-1	800	0.4	100	1.15	1	50	25	—
1N1251	Do-1	50	0.5	25	1	0.5	500	125	3
1N1252	Do-1	100	0.5	25	1	0.5	500	125	3
1N1253	Do-1	200	0.5	25	1	0.5	500	125	3
1N1254	Do-1	300	0.5	25	1	0.5	500	125	3
1N1255	Do-1	400	0.5	25	1	0.5	500	125	3
1N1256	Do-1	500	0.32	25	1	0.32	500	125	3
1N1257	Do-1	600	0.3	25	1	0.3	500	125	3
1N1258	Do-1	700	0.28	25	1	0.28	500	125	3

Notes: (3) I_R averaged over one cycle

LEAD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (μA)	AMBIENT TEMP. (°C)	NOTES
1N1259	Do-1	800	0.27 @	25	1 @ 0.27	500 @	125	3
1N1260	Do-1	900	0.25 @	25	1 @ 0.25	500 @	125	3
1N1261	Do-1	1000	0.24 @	25	1 @ 0.24	500 @	125	3
1N1406	Do-1	600	0.125 @	75	5 @ 1.2	10 @	25	—
1N1407	Do-1	800	0.125 @	75	5 @ 1.2	10 @	25	—
1N1408	Do-1	1000	0.125 @	75	5 @ 1.2	10 @	25	—
1N1409	Do-1	1200	0.125 @	75	5 @ 1.2	10 @	25	—
1N1410	Do-1	1500	0.125 @	75	6.25 @ 1.2	10 @	25	—
1N1443	Do-1	1000	0.6 @	100	1.15 @ 1	500 @	25	—
1N1486	Do-1	500	0.78 @	50	1.1 @ 0.5	20 @	25	—
1N1487	Do-1	100	0.75 @	25	0.55 @ 0.25	400 @	125	3, 4
1N1488	Do-1	200	0.75 @	25	0.55 @ 0.25	300 @	125	3, 4
1N1489	Do-1	300	0.75 @	25	0.55 @ 0.25	300 @	25	3, 4
1N1490	Do-1	400	0.75 @	25	0.55 @ 0.25	300 @	25	3, 4
1N1491	Do-1	500	0.75 @	25	0.55 @ 0.25	300 @	25	3, 4
1N1492	Do-1	600	0.75 @	25	0.55 @ 0.25	300 @	25	3, 4
1N1556	Do-1	100	0.75 @	100	1.4 @ 0.6	1000 @	100	—
1N1557	Do-1	200	0.75 @	100	1.4 @ 0.6	1000 @	100	—
1N1558	Do-1	300	0.75 @	100	1.4 @ 0.6	1000 @	100	—
1N1559	Do-1	400	0.75 @	100	1.4 @ 0.6	1000 @	100	—
1N1560	Do-1	500	0.75 @	100	1.4 @ 0.6	1000 @	100	—
1N1644	Do-1	50	0.75 @	50	0.5 @ 0.25	400 @	150	3, 4
1N1645	Do-1	100	0.75 @	50	0.5 @ 0.25	400 @	150	3, 4
1N1646	Do-1	150	0.75 @	50	0.5 @ 0.25	400 @	150	3, 4
1N1647	Do-1	200	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1648	Do-1	250	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1649	Do-1	300	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1650	Do-1	350	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1651	Do-1	400	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1652	Do-1	500	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1653	Do-1	600	0.75 @	50	0.5 @ 0.25	300 @	150	3, 4
1N1692	Do-1	100	0.6 @	50	0.6 @ 0.25	500 @	100	3, 4
1N1693	Do-1	200	0.6 @	50	0.6 @ 0.25	500 @	100	3, 4
1N1694	Do-1	300	0.6 @	50	0.6 @ 0.25	500 @	100	3, 4
1N1695	Do-1	400	0.6 @	50	0.6 @ 0.25	500 @	100	3, 4
1N1696	Do-1	500	0.6 @	50	0.6 @ 0.25	0.5 @	100	3, 4
1N1697	Do-1	600	0.6 @	50	0.6 @ 0.25	0.5 @	100	3, 4
1N1701	Do-12	50	0.15 @	150	1.3 @ 0.6	10 @	25	—
1N1702	Do-12	100	0.15 @	150	1.3 @ 0.6	10 @	25	—
1N1703	Do-12	200	0.15 @	150	1.3 @ 0.6	10 @	25	—
1N1704	Do-12	300	0.15 @	150	1.3 @ 0.6	10 @	25	—
1N1705	Do-12	400	0.15 @	150	1.3 @ 0.6	10 @	25	—
1N1706	Do-12	500	0.15 @	150	1.3 @ 0.6	10 @	25	—
1N1707	Do-12	50	0.5 @	55	1.2 @ 0.5	10 @	25	—
1N1708	Do-12	100	0.5 @	55	1.2 @ 0.5	10 @	25	—
1N1709	Do-12	200	0.5 @	55	1.2 @ 0.5	10 @	25	—
1N1710	Do-12	300	0.5 @	55	1.2 @ 0.5	10 @	25	—
1N1711	Do-12	400	0.5 @	55	1.2 @ 0.5	10 @	25	—
1N1712	Do-12	500	0.5 @	55	1.2 @ 0.5	10 @	25	—
1N2069	Do-27	200	0.75 @	25	1.2 @ 0.5	10 @	25	—
1N2069A	Do-27	200	0.75 @	25	1.0 @ 0.5	5 @	25	—
1N2070	Do-27	400	0.75 @	25	1.2 @ 0.5	10 @	25	—
1N2070A	Do-27	400	0.75 @	25	1.0 @ 0.5	5 @	25	—
1N2071	Do-27	600	0.75 @	25	1.2 @ 0.5	10 @	25	—
1N2071A	Do-27	600	0.75 @	25	1.0 @ 0.5	5 @	25	—

Notes: (3) I_R averaged over one cycle (4) V_F average volts at average current

LEAD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_o (amps)	AMBIENT TEMP. (°C)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (amps)	REVERSE CURRENT (μA)	AMBIENT TEMP. (°C)	NOTES
1N2072	Do-1	50	0.75	25	1.2	0.5	250	100	—
1N2073	Do-1	100	0.75	25	1.2	0.5	250	100	—
1N2074	Do-1	150	0.75	25	1.2	0.5	250	100	—
1N2075	Do-1	200	0.75	25	1.2	0.5	250	100	—
1N2076	Do-1	250	0.75	25	1.2	0.5	250	100	—
1N2077	Do-1	300	0.75	25	1.2	0.5	250	100	—
1N2078	Do-1	400	0.75	25	1.2	0.5	250	100	—
1N2079	Do-1	500	0.75	25	1.2	0.5	250	100	—
1N2080	Do-1	50	0.5	25	1.5	0.5	350	100	—
1N2081	Do-1	100	0.5	25	1.5	0.5	350	100	—
1N2082	Do-1	200	0.5	25	1.5	0.5	350	100	—
1N2083	Do-1	300	0.5	25	1.5	0.5	350	100	—
1N2084	Do-1	400	0.5	25	1.5	0.5	350	100	—
1N2085	Do-1	500	0.5	25	1.5	0.5	350	100	—
1N2086	Do-1	600	0.5	25	1.5	0.5	350	100	—
1N2103	Do-1	50	0.75	25	1.2	0.75	300	25	—
1N2104	Do-1	100	0.75	25	1.2	0.75	300	25	—
1N2105	Do-1	200	0.75	25	1.2	0.75	300	25	—
1N2106	Do-1	300	0.75	25	1.2	0.75	300	25	—
1N2107	Do-1	400	0.75	25	1.2	0.75	300	25	—
1N2108	Do-1	500	0.75	25	1.2	0.75	300	25	—
1N2115	Do-1	365	0.3	50	0.8	0.2	250	85	4
1N2117	Do-1	720	0.75	50	1.3	0.75	10	25	—
1N2373	Do-1	600	0.25	25	3.0	0.4	10	25	—
1N2374	Do-1	1000	0.25	25	3.0	0.4	10	25	—
1N2482	Do-27	200	0.75	55	1.2	0.75	1000	55	—
1N2483	Do-27	400	0.75	55	1.2	0.75	1000	55	—
1N2484	Do-27	600	0.75	55	1.2	0.75	1000	55	—
1N2485	Do-1	200	0.75	55	1	0.75	1	55	—
1N2486	Do-1	300	0.75	55	1	0.75	1	55	—
1N2487	Do-1	400	0.75	55	1	0.75	1	55	—
1N2488	Do-1	500	0.75	55	1	0.75	1	55	—
1N2489	Do-1	600	0.75	55	1	0.75	1	55	—
1N2501	Do-1	800	0.15	25	1.5	0.1	20	25	—
1N2502	Do-1	1000	0.15	25	1.5	0.1	20	25	—
1N2503	Do-1	1200	0.15	25	1.5	0.1	20	25	—
1N2504	Do-1	1500	0.15	25	1.5	0.1	20	25	—
1N2505	Do-1	800	0.3	25	1.5	0.2	20	25	—
1N2506	Do-1	1000	0.3	25	1.5	0.2	20	25	—
1N2507	Do-1	1200	0.3	25	1.5	0.2	20	25	—
1N2508	Do-1	1500	0.3	25	1.5	0.2	20	25	—
1N2609	Do-12	50	0.75	50	1	0.75	1	25	—
1N2610	Do-12	100	0.75	50	1	0.75	1	25	—
1N2611	Do-12	200	0.75	50	1	0.75	1	25	—
1N2612	Do-12	300	0.75	50	1	0.75	1	25	—
1N2613	Do-12	400	0.75	50	1	0.75	1	25	—
1N2614	Do-12	500	0.75	50	1	0.75	1	25	—
1N2615	Do-12	600	0.75	50	1	0.75	1	25	—
1N2616	Do-12	800	0.75	50	1	0.75	1	25	—
1N2617	Do-12	1000	0.75	50	1	0.75	1	25	—
1N2858	Do-1	50	0.75	75	1.2	0.75	400	100	3
1N2859	Do-1	100	0.75	75	1.2	0.75	400	100	3
1N2860	Do-1	200	0.75	75	1.2	0.75	400	100	3
1N2861	Do-1	300	0.75	75	1.2	0.75	300	100	3
1N2862	Do-1	400	0.75	75	1.2	0.75	300	100	3
1N2863	Do-1	500	0.75	75	1.2	0.75	300	100	3
1N2864	Do-1	600	0.75	75	1.2	0.75	300	100	3
1N3072	Do-12	50	0.2	150	1.5	0.5	1	25	3

Notes: (3) I_R averaged over one cycle (4) V_F average volts at average current

LEAD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_o (amps)	AMBIENT TEMP. (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (μA)	AMBIENT TEMP. (°C)	NOTES
1N3073	Do-12	100	0.2	150	1.5 @ 0.5	1	25	3
1N3074	Do-12	150	0.2	150	1.5 @ 0.5	1	25	3
1N3075	Do-12	200	0.2	150	1.5 @ 0.5	1	25	3
1N3076	Do-12	250	0.2	150	1.5 @ 0.5	1	25	3
1N3077	Do-12	300	0.2	150	1.5 @ 0.5	1	25	3
1N3078	Do-12	350	0.2	150	1.5 @ 0.5	1	25	3
1N3079	Do-12	400	0.2	150	1.5 @ 0.5	1	25	3
1N3080	Do-12	500	0.2	150	1.5 @ 0.5	1	25	—
1N3081	Do-12	600	0.2	150	1.5 @ 0.5	1	25	—
1N3082	Do-12	200	0.5	150	1 @ 0.75	5	25	—
1N3083	Do-12	400	0.5	150	1 @ 0.75	5	25	—
1N3084	Do-12	600	0.5	150	1 @ 0.75	5	25	—
1N3189	Do-12	200	1	100	1 @ 0.75	5	25	—
1N3190	Do-12	400	1	100	1 @ 0.75	5	25	—
1N3191	Do-12	600	1	100	1 @ 0.75	5	25	—
1N3193	Do-12	200	0.75	75	1.2 @ 1	5	25	—
1N3194	Do-12	400	0.75	75	1.2 @ 1	5	25	—
1N3195	Do-12	600	0.75	75	1.2 @ 1	5	25	—
1N3196	Do-12	800	0.75	75	1.2 @ 1	5	25	—
1N3253	Do-12	200	0.75	75	1.2 @ 1	5	25	5
1N3254	Do-12	400	0.75	75	1.2 @ 1	5	25	5
1N3255	Do-12	600	0.75	75	1.2 @ 1	5	25	5
1N3256	Do-12	800	0.75	75	1.2 @ 1	5	25	5
1N3639	Do-12	200	0.75	75	1.1 @ 1	200	75	3, 5
1N3640	Do-12	400	0.75	75	1 @ 1	200	75	3, 5
1N3641	Do-12	600	0.75	75	1 @ 1	200	75	3, 5
1N3642	Do-12	800	0.5	75	1 @ 1	200	75	3, 5
1N4719	1G-76	50	3	75	1 @ 3	1500	75	3
1N4720	1G-76	100	3	75	1 @ 3	1500	75	3
1N4721	1G-76	200	3	75	1 @ 3	1500	75	3
1N4722	1G-76	400	3	75	1 @ 3	1500	75	3
1N4723	1G-76	600	3	75	1 @ 3	1500	75	3
1N4724	1G-76	800	3	75	1 @ 3	1500	75	3
1N4725	1G-76	1000	3	75	1 @ 3	1500	75	3
ER1	Do-27	50	0.4	100	1.25 @ 0.5	25	25	—
ER11	Do-27	100	0.4	100	1.25 @ 0.5	25	25	—
ER21	Do-27	200	0.4	100	1.25 @ 0.5	25	25	—
ER31	Do-27	300	0.4	100	1.25 @ 0.5	25	25	—
ER41	Do-27	400	0.4	100	1.25 @ 0.5	25	25	—
ER51	Do-27	500	0.4	100	1.25 @ 0.5	25	25	—
ER61	Do-27	600	0.4	100	1.25 @ 0.5	25	25	—
ER81	Do-27	800	0.3	100	1.25 @ 0.5	25	25	—
ER181	Do-27	50	1	75	1.1 @ 1	10	25	—
ER182	Do-27	100	1	75	1.1 @ 1	10	25	—
ER183	Do-27	200	1	75	1.1 @ 1	10	25	—
ER184	Do-27	400	1	75	1.1 @ 1	10	25	—
ER185	Do-27	600	1	75	1.1 @ 1	10	25	—
ER186	Do-27	800	1	75	1.1 @ 1	10	25	—
ER187	Do-27	1000	1	75	1.1 @ 1	10	25	—
ER308	Do-27	800	0.5	100	1.1 @ 0.5	10	25	—
ER310	Do-27	1000	0.5	100	1.1 @ 0.5	10	25	—
ER312	Do-27	1200	0.5	100	1.1 @ 0.5	10	25	—
SL91	Do-1	100	0.15	85	1.1 @ 0.5	50	25	—
SL92	Do-1	200	0.30	85	1.1 @ 0.5	50	25	—
SL93	Do-1	300	0.30	85	1.1 @ 0.5	50	25	—
SL608	Do-1	800	0.15	25	1.5 @ 0.1	20	25	—

Notes: (3) I_R averaged over one cycle (5) Plastic insulating sleeve over body

LEAD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (μA)	AMBIENT TEMP. (°C)	NOTES
SL610	Do-1	1000	0.15 @	25	1.5 @ 0.1	20 @	25	—
SL612	Do-1	1200	0.15 @	25	1.5 @ 0.1	20 @	25	—
SL615	Do-1	1500	0.15 @	25	1.5 @ 0.1	20 @	25	—
SL708	Do-1	800	0.3 @	25	1.5 @ 0.2	20 @	25	—
SL710	Do-1	1000	0.3 @	25	1.5 @ 0.2	20 @	25	—
SL712	Do-1	1200	0.3 @	25	1.5 @ 0.2	20 @	25	—
SL715	Do-1	1500	0.3 @	25	1.5 @ 0.2	20 @	25	—
TK5	Do-12	50	0.25 @	150	1.1 @ 0.5	10 @	25	—
TK10	Do-12	100	0.25 @	150	1.1 @ 0.5	10 @	25	—
TK11	Do-12	100	0.5 @	150	1 @ 0.75	5 @	25	—
TK20	Do-12	200	0.25 @	150	1.1 @ 0.5	10 @	25	—
TK21	Do-12	200	0.5 @	150	1 @ 0.75	5 @	25	—
TK30	Do-12	300	0.25 @	150	1.1 @ 0.5	10 @	25	—
TK40	Do-12	400	0.25 @	150	1.1 @ 0.5	10 @	25	—
TK41	Do-12	400	0.5 @	150	1 @ 0.75	5 @	25	—
TK50	Do-12	500	0.25 @	150	1.1 @ 0.5	10 @	25	—
TK60	Do-12	600	0.25 @	150	1.2 @ 0.5	10 @	25	—
TK61	Do-12	600	0.5 @	150	1 @ 0.75	5 @	25	—
TL11	Do-1	100	0.2 @	100	2 @ 0.4	300 @	100	3
TL12	Do-1	100	0.35 @	100	1.6 @ 0.8	100 @	100	3
TL21	Do-1	200	0.2 @	100	2 @ 0.4	300 @	100	3
TL22	Do-1	200	0.35 @	100	1.6 @ 0.8	100 @	100	3
TL31	Do-1	300	0.2 @	100	2 @ 0.4	300 @	100	3
TL32	Do-1	300	0.35 @	100	1.6 @ 0.8	100 @	100	3
TL41	Do-1	400	0.2 @	100	2 @ 0.4	300 @	100	3
TL42	Do-1	400	0.35 @	100	1.6 @ 0.8	100 @	100	3
TL51	Do-1	500	0.2 @	100	2 @ 0.4	300 @	100	3
TL61	Do-1	600	0.2 @	100	2 @ 0.4	300 @	100	3
TP101	1G-16	100	0.5 @	100	1.5 @ 0.5	500 @	25	3
TP201	1G-16	200	0.5 @	100	1.5 @ 0.5	500 @	25	3
TP301	1G-16	300	0.5 @	100	1.5 @ 0.5	500 @	25	3
TP401	1G-16	400	0.5 @	100	1.5 @ 0.5	500 @	25	3
ER2	*	50	1 @	75	1.1 @ 1	10 @	25	—
ER12	*	50	1 @	75	1.1 @ 1	10 @	25	—
ER22	*	50	1 @	75	1.1 @ 1	10 @	25	—
ER42	*	50	1 @	75	1.1 @ 1	10 @	25	—
ER62	*	50	1 @	75	1.1 @ 1	10 @	25	—

SILICON GLASS RECTIFIERS

SGR100	Do-29	100	1 @	100	1 @ 1	10 @	25	—
1N4383	Do-29	200	1 @	100	1 @ 1	10 @	25	—
1N4384	Do-29	400	1 @	100	1 @ 1	10 @	25	—
1N4385	Do-29	600	1 @	100	1 @ 1	10 @	25	—
1N4585	Do-29	800	.6 @	100	1 @ 1	10 @	25	—
1N4586	Do-29	1000	.6 @	100	1 @ 1	10 @	25	—
SGR200A	Do-29	200	1 @	50	1 @ 1	5 @	25	4
SGR400A	Do-29	400	1 @	50	1 @ 1	5 @	25	4
SGR600A	Do-29	600	1 @	50	1 @ 1	5 @	25	4

Notes: (3) I_R averaged over one cycle (4) Controlled Avalanche Type

*Subminiature epoxy package

STUD MOUNTED SILICON POWER RECTIFIERS

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N248	Do-5	50	10 @ 150		1.5 @ 25	5 @ 150		3
1N248A, B	Do-5	50	20 @ 150		1.5 @ 50	5 @ 150		3
1N249	Do-5	100	10 @ 150		1.5 @ 25	5 @ 150		3
1N249A, B	Do-5	100	20 @ 150		1.5 @ 50	5 @ 150		3
1N250	Do-5	200	10 @ 150		1.5 @ 25	5 @ 150		3
1N250A, B	Do-5	200	20 @ 150		1.5 @ 50	5 @ 150		3
1N253	Do-4	95	1 @ 150		2 @ 2	.1 @ 150		—
1N254	Do-4	190	0.4 @ 150		2 @ 0.8	.1 @ 150		—
1N255	Do-4	380	0.4 @ 150		2 @ 0.8	.15 @ 150		—
1N256	Do-4	570	0.2 @ 150		2 @ 0.4	.25 @ 150		—
1N332	Do-4	400	0.4 @ 150		2 @ 0.8	.2 @ 150		—
1N333	Do-4	400	0.2 @ 150		2 @ 0.4	.2 @ 150		—
1N334	Do-4	300	0.4 @ 150		2 @ 0.8	.2 @ 150		—
1N335	Do-4	300	0.2 @ 150		2 @ 0.4	.2 @ 150		—
1N336	Do-4	200	0.4 @ 150		2 @ 0.8	.1 @ 150		—
1N337	Do-4	200	0.2 @ 150		2 @ 0.4	.2 @ 150		—
1N338	Do-4	100	1 @ 150		2 @ 2	.2 @ 150		—
1N339	Do-4	100	0.4 @ 150		2 @ 0.8	.1 @ 150		—
1N340	Do-4	100	0.2 @ 150		2 @ 0.4	.5 @ 150		—
1N341	Do-4	400	0.4 @ 150		2 @ 0.8	.1 @ 150		—
1N342	Do-4	400	0.2 @ 150		2 @ 0.4	.5 @ 150		—
1N343	Do-4	300	0.4 @ 150		2 @ 0.8	.5 @ 150		—
1N344	Do-4	300	0.2 @ 150		2 @ 0.4	0.5 @ 150		—
1N345	Do-4	200	0.4 @ 150		2 @ 0.8	0.5 @ 150		—
1N346	Do-4	200	0.2 @ 150		2 @ 0.4	0.5 @ 150		—
1N347	Do-4	100	1 @ 150		2 @ 2	0.5 @ 150		—
1N348	Do-4	100	0.4 @ 150		2 @ 0.8	0.5 @ 150		—
1N349	Do-4	100	0.2 @ 150		2 @ 0.4	0.5 @ 150		—
1N550	Do-4	100	0.5 @ 125		1.5 @ 0.5	0.5 @	25	6
1N551	Do-4	200	0.5 @ 125		1.5 @ 0.5	1 @	25	6
1N552	Do-4	300	0.5 @ 125		1.5 @ 0.5	1.5 @	25	6
1N553	Do-4	400	0.5 @ 125		1.5 @ .05	2.5 @	25	6
1N554	Do-4	500	0.5 @ 125		1.5 @ 0.5	3.5 @	25	6
1N555	Do-4	600	0.5 @ 125		1.5 @ 0.5	5 @	25	6
1N562	Do-4	800	0.4 @ 125		1.75 @ 0.4	15 @	25	6
1N563	Do-4	1000	0.4 @ 125		1.75 @ 0.4	20 @	25	6
1N607	Do-4	50	0.8 @ 100		1.5 @ 0.2	25 @	25	6
1N607A	Do-4	50	0.8 @ 100		1.5 @ 0.4	1 @	25	6
1N608	Do-4	100	0.8 @ 100		1.5 @ 0.2	25 @	25	6
1N608A	Do-4	100	0.8 @ 100		1.5 @ 0.4	1 @	25	6
1N609	Do-4	150	0.8 @ 100		1.5 @ 0.2	25 @	25	6
1N609A	Do-4	150	0.8 @ 100		1.5 @ 0.4	1 @	25	6
1N610	Do-4	200	0.8 @ 100		1.5 @ 0.2	25 @	25	6
1N610A	Do-4	200	0.8 @ 100		1.5 @ 0.4	1 @	25	6
1N611	Do-4	300	0.8 @ 100		1.5 @ 0.4	25 @	25	6
1N611A	Do-4	300	0.8 @ 100		1.5 @ 0.2	1 @	25	6
1N612	Do-4	400	0.8 @ 100		1.5 @ 0.4	25 @	25	6
1N612A	Do-4	400	0.8 @ 100		1.5 @ 0.2	1 @	25	6
1N613	Do-4	500	0.8 @ 100		1.5 @ 0.4	25 @	25	6
1N613A	Do-4	500	0.8 @ 100		1.5 @ 0.2	1 @	25	6
1N614	Do-4	600	0.8 @ 100		1.5 @ 0.4	25 @	25	6
1N614A	Do-4	600	0.8 @ 100		1.5 @ 0.2	1 @	25	6
1N1115	Do-4	100	0.6 @ 150		0.65 @ 0.6	0.4 @ 150		4
1N1116	Do-4	200	0.6 @ 150		0.65 @ 0.6	0.3 @ 150		4
1N1117	Do-4	300	0.6 @ 150		0.65 @ 0.6	0.3 @ 150		4

Notes: (3) Reverse polarity (anode to stud) available, add suffix R (4) V_F full cycle average (6) I_R in μ ADC

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (amps)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N1118	Do-4	400	0.6 @ 150		0.65 @ 0.6		0.3 @ 150		4
1N1119	Do-4	500	0.6 @ 150		0.65 @ 0.6		0.3 @ 150		4
1N1120	Do-4	600	0.6 @ 150		0.65 @ 0.6		0.3 @ 150		4
1N1124	Do-4	200	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1124A	Do-4	200	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1125	Do-4	300	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1125A	Do-4	300	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1126	Do-4	400	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1126A	Do-4	400	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1127	Do-4	500	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1127A	Do-4	500	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1128	Do-4	600	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1128A	Do-4	600	1 @ 150		1.1 @ 1		0.3 @ 150		—
1N1130	Do-4	1500	0.3 @ 25		15 @ 0.3		0.05 @ 25		5
1N1183	Do-5	50	35 @ 140		1.4 @ 100		10 @ 140		3
1N1183A	Do-5	50	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1184	Do-5	100	35 @ 140		1.4 @ 100		10 @ 140		3
1N1184A	Do-5	100	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1185	Do-5	150	35 @ 140		1.4 @ 100		10 @ 140		3
1N1185A	Do-5	150	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1186	Do-5	200	35 @ 140		1.4 @ 100		10 @ 140		3
1N1186A	Do-5	200	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1187	Do-5	300	35 @ 140		1.4 @ 100		10 @ 140		3
1N1187A	Do-5	300	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1188	Do-5	400	35 @ 140		1.4 @ 100		10 @ 140		3
1N1188A	Do-5	400	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1189	Do-5	500	35 @ 140		1.4 @ 100		10 @ 140		3
1N1189A	Do-5	500	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1190	Do-5	600	35 @ 140		1.4 @ 100		10 @ 140		3
1N1190A	Do-5	600	40 @ 150		1.1 @ 100		2.5 @ 150		—
1N1191	Do-5	50	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1191A	Do-5	50	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1192	Do-5	100	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1192A	Do-5	100	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1193	Do-5	150	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1193A	Do-5	150	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1194	Do-5	200	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1194A	Do-5	200	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1195	Do-5	300	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1195A	Do-5	300	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1196	Do-5	400	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1196A	Do-5	400	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1197	Do-5	500	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1197A	Do-5	500	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1198	Do-5	600	18 @ 140		1.3 @ 50		10 @ 140		3, 5
1N1198A	Do-5	600	22 @ 150		1.2 @ 60		2.5 @ 150		3
1N1199	Do-4	50	12 @ 150		1.3 @ 12		10 @ 150		5
1N1199A	Do-4	50	12 @ 150		1.3 @ 12		3 @ 150		—
1N1199B	Do-4	50	12 @ 150		1.1 @ 12		0.9 @ 150		—
1N1200	Do-4	100	12 @ 150		1.3 @ 12		10 @ 150		5
1N1200A	Do-4	100	12 @ 150		1.3 @ 12		2.5 @ 150		—
1N1200B	Do-4	100	12 @ 150		1.1 @ 12		0.9 @ 150		—
1N1201	Do-4	150	12 @ 150		1.3 @ 12		10 @ 150		5
1N1201A	Do-4	150	12 @ 150		1.3 @ 12		2.25 @ 150		—
1N1201B	Do-4	150	12 @ 150		1.1 @ 12		0.9 @ 150		—
1N1202	Do-4	200	12 @ 150		1.3 @ 12		10 @ 150		5
1N1202A	Do-4	200	12 @ 150		1.3 @ 12		2 @ 150		—
1N1202B	Do-4	200	12 @ 150		1.1 @ 12		0.9 @ 150		—
1N1203	Do-4	300	12 @ 150		1.3 @ 12		10 @ 150		5

Notes: (3) Reverse polarity (anode to stud) available, add suffix R (4) V_F full cycle average (5) I_R — DC or peak value

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_o (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N1201B	Do-4	150	12 @ 150		1.1 @ 12	0.9 @ 150		—
1N1202	Dc-4	200	12 @ 150		1.3 @ 12	10 @ 150		5
1N1202A	Do-4	200	12 @ 150		1.3 @ 12	2 @ 150		—
1N1202B	Do-4	200	12 @ 150		1.1 @ 12	0.9 @ 150		—
1N1203	Do-4	300	12 @ 150		1.3 @ 12	10 @ 150		5
1N1203A	Do-4	300	12 @ 150		1.3 @ 12	1.75 @ 150		—
1N1203B	Do-4	300	12 @ 150		1.1 @ 12	0.9 @ 150		—
1N1204	Do-4	400	12 @ 150		1.3 @ 12	10 @ 150		5
1N1204A	Do-4	400	12 @ 150		1.3 @ 12	1.5 @ 150		—
1N1204B	Do-4	400	12 @ 150		1.1 @ 12	0.9 @ 150		—
1N1205	Do-4	500	12 @ 150		1.3 @ 12	10 @ 150		5
1N1205A	Do-4	500	12 @ 150		1.3 @ 12	1.25 @ 150		—
1N1205B	Do-4	500	12 @ 150		1.1 @ 12	0.9 @ 150		—
1N1206	Do-4	600	12 @ 150		1.3 @ 12	10 @ 150		5
1N1206A	Do-4	600	12 @ 150		1.3 @ 12	1 @ 150		—
1N1206B	Do-4	600	12 @ 150		1.1 @ 12	0.9 @ 150		—
1N1227	Do-4 (1)	50	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1227A	Do-4 (1)	50	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1228	Do-4 (1)	100	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1228A	Do-4 (1)	100	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1229	Do-4 (1)	150	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1229A	Do-4 (1)	150	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1230	Do-4 (1)	200	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1230A	Do-4 (1)	200	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1231	Do-4 (1)	300	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1231A	Do-4 (1)	300	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1232	Do-4 (1)	400	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1232A	Do-4 (1)	400	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1233	Do-4 (1)	500	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1233A	Do-4 (1)	500	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1234	Do-4 (1)	600	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1234A	Do-4 (1)	600	1.6 @ 140		1.15 @ 1	0.5 @ 150		5
1N1235	Do-4 (1)	700	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1236	Do-4 (1)	800	1.6 @ 140		1.15 @ 1	0.5 @ 125		5
1N1341	Do-4	50	6 @ 150		1.2 @ 10	10 @ 150		5
1N1341A	Do-4	50	6 @ 150		1.2 @ 10	3 @ 150		—
1N1341B	Do-4	50	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1342	Do-4	100	6 @ 150		1.2 @ 10	10 @ 150		5
1N1342A	Do-4	100	6 @ 150		1.2 @ 10	2.5 @ 150		—
1N1342B	Do-4	100	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1343	Do-4	150	6 @ 150		1.2 @ 10	10 @ 150		5
1N1343A	Do-4	150	6 @ 150		1.2 @ 10	2.25 @ 150		—
1N1343B	Do-4	150	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1344	Do-4	200	6 @ 150		1.2 @ 10	10 @ 150		5
1N1344A	Do-4	200	6 @ 150		1.2 @ 10	2 @ 150		—
1N1344B	Do-4	200	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1345	Do-4	300	6 @ 150		1.2 @ 10	10 @ 150		5
1N1345A	Do-4	300	6 @ 150		1.2 @ 10	1.75 @ 150		—
1N1345B	Do-4	300	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1346	Do-4	400	6 @ 150		1.2 @ 10	10 @ 150		5
1N1346A	Do-4	400	6 @ 150		1.2 @ 10	1.5 @ 150		—
1N1346B	Do-4	400	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1347	Do-4	500	6 @ 150		1.2 @ 10	10 @ 150		5
1N1347A	Do-4	500	6 @ 150		1.2 @ 10	1.25 @ 150		—
1N1347B	Do-4	500	6 @ 150		1.1 @ 6	.45 @ 150		—
1N1348	Do-4	600	6 @ 150		1.2 @ 10	10 @ 150		5
1N1348A	Do-4	600	6 @ 150		1.2 @ 10	1 @ 150		—

Notes: (1) DO-4 package with modified anode lug (5) I_R — DC or peak value

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N1348B	Do-4	600	6 @ 150	1.1 @ 6	.45 @ 150	—
1N1434	Do-5	50	30 @ 25	1.2 @ 60	5 @ 150	3
1N1435	Do-5	100	30 @ 25	1.2 @ 60	5 @ 150	3
1N1436	Do-5	200	30 @ 25	1.2 @ 60	5 @ 150	3
1N1437	Do-5	400	30 @ 25	1.2 @ 60	5 @ 150	3
1N1438	Do-5	600	30 @ 25	1.2 @ 60	5 @ 150	3
1N1444		1000	1.6 @ 145	1.15 @ 1	0.5 @ 125	—
1N1537	Do-4	50	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1538	Do-4	100	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1539	Do-4	150	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1540	Do-4	200	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1541	Do-4	300	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1542	Do-4	400	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1543	Do-4	500	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1544	Do-4	600	1.6 @ 140	1.5 @ 2.5	0.5 @ 150	—
1N1551	Do-4	100	0.75 @ 100	1.4 @ 0.75	1 @ 100	—
1N1552	Do-4	200	0.75 @ 100	1.4 @ 0.75	1 @ 100	—
1N1553	Do-4	300	0.75 @ 100	1.4 @ 0.75	1 @ 100	—
1N1554	Do-4	400	0.75 @ 100	1.4 @ 0.75	1 @ 100	—
1N1555	Do-4	500	0.75 @ 100	1.4 @ 0.75	1 @ 100	—
1N1581	Do-4	50	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1582	Do-4	100	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1583	Do-4	200	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1584	Do-4	300	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1585	Do-4	400	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1586	Do-4	500	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1587	Do-4	600	3 @ 150	1.5 @ 6	0.5 @ 150	—
1N1612	Do-4	50	5 @ 150	1.5 @ 10	1 @ 150	—
1N1613	Do-4	100	5 @ 150	1.5 @ 10	1 @ 150	—
1N1614	Do-4	200	5 @ 150	1.5 @ 10	1 @ 150	—
1N1615	Do-4	400	5 @ 150	1.5 @ 10	1 @ 150	—
1N1616	Do-4	600	5 @ 150	1.5 @ 10	1 @ 150	—
1N2021	Do-5	150	10 @ 150	1.5 @ 25	5 @ 150	3
1N2022	Do-5	250	10 @ 150	1.5 @ 25	5 @ 150	3
1N2023	Do-5	300	10 @ 150	1.5 @ 25	5 @ 150	3

Notes: (3) Reverse polarity (anode to stud) available, add suffix R

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_o (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N2024	Do-5	350		10 @ 150	1.5 @ 25		5 @ 150	3
1N2025	Do-5	400		10 @ 150	1.5 @ 25		5 @ 150	3
1N2026	Do-4	50		1 @ 150	2 @ 2		0.5 @ 150	—
1N2027	Do-4	200		1 @ 150	2 @ 2		0.5 @ 150	—
1N2028	Do-4	300		1 @ 150	2 @ 2		0.5 @ 150	—
1N2029	Do-4	400		1 @ 150	2 @ 2		0.5 @ 150	—
1N2030	Do-4	500		1 @ 150	2 @ 2		0.5 @ 150	—
1N2031	Do-4	600		1 @ 150	2 @ 2		0.5 @ 150	—
1N2128	Do-5	50		60 @ 100	1.5 @ 100		10 @ 100	3
1N2128A	Do-5	50		60 @ 125	1.4 @ 100		10 @ 125	3
1N2129	Do-5	100		60 @ 100	1.5 @ 100		10 @ 100	3
1N2129A	Do-5	100		60 @ 125	1.4 @ 100		10 @ 125	3
1N2130	Do-5	150		60 @ 100	1.5 @ 100		10 @ 100	3
1N2130A	Do-5	150		60 @ 125	1.4 @ 100		10 @ 125	3
1N2131	Do-5	200		60 @ 100	1.5 @ 100		10 @ 100	3
1N2131A	Do-5	200		60 @ 125	1.4 @ 100		10 @ 125	3
1N2132	Do-5	250		60 @ 100	1.5 @ 100		10 @ 100	3
1N2132A	Do-5	250		60 @ 125	1.4 @ 100		10 @ 125	3
1N2133	Do-5	300		60 @ 100	1.5 @ 100		10 @ 100	3
1N2133A	Do-5	300		60 @ 125	1.4 @ 100		10 @ 125	3
1N2134	Do-5	350		60 @ 100	1.5 @ 100		10 @ 100	3
1N2134A	Do-5	350		60 @ 125	1.4 @ 100		10 @ 125	3
1N2135	Do-5	400		60 @ 100	1.5 @ 100		10 @ 100	3
1N2135A	Do-5	400		60 @ 125	1.4 @ 100		10 @ 125	3
1N2154	Do-5	50		25 @ 145	0.6 @ 25		5 @ 145	3, 4
1N2155	Do-5	100		25 @ 145	0.6 @ 25		4.5 @ 145	3, 4
1N2156	Do-5	200		25 @ 145	0.6 @ 25		4.0 @ 145	3, 4
1N2157	Do-5	300		25 @ 145	0.6 @ 25		3.5 @ 145	3, 4
1N2158	Do-5	400		25 @ 145	0.6 @ 25		3.0 @ 145	3, 4
1N2159	Do-5	500		25 @ 145	0.6 @ 25		2.5 @ 145	3, 4
1N2160	Do-5	600		25 @ 145	0.6 @ 25		2.0 @ 145	3, 4
1N2216	Do-4	50		0.4 @ 150	1.2 @ 1.5		0.5 @ 150	—
1N2217	Do-10	50		0.4 @ 150	1.2 @ 1.5		0.5 @ 150	—
1N2218	Do-4	500		0.4 @ 150	1.2 @ 1.5		0.5 @ 150	—
1N2219	Do-10	500		0.4 @ 150	1.2 @ 1.5		0.5 @ 150	—
1N2220	Do-4	600		0.4 @ 150	1.2 @ 1.5		0.5 @ 150	—
1N2221	Do-10	600		0.4 @ 150	1.2 @ 1.5		0.5 @ 150	—
1N2222	Do-4	800		0.3 @ 150	1.2 @ 2		.75 @ 150	—
1N2222A	Do-4	800		0.3 @ 150	1.2 @ 2		.35 @ 150	—
1N2223	Do-10	800		0.3 @ 150	1.2 @ 2		.75 @ 150	—
1N2223A	Do-10	800		0.3 @ 150	1.2 @ 2		.35 @ 150	—
1N2224	Do-4	1000		0.3 @ 150	1.2 @ 2		.75 @ 150	—

Notes: (3) Reverse polarity (anode to stud) available, add suffix R (4) V_F full cycle average

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N2224A	Do-4	1000	0.3 @ 150		1.2 @ 2	.35 @ 150		—
1N2225	Do-10	1000	0.3 @ 150		1.2 @ 2	.75 @ 150		—
1N2225A	Do-10	1000	0.3 @ 150		1.2 @ 2	.35 @ 150		—
1N2226	Do-4	1200	0.3 @ 150		1.2 @ 2	.75 @ 150		—
1N2226A	Do-4	1200	0.3 @ 150		1.2 @ 2	.35 @ 150		—
1N2227	Do-10	1200	0.3 @ 150		1.2 @ 2	.75 @ 150		—
1N2227A	Do-10	1200	0.3 @ 150		1.2 @ 2	.35 @ 150		—
1N2228	Do-4	50	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2229	Do-10	50	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2230	Do-4	200	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2231	Do-10	200	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2232	Do-4	300	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2233	Do-10	300	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2234	Do-4	400	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2235	Do-10	400	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2236	Do-4	500	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2237	Do-10	500	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2238	Do-4	600	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2239	Do-10	600	1 @ 150		0.6 @ 1.5	0.5 @ 150		4
1N2266	Do-4	50	0.3 @ 150		0.6 @ 1	.35 @ 150		4
1N2267	Do-10	50	0.3 @ 150		0.6 @ 1	.35 @ 150		4
1N2268	Do-4	500	0.3 @ 150		0.6 @ 1	.35 @ 150		4
1N2269	Do-10	500	0.3 @ 150		0.6 @ 1	.35 @ 150		4
1N2270	Do-4	600	0.3 @ 150		0.6 @ 1	.35 @ 150		4
IN2271	Do-10	600	0.3 @ 150		0.6 @ 1	.35 @ 150		4
1N2272	Do-4	50	6 @ 150		1.2 @ 20	1 @ 150		—
1N2273	Do-4	100	6 @ 150		1.2 @ 20	1 @ 150		—
1N2274	Do-4	200	6 @ 150		1.2 @ 20	1 @ 150		—
1N2275	Do-4	300	6 @ 150		1.2 @ 20	1 @ 150		—
1N2276	Do-4	400	6 @ 150		1.2 @ 20	1 @ 150		—
1N2277	Do-4	500	6 @ 150		1.2 @ 20	1 @ 150		—
1N2278	Do-4	600	6 @ 150		1.2 @ 20	1 @ 150		—
1N2279	Do-4	800	6 @ 150		1.2 @ 20	1 @ 150		—
1N2446	Do-5	50	20 @ 150		1.1 @ 20	5 @ 150		3
1N2447	Do-5	100	20 @ 150		1.1 @ 20	5 @ 150		3
1N2448	Do-5	150	20 @ 150		1.1 @ 20	5 @ 150		3
1N2449	Do-5	200	20 @ 150		1.1 @ 20	5 @ 150		3
1N2450	Do-5	250	20 @ 150		1.1 @ 20	5 @ 150		3
1N2451	Do-5	300	20 @ 150		1.1 @ 20	5 @ 150		3
1N2452	Do-5	350	20 @ 150		1.1 @ 20	5 @ 150		3
1N2453	Do-5	400	20 @ 150		1.1 @ 20	5 @ 150		3
1N2454	Do-5	500	20 @ 150		1.1 @ 20	5 @ 150		3
1N2455	Do-5	600	20 @ 150		1.1 @ 20	5 @ 150		3
1N2456	Do-5	700	20 @ 150		1.1 @ 20	5 @ 150		3
1N2457	Do-5	800	20 @ 150		1.1 @ 20	5 @ 150		—
1N2491	Do-4	50	6 @ 150		1.2 @ 12	2 @ 150		—
1N2492	Do-4	100	6 @ 150		1.2 @ 12	2 @ 150		—
1N2493	Do-4	200	6 @ 150		1.2 @ 12	2 @ 150		—
1N2494	Do-4	300	6 @ 150		1.2 @ 12	2 @ 150		—
1N2495	Do-4	400	6 @ 150		1.2 @ 12	2 @ 150		—
1N2496	Do-4	500	6 @ 150		1.2 @ 12	2 @ 150		—
1N2497	Do-4	600	6 @ 150		1.2 @ 12	2 @ 150		—
1N2793	Do-5	50	5 @ 150		1.25 @ 15	5 @ 150		3
1N2794	Do-5	100	5 @ 150		1.25 @ 15	5 @ 150		3
1N2795	Do-5	150	5 @ 150		1.25 @ 15	5 @ 150		3

Notes: (3) Reverse polarity (anode to stud) available, add suffix R (4) V_F full cycle average

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
1N2796	Do-5	200		5 @ 150	1.25 @ 15	5 @ 150		3
1N2797	Do-5	250		5 @ 150	1.25 @ 15	5 @ 150		3
1N2798	Do-5	300		5 @ 150	1.25 @ 15	5 @ 150		3
1N2799	Do-5	350		5 @ 150	1.25 @ 15	5 @ 150		3
1N2800	Do-5	400		5 @ 150	1.25 @ 15	5 @ 150		3
1N2847	Do-10	100		0.3 @ 150	0.65 @ .5	0.3 @ 150		4
1N2848	Do-10	200		0.3 @ 150	0.65 @ .5	0.3 @ 150		4
1N2849	Do-10	300		0.3 @ 150	0.65 @ .5	0.3 @ 150		4
1N2850	Do-10	400		0.3 @ 150	0.65 @ .5	0.3 @ 150		4
1N2851	Do-10	500		0.3 @ 150	0.65 @ .5	0.3 @ 150		4
1N2852	Do-10	600		0.3 @ 150	0.65 @ .5	0.3 @ 150		4
1N3208	Do-5	50		15 @ 150	1.5 @ 40	10 @ 150		3
1N3209	Do-5	100		15 @ 150	1.5 @ 40	10 @ 150		3
1N3210	Do-5	200		15 @ 150	1.5 @ 40	10 @ 150		3
1N3211	Do-5	300		15 @ 150	1.5 @ 40	10 @ 150		3
1N3212	Do-5	400		15 @ 150	1.5 @ 40	10 @ 150		3
1N3213	Do-5	500		15 @ 150	1.5 @ 40	10 @ 150		3
1N3214	Do-5	600		15 @ 150	1.5 @ 40	10 @ 150		3
SM72	Do-4	6		2 @ 25	2 @ 2	25 @ 25		—
TM1	Do-4	50		1 @ 100	2 @ 2	.3 @ 100		—
TM2	Do-4	50		.4 @ 100	2 @ 0.8	.3 @ 100		—
TM3	Do-4	50		.2 @ 100	2 @ 0.4	.3 @ 100		—
TM4	Do-4	50		1 @ 150	2 @ 2	.5 @ 150		—
TM5	Do-4	50		.4 @ 150	2 @ 0.8	.5 @ 150		—
TM6	Do-4	50		.2 @ 150	2 @ 0.4	.5 @ 150		—
TM7	Do-4	50		3 @ 150	1.5 @ 6	.5 @ 150		—
TM8	Do-4	50		6 @ 150	1.1 @ 6	2 @ 150		—
TM9	Do-4	50		12 @ 150	1.2 @ 12	2 @ 150		—
TM11	Do-4	100		1 @ 100	2 @ 2	.3 @ 100		—
TM12	Do-4	100		.4 @ 100	2 @ 0.8	.3 @ 100		—
TM13	Do-4	100		.2 @ 100	2 @ 0.4	.3 @ 100		—
TM17	Do-4	100		3 @ 150	1.5 @ 6	.5 @ 150		—
TM18	Do-4	100		6 @ 150	1.1 @ 6	.5 @ 150		—
TM19	Do-4	100		12 @ 150	1.2 @ 12	.5 @ 150		—
TM21	Do-4	200		1 @ 100	2 @ 2	.3 @ 100		—
TM22	Do-4	200		.4 @ 100	2 @ 0.8	.3 @ 100		—
TM23	Do-4	200		.2 @ 100	2 @ 0.4	.3 @ 100		—
TM24	Do-4	200		1 @ 150	2 @ 2	.5 @ 150		—
TM27	Do-4	200		3 @ 150	1.5 @ 6	.5 @ 150		—
TM28	Do-4	200		6 @ 150	1.1 @ 6	2 @ 150		—
TM29	Do-4	200		12 @ 150	1.2 @ 12	2 @ 150		—
TM31	Do-4	300		1 @ 100	2 @ 2	.3 @ 100		—
TM32	Do-4	300		.4 @ 100	2 @ 0.8	.3 @ 100		—
TM33	Do-4	300		.2 @ 100	2 @ 0.4	.3 @ 100		—
TM34	Do-4	300		1 @ 150	2 @ 2	.5 @ 150		—
TM37	Do-4	300		3 @ 150	1.5 @ 6	.5 @ 150		—
TM38	Do-4	300		6 @ 150	1.1 @ 6	2 @ 150		—
TM39	Do-4	300		12 @ 150	1.2 @ 12	2 @ 150		—
TM41	Do-4	400		1 @ 100	2 @ 2	.3 @ 100		—
TM42	Do-4	400		.4 @ 100	2 @ 0.8	.3 @ 100		—
TM43	Do-4	400		.2 @ 100	2 @ 0.4	.3 @ 100		—
TM44	Do-4	400		1 @ 150	2 @ 2	.5 @ 150		—
TM47	Do-4	400		3 @ 150	1.5 @ 6	.5 @ 150		—
TM48	Do-4	400		6 @ 150	1.1 @ 6	6 @ 150		—
TM49	Do-4	400		12 @ 150	1.2 @ 12	12 @ 150		—

Notes: (3) Reverse polarity (anode to stud) available, add suffix R (4) V_F full cycle average

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_o (amps)	CASE TEMPERATURE (°C)	MAX. FORWARD VOLTAGE (volts)	FORWARD CURRENT (amps)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
TM51	Do-4	500	1 @ 100		2 @ 2		.3 @ 100		—
TM52	Do-4	500	.4 @ 100		2 @ 0.8		.3 @ 100		—
TM53	Do-4	500	.2 @ 100		2 @ 0.4		.3 @ 100		—
TM54	Do-4	500	1 @ 150		2 @ 2		.5 @ 150		—
TM55	Do-4	500	.4 @ 150		2 @ 0.8		.5 @ 150		—
TM56	Do-4	500	.2 @ 150		2 @ 0.4		.5 @ 150		—
TM57	Do-4	500	3 @ 150		1.5 @ 6		.5 @ 150		—
TM58	Do-4	500	6 @ 150		1.1 @ 6		2 @ 150		—
TM59	Do-4	500	12 @ 150		1.2 @ 12		2 @ 150		—
TM61	Do-4	600	1 @ 100		2 @ 2		.3 @ 100		—
TM62	Do-4	600	.4 @ 100		2 @ 0.8		.3 @ 100		—
TM63	Do-4	600	.2 @ 100		2 @ 0.4		.3 @ 100		—
TM64	Do-4	600	1 @ 150		2 @ 2		.5 @ 150		—
TM65	Do-4	600	.4 @ 150		2 @ 0.8		.5 @ 150		—
TM66	Do-4	600	.2 @ 150		2 @ 0.4		.5 @ 150		—
TM67	Do-4	600	3 @ 150		1.5 @ 6		.5 @ 150		—
TM68	Do-4	600	6 @ 150		1.1 @ 6		2 @ 150		—
TM69	Do-4	600	12 @ 150		1.2 @ 12		2 @ 150		—
TM74	Do-4	700	1 @ 150		2 @ 2		.5 @ 150		—
TM75	Do-4	700	.4 @ 150		2 @ 0.8		.5 @ 150		—
TM76	Do-4	700	.2 @ 150		2 @ 0.4		.5 @ 150		—
TM78	Do-4	700	6 @ 150		1.1 @ 6		2 @ 150		—
TM79	Do-4	700	12 @ 150		1.2 @ 12		2 @ 150		—
TM84	Do-4	800	1 @ 150		2 @ 2		.5 @ 150		—
TM85	Do-4	800	.4 @ 150		2 @ 0.8		.5 @ 150		—
TM86	Do-4	800	.2 @ 150		2 @ 0.4		.5 @ 150		—
TM88	Do-4	800	6 @ 150		1.1 @ 6		2 @ 150		—
TM89	Do-4	800	12 @ 150		1.2 @ 12		2 @ 150		—
TM104	Do-4	1000	1 @ 150		2 @ 2		.5 @ 150		—
TM105	Do-4	1000	.4 @ 150		2 @ 0.4		.5 @ 150		—
TM106	Do-4	1000	.2 @ 150		2 @ 0.4		.5 @ 150		—
TM124	Do-4	1200	1 @ 150		2 @ 2		.5 @ 150		—
TM125	Do-4	1200	.4 @ 150		2 @ 0.8		.5 @ 150		—
TM126	Do-4	1200	.2 @ 150		2 @ 0.4		.5 @ 150		—
TM155	Do-4	1500	.4 @ 150		2 @ 0.8		.5 @ 150		—
TM156	Do-4	1500	.2 @ 150		2 @ 0.4		.5 @ 150		—
TP100	Do-4	100	.5 @ 100		1.5 @ .5		.5 @ 25		5
TP200	Do-4	200	.5 @ 100		1.5 @ .5		.5 @ 25		5
TP300	Do-4	300	.5 @ 100		1.5 @ .5		.5 @ 25		5
TP400	Do-4	400	.5 @ 100		1.5 @ .5		.5 @ 25		5
TR50	Do-5	50	20 @ 100		2 @ 25		10 @ 100		—
TR53	Do-5	50	35 @ 150		1.5 @ 100		5 @ 150		3
TR100	Do-5	100	20 @ 100		2 @ 25		10 @ 100		—
TR103	Do-5	100	35 @ 150		1.5 @ 100		5 @ 150		3
TR150	Do-5	150	20 @ 100		2 @ 25		10 @ 100		—
TR151	Do-5	150	10 @ 150		1.5 @ 25		5 @ 150		3
TR152	Do-5	150	20 @ 150		1.5 @ 50		5 @ 150		3
TR153	Do-5	150	35 @ 150		1.5 @ 50		5 @ 150		3
TR200	Do-5	200	20 @ 100		2 @ 25		10 @ 100		—
TR203	Do-5	200	35 @ 150		1.5 @ 100		5 @ 150		3
TR251	Do-5	250	10 @ 150		1.5 @ 25		5 @ 150		3
TR252	Do-5	250	20 @ 150		1.5 @ 50		5 @ 150		3
TR253	Do-5	250	35 @ 150		1.5 @ 100		5 @ 150		3
TR300	Do-5	300	20 @ 100		2 @ 25		10 @ 100		—
TR301	Do-5	300	10 @ 150		1.5 @ 25		5 @ 150		3

Notes: (3) Reverse polarity (anode to stud) available, add suffix R (5) I_R — DC or peak value

STUD MOUNTED SILICON POWER RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	NOTES
TR302	Do-5	300		20 @ 150	1.5 @ 50	5 @ 150		3
TR303	Do-5	300		35 @ 150	1.5 @ 100	5 @ 150		3
TR351	Do-5	350		10 @ 150	1.5 @ 25	5 @ 150		3
TR352	Do-5	350		20 @ 150	1.5 @ 50	5 @ 150		3
TR353	Do-5	350		35 @ 150	1.5 @ 100	5 @ 150		3
TR400	Do-5	400		20 @ 100	2 @ 25	10 @ 100		—
TR401	Do-5	400		10 @ 150	1.5 @ 25	5 @ 150		3
TR402	Do-5	400		20 @ 150	1.5 @ 50	5 @ 150		3
TR403	Do-5	400		35 @ 150	1.5 @ 100	5 @ 150		3
TR500	Do-5	500		20 @ 100	2 @ 25	10 @ 100		—
TR501	Do-5	500		10 @ 150	1.5 @ 25	5 @ 150		3
TR502	Do-5	500		20 @ 150	1.5 @ 50	5 @ 150		3
TR503	Do-5	500		35 @ 150	1.5 @ 100	5 @ 150		3
TR600	Do-5	600		20 @ 100	2 @ 25	10 @ 100		—
TR601	Do-5	600		10 @ 150	1.5 @ 25	5 @ 150		3
TR602	Do-5	600		20 @ 150	1.5 @ 50	5 @ 150		3
TR603	Do-5	600		35 @ 150	1.5 @ 100	5 @ 150		3
TR701	Do-5	700		10 @ 150	1.5 @ 25	5 @ 150		3
TR702	Do-5	700		20 @ 150	1.5 @ 50	5 @ 150		3
TR800	Do-5	800		20 @ 100	2 @ 25	10 @ 100		—
TR801	Do-5	800		10 @ 150	1.5 @ 25	5 @ 150		3
TR802	Do-5	800		20 @ 150	1.5 @ 50	5 @ 150		3
TR1120	Do-4	50		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1121	Do-4	100		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1122	Do-4	200		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1123	Do-4	300		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1124	Do-4	400		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1125	Do-4	500		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1126	Do-4	600		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1128	Do-4	800		12 @ 150	1.2 @ 12	0.4 @ 150		—
TR1130	Do-4	1000		12 @ 150	1.2 @ 12	0.4 @ 150		—

Notes: (3) Reverse polarity (anode to stud) available, add suffix R

SILICON VOLTAGE VARIABLE CAPACITORS

TYPE	CASE STYLE	CAPACITANCE ±20% @ —4 VDC (pf)	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	TYP. CAPACITANCE CHANGE FROM 0.1V to V_{MAX}	MAX. LEAKAGE CURRENT @ V_{MAX} (μA)
SC47	Do-2	470	25	690	0.5
SC56	Do-2	560	20	800	0.5
SC68	Do-2	680	15	930	0.5
SC82	Do-2	820	15	1120	0.5
SC100	Do-2	1000	15	1440	0.5
SC120	Do-2	1200	15	1440	0.5
SC150	Do-2	1500	15	2000	0.5
SC180	Do-2	1800	13	2400	0.5
SC200	Do-2	2000	10	2600	0.5

FAST RECOVERY RECTIFIERS

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	AVERAGE REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	RECOVERY TIME (nsec)	PEAK REVERSE RECOVERY CURRENT (amp)	NOTES
1N3874	Do-10	50	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3875	Do-10	100	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3876	Do-10	200	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3877	Do-10	300	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3878	Do-10	400	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3879	Do-4	50	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3880	Do-4	100	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3881	Do-4	200	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3882	Do-4	300	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3883	Do-4	400	6	@ 100	1.4 @ 6	3	@ 100	200	2	—
1N3884	Do-10	50	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3885	Do-10	100	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3886	Do-10	200	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3887	Do-10	300	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3888	Do-10	400	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3889	Do-4	50	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3890	Do-4	100	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3891	Do-4	200	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3892	Do-4	300	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3893	Do-4	400	12	@ 100	1.4 @ 12	5	@ 100	200	2	—
1N3899	Do-5	50	20	@ 100	1.4 @ 20	10	@ 100	200	3	—
1N3900	Do-5	100	20	@ 100	1.4 @ 20	10	@ 100	200	3	—
1N3901	Do-5	200	20	@ 100	1.4 @ 20	10	@ 100	200	3	—
1N3902	Do-5	300	20	@ 100	1.4 @ 20	10	@ 100	200	3	—
1N3903	Do-5	400	20	@ 100	1.4 @ 20	10	@ 100	200	3	—
1N3909	Do-5	50	30	@ 100	1.4 @ 30	15	@ 100	200	3	—
1N3910	Do-5	100	30	@ 100	1.4 @ 30	15	@ 100	200	3	—
1N3911	Do-5	200	30	@ 100	1.4 @ 30	15	@ 100	200	3	—
1N3912	Do-5	300	30	@ 100	1.4 @ 30	15	@ 100	200	3	—
1N3913	Do-5	400	30	@ 100	1.4 @ 30	15	@ 100	200	3	—
TFR105	Do-4	50	1	@ 150	1.2 @ 1	1	@ 150	200	—	—
TFR105Z	Do-4	50	1	@ 150	1.2 @ 1	1	@ 150	200	—	4
TFR110	Do-4	100	1	@ 150	1.2 @ 1	1	@ 150	200	—	—
TFR110Z	Do-4	100	1	@ 150	1.2 @ 1	1	@ 150	200	—	4
TFR120	Do-4	200	1	@ 150	1.2 @ 1	1	@ 150	200	—	—
TFR120Z	Do-4	200	1	@ 150	1.2 @ 1	1	@ 150	200	—	4
TFR140	Do-4	400	1	@ 150	1.2 @ 1	1	@ 150	200	—	—
TFR140Z	Do-4	400	1	@ 150	1.2 @ 1	1	@ 150	200	—	4
TFR305	Do-4	50	3	@ 150	1.2 @ 3	2	@ 150	200	—	—
TFR305Z	Do-4	50	3	@ 150	1.2 @ 3	2	@ 150	200	—	4
TFR310	Do-4	100	3	@ 150	1.2 @ 3	2	@ 150	200	—	—
TFR310Z	Do-4	100	3	@ 150	1.2 @ 3	2	@ 150	200	—	4
TFR320	Do-4	200	3	@ 150	1.2 @ 3	2	@ 150	200	—	—
TFR320Z	Do-4	200	3	@ 150	1.2 @ 3	2	@ 150	200	—	4
TFR340	Do-4	400	3	@ 150	1.2 @ 3	2	@ 150	200	—	—
TFR340Z	Do-4	400	3	@ 150	1.2 @ 3	2	@ 150	200	—	4
TFR605	Do-4	50	6	@ 150	1.2 @ 6	3	@ 150	200	—	—
TFR605Z	Do-4	50	6	@ 150	1.2 @ 6	3	@ 150	200	—	4
TFR610	Do-4	100	6	@ 150	1.2 @ 6	3	@ 150	200	—	—
TFR610Z	Do-4	100	6	@ 150	1.2 @ 6	3	@ 150	200	—	4
TFR620	Do-4	200	6	@ 150	1.2 @ 6	3	@ 150	200	—	—
TFR620Z	Do-4	200	6	@ 150	1.2 @ 6	3	@ 150	200	—	4
TFR640	Do-4	400	6	@ 150	1.2 @ 6	3	@ 150	200	—	—
TFR640Z	Do-4	400	6	@ 150	1.2 @ 6	3	@ 150	200	—	4
TFR1205	Do-4	50	12	@ 150	1.2 @ 12	4	@ 150	200	—	—

Notes: (4) Controlled avalanche type

Reverse recovery time for all types measured when switching from one ampere forward to 30 volts reverse.

FAST RECOVERY RECTIFIERS . . . cont'd

TYPE	CASE STYLE	MAX. PEAK REVERSE VOLTAGE (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	CASE TEMPERATURE (°C)	FORWARD CURRENT (amps) MAX. FORWARD VOLTAGE (volts)	AVERAGE REVERSE CURRENT (MA)	CASE TEMPERATURE (°C)	RECOVERY TIME (nsec)	PEAK REVERSE RECOVERY CURRENT (amp)	NOTES
TFR1205Z	Do-4	50	12 @ 150	1.2 @ 12	4 @ 150	200	—	4
TFR1210	Do-4	100	12 @ 150	1.2 @ 12	4 @ 150	200	—	—
TFR1210Z	Do-4	100	12 @ 150	1.2 @ 12	4 @ 150	200	—	4
TFR1220	Do-4	200	12 @ 150	1.2 @ 12	4 @ 150	200	—	—
TFR1220Z	Do-4	200	12 @ 150	1.2 @ 12	4 @ 150	200	—	4
TFR1240	Do-4	400	12 @ 150	1.2 @ 12	4 @ 150	200	—	—
TFR1240Z	Do-4	400	12 @ 150	1.2 @ 12	4 @ 150	200	—	4
TKF5	Do-12	50	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TFK10	Do-12	100	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TKF20	Do-12	200	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TFK30	Do-12	300	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TFK40	Do-12	400	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TKF50	Do-12	500	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TKF60	Do-12	600	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TKF80	Do-12	800	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5
TKF100	Do-12	1000	0.5 @ 100	1.1 @ 1	0.5 @ 100	200	—	5

Notes: (4) Controlled avalanche type (5) Reverse current measured at ambient temperature
Reverse recovery time for all types measured when switching from one ampere forward to 30 volts reverse.

TRANSWITCHES

PNPN switching device designed for gate turn off characteristics

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (MA)	CASE TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (μA) AMBIENT TEMP. (°C)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	GATE TURN-OFF CURRENT, I_{GO} (MA)	GATE TURN-OFF VOLTAGE, V_{GO} (volts)	MAX. HOLDING CURRENT (MA)	CASE STYLE
2N764(TSW31)	30	200 @ 25	1.5 (1)	50 @ 125	1	1	— 40	8	5	To-18
2N765(TSW61)	60	200 @ 25	1.5 (1)	50 @ 125	1	1	— 40	8	5	To-18
2N766(TSW101)	100	200 @ 25	1.5 (1)	50 @ 125	1	1	— 40	8	5	To-18
2N767(TSW201)	200	200 @ 25	1.5 (1)	50 @ 125	1	1	— 40	8	5	To-18
2N892	15	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N893	15	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N894	30	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N895	30	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N896	60	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N897	60	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N898	100	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N899	100	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N900	200	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N901	200	150 @ 75	1 (2)	100 @ 125	50μA	0.7	— 2	— 1.5	—	To-18
2N4320	30	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4321	60	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4322	100	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4323	150	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4324	200	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4325	250	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52

Notes: (1) I_F = 50 MA (2) I_F = 4 MA

TRANSWITCHES . . . cont'd

PNPN switching device designed for gate turn off characteristics

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (MA)	CASE TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (μA)	AMBIENT TEMP. (°C)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	GATE TURN-OFF CURRENT, I_{GO} (MA)	GATE TURN-OFF VOLTAGE, V_{GO} (volts)	MAX. HOLDING CURRENT (MA)	CASE STYLE
2N4326	30	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4327	60	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4328	100	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4329	150	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4330	200	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N4331	250	250 @ 25	2	100 @ 125	500μA	1	— 50	—10	3	To-52
2N1686(TSW30)	30	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
2N1687(TSW60)	60	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
2N1688(TSW100)	100	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
2N1689(TSW200)	200	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
SW30	30	30 @ 85	1	50 @ 85	1.5	1	— 8	— 5	10	To-18
TSW30	30	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
TSW60	60	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
TSW100	100	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
TSW200	200	500 @ 25	2	50 @ 125	1	1	—100	—10	5	To-5
TSW31	30	200 @ 25	1.5 (1)	50 @ 125	1	1	— 10	— 4	5	To-18
TSW61	60	200 @ 25	1.5 (1)	50 @ 125	1	1	— 10	— 4	5	To-18
TSW101	100	200 @ 25	1.5 (1)	50 @ 125	1	1	— 10	— 4	5	To-18
TSW201	200	200 @ 25	1.5 (1)	50 @ 125	1	1	— 10	— 4	5	To-18

Notes: (1) I_F = 50 MA

LIGHT ACTIVATED SILICON CONTROLLED RECTIFIERS

TYPE	MAX. OPERATING VOLTAGE V_{MAX} (volts)	AMBIENT TEMP. (°C) MAX. AVERAGE FORWARD CURRENT, Io (amps)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	CASE TEMP. (°C) MAX. REVERSE CURRENT @ $V_{MAX(mA)}$	GATE CURRENT TO FIRE, I_{GT} (μA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	MAX. HOLDING CURRENT (mA)	Light Intensity to Fire (foot-candles)	Case Style
TPS 20	25	200 @ 75	1.5	100 @ 100	50	.8	1	150	To-18 (round lens)
TPS 50	50	200 @ 75	1.5	100 @ 100	50	.8	1	150	To-18 (round lens)
TPS 100	100	200 @ 75	1.5	100 @ 100	50	.8	1	150	To-18 (round lens)
TPS 150	150	200 @ 75	1.5	100 @ 100	50	.8	1	150	To-18 (round lens)
TPS 200	200	200 @ 75	1.5	100 @ 100	50	.8	1	150	To-18 (round lens)

LEAD MOUNTED SILICON CONTROLLED RECTIFIERS
Case Styles — TO-18, TO-46, TO-52

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (MA)	AMBIENT TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (μA)	CASE TEMP. (°C)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	MAX. HOLDING CURRENT (MA)	CASE STYLE
2N876	15	200	@ 75	1.5	100	@ 125	0.2	0.8	5	To-18
2N877	30	200	@ 75	1.5	100	@ 125	0.2	0.8	5	To-18
2N878	60	200	@ 75	1.5	100	@ 125	0.2	0.8	5	To-18
2N879	100	200	@ 75	1.5	100	@ 125	0.2	0.8	5	To-18
2N880	150	200	@ 75	1.5	100	@ 125	0.2	0.8	5	To-18
2N881	200	200	@ 75	1.5	100	@ 125	0.2	0.8	5	To-18
2N884	15	200	@ 75	1.5	20	@ 125	20μA	0.6	1	To-18
2N885	30	200	@ 75	1.5	20	@ 125	20μA	0.6	1	To-18
2N886	60	200	@ 75	1.5	20	@ 125	20μA	0.6	1	To-18
2N887	100	200	@ 75	1.5	20	@ 125	20μA	0.6	1	To-18
2N888	150	200	@ 75	1.5	20	@ 125	20μA	0.6	1	To-18
2N889	200	200	@ 75	1.5	20	@ 125	20μA	0.6	1	To-18
2N948	30	200	@ 75	2	20	@ 125	20μA	1	1	To-18
2N949	60	200	@ 75	2	20	@ 125	20μA	1	1	To-18
2N950	100	200	@ 75	2	20	@ 125	20μA	1	1	To-18
2N951	200	200	@ 75	2	20	@ 125	20μA	1	1	To-18
2N2679	30	350	@ 55	1.25 (1)	100	@ 150	20μA	0.7	0.5	To-18
2N2680	60	350	@ 55	1.25 (1)	100	@ 150	20μA	0.7	0.5	To-18
2N2681	100	350	@ 55	1.25 (1)	100	@ 150	20μA	0.7	0.5	To-18
2N2682	200	350	@ 55	1.25 (1)	100	@ 150	20μA	0.7	0.5	To-18
2N2683	30	280	@ 55	1.25 (1)	20	@ 125	20μA	0.8	1	To-18
2N2684	60	280	@ 55	1.25 (1)	20	@ 125	20μA	0.8	1	To-18
2N2685	100	280	@ 55	1.25 (1)	20	@ 125	20μA	0.8	1	To-18
2N2686	200	280	@ 55	1.25 (1)	20	@ 125	20μA	0.8	1	To-18
2N2687	30	280	@ 55	1.5 (1)	100	@ 125	0.2	1	2	To-18
2N2688	60	280	@ 55	1.5 (1)	100	@ 125	0.2	1	2	To-18
2N2689	100	280	@ 55	1.5 (1)	100	@ 125	0.2	1	2	To-18
2N2690	200	280	@ 55	1.5 (1)	100	@ 125	0.2	1	2	To-18
2N3001	30	350	@ 55	1.1	100	@ 150	20μA	0.7	4	To-18
2N3002	60	350	@ 55	1.1	100	@ 150	20μA	0.7	4	To-18
2N3003	100	350	@ 55	1.1	100	@ 150	20μA	0.7	4	To-18
2N3004	200	350	@ 55	1.1	100	@ 150	20μA	0.7	4	To-18
2N3005	30	250	@ 55	1.1	100	@ 150	0.2	0.8	5	To-18
2N3006	60	250	@ 55	1.1	100	@ 150	0.2	0.8	5	To-18
2N3007	100	250	@ 55	1.1	100	@ 150	0.2	0.8	5	To-18
2N3008	200	250	@ 55	1.1	100	@ 150	0.2	0.8	5	To-18
TSW20C	25	200	@ 75	2.5	500	@ 125	0.4	1	5	To-46
TSW21C	50	200	@ 75	2.5	500	@ 125	0.4	1	5	To-46
TSW22C	100	200	@ 75	2.5	500	@ 125	0.4	1	5	To-46
TSW23C	200	200	@ 75	2.5	500	@ 125	0.4	1	5	To-46
TSW30C	30	200	@ 75	2.5	150	@ 125	0.4	1	5	To-18
2N4144	15	250	@ 25	2.5	10	@ 25	1	—	5	To-52
2N4145	30	250	@ 25	2.5	10	@ 25	1	—	5	To-52
2N4146	60	250	@ 25	2.5	10	@ 25	1	—	5	To-52
2N4147	100	250	@ 25	2.5	10	@ 25	1	—	5	To-52
2N4148	150	250	@ 25	2.5	10	@ 25	1	—	5	To-52
2N4149	200	250	@ 25	2.5	10	@ 25	1	—	5	To-52
2N4332	30	250	@ 25	1.5	50	@ 125	10μA	0.8	1.0	To-52
2N4333	60	250	@ 25	1.5	50	@ 125	10μA	0.8	1.0	To-52
2N4334	100	250	@ 25	1.5	50	@ 125	10μA	0.8	1.0	To-52
2N4335	150	250	@ 25	1.5	50	@ 125	10μA	0.8	1.0	To-52
2N4336	200	250	@ 25	1.5	50	@ 125	10μA	0.8	1.0	To-52
2N4337	250	250	@ 25	1.5	50	@ 125	10μA	0.8	1.0	To-52
TSW60C	60	200	@ 75	2.5	150	@ 125	0.4	1	5	To-18
TSW100C	100	200	@ 75	2.5	150	@ 125	0.4	1	5	To-18
TSW200C	200	200	@ 75	2.5	150	@ 125	0.4	1	5	To-18

Notes: (1) I_F = 200 MA

LEAD MOUNTED SILICON CONTROLLED RECTIFIERS

Case Style — TO-5

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (MA)	CASE TEMP. (°C)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	MAX. HOLDING CURRENT (MA)
2N1595	50	0.3	@ 125	2 (1)	1	@ 125	10	1	25
2N1596	100	0.3	@ 125	2 (1)	1	@ 125	10	1	25
2N1597	200	0.3	@ 125	2 (1)	1	@ 125	10	1	25
2N1598	300	0.3	@ 125	2 (1)	1	@ 125	10	1	25
2N1599	400	0.3	@ 125	2 (1)	1	@ 125	10	1	25
2N1869	15	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1870	30	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1871	60	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1872	100	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1873	150	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1874	200	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1870A (2)	30	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1871A (2)	60	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1872A (2)	100	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1874A (2)	200	0.3	@ 125	2.5 (3)	0.1	@ 125	.2	0.8	5
2N1875	15	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1876	30	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1877	60	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1878	100	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1879	150	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1880	200	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1875A	15	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1876A	30	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1877A	60	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1878A	100	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1879A	150	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1880A	200	0.3	@ 125	2.5 (3)	0.1	@ 125	.020	0.6	3
2N1881	30	1	@ 100	2	0.2	@ 100	2	2	2 (4)
2N1882	60	1	@ 100	2	0.2	@ 100	2	2	2 (4)
2N1883	100	1	@ 100	2	0.2	@ 100	2	2	2 (4)
2N1884	150	1	@ 100	2	0.2	@ 100	2	2	2 (4)
2N1885	200	1	@ 100	2	0.2	@ 100	2	2	2 (4)
2N2009	25	0.3	@ 125	2 (1)	0.1	@ 125	0.2	1	5
2N2010	50	0.3	@ 125	2 (1)	0.1	@ 125	0.2	1	5
2N2011	100	0.3	@ 125	2 (1)	0.1	@ 125	0.2	1	5
2N2012	200	0.3	@ 125	2 (1)	0.1	@ 125	0.2	1	5
2N2013	300	0.3	@ 125	2 (1)	0.1	@ 125	0.2	1	5
2N2014	400	0.3	@ 125	2 (1)	0.1	@ 125	0.2	1	5
2N2322	25	1	@ 85	2	.1	@ 125	.35	1	3
2N2322A	25	1	@ 85	2.2	.1	@ 125	.020	.6	2

Notes: (1) I_F = 1 Amp (2) Mil. type — USN (3) I_F = 2 Amp (4) Typical value

LEAD MOUNTED SILICON CONTROLLED RECTIFIERS . . . cont'd

Case Style — TO-5

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (MA)	CASE TEMP. (°C)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	MAX. HOLDING CURRENT (MA)
2N2323	50	1	@ 85	2	.1	@ 125	.35	1	3
2N2323A	50	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N2324	100	1	@ 85	2	.1	@ 125	.35	1	3
2N2324A	100	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N2325	150	1	@ 85	2	.1	@ 125	.35	1	3
2N2325A	150	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N2326	200	1	@ 85	2	.1	@ 125	.35	1	3
2N2326A	200	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N2327	250	1	@ 85	2	.1	@ 125	.35	1	3
2N2327A	250	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N2328	300	1	@ 85	2	.1	@ 125	.35	1	3
2N2328A	300	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N2329	400	1	@ 85	2	.1	@ 125	.35	1	3
2N2329A	400	1	@ 85	2.2	.1	@ 125	.020	.6	2
2N3555	30	1.6	@ 25	1.4	100	@ 150	.020	.7	3
2N3556	60	1.6	@ 25	1.4	100	@ 150	.020	.7	3
2N3557	100	1.6	@ 25	1.4	100	@ 150	.020	.7	3
2N3558	200	1.6	@ 25	1.4	100	@ 150	.020	.7	3
2N3559	30	1.6	@ 25	1.4	100	@ 150	.200	.8	5
2N3560	60	1.6	@ 25	1.4	100	@ 150	.200	.8	5
2N3561	100	1.6	@ 25	1.4	100	@ 150	.200	.8	5
2N3562	200	1.6	@ 25	1.4	100	@ 150	.200	.8	5
TCR35C	30	1	@ 80	2.5	1	@ 125	3	1	10
TCR40C	15	1	@ 75	2.5	.01	@ 25	.2	.8	5
TCR41C	30	1	@ 75	2.5	.01	@ 25	.2	.8	5
TCR42C	60	1	@ 75	2.5	.01	@ 25	.2	.8	5
TCR43C	100	1	@ 75	2.5	.01	@ 25	.2	.8	5
TCR44C	150	1	@ 75	2.5	.01	@ 25	.2	.8	5
TCR45C	200	1	@ 75	2.5	.01	@ 25	.2	.8	5
TCR65C	60	1	@ 80	2.5	1	@ 125	3	1	10
TCR105C	100	1	@ 80	2.5	1	@ 125	3	1	10
TCR205C	200	1	@ 80	2.5	1	@ 125	3	1	10
TCR305C	300	1	@ 80	2.5	1	@ 125	3	1	10
TCR405C	400	1	@ 80	2.5	1	@ 125	3	1	10

7/16" STUD MOUNTED SILICON CONTROLLED RECTIFIERS

Case Style — TO-64

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (MA)	CASE TEMPERATURE (°C)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)	MAX. HOLDING CURRENT (MA)
2N1600	50	3	@ 80	2	1	@ 125	10	3	25
2N1601	100	3	@ 80	2	1	@ 125	10	3	25
2N1602	200	3	@ 80	2	1	@ 125	10	3	25
2N1603	300	3	@ 80	2	1	@ 125	10	3	25
2N1604	400	3	@ 80	2	1	@ 125	10	3	25
2N1770	25	4.7	@ 60	1.6	4.5	@ 125	15	2	25
2N1770A	25	4.7	@ 105	1.6	4.5	@ 150	15	2	25
2N1771	50	4.7	@ 60	1.6	4.5	@ 125	15	2	25
2N1771A	50	4.7	@ 105	1.6	4.5	@ 150	15	2	25
2N1772	100	4.7	@ 60	1.6	4.5	@ 125	15	2	25
2N1772A	100	4.7	@ 105	1.6	4.5	@ 150	15	2	25
2N1773	150	4.7	@ 60	1.6	4	@ 125	15	2	25
2N1773A	150	4.7	@ 105	1.6	4	@ 150	15	2	25
2N1774	200	4.7	@ 60	1.6	3	@ 125	15	2	25
2N1774A	200	4.7	@ 105	1.6	3	@ 150	15	2	25
2N1775	250	4.7	@ 60	1.6	2.5	@ 125	15	2	25
2N1775A	250	4.7	@ 105	1.6	2.5	@ 150	15	2	25
2N1776	300	4.7	@ 60	1.6	2	@ 125	15	2	25
2N1776A	300	4.7	@ 105	1.6	2	@ 150	15	2	25
2N1777	400	4.7	@ 60	1.6	1	@ 125	15	2	25
2N1777A	400	4.7	@ 105	1.6	1	@ 150	15	2	25
TCR3	50	3	@ 75	2	1	@ 100	50	3	25
TCR8	50	5	@ 80	1.25	1	@ 100	20	1.5	25
TCR13	100	3	@ 75	2	1	@ 100	50	3	25
TCR18	100	5	@ 80	1.25	1	@ 100	20	1.5	25
TCR23	200	3	@ 75	2	1	@ 100	50	3	25
TCR28	200	5	@ 80	1.25	1	@ 100	20	1.5	25
TCR33	300	3	@ 75	2	1	@ 100	50	3	25
TCR38	300	5	@ 80	1.25	1	@ 100	20	1.5	25
TCR43	400	3	@ 75	2	1	@ 100	50	3	25
TCR48	400	5	@ 80	1.25	1	@ 100	20	1.5	25
TCR50	50	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR51	100	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR52	150	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR53	200	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR54	250	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR55	300	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR56	400	5	@ 25	1.3 (1)	.25	@ 125	5	1	25
TCR70	50	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR71	100	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR72	150	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR73	200	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR74	250	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR75	300	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR76	400	5	@ 25	1.75 (1)	1	@ 125	15	1.5	25
TCR505	50	5	@ 25	1.25	2	@ 125	20	3	25
TCR1005	100	5	@ 25	1.25	2	@ 125	20	3	25
TCR1505	150	5	@ 25	1.25	2	@ 125	20	3	25
TCR2005	200	5	@ 25	1.25	2	@ 125	20	3	25
TCR2505	250	5	@ 25	1.25	2	@ 125	20	3	25
TCR3005	300	5	@ 25	1.25	2	@ 125	20	3	25
TCR3505	350	5	@ 25	1.25	2	@ 125	20	3	25
TCR4005	400	5	@ 25	1.25	2	@ 125	20	3	25

Notes: (1) I_F = 3 Amp

9/16" STUD MOUNTED SILICON CONTROLLED RECTIFIERS

Case Style — TO-48

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AVERAGE FORWARD CURRENT, I_O (amps)	AMBIENT TEMP. (°C)	FULL LOAD VOLTAGE DROP @ 100°C (volts)	MAX. REVERSE CURRENT @ V_{MAX} (MA)	CASE TEMPERATURE (°C)	GATE CURRENT TO FIRE I_{GT} (MA) @ 100°C	GATE VOLTAGE TO FIRE V_{GT} (volts) @ 100°C	HOLDING CURRENT (MA) (TYPICAL)
2N681	25	16	25 @	.86 (1)	6.5	@ 125	25 (1)	3 (1)	10
2N682	50	16	25 @	.86 (1)	6.5	@ 125	25 (1)	3 (1)	10
2N683	100	16	25 @	.86 (1)	6.5	@ 125	25 (1)	3 (1)	10
2N684	150	16	25 @	.86 (1)	6.5	@ 125	25 (1)	3 (1)	10
2N685	200	16	25 @	.86 (1)	6	@ 125	25 (1)	3 (1)	10
2N686	250	16	25 @	.86 (1)	5.5	@ 125	25 (1)	3 (1)	10
2N687	300	16	25 @	.86 (1)	5	@ 125	25 (1)	3 (1)	10
2N688	400	16	25 @	.86 (1)	4	@ 125	25 (1)	3 (1)	10
2N689	500	16	25 @	.86 (1)	3	@ 125	25 (1)	3 (1)	10
2N1842	25	10	25 @	1.25	22.5	@ 100	50	3.5	20
2N1843	50	10	25 @	1.25	19	@ 100	50	3.5	20
2N1844	100	10	25 @	1.25	12.5	@ 100	50	3.5	20
2N1845	150	10	25 @	1.25	6.5	@ 100	50	3.5	20
2N1846	200	10	25 @	1.25	6	@ 100	50	3.5	20
2N1847	250	10	25 @	1.25	5.5	@ 100	50	3.5	20
2N1848	300	10	25 @	1.25	5	@ 100	50	3.5	20
2N1849	400	10	25 @	1.25	4	@ 100	50	3.5	20
2N1850	500	10	25 @	1.25	3	@ 100	50	3.5	20
TCR510	50	10	25 @	1.1	3	@ 100	50	3	25
TCR520	50	20	25 @	.82	3	@ 100	50	3	25
TCR1010	100	10	25 @	1.1	3	@ 100	50	3	25
TCR1020	100	20	25 @	.82	3	@ 100	50	3	25
TCR1510	150	10	25 @	1.1	3	@ 100	50	3	25
TCR1520	150	20	25 @	.82	3	@ 100	50	3	25
TCR2010	200	10	25 @	1.1	3	@ 100	50	3	25
TCR2020	200	20	25 @	.82	3	@ 100	50	3	25
TCR2510	250	10	25 @	1.1	3	@ 100	50	3	25
TCR2520	250	20	25 @	.82	3	@ 100	50	3	25
TCR3010	300	10	25 @	1.1	3	@ 100	50	3	50
TCR3020	300	20	25 @	.82	3	@ 100	50	3	50
TCR3510	350	10	25 @	1.1	3	@ 100	50	3	50
TCR3520	350	20	25 @	.82	3	@ 100	50	3	50
TCR4010	400	10	25 @	1.1	3	@ 100	50	3	50
TCR4020	400	20	25 @	.82	3	@ 100	50	3	50

Notes: (1) $T_J = 125°C$

TRIGGER DIODE

ER900 32 Volt symmetrical breakover device. Use as reliable trigger source to fire Transitron Gated Bi Switches and SCRs.

FLANGE MOUNTED SILICON CONTROLLED RECTIFIERS

Case Style — TO-66

TYPE	MAX. OPERATING VOLTAGE, V_{MAX} (volts)	MAX. AMBIENT TEMP (°C) MAX. FORWARD CURRENT (amps)	TEMPERATURE PEAK FORWARD VOLTAGE CURRENT PEAK (amps) (volts)	CASE TEMPERATURE (°C) MAX REVERSE CURRENT @ V_{MAX} (MA)	GATE CURRENT TO FIRE I_{GT} (MA)	GATE VOLTAGE TO FIRE V_{GT} (volts)	MAX. HOLDING CURRENT I_H (MA)
TCR730	50	5 @ 80	(15) 2.2 @ 25	.1 @ 25	20	1.5	25
TCR731	100	5 @ 80	(15) 2.2 @ 25	.1 @ 25	20	1.5	25
TCR732	200	5 @ 80	(15) 2.2 @ 25	.1 @ 25	20	1.5	25
TCR733	300	5 @ 80	(15) 2.2 @ 25	.1 @ 25	20	1.5	25
TCR734	400	5 @ 80	(15) 2.2 @ 25	.1 @ 25	20	1.5	25
TCR742	50	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR743	100	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR744	150	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR745	200	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR746	250	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR747	300	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR748	400	5 @ 80	(10) 1.75 @ 25	.05 @ 25	15	1.5	25
TCR96	600	3.2 @ 75	(10) 1.5 @ 25	.05 @ 25	15	1.5	25
2N3228	200	3.2 @ 50	(10) 1.5 @ 25	.75 @ 100	15	1.5	25
2N3525	400	3.2 @ 75	(10) 1.5 @ 25	1.5 @ 100	15	1.5	25

REFERENCE AMPLIFIERS

Transitron's Ref-Amp eliminates four components and reduces the temperature coefficient of practical regulator circuits. It consists of a voltage reference (temperature compensated zener diode) and a silicon amplifying transistor, packaged together for convenience in mounting. The Ref-Amp may be used to replace both the reference and the first stage transistor amplifier in regulated power supplies. The following is a typical series of characteristics that can be packaged in a variety of case styles.

Case styles include: 1G85, ½" Cube, To-5, and To-18.

TYPE	REFERENCE VOLTAGE* (volts) MIN./MAX.		TEMP. COEFFICIENT (% per °C)	OPERATING TEMPERATURE (°C)	MAX. ZENER CURRENT (MA)	MAXIMUM V_{CE} (volts)	MAXIMUM I_C (MA)
3N42	8.3	9.8	.005	−55 to +100	20	30	2
3N43	8.3	9.8	.003	−55 to +100	20	30	2
3N44	8.3	9.8	.002	−55 to +100	20	30	2
3N44A	8.3	9.8	.001	−55 to +100	20	30	2

Notes: * Measuring Conditions: $I_Z = 5$ MA, $I_C = 250$ μA, $V_{CE} = 3V$, TA = 25°C

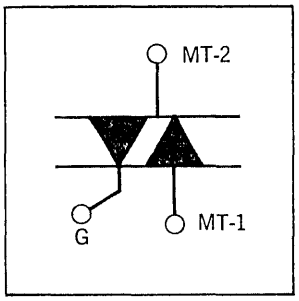
TRIACS

A TRIAC is capable of switching from the off-state to the on-state in both directions. It is also capable of switching in both directions with either polarity of gate terminal voltage.

The TRIAC being a bi-directional device is ideally suited for all A.C. switching and phase control applications.

TYPE	CASE STYLE	MAX. AVERAGE FORWARD CURRENT, I_O (amps) CASE TEMPERATURE (°C)	MIN. BREAKBACK VOLTAGE (volts)	FULL LOAD VOLTAGE DROP @ 25°C (volts)	GATE CURRENT TO FIRE, I_{GT} (MA)	GATE VOLTAGE TO FIRE, V_{GT} (volts)
GBS201A	To-5	1.0 @ 75	200	1.55	25.0	2.0
GBS401A	To-5	1.0 @ 75	400	1.55	25.0	2.0
GBS203E	To-66	3.0 @ 75	200	1.55	50.0	3.0
GBS403E	To-66	3.0 @ 75	400	1.55	50.0	3.0
GBS266E	To-66	6.0 @ 75	200	1.9	50.0	3.0
GBS466E	To-66	6.0 @ 75	400	1.9	50.0	3.0
GBS210E	To-66	10.0 @ 75	200	1.55	100.0	3.0
GBS410E	To-66	10.0 @ 75	400	1.55	100.0	3.0
GBS276D	To-64	6.0 @ 150	200	1.9	50.0	3.0
GBS476D	To-64	6.0 @ 150	400	1.9	50.0	3.0

SYMBOL:



CERTIFIED TRANSREFERENCES

Case Style — 1G-82

The Certified Transreference is a solid state equivalent of the standard cell. It features a miniature package, 500 hour certified voltage stability of ±0.005%; temperature coefficients as low as ±0.0005%/°C; and voltage regulation of 0.002% for a 10% input variation.

TYPE*	D.C. INPUT VOLTAGE ±10% (volts)	D.C. OUTPUT VOLTAGE ±5% (volts)	TEMP. COEFFICIENT (% per °C)	CERTIFIED VOLTAGE STABILITY (%)	REGULATION (%)	OUTPUT IMPEDANCE (Ω/volt)	OUTPUT CURRENT (μA)
TCA3111	50	6.3	±.001	±.005	.002	2.5	200
TCA3112	50	12.6	±.001	±.005	.002	2.5	200
TCA3113	50	18.9	±.001	±.005	.002	2.5	200
TCA3114	50	25.2	±.001	±.005	.002	2.5	200
TCA3115	50	31.5	±.001	±.005	.002	2.5	200
TCA3116	50	6.3	±.0005	±.005	.002	2.5	200
TCA3117	50	12.6	±.0005	±.005	.002	2.5	200
TCA3118	50	18.9	±.0005	±.005	.002	2.5	200
TCA3119	50	25.2	±.0005	±.005	.002	2.5	200
TCA3120	50	31.5	±.0005	±.005	.002	2.5	200

Notes: * Specify N suffix for common negative terminal; P suffix for common positive terminal

SILICON RECTIFIER MODULES

FEATURES:

1. Compact Size
2. Rigid Construction
3. Minimum Thermal Resistance
4. Light
5. High Peak Surge Ratings (up to 400 amperes)
6. High Peak Reverse Voltage (up to 600 volts)

SINGLE PHASE CENTER TAP (Outline A)

D.C. OUTPUT			
Current 45°C Voltage	20 Amp	25 Amp	35 Amp
16	TP1C0J1A1	TP1C0K1A1	TP1C0L1A1
32	TP1C1J1A1	TP1C1K1A1	TP1C1L1A1
64	TP1C2J1A1	TP1C2K1A1	TP1C2L1A1
96	TP1C3J1A1	TP1C3K1A1	TP1C3L1A1
128	TP1C4J1A1	TP1C4K1A1	TP1C4L1A1
160	TP1C5J1A1	TP1C5K1A1	TP1C5L1A1
192	TP1C6J1A1	TP1C6K1A1	TP1C6L1A1
CONTROLLED AVALANCHE ASSEMBLIES			
64		TP1C2K1A1/A	TP1C2L1A1/A
128		TP1C4K1A1/A	TP1C4L1A1/A
192		TP1C6K1A1/A	TP1C6L1A1/A
256		TP1C8K1A1/A	TP1C8L1A1/A

SINGLE PHASE BRIDGE (Outline B)

D.C. OUTPUT			
Current 45°C Voltage	20 Amp	25 Amp	35 Amp
32	TP1B0J1A1	TP1B0K1A1	TP1B0L1A1
64	TP1B1J1A1	TP1B1K1A1	TP1B1L1A1
128	TP1B2J1A1	TP1B2K1A1	TP1B2L1A1
192	TP1B3J1A1	TP1B3K1A1	TP1B3L1A1
256	TP1B4J1A1	TP1B4K1A1	TP1B4L1A1
320	TP1B5J1A1	TP1B5K1A1	TP1B5L1A1
384	TP1B6J1A1	TP1B6K1A1	TP1B6L1A1
CONTROLLED AVALANCHE ASSEMBLIES			
128		TP1B2K1A1/A	TP1B2L1A1/A
256		TP1B4K1A1/A	TP1B4L1A1/A
384		TP1B6K1A1/A	TP1B6L1A1/A
512		TP1B8K1A1/A	TP1B8L1A1/A

TRANSINDICATOR NUMERICAL DISPLAYS

The Transitron Numerical Display provides a clear decimal display of binary information. This compact unit features extremely wide operating tolerances on supply voltage, temperature range and input signal level. Transindicator displays utilize silicon semiconductor circuitry throughout and are designed for use as dependable building block modules in timing, control, and computer system applications.

The ND100 series features continuous decimal display with a minimum signal voltage differential of 3 volts. The ND200 series incorporates the special feature of latching storage, making it possible to sample at any desired time the information being presented to the display, and to indicate and hold this sampled data for convenient visual observation. The latch command pulse automatically clears, decodes, and writes the information presented at the input terminals. No additional control signals are required to erase the previous display.

CONTINUOUS DISPLAY			LATCHING DISPLAY		
Model	**Case**	**Input***	**Model**	**Case**	**Input***
ND100	A	8 line 8421	ND200 (200A)	A	8 line 8421
ND101	B	4 line 8421	ND201	B	4 line 8421
ND102	A	8 line 2421	ND202 (202A)	A	8 line 2421
ND103	B	4 line 2421	ND203	B	4 line 2421
ND150	E	8 line 8421			

*Other codes available on request.

TRANSINDICATOR HIGH SPEED INTEGRATED CIRCUIT COUNTERS AND DISPLAYS

Transitron offers a complete series of high speed integrated circuit decade counters with and without displays. All counters make use of Transitron's HLTTL integrated circuit to provide the combination of high speed with high noise immunity. In addition, each counter can be supplied with continuous or latching display as in the ND100 — ND200 series.

The ND500 and ND600 series of decade counters are capable of operating at rates up to 20 MHZ in either direction. For bi-directional operation, the counters will operate up to 5 MHZ. Higher counting rates are available upon requests. All counters will provide 8 Line 8421 BCD outputs. The counters are designed for use in computer systems, machine control and general laboratory equipment.

Model	**Case Style**	***Maximum Count Rate**	**Display**
ND550	B	20 MHZ	Continuous
ND560	B	20 MHZ	Latching
ND570	C	20 MHZ	—
*ND580	C	15 MHZ	—
*ND590	D	15 MHZ	Continuous
*ND600	D	15 MHZ	Latching

*These counters will count up to 5 MC including reversals for Bi-directional operation.

TRANSISTORIZED NEON INDICATORS & PANEL ASSEMBLIES

The Transitron Transindicators are subminiature transistorized neon indicators, offering the convenience and operational advantages of a single hermetically sealed package containing all the necessary components for positive and negative turn on and turn off.

Various mechanical and electrical configurations are available.* These include clip mounted types for printed circuit board applications, front and rear panel mounted types, and complete printed circuit board assemblies utilizing the clip mounted units. Electrical specifications and type designations are shown in the table below.

TYPE	SIGNAL VOLTAGE TURN ON (volts)	SIGNAL VOLTAGE TURN OFF (volts)	SUPPLY VOLTAGE (volts)	CURRENT DRAIN (μA) LAMP ON (MAX.)	CURRENT DRAIN (μA) LAMP OFF (MAX.)	INPUT RESISTANCE (ohms)	MAXIMUM SIGNAL VOLTAGE (volts)	CASE STYLE
TL1	+ 4	+0.5	+100	330	50	100K	−1 to +50	1G-83
TLD1	+ 4	+0.5	+100	330	50	100K	−1 to +50	1G-84
TL2	− 4	−0.5	−100	330	50	100K	+1 to −50	1G-83
TLD2	− 4	−0.5	−100	330	50	100K	+1 to −50	1G-84
TL3	+0.5	+ 4	+100	200	250	100K	−1 to +50	1G-83
TLD3	+0.5	+ 4	+100	200	250	100K	−1 to +50	1G-84
TL4	−0.5	− 4	−100	200	250	100K	+1 to −50	1G-83
TLD4	−0.5	− 4	−100	200	250	100K	+1 to −50	1G-84
TLA1	+ 4	+0.5	+140	1600	60	33K	−1 to +50	1G-83
TLDA1	+ 4	+0.5	+140	1600	60	33K	−1 to +50	1G-84
TLA2	− 4	−0.5	−140	1600	60	33K	+1 to −50	1G-83
TLDA2	− 4	−0.5	−140	1600	60	33K	+1 to −50	1G-84
TLA3	+0.5	+ 4	+140	1600	2000	33K	−1 to +50	1G-83
TLDA3	+0.5	+ 4	+140	1600	2000	33K	−1 to +50	1G-84
TLA4	−0.5	− 4	−140	1600	2000	33K	+1 to −50	1G-83
TLDA4	−0.5	− 4	−140	1600	2000	33K	+1 to −50	1G-84

* Transindicator Panel Assemblies are printed circuit board designs utilizing the TL1C—TL4C series neon indicator lights. Two basic types are offered as standards, the TLP1 with a maximum of 19 indicators and the TLP2 with a maximum of 38 indicators. **Special board assembly configurations are also available.**
Electrically, the indicators are connected to a common supply bus, with individual signal pins. These assemblies have been designed to accept a standard 22 pin circuit board connector.

THERMAL TIME DELAY RELAYS Selection Chart

SERIES	DELAY (sec)	HEATER VOLTAGE* AC or DC	CONTACTS	CONTACT CURRENT RATINGS (AMP) @ 115 VAC	CONTACT CURRENT RATINGS (AMP) @ 28 VDC	CONTACT RESISTANCE (ohms)	AMBIENT TEMPERATURE RANGE (°C)	HEATER POWER (watts)	MINIMUM OPERATING LIFE (hours)	WEIGHT (oz.)	PACKAGE	BASE	COMMENTS
J	2-60	6.3, 12.6, 22.5, 117	SPST	2	2	0.1	−55 to +85	2	200,000	1	Glass	9 Pin	low cost commercial
JW	2-60	6.3, 12.6, 22.5, 117	SPST	2	2	0.1	−55 to +85	2	200,000	1	Metal	Octal	low cost commercial
H	3-180	6.3, 12.6, 22.5, 117	SPST	3	1	0.1	−65 to +125	4-7	100,000	2	Metal (3)	7 Pin, 9 Pin (2), Octal	high reliability, aircraft missile, industrial
K	3-60	6.3, 12.6, 22.5, 117	SPST	3	1	0.1	−55 to +85	3-7	50,000	2	Glass	9 Pin	low cost commercial
S	3-120	6.3, 12.6, 22.5, 117	SPDT	3	3	0.1	−55 to +100	2.5-4	100,000	2	Metal (3)	7 Pin, 9 Pin (2), Octal	high reliability SPDT snap action switch
G	3-120	6.3, 12.6, 22.5, 117	SPDT	2	2	0.1	−55 to +85	2.5-4	100,000	1	Glass	9 Pin	commercial SPDT snap action switch

Notes: * All voltages 5-220 V available on request (2) 9 pin hooked base also available (3) hermetic seal

PRECISION VOLTAGE REFERENCES

Transitron high voltage precision references are welded, encapsulated strings of closely matched "zener" diodes selected for precision tolerance, low current use. The design engineer is afforded great freedom in obtaining standard units from 10 to 100 volts, in many cases avoiding the necessity of "custom" parts.

SPECIFICATIONS AT 25°C

CHARACTERISTICS AND RATINGS

TYPE		Reference Voltage		Maximum* Dynamic Resistance		Maximum Average Operating Current @ 25°C (mA)	Typical Temperature Coefficient at Voltage Test Current (%/°C)	
2% Tolerance	1% Tolerance	Volts	@ mA	ohms	@ mA		Avg.	Max.
SV4010	SV4010A	10	1.0	90	10	50	±.01	+.015
SV4011	SV4011A	11	1.0	50	10	45	±.01	+.02
SV4012	SV4012A	12	1.0	30	10	40	±.02	+.03
SV4013	SV4013A	13	1.0	30	10	40	+.03	+.04
SV4014	SV4014A	14	1.0	20	10	35	+.04	+.045
SV4015	SV4015A	15	1.0	20	10	30	+.04	+.05
SV4016	SV4016A	16	1.0	30	10	30	+.05	+.06
SV4017	SV4017A	17	1.0	30	10	30	+.05	+.06
SV4018	SV4018A	18	1.0	40	10	25	+.05	+.06
SV4019	SV4019A	19	1.0	120	5	25	+.06	+.07
SV4020	SV4020A	20	1.0	120	5	25	+.06	+.07
SV4021	SV4021A	21	1.0	120	5	20	+.06	+.07
SV4022	SV4022A	22	1.0	120	5	20	+.07	+.08
SV4023	SV4023A	23	1.0	140	5	20	+.07	+.08
SV4024	SV4024A	24	1.0	160	5	20	+.07	+.08
SV4025	SV4025A	25	1.0	160	5	20	+.07	+.08
SV4026	SV4026A	26	1.0	180	5	18	+.07	+.08
SV4027	SV4027A	27	1.0	200	5	18	+.07	+.08
SV4028	SV4028A	28	1.0	240	5	18	+.075	+.08
SV4029	SV4029A	29	1.0	240	5	16	+.075	+.08
SV4030	SV4030A	30	1.0	240	5	16	+.075	+.08
SV4031	SV4031A	31	1.0	240	5	16	+.075	+.08
SV4032	SV4032A	32	1.0	240	5	16	+.075	+.09
SV4033	SV4033A	33	1.0	240	5	14	+.08	+.09
SV4034	SV4034A	34	1.0	300	5	16	+.08	+.09
SV4035	SV4035A	35	1.0	350	5	14	+.08	+.09
SV4036	SV4036A	36	1.0	400	5	14	+.08	+.09
SV4037	SV4037A	37	1.0	400	5	14	+.08	+.09
SV4038	SV4038A	38	1.0	400	5	12	+.08	+.09
SV4039	SV4039A	39	1.0	400	5	12	+.08	+.09
SV4040	SV4040A	40	1.0	600	5	12	+.08	+.09
SV4041	SV4041A	41	1.0	600	5	12	+.085	+.09
SV4042	SV4042A	42	1.0	600	5	12	+.085	+.09
SV4043	SV4043A	43	1.0	600	5	12	+.085	+.10
SV4044	SV4044A	44	1.0	600	5	10	+.085	+.10
SV4045	SV4045A	45	1.0	600	5	10	+.09	+.10
SV4046	SV4046A	46	1.0	600	5	10	+.09	+.10
SV4047	SV4047A	47	0.5	600	5	10	+.09	+.10
SV4048	SV4048A	48	0.5	800	5	10	+.09	+.10
SV4049	SV4049A	49	0.5	800	5	10	+.09	+.10
SV4050	SV4050A	50	0.5	800	5	10	+.09	+.10
SV4051	SV4051A	51	0.5	800	5	9	+.08	+.09
SV4052	SV4052A	52	0.5	800	5	9	+.08	+.09

*The dynamic resistance is measured by imposing a small AC current upon the DC test current.

PRECISION VOLTAGE REFERENCES . . . cont'd

SPECIFICATIONS AT 25°C

CHARACTERISTICS AND RATINGS

TYPE		Reference Voltage		Maximum* Dynamic Resistance		Maximum Average Operating Current	Typical Temperature Coefficient at Voltage Test Current (%/°C)	
2% Tolerance	1% Tolerance	Volts	@ mA	ohms	@ mA	@ 25°C (mA)	Avg.	Max.
SV4053	SV4053A	53	0.5	800	5	9	+.08	+.09
SV4054	SV4054A	54	0.5	800	5	9	+.08	+.09
SV4055	SV4055A	55	0.5	800	5	9	+.08	+.09
SV4056	SV4056A	56	0.5	800	5	9	+.08	+.09
SV4057	SV4057A	57	0.5	1000	5	8	+.08	+.09
SV4058	SV4058A	58	0.5	1000	5	8	+.08	+.09
SV4059	SV4059A	59	0.5	1000	5	8	+.08	+.09
SV4060	SV4060A	60	0.5	1000	5	8	+.08	+.09
SV4061	SV4061A	61	0.5	1000	5	8	+.085	+.09
SV4062	SV4062A	62	0.5	1000	5	8	+.085	+.09
SV4063	SV4063A	63	0.5	1000	5	8	+.085	+.09
SV4064	SV4064A	64	0.5	1000	5	8	+.085	+.09
SV4065	SV4065A	65	0.5	1000	5	8	+.085	+.09
SV4066	SV4066A	66	0.5	1000	5	7	+.085	+.10
SV4067	SV4067A	67	0.5	1000	5	7	+.085	+.10
SV4068	SV4068A	68	0.5	1000	5	7	+.09	+.10
SV4069	SV4069A	69	0.5	1200	5	7	+.09	+.10
SV4070	SV4070A	70	0.5	1200	5	7	+.09	+.10
SV4071	SV4071A	71	0.5	1200	5	7	+.09	+.10
SV4072	SV4072A	72	0.5	1200	5	7	+.09	+.10
SV4073	SV4073A	73	0.5	1200	5	6	+.09	+.10
SV4074	SV4074A	74	0.5	1200	5	6	+.09	+.10
SV4075	SV4075A	75	0.5	1200	5	6	+.09	+.10
SV4076	SV4076A	76	0.5	1500	5	6	+.08	+.09
SV4077	SV4077A	77	0.5	1500	5	6	+.08	+.09
SV4078	SV4078A	78	0.5	1500	5	6	+.08	+.09
SV4079	SV4079A	79	0.5	1500	5	6	+.08	+.09
SV4080	SV4080A	80	0.5	1500	5	6	+.08	+.09
SV4081	SV4081A	81	0.5	1500	5	6	+.08	+.09
SV4082	SV4082A	82	0.5	1500	5	6	+.08	+.09
SV4083	SV4083A	83	0.5	1500	5	6	+.085	+.09
SV4084	SV4084A	84	0.5	1500	5	6	+.085	+.09
SV4085	SV4085A	85	0.5	1500	5	5.5	+.085	+.09
SV4086	SV4086A	86	0.5	1500	5	5.5	+.085	+.09
SV4087	SV4087A	87	0.5	1500	5	5.5	+.085	+.09
SV4088	SV4088A	88	0.5	1500	5	5.5	+.085	+.09
SV4089	SV4089A	89	0.5	1500	5	5.5	+.085	+.10
SV4090	SV4090A	90	0.5	1500	5	5.5	+.085	+.10
SV4091	SV4091A	91	0.5	1500	5	5.5	+.09	+.10
SV4092	SV4092A	92	0.5	2000	5	5	+.09	+.10
SV4093	SV4093A	93	0.5	2000	5	5	+.09	+.10
SV4094	SV4094A	94	0.5	2000	5	5	+.09	+.10
SV4095	SV4095A	95	0.5	2000	5	5	+.09	+.10
SV4096	SV4096A	96	0.5	2000	5	5	+.09	+.10
SV4097	SV4097A	97	0.5	2000	5	5	+.09	+.10
SV4098	SV4098A	98	0.5	2000	5	5	+.09	+.10
SV4099	SV4099A	99	0.5	2000	5	5	+.09	+.10
SV4100	SV4100A	100	0.5	2000	5	5	+.09	+.10

*The dynamic resistance is measured by imposing a small AC current upon the DC test current.

MECHANICAL DATA

MAXIMUM CASE DIMENSIONS: .703" long; .328" diameter.

MINIMUM LEAD LENGTH: 1.0" each end (axially mounted), $\frac{.032}{.035}$" diameter.

ENCAPSULATION: Hermetically sealed glass diodes, welded and potted in epoxy resin.

MOUNTING POSITION: Any.

MAXIMUM ALTITUDE: Any.

LEAD MATERIAL: Tinned steel or dumet.

ADDITIONAL CHARACTERISTICS AND RATINGS

Operating and Storage Temperature	−55°C to +150°C
Maximum Average Power Dissipation	500 mW
Peak Recurrent Power Dissipation	1500 mW

HIGH VOLTAGE ASSEMBLIES

Transitron's improved high voltage silicon rectifier assemblies feature weld-connected series strings of hermetically sealed high reliability cells and strong, non-conductive high temperature resin cases. These rugged devices are designed to withstand exacting military environmental testing. All Transitron high voltage assemblies may be used in any series combinations to achieve higher voltage rating.

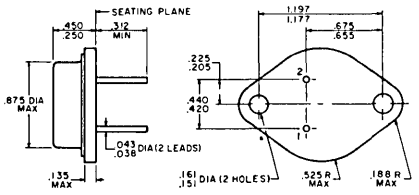
	MAXIMUM RATINGS				SPECIFICATIONS				
			Maximum Average Forward Current (mA) [1]			Maximum DC Inverse Current @ rated PIV (μAdc)		Body Dimensions (inches)	
TYPE	Peak Inverse Voltage (volts)	Maximum RMS Input Voltage (volts) [1]	@25°C	@100°C	Maximum Forward Voltage @ 200 mAdc (volts)	@25°C	@100°C	DIA.	L. [2]
SE1730	1000	700	200	100	4	2.5	40	.375	.5
SE1731	1500	1050	200	100	5	2.5	40	.375	.5
SE1732	2000	1400	200	100	7	2.5	40	.375	1.0
SE1733	3000	2100	150	75	10	5	75	.375	1.0
SE1734	5000	3500	100	50	15	5	75	.500	1.0
SE2382	4000	2800	150	75	14	5	75	.500	1.0
SE2383	6000	4200	100	50	20	5	75	.500	1.5
SE2384	8000	5600	75	40	25	5	75	.500	1.5
SE2385	10000	7000	75	40	30	5	75	.500	2.0

1. For resistive or inductive loads.
2. Leads: Tinned; 0.030" to 0.035" diameter, 1½" minimum length.

Note: All types are available marked as their relaxed-specification EIA counterparts (E.G., SE1730 may be identified as IN1730).

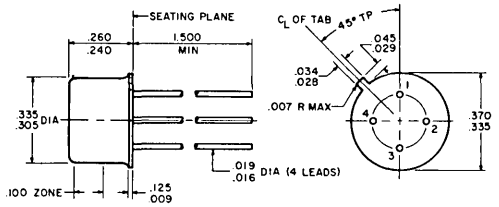
PACKAGE OUTLINE DRAWINGS

JEDEC TO-3 OUTLINE (1G-78)



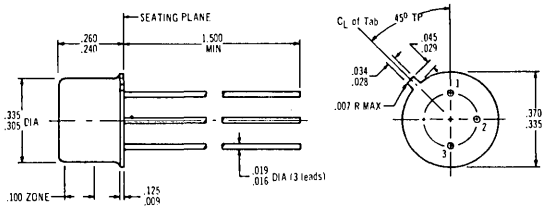
NOTES
1. DETAILED DRAWING #1G-78 IS AVAILABLE UPON REQUEST.
2. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR (connected to case)

JEDEC TO-33 OUTLINE (1G-87)



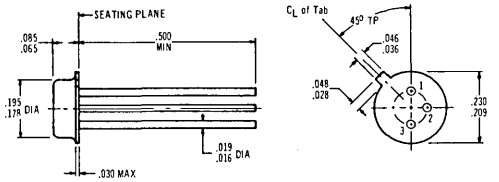
NOTES:
1. LEAD-POSITIONS ARE LOCATED ON A 0.200 DIA PIN-CIRCLE, 90° APART (TRUE POSITIONS)
2. LEADS SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC.
3. DETAILED DRAWING #1G-87 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR 4. ZENER

JEDEC TO-5 OUTLINE (1G-35)



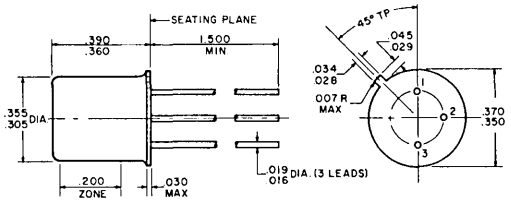
NOTES:
1. LEAD-POSITIONS ARE LOCATED ON A 0.200 DIA PIN-CIRCLE, 90° APART.
2. LEADS SHALL BE LOCATED WITHIN 0.007" OF TRUE POSITION.
3. DETAILED DRAWING #1G-35 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR (connected to case).

JEDEC TO-46 OUTLINE (1G-58)



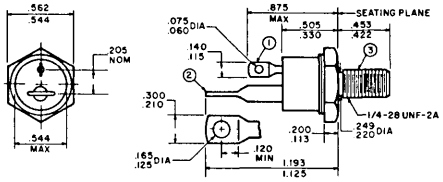
NOTES:
1. LEAD-POSITIONS ARE LOCATED ON A 0.100 DIA PIN-CIRCLE, 90° APART.
2. LEADS SHALL BE LOCATED WITHIN 0.007" OF TRUE POSITION.
3. DETAILED DRAWING #1G-58 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR

JEDEC TO-11 OUTLINE (1G-36)



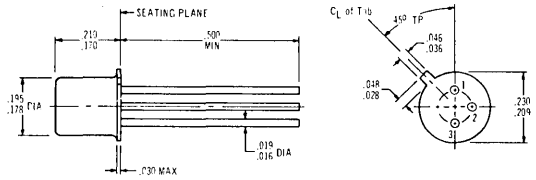
NOTES:
1. LEAD-POSITIONS ARE LOCATED ON A 0.200 DIA PIN CIRCLE, 90° APART (TRUE POSITIONS)
2. LEADS SHALL BE LOCATED WITHIN 0.005 OF TRUE POSITIONS AT MMC.
3. DETAILED DRAWING #1G-36 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR

JEDEC TO-48 OUTLINE (1G-25)



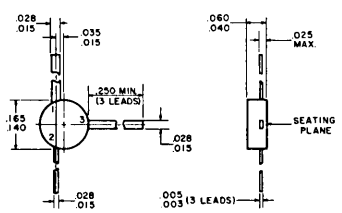
NOTES:
1. PARTIAL THREADS: 0.090 MAX
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 30 LB-IN. APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS.
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.2268") (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS)
4. DETAILED DRAWING #1G-25 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1. GATE 2. CATHODE 3. ANODE (connected to case)

JEDEC TO-18 OUTLINE (1G-26)



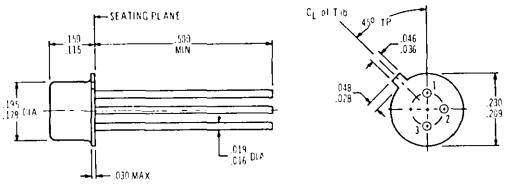
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.100 DIA PIN CIRCLE, 90° APART
2. LEADS SHALL BE LOCATED WITHIN 0.007" OF TRUE POSITION
3. DETAILED DRAWING #1G-26 IS AVAILABLE UPON REQUEST
4. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR (connected to case)

JEDEC TO-51 OUTLINE (1G-40)



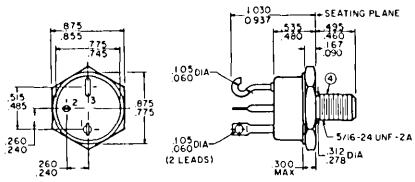
NOTES:
1. DETAILED DRAWING #1G-40 IS AVAILABLE UPON REQUEST.
2. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE 3. COLLECTOR

JEDEC TO-52 OUTLINE (1G-75)



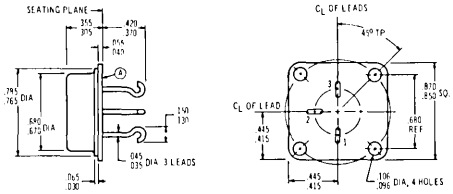
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.100 DIA PIN-CIRCLE, 90° APART.
2. LEADS SHALL BE LOCATED WITHIN 0.007" OF TRUE POSITION
3. DETAILED DRAWING #1G-75 IS AVAILABLE UPON REQUEST
4. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR (connected to case)

JEDEC TO-63 OUTLINE (1G-79)



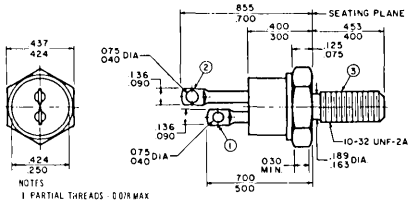
NOTES
1. PARTIAL THREADS: 0.105 MAX
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 45 LB-IN APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.2854) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS)
4. DETAILED DRAWING #1G-79 IS AVAILABLE UPON REQUEST
5. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR (connected to case)

JEDEC TO-53 OUTLINE (1G-37)



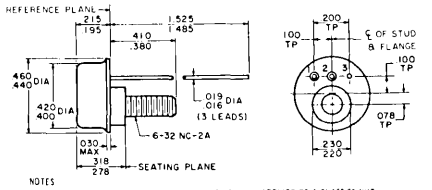
NOTES
1. FOUR MOUNTING HOLES LOCATED ON .962 DIA BOLT CIRCLE, 90° APART, WITHIN .005 OF TRUE POSITION
2. THREE LEADS LOCATED ON .430 DIA PIN CIRCLE, 90° APART, WITHIN .005 OF TRUE POSITION
3. DISTANCE BETWEEN CENTERS OF MOUNTING HOLES AND FLANGE OF COVER: .075 MINIMUM
4. THE DIAMETER OF THE LEADS IS UNCONTROLLED WITHIN THE ZONE BETWEEN SURFACE A AND A PARALLEL PLANE .031" FROM SURFACE A
5. DETAILED DRAWING #1G-37 IS AVAILABLE UPON REQUEST
6. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR (connected to case)

JEDEC TO-64 OUTLINE (1G-22)



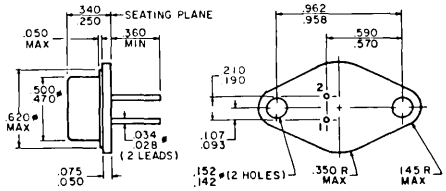
NOTES
1. PARTIAL THREADS: 0.078 MAX
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 15 LB-IN APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.1697) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS)
4. DETAILED DRAWING #1G-22 IS AVAILABLE UPON REQUEST
5. INTERNAL CONNECTIONS: 1 GATE 2 CATHODE 3 ANODE (connected to case).

JEDEC TO-57 OUTLINE (1G-41)



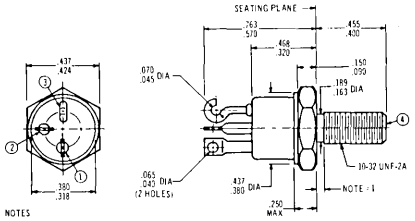
NOTES
1. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 6 LB-IN APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS
2. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.1177) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS)
3. LEADS AND STUD SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC
4. DETAILED DRAWING #1G-41 IS AVAILABLE UPON REQUEST
5. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR (connected to case)

JEDEC TO-66 OUTLINE (1G-77)



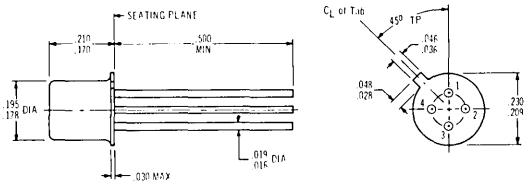
NOTES
1. DETAILED DRAWING #1G-77 IS AVAILABLE UPON REQUEST.
2. INTERNAL CONNECTIONS: 1. EMITTER 2. BASE AND CASE COLLECTOR

JEDEC TO-59 OUTLINE (1G-72)



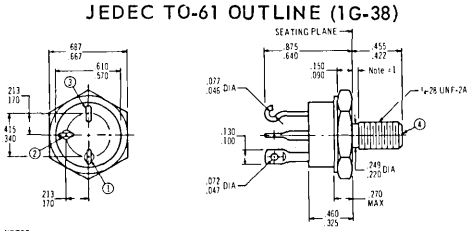
NOTES
1. PARTIAL THREADS: 0.018 MAX
2. TERMINALS WILL BE LOCATED ON A 0.200 DIA PIN CIRCLE, 90° APART, WITHIN 0.0075 OF TRUE POSITION
3. UNIT SHALL NOT BE DAMAGED BY TORQUE OF 15 LB-IN APPLIED TO 10-32 NUT ASSEMBLED ON THREAD
4. DETAILED DRAWING #1G-72 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR (connected to case)

JEDEC TO-72 OUTLINE (1G-71)



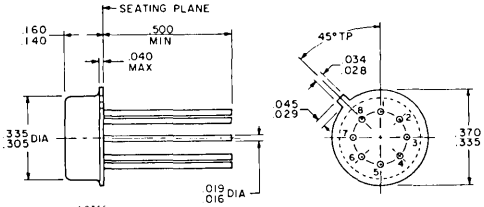
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.100 DIA. PIN CIRCLE, 90° APART.
2. LEADS SHALL BE LOCATED WITHIN 0.007" OF TRUE POSITION
3. DETAILED DRAWING 1G-71 IS AVAILABLE UPON REQUEST.

JEDEC TO-61 OUTLINE (1G-38)



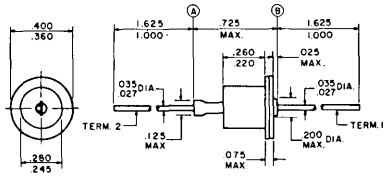
NOTES
1. PARTIAL THREADS: 0.090 MAX
2. UNIT SHALL NOT BE DAMAGED BY TORQUE OF 30 LB-IN APPLIED TO 1/4-28 NUT ASSEMBLED ON THREAD
3. ANGULAR ORIENTATION OF TERMINALS IS UNDEFINED
4. MAX PITCH DIA OF PLATED THREAD SHALL BE BASIC PITCH DIA (.2268) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS)
5. DETAILED DRAWING #1G-38 IS AVAILABLE UPON REQUEST.
6. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR

JEDEC TO-79 OUTLINE (1G-67)



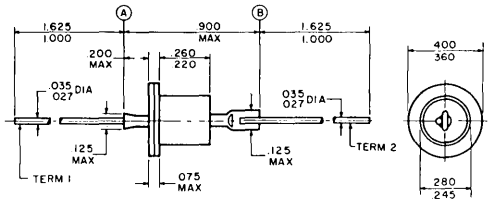
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.200 DIA PIN CIRCLE, 45° APART
2. LEADS SHALL BE LOCATED WITHIN 0.007" OF TRUE POSITION
3. DETAILED DRAWING 1G-67 IS AVAILABLE UPON REQUEST.

JEDEC DO-1 OUTLINE (1G-49)



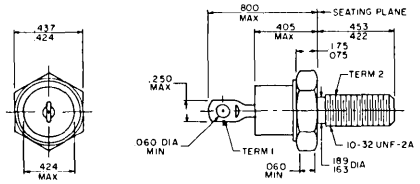
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.188 OF SURFACES IDENTIFIED BY EXTENSION LINES MARKED "A" AND "B".
2. DETAILED DRAWING #1G-49 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1. CATHODE (connected to case) 2. ANODE.

JEDEC DO-2 OUTLINE (1G-17)



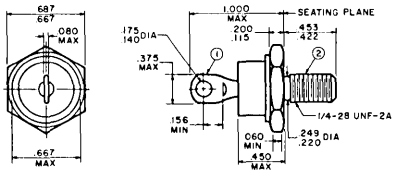
NOTE:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.198 OF SURFACES IDENTIFIED BY EXTENSION LINES MARKED "A" AND "B".
2. DETAILED DRAWING, 1G-17 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1. CATHODE (connected to case) 2. ANODE.

JEDEC DO-4 OUTLINE (1G-6)



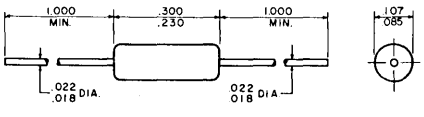
NOTES:
1. PARTIAL THREADS: 0.079 MAX.
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 15 LB-IN. APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS.
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.1697) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS).
4. DETAILED DRAWING #1G-6 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1. ANODE 2. CATHODE (connected to case).

JEDEC DO-5 OUTLINE (1G-9)



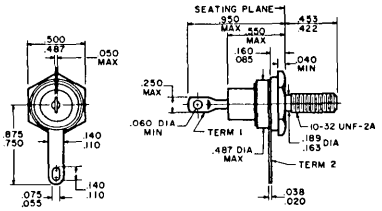
NOTES:
1. PARTIAL THREADS: 0.090 MAX.
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 30 LB-IN. APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS.
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.2268) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS).
4. DETAILED DRAWING #1G-9 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1. ANODE 2. CATHODE (connected to case).

JEDEC DO-7 OUTLINE (1G-2)



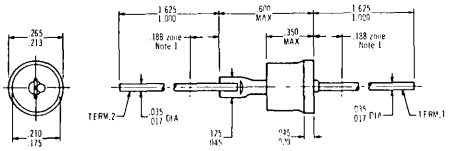
NOTES:
1. LEAD DIAMETERS UNCONTROLLED WITHIN 0.050" OF BODY.
2. THE CATHODE LEAD IS THE LEAD CLOSER TO THE COLOR BAND(S) ON THE BODY.
3. ENCAPSULATION: ALL-GLASS HERMETICALLY SEALED CASE.
4. LEADS: TINNED DUMET.
5. WEIGHT: LESS THAN 0.2 GRAMS.
6. MAXIMUM ALTITUDE: ANY.
7. IT IS RECOMMENDED THAT A HEAT SINK (LONG-NOSE PLIERS) BE USED WHEN SOLDERING LEADS WITHIN ¼ INCH OF GLASS CASE.
8. DETAILED DRAWING #1G-2 IS AVAILABLE UPON REQUEST.

JEDEC DO-10 OUTLINE (1G-8)



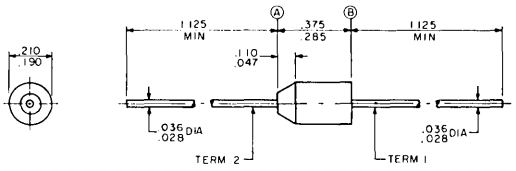
NOTES:
1. PARTIAL THREADS: 0.078 MAX.
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 15 LB-IN. APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS.
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.1697) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS).
4. DETAILED DRAWING #1G-8 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1. ANODE 2. CATHODE (connected to case).

JEDEC DO-12 OUTLINE (1G-7)



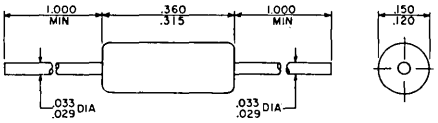
NOTES:
1. LEAD DIAMETER UNCONTROLLED IN THIS ZONE.
2. THE TWO DIAMETERS SHOWN IN THE END VIEW SHALL DIFFER BY AT LEAST 0.010" ON ANY INDIVIDUAL UNIT.
3. DETAILED DRAWING #1G-7 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. CATHODE (connected to case) 2. ANODE.

JEDEC DO-27 OUTLINE (1G-21)



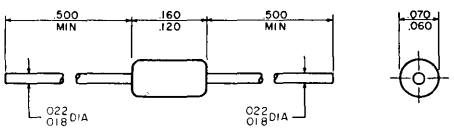
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.062 OF SURFACES IDENTIFIED BY EXTENSION LINES MARKED "A" AND "B".
2. DETAILED DRAWING #1G-21 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1. ANODE 2. CATHODE.

JEDEC DO-29 OUTLINE (1G-97)



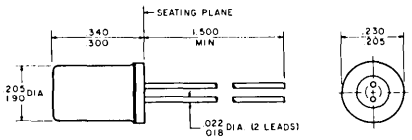
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.050 OF BODY TO ALLOW FOR STUD PROTRUSION. LEAD ATTACHMENT, AND FINISH IRREGULARITIES.

JEDEC DO-35 OUTLINE (1G-91A)



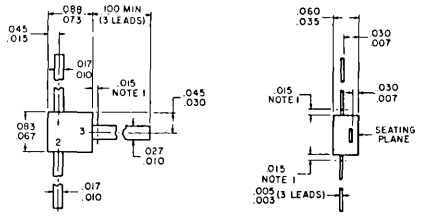
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.080 OF BODY TO ALLOW FOR STUD PROTRUSION, LEAD ATTACHMENT, AND FINISH IRREGULARITIES.

TRANSITRON 1G-4 OUTLINE



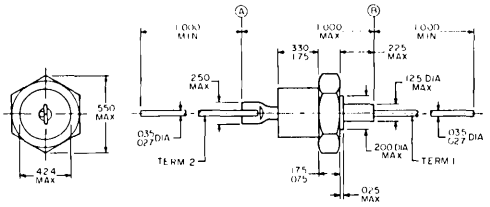
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.050 DIA PIN CIRCLE. 180° APART (TRUE POSITIONS)
2. LEADS SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC.
3. THE SPECIFIED LEAD DIAMETER APPLIES TO THE ZONE BETWEEN 0.100 AND 1.500 FROM THE SEATING PLANE. OUTSIDE OF THESE ZONES THE LEAD DIAMETER IS NOT CONTROLLED.
4. DETAILED DRAWING #1G-4 IS AVAILABLE UPON REQUEST.
5. DOT ON FLANGE DENOTES CATHODE LEAD.

TRANSITRON 1G-44 OUTLINE



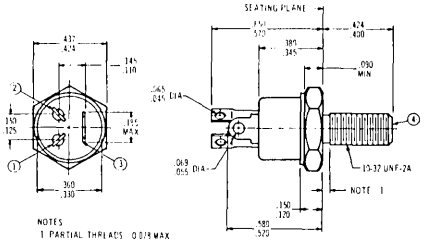
NOTES
1. LEAD WIDTH, LEAD THICKNESS AND IRREGULARITIES IN BODY OUTLINE ARE NOT CONTROLLED IN THIS ZONE.
2. DETAILED DRAWING #1G-44 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR.

TRANSITRON 1G-16 OUTLINE



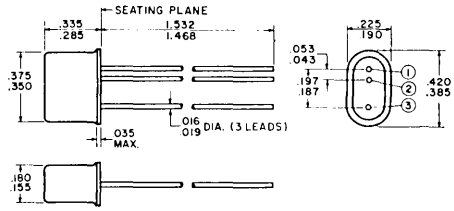
NOTES
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.188 OF SURFACES IDENTIFIED BY EXTENSION LINES MARKED "A" AND "B".
2. DETAILED DRAWING #1G-16 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1. CATHODE (connected to case) 2. ANODE.

TRANSITRON 1G-57 OUTLINE



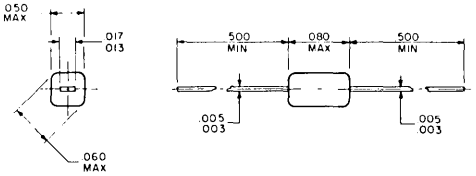
NOTES
1. PARTIAL THREADS: 0.078 MAX.
2. MAX. PITCH DIA. OF PLATED THREAD SHALL BE BASIC PITCH DIA. (0.1697) (REFERENCE ASA STANDARD NR. B1.1-1960 UNIFIED SCREW THREADS).
3. UNIT WILL NOT BE DAMAGED ELECTRICALLY OR MECHANICALLY BY A TORQUE OF 15 LB-IN APPLIED TO HEX OR NUT ASSEMBLED ON STUD.
4. DETAILED DRAWING #1G-57 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR.

TRANSITRON 1G-30 OUTLINE



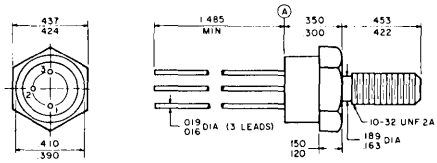
NOTES
1. DETAILED DRAWING #1G-30 IS AVAILABLE UPON REQUEST.
2. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR.

TRANSITRON 1G-59 OUTLINE



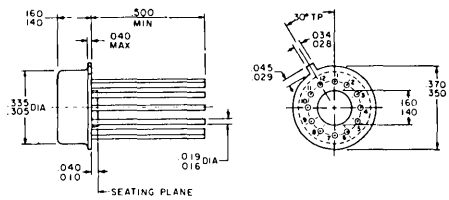
NOTES
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.050 OF BODY.
2. DETAILED DRAWING 1G-59 IS AVAILABLE UPON REQUEST.
3. DOT ON LEAD DENOTES CATHODE LEAD.

TRANSITRON 1G-32 OUTLINE



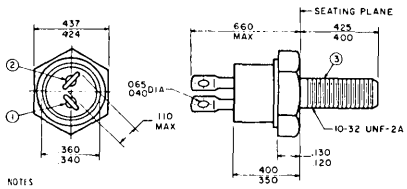
NOTES
1. PARTIAL THREADS: 0.078 MAX.
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 15 LB-IN APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS.
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.1697) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS).
4. LEADS ARE LOCATED ON A 0.200 DIA PIN-CIRCLE, 90° APART.
5. DETAILED DRAWING #1G-32 IS AVAILABLE UPON REQUEST.
6. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR.

TRANSITRON 1G-63 OUTLINE



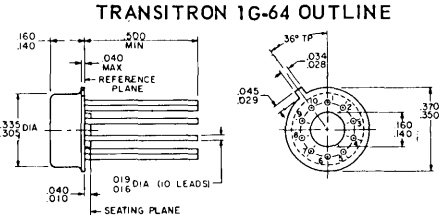
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.230 DIA PIN-CIRCLE, 30° APART (TRUE POSITIONS).
2. LEADS SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC.
3. A DEVICE CONFORMING WITH THIS OUTLINE MAY OMIT ONE LEAD.
4. DETAILED DRAWING #1G-63 IS AVAILABLE UPON REQUEST.

TRANSITRON 1G-39 OUTLINE



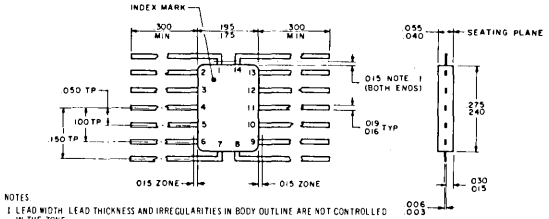
NOTES
1. PARTIAL THREADS: 0.078 MAX.
2. UNITS SHALL NOT BE DAMAGED BY TORQUE OF 15 LB-IN APPLIED TO A CLASS 2B NUT ASSEMBLED ON THREADS.
3. MAXIMUM PITCH DIAMETER OF PLATED THREADS SHALL BE "BASIC" PITCH DIAMETER (0.1697) (REFERENCE ASA STANDARD NR. B1.1-1960, UNIFIED SCREW THREADS).
4. DETAILED DRAWING #1G-39 IS AVAILABLE UPON REQUEST.
5. INTERNAL CONNECTIONS: 1 EMITTER 2 BASE 3 COLLECTOR (connected to case).

TRANSITRON 1G-64 OUTLINE



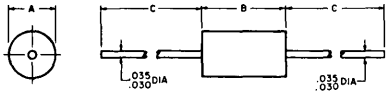
NOTES
1. LEAD POSITIONS ARE LOCATED ON A 0.230 DIA PIN-CIRCLE, 36° APART (TRUE POSITIONS).
2. LEADS SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC.
3. A DEVICE CONFORMING WITH THIS OUTLINE MAY OMIT ONE LEAD.
4. DETAILED DRAWING #1G-64 IS AVAILABLE UPON REQUEST.

TRANSITRON 1G-65 OUTLINE



NOTES:
1. LEAD WIDTH, LEAD THICKNESS AND IRREGULARITIES IN BODY OUTLINE ARE NOT CONTROLLED IN THE ZONE.
2. THE NUMBERS SHOWN ON THE BODY DESIGNATE LEAD POSITIONS. A DEVICE MAY OMIT ONE OR MORE OF THE LEADS SHOWN, BUT ALL LEADS PRESENT MUST BE IDENTIFIED ON THE CONNECTION DIAGRAM BY MEANS OF THE LEAD-POSITION NUMBERS.
3. LEADS SHALL BE LOCATED WITHIN 0.005 OF TRUE POSITION. LEAD LOCATION DIMENSIONS ALSO APPLY TO CORRESPONDING LEADS ON THE OPPOSITE SIDES OF BOTH CENTERLINES OF THE BODY. LEAD LOCATION SHALL BE MEASURED WITHIN 0.030" OF SIDES OF BODY (OR EXTENSION OF SIDES).
4. DETAILED DRAWING 1G-65 IS AVAILABLE UPON REQUEST.

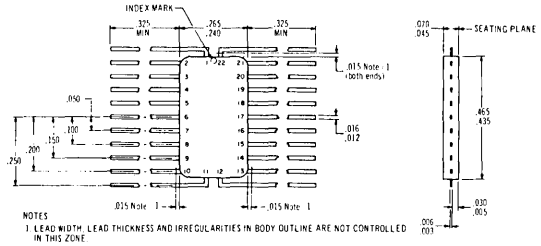
TRANSITRON 1G-80 OUTLINE



VARIATION (dash nr.)	Dimension A (inches)	Dimension B (inches)	Dimension C (inches)
1G-80-01	0.265/0.235	0.765/0.735	1.500 Min
1G-80-02	0.328/0.298	0.703/0.673	1.000 Min
1G-80-03	0.328/0.298	1.015/0.985	1.000 Min
1G-80-04	0.390/0.360	0.515/0.485	1.500 Min
1G-80-05	0.390/0.360	1.015/0.985	1.500 Min
1G-80-06	0.515/0.485	0.640/0.610	1.500 Min
1G-80-07	0.515/0.485	1.015/0.985	1.500 Min
1G-80-08	0.515/0.485	1.515/1.485	1.500 Min
1G-80-09	0.515/0.485	2.015/1.985	1.500 Min

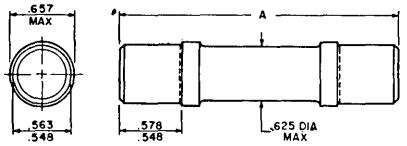
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.050 OF BODY.
2. DETAILED DRAWING #1G-80 IS AVAILABLE UPON REQUEST.
3. POLARITY OF DEVICE WILL BE INDICATED BY A STANDARD POLARITY SYMBOL OR BY A BAND ON THE BODY NEAR THE CATHODE LEAD.

TRANSITRON 1G-68 OUTLINE



NOTES:
1. LEAD WIDTH, LEAD THICKNESS AND IRREGULARITIES IN BODY OUTLINE ARE NOT CONTROLLED IN THIS ZONE.
2. A DEVICE MAY OMIT ONE OR MORE OF THE LEADS SHOWN, BUT ALL LEADS PRESENT MUST BE IDENTIFIED BY MEANS OF THE LEAD-POSITION NUMBERS.
3. LEADS SHALL BE LOCATED WITHIN 0.005 OF TRUE POSITION. LEAD LOCATION DIMENSIONS SHALL ALSO APPLY TO CORRESPONDING LEADS ON THE OPPOSITE SIDES OF BOTH CENTER-LINES OF THE BODY.

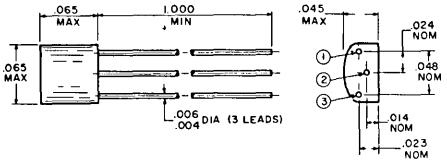
TRANSITRON 1G-81 OUTLINE



NOTES:
1. DETAILED DRAWING #1G-81 IS AVAILABLE UPON REQUEST.
2. POLARITY OF DEVICE WILL BE INDICATED BY A STANDARD POLARITY SYMBOL ON THE CASE.

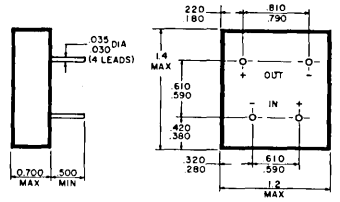
VARIATION (dash nr.)	DIMENSION A (inches) (±0.062)
1G-81-01	1.812
1G-81-02	2.500
1G-81-03	4.312
1G-81-04	6.062

TRANSITRON 1G-69 OUTLINE



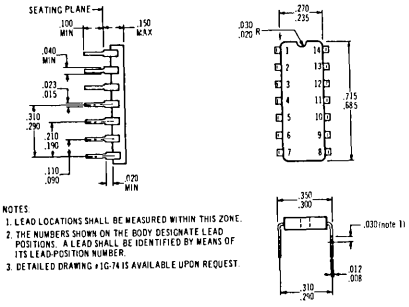
NOTE:
1. THE SPECIFIED LEAD DIAMETER APPLIES TO THE ZONE BETWEEN 0.050 AND 0.250 FROM THE BODY. BETWEEN 0.250 AND END OF LEAD A MAXIMUM OF 0.008 IS HELD. OUTSIDE OF THESE ZONES THE LEAD DIAMETER IS NOT CONTROLLED.
2. DETAILED DRAWING #1G-69 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1. EMITTER 2. COLLECTOR 3. BASE

TRANSITRON 1G-82 OUTLINE



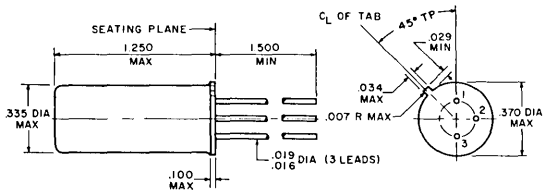
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.050 OF BODY.
2. DETAILED DRAWING #1G-82 IS AVAILABLE UPON REQUEST.

TRANSITRON 1G-74 OUTLINE



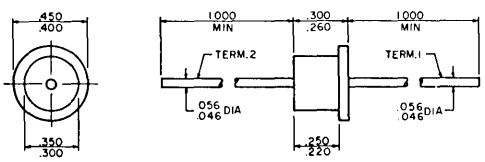
NOTES:
1. LEAD LOCATIONS SHALL BE MEASURED WITHIN THIS ZONE.
2. THE NUMBERS SHOWN ON THE BODY DESIGNATE LEAD POSITIONS. A LEAD SHALL BE IDENTIFIED BY MEANS OF ITS LEAD-POSITION NUMBER.
3. DETAILED DRAWING #1G-74 IS AVAILABLE UPON REQUEST.

TRANSITRON 1G-83 OUTLINE



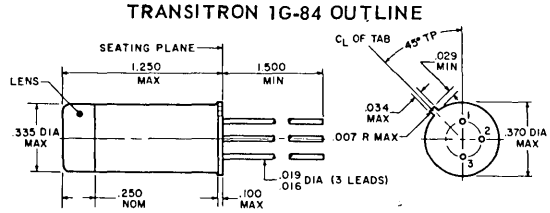
NOTES:
1. LEAD-POSITIONS ARE LOCATED ON A 0.200 DIA PIN-CIRCLE, 90° APART (TRUE POSITIONS).
2. LEADS SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC.
3. DETAILED DRAWING #1G-83 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. COMMON 2. SIGNAL 3. POWER INPUT

TRANSITRON 1G-76 OUTLINE



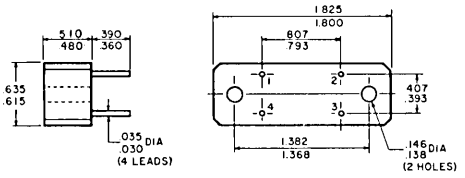
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.060 OF BODY.
2. DETAILED DRAWING #1G-76 IS AVAILABLE UPON REQUEST.
3. INTERNAL CONNECTIONS: 1. ANODE 2. CATHODE (connected to case)

TRANSITRON 1G-84 OUTLINE



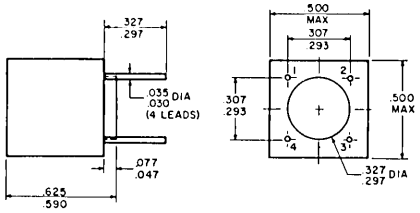
NOTES:
1. LEAD-POSITIONS ARE LOCATED ON A 0.200 DIA PIN-CIRCLE, 90° APART (TRUE POSITIONS).
2. LEADS SHALL BE LOCATED WITHIN 0.007 OF TRUE POSITIONS AT MMC.
3. DETAILED DRAWING #1G-84 IS AVAILABLE UPON REQUEST.
4. INTERNAL CONNECTIONS: 1. COMMON 2. SIGNAL 3. POWER INPUT

TRANSITRON 1G-85 OUTLINE



NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.050 OF BODY.
2. DETAILED DRAWING #1G-85 IS AVAILABLE UPON REQUEST.
3. EMITTER LEAD DENOTED BY AN ADJACENT DOT ON SIDE OF BODY.

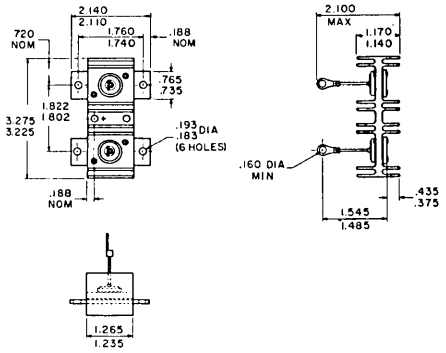
TRANSITRON 1G-86 OUTLINE



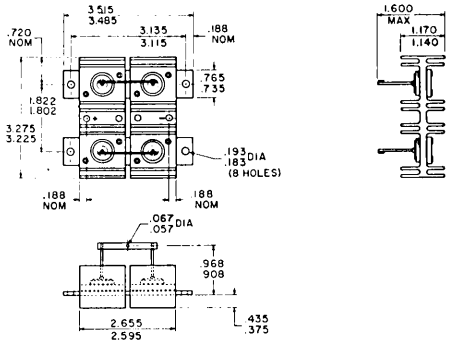
NOTES:
1. LEAD DIAMETER UNCONTROLLED WITHIN 0.050 OF BODY.
2. DETAILED DRAWING #1G-86 IS AVAILABLE UPON REQUEST.
3. EMITTER LEAD DENOTED BY AN ADJACENT DOT ON SIDE OF BODY.

SILICON RECTIFIER MODULES

(Outline A)

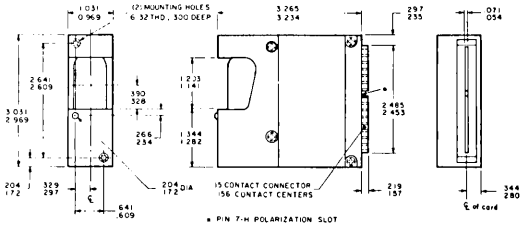


(Outline B)

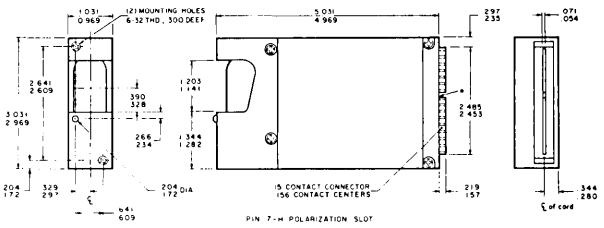


DISPLAYS AND COUNTERS

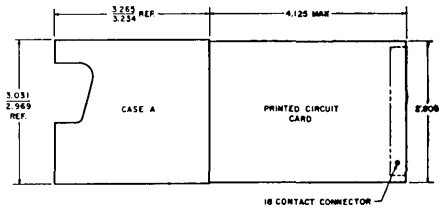
CASE STYLE A



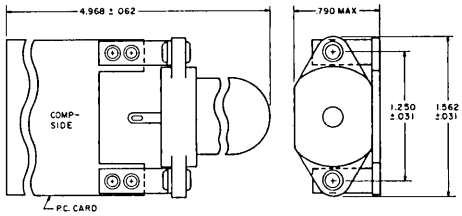
CASE STYLE B



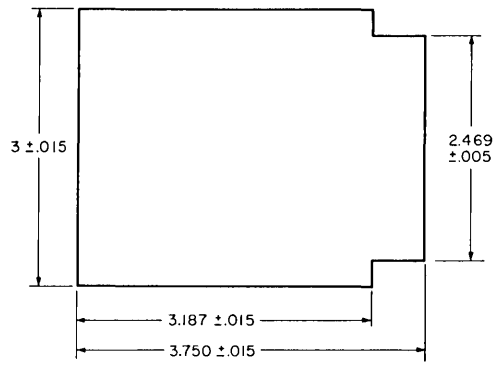
CASE STYLE D

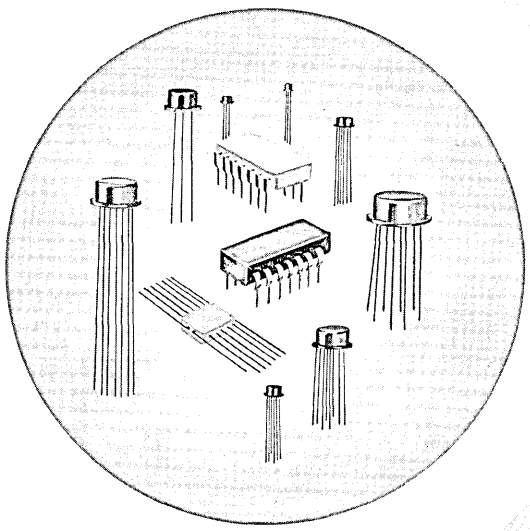


CASE STYLE E



CASE STYLE C





Transitron IC's

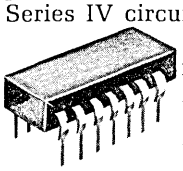
SERIES I The industry's broadest line of saturated, high-speed digital IC's utilizing High Level Transistor-Transistor Logic technology. All units feature high fan-out (to 15) high noise immunity (typically >1V), high speed (typically 30MHz), and high capacitance drive capability. Both military and industrial types available.

SERIES II An extensive series of ultra-high-speed gates and flip-flops, utilizing HLTTL logic and designed for use in systems where extremely high operating speeds are essential. Typical gate propagation delay times are 6 nanoseconds, and JK flip-flops offer typical counting frequencies of 40 MHz. Available for both military and industrial application.

SERIES III IC logic array elements featuring 16-bit memory cells with bit-oriented, non-destructive readout. Operating from a nominal 5 V supply, they utilize addressing, writing and sensing levels compatible with HLTTL circuitry. Easily interfaced with other logic types. This series will include shift registers, counters, decoders, and adders.

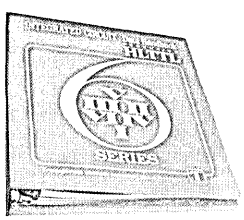
SERIES IV A group of Series I HLTTL circuits packaged in DTL pin configuration. Ideal for use as high-performance replacements for DTL logic elements. Nine functions presently available, including NAND gates; line drivers; OR gates, expanders; general purpose master-slave flip-flop plus dual and single JK flip-flops. A list of industry equivalents available on request.

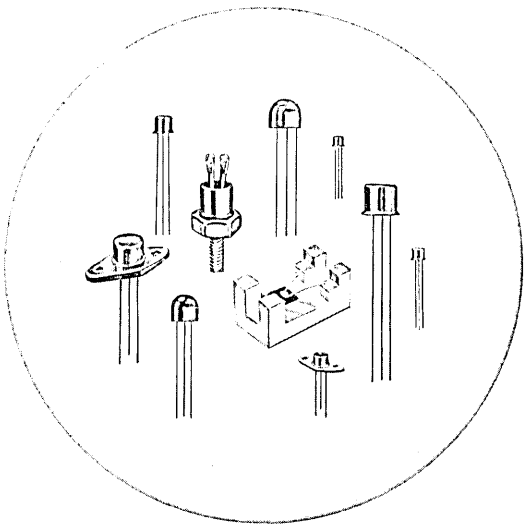
PLASTIC IC's — Series II and IV HLTTL circuit functions are now available from Transitron in plastic packages. Plastic IC's presently in production are all Series IV circuits (HLTTL in DTL pin configuration — see above), and most Series II functions in standard pin configuration. Most Series I and all Series III functions will become available in plastic packages and will be announced shortly.



NEW INTEGRATED CIRCUIT HANDBOOK

Here's a new data reference and catalog containing complete specifications, and performance and application data on Transitron HLTTL IC's. Interested? Write and tell us. Price, $15.00, but FREE to all qualified engineers, designers, and procurement people.

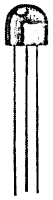




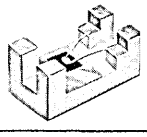
Transitron TRANSISTORS

PLASTIC-PACKAGED Transistors — This broad new line of plastic-encapsulated transistors offers the designer an optimum combination of performance, reliability and low price. All types are encased in TO-18 size packages with hermetically sealed leads. Each package mounts in a standard TO-18 socket without lead preforming. Available types (both NPN and PNP) include:

- **High gain, general purpose amplifiers**
- **General purpose, HF amplifier/drivers**
- **High frequency logic**
- **VHF/UHF unit for HF oscillator/amplifier service**



LID-PACKAGED Transistors — Many of Transitron's most widely-used transistor types are now available in LID (Leadless Inverted Device) packages. Developed for use with thick- and thin-film hybrid circuits, the LID takes up little space (measures only 0.075″ x 0.040″ x 0.032″), and offers significant advantages in handling. It is particularly adaptable to automatic, high-speed, low-temperature multiple mounting techniques. A broad range of LID-mounted standard EIA types including transistors, diodes, zeners, choppers, and SCR's, is available for fast shipment.

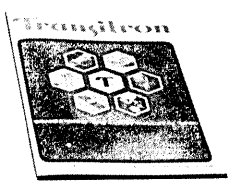


Everything you want in silicon planar transistors

One of the industry's broadest lines of quality silicon planar transistors. Types for every application, in every price range. General purpose; small signal; high-speed switching; planar logic switching; epitaxial switching; medium and high-voltage; low, medium and high power; chopper; audio amplifier; and many other types. Many special units and packages such as Transitron's multiple-emitter types for UHF and high-current switching, and microminiature types for high-density circuitry.

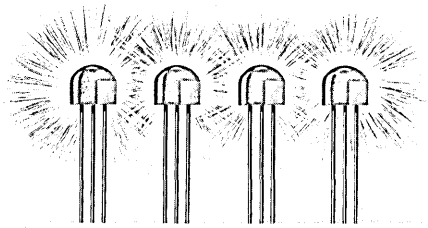
Send for Condensed Catalog SF67

. . . packed with helpful selection and design data for Transitron's complete line of semiconductor components.



on any Transitron product, call your nearest Transitron Sales Engineer. **Here's where to find him:**

GOING PLASTIC?



GO low cost, high quality with .....

TRANSITRON INDUSTRIAL DISTRIBUTORS

Alabama, HUNTSVILLE
M G Electronics & Equipment Co., Inc.,
(205) 534-0608

Arizona, PHOENIX 85016
Kimball Electronics, Inc.,
(602) 264-4438

California, CULVER CITY 90230
Avnet Corporation, (213) 870-0111
GARDENA 90247
Bell Electronic Corp.,
(213) FAculty 1-5802
MENLO PARK 94025
Bell Electronic Corp.,
(415) DAvenport 3-9431
MOUNTAIN VIEW 94040
Avnet Corporation, (415) 961-7700
NORTH HOLLYWOOD 91601
Richey Electronics, Inc.,
(213) 877-2651
REDWOOD CITY 94063
Fortune Electronics Corp.,
(415) 365-4000
SAN DIEGO 92111
Avnet Corporation, (714) 279-1550
SAN DIEGO 92111
Bell Electronic Corp., (714) BR 8-4350

Florida, PALM BEACH GARDENS 33403
Industrial Electronics Associates, Inc.,
(305) 848-8686

Georgia, ATLANTA 30308
Specialty Distributing Co., Inc.,
(404) TRinity 3-2521

Hawaii, HONOLULU 96810
Industrial Electronics, Inc., 506-095

Illinois, CHICAGO
Radio Distributing Co., Inc.,
(312) 379-2121
FRANKLIN PARK
Avnet Corporation, (312) 678-8160
SCHILLER PARK
Pace Electronic Supply
(312) 678-6310

Indiana, SOUTH BEND 46624
Radio Distributing Co., Inc.,
(219) 287-2911

Iowa, CEDAR RAPIDS
Iowa Radio Supply Co.,
(319) EM 4-6154

Kansas, WICHITA 67201
Radio Supply Co., Inc.,
(316) AMherst 7-5214

Louisiana, NEW ORLEANS
Radio Parts, Inc., (504) 522-0217

Maryland, BALTIMORE 21211
Kann-Ellert Electronics, Inc.,
(301) TUxedo 9-4242
ROCKVILLE 20850
Pioneer Standard Electronics, Inc.,
(301) 427-3300

Massachusetts, BURLINGTON
Avnet Corporation, (617) 272-3060
CAMBRIDGE 02139
R & D Electronic Supply Co., Inc.,
(617) UN 4-0400
WATERTOWN
L. L. Schley Co. Inc., (617) 926-0235

TRANSITRON ELECTRONIC CORPORATION, 168 ALBION STREET, WAKEFIELD, MASSACHUSETTS 01880

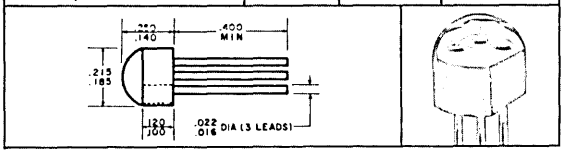
Transitron plastic-packaged silicon planar transistors offer an excellent combination of performance, reliability and low, low price.

Both NPN and PNP types are available. They are encapsulated in a TO-18 size package with leads hermetically sealed. Each package has a locating flat, and leads which will fit the TO-18 standard socket without preforming.

A broad range of types is available for fast delivery from Transitron stock.

PLASTIC-PACKAGED SILICON PLANAR TRANSISTOR FAMILIES

APPLICATION	TYPE	PLASTIC-PACKAGED FAMILY	SIMILAR TO-18 FAMILY
High gain, general purpose amplifier	NPN NPN PNP PNP	**2N3709** **2N3710** **2N4288** **2N4289**	2N929 2N930 2N2604 2N2605
General purpose high frequency amplifier and driver	NPN NPN PNP PNP	**2N4140** **2N4141** **2N4142** **2N4143**	2N2221 2N2222 2N2906 2N2907
High frequency logic	NPN NPN PNP PNP	**2N4274** **2N4275** **2N4121** **2N4122**	2N744 2N2369 2N3248 2N3249
VHF/UHF unit for high frequency oscillator and amplifier service	NPN	**2N3563**	2N918



Transitron

TRANSITRON INDUSTRIAL DISTRIBUTORS (Continued)

Minnesota, MINNEAPOLIS
Northwest Electronic Inc.,
(612) 331-6350
ST. PAUL 55104
Radio Distributing Co., Inc.,
(612) 645-0631
Missouri, KANSAS CITY 64106
Burstein-Applebee Co.,
(816) BAltimore 1-1155
ST. LOUIS 63130
Ensco Distributing Corp.,
(314) PA 6-2233
New Jersey, CHERRY HILL
Valley Electronics, Inc.,
(609) NO 2-9337

New York, BINGHAMTON 13902•
Federal Electronics, Inc.,
(607) Pioneer 8-8211
BUFFALO
Radio Equipment Corp., (716) 856-1415
BUFFALO 14202
Summitt Distributors, Inc.,
(716) 884-3450
LONG ISLAND CITY 11106
H. L. Dalis, Inc., (212) EMpire 1-1100
NEW YORK 10013
Milo Electronics Corp., (212) BE 3-2980
WESTBURY, L.I.
Avnet Corp., (516) 333-8650

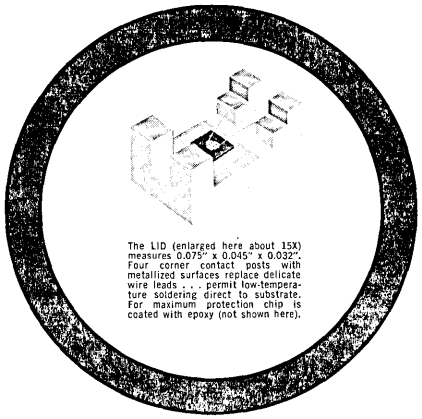
North Carolina, WINSTON-SALEM 27108
Kirkman Electronics, Inc.,
(919) 724-0541
Ohio, CINCINNATI
Hughes-Peters, Inc., (513) 381-7625
CLEVELAND 44115
Radio & Electronic Parts Corp.,
(216) UTah 1-6060
COLUMBUS 43211
Hughes Peters, Inc., (614) 294-5351
DAYTON
Stotts Friedman Co., (513) 224-1111
Oklahoma, TULSA 74119
Radio, Inc., (918) LUther 7-9124

Pennsylvania, McKEESPORT
Barno Radio Co., Industrial Electronic
Div., (412) 462-7575
PHILADELPHIA 19106
Radio Electric Service Co. of Pa., Inc.,
(215) WAlnut 5-6900
Texas, DALLAS 75207
Contact Electronics, Inc.,
(214) ME 1-9530
DALLAS
Solid State Electronics of Texas,
(214) FL 2-2601
EL PASO
Mc Nicol, Inc., (915) 566-2936

HOUSTON 77019
Busacker Electronic Equip. Co.,
(713) JAckson 6-4661
Utah, SALT LAKE CITY 84104
Kimball Electronics, Inc., (801) 328-2075
Washington, SEATTLE 98121
Kierulff Electronics, (206) 725-1550
In Canada contact MONTREAL
Prelco Electronics Ltd.,
(514) 389-8051
TORONTO
Electro Sonic Supply Co., Ltd.,
(416) 924-9301
VANCOUVER 9
L. A. Varah Ltd., (604) 736-6411

TRANSITRON ELECTRONIC CORPORATION, 168 ALBION STREET, WAKEFIELD, MASSACHUSETTS 01880

now Transitron gives you the industry's broadest selection of LID packaged transistors for hybrid use



The LID (enlarged here about 15X) measures 0.075" x 0.045" x 0.032". Four corner contact posts with metallized surfaces replace delicate wire leads . . . permit low-temperature soldering direct to substrate. For maximum protection chip is coated with epoxy (not shown here).

The fully-tested Transitron LID's offer:

- Availability of standard EIA types
- Broad spectrum of devices for design flexibility
- Easier, faster handling
- Substantial space savings
- Low-temperature mounting to hybrid circuit
- Simple, quick testing and grading
- Adaptability for automatic, high-speed multiple mounting
- Use of processes with established reliability

Many widely-used Transitron transistor types are now available in LID (Leadless Inverted Device) form.

The Transitron LID consists of semiconductor chips mounted on microminiature ceramics designed for mounting on hybrid circuit substrates. They provide advantages in size, handling and economy not available with any other packaging technique.

Send today for complete data on the new LID package.

These types available now

PNP Medium Power . . . 2N2907/LID . . . 2N3503/LID

NPN Core Driver . . . 2N1959/LID . . . 2N2538/LID

PNP Logic . . . 2N2894/LID . . . 2N3250/LID

NPN Logic (1000 mc) . . . 2N709/LID . . . 2N2784/LID . . . 2N3010/LID

NPN Logic (500 mc) . . . 2N708/LID . . . 2N744/LID . . . 2N2369/LID

UHF Transistor . . . 2N918/LID

NPN Low Level . . . 2N930/LID . . . 2N2484/LID

NPN General Purpose . . . 2N2222/LID

CALL YOUR NEAREST TRANSITRON SALES ENGINEER — Baltimore: (301) 685-1070 · **Boston:** (617) 245-5640 · **Camden:** (609) ULysses 4-7082 · **Chicago:** (312) Village 8-5556 · **Dallas:** (214) FLeetwood 7-9448 · **Dayton:** (513) 224-9651 · **Detroit:** (313) 838-5884 · **Kansas City:** (913) ENdicott 2-6640 · **Los Angeles:** (213) MAdison 9-2551 · **Minneapolis:** (612) 927-7923 · **New York:** (914) 834-8000 · **Orlando:** (305) CHerry 1-4526 · **Phoenix:** (602) 277-3366 · **Poughkeepsie:** (914) 452-5250 · **Rochester:** (716) LU 6-0468 · **San Francisco:** (415) 961-1954 · **Seattle:** (206) MA 2-4115 · **Canada:** Toronto 18, (416) CLifford 9-5461

Transitron electronic corporation
168 Albion Street, Wakefield, Mass. 01881

TRANSITRON INDUSTRIAL DISTRIBUTORS

Alabama, HUNTSVILLE
M G Electronics & Equipment Co., Inc., (205) 533-0608

Arizona, PHOENIX 85016
Kimball Electronics, Inc., (602) 264-4438

PHOENIX
Sterling Electronics, (602) 258-4531

California, CULVER CITY 90230
Avnet Corporation, (213) 870-0111

CARDENA 90247
Bell Electronic Corp., 213 FAculty 1-5802

GLENDALE
R & C Electronics, (213) 245-7121

MENLO PARK 94025
Bell Electronic Corp., 415 DAvenport 3-9431

MOUNTAIN VIEW 94041
Avnet Corporation, (415) 961-7700

NORTH HOLLYWOOD 91601
Richey Electronics, Inc., (312) 877-2051

REDWOOD CITY 94063
Fortune Electronics Corp., 415 365-4000

SAN DIEGO 92111
Avnet Corporation, (714) 279-1550

SAN DIEGO 92111
Bell Electronic Corp., (714) BR 8-4350

SAN FRANCISCO 94124
Fortune Electronics Corp., 415 VAlencia 6-8811

Florida, PALM BEACH GARDENS 33403
Industrial Electronics Associates, Inc., 305 848-8686

Georgia, ATLANTA 30308
Specialty Distributing Co., Inc., 404 TRinity 3-2521

Hawaii, HONOLULU 96810
Industrial Electronics, Inc., 506-095

Illinois, CHICAGO 60655
Radio Distributing Co., Inc., 312 375-2121

SCHILLER PARK
Pace Electronic Supply (312) 678-6310

FRANKLIN PARK
Avnet Corporation, (312) 678-8150

Indiana, SOUTH BEND 46624
Radio Distributing Co., Inc., (219) 287-2911

Iowa, CEDAR RAPIDS
Iona Radio Supply Co. (319) EM 4-6154

Kansas, WICHITA 67201
Radio Supply Co., Inc., 316 AMherst 7-5214

Louisiana, NEW ORLEANS 70130
Radio Parts, Inc., (504) 522-0217

Maryland, BALTIMORE 21211
Kann-Ellert Electronics, Inc., (301) TUxedo 9-4242

ROCKVILLE 20850
Pioneer Electric, Inc., (301) 427-3300

Massachusetts, BURLINGTON
Avnet Corporation, (617) 272-3060

CAMBRIDGE 02139
R & D Electronic Supply Co., Inc., (617) UN 4-0400

WATERTOWN
L. L. Schley Co., Inc., (617) 926-0235

Michigan, DETROIT
Pace Electronics, (313) 543-3850

Minnesota, MINNEAPOLIS
Northwest Electronic Inc., (612) 331-6350

ST. PAUL 55104
Radio Distributing Co., Inc., (612) 645-0631

Missouri, KANSAS CITY 64106
Burstein-Applebee Co., (816) BAltimore 1-1155

ST. LOUIS 63130
Ensco Distributing Corp., (314) PA 6-2233

New Jersey, CHERRY HILL
Valley Electronics, Inc., (609) NO 2-9337

New York, BINGHAMTON 13902
Federal Electronics, Inc., (607) Pioneer 8-8211

BUFFALO 14203
Radio Equipment Corp., (716) 856-1415

BUFFALO 14202
Summit Distributors, Inc., (716) 884-3450

LONG ISLAND CITY 11106
H. L. Dalis, Inc., (212) EMpire 1-1100

NEW YORK 10013
Milo Electronics Corp., (212) BE 3-2980

WESTBURY, L.I.
Avnet Corp., (516) 333-8650

North Carolina, WINSTON-SALEM 27108
Kirkman Electronics, Inc., (919) 724-0541

Ohio, CINCINNATI
Hughes-Peters, Inc., (513) 381-7625

CLEVELAND 44115
Radio & Electronic Parts Corp., (216) UTah 1-6060

COLUMBUS 43211
Hughes-Peters, Inc., (614) 294-5351

DAYTON 45402
Stotts-Friedman Co., (513) 224-1111

Oklahoma, TULSA 74119
Radio, Inc., (918) LUther 7-9124

Pennsylvania, McKEESPORT
Barno Radio Co., Industrial Electronic Div., (412) 482-7575

PHILADELPHIA 19106
Radio Electric Service Co. of Pa., Inc., (215) WAlnut 5-6900

Texas, DALLAS 75207
Contact Electronics, Inc., (214) ME 1-9530

DALLAS
Solid State Electronics of Texas, (214) FL 2-2601

EL PASO
Mc Nicol, Inc., (915) 566-2936

HOUSTON 77019
Busacker Electronic Equip. Co., (713) JAckson 6-4661

Utah, SALT LAKE CITY 84104
Kimball Electronics, Inc., (801) 328-2075

Washington, SEATTLE 98121
Kierulff Electronics, (206) 725-1550

In Canada contact MONTREAL 9
E T R Supply Company, Ltd., (514) 735-2471

DON MILLS, ONTARIO
Western Components Supply Ltd., (416) 445-2340

VANCOUVER 9
L. A. Varah Ltd., (604) 736-6411

TRANSITRON QUALITY ASSURANCE AND RELIABILITY

Transitron Quality Assurance and Reliability Groups report to our Corporate Director who is responsible directly to the President for all aspects of quality assurance and reliability. Included in this group are the key functions of incoming inspection, process control, and outgoing inspection. The group is also responsible for support functions such as the standards laboratories, life and environmental test facilities, and equipment calibration and certification. All functions operate in accordance with procedures as defined in Transitron's Quality Assurance and Reliability Manual.

Our Quality Assurance Group is continually aware that quality and reliability must be inherent in a finished device. The Group assists engineering in evaluation of new products and thus works — and complements — the manufacturing line in the production of these products. This effort begins with the generation and approval of both manufacturing procedures and engineering changes thereto, and is implemented by many in-process quality control check stations. These stations include: lot acceptance of incoming material, in-process control points, and sampling acceptance by Quality Control of every lot prior to shipment.

In addition to the controls on the manufacturing lines and of the incoming material and finished products, Transitron's Quality Reliability Group conduct periodic life and design tests. These tests are performed on product lines that are not normally subjected to such tests as a result of MIL or customer requirements. This in-house evaluation program is titled "TREP" — Transitron Reliability Evaluation Program. The test series consists of a 1000 hour operating life, 1000 hour elevated temperature storage, shock, vibration, constant acceleration, hermeticity, and other tests normally specified on MIL and high reliability specifications.

Transitron's Reliability Group has developed a complete computer program library for data analysis. The most popular program is called "STAT 9". It will: screen the data to specifications and will note devices that are out of spec; plot a frequency distribution of each parameter at each readout period; calculate the average and standard deviation of each distribution; calculate obsolete or percent change for each device and plot a distribution of change. Additionally, the program summarizes the number of devices on test, indicates the total defects found, compares this to the sample acceptance number and determines if test is accepted or rejected. Other options are available such as failure rate calculation and confidence intervals about the failure rate. Other STAT PROGRAMS that have been developed are applicable to drift analysis and matrix test data analysis.

wherever there's electronics . . . there's **Transitron**

Printed in U. S. A.

Transitron electronic corporation

168 Albion Street, Wakefield, Massachusetts 01881 • (617) 245-4500, Cable: "TRELCO"