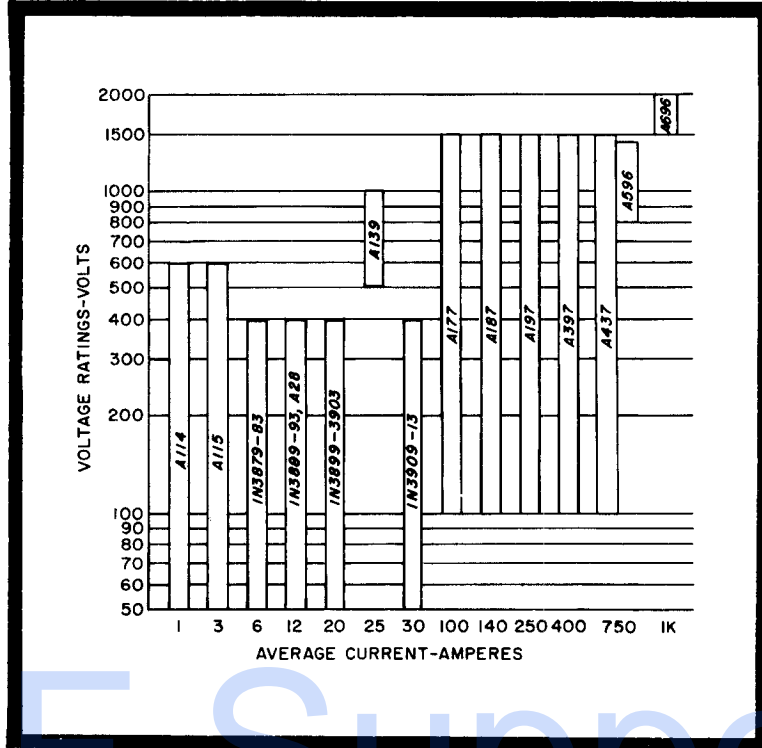
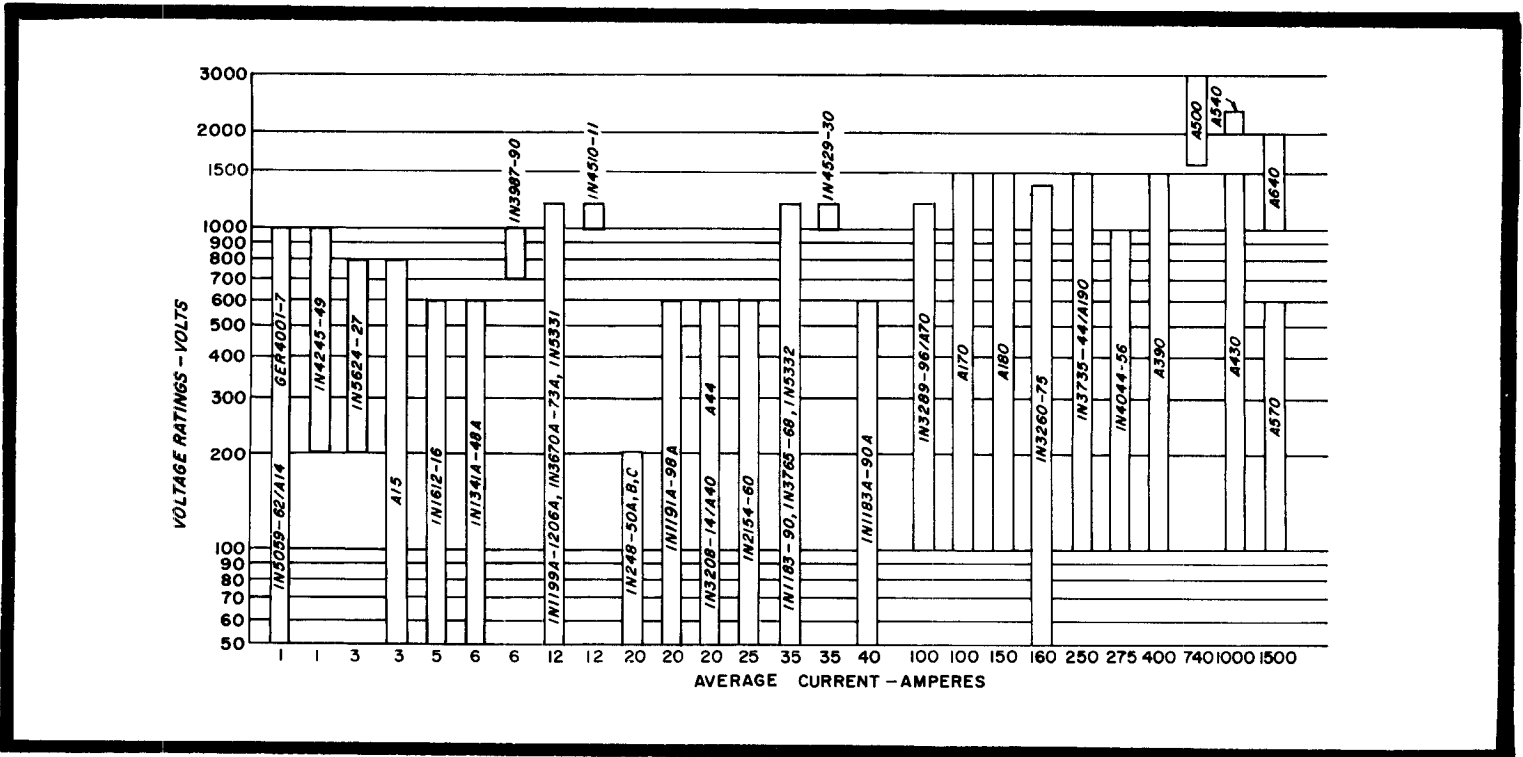


FAST RECOVERY RECTIFIERS SELECTOR GUIDE



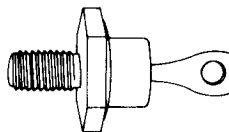
STANDARD RECTIFIERS SELECTOR GUIDE



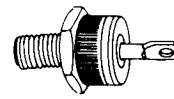
RECTIFIERS 20 TO 25 AMPERES

JEDEC	1N248B-50B	1N1195A-98A	1N2154-60	1N1183-90 1N3765-68 1N5332	1N4529-30	1N1183A-90A	1N3899-3903	1N3909-13	1N3208-14			
GE TYPE	—	—	—	—	—	—	—	—	A40F	A44F	A139	
SPECIFICATIONS												
$I_{FM(AV)}$	Max. average forward current (1 phase operation) (A)	20	20	25	35	35	40	20	30	20	20	25
	@ $T_C = (^\circ C)$	150	150	145	140	115	150	100	100	110	110	75
$V_{RM(rep)}$	Max. repetitive peak reverse voltage (V)											
		50	1N248B 1N1191A	1N2154	1N1183	—	1N1183A	1N3899*	1N3909*	1N3208 A40F	A44F	—
	100	1N249B	1N1192A	1N2155	1N1184*	—	1N1184A	1N3900*	1N3910*	1N3209 A40A	A44A	—
	150	—	1N1193A	—	1N1185	—	1N1185A	—	—	—	—	—
	200	1N250B	1N1194A	1N2156	1N1186*	—	1N1186A	1N3901*	1N3911*	1N2110 A40B	A44B	—
	300	—	1N1195A	1N2157	1N1187	—	1N1187A	1N3902*	1N3912*	1N3211 A40C	A44C	—
	400	—	1N1196A	1N2158	1N1188*	—	1N1188A	1N3903*	1N3913*	1N3212 A40D	A44D	—
	500	—	1N1197A	1N2159	1N1189	—	1N1189A	—	—	1N3213 A40E	A44E	A139E
	600	—	1N1198A	1N2160	1N1190*	—	1N1190A	—	—	1N3214 A40M	A44M	A139M
	700	—	—	—	1N3765	—	—	—	—	—	—	—
	800	—	—	—	1N3766	—	—	—	—	—	—	A139N
	900	—	—	—	1N3767	—	—	—	—	—	—	—
	1000	—	—	—	1N3768	1N4529	—	—	—	—	—	A139P
	1200	—	—	—	1N5332	1N4530	—	—	—	—	—	—
$I_{FM(surge)}$	Max. peak one cycle, non-recurrent surge current (60 Hz sine wave, 1 phase operation) @ max. rated load conditions (A)	350	350	400	500	500	800	225	300	300	300	400
$I^2 t$	Max. $I^2 t$ rating (non-repetitive for 8.3 msec) $A^2 \text{ sec}$	—	—	250	500	500	—	—	—	100	100	500
T_J	Operating junction temperature range ($^\circ C$)	-65 to +175	-65 to +175	-65 to +200	-65 to +200	-65 to +175	-65 to +200	-65 to +150	-65 to +150	-65 to +175	-65 to +175	-40 to +125
T_{stg}	Storage temperature range ($^\circ C$)	-65 to +175	-65 to +175	-65 to +200	-65 to +200	-65 to +200	-65 to +200	-65 to +175	-65 to +175	-65 to +175	-65 to +175	-40 to +200
$R_{\theta JC}$	Max. thermal resistance, junction-to-case ($^\circ C/W$)	1.2	1.2	1.4	1.0	1.0	1.0	1.5	1.0	1.5 Typical	1.5 Typical	1.0
V_{FM}	Max. peak forward voltage drop @ rated $I_{F(AV)}$ (1 phase operation) (V)	1.5	1.2	1.2	1.8	1.4	1.3	1.4	1.4	1.00 Typical	1.00 Typical	1.85
	@ $T_C = (^\circ C)$	25	25	145	140	115	25	25	25	25	25	75
T_{rr}	Max. reverse recovery time (nsec)	—	—	—	—	—	—	200	200	—	—	500
PACKAGE OUTLINE NO.		123	123	123	123	123	123	123	123	125	126	123

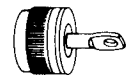
* JAN & JANTX types available.



123



125



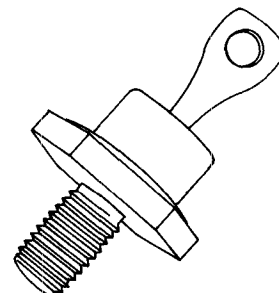
126

Silicon Rectifier

1N248-50,A,B

10A & 20A Types

These stud mounted diffused junction silicon rectifiers are designed for all rectifier applications in the 10 to 20 ampere range. A high junction temperature rating and an extremely low forward voltage drop and thermal impedance permit high current operation with minimum space requirements. These rectifiers may be mounted directly to a chassis or a fin or may be electrically insulated from the heat sink by using the mica washer insulating kit



General Electric research, advanced development and product design have resulted in a highly efficient rectifying junction. This feature, plus a mechanical design employing high temperature hard solders and welds for all internal and external joints and seals, which eliminates common sources of thermal fatigue failure, has produced a silicon rectifier with outstanding reliability under all operating conditions.

electrical ratings and specifications (60 CPS, Resistive or Inductive Load)

	1N248	1N249	1N250	1N248A	1N249A	1N250A	1N248B	1N249B [†]	1N250B [†]	
Max. Allow. Peak Reverse Voltage (Repetitive, -65°C to +175°C) *	50	100	200	50	100	200	50	100	200	Volts
Max. Allow. Peak Reverse Voltage (Repetitive at 25°C) *	50	100	200	50	100	200	55	110	220	Volts
Max. Allow. RMS Voltage	35	70	140	35	70	140	35	70	140	Volts
Max. Allow. DC Blocking Voltage†	50	100	200	50	100	200	50	100	200	Volts
Max. Allow. Forward Current (Single Phase or Three Phase 150°C stud temp.)	← 10 Amp DC →			← 20 Amp DC →			← 20 Amp DC →			
Peak Recurrent Forward Current	← 45 Amp →			← 90 Amp →			← 90 Amp →			
Max. Allow. Peak One-Cycle Surge Current	← 200 Amp →			← 350 Amp →			← 350 Amp →			
Max. Full Load Voltage Drop (T _j = 25°C) At 25A At 50A	← 1.5 Volts →			← 1.5 Volts →			← 1.5 Volts →			
Max. Leakage Current at Full Load (Single Phase, Full Cycle Average, 150°C stud temp.)	← 5 milliamp →									
Junction Operating and Storage Temp. Range	← -65°C to +175°C →									
Maximum Stud Torque	30 inch-pounds.									

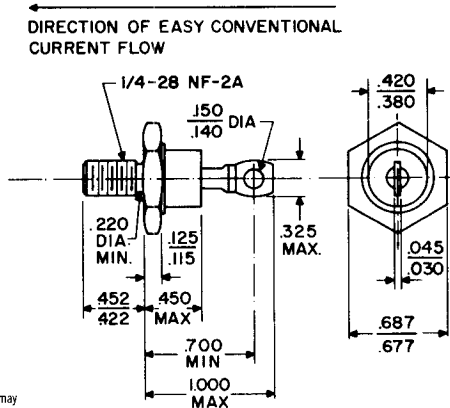
*Maximum voltages apply with a heat sink thermal resistance of 12°C/watt or less at maximum rated junction temperature.

†Maximum voltages apply with a heat sink thermal resistance of 5°C/watt or less at maximum rated junction temperature.

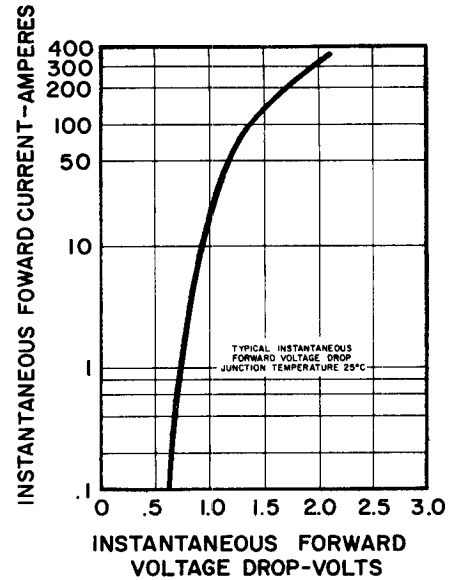
1N248-50, A, B

OUTLINE DRAWING

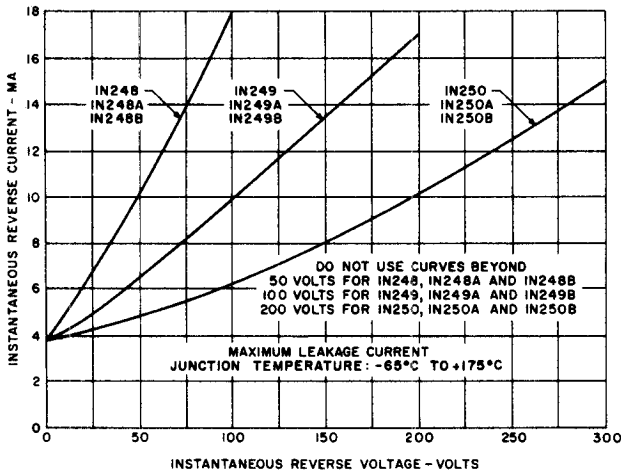
**INSULATING
HARDWARE
KIT***



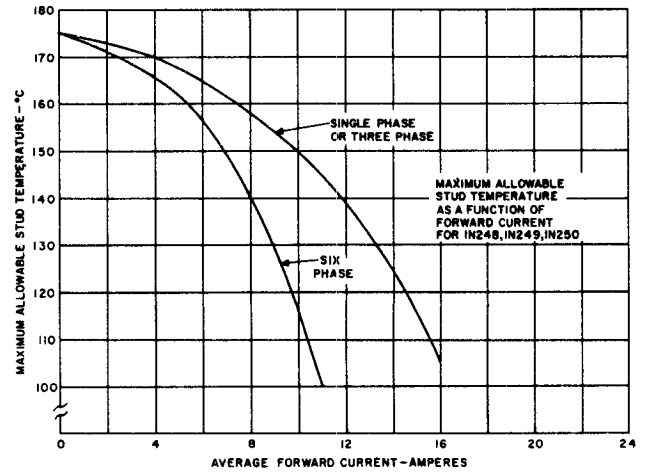
NOTE 1: Unit weight—.5 oz.
NOTE 2: Mica washer in mounting kit may add approx 2.5°C/watt thermal resistance stud to heatsink.
Complies with EIA registered outline DD-5
*Available upon request.



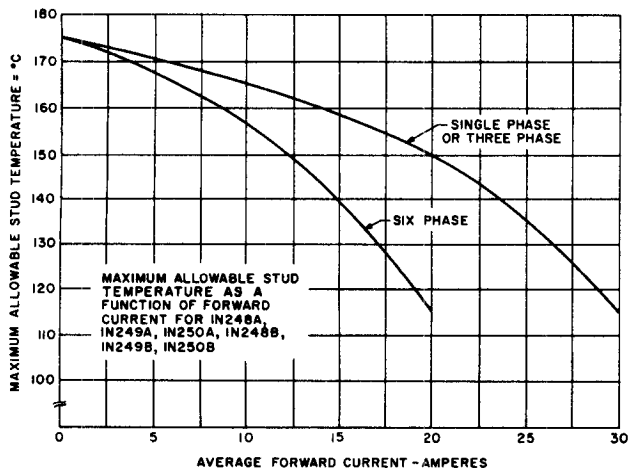
1. TYPICAL FORWARD CHARACTERISTICS



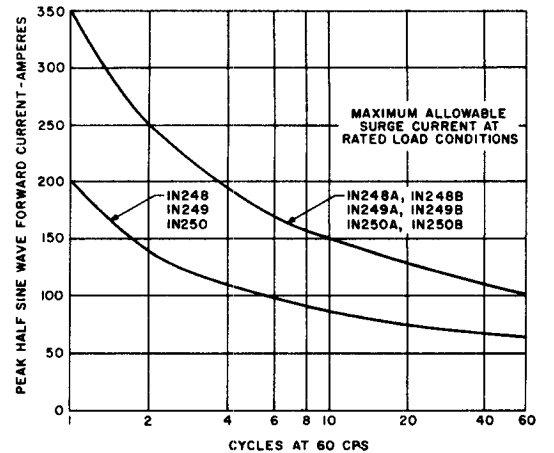
2. REVERSE CHARACTERISTICS



**3. MAXIMUM ALLOWABLE STUD TEMPERATURE
1N248, 1N249, 1N250**



**4. MAXIMUM ALLOWABLE CURRENT STUD TEMPERATURE
1N248A, 1N249A, 1N250A
1N248B, 1N249B, 1N250B**



5. SURGE RATING