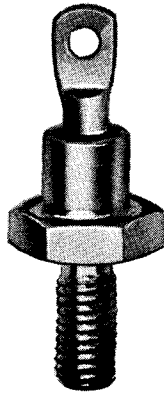


Series 20



Avalanche Silicon Power Rectifiers



ELECTRICAL CHARACTERISTICS:

Maximum Average Forward Current, Single Phase Half
Wave DC Rating at 126° C. Case Temperature 16 amperes

Maximum Surge Current
(one cycle of 60 CPS sine wave) 200 amperes

Peak Forward Voltage
at 30 Amps (25° C. Case Temp.) 1.3 Volts Maximum

Rated Peak Reverse Voltage Range 50 to 1600 Volts

Maximum *FCA Reverse Current
at 150° C. Case Temperature 1.0 Milliamps

Maximum Operating Frequency 100,000 CPS

Maximum I²t (less than 8 ms) 165 Amps² - Second

Reverse Power Rating 0.16 Joules

*FCA = Full Cycle Average (measured with a DC meter)

MECHANICAL CHARACTERISTICS:

Base Steel stud and base with a #10-32 UNF-2A thread for through mounting on a heat sink. Nickel plating produces low contact resistance and prevents corrosion.

Header Glass to metal construction. Hermetically sealed to base.

Weight Approximately 0.16 ounces

Mounting Position May be mounted in any position

Mounting Torque 30 inch pounds maximum

Dimensions In accordance with JEDEC DO-4 Outline

THERMAL CHARACTERISTICS:

Storage Temperature Range -65° C. to + 200° C.

Operating Temperature Range:
Junction -65° C. to + 190° C.

Impedance (°C/W), Junction to Case 3.0 Maximum

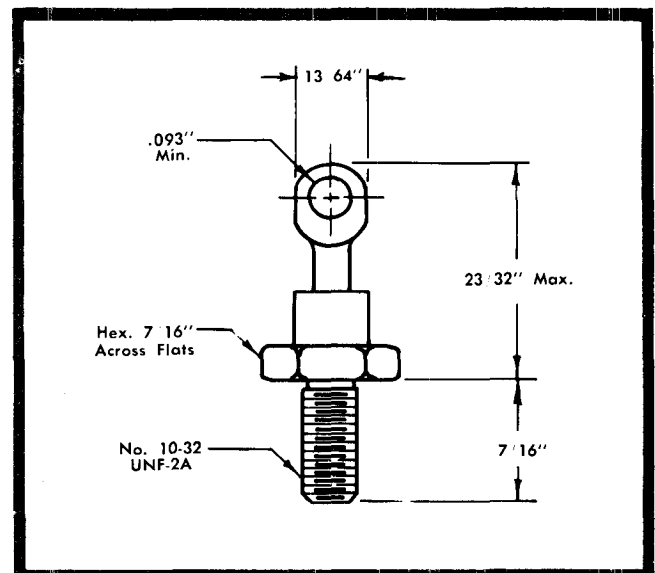
ENVIRONMENTAL SPECIFICATIONS:

Tests in accordance with (MIL-E-1)

- Tests Include:
1. Temperature cycling
 2. Salt spray
 3. Vibration
 4. Shock
 5. Moisture resistance
 6. Temperature soak

Ratings

JEDEC Numbers	Catalog Number Polarity		Peak Reverse Voltage
	Standard	Reverse	
1N1341, 1N1341A, 1N1341B, 1N1581, 1N1612, 1N2228, 1N2491	S2005	R2005	50
1N1342, 1N1342A, 1N1342B, 1N1582, 1N1613, 1N2492	S2010	R2010	100
1N1343, 1N1343A, 1N1343B	S2015	R2015	150
1N1124, 1N1344, 1N1344A, 1N1344B, 1N1583, 1N1614, 1N2230, 1N2493	S2020	R2020	200
	S2025	R2025	250
1N1125, 1N1345, 1N1345A, 1N1345B, 1N1584, 1N2232, 1N2494	S2030	R2030	300
	S2035	R2035	350
1N1126, 1N1346, 1N1346A, 1N1346B, 1N1585, 1N1615, 1N2234, 1N2495	S2040	R2040	400
	S2045	R2045	450
1N1127, 1N1347, 1N1347A, 1N1347B, 1N1586, 1N2236, 1N2496	S2050	R2050	500
	S2060	R2060	600
1N1128, 1N1348, 1N1348A, 1N1348B, 1N1587, 1N1616, 1N2238, 1N2497	S2070	R2070	700
	S2080	R2080	800
1N2240	S2090	R2090	900
	S2100	R2100	1000



Diodes are available with voltage ratings up to 1600 PRV.

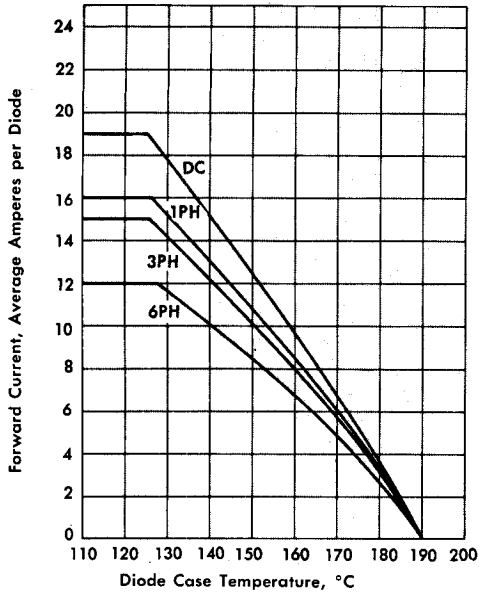


Fig. 1—Load current versus case temperature.

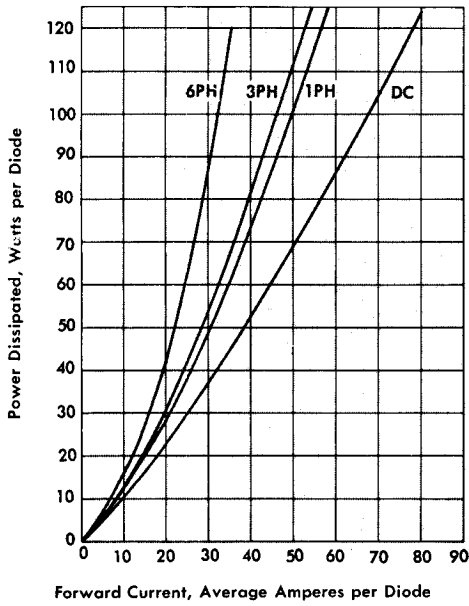


Fig. 2—Maximum power dissipation versus forward current.

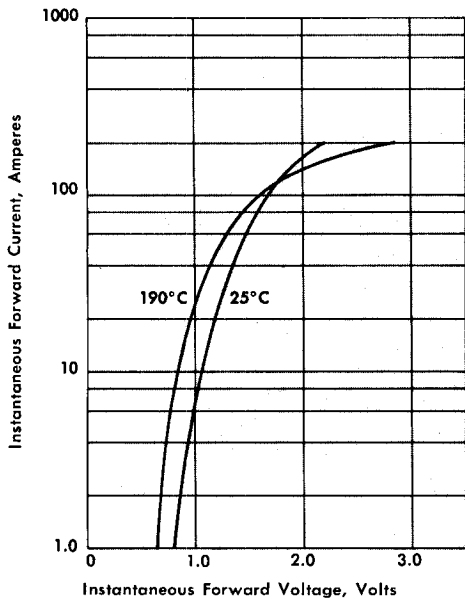


Fig. 3—Maximum forward characteristics.

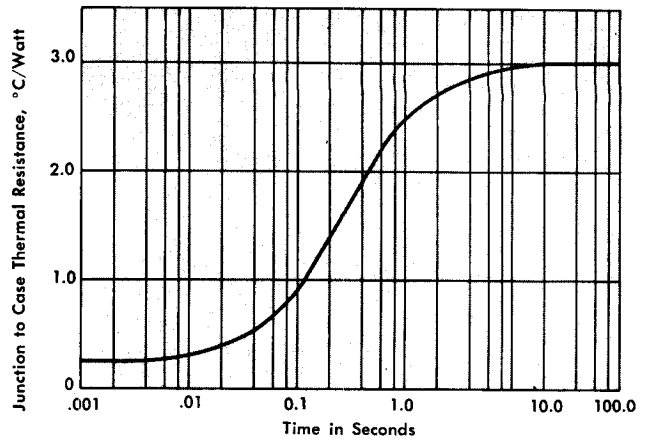


Fig. 4—Transient thermal resistance.

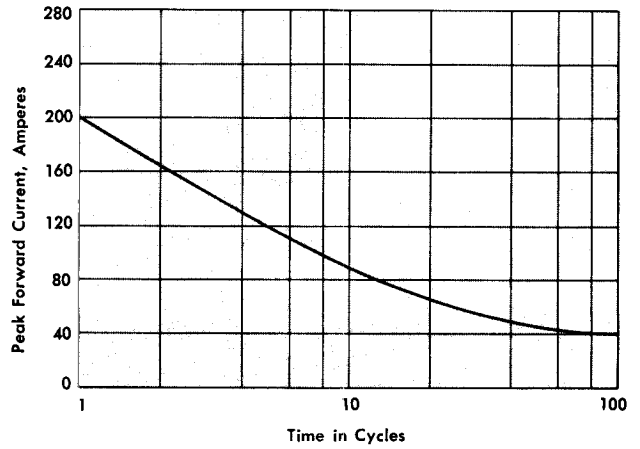


Fig. 5—Maximum surge current at rated load.

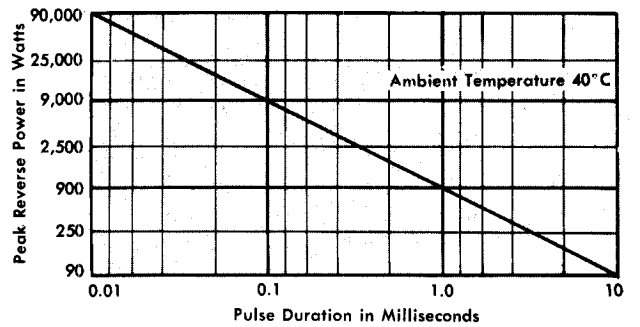


Fig. 6—Estimated reverse power surge ratings - non recurrent.

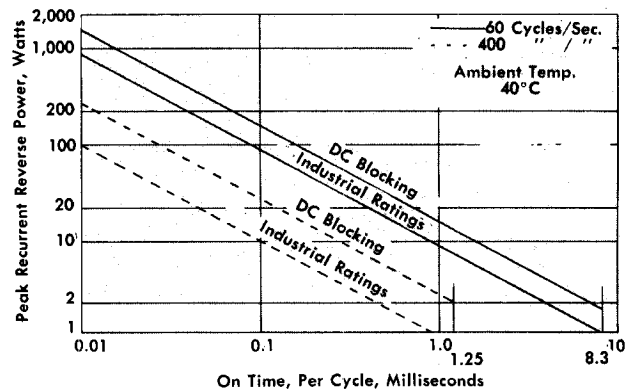


Fig. 7—Reverse power surge ratings - recurrent.