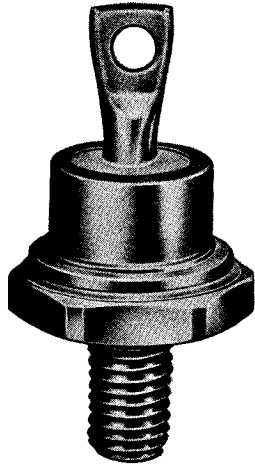


# Series 36



# Avalanche Silicon Power Rectifiers



### ELECTRICAL CHARACTERISTICS:

Maximum Average Forward Current, Single Phase Half Wave DC Rating at 121° C. Case Temperature ..... 65 amperes  
 Maximum Surge Current (one cycle of 60 CPS sine wave) ..... 800 amperes  
 Peak Forward Voltage at 90 Amps (25° C. Case Temp.) ..... 1.15 Volts Maximum  
 Rated Peak Reverse Voltage Range ..... 50 to 1600 Volts  
 Maximum \*FCA Reverse Current at 150° C. Case Temperature ..... 2.0 Milliamps  
 Maximum Operating Frequency ..... 10,000 CPS  
 Max. I<sup>2</sup>t (less than 8 ms) ..... 2750 Amps<sup>2</sup> - Second  
 Reverse Power Rating ..... 0.60 Joules  
 \*FCA = Full Cycle Average (measured with a DC meter)

### MECHANICAL CHARACTERISTICS:

Base ..... High Strength Copper Stud and Base with a 1/4"-28-UNF-2A thread for through mounting on a heat sink. Nickel plating of base produces low contact resistance and prevents corrosion.  
 Header ..... Glass to metal construction. Hermetically sealed to base.  
 Weight ..... Approximately 0.6 ounces  
 Mounting Position ..... May be mounted in any position  
 Mounting Torque ..... 30 in. lbs. maximum  
 Dimensions ..... In accordance with JEDEC DO-5 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 ..... 0.8 Max.

### ENVIRONMENTAL SPECIFICATIONS:

Tests in accordance with (MIL-E-1)

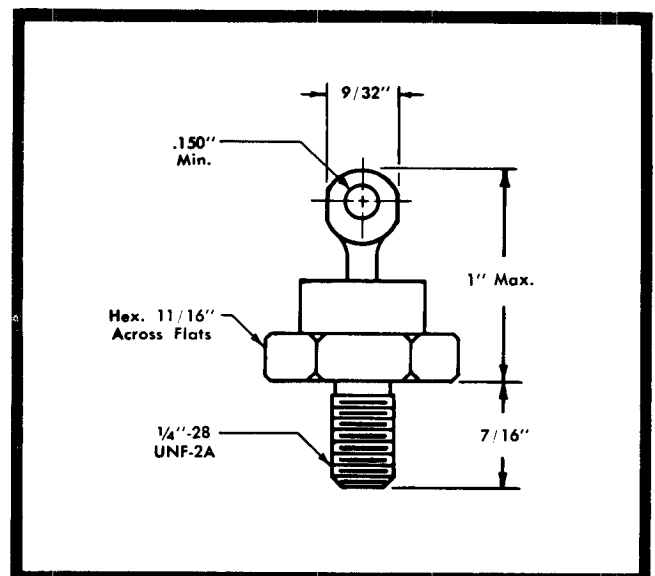
- Tests include:
1. Temperature cycling
  2. Salt spray
  3. Vibration
  4. Shock
  5. Moisture resistance
  6. Temperature soak

Datasheet

### Ratings

JEDEC Numbers	Catalog Number Polarity		Peak Reverse Voltage
	Standard	Reverse	
1N1183A, 1N2128	S3605	R3605	50
1N1184A, 1N2129	S3610	R3610	100
1N1185A, 1N2130	S3615	R3615	150
1N1186A, 1N4136, 1N2131	S3620	R3620	200
1N2132	S3625	R3625	250
1N1187A, 1N2133	S3630	R3630	300
1N2134	S3635	R3635	350
1N1188A, 1N4137, 1N2135	S3640	R3640	400
1N2136	S3645	R3645	450
1N1189A, 1N2137	S3650	R3650	500
1N1190A, 1N4138, 1N2138	S3660	R3660	600
	S3670	R3670	700
	S3680	R3680	800
	S3690	R3690	900
	S36100	R36100	1000

Diodes are available with voltage ratings up to 1600 PRV.



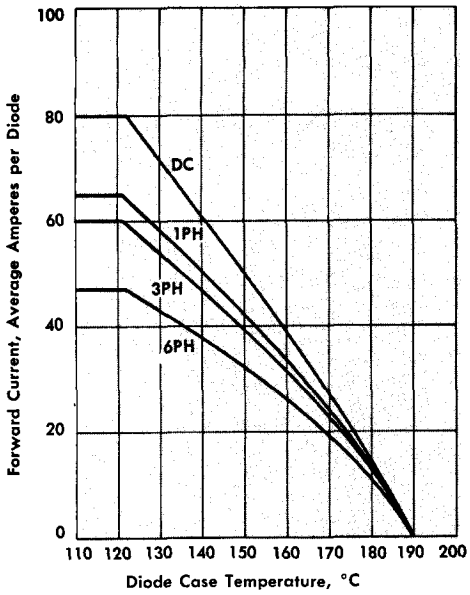


Fig. 1—Load current versus case temperature.

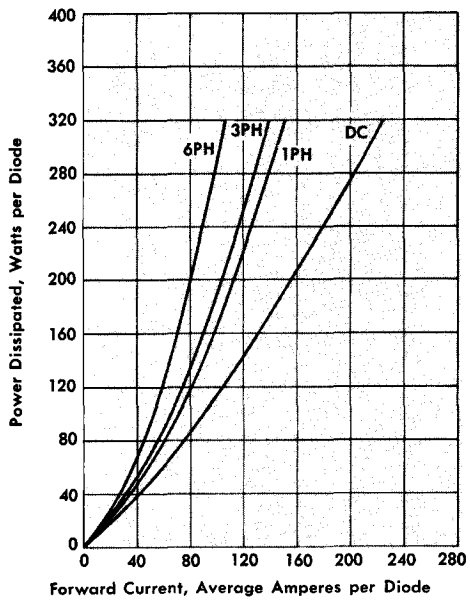


Fig. 2—Maximum power dissipation versus forward current.

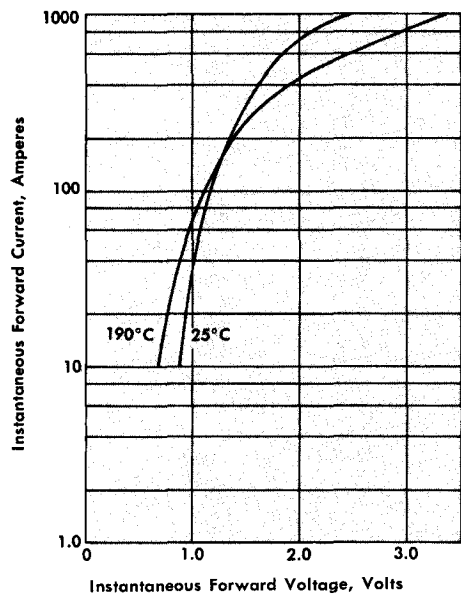


Fig. 3—Maximum forward characteristics.

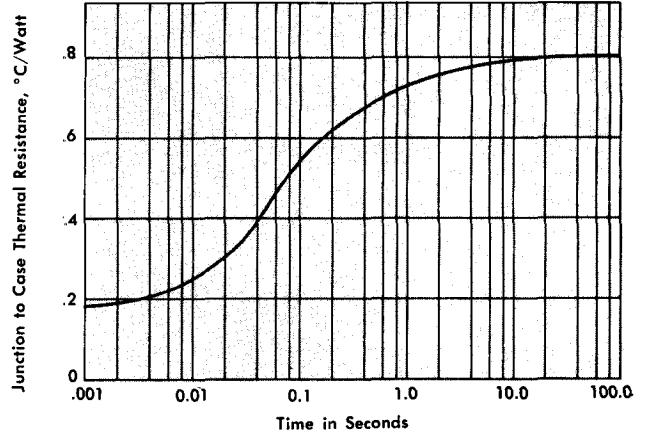


Fig. 4—Transient thermal resistance.

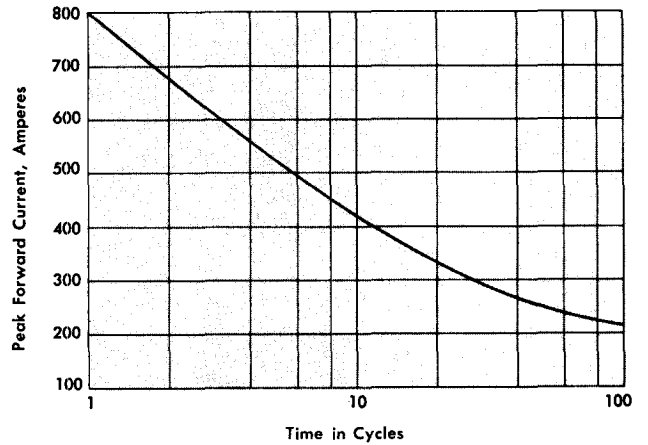


Fig. 5—Maximum surge current at rated load.

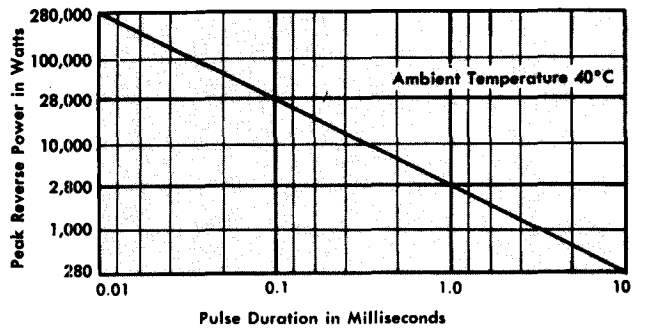


Fig. 6—Estimated reverse power surge ratings - non recurrent.

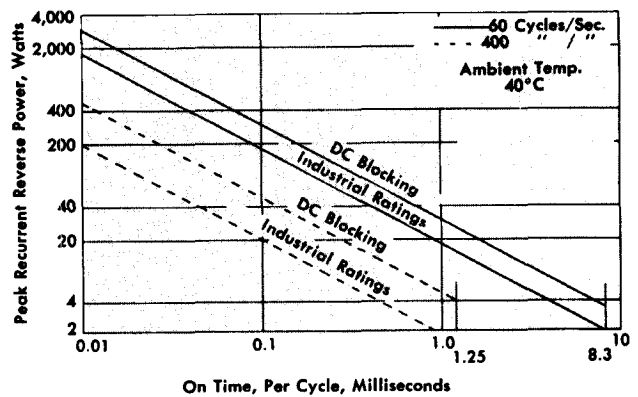


Fig. 7—Reverse power surge ratings - recurrent.