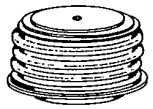
Silicon RECTIFIER

A540

2400 Volts 1000 Amps Avg.

The A540 Series of high power rectifier diodes feature the newly developed, multi-diffusion technology in a new General Electric pressure-mounted package.



FEATURES:

- High Current, High Voltage
- Pressure Contacts
- Glazed Ceramic Package with 1" Creepage Path
- Reversibility (eliminates need for special reverse polarity units)
- Hermetic Seal
- Availabile in Factory Assembled Heat Exchangers or Ready-to-Mount

IMPORTANT: Mounting instructions on the last page of the C501 specification must be followed.

MAXIMUM ALLOWABLE RATINGS

TYPE	REPETITIVE PEAK REVERSE VOLTAGE, V_{RRM} T_J = -40°C to +185°C	NON-REPETITIVE REVERSE VOLTAGE, V_{RSM} T_J = 0°C to +185°C	V_{RRM}/V_{RSM} T_J = 185°C to 200°C
A540LD	2400 Volts	2500 Volts	2000 Volts
A540LC	2300	2400	1950
A540LB	2200	2300	1850
A540LA	2100	2200	1750
A540L	2000	2100	1700

Lower voltages available – consult factory.

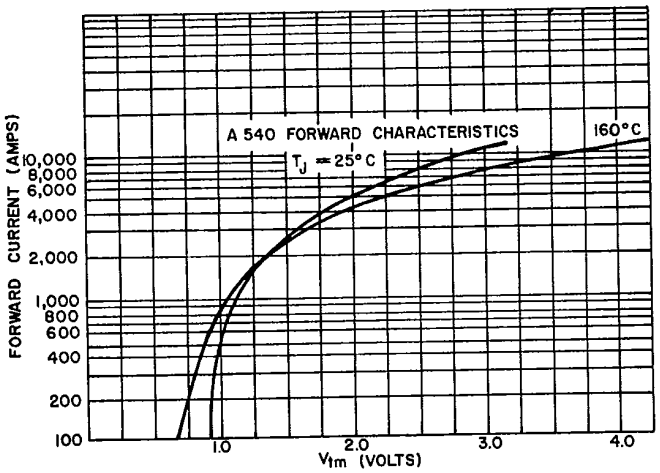
Average Forward Current ..... 1000 Amperes, 1Φ Average
Peak One-Cycle Surge Current ..... 12,000 Amperes
Minimum I^2t Rating (for times ⩾ 1.5 msec) ..... 285,000 Ampere² Seconds
Minimum I^2t Rating (at 8.3 msec) ..... 597,000 Ampere² Seconds
Maximum Forward Voltage Drop (T_C = 160°C Case Temperature, 1000 Amps. Peak) ..... 1.08 Volts
Peak Reverse Leakage Current (T_J = 200°C, V = Rated V_{RRM}) 35mA
Maximum Thermal Resistance, $R_{\theta JS}$ (Double-Side Cooling) ..... 0.06°C/Watt
Storage Temperature, T_{STG} ..... -40°C to +200°C
Operating Junction Temperature, T_J ..... -40°C to +200°C
Mounting Force Required ..... 2200 Lbs. ± 10%
9.8 KN ± 10%

NOTES:

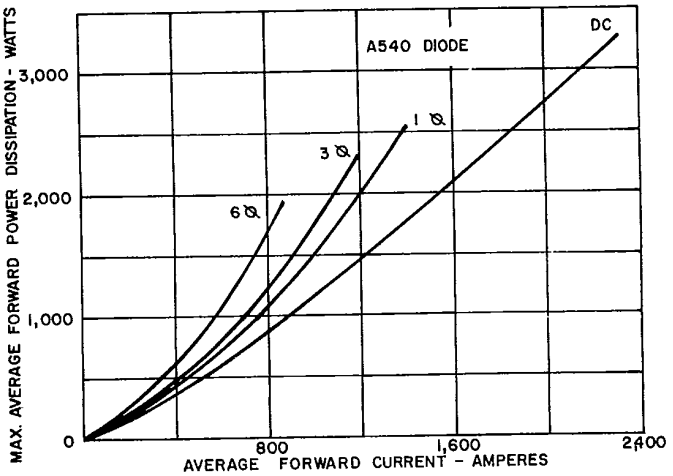
1 Assumes a heatsink thermal resistance of less than 1.1°C/watt.

2 Non-recurrent voltage and current ratings, as contrasted to repetitive ratings which apply for occasional or unpredictable overloads. For example, the forward surge current ratings are non-recurrent ratings that are used in fault coordination work.

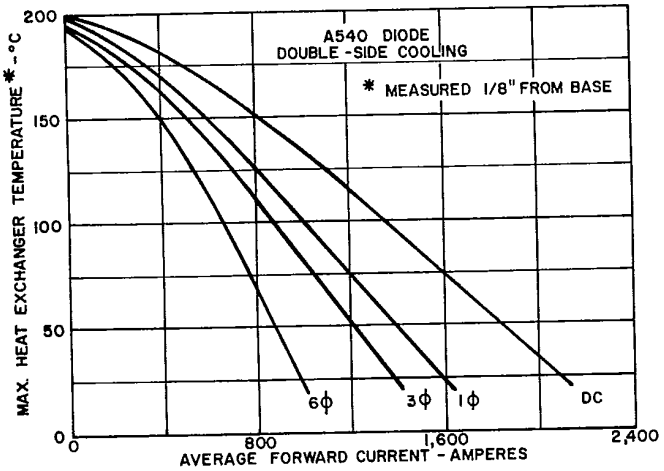
A----00540-1X



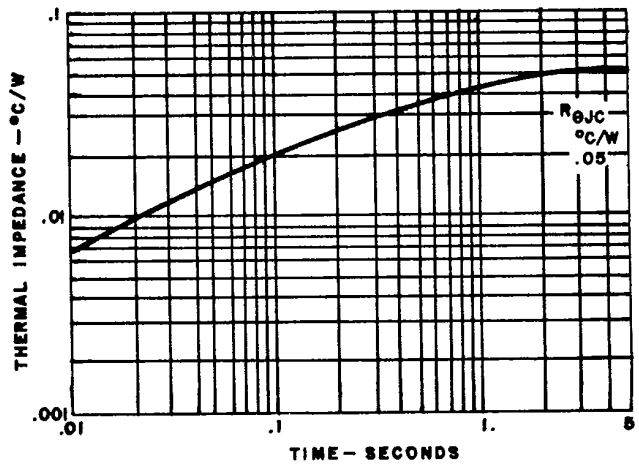
1. MAXIMUM ON-STATE CHARACTERISTICS



2. AVERAGE FORWARD POWER DISSIPATION VERSUS AVERAGE FORWARD CURRENT



3. MAXIMUM HEAT EXCHANGER TEMPERATURE VERSUS AVERAGE FORWARD CURRENT FOR DOUBLE-SIDE COOLING

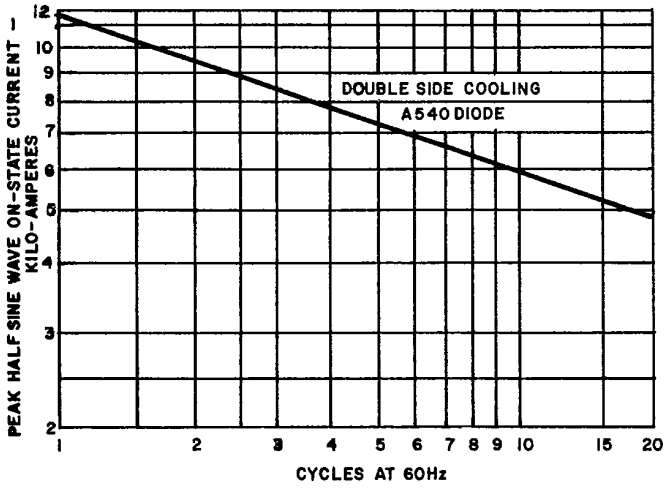


4. TRANSIENT THERMAL IMPEDANCE — JUNCTION-TO-CASE

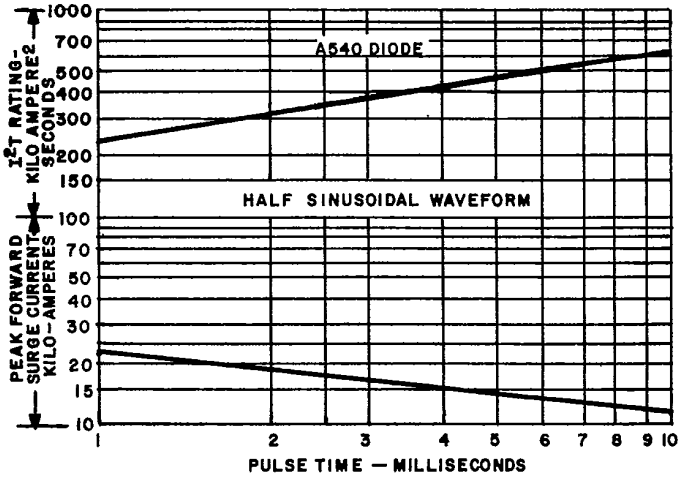
NOTES:

1. Power "D" adds .01°C/W to account for both case to dissipator interfaces, when properly mounted; e.g., $R_{\theta JS}$ = .06°C/W. See Mounting Instructions.
2. DC Thermal Impedance is based on average full cycle junction temperature. Instantaneous junction temperature may be calculated using the following modifications.
   - end of conducting portion of cycle
     - 120° sq. wave add .0065°C/W along entire curve
     - 180° sq. wave add .0047°C/W along entire curve
     - 180° sine wave add .0026°C/W along entire curve
   - end of full cycle
     - any wave, subtract .0026°C/W along entire curve

A540

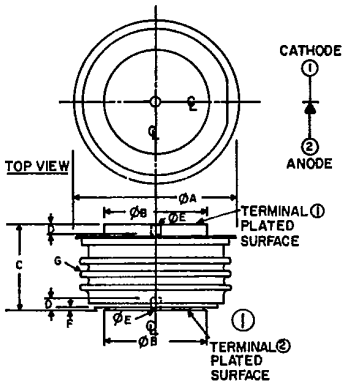


5. MAXIMUM SURGE CURRENT FOLLOWING RATED LOAD CONDITIONS



6. SUBCYCLE PEAK SURGE FORWARD CURRENT AND I^2t RATING FOLLOWING RATED LOAD CONDITIONS

OUTLINE DRAWING



NOTE:
1. GLAZED CERAMIC INSULATOR WITH 1.00 INCH MIN. SURFACE CREEPAGE (25.40mm)

SYMBOL	INCHES		MILLIMETERS		NOTE
	MIN	MAX	MIN	MAX	
ØA	—	2.000	—	50.80	
ØB	1.240	1.260	31.50	32.00	
C	1.000	1.060	25.40	26.92	
D	.080	—	2.03	—	
ØE	0.136	0.146	3.45	3.71	
F	.034	—	0.86	—	
G					1

A----00540-3X