

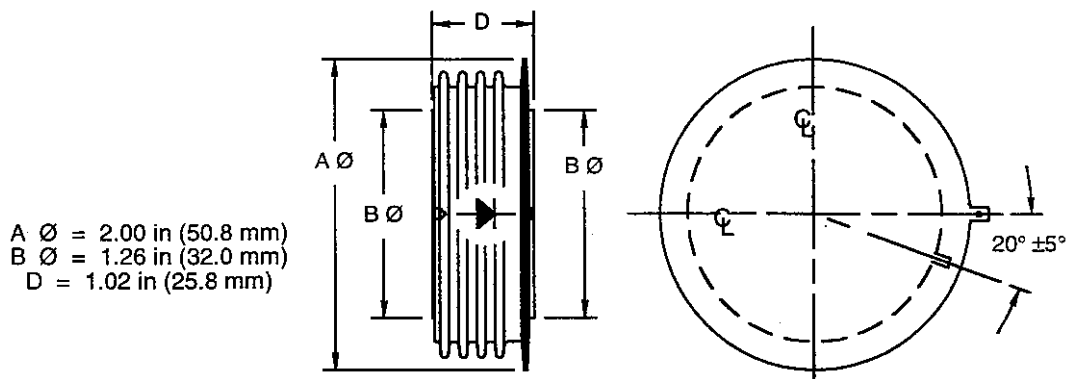
The A540 is ideal for rectifier circuits and is processed by multi-diffusion, utilizing 33mm diameter silicon. It is supplied in a disk package ready to mount using commercially available heat dissipators and mechanical clamping hardware.

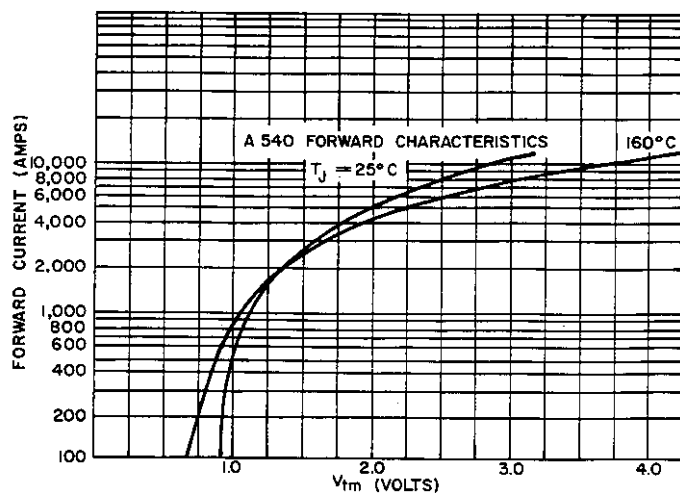
MAXIMUM ALLOWABLE RATINGS

TYPE	REPETITIVE PEAK REVERSE VOLTAGE, V_{RRM} $T_J = -40^{\circ}\text{C}$ to $+185^{\circ}\text{C}$	NON-REPETITIVE REVERSE VOLTAGE, V_{RSM} $T_J = 0^{\circ}\text{C}$ to $+185^{\circ}\text{C}$	V_{RRM}/V_{RSM} $T_J = 185^{\circ}\text{C}$ 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

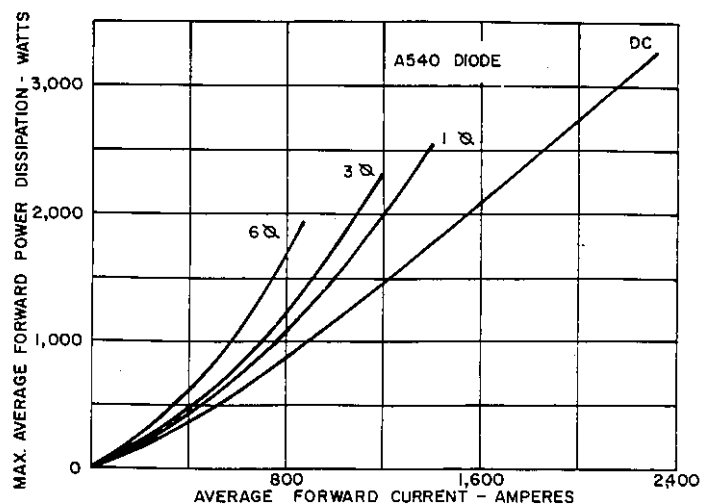
Lower voltages available – consult factory.

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

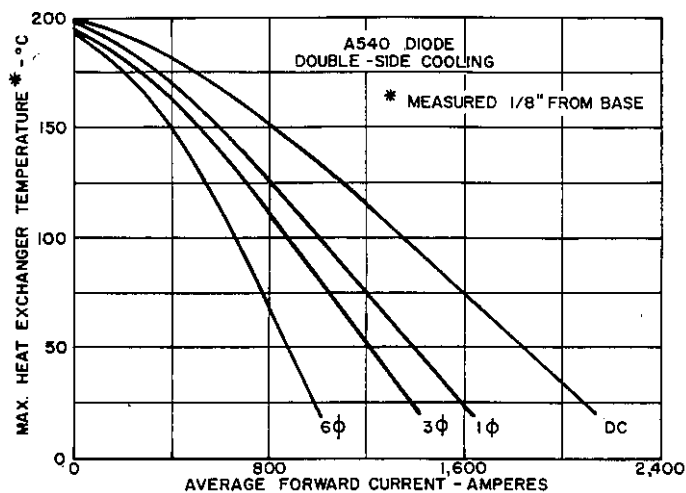




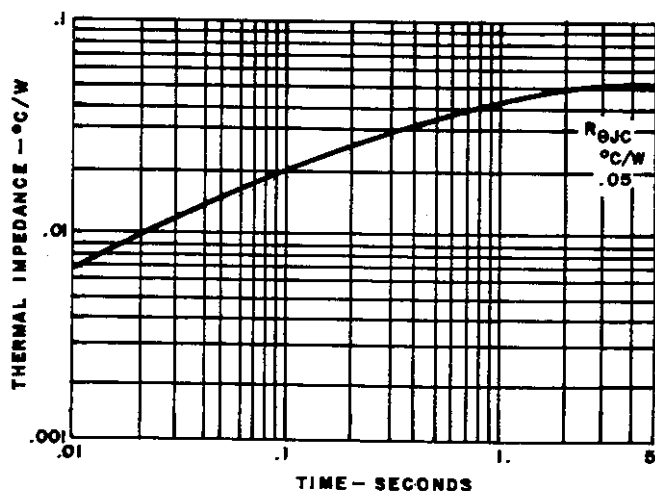
1. MAXIMUM ON-STATE CHARACTERISTICS



2. AVERAGE FORWARD POWER DISSIPATION
VERSUS AVERAGE FORWARD CURRENT



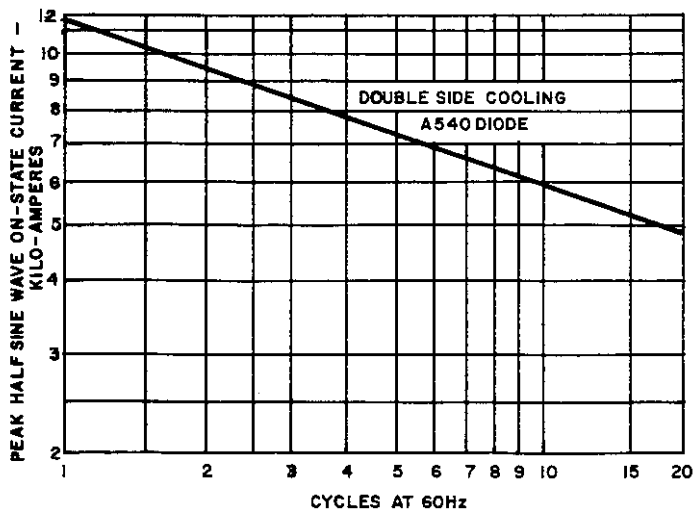
3. MAXIMUM HEAT EXCHANGER TEMPERATURE
VERSUS AVERAGE FORWARD CURRENT
FOR DOUBLE-SIDE COOLING



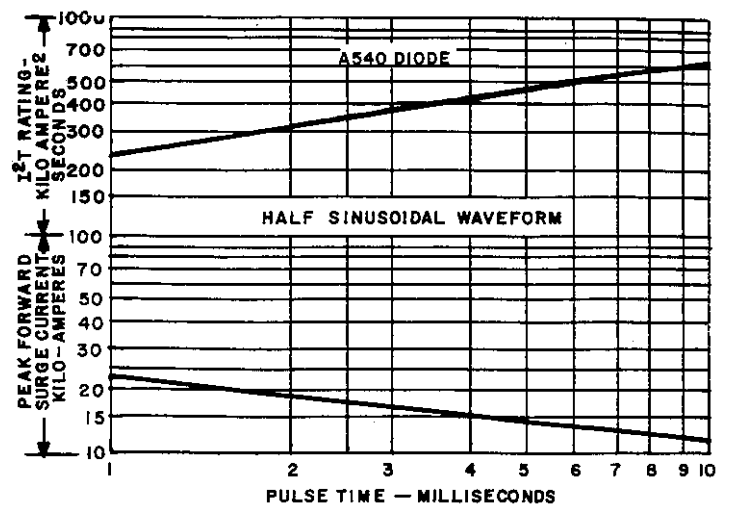
4. TRANSIENT THERMAL IMPEDANCE -
JUNCTION-TO-CASE

NOTES:

- Power "D" adds .01°C/W to account for both case to dissipator interfaces, when properly mounted; e.g., $R_{\theta JS} = .06^\circ\text{C/W}$. See Mounting Instructions.
- 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



5. MAXIMUM SURGE CURRENT FOLLOWING
RATED LOAD CONDITIONS



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