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

<table>
<thead>
<tr>
<th>TYPE</th>
<th>REPETITIVE PEAK REVERSE VOLTAGE, $V_{RRM}$</th>
<th>NON-REPETITIVE REVERSE VOLTAGE, $V_{RSM}$</th>
<th>$V_{RRM}$/$V_{RSM}$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$T_J = -40^\circ C$ to $+185^\circ C$</td>
<td>$T_J = 0^\circ C$ to $+185^\circ C$</td>
<td></td>
</tr>
<tr>
<td>A540LD</td>
<td>2400 Volts</td>
<td>2500 Volts</td>
<td>2000 Volts</td>
</tr>
<tr>
<td>A540LC</td>
<td>2300</td>
<td>2400</td>
<td>1950</td>
</tr>
<tr>
<td>A540LB</td>
<td>2200</td>
<td>2300</td>
<td>1850</td>
</tr>
<tr>
<td>A540LA</td>
<td>2100</td>
<td>2200</td>
<td>1750</td>
</tr>
<tr>
<td>A540L</td>
<td>2000</td>
<td>2100</td>
<td>1700</td>
</tr>
</tbody>
</table>

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 Ampere$^2$ Seconds
Minimum $I^2t$ Rating (at 8.3 msec) .................................. 597,000 Ampere$^2$ Seconds
Maximum Forward Voltage Drop ($T_C = 160^\circ C$ Case Temperature, 1000 Amps. Peak) ................. 1.08 Volts
Peak Reverse Leakage Current ($T_J = 200^\circ C$, $V = $ Rated $V_{RRM}$) .................................. 35mA
Maximum Thermal Resistance, $R_{thj}$ (Double-Side Cooling) ....... 0.06$^\circ$C/Watt
Storage Temperature, $T_{STG}$ .......................................... $-40^\circ$C to $+200^\circ$C
Operating Junction Temperature, $T_J$ .................................. $-40^\circ$C to $+200^\circ$C
Mounting Force Required .................................................. 2200 Lbs. ± 10%
.................................................. 9.8 KN ± 10%

A $\varnothing = 2.00$ in (50.8 mm)
B $\varnothing = 1.26$ in (32.0 mm)
D = 1.02 in (25.8 mm)
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

NOTES:
1. Power "D" adds .01°C/W to account for both case to dissipator interfaces, when properly mounted; e.g., \( R_{D,JA} = .06°C/W \); 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

4. TRANSIENT THERMAL IMPEDANCE - JUNCTION-TO-CASE

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5. Maximum Surge Current Following Rated Load Conditions

6. Subcycle Peak Surge Forward Current and $I^2t$ Rating Following Rated Load Conditions