Features

- 3.0 ampere operation at $T_a = 75^\circ C$ with no thermal runaway.
- High current capability.
- Low leakage.

General Purpose Rectifiers

Absolute Maximum Ratings* $T_a = 25^\circ C$ unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Device</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_{RRM}$</td>
<td>Maximum Repetitive Reverse Voltage</td>
<td>5400 5401 5402 5403 5404 5405 5406 5407 5408</td>
<td>50 100 200 300 400 500 600 800 1000</td>
<td>V</td>
</tr>
<tr>
<td>$I_{F(AV)}$</td>
<td>Average Rectified Forward Current, $0.375$&quot; lead length @ $T_a = 75^\circ C$</td>
<td></td>
<td>3.0</td>
<td>A</td>
</tr>
<tr>
<td>$I_{FSM}$</td>
<td>Non-repetitive Peak Forward Surge Current, 8.3 ms Single Half-Sine-Wave</td>
<td></td>
<td>200</td>
<td>A</td>
</tr>
<tr>
<td>$T_{stg}$</td>
<td>Storage Temperature Range</td>
<td></td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
<tr>
<td>$T_J$</td>
<td>Operating Junction Temperature</td>
<td></td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
</tbody>
</table>

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_D$</td>
<td>Power Dissipation</td>
<td>6.25</td>
<td>W</td>
</tr>
<tr>
<td>$R_{JA}$</td>
<td>Thermal Resistance, Junction to Ambient</td>
<td>20</td>
<td>°C/W</td>
</tr>
</tbody>
</table>

Electrical Characteristics $T_a = 25^\circ C$ unless otherwise noted

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Device</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_F$</td>
<td>Forward Voltage @ 3.0 A</td>
<td>1.2</td>
<td>V</td>
</tr>
<tr>
<td>$I_R$</td>
<td>Maximum Full Load Reverse Current, Full Cycle, $T_a = 105^\circ C$</td>
<td>0.5</td>
<td>mA</td>
</tr>
<tr>
<td>$I_{Rt}$</td>
<td>Reverse Current @ rated $V_R$</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>$T_a = 25^\circ C$</td>
<td>5.0</td>
<td>μA</td>
</tr>
<tr>
<td></td>
<td>$T_a = 100^\circ C$</td>
<td>500</td>
<td>μA</td>
</tr>
<tr>
<td>$C_T$</td>
<td>Total Capacitance, $V_R = 4.0$ V, $f = 1.0$ MHz</td>
<td>30</td>
<td>pF</td>
</tr>
</tbody>
</table>
Typical Characteristics

Figure 1. Forward Current Derating Curve

Figure 2. Forward Voltage Characteristics

Figure 3. Non-Repetitive Surge Current

Figure 4. Reverse Current vs Reverse Voltage

Figure 5. Total Capacitance
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- POP™
- Power247™

- PowerEdge™
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- QS™
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