HERMETIC JEDEC TO-257AA HIGH EFFICIENCY, SOFT RECOVERY RECTIFIER

FEATURES
- Small Size
- Ultra Fast Recovery
- Soft Recovery Behavior
- Extremely Low Losses At High Switching Speeds
- Low I_{RM} Rating
- Hermetic And Isolated Package
- Available Screened To MIL-S-19500, TX, TXV And S Levels

DESCRIPTION
This soft recovery, high speed rectifier is ideally suited for high performance in high voltage switching applications. The performance of this rectifier minimizes losses in power conversion and motor control circuits complementing the switching characteristics of power MOSFETs, IGBTs, and bipolar transistors.

ABSOLUTE MAXIMUM RATINGS  T_C = 25°C
- Peak Inverse Voltage ................................................... 400 & 600 V
- Maximum Average D.C. Output Current @ T_C = 100°C ........................................ 14 A
- Surge Current (Non-Repetitive 8.3 nsec) ........................................ 90 A
- Thermal Resistance, Junction-To-Case ........................................ 2.5° C/W
- Operating and Storage Temperature Range ........................................ -55°C to +150°C

MECHANICAL OUTLINE

PIN CONNECTION

Cathode
Anode
**ELECTRICAL CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Type</th>
<th>PIV</th>
<th>Maximum Forward Voltage @ 14 A</th>
<th>Maximum Reverse Current @ .8x PIV</th>
<th>Maximum Reverse Recovery Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>OM5008ST</td>
<td>400</td>
<td>1.75 V</td>
<td>100 µA</td>
<td>-100 A/µs</td>
</tr>
<tr>
<td>OM5009ST</td>
<td>600</td>
<td>1.65 V</td>
<td>3.0 mA</td>
<td>35 ns</td>
</tr>
</tbody>
</table>

**TURN-OFF CHARACTERISTICS**

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Test Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>$T_{rr}$</td>
<td>$I_F = 0.5$ A; $I_Q = 1$ A; $T_J = 25$°C</td>
<td>-</td>
<td>-</td>
<td>35 ns</td>
<td>ns</td>
</tr>
<tr>
<td>$I_{RM}$</td>
<td>$V_R = 350$ V; $I_F = 12$ A; $L = 0.05$ μH; $T_J = 100$°C; $dI_F/dt = -100$ A/µs</td>
<td>-</td>
<td>4</td>
<td>6 A</td>
<td>A</td>
</tr>
</tbody>
</table>

**DEFINITION OF TURN-OFF CHARACTERISTICS**

**TYPICAL REVERSE CURRENT**

**TYPICAL FORWARD VOLTAGE**