15 AMP ULTRA FAST RECTIFIER IN SMALL HERMETIC PACKAGE

FEATURES
• Small Size
• Very Low Forward Voltage
• Very Fast Switching Time
• Hermetic Isolated Package
• High Surge
• Low Thermal Resistance
• Available Screened To MIL-S-19500, TX, TXV And S Levels

DESCRIPTION
This series of products in a hermetic package is specifically designed for use at power switching frequencies in excess of 100 kHz. This series of ultra fast rectifiers is packaged in a small easy-to-use hermetic package replacing conventional DO-4 and TO-3 packaging. These devices are ideally suited for Hi-Rel applications where small size and a hermetically sealed package are required. All devices are available Hi-Rel screened in Omnirel’s facility.

ABSOLUTE MAXIMUM RATINGS @ 25°C
Peak Inverse Voltage ........................................... 50 to 600 V
Maximum Average D.C. Output Current @ T_C = 100° C ...................... 15 A
Non-Repetitive Sinusoidal Surge Current 8.3 ms .......................... 180 A
Operating and Storage Temperature Range .......................... -55° C to +150° C

MECHANICAL OUTLINE

PIN CONNECTION

CATHODE ANODE

OM5005ST OM5006ST
OM5001ST OM5003ST OM5005ST OM5007ST
OM5002ST OM5004ST OM5006ST

15 Amp, 50 To 600 Volts, 35 To 50 ns trr
### ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Type</th>
<th>PIV</th>
<th>Maximum Forward Voltage (1)</th>
<th>Maximum Reverse Current</th>
<th>Maximum Reverse Recovery Time (2)</th>
<th>Maximum Thermal Resist.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T&lt;sub&gt;j&lt;/sub&gt; = 25°C</td>
<td>T&lt;sub&gt;j&lt;/sub&gt; = 100°C</td>
<td>T&lt;sub&gt;j&lt;/sub&gt; = 25°C</td>
<td>T&lt;sub&gt;j&lt;/sub&gt; = 100°C</td>
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<tr>
<td>OM5001ST</td>
<td>50</td>
<td>1.1V @ 15A</td>
<td>0.90V @ 15A</td>
<td>20 µA</td>
<td>1 mA</td>
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<tr>
<td>OM5002ST</td>
<td>100</td>
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<tr>
<td>OM5003ST</td>
<td>150</td>
<td>1.35V @ 15A</td>
<td>1.15V @ 15A</td>
<td>20 µA</td>
<td>1 mA</td>
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<tr>
<td>OM5004ST</td>
<td>200</td>
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<td></td>
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<tr>
<td>OM5005ST</td>
<td>300</td>
<td>1.6V@ 15 A</td>
<td>1.4V@ 15A</td>
<td>20 µA</td>
<td>2 mA</td>
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<tr>
<td>OM5006ST</td>
<td>400</td>
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<tr>
<td>OM5007ST</td>
<td>600</td>
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</table>

(1) Pulse Test: Pulse Width = 300µs, Duty Cycle 2.0%.  
(2) Measured in Circuit: I<sub>f</sub> = 0.5 A, I<sub>r</sub> = 1.0 A, I<sub>Rec</sub> = 0.25 A

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#### 50 V TO 200 V TYPICAL FORWARD VOLTAGE
**OM5001, 5002, 5003, 5004**

#### 300 V TO 400V TYPICAL FORWARD VOLTAGE
**OM5005, 5006**

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#### TYPICAL REVERSE CURRENT
**OM5001, 5002, 5003, 5004**

#### TYPICAL REVERSE CURRENT
**OM5005, 5006**