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DF05M - DF10M
Bridge Rectifiers

Features
• Surge Overload Rating: 50 Amperes Peak
• Glass Passivated Junction.
• Low Leakage.
• UL Certified, UL #E258596.

Ordering Information

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<th>Part Number</th>
<th>Top Mark</th>
<th>Package</th>
<th>Packing Method</th>
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<td>DF005M</td>
<td>MDIP 4L</td>
<td>Rail</td>
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<td>DF10M</td>
<td>DF10M</td>
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Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at $T_A = 25^\circ C$ unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>V_RRM</td>
<td>Maximum Repetitive Reverse Voltage</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>V_RMS</td>
<td>Maximum RMS Bridge Input Voltage</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>V_DC</td>
<td>DC Reverse Voltage at Rated $I_R$</td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>I_F(AV)</td>
<td>Average Rectified Forward Current at $T_A = 40^\circ C$</td>
<td>1.5</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>50</td>
<td>A</td>
</tr>
<tr>
<td>T_STG</td>
<td>Storage Temperature Range</td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
<tr>
<td>T_J</td>
<td>Operating Junction Temperature</td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
</tbody>
</table>
### Thermal Characteristics

Values are at $T_A = 25°C$ unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>$P_D$</td>
<td>Power Dissipation</td>
<td>3.1</td>
<td>W</td>
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<tr>
<td>$R_{\theta JA}$</td>
<td>Thermal Resistance, Junction-to-Ambient(1), per Leg</td>
<td>40</td>
<td>°C/W</td>
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**Note:**
1. Device mounted on PCB with 0.5 inch x 0.5 inch (13 mm x 13 mm).

### Electrical Characteristics

Values are at $T_A = 25°C$ unless otherwise noted.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Parameter</th>
<th>Conditions</th>
<th>Min.</th>
<th>Typ.</th>
<th>Max.</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>$V_F$</td>
<td>Forward Voltage, per Element</td>
<td>$I_F = 1.0$ A</td>
<td>1.1</td>
<td></td>
<td></td>
<td>V</td>
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<tr>
<td>$I_R$</td>
<td>Reverse Current, per Element at Rated $V_R$</td>
<td>$T_A = 25°C$, $T_A = 125°C$</td>
<td>5.0</td>
<td>500</td>
<td></td>
<td>μA</td>
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<tr>
<td>$I^2t$</td>
<td>Rating for Fusing ($t &lt; 8.35$ ms)</td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td>A²s</td>
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<tr>
<td>$C_J$</td>
<td>Typical Capacitance, per Leg</td>
<td>$V_R = 4.0$ V, $f = 1.0$ MHz</td>
<td>25</td>
<td></td>
<td></td>
<td>pF</td>
</tr>
</tbody>
</table>
Typical Performance Characteristics

Figure 1. Non-Repetitive Surge Current

Figure 2. Forward Current Derating Curve

Figure 3. Forward Voltage Characteristics

Figure 4. Reverse Current vs. Reverse Voltage
Physical Dimensions

Figure 5. 4-Lead, DIP, 6.5 MM WIDE

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<th>Product Status</th>
<th>Definition</th>
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