FR1A THRU FR1M

SURFACE MOUNT FAST RECOVERY RECTIFIER
Reverse Voltage - 50 to 1000 Volts  Forward Current - 1.0 Ampere

FEATURES
- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low reverse leakage
- Built-in strain relief, ideal for automated placement
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds at terminals
- Glass passivated chip junction

MECHANICAL DATA
Case: JEDEC DO-214AA molded plastic body over passivated chip
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.005 ounce, 0.138 grams
SMA package is available.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>Maximum repetitive peak reverse voltage</th>
<th>V_{RRM}</th>
<th>50</th>
<th>100</th>
<th>200</th>
<th>400</th>
<th>600</th>
<th>800</th>
<th>1000</th>
<th>VOLTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum RMS voltage</td>
<td>V_{RMS}</td>
<td>35</td>
<td>70</td>
<td>140</td>
<td>280</td>
<td>420</td>
<td>560</td>
<td>700</td>
<td>VOLTS</td>
</tr>
<tr>
<td>Maximum DC blocking voltage</td>
<td>V_{DC}</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>VOLTS</td>
</tr>
<tr>
<td>Maximum average forward rectified current at T_{J}=90°C</td>
<td>I_{AV}</td>
<td>1.0</td>
<td>Amp</td>
<td></td>
<td></td>
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<tr>
<td>Peak forward surge current</td>
<td>I_{FSM}</td>
<td>50.0</td>
<td>Amps</td>
<td></td>
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<tr>
<td>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)</td>
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<tr>
<td>Maximum instantaneous forward voltage at 1.0A</td>
<td>V_{F}</td>
<td>1.3</td>
<td>Volts</td>
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</tr>
<tr>
<td>Maximum DC reverse current</td>
<td>I_{R}</td>
<td>5.0</td>
<td>μA</td>
<td></td>
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<tr>
<td>at rated DC blocking voltage</td>
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<td>200.0</td>
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<tr>
<td>Maximum reverse recovery time (NOTE 1)</td>
<td>t_{rr}</td>
<td>150</td>
<td>250</td>
<td>500</td>
<td>ns</td>
<td></td>
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<tr>
<td>Typical junction capacitance (NOTE 2)</td>
<td>C_{J}</td>
<td>40.0</td>
<td>pF</td>
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<tr>
<td>Typical thermal resistance (NOTE 3)</td>
<td>R_{JA}</td>
<td>15.0</td>
<td>°C/W</td>
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<tr>
<td>Operating junction and storage temperature range</td>
<td>T_{J},T_{STG}</td>
<td>-50 to +150</td>
<td>°C</td>
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</table>

Note: 1. Reverse recovery condition I_{F}=0.5A, I_{RR}=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. P.C.B. mounted with 0.2x0.2” (5.0x5.0mm) copper pad areas
RATINGS AND CHARACTERISTIC CURVES FR1A THRU FR1M

Figure 1
Typical Forward Characteristics

Figure 2
Forward Derating Curve

Figure 3
Junction Capacitance

Note: Specification is subject to change without further notice. For more details and updates, please visit our website.
Notes:
1. Rise Time = 7ns max.
2. Rise Time = 10ns max.
3. Resistors are non-inductive

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