RB151 THRU RB157

1.5 A SINGLE-PHASE SILICON BRIDGE RECTIFIERS
Reverse Voltage - 50 to 1000 V
Forward Current - 1.5 A

Features
- Surge overload rating - 50 amperes peak
- Ideal for printed circuit boards
- Reliable low cost construction technique results in inexpensive product
- Mounting Position: Any

Absolute Maximum Ratings and Characteristics
Ratings at 25 °C ambient temperature unless otherwise specified. Single-phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbols</th>
<th>RB151</th>
<th>RB152</th>
<th>RB153</th>
<th>RB154</th>
<th>RB155</th>
<th>RB156</th>
<th>RB157</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>V_{RRM}</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
<td>V</td>
</tr>
<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>V</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>V</td>
</tr>
<tr>
<td>Maximum Average Forward Rectified Current at ( T_A = 50 \text{ °C} )</td>
<td>I_{F(AV)}</td>
<td>1.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Peak Forward Surge Current, 8.3 ms Single Half- Sine-wave Superimposed on Rated Load (JEDEC Method)</td>
<td>I_{FSM}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>50</td>
<td>A</td>
</tr>
<tr>
<td>Maximum Forward Voltage Drop per Element at 1A</td>
<td>V_{F}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>V</td>
</tr>
<tr>
<td>Maximum Reverse Current at Rated DC Blocking Voltage per Element at ( T_A = 25 \text{ °C} )</td>
<td>I_{R}</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>( \mu A )</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>( T_{j} )</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>( T_{stg} )</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>-55 to +150</td>
<td>°C</td>
</tr>
</tbody>
</table>
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RATING AND CHARACTERISTICS CURVES

FIG. 1-MAXIMUM FORWARD SURGE CURRENT

- PEAK FORWARD SURGE CURRENT AMPERES
  - NUMBER OF CYCLES AT 60Hz

FIG. 2-DERATING CURVE

- OUTPUT RECTIFIED CURRENT
  - AMBIENT TEMPERATURE, °C

FIG. 3-TYPICAL FORWARD CHARACTERISTICS

- INSTANTANEOUS FORWARD VOLTAGE, VOLTS
  - INSTANTANEOUS REVERSE CURRENT, AMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

- INSTANTANEOUS REVERSE CURRENT, MICROAMPERES
  - PERCENT OF RATED PEAK REVERSE VOLTAGE

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