MBR0530

Surface Mount Schottky Barrier Diode

Absolute Maximum Ratings (T_a = 25 °C)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Repetitive Peak Reverse Voltage</td>
<td>V_{RRM}</td>
<td>30 V</td>
<td></td>
</tr>
<tr>
<td>Non-Repetitive Peak Reverse Voltage</td>
<td>V_{RSM}</td>
<td>30 V</td>
<td></td>
</tr>
<tr>
<td>Maximum DC Blocking Voltage</td>
<td>V_R</td>
<td>30 V</td>
<td></td>
</tr>
<tr>
<td>Average Forward Rectified Current</td>
<td>I_{F(AV)}</td>
<td>0.5 A</td>
<td></td>
</tr>
<tr>
<td>Peak Forward Surge Current (8.3 ms Single Half Sine-wave)</td>
<td>I_{FSM}</td>
<td>5.5 A</td>
<td></td>
</tr>
<tr>
<td>Thermal Resistance Junction to Lead</td>
<td>R_{θJL}</td>
<td>150 °C/W</td>
<td></td>
</tr>
<tr>
<td>Thermal Resistance Junction to Ambient</td>
<td>R_{θJA}</td>
<td>206 °C/W</td>
<td></td>
</tr>
<tr>
<td>Operating Junction Temperature</td>
<td>T_j</td>
<td>- 65 to + 125 °C</td>
<td></td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>T_{stg}</td>
<td>- 65 to + 125 °C</td>
<td></td>
</tr>
</tbody>
</table>

1) 1 inch square pad size (1 X 0.5 inch for each lead) on FR4 board

Characteristics at T_a = 25 °C

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forward Voltage at I_F = 100 mA</td>
<td>V_F</td>
<td>0.375 V</td>
<td></td>
</tr>
<tr>
<td>at I_F = 500 mA</td>
<td></td>
<td>0.5 V</td>
<td></td>
</tr>
<tr>
<td>Reverse Current at V_R = 30 V</td>
<td>I_R</td>
<td>130 μA</td>
<td></td>
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<tr>
<td>at V_R = 15 V</td>
<td></td>
<td>20 μA</td>
<td></td>
</tr>
</tbody>
</table>
**Figure 1. Typical Forward Voltage**

**Figure 2. Typical Reverse Current**

**Figure 3. Typical Capacitance**
MBR0530

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123

<table>
<thead>
<tr>
<th>UNIT</th>
<th>A</th>
<th>bE</th>
<th>c</th>
<th>D</th>
<th>E</th>
<th>HE</th>
<th>β</th>
<th>θ</th>
</tr>
</thead>
<tbody>
<tr>
<td>mm</td>
<td>1.15</td>
<td>1.05</td>
<td>0.6</td>
<td>0.135</td>
<td>2.6</td>
<td>1.55</td>
<td>3.65</td>
<td>0.2</td>
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</tbody>
</table>