**Features**
- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering: 250°C for 10 Seconds At Terminals
- Low Forward Voltage

**Maximum Ratings**
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance: 5°C/W Junction to Lead

<table>
<thead>
<tr>
<th>MCC Catalog Number</th>
<th>Device Marking</th>
<th>Maximum Recurrent Peak Reverse Voltage</th>
<th>Maximum RMS Voltage</th>
<th>Maximum DC Blocking Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>MBR0520</td>
<td>R2</td>
<td>20V</td>
<td>14V</td>
<td>20V</td>
</tr>
<tr>
<td>MBR0530</td>
<td>R3</td>
<td>30V</td>
<td>21V</td>
<td>30V</td>
</tr>
<tr>
<td>MBR0540</td>
<td>R4</td>
<td>40V</td>
<td>28V</td>
<td>40V</td>
</tr>
<tr>
<td>MBR0560</td>
<td>R6</td>
<td>60V</td>
<td>42V</td>
<td>60V</td>
</tr>
<tr>
<td>MBR0580</td>
<td>R8</td>
<td>80V</td>
<td>56V</td>
<td>80V</td>
</tr>
<tr>
<td>MBR05100</td>
<td>RA</td>
<td>100V</td>
<td>70V</td>
<td>100V</td>
</tr>
</tbody>
</table>

**Electrical Characteristics @ 25°C Unless Otherwise Specified**

- Average Forward Current $I_{F(AV)}$ = 0.5A, $T_J=115°C$
- Peak Forward Surge Current $I_{FSM}$ = 5.5A, 8.3ms half sine
- Maximum Instantaneous Forward Voltage $V_F$
  - MBR0520: 0.45V
  - MBR0530: 0.55V
  - MBR0540: 0.55V
  - MBR0560: 0.70V
  - MBR0580-05100: 0.80V
- Maximum DC Reverse Current At Rated DC Blocking Voltage $I_R$ = 0.2mA, $T_J=25°C$
- Typical Junction Capacitance $C_J$ = 30pF

**Suggested Solder Pad Layout**

**Dimensions**

- **DIM**
- **INCHES**
- **MM**
- **NOTE**
  - MIN | MAX | MIN | MAX
  - A   | 0.140 | 0.152 | 3.55 | 3.85
  - B   | 0.100 | 0.112 | 2.55 | 2.85
  - C   | 0.055 | 0.071 | 1.40 | 1.80
  - D   | ----- | 0.053 | ----- | 1.35
  - E   | 0.012 | 0.031 | 0.30 | 0.78
  - F   | 0.006 | ----- | 0.15 | ----- 
  - G   | ----- | 0.01  | ----- | 0.25
  - H   | ----- | 0.006 | ----- | 0.15

**Minimum Junction Temperature 0.093”
Minimum Case Temperature 0.048”
Minimum Case 0.036”

**www.mccsemi.com**
Figure 3
Forward Derating Curve

Average Forward Rectified Current - Amperes
versus Ambient Temperature - °C

Figure 4
Peak Forward Surge Current

Peak Forward Surge Current - Amperes versus Number Of Cycles At 60Hz - Cycles

MCC
www.mccsemi.com
This datasheet has been downloaded from:

www.datasheetcatalog.com

Datasheets for electronics components.