Features
- Metal of silicon rectifier, majority carrier conducton
- Guard ring for transient protection
- Low power loss high efficiency
- High surge capacity, High current capability

Maximum Ratings
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C

<table>
<thead>
<tr>
<th>Microsemi 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>MBR1520</td>
<td>MBR1520</td>
<td>20V</td>
<td>14V</td>
<td>20V</td>
</tr>
<tr>
<td>MBR1530</td>
<td>MBR1530</td>
<td>30V</td>
<td>21V</td>
<td>30V</td>
</tr>
<tr>
<td>MBR1535</td>
<td>MBR1535</td>
<td>35V</td>
<td>24.5V</td>
<td>35V</td>
</tr>
<tr>
<td>MBR1540</td>
<td>MBR1540</td>
<td>40V</td>
<td>28V</td>
<td>40V</td>
</tr>
<tr>
<td>MBR1545</td>
<td>MBR1545</td>
<td>45V</td>
<td>31.5</td>
<td>45V</td>
</tr>
<tr>
<td>MBR1560</td>
<td>MBR1560</td>
<td>60V</td>
<td>42V</td>
<td>60V</td>
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<tr>
<td>MBR1580</td>
<td>MBR1580</td>
<td>80V</td>
<td>56V</td>
<td>80V</td>
</tr>
<tr>
<td>MBR15100</td>
<td>MBR15100</td>
<td>100V</td>
<td>70V</td>
<td>100V</td>
</tr>
</tbody>
</table>

Electrical Characteristics @ 25°C Unless Otherwise Specified
- Average Forward Current
- Peak Forward Surge Current
- Maximum Forward Voltage Drop Per Element
- Maximum DC Reverse Current At Rated DC Blocking Voltage

<table>
<thead>
<tr>
<th>Average Forward Current</th>
<th>$I_{F(AV)}$ 15A</th>
<th>$T_C = 125°C$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peak Forward Surge Current</td>
<td>$I_{FSM}$ 150A</td>
<td>8.3ms, half sine</td>
</tr>
<tr>
<td>Maximum Forward Voltage Drop Per Element</td>
<td>$V_F$ .63V, .75V, .84V</td>
<td>$I_{FM} = 16A$ mper, $I_{FM} = 15 Amper$</td>
</tr>
<tr>
<td>Maximum DC Reverse Current At Rated DC Blocking Voltage</td>
<td>$I_R$ 0.2 mA</td>
<td>$T_J = 25°C$</td>
</tr>
</tbody>
</table>

*Pulse test: Pulse width 300 µsec, Duty cycle 1%
MBR1520 thru MBR15100

Figure 1
Typical Forward Characteristics

Instantaneous Forward Current - Amperes
versus
Instantaneous Forward Voltage - Volts

Figure 2
Typical Reverse Characteristics

Instantaneous Reverse Leakage Current - MicroAmperes
versus
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3
Forward Derating Curve

Volts
Instantaneous Forward Current - Amperes
Instantaneous Forward Voltage - Volts

Figure 4
Peak Forward Surge Current

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

Average Forward Rectified Current - Amperes
Ambient Temperature - °C

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