RBV1500 - RBV1510

PRV : 50 - 1000 Volts
Io : 15 Amperes

FEATURES :
* High current capability
* High surge current capability
* High reliability
* Low reverse current
* Low forward voltage drop
* High case dielectric strength of 2000 Vdc
* Ideal for printed circuit board
* Very good heat dissipation
* Pb / RoHS Free

MECHANICAL DATA :
* Case : Reliable low cost construction utilizing molded plastic technique
* Epoxy : UL94V-O rate flame retardant
* Terminals : Plated lead solderable per MIL-STD-202, Method 208 guaranteed
* Polarity : Polarity symbols marked on case
* Mounting position : Any
* Weight : 8.11 grams (Approximaly)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Rating 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>RATING</th>
<th>SYMBOL</th>
<th>RBV 1500</th>
<th>RBV 1501</th>
<th>RBV 1502</th>
<th>RBV 1504</th>
<th>RBV 1506</th>
<th>RBV 1508</th>
<th>RBV 1510</th>
<th>UNIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>VRRM</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>VRMS</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>VDC</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 Current Tc = 55°C</td>
<td>IF(AV)</td>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Peak Forward Surge Current Single half sine wave</td>
<td>IFSM</td>
<td></td>
<td></td>
<td></td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td>A</td>
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<tr>
<td>Superimposed on rated load (JEDEC Method)</td>
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<tr>
<td>Current Squared Time at 1 &lt; 8.3 ms.</td>
<td>IFt</td>
<td></td>
<td></td>
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<td>375</td>
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<td></td>
<td></td>
<td>A²S</td>
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<tr>
<td>Maximum Forward Voltage per Diode at If = 7.5 A</td>
<td>VF</td>
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<td>1.1</td>
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<td></td>
<td>V</td>
</tr>
<tr>
<td>Maximum DC Reverse Current</td>
<td>IR</td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td></td>
<td></td>
<td></td>
<td>µA</td>
</tr>
<tr>
<td>at Rated DC Blocking Voltage</td>
<td>IB(H)</td>
<td></td>
<td></td>
<td></td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td>µA</td>
</tr>
<tr>
<td>Typical Thermal Resistance (Note 1)</td>
<td>RθJC</td>
<td></td>
<td></td>
<td></td>
<td>1.9</td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
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<tr>
<td>Operating Junction Temperature Range</td>
<td>TJ</td>
<td></td>
<td></td>
<td></td>
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<td>- 40 to + 150</td>
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<td></td>
<td>°C</td>
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<tr>
<td>Storage Temperature Range</td>
<td>TstG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>- 40 to + 150</td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

Notes:
1. Thermal Resistance from junction to case with units mounted on a 5" x 4" x 3" (12.7cm.x 10.2cm.x 7.3cm.) Al.-Finned Plate.
RATING AND CHARACTERISTIC CURVES (RBV1500 - RBV1510)

**FIG. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**

- Heat Sink Mounting, \( Tc \)
- 5" x 4" x 3" THK, (12.7cm x 12.7cm x 7.3cm)

**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

- Pulse Width = 300 µs
- 1% Duty Cycle
- 8.3 ms SINGLE HALF SINE WAVE
- JEDEC METHOD

**FIG. 3 - TYPICAL FORWARD CHARACTERISTICS**

- \( Tj = 25°C \)
- \( Tj = 50°C \)
- \( Tj = 100°C \)

**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS**

- \( Tj = 25°C \)
- \( Tj = 100°C \)