RS801 THRU RS807

SINGLE-PHASE SILICON BRIDGE RECTIFIERS
Reverse Voltage – 50 to 1000 Volts
Forward Current – 8.0 Amperes

Features
- Low leakage
- Low forward voltage
- Mounting position: Any
- Surge overload rating: 250 amperes peak
- Ideal for printed circuit boards
- High forward surge current capability

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

<table>
<thead>
<tr>
<th>Symbols</th>
<th>RS 801</th>
<th>RS 802</th>
<th>RS 803</th>
<th>RS 804</th>
<th>RS 805</th>
<th>RS 806</th>
<th>RS 807</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum recurrent peak reverse voltage</td>
<td>$V_{R_{RM}}$</td>
<td>50</td>
<td>100</td>
<td>200</td>
<td>400</td>
<td>600</td>
<td>800</td>
<td>1000</td>
</tr>
<tr>
<td>Maximum RMS bridge input 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>
</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>
</tr>
<tr>
<td>Maximum average forward rectified output current at $T_C = 75^\circ C$ with heat sink</td>
<td>$I_O$</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
</tr>
<tr>
<td>Peak forward surge current 8.3ms single half sine-wave superimposed on rated load</td>
<td>$I_{RSM}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>250</td>
<td>Amps</td>
</tr>
<tr>
<td>Maximum forward voltage drop per element at 8A DC</td>
<td>$V_F$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.1</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum reverse current at rated DC blocking voltage per element @ $T_A = 25^\circ C$</td>
<td>$I_{R}$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10</td>
<td>$\mu$Amps</td>
</tr>
<tr>
<td>@ $T_C = 100^\circ C$</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>0.2</td>
<td>mAmps</td>
<td></td>
</tr>
<tr>
<td>Operating and storage temperature range</td>
<td>$T_J, T_S$</td>
<td>-55 to +150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>
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**Typical Instantaneous Forward Characteristics**

- Instantaneous Forward Voltage - $V_1$
- Instantaneous Forward Current - $I_1$

**Power Dissipation**

- Average Rectified Forward Current - $I_{ave}$
- Power Dissipation $P_F$ (W)

**Surge Forward Current Capability**

- Collector Emitter Voltage - $V_{CE}$, Collector Emitter Voltage - $V_{CE}$
- Number Of Cycle
- Case Temperature (°C)

**Typical Forward Current Derating Curve**

- Average Forward Current (A)
- Number Of Cycle
- Case Temperature (°C)