SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 200 Volts CURRENT 5.0 Amperes

FEATURES
* High reliability
* Low switching loss
* Low forward voltage drop
* High current capability
* High switching capability

MECHANICAL DATA
* Epoxy: Device has UL flammability classification 94V-O
* Case: Molded plastic
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting: position: Any
* Weight: 1.18 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25 °C ambient temperature unless otherwise specified. resistive or inductive load.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

<table>
<thead>
<tr>
<th>RATINGS</th>
<th>SYMBOL</th>
<th>SR520</th>
<th>SR530</th>
<th>SR540</th>
<th>SR550</th>
<th>SR560</th>
<th>SR580</th>
<th>SR5100</th>
<th>SR5150</th>
<th>SR5200</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Recurrent Peak Reverse Voltage</td>
<td>( V_{RRM} )</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum RMS Voltage</td>
<td>( V_{RMS} )</td>
<td>14</td>
<td>21</td>
<td>28</td>
<td>35</td>
<td>42</td>
<td>56</td>
<td>70</td>
<td>105</td>
<td>140</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum DC Blocking Voltage</td>
<td>( V_{DC} )</td>
<td>20</td>
<td>30</td>
<td>40</td>
<td>50</td>
<td>60</td>
<td>80</td>
<td>100</td>
<td>150</td>
<td>200</td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum Average Forward Rectified Current at Derating Load Temperature</td>
<td>( I_D )</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
</tr>
<tr>
<td>Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)</td>
<td>( I_{FSM} )</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Amps</td>
</tr>
<tr>
<td>Typical Current Squared Time</td>
<td>( t_T )</td>
<td>93.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A^2S</td>
</tr>
<tr>
<td>Typical Thermal Resistance (Note 1)</td>
<td>( R_{THA} )</td>
<td>25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td></td>
<td>( R_{THJL} )</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C/W</td>
</tr>
<tr>
<td>Typical Junction Capacitance (Note 3)</td>
<td>( C_J )</td>
<td>200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
</tr>
<tr>
<td>Operating Temperature Range</td>
<td>( T_J )</td>
<td>150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature Range</td>
<td>( T_J )</td>
<td>-65 to + 150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>°C</td>
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</table>

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>SYMBOL</th>
<th>SR520</th>
<th>SR530</th>
<th>SR540</th>
<th>SR550</th>
<th>SR560</th>
<th>SR580</th>
<th>SR5100</th>
<th>SR5150</th>
<th>SR5200</th>
<th>UNITS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Instantaneous Forward Voltage at 5.0A DC</td>
<td>( V_F )</td>
<td>55</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Volts</td>
</tr>
<tr>
<td>Maximum Average Reverse Current @( T_A = 25°C )</td>
<td>( I_R )</td>
<td>0.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mA</td>
</tr>
<tr>
<td>at Rated DC Blocking Voltage @( T_A = 100°C )</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>mA</td>
</tr>
</tbody>
</table>

NOTES:
1. Thermal Resistance : At 9.5mm lead lengths, PCB mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2009-10
REV A
RATING AND CHARACTERISTICS CURVES (SR520 THRU SR5200)

**FIG. 1** TYPICAL FORWARD CURRENT DERATING CURVE

**FIG. 2** TYPICAL REVERSE CHARACTERISTICS

**FIG. 3** TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

**FIG. 4** TYPICAL JUNCTION CAPACITANCE

**FIG. 5** MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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- **Average Forward Current (A)**: Single Phase Half Wave 60Hz Inductive or Resistive Load 0.375" (9.5mm) Lead Length
- **Percent of Rated Peak Reverse Voltage (%)**
- **Instantaneous Forward Voltage (V)**
- **Instantaneous Reverse Current (mA)**
- **Lead Temperature (°C)**
- **Average Forward Current (A)**
- **CJ, Junction Capacitance (pF)**
- **Peak Forward Surge Current (A)**
- **Number of Cycles at 60Hz**
- **Reverse Voltage (V)**
- **Reverse Voltage (V)**

**Notes:**
- **SR520 ~ SR540**
- **SR550 ~ SR560**
- **SR580 ~ SR5200**
Marking Description

Rectron Logo -> V Y M

Part No. -> S R 5 X X

Cathode Band

Year – code:
(Y: Last digit of year)

Month – code:
(M: 0~9, O, N, D)

Voltage-code
20------20V  60------60V
30------30V  80------80V
40------40V  90------90V
50------50V  100----100V
200----200V
# Packaging of Diode and Bridge Rectifiers

## Bulk Pack

<table>
<thead>
<tr>
<th>Package</th>
<th>Packing Code</th>
<th>EA Per Box</th>
<th>Inner Box Size (mm)</th>
<th>Carton Size (mm)</th>
<th>EA Per Carton</th>
<th>Gross Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-201</td>
<td>-B</td>
<td>500</td>
<td>300<em>73</em>40</td>
<td>347<em>320</em>271</td>
<td>12,000</td>
<td>15.9</td>
</tr>
</tbody>
</table>

## Reel Pack

<table>
<thead>
<tr>
<th>Package</th>
<th>Packing Code</th>
<th>EA Per Reel</th>
<th>EA Per Inner Box</th>
<th>Component Space (mm)</th>
<th>Tape Space (mm)</th>
<th>Reel Dia (mm)</th>
<th>Carton Size (mm)</th>
<th>EA Per Carton</th>
<th>Gross Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-201</td>
<td>-T</td>
<td>1,200</td>
<td>1,200</td>
<td>5.0</td>
<td>52</td>
<td>330</td>
<td>355<em>350</em>335</td>
<td>4,800</td>
<td>9.10</td>
</tr>
</tbody>
</table>

## Ammo Pack

<table>
<thead>
<tr>
<th>Package</th>
<th>Packing Code</th>
<th>Reel (EA)</th>
<th>Component Space(mm)</th>
<th>Tape Space (mm)</th>
<th>Box Size (mm)</th>
<th>Carton Size(mm)</th>
<th>Carton (EA)</th>
<th>Gross Weight (Kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO-201</td>
<td>-F</td>
<td>600</td>
<td>9.5</td>
<td>52</td>
<td>255<em>73</em>100</td>
<td>400<em>268</em>225</td>
<td>6,000</td>
<td>9.9</td>
</tr>
</tbody>
</table>
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