SR520 THRU SR5100

SCHOTTKY BARRIER RECTIFIERS
Reverse Voltage – 20 to 100 Volts
Forward Current – 5.0 Amperes

Features
- High current capability
- Metal to silicon rectifier, majority carrier conduction
- Low power loss, high efficiency
- Exceeds environmental standards of MIL-S-19500/228
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications

Mechanical Data
- **Case:** Molded plastic body, DO-201AD
- **Epoxy:** UL-94V-O rate flame retardant
- **Terminals:** Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

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>SR520</th>
<th>SR530</th>
<th>SR540</th>
<th>SR550</th>
<th>SR560</th>
<th>SR580</th>
<th>SR5100</th>
<th>Units</th>
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</thead>
<tbody>
<tr>
<td>V_{RRM}</td>
<td></td>
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<td>V</td>
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<tr>
<td>V_{RMS}</td>
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<td></td>
<td></td>
<td></td>
<td>V</td>
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<tr>
<td>V_{DC}</td>
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<td></td>
<td></td>
<td></td>
<td>V</td>
</tr>
<tr>
<td>I_{AV}</td>
<td>0.375” (9.5mm) lead length</td>
<td>5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>I_{FSM}</td>
<td>8.3mS single half sine-wave superimposed on rated load (JEDEC method)</td>
<td>150</td>
<td></td>
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<td></td>
<td>A</td>
</tr>
<tr>
<td>V_{F}</td>
<td>Maximum forward voltage at 5A DC</td>
<td>0.55</td>
<td>0.70</td>
<td>0.85</td>
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<td>V</td>
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<tr>
<td>I_{R}</td>
<td>Maximum reverse current at rated DC blocking voltage T_{A} = 25°C</td>
<td>0.5</td>
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<td></td>
<td></td>
<td></td>
<td>mA</td>
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<tr>
<td>T_{A}</td>
<td>T_{A} = 100°C</td>
<td>50</td>
<td></td>
<td></td>
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<tr>
<td>C_{J}</td>
<td>Typical junction capacitance (Note 1)</td>
<td>500</td>
<td>380</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>pF</td>
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<tr>
<td>R_{JUA}</td>
<td>Typical thermal resistance (Note 2)</td>
<td>15</td>
<td>10</td>
<td></td>
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<td>°C/W</td>
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<tr>
<td>T_{J}</td>
<td>Operating junction temperature range</td>
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<td></td>
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<td>125</td>
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<td>°C</td>
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<td>T_{B}</td>
<td>Storage temperature range</td>
<td></td>
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<td>-50 to +125</td>
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<td>°C</td>
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</tbody>
</table>

Notes:
1. Measured at 1MHz and applied reverse voltage of 4 Volts
2. Thermal Resistance from Junction to Ambient and from Junction to lead at 0.375”(9.5mm) lead length
   P.C.B. mounted
**SR520 THRU SR5100**

**Forward Current Derating Curve**

- Average Forward Current, A vs. Lead Temperature (°C)
- 0.375"(9.5mm) Lead Length
- Resistive or inductive load

**Max Non-repetitive Peak Forward Surge Current**

- Peak Forward Surge Current, A vs. Number Of Cycles at 60Hz
- 8.3ms single half sine-wave JEDEC method

**Typical reverse characteristics**

- Instantaneous reverse current, milliamperes vs. Percent of rated peak reverse voltage, %
- TJ = 25°C, TJ = 75°C, TJ = 100°C

**Typical forward characteristics**

- Instantaneous forward current, A vs. Instantaneous forward voltage, V
- TJ = 25°C, Pulse Width = 200µS
- 20, 30, 40V, 50, 60V, 80, 100V

**Typical Junction Capacitance**

- Capacitance, pF vs. Reverse Voltage, V
- TJ = 25°C

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