

## II. Schottky Rectifier

### 5.0A Schottky Rectifier SR520~SR5200

(Package: DO-201AD)

|  |  |
|--|--|
| <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• The plastic package carries Underwriters Laboratory Flammability Classification 94V-0</li> <li>• Construction utilizes void-free molded plastic technique</li> <li>• High forward surge current capability</li> <li>• High temperature soldering guaranteed</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : JEDEC DO-201AD molded plastic body</li> <li>• Terminals : Plated axial leads, solderable per MIL-STD-202E, Method 208C guaranteed</li> <li>• Polarity : Color band denotes cathode end</li> <li>• Mounting Position : Any</li> <li>• Weight : 1.18 grams</li> </ul> | <p>Case: DO-201AD<br/>Dimensions in inches and (millimeters)</p> |
|--|--|

### Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Characteristic  | Symbol    | SR 520      | SR 530 | SR 540 | SR 550 | SR 560      | SR 580 | SR 5100 | SR 5150 | SR 5200 | Units |
|---|-----------|-------------|--------|--------|--------|-------------|--------|---------|---------|---------|-------|
| Maximum recurrent peak reverse voltage  | $V_{RRM}$ | 20          | 30     | 40     | 50     | 60          | 80     | 100     | 150     | 200     | Volts |
| Maximum RMS voltage   | $V_{RMS}$ | 14          | 21     | 28     | 35     | 42          | 56     | 70      | 105     | 140     | Volts |
| Maximum DC blocking voltage   | $V_{DC}$  | 20          | 30     | 40     | 50     | 60          | 80     | 100     | 150     | 200     | Volts |
| Maximum average forward rectified current at derating lead temperature  | $I_O$     | 5.0         |        |        |        |             |        |         |         |         | Amps  |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)                      | $I_{FSM}$ | 100         |        |        |        |             |        |         |         |         | Amps  |
| Maximum instantaneous forward voltage at 5.0A DC  | $V_F$     | 0.55        |        | 0.75   |        | 0.85        |        |         |         | Volts   |       |
| Maximum average reverse current at rated DC blocking voltage<br>$T_a = 25^\circ\text{C}$<br>$T_a = 100^\circ\text{C}$ | $I_R$     | 0.2         |        |        |        |             |        |         |         |         | mA    |
|   |           | 2           |        |        |        |             |        |         |         |         |       |
| Typical thermal resistance (Note 1)   | Rth-JA    | 25          |        |        |        |             |        |         |         |         | °C/W  |
|   | Rth-JL    | 8           |        |        |        |             |        |         |         |         |       |
| Typical junction capacitance (Note 2)   | $C_j$     | 500         |        |        |        | 400         |        |         |         | PF      |       |
| Operating junction temperature range  | $T_j$     | -55 to +125 |        |        |        | -55 to +150 |        |         |         | °C      |       |
| Storage temperature range   | $T_{stg}$ | -55 to +150 |        |        |        |             |        |         |         |         | °C    |

Notes:

1. Thermal resistance : At 9.5mm lead lengths, PCB mounted.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

<http://patron-components.com/>

# Ratings and Characteristic Curves of SR520~SR5200

FIG.1 FORWARD CURRENT DERATING CURVE

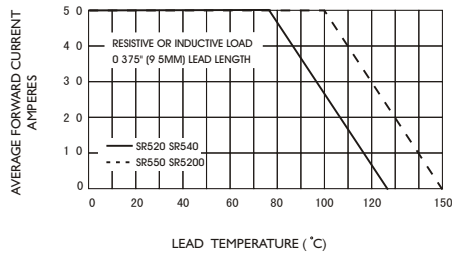


FIG.2 MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT

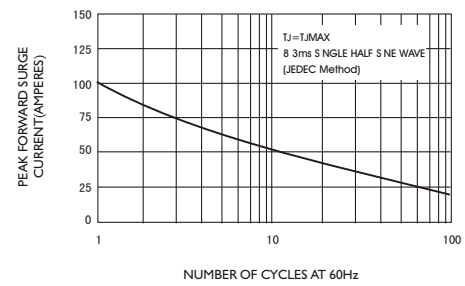


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

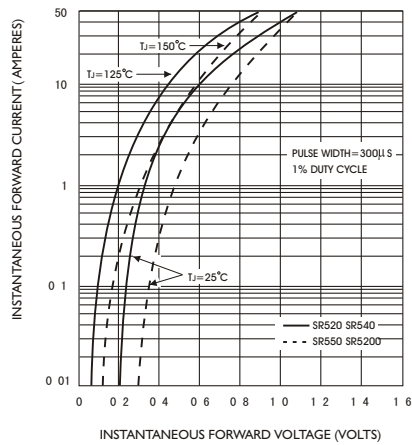


FIG.4 TYPICAL REVERSE CHARACTERISTICS

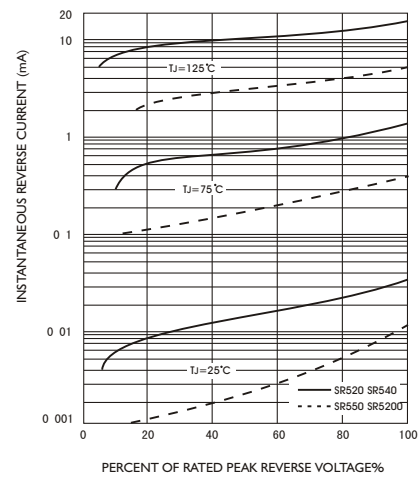


FIG.5 TYPICAL JUNCTION CAPACITANCE

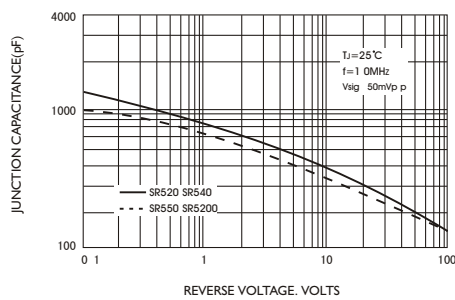


FIG.6 TYPICAL TRANSIENT THERMAL IMPEDANCE

