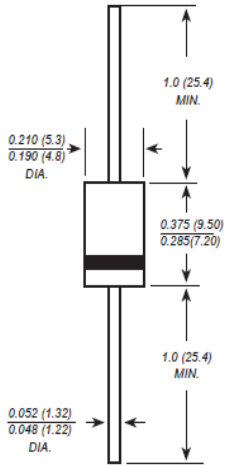


# SR520 THRU SR5A0

## SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts Forward Current - 5.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-201AD molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.04 ounce, 1.10 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

|   | SYMBOLS         | SR 520      | SR 530 | SR 540 | SR 550      | SR 560 | SR 570 | SR 580 | SR 590 | SR 5A0 | UNITS |
|---|-----------------|-------------|--------|--------|-------------|--------|--------|--------|--------|--------|-------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 20          | 30     | 40     | 50          | 60     | 70     | 80     | 90     | 100    | VOLTS |
| Maximum RMS voltage   | $V_{RMS}$       | 14          | 21     | 28     | 35          | 42     | 49     | 56     | 63     | 70     | VOLTS |
| Maximum DC blocking voltage   | $V_{DC}$        | 20          | 30     | 40     | 50          | 60     | 70     | 80     | 90     | 100    | VOLTS |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length (see fig. 1)                            | $I_{(AV)}$      | 5.0         |        |        |             |        |        |        |        |        | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)          | $I_{FSM}$       | 150.0       |        |        |             |        |        |        |        |        | Amps  |
| Maximum instantaneous forward voltage at 5.0A   | $V_F$           | 0.55        |        | 0.70   |             | 0.85   |        |        |        | Volts  |       |
| Maximum DC reverse current<br>at rated DC blocking voltage<br>$T_A=25^\circ\text{C}$<br>$T_A=100^\circ\text{C}$ | $I_R$           | 5.0         |        |        |             |        |        |        |        |        | mA    |
|   |                 | 50.0        |        |        | 25.0        |        |        |        |        |        |       |
| Typical junction capacitance (NOTE 1)   | $C_J$           | 500         |        |        | 400         |        |        |        |        | pF     |       |
| Typical thermal resistance (NOTE 2)   | $R_{\theta JA}$ | 25.0        |        |        |             |        |        |        |        |        | °C/W  |
| Operating junction temperature range  | $T_J$           | -65 to +125 |        |        | -65 to +150 |        |        |        |        |        | °C    |
| Storage temperature range   | $T_{STG}$       | -65 to +150 |        |        |             |        |        |        |        |        | °C    |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES SR520 THRU SR5A0

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1-FORWARD CURRENT DERATING CURVE

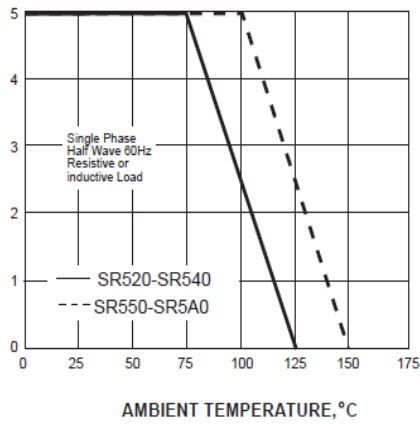


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

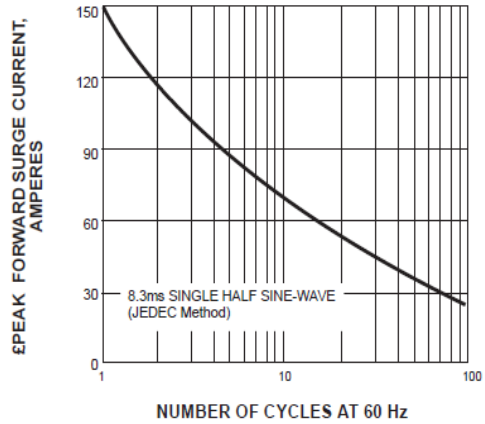


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

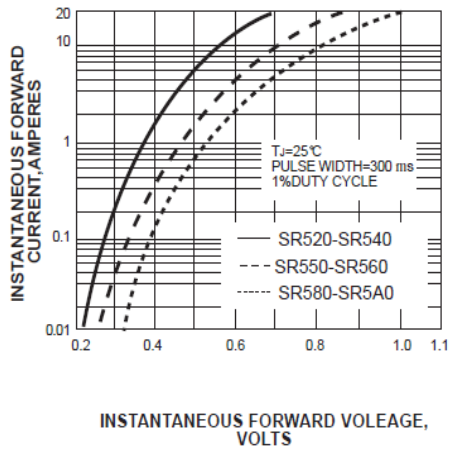


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

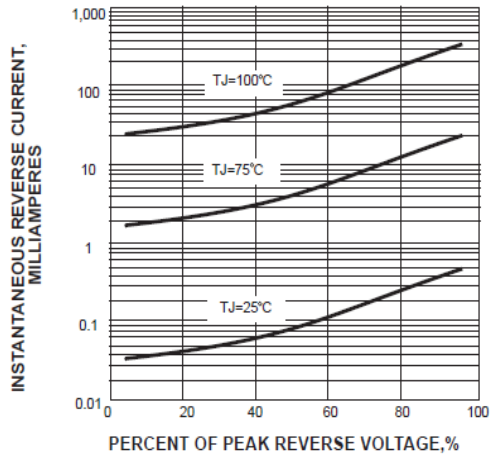


FIG. 5-TYPICAL JUNCTION CAPACITANCE

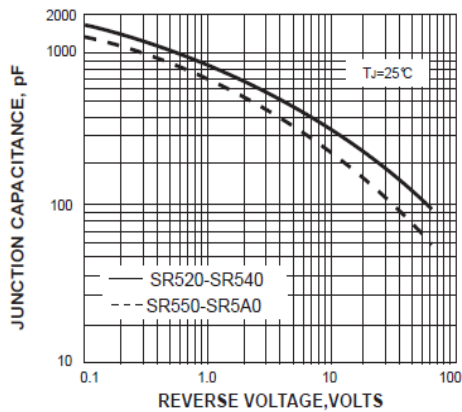


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

