

## SCHOTTKY BARRIER RECTIFIER

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ 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

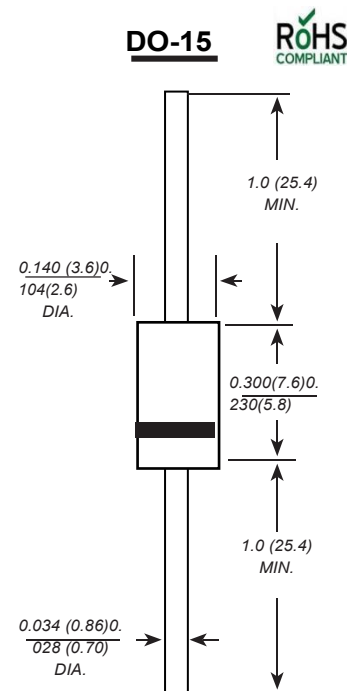
**Case :** JEDEC DO-15 Molded plastic body

**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Color band denotes cathode end

**Mounting Position :** Any

**Weight :** 0.014 ounce, 0.40 grams



Dimensions in inches and (millimeters)

### 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%.

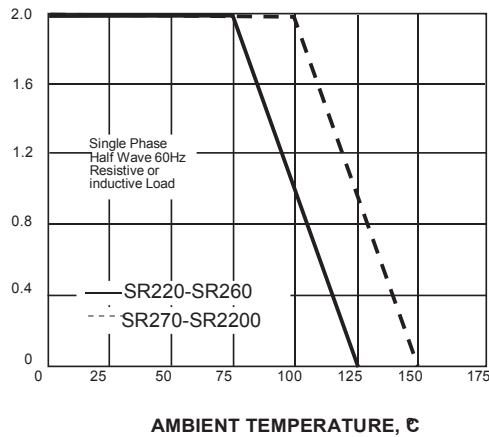
| Parameter                                                                                                     | SYMBOLS           | SR 220      | SR 230     | SR 240      | SR 250     | SR 260     | SR 270      | SR 280     | SR 290     | SR 2100     | SR 2150     | SR 2200     | UNITS |    |
|---------------------------------------------------------------------------------------------------------------|-------------------|-------------|------------|-------------|------------|------------|-------------|------------|------------|-------------|-------------|-------------|-------|----|
| Marking Code                                                                                                  |                   | RCD SR 220  | RCD SR 230 | RC D SR 240 | RCD SR 250 | RcD SR 260 | RCD 270     | RCD SR 280 | RCD SR 290 | RCD SR 2100 | RCD SR 2150 | RCD SR 2200 |       |    |
|                                                                                                               |                   | 20          | 30         | 40          | 50         | 60         | 70          | 80         | 90         | 100         | 150         | 200         |       |    |
| Maximum RMS voltage                                                                                           | V <sub>RMS</sub>  | 14          | 21         | 40          | 35         | 42         | 49          | 56         | 63         | 70          | 105         | 140         | V     |    |
| Maximum DC blocking voltage                                                                                   | V <sub>DC</sub>   | 20          | 30         | 40          | 50         | 60         | 70          | 80         | 90         | 100         | 150         | 200         | V     |    |
| Maximum average forward rectified current<br>0.375"(9.5mm) lead length(see fig.1)                             | I <sub>(AV)</sub> | 2.0         |            |             |            |            |             |            |            |             |             |             | A     |    |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed onrated load (JEDEC Method)         | I <sub>FSM</sub>  | 60          |            |             |            |            |             |            |            |             |             |             | A     |    |
| Maximum instantaneous forward voltage at 2.0A                                                                 | V <sub>F</sub>    | 0.55        |            |             | 0.70       |            | 0.85        |            |            |             | 0.95        |             | V     |    |
| Maximum DC reverse current      T <sub>A</sub> =25℃ T <sub>A</sub><br>at rated DC blocking voltage      =100℃ | I <sub>R</sub>    | 0.5         |            |             |            |            |             |            |            |             | 0.2         |             | mA    |    |
|                                                                                                               |                   | 10.0        |            |             |            | 5.0        |             |            | 2.0        |             |             |             |       |    |
| Typical junction capacitance (NOTE 1)                                                                         | C <sub>J</sub>    | 220         |            |             | 80         |            |             |            |            |             |             |             |       | pF |
| Typical thermal resistance (NOTE 2)                                                                           | R <sub>θJA</sub>  | 50.0        |            |             |            |            |             |            |            |             |             |             | ℃/W   |    |
| Operating junction and storage                                                                                | T <sub>J</sub>    | -65 to +125 |            |             |            |            | -65 to +150 |            |            |             |             |             |       | ℃  |
| Storage temperature range                                                                                     | T <sub>STG</sub>  | -65 to +150 |            |             |            |            |             |            |            |             |             |             | ℃     |    |

**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

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

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

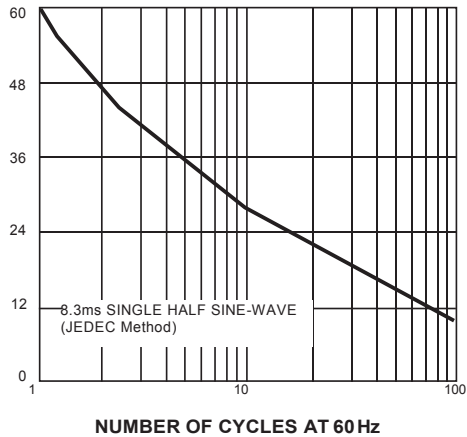
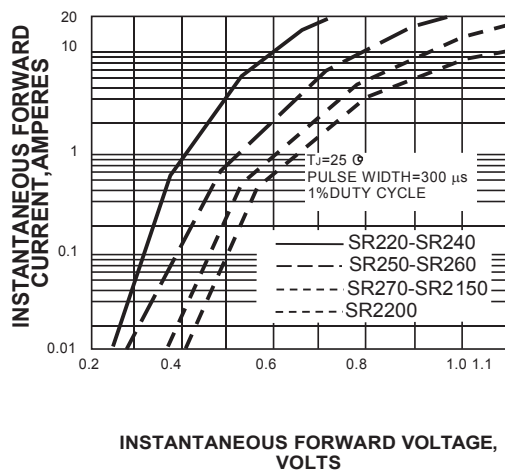


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

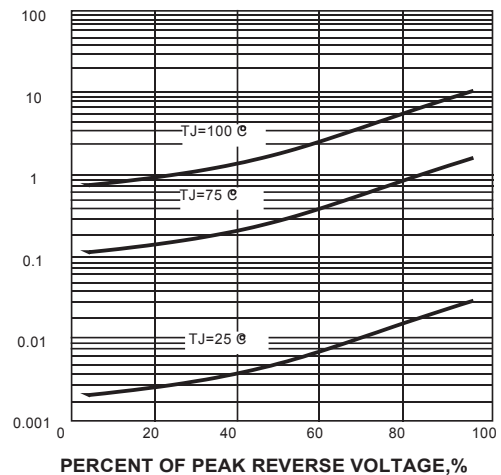
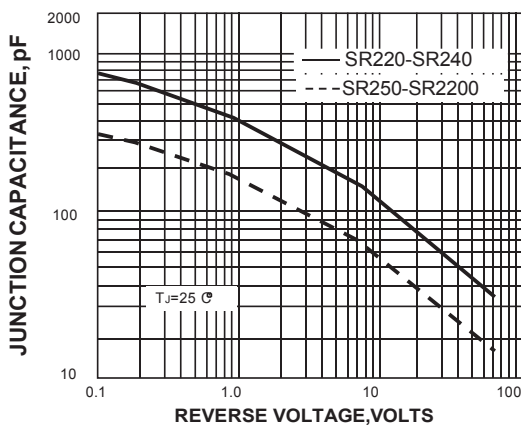
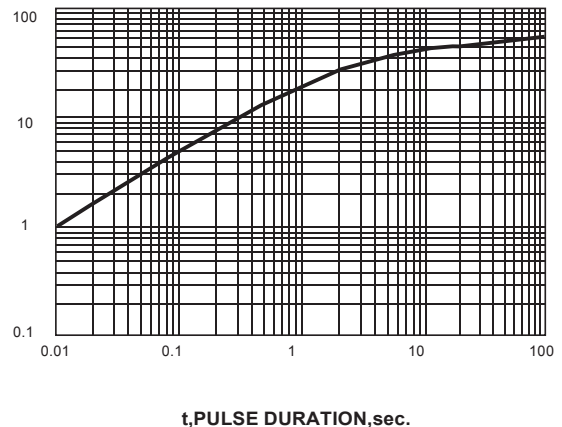


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.