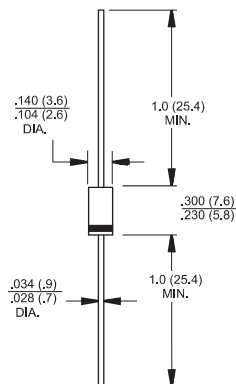




## Features

- ✧ Low power loss, high efficiency.
- ✧ High current capability, Low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inverter, free wheeling, and polarity protection application



## Mechanical Data

- ✧ Cases: DO-15 molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 0.4 gram

Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number                                                                                                   | Symbol            | SR 202      | SR 203 | SR 204 | SR 205 | SR 206 | SR 209 | SR 210 | SR 215 | Units |
|---------------------------------------------------------------------------------------------------------------|-------------------|-------------|--------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                                        | V <sub>RRM</sub>  | 20          | 30     | 40     | 50     | 60     | 90     | 100    | 150    | V     |
| Maximum RMS Voltage                                                                                           | V <sub>RMS</sub>  | 14          | 21     | 28     | 35     | 42     | 63     | 70     | 105    | V     |
| Maximum DC Blocking Voltage                                                                                   | V <sub>DC</sub>   | 20          | 30     | 40     | 50     | 60     | 90     | 100    | 150    | V     |
| Maximum Average Forward Rectified Current<br>See Fig. 1                                                       | I <sub>(AV)</sub> | 2.0         |        |        |        |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3 ms Single<br>Half Sine-wave Superimposed on Rated<br>Load (JEDEC method )     | I <sub>FSM</sub>  | 50          |        |        |        |        |        |        |        | A     |
| Maximum Instantaneous Forward Voltage@2.0 A                                                                   | V <sub>F</sub>    | 0.55        |        |        | 0.70   |        | 0.85   |        | 0.95   | V     |
| Maximum D.C. Reverse Current @ T <sub>A</sub> =25 °C<br>at Rated DC Blocking Voltage @ T <sub>A</sub> =125 °C | I <sub>R</sub>    | 0.5         |        |        |        |        | 0.1    |        |        | mA    |
|                                                                                                               |                   | 10          |        |        | 5.0    |        | 2.0    |        |        | mA    |
| Typical Junction Capacitance (Note 2)                                                                         | C <sub>j</sub>    | 120         |        |        | 85     |        | 65     |        |        | pF    |
| Typical Thermal Resistance (Note 1)                                                                           | R <sub>θJA</sub>  | 75          |        |        |        |        |        |        |        | °C/W  |
| Operating Junction Temperature Range                                                                          | T <sub>J</sub>    | -65 to +150 |        |        |        |        |        |        |        | °C    |
| Storage Temperature Range                                                                                     | T <sub>STG</sub>  | -65 to +150 |        |        |        |        |        |        |        | °C    |

Notes: 1. Mount on Cu-Pad Size 10mm x 10mm on P.C.B.

2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SR202 THUR SR215)

FIG.1- FORWARD CURRENT DERATING CURVE

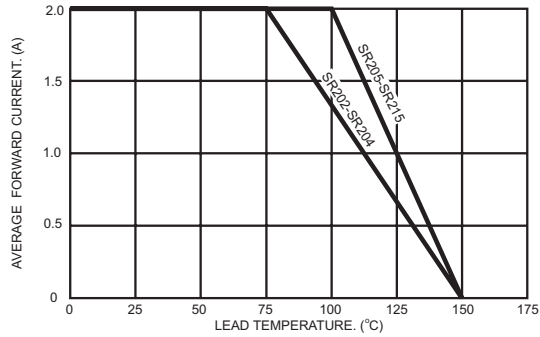


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

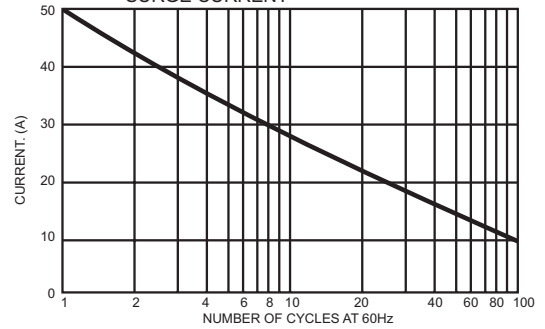


FIG.3- TYPICAL FORWARD CHARACTERISTICS

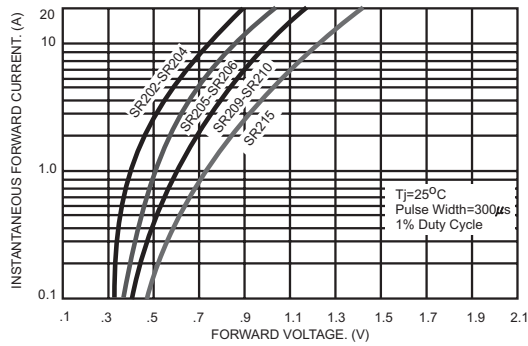


FIG.4- TYPICAL REVERSE CHARACTERISTICS

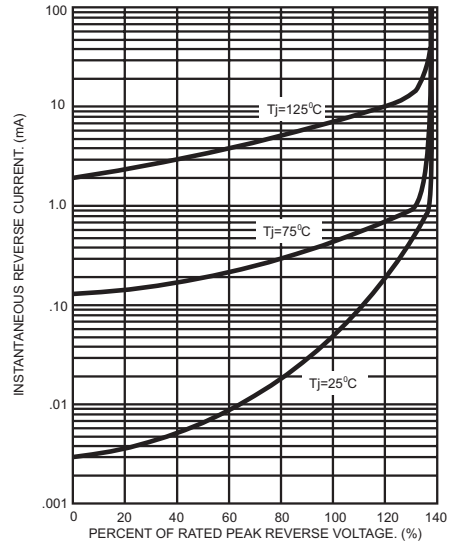


FIG.5- TYPICAL JUNCTION CAPACITANCE

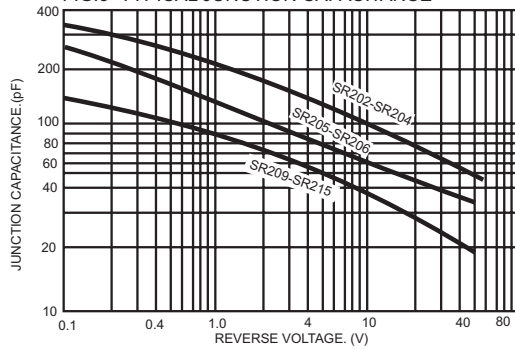


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

