



**VOLTAGE RANGE: 20 --- 200 V**  
**CURRENT: 2.0 A**

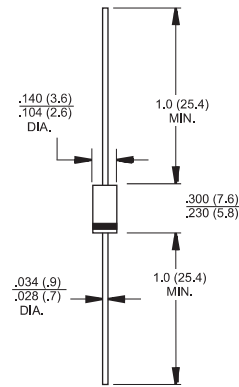
## Features

- ✧ Metal-Semiconductor junction with guard ring
- ✧ Epitaxial construction
- ✧ Low forward voltage drop, low switching losses
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters free wheeling, and polarity protection applications
- ✧ The plastic material carries U/L recognition 94V-0

## Mechanical Data

- ✧ Case: JEDEC DO-15, molded plastic
- ✧ Terminals: Axial lead, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode
- ✧ Weight: 0.014 ounces, 0.39 grams
- ✧ Mounting position: Any

### DO-15



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

| Parameter   | Symbol          | SR220           | SR230 | SR240 | SR250 | SR260 | SR280           | SR2100 | SR2150 | SR2200 | UNITS |
|---|-----------------|-----------------|-------|-------|-------|-------|-----------------|--------|--------|--------|-------|
| Maximum recurrent peak reverse voltage  | $V_{RRM}$       | 20              | 30    | 40    | 50    | 60    | 80              | 100    | 150    | 200    | V     |
| Maximum RMS voltage   | $V_{RMS}$       | 14              | 21    | 28    | 35    | 42    | 56              | 70     | 105    | 140    | V     |
| Maximum DC blocking voltage   | $V_{DC}$        | 20              | 30    | 40    | 50    | 60    | 80              | 100    | 150    | 200    | V     |
| Maximum average forward rectified current<br>9.5mm lead length, @ $T_A=75^\circ C$                          | $I_{F(AV)}$     | 2.0             |       |       |       |       |                 |        |        |        | A     |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load @ $T_J=125^\circ C$ | $I_{FSM}$       | 50.0            |       |       |       |       |                 |        |        |        | A     |
| Maximum instantaneous forward voltage<br>@ 2.0A (Note 1)  | $V_F$           | 0.45            | 0.55  | 0.7   |       |       | 0.85            |        |        | V      |       |
| Maximum reverse current @ $T_A=25^\circ C$<br>at rated DC blocking voltage @ $T_A=100^\circ C$              | $I_R$           | 0.5             |       |       |       |       | 0.1             |        |        |        | mA    |
|   |                 | 10.0            |       |       |       |       |                 |        |        |        |       |
| Typical junction capacitance (Note2)  | $C_J$           | 170             |       |       |       |       |                 |        |        |        | pF    |
| Typical thermal resistance (Note3)  | $R_{\theta JA}$ | 35              |       |       |       |       |                 |        |        |        | °C/W  |
| Operating junction temperature range  | $T_J$           | - 55 ---- + 150 |       |       |       |       | - 55 ---- + 175 |        |        |        | °C    |
| Storage temperature range   | $T_{STG}$       | - 55 ---- + 150 |       |       |       |       | - 55 ---- + 175 |        |        |        | °C    |

NOTE: 1. Pulse test: 300us pulse width, 1% duty cycle.

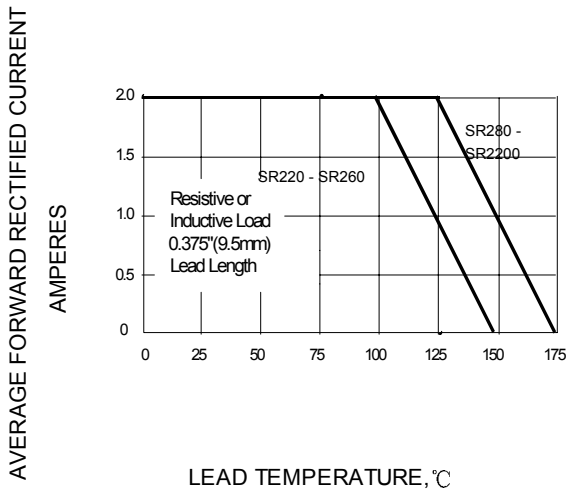
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to ambient

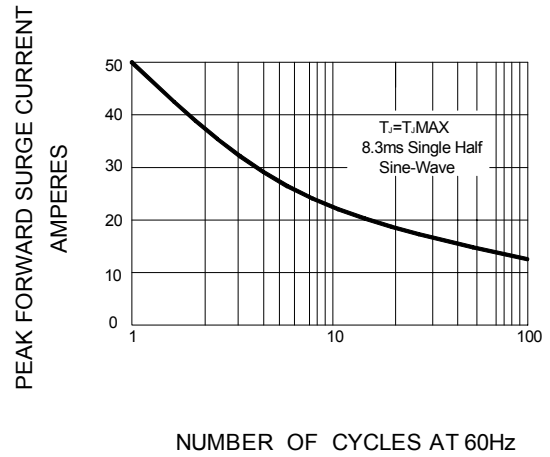


## Ratings AND Characteristic Curves

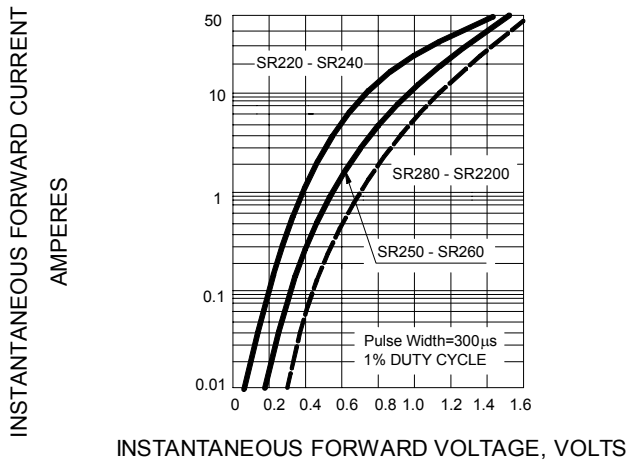
**FIG.1 -- FORWARD CURRENT DERATING CURVE**



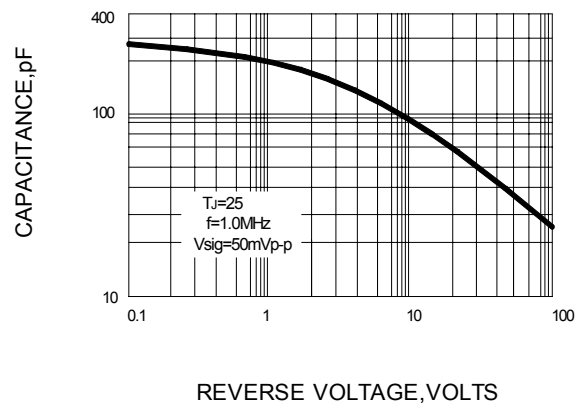
**FIG.2 -- PEAK FORWARD SURGE CURRENT**



**FIG.3 -- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 -- TYPICAL JUNCTION CAPACITANCE**



| PACKAGE | SPQ/PCS   | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| DO-15   | 3000/AMMO | 30000          | 42X28X31       | 12.00        | 10.00        |