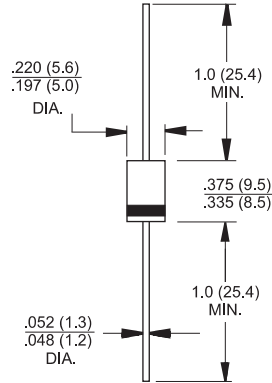




### DO-201AD/DO-27



## 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-201AD molded plastic
- ✧ 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: 1.2grams

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 320      | SR 330 | SR 340 | SR 350      | SR 360 | SR 390 | SR 3100 | SR 3150 | SR 3200 | Units |
|---|------------------------------------|-------------|--------|--------|-------------|--------|--------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                          | 20          | 30     | 40     | 50          | 60     | 90     | 100     | 150     | 200     | V     |
| Maximum RMS Voltage   | $V_{RMS}$                          | 14          | 21     | 28     | 35          | 42     | 63     | 70      | 105     | 140     | V     |
| Maximum DC Blocking Voltage   | $V_{DC}$                           | 20          | 30     | 40     | 50          | 60     | 90     | 100     | 150     | 200     | V     |
| Maximum Average Forward Rectified Current<br>See Fig. 1   | $I_{(AV)}$                         | 3.0         |        |        |             |        |        |         |         |         | A     |
| Maximum Instantaneous Forward Voltage @3.0A   | $V_F$                              | 0.55        |        |        | 0.70        |        | 0.85   | 0.95    |         | V       |       |
| Maximum D.C. Reverse Current @ $T_A=25^\circ\text{C}$<br>at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$ | $I_R$                              | 0.5         |        |        |             |        |        | 0.1     |         | mA      |       |
|   |                                    | 10          |        |        | 5           |        | 2.0    |         | mA      |         |       |
| Typical Junction Capacitance (Note 2)   | $C_j$                              | 200         |        |        | 130         |        | 72     |         | pF      |         |       |
| Typical Thermal Resistance (Note 1)   | $R_{\theta JA}$<br>$R_{\theta JC}$ | 50          |        |        |             |        |        | 15      |         | °C/W    |       |
| Operating Junction Temperature Range  | $T_J$                              | -65 to +125 |        |        | -65 to +150 |        |        |         | °C      |         |       |
| Storage Temperature Range   | $T_{STG}$                          | -65 to +150 |        |        |             |        |        |         |         |         | °C    |

- Notes:
1. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

### RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

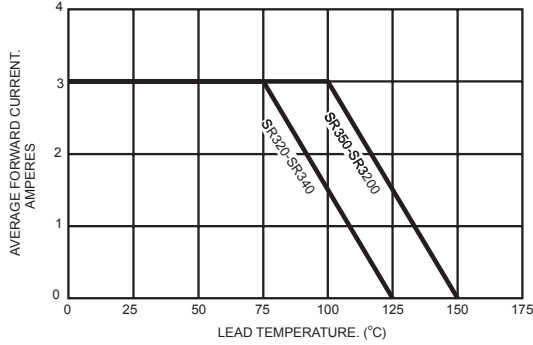


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

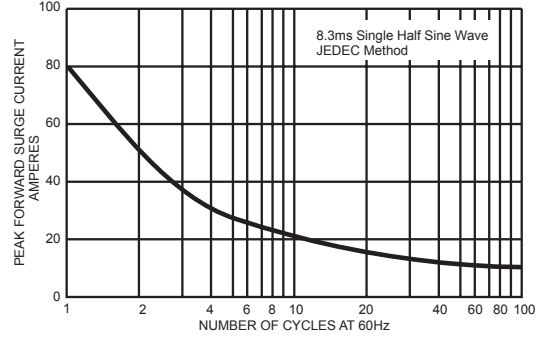


FIG.3- TYPICAL FORWARD CHARACTERISTICS

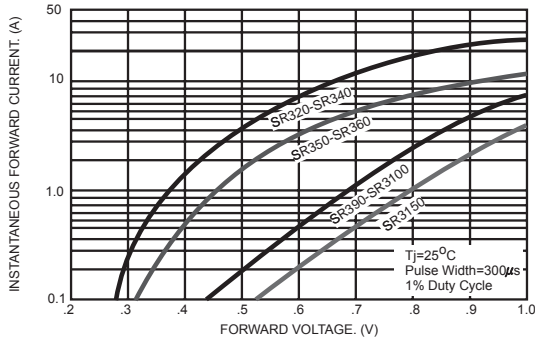


FIG.4- TYPICAL REVERSE CHARACTERISTICS

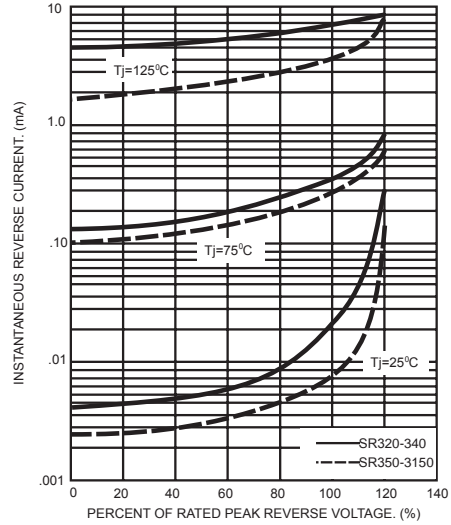


FIG.5- TYPICAL JUNCTION CAPACITANCE

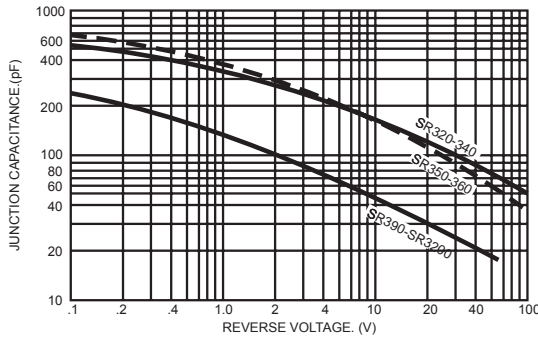


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

