



# SR502 THRU SR506

## 5.0 AMPS. Schottky Barrier Rectifiers

Voltage Range  
20 to 60 Volts  
Current  
5.0 Amperes

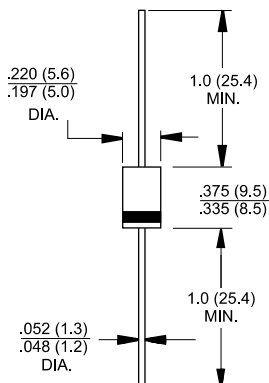
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

- ✧ Cases: DO-201AD molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 250°C/10 seconds/.375"(.95mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.1 grams

### DO-201AD



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                                                                                                 | SR502       | SR503 | SR504 | SR505       | SR506 | Units    |
|-------------------------------------------------------------------------------------------------------------|-------------|-------|-------|-------------|-------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                      | 20          | 30    | 40    | 50          | 60    | V        |
| Maximum RMS Voltage                                                                                         | 14          | 21    | 28    | 35          | 42    | V        |
| Maximum DC Blocking Voltage                                                                                 | 20          | 30    | 40    | 50          | 60    | V        |
| Maximum Average Forward Rectified Current<br>See Fig. 1                                                     | 5.0         |       |       |             |       | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )         | 150         |       |       |             |       | A        |
| Maximum Instantaneous Forward Voltage @5.0A                                                                 | 0.55        |       |       | 0.70        |       | V        |
| Maximum D.C. Reverse Current @ T <sub>A</sub> =25°C<br>at Rated DC Blocking Voltage @ T <sub>A</sub> =100°C | 0.5<br>50   |       |       |             |       | mA<br>mA |
| Typical Thermal Resistance (Note 1) RθJA                                                                    | 15          |       |       | 10          |       | °C/W     |
| Typical Junction Capacitance (Note 2)                                                                       | 500         |       |       | 380         |       | pF       |
| Operating Junction Temperature Range T <sub>J</sub>                                                         | -65 to +125 |       |       | -65 to +150 |       | °C       |
| Storage Temperature Range T <sub>STG</sub>                                                                  | -65 to +150 |       |       |             |       | °C       |

Notes: 1. Thermal Resistance from Junction to Ambient Vertical P.C. Board Mounting, 0.375"(9.5mm) Lead Length

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

## RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR506)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

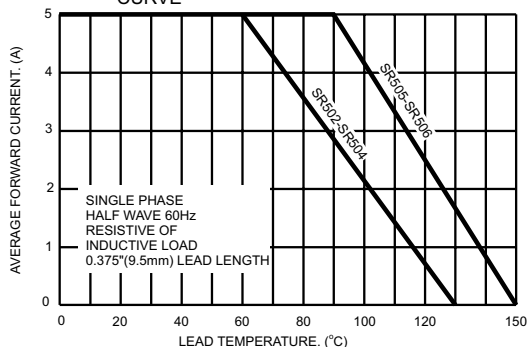


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

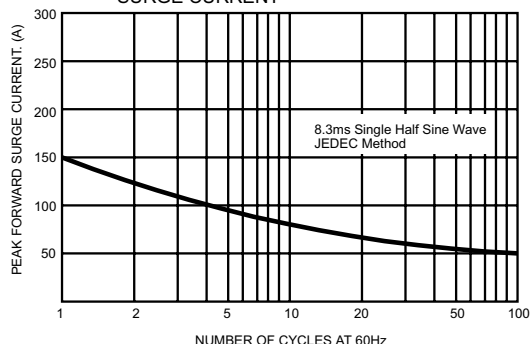


FIG.3- TYPICAL REVERSE CHARACTERISTICS

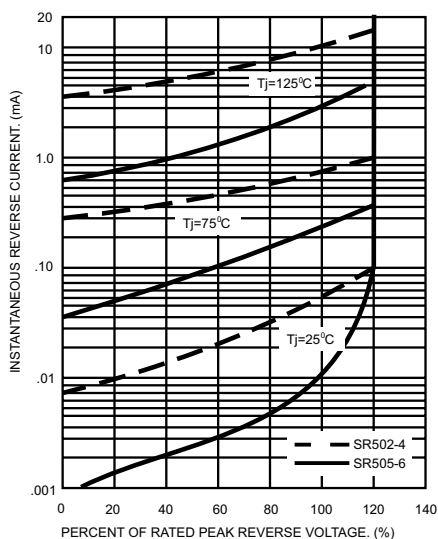


FIG.4- TYPICAL FORWARD CHARACTERISTICS

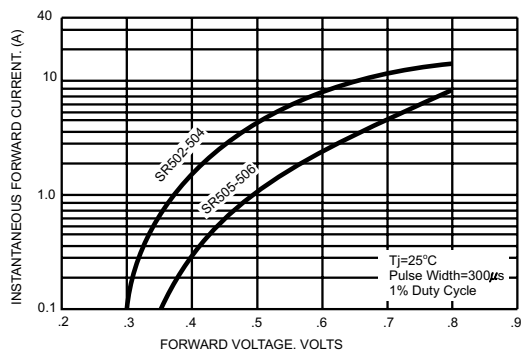


FIG.5- TYPICAL JUNCTION CAPACITANCE

