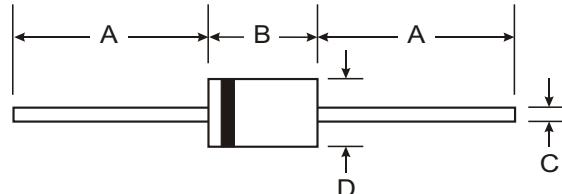


NOT RECOMMENDED FOR NEW DESIGNS,
PLEASE USE SB520 - SB560

Features

High Current Capability and Low Forward Drop
High Surge Capacity
Guard Ring for Transient Protection
Low Power Loss, High Efficiency
Plastic Material: UL Flammability
Classification Rating 94V-0



Mechanical Data

Case: DO-201AD, Molded Plastic
Terminals: Axial Lead, Solderable per
MIL-STD-202, Method 208
Mounting Position: Any
Polarity: Cathode Band
Weight: 1.20 grams (approx.)

| DO-201AD | | |
|----------|-------|------|
| Dim | Min | Max |
| A | 25.40 | |
| B | 7.20 | 9.50 |
| C | 1.20 | 1.30 |
| D | 4.80 | 5.20 |

All Dimensions in mm

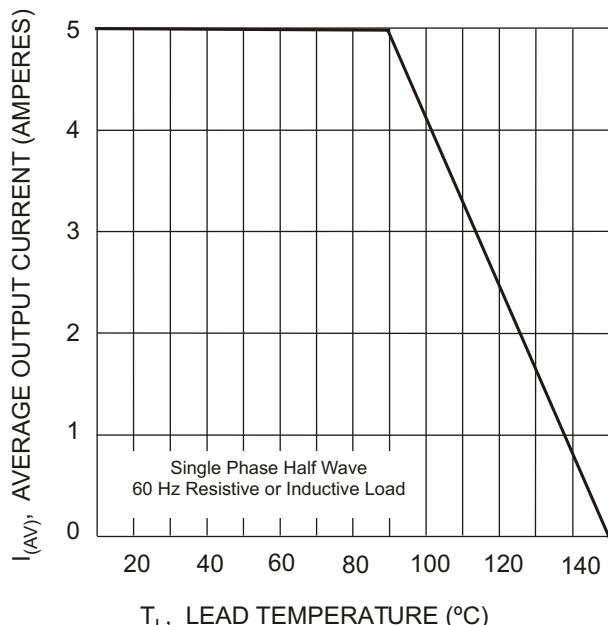
Maximum Ratings and Electrical Characteristics

Rating at 25 C ambient temperature unless otherwise specified.

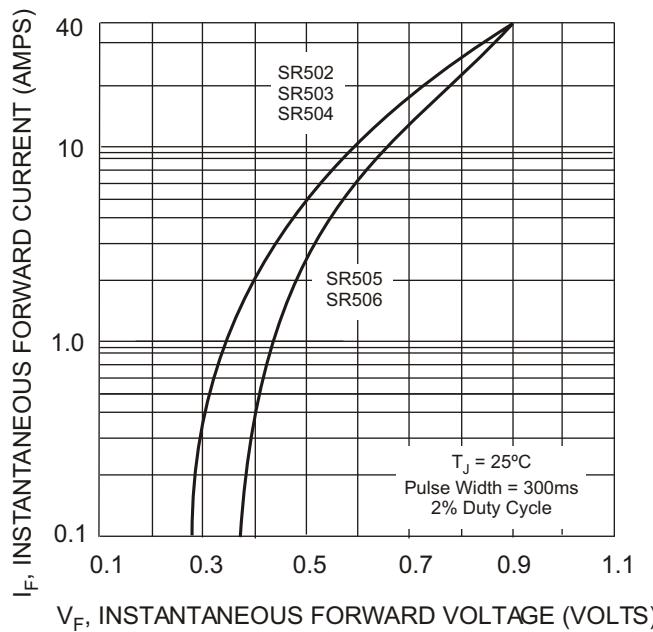
Single phase, half wave, 60Hz, resistive or inductive load.

| Characteristic | Symbol | SR502 | SR503 | SR504 | SR505 | SR506 | Unit |
|---|----------------|-------|-------|-------------|-------|-------|------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | V |
| Maximum RMS Voltage | V_{RSM} | 14 | 21 | 28 | 35 | 42 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | V |
| Maximum Average Forward Rectified Current 9.5mm lead length | $I_{(AV)}$ | | | 5.0 | | | A |
| Peak Forward Surge current 8.3ms half sine-wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | | | 150 | | | A |
| Maximum Forward Voltage @ 5.0A | V_F | | 0.55 | | 0.67 | | V |
| Maximum Average Reverse Current at $T_A = 25 C$ Peak Reverse Voltage $T_A = 100 C$ | I_R | | | 1.0 50 | | | mA |
| Typical Thermal Resistance (Note 1) | R_{JL} | | 15 | | 10 | | K/W |
| Typical Junction Capacitance (Note 2) | C_J | | 550 | | 400 | | pF |
| Storage and Operating Temperature Range | T_J, T_{STG} | | | -65 to +150 | | | C |

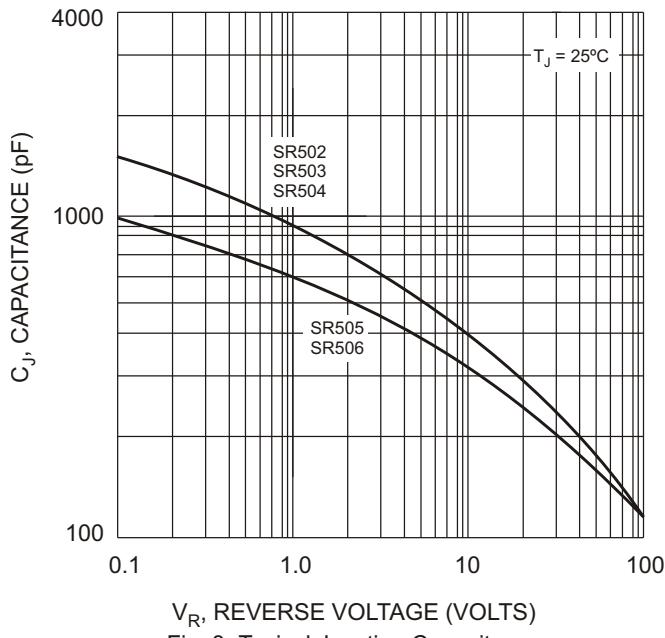
Notes: 1. Thermal Resistance from Junction to Lead Vertical PC Board Mounting, 9.5mm Lead Length.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V.



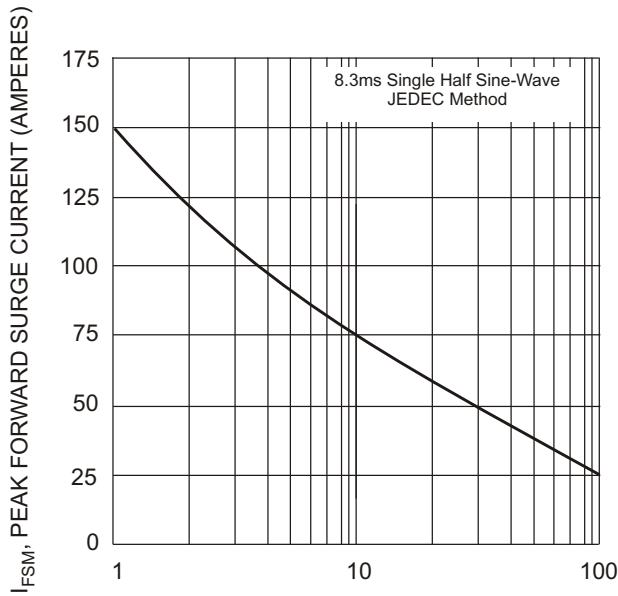
T_L , LEAD TEMPERATURE (°C)
Fig. 1 Typical Forward Characteristics



V_F , INSTANTANEOUS FORWARD VOLTAGE (VOLTS)
Fig. 2 Typical Forward Characteristics



V_R , REVERSE VOLTAGE (VOLTS)
Fig. 3 Typical Junction Capacitance



I_{FSM} , PEAK FORWARD SURGE CURRENT (AMPERES)
Fig. 4 Maximum Non-Repetitive Peak Forward Surge Current

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.