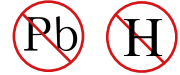




SCHOTTKY BARRIER RECTIFIERS

VOLTAGE 45 to 100 Volts CURRENT - 5.0 Ampere



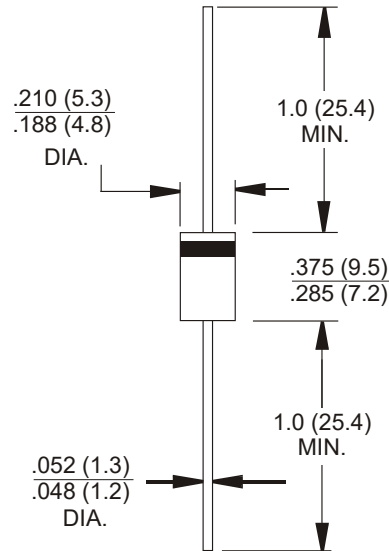
**FEATURES**

- Ultra Low Forward Voltage Drop, High current capability
- Low reverse current
- Low thermal resistance
- Low power loss and high efficiency
- High forward surge capability
- Ultra fast recovery times, high voltage.
- High temperature soldering : 260°C / 10 seconds at terminals

**MECHANICAL DATA**

- Case: DO-201AD full molded plastic package
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Molding Compound Flammability Rating:UL 94V-0 Low power loss and high efficiency
- High temperature soldering guaranteed: 260°C 10second
- Plastic package has Underwriters Laboratory
- Exceeds environmental standards of MIL-S-19500/228
- Pb free product at available : 99% Sn above meet RoHS environment

DO-201AD Unit:inch(mm)



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| PARAMETER   | SYMBOL          | SB545L      | SB550L | SB560L | SB580L | SB5100L | UNIT         |
|---|-----------------|-------------|--------|--------|--------|---------|--------------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$       | 45          | 50     | 60     | 80     | 100     | V            |
| Maximum RMS Voltage   | $V_{RMS}$       | 32          | 35     | 42     | 56     | 70      | V            |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 45          | 50     | 60     | 80     | 100     | V            |
| Maximum Average Forward Rectified Current 0.375" Lead Length                                      | $I_{F(AV)}$     | 5           |        |        |        |         | A            |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | $I_{FSM}$       | 120         | 150    |        |        | A       |              |
| $I^2t$ Rating for Fusing ( $t < 8.3ms$ )  | $I^2t$          | 59.778      | 93.403 |        |        | $A^2S$  |              |
| Maximum Instantaneous Forward Voltage at 5A   | $V_F$           | 0.49        | 0.61   | 0.71   |        | V       |              |
| Maximum DC Reverse Current at $T_A=25^\circ C$<br>at Rated DC Blocking Voltage $T_A=100^\circ C$  | $I_R$           | 0.5<br>50   |        |        |        |         | mA           |
| Typical Junction Capacitance (Note 1)   | $C_J$           | 500         |        |        | 380    |         | pF           |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$ | 15          |        |        | 10     |         | $^\circ C/W$ |
| Operating Junction Temperature Range  | $T_J$           | -55 to +150 |        |        |        |         | $^\circ C$   |
| Storage Temperature Range   | $T_{STG}$       | -55 to +150 |        |        |        |         | $^\circ C$   |

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.  
2. Thermal Resistance Junction to Lead Vertical PCB Mounting 0.375" (9.5mm) Lead Lengths.

# DEVICE CHARACTERISTICS

## SB545L THRU SB5100L

### Typical Performance Characteristics

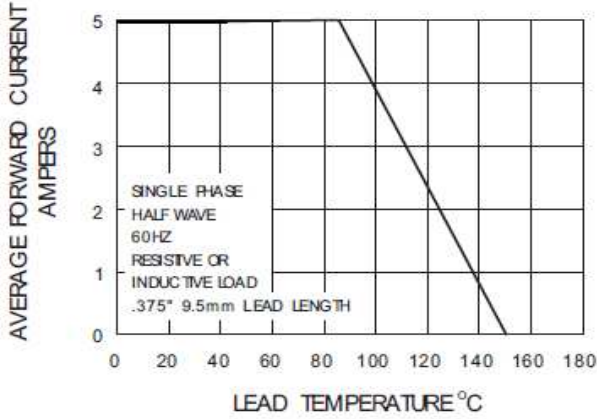


Fig1. Forward Current Derating Curve

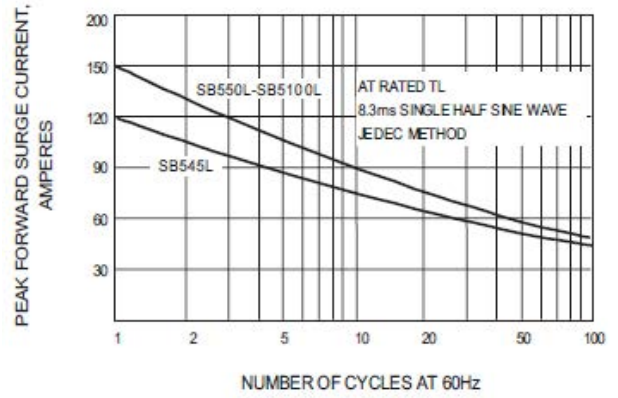


Fig2. Maximum Non-repetitive Peak Forward surge Current

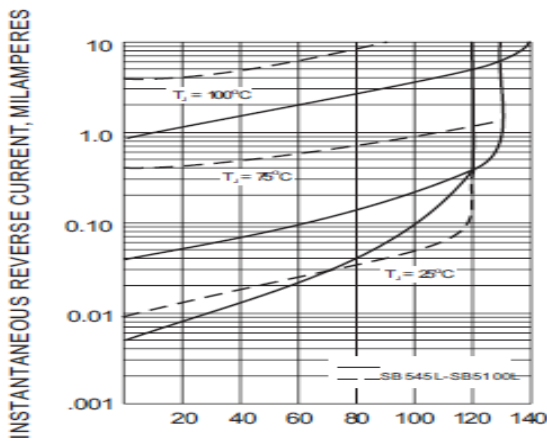


Fig3. Typical Reverse Characteristic

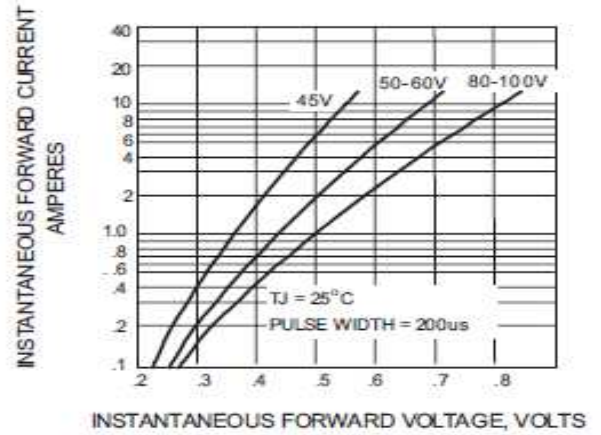


Fig4. Typical Instantaneous Forward Characteristics

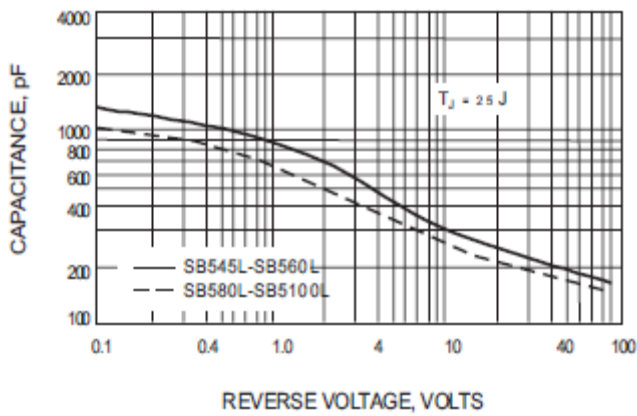


Fig5. Typical Junction Capacitance