

**VOLTAGE RANGE: 20 - 100V**

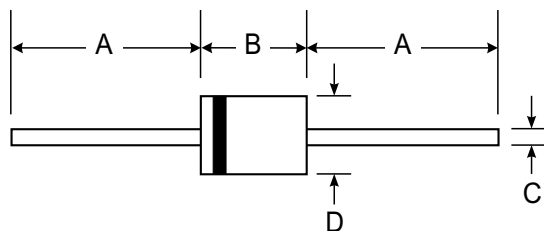
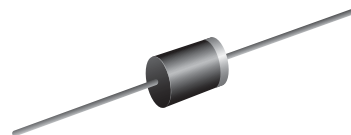
**CURRENT: 3.0 A**

### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications

### Mechanical Data

- Case: DO-201AD, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 1.2 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



| DO-201AD             |       |      |
|----------------------|-------|------|
| Dim                  | Min   | Max  |
| A                    | 25.40 | —    |
| B                    | 7.20  | 9.50 |
| C                    | 1.20  | 1.30 |
| D                    | 4.80  | 5.30 |
| All Dimensions in mm |       |      |

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

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

| Characteristic                                                                                                        | Symbol                                                 | SB320       | SB330 | SB340 | SB350 | SB360 | SB380 | SB3100 | Unit |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-------|-------|-------|-------|-------|--------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 20          | 30    | 40    | 50    | 60    | 80    | 100    | V    |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 14          | 21    | 28    | 35    | 42    | 56    | 70     | V    |
| Average Rectified Output Current @T <sub>L</sub> = 95°C<br>(Note 1)                                                   | I <sub>O</sub>                                         | 3.0         |       |       |       |       |       |        | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | I <sub>FSM</sub>                                       | 80          |       |       |       |       |       |        | A    |
| Forward Voltage @I <sub>F</sub> = 3.0A                                                                                | V <sub>FM</sub>                                        | 0.55        |       |       | 0.75  |       | 0.85  |        | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C                   | I <sub>RM</sub>                                        | 0.5<br>20   |       |       |       |       |       |        | mA   |
| Typical Junction Capacitance (Note 2)                                                                                 | C <sub>j</sub>                                         | 250         |       |       |       |       |       |        | pF   |
| Typical Thermal Resistance (Note 1)                                                                                   | R θ JA                                                 | 20          |       |       |       |       |       |        | °C/W |
| Operating and Storage Temperature Range                                                                               | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +150 |       |       |       |       |       |        | °C   |

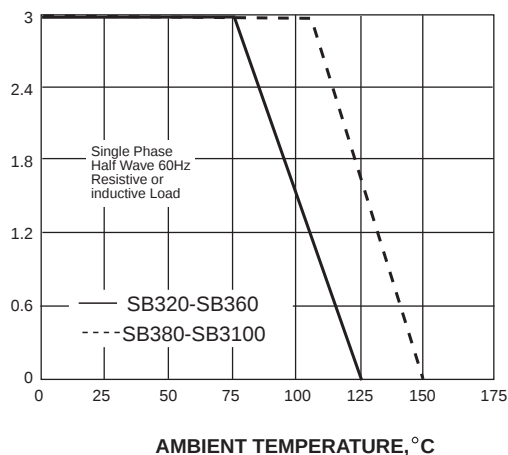
Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.

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

## RATINGS AND CHARACTERISTIC CURVES SB320 THRU SB3100

AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

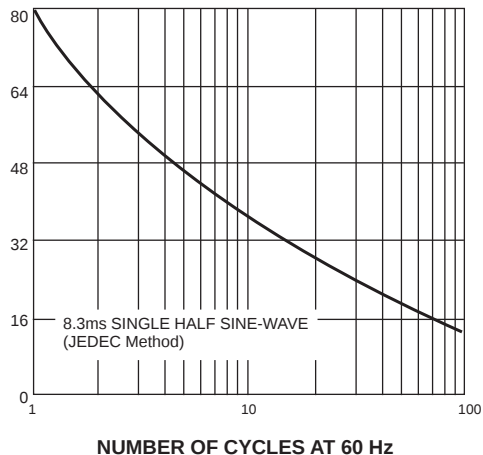
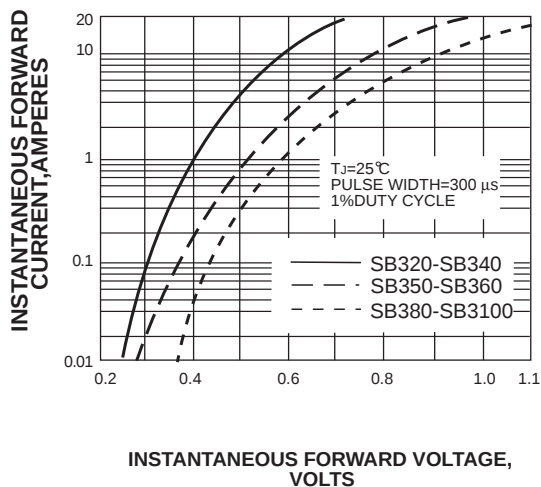


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

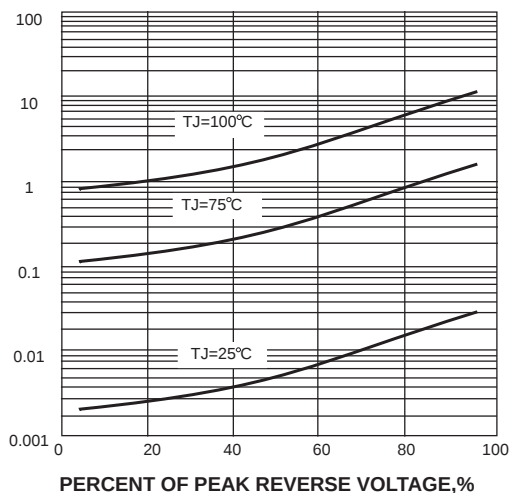
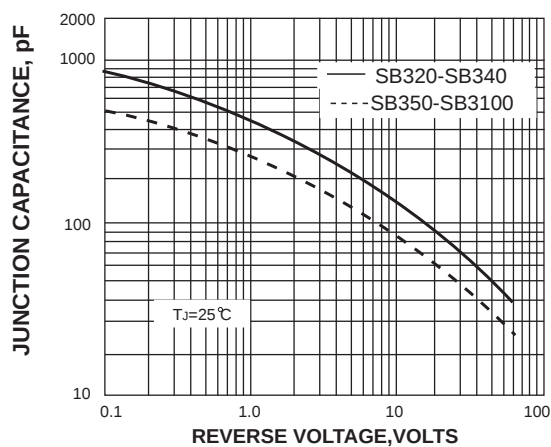


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

