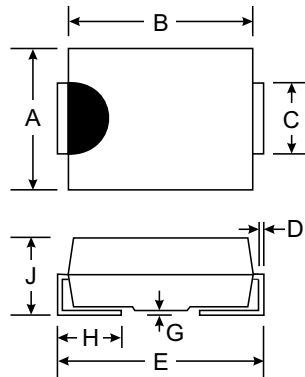


### Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 30A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Application
- High Temperature Soldering: 260°C/10 Second at Terminal
- Plastic Material: UL Flammability Classification Rating 94V-0



| Dim | SMA  |      | SMB  |      |
|-----|------|------|------|------|
|     | Min  | Max  | Min  | Max  |
| A   | 2.29 | 2.92 | 3.30 | 3.94 |
| B   | 4.00 | 4.60 | 4.06 | 4.57 |
| C   | 1.27 | 1.63 | 1.96 | 2.21 |
| D   | 0.15 | 0.31 | 0.15 | 0.31 |
| E   | 4.80 | 5.59 | 5.00 | 5.59 |
| G   | 0.10 | 0.20 | 0.10 | 0.20 |
| H   | 0.76 | 1.52 | 0.76 | 1.52 |
| J   | 2.01 | 2.62 | 2.00 | 2.62 |

**All Dimensions in mm**

No Suffix Designates SMA Package  
 "B" Suffix Designates SMB Package

### Mechanical Data

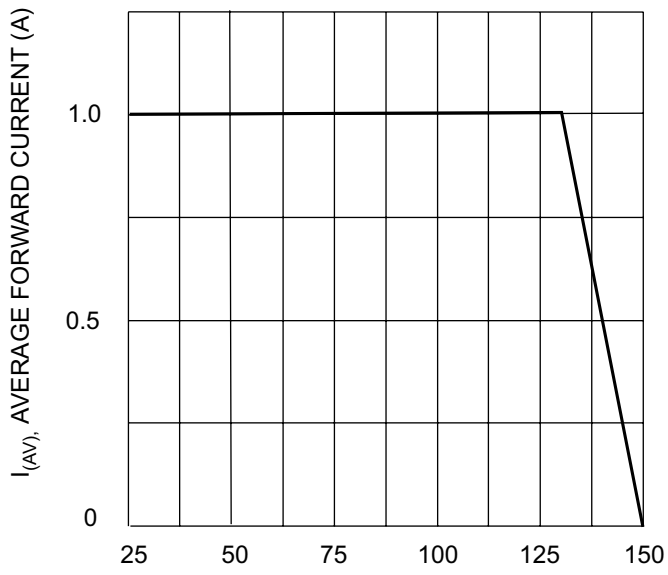
- Case: SMA / SMB, Molded Plastic
- Terminals: Solder Plated Terminal - Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band or Cathode Notch
- SMA Weight: 0.064 grams (approx.)
- SMB Weight: 0.093 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

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

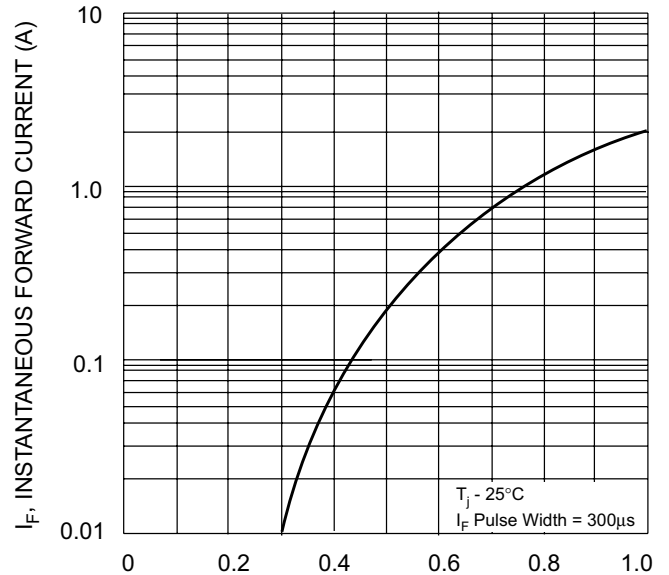
Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| Characteristic  | Symbol   | B170/B       | B180/B | B190/B | B1100/B | 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> | 70           | 80     | 90     | 100     | V    |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>                                    | 49           | 56     | 63     | 70      | V    |
| Average Rectified Output Current @ T <sub>T</sub> = 125°C   | I <sub>O</sub>   | 1.0          |        |        |         | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 30           |        |        |         | A    |
| Forward Voltage @ I <sub>F</sub> = 1.0A @ T <sub>A</sub> = 25°C<br>@ T <sub>A</sub> = 100°C                     | V <sub>FM</sub>  | 0.79<br>0.69 |        |        |         | V    |
| Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>A</sub> = 25°C<br>@ T <sub>A</sub> = 100°C           | I <sub>RM</sub>  | 0.5<br>5.0   |        |        |         | mA   |
| Typical Junction Capacitance (Note 2)   | C <sub>j</sub>   | 80           |        |        |         | pF   |
| Typical Thermal Resistance Junction to Terminal (Note 1)  | R <sub>θJT</sub>                                       | 25           |        |        |         | K/W  |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +150  |        |        |         | °C   |

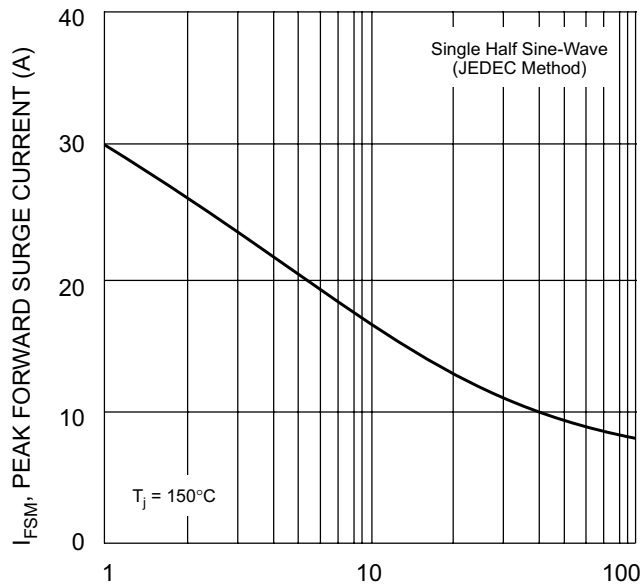
- Notes: 1. Valid provided that terminals are kept at ambient temperature.  
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.



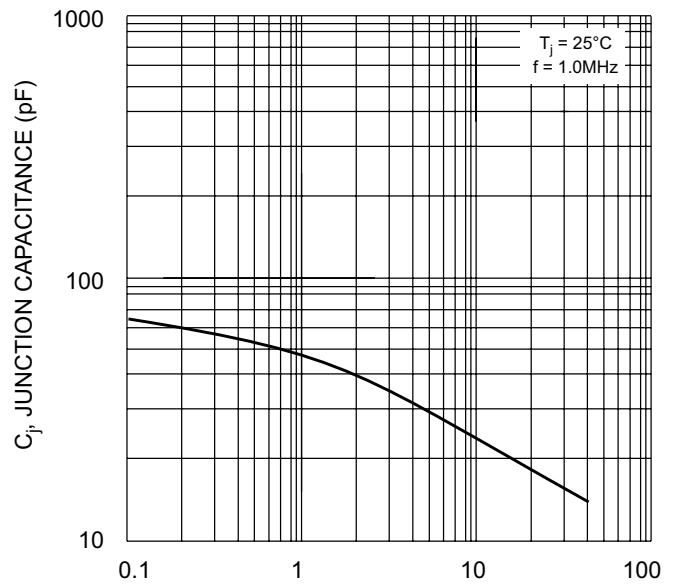
$T_T$ , TERMINAL TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



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



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Fwd Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Junction Capacitance