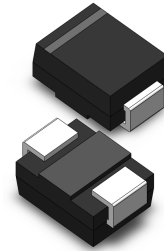


**VOLTAGE RANGE: 50 - 1000V**  
**CURRENT: 2.0 A**

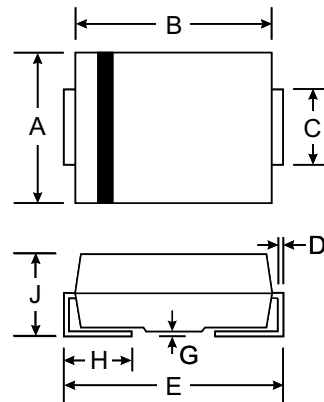
### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-0



### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



| SMB(DO-214AA)        |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 3.30 | 3.94 |
| B                    | 4.06 | 4.70 |
| C                    | 1.91 | 2.21 |
| D                    | 0.15 | 0.31 |
| E                    | 5.00 | 5.59 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| 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              | SMH201B     | SMH202B | SMH203B | SMH204B | SMH205B | SMH206B | SMH207B | Unit |    |
|---|---------------------|-------------|---------|---------|---------|---------|---------|---------|------|----|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>    |             |         |         |         |         |         |         |      |    |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>    | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V    |    |
| DC Blocking Voltage   | V <sub>R</sub>      |             |         |         |         |         |         |         |      |    |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub> | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V    |    |
| Average Rectified Output Current @ T <sub>L</sub> = 55°C  | I <sub>O</sub>      | 2.0         |         |         |         |         |         |         | A    |    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | I <sub>FSM</sub>    | 50          |         |         |         |         |         |         | A    |    |
| Forward Voltage @ I <sub>F</sub> = 2.0A   | V <sub>FM</sub>     | 1.0         |         | 1.4     |         | 1.7     |         |         | 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>     | 10<br>50    |         |         |         |         |         |         | μA   |    |
| Reverse Recovery Time (Note 1)  | t <sub>rr</sub>     | 50          |         |         |         | 75      |         |         |      | nS |
| Typical Junction Capacitance (Note 2)   | C <sub>j</sub>      | 20          |         |         |         |         |         |         | pF   |    |
| Typical Thermal Resistance (Note 3)   | R <sub>θJL</sub>    | 50          |         |         |         |         |         |         | °C/W |    |
| Operating and Storage Temperature Range   | T <sub>J,TSTG</sub> | -50 to +150 |         |         |         |         |         |         | °C   |    |

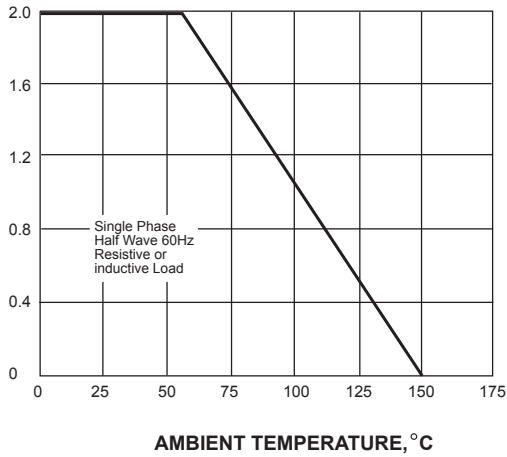
- Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See figure 5.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



## RATINGS AND CHARACTERISTIC CURVES SMH201BTHRU SMH207B

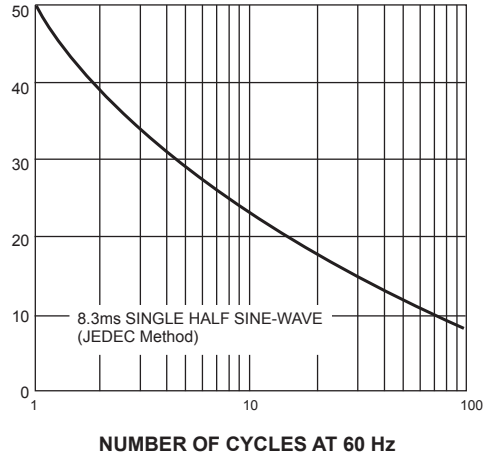
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



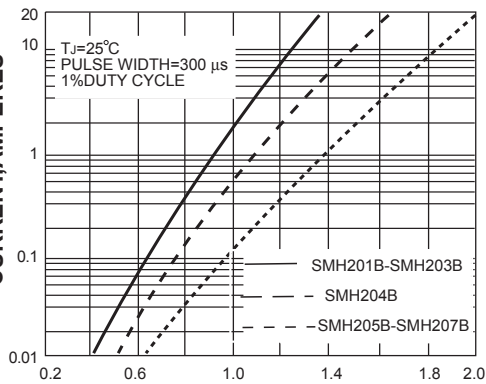
PEAK FORWARD SURGE CURRENT, AMPERES

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



INSTANTANEOUS FORWARD CURRENT, AMPERES

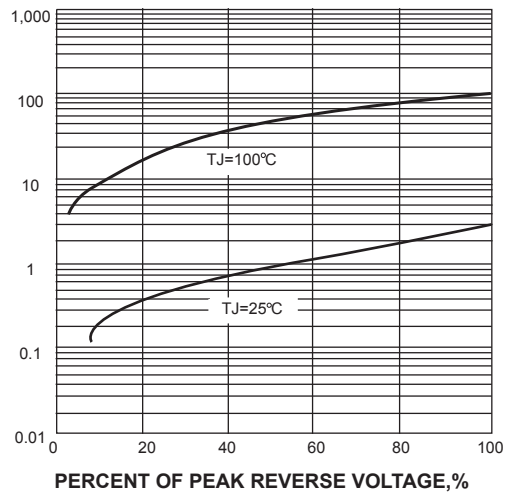
FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

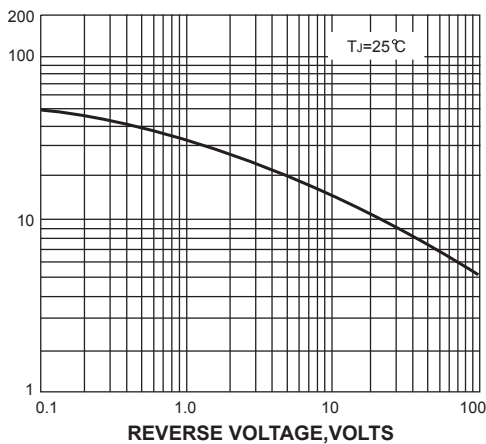
FIG. 4-TYPICAL REVERSE CHARACTERISTICS



PERCENT OF PEAK REVERSE VOLTAGE, %

JUNCTION CAPACITANCE, pF

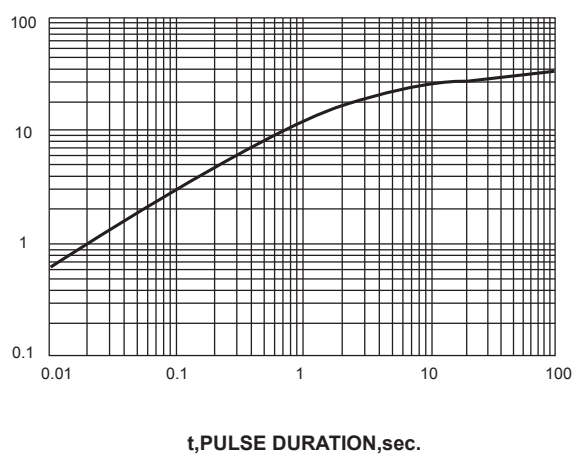
FIG. 5-TYPICAL JUNCTION CAPACITANCE



REVERSE VOLTAGE, VOLTS

TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



t, PULSE DURATION, sec.