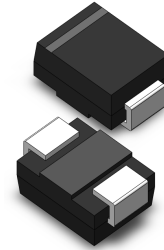


**VOLTAGE RANGE: 50 - 600V**  
**CURRENT: 1.0 A**

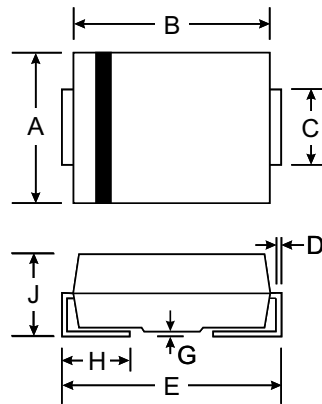
### Features

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



### 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

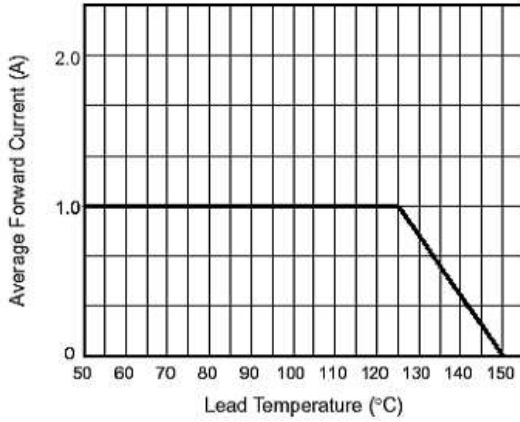
Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic  | Symbol   | MURS 105   | MURS 110 | MURS 115 | MURS 120 | MURS 130    | MURS 140 | MURS 160 | 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> | 50         | 100      | 150      | 200      | 300         | 400      | 600      | V    |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>                                    | 35         | 70       | 105      | 140      | 210         | 280      | 420      | V    |
| Average Rectified Output Current<br><small>T<sub>L</sub> = 150 °C<br/>T<sub>L</sub> = 125 °C</small>                      | I <sub>O</sub>   | 1.0<br>2.0 |          |          |          |             |          |          | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)        | I <sub>FSM</sub>                                       | 40         |          |          |          | 35          |          |          | A    |
| Forward Voltage<br><small>@ I<sub>F</sub> = 1.0A</small>  | V <sub>FM</sub>  | 0.875      |          |          |          | 1.25        |          |          | V    |
| Peak Reverse Current<br>At Rated DC Blocking Voltage<br><small>@ T<sub>A</sub> = 25°C<br/>@ T<sub>A</sub> = 100°C</small> | I <sub>RM</sub>  |            |          |          |          | 10.0<br>150 |          |          | μA   |
| Reverse Recovery Time (Note 1)  | t <sub>rr</sub>  |            |          |          |          | 35          |          |          | nS   |
| Typical Junction Capacitance (Note 2)   | C <sub>j</sub>   |            |          |          |          | 25          |          |          | pF   |
| Typical Thermal Resistance (Note 3)   | R <sub>θJL</sub>                                       |            |          |          |          | 13          |          |          | °C/W |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub>                      |            |          |          |          | -65 to +150 |          |          | °C   |

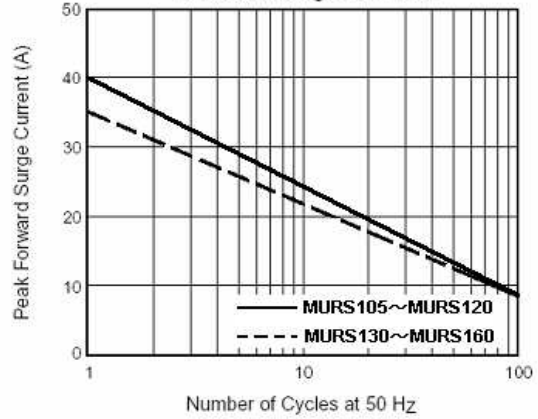
Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See figure 5.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.  
 3. Mounted on P.C. Board with 8.0mm<sup>2</sup> land area.

## RATINGS AND CHARACTERISTIC CURVES MURS105 THRU MURS160

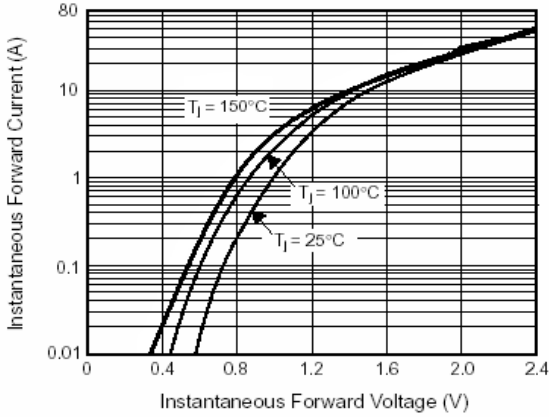
**Fig. 1 — Forward Current Derating Curve**



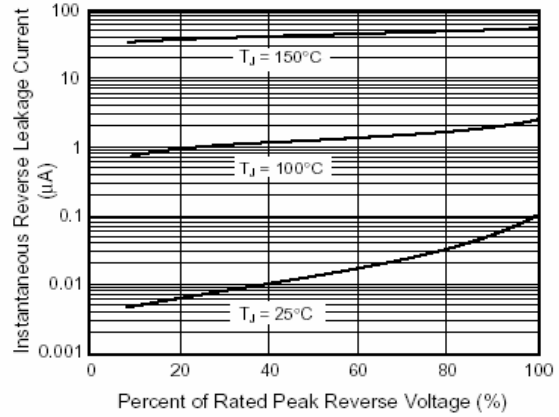
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Reverse Leakage Characteristics**



**Fig. 5 — Typical Junction Capacitance**

