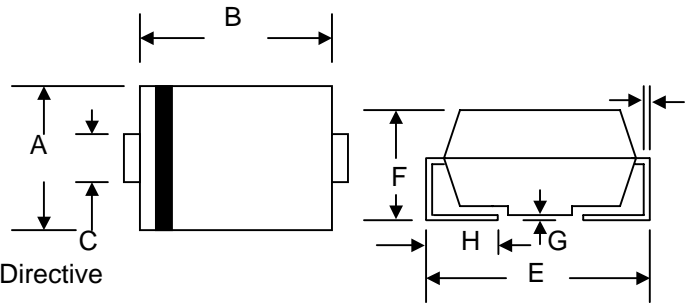


**Features**

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 30A Peak
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- Green Products in Compliance with the RoHS Directive



**Mechanical Data**

- Case: Low Profile 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   | Min     | Max   |
| A            | 3.30  | 3.94  | 0.130   | 0.155 |
| B            | 4.06  | 4.70  | 0.160   | 0.185 |
| C            | 1.91  | 2.11  | 0.075   | 0.083 |
| D            | 0.152 | 0.305 | 0.006   | 0.012 |
| E            | 5.08  | 5.59  | 0.2     | 0.220 |
| F            | 2.13  | 2.44  | 0.084   | 0.096 |
| G            | 0.051 | 0.203 | 0.002   | 0.008 |
| H            | 0.76  | 1.27  | 0.030   | 0.05  |
|              | In mm |       | In inch |       |

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

| Characteristic   | Symbol              | MBRS120-G   | MBRS130-G | MBRS140-G | Unit |
|--|---------------------|-------------|-----------|-----------|------|
| Peak Repetitive Reverse Voltage  | V <sub>RRM</sub>    |             |           |           |      |
| Working Peak Reverse Voltage   | V <sub>VRWM</sub>   | 20          | 30        | 40        | V    |
| DC Blocking Voltage  | V <sub>R</sub>      |             |           |           |      |
| RMS Reverse Voltage  | V <sub>R(RMS)</sub> | 14          | 21        | 28        | V    |
| Average Rectified Output Current @T <sub>L</sub> = 75°C  | I <sub>o</sub>      | 1.0         |           |           | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>    | 30          |           |           | A    |
| Forward Voltage @I <sub>F</sub> = 1.0A   | V <sub>FM</sub>     | 0.55        |           |           | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C  | I <sub>RM</sub>     | 0.5         |           |           | mA   |
| At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C   |                     | 20          |           |           |      |
| Typical Thermal Resistance Junction to Ambient (Note 1)  | R <sub>θJA</sub>    | 95          |           |           | K/W  |
| Operating Temperature Range  | T <sub>j</sub>      | -65 to +125 |           |           | °C   |
| Storage Temperature Range  | T <sub>STG</sub>    | -65 to +150 |           |           | °C   |

Note: 1. Mounted on P.C. Board with 5.0mm<sup>2</sup> copper pad areas

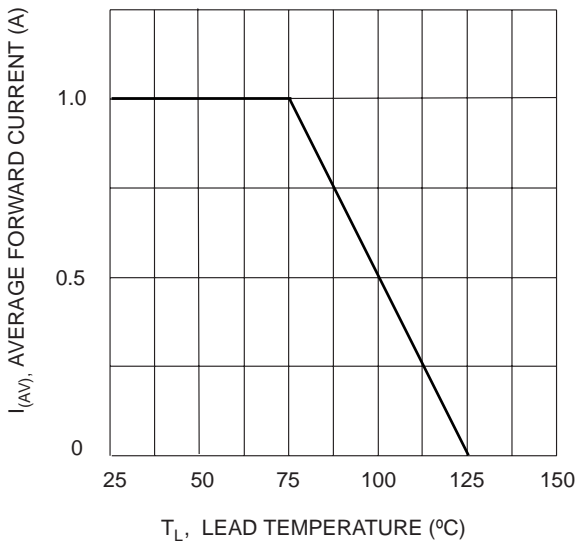


Fig. 1 Forward Current Derating Curve

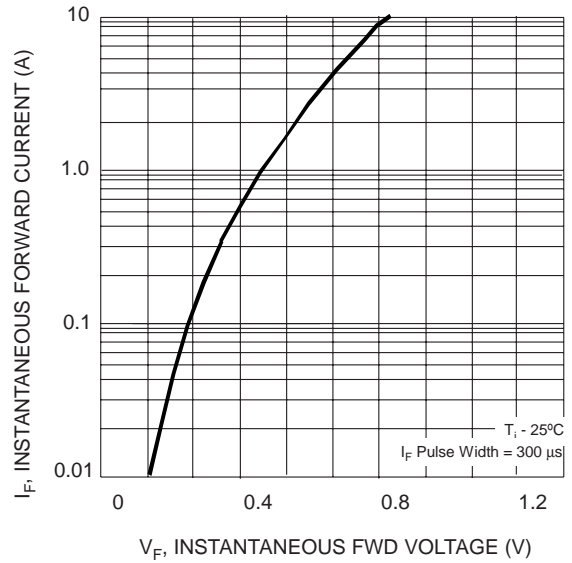


Fig. 2 Typ. Forward Characteristics

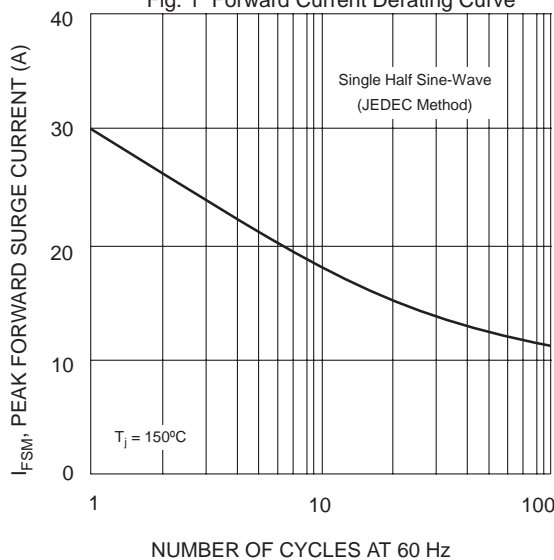


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

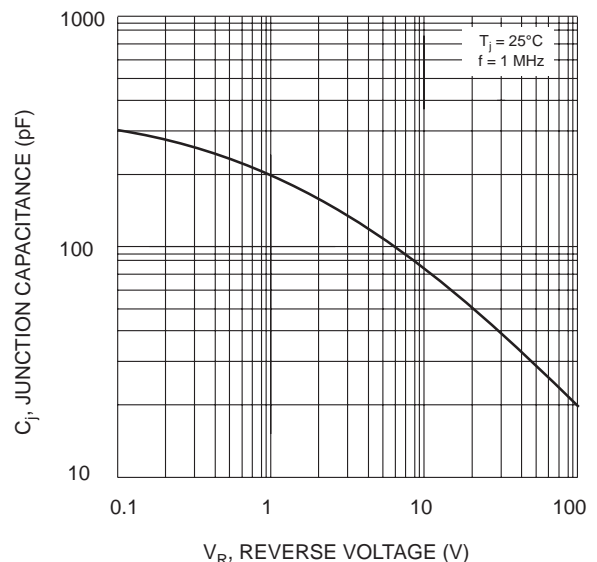


Fig. 4 Typical Junction Capacitance

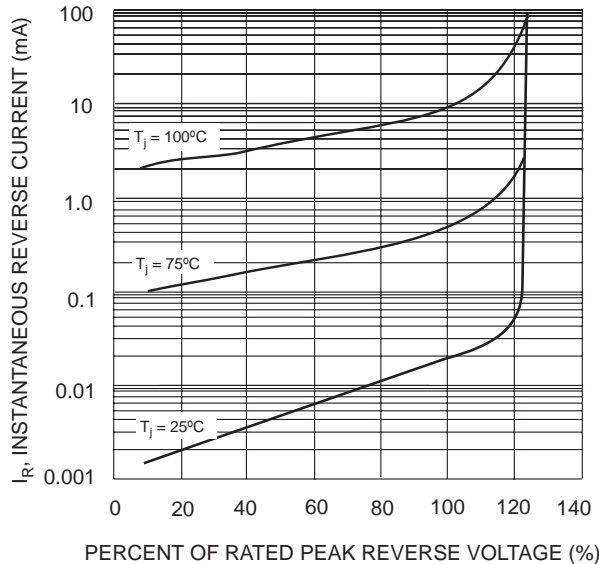


Fig. 5 Typical Reverse Characteristics

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