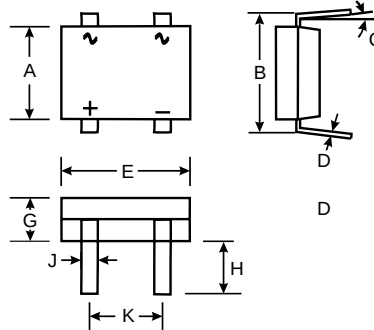


#### Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-O



| MB-M                 |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 3.65 | 4.10 |
| B                    | 4.95 | 5.21 |
| C                    | 0    | 10°  |
| D                    | 0.15 | 0.41 |
| E                    | 4.50 | 4.95 |
| G                    | 2.30 | 2.70 |
| H                    | 2.54 |      |
| J                    | 0.43 | 0.74 |
| K                    | 2.41 | 2.67 |
| All Dimensions in mm |      |      |

#### Mechanical Data

- Case: MB-S, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.22 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**

#### 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                                                 | B05M        | B1M | B2M | B4M | B6M | B8M | B10M | Unit             |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-----|-----|-----|-----|-----|------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                               | V <sub>RRM</sub><br>V <sub>VRM</sub><br>V <sub>R</sub> | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | V                |
| RMS Reverse Voltage                                                                                                                  | V <sub>R(RMS)</sub>                                    | 35          | 70  | 140 | 280 | 420 | 560 | 700  | V                |
| Average Rectified Output Current (Note 1) @T <sub>A</sub> = 40°C<br>Average Rectified Output Current (Note 2) @T <sub>A</sub> = 40°C | I <sub>O</sub>                                         | 0.5<br>0.8  |     |     |     |     |     |      | 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>                                       | 30          |     |     |     |     |     |      | A                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                                       | I <sup>2</sup> t                                       | 5.0         |     |     |     |     |     |      | A <sup>2</sup> s |
| Forward Voltage per element @I <sub>F</sub> = 0.5A                                                                                   | V <sub>FM</sub>                                        | 1.0         |     |     |     |     |     |      | V                |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                                  | I <sub>RM</sub>                                        | 5.0<br>500  |     |     |     |     |     |      | μA               |
| Typical Junction Capacitance per leg (Note 3)                                                                                        | C <sub>j</sub>                                         | 13          |     |     |     |     |     |      | pF               |
| Typical Thermal Resistance per leg (Note 1)                                                                                          | R <sub>θJA</sub><br>R <sub>θJL</sub>                   | 70<br>20    |     |     |     |     |     |      | °C/W             |
| Operating and Storage Temperature Range                                                                                              | T <sub>j</sub> , T <sub>STG</sub>                      | -55 to +150 |     |     |     |     |     |      | °C               |

Note: 1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.  
2. Mounted on aluminum substrate PC board with 1.3mm<sup>2</sup> solder pad.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

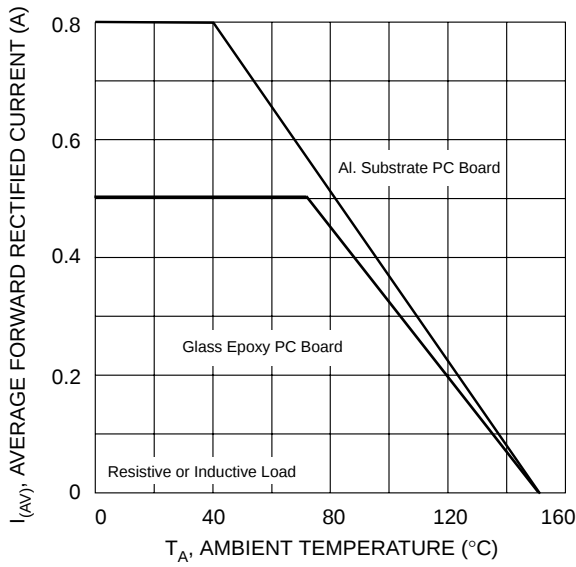


Fig. 1 Output Current Derating Curve

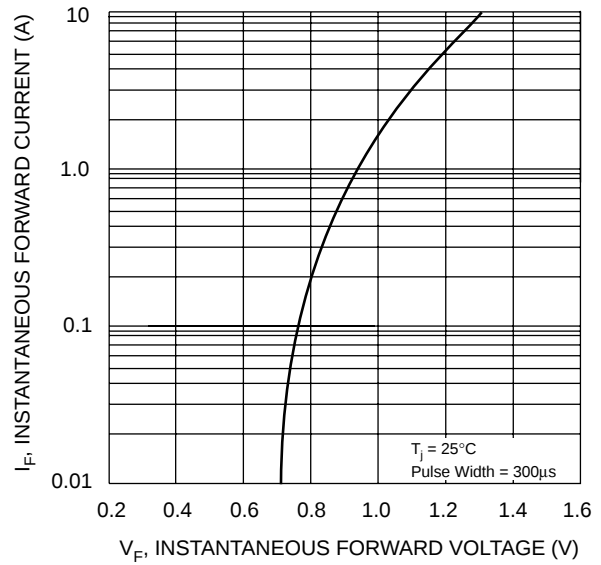


Fig. 2 Typical Forward Characteristics (per leg)

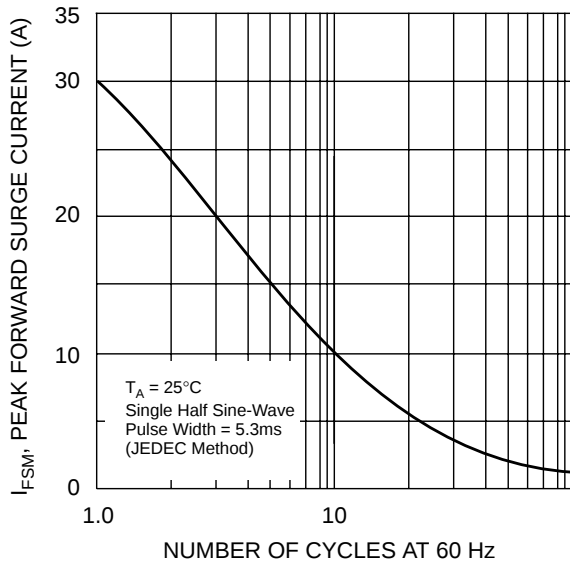


Fig. 3 Maximum Peak Forward Surge Current (per leg)

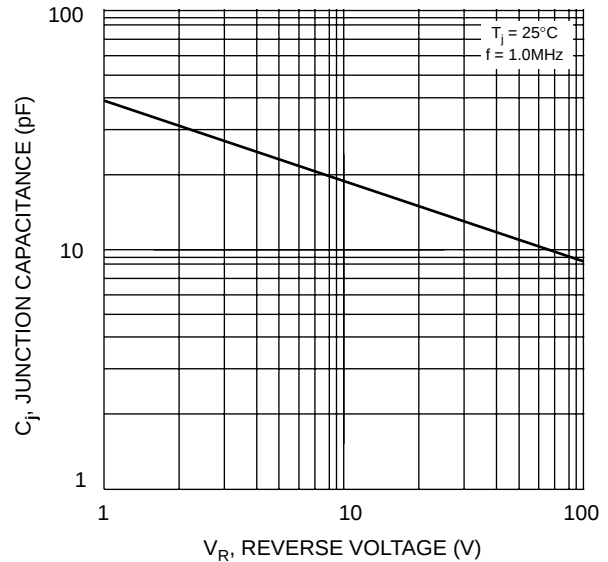


Fig. 4 Typical Junction Capacitance

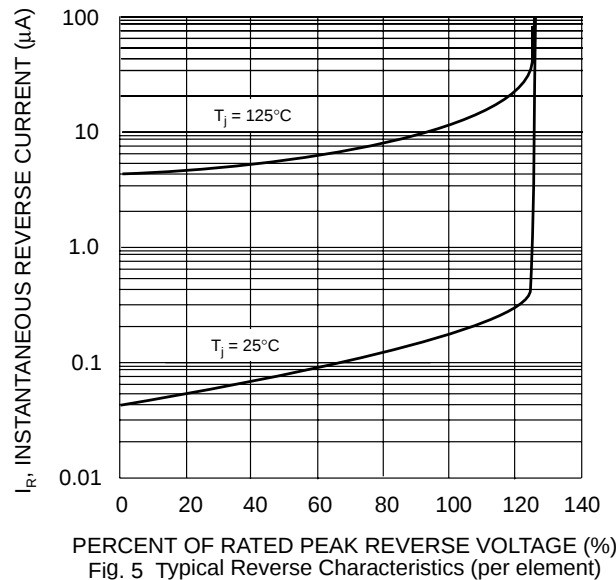


Fig. 5 Typical Reverse Characteristics (per element)