

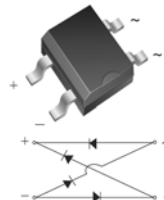


Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifiers

Reverse Voltage 200 to 1000 Volts Forward Current 0.8 Ampere

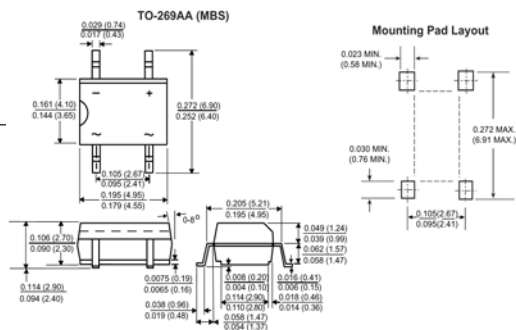
### Features

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated chip junctions
- ◆ High surge overload rating: 35A peak
- ◆ Saves space on printed circuit boards
- ◆ High temperature soldering guaranteed: 260°C/10 seconds.



### Mechanical Data

- ◆ Case: Molded plastic body over passivated junctions
- ◆ Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- ◆ Mounting Position: Any
- ◆ Weight: 0.078 oz., 0.22 g



Package outline dimensions in inches (millimeters)

### Maximum Ratings and Electrical Characteristics

(T<sub>A</sub>=25°C unless otherwise noted)

| Parameter                                                                                                             | Symbols                                                  | MB2S                                                        | MB4S | MB6S | MB8S | MB10S | Units |
|-----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------------------|------|------|------|-------|-------|
| Maximum repetitive peak reverse voltage                                                                               | V <sub>RRM</sub>                                         | 200                                                         | 400  | 600  | 800  | 1000  | Volts |
| Maximum RMS voltage                                                                                                   | V <sub>RMS</sub>                                         | 140                                                         | 280  | 420  | 560  | 700   | Volts |
| Maximum DC blocking voltage                                                                                           | V <sub>DC</sub>                                          | 200                                                         | 400  | 600  | 800  | 1000  | Volts |
| Maximum average forward output rectified current<br>(see Fig.1)<br>on glass-epoxy P.C.B.<br>on aluminum substrate     | I <sub>F(AV)</sub>                                       | 0.5 <sup>(1)</sup><br>0.8 <sup>(2)</sup>                    |      |      |      |       | Amp   |
| Peak forward surge current 8.3 ms single half sine-wave<br>superimposed on rated load (JEDEC Method)                  | I <sub>FSM</sub>                                         | 35.0                                                        |      |      |      |       | Amps  |
| Rating for fusing (t < 8.3ms)                                                                                         | Pt                                                       | 5.0                                                         |      |      |      |       | A²sec |
| Maximum instantaneous forward voltage drop per leg at 0.4A                                                            | V <sub>F</sub>                                           | 1.0                                                         |      |      |      |       | Volt  |
| Maximum DC reverse current at<br>rated DC blocking voltage per leg<br>T <sub>A</sub> = 25°C<br>T <sub>A</sub> = 125°C | I <sub>R</sub>                                           | 5.0<br>100                                                  |      |      |      |       | uA    |
| Typical thermal resistance per leg                                                                                    | R <sub>θJA</sub><br>R <sub>θJA</sub><br>R <sub>θJL</sub> | 85 <sup>(1)</sup><br>70 <sup>(2)</sup><br>20 <sup>(1)</sup> |      |      |      |       | °C/W  |
| Typical junction capacitance per leg at 4.0V, 1.0MHz                                                                  | C <sub>J</sub>                                           | 13                                                          |      |      |      |       | pF    |
| Operating junction and storage temperature range                                                                      | T <sub>J</sub> , T <sub>STG</sub>                        | -55 to +150                                                 |      |      |      |       | °C    |

- Notes**
1. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
  2. On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

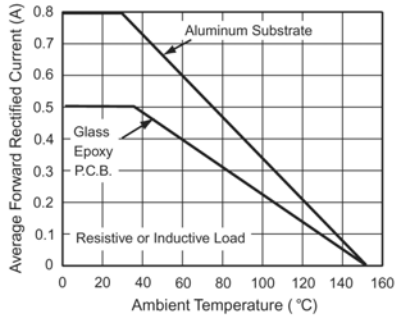


Figure 1. Derating Curve for Output Rectified Current

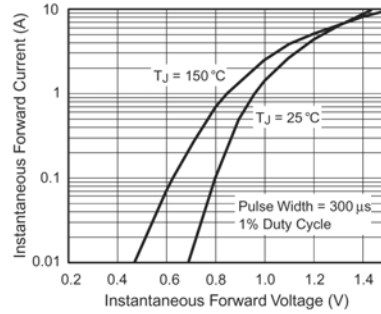


Figure 3. Typical Forward Voltage Characteristics Per Leg

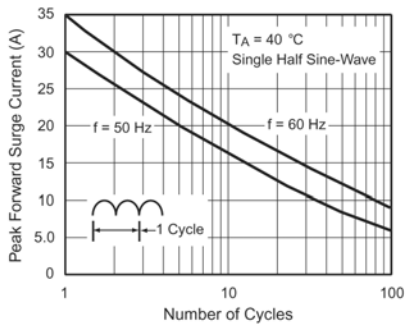


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

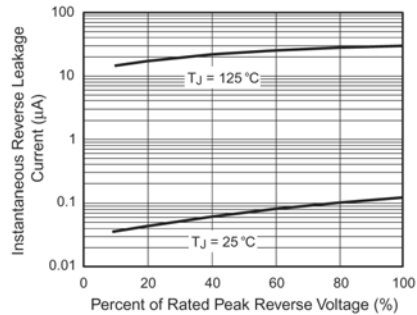


Figure 4. Typical Reverse Leakage Characteristics Per Leg

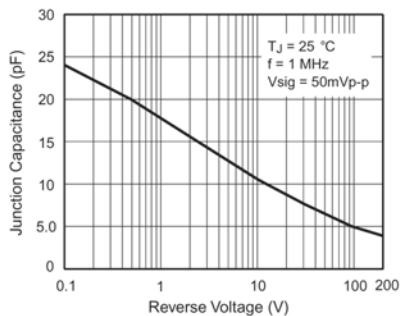


Figure 5. Typical Junction Capacitance Per Leg