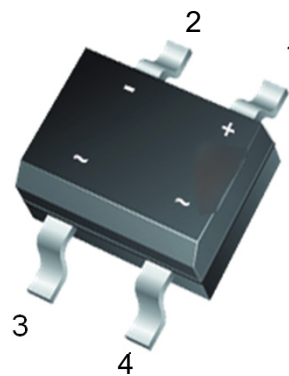
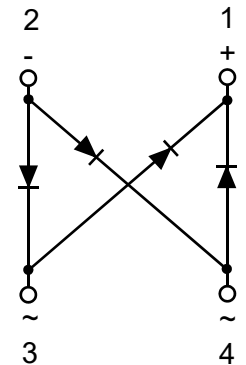


Surface Mount Glass Passivated Bridge Rectifier

Feature

- Glass Passivated Die Construction
- Low Forward Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application


Top View

Circuit Diagram

Maximum Ratings and Electrical characteristics

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

| Parameter | Symbol | MB1S | MB2S | MB4S | MB6S | MB8S | MB10S | Units |
|--|------------------------------------|---|------|------|------|------|-------|---------------------------|
| Peak repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V_{RMS} | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current ¹⁾ @ $T_A=40^\circ\text{C}$ Average Rectified Output Current ²⁾ @ $T_A=40^\circ\text{C}$ | I_O | 0.5 0.8 | | | | | | A |
| Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load(JEDEC Method) | I_{FSM} | 35 | | | | | | A |
| I^2t Rating for Fusing($t<8.3\text{ms}$) | I^2t | 3.7 | | | | | | A^2s |
| Forward Voltage per element @ $I_F=0.4\text{A}$ | V_{FM} | 1.0 | | | | | | V |
| Peak Reverse Current at Rated DC Blocking Voltage | I_{RM} | $T_a = 25^\circ\text{C}$: 5.0 $T_a = 125^\circ\text{C}$: 100 | | | | | | μA |
| Typical Junction Capacitance ³⁾ | C_J | 13 | | | | | | pF |
| Typical Thermal Resistance ¹⁾ | $R_{\theta JA}$ $R_{\theta JL}$ | 85 20 | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55~+150 | | | | | | $^\circ\text{C}$ |

Notes:

1. Mounted on glass epoxy PC board with 1.3mm² solder pad.
2. Mounted on aluminum substrate PC board with 1.3mm² solder pad.
3. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C

Typical Characteristics

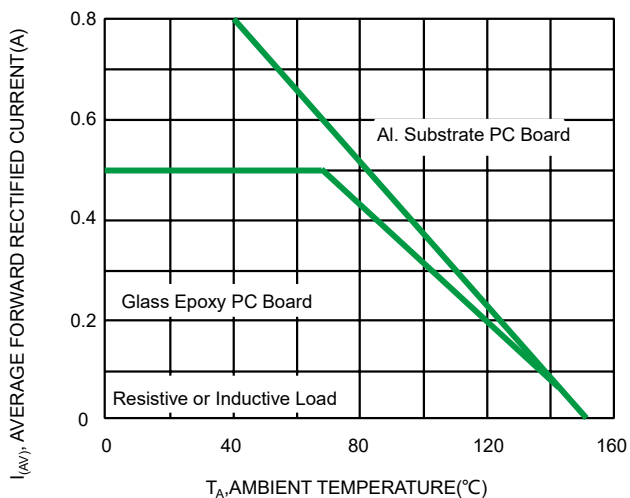


Fig 1. Output Current Derating Curve

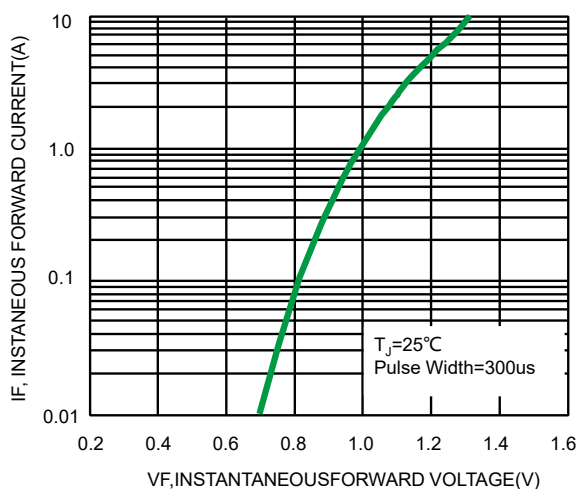


Fig 2. Typical Forward Characteristics

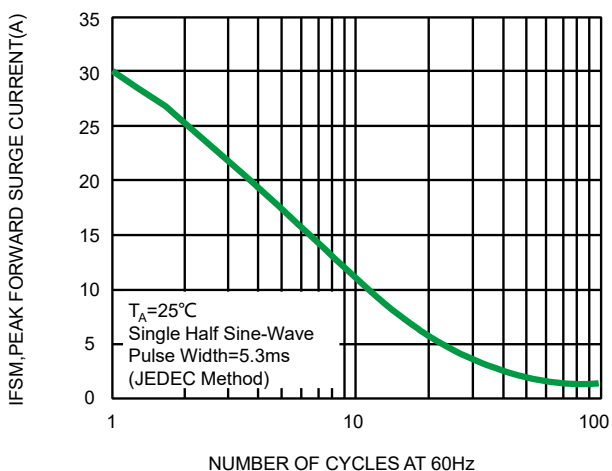


Fig 3. Maximum Peak Forward Surge Current

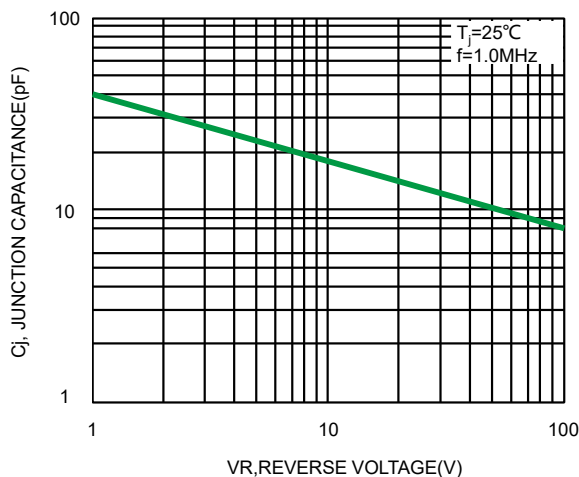


Fig 4. Typical Junction Capacitance

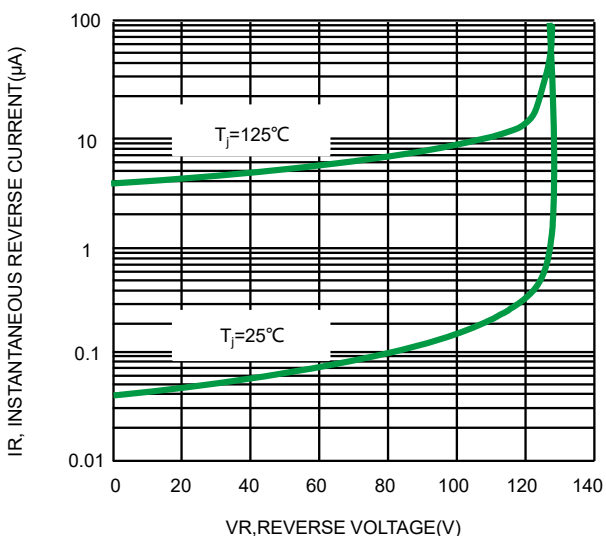
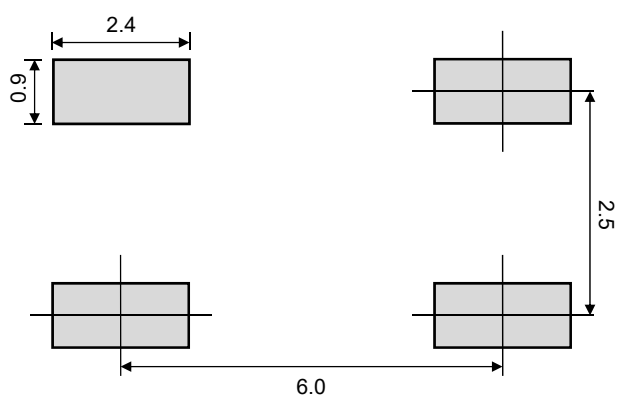
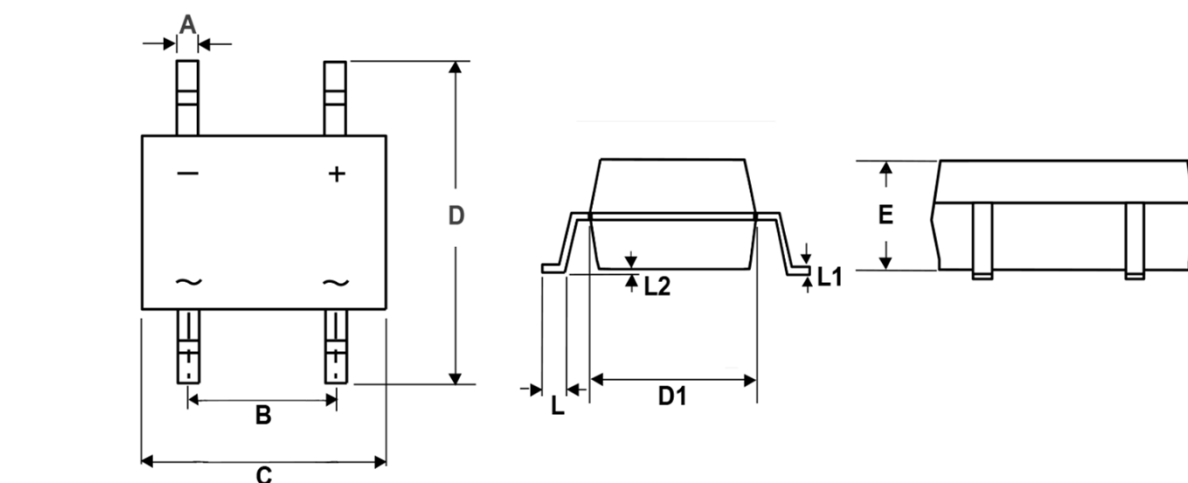


Fig 5. Typical Reverse Characteristics

Product dimension (MBS)



Suggested PCB Layout


Unit:mm

| Dim | Millimeters | | Inches | |
|-----|-------------|------|--------|-------|
| | Min | Max | Min | Max |
| A | 0.50 | 0.80 | 0.020 | 0.031 |
| B | 2.30 | 2.74 | 0.091 | 0.108 |
| C | 4.50 | 4.95 | 0.177 | 0.195 |
| D | 6.40 | 7.00 | 0.252 | 0.276 |
| D1 | 3.60 | 4.10 | 0.142 | 0.161 |
| E | 2.30 | 2.70 | 0.091 | 0.106 |
| L | 0.50 | 1.10 | 0.020 | 0.043 |
| L1 | 0.15 | 0.35 | 0.006 | 0.014 |
| L2 | 0.10 | 0.20 | 0.004 | 0.008 |

Ordering information

| Device | Package | Shipping |
|-------------|---------------|--------------------|
| MB1S ~MB10S | MBS (Pb-Free) | 3000 / Tape & Reel |


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