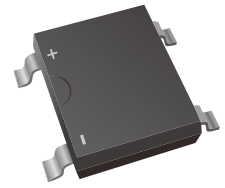


1A Surface Mount Glass Passivated Bridge Rectifier

Features

- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 1 A
- High Surge Current Capability
- Designed for Surface Mount Application



Mechanical Data

- Case: MBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg 0.0026oz

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

| Parameter | Symbols | MB1F | MB2F | MB4F | MB6F | MB8F | MB10F | Units |
|---|------------------------------------|------------|------|------|------|------|-------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Average Rectified Output Current at $T_c = 125\text{ }^\circ\text{C}$ | I_O | 1.0 | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 35 | | | | | | A |
| Maximum Forward Voltage at 1.0 A | V_F | 1.1 | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @ $T_A=25\text{ }^\circ\text{C}$ @ $T_A=125\text{ }^\circ\text{C}$ | I_R | 5 40 | | | | | | μA |
| Typical Junction Capacitance (Note1) | C_j | 13 | | | | | | pF |
| Typical Thermal Resistance (Note2) | $R_{\theta JA}$ $R_{\theta JC}$ | 80 25 | | | | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | | | | | | $^\circ\text{C}$ |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

Ratings and characteristics Curves

Fig.1 Average Rectified Output Current Derating Curve

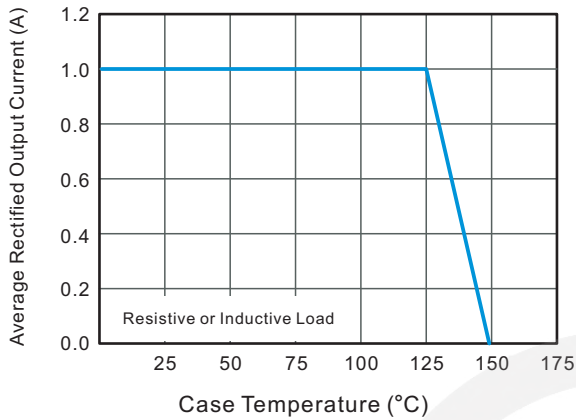


Fig.2 Typical Reverse Characteristics

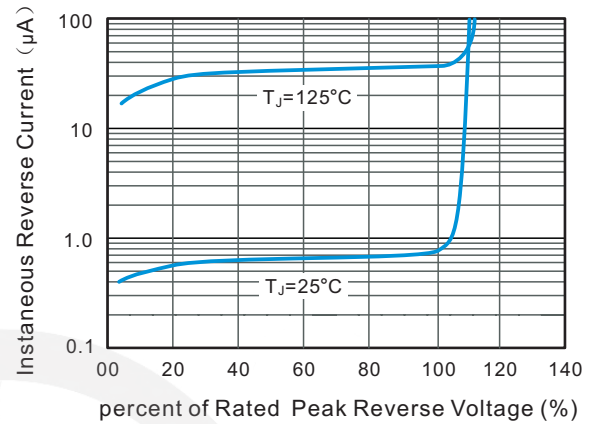


Fig.3 Typical Instantaneous Forward Characteristics

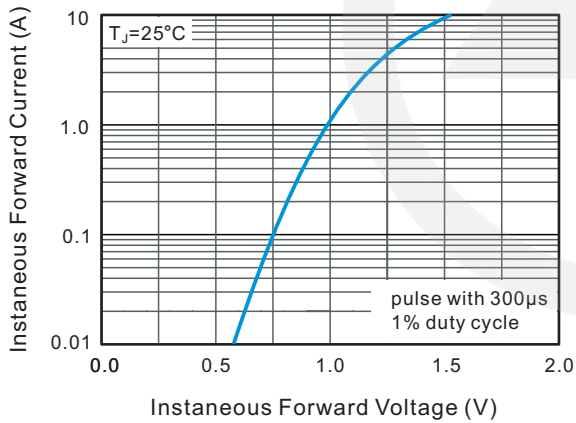


Fig.4 Typical Junction Capacitance

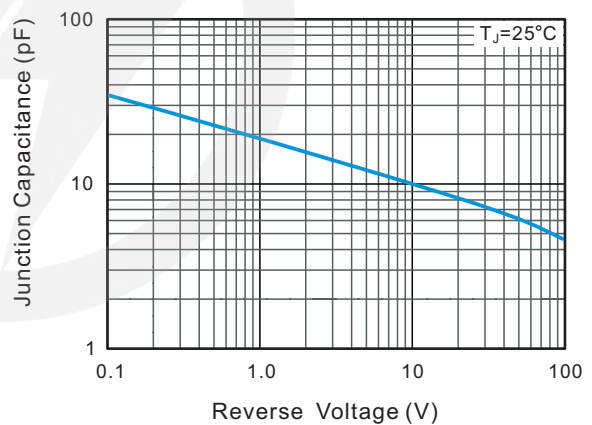
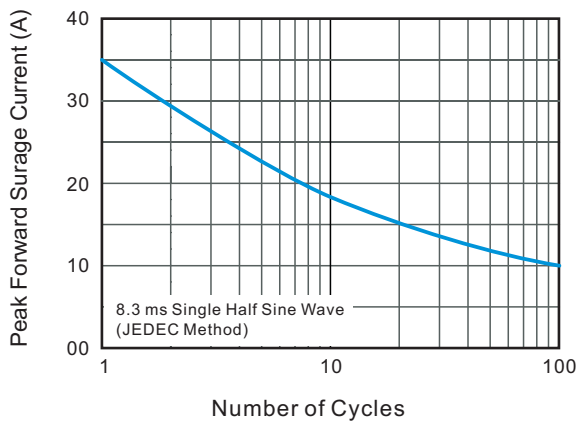
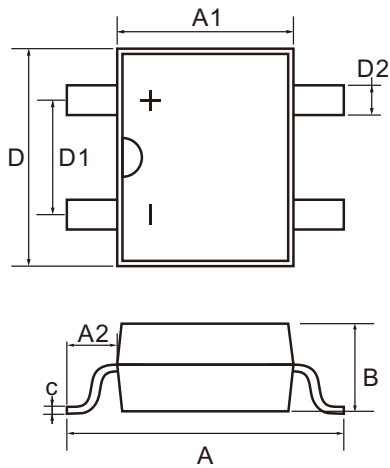


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



MBF Package Outline

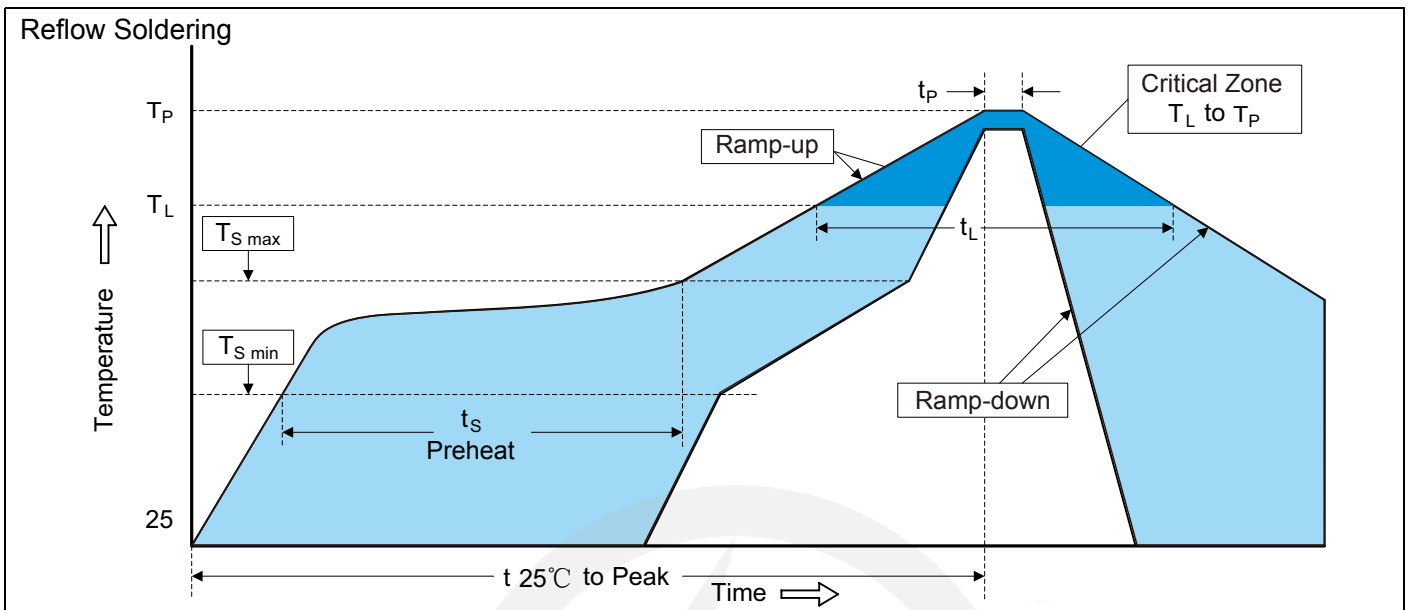


Unit: mm

| SYMBOL | DIMENSIONS | |
|--------|------------|------|
| | MIN. | MAX. |
| A | 6.40 | 7.00 |
| A1 | 3.60 | 4.10 |
| A2 | 1.30 | 1.70 |
| B | 1.20 | 1.60 |
| D | 4.50 | 5.00 |
| D1 | 2.30 | 2.70 |
| D2 | 0.50 | 0.80 |
| C | 0.15 | 0.22 |



Recommended Soldering Conditions



Recommended Conditions

| Profile Feature | Pb-Free Assembly |
|---|----------------------------------|
| Average ramp-up rate (T _L to T _P) | 3°C/second max. |
| Preheat -Temperature Min (T _{S min}) -Temperature Max (T _{S max}) -Time (min to max) (t _s) | 150°C 200°C 60-180 seconds |
| T _{S max} to T _L -Ramp-up Rate | 3°C/second max. |
| Time maintained above: -Temperature (T _L) -Time (t _L) | 217°C 60-150 seconds |
| Peak Temperature (T _P) | 260°C |
| Time within 5°C of actual Peak Temperature (t _P) | 20-40 seconds |
| Ramp-down Rate | 6°C/second max. |
| Time 25°C to Peak Temperature | 8 minutes max. |

Packaging

13" Reel



D5 Φ330.0±2.0

D6 Φ13.5±0.5

H 2.5±1.0

W2 16.0±2.0

Quantity: 5000PCS