# MB1F THRU MB10F

## 0.8A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

### FEATURES:

Glass Passivated Chip Junction
Reverse Voltage - 100 to 1000 V
Forward Current - 0.8 A
High Surge Current Capability
Designed for Surface Mount Application

### PINNING

| PIN | DESCRIPTION |
|---|---|
| 1 | Input Pin ( ~ ) |
| 2 | Input Pin ( ~ ) |
| 3 | Output Anode ( + ) |
| 4 | Output Cathode ( - ) |




MBF Package

### 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 °C | $I_O$ | 0.8 | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | A |
| Maximum Forward Voltage at 0.8 A | $V_F$ | 1.1 | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @$T_A$=25 °C<br>@$T_A$=125 °C | $I_R$ | 5<br>40 | | | | | | μA |
| Typical Junction Capacitance ( Note1 ) | $C_j$ | 13 | | | | | | pF |
| Typical Thermal Resistance ( Note2 ) | $R_{\theta JA}$<br>$R_{\theta JC}$ | 90<br>30 | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{stg}$ | -55 ~ +150 | | | | | | °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.

**Fig.1 Average Rectified Output Current Derating Curve**

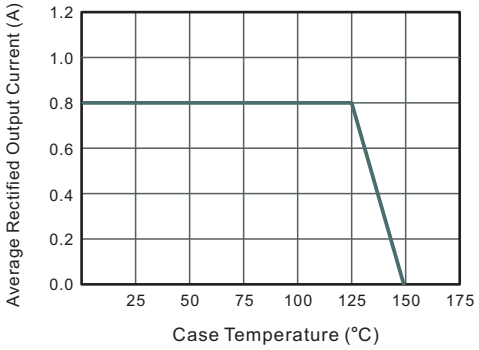



**Fig.2 Typical Reverse Characteristics**

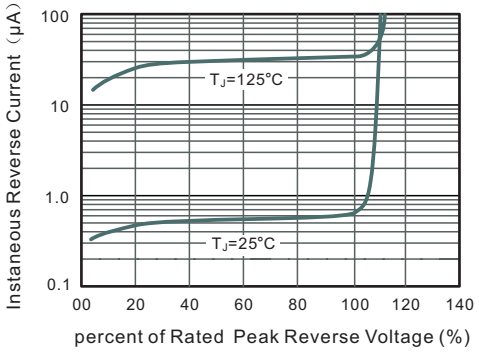



**Fig.3 Typical Instaneous Forward Characteristics**

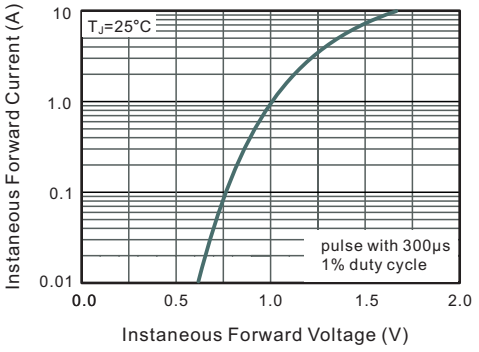



**Fig.4 Typical Junction Capacitance**

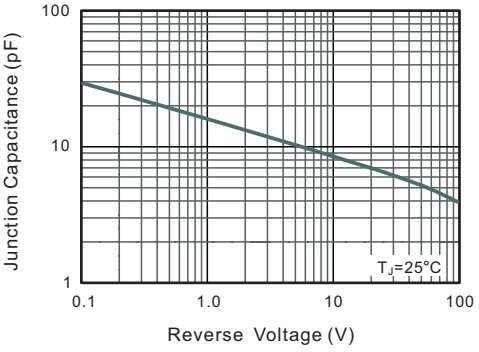
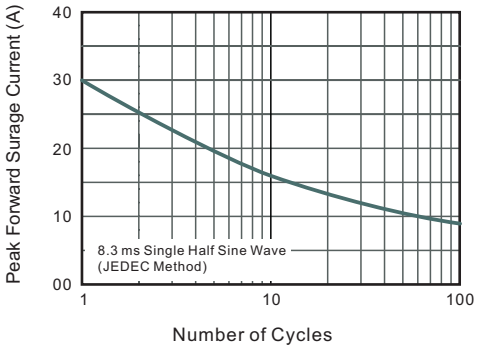
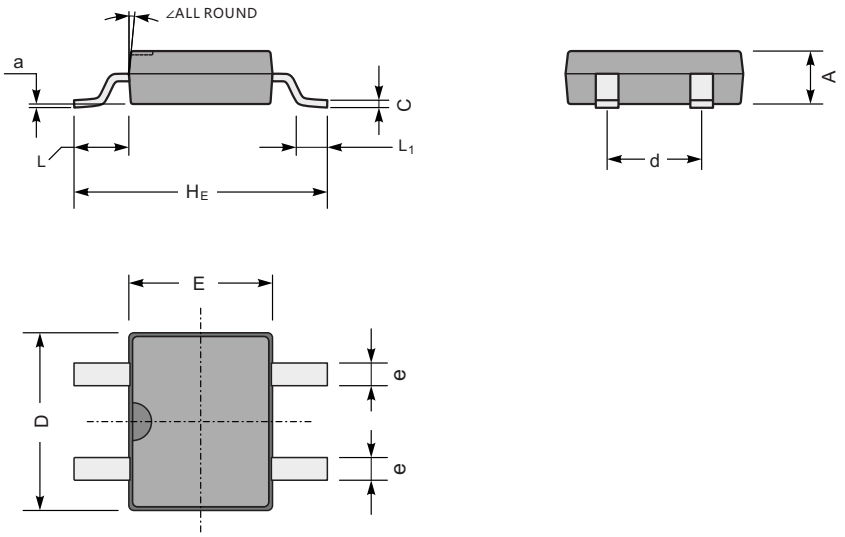



**Fig.5 Maximum Non-Repetitive Peak Forward Surage Current**



# PACKAGE OUTLINE

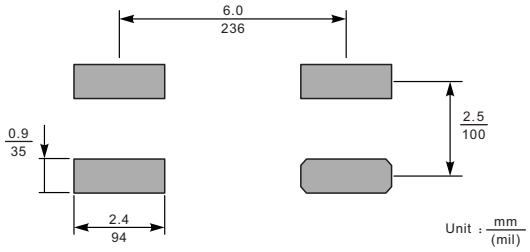
**Plastic surface mounted package; 4 leads**




MBF mechanical data

| UNIT | | A | C | D | E | $H_E$ | d | e | L | $L_1$ | a | ∠ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| mm | max | 1.6 | 0.22 | 5.0 | 4.1 | 7.0 | 2.7 | 0.8 | 1.7 | 1.1 | 0.2 | 7° |
| | min | 1.2 | 0.15 | 4.5 | 3.6 | 6.4 | 2.3 | 0.5 | 1.3 | 0.5 | — | |
| mil | max | 63 | 8.7 | 197 | 161 | 276 | 106 | 31 | 67 | 43 | 8 | |
| | min | 47 | 5.9 | 177 | 142 | 252 | 91 | 20 | 51 | 20 | — | |

## The recommended mounting pad size




## Marking

| Type number | Marking code |
|---|---|
| MB1F | MB1F |
| MB2F | MB2F |
| MB4F | MB4F |
| MB6F | MB6F |
| MB8F | MB8F |
| MB10F | MB10F |