

1A SURFACE MOUNT SCHOTTKY BRIDGE

FEATURES:

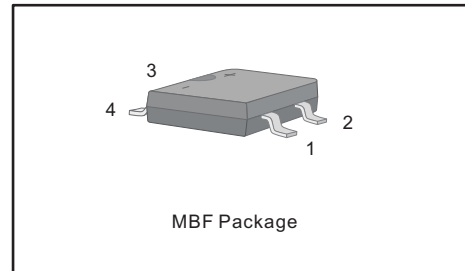
- Reverse Voltage - 40 to 200 V
- Forward Current - 1 A
- High Surge Current Capability
- Designed for Surface Mount Application

MECHANICAL DATA

- Case: MBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg 0.0024oz

PINNING

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



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 | MB14F | MB16F | MB18F | MB110F | MB115F | MB120F | Units |
|---|-----------------|------------|-------|-------|----------|----------|--------|---------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 28 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 1.0 | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 40 | | | 30 | | | A |
| Max Instantaneous Forward Voltage at 1 A | V_F | 0.55 | 0.70 | | 0.85 | 0.90 | | V |
| Maximum DC Reverse Current $T_a = 25^{\circ}C$ at Rated DC Reverse Voltage $T_a = 100^{\circ}C$ | I_R | 0.3 10 | | | 0.2 5 | 0.1 2 | | mA |
| Typical Junction Capacitance ¹⁾ | C_j | 110 | 80 | | | | pF | |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ | 100 | | | | | | $^{\circ}C/W$ |
| Operating Junction Temperature Range | T_j | -55 ~ +150 | | | | | | $^{\circ}C$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | $^{\circ}C$ |

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 Forward Current Derating Curve

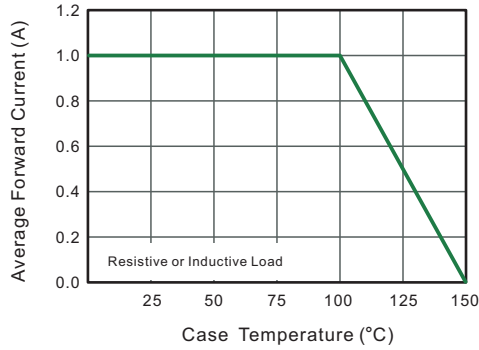


Fig.2 Typical Reverse Characteristics

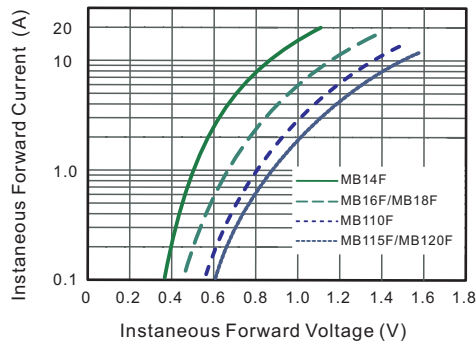
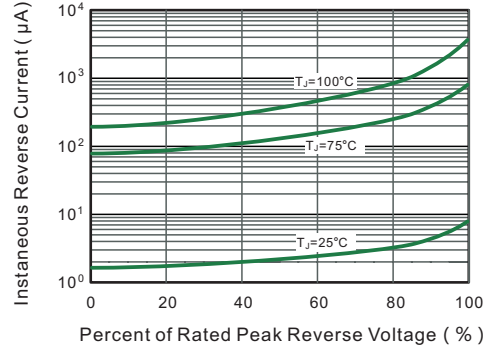


Fig.4 Typical Junction Capacitance

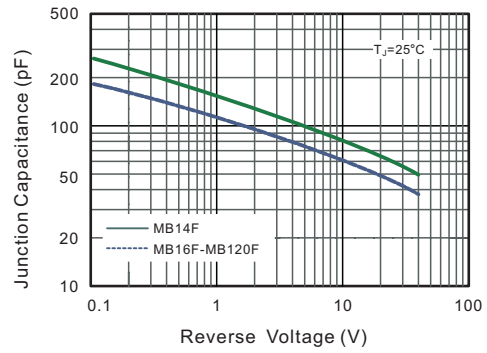


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

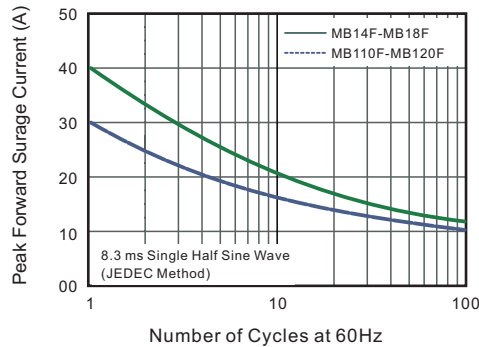
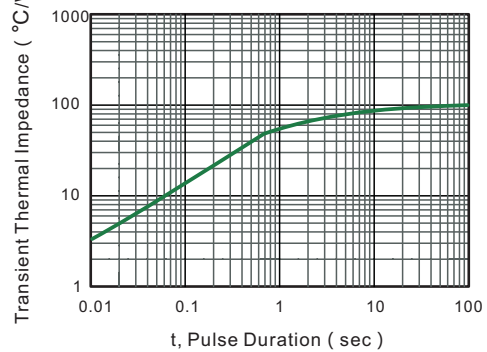


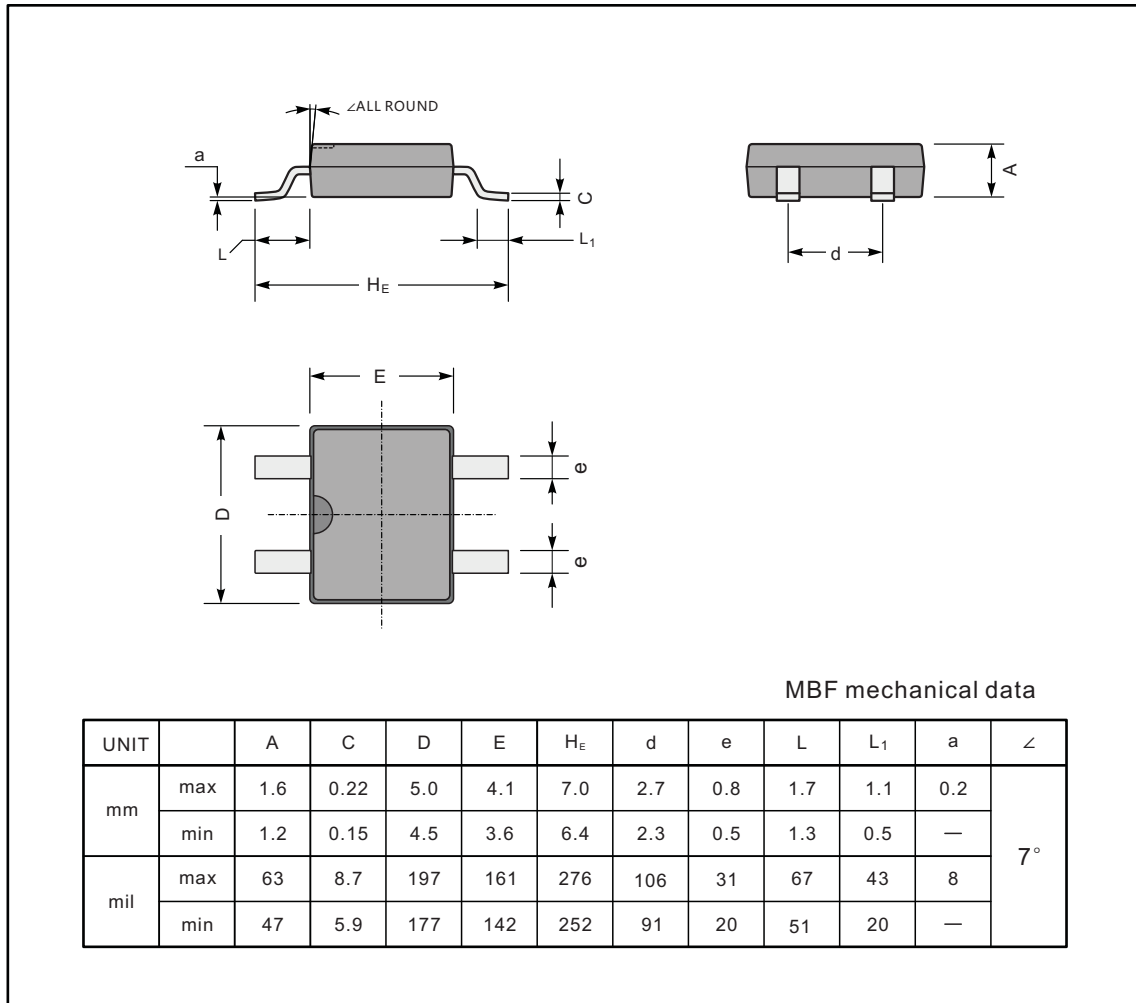
Fig.6- Typical Transient Thermal Impedance



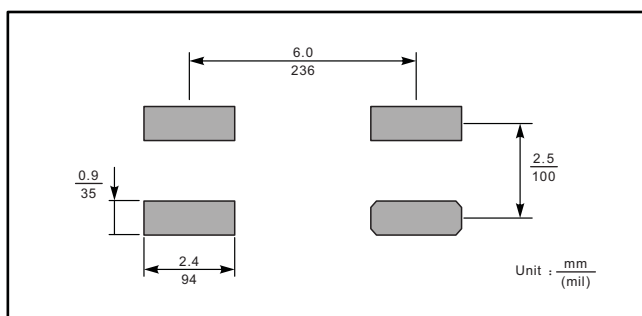
PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

MBF



The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| MB14F | MB14F |
| MB16F | MB16F |
| MB18F | MB18F |
| MB110F | MB110F |
| MB115F | MB115F |
| MB120F | MB120F |

