



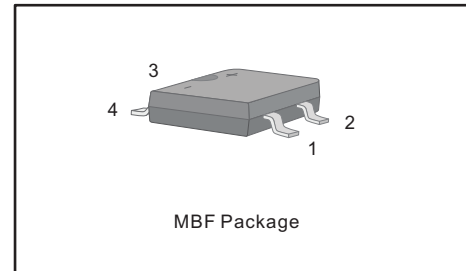
1A SURFACE MOUNT SCHOTTKY BRIDGE

**FEATURES:**

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

**PINNING**

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



**MECHANICAL DATA**

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

**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<br>10  |       |       | 0.2<br>5 | 0.1<br>2 |        | mA    |
| Typical Junction Capacitance <sup>1)</sup>  | $C_j$           | 110        | 80    |       |          |          | pF     |       |
| Typical Thermal Resistance <sup>2)</sup>  | $R_{\theta JA}$ | 100        |       |       |          |          |        | °C/W  |
| Operating Junction Temperature Range  | $T_j$           | -55 ~ +150 |       |       |          |          |        | °C    |
| Storage Temperature Range   | $T_{stg}$       | -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 Forward Current Derating Curve

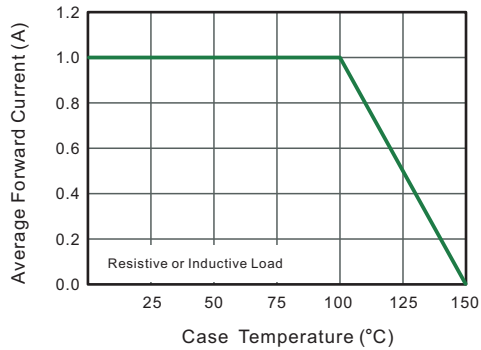


Fig.2 Typical Reverse Characteristics

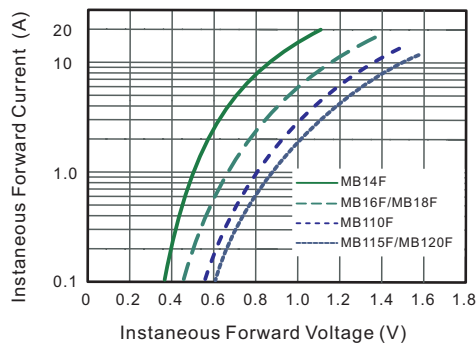
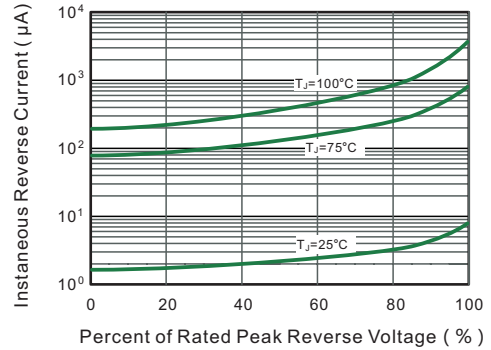


Fig.4 Typical Junction Capacitance

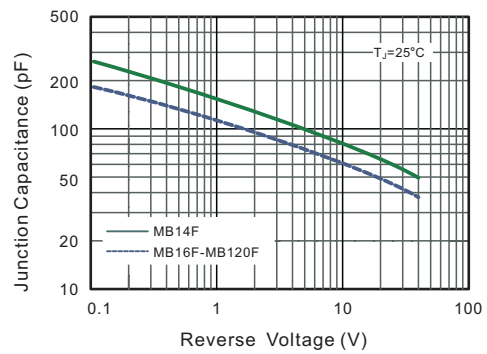


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

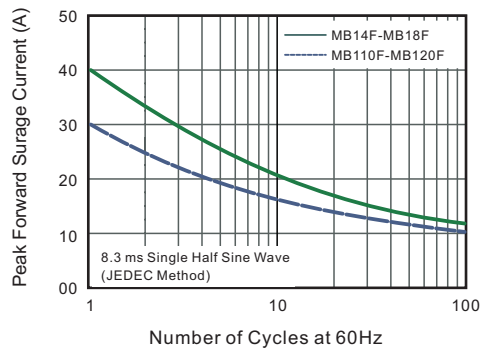
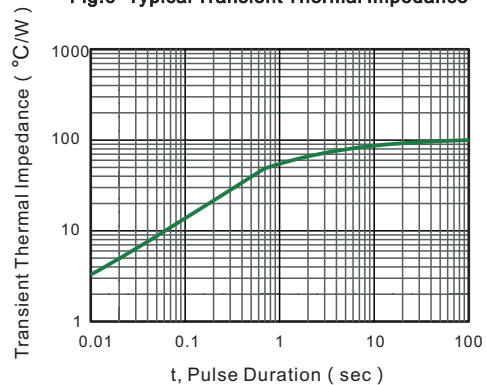


Fig.6- Typical Transient Thermal Impedance

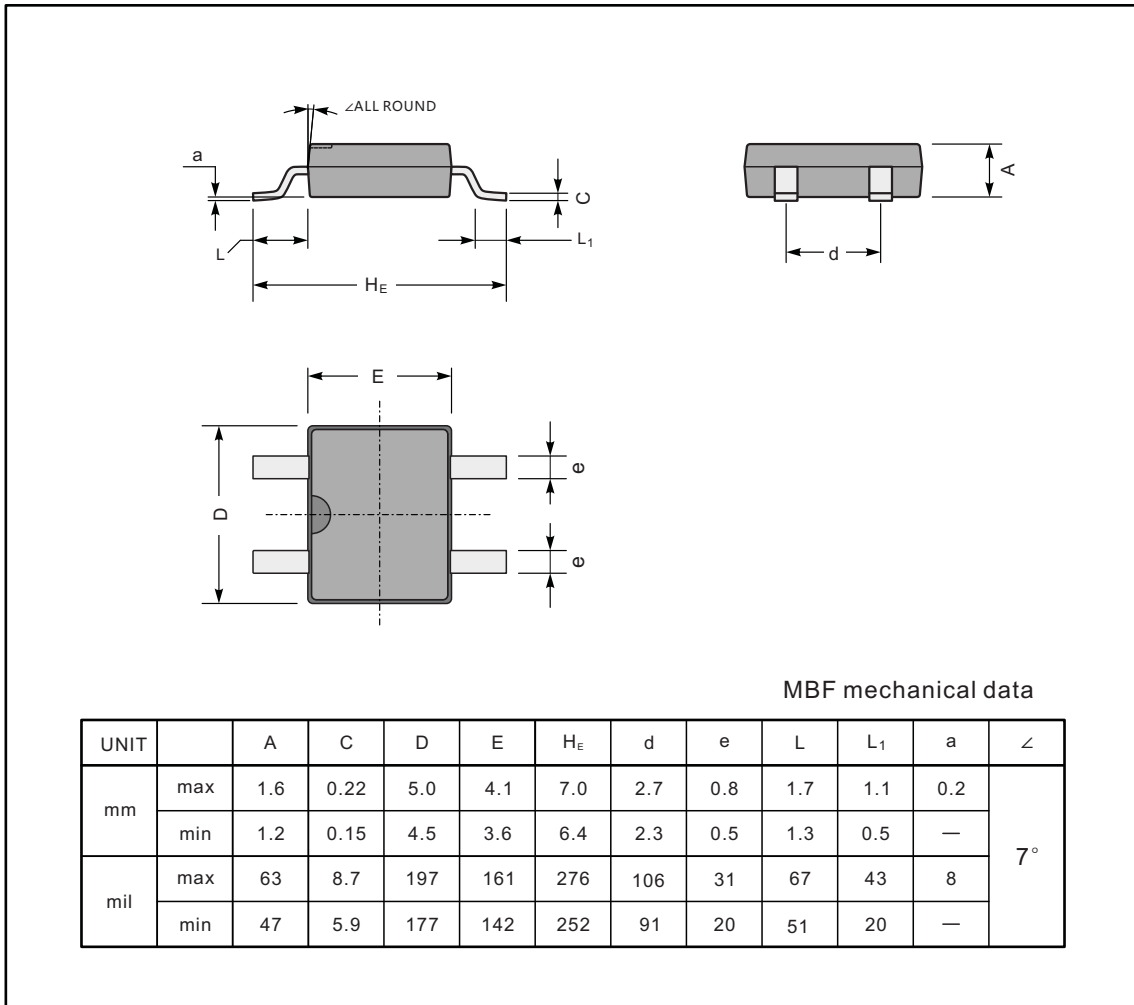




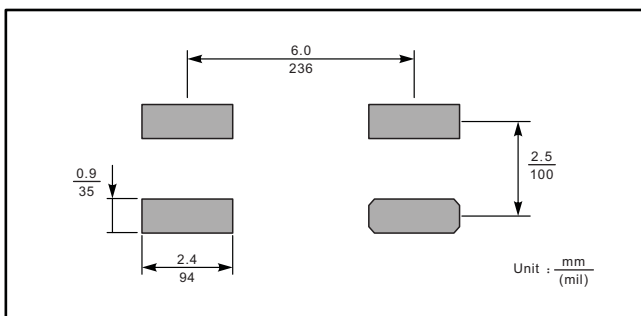
**PACKAGE OUTLINE**

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       |

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