



FEATURES

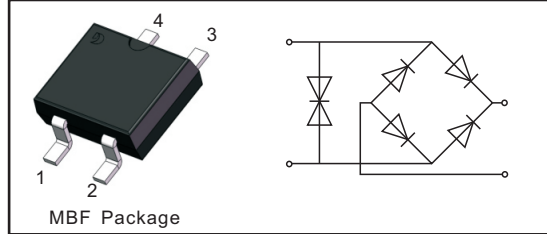
- Lead Free Finish/RoHS Compliant
- Green Molding Compound (No Halogen and Antimony)
- Fast reverse recovery time
- Glass Passivated Chip Junction
- Designed for Surface Mount Application

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/0.0026oz



Maximum Ratings and Thermal Characteristics(TA = 25°C unless otherwise specified)
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 of Switch Bridge | Symbols | MBT2036 | Units |
|--|-----------------|------------|---------|
| Continuous Forward Current | I_F | 300 | mA |
| Reverse Breakdown Voltage at $I_R=5\mu A$ | $V_{(BR)R}$ | 100 | V |
| Non-repetitive Peak Forward Surge Current @ $t=8.3mS$ | I_{FSM} | 8 | A |
| Maximum Forward Voltage @ $I_F=300mA$ | V_F | 1.5 | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage (@ $V_R=75V$) | I_R | 5 50 | μA |
| Typical Junction Capacitance ($f=1MHz, 4V DC$) | C_j | 8 | pF |
| Typical Thermal Resistance (Note1) | $R_{\theta JA}$ | 90 | °C/W |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | °C |

Note: 1. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

| Parameter of TVS | Symbol | MBT2036 | Unit |
|---|----------------|-------------|------|
| Breakdown voltage @ 1mA | V_{BR} | 32.4~39.6 | V |
| Peak Pulse Current on 10/1000 us waveform (Note 2, Fig 7) | I_{PPM} | See Table 1 | A |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | °C |

Table 1

| Type | Typ. Clamp Voltage $V_C @ I_{PP}(V)$ | Peak Pulse Current@10/1000us $I_{PP}(A)$ |
|---------|--------------------------------------|--|
| MBT2036 | 45 | 5.0 |

NOTE2: Non-repetitive current pulse, per Fig.8 and derated above TA = 25°C per Fig. 7.



Fig.1 Power Derating Curve

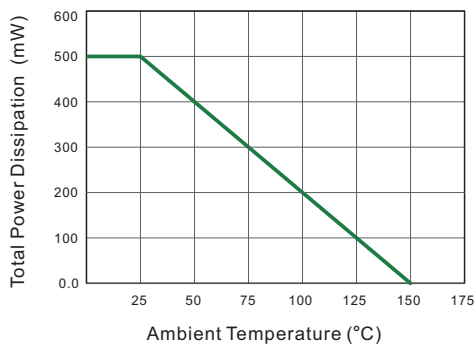


Fig.2 Typical Reverse Characteristics

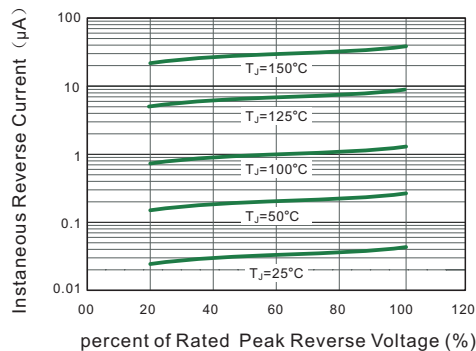


Fig.3 Typical Instantaneous Forward Characteristics

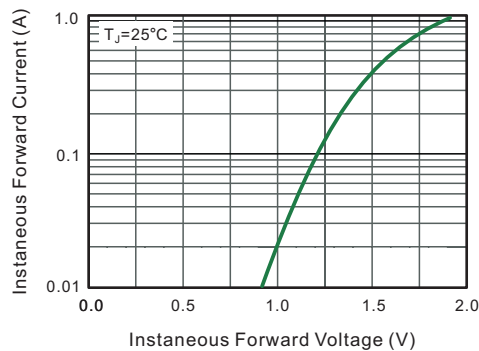


Fig.4 Typical Junction Capacitance

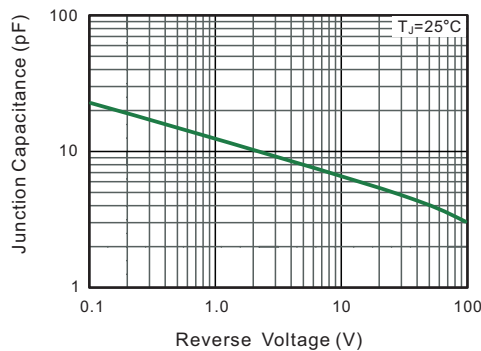


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

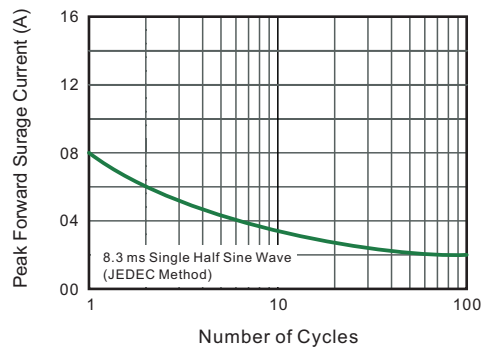


Fig.6 Peak Pulse Power Rating Curve

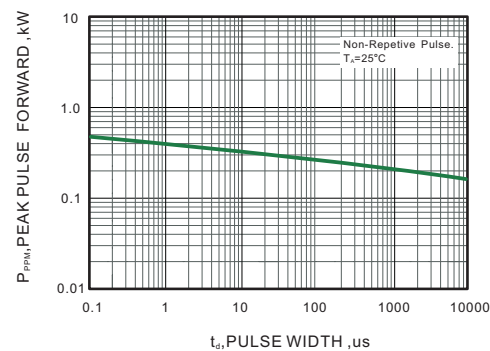


Fig.7 Forward Current Derating Curve

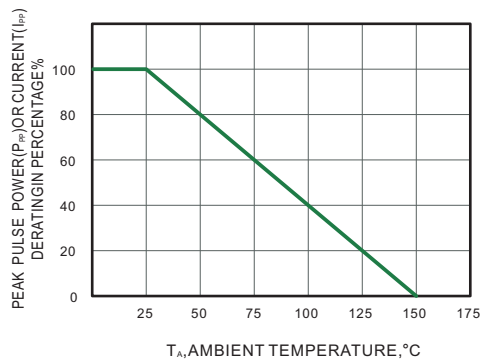
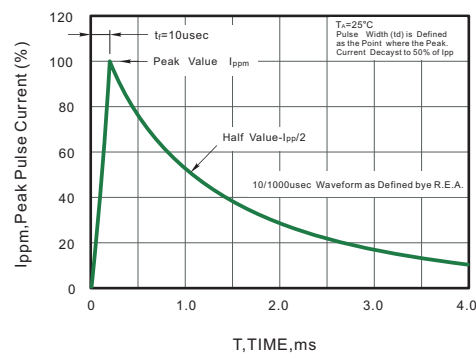
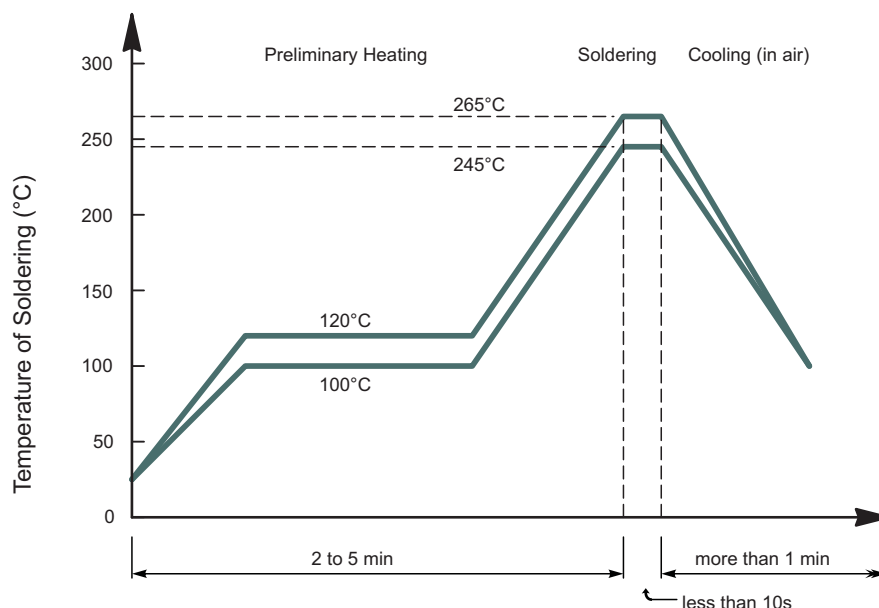


Fig.8 Pulse Waveform

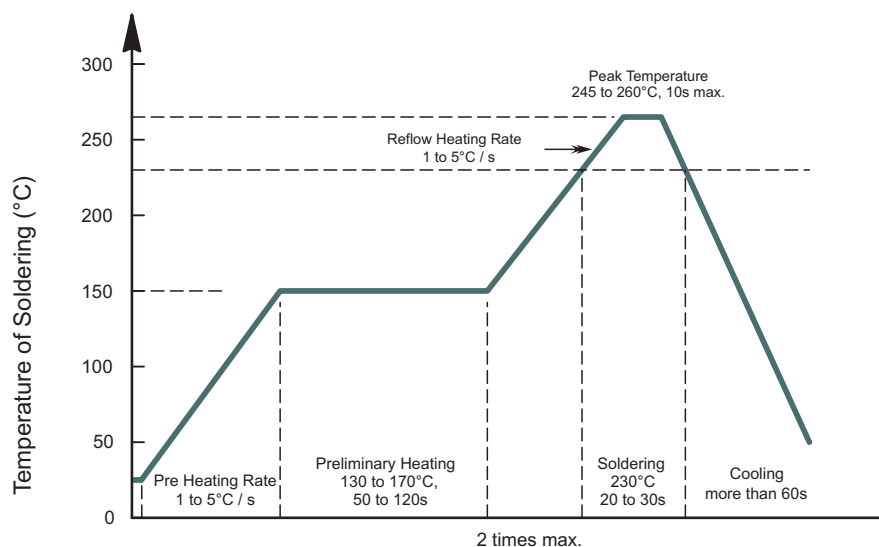




• Recommended condition of flow soldering



• Recommended condition of reflow soldering



Recommended peak temperature is over 245 °C. If peak temperature is below 245 °C, you may adjust the following parameters; time length of peak temperature (longer), time length of soldering (longer), thickness of solder paste (thicker)

• Condition of hand soldering

Temperature: 370°C

Time: 3s max.

Times: one time

• Remark:

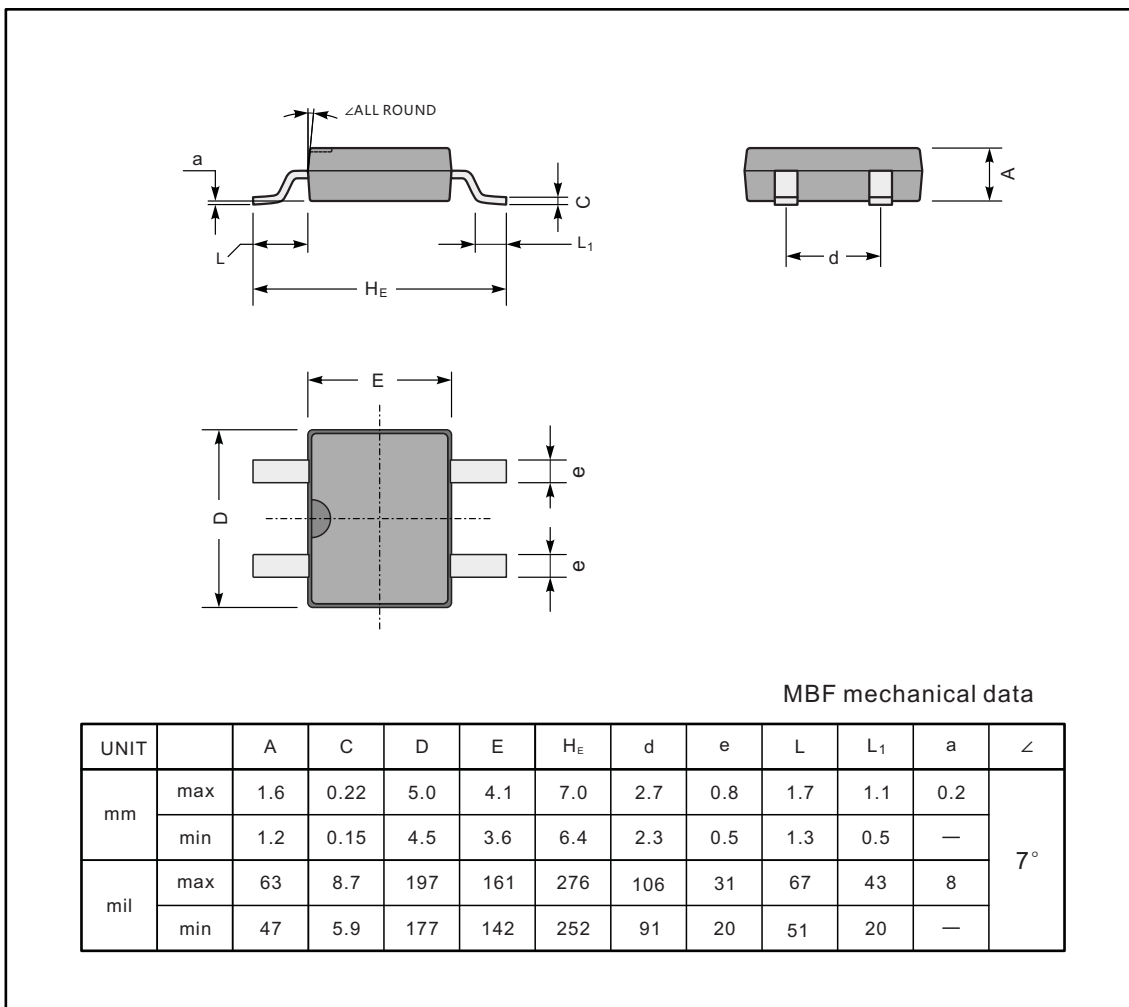
Lead free solder paste (96.5Sn/3.0Ag/0.5Cu)



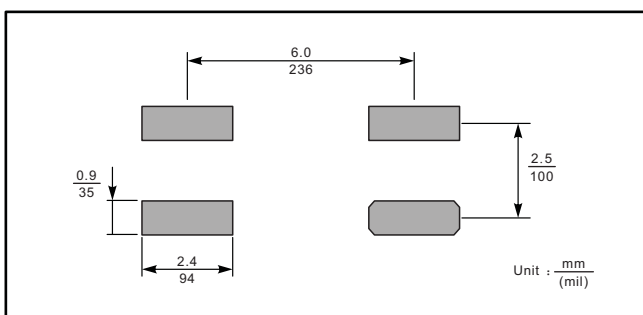
PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

MBF



The recommended mounting pad size



Marking

| | |
|-------------|--------------|
| Type number | Marking code |
| MBT2036 | M2036 |