



2A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

FEATURES:

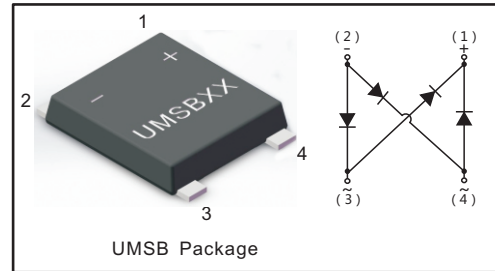
- Glass Passivated Chip Junction
- Reverse Voltage - 100 to 1000 V
- Forward Current - 2.0 A
- High Surge Current Capability
- Designed for Surface Mount Application

MECHANICAL DATA

- Case: UMSB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.234g / 0.00825oz

PINNING

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



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 | MSB20B | MSB20D | MSB20G | MSB20J | MSB20K | MSB20M | 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 | I_O | 2.0 | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I_{FSM} | 50 | | | | | | A |
| Maximum Forward Voltage at 2.0 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 | 5 100 | | | | | | μA |
| Typical Junction Capacitance (Note1) | C_j | 30 | | | | | | pF |
| Typical Thermal Resistance (Note2) | $R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$ | 60 10 25 | | | | | | $^\circ\text{C/W}$ |
| 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.



Fig.1 Average Rectified Output Current Derating Curve

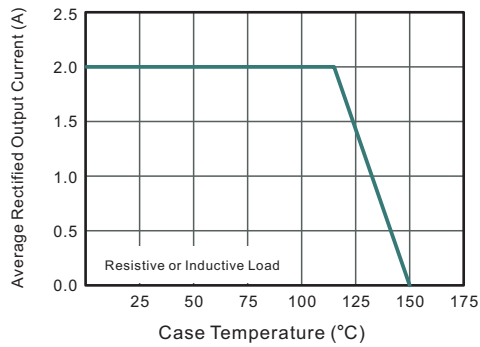


Fig.2 Typical Reverse Characteristics

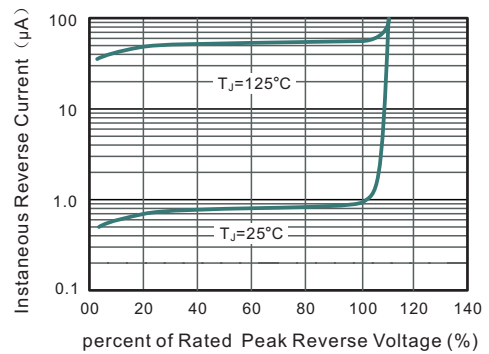


Fig.3 Typical Instantaneous Forward Characteristics

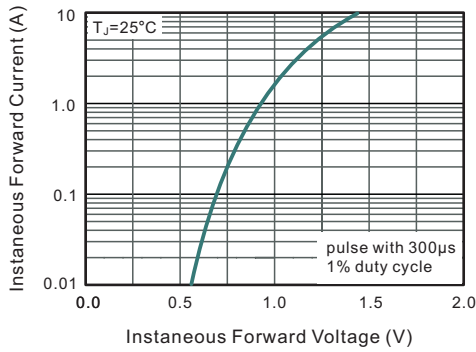


Fig.4 Typical Junction Capacitance

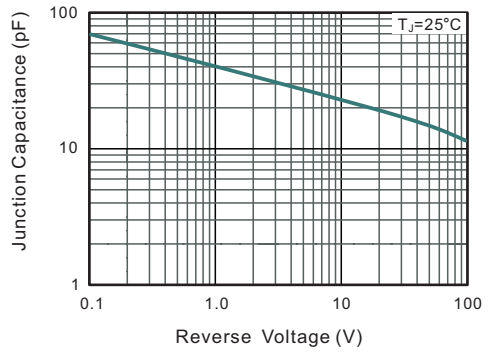


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

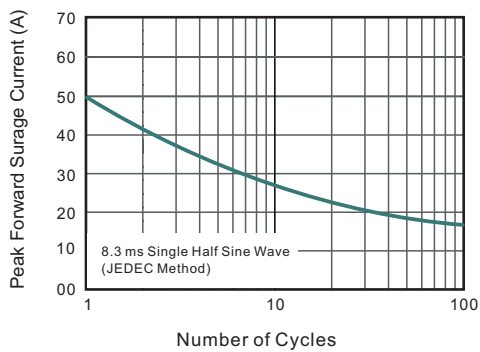
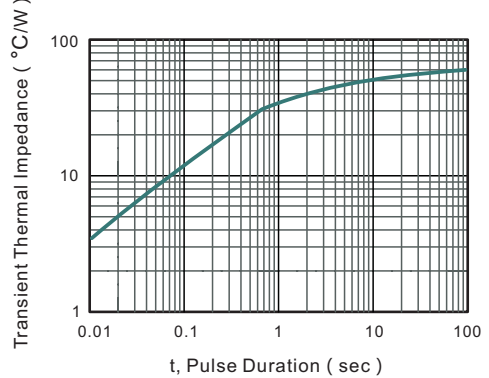


Fig.6- Typical Transient Thermal Impedance

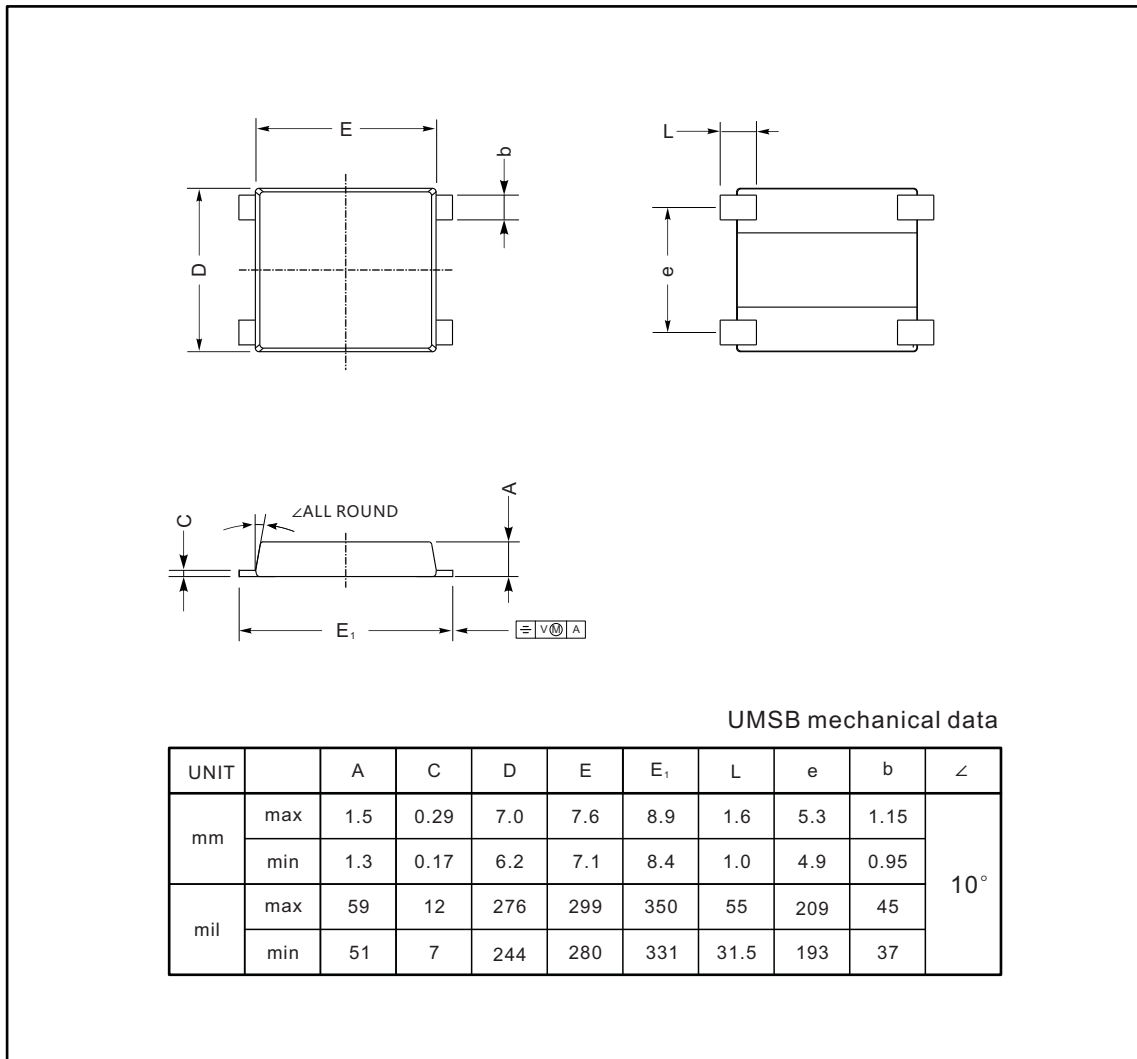




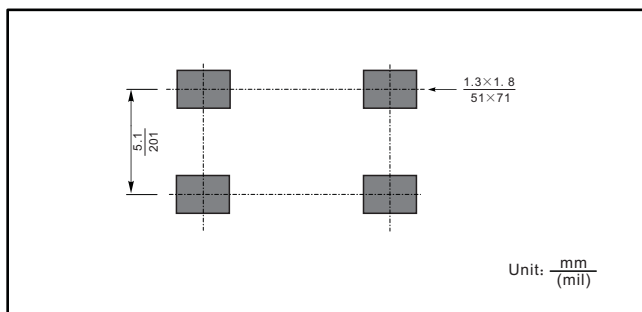
PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

UMSB



The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| MSB20B | MB20B |
| MSB20D | MB20D |
| MSB20G | MB20G |
| MSB20J | MB20J |
| MSB20K | MB20K |
| MSB20M | MB20M |