

MSB20B THRU MSB20M

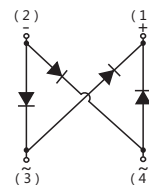
2.0 Amps Surface Mount Glass Passivated Bridge Rectifier



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

UMSB



PINNING

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

Absolute Maximum Ratings (Ta=25°C unless otherwise noted)

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current 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 | 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 | | | | | | °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.

Typical Characteristics

Fig.1 Average Rectified Output Current Derating Curve

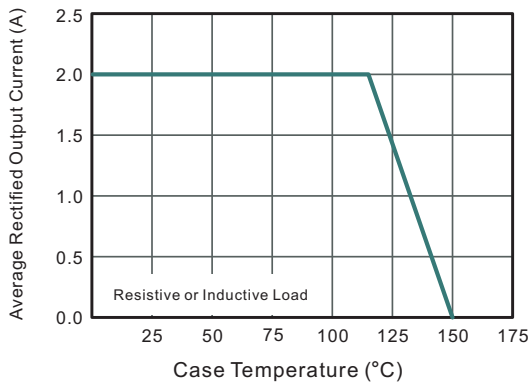


Fig.2 Typical Reverse Characteristics

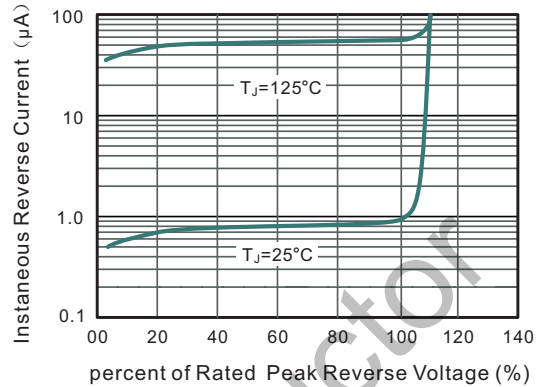


Fig.3 Typical Instantaneous Forward Characteristics

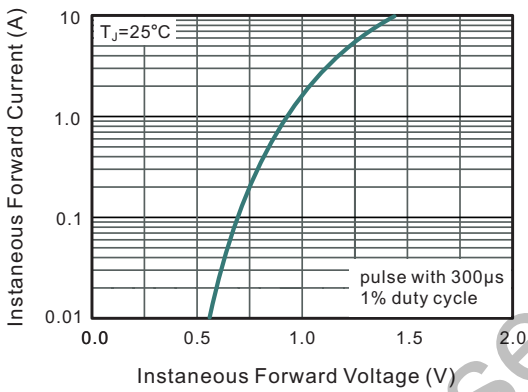


Fig.4 Typical Junction Capacitance

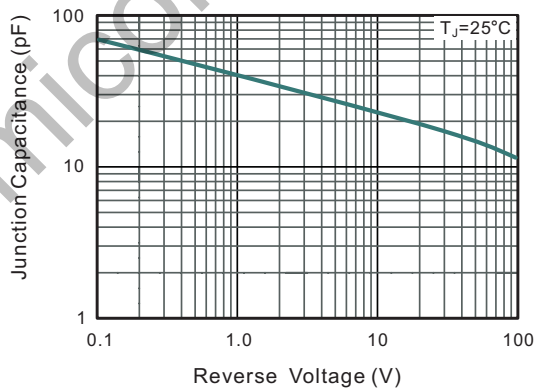


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

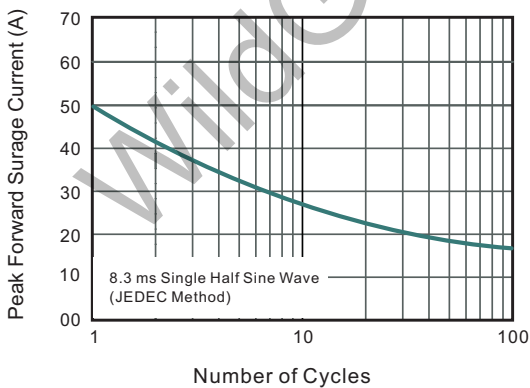
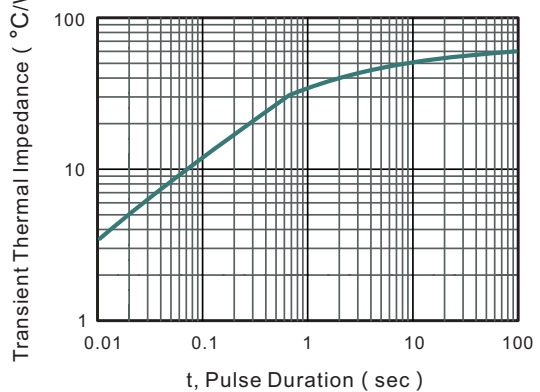
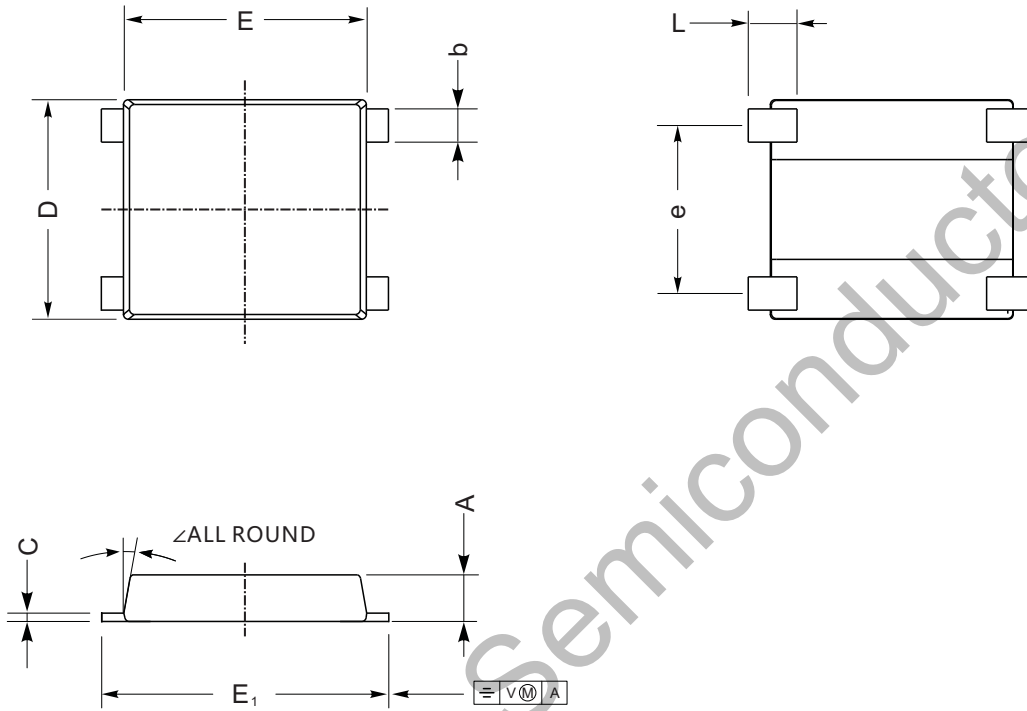


Fig.6- Typical Transient Thermal Impedance



Package Dimension

UMSB



UMSB mechanical data

| UNIT | | A | C | D | E | E ₁ | L | e | b | ∠ |
|------|-----|-----|------|-----|-----|----------------|------|-----|------|-----|
| mm | max | 1.5 | 0.29 | 7.0 | 7.6 | 8.9 | 1.6 | 5.3 | 1.15 | 10° |
| | min | 1.3 | 0.17 | 6.2 | 7.1 | 8.4 | 1.0 | 4.9 | 0.95 | |
| mil | max | 59 | 12 | 276 | 299 | 350 | 55 | 209 | 45 | |
| | min | 51 | 7 | 244 | 280 | 331 | 31.5 | 193 | 37 | |

Marking

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

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