# MB1M THRU MB10M

## MINI SILICON SURFACE MOUNT BRIDGE RECTIFIER

**Reverse Voltage - 100 to 1000 Volts  Forward Current - 0.8 Ampere**

## FEATURES

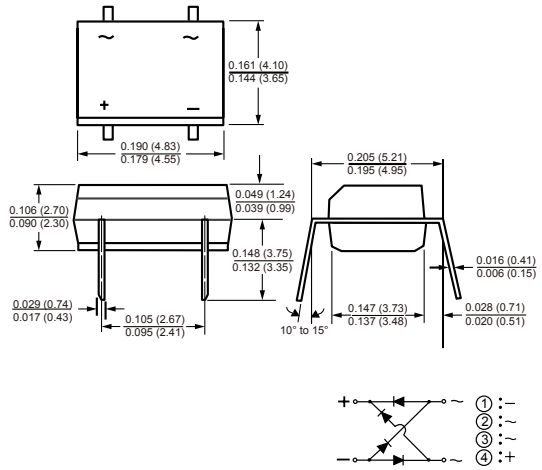
- Surge overload rating - 30 Amperes peak
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded
- Glass passivated device
- Polarity symbols molded on body

## MECHANICAL DATA

- Case : MBM, Molded Plastic
- Epoxy : Device has UL flammability classification 94V-0
- Mounting Position : Any
- Weight : 0.22 grams (approx.)
- Marking : Type Number

RoHS Compliant

MBM




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase half-wave 60Hz,resistive or inductive load,for capacitive load current derate by 20%.

| Characteristic | Symbol | MB1M | MB2M | MB4M | MB6M | MB8M | MB10M | Unit |
|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1) @$T_A$ = 40°C | $I_O$ | 0.8 | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | $I_{FSM}$ | 30 | | | | | | A |
| $I^2t$ Rating for Fusing (t < 8.3ms) | $I^2t$ | 10 | | | | | | $A^2s$ |
| Forward Voltage per element @$I_F$ = 0.8A | $V_{FM}$ | 1.1 | | | | | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 125°C | $I_{RM}$ | 5.0<br>500 | | | | | | μA |
| Typical Junction Capacitance per leg (Note 2) | $C_j$ | 25 | | | | | | pF |
| Typical Thermal Resistance per leg (Note 1) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 85<br>20 | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -55 to +150 | | | | | | °C |

Note: 1. Mounted on glass epoxy PC board with 1.3mm$^2$ solder pad.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-FORWARD CURRENT DERATING CURVE

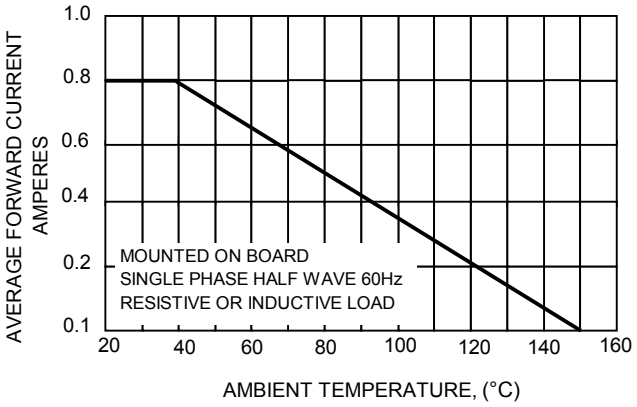



FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

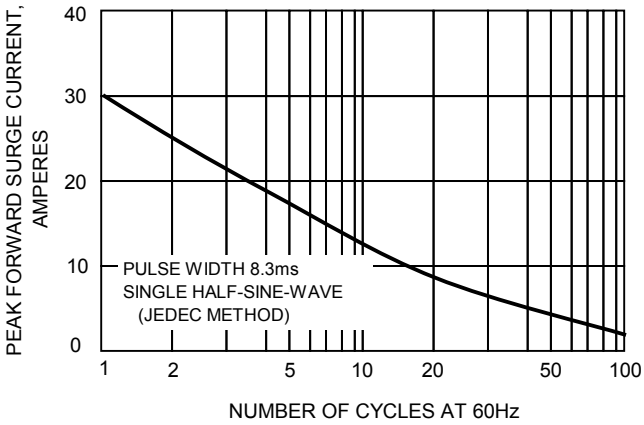



FIG.3-TYPICAL REVERSE CHARACTERISTICS

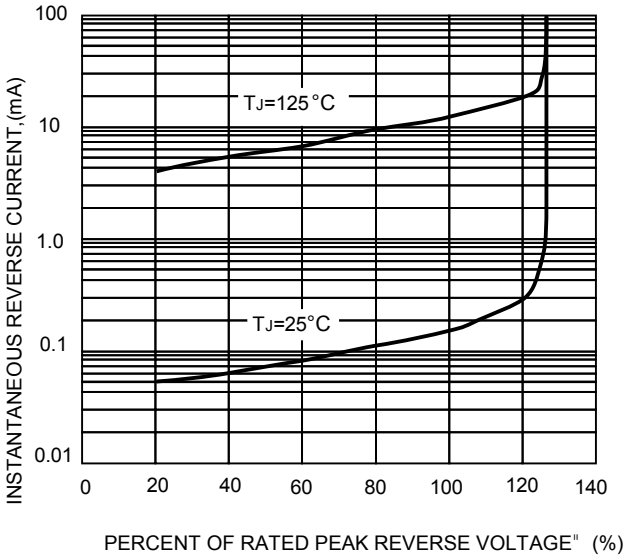



FIG.4-TYPICAL FORWARD CHARACTERISTICS

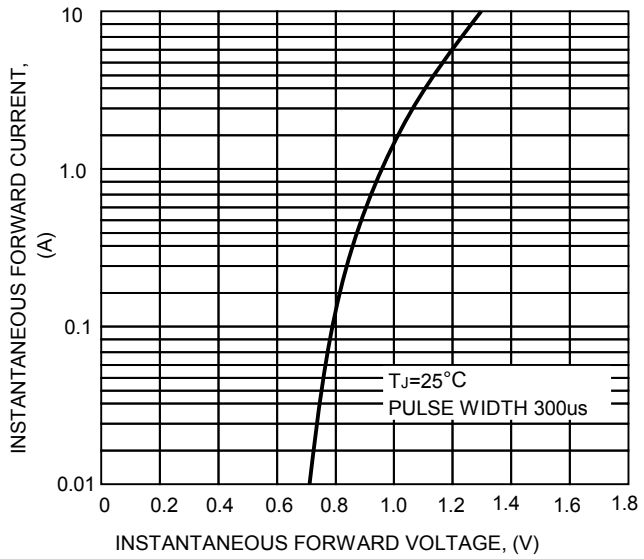



FIG.5-TYPICAL JUNCTION CAPACITANCE

