

### SILICON BRIDGE RECTIFIERS

VOLTAGE RANGE: 200 --- 1000 V  
CURRENT: 0.5 A

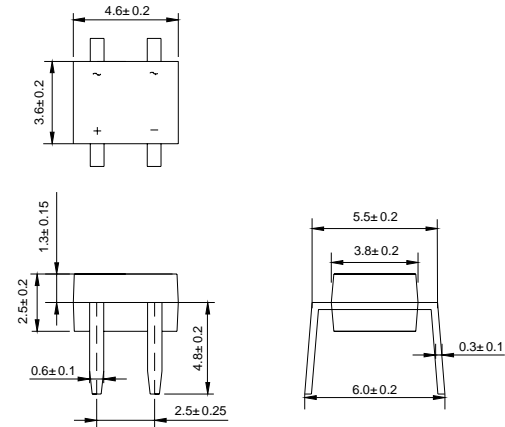
#### FEATURES

- ◇ This series is UL recognized under Component Index, file number E239431
- ◇ Glass passivated chip junctions
- ◇ Plastic material has U/L flammability classification 94V-0
- ◇ High surge overload rating: 35A peak
- ◇ Saves space on printed circuit boards
- ◇ High temperature soldering guaranteed: 260°C/10 seconds at 5 lbs. (2.3kg) tension

#### MECHANICAL DATA

Case: Molded plastic body over passivated junctions  
 Terminals: Plated leads solderable per MIL-STD-750, Method 2026  
 Polarity: Polarity symbols marked on body  
 Dimensions in inches and (millimeters)  
 Mounting Position: Any  
 Weight: 0.0078 ounce, 0.22 gram

#### MBM



Dimensions in millimeters

#### 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, derate by 20%.

		MB2M	MB4M	MB6M	MB8M	MB10M	UNITS
Maximum recurrent peak reverse voltage	$V_{RRM}$	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	200	400	600	800	1000	V
Maximum average forward output current @ $T_A=25^\circ\text{C}$	$I_{F(AV)}$	0.5 <sup>(1)</sup> 0.8 <sup>(2)</sup>					A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	35					A
Maximum instantaneous forward voltage @ 0.4 A	$V_F$	1.0					V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_A=125^\circ\text{C}$	$I_R$	5.0 100					$\mu\text{A}$
Typical junction capacitance per leg (NOTE 3)	$C_J$	13					pF
Typical thermal resistance per leg (NOTE 1)	$R_{JA}$ $R_{JL}$	85 20					$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	- 55 ---- + 150					$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150					$^\circ\text{C}$

NOTES: (1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads

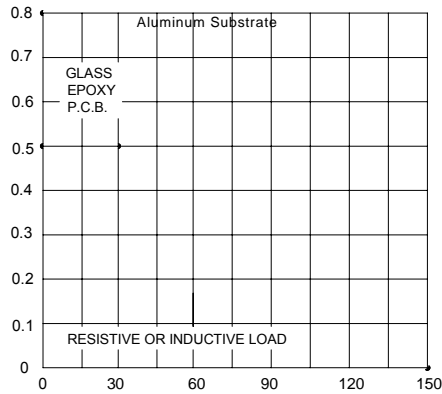
(2) On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

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AVERAGE FORWARD CURRENT, AMPERES

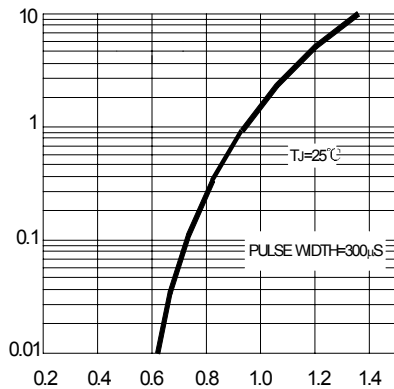
**FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



AMBIENT TEMPERATURE, °C

INSTANTANEOUS FORWARD CURRENT, AMPERES

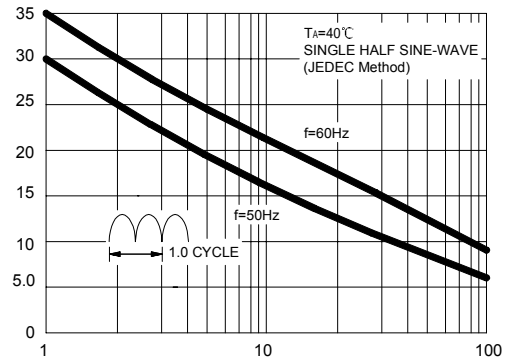
**FIG.3 – TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG**



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

PEAK FORWARD SURGE CURRENT, AMPERES

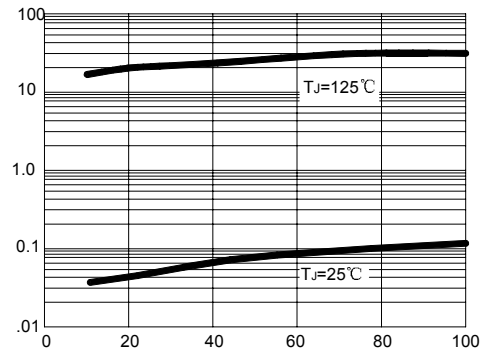
**FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



NUMBER OF CYCLES AT 60Hz

INSTANTANEOUS REVERSE CURRENT, MICRO AMPERES

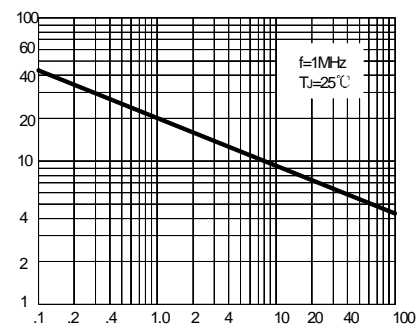
**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**



PERCENT OF RATED PEAK REVERSE VOLTAGE, %

CAPACITANCE, pF

**FIG.5 – TYPICAL JUNCTION CAPACITANCE PER ELEMENT**



REVERSE VOLTAGE, VOLTS