GM GarboMicro Semiconductor

MB1S thru MB10S

SURFACE MOUNT
GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE - **100** to **1000** Volts
FORWARD CURRENT - **0.8**

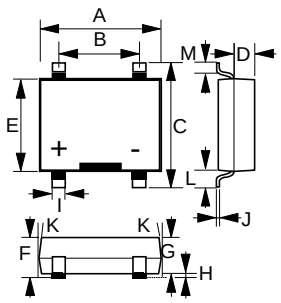
FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- Lead tin plated copper

MECHANICAL DATA

- Polarity : Symbol molded on body
- Weight : 0.0044 ounces, 0.125 grams
- Mounting position : Any

MBS



MBS		
DIM.	MIN.	MAX.
A	4.50	4.90
B	2.30	2.70
C	–	7.00
D	1.20	1.60
E	3.60	4.00
F	–	3.00
G	2.30	2.70
H	–	0.20
I	0.50	0.80
J	0.15	0.35
K	5 TYPICAL	
L	1.30	1.70
M	0.70	1.10
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

CHARACTERISTICS	SYMBOL	MB1S	MB2S	MB4S	MB6S	MB8S	MB10S	UNIT
Maximum Recurrent 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
Maximum average forward output rectified current at TA=30°C - on glass-epoxy P.C.B. (NOTE 1) - on aluminum substrate (NOTE 2)	$I_{(AV)}$	0.5 0.8						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)	I_{FSM}	30						A
MaximumForward Voltage at 0.4A DC	V_F	1.1						V
Maximum DC Reverse Current @TJ=25 C at Rated DC Blocking Voltage @TJ=125 C	I_R	5 500						uA
I^2t Rating for fusing (t < 8.3ms)	I^2t	3.7						A^2S
Typical Junction Capacitance per element (Note 3)	C_J	15						pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	75						°C/W
Operating Temperature Range	T_J	-55 to + 150						°C
Storage Temperature Range	T_{STG}	-55 to + 150						°C

NOTES : 1. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
Http://www.gmsemi.com
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 1.0MHz and applied reverse voltage of 4.0V DC.
4.Thermal Resistance Junction to Ambient.

RATINGS AND CHARACTERISTICS CURVES (MBS2 THRU MBS10)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

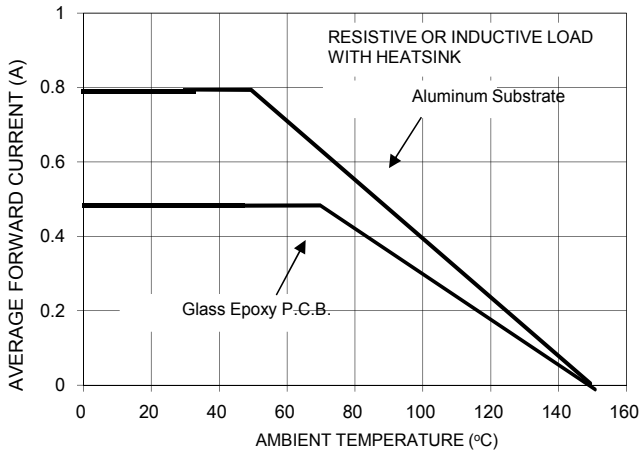


FIG. 2 TYPICAL REVERSE CHARACTERISTICS PER LEG

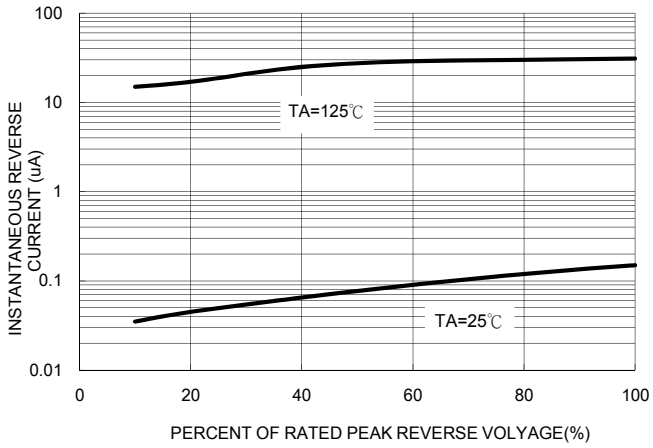


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

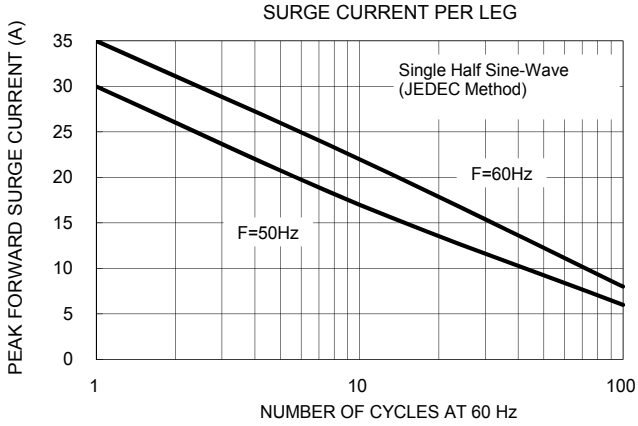


FIG. 4 TYPICAL JUNCTION CAPACITANCE PER LEG

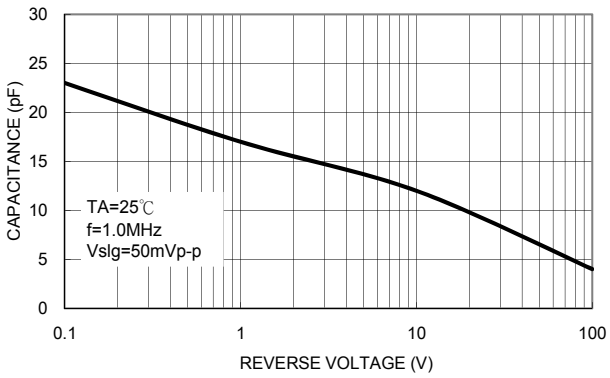


FIG. 5 TYPICAL FORWARD CHARACTERISTICS PER LEG