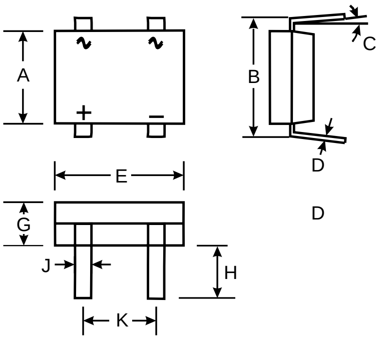
TRR®

MB05M – MB10M

0.5A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-O



MB-M		
Dim	**Min**	**Max**
A	3.65	4.10
B	4.95	5.21
C	0	10°
D	0.15	0.41
E	4.50	4.95
G	2.30	2.70
H	2.54	
J	0.43	0.74
K	2.41	2.67
All Dimensions in mm		

Mechanical Data

- Case: MB-M, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.22 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	MB05M	MB1M	MB2M	MB4M	MB6M	MB8M	MB10M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T_A = 40°C Average Rectified Output Current (Note 2) @T_A = 40°C	I_O	0.5 0.8							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
I^2t Rating for Fusing (t < 8.3ms)	I^2t	5.0							A^2s
Forward Voltage per element @I_F = 0.5A	V_{FM}	0.98							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	2.0 500							µA
Typical Junction Capacitance per leg (Note 3)	C_j	13							pF
Typical Thermal Resistance per leg (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	70 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. Mounted on aluminum substrate PC board with 1.3mm^2 solder pad.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

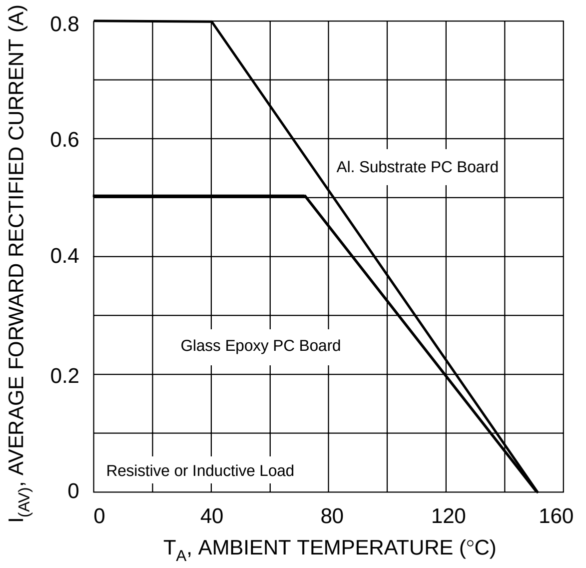


Fig. 1 Output Current Derating Curve

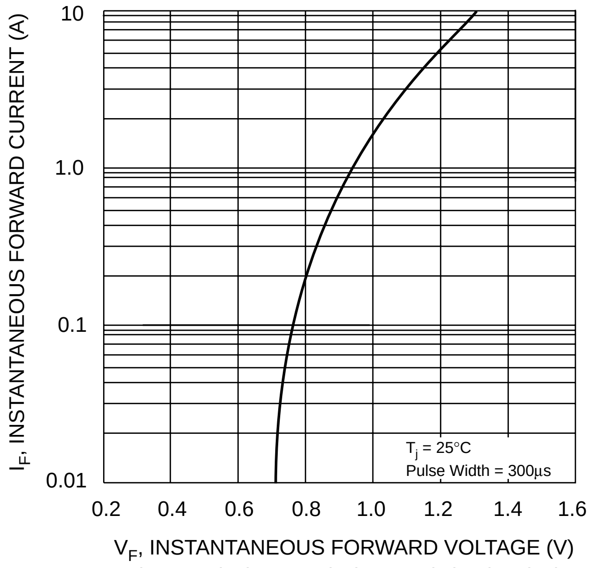


Fig. 2 Typical Forward Characteristics (per leg)

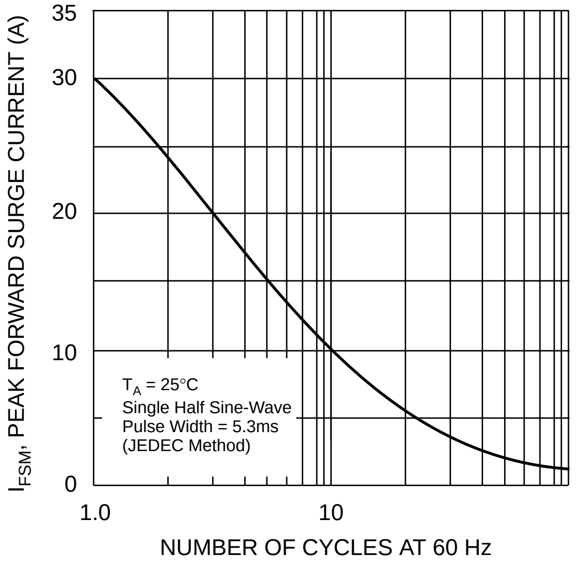


Fig. 3 Maximum Peak Forward Surge Current (per leg)

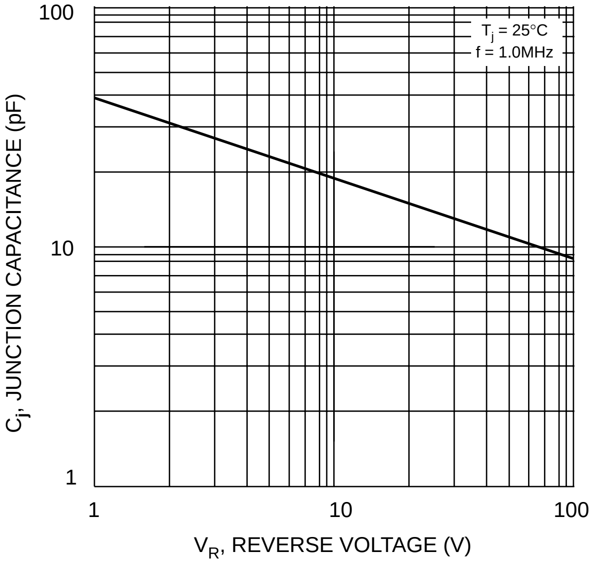


Fig. 4 Typical Junction Capacitance

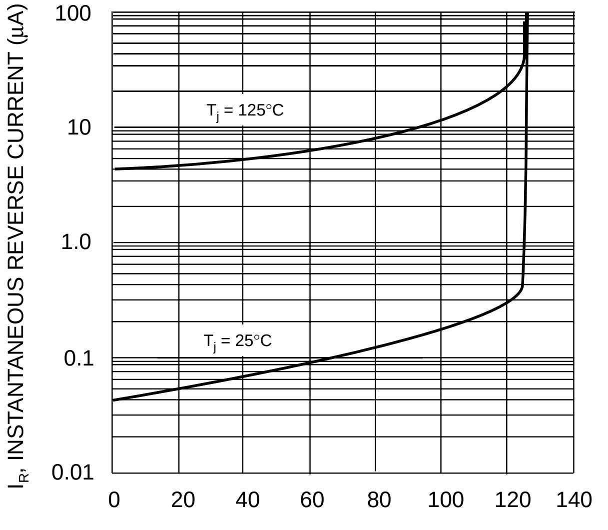


Fig. 5 Typical Reverse Characteristics (per element)