

MB2M thru MB10M

Miniature Glass Passivated Single-Phase Bridge Rectifiers
 Reverse Voltage 200 to 1000 Volts Forward Current 0.5 Ampere

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junctions
- High surge overload rating: 35A peak
- Saves space on printed circuit boards
- Recommended for non-automotive applications



MBM



Schematic Diagram

Mechanical Data

- Case: Molded plastic body over passivated junctions
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026
- Mounting position: Any
- Weight: 0.078oz., 0.22g

Maximum Ratings and Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	MB2M	MB4M	MB6M	MB8M	MB10M	Unit
Maximum Repetitive 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 Rectified Current-On Glass-Epoxy P.C.B. ¹	$I_{F(AV)}$	0.5					A
Maximum Average Forward Rectified Current-On Aluminum Substrate ²		0.8					
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed On Rated Load (JEDEC Method)	I_{FSM}	35					A
Rating For Fusing ($t < 8.3\text{ms}$)	I^2t	5					A ² Sec
Maximum Instantaneous Forward Voltage Drop Per Leg At 0.4A	V_F	1					V
Maximum DC Reverse Current At Rated DC Blocking Voltage Per Leg($T_A=25^\circ\text{C}$)	I_R	5					uA
Maximum DC Reverse Current At Rated DC Blocking Voltage Per Leg($T_A=125^\circ\text{C}$)		100					uA
Typical Thermal Resistance Per Leg	$R_{\theta JA}^1$	85					°C/W
	$R_{\theta JA}^2$	70					
	$R_{\theta JL}^1$	20					
Typical Junction Capacitance Per Leg At 4.0V, 1.0MHz	C_J	13					pF
Operating Junction Temperature	T_J	-55 To +150					°C
Storage Temperature	T_{STG}	-55 To +150					°C

Notes: 1. On glass epoxy P.C.B. mounted on 0.05 x 0.05 inch (1.3 x 1.3mm) pads
 2. On aluminum substrate P.C.B. with an area of 0.8 x 0.8 inch (20 x 20mm) mounted on 0.05 x 0.05 inch (1.3 x 1.3mm) solder pad

Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

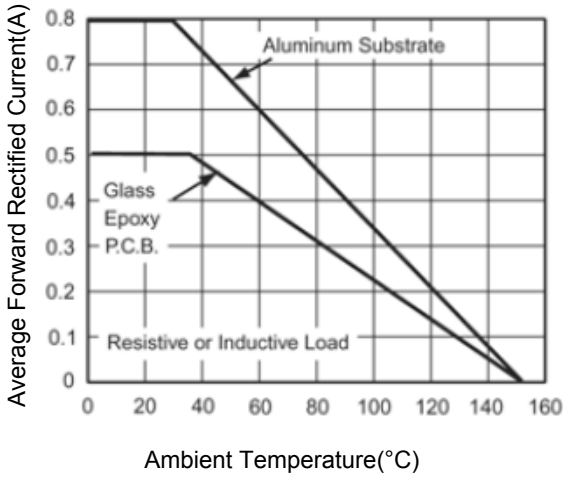


Figure 1. Derating Curve For Output Rectified Current

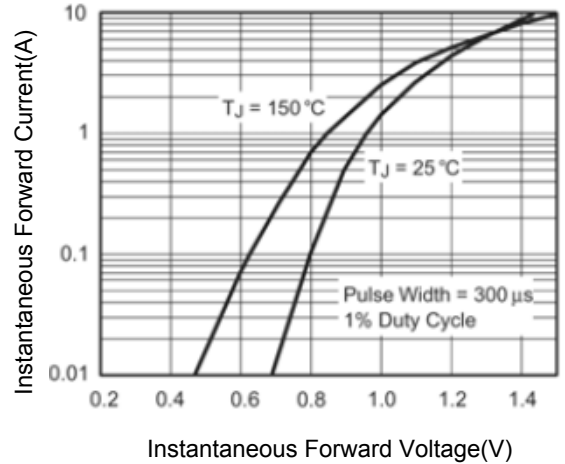


Figure 2. Typical Forward Characteristics Per Leg

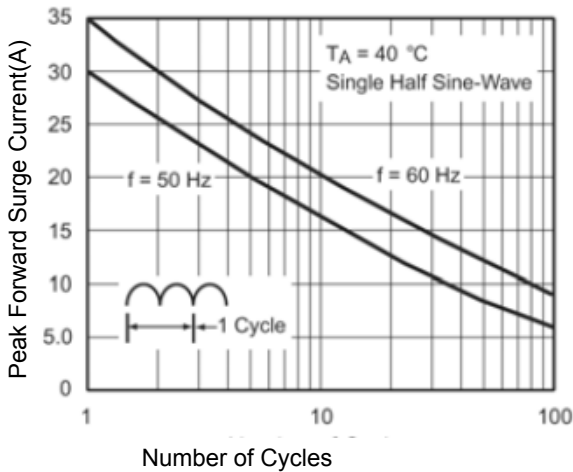


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

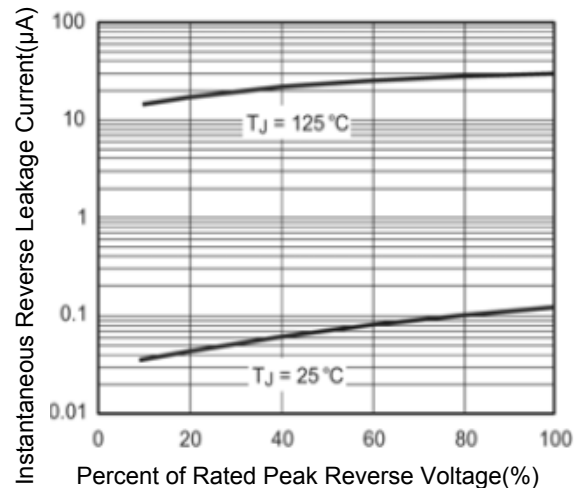


Figure 4. Typical Reverse Leakage Characteristics Per Leg

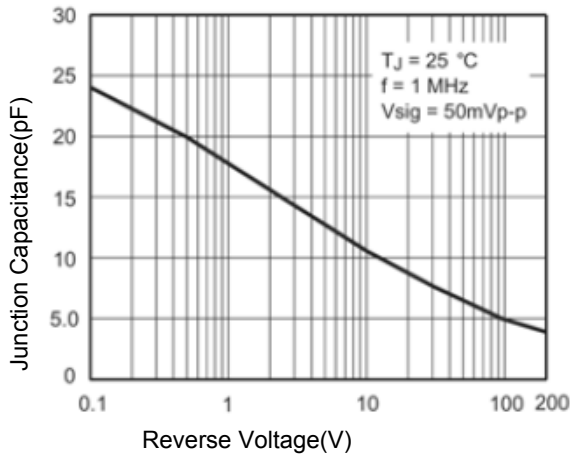


Figure 5. Typical Junction Capacitance Per Leg

Package Outline Dimensions

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