

# MB2M thru MB10M

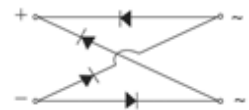
Miniature Glass Passivated Single-Phase Bridge Rectifiers  
 Reverse Voltage 200 to 1000 Volts Forward Current 0.5 Ampere

## 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. <sup>1</sup>	$I_{F(AV)}$	0.5					A
Maximum Average Forward Rectified Current-On Aluminum Substrate <sup>2</sup>		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 <sup>2</sup> 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					$\mu\text{A}$
Maximum DC Reverse Current At Rated DC Blocking Voltage Per Leg( $T_A=125^\circ\text{C}$ )		100					$\mu\text{A}$
Typical Thermal Resistance Per Leg	$R_{\theta JA}^1$	85					$^\circ\text{C/W}$
	$R_{\theta JA}^2$	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					$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 To +150					$^\circ\text{C}$

**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)

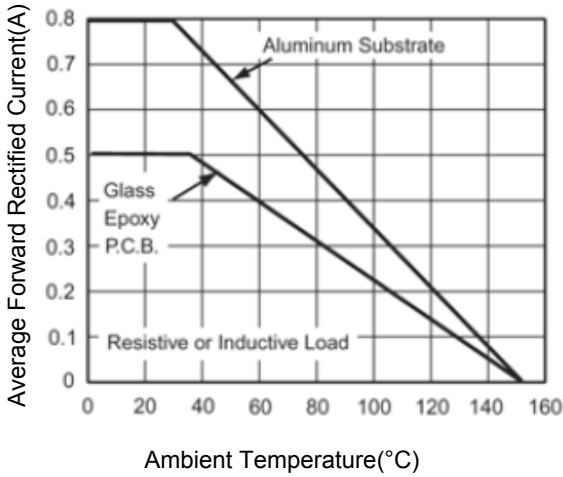


Figure 1. Derating Curve For Output Rectified Current

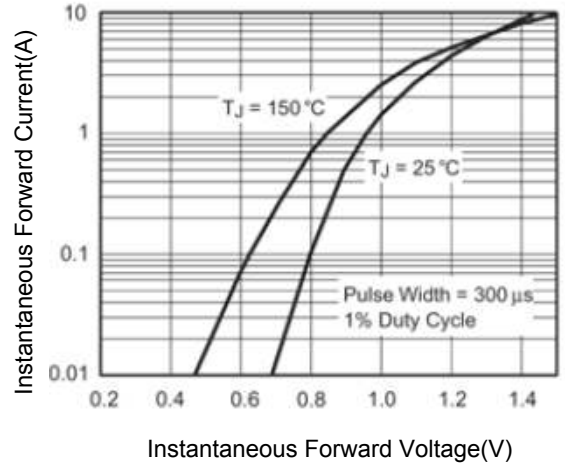


Figure 2. Typical Forward Characteristics Per Leg

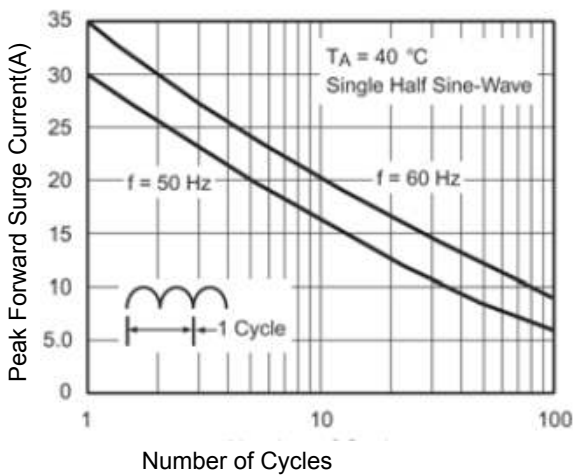


Figure 3. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

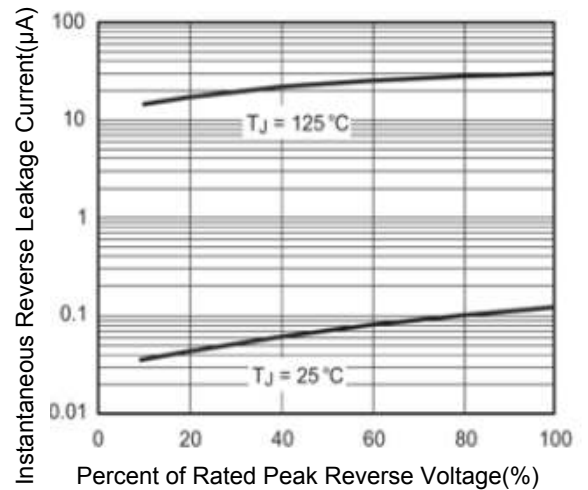


Figure 4. Typical Reverse Leakage Characteristics Per Leg

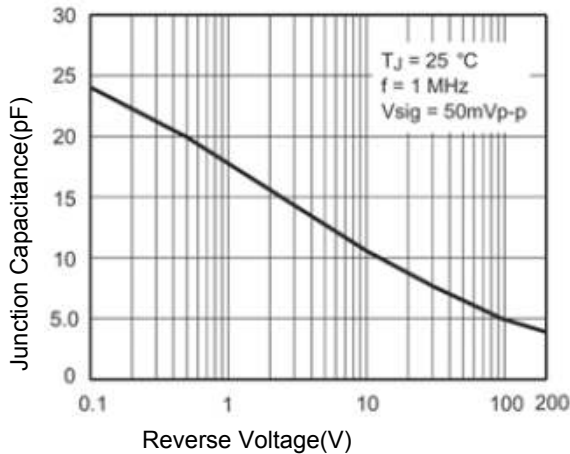


Figure 5. Typical Junction Capacitance Per Leg

## Package Outline Dimensions

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