SYNSEMI SEMICONDUCTOR

MB2M thru MB6M

Miniature Glass Passivated Single-Phase Bridge Rectifiers
Voltage Range 200 to 600 Volts Forward Current 0.5 Ampere

Features

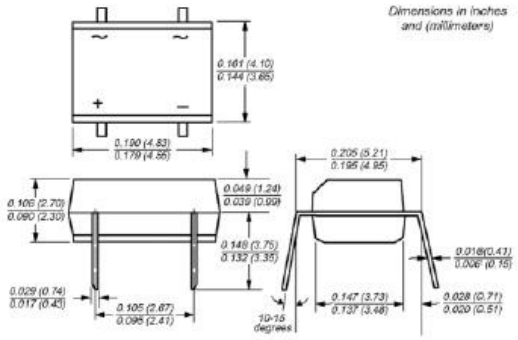
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated chip junctions
- High surge overload rating: 35A peak
- Saves space on printed circuit boards
- Recommended for non-automotive applications



MBM

Mechanical Data

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



Maximum Ratings and Electrical Characteristics

(T_A=25°C unless otherwise noted)

Parameter	Symbols	MB2M	MB4M	MB6M	Units
Maximum repetitive peak reverse voltag	V_{RRM}	200	400	600	Volts
Maximum RMS voltage	V_{RMS}	140	280	420	Volts
Maximum DC blocking voltage	V_{DC}	200	400	600	Volts
Maximum average forward output rectified current (see Fig.1) on glass-epoxy P.C.B. on aluminum substrate	$I_{F(AV)}$	0.5 (1) 0.8 (2)			Amp
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	35.0			Amps
Rating for fusing (t < 8.3ms)	I^2t	5.0			A^2sec
Maximum instantaneous forward voltage drop per leg at 0.4A	V_F	1.0			Volt
Maximum DC reverse current at T_A = 25°C rated DC blocking voltage per leg T_A = 125°C	I_R	5.0 100			uA
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JA}$ $R_{\theta JL}$	85 (1) 70 (2) 20 (1)			°C/W
Typical junction capacitance per leg (3)	C_J	13			pF
Operating junction and storage temperature range	T_J, 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
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

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

Fig. 1 - Derating Curve for Output Rectified Current

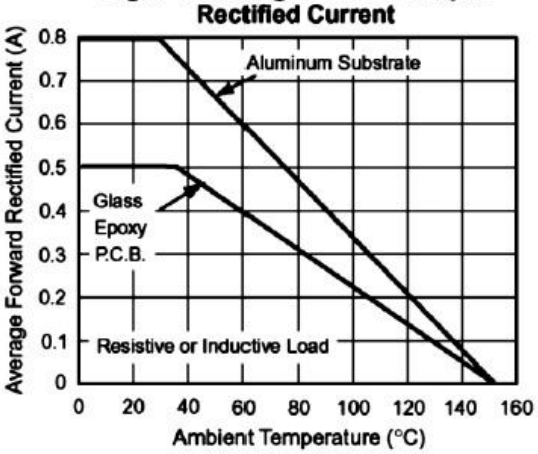


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

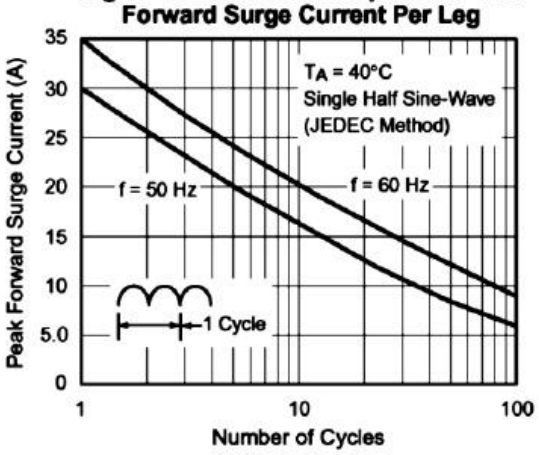


Fig. 3 - Typical Forward Voltage Characteristics Per Leg

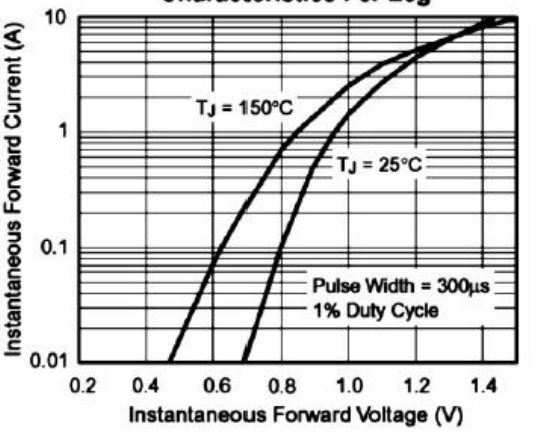


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

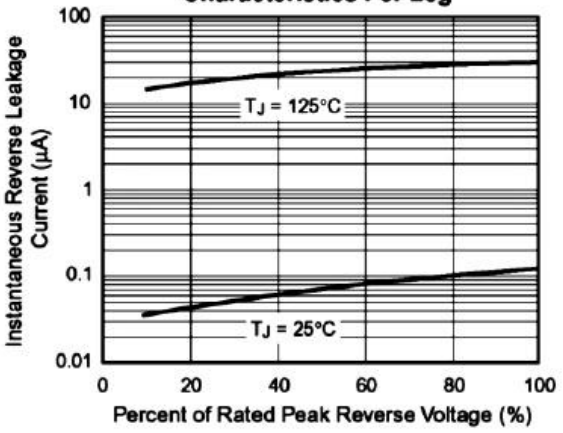


Fig. 5 - Typical Junction Capactitance Per Leg

