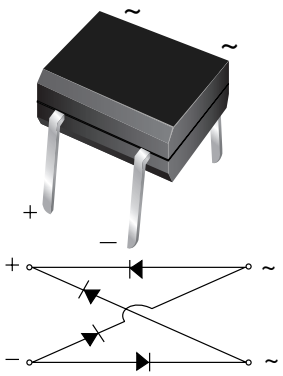
Miniature Glass Passivated Single-Phase Bridge Rectifiers



Case Style MBM

FEATURES

- UL recognized, file number E54214
- Ideal for printed circuit boards
- Applicable for automative insertion
- Middle surge current capability
- Recommended for non-automotive applications
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

RoHS COMPLIANT

TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for power supply, lighting ballaster, battery charger, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA

Case: MBM

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class 1A whisker test

Polarity: As marked on body

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	0.5 A
V_{RRM}	200 V, 400 V, 600 V
I_{FSM}	30 A
I_R	5 µA
V_F	1.0 V
T_J max.	150 °C

MAXIMUM RATINGS (T_A = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	B2M	B4M	B6M	UNIT
Device marking code		B2	B4	B6	
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	V
Maximum RMS voltage	V_{RMS}	140	280	420	V
Maximum DC blocking voltage	V_{DC}	200	400	600	V
Maximum average forward output rectified current (Fig. 1) on glass-epoxy P.C.B.	$I_{F(AV)}$	0.5 (1)			A
Peak forward surge current 10 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30			A
Rating for fusing (t < 8.3 ms)	I^2t	5.0			A^2s
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150			°C

Note:

(1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads

ELECTRICAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)						
PARAMETER	**TEST CONDITIONS**	**SYMBOL**	**B2M**	**B4M**	**B6M**	**UNIT**
Maximum instantaneous forward voltage drop per diode	0.5 A	V_F	1.0			V
Maximum DC reverse current at rated DC blocking voltage per diode	T_A = 25 °C T_A = 125 °C	I_R	5.0 100			µA
Typical junction capacitance per diode	4.0 V, 1 MHz	C_J	13			pF

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)					
PARAMETER	**SYMBOL**	**B2M**	**B4M**	**B6M**	**UNIT**
Typical thermal resistance (1)	$R_{\theta JA}$ $R_{\theta JL}$	90 40			°C/W

Note:

(1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads

ORDERING INFORMATION (Example)				
PREFERRED P/N	**UNIT WEIGHT (g)**	**PREFERRED PACKAGE CODE**	**BASE QUANTITY**	**DELIVERY MODE**
B2M-E3/45	0.22	45	100	Tube

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

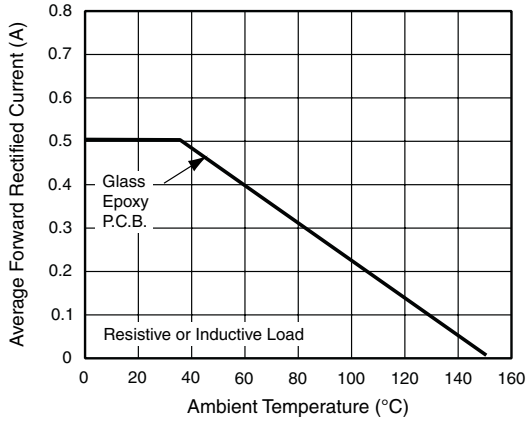


Figure 1. Derating Curve for Output Rectified Current

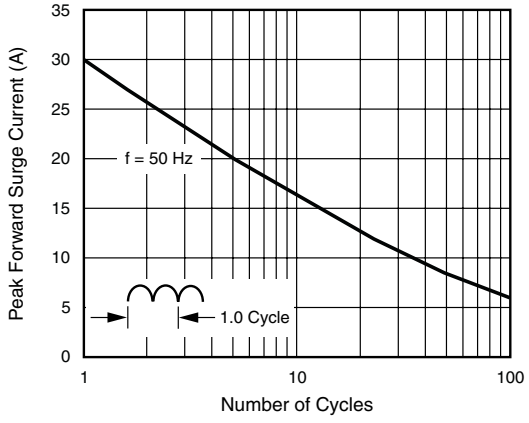


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

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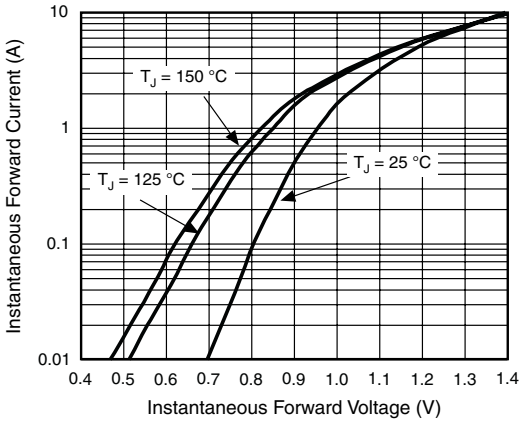


Figure 3. Typical Forward Voltage Characteristics Per Diode

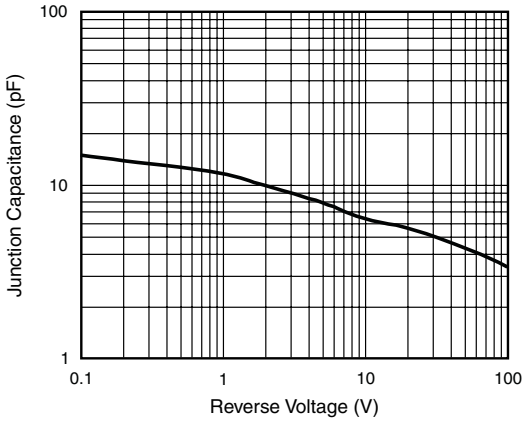


Figure 5. Typical Junction Capacitance Per Diode

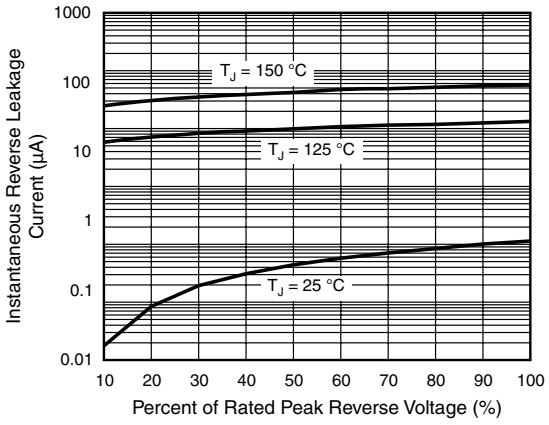
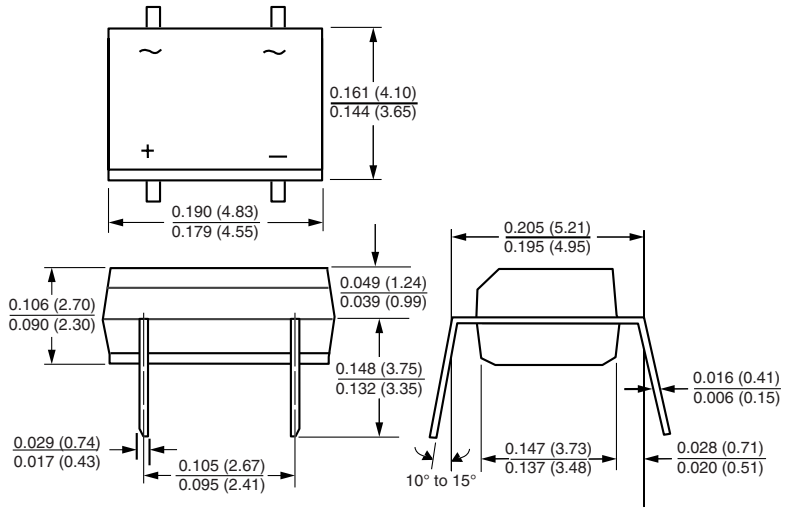


Figure 4. Typical Reverse Leakage Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style MBM



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