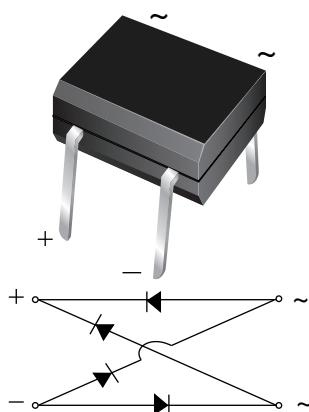


Miniature Glass Passivated Single-Phase Bridge Rectifiers


Case Style MBM
FEATURES

- UL recognized, file number E54214
- Ideal for printed circuit boards
- Applicable for automotive insertion
- Middle surge current capability
- Recommended for non-automotive applications
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see www.vishay.com/doc?99912


RoHS
COMPLIANT

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for power supply, lighting ballaster, battery charger, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA
Case: MBM

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: As marked on body

PRIMARY CHARACTERISTICS	
Package	MBM
$I_{F(AV)}$	0.5 A
V_{RRM}	200 V, 400 V, 600 V
I_{FSM}	30 A
I_R	5 μ A
V_F at $I_F = 0.5$ A	1.0 V
T_J max.	150 °C
Diode variations	Quad

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 PCB	$I_{F(AV)}$	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 PCB mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) pads

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

THERMAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	B2M	B4M	B6M	UNIT
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	90	40		$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$	40			

Note

⁽¹⁾ On glass epoxy PCB mounted on 0.05" x 0.05" (1.3 mm 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

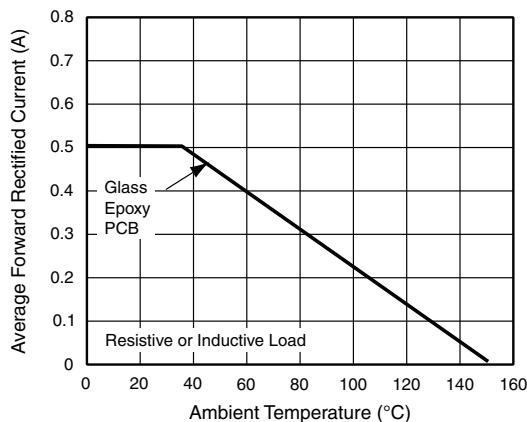
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Derating Curve for Output Rectified Current

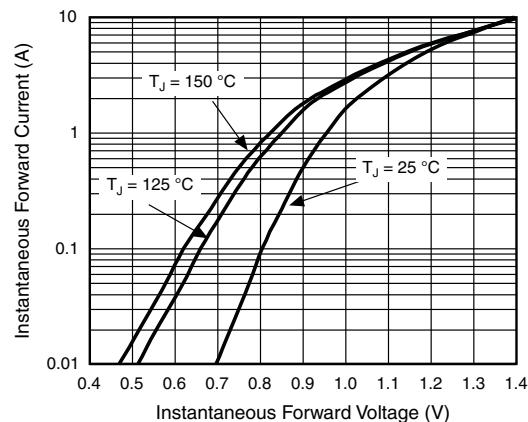


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

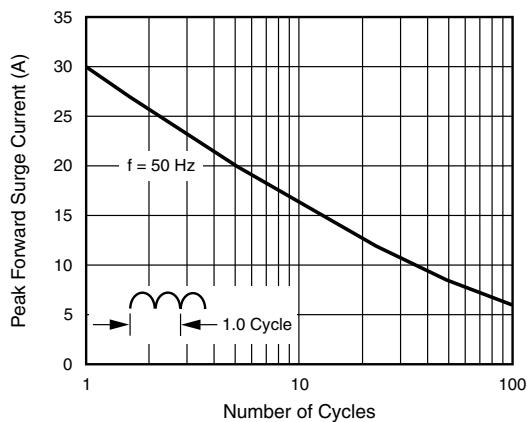


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

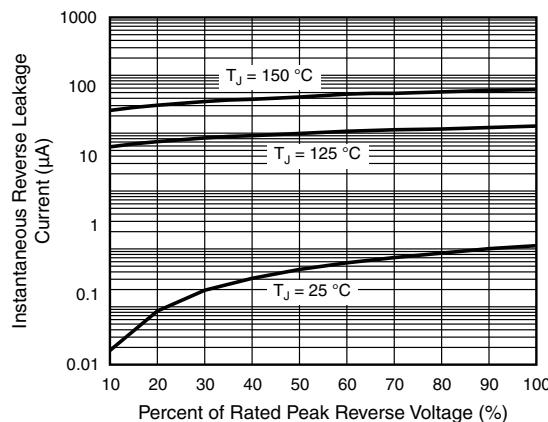


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

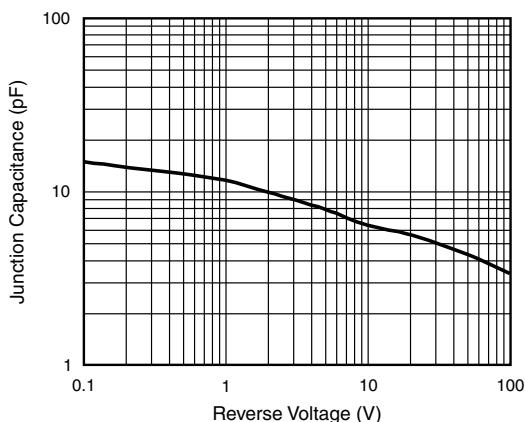
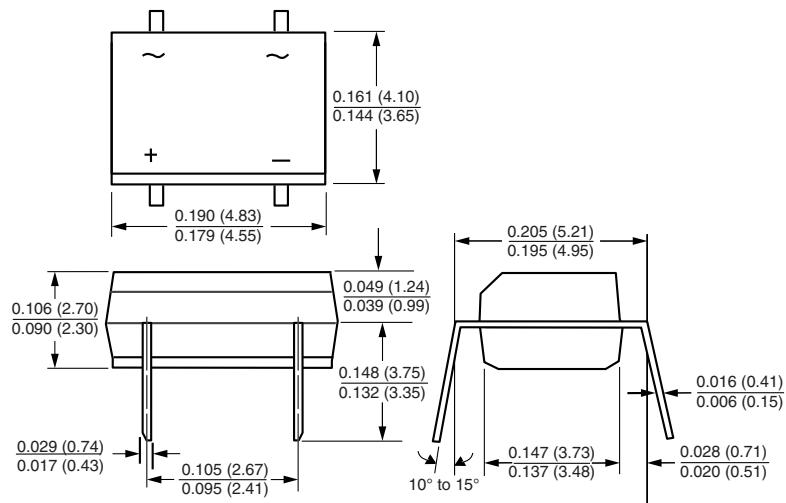


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)
Case Style MBM



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