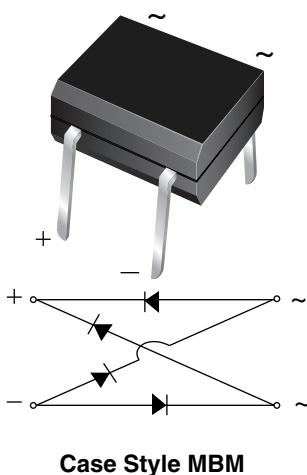


## Miniature Glass Passivated Single-Phase Bridge Rectifiers



### 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](http://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

### LINKS TO ADDITIONAL RESOURCES



3D Models

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	0.5 A
$V_{RRM}$	200 V, 400 V, 600 V
$I_{FSM}$	30 A
$I_R$	5 $\mu$ A
$V_F$ at $I_F = 0.5$ A	1.0 V
$T_J$ max.	150 °C
Package	MBM
Circuit configuration	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** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	B2M	B4M	B6M	UNIT
Maximum instantaneous forward voltage drop per diode	$I_F = 0.5 \text{ A}$	$V_F$		1.0		V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_A = 25^\circ\text{C}$	$I_R$		5.0		$\mu\text{A}$
	$T_A = 125^\circ\text{C}$			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 <sup>(1)</sup>	$R_{\theta JA}$		90		$^\circ\text{C/W}$
	$R_{\theta JL}$		40		

**Note**

<sup>(1)</sup> 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

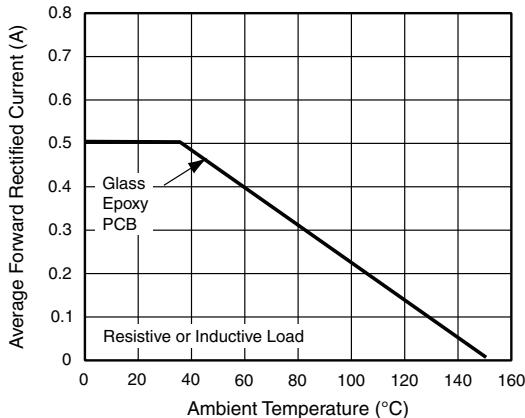
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)


Fig. 1 - Derating Curve for Output Rectified Current

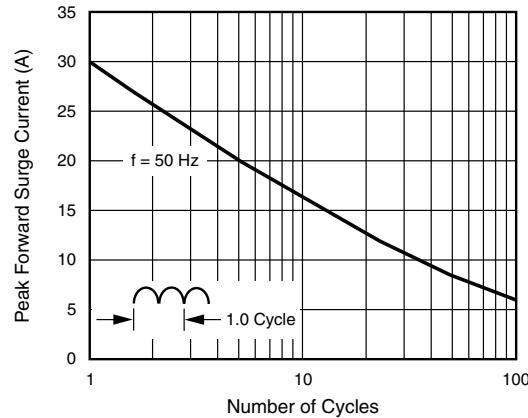


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

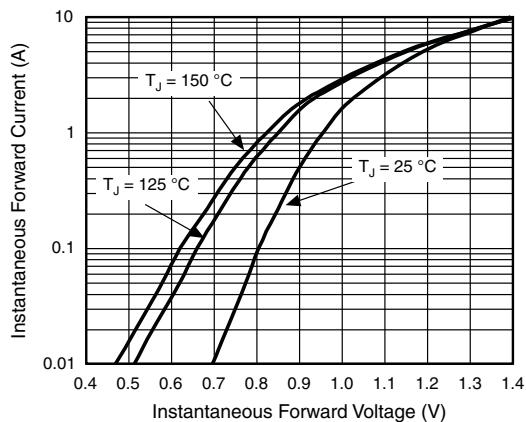


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

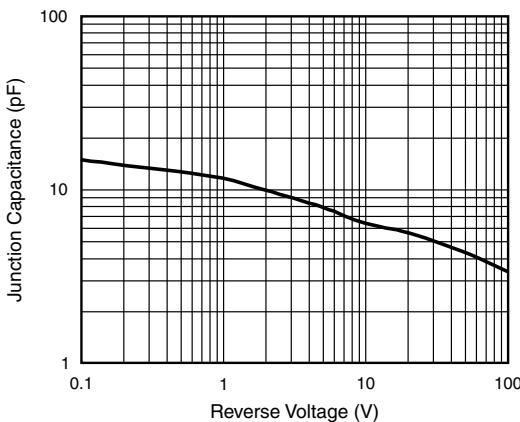


Fig. 5 - Typical Junction Capacitance Per Diode

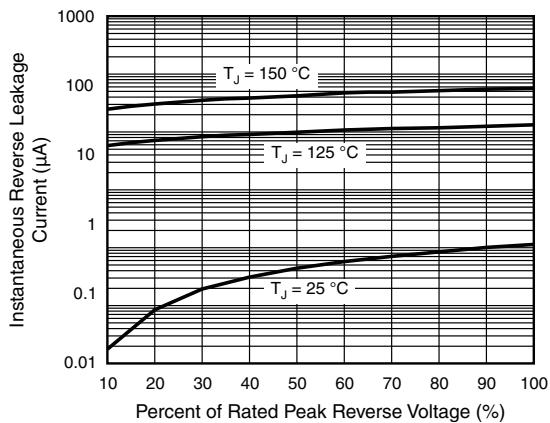
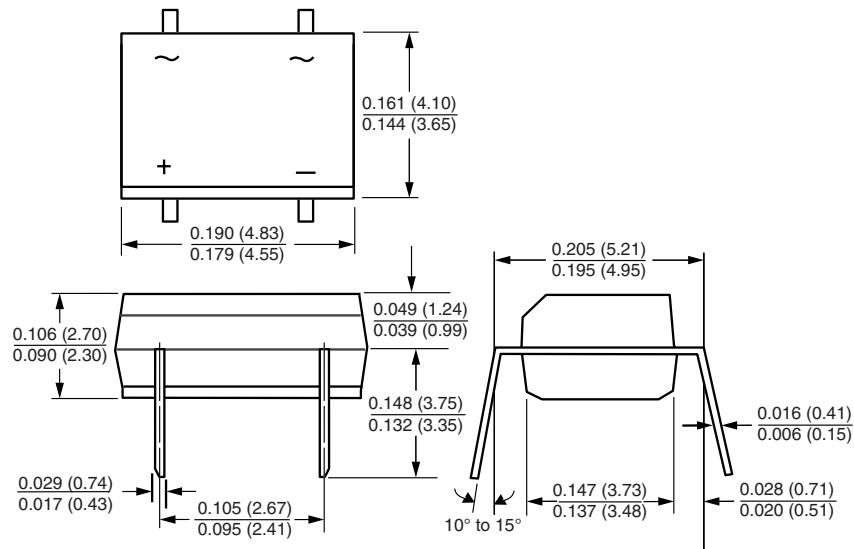


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)  
Case Style MBM



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