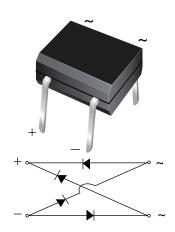


## Vishay General Semiconductor

# Miniature Glass Passivated Single-Phase Bridge Rectifiers



**Case Style MBM** 

PRIMARY CHARACTERISTICS					
Package	МВМ				
I <sub>F(AV)</sub>	0.5 A				
$V_{RRM}$	200 V, 400 V, 600 V				
I <sub>FSM</sub>	30 A				
I <sub>R</sub>	5 μΑ				
$V_F$ at $I_F = 0.5$ A	1.0 V				
T <sub>J</sub> max.	150 °C				
Diode variations	Quad				

#### **FEATURES**





- Ideal for printed circuit boards
- · Applicable for automative 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 <a href="https://www.vishav.com/doc?99912"><u>www.vishav.com/doc?99912</u></a>

#### **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

<b>MAXIMUM RATINGS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	B2M	B4M	В6М	UNIT	
Device marking code		B2	B4	B6		
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	400	600	V	
Maximum RMS voltage	V <sub>RMS</sub>	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 <sub>F(AV)</sub>	0.5 (1)			А	
Peak forward surge current 10 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30			А	
Rating for fusing (t < 8.3 ms)	I <sup>2</sup> t	5.0			A <sup>2</sup> s	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 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

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	B2M	B4M	В6М	UNIT
Maximum instantaneous forward voltage drop per diode	I <sub>F</sub> = 0.5 A	V <sub>F</sub>	1.0		V	
Maximum DC reverse current at rated	T <sub>A</sub> = 25 °C	I_		5.0		
DC blocking voltage per diode	T <sub>A</sub> = 125 °C	I <sub>R</sub>	100		- μΑ	
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	13		pF	



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THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	B2M	B4M	В6М	UNIT	
Typical thermal resistance (1)	$R_{\theta JA}$	90			°C/W	
	$R_{ heta JL}$	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<sub>A</sub> = 25 °C unless otherwise noted)

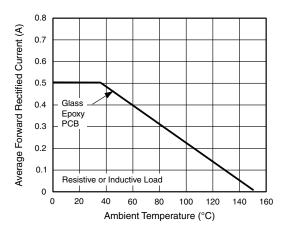


Fig. 1 - Derating Curve for Output Rectified Current

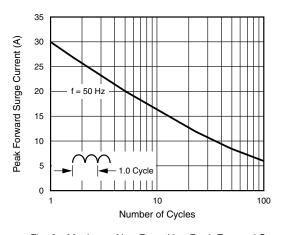


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

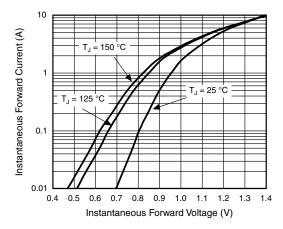


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

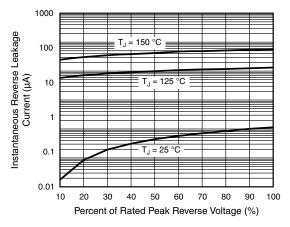


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode



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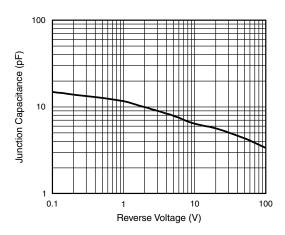
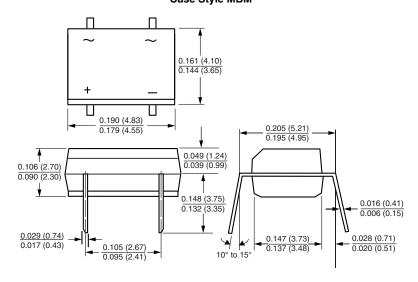


Fig. 5 - Typical Junction Capacitance Per Diode

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





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