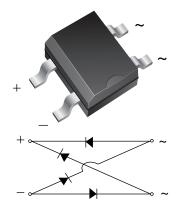
Vishay General Semiconductor

Miniature Glass Passivated Single-Phase Surface-Mount Bridge Rectifier



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MBS (TO-269AA)

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS				
I _{F(AV)}	0.5 A			
V _{RRM}	200 V, 400 V, 600 V			
I _{FSM}	30 A			
I _R	5 μΑ			
V_F at $I_F = 0.5 A$	1.0 V			
T _J max.	150 °C			
Package	MBS (TO-269AA)			
Circuit configuration	Quad			

FEATURES

- UL recognition, file number E54214
- · Saves space on printed circuit boards
- Ideal for automated placement
- Middle surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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: MBS (TO-269AA)

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 JESD22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked on body

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL	B2S	B4S	B6S	UNIT
Device marking code	vice marking code B2 B4 B6			B6	
Maximum repetitive peak reverse voltage	repetitive peak reverse voltage V _{RRM} 200 400 600		600	V	
Maximum RMS voltage	V _{RMS}	140	280	420	V
Maximum DC blocking voltage	V _{DC}	200 400 600		600	V
Maximum average forward output rectified current on glass-epoxy PCB (fig. 1)	I _{F(AV)}	0.5 (1)			А
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	I _{FSM}	30			А
Rating for fusing (t < 8.3 ms)	l ² t	5.0		A ² s	
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

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ELECTRICAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	VALUES	UNIT		
Maximum instantaneous forward voltage per diode	I _F = 0.5 A	V _F	1.0	V		
Maximum DC reverse current at rated DC blocking voltage per diode	T _A = 25 °C	- I _R	5.0	μΑ		
	T _A = 125 °C		100			
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	13	pF		

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)						
PARAMETER	SYMBOL	L B2S B4S B6S		UNIT		
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	90			°C/W	
rypical mermai resistance (*)	R _{θJL}	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		
B2S-E3/80	0.22	80	3000	13" diameter paper tape and reel		

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

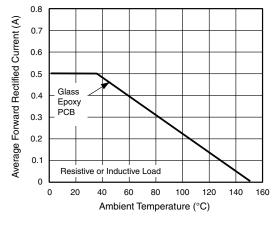


Fig. 1 - Derating Curve for Output Rectified Current

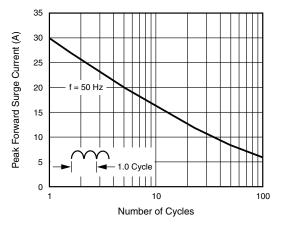


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

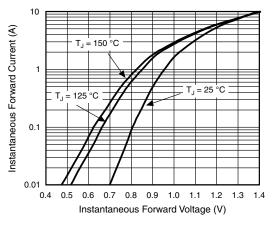


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

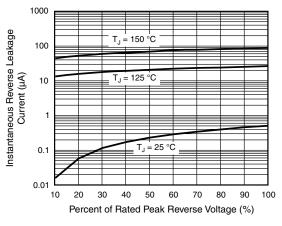


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

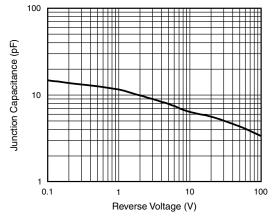
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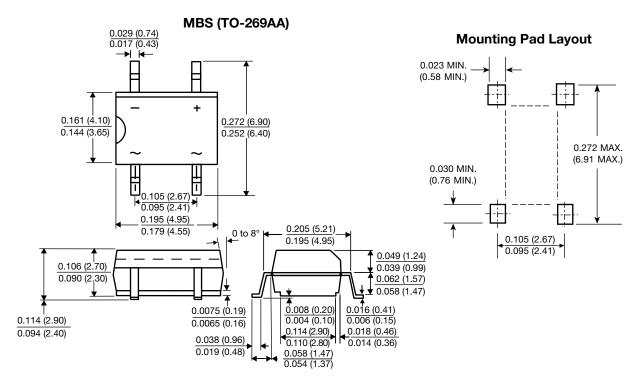


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Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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