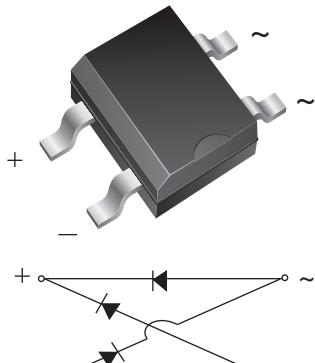


Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifier


TO-269AA (MBS)

PRIMARY CHARACTERISTICS	
Package	TO-269AA (MBS)
$I_{F(AV)}$	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

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 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: TO-269AA (MBS)

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		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 on glass-epoxy PCB (fig. 1)	$I_{F(AV)}$	0.5 (1)			A
Peak forward surge current 10 ms single half sine-wave superimposed on rated load	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	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	μ A
	$T_A = 125$ °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	B2S	B4S	B6S	UNIT
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$		90		$^\circ\text{C}/\text{W}$
	$R_{\theta JL}$		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
B2S-E3/80	0.22	80	3000	13" diameter paper tape and reel

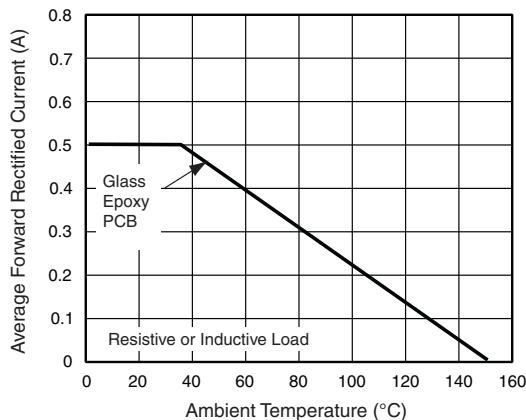
RATINGS AND CHARACTERISTICS CURVES ($T_A = 25^\circ\text{C}$ unless otherwise noted)


Fig. 1 - Derating Curve for Output Rectified Current

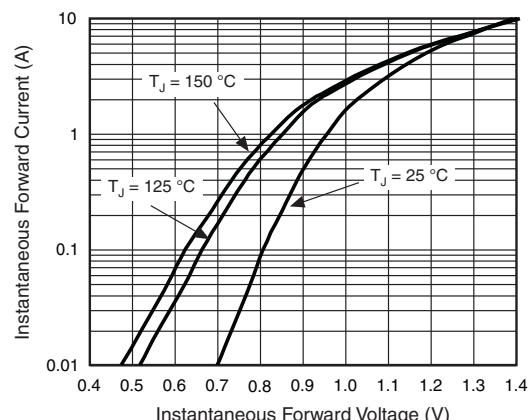


Fig. 3 - Typical Forward Voltage Characteristics Per Diode

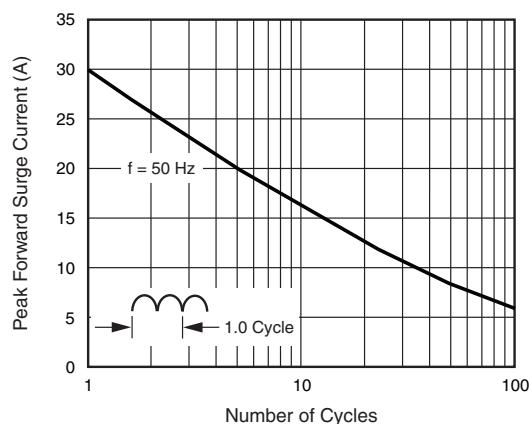


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

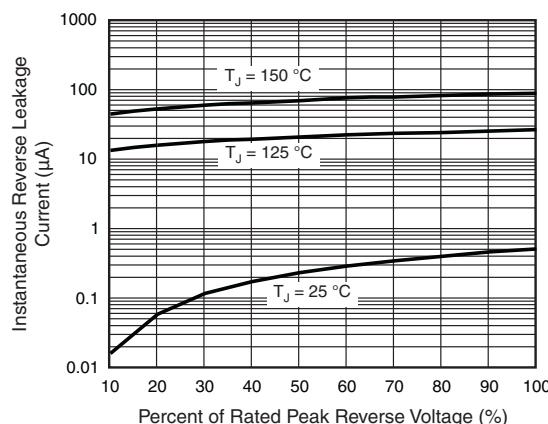


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

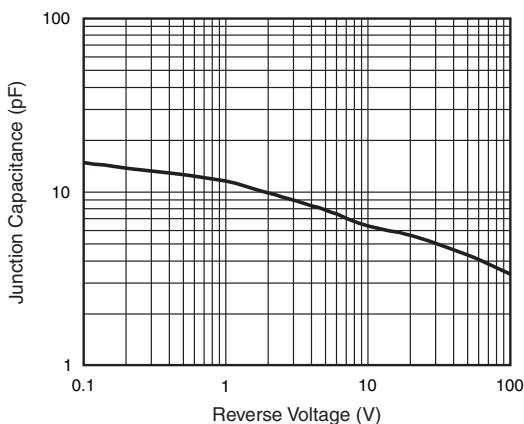
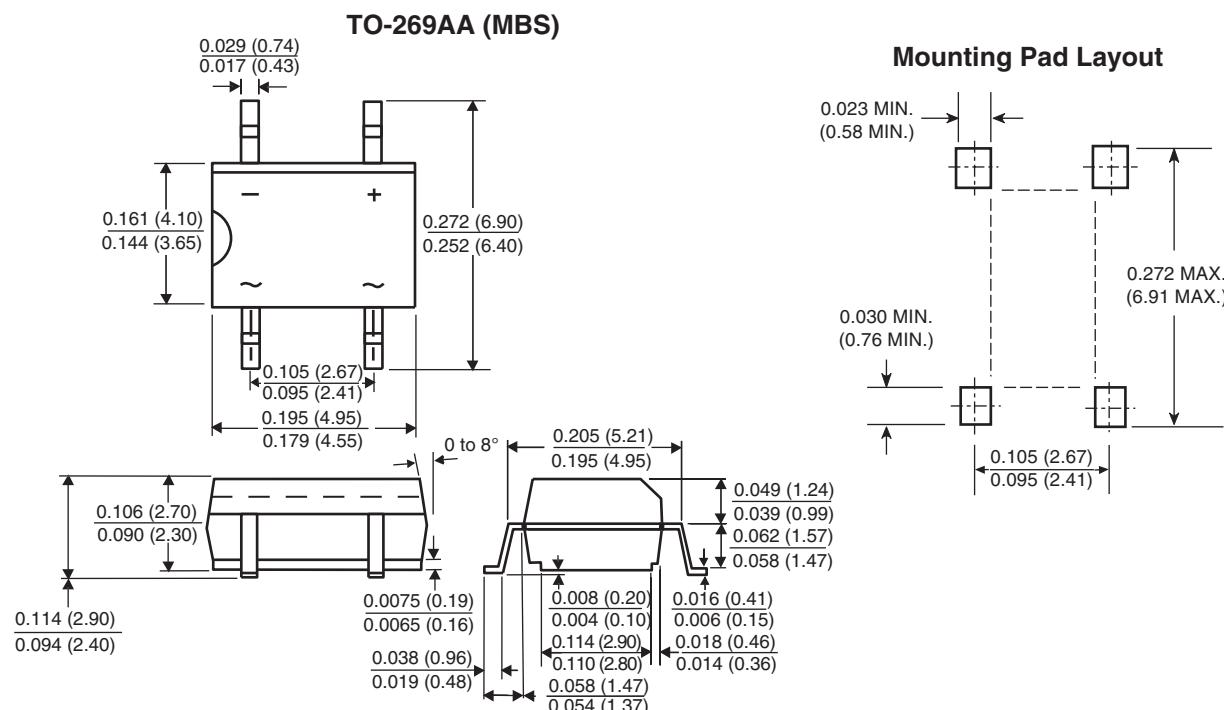


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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