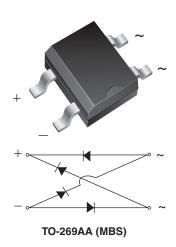


Vishay General Semiconductor

Miniature Glass Passivated Fast Recovery Surface Mount Bridge Rectifier



PRIMARY CHARACTERISTICS				
I _{F(AV)}	0.5 A			
V_{RRM}	200 V, 400 V			
I _{FSM}	30 A			
t _{rr}	150 ns			
V_F at $I_F = 0.4$ A	1.25 V			
T _J max.	150 °C			
Package	TO-269AA (MBS)			
Diode variations	Quad			

FEATURES





- · Saves space on printed circuit boards
- · Ideal for automated placement
- Fast recovery, low switching loss
- High surge current capability

RoHS

- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- Material categorization: For definitions of compliance please see <u>www.vishav.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: 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	RMB2S	RMB4S	UNIT
Device marking code			2R	4R	
Maximum repetitive peak reverse voltage		V_{RRM}	200	400	V
Maximum RMS voltage		V _{RMS}	140	280	V
Maximum DC blocking voltage		V _{DC}	200	400	V
Maximum average forward output rectified current at T _A = 30 °C	on glass-epoxy PCB (1)		0.5		А
	on aluminum substrate (2)	I _{F(AV)}	0.8		
Peak forward surge current 8.3 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

Notes

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

⁽²⁾ On aluminum substrate PCB with an area of 0.8" x 0.8" (20 mm x 20 mm) mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) solder pad



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	TEST CONDITIONS	SYMBOL	RMB2S	RMB4S	UNIT
Maximum instantaneous forward voltage per diode	I _F = 0.4 A	V _F	1.	25	V
Maximum DC reverse current at rated DC blocking	imum DC reverse current at rated DC blocking T _A = 25 °C		5.0		
voltage per diode	T _A = 125 °C	IR	100		μΑ
Maximum reverse recovery time per diode	$I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A},$ $I_{rr} = 0.25 \text{ A}$	t _{rr}	150		ns
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	1	3	pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL	RMB2S	RMB4S	UNIT
	R _{0JA} (1)	85		°C/W
Typical thermal resistance (1)	R _{θJA} ⁽²⁾	70		
	R _{0JL} (1)	20		

Notes

- $^{(1)}$ On glass epoxy PCB mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) pads
- (2) On aluminum substrate PCB with an area of 0.8" x 0.8" (20 mm x 20 mm) mounted on 0.05" x 0.05" (1.3 mm x 1.3 mm) solder pad

ORDERING INFORMATION (Example)					
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE	
RMB4S-E3/45	0.22	45	100	Tube	
RMB4S-E3/80	0.22	80	3000	13" diameter paper tape and reel	

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

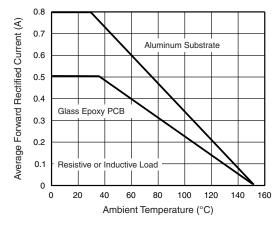


Fig. 1 - Maximum Forward Current Derating Curve

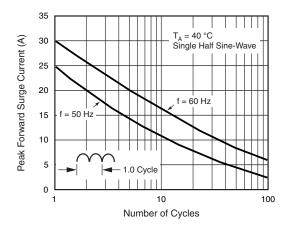


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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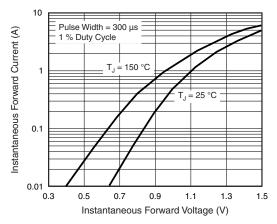


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

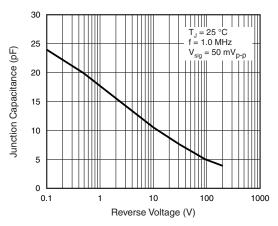


Fig. 5 - Typical Junction Capacitance Per Diode

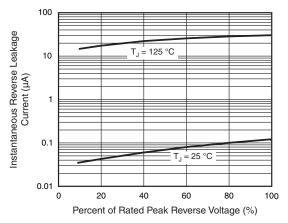
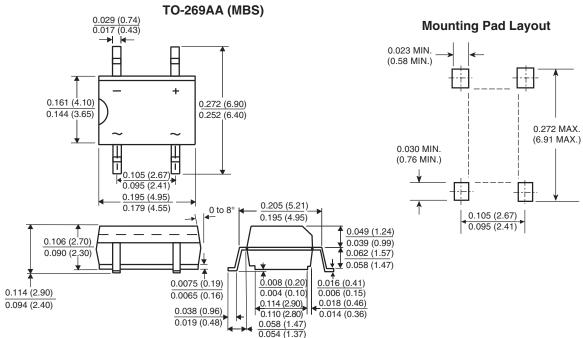


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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