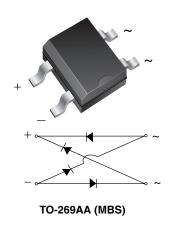


Vishay General Semiconductor

# Miniature Glass Passivated Single-Phase Surface Mount Bridge Rectifier



PRIMARY CHARACTERISTICS					
I <sub>F(AV)</sub>	0.5 A				
V <sub>RRM</sub>	200 V, 400 V, 600 V				
I <sub>FSM</sub>	30 A				
I <sub>R</sub>	5 μΑ				
V <sub>F</sub>	1.0 V				
T <sub>J</sub> max.	150 °C				

#### **FEATURES**





Ideal for automated placement

Middle surge current capability

 Meets MSL level 1, per J-STD-020, LF maximum peak of 250 °C

Solder dip 260 °C, 40 s

 Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

# (Pb)



### TYPICAL APPLICATIONS

General purpose use in ac-to-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)

Epoxy meets UL 94V-0 flammability rating

Terminals: Matte tin plated leads, solderable per

J-STD-002 and JESD22-B102

E3 suffix for consumer grade, meets JESD 201 class

1A whisker test

Polarity: As marked on body

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	B2S	B4S	B6S	UNIT	
Device marking code		B2	B4	В6		
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 <sub>DC</sub>	200	400	600	٧	
Maximum average forward output rectified current on glass-epoxy P.C.B. (Fig. 1)	I <sub>F(AV)</sub>	0.5 (1)			А	
Peak forward surge current 10 msec single half sine-wave superimposed on rated load	I <sub>FSM</sub>	30			А	
Rating for fusing (t < 8.3 ms)	l <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 P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3 mm) pads

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	VALUE	UNIT	
Max. instantaneous forward voltage drop per diode	0.5 A		V <sub>F</sub>	1.0	V	
Maximum DC reverse current at rated DC blocking voltage per diode		T <sub>A</sub> = 25 °C T <sub>A</sub> = 125 °C	I <sub>R</sub>	5.0 100	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	B2S	B4S	B6S	UNIT
Typical thermal resistance <sup>(1)</sup>	$R_{ hetaJA} \ R_{ hetaJL}$	90 40			°C/W

#### Note:

(1) On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 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		

10

#### **RATINGS AND CHARACTERISTICS CURVES**

 $(T_A = 25 \, ^{\circ}C \text{ unless otherwise noted})$ 

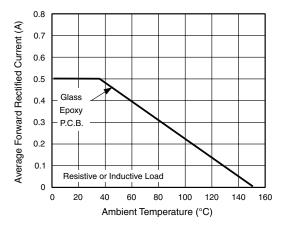
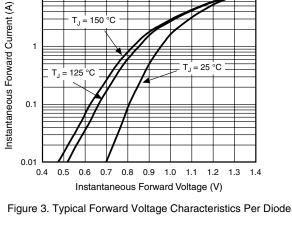


Figure 1. Derating Curve for Output Rectified Current



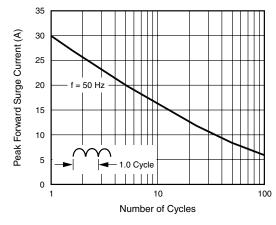


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

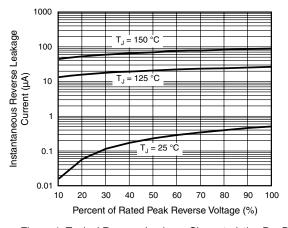


Figure 4. Typical Reverse Leakage Characteristics Per Diode



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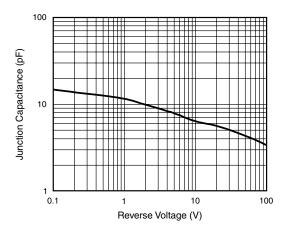
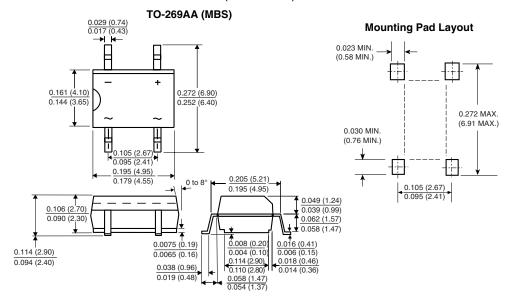


Figure 5. Typical Junction Capacitance Per Diode

#### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)





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