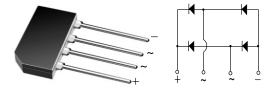


# G2SBA20, G2SBA60 & G2SBA80

Vishay General Semiconductor

# **Glass Passivated Single-Phase Bridge Rectifier**



Case Type GBL

1.5 A

200 V, 600 V, 800 V

60 A

5 μΑ

1.0 V

150 °C

**PRIMARY CHARACTERISTICS** 

I<sub>F(AV)</sub>

V<sub>RRM</sub>

I<sub>FSM</sub>

 $I_{R}$ 

 $V_{F}$ 

T<sub>J</sub> max.

#### FEATURES

- UL recognition file number E54214
- · Ideal for printed circuit boards
- · High surge current capability
- Typical I<sub>R</sub> less than 0.1 μA
- High case dielectric strength
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

#### **TYPICAL APPLICATIONS**

General purpose use in ac-to-dc bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

#### **MECHANICAL DATA**

Case: GBL

Epoxy meets UL 94 V-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	G2SBA20	G2SBA60	G2SBA80	UNIT	
Maximum repetitive peak reverse voltage		200	600	800	V	
Maximum RMS voltage	V <sub>RMS</sub>	140	420	560	V	
Maximum DC blocking voltage	V <sub>DC</sub>	200	600	800	V	
Maximum average forward rectified output current at $T_A = 25 ^{\circ}\text{C}$	I <sub>F(AV)</sub>	1.5			А	
Peak forward surge current single sine-wave superimposed on rated load	I <sub>FSM</sub>	60			A	
Rating for fusing (t < 8.3 ms)	l <sup>2</sup> t	15		A <sup>2</sup> s		
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 55 to + 150			°C	

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25 \degree C$ unless otherwise noted)						
PARAMETER TEST CONDITIONS		SYMBOL	G2SBA20	G2SBA60	G2SBA80	UNIT
Maximum instantaneous forward voltage drop per diode	0.75 A	V <sub>F</sub>	1.00		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>	5.0 300		μΑ	

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ROHS COMPLIANT

### Vishay General Semiconductor



<b>THERMAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	G2SBA20	G2SBA60	G2SBA80	UNIT	
Typical thermal resistance	$R_{ extsf{ heta}JA}\ R_{ hetaJC}$	40 12		°C/W		

Note:

(1) Unit mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length

ORDERING INFORMATION (Example)						
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE		
G2SBA60-E3/45	2.017	45	20	Tube		
G2SBA60-E3/51	2.017	51	400	Anti-static PVC tray		

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

(T<sub>A</sub> = 25 °C unless otherwise noted)

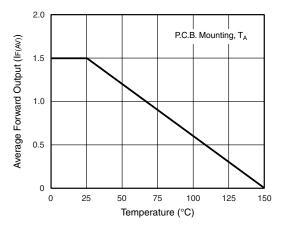


Figure 1. Derating Curve Output Rectified Current

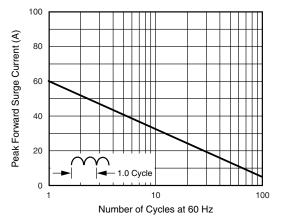


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

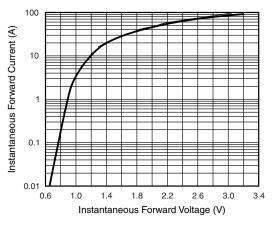
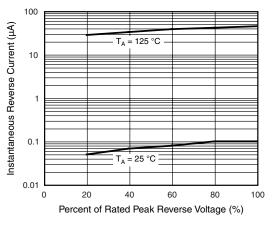


Figure 3. Typical Forward Characteristics Per Diode





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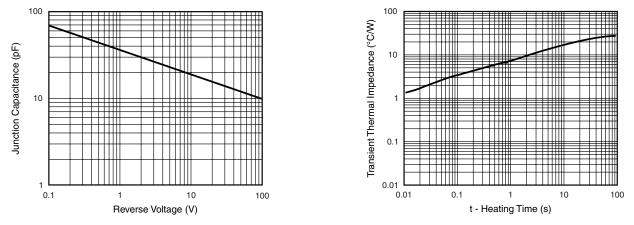
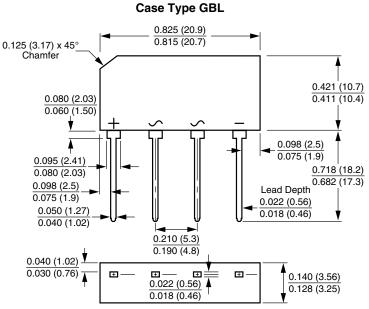


Figure 5. Typical Junction Capacitance Per Diode

Figure 6. Typical Transient Thermal Impedance





Polarity shown on front side of case, positive lead beveled corner

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