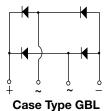


## G2SB20, G2SB60, G2SB80

Vishay General Semiconductor

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





#### **FEATURES**

- UL recognition file number E54214
- · Ideal for printed circuit boards
- High surge current capability
- T : 11 1 1 1 1 1 1 1 1 1
- $\bullet$  Typical  $I_R$  less than 0.1  $\mu A$
- High case dielectric strength
  Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see <a href="https://www.vishav.com/doc?99912">www.vishav.com/doc?99912</a>

#### **LINKS TO ADDITIONAL RESOURCES**

www.vishay.com



PRIMARY CHARACTERISTICS					
I <sub>F(AV)</sub>	1.5 A				
$V_{RRM}$	200 V, 600 V, 800 V				
I <sub>FSM</sub> 80 A					
I <sub>R</sub>	5 μΑ				
$V_F$ at $I_F = 0.75 \text{ V}$	1.0 V				
T <sub>J</sub> max.	150 °C				
Package	GBL				
Circuit configuration	In-line				

### **TYPICAL APPLICATIONS**

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances application.

#### **MECHANICAL DATA**

Case: GBL

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 JESD 22-B102

E3 suffix 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	G2SB20	G2SB60	G2SB80	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	600	800	V
Maximum RMS voltage	$V_{RMS}$	140	420	560	V
Maximum DC blocking voltage	$V_{DC}$	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>	80			А
Rating for fusing (t < 8.3 ms)	l <sup>2</sup> t	27		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 <sub>A</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS	SYMBOL	G2SB20	G2SB60	G2SB80	UNIT
Maximum instantaneous forward voltage drop per diode	0.75 A	V <sub>F</sub>	1.00		V	
Maximum DC reverse current at T <sub>A</sub> = 25 °C		1-	5.0			
rated DC blocking voltage per diode	T <sub>A</sub> = 125 °C	IR	300			μΑ



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THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	G2SB20	G2SB60	G2SB80	UNIT		
Typical thermal resistance	$R_{\theta JA}$	40			°C/W		
Typical trieffial resistance	$R_{ heta JC}$	12			C/ VV		

#### Note

Unit mounted on PCB with 0.5" x 0.5" (12 mm 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		
G2SB60-E3/45	2.045	45	20	Tube		
G2SB60-E3/51	2.045	51	400	Anti-static PVC tray		

### RATINGS AND CHARACTERISTICS CURVES (T<sub>A</sub> = 25 °C unless otherwise noted)

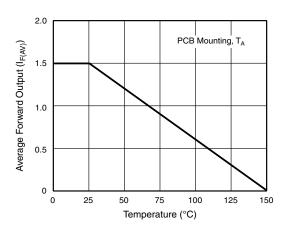


Fig. 1 - Derating Curve Output Rectified Current

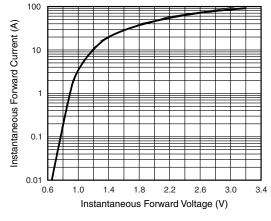


Fig. 3 - Typical Forward Characteristics Per Diode

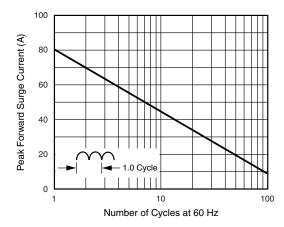


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

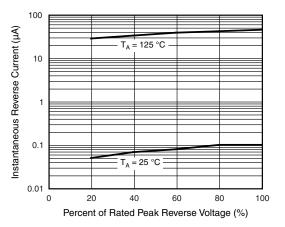


Fig. 4 - Typical Reverse Characteristics Per Diode



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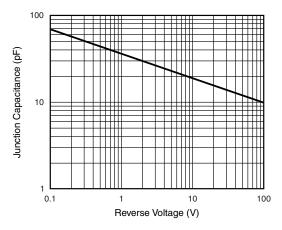


Fig. 5 - Typical Junction Capacitance Per Diode

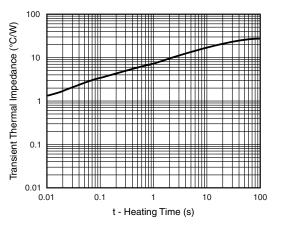


Fig. 6 - Typical Transient Thermal Impedance

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

#### Case Type GBL 0.825 (20.9) 0.815 (20.7) 0.125 (3.17) x 45° Chamfer 0.421 (10.7) 0.411 (10.4) 0.080 (2.03) 0.060 (1.50) 0.098 (2.5) 0.075 (1.9) 0.095 (2.41) 0.718 (18.2) 0.080 (2.03) 0.682 (17.3) 0.098 (2.5) Lead Depth 0.075 (1.9) 0.022 (0.56) 0.050 (1.27) 0.018 (0.46) 0.040 (1.02) 0.210 (5.3) 0.190 (4.8) 0.040 (1.02) 0.030 (0.76) + + + 0.140 (3.56) 0.022 (0.56) 0.128 (3.25) 0.018 (0.46)

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

## **Legal Disclaimer Notice**



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