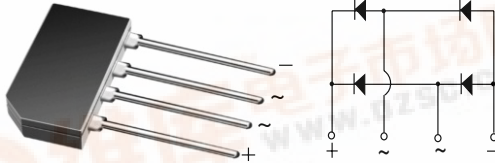




# G2SB20, G2SB60 & G2SB80

Vishay General Semiconductor

## Glass Passivated Single-Phase Bridge Rectifier



Case Type GBL

### FEATURES

- UL recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- Typical  $I_R$  less than 0.1  $\mu A$
- High case dielectric strength
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



**RoHS**  
COMPLIANT

### TYPICAL APPLICATIONS

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

### MECHANICAL DATA

**Case:** GBL

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

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1.5 A
$V_{RRM}$	200 V, 600 V, 800 V
$I_{FSM}$	80 A
$I_R$	5 $\mu A$
$V_F$	1.0 V
$T_J$ max.	150 °C

### MAXIMUM RATINGS ( $T_A = 25$ °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 $T_A = 25$ °C	$I_{F(AV)}$	1.5			A
Peak forward surge current single sine-wave superimposed on rated load	$I_{FSM}$	80			A
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	27			A <sup>2</sup> s
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to + 150			°C

### ELECTRICAL CHARACTERISTICS ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	G2SB20	G2SB60	G2SB80	UNIT
Maximum instantaneous forward voltage drop per diode	0.75 A	$V_F$	1.00			V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_A = 25$ °C $T_A = 125$ °C	$I_R$	5.0 300			$\mu A$

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THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	G2SB20	G2SB60	G2SB80	UNIT
Typical thermal resistance	$R_{\theta JA}$		40		$^{\circ}\text{C/W}$
	$R_{\theta JC}$		12		

## 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
G2SB60-E3/45	2.045	45	20	Tube
G2SB60-E3/51	2.045	51	400	Anti-static PVC tray

## RATINGS AND CHARACTERISTICS CURVES

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

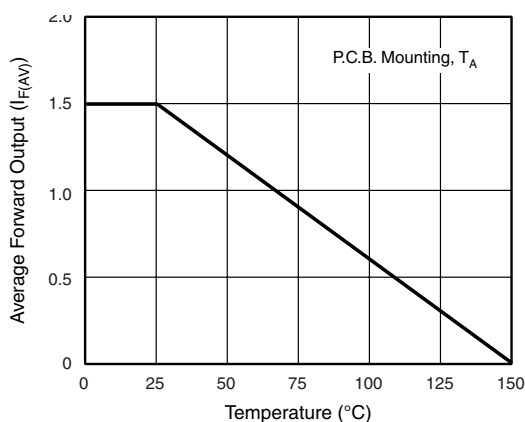


Figure 1. Derating Curve Output Rectified Current

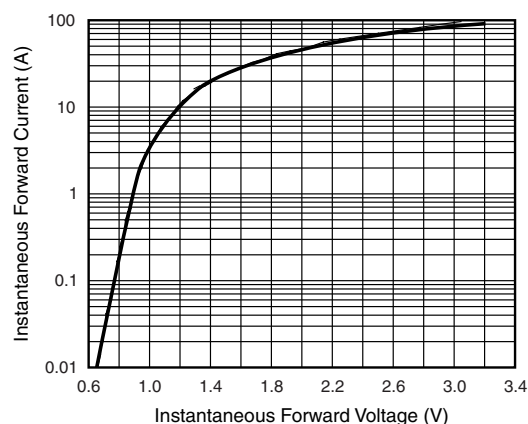


Figure 3. Typical Forward Characteristics Per Diode

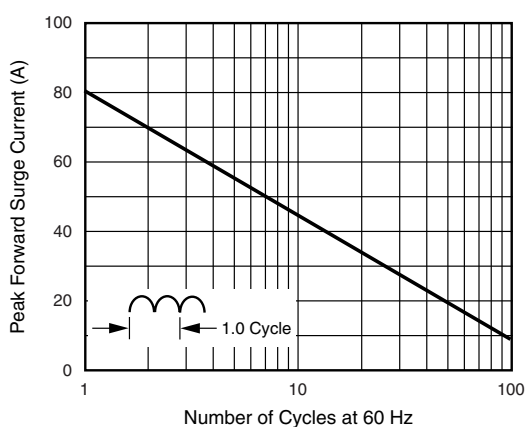


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

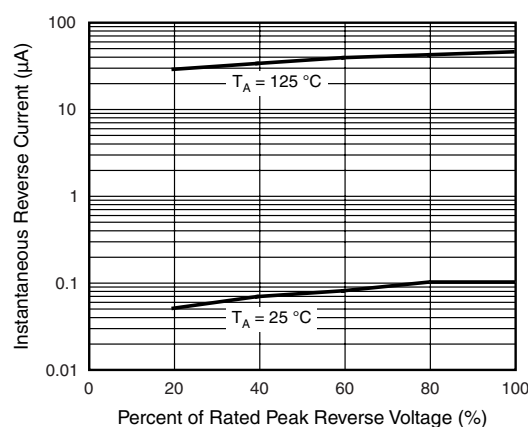


Figure 4. Typical Reverse Characteristics Per Diode



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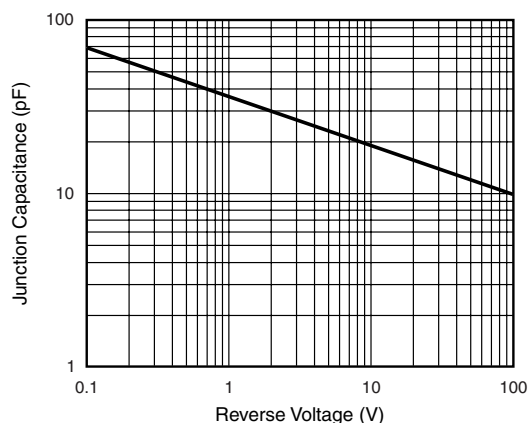


Figure 5. Typical Junction Capacitance Per Diode

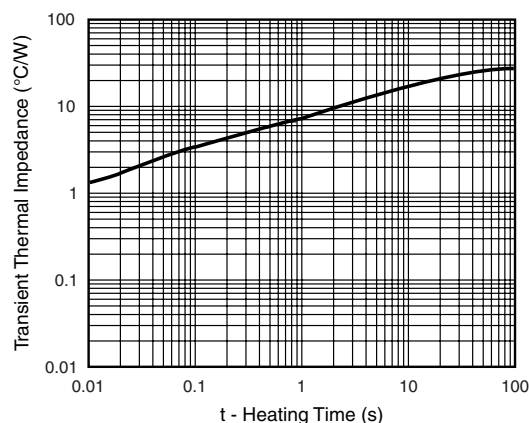
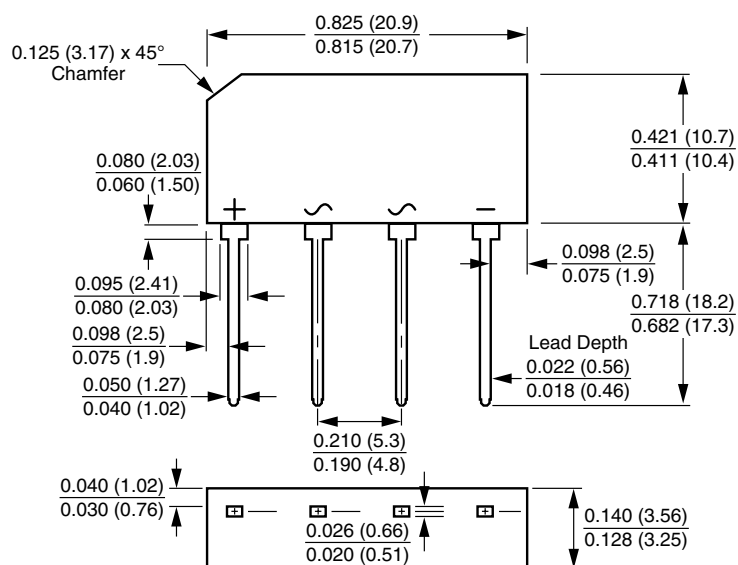


Figure 6. Typical Transient Thermal Impedance

### PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

#### Case Type GBL



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



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