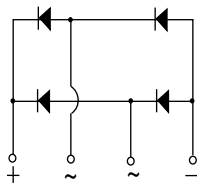


## Glass Passivated Single-Phase Bridge Rectifier



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 275 °C max. 10 s, per JESD 22-B106
- Material categorization: For definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT

### 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

### PRIMARY CHARACTERISTICS

Package	GBL
$I_{F(AV)}$	1.5 A
$V_{RRM}$	200 V, 600 V, 800 V
$I_{FSM}$	80 A
$I_R$	5 $\mu A$
$V_F$ at $I_F = 0.75$ V	1.0 V
$T_J$ max.	150 °C
Diode variations	In-Line

### 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)

ELECTRICAL CHARACTERISTICS (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 rated DC blocking voltage per diode	T <sub>A</sub> = 25 °C	I <sub>R</sub>	5.0			μA
	T <sub>A</sub> = 125 °C		300			

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

PARAMETER	SYMBOL	G2SB20	G2SB60	G2SB80	UNIT
Typical thermal resistance	R <sub>θJA</sub>	40			°C/W
	R <sub>θJC</sub>	12			

**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

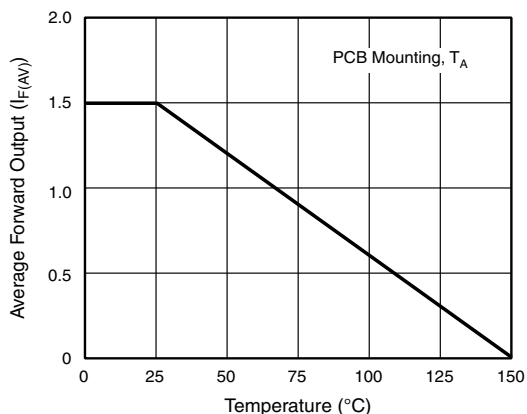
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

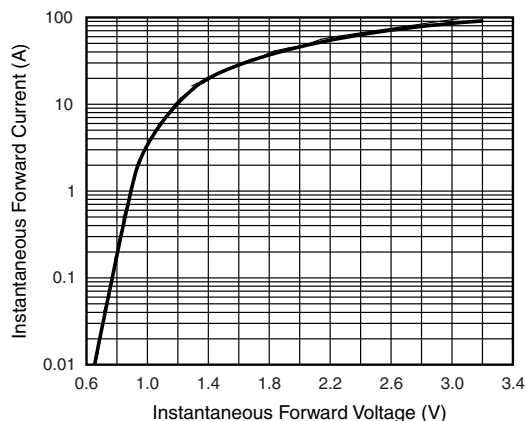


Fig. 3 - Typical Forward Characteristics Per Diode

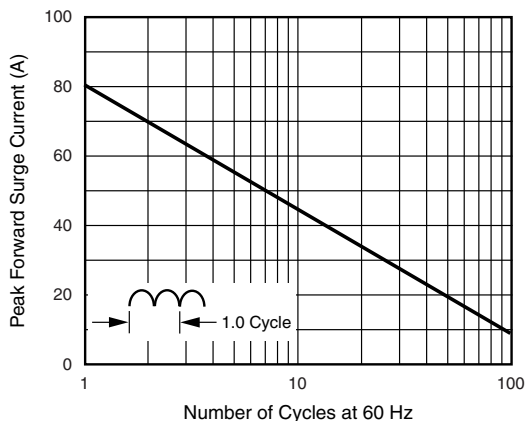


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

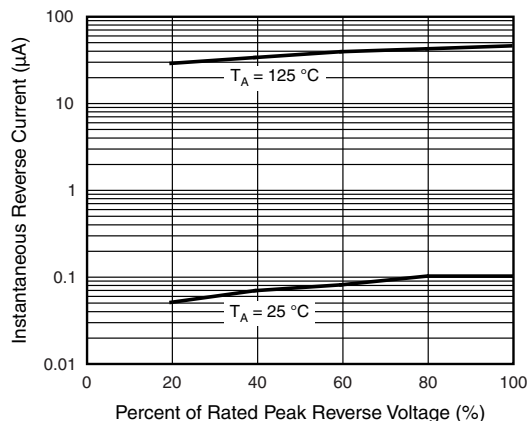


Fig. 4 - Typical Reverse Characteristics Per Diode

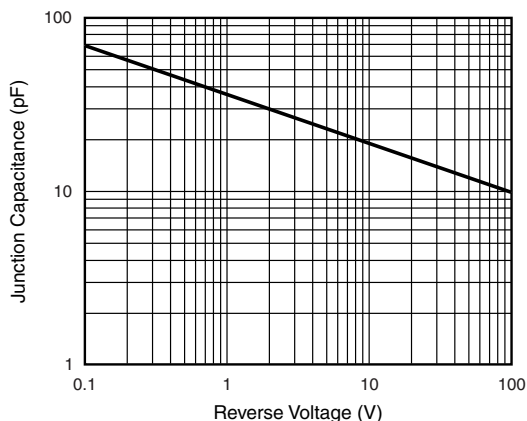


Fig. 5 - Typical Junction Capacitance Per Diode

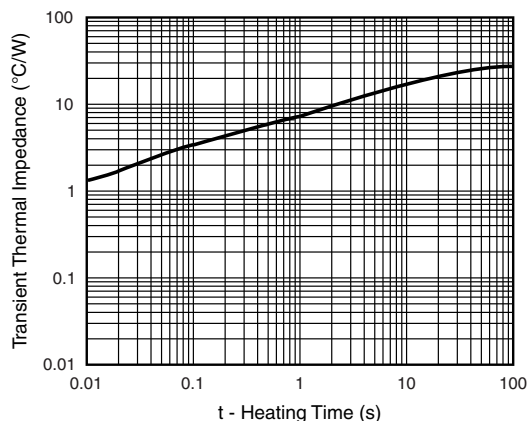
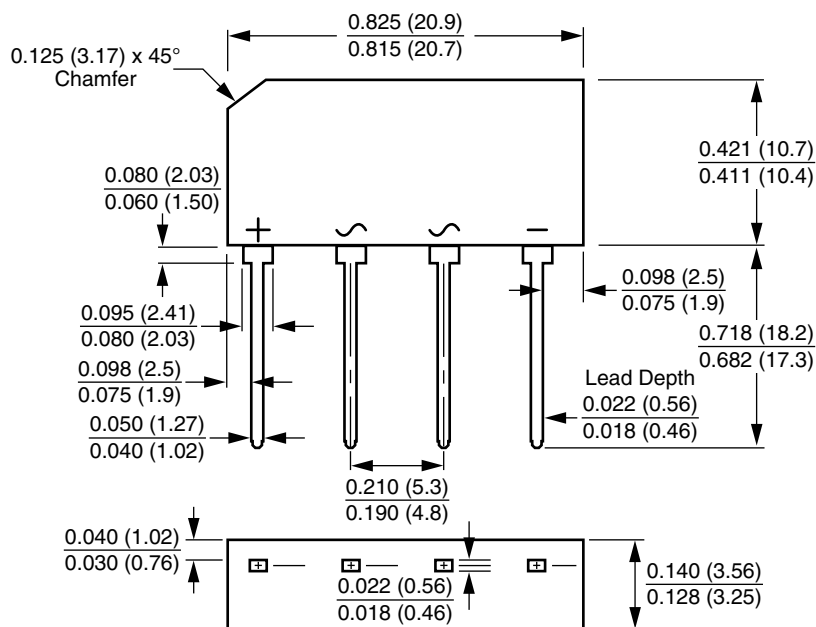


Fig. 6 - Typical Transient Thermal Impedance

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

**Case Type GBL**


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



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**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

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