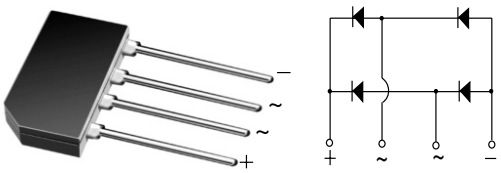
Glass Passivated Single-Phase Bridge Rectifier



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 µA
- 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 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

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	1.5 A
V_{RRM}	200 V, 600 V, 800 V
I_{FSM}	80 A
I_R	5 µA
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^2s
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			µA

THERMAL CHARACTERISTICS (T_A = 25 °C unless otherwise noted)					
PARAMETER	**SYMBOL**	**G2SB20**	**G2SB60**	**G2SB80**	**UNIT**
Typical thermal resistance	$R_{\theta JA}$ $R_{\theta JC}$	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**
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 °C unless otherwise noted)

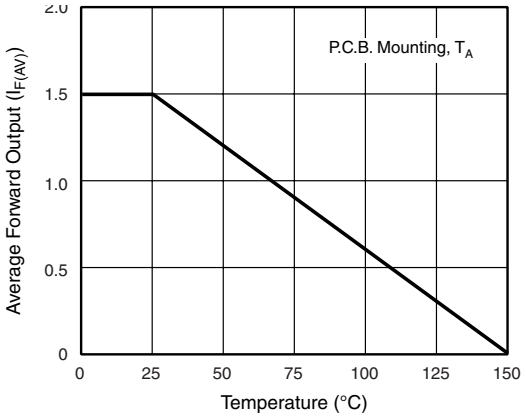


Figure 1. Derating Curve Output Rectified Current

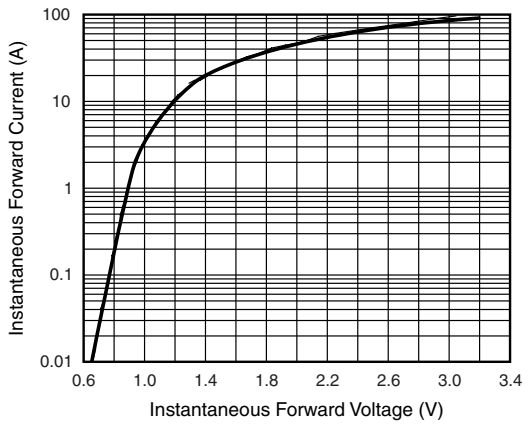


Figure 3. Typical Forward Characteristics Per Diode

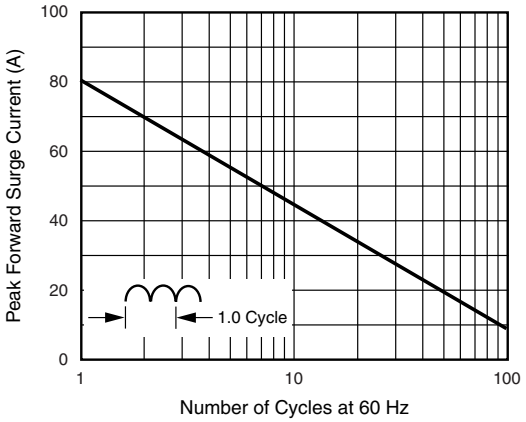


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

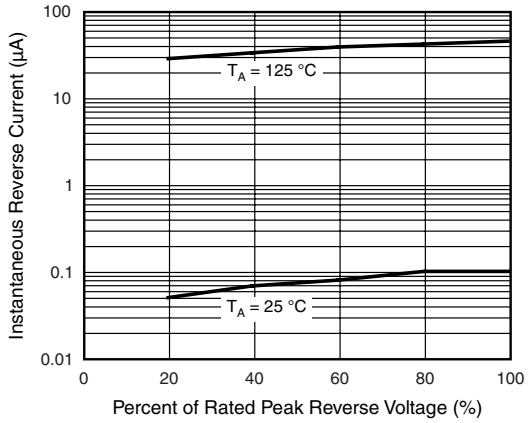


Figure 4. Typical Reverse Characteristics Per Diode

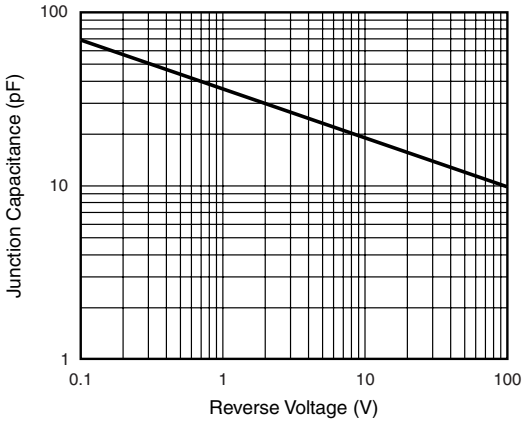


Figure 5. Typical Junction Capacitance Per Diode

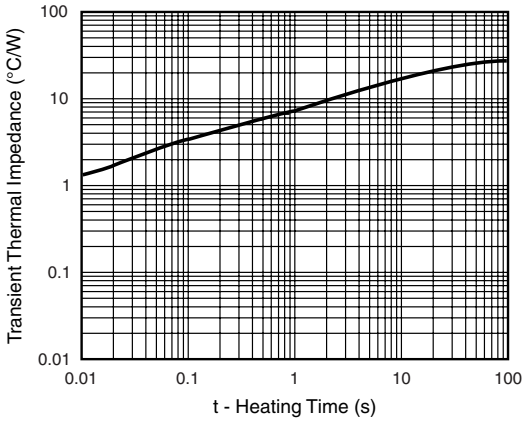
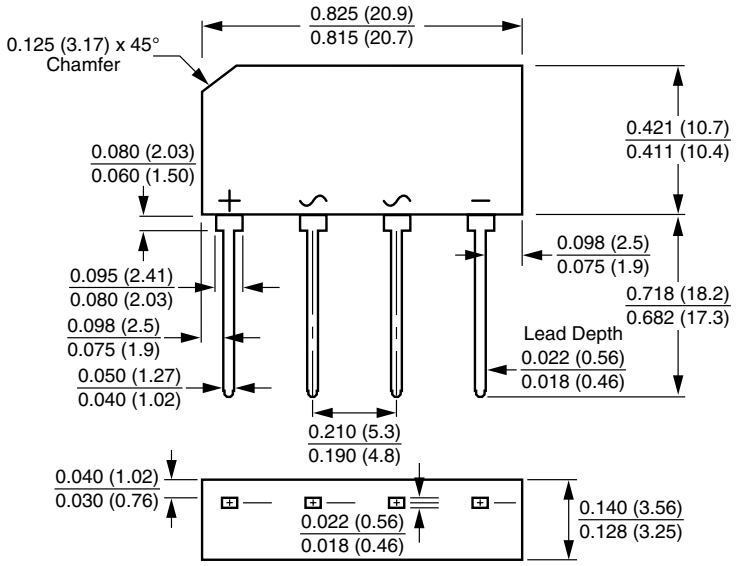


Figure 6. Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Type GBL



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

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