G2SB20, G2SB60 & G2SB80

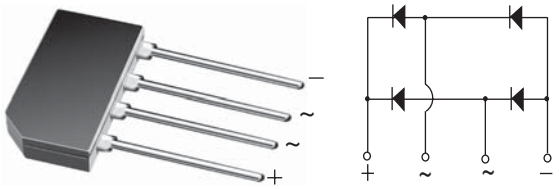
Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier

Major Ratings and 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

Case Type GBL



Features

- UL Recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- Typical I_R less than 0.1µA
- High case dielectric strength
- Solder Dip 260 °C, 40 seconds

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 (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

Polarity: As marked on body

Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

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^2sec
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150			°C

Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	G2SB20	G2SB60	G2SB80	Unit
Maximum instantaneous forward voltage drop per leg	at 0.75 A	V_F	1.00			V
Maximum DC reverse current at rated DC blocking voltage per leg	T_A = 25 °C T_A = 125 °C	I_R	5.0 300			µA

Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	G2SB20	G2SB60	G2SB80	Unit
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JC}$	40 12			°C/W

Notes: (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

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

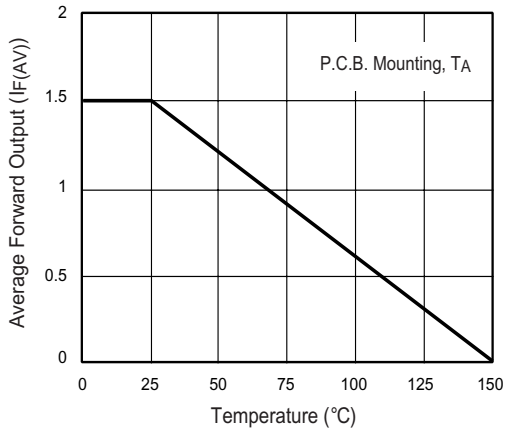


Figure 1. Derating Curve Output Rectified Current

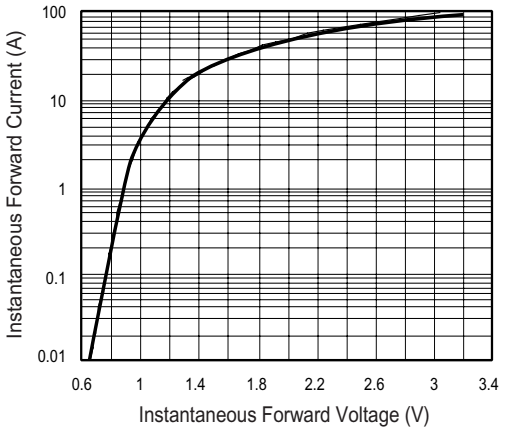


Figure 3. Typical Forward Characteristics Per Leg

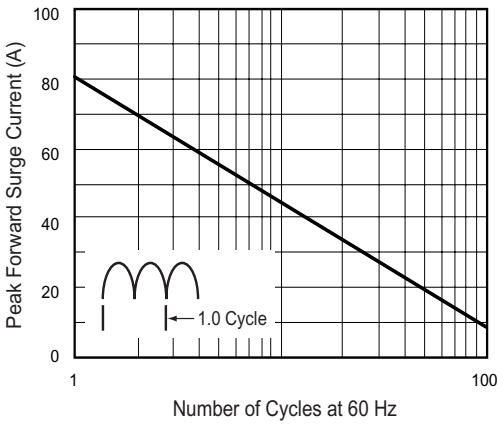


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

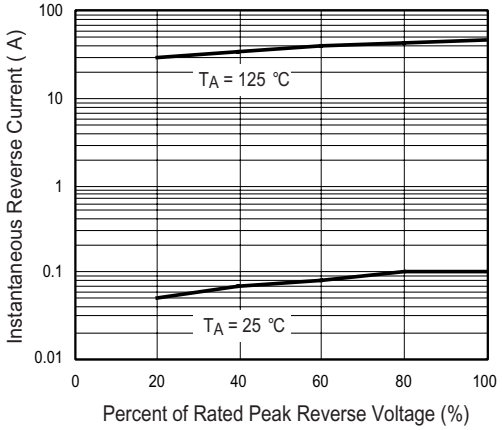


Figure 4. Typical Reverse Characteristics Per Leg

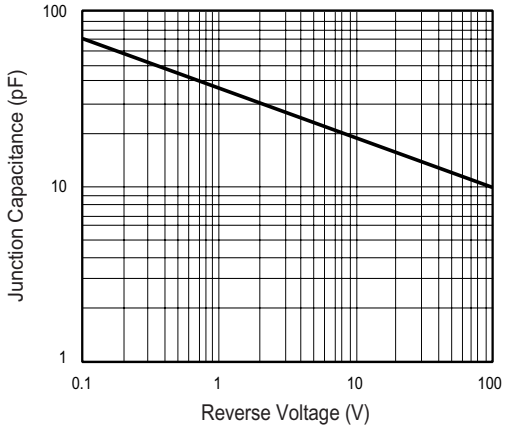


Figure 5. Typical Junction Capacitance Per Leg

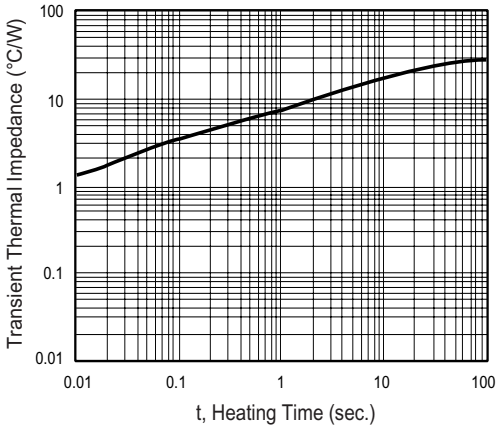
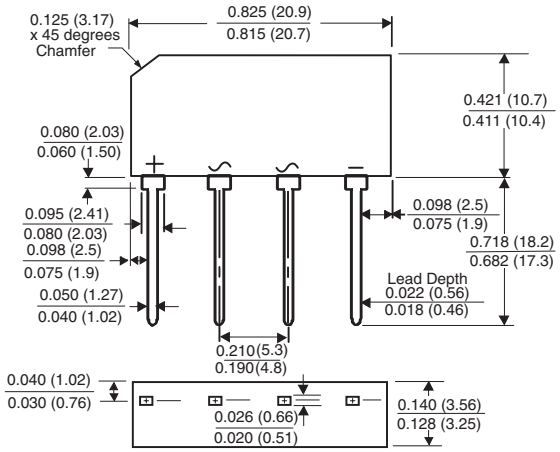


Figure 6. Typical Transient Thermal Impedance

Package outline dimensions in inches (millimeters)

Case Type GBL



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

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