



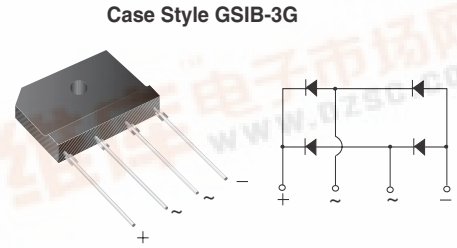
GSIB4A20 thru GSIB4A80

Vishay Semiconductors

Glass Passivated Single-In-Line Bridge Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	4 A
V_{RRM}	200 V to 800 V
I_{FSM}	80 A
I_R	5 μ A
V_F	1.0 V
T_j max.	150 °C



Features

- UL Recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Meets MSL level 1, per J-STD-020C

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Monitor, TV, Printer, Switching Mode Power Supply, Adapter, Audio equipment, and Home Appliances applications

Mechanical Data

Case: GSIB-3G

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and MIL-STD-750, Method 2026

Polarity: As marked on body

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.

Recommended Torque: 5.7 cm-kg (5 inches-lbs)

Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	GSIB4A20	GSIB4A40	GSIB4A60	GSIB4A80	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	V
Maximum average forward rectified output current at $T_C = 100\text{ °C}$ $T_A = 25\text{ °C}$	$I_{F(AV)}$	4.0 ⁽¹⁾ 2.3 ⁽²⁾				A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	80				A
Rating for fusing ($t < 8.3\text{ ms}$)	I^2t	32				A ² sec
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	GSIB4A20	GSIB4A40	GSIB4A60	GSIB4A80	Unit
Maximum instantaneous forward drop per leg	at 2.0 A	V_F	1.00				V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_A = 25\text{ °C}$ $T_A = 125\text{ °C}$	I_R	5.0 400				μ A



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Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	GSIB4A20	GSIB4A40	GSIB4A60	GSIB4A80	Unit
Typical thermal resistance per leg	$R_{\theta JA}$	26 ⁽²⁾				°C/W
	$R_{\theta JC}$	5 ⁽¹⁾				

Notes:

- (1) Unit case mounted on Al plate heatsink.
- (2) Units 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
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

Ratings and Characteristics Curves

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

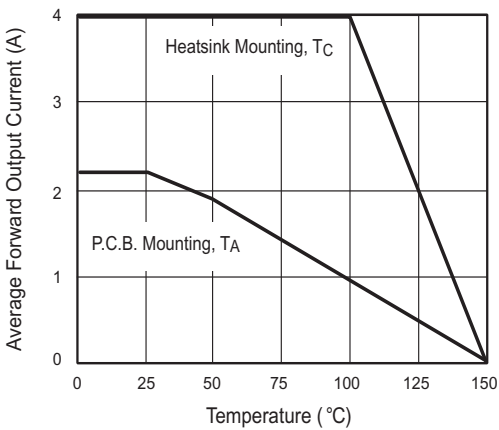


Figure 1. Derating Curve Output Rectified Current

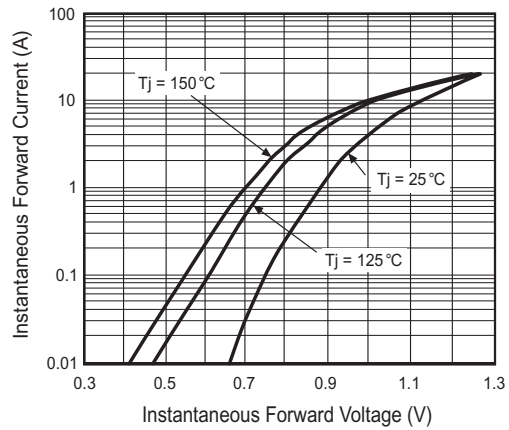


Figure 3. Typical Forward Characteristics Per Leg

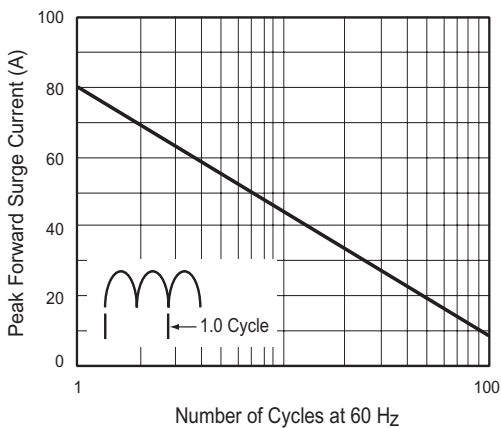


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

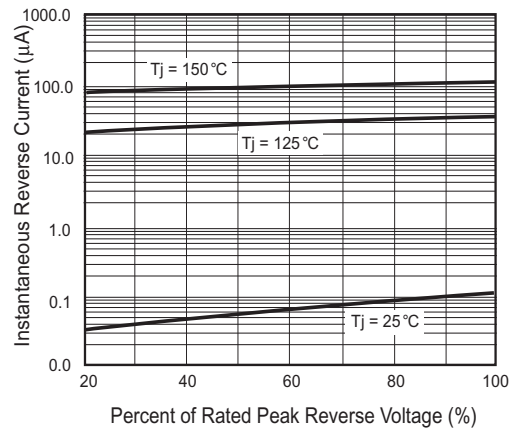


Figure 4. Typical Reverse Characteristics Per Leg



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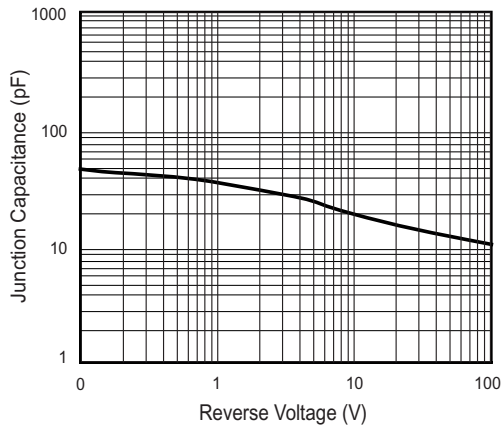


Figure 5. Typical Junction Capacitance Per Leg

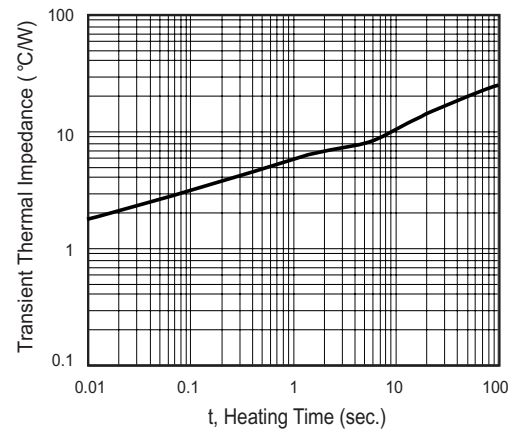


Figure 6. Typical Transient Thermal Impedance Per Leg

Package outline dimensions in inches (millimeters)

Case Style GSIB-3G

