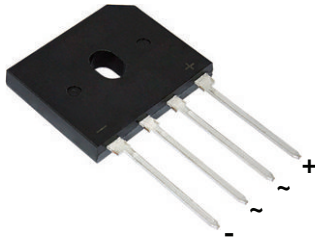


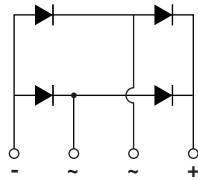


**THE DATASHEET OF
G3SBA20-E3/51**



**Glass Passivated Single-Phase Bridge Rectifier**

Case Style GBU



Case Style GBU

FEATURES

- UL recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

LINKS TO ADDITIONAL RESOURCES

3D Models

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, switching mode power supply, adapter, audio equipment, and home appliances applications.

MECHANICAL DATA**Case:** GBU

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade
Base P/N-M3 - halogen-free, RoHS-compliant, and commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 and M3 suffix meet JESD 201 class 1A whisker test

Polarity: as marked on body

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

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

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	4.0 A
V_{RRM}	200 V, 600 V, 800 V
I_{FSM}	80 A
I_R	5 μ A
V_F at $I_F = 2.0$ V	1.0 V
T_J max.	150 °C
Package	GBU
Circuit configuration	In-line

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	G3SBA20	G3SBA60	G3SBA80	UNIT	
Maximum repetitive peak reverse voltage	V_{RRM}	200	600	800	V	
Maximum RMS voltage	V_{RWM}	140	420	560	V	
Maximum DC blocking voltage	V_{DC}	200	600	800	V	
Maximum average forward rectified output current at	$I_{F(AV)}$	$T_C = 100$ °C ⁽¹⁾			4.0	A
		$T_A = 25$ °C ⁽²⁾			2.3	
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 ² s	
Operating junction and storage temperature range	T_J, T_{STG}	-55 to + 150			°C	

Notes

⁽¹⁾ Unit case mounted on aluminum plate heatsink

⁽²⁾ Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

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

PARAMETER	TEST CONDITIONS	SYMBOL	G3SBA20	G3SBA60	G3SBA80	UNIT
Maximum instantaneous forward voltage per diode	2.0 A	V_F	1.00			V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_J = 25$ °C	I_R	5.0			μ A
	$T_J = 125$ °C		400			



THERMAL CHARACTERISTICS ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	G3SBA20	G3SBA60	G3SBA80	UNIT
Typical thermal resistance	$R_{\theta JA}$ (2)	26			$^\circ\text{C}/\text{W}$
	$R_{\theta JC}$ (1)	5.0			

Notes

- (1) Unit case mounted on aluminum plate heatsink
- (2) Units 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
G3SBA60-E3/45	3.404	45	20	Tube
G3SBA60-E3/51	3.404	51	250	Paper tray
G3SBA60-M3/45	3.404	45	20	Tube
G3SBA60-M3/51	3.404	51	250	Paper tray

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

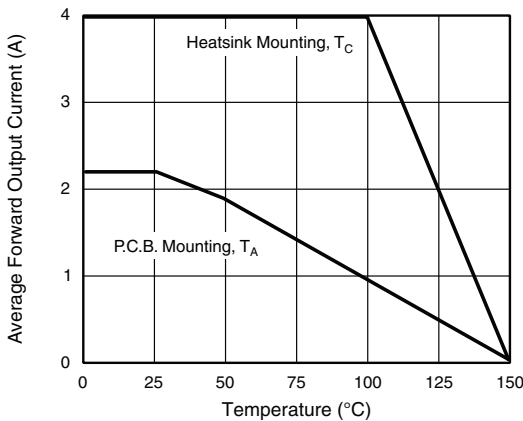


Fig. 1 - Derating Curve Output Rectified Current

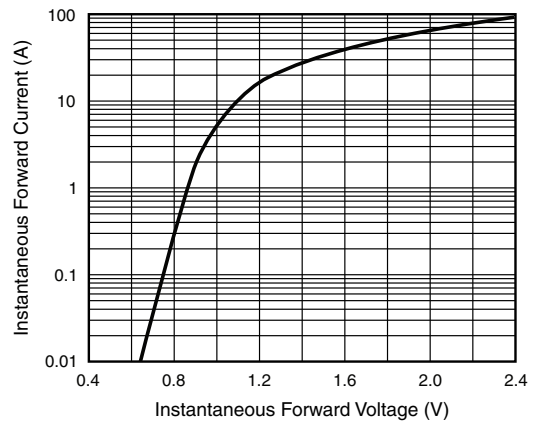


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

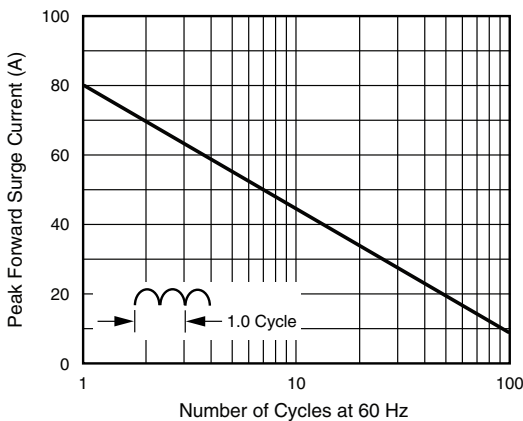


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

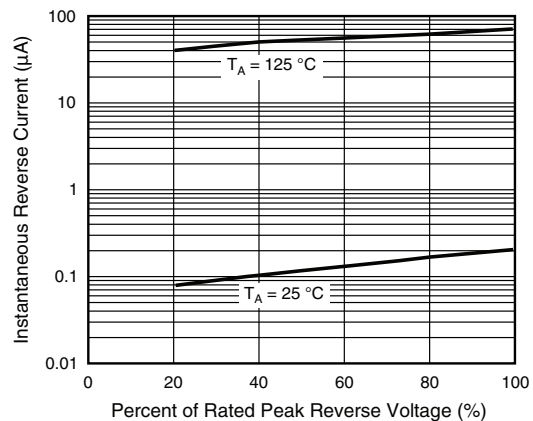


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

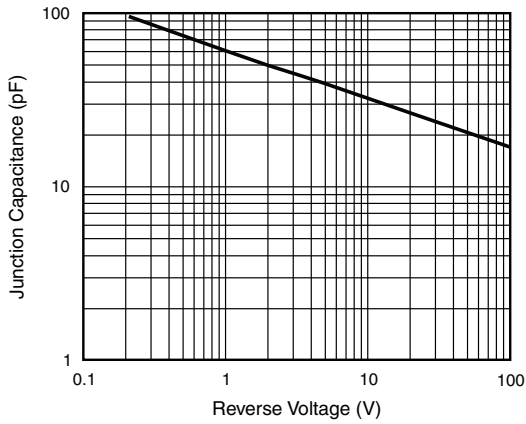


Fig. 5 - Typical Junction Capacitance Per Diode

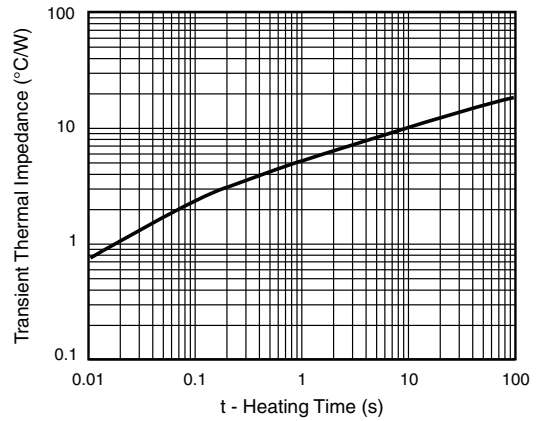
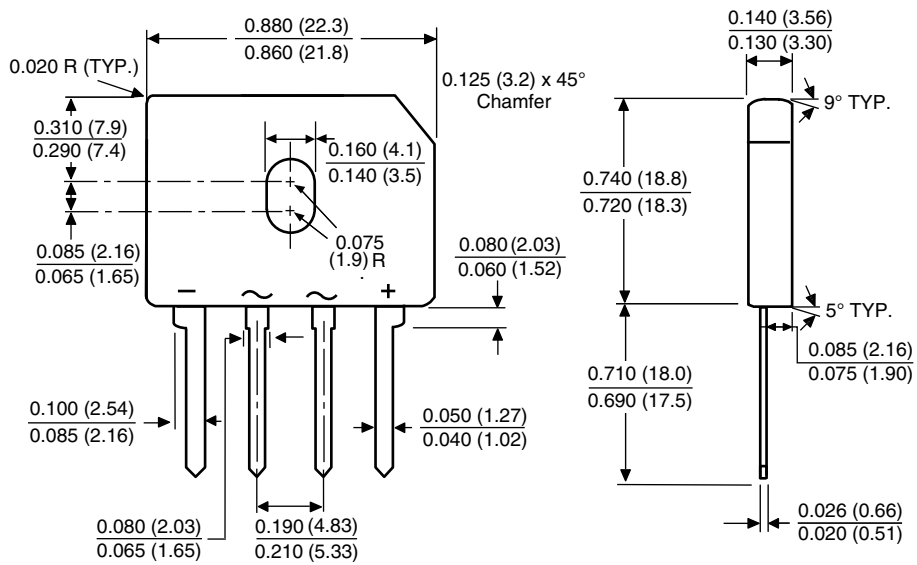


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Type GBU



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



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