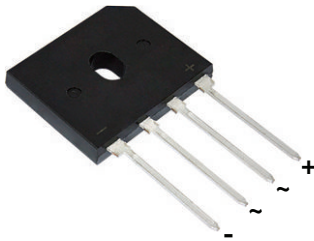
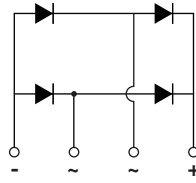


## Glass Passivated Single-Phase Bridge Rectifier



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<sub>RMS</sub>
- 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  
HALOGEN  
**FREE**

### 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)

### LINKS TO ADDITIONAL RESOURCES



3D Models

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	6.0 A
$V_{RRM}$	200 V, 600 V, 800 V
$I_{FSM}$	150 A
$I_R$	5 $\mu$ A
$V_F$ at $I_F = 3.0$ V	1.05 V
$T_J$ max.	150 °C
Package	GBU
Circuit configuration	In-line

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)						
PARAMETER	SYMBOL	G5SBA20	G5SBA60	G5SBA80	UNIT	
Maximum repetitive peak reverse voltage	$V_{RRM}$	200	600	800	V	
Maximum RMS reverse 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 <sup>(1)</sup>			6.0	A
		$T_A = 25$ °C <sup>(2)</sup>			2.8	
Peak forward surge current single sine-wave superimposed on rated load	$I_{FSM}$	150			A	
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	93			A <sup>2</sup> s	
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150			°C	

#### Notes

<sup>(1)</sup> Unit case mounted on aluminum plate heatsink

<sup>(2)</sup> 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	G5SBA20	G5SBA60	G5SBA80	UNIT
Maximum instantaneous forward voltage per diode	3.0 A	$V_F$	1.05			V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_J = 25$ °C	$I_R$	5.0			$\mu$ A
	$T_J = 125$ °C		300			



THERMAL CHARACTERISTICS ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)					
PARAMETER	SYMBOL	G5SBA20	G5SBA60	G5SBA80	UNIT
Typical thermal resistance	$R_{\theta JA}$ <sup>(2)</sup>	22			$^\circ\text{C/W}$
	$R_{\theta JC}$ <sup>(1)</sup>	3.4			

**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
G5SBA60-E3/45	3.565	45	20	Tube
G5SBA60-E3/51	3.565	51	250	Paper tray
G5SBA60-M3/45	3.565	45	20	Tube
G5SBA60-M3/51	3.565	51	250	Paper tray

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

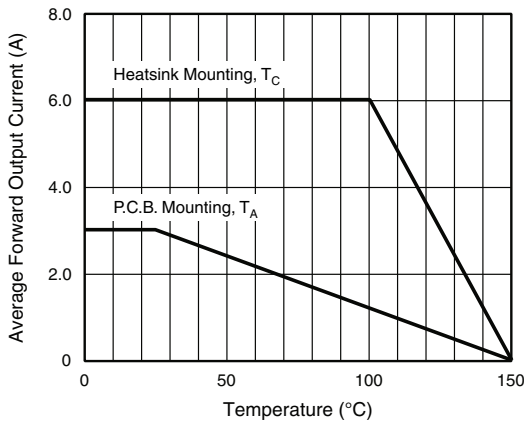


Fig. 1 - Derating Curve Output Rectified Current

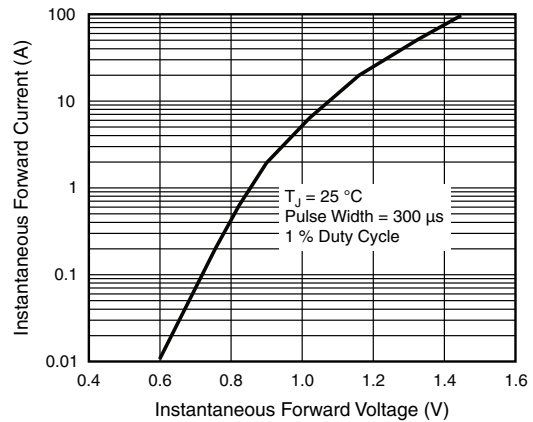


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

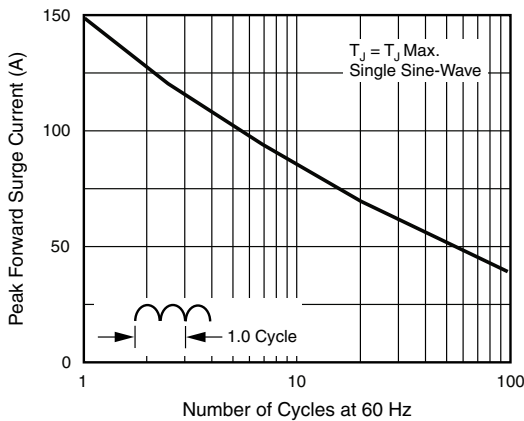


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

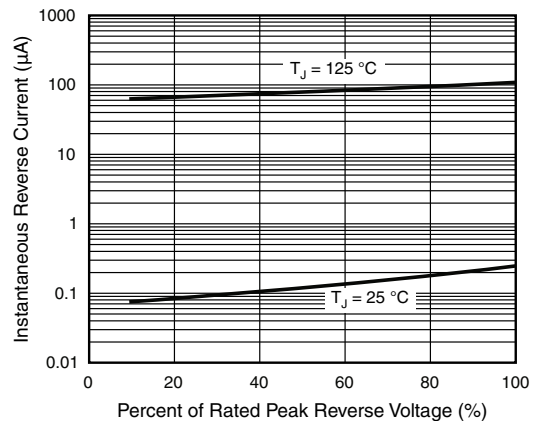


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

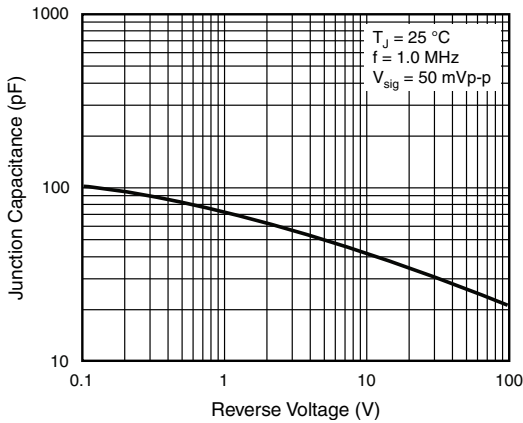


Fig. 5 - Typical Junction Capacitance Per Diode

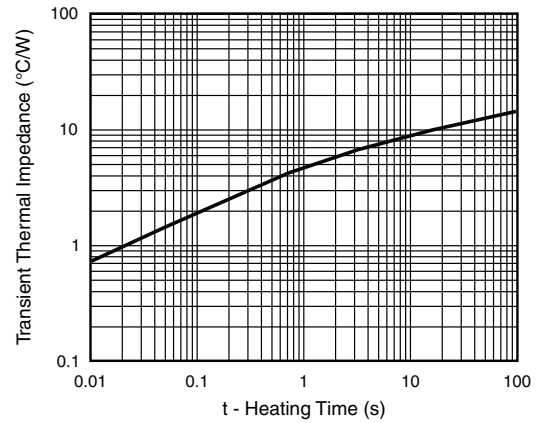
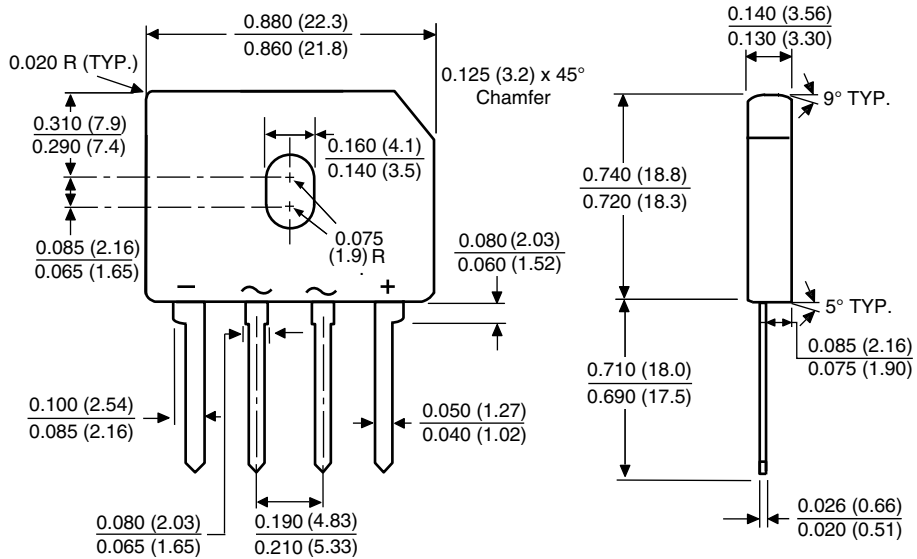


Fig. 6 - Typical Transient Thermal Impedance

## 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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