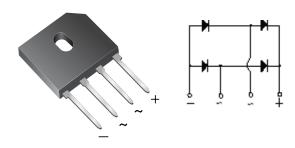


Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier



Case	Style	GBU
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PRIMARY CHARACTERISTICS							
I _{F(AV)} 8.0 A							
V_{RRM}	50 V to 1000 V						
I _{FSM}	200 A						
I _R	5 μΑ						
V _F	1.0 V						
T _J max.	150 °C						

FEATURES





· Ideal for printed circuit boards



High surge current capability

High case dielectric strength of 1500 V_{BMS}

RoHS

Solder dip 260 °C, 40 s

 Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for monitor, TV, printer, power supply, switching mode power supply, adapter, audio equipment and home appliances applications.

MECHANICAL DATA

Case: GBU

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

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max. **Recommended Torque:** 5.7 cm-kg (5 inches-lbs)

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	٧
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	٧
Maximum average forward $T_C = 60 ^{\circ}C ^{(1)}$ rectified output current at $T_A = 40 ^{\circ}C ^{(2)}$	I _{F(AV)}	8.0 3.9				Α			
Peak forward surge current single sine-wave super-imposed on rated load	I _{FSM}	M 200			Α				
Rating for fusing (t < 8.3 ms)	l ² t	166							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 P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length

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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	UNIT
Maximum instantaneous forward voltage drop per diode	8.0 A	V _F				1.0				٧
Maximum DC reverse current at rated DC blocking voltage per diode	T _A = 25 °C T _A = 125 °C	I _R	5.0 500					μΑ		
Typical junction capacitance per diode	4 V, 1 MHz	СЈ		2	11			94		pF

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL GBU8A GBU8B GBU8D GBU8G GBU8J GBU8K GBU8M UNIT						UNIT
Typical thermal resistance	$R_{\theta JA}^{(2)} \atop R_{\theta JC}^{(1)(3)}$	20 4.0			°C/W		

Notes:

- (1) Units case mounted on aluminum plate heatsink
- (2) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12 mm) copper pads, 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 screws

ORDERING INFORMATION									
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
GBU8J-E3/45	3.857	45	20	Tube					
GBU8J-E3/51	3.857	51	250	Paper tray					

RATINGS AND CHARACTERISTICS CURVES

(T_A = 25 °C unless otherwise noted)

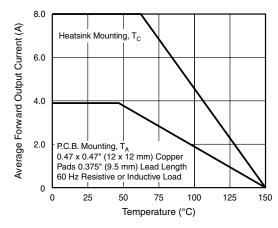


Figure 1. Derating Curve Output Rectified Current

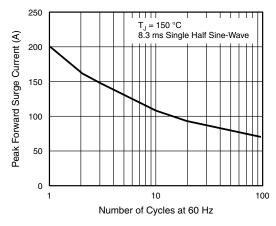


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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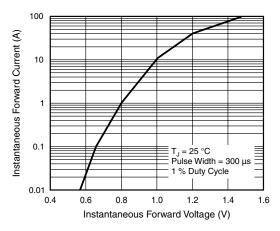


Figure 3. Typical Forward Characteristics Per Diode

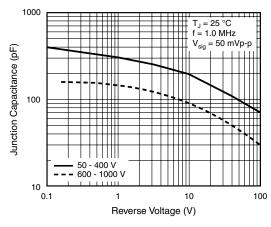


Figure 5. Typical Junction Capacitance Per Diode

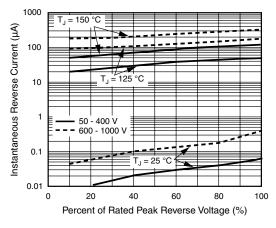


Figure 4. Typical Reverse Leakage Characteristics Per Diode

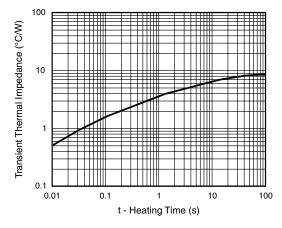
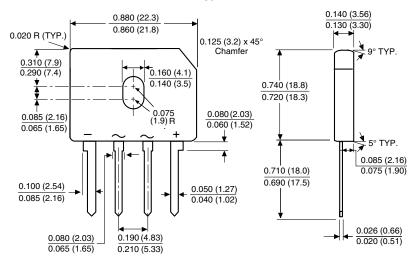


Figure 6. Typical Transient Thermal Impedance Per Diode

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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