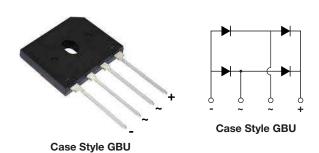


GBU4A, GBU4B, GBU4D, GBU4G, GBU4J, GBU4K, GBU4M

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Glass Passivated Single-Phase Bridge Rectifier



PRIMARY CHARACTERISTICS							
Package	GBU						
I _{F(AV)}	4.0 A						
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I _{FSM}	150 A						
I _R	5 μΑ						
V _F at I _F = 4.0 A	1.0 V						
T _J max.	150 °C						
Diode variations	In-line						

FEATURES





- · Ideal for printed circuit boards
- · High surge current capability
- 1 link ---- distratuis starounde af 450/
- High case dielectric strength of 1500 V_{RMS}

Solder dip 275 °C max. 10 s, per JESD 22-B106

RoHS

 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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 1/14-L5 - Horio-compilant, commercial grade

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

E3 suffix 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	GBU4A	GBU4B	GBU4D	GBU4G	GBU4J	GBU4K	GBU4M	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
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	V
$ \begin{array}{c} \text{Maximum average forward} \\ \text{rectified output current at} \end{array} \qquad \begin{array}{c} T_{C} = 100 \ ^{\circ}\text{C}^{\ (1)} \\ \hline T_{A} = 40 \ ^{\circ}\text{C}^{\ (2)} \end{array} $	I _{F(AV)}	4.0 3.0					Α		
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	150				Α			
Rating for fusing (t < 8.3 ms)	I ² t	93			A ² s				
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150				°C			

Notes

⁽¹⁾ Unit case mounted on 1.6" x 1.6" x 0.06" thick (4.0 cm x 4.0 cm x 0.15 cm) aluminum plate

⁽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



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ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GBU4A	GBU4B	GBU4D	GBU4G	GBU4J	GBU4K	GBU4M	UNIT
Maximum instantaneous forward voltage drop per diode	4.0 A	V _F				1.0				V
Maximum DC reverse current at rated DC	T _A = 25 °C	L				5.0				
blocking voltage per diode	T _A = 125 °C	IR	500						μA	
Typical junction capacitance per diode	4 V, 1 MHz	СЈ	57					pF		

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL GBU4A GBU4B GBU4D GBU4G GBU4J GBU4K GBU4M UNIT						UNIT		
Typical thormal registance	R _{0JA} (2)	22							°C/W
Typical thermal resistance	R ₀ JC (1)	4.2				C/VV			

Notes

- (1) Units case mounted on aluminum plate heatsink
- (2) Units mounted in free air, no heatsink on PCB, 0.5" x 0.5" (12 mm x 12 mm) copper pads, 0.375" (9.5 mm) lead length

ORDERING INFORMATION									
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
GBU4J-E3/45	3.857	45	20	Tube					
GBU4J-E3/51	3.857	51	250	Paper tray					

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

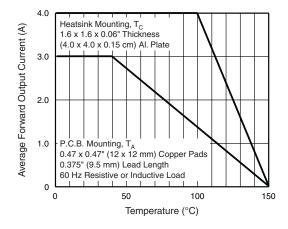


Fig. 1 - Derating Curve Output Rectified Current

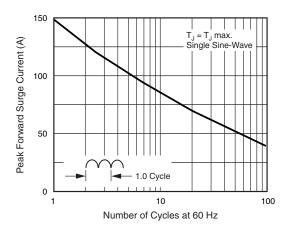


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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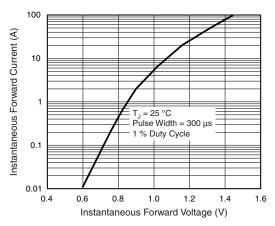


Fig. 3 - Typical Forward Characteristics Per Diode

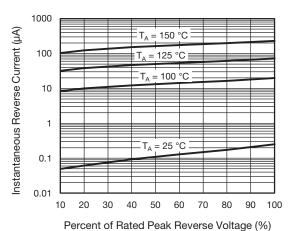


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

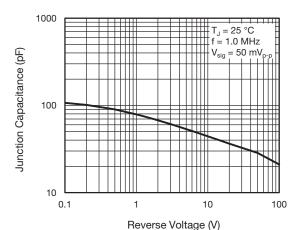


Fig. 5 - Typical Junction Capacitance Per Diode

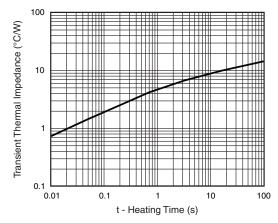
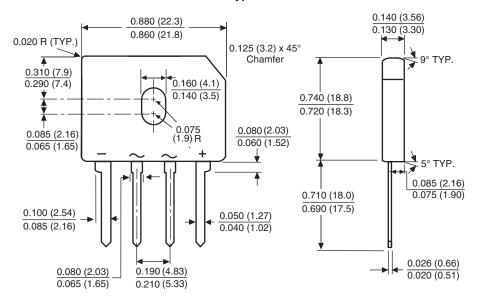


Fig. 6 - Typical Transient Thermal Impedance

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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