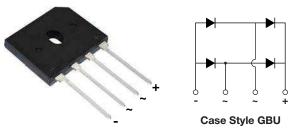
GBU6A, GBU6B, GBU6D, GBU6G, GBU6J, GBU6K, GBU6M

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Glass Passivated Single-Phase Bridge Rectifier



Case Style GBU

PRIMARY CHARACTERISTICS						
Package	GBU					
I _{F(AV)}	6.0 A					
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V					
I _{FSM}	175 A					
I _R	5 μΑ					
V_F at I_F = 6.0 A	1.0 V					
T _J max.	150 °C					
Diode variations	In-line					

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 <u>www.vishay.com/doc?99912</u>

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-M3 - halogen-free, RoHS-compliant, and commercial grade

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

M3 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 ($T_A = 25 \text{ °C}$ unless otherwise noted)									
PARAMETER	SYMBOL	GBU6A	GBU6B	GBU6D	GBU6G	GBU6J	GBU6K	GBU6M	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
Maximum average forward $T_{C} = 90 \ ^{\circ}C^{(1)}$	E(A) A	6.0							A
rectified output current at (fig. 1) $T_A = 40 \text{ °C}$ (2)	I _{F(AV)}	3.8							
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	175			А				
Rating for fusing (t < 8.3 ms)	8.3 ms) I ² t 127			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



COMPLIANT HALOGEN

GBU6A, GBU6B, GBU6D, GBU6G, GBU6J, GBU6K, GBU6M



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ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GBU6A	GBU6B	GBU6D	GBU6G	GBU6J	GBU6K	GBU6M	UNIT
Maximum instantaneous forward voltage drop per diode	6.0 A	V _F				1.0				V
Maximum DC reverse	T _A = 25 °C	- I _B				5.0				μA
blocking voltage per diode	T _A = 125 °C	·R	500							μΛ
Typical junction capacitance per diode	4 V, 1 MHz	CJ	68					pF		

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)									
PARAMETER SYMBOL GBU6A GBU6B GBU6D GBU6G GBU6J GBU6K GBU6M UN								UNIT	
Typical thermal resistance	R _{0JA} ⁽²⁾	20							°C/W
	R _{0JC} (1)(3)	2.5							0/11

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

⁽³⁾ Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

ORDERING INFORMATION (Example)								
PREFERRED P/N	D P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE							
GBU6J-M3/45	3.857	45	20	Tube				
GBU6J-M3/51	3.857	51	250	Paper tray				

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

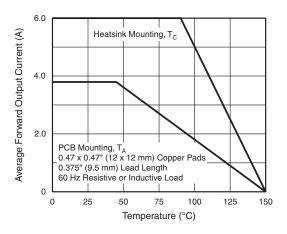
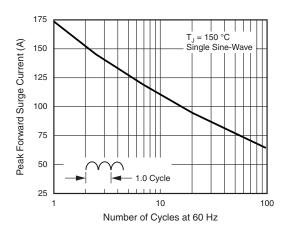
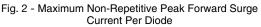


Fig. 1 - Derating Curve Output Rectified Current

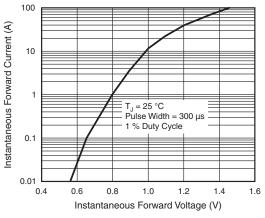




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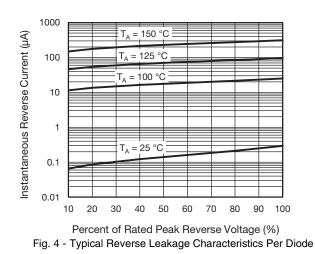
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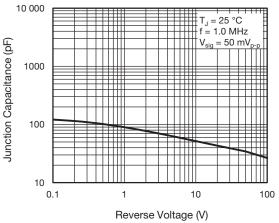


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Fig. 3 - Typical Forward Characteristics Per Diode







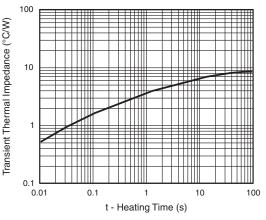
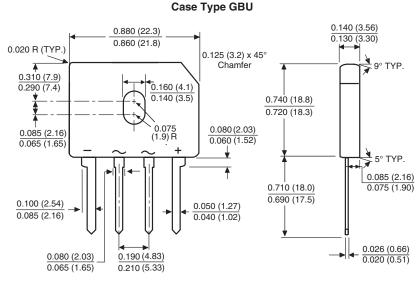


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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

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