GBL005, GBL01, GBL02, GBL04, GBL06, GBL08, GBL10

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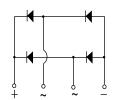
Vishay General Semiconductor

HALOGEN

FREE

Glass Passivated Single-Phase Bridge Rectifier





Case Type GBL

FEATURES

- UL recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- Typical I_R less than 0.1 μA
- Typical in 1000 than of pr
- High case dielectric strength
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS							
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						
Package	GBL						
Circuit configuration	In-line						

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances application.

MECHANICAL DATA

Case: GBL

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

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)										
PARAMETER		SYMBOL	GBL005	GBL01	GBL02	GBL04	GBL06	GBL08	GBL10	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	٧
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward $T_C = 50 ^{\circ}C$			4.0 (1)						Α	
rectified output current at	T _A = 40 °C	I _{F(AV)}	3.0 (2)							
Peak forward surge current single sine-wave superimposed on rated load		I _{FSM}	150							Α
Rating for fusing (t < 8.3 ms)		l ² t	93							A ² s
Operating junction and storage temperature range		T _J , T _{STG}	-55 to +150							°C

Notes

- $^{(1)}$ Unit mounted on 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate
- (2) Unit mounted on PCB at 0.375" (9.5 mm) lead length and 0.5" x 0.5" (12 mm x 12 mm) copper pads

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GBL005	GBL01	GBL02	GBL04	GBL06	GBL08	GBL10	UNIT
Maximum instantaneous forward voltage drop per diode	4.0 A	V_{F}	1.00						٧	
Maximum DC reverse	T _A = 25 °C		5.0							
current at rated DC blocking voltage per diode	T _A = 125 °C	I _R			500					μΑ
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ		9:	5			40		pF



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL GBL005 GBL01 GBL02 GBL04 GBL06 GBL08 GBL10 UNIT								
Typical thermal resistance	R _{0JA} (2)	22							°C/W
Typical thermal resistance	R _{θJC} ⁽¹⁾	3.5							C/ VV

Notes

- $^{(1)}$ Unit mounted on 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate
- $^{(2)}$ Unit mounted on PCB at 0.375" (9.5 mm) lead length and 0.5" x 0.5" (12 mm x 12 mm) copper pads

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE				
GBL06-M3/45	2.18	45	20	Tube				
GBL06-M3/51	2.18	51	400	Anti-static PVC tray				

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

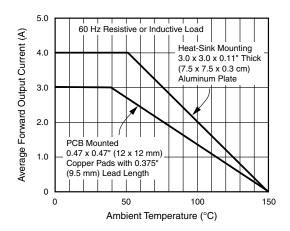
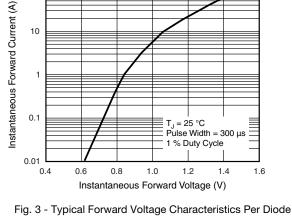


Fig. 1 - Derating Curves Output Rectified Current



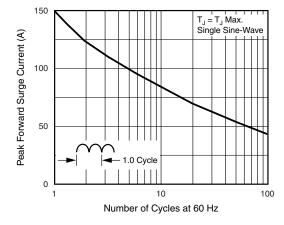


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

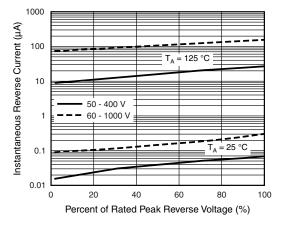


Fig. 4 - Typical Reverse Characteristics Per Diode

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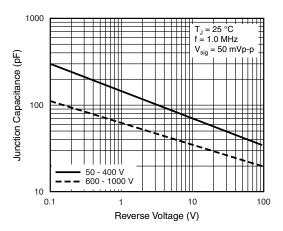


Fig. 5 - Typical Junction Capacitance Per Diode

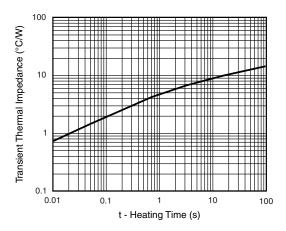
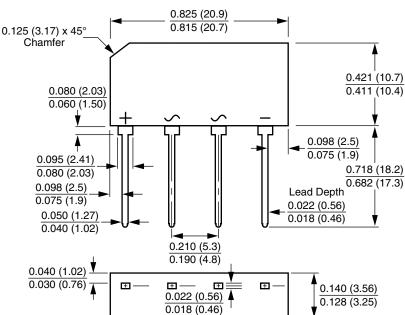


Fig. 6 - Typical Transient Thermal Impedance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Type GBL



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



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