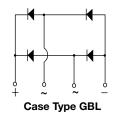


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Glass Passivated Single-Phase Bridge Rectifier





LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS							
I _{F(AV)}	4 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						

FEATURES

- UL recognition file number E54214
- Enhanced thermal capability
- · High surge current capability
- Typical reverse leakage current less than 0.1 μA
- High case dielectric strength
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see <u>www.vishav.com/doc?99912</u>

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-E3 - RoHS-compliant, 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

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	GBL005E	GBL01E	GBL02E	GBL04E	GBL06E	GBL08E	GBL10E	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 rectified output current at T _A = 25 °C	I _{F(AV)} 4.0 ⁽¹⁾ 2.6 ⁽²⁾							Α	
'		Z.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	

Note

- (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) Free air, mounted on recommended copper pad area

ELECTRICAL CHARACTERISTICS (T _J = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GBL005E	GBL01E	GBL02E	GBL04E	GBL06E	GBL08E	GBL10E	UNIT
Maximum instantaneous forward voltage drop per diode	4.0 A	V _F	1.0					٧		
Maximum DC reverse current	T _J = 25 °C		5.0							μΑ
at rated DC blocking voltage per diode	T _J = 125 °C	I _R	500							
Typical junction capacitance per diode	4.0 V, 1 MHz	CJ	50				pF			



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	GBL005E	GBL005E GBL01E GBL02E GBL04E GBL06E GBL08E GBL10E					UNIT	
Typical thermal resistance	$R_{\theta JA}$				28 (1)(2)				°C/W
Typical trieffial resistance	$R_{\theta JM}$	2.2 ⁽³⁾							C/ VV

Notes

- (1) The heat generated must be less than the thermal conductivity from junction-to-ambient: dP_D/R_{θJA}
- (2) Thermal resistance junction-to-ambient to follow JEDEC® 51-2A, device mounted on FR4 PCB, 2 oz., standard footprint
- (3) Thermal resistance junction-to-mount to follow JEDEC® 51-14 transient dual interface test method (TDIM)

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
GBL06E-E3/P	2.31	Р	20	Tube			
GBL06E-E3/A	2.31	А	400	Paper tray			

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

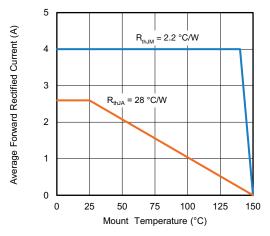


Fig. 1 - Derating Curves Output Rectified Current

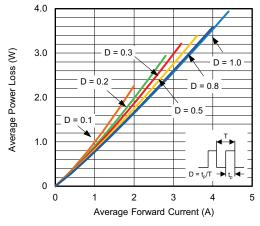


Fig. 3 - Forward Power Loss Characteristics Per Diode

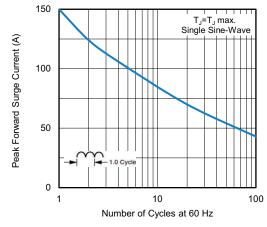


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

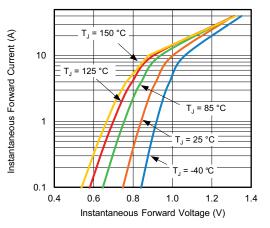


Fig. 4 - Typical Forward Voltage Characteristics
Per Diode

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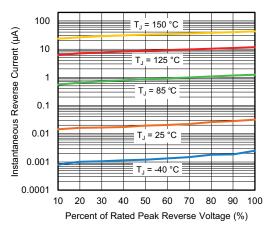


Fig. 5 - Typical Reverse Characteristics Per Diode

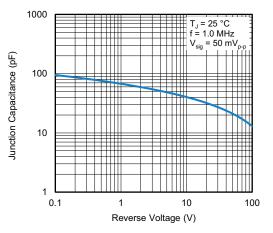


Fig. 6 - Typical Junction Capacitance Per Diode

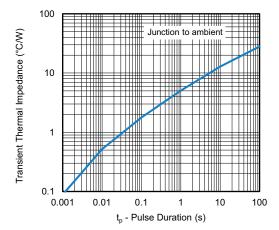
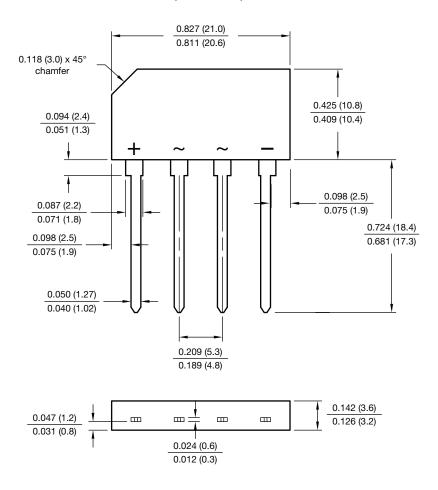


Fig. 7 - Typical Transient Thermal Impedance Per Diode

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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