

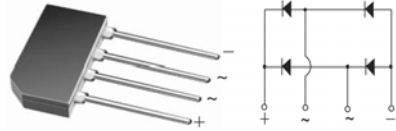


GBL005 thru GBL10

Glass Passivated Single-Phase Bridge Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 4.0 Amperes

Features

- ◆ Ideal for printed circuit boards
- ◆ High surge current capability
- ◆ Typical I_R less than 0.1 μ A
- ◆ High case dielectric strength
- ◆ Solder Dip 260 °C, 40 seconds

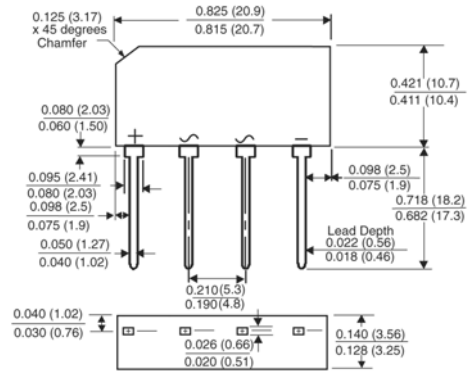


Mechanical Data

- ◆ Case: GBL
- ◆ Epoxy meets UL-94V-0 Flammability rating
- ◆ Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D
- ◆ Polarity: As marked on body

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Monitor, TV, Printer, SMPS, Adapter, Audio equipment, and Home Appliances application



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

Package outline dimensions in inches (millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	GBL005	GBL01	GBL02	GBL04	GBL06	GBL08	GBL10	Units	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	Volts	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	Volts	
Maximum average forward rectified output current at $T_C=50^\circ\text{C}$ / $T_A=40^\circ\text{C}$	$I_{F(AV)}$					4.0 ⁽¹⁾ 3.0 ⁽²⁾				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}					150.0				Amps
Rating for fusing (t < 8.3ms)	I^2t					93				A ² sec
Maximum instantaneous forward voltage drop per leg at 2.0A	V_F					1.0				Volts
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ / $T_A=150^\circ\text{C}$	I_R					10.0 500				μ A
Typical junction capacitance per leg at 4.0V, 1MHz	C_j					95				pF
Typical thermal resistance per leg	$R_{\theta JA}$ / $R_{\theta ML}$					22 ⁽²⁾ 3.5 ⁽¹⁾				°C/W
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 x 7.5 x 0.3 cm) Al. plate
 2. Unit mounted on P.C.B. at 0.375" (9.5 mm) lead length and 0.5 x 0.5" (13 x 13 mm) copper pads

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

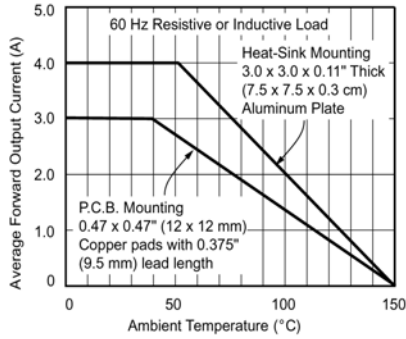


Figure 1. Derating Curves Output Rectified Current

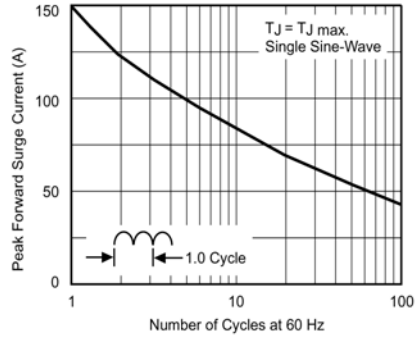


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

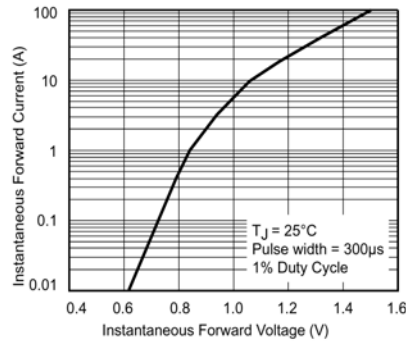


Figure 3. Typical Forward Voltage Characteristics Per Leg

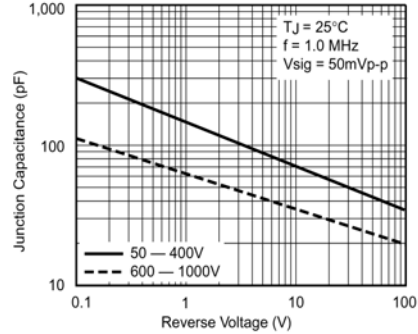


Figure 5. Typical Junction Capacitance Per Leg

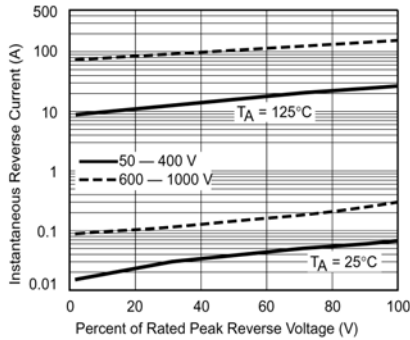


Figure 4. Typical Reverse Characteristics Per Leg

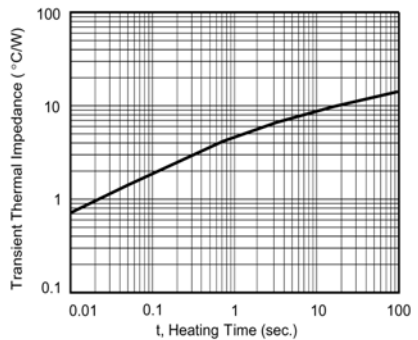


Figure 6. Typical Transient Thermal Impedance Per Leg