



**Glass Passivated Chip Single-phase Bridge Rectifier**  
**Reverse Voltage 50~1000 Volts, Forward Current 4.0 Amperes.**

**Features**

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

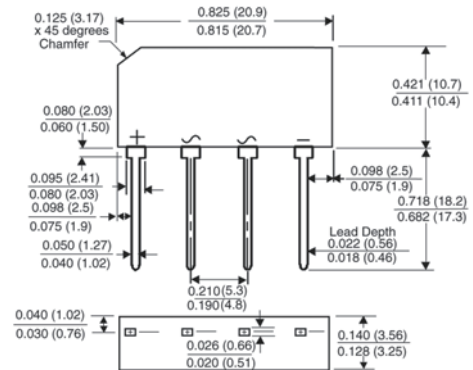


**Mechanical Data**

- ◆ 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	GBL4005	GBL401	GBL402	GBL404	GBL406	GBL408	GBL410	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 <sup>(1)</sup> 3.0 <sup>(2)</sup>			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 <sup>2</sup> 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			$\mu$ A
Typical junction capacitance per leg at 4.0V, 1MHz	$C_j$	95					40	pF	
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JL}$					22 <sup>(2)</sup> 3.5 <sup>(1)</sup>			°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)

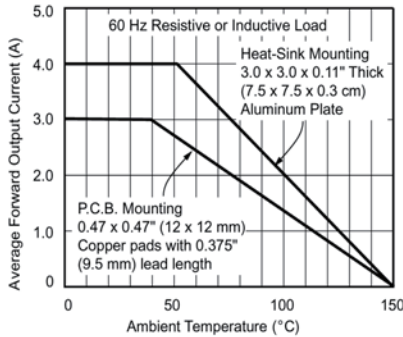


Figure 1. Derating Curves Output Rectified Current

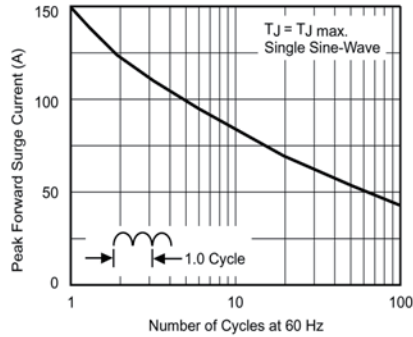


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

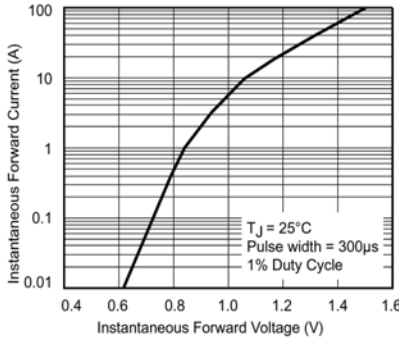


Figure 3. Typical Forward Voltage Characteristics Per Leg

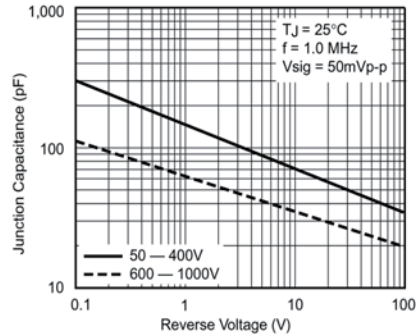


Figure 5. Typical Junction Capacitance Per Leg

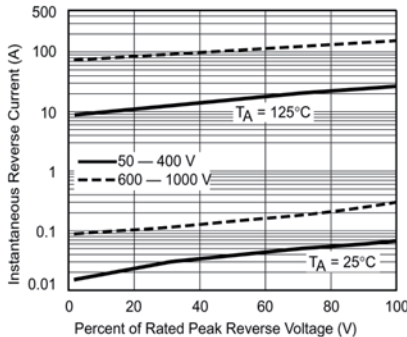


Figure 4. Typical Reverse Characteristics Per Leg

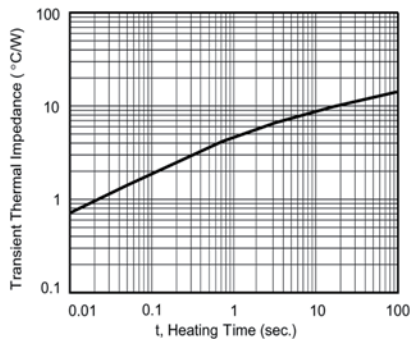


Figure 6. Typical Transient Thermal Impedance Per Leg