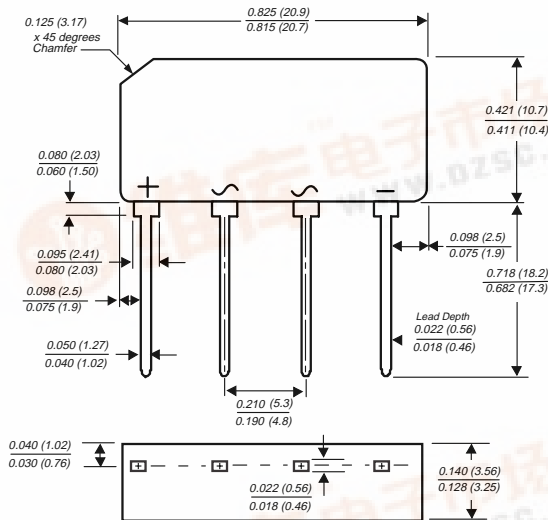


# GBL005 THRU GBL10

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 4.0 Amperes

### Case Type GBL

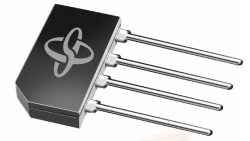


Polarity shown on front side of case: positive lead by beveled corner

Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ This series is UL listed under the Recognized Component Index, file number E54214
- ◆ Glass passivated chip junctions
- ◆ High case dielectric strength
- ◆ Typical  $I_R$  less than  $0.1\mu A$
- ◆ High surge current capability
- ◆ Ideal for printed circuit boards
- ◆ High temperature soldering guaranteed:  $260^\circ C/10$  seconds,  $0.375"$  (9.5mm) lead length, 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** Molded plastic body over passivated junctions  
**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026  
**Mounting Position:** Any  
**Weight:** 0.071 ounce, 2.0 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^\circ C$  ambient temperature unless otherwise specified.

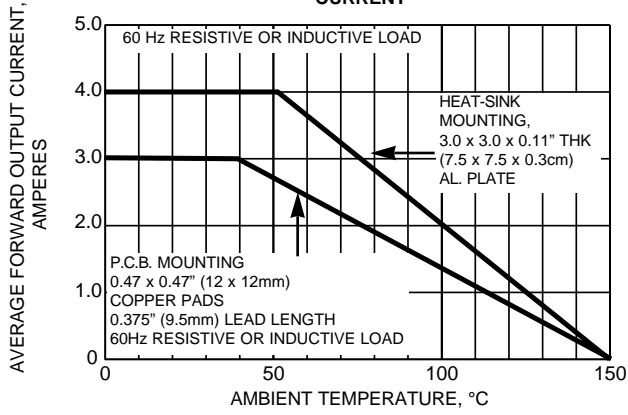
	SYMBOLS	GBL 005	GBL 01	GBL 02	GBL 04	GBL 06	GBL 08	GBL 10	UNITS	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts	
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts	
Maximum average forward rectified output current at $T_C=50^\circ C$ (NOTE 1) $T_A=40^\circ C$ (NOTE 2)	$I_{(AV)}$	4.0				3.0				Amps
Peak forward surge current, single half sine-wave superimposed on rated load (JEDEC Method) $T_J=150^\circ C$	$I_{FSM}$	150.0								Amps
Rating for fusing ( $t < 8.3ms$ )	$I^2t$	93.0								$A^2sec$
Maximum instantaneous forward drop per leg at 4.0 Amperes	$V_F$	1.1								Volts
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ C$ $T_A=125^\circ C$	$I_R$	5.0				500.0				$\mu A$
Typical junction capacitance per leg (NOTE 3)	$C_J$	95.0				40.0				pF
Typical thermal resistance per leg (NOTE 1) (NOTE 2)	$R_{\theta JA}$ $R_{\theta JL}$	22.0				3.5				$^\circ C/W$
Operating junction storage and temperature range	$T_J, T_{STG}$	-55 to +150								$^\circ C$

NOTES:  
 (1) Unit mounted on  $3.0 \times 3.0 \times 0.11"$  thick (7.5 x 7.5 x 0.3cm) Al. plate  
 (2) Unit mounted on P.C.B. at  $0.375"$  (9.5mm) lead length and  $0.5 \times 0.5"$  (12 x 12mm) copper pads  
 (3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

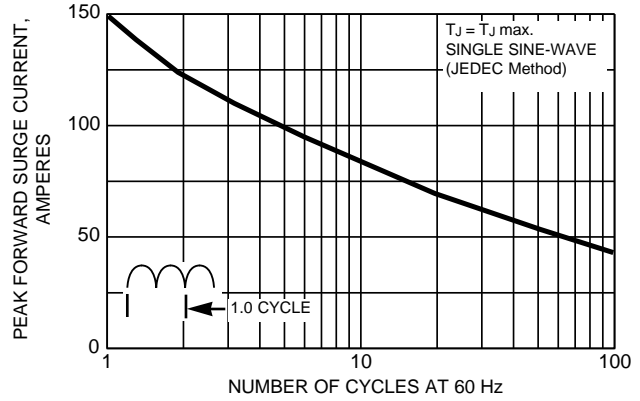


# RATINGS AND CHARACTERISTICS CURVES GBL005 THRU GBL10

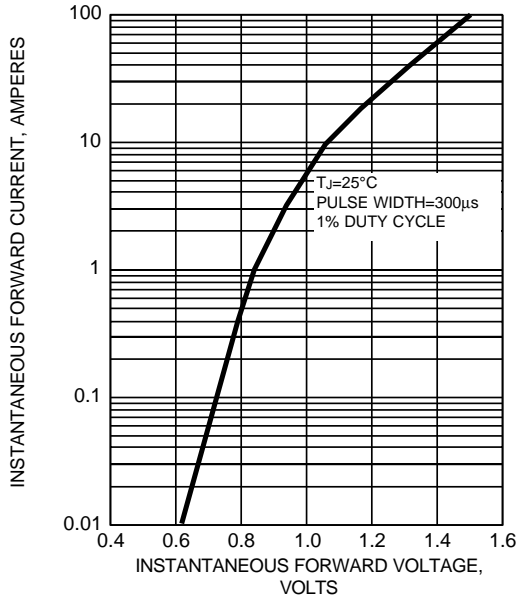
**FIG. 1 - DERATING CURVES OUTPUT RECTIFIED CURRENT**



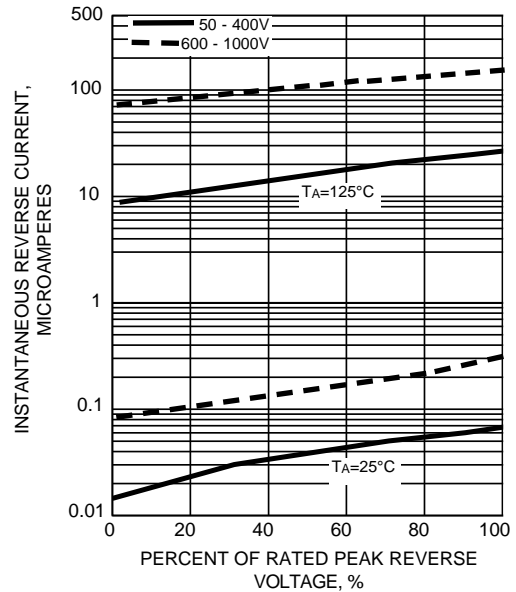
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



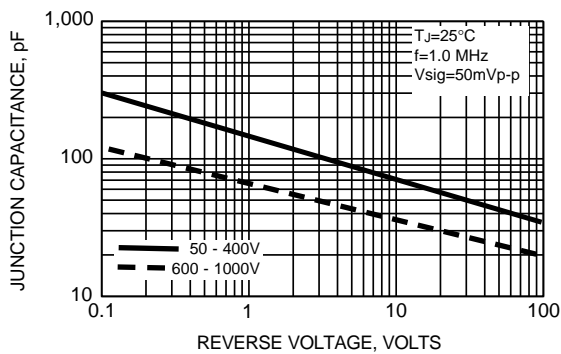
**FIG. 3 - TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG**



**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG**



**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG**

