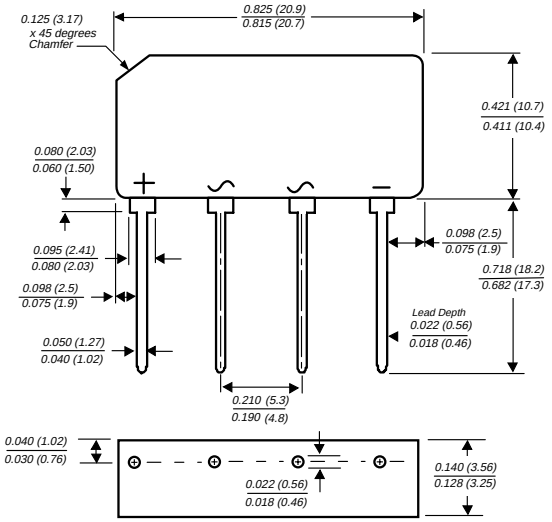
GBL005 THRU GBL10

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

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

Case Type GBL

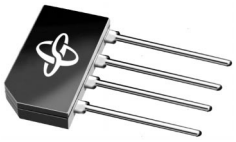


Polarity shown on front side of case: positive lead by beveled corner

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 0.1μA
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°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°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_A=50°C (NOTE 1) / T_A=40°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°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°C / T_A=125°C	I_R	5.0 / 500.0							μA
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							°C/W
Operating junction storage and 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 0.3cm) Al. plate
(2) Unit mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5 x 0.5" (12 x12mm) copper pads
(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

GENERAL SEMICONDUCTOR

RATINGS AND CHARACTERISTICS CURVES GBL005 THRU GBL10

FIG. 1 - DERATING CURVES OUTPUT RECTIFIED CURRENT

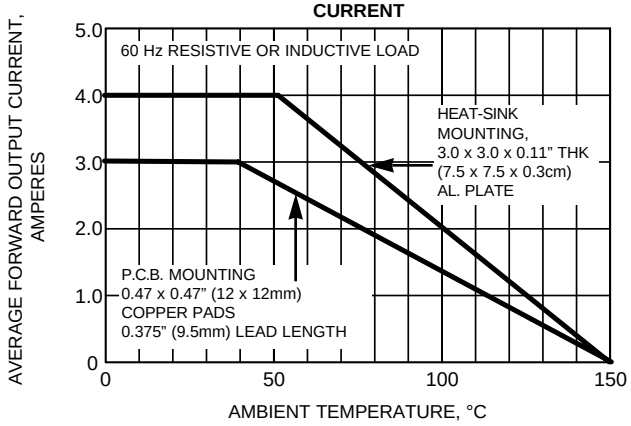


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

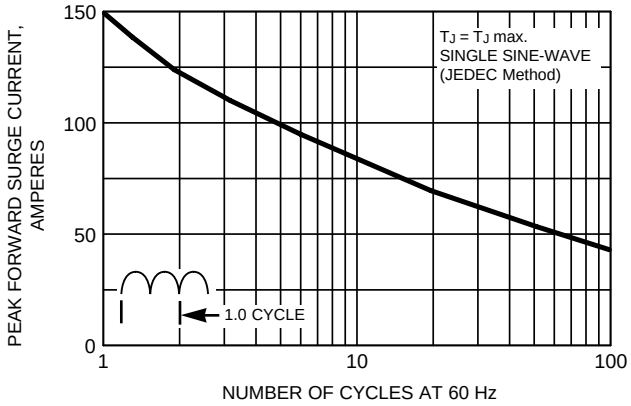


FIG. 3 - TYPICAL FORWARD VOLTAGE CHARACTERISTICS PER LEG

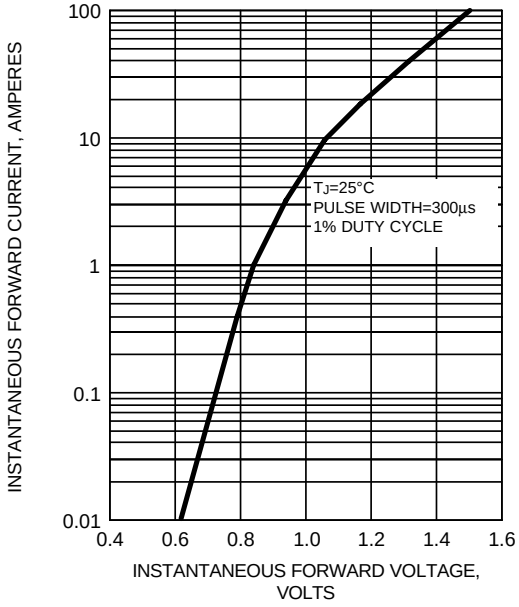


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

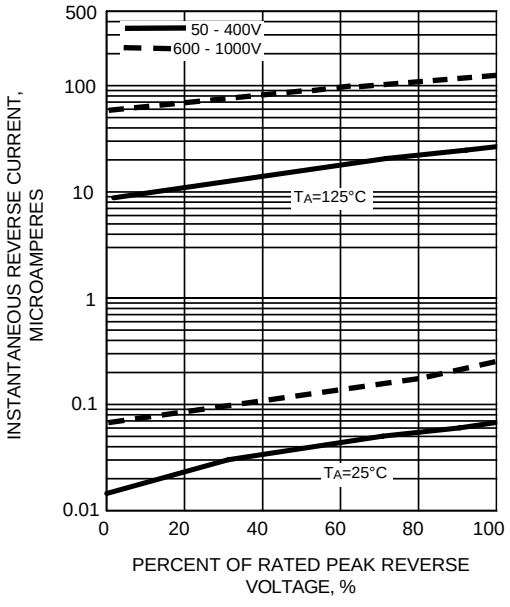


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

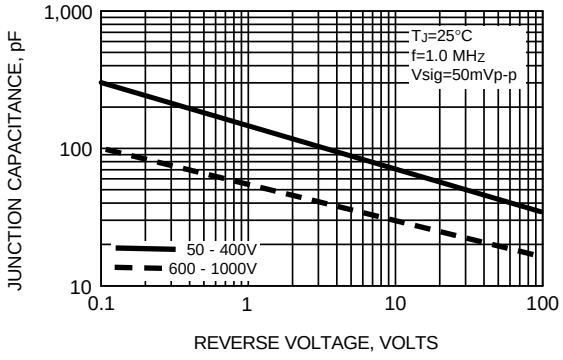
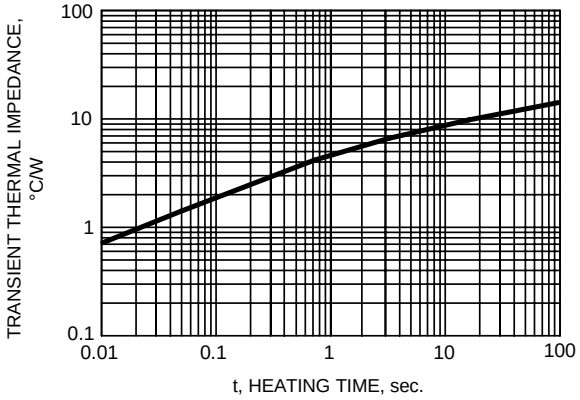


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



GENERAL SEMICONDUCTOR