



DATA SHEET

SEMICONDUCTOR

GBL4005 THRU GBL410

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

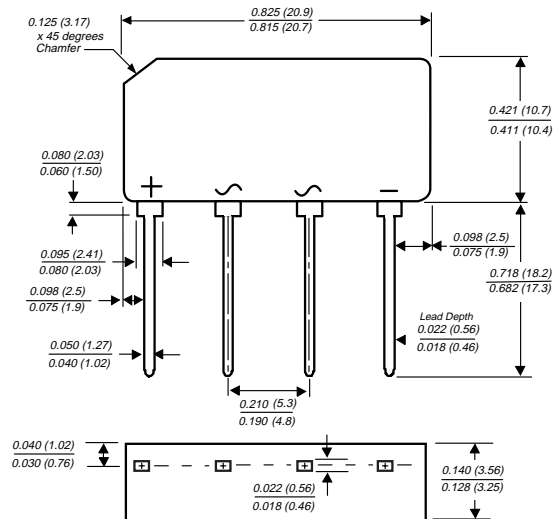


Reverse Voltage - 50 to 1000 Volts Forward Current - 4.0 Amperes

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 IR less than 0.1mA
- 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
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

GBL Unit:inch(mm)



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

Dimensions in inches and (millimeters)

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 4005	GBL 401	GBL 402	GBL 404	GBL 406	GBL 408	GBL 410	UNITS
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum average forward TC=50°C (NOTE 1) rectified output current at TA=40°C (NOTE 2)	I(AV)					4.0			Amps
Peak forward surge current, single half sine-wave superimposed on rated load (JEDEC Method) TJ=150°C	IFSM					150.0			Amps
Rating for fusing (t<8.3ms)	I2t					93.0			A2sec
Maximum instantaneous forward drop per leg at 4.0 Amperes	VF					1.0			Volts
Maximum DC reverse current at rated TA=25°C DC blocking voltage per leg TA=125°C	IR					5.0			uA
Typical junction capacitance per leg (NOTE 3)	CJ					95.0	40.0		pF
Typical thermal resistance per leg (NOTE 1) (NOTE 2)	RQJA RQJL					22.0			/W
Operating junction storage and temperature range	TJ, TSTG					-55 to +150			

NOTES:

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

DEVICE CHARACTERISTICS

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Fig. 1 – Derating Curves Output Rectified Current

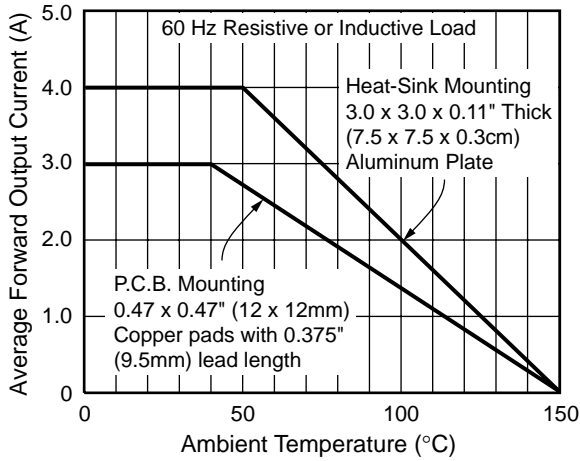


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

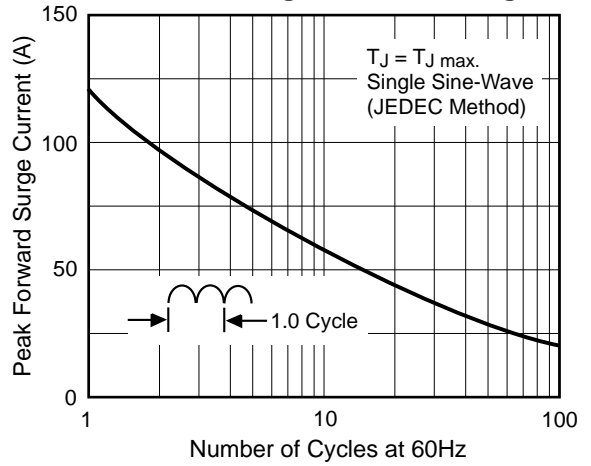


Fig. 3 – Typical Forward Voltage Characteristics Per Leg

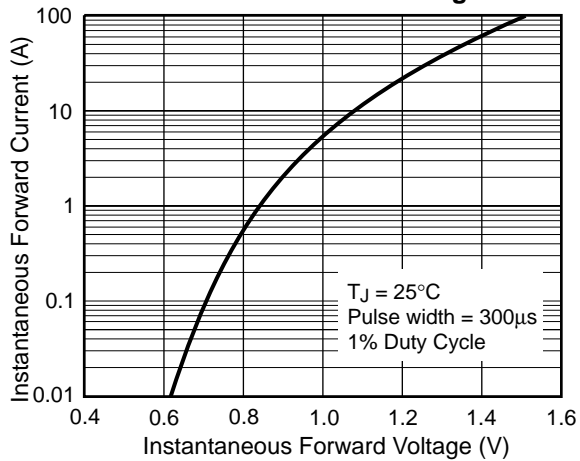


Fig. 4 – Typical Reverse Leakage Characteristics Per Leg

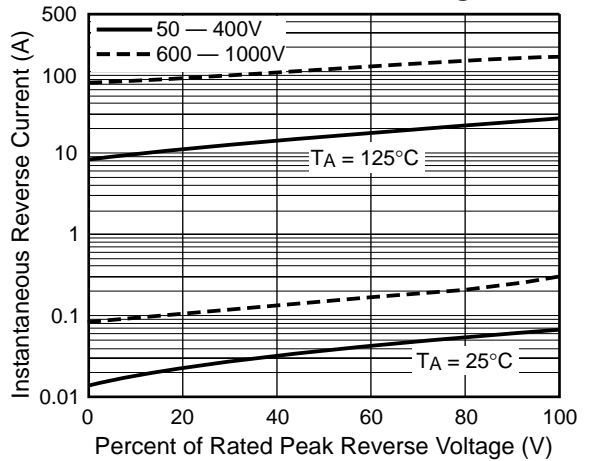


Fig. 5 – Typical Junction Capacitance Per Leg

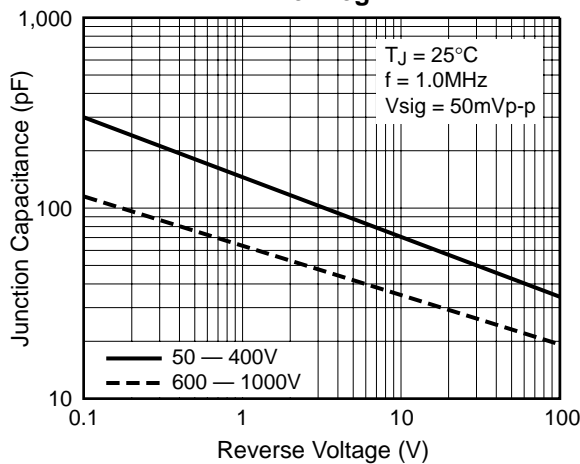


Fig. 6 – Typical Transient Thermal Impedance Per Leg

