

GBL4005 THRU GBL410

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 V

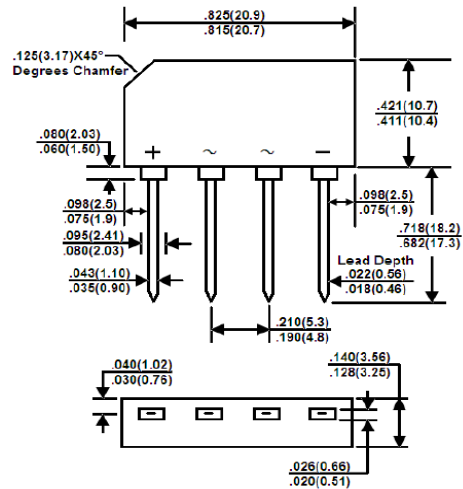
Forward Current - 4 A

Features

- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Glass passivated chip junctions

Mechanical Data

- **Case:** Molded plastic, GBL
- **Epoxy:** UL 94V-0 rate flame retardant
- **Mounting Position:** Any



Dimensions in millimeters

Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	GBL4005	GBL401	GBL402	GBL404	GBL406	GBL408	GBL410	Units	
	Marking	GBL4005	GBL401	GBL402	GBL404	GBL406	GBL408	GBL410	-	
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V	
Maximum average forward rectified current $T_C = 50^\circ\text{C}$ $T_J = 40^\circ\text{C}$	$I_{F(AV)}$					4			A	
Peak forward surge current , 8.3 ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}					150			A	
Maximum forward voltage at 2A DC	V_F					1			V	
Maximum reverse current at rated DC blocking voltage $T_C = 100^\circ\text{C}$	I_R					5 500			μA	
Typical junction capacitance ¹⁾	C_J					65	25			pF
Typical thermal resistance ²⁾	$R_{\theta JL}$					34			$^\circ\text{C/W}$	
Typical thermal resistance ³⁾	$R_{\theta JL}$					15			$^\circ\text{C/W}$	
Operating Junction and storage temperature range	T_J, T_{Stg}					-55 to +150			$^\circ\text{C}$	

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V.

²⁾ Mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length.

³⁾ Case mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3 cm) Al. Plate.

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FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

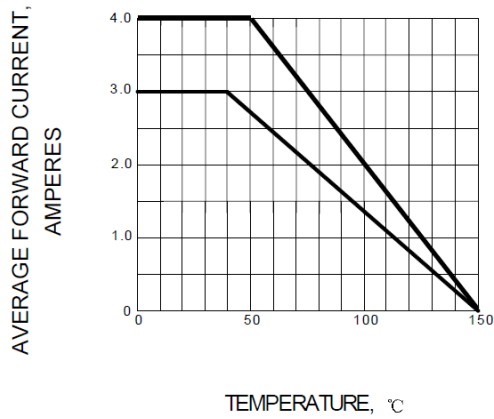


FIG.2 – TYPICAL FORWARD CHARACTERISTIC

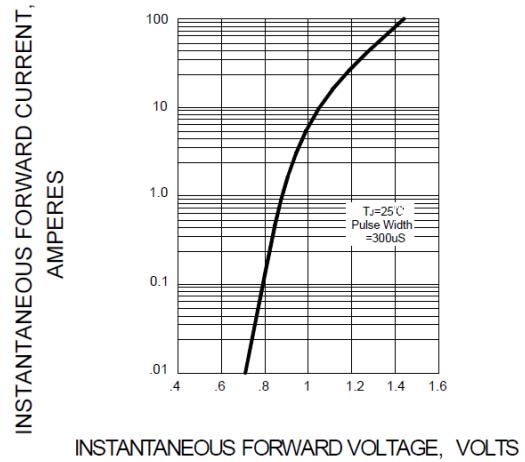


FIG.3 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

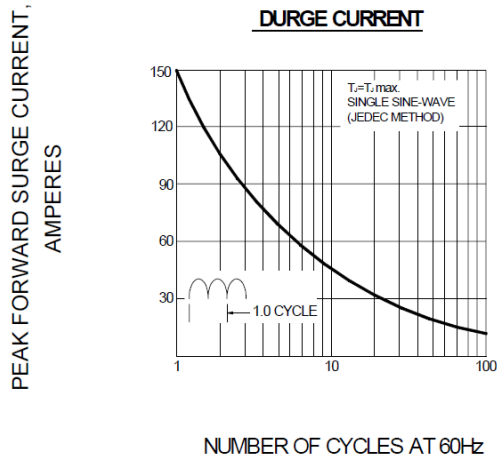


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

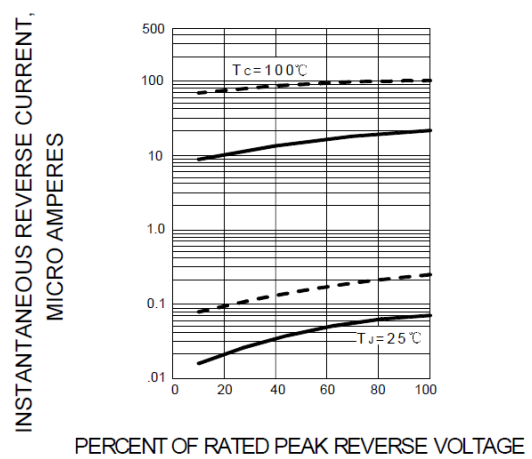


FIG.5 – TYPICAL JUNCTION CAPACITANCE PER LEG

