

# GBL4005-GBL410

Silicon Bridge Rectifiers



**VOLTAGE RANGE: 50 --- 1000 V**

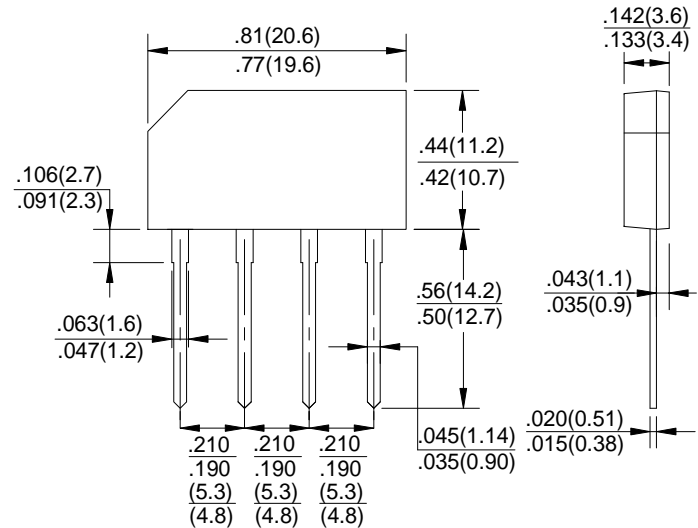
**CURRENT: 4.0 A**

**GBL**



## Features

- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique
- ◇ Plastic material has U/L flammability classification 94V-O
- ◇ Mounting position: Any
- ◇ Glass passivated chip junctions



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		GBL 4005	GBL 401	GBL 402	GBL 404	GBL 406	GBL 408	GBL 410	UNITS
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 output current @ $T_c=50^\circ\text{C}$ @ $T_J=40^\circ\text{C}$	$I_{F(AV)}$	4.0 3.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	150.0							A
$I^2t$ Rating for fusing @ $T_J=25^\circ\text{C}$	$I^2t$	93.3							A <sup>2</sup> S
Maximum instantaneous forward voltage at 2.0A at 4.0A	$V_F$	1.0 1.1							V
Maximum reverse current @ $T_A=25^\circ\text{C}$ at rated DC blocking voltage @ $T_c=100^\circ\text{C}$	$I_R$	5.0 500.0							$\mu\text{A}$
Typical junction capacitance per leg (note 1)	$C_J$	65			25				pF
Typical thermal resistance per leg (note 2) (note 3)	$R_{\theta JA}$ $R_{\theta JC}$	34 15							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	- 55 ---- + 150							$^\circ\text{C}$
Storage temperature range	$T_{STG}$	- 55 ---- + 150							$^\circ\text{C}$

NOTE: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.

2. Units mounted on P.C.B. with 0.5x0.5" (12x12mm) copper pads and 0.375" (9.5mm) lead length.

3. Unit case mounted on 3.0x3.0x0.11" thick (7.5x7.5x0.3cm) Al. Plate.

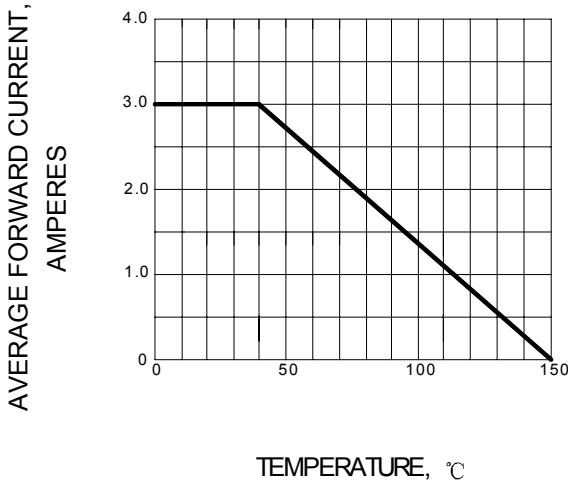
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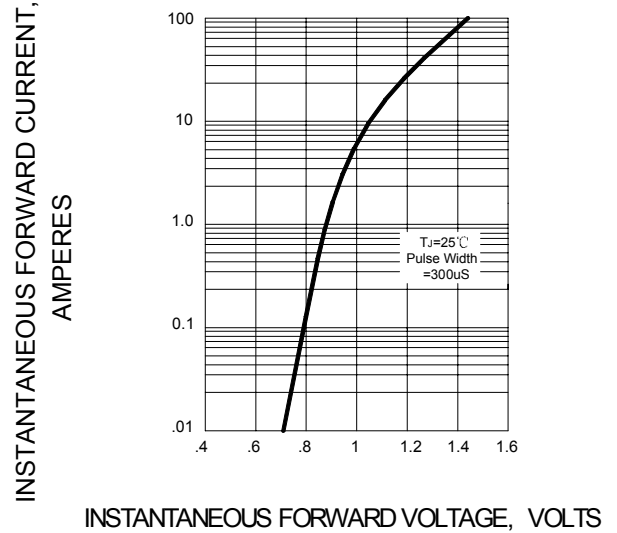


## Ratings AND Characteristic Curves

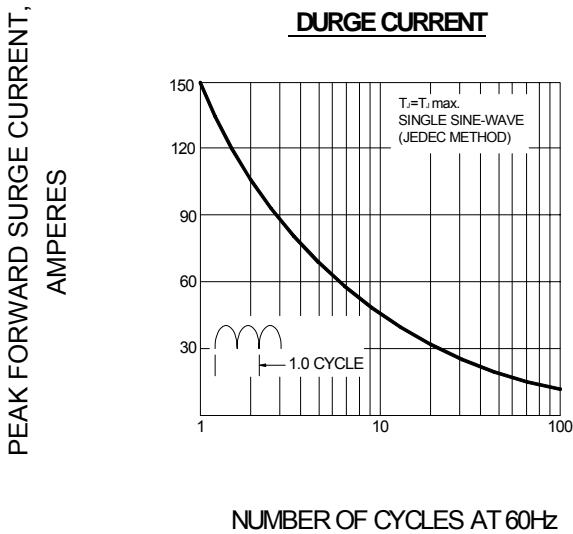
**FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



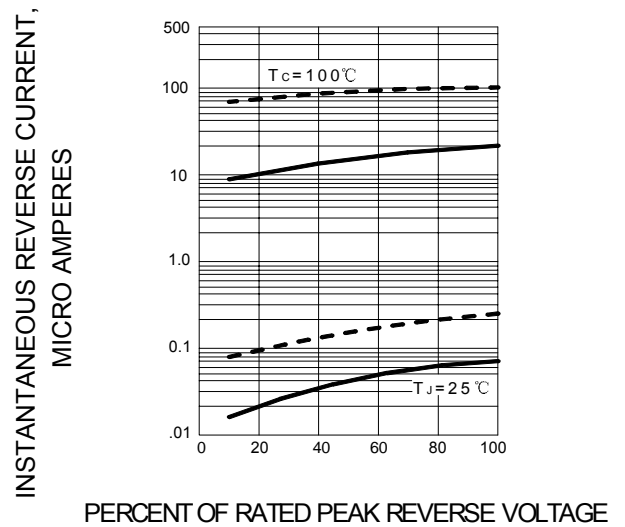
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



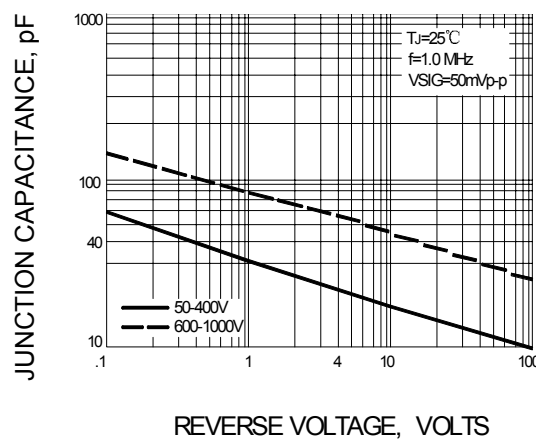
**FIG.3 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**



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



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