



# GBU4005~GBU408

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

Voltage Range 50 to 800 Volts

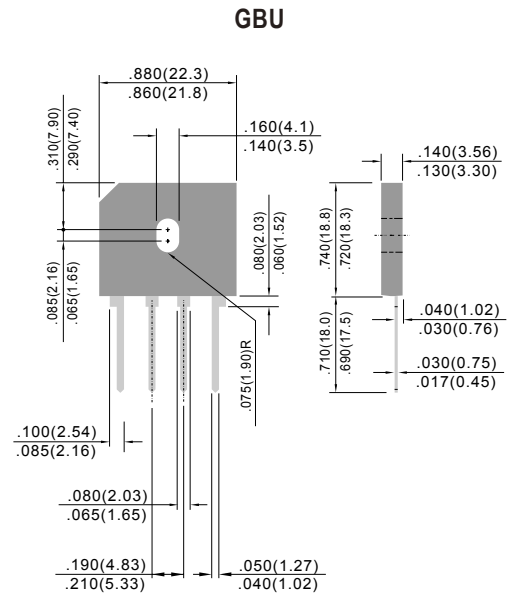
Current 4.0 Amperes

## Features

- \* Plastic material has Underwriters Laboratory Flammability Classification 94V-0
  - \* Ideal for printed circuit board
  - \* Reliable low cost construction utilizing molded plastic technique
  - \* Surge overload rating: 150 Amperes peak
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

## Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique  
 Terminals: Leads solderable per MIL-STD-202, Method 208  
 Mounting position: Any  
 Mounting torque: 5 in. lb. Max.  
 Weight: 0.15 ounce, 4.0 grams



Dimensions in millimeters

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.  
 For Capacitive load derate current by 20%.

PARAMETER	SYMBOL	GBU4005	GBU401	GBU402	GBU404	GBU406	GBU408	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	V
Maximum RMS Bridge Input Voltage	$V_{RMS}$	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	V
Maximum Average Forward $T_C=100^\circ C$ Rectified Output Current at $T_A=40^\circ C$	$I_{AV}$				4.0			A
					3.0			
$I^2t$ Rating for fusing ( $t < 8.3ms$ )	$I^2t$				93			A <sup>2</sup> sec
Peak Forward Surge Current single sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$				150			Apk
Maximum Instantaneous Forward Voltage Drop per element at 2.0A	$V_F$				1.0			Vpk
Maximum Reverse Leakage Current at Rated @ $T_A=25^\circ C$ Dc Blocking Voltage @ $T_A=100^\circ C$	$I_R$				5.0			$\mu A$
					500			
Typical Thermal Resistance per leg (Note 2) (Note 3)	$R_{\theta JA}$ $R_{\theta JC}$				19			$^\circ C/W$
					4			
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$				-55 to + 150			$^\circ C$

### NOTES:

1. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.
2. Units Mounted in free air, no heatsink, P.C.B at 0.375"(9.5mm) lead length with 0.5 x 0.5"(12 x 12mm)copper pads.
3. Units Mounted on a 2.0 x 1.6" x 0.3" thick (5 x 4 x 0.8cm) AL plate.

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## Rating and Characteristic Curves

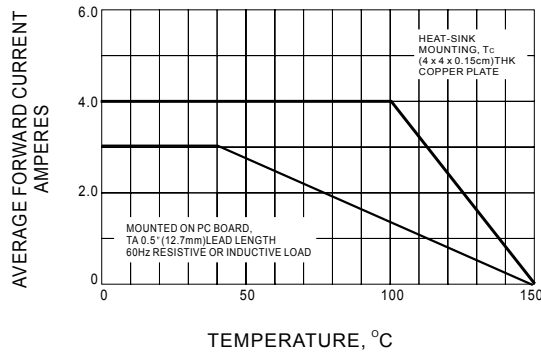


Fig.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

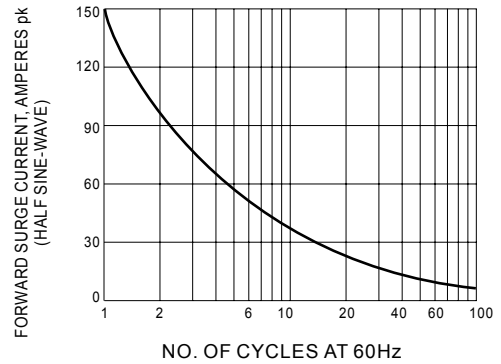


Fig.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

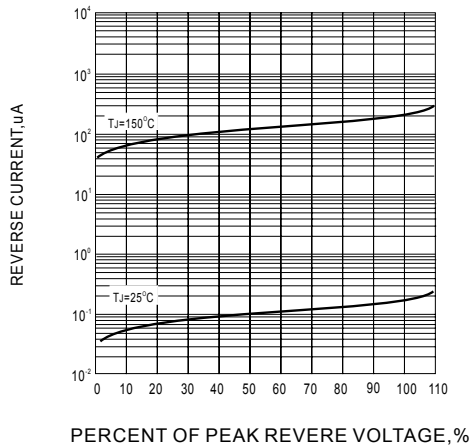


Fig.3 - TYPICAL REVERSE CHARACTERISTICS

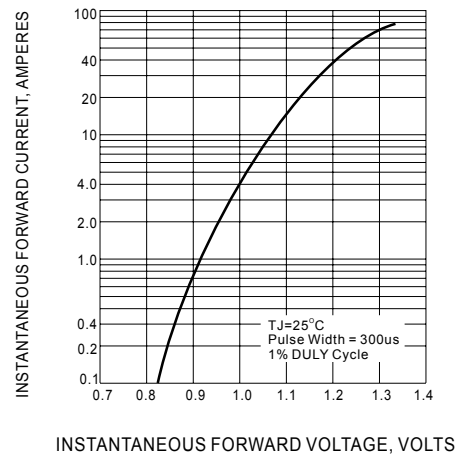


Fig.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT