

# GBU4/6/8005-GBU4/6/810

SINGLE PHASE 4.0/6.0/8.0 AMPS.  
GLASS PASSIVATED  
BRIDGE RECTIFIERS



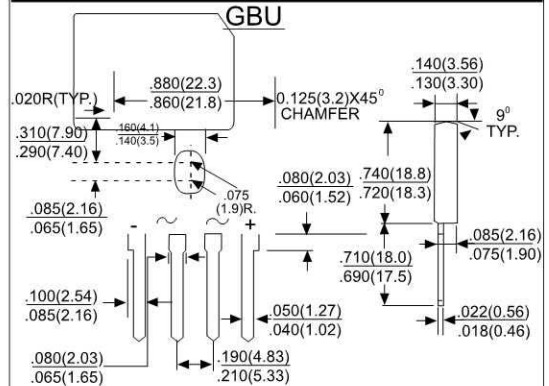
## Features

- \*Ideal for printed circuit board
- \*Reliable low cost construction
- \*Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- \*Surge overload rating to 150 amperes peak
- \*High temperature soldering guaranteed: 250°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension

## Mechanical Data

- \*Case: Molded plastic body
- \*Terminals: Leads solderable per MIL-STD-750, Method 2026
- \*Weight: 0.3 ounce, 8.0 grams
- \*Mounting torque: 5 in.lbs. Max.

Voltage Range  
50 to 1000 Volts  
Current  
4.0/6.0/8.0 Amperes



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

Type Number		GBU 4005 6005 8005	GBU 401 601 801	GBU 402 602 802	GBU 404 604 804	GBU 406 606 806	GBU 408 608 808	GBU 410 610 810	UNITS	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current @ T <sub>c</sub> = 100°C	I <sub>F(AV)</sub>	4.0/6.0/8.0							A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I <sub>FSM</sub>	150/175/200							A	
Maximum Instantaneous Forward Voltage Drop Per Leg @ 4.0A/6.0A/8.0A	V <sub>F</sub>	1.0							V	
Maximun DC Reverse Current @ T <sub>A</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>A</sub> = 125°C	I <sub>R</sub>	5.0 500							µA µA	
Typical Thermal Resistance (Note 1) (Note 2)	R <sub>J(A)</sub> R <sub>J(C)</sub>	20/7.0/21.0 4.0							°C/W	
Typical Junction Capacitance (Note 3)	C <sub>J</sub>	100/211/211				45/94/94				pF
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C	

- NOTES: GBU4005 Thru GBU410: 1. Mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) Copper Pads and 0.375" (9.5mm) Lead Length.  
2. Mounted on Al. Plate of 1.6 x 1.6 x 0.06" THK (4 x 4 x 0.15cm).
- GBU4005 Thru GBU410: 1. Mounted on Al. Plate Heatsink of 2.6 x 1.4 x 0.06" THK (6.5 x 3.5 x 0.15cm).  
2. Bolt on Heatsink with silicone Thermal Compound for Maximum Heat Transfer with #6 Screws.
- GBU4005 Thru GBU410: 1. Units Mounted In Free Air No Heat Sink On PCB 0.5 x 0.5" (12 x 12mm) Copper Pads, 0.375" (9.5mm) Lead Length.  
2. Units Case Mounted On 3.2 x 3.2 x 0.12" Thick (8.2x8.2x0.3cm) AL. Plate Heat Sink.  
3. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0 Volts.

# RATING AND CHARACTERISTIC CURVES GBU4A/6A/8A SERIES

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

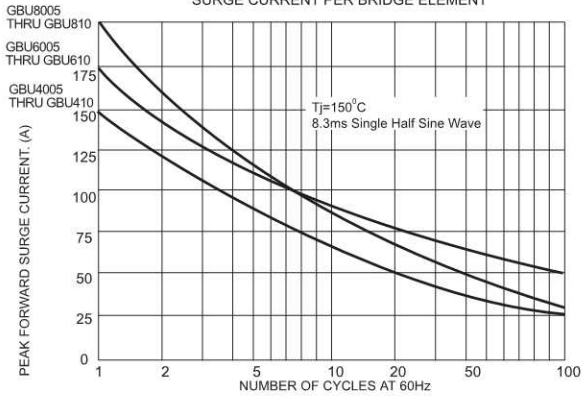


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

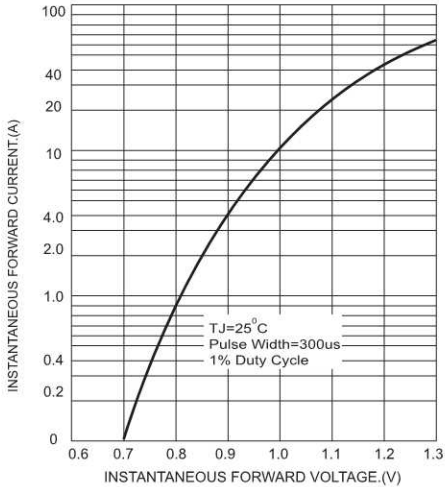


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT (GBU4005 THRU GBU410)

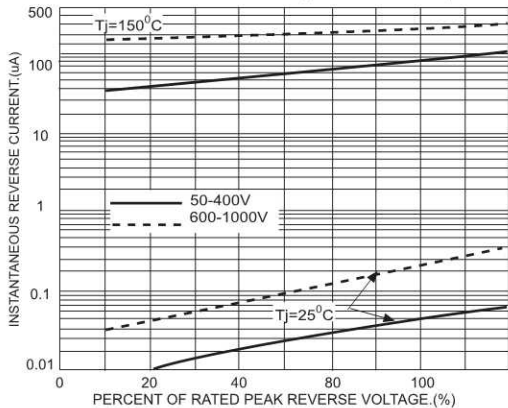


FIG.2-MAXIMUM FORWARD CURRENT DERATING CURVE

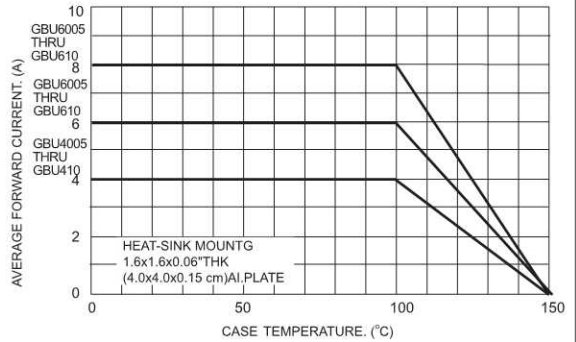


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT (GBU6005 THRU GBU610)

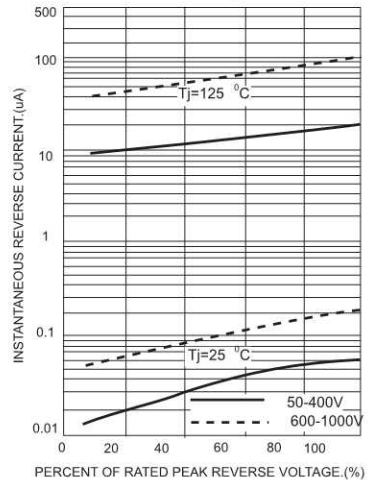


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT (GBU6005 THRU GBU810)

