

# GBU6005 THRU GBU610

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS  
**FORWARD CURRENT:** 6.0 AMPERE

### FEATURES

- Glass passivated chip junction
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Reliable low cost construction utilizing molded plastic technique

### MECHANICAL DATA

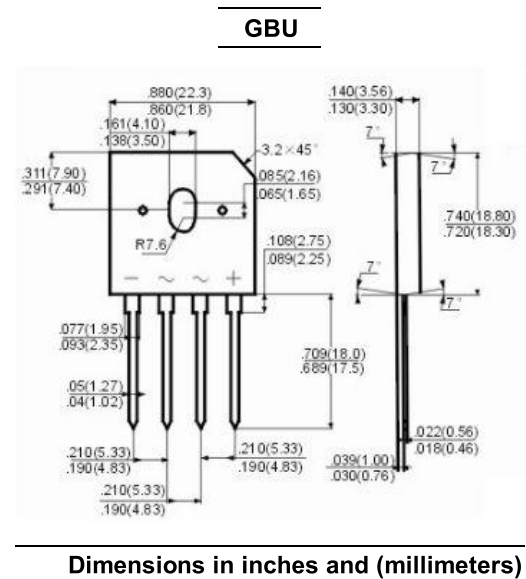
Case: Molded plastic, GBU

Epoxy: UL 94V-0 rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.15ounce, 4.0gram



### Maximum Ratings and Electrical 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%.

	Symbols	GBU6005	GBU601	GBU602	GBU604	GBU606	GBU608	GBU610	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_c=100\text{ }^\circ\text{C}$ (Note 1),(Note 2)	$I_{(AV)}$	6.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	175							Amp
Maximum Forward Voltage at 6.0A DC and 25°C	$V_F$	1.0							Volts
Maximum Reverse Current at Rated DC Blocking Voltage at $T_A=25\text{ }^\circ\text{C}$ and $T_A=125\text{ }^\circ\text{C}$	$I_R$	5.0							uAmp
Typical Junction Capacitance (Note 3)	$C_J$	210				94			pF
Typical Thermal Resistance (Note 1),(Note 2)	$R_{\theta JA}$	7.4							$^\circ\text{C/W}$
Typical Thermal Resistance (Note 1),(Note 2)	$R_{\theta JC}$	2.2							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150							$^\circ\text{C}$

### NOTES:

1- Units case mounted on 2.6 x 1.4 x 0.06" thick (6.5 x 3.5 x 0.15 cm) Al. Plate heatsink

2- Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

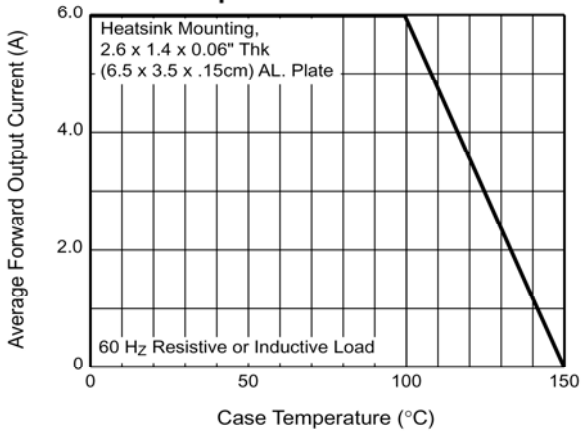
3- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

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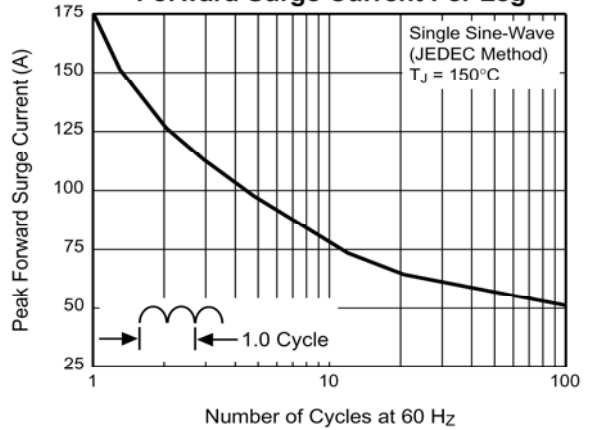
## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES

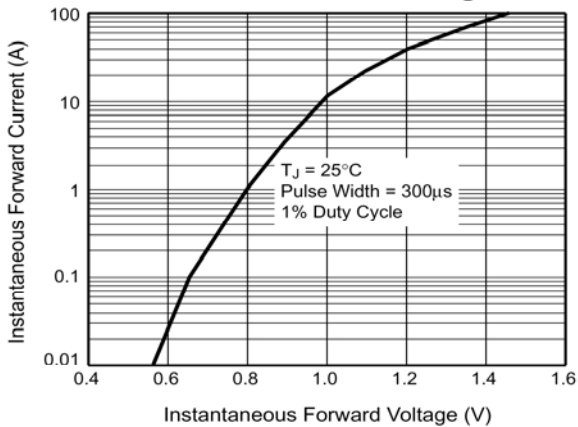
**Fig. 1 – Derating Curve  
Output Rectified Current**



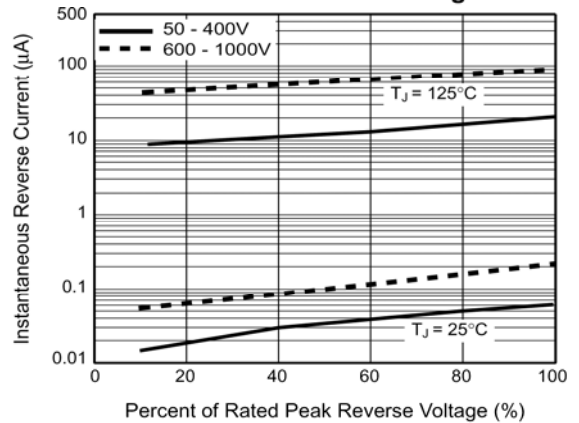
**Fig. 2 – Maximum Non-Repetitive Peak  
Forward Surge Current Per Leg**



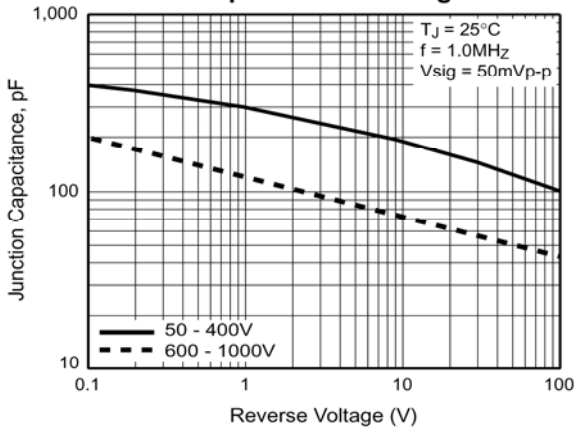
**Fig. 3 – Typical Forward  
Characteristics Per Leg**



**Fig. 4 – Typical Reverse Leakage  
Characteristics Per Leg**



**Fig. 5 – Typical Junction  
Capacitance Per Leg**



**Fig. 6 – Typical Transient  
Thermal Impedance**

