

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
- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

MECHANICAL DATA

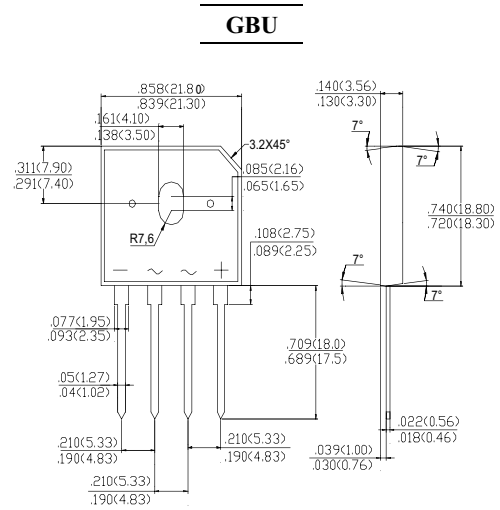
Case: Molded plastic, GBU

Epoxy: UL 94V-O rate flame retardant

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

Mounting position: Any

Weight: 0.15ounce, 4.0gram



Dimensions in inches and (millimeters)

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 $T_C=100^\circ\text{C}$ (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 $T_A=25^\circ\text{C}$ and $T_A=125^\circ\text{C}$	I_R	5.0 500							uAmp
Typical Junction Capacitance (Note 3)	C_J	210				94			pF
Typical Thermal Resistance (Note 1),(Note 2)	$R_{\theta JA}$	7.4							°C/W
Typical Thermal Resistance (Note 1),(Note 2)	$R_{\theta JC}$	2.2							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							°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

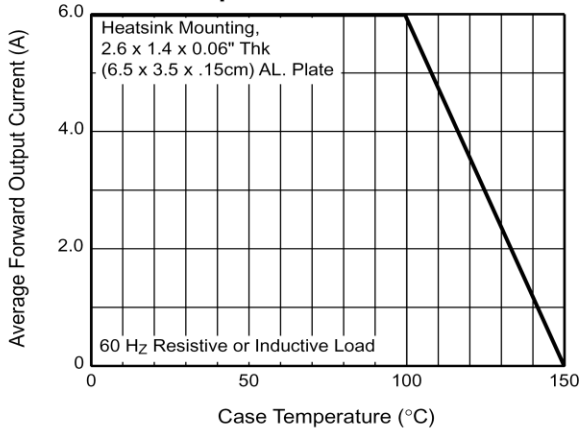
3- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

GBU6005 THRU GBU610

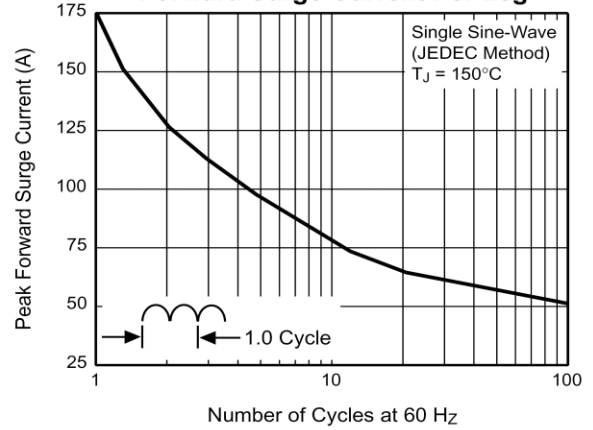
GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

RATINGS AND CHARACTERISTIC CURVES

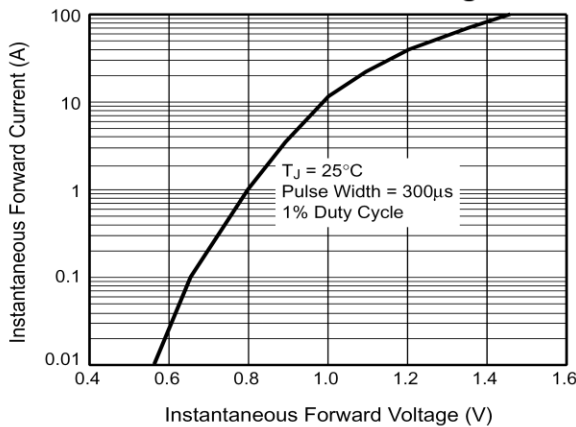
**Fig. 1 – Derating Curve
Output Rectified Current**



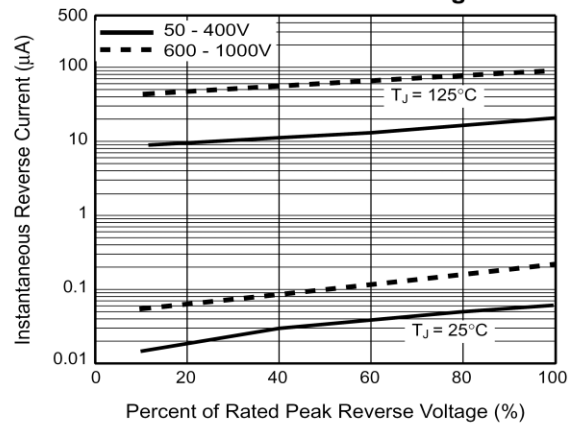
**Fig. 2 – Maximum Non-Repetitive Peak
Forward Surge Current Per Leg**



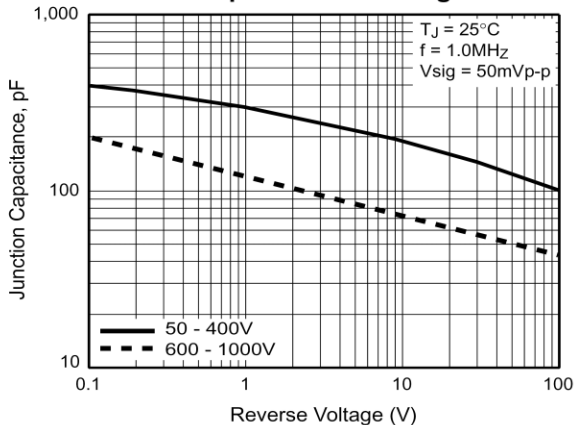
**Fig. 3 – Typical Forward
Characteristics Per Leg**



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



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



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

