



### GBU8005 THRU GBU810

#### GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 8.0 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

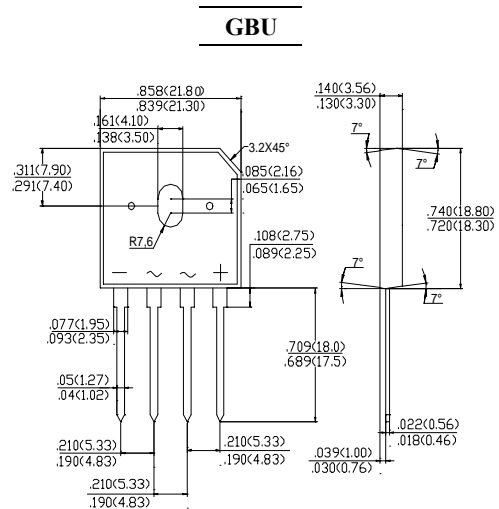
Case: Molded plastic, GBU

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	GBU8005	GBU801	GBU802	GBU804	GBU806	GBU808	GBU810	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 $T_C=100$ (Note 1)	$I_{(AV)}$	8.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	200							Amp
Maximum Forward Voltage at 8.0A DC and 25 °C	$V_F$	1.0							Volts
Maximum Reverse Current at Rated DC Blocking Voltage at $T_A=25$ and $T_A=125$	$I_R$	5.0 500							uAmp
Typical Junction Capacitance (Note 3)	$C_J$	255				125			pF
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	21							/W
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	2.2							/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150							

NOTES: 1- Units case mounted on 3.2 x 3.2 x 0.12" thick (8.2 x 8.2 x 0.3cm) 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.

4- Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12mm) copper pads, 0.375" lead length



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RATINGS AND CHARACTERISTIC CURVES

Fig. 1 – Derating Curve Output Rectified Current

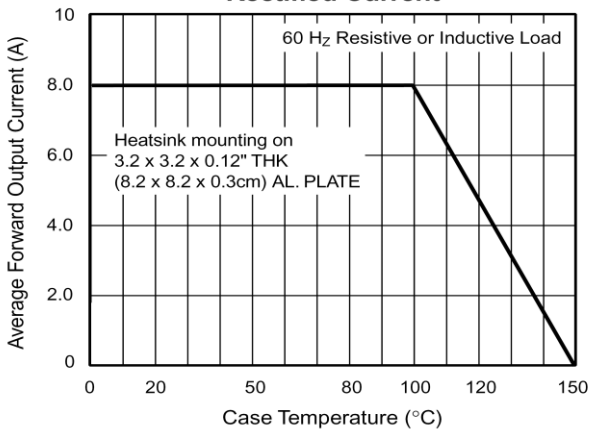


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

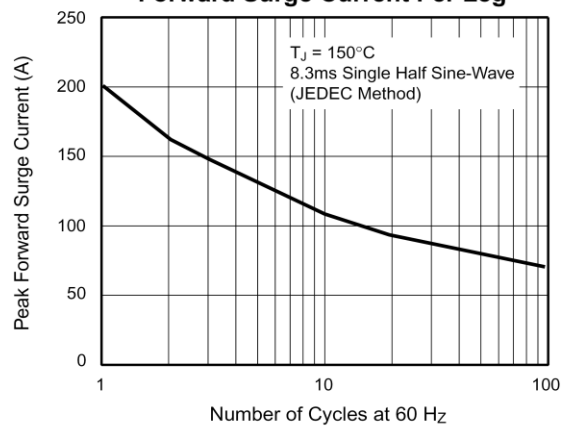


Fig. 3 – Typical Forward Characteristics Per Leg

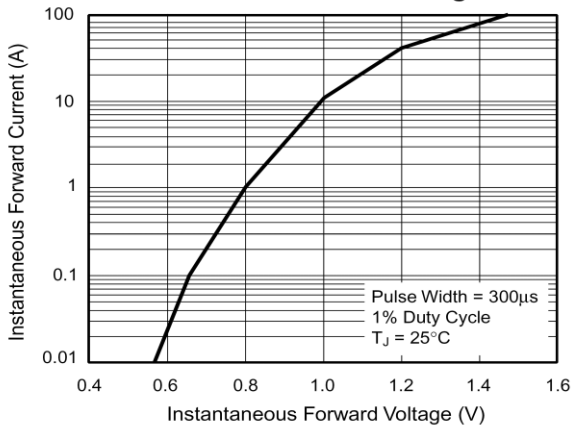


Fig. 4 – Typical Reverse Characteristics Per Leg

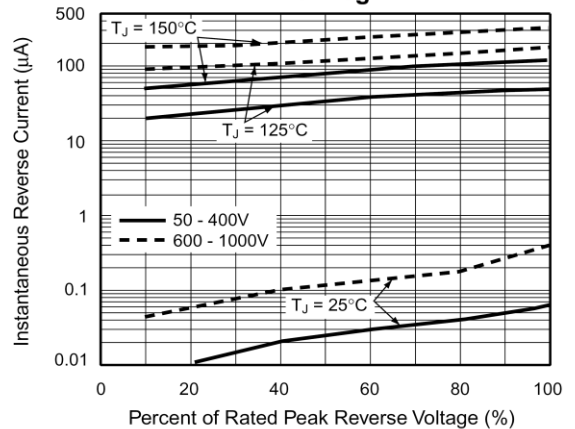


Fig. 5 – Typical Junction Capacitance Per Leg

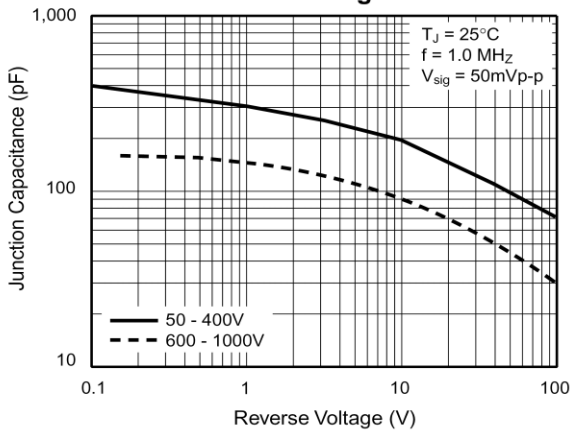


Fig. 6 – Typical Transient Thermal Impedance Per Leg

