

GBU4005 THRU GBU410

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 4.0 AMPERE

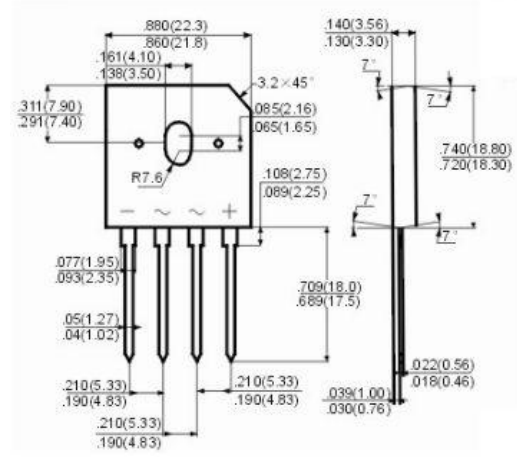
FEATURES

- 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

GBU



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	GBU4005	GBU401	GBU402	GBU404	GBU406	GBU408	GBU410	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) $T_A=40^\circ\text{C}$ (Note 2)	$I_{(AV)}$					4.0			Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}					150			Amp	
Maximum Forward Voltage at 4.0A DC and 25°C	V_F					1.0			Volts	
Maximum Reverse Current at Rated DC Blocking Voltage at $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R					5.0			uAmp	
Typical Junction Capacitance (Note 3)	C_J					100	45			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$					22			°C/W	
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$					4.2			°C/W	
Operating and Storage Temperature Range	T_J, T_{stg}					-55 to +150				°C

NOTES:

- 1- Unit case mounted on 1.6 x 1.6 x 0.06" thick (4.0 x 4.0 x 0.15cm) Al. Plate
- 2- Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length
- 3- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 4- Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

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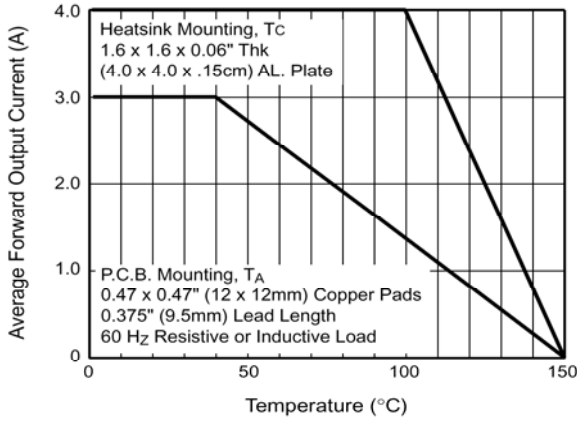
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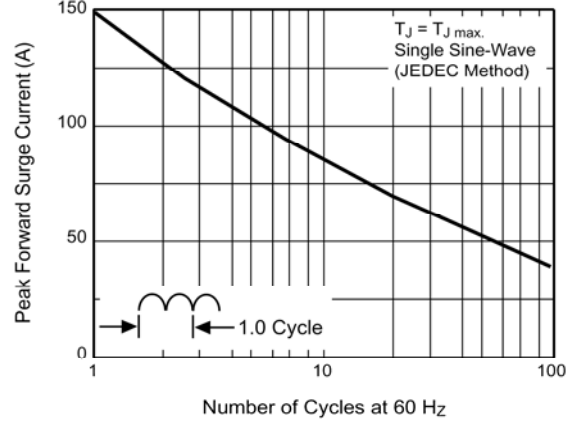
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RATINGS AND CHARACTERISTIC CURVES

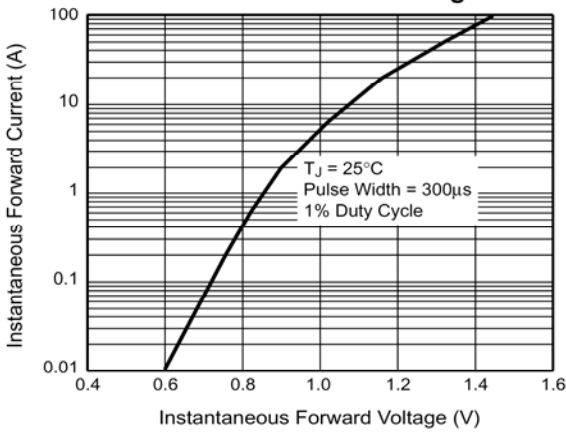
**Fig. 1 — Derating Curve
Output Rectified Current**



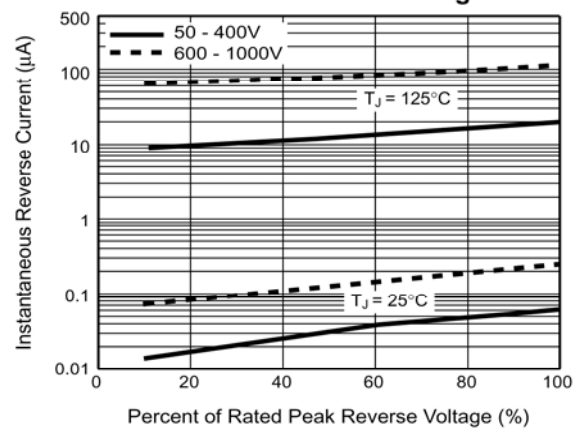
**Fig. 2 — Maximum Non-Repetitive
Peak Forward Surge Current Per Leg**



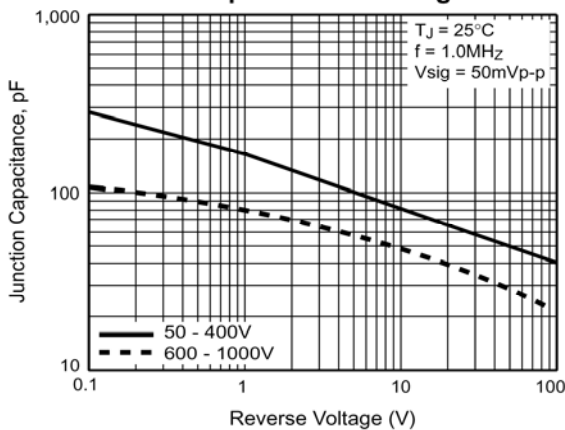
**Fig. 3 — Typical Forward
Characteristics Per Leg**



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



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



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

