

***GBU40X SERIES***



**GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER**

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# 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
- 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

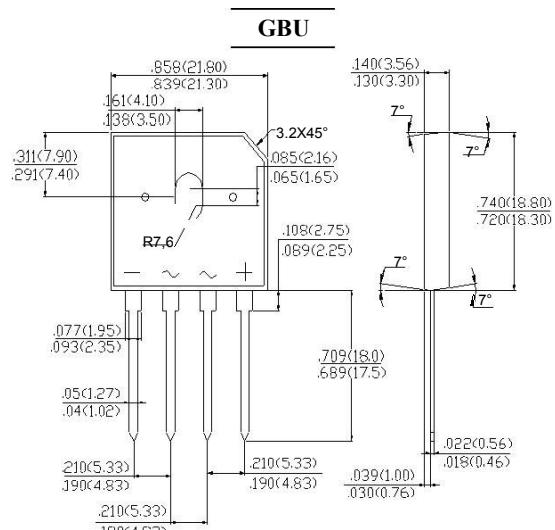
Case: Molded plastic, GBU

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	GBU4005	GBU401	GBU402	GBU404	GBU406	GBU408	GBU410	Units
<b>Maximum Recurrent Peak Reverse Voltage</b>	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
<b>Maximum RMS Voltage</b>	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
<b>Maximum DC Blocking Voltage</b>	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T <sub>C</sub> =100°C (Note 1) T <sub>A</sub> = 40°C (Note 2)	I <sub>(AV)</sub>				4.0				Amp
					3.0				
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>				150				Amp
Maximum Forward Voltage at 4.0A DC and 25°C	V <sub>F</sub>				1.0				Volts
Maximum Reverse Current at T <sub>A</sub> =25°C at Rated DC Blocking Voltage T <sub>A</sub> =125°C	I <sub>R</sub>				5.0				uAmp
					500				
Typical Junction Capacitance (Note 3)	C <sub>J</sub>		100			45			pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>			22					°C/W
Typical Thermal Resistance (Note 1)	R <sub>θJC</sub>			4.2					°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>Stg</sub>			-55 to +150					°C

NOTES: 1- Unit case mounted on 1.6 x 1.6 x 0.06" thick (4.0 x4.0 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

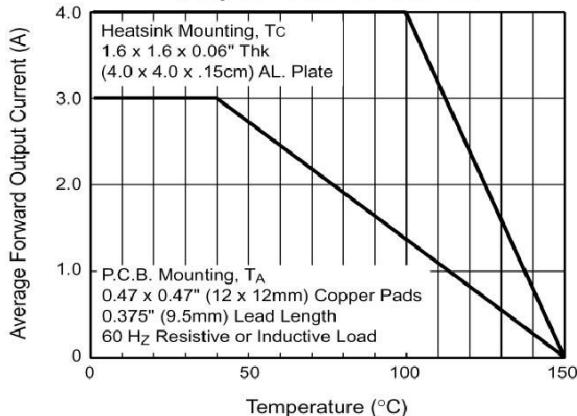
# GBU4005 THRU GBU410

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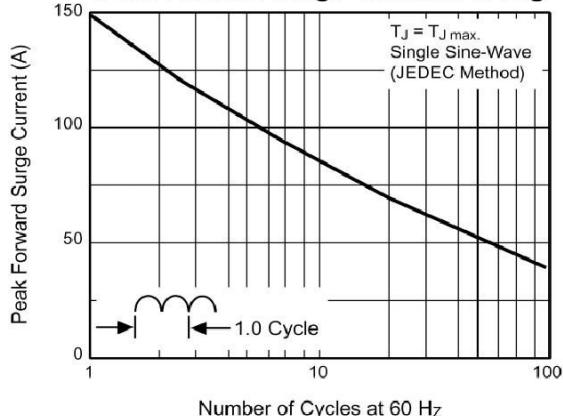


## RATINGS AND CHARACTERISTIC CURVES

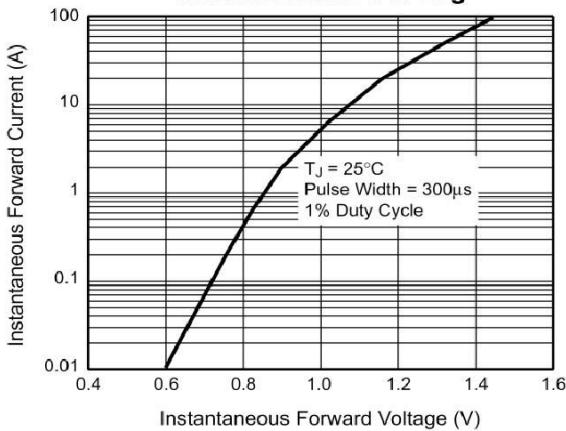
**Fig. 1 — Derating Curve  
Output Rectified Current**



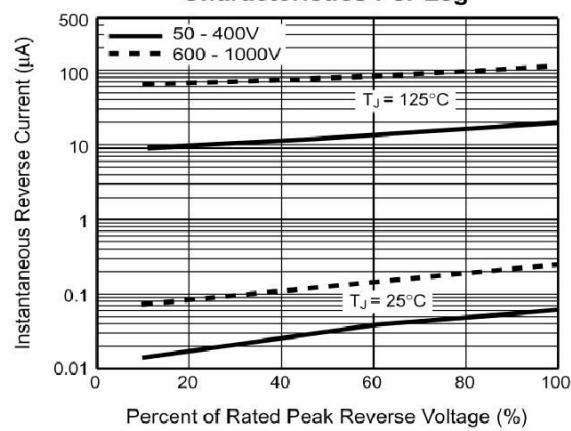
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



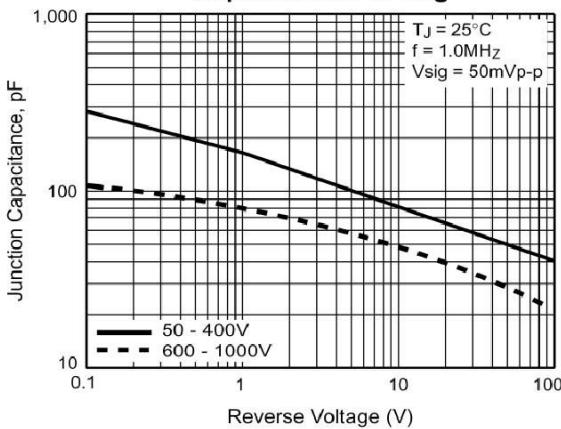
**Fig. 3 — Typical Forward Characteristics Per Leg**



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



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



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

