



# SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

## GBJ6005 THRU GBJ610

VOLTAGE RANGE  
CURRENT

50 to 1000 Volts  
6.0 Ampere

### FEATURES

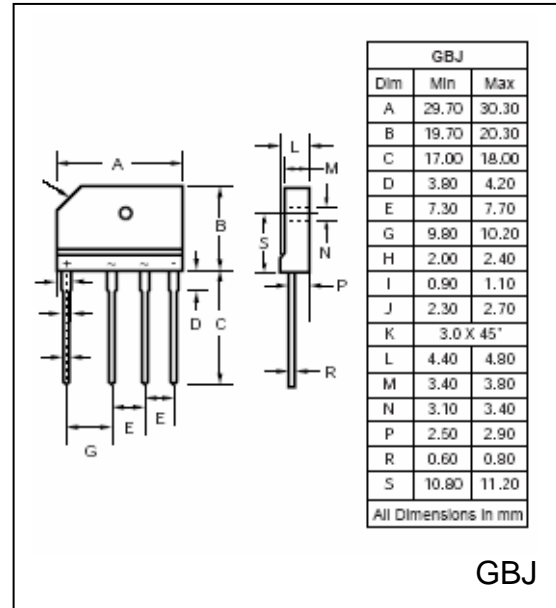
- Plastic package has UL flammability Classification 94V – 0
- Glass passivated chip junction
- High case dielectric strength of 1500 V<sub>RMS</sub>
- High surge current capability
- High temperature soldering guaranteed:  
260 °C /10 seconds, 0.375” (9.5mm) lead length

### MECHANICAL DATA

- Case: Molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750 Method 2026
- Mounting position: any (Note 2)
- Mounting Torque: 6 in-lbs max.
- Weight: 0.26 ounce, 7.4 gram

### 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	GBJ 6005	GBJ 601	GBJ 602	GBJ 604	GBJ 606	GBJ 608	GBJ 610	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, At T <sub>C</sub> = 110°C	I <sub>(AV)</sub>	6.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	170							Amps
Rating for Fusing (t<8.3mS)	I <sup>2</sup> t	127							A <sup>2</sup> s
Maximum Instantaneous Forward Voltage drop per Bridge element 3.0A	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	I <sub>R</sub>	5.0							μA
		500							
Typical Junction Capacitance, per leg (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C <sub>J</sub>	211				94			pF
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	6.0							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	(-55 to +150)							°C
Storage Temperature Range	T <sub>STG</sub>	(-55 to +150)							°C

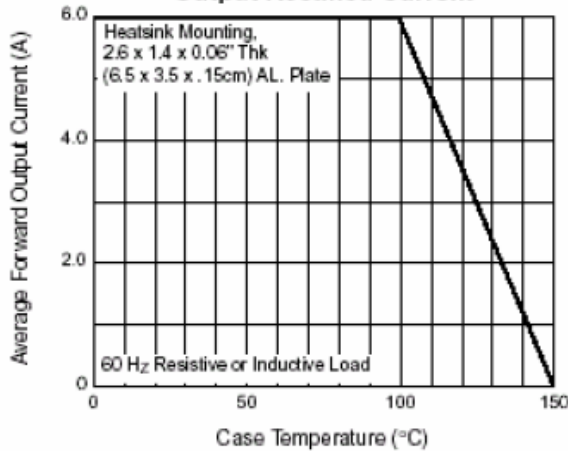
### Notes:

1. Unit mounted on AL Plate heatsink (100mm x 100mm x 1.6mm)
2. Recommended mounting is bolt down with #6 screws to heat sink using silicone thermal grease for maximum heat transfer.

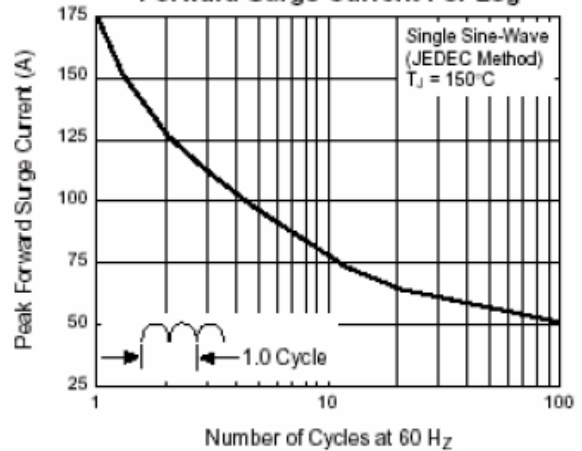


## RATINGS AND CHARACTERISTIC CURVES GBJ6005 THRU GBJ610

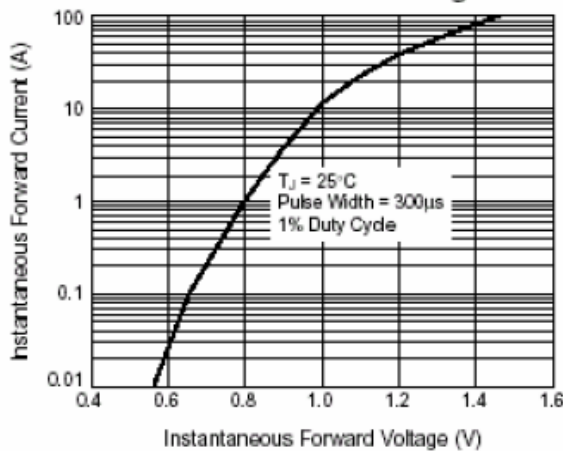
**Fig. 1 – Derating Curve  
Output Rectified Current**



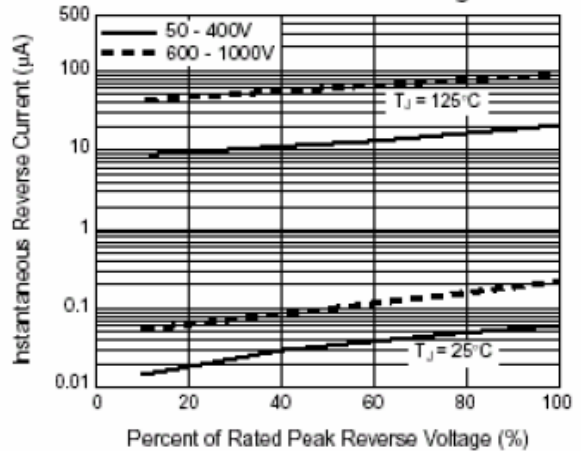
**Fig. 2 – Maximum Non-Repetitive Peak  
Forward Surge Current Per Leg**



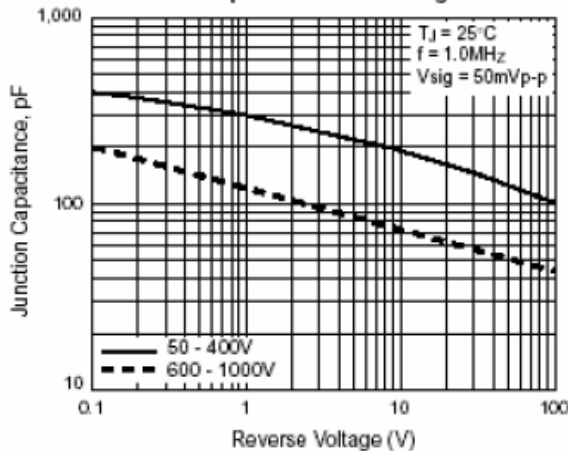
**Fig. 3 – Typical Forward  
Characteristics Per Leg**



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



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



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

