



## SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

**GBJ6005 THRU GBJ610**

**VOLTAGE RANGE**

**50 to 1000 Volts**

**CURRENT**

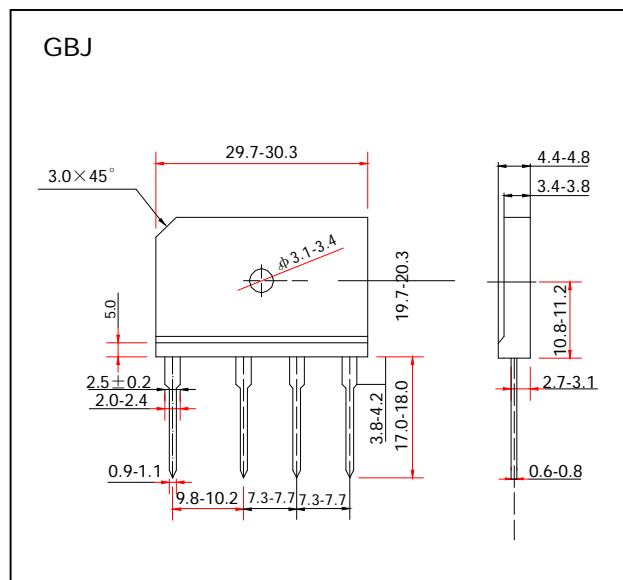
**6.0 Amperes**

### FEATURES

- Plastic package has UL Flammability Classification 94V-0
- Glass passivated chip junctions
- 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
- Terminal: Plated leads solderable per MIL-STD-750 Method 2026
- Mounting position: Any (Note 3)
- Mounting Torque: 6 in – 1bs 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 Reverse Peak Repetitive 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	100	Volts
Maximum Average Forward Rectified Current, At T <sub>C</sub> =110°C (Note 1)	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>	150							Amps
Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	127							A <sup>2</sup> s
Maximum Instantaneous Forward Voltage drop Per leg at 3.0A	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at rated DC blocking voltage per element	T <sub>A</sub> =25°C	5.0							μ A
	T <sub>A</sub> =125°C	500							
Typical Junction Capacitance, per let (Note 4)	C <sub>J</sub>	211.0			94.0				pF
Typical Thermal Resistance (Note 2)	R <sub>JA</sub>	35.0							°C/W
Operating Junction Temperature Range	T <sub>J</sub>	(-55 to +150)							°C/W
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. Unit mounted on P.C.B With 0.5" x 0.5" x (12 x 12mm) copper pads on 0.375" (9.5mm) lead length
  3. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum Heat transfer with #6 screws
  4. Measured at 1.0 MHz and applied reverse voltage of 4.0 V



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## RATINGS AND CHARACTERISTIC CURVES GBJ6005 THRU GBJ610

FIG. 1- DERATING CURVE  
OUTPUT RECTIFIED CURRENT

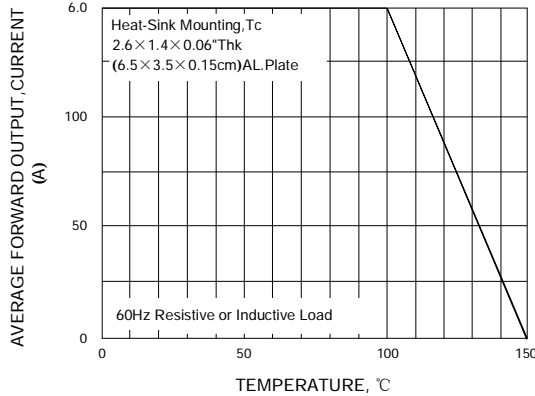


FIG. 2- MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER LEG

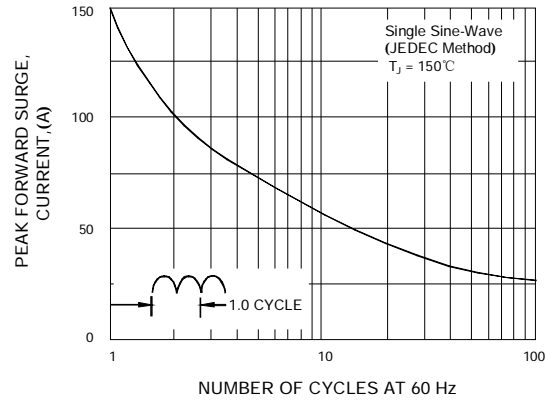


FIG. 3- TYPICAL FORWARD CHARACTERISTICS  
PER LEG

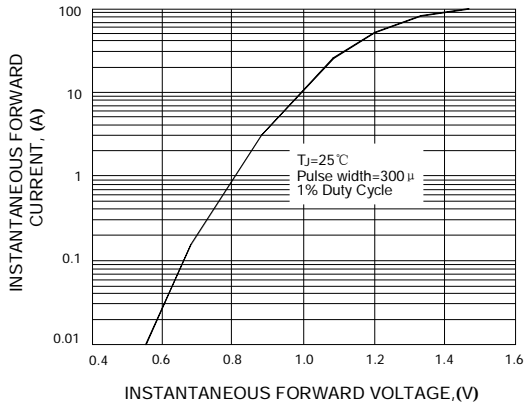


FIG. 4- TYPICAL REVERSE LEAKAGE  
CHARACTERISTICS PER LEG

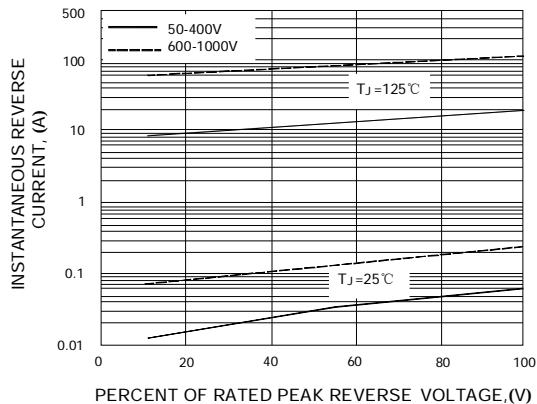


FIG. 5- TYPICAL JUNCTION CAPACITANCE  
PER LEG

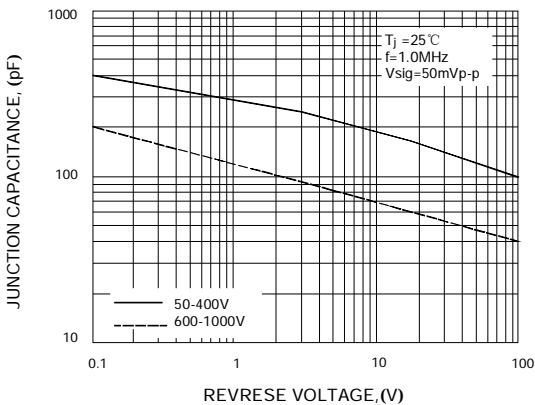


FIG. 6- TYPICAL TRANSIENT THERMAL  
IMPEDANCE

