

## SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

### GBJ10005 THRU GBJ1010

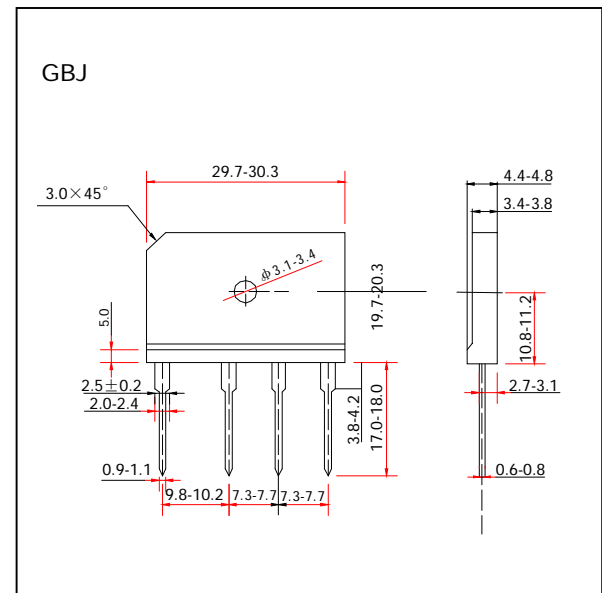
**VOLTAGE RANGE**
**50 to 1000 Volts**
**CURRENT**
**10.0 Amperes**

### 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
- Ideal for printed circuit boards
- 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: 0.15 ounce, 4.0 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 10005	GBJ 1001	GBJ 1002	GBJ 1004	GBJ 1006	GBJ 1008	GBJ 1010	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	1000	Volts
Maximum Average Forward Rectified Current, At T <sub>C</sub> =100°C (Note 1) At T <sub>A</sub> =40°C (Note 2)	I <sub>(AV)</sub>	10 5.0							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	142							A <sup>2</sup> s
Maximum Instantaneous Forward Voltage drop Per bridge element 5.0A	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	250							
Typical Junction Capacitance, per let (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C <sub>J</sub>	60							pF
Typical Thermal Resistance (Note 2 and 3)	R <sub>JC</sub>	2.2							°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 150mm×150mm×1.6mm Al. Plate heatsink
  2. Unit mounted on P.C.B. With 0.5×0.5”(1.2×1.2mm) copper pads and 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 screw

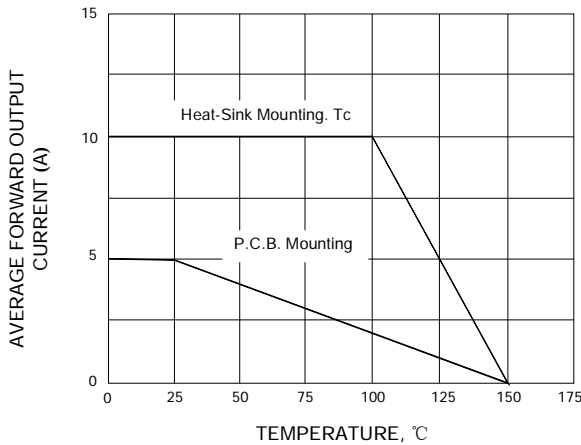
**SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER**

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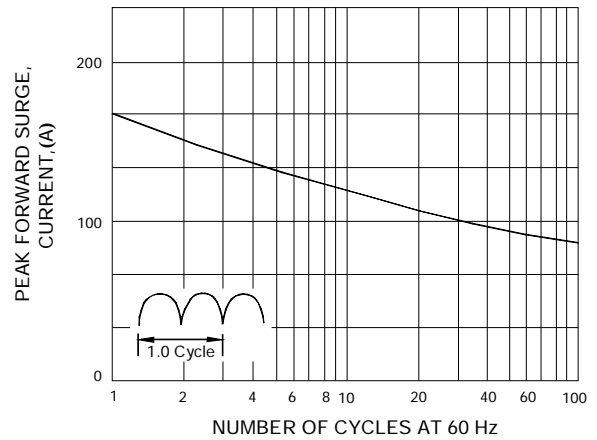
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**CURRENT** 10.0 Amperes

**RATINGS AND CHARACTERISTIC CURVES GBJ10005 THRU GBJ1010**

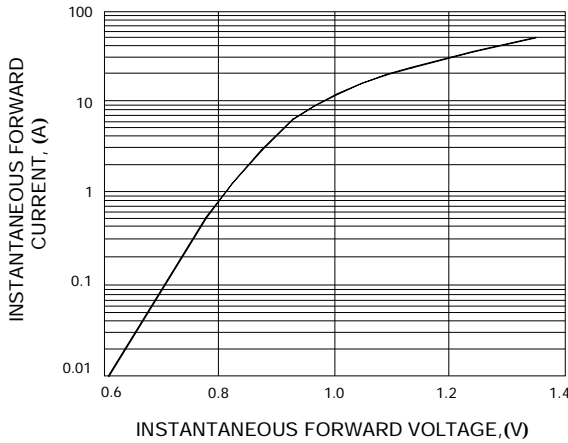
**FIG. 1- DERATING CURVE  
 OUTPUT RECTIFIED CURRENT**



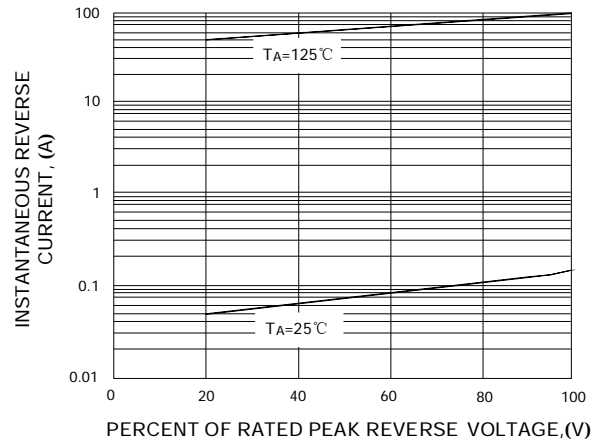
**FIG. 2- MAXIMUM NON-REPETITIVE PEAK  
 FORWARD SURGE CURRENT PER LEG**



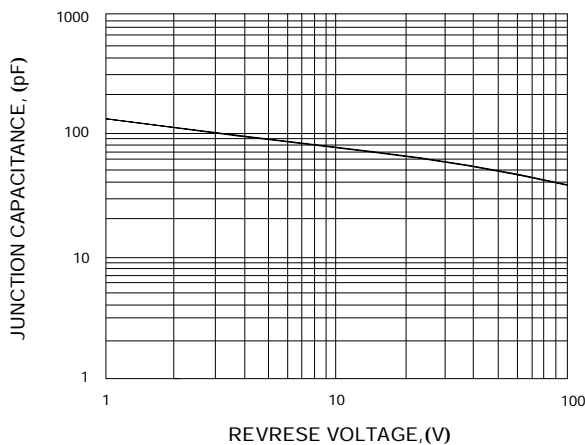
**FIG. 3- TYPICAL FORWARD  
 CHARACTERISTICS PER LGE**



**FIG. 4- TYPICAL REVERSE CHARACTERISTICS  
 PER LEG**



**FIG. 5- TYPICAL JUNCTION CAPACITANCE  
 PER LEG**



**FIG. 6- TYPICAL TRANSIENT THERMAL  
 IMPEDANCE**

