



# GBU10005 THRU GBU1010

## Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts  
Forward Current - 10 Amperes

### Features

- Glass passivated chip
- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- Meet UL flammability classification 94V-0

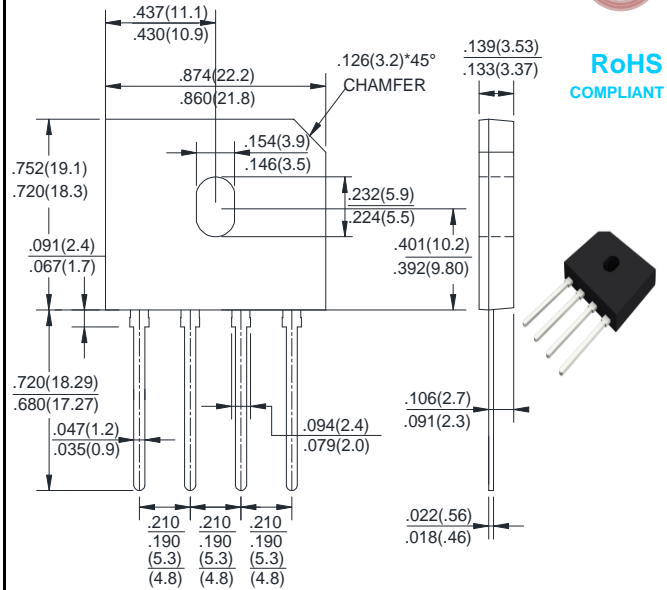
### Mechanical Data

- Polarity: Symbol marked on body
- Mounting position: Any

### Applications

- General purpose use in AC/DC bridge full wave rectification, for SMPS, lighting ballaster, adapter, etc.

### GBU



RoHS  
COMPLIANT

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	GBU	GBU	GBU	GBU	GBU	GBU	GBU	Unit	
		10005	1001	1002	1004	1006	1008	1010		
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current (with heatsink Note 2) @ TC=100°C (without heatsink)	I <sub(av)< sub=""></sub(av)<>	10.0							3.0	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	200								A
I <sup>2</sup> t Rating for Fusing (t<8.3mS)	I <sup>2</sup> t	166								A <sup>2</sup> s
Peak Forward Voltage per Diode at 5A DC	V <sub>F</sub>	1.0								V
Maximum DC Reverse Current at Rated @T <sub>J</sub> =25°C	I <sub>R</sub>	5.0							500	μA
DC Blocking Voltage per Diode @T <sub>J</sub> =125°C										
Typical Junction Capacitance per Diode (Note1)	C <sub>J</sub>	70								pF
Typical Thermal Resistance to Ambient (Note2)	R <sub>θJA</sub>	9							°C/W	
Typical Thermal Resistance to case (Note2)	R <sub>θJC</sub>	2								
Typical Thermal Resistance to lead (Note2)	R <sub>θJL</sub>	1.5								
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. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.  
2. Device mounted on 100mm\*100mm\*1.6mm Cu plate heatsink.  
3. The typical data above is for reference only

Fig. 1 - Forward Current Derating Curve

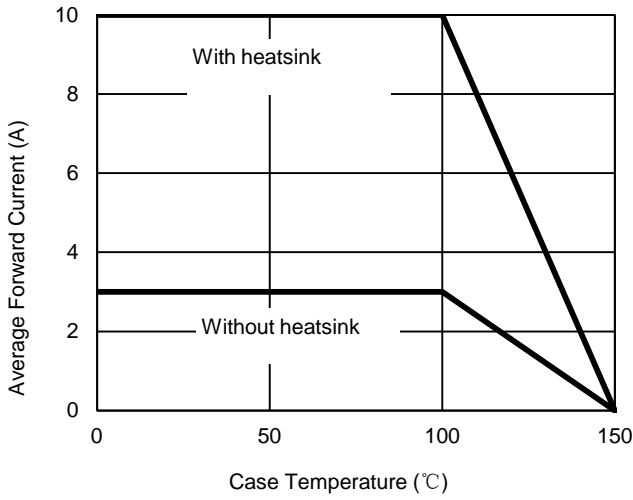


Fig. 2 - Maximum Non-Repetitive Surge Current

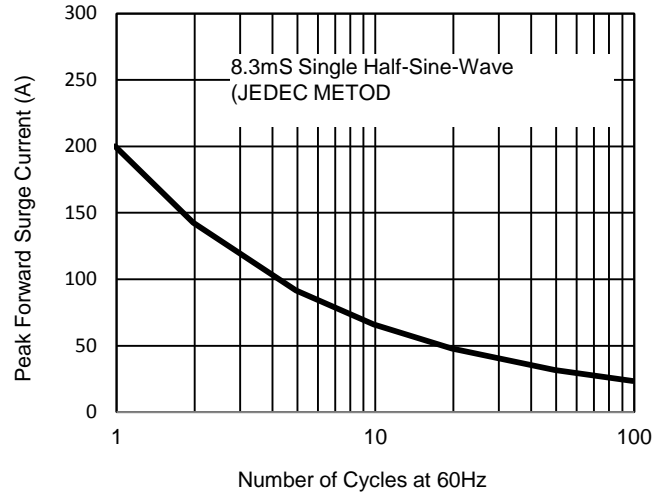


Fig. 3 - Typical Reverse Characteristics

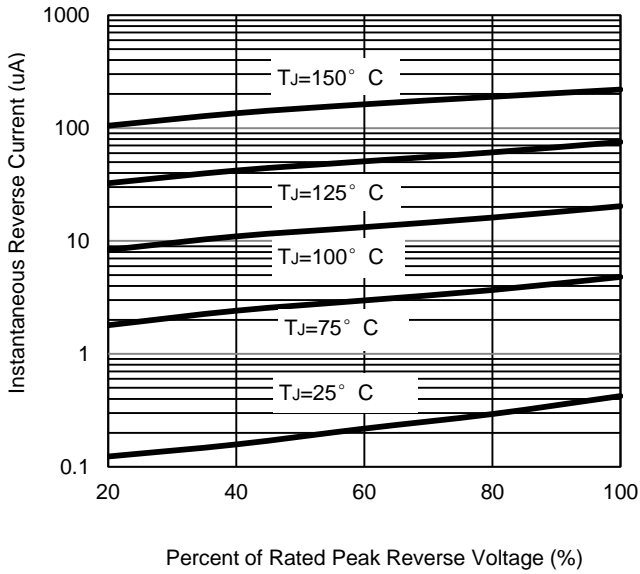


Fig. 4 - Typical Forward Characteristics

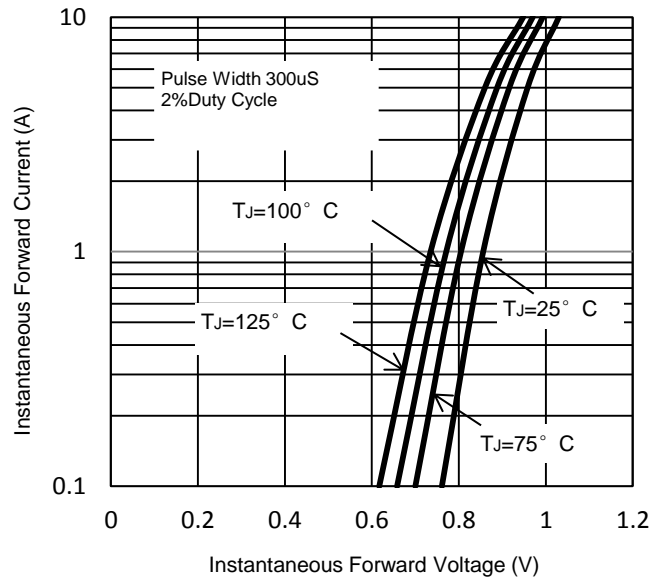
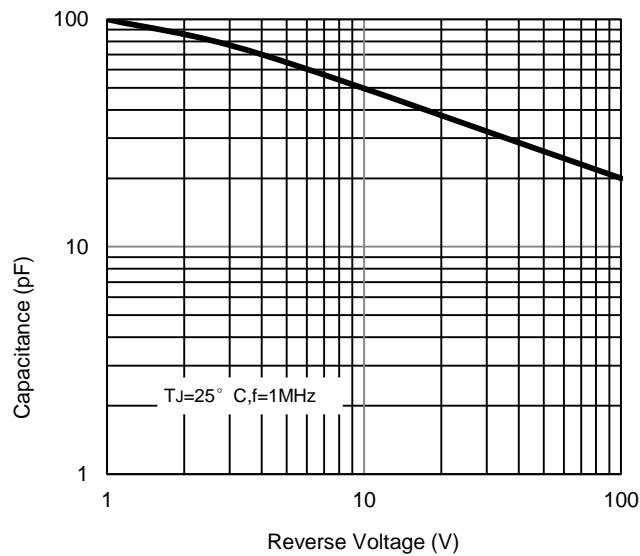


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.