

GBJ20005 THRU GBJ2010

Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts

Forward Current - 20 Amperes

Features

- Glass passivated chip
- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- AEC-Q101 qualified

Mechanical Data

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

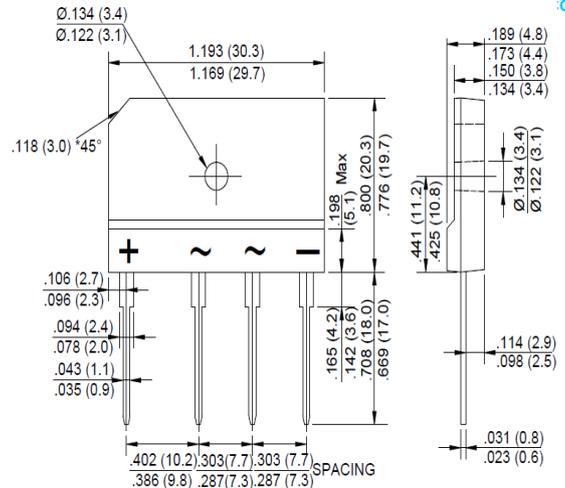
Applications

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

GBJ



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	GBJ	GBJ	GBJ	GBJ	GBJ	GBJ	GBJ	Unit
		20005	2001	2002	2004	2006	2008	2010	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	v
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	v
Maximum Average Forward Rectified Current (with heatsink Note 2)	I <sub(av)< sub=""></sub(av)<>	20.0							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	260							A
I ² t Rating for Fusing (t<8.3mS)	I ² t	280.5							A ² s
Peak Forward Voltage per Diode at 10 A DC	V _F	1.0							V
Maximum DC Reverse Current at Rated @T _J =25°C	I _R	5.0							μA
DC Blocking Voltage per Diode @T _J =125°C		500							
Typical Junction Capacitance per Diode (Note1)	C _J	60							pF
Typical Thermal Resistance to Ambient (Note2)	R _{θJA}	4.5							°C/W
Typical Thermal Resistance to case (Note2)	R _{θJC}	0.8							
Typical Thermal Resistance to lead (Note2)	R _{θJL}	1.5							
Operating Junction Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

- Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 2. Device mounted on 300mm*300mm*1.6mm Cu plate heatsink.
 3. The typical data above is for reference only

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Rating and Characteristic Curves

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Fig. 1 - Forward Current Derating Curve

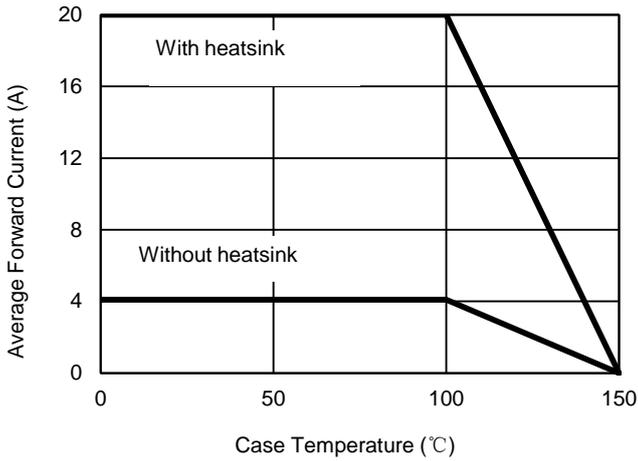


Fig. 2 - Maximum Non-Repetitive Surge Current

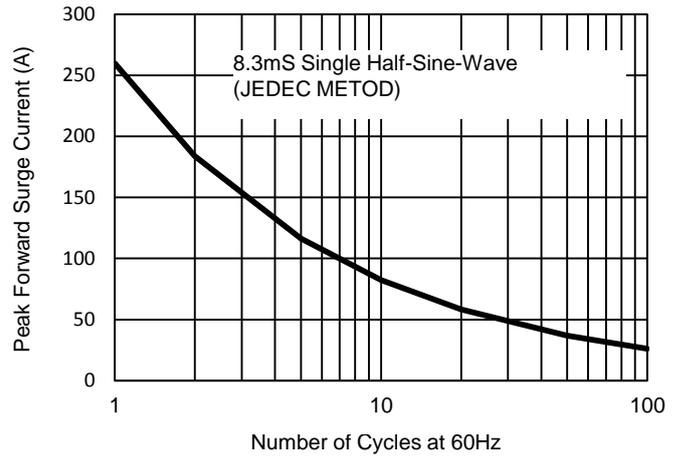


Fig. 3 - Typical Reverse Characteristics

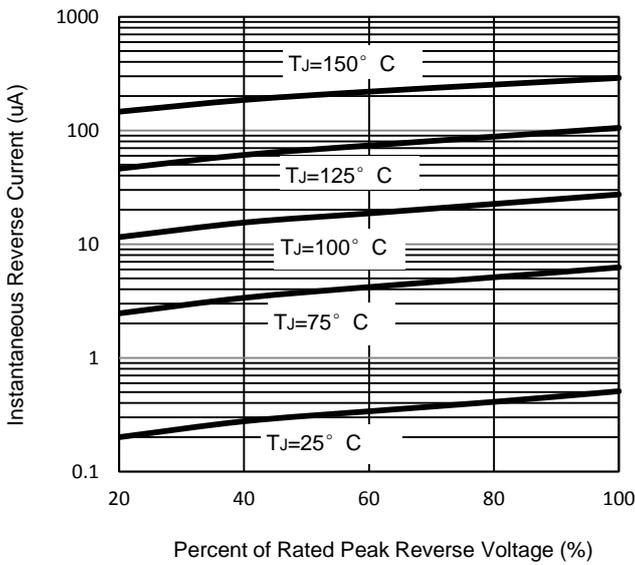


Fig. 4 - Typical Forward Characteristics

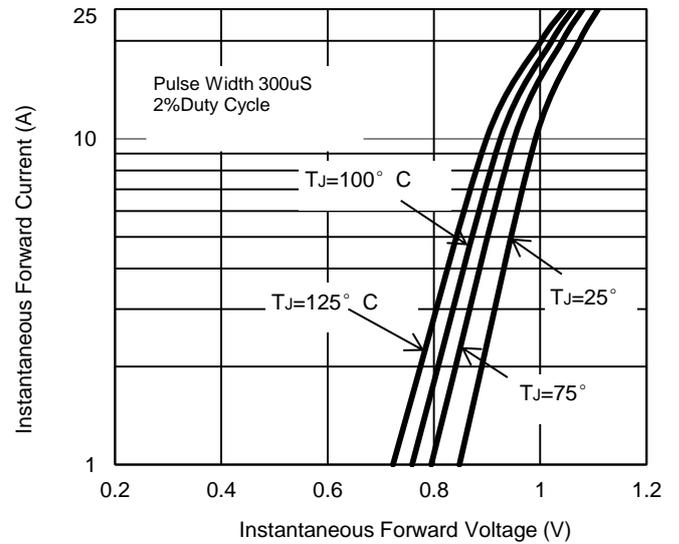


Fig. 5 - Typical Junction Capacitance

