

Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts

Forward Current - 25 Amperes

Features

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

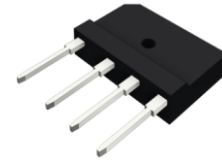
Mechanical Data

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

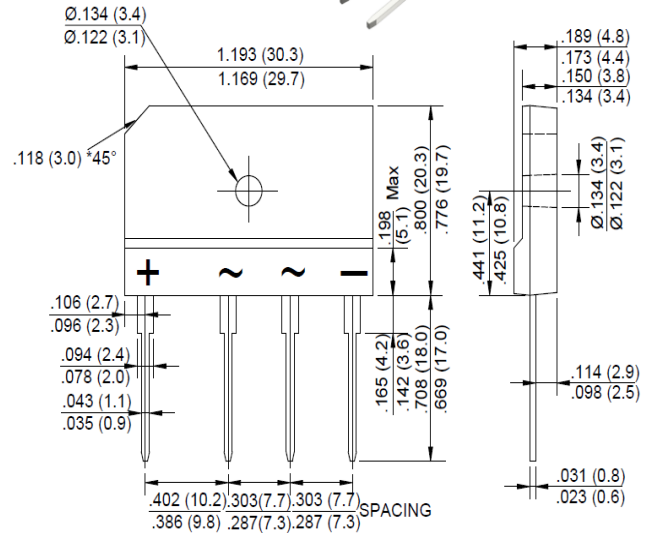
Applications

- 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	
		25005	2501	2502	2504	2506	2508	2510		
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		
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000		
Maximum Average Forward (with heatsink Note 2) Rectified Current @ $T_c=100^\circ\text{C}$ (without heatsink)	$I_{(AV)}$	25.0							4.2	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	350								A
I^2t Rating for Fusing ($t < 8.3\text{mS}$)	I^2t	508								A^2s
Peak Forward Voltage per Diode at 12.5A DC	V_F	1.0								V
Maximum DC Reverse Current at Rated @ $T_J=25^\circ\text{C}$	I_R	5.0								μA
DC Blocking Voltage per Diode @ $T_J=125^\circ\text{C}$		500								
Typical Junction Capacitance per Diode (Note1)	C_J	85								pF
Typical Thermal Resistance to Ambient (Note2)	$R_{\theta JA}$	4.5								$^\circ\text{C}/\text{W}$
Typical Thermal Resistance to case (Note2)	$R_{\theta JC}$	0.6								
Typical Thermal Resistance to lead (Note2)	$R_{\theta JL}$	1.5								
Operating Junction Temperature Range	T_J	-55 to +150								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150								$^\circ\text{C}$

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

GBJ25*-U-00-A001

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Fig. 1 - Forward Current Derating Curve

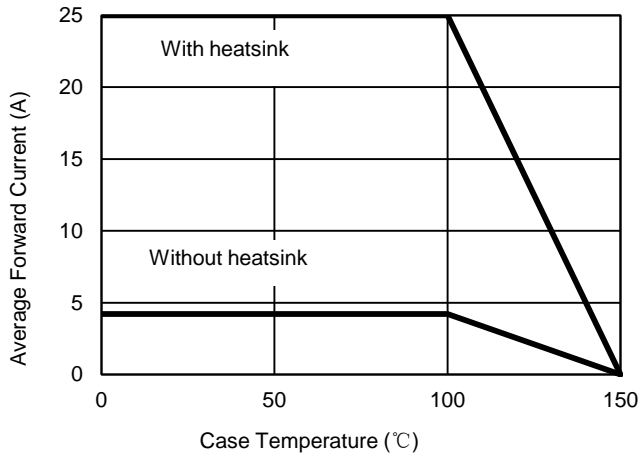


Fig. 2 - Maximum Non-Repetitive Surge Current

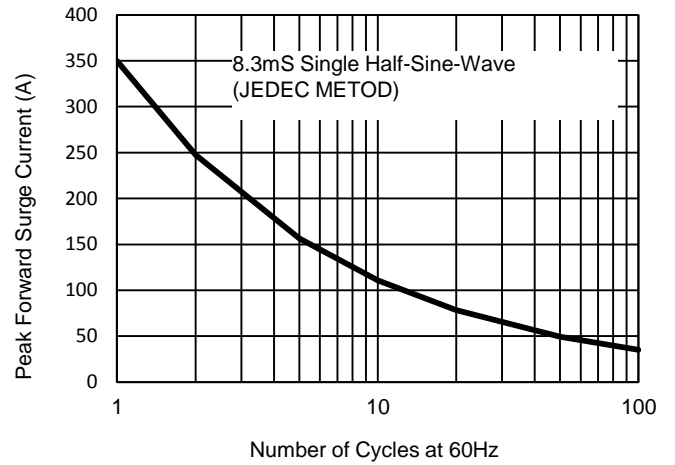


Fig. 3 - Typical Reverse Characteristics

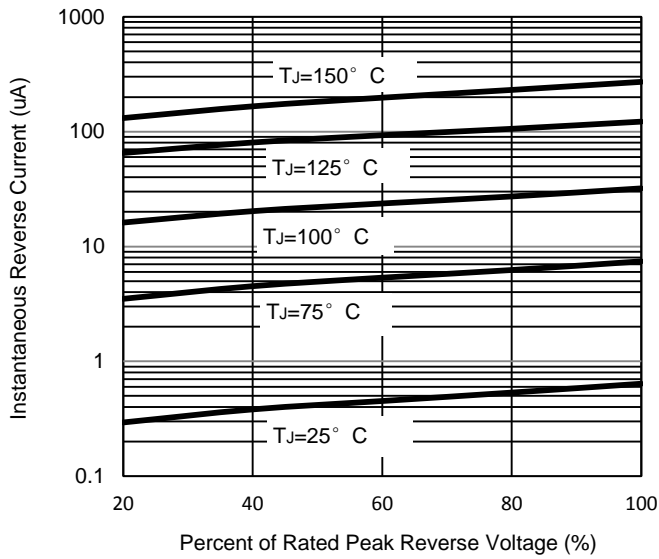


Fig. 4 - Typical Forward Characteristics

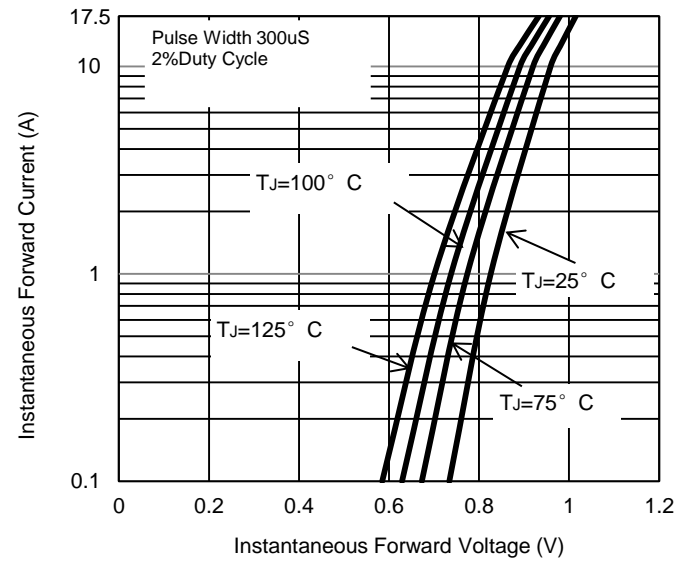
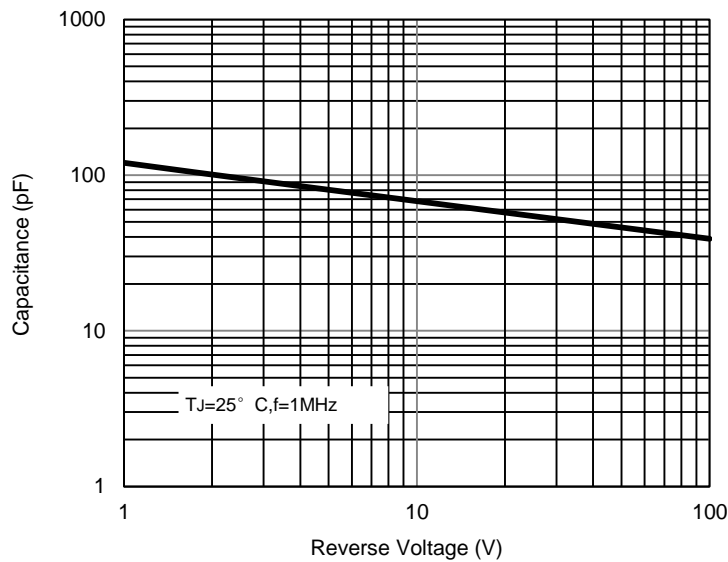


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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