

# GBJ25005 THRU GBJ2510

## 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

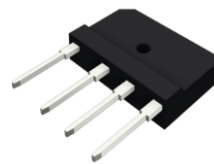
### Mechanical Data

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

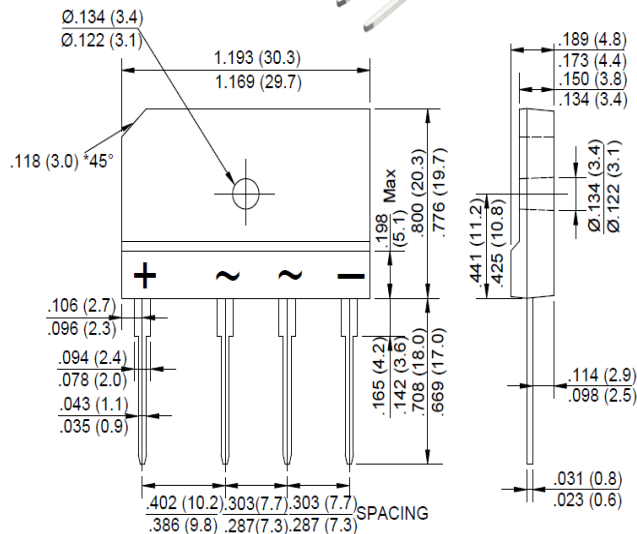
### Applications

- 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								$\text{A}^2\text{s}$
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								$\mu\text{A}$
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

# Rating and Characteristic Curves

## GBJ25005 THRU GBJ2510

Fig. 1 - Forward Current Derating Curve

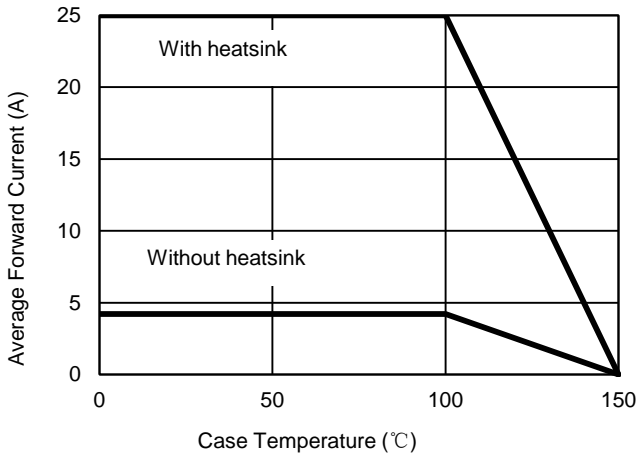


Fig. 2 - Maximum Non-Repetitive Surge Current

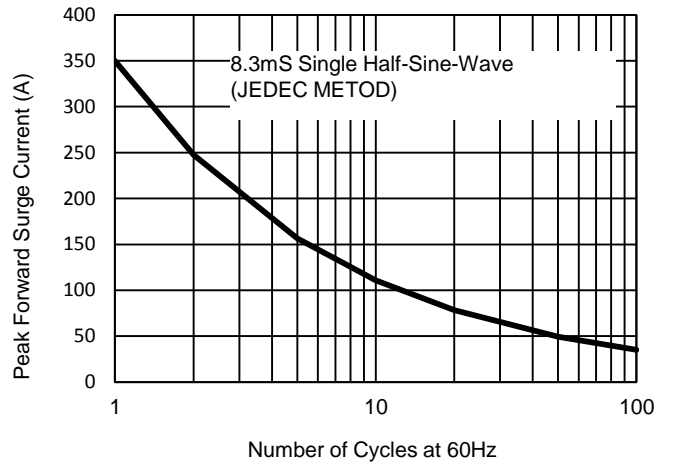


Fig. 3 - Typical Reverse Characteristics

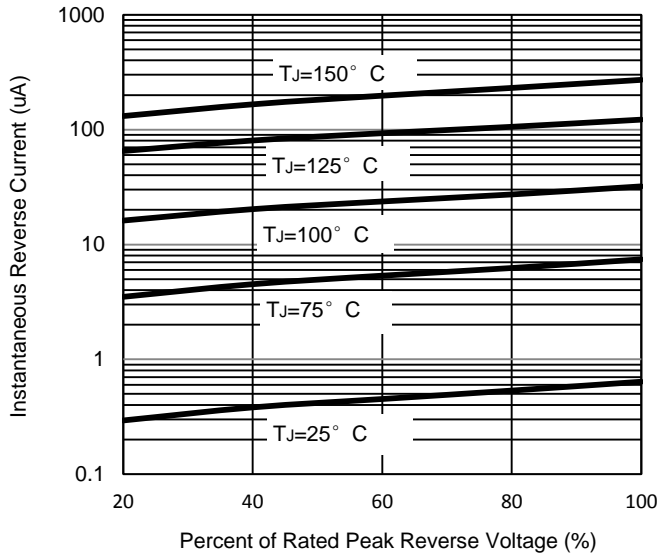


Fig. 4 - Typical Forward Characteristics

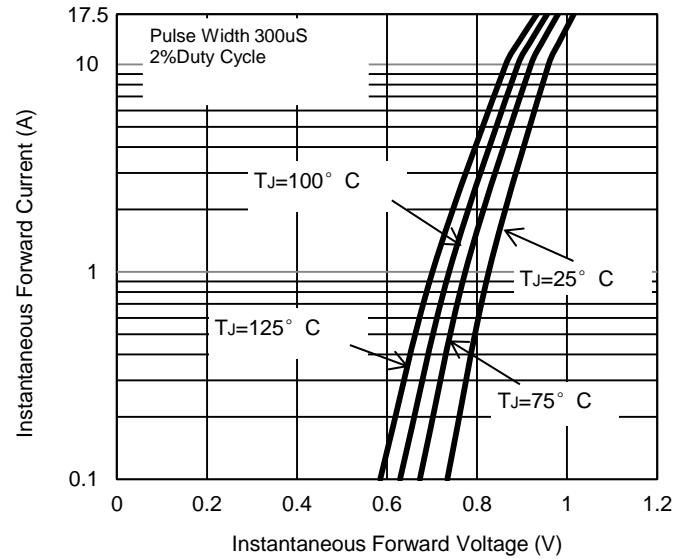
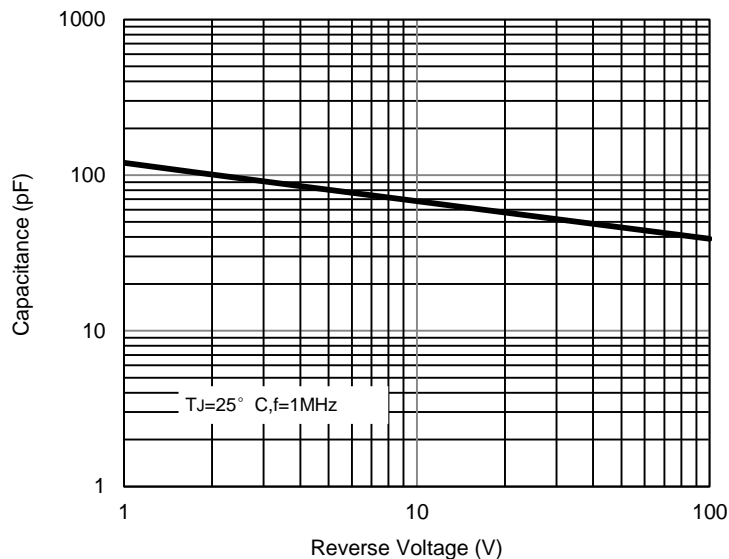


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.