

# GBU25005 THRU GBU2510

## 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

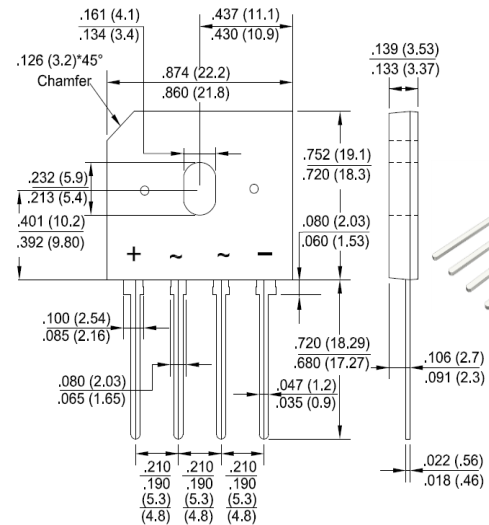
### Mechanical Data

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

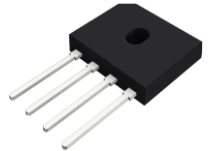
### Applications

- 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
		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	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_C=100^\circ\text{C}$ (with heatsink Note 2)	$I_{(AV)}$	25.0							A
Rectified Current @ $T_C=100^\circ\text{C}$ (without heatsink)		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							V
Typical Junction Capacitance per Diode (Note1)	$C_J$	70							pF
Typical Thermal Resistance to Ambient (Note2)	$R_{\theta JA}$	10							$^\circ\text{C/W}$
Typical Thermal Resistance to case (Note2)	$R_{\theta JC}$	2							$^\circ\text{C/W}$
Typical Thermal Resistance to lead (Note2)	$R_{\theta JL}$	2.2							$^\circ\text{C/W}$
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 100mm\*100mm\*1.6mm Cu plate heatsink.  
 3. The typical data above is for reference only

GBU25\*-U/B-00/99-00/01

Rev. 9, 22-Apr-2019

# Rating and Characteristic Curves

## GBU25005 THRU GBU2510

Fig. 1 - Forward Current Derating Curve

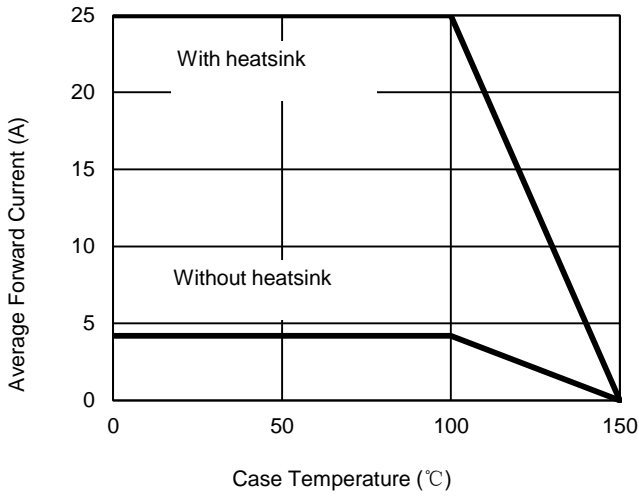


Fig. 2 - Maximum Non-Repetitive Surge Current

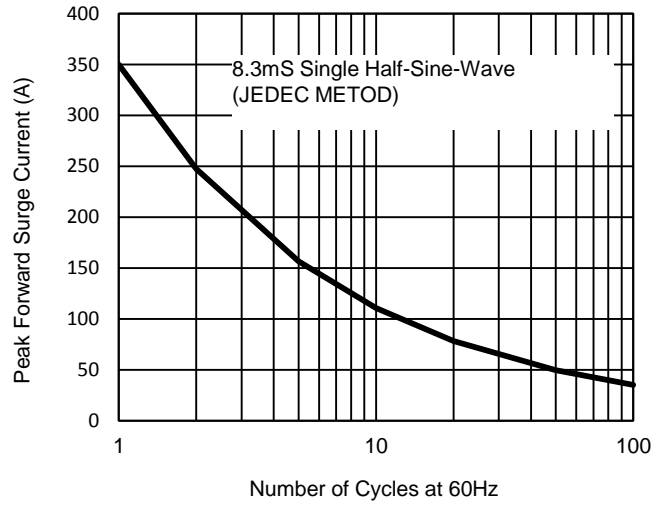


Fig. 3 - Typical Reverse Characteristics

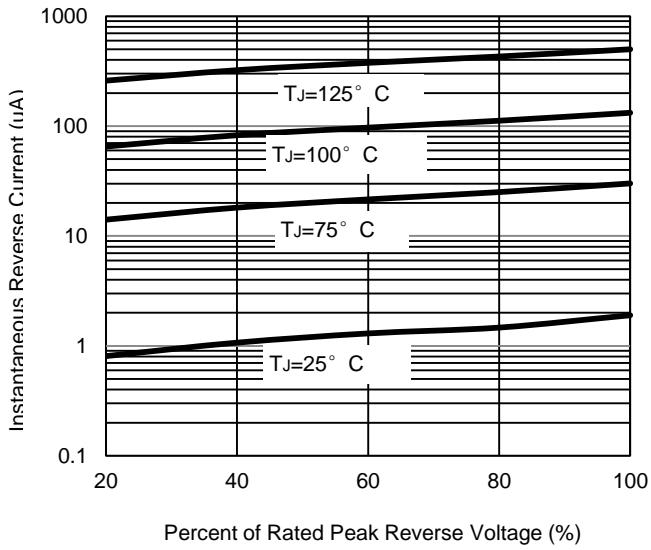
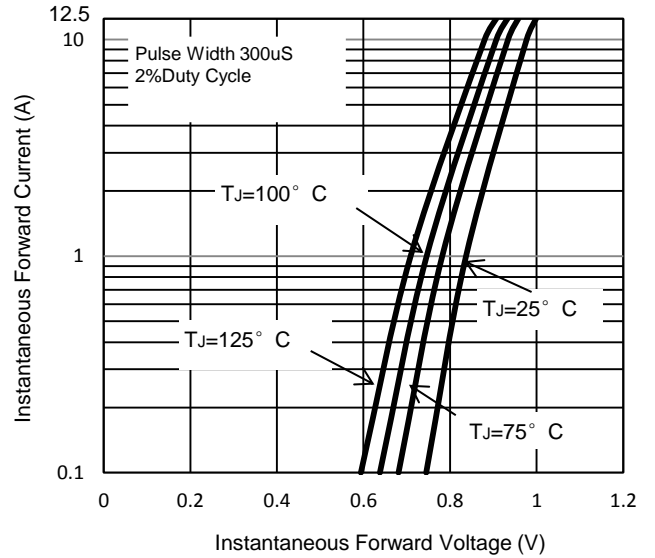


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.

