



GBU6005 THRU GBU610

Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts
Forward Current - 6.0 Amperes

Features

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

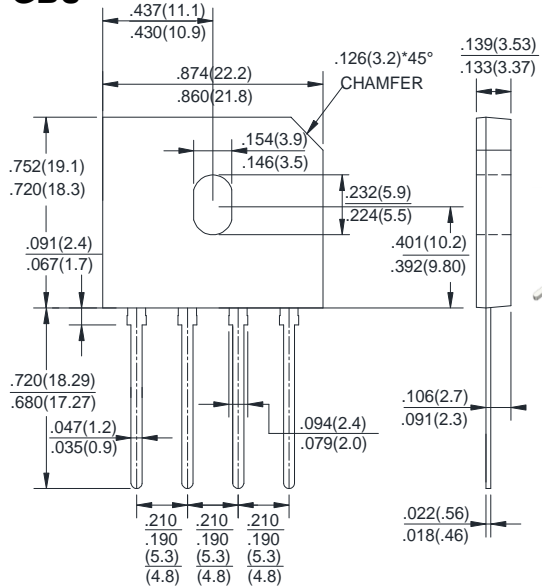
Mechanical Data

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

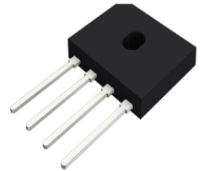
Applications

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

GBU



RoHS
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

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	GBU6005	GBU601	GBU602	GBU604	GBU606	GBU608	GBU610	Unit	
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 (with heatsink Note 2) Rectified Current @ $T_c=100^\circ\text{C}$ (without heatsink)	$I_{(AV)}$	6.0							2.4	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	150								A
I^2t Rating for Fusing ($t < 8.3\text{mS}$)	I^2t	93.4								A^2s
Peak Forward Voltage Per Diode at 3A DC	V_F	0.95								V
Peak Forward Voltage per Diode at 6A DC	V_F	1.1								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	45								pF
Typical Thermal Resistance to Ambient (without heatsink)	$R_{\theta JA}$	27								$^\circ\text{C}/\text{W}$
Typical Thermal Resistance to case (with heatsink (Note2))	$R_{\theta JC}$	2.2								$^\circ\text{C}/\text{W}$
Typical Thermal Resistance to lead (without heatsink)	$R_{\theta JL}$	4.5								$^\circ\text{C}/\text{W}$
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 50mm*50mm*1.6mm Cu plate heatsink.

3. The typical data above is for reference only



Fig. 1 - Forward Current Derating Curve

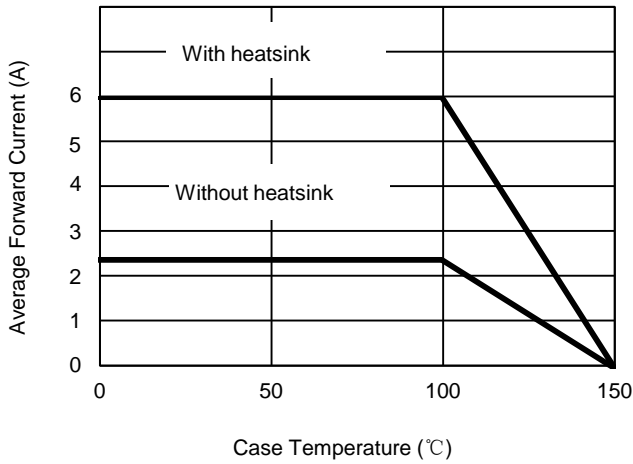


Fig. 2 - Maximum Non-Repetitive Surge Current

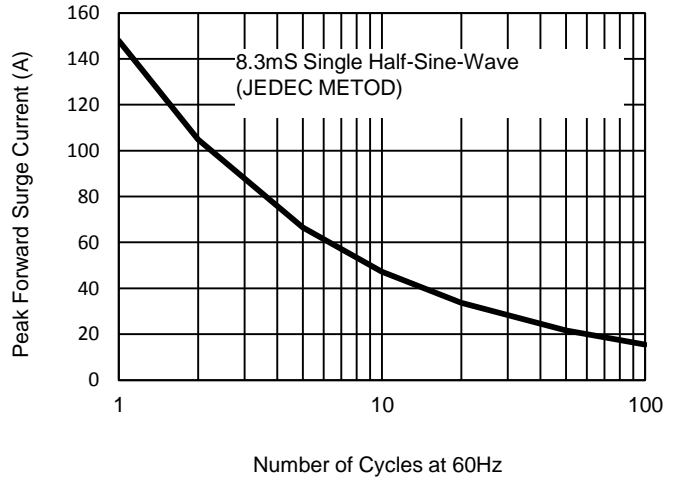


Fig. 3 - Typical Reverse Characteristics

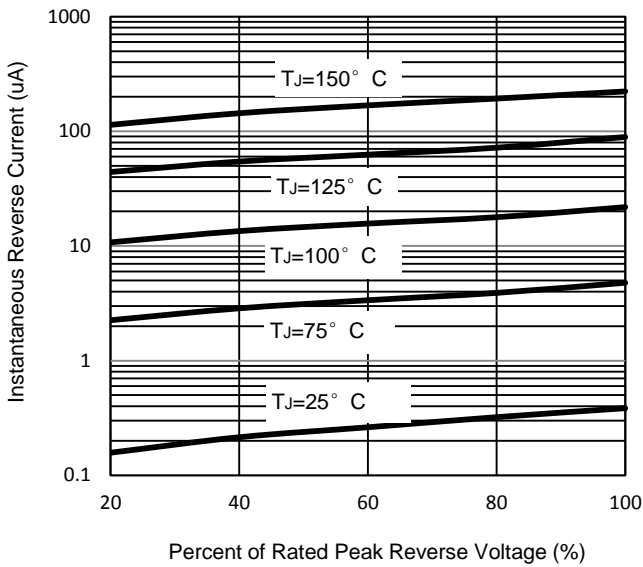


Fig. 4 - Typical Forward Characteristics

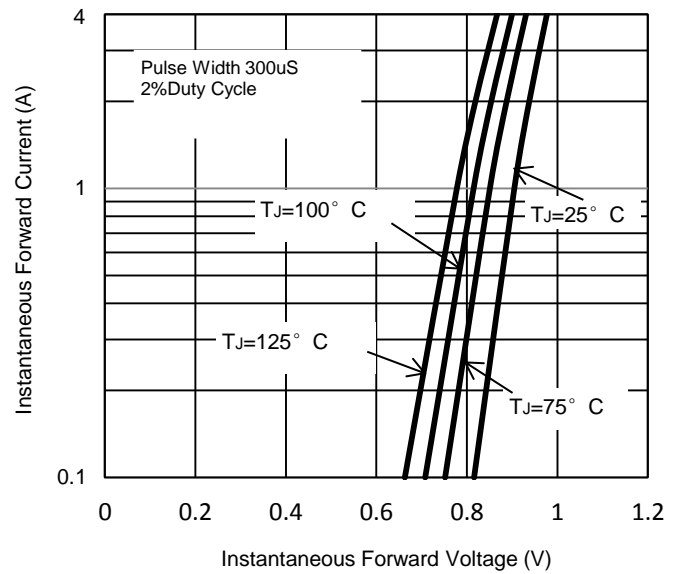
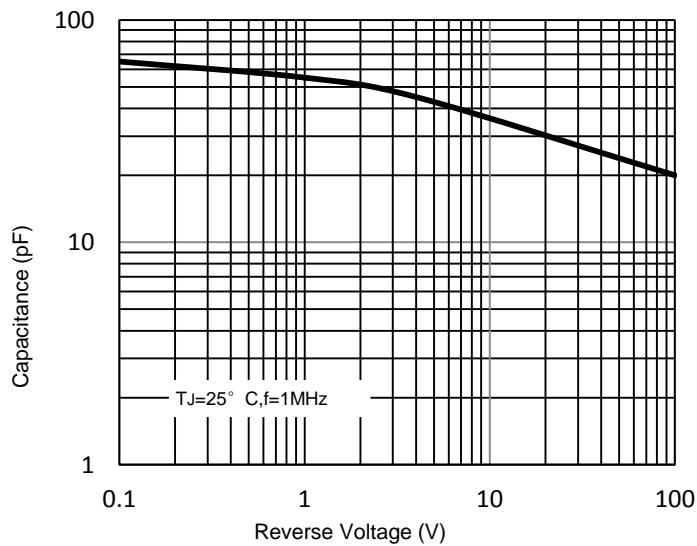


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.