



GBU30005 THRU GBU3010

Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts
Forward Current - 30 Amperes

Features

- Glass passivated chip
- Low forward voltage drop
- Ideal for printed circuit board
- High surge current capability
- Meet UL flammability classification 94V-0

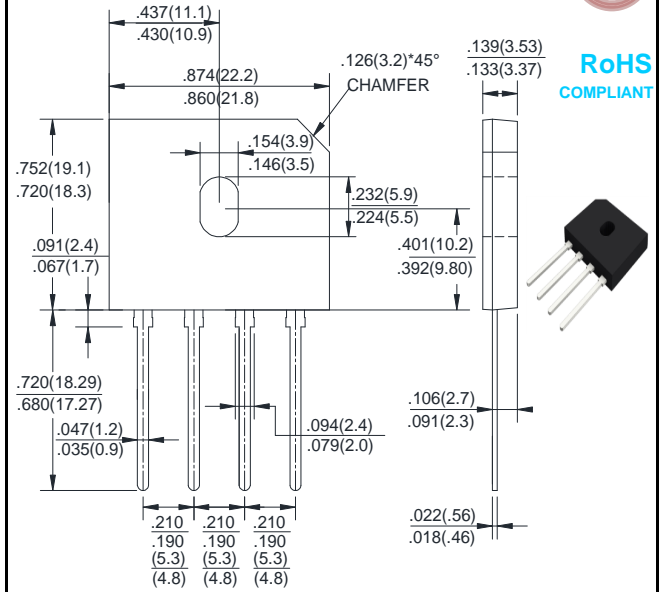
Mechanical Data

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

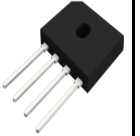
Applications

- 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	
		30005	3001	3002	3004	3006	3008	3010		
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 @ $T_C=100^\circ C$ (with heatsink Note 2) (without heatsink)	$I(AV)$	30.0							5.0	A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	380								A
Peak Forward Surge Current, 1.0mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	800								A
I^2t Rating for Fusing ($t < 8.3mS$)	I^2t	599								A^2s
Peak Forward Voltage per Diode at 15.0A DC	V_F	1.0								V
Maximum DC Reverse Current at Rated @ $T_J=25^\circ C$	I_R	0.4								μA
DC Blocking Voltage per Diode @ $T_J=125^\circ C$		260								
Typical Junction Capacitance per Diode (Note1)	C_J	70								pF
Typical Thermal Resistance to Ambient (Note2)	$R_{\theta JA}$	10								$^\circ C/W$
Typical Thermal Resistance to case (Note2)	$R_{\theta JC}$	2								
Typical Thermal Resistance to lead (Note2)	$R_{\theta JL}$	2.2								
Operating Junction Temperature Range	T_J	-55 to +150								$^\circ C$
Storage Temperature Range	T_{STG}	-55 to +150								$^\circ C$

- 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



Fig. 1 - Forward Current Derating Curve

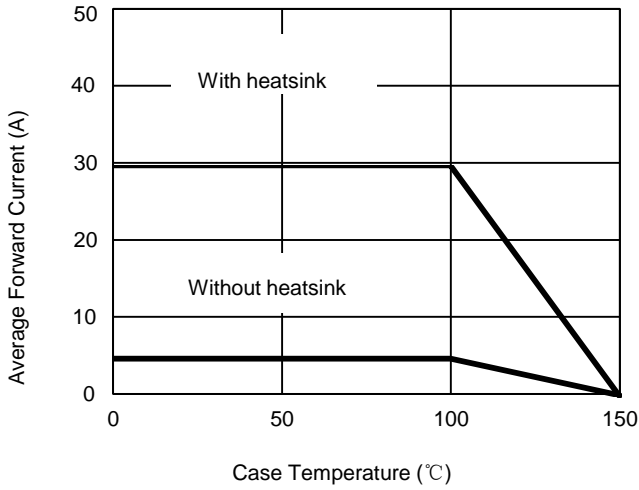


Fig. 2 - Maximum Non-Repetitive Surge Current

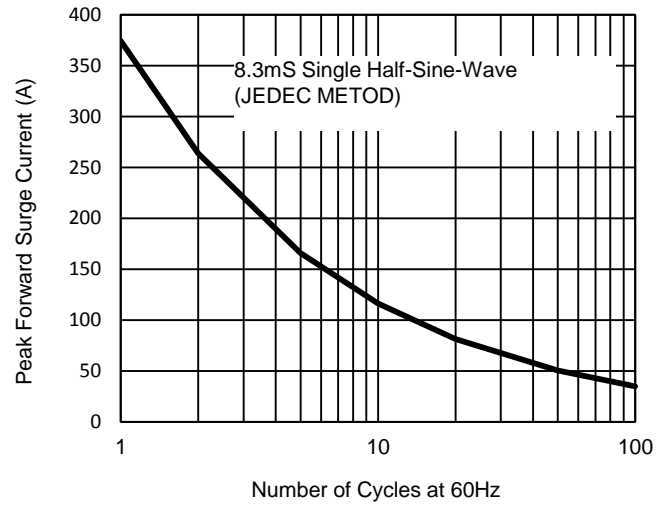


Fig. 3 - Typical Reverse Characteristics

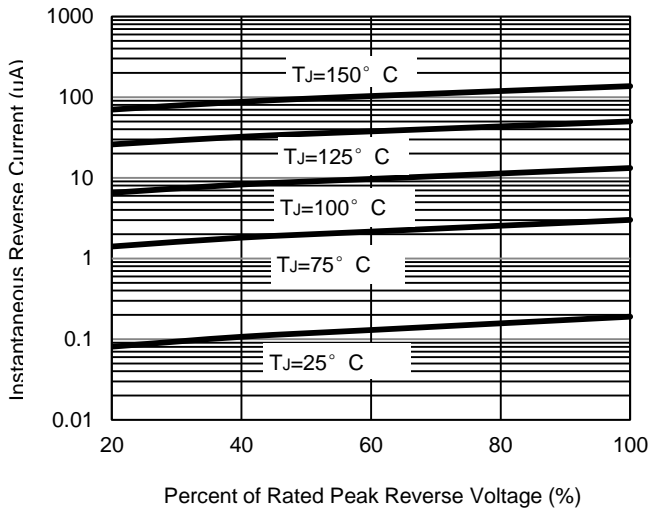
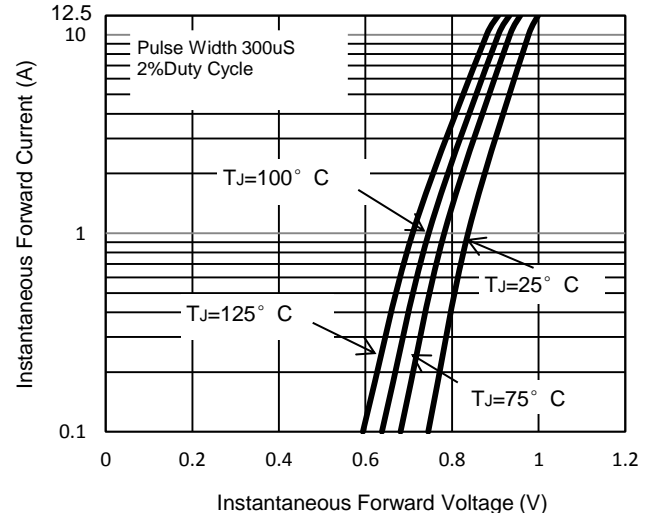


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.