GBU4005 THRU GBU410

Glass Passivated Bridge Rectifiers

Reverse Voltage - 50 to 1000 Volts

Forward Current - 4.0 Amperes

Features

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

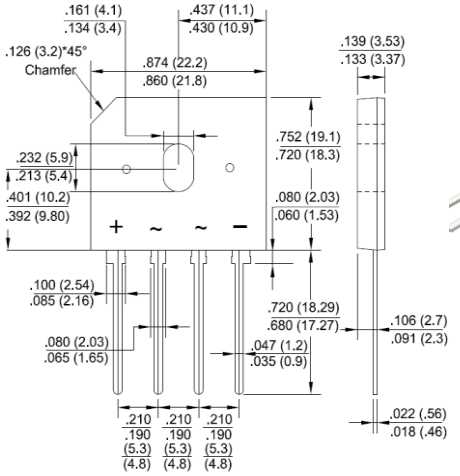
Mechanical Data

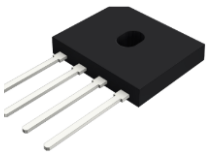
- Polarity: Symbol marked on body
- Mounting position: Any

Applications

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

GBU





Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	GBU4005	GBU401	GBU402	GBU404	GBU406	GBU408	GBU410	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)	$I_{(AV)}$	4.0							A
Rectified Current @ T_C=100℃ (without heatsink)		2.4							
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<8.3mS)	I^2t	93.4							A^2s
Peak Forward Voltage Per Diode at 2A DC	V_F	0.95							V
Peak Forward Voltage per Diode at 4A DC	V_F	1.05							V
Maximum DC Reverse Current at Rated @T_J=25℃	I_R	5.0							μA
DC Blocking Voltage per Diode @T_J=125℃		500							
Typical Junction Capacitance Per Diode (Note1)	C_J	45							pF
Typical Thermal Resistance to Ambient （without heatsink）	$R_{\theta JA}$	27							℃/W
Typical Thermal Resistance to case （with heatsink (Note2) ）	$R_{\theta JC}$	2.2							℃/W
Typical Thermal Resistance to lead （without heatsink）	$R_{\theta JL}$	4.5							℃/W
Operating Junction Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃

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

Rating and Characteristic Curves
GBU4005 THRU GBU410

Fig. 1 - Forward Current Derating Curve

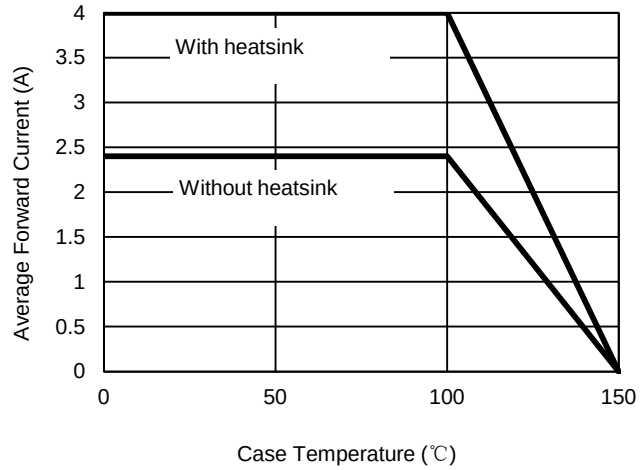


Fig. 2 - Maximum Non-Repetitive Surge Current

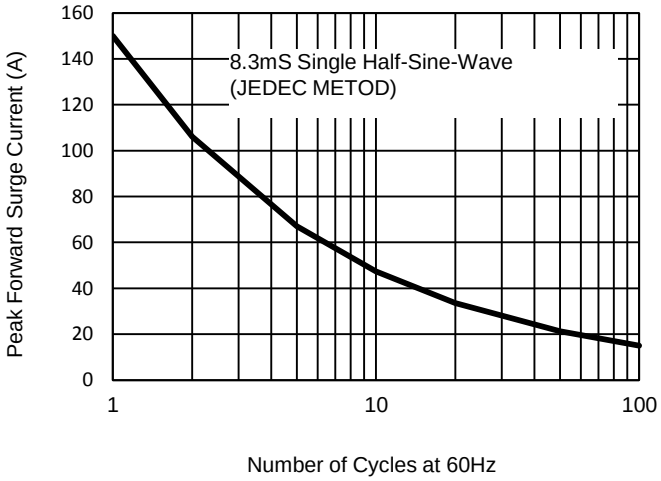


Fig. 3 - Typical Reverse Characteristics

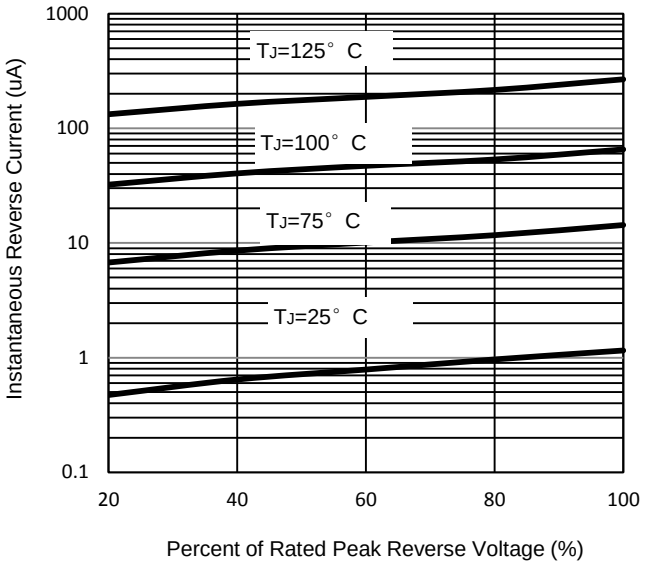


Fig. 4 - Typical Forward Characteristics

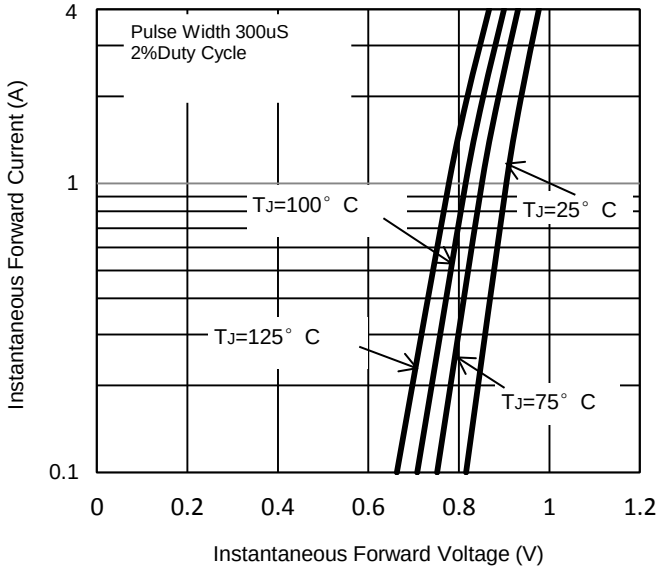
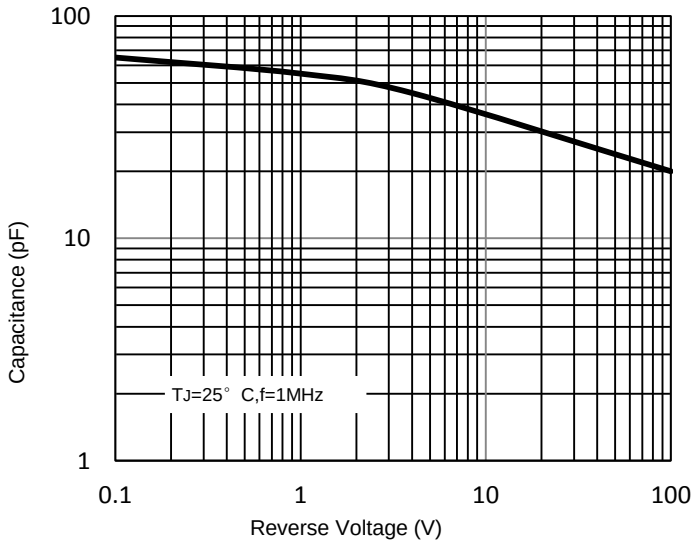


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.