

GBU30005 THRU GBU3010

GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE - **50 to 1000** Volts

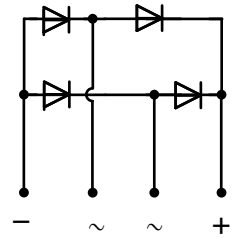
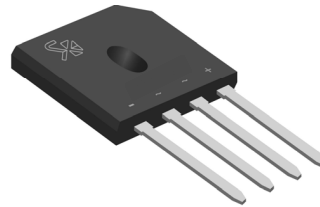
FORWARD CURRENT - **30** Amperes

FEATURES

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

Applications

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



GBU

Mechanical Data

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

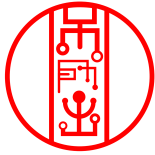
Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristics	Symbol	GBU30005	GBU3001	GBU3002	GBU3004	GBU3006	GBU3008	GBU3010	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)	30.0							A
Rectified Current @ T _c =100°C (without heatsink)		4.2							
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	380							A
I ² t Rating for Fusing (t<8.3mS)	I ² t	599.26							A ² s
Peak Forward Voltage per Diode at 15A DC	V _F	1.0							V
Maximum DC Reverse Current at Rated @T _J =25°C	I _R	5.0							μA
DC Blocking Voltage per Diode @T _J =125°C		500							
Typical Junction Capacitance per Diode (Note1)	C _J	70							pF
Typical Thermal Resistance to Ambient (Note2)	R _{θJA}	10							°C/W
Typical Thermal Resistance to case (Note2)	R _{θJC}	2							
Typical Thermal Resistance to lead (Note2)	R _{θJL}	2.2							
Operating Junction Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°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



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Fig. 1 - Forward Current Derating Curve

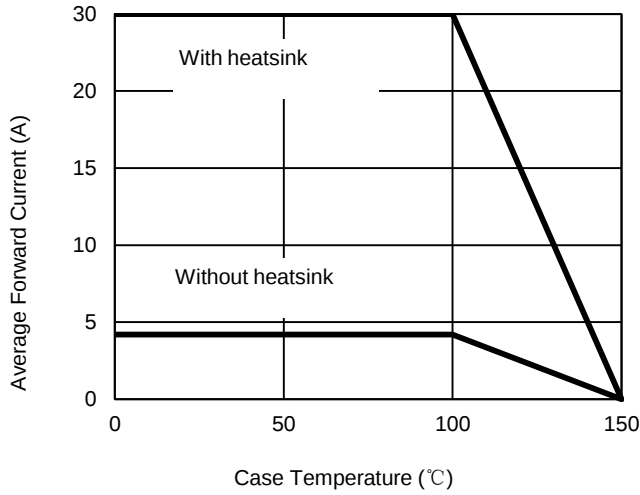


Fig. 2 - Maximum Non-Repetitive Surge Current

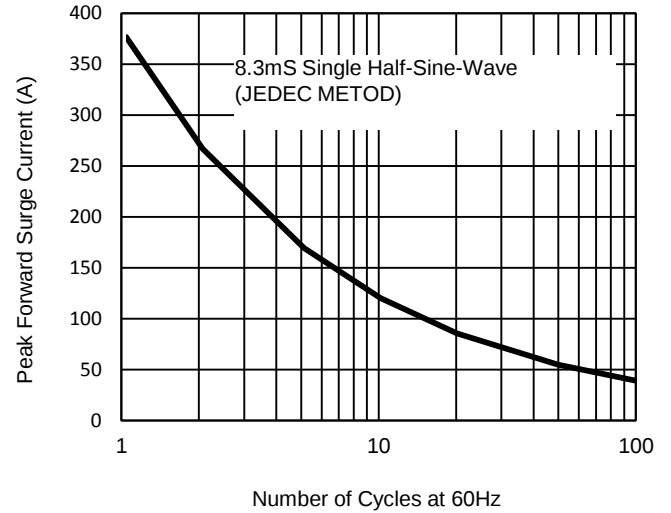


Fig. 3 - Typical Reverse Characteristics

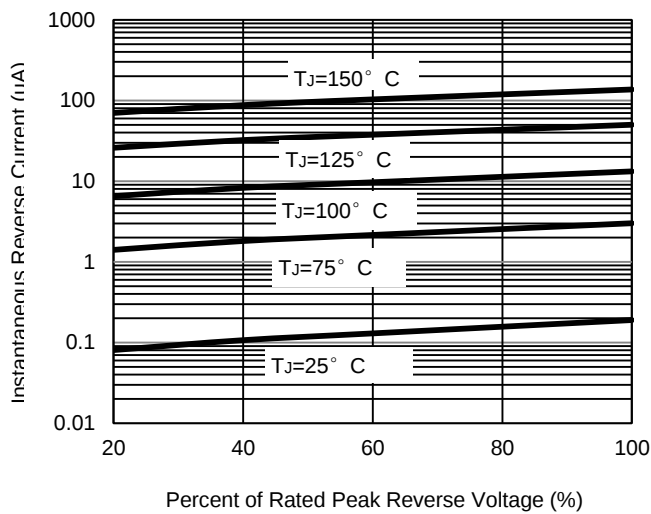
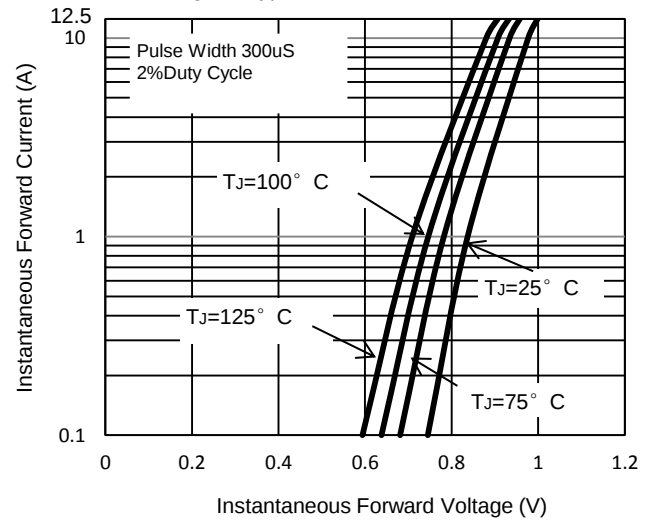
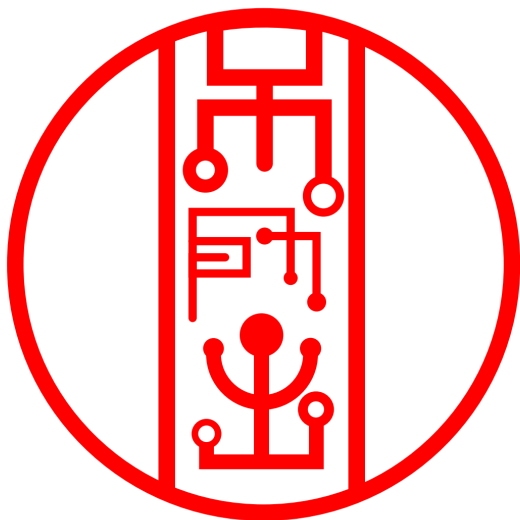


Fig. 4 - Typical Forward Characteristics



PACKAGE OUTLINE

GBU



GBU mechanical data

UNIT		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
mm	max	22.30	18.80	3.56	18.00	1.00	0.56	7.90	4.10	2.16	2.75	2.35	1.27	5.33	7.0° TYPICAL	3.2X45°	1.90 RADIUS
	min	21.80	18.30	3.30	17.50	0.76	0.46	7.40	3.50	1.65	1.85	1.95	1.02	4.83			
mil	max	878	740	140	709	39	22	311	161	85	108	93	50	210		126°45°	75 RADIUS
	min	858	720	130	689	30	18	291	138	65	73	77	40	190			