

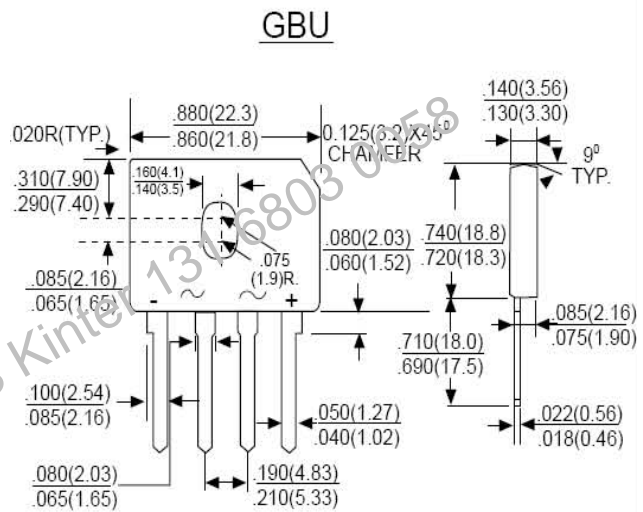
# GBU4/GBU6/GBU8 SERIES

## Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O

## Mechanical Data

- Case: G B U , Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 8.0 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version,**



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	GBU	GBU	GBU	GBU	GBU	GBU	GBU	Unit
		4005 6005 8005	401 601 801	402 602 802	404 604 804	406 606 806	408 608 808	410 610 810	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current @T <sub>A</sub> = 40°C	I <sub>O</sub>	4.0/6.0/8.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	150/175/200							A
Forward Voltage per element @I <sub>F</sub> = 4.0/6.0/8.0A	V <sub>FM</sub>	1.1							V
Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C	I <sub>RM</sub>	5.0 500							μA
Typical Junction Capacitance per element (Note 1)	C <sub>j</sub>	100/211/211				45/94/94			pF
Typical Thermal Resistance per leg (Note 2)	R <sub>θJA</sub> R <sub>θJL</sub>	20/17/21 4.0							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>STG</sub>	-65 to +150							°C

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Mounted on PC board with 13mm<sup>2</sup> copper pad.

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FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

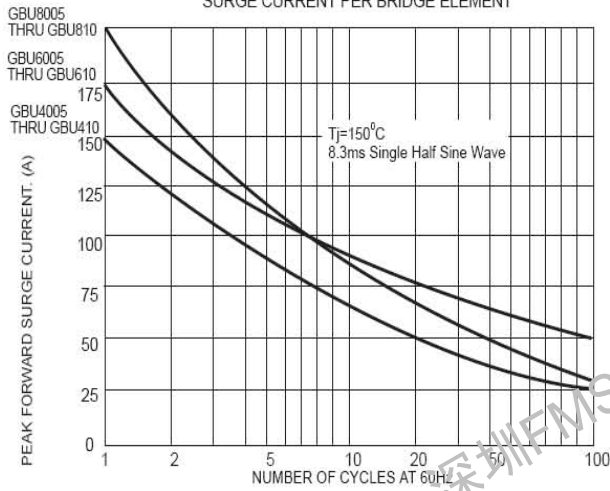


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

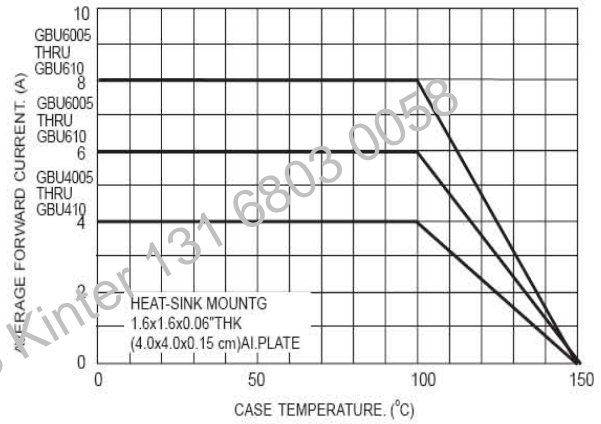


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

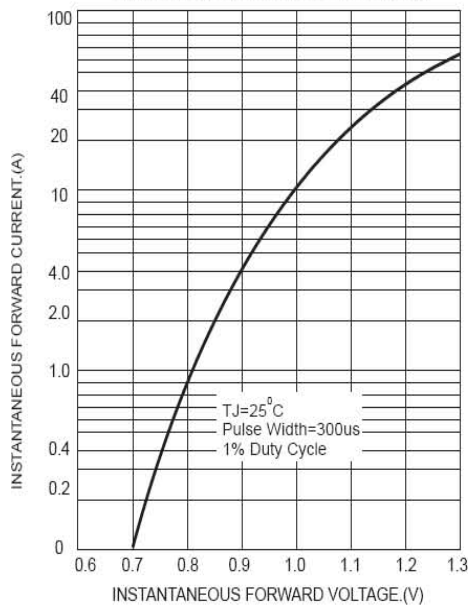


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT(GBU6005 THRU GBU610)

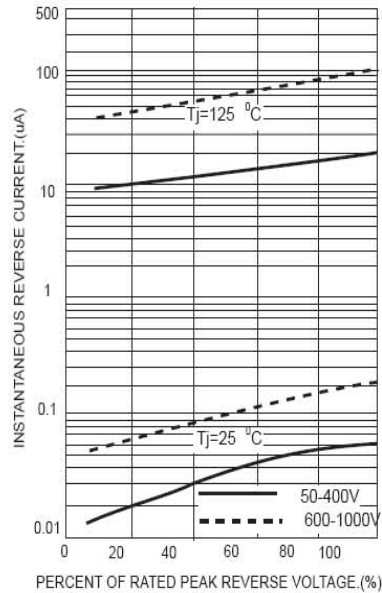


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT(GBU4005 THRU GBU410)

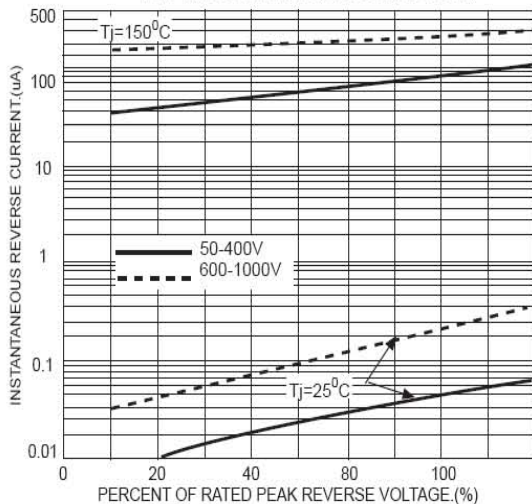


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT(GBU6005 THRU GBU810)

