

# GBU8005 ~ GBU810

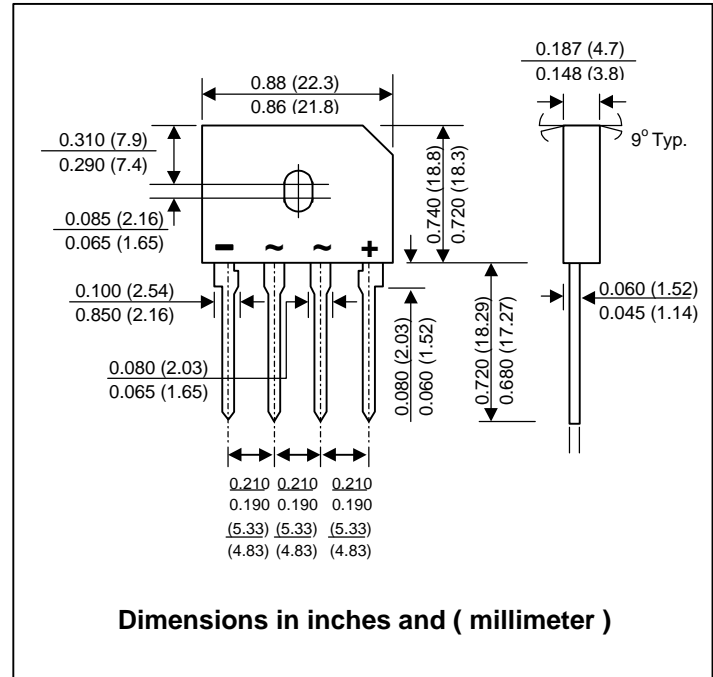
# Glass Passivated Single-Phase Bridge Rectifiers

PRV : 50 - 1000 Volts

Io : 8.0 Amperes

### FEATURES :

- \* Surge overload rating - 200 Amperes peak
- \* Ideal for printed circuit boards
- \* Reliable low cost construction utilizing molded plastic technique
- \* Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- \* Mounting Position : Any
- \* **Pb / RoHS Free**



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

RATING		SYMBOL	GBU 8005	GBU 801	GBU 802	GBU 804	GBU 806	GBU 808	GBU 810	UNIT
Maximum Recurrent 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 Output Current $T_c=100^{\circ}C$	(with heatsink note2) (without heatsink )	$I_{F(AV)}$	8.0							A
			3.2							
Peak Forward Surge Current, 8.3ms Single half sine-wave Superimposed on rated load (JEDEC Method)		$I_{FSM}$	200							A
Rating for fusing ( t < 8.3 ms. )		$I^2t$	166							A <sup>2</sup> S
Maximum Instantaneous Forward Voltage at $I_F = 4 A$		$V_F$	1.0							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_J = 25^{\circ}C$	$I_R$	5.0							$\mu A$
	$T_J = 100^{\circ}C$	$I_{R(H)}$	500							
Typical Junction capacitance per element (Note1)		$C_J$	60							pF
Typical Thermal Resistance (Note 2)		$R_{\theta JC}$	2.2							$^{\circ}C/W$
Operating Junction Temperature Range		$T_J$	- 50 to + 150							$^{\circ}C$
Storage Temperature Range		$T_{STG}$	- 50 to + 150							$^{\circ}C$

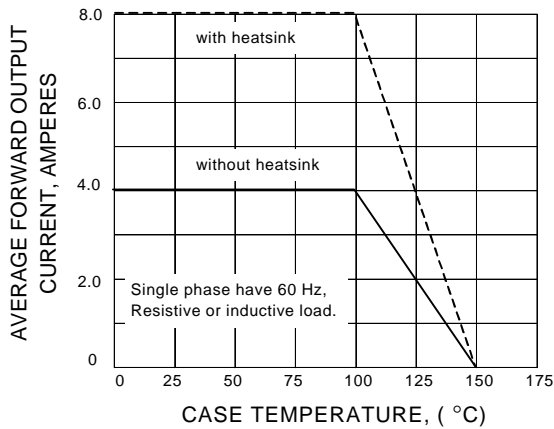
### Notes :

(1) Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC

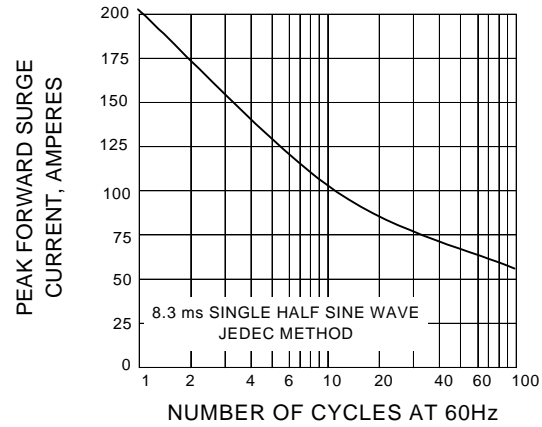
(2) Device mounted on 100mm x 100mm x 1.6mm Cu. Plate heatsink.

## RATING AND CHARACTERISTIC CURVES ( GBU8005 - GBU810 )

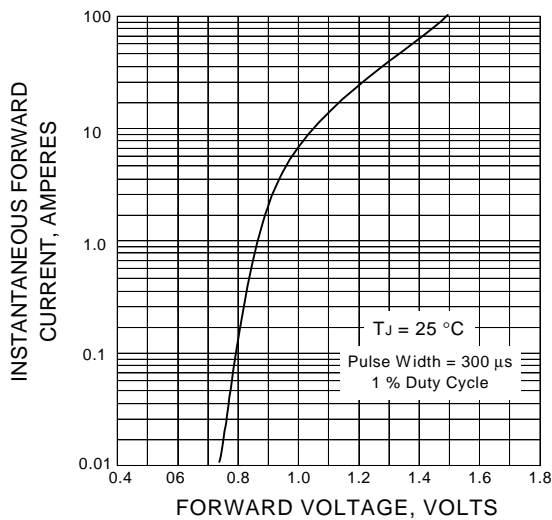
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

