

## GBU6A ~ GBU6M

PRV : 50 - 1000 Volts

Io : 6.0 Amperes

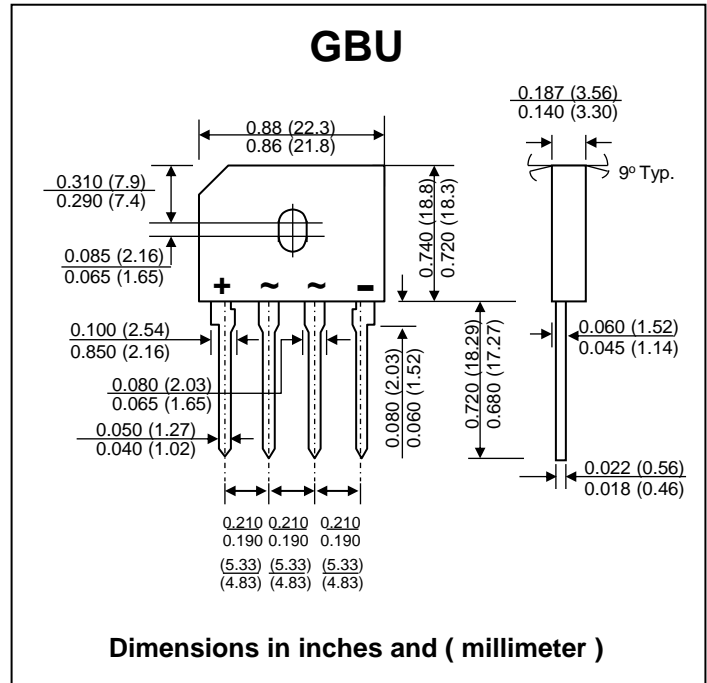
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Ideal for printed circuit board
- \* Very good heat dissipation
- \* Pb / RoHS Free

### MECHANICAL DATA :

- \* Case : Molded plastic
- \* Polarity : Polarity symbols marked on case
- \* Mounting position : Any
- \* Weight : 4 grams

## SILICON BRIDGE RECTIFIERS



## 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%.

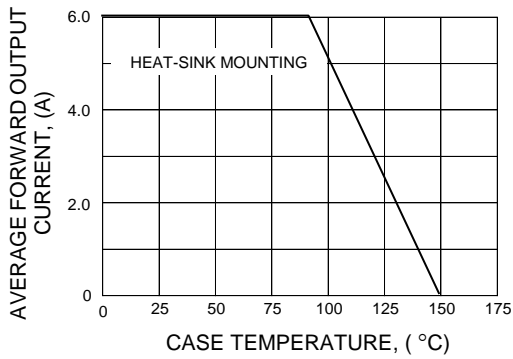
RATING	SYMBOL	GBU 6A	GBU 6B	GBU 6D	GBU 6G	GBU 6J	GBU 6K	GBU 6M	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current $T_c = 90\text{ }^\circ\text{C}^{(1)}$	$I_{F(AV)}$	6.0							A
Maximum Peak Forward Surge Current ( Single sin-wave superimposed on rated load )	$I_{FSM}$	175							A
Maximum Instantaneous Forward Voltage drop per leg at $I_F = 6.0\text{ A}$	$V_F$	1.0							V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	$I_R$	5.0							$\mu\text{A}$
	$I_{R(H)}$	500							$\mu\text{A}$
Typical junction Capacitance per leg ( at 4.0 A, 1MHz )	$C_J$	211				94			pF
Typical Thermal Resistance, Junction to Case $^{(1,3)}$	$R_{\theta JC}$	2.5							$^\circ\text{C/W}$
Typical Thermal Resistance, Junction to Ambient $^{(2)}$	$R_{\theta JA}$	20							$^\circ\text{C/W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 55 to + 150							$^\circ\text{C}$

### Notes :

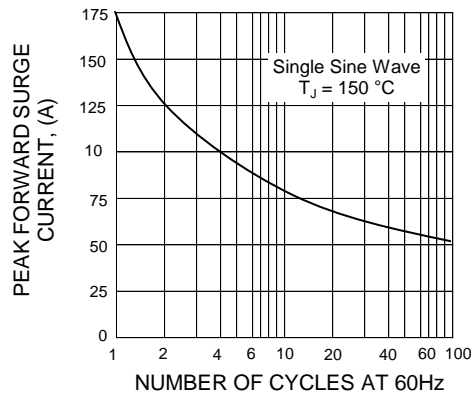
- (1) Unit case mounted on Al plate heatsink
- (2) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12 mm) copper pads, 0.375"(9.5mm)lead length
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

**RATING AND CHARACTERISTIC CURVES ( GBU6A ~ GBU6M )**

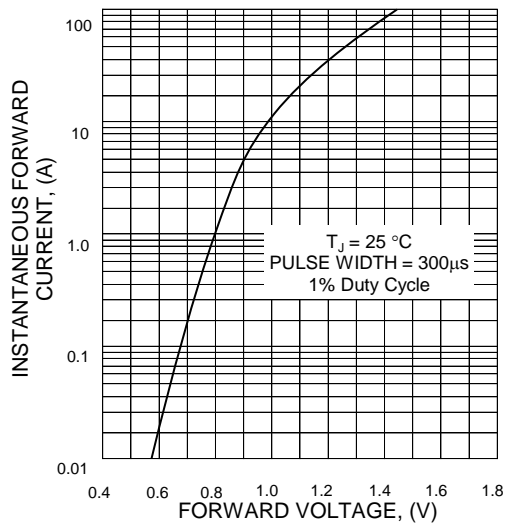
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



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



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS PER LEG**

