

# DATA SHEET

## GBJ6A~GBJ6K

### GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 50 to 800 Volts **CURRENT** 6.0 Ampere

**Reconnized File #E228882**

#### FEATURES

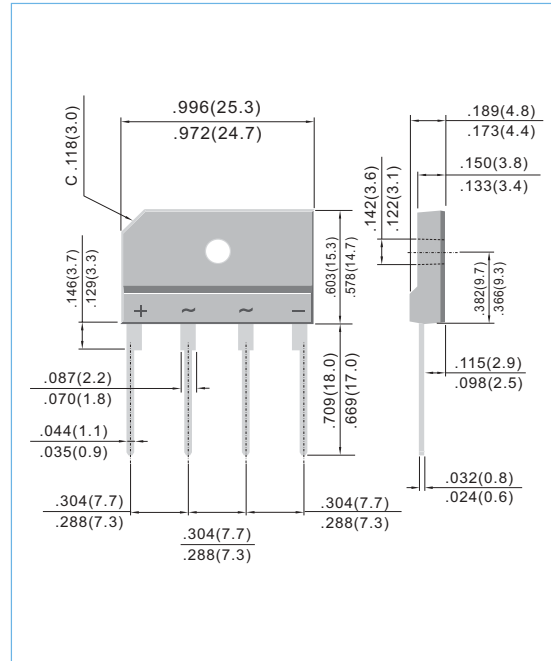
- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- High temperature soldering guaranteed:  
260°C/10 seconds/.375"(9.5mm) lead length at 5 lbs. (2.3kg) tension
- Both normal and Pb free product are available:  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: Reliable low cost construction utilizing molded plastic technique  
Terminals: Leads solderable per MIL-STD-202, Method 208  
Mounting position: Any  
Mounting torque: 5 in. lb. Max.  
Weight: 0.15 ounce, 4.0 grams

GBJ

Unit: inch (mm)



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

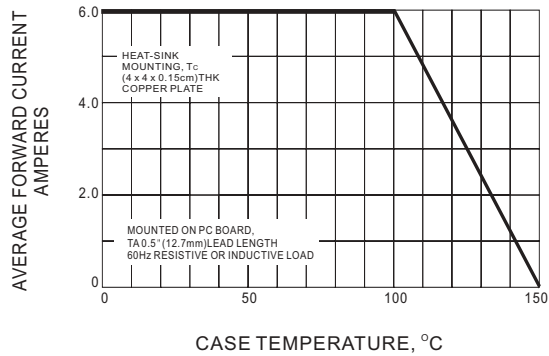
Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.  
For Capacitive load derate current by 20%.

| PARAMETER                                                                                                          | SYMBOL                             | GBJ6A        | GBJ6B | GBJ6D | GBJ6G | GBJ6J | GBJ6K | UNITS                  |
|--------------------------------------------------------------------------------------------------------------------|------------------------------------|--------------|-------|-------|-------|-------|-------|------------------------|
| Maximum Recurrent Peak Reverse Voltage                                                                             | $V_{RRM}$                          | 50           | 100   | 200   | 400   | 600   | 800   | V                      |
| Maximum RMS Bridge Input Voltage                                                                                   | $V_{RMS}$                          | 35           | 70    | 140   | 280   | 420   | 560   | V                      |
| Maximum DC Blocking Voltage                                                                                        | $V_{DC}$                           | 50           | 100   | 200   | 400   | 600   | 800   | V                      |
| Maximum Average Forward Rectified Output Current at $T_C=100^\circ\text{C}$                                        | $I_{AV}$                           | 6.0          |       |       |       |       |       | A                      |
| $I^2t$ Rating for fusing ( $t < 8.3\text{ms}$ )                                                                    | $I^2t$                             | 127          |       |       |       |       |       | $\text{A}^2\text{sec}$ |
| Peak Forward Surge Current single sine-wave superimposed on rated load (JEDEC method)                              | $I_{FSM}$                          | 175          |       |       |       |       |       | Apk                    |
| Maximum Instantaneous Forward Voltage Drop per element at 3.0A                                                     | $V_F$                              | 1.0          |       |       |       |       |       | Vpk                    |
| Maximum Reverse Leakage Current at Rated @ $T_A=25^\circ\text{C}$<br>Dc Blocking Voltage @ $T_A=100^\circ\text{C}$ | $I_R$                              | 5.0<br>500   |       |       |       |       |       | $\mu\text{A}$          |
| Typical Thermal Resistance per leg (Note 2)<br>(Note 3)                                                            | $R_{\theta JA}$<br>$R_{\theta JC}$ | 8.6<br>3.1   |       |       |       |       |       | $^\circ\text{C/W}$     |
| Operating Junction and Storage Temperature Range                                                                   | $T_J, T_{STG}$                     | -55 to + 150 |       |       |       |       |       | $^\circ\text{C}$       |

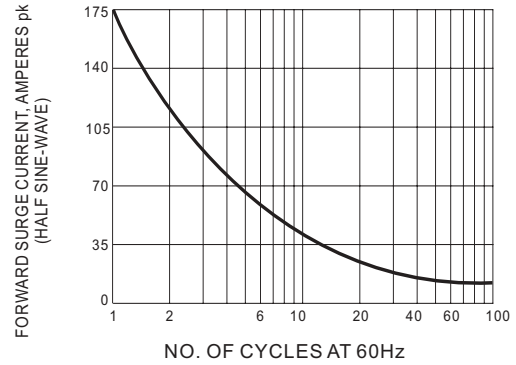
#### NOTES:

- Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.
- Units Mounted in free air, no heatsink, P.C.B at 0.375"(9.5mm) lead length with 0.5 x 0.5"(12 x 12mm) copper pads.
- Units Mounted on a 2.6 x 1.4" x 0.06" thick (6.5 x 3.5 x 0.15cm) AL plate.

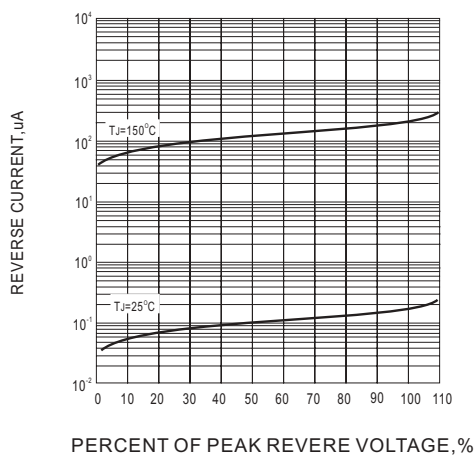
## RATING AND CHARACTERISTIC CURVES



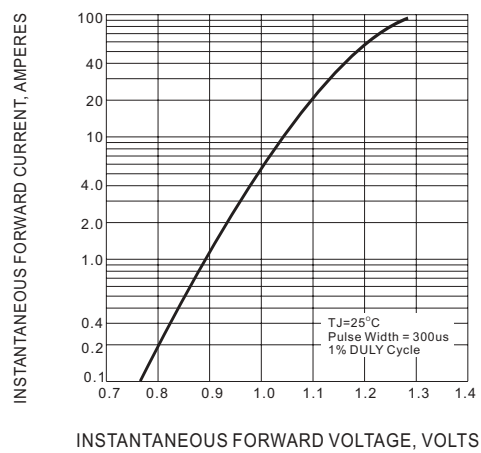
**Fig. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**Fig.3 - TYPICAL REVERSE CHARACTERISTICS**



**Fig.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT**