



# DATA SHEET

## GBU8A~GBU8K

**GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER**  
**VOLTAGE 50 to 800 Volts CURRENT - 8.0 Amperes**

**GBU**

Unit: inch ( mm )

### FEATURES

- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Surge overload rating: 200 Amperes peak
- High temperature soldering guaranteed:  
260°C/10 seconds/.375"(9.5mm) lead length at 5 lbs. (2.3kg) tension

### MECHANICAL DATA

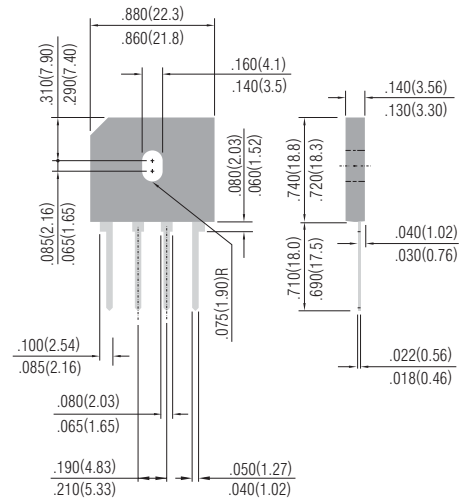
Case: Reliable low cost construction utilizing molded plastic technique

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



### 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%.

	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	UNIT
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	V
Maximum RMS Input Voltage	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	V
Maximum Average Forward $T_C=100^\circ\text{C}$ Rectified Output Current at $T_A=40^\circ\text{C}$	8.0 6.0						A
I <sup>2</sup> t Rating for fusing ( t<8.3ms)	166						A <sup>2</sup> S
Peak Forward Surge Current single sine-wave superimposed on rated load (JEDEC method)	200						Apk
Maximum Instantaneous Forward Voltage Drop per element at 4.0A	1.0						Vpk
Maximum Reverse Leakage at rated $T_A=25^\circ$ CDc Blocking Voltage per element $T_C=100^\circ\text{C}$	5.0 500						$\mu\text{A}$ $\mu\text{A}$
Typical Thermal Resistance per leg(Note 2) R $\theta\text{JA}$	18.0						$^\circ\text{C} / \text{W}$
Typical Thermal Resistance per leg(Note 3) R $\theta\text{JA}$	3.0						$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range, $T_J, T_{STG}$	-55+150						$^\circ\text{C}$

#### NOTES:

1. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.
2. 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.
3. Units Mounted on a 2.0 x 1.6" x 0.3" thick (5 x 4 x 0.8cm) AL plate.



**RATING AND CHARACTERISTIC CURVES**

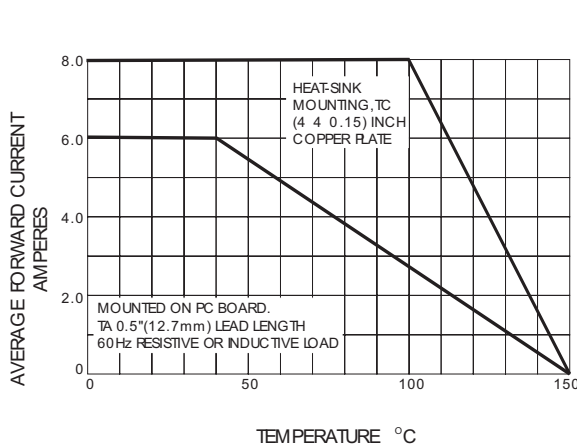


Fig. 1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

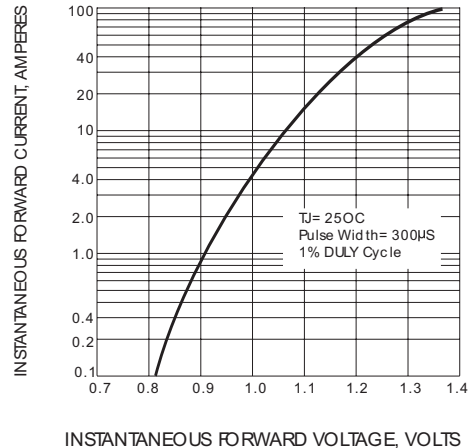


Fig. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

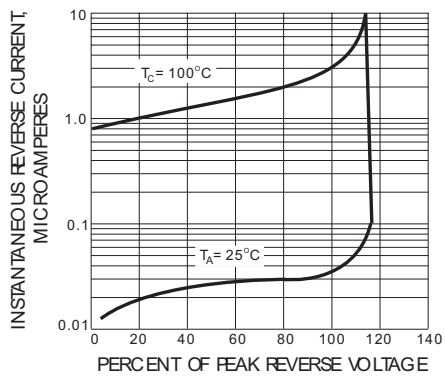


Fig. 3 - TYPICAL PEAK REVERSE CHARACTERISTICS

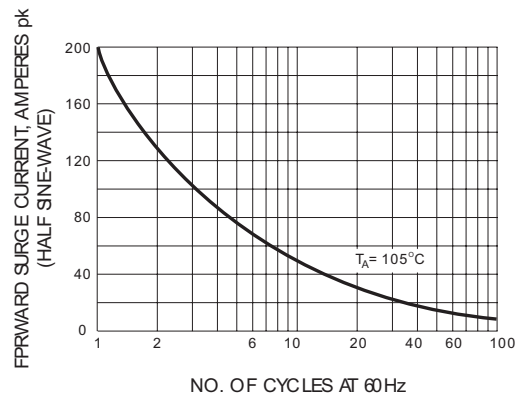


Fig. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

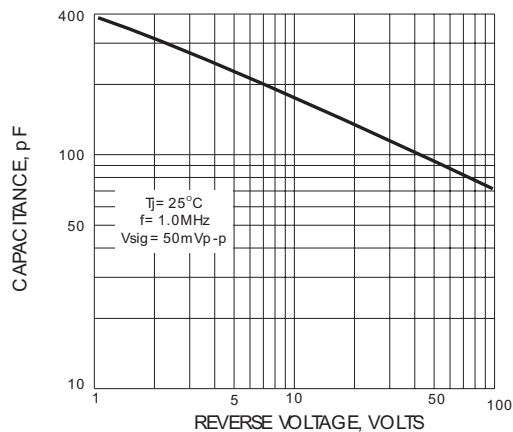


Fig. 5 - TYPICAL JUNCTION CAPACITANCE PER ELEMENT