

**Glass Passivated Single-Phase Bridge Rectifier**

**Case Style GBU**

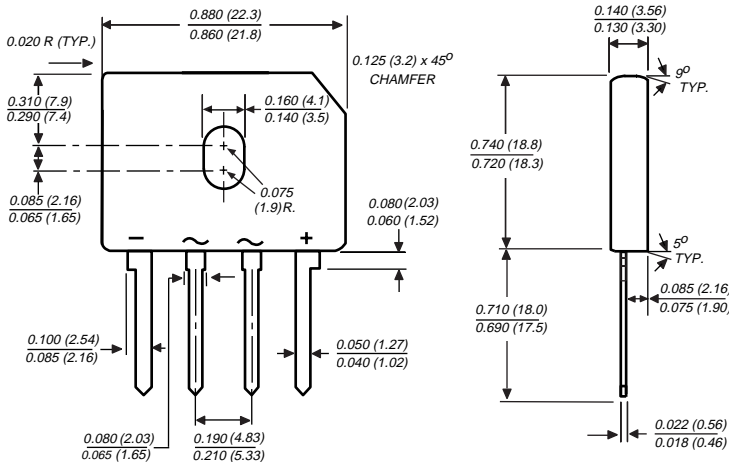
**Reverse Voltage** 50 and 1000V  
**Forward Current** 8.0A

**Features**

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 VRMS
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge overload rating
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

**Mechanical Data**

- Case:** Molded plastic body over passivated junctions
- Terminals:** Plated leads solderable per MIL-STD-750, Method 2026
- Mounting Position:** Any (Note 2)
- Mounting Torque:** 5 in-lbs max.
- Weight:** 0.15 oz., 4.0 g
- Packaging codes/options:** 1/250 EA. per Bulk Tray Stack



Polarity shown on front side of case, positive lead by beveled corner

Dimensions in inches and (millimeters)

**Maximum Ratings & Thermal Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	Unit
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at T <sub>C</sub> = 100°C (Note 1)	I <sub>F(AV)</sub>	8.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T <sub>J</sub> = 150°C	I <sub>FSM</sub>	200							A
Rating for fusing (t < 8.3ms)	I <sup>2</sup> t	166							A <sup>2</sup> sec
Typical thermal resistance per leg (Note 3)	R <sub>θJA</sub> R <sub>θJC</sub>	21 2.2							°C/W
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

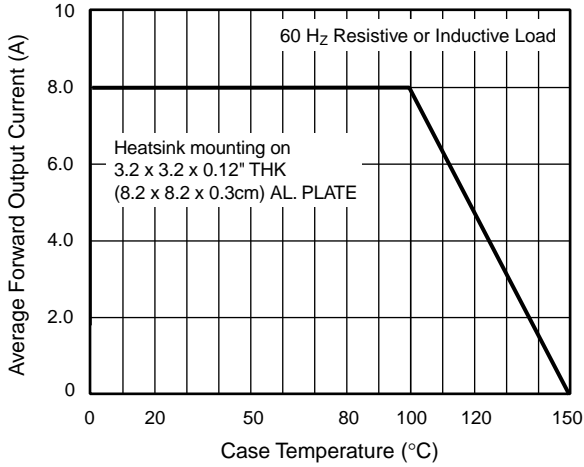
**Electrical Characteristics** Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	Unit	
Maximum instantaneous forward voltage drop per leg at 8.0 A	V <sub>F</sub>	1.0							V	
Maximum DC reverse current at T <sub>A</sub> = 25°C rated DC blocking voltage per leg T <sub>A</sub> = 125°C	I <sub>R</sub>	5.0 500							μA	
Typical junction capacitance per leg at 4V, 1MHz	C <sub>J</sub>	211				94				pF

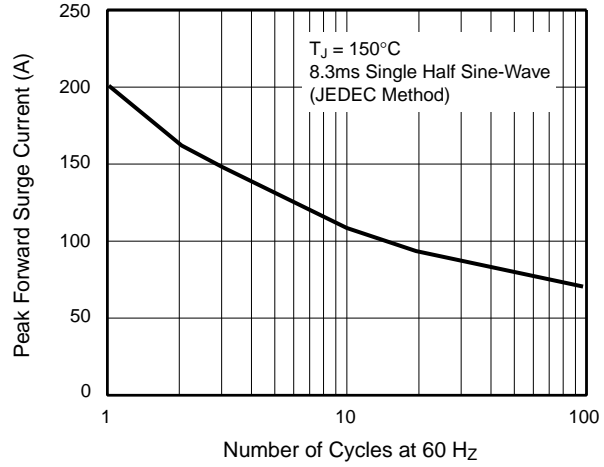
- Notes:** (1) Units case mounted on 3.2 x 3.2 x 0.12" thick (8.2 x 8.2 x 0.3cm) Al plate heatsink  
 (2) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws  
 (3) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12mm) copper pads, 0.375" lead length

## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

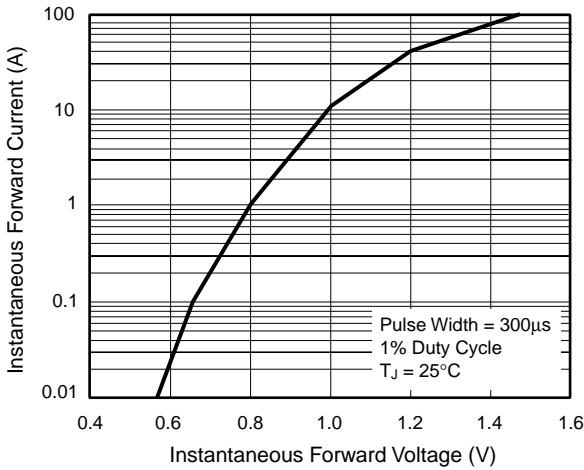
**Fig. 1 – Derating Curve Output Rectified Current**



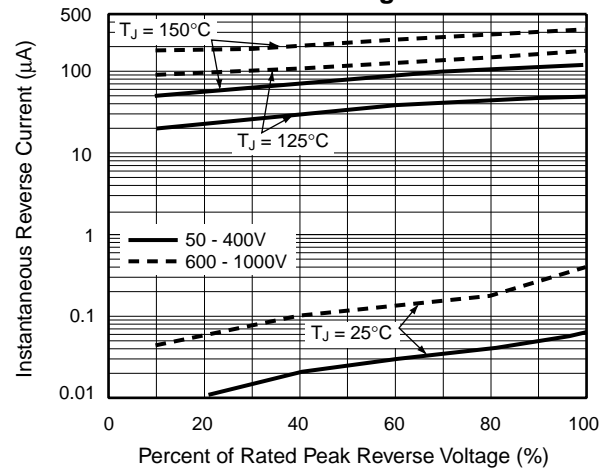
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



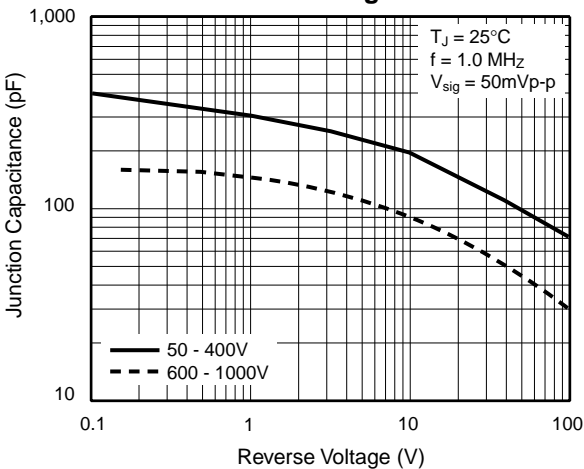
**Fig. 3 – Typical Forward Characteristics Per Leg**



**Fig. 4 – Typical Reverse Characteristics Per Leg**



**Fig. 5 – Typical Junction Capacitance Per Leg**



**Fig. 6 – Typical Transient Thermal Impedance Per Leg**

