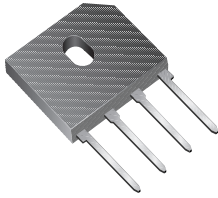




# GBU6A thru GBU6M

Vishay Semiconductors  
formerly General Semiconductor



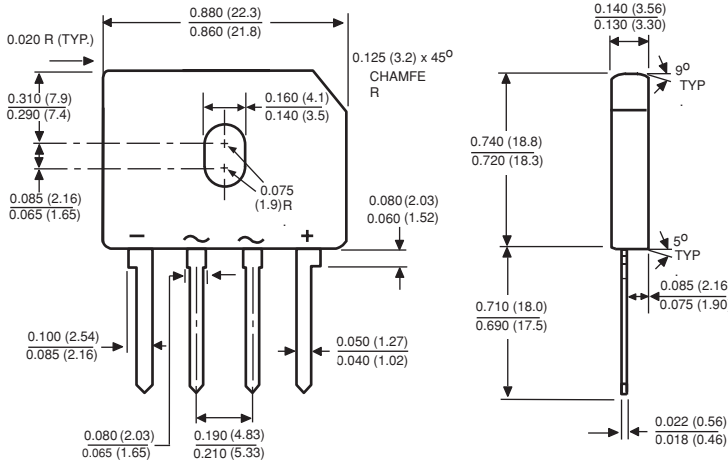
## Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000 V  
Forward Current 6.0 A

Case Style GBU

### 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 V<sub>RMS</sub>
- 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



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

Dimensions in inches and (millimeters)

### 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. - lb. max.

**Weight:** 0.15 oz., 4.0 g

**Packaging codes/options:**  
1/250 EA. per Bulk Tray Stack

### Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	GBU 6A	GBU 6B	GBU 6D	GBU 6G	GBU 6J	GBU 6K	GBU 6M	Units
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 <sup>(1) (2)</sup>	I <sub>F(AV)</sub>	6.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T <sub>J</sub> =150°C	I <sub>FSM</sub>	175							A
Rating for fusing (t<8.3ms)	I <sup>2</sup> t	127							A <sup>2</sup> sec
Typical thermal resistance per leg <sup>(1) (2)</sup>	R <sub>θJA</sub> R <sub>θJC</sub>					7.4 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.

Maximum instantaneous forward voltage drop per leg at 6.0 A	V <sub>F</sub>	1.0						V	
Maximum DC reverse current at rated DC blocking voltage per leg	I <sub>R</sub>					5.0 500			μA
Typical junction capacitance per leg at 4.0V, 1MHz	C <sub>J</sub>	211				94		pF	

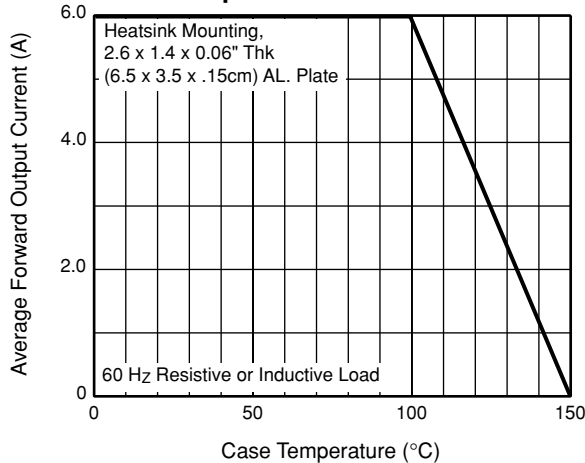
#### Notes:

(1) Units case mounted on 2.6 x 1.4 x 0.06" thick (6.5 x 3.5 x 0.15 cm) Al. Plate heatsink

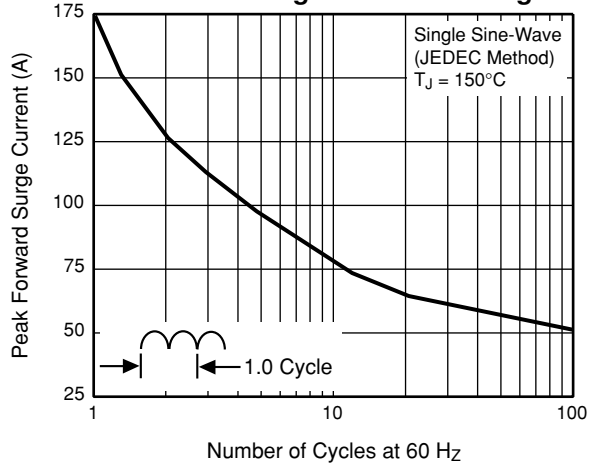
(2) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

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

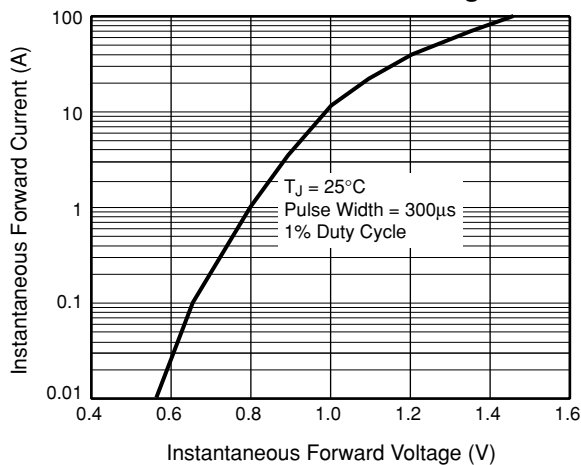
**Fig. 1 – Derating Curve Output Rectified Current**



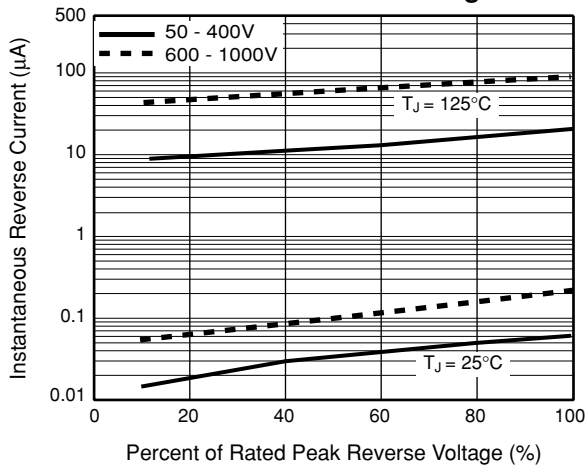
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



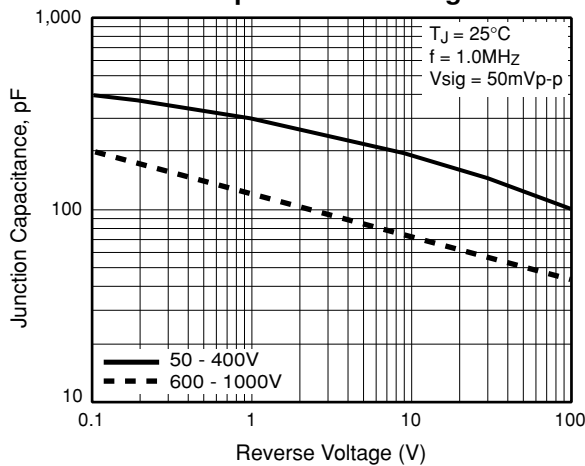
**Fig. 3 – Typical Forward Characteristics Per Leg**



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



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



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

