

**Case Style GBU**

## Glass Passivated Single-Phase Bridge Rectifier

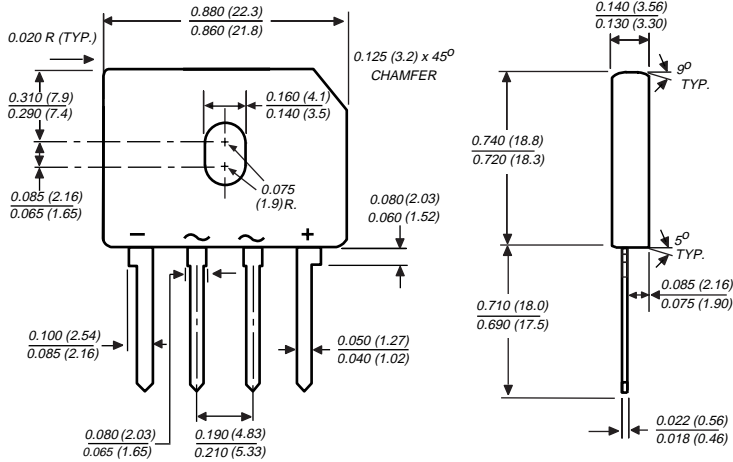
**Reverse Voltage** 50 and 1000V  
**Forward Current** 4.0A

### 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 current capability
- 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 4)  
**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.

	Symbols	GBU 4A	GBU 4B	GBU 4D	GBU 4G	GBU 4J	GBU 4K	GBU 4M	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)</sup> T <sub>A</sub> =40°C <sup>(2)</sup>	I <sub>F(AV)</sub>	4.0 3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T <sub>J</sub> =150°C	I <sub>FSM</sub>	150							A
Rating for fusing (t<8.3ms)	I <sup>2</sup> t	93							A <sup>2</sup> sec
Typical thermal resistance per leg <sup>(2)</sup> <sup>(1)</sup>	R <sub>θJA</sub> R <sub>θJC</sub>	22 4.2							°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 drop per leg at 4.0 Amperes	V <sub>F</sub>	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg T <sub>A</sub> = 25°C T <sub>A</sub> =125°C	I <sub>R</sub>	5.0 500							μA
Typical junction capacitance per leg at 4.0V, 1MHz	C <sub>J</sub>	100			45				pF

**Notes:**

- (1) Unit case mounted on 1.6 x 1.6 x 0.06" thick (4.0 x 4.0 x 0.15cm) Al. Plate
- (2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 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 screw

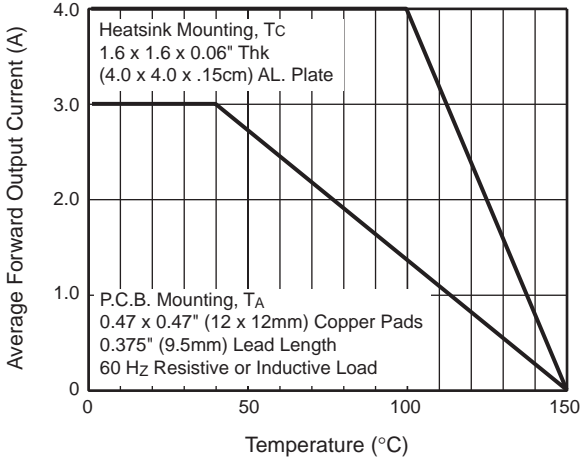
# GBU4A thru GBU4M



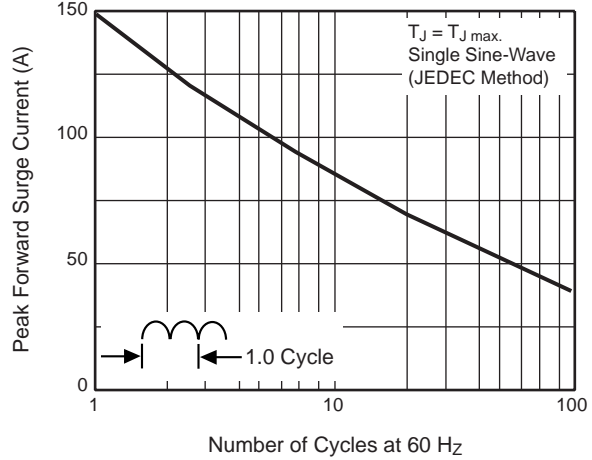
Vishay Semiconductors  
formerly General Semiconductor

## Ratings and Characteristic Curves (T<sub>A</sub> = 25°C unless otherwise noted)

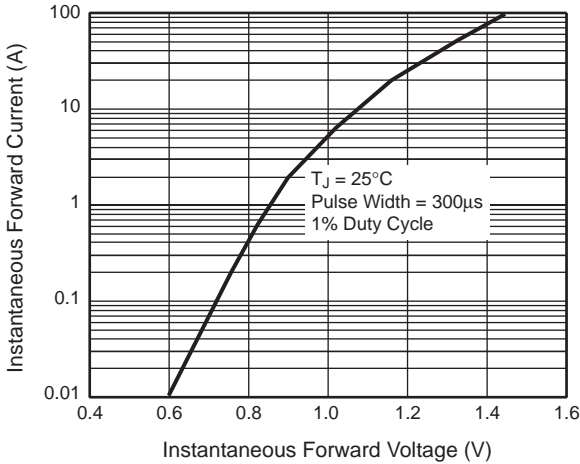
**Fig. 1 — Derating Curve Output Rectified Current**



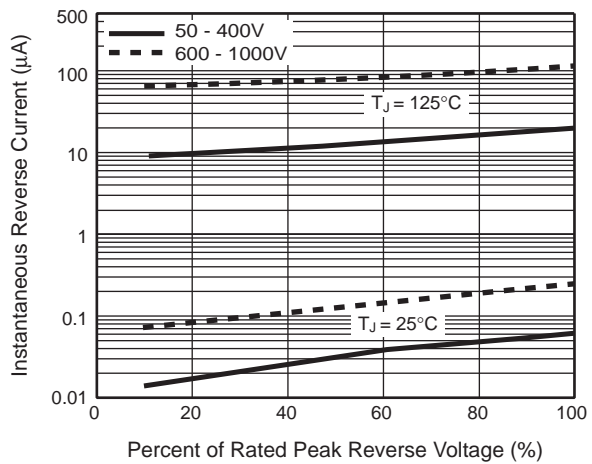
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



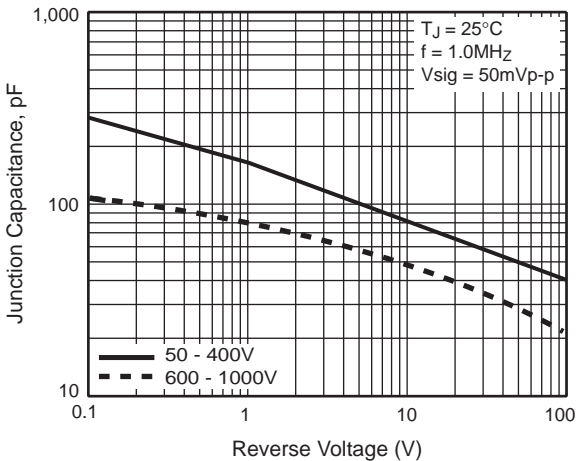
**Fig. 3 — Typical Forward Characteristics Per Leg**



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



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



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

