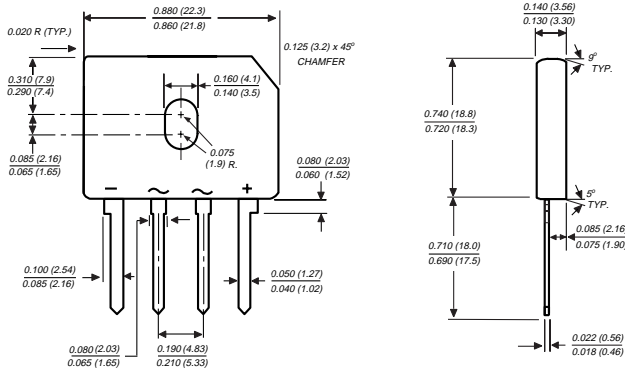


# GBU4A THRU GBU4M

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 4.0 Amperes

### Case Style GBU

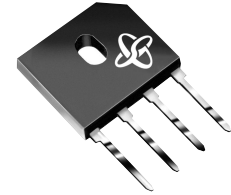


Polarity shown on front side of case, positive lead by beveled corner

Dimensions in inches and (millimeters)

### 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)

**Mounting Torque:** 5 in. - lb. max.

**Weight:** 0.15 ounce, 4.0 grams

### MAXIMUM RATINGS AND ELECTRICAL 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	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified output current at $T_C=100^\circ\text{C}$ (NOTE 1) $T_A=40^\circ\text{C}$ (NOTE 2)	$I_{(AV)}$	4.0				3.0			Amps
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J=150^\circ\text{C}$	$I_{FSM}$	150.0							Amps
Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	93.0							A <sup>2</sup> sec
Maximum instantaneous forward voltage drop per leg at 4.0A	$V_F$	1.0							Volts
Maximum DC reverse current at rated DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	$I_R$	5.0				500.0			$\mu\text{A}$
Typical junction capacitance per leg (NOTE 3)	$C_J$	100.0				45.0			pF
Typical thermal resistance per leg (NOTE 2) (NOTE 1)	$R_{\theta JA}$ $R_{\theta JC}$	22.0				4.2			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

#### 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

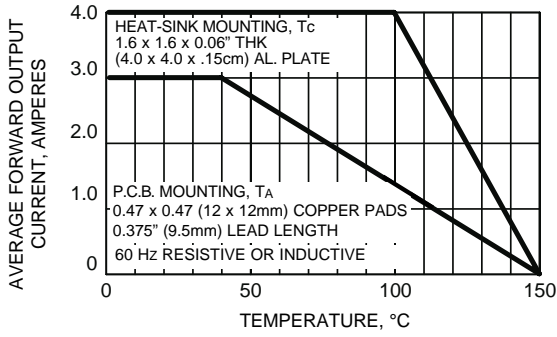
(2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length

(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

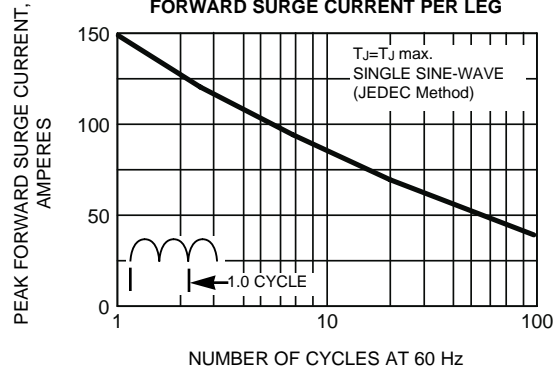
(4) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

# RATINGS AND CHARACTERISTICS CURVES GBU4A THRU GBU4M

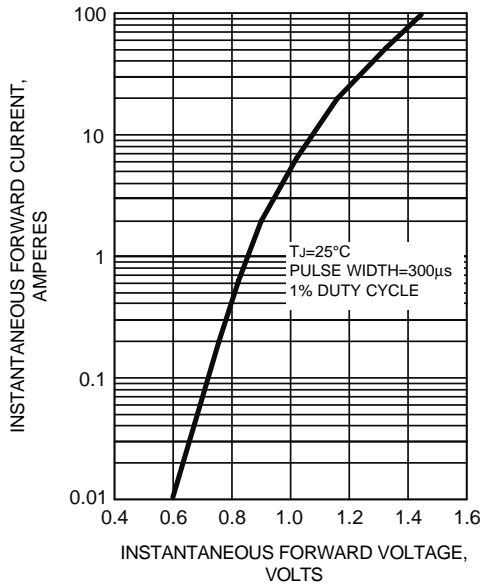
**FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT**



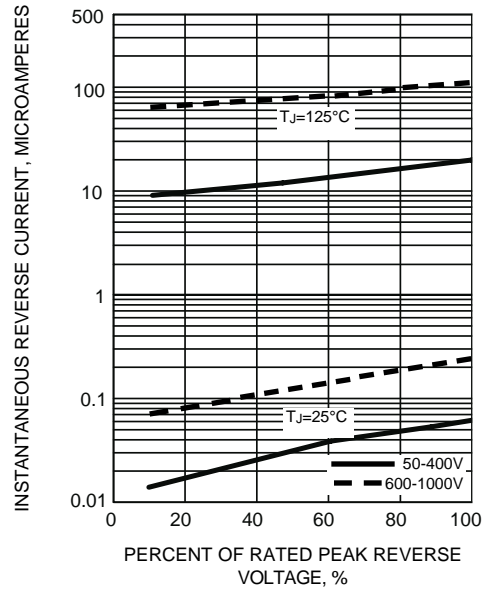
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



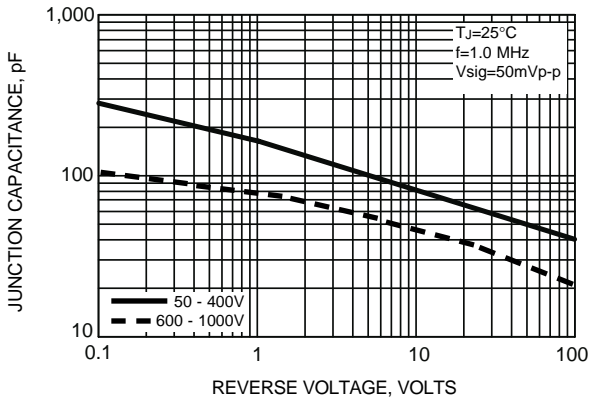
**FIG. 3 - TYPICAL FORWARD CHARACTERISTICS PER LEG**



**FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG**



**FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE**

