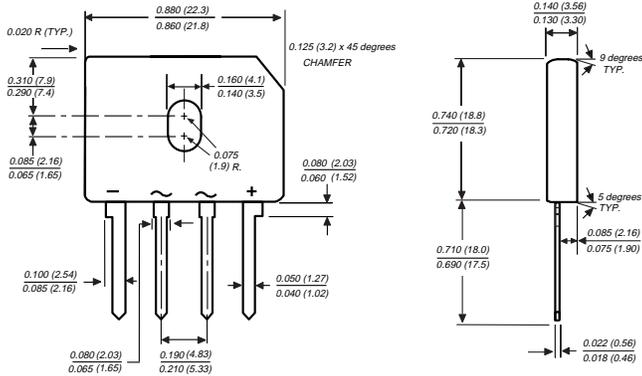


# GBU6A THRU GBU6M

## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

Reverse Voltage - 50 to 1000 Volts      Forward Current - 6.0 Amperes

### Case Style GBU

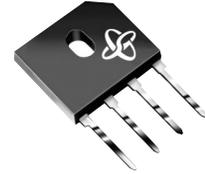


Polarity shown on front side of case, positive lead by beveled corner

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 junctions
- ◆ 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 chip

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Mounting Position:** Any (NOTE 2)

**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 6A	GBU 6B	GBU 6D	GBU 6G	GBU 6J	GBU 6K	GBU 6M	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, 2)	$I_{(AV)}$	6.0							Amps	
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J=150^\circ\text{C}$	$I_{FSM}$	175.0							Amps	
Rating for fusing ( $t<8.3\text{ms}$ )	$I^2t$	127.0							A <sup>2</sup> sec	
Maximum instantaneous forward voltage drop per leg at 6.0A	$V_F$	1.0							Volts	
Maximum DC reverse current at rated DC blocking voltage per leg	$I_R$	5.0 500.0							$\mu\text{A}$	
Typical junction capacitance per leg (NOTE 3)	$C_J$	211.0				94.0			pF	
Typical thermal resistance per leg (NOTE 1, 2)	$R_{\theta JA}$ $R_{\theta JC}$	7.4 2.2								$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$	

#### NOTES:

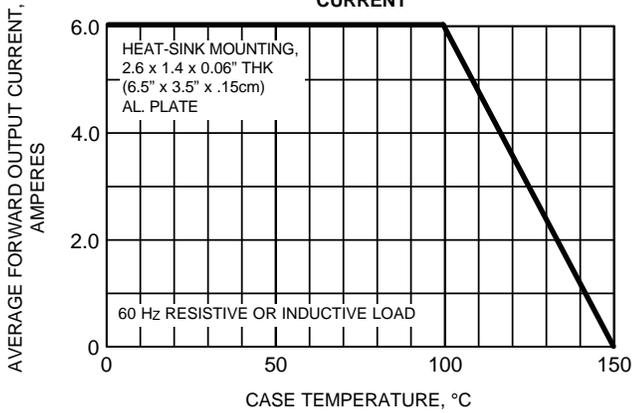
(1) Units case mounted on 2.6 x 1.4 x 0.06" thick (6.5 x 3.5 x 0.15 cm) Al. Plate heatsink

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

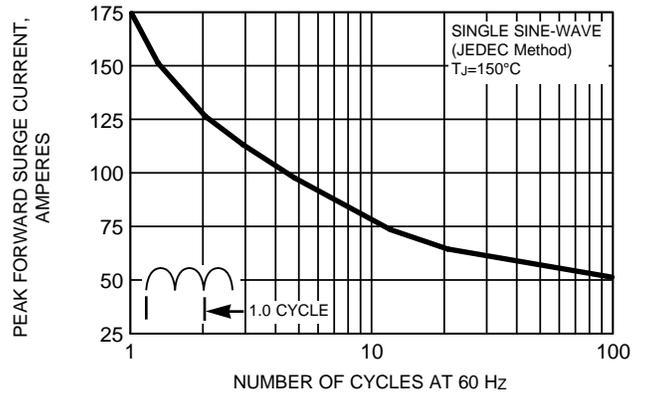
(3) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

# RATINGS AND CHARACTERISTICS CURVES GBU6A THRU GBU6M

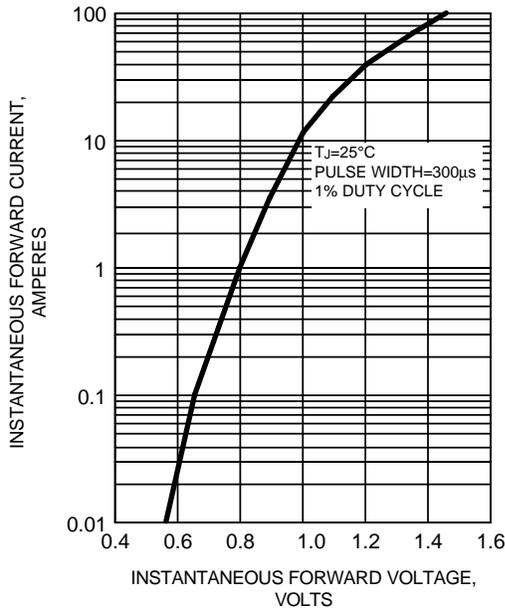
**FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT**



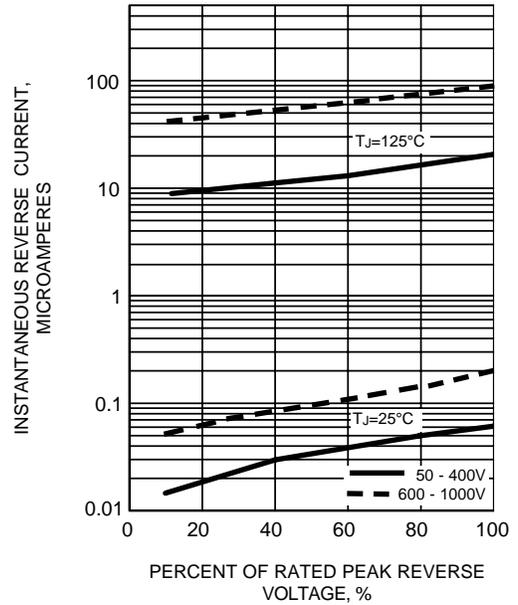
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG**



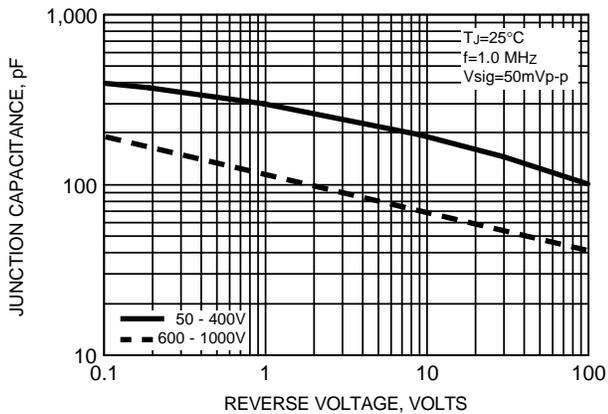
**FIG. 3 - TYPICAL FORWARD CHARACTERISTICS PER LEG**



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



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



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

