



## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**GBU4A THRU GBU4M**

**VOLTAGE RANGE**

**50 to 1000 Volts**

**CURRENT**

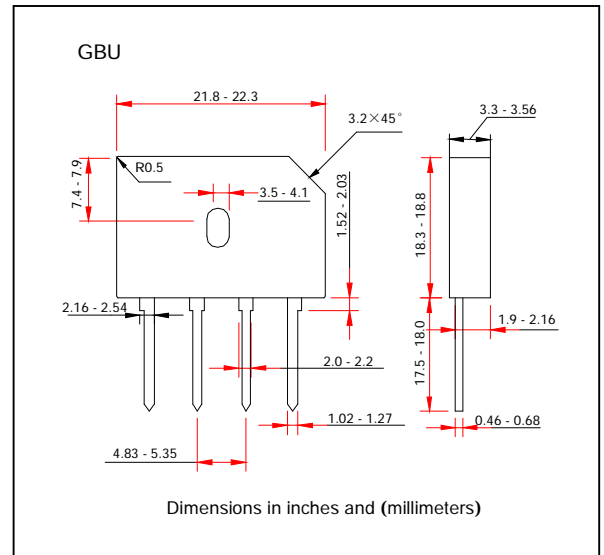
**4.0 Amperes**

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Ideal for printed circuit boards
- Glass passivated chip junctions
- High surge current capability
- High temperature soldering guaranteed  
260°C/10 seconds, 0.375"(9.5mm) lead length at 5 lbs. (2.3kg) tension

### MECHANICAL DATA

- Case: molded plastic body over passivated junctions
- Terminal: Plated leads solderable per MIL-STD-750 Method 2026
- Mounting position: Any (Note 3)
- Weight: 0.15 ounce, 4.0 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	GBU 4A	GBU 4B	GBU 4D	GBU 4G	GBU 4J	GBU 4K	GBU 4M	UNIT	
Maximum Reverse Peak Repetitive 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	100	Volts	
Maximum Average Forward Rectified Output Current, At $T_C=50^\circ\text{C}$ (Note 1) At $T_A=40^\circ\text{C}$ (Note 2)	$I_{(AV)}$					4.0 3.0				Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	$I_{FSM}$					150				Amps
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$					93				$\text{A}^2\text{s}$
Maximum Instantaneous Forward Voltage drop Per leg at 4.0A	$V_F$					1.0				Volts
Maximum Reverse Current at rated DC blocking voltage per element	$T_A=25^\circ\text{C}$					5.0				$\mu\text{A}$
	$T_A=125^\circ\text{C}$					500				
Typical Junction Capacitance (Note 4)	$C_J$					100	45			pF
Typical Thermal Resistance (Note 1)	$R_{JA}$					22				$^\circ\text{C}/\text{W}$
Typical Thermal Resistance (Note 2)	$R_{JL}$					4.2				$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$					(-55 to +150)			$^\circ\text{C}$	

- Notes:**
1. Unit mounted on 1.6×1.6×0.06" thick (4.0×4.0×0.15cm) AL. plate
  2. Unit mounted on P.C.B. With 0.5×0.5"(1.2×1.2mm) 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
  4. Measured at 1.0 MHz and applied reverse voltage of 4.0 V



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**VOLTAGE RANGE**

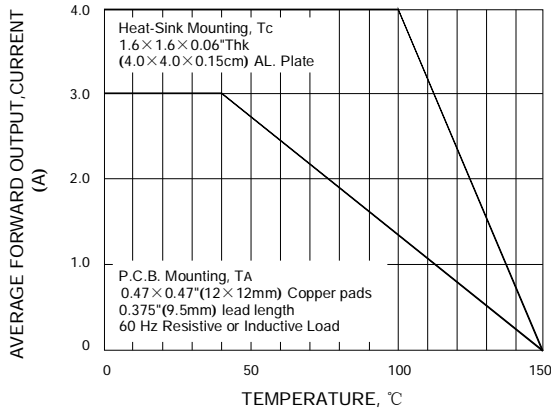
**50 to 1000Volts**

**CURRENT**

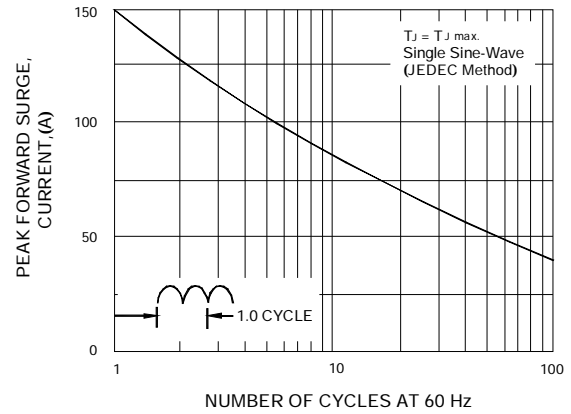
**4.0 Ampere**

## RATINGS AND CHARACTERISTIC CURVES GBU4A THRU GBU4M

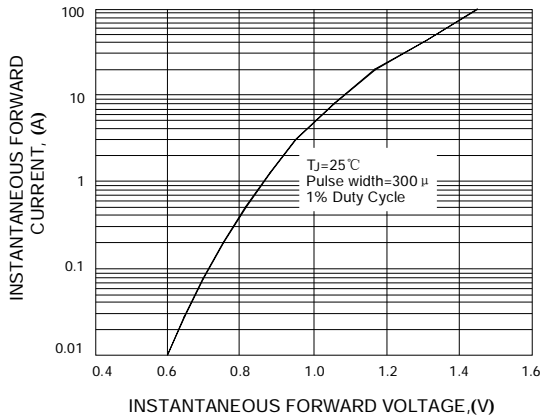
**FIG. 1- DERATING CURVE  
OUTPUT RECTIFIED CURRENT**



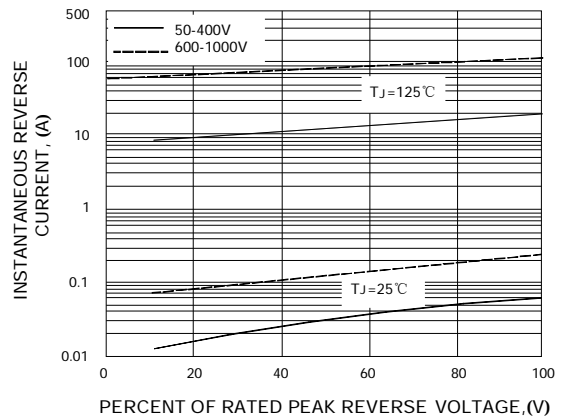
**FIG. 2- MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER LEG**



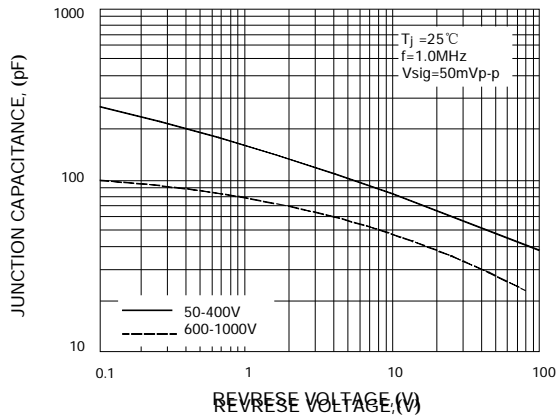
**FIG. 3- TYPICAL FORWARD CHARACTERISTICS  
PER LGE**



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



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



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

