



# SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIER

## GBU4A THRU GBU4M

VOLTAGE RANGE  
CURRENT

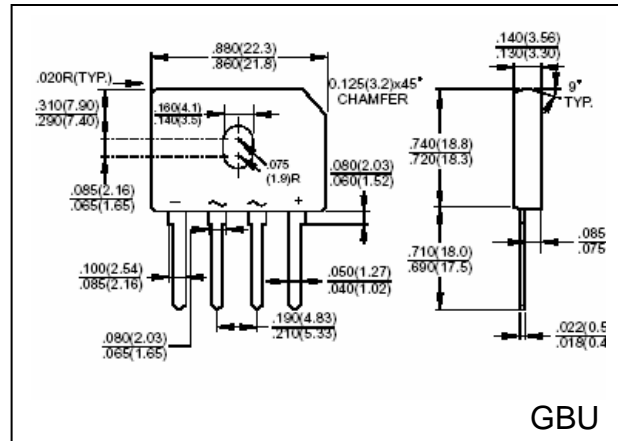
50 to 1000 Volts  
4.0 Ampere

### FEATURES

- UL recognized
- High forward surge current capability
- Glass passivated chip junction
- High case dielectric strength
- High temperature soldering guaranteed:  
260°C / 10 seconds

### MECHANICAL DATA

- Case: Transfer molded plastic
- Terminal: Lead solderable per MIL-STD-750 method 2026
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #6 screw, 5-in-lbs Torque max., (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	GBU4A	GBU4B	GBU4D	GBU4G	GBU4J	GBU4K	GBU4M	UNIT
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 Current, @ $T_C = 100^\circ\text{C}$ (Note 1) @ $T_A = 40^\circ\text{C}$ (Note 2)	$I_{(AV)}$	4.0 3.0						Amps	
Peak Forward Surge Current 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 Bridge element 4.0A	$V_F$	1.0						Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$I_R$	5.0						$\mu\text{A}$	
$T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$		0.5						mA	
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	100				45			pF
Typical Thermal Resistance (Note 2)	$R_{\theta Ja}$	22						$^\circ\text{C}/\text{W}$	
Typical Thermal Resistance (Note 3)	$R_{\theta Jc}$	2.5						$^\circ\text{C}/\text{W}$	
Operating Junction Temperature Range	$T_J$	(-55 to +150)						$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	(-55 to +150)						$^\circ\text{C}$	

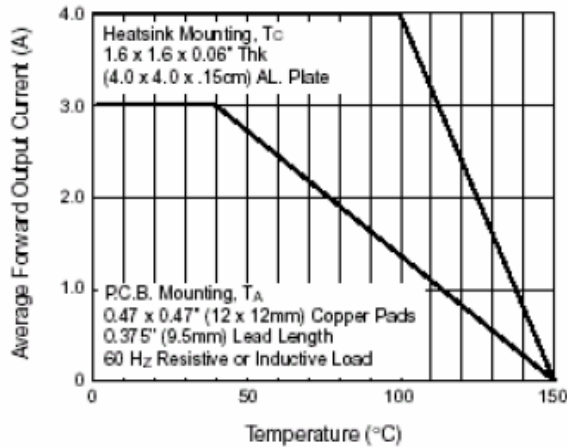
### Notes:

1. Unit mounted on 1.6" x 1.6" x 0.06" (4cm x 4cm x 0.15cm) AL plate
2. Unit mounted on PCB with 0.5" x 0.5" (12mm x 12mm) copper pads and 0.375 (9.5mm) lead length
3. Recommended mounting position is to bolt down on heatsink using #6 screw and silicon thermal compound for maximum heat transfer

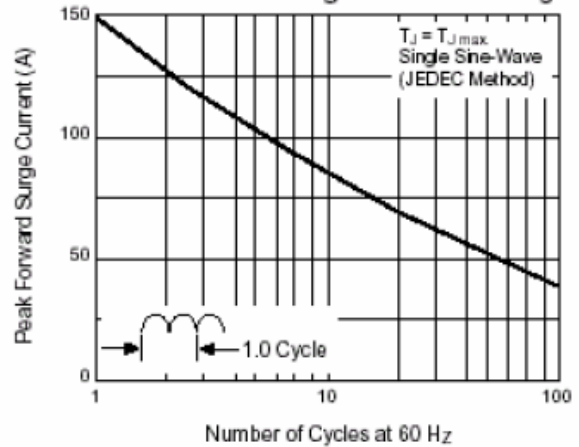


## RATINGS AND CHARACTERISTIC CURVES GBU4A THRU GBU4M

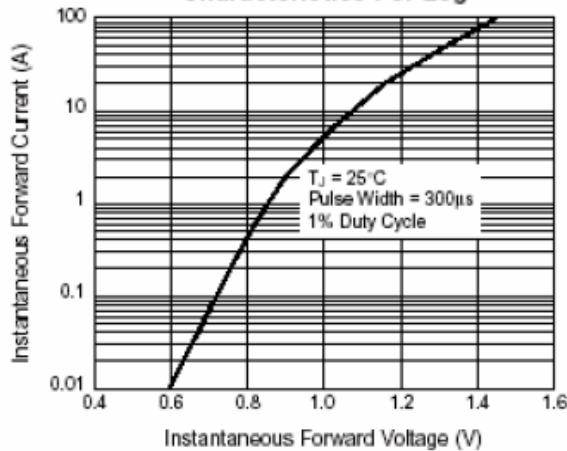
**Fig. 1 — Derating Curve  
Output Rectified Current**



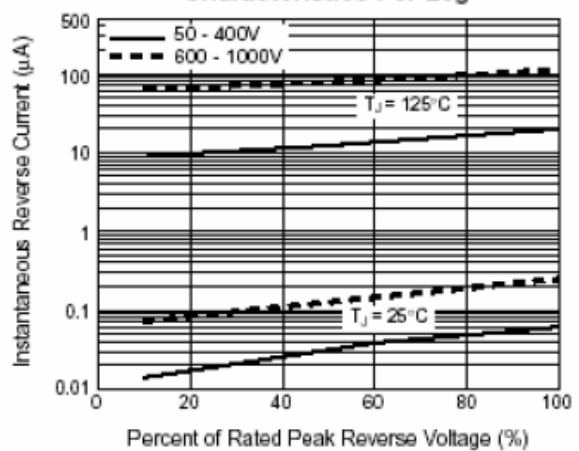
**Fig. 2 — Maximum Non-Repetitive  
Peak Forward Surge Current Per Leg**



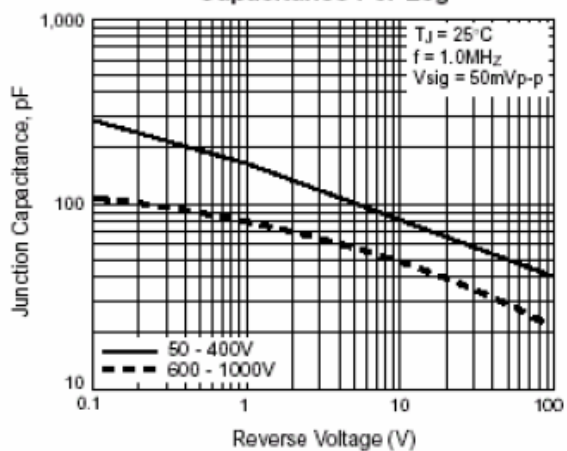
**Fig. 3 — Typical Forward  
Characteristics Per Leg**



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



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



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

