



# GBU6005 THRU GBU610

## BRIDGE RECTIFIERS

### FEATURES

- UL Recognized File #E469616
- Glass passivated chip junction
- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

### MECHANICAL DATA

Case: Molded plastic, GBU

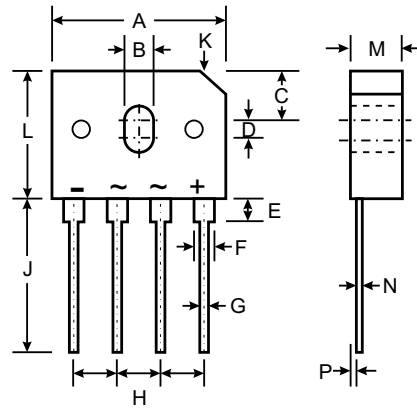
Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.15ounce, 4.0gram

### GBU



Dim	Min	Max
A	21.8	22.3
B	3.5	4.1
C	7.4	7.9
D	1.65	2.16
E	2.25	2.75
F	2.05	2.3
G	1.02	1.27
H	4.83	5.33
J	17.5	18.0
K	4.2 X 45°	
L	18.3	18.8
M	3.30	3.56
N	0.46	0.56
P	0.76	1.0

Dimensions in millimeters

### 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	GBU6005	GBU601	GBU602	GBU604	GBU606	GBU608	GBU610	Units
Maximum Recurrent 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 at $T_C=100$ (Note 1 . Note 2)	$I_{(AV)}$	6.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	125							Amp
Maximum Forward Voltage at 3.0A DC and 25 °C	$V_F$	1.0							Volts
Maximum Reverse Current at $T_A=25$ at Rated DC Blocking Voltage $T_A=125$	$I_R$	5.0 500							uAmp
Typical Junction Capacitance (Note 3)	$C_J$	100				45			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	22							/W
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	4.2							/W
Operating and Storage Temperature Range	$T_J, T_{stg}$	-55 to +150							

#### NOTES:

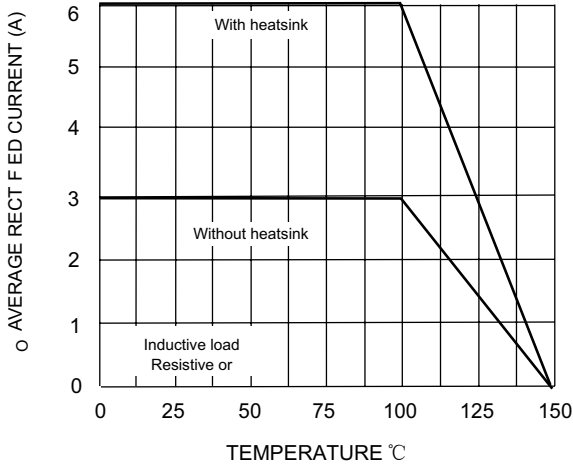
- 1- Unit case mounted on 2.0 x 2.0 x 0.06" thick (5.0 x5.0 x0.16cm) Al. Plate
- 2- Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length
- 3- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 4- Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw



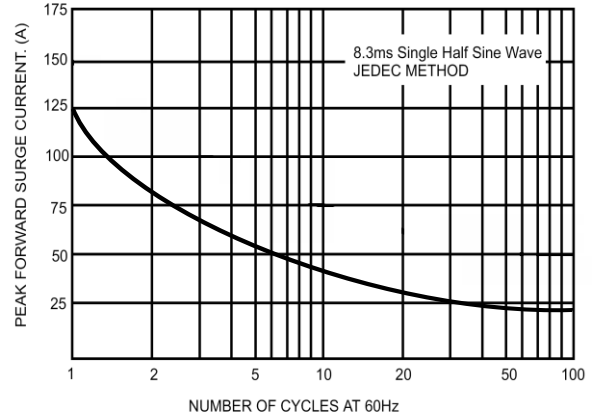
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## Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

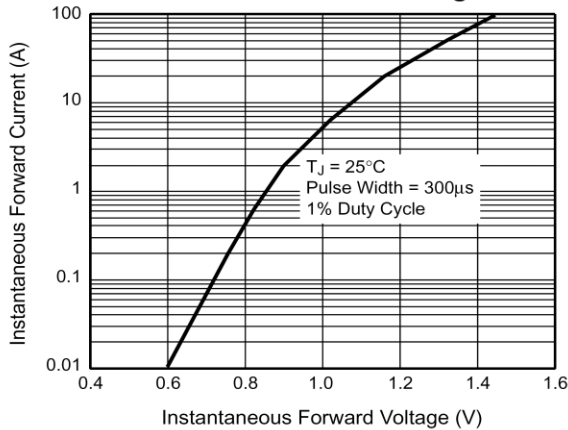
**Fig. 1 – Derating Curve Output Rectified Current**



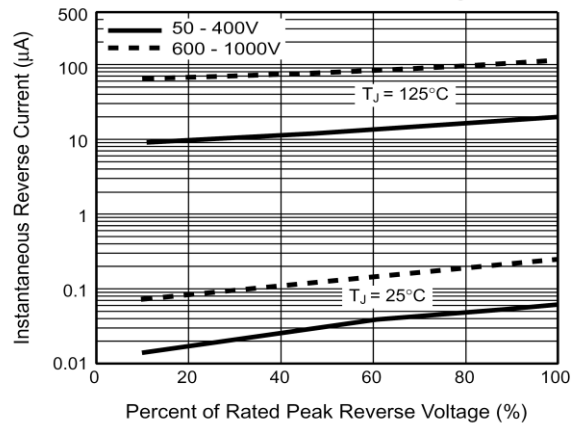
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



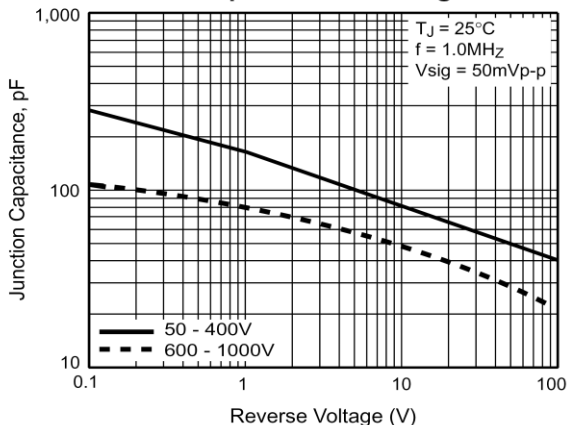
**Fig. 3 – Typical Forward Characteristics Per Leg**



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



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



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

