



# GBU6005 THRU GBU610

## GLASS PASSIVATED BRIDGE RECTIFIER

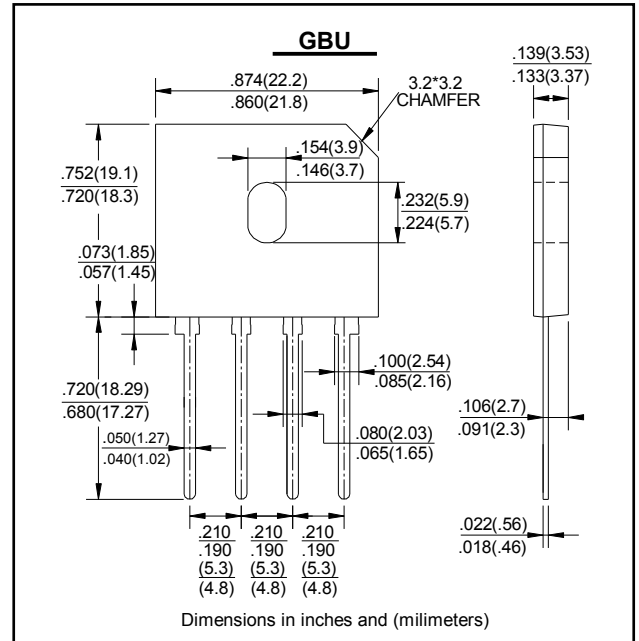
Reverse Voltage - 50 to 1000 Volts    Forward Current - 6.0 Ampere

### FEATURES

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

### MECHANICAL DATA

- Case: Molded plastic, GBU
- Terminals: Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position: Any



### 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 current derate by 20%.

Parameter	Symbols	GBU 6005	GBU 601	GBU 602	GBU 604	GBU 606	GBU 608	GBU 610	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current with Heatsink at $T_C = 100^\circ\text{C}$	$I_{(AV)}$	6.0							A
Peak Forward Surge Current, 8.3 ms Single Half-Sine -Wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	175							A
Maximum Forward Voltage at 3.0 A DC and 25 °C	$V_F$	1.0							V
Maximum Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$	$I_R$	10.0							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$	50							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JC}$	2.2							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_S$	-55 to +150							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 VDC.

<sup>2)</sup> Thermal resistance from junction to case with device mounted on 300 mm X 300 mm X 1.6 mm Cu plate heatsink.



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## RATINGS AND CHARACTERISTIC CURVES

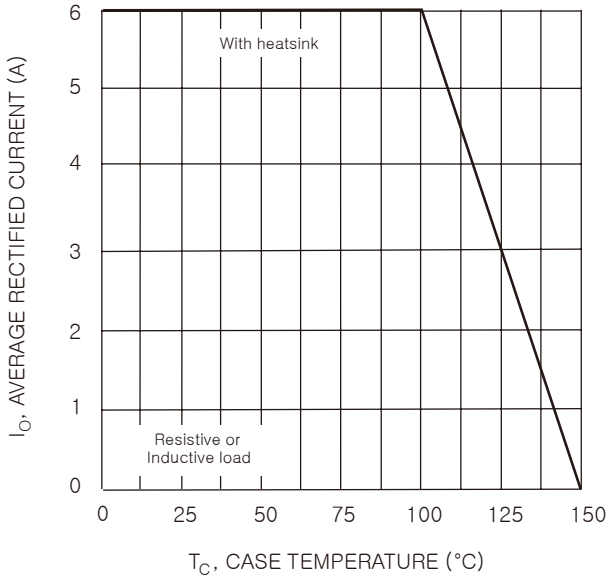


Fig. 1 Forward Current Derating Curve

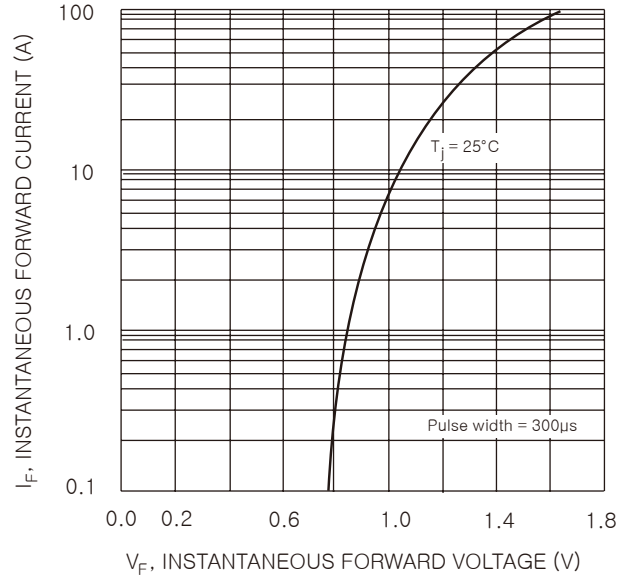


Fig. 2 Typical Forward Characteristics

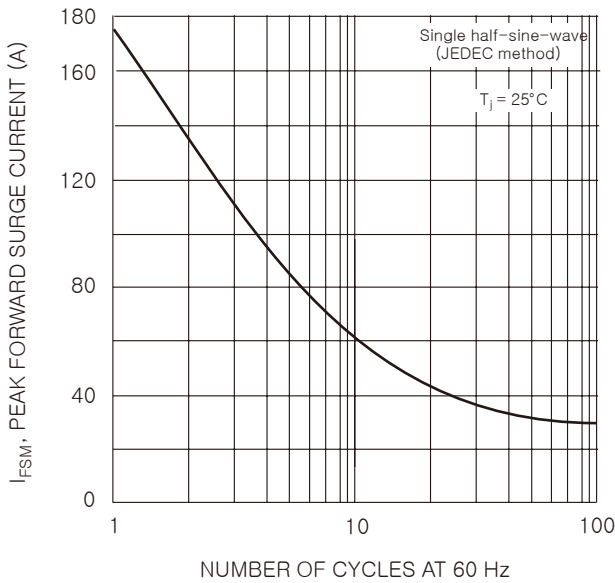


Fig. 3 Maximum Non-Repetitive Surge Current

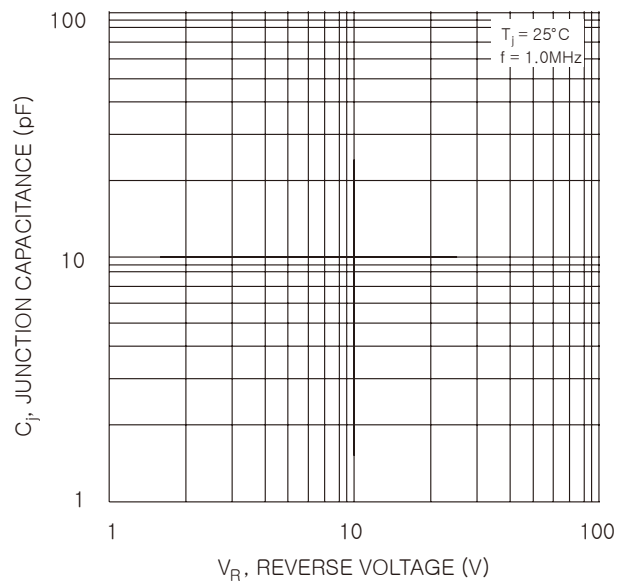


Fig. 4 Typical Junction Capacitance