

# GBU6005 THRU GBU610

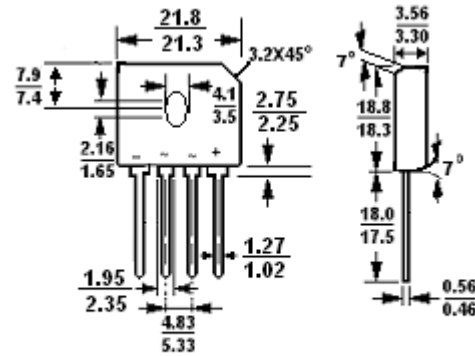
## GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

Forward Current – 6.0 Amperes

### Features

- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Ideal for printed circuit boards
- Glass passivated chip junction
- Reliable low cost construction utilizing molded plastic technique



Dimensions in mm

### Mechanical Data

- **Case:** Molded plastic GBU
- **Terminals:** leads solderable per MIL-STD-202 Method 208 guaranteed
- **Mounting Position:** Any

### Absolute Maximum Ratings and Characteristics

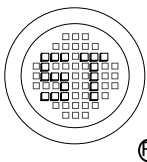
Rating at 25°C ambient temperature unless otherwise specified. Single-phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

	Symbols	GBU 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 at $T_C = 100^\circ\text{C}$ (Note 1), (Note 2)	$I_{F(AV)}$	6							A
Peak forward surge current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	175							A
Maximum forward voltage at 3.0A DC and 25°C	$V_F$	1							V
Maximum reverse current at $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	$I_R$	5 500							$\mu\text{A}$
Typical junction capacitance (Note 3)	$C_J$	211				94			pF
Typical thermal resistance (Note 1),(Note 2)	$R_{\theta JA}$	7.4							$^\circ\text{C/W}$
Typical thermal resistance (Note 1),(Note 2)	$R_{\theta JC}$	2.2							$^\circ\text{C/W}$
Operating and storage temperature range	$T_J, T_S$	-55 to +150							$^\circ\text{C}$

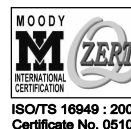
Notes: (1). Units case mounted on 2.6x1.4x0.06" thick (6.5x3.5x0.15 cm) Al. plate heatsink..

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

(3). Measured at 1MHz and applied reverse voltage of 4.0 VDC.



**SEMTECH ELECTRONICS LTD.**  
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ISO/TS 16949 : 2002  
Certificate No. 05103

ISO 14001:2004  
Certificate No. 7116

ISO 9001:2000  
Certificate No. 0506098

Dated : 16/02/2004

## RATINGS AND CHARACTERISTIC CURVES

