



# GBU6005 THRU GBU610

## SILICON BRIDGE RECTIFIERS

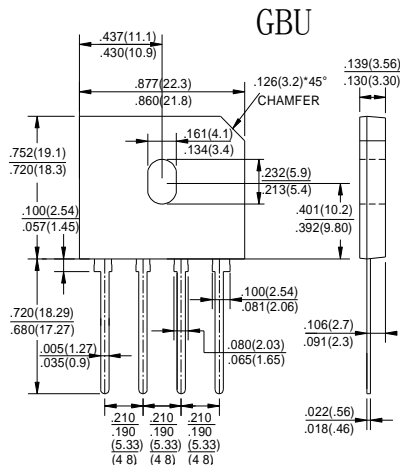
Reverse Voltage - 50 to 1000 Volts Forward Current - 6.0 Amperes

### FEATURES

Ideal for printed circuit boards  
 Reliable low cost construction technique  
 results in inexpensive product  
 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  
**Lead:** Solder plated  
**Polarity:** As marked



### 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%.

	SYMBOLS	GBU6005	GBU601	GBU602	GBU604	GBU606	GBU608	GBU610	UNITS
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 (with heatsink Note 2) Rectified Current @ $T_c=100^\circ\text{C}$ (without heatsink)	$I_{(AV)}$	6.0 2.4							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150							Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.95							Volts
Maximum instantaneous forward voltage at 6.0A	$V_F$	1.10							Volts
Maximum DC reverse current at $T_A=25^\circ\text{C}$ rated DC blocking voltage per leg $T_A=125^\circ\text{C}$	$I_R$	5.0 500							$\mu\text{A}$
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	2.2							$^\circ\text{C}/\text{W}$
Typical Junction Capacitance Per Element (Note1)	$C_J$	45							pF
$I^2t$ Rating for Fusing ( $t<8.3\text{ms}$ )	$I^2t$	93.4							$\text{A}^2\text{s}$
Operating temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Device mounted on 100mm\*100mm\*1.6mm Cu plate heatsink.



# RATINGS AND CHARACTERISTIC CURVES GBU6005 THRU GBU610

Fig. 1 - Forward Current Derating Curve

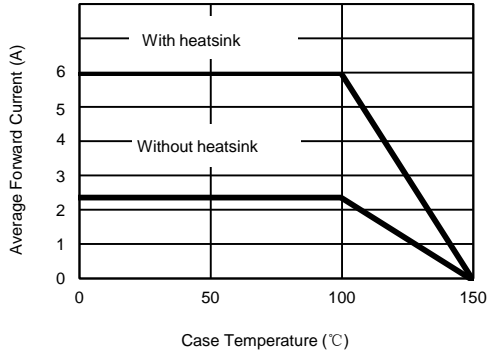


Fig. 2 - Maximum Non-Repetitive Surge Current

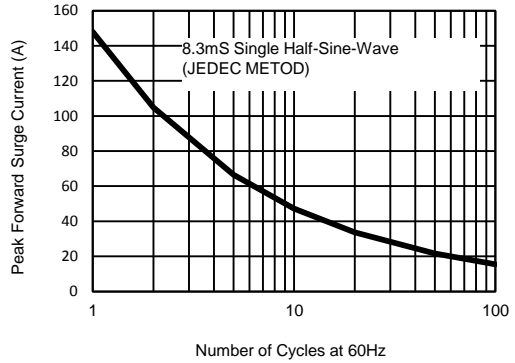


Fig. 3 - Typical Reverse Characteristics

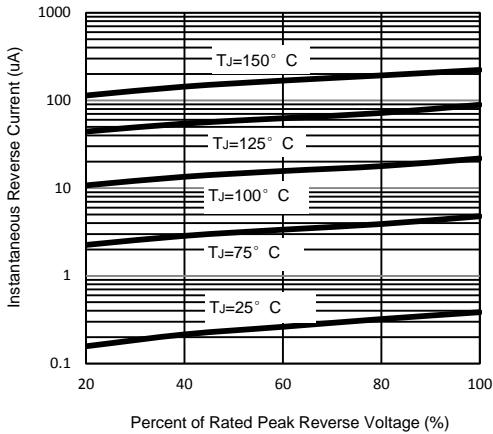


Fig. 4 - Typical Forward Characteristics

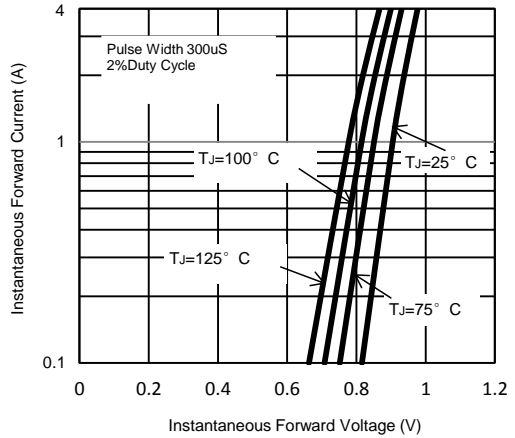


Fig. 5 - Typical Junction Capacitance

