

Silicon Bridge Rectifiers

GBU6005--GBU610

FEATURES

- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has U/L flammability classification 94V-O
- Mounting position: Any
- Glass passivated chip junctions



Lead-free

Maximum Ratings (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	GBU 6005	GBU 601	GBU 602	GBU 604	GBU 605	GBU 606	GBU 608	GBU 610	UNITS	
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	200	400	500	600	800	1000	V	
Maximum RMS voltage	V_{RMS}	35	70	140	280	350	420	560	700	V	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	500	600	800	1000	V	
50Hz sine wave, R-load Without heat sink Ta=25°C	$I_{F(AV)}$	2.3									A
50Hz sine wave, R-load With heat sink Tc=50°C		6.0									
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	I_{FSM}	175									A

Thermal Characteristics

Characteristic	Symbol	GBU 6005	GBU 601	GBU 602	GBU 604	GBU 605	GBU 606	GBU 608	GBU 610	UNITS	
Typical junction capacitance per element(note 3)	C_J	211					94				p F
Typical thermal resistance(note1) (note2)	$R_{\theta JA}$ $R_{\theta JC}$	7.4					2.2				°C/W
Operating junction temperature range	T_J	- 55 ---- + 150									°C
Storage temperature range	T_{STG}	- 55 ---- + 150									°C

Electrical Characteristics (@TA = 25°C unless otherwise specified)

Characteristic	Symbol	GBU 6005	GBU 601	GBU 602	GBU 604	GBU 605	GBU 606	GBU 608	GBU 610	UNITS	
Maximum instantaneous forward voltage @3.0A	V_F	1.0									V
Maximum reverse current @TA=25 °C at rated DC blocking voltage @TA=125°C	I_R	5.0					0.5				μ A mA

NOTE: 1. Unit case mounted on 2.6x1.4x0.06" thick (6.5x3.5x0.15cm) Al. Plate.

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

3. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts.



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PACKAGE OUTLINE DIMENSIONS

GBU		
Dim	Min	Max
A	22.00	22.40
B	18.40	18.80
C	3.40	3.95
C1	2.50	3.00
E	0.40	0.60
F	17.00min	
F1	1.70	2.30
I1	2.30	2.60
I2	0.95	1.25
K	4.70	5.30
P	R1.9typical	
All Dimensions in mm		

PACKAGE INFORMATION

Device	Package	Shipping
GBU6005--GBU610	GBU	500 Units/Box



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FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

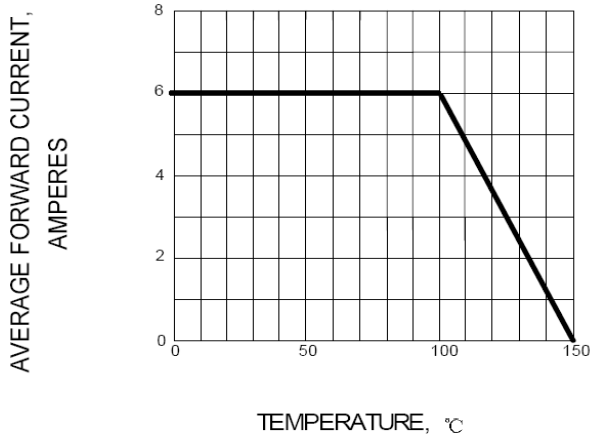


FIG.2 – TYPICAL FORWARD CHARACTERISTIC

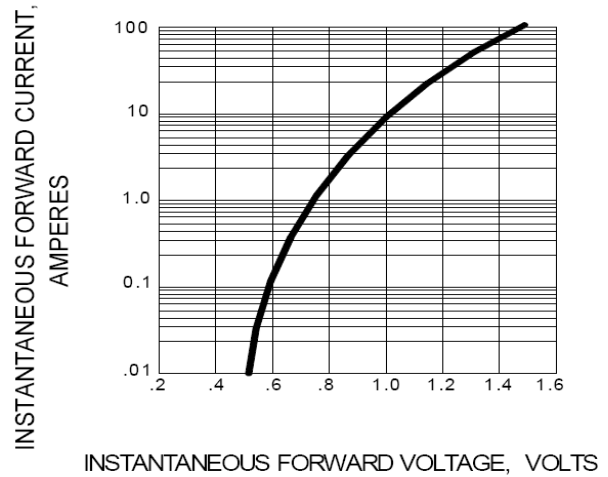


FIG.3 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

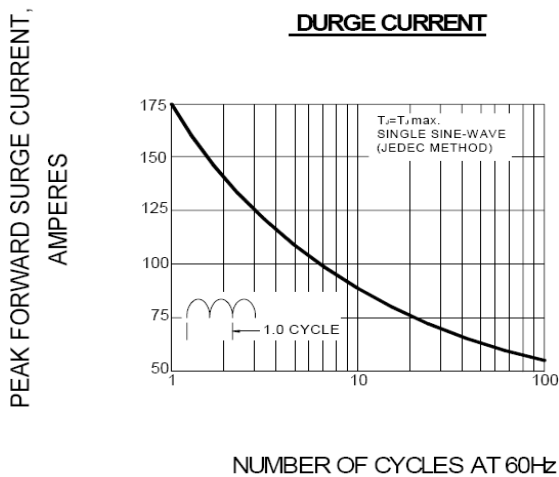


FIG.4 – TYPICAL REVERSE CHARACTERISTIC

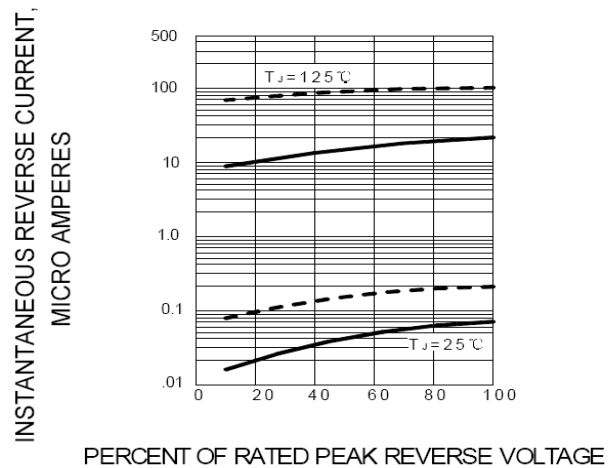


FIG.5 – TYPICAL JUNCTION CAPACITANCE PER LEG

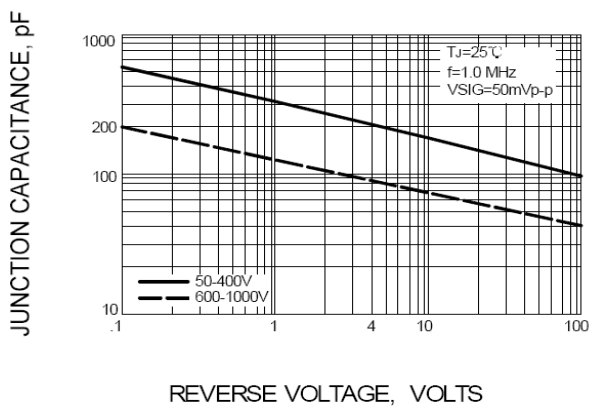


FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE

