

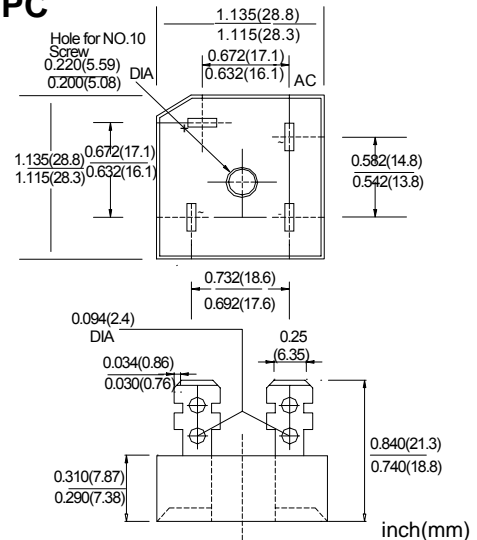
## SILICON BRIDGE RECTIFIERS

VOLTAGE RANGE: 50 --- 1000 V  
CURRENT: 6.0 A

### FEATURES

- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique
- ◇ Plastic material has U/L flammability classification 94V-0
- ◇ Mounting position: Any
- ◇ Glass passivated chip junctions

### GBPC



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

		GBPC 6005	GBPC 601	GBPC 602	GBPC 604	GBPC 606	GBPC 608	GBPC 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 output current Tc=100°C	$I_{F(AV)}$	6.0							A
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load	$I_{FSM}$	175.0							A
Maximum instantaneous forward voltage at 3.0 A	$V_F$	1.0							V
Maximum reverse current @T <sub>A</sub> =25°C at rated DC blocking voltage @T <sub>A</sub> =125°C	$I_R$	5.0 500.0							μA
Typical junction capacitance per leg (note 3)	$C_J$	186				90			pF
Typical thermal resistance per leg (note 2)	$R_{\theta JA}$	22							°C/W
(note 1)	$R_{\theta JC}$	7.3							
Operating junction temperature range	$T_J$	- 55 ---- + 150							°C
Storage temperature range	$T_{STG}$	- 55 ---- + 150							°C

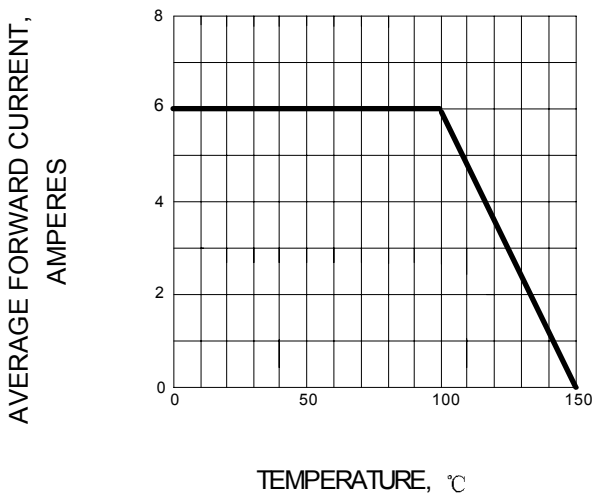
NOTE: 1. Unit case mounted on 2.6x1.4x0.06" thick (6.5x3.5x0.15cm) Al. Plate.

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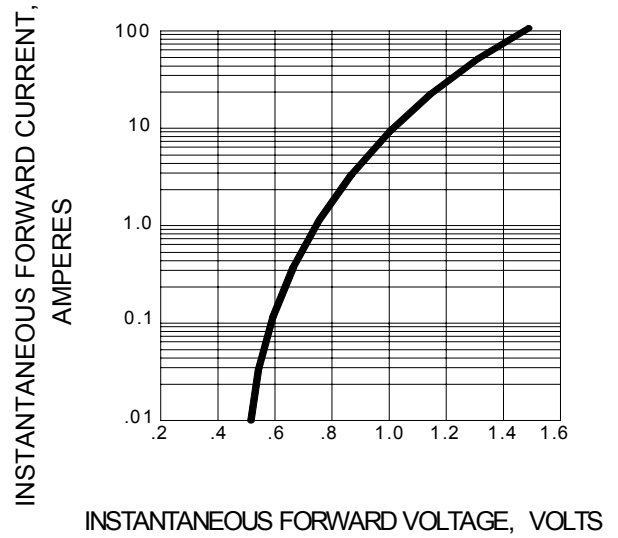
2. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

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

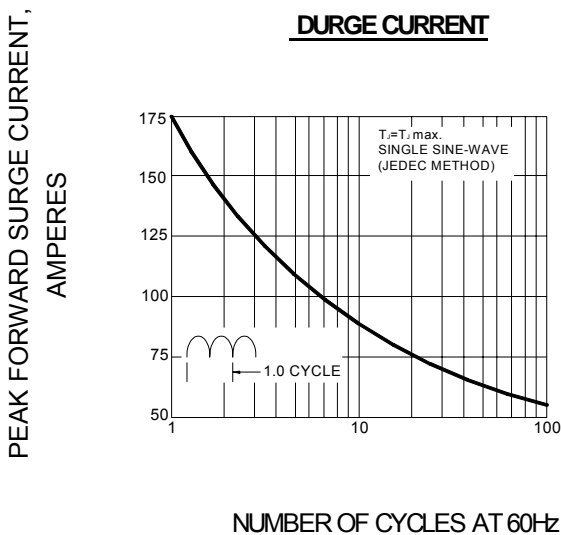
**FIG.1 – DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



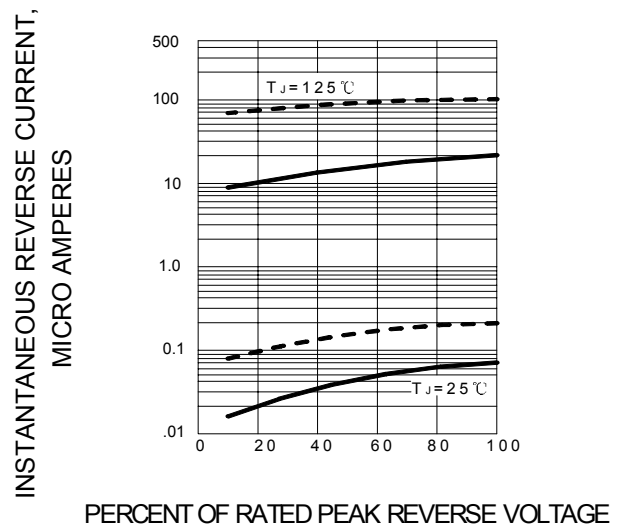
**FIG.2 – TYPICAL FORWARD CHARACTERISTIC**



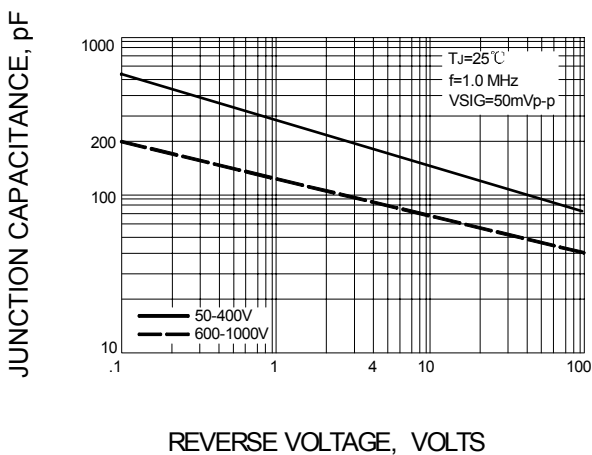
**FIG.3 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**



**FIG.5 – TYPICAL JUNCTION CAPACITANCE PER LEG**



**FIG.6 – TYPICAL TRANSIENT THERMAL IMPEDANCE**

