

## Single Phase Glass Passivated Silicon Bridge Rectifier

$V_{RRM} = 50\text{ V} - 400\text{ V}$

$I_O = 6\text{ A}$

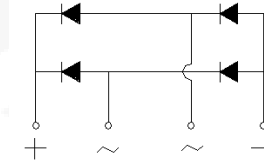
### Features

- Epoxy Resin material compliant with 94V-0 standards of UL UL Material Flammability Provisions
- Compliant with UL Provisions, UL Code: E303851
- Ideal for printed circuit boards
- High surge overload rating
- High temperature soldering guaranteed: 260°C/ 10 seconds, 9.5 mm lead length
- Not ESD Sensitive

### Mechanical Data

- Case: Epoxy resin body over passivated junctions
- Weight: 4.60 g
- Mounting position: Any

GBU Package



### Maximum ratings at $T_A = 25\text{ °C}$ , unless otherwise specified

Parameter	Symbol	Conditions	GBU6A	GBU6B	GBU6D	GBU6G	Unit
Repetitive peak reverse voltage	$V_{RRM}$		50	100	200	400	V
RMS reverse voltage	$V_{RMS}$		35	70	140	280	V
DC blocking voltage	$V_{DC}$		50	100	200	400	V
Operating temperature	$T_j$		-40 to 150	-40 to 150	-40 to 150	-40 to 150	°C
Storage temperature	$T_{stg}$		-40 to 150	-40 to 150	-40 to 150	-40 to 150	°C

### Electrical characteristics at $T_A = 25\text{ °C}$ , unless otherwise specified

Single phase, half sine wave, 50 Hz, resistive load

For capacitive load derate current by 20%

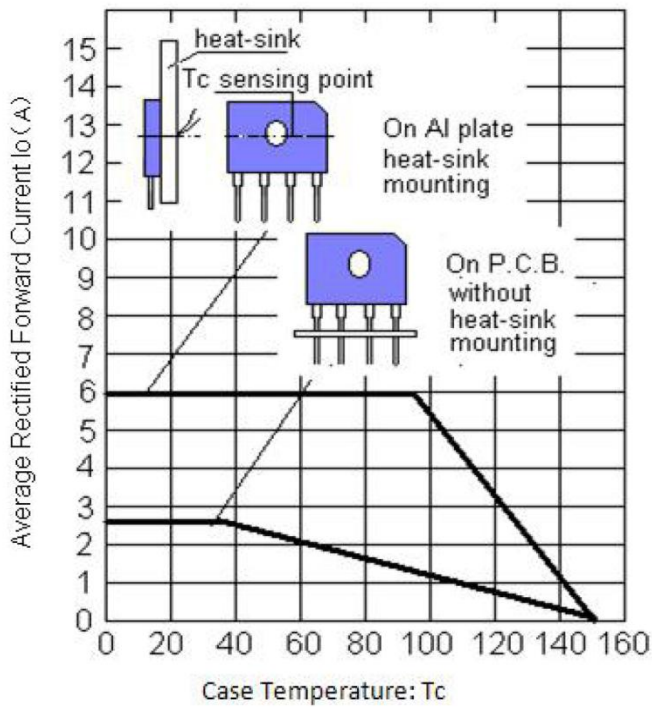
Parameter	Symbol	Conditions	GBU6A	GBU6B	GBU6D	GBU6G	Unit
Maximum forward rectified current	$I_O$	$T_C = 100\text{ °C}$	6 <sup>(1)</sup>	6 <sup>(1)</sup>	6 <sup>(1)</sup>	6 <sup>(1)</sup>	A
		$T_A = 25\text{ °C}$	2.8 <sup>(2)</sup>	2.8 <sup>(2)</sup>	2.8 <sup>(2)</sup>	2.8 <sup>(2)</sup>	
Peak forward surge current	$I_{FSM}$	$t_p = 10\text{ ms}, T_j = 25\text{ °C}$	175	175	175	175	A
Maximum forward voltage drop	$V_F$	$I_F = 3\text{ A}$	1.05	1.05	1.05	1.05	V
Maximum reverse current at rated DC blocking voltage	$I_R$	$T_A = 25\text{ °C}$	5	5	5	5	µA
		$T_A = 125\text{ °C}$	500	500	500	500	
Insulation strength (lead wire to case)	$V_{dis}$	AC voltage: 1 min leakage current < 1mA	2.5	2.5	2.5	2.5	kV
Rating for fusing at $T_j = 25\text{ C}$	$I^2t$	$1\text{ ms} < t_p < 10\text{ ms}$	55	55	55	55	A <sup>2</sup> s
Typical thermal resistance	$R_{\theta JA}$		22 <sup>(2)</sup>	22 <sup>(2)</sup>	22 <sup>(2)</sup>	22 <sup>(2)</sup>	°C/W
	$R_{\theta JC}$		5.5 <sup>(1)</sup>	5.5 <sup>(1)</sup>	5.5 <sup>(1)</sup>	5.5 <sup>(1)</sup>	
Mounting Torque	M		0.8 (0.5 N.m is recommended)				N.m

<sup>1</sup> - Device mounted on 65 mm x 35 mm x 1.5 mm heatsink

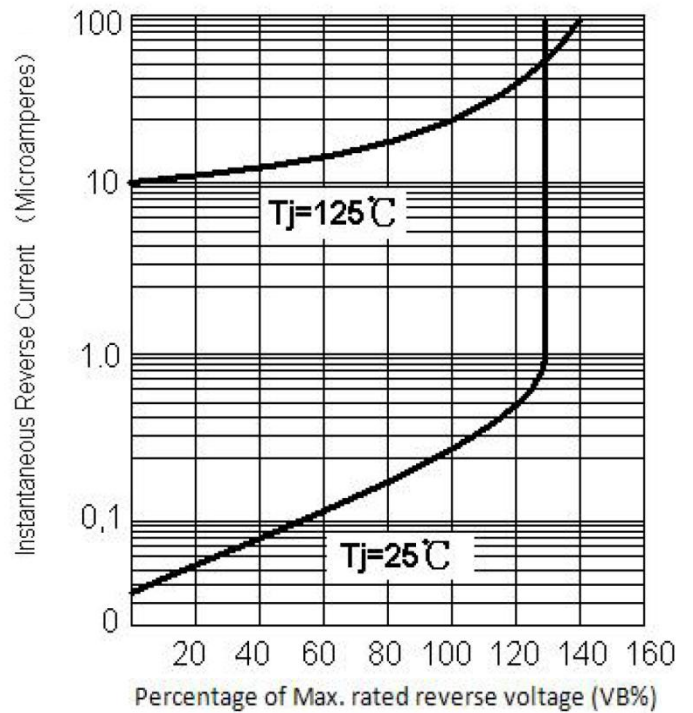
<sup>2</sup> - Device mounted on PCB without heatsink

<sup>3</sup> - Recommended mounted position is to bolt down device on a heatsink with silicon thermal compound for maximum heat transfer using M3 screw.

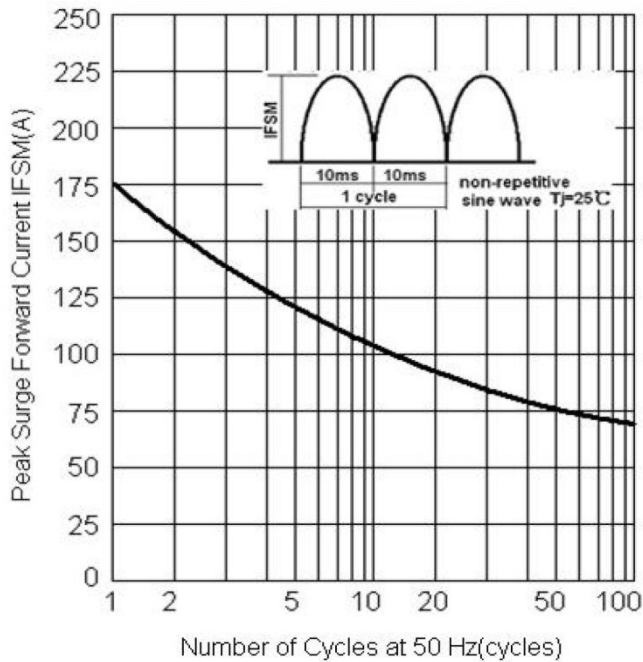
**Fig.1: Current Derating Curve**



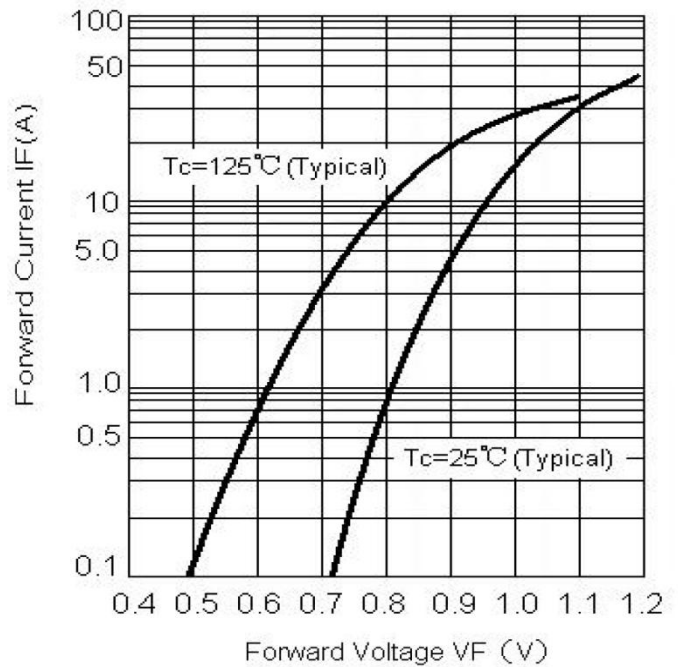
**Fig.2: Typical Reverse Characteristics**



**Fig.3: Max. Surge Current**



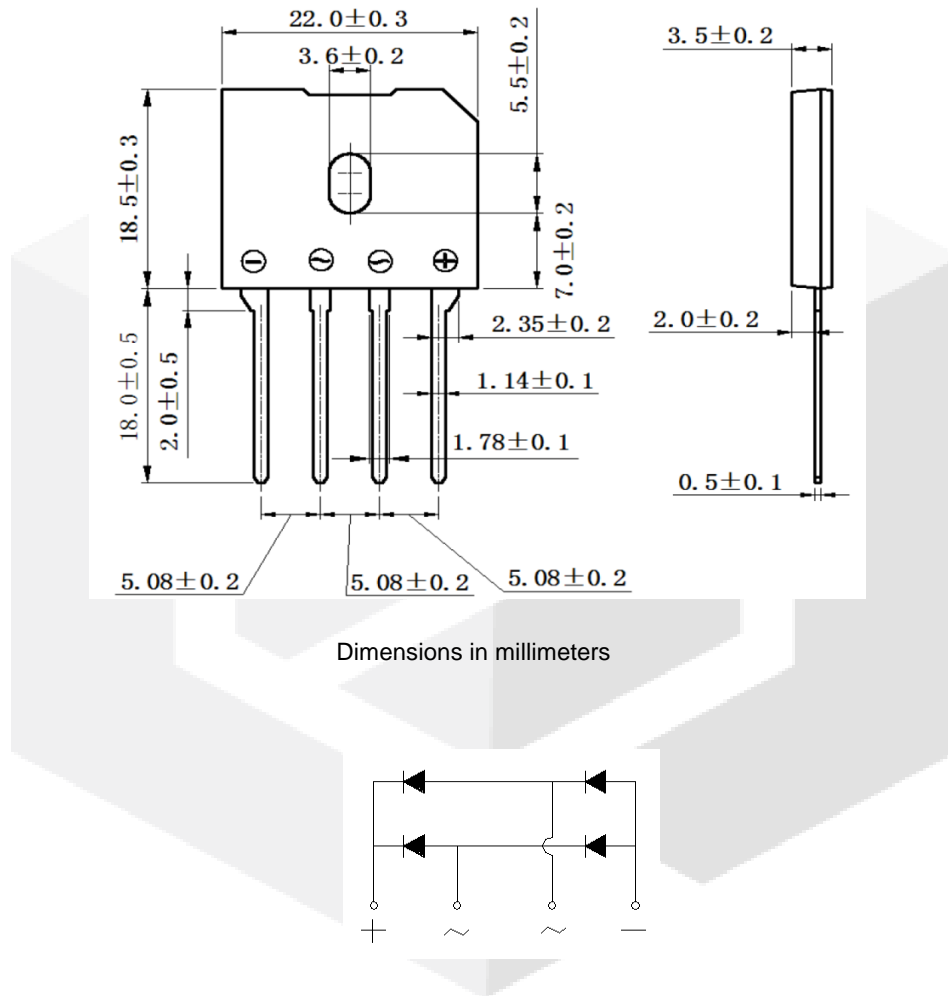
**Fig.4: Rated Forward Features**



**Package dimensions and terminal configuration**

Product is marked with part number and terminal configuration.

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