

Single Phase Glass Passivated Silicon Bridge Rectifier

$V_{RRM} = 600\text{ V} - 1000\text{ V}$

$I_O = 10\text{ A}$

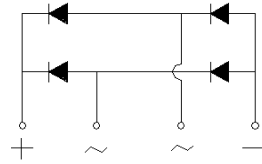
Features

- 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	GBU10J	GBU10K	GBU10M	Unit
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	V
RMS reverse voltage	V_{RMS}		420	560	700	V
DC blocking voltage	V_{DC}		600	800	1000	V
Operating temperature	T_j		-40 to 150	-40 to 150	-40 to 150	°C
Storage temperature	T_{stg}		-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	GBU10J	GBU10K	GBU10M	Unit
Maximum forward rectified current	I_O	$T_C = 100\text{ °C}$	10 ⁽¹⁾	10 ⁽¹⁾	10 ⁽¹⁾	A
		$T_A = 25\text{ °C}$	3.5 ⁽²⁾	3.5 ⁽²⁾	3.5 ⁽²⁾	
Peak forward surge current	I_{FSM}	$t_p = 10\text{ ms}, T_j = 25\text{ °C}$	225	225	225	A
Maximum forward voltage drop	V_F	$I_F = 5\text{ A}$	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	µA
		$T_A = 125\text{ °C}$	500	500	500	
Insulation strength (lead wire to case)	V_{dis}	AC voltage: 1 min leakage current < 1mA	2.5	2.5	2.5	kV
Rating for fusing at $T_j = 25\text{ C}$	I^2t	$1\text{ ms} < t_p < 10\text{ ms}$	80	80	80	A ² s
Typical thermal resistance	$R_{\theta JA}$ $R_{\theta JC}$		23 ⁽²⁾	23 ⁽²⁾	23 ⁽²⁾	°C/W
			5.0 ⁽¹⁾	5.0 ⁽¹⁾	5.0 ⁽¹⁾	
Mounting Torque	M		0.8 (0.5 N.m is recommended)			N.m

¹ - Device mounted on 65 mm x 35 mm x 1.5 mm heatsink

² - Device mounted on PCB without heatsink

³ - 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

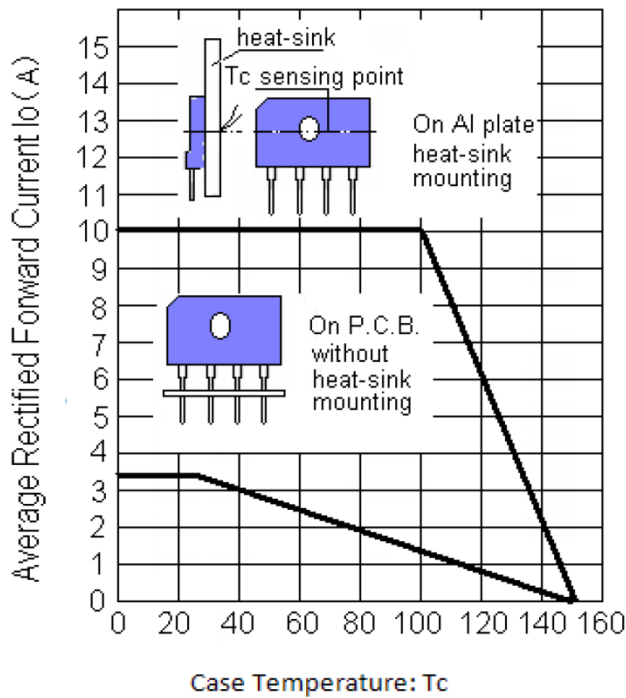


Fig.2: Typical Reverse Characteristics

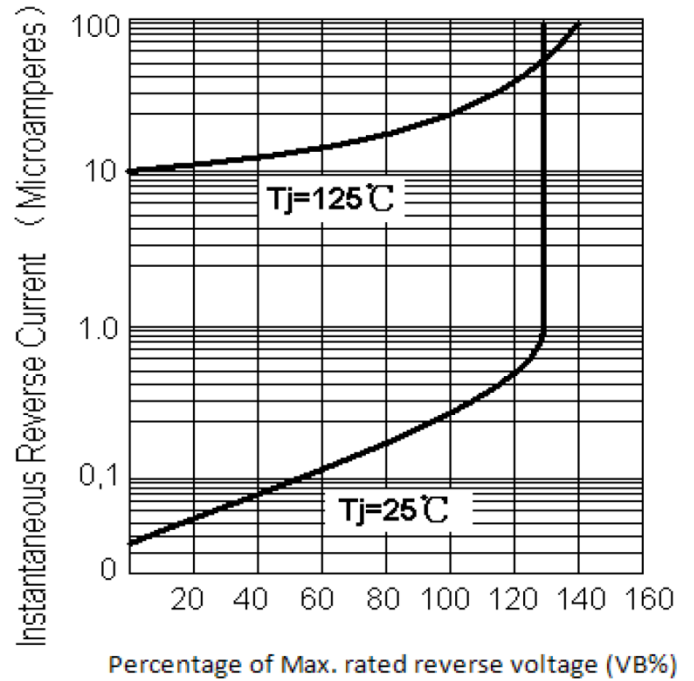


Fig.3: Max. Surge Current

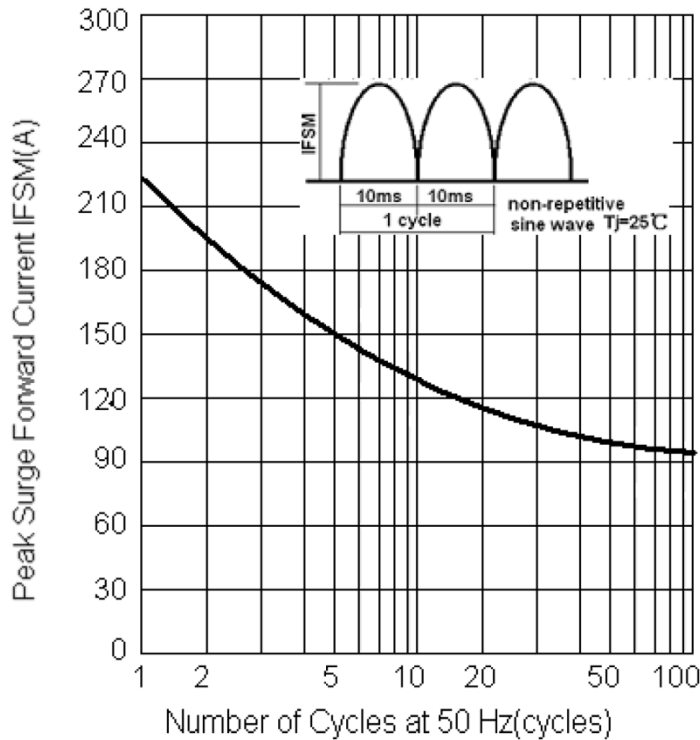
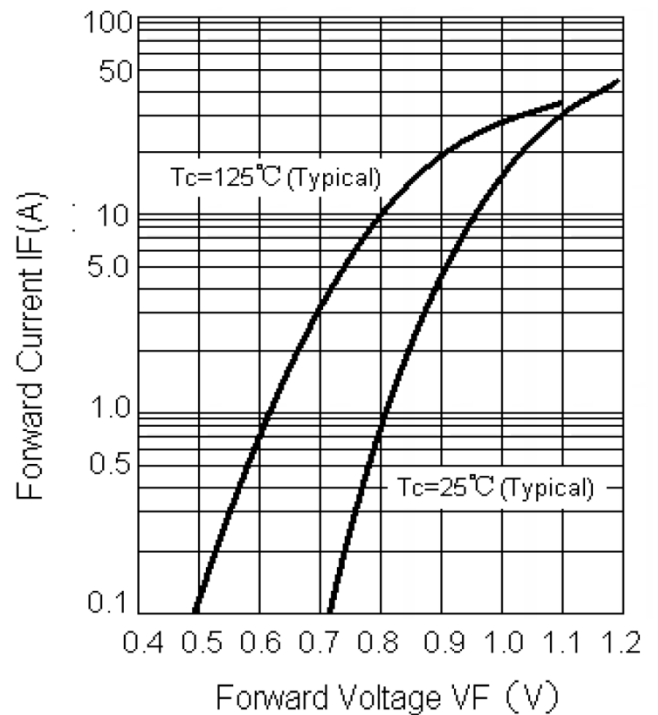


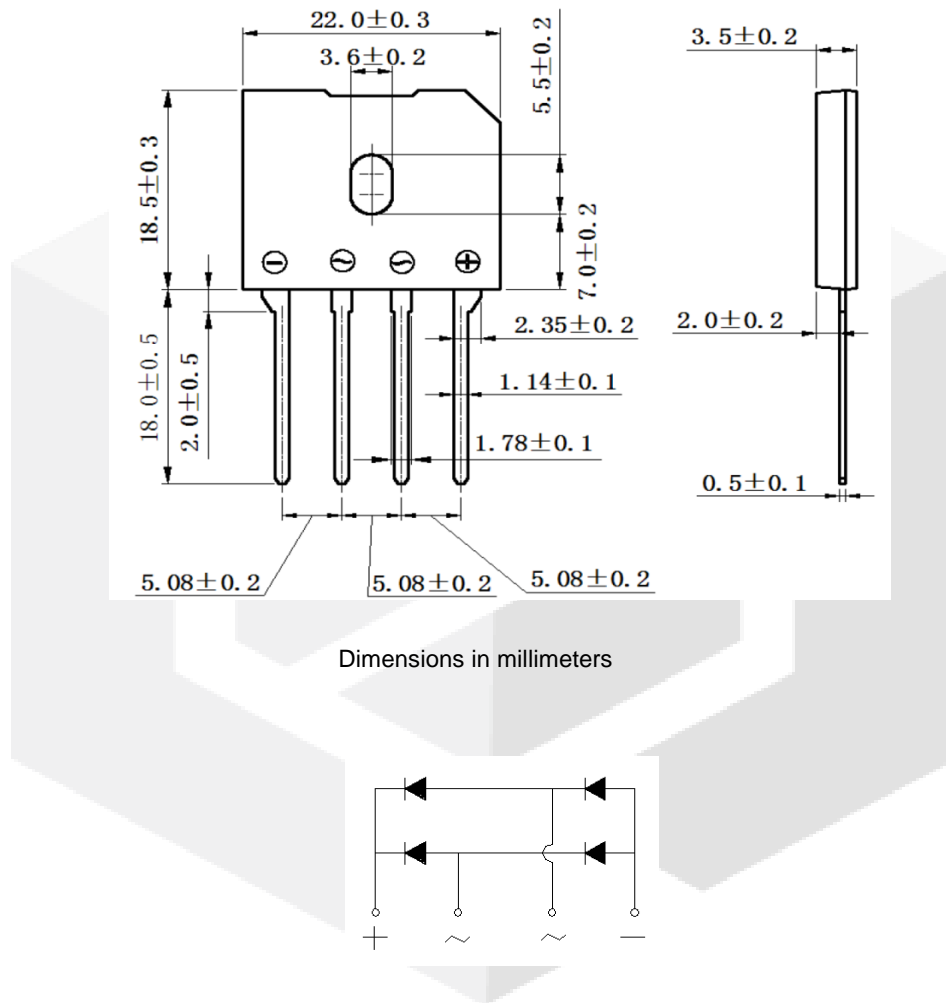
Fig.4: Rated Forward Features



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

GBU



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