

Single Phase Glass Passivated Silicon Bridge Rectifier

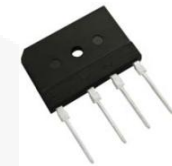
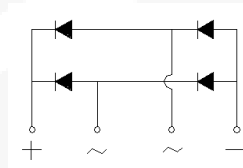
$$V_{RRM} = 100 \text{ V} - 400 \text{ V}$$

$$I_O = 10 \text{ A}$$

Features

- Epoxy Resin material compliant with 94V-0 standards of UL Material Flammability Provisions
- Compliant with RoHS Provisions
- Single in-line DIP package, compact size
- Low forward voltage, high forward current
- High surge current capability
- Types from 100 V to 400 V V_{RRM}
- Small size, high heat-conducting performance
- Thermal welding performance: 260 °C/10 s
- Weight: 7.25 g (0.25 Oz)
- Not ESD Sensitive

GBJ Package



Maximum ratings at $T_A = 25 \text{ °C}$ (ambient temperature), unless otherwise specified

Parameter	Symbol	Conditions	GBJ10B	GBJ10D	GBJ10G	Unit
Repetitive peak reverse voltage	V_{RRM}		100	200	400	V
DC blocking voltage	V_{DC}		100	200	400	
Operating temperature	T_j		-50 to 150	-50 to 150	-50 to 150	°C
Storage temperature	T_{stg}		-50 to 150	-50 to 150	-50 to 150	°C

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

Resistive load, single phase, half sine wave, 60 Hz.

For capacitive load derate current by 20%.

Parameter	Symbol	Conditions	GBJ10B	GBJ10D	GBJ10G	Unit
Maximum average forward rectified current	I_O	$T_C = 100 \text{ °C}$ $T_A = 25 \text{ °C}$	10 ⁽¹⁾ 2.7 ⁽²⁾	10 ⁽¹⁾ 2.7 ⁽²⁾	10 ⁽¹⁾ 2.7 ⁽²⁾	A
Maximum forward surge current	I_{FSM}	8.3 ms pulse width, single pulse sine-wave, rated load, $T_j = 25 \text{ °C}$	200	200	200	A
Maximum forward voltage	V_F	$I_F = 5 \text{ A}$	1.05	1.05	1.05	V
Max. reverse current leakage at rated DC blocking voltage	I_R	$T_A = 25 \text{ °C}$ $T_A = 125 \text{ °C}$	5 500	5 500	5 500	μA
Insulation strength (Lead wire to case)	V_{dis}	AC Voltage: 1 minute, current leakage < 1 mA	2.5	2.5	2.5	kV
Fusing feature	I^2t	$1\text{ms} \leq t < 10\text{ms}$, $T_j = 25 \text{ °C}$	80	80	80	A ² s
Thermal resistance	$R_{\theta JA}$	without heatsink	26 ⁽²⁾	26 ⁽²⁾	26 ⁽²⁾	°C/W
	$R_{\theta JC}$	with stated size heatsink	2.3 ⁽¹⁾	2.3 ⁽¹⁾	2.3 ⁽¹⁾	
Mounting torque	TOR		1.0 (0.8 Nm is recommended)			Nm

Remarks: (1) Install on PCB with stated size heat sink. In order to reach excellent heat dissipation performance, please coat thermal conductive silica gel in moderation, use M3 screw to screw up. Recommended heatsink size: 12.7*8.2*3.8 cm.

(2) Install on PCB without heatsink.

Fig.1: Current Derating Curve

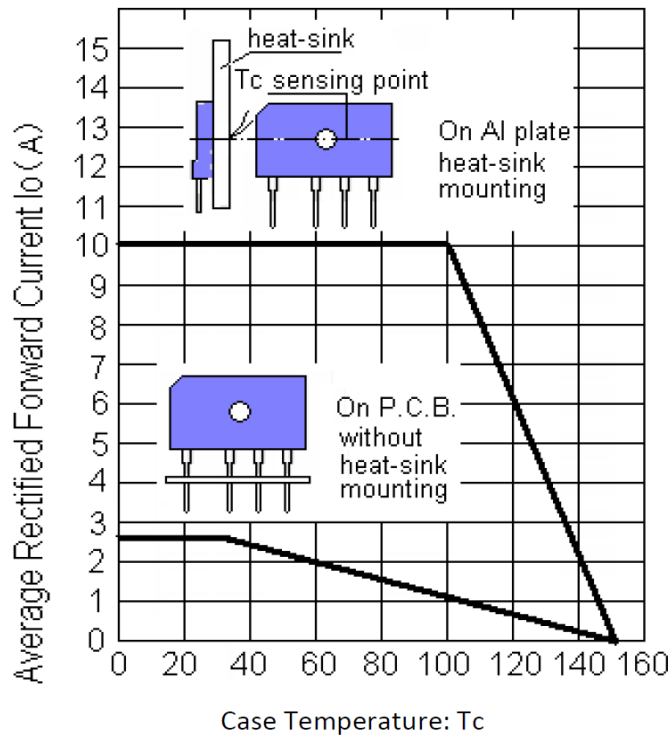


Fig.2: Typical Reverse Characteristics

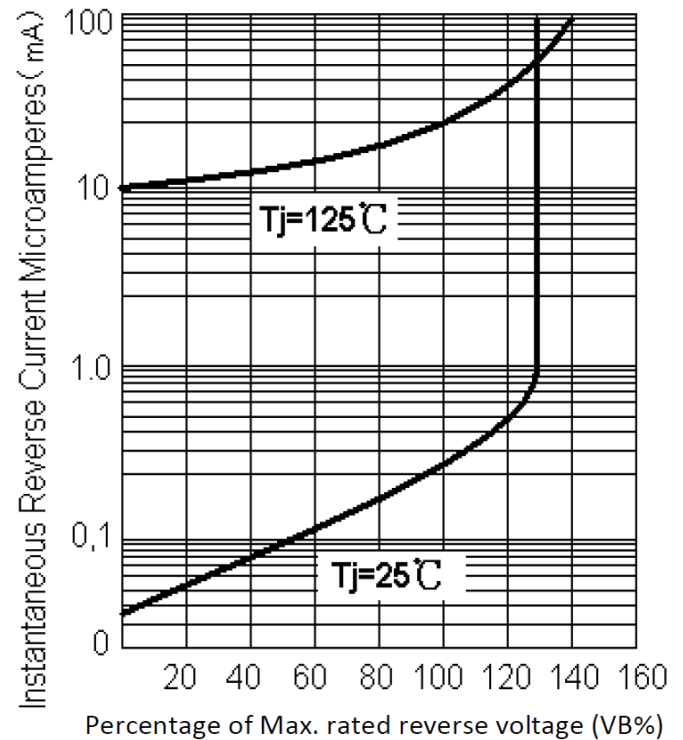


Fig.3: Max. Surge Current

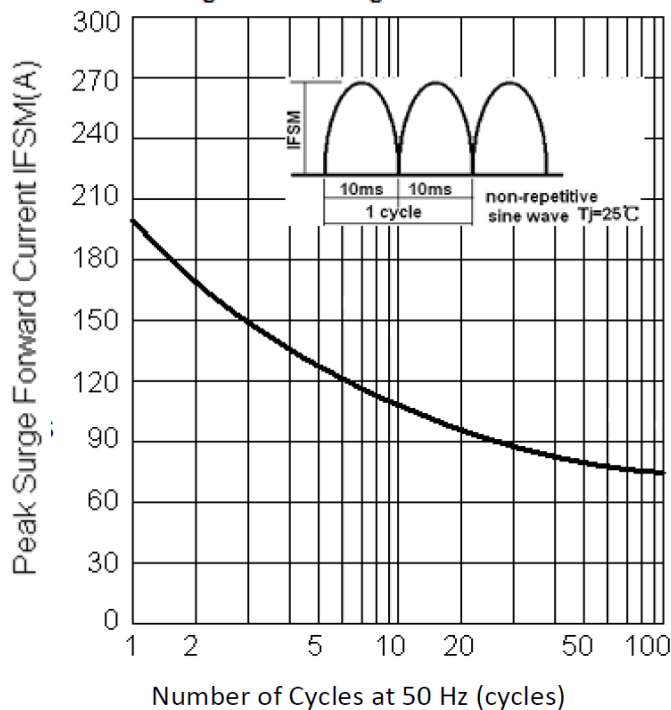
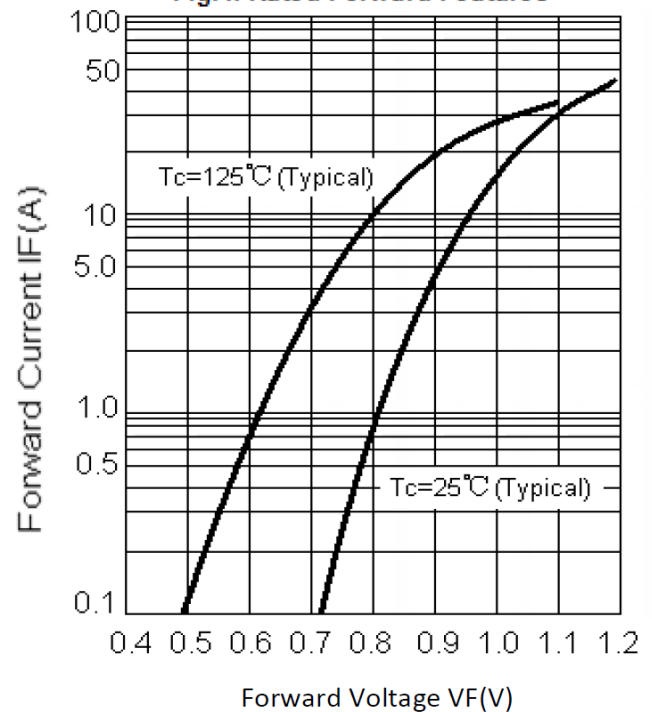
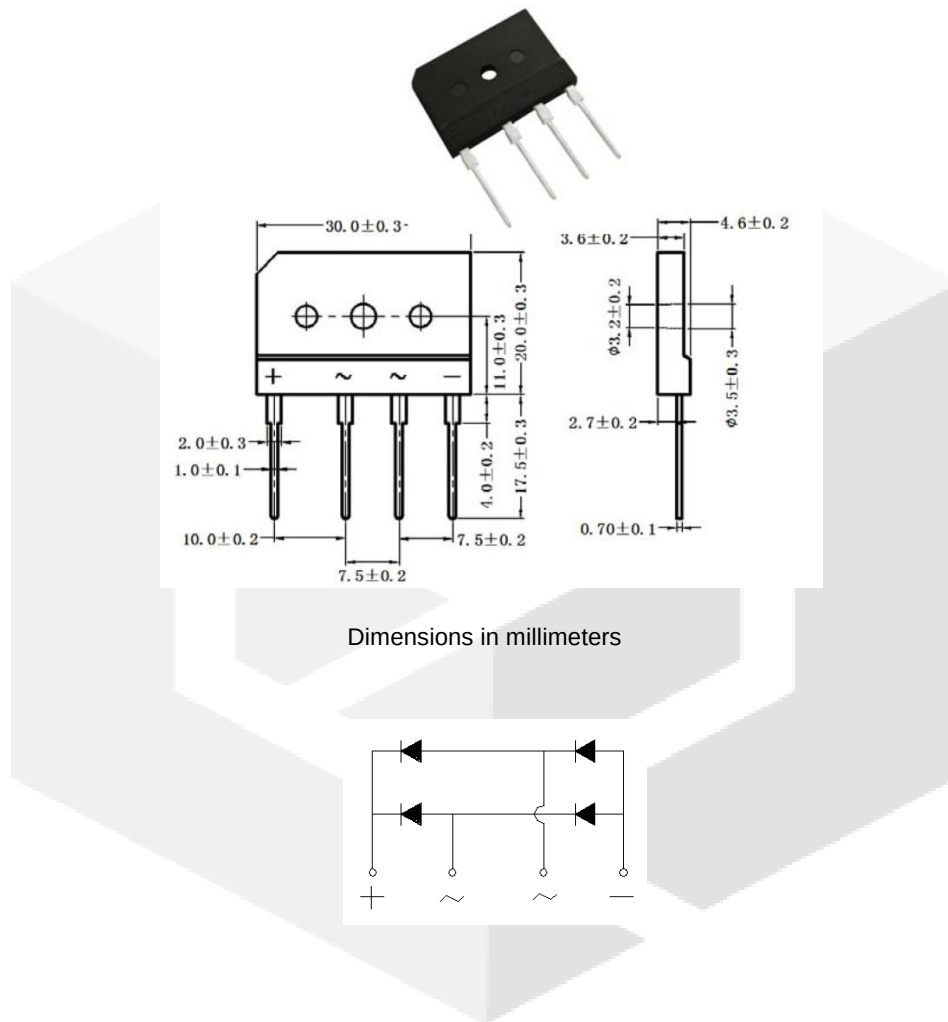


Fig.4: Rated Forward Features



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.



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