

Single Phase Glass Passivated Silicon Bridge Rectifier

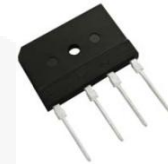
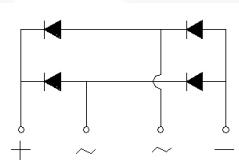
$V_{RRM} = 600\text{ V} - 1000\text{ V}$

$I_O = 30\text{ A}$

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 600 V to 1000 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	GBJ30J	GBJ30K	GBJ30M	Unit
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	V
DC blocking voltage	V_{DC}		600	800	1000	
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	GBJ30J	GBJ30K	GBJ30M	Unit
Maximum average forward rectified current	I_O	$T_C = 98\text{ °C}$	30 ⁽¹⁾	30 ⁽¹⁾	30 ⁽¹⁾	A
		$T_A = 25\text{ °C}$	5.2 ⁽²⁾	5.2 ⁽²⁾	5.2 ⁽²⁾	
Maximum forward surge current	I_{FSM}	8.3 ms pulse width, single pulse sine-wave, rated load, $T_j = 25\text{ °C}$	420	420	420	A
Maximum forward voltage	V_F	$I_F = 15\text{ A}$	1.05	1.05	1.05	V
Max. reverse current leakage at rated DC blocking voltage	I_R	$T_A = 25\text{ °C}$	5	5	5	μA
		$T_A = 125\text{ °C}$	500	500	500	
Insulation strengthg (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	$1\text{ ms} \leq t < 10\text{ ms}$, $T_j = 25\text{ °C}$	350	350	350	A ² s
Thermal resistance	$R_{\theta JA}$	without heatsink	22 ⁽²⁾	22 ⁽²⁾	22 ⁽²⁾	°C/W
		with stated size heatsink	1.0 ⁽¹⁾	1.0 ⁽¹⁾	1.0 ⁽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: 15.2*15.2*12.8 cm.

(2) Install on PCB without heatsink.

Fig.1: Current Derating Curve

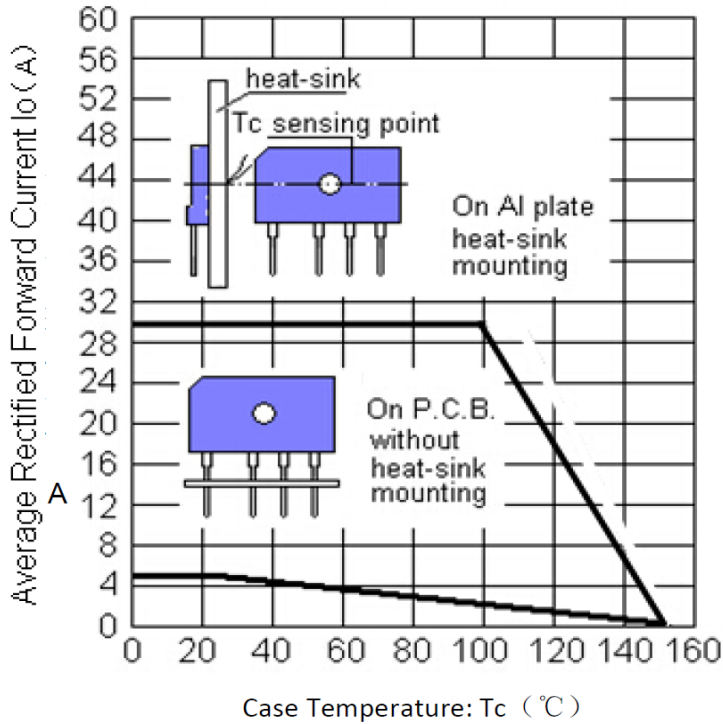


Fig.2: Typical Reverse Characteristics

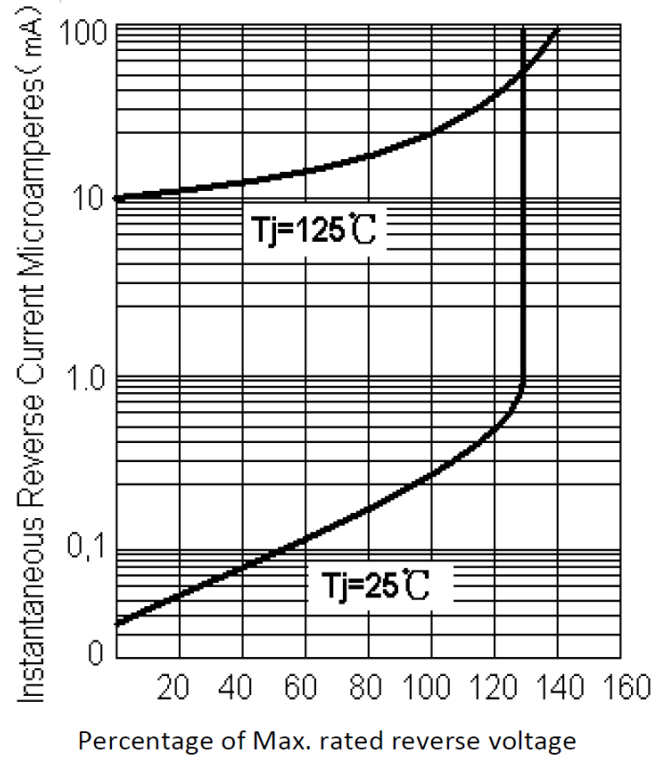


Fig.3: Max. Surge Current

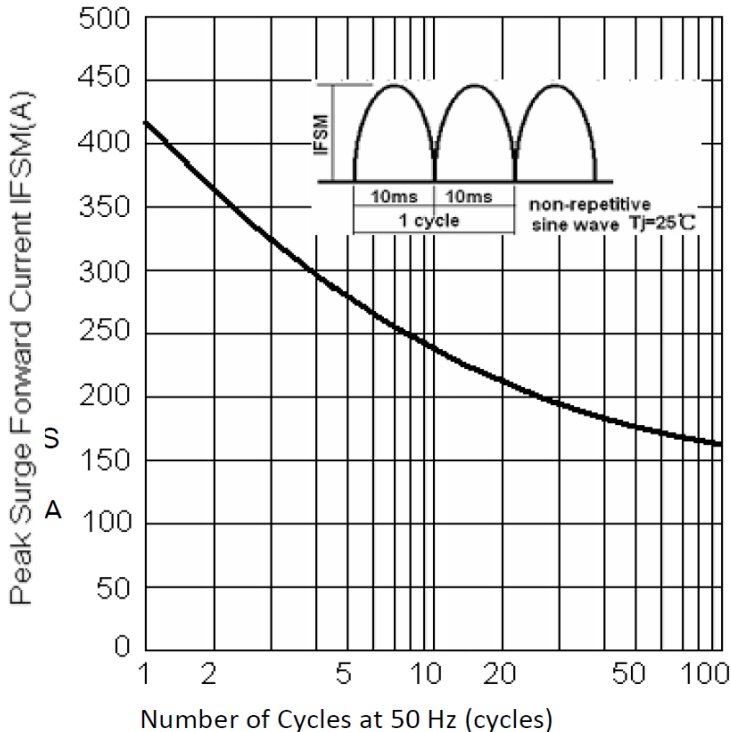
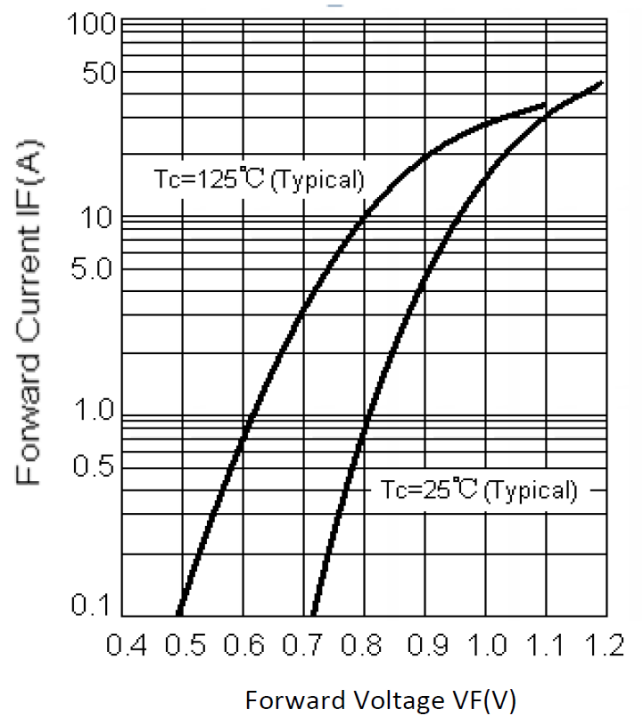


Fig.4: Rated Forward Features



Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

