

Glass Passivated 3 Phase Bridge Rectifier

Features

- Low forward voltage drop
- High current capability
- High reliability 高

Mechanical Data

- Case: Epoxy case with heat sink
- Polarity: Symbol marked on body
- Mounting position:
- Bolt pass through the mounting hole of body then fix to heat sink
- Maximum Mounting torque (M4)¹: 0.8 N.m 8N.m

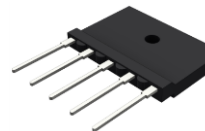
Applications

- For use in high power supply inverters, servo motor and welding machine applications

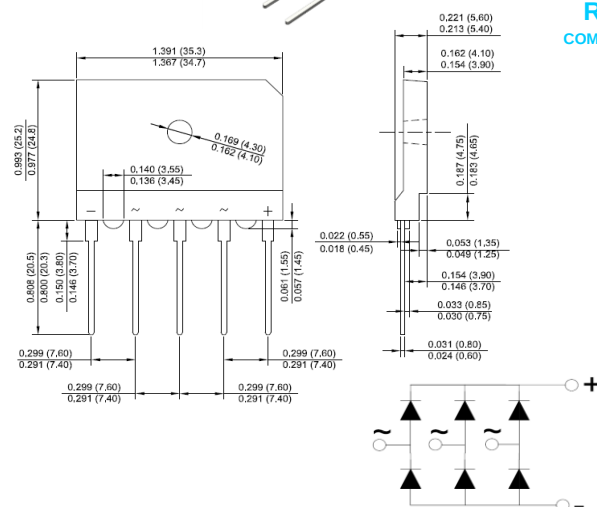
Reverse Voltage - 800 to 1600Volts

Forward Current - 50 Amperes

SGBJ



RoHS
COMPLIANT



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	SGBJ50 -08	SGBJ50 -10	SGBJ50 -12	SGBJ50 -16	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	800	1000	1200	1600	V
Maximum RMS Voltage	V_{RMS}	560	700	840	1120	V
Maximum DC Blocking Voltage	V_{DC}	800	1000	1200	1600	V
Peak Non-Repetitive Reverse Voltage	V_{RSM}	900	1100	1300	1700	V
Maximum Average Forward Rectified Current @ $T_C=110^\circ\text{C}$	$I_{(AV)}$	50				A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	450				A
I^2t Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	840				A ² S
Peak Forward Voltage per Diode at 25A DC	V_F	1.1				V
Maximum DC Reverse Current at Rated @ $T_J=25^\circ\text{C}$	I_R	5				μA
DC Blocking Voltage per Diode @ $T_J=150^\circ\text{C}$		3				mA
Typical Thermal Resistance to Case	$R_{\theta JC}$	0.8				$^\circ\text{C/W}$
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500				V
Operating Junction Temperature Range	T_J	-55 to +150				$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +125				$^\circ\text{C}$

Notes: 1. Surface roughness of Heat sink $< 0.05\text{mm}$

2. The typical data above is for reference only

SGBJ50*-U-00/99/92-00/01

Rev. 9, 22-Apr-2019

Fig. 1 - Forward Current Derating Curve

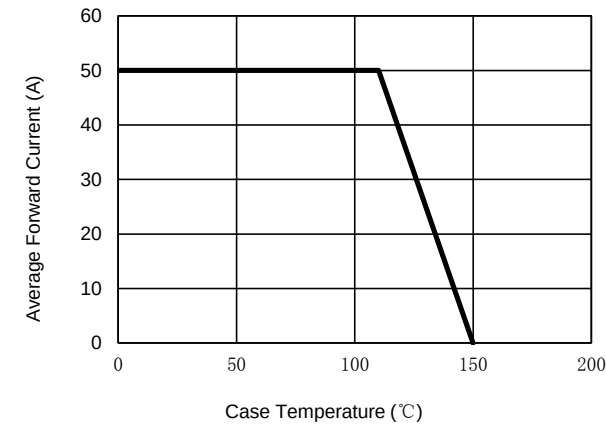


Fig. 2 - Maximum Non-Repetitive Surge Current

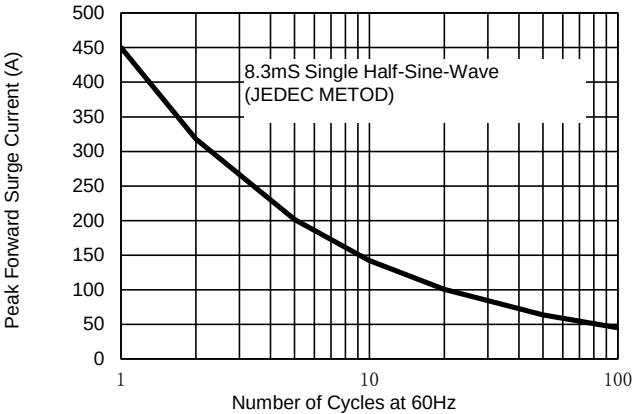


Fig. 3 - Typical Reverse Characteristics

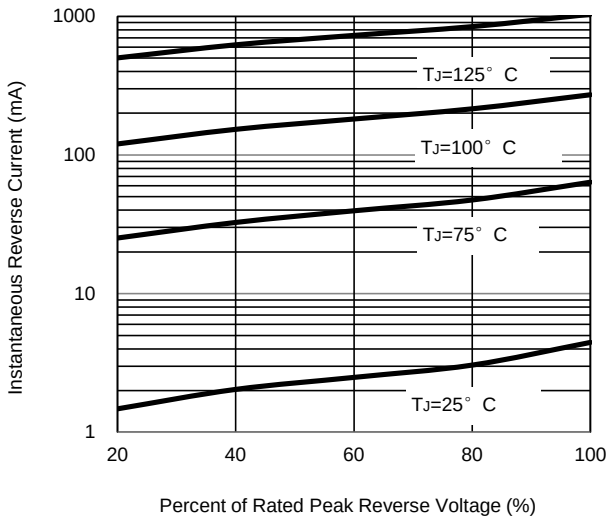
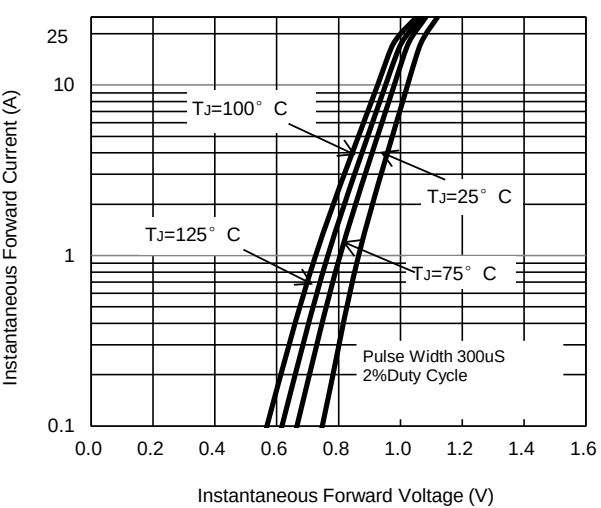


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.

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