

Glass Passivated 3 Phase Bridge Rectifiers

Reverse Voltage - 50 to 1600Volts

Forward Current - 50 Amperes

Features

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

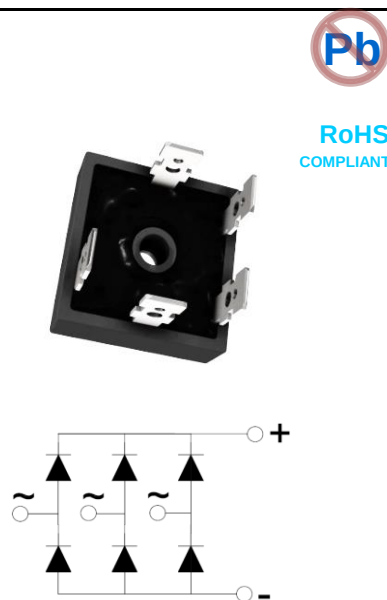
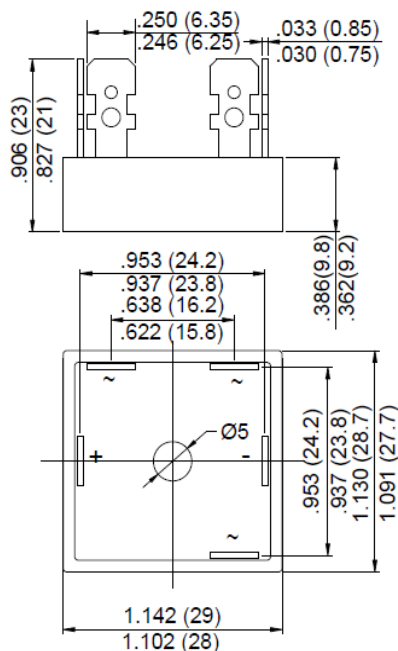
Mechanical Data

- 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
- Mounting torque: 2 N.m

Applications

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

SBRG



Package Outline Dimensions in Inches (Millimeters)

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	SBR50-00G	SBR50-01G	SBR50-02G	SBR50-04G	SBR50-06G	SBR50-08G	SBR50-10G	SBR50-12G	SBR50-14G	SBR50-16G	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	1200	1400	1600	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	840	980	1120	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	1200	1400	1600	V
Peak Non-Repetitive Reverse Voltage	V_{RSM}	75	150	275	500	725	900	1100	1300	1500	1700	V
Maximum Average Forward Rectified Current @TC=80 °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 ($t < 8.3mS$) $t < 8.3mS$	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 @Tj=25°C	I_R	3										μA
DC Blocking Voltage per Diode @Tj=150°C		2										mA
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500										V
Operating Junction Temperature Range	T_J	-55 to +150										°C
Storage Temperature Range	T_{STG}	-55 to +125										°C

Fig. 1 - Forward Current Derating Curve

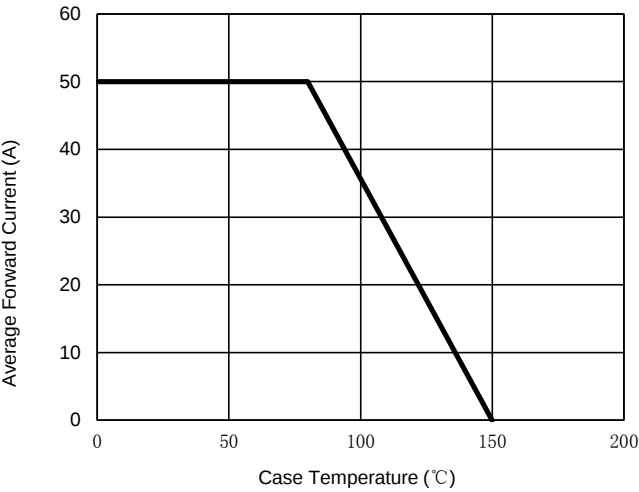


Fig. 2 - Maximum Non-Repetitive Surge Current

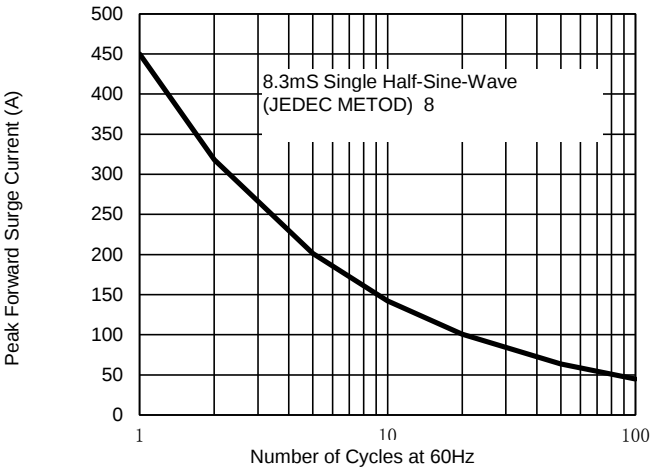


Fig. 3 - Typical Reverse Characteristics

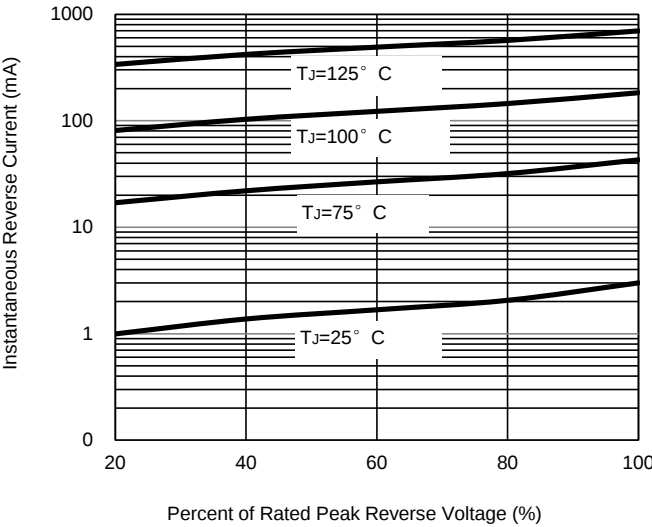
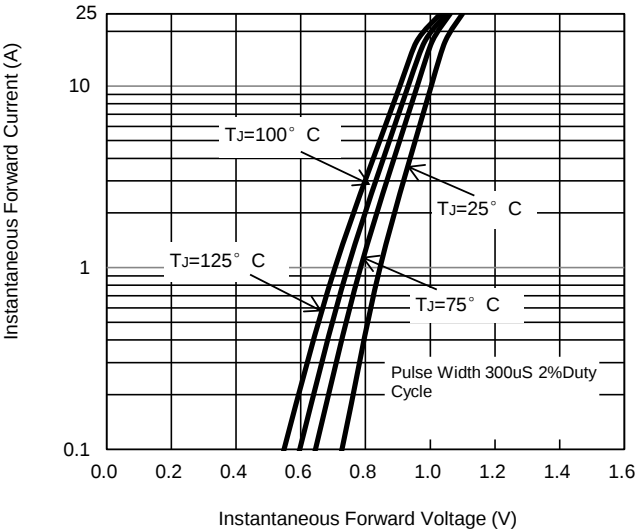


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.

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