

Silicon Passivated 3 Phase Bridge Rectifiers

Reverse Voltage - 800 to 1600Volts

Forward Current - 50 Amperes

Features

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

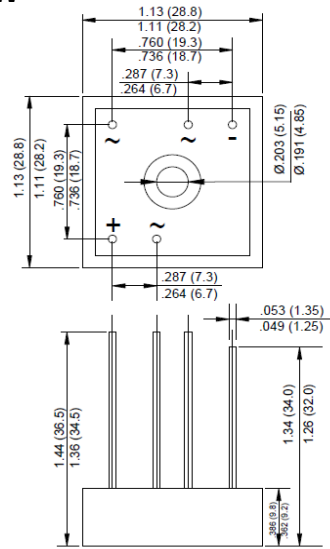
Mechanical Data

- 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

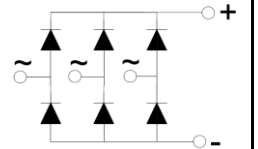
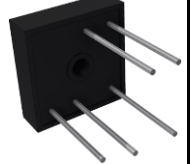
Applications

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

SBRW



RoHS
COMPLIANT



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 -08W	SBR50 -10W	SBR50 -12W	SBR50 -14W	SBR50 -16W	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	800	1000	1200	1400	1600	V
Maximum RMS Voltage	V _{RMS}	560	700	840	980	1120	V
Maximum DC Blocking Voltage	V _{DC}	800	1000	1200	1400	1600	V
Peak Non-Repetitive Reverse Voltage	V _{RSM}	900	1100	1300	1500	1700	V
Maximum Average Forward Rectified Current @T _c =55 °C	I _(AV)	50					A
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	500					A
I ² t Rating for Fusing (t<8.3ms)	I ² t	1037.5					A ² S
Peak Forward Voltage per Diode at 25A DC	V _F	1.2					V
Maximum DC Reverse Current at Rated @T _j =25°C	I _R	5					µA
DC Blocking Voltage per Diode @T _j =150°C		3					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

SBR50*W-B-00/99-00/01

Rev. 9, 22-Apr-2019

Fig. 1 - Forward Current Derating Curve

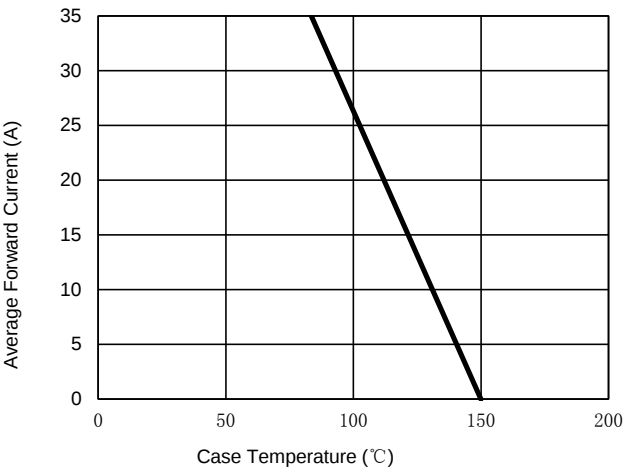


Fig. 2 - Maximum Non-Repetitive Surge Current

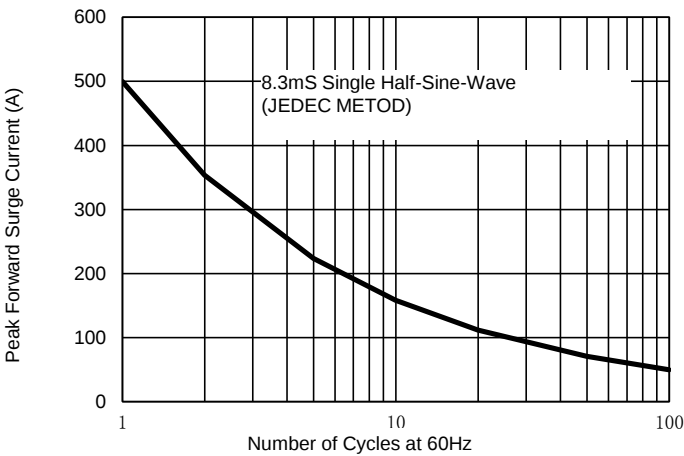


Fig. 3 - Typical Reverse Characteristics

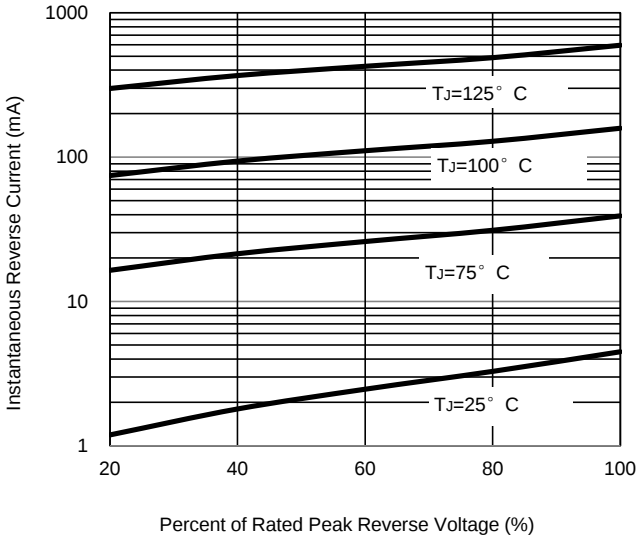
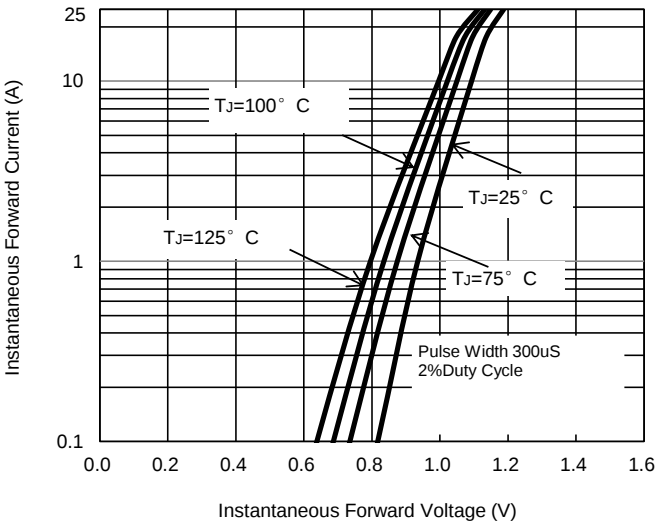


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.

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