

**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
- Meet UL flammability classification 94V-0

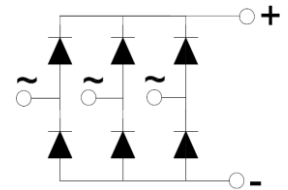
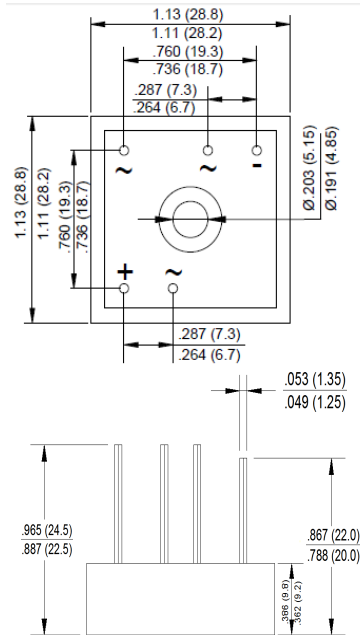
Mechanical Data

- 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

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

Applications

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

SBR-W**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										Unit
		00GW	01GW	02GW	04GW	06GW	08GW	10GW	12GW	14GW	16GW	
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 @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}	475										A
I ² t Rating for Fusing (t<8.3mS)	I ² t	936										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°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
Typical Thermal Resistance Junction to Case per Diode	R _{θJC}	0.9										°C/W
Operating Junction Temperature Range	T _J	-40 to +150										°C
Storage Temperature Range	T _{STG}	-40 to +125										°C

Note: The typical data above is for reference only

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

Rev. 11, 18-May-2020



Fig. 1 - Forward Current Derating Curve

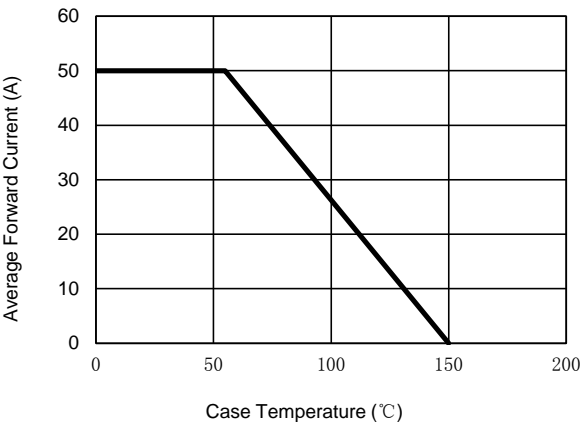


Fig. 2 - Maximum Non-Repetitive Surge Current

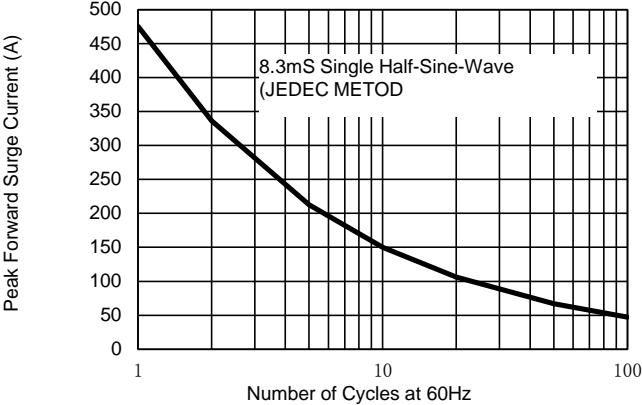


Fig. 3 - Typical Reverse Characteristics

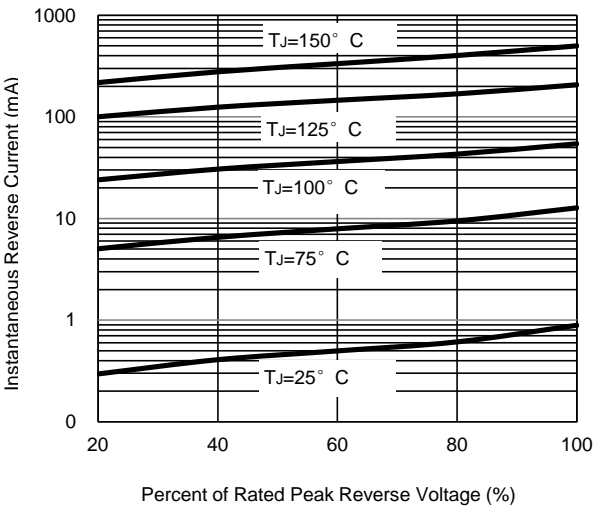
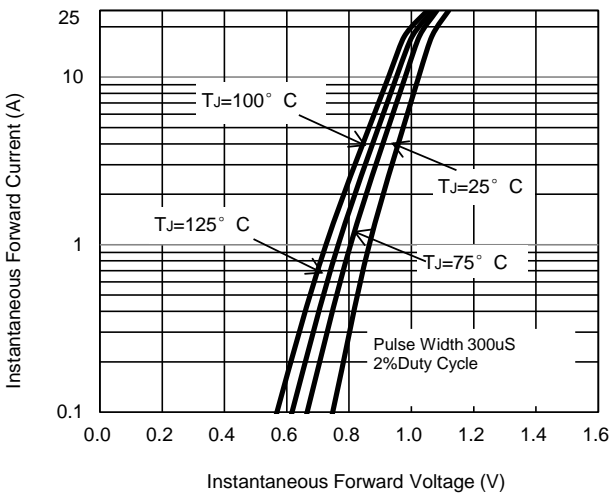


Fig. 4 - Typical Forward Characteristics



The curve above is for reference only.



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