

Silicon Passivated 3 Phase Bridge Rectifiers

Reverse Voltage - 50 to 1600Volts
Forward Current - 25 Amperes

Features

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

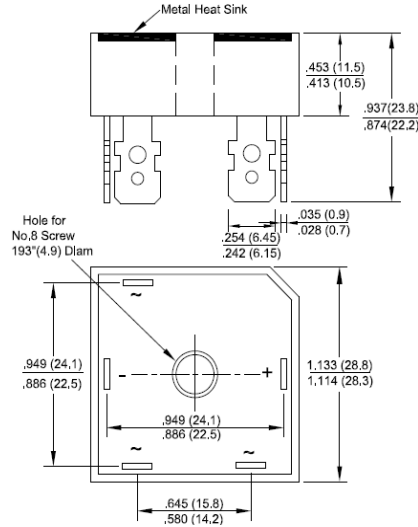
Mechanical Data

- 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

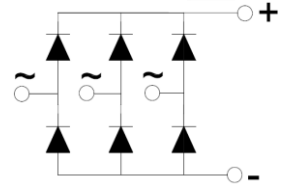
Applications

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

SBR



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	SBR25										Unit
		-00	-01	-02	-04	-06	-08	-10	-12	-14	-16	
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 =60 °C	I _(AV)	25										A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I _{FSM}	375										A
I ² t Rating for Fusing (t<8.3mS)	I ² t	580										A ² S
Peak Forward Voltage per Diode at 12.5A DC	V _F	1.1										V
Maximum DC Reverse Current at Rated @T _J =25 °C	I _R	10										µA
DC Blocking Voltage per Diode @T _J =125 °C		5.0										mA
Typical Thermal Resistance Junction to Case per Diode	R _{θJC}	1.42										°C/W
Typical Thermal Resistance Case to Heatsink per Diode	R _{θCS}	0.2										°C/W
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 +150										°C

Note: The typical data above is for reference only

Fig. 1 - Current Rating Characteristics

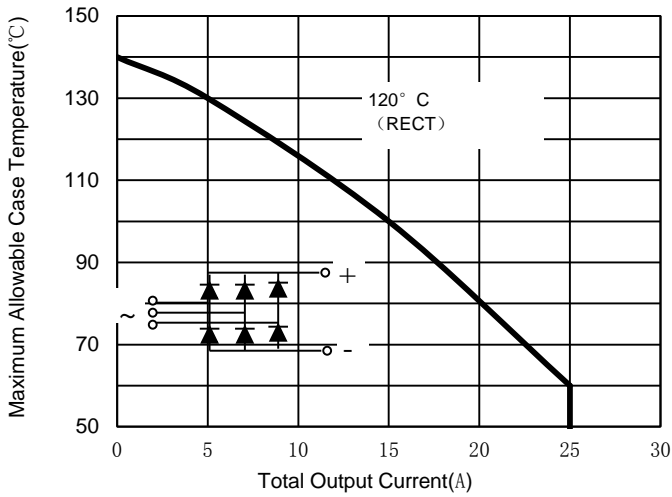


Fig. 2 - Typical Forward Characteristics

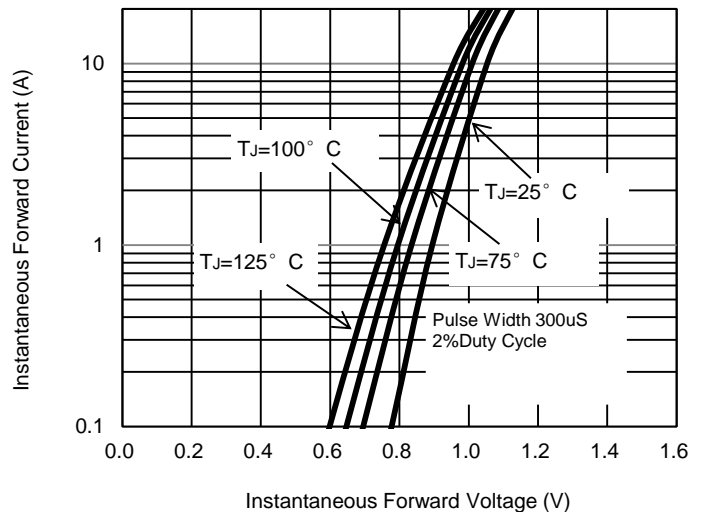


Fig. 3 - Total Power Loss Characteristics

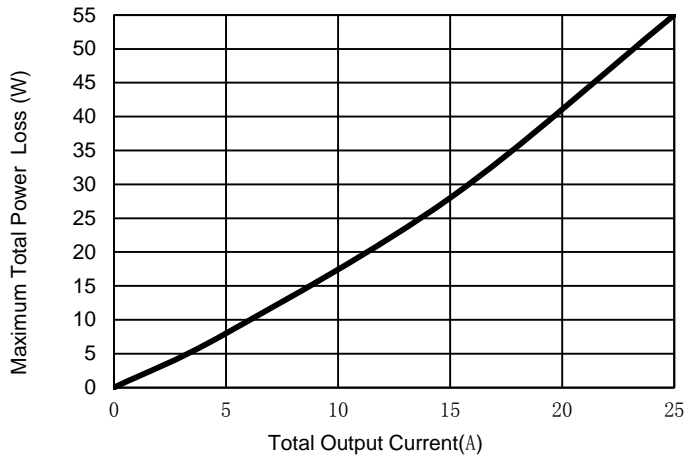


Fig. 4 - Total Power Loss Characteristics

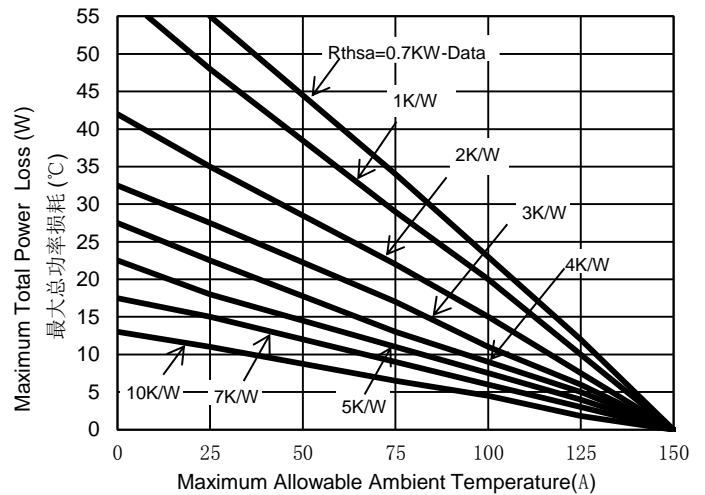


Fig. 5 - Maximum Non-repetitive Surge Current

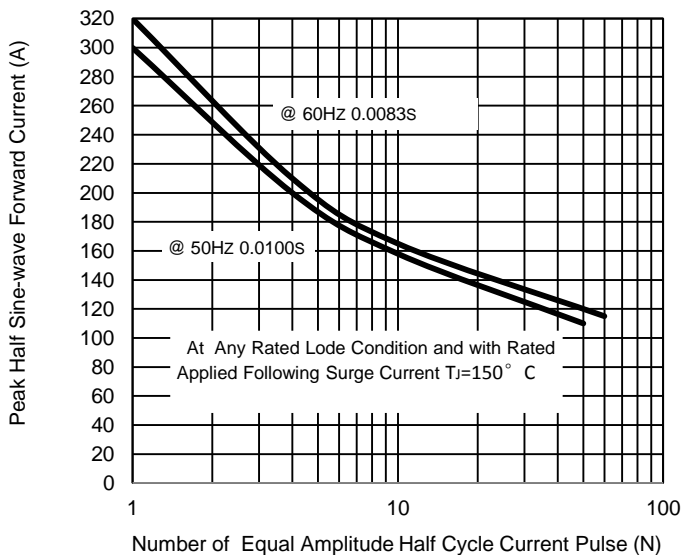
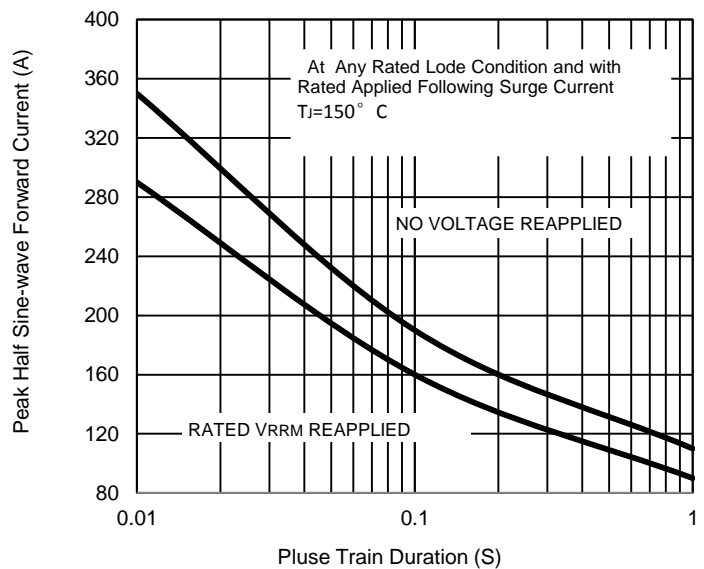
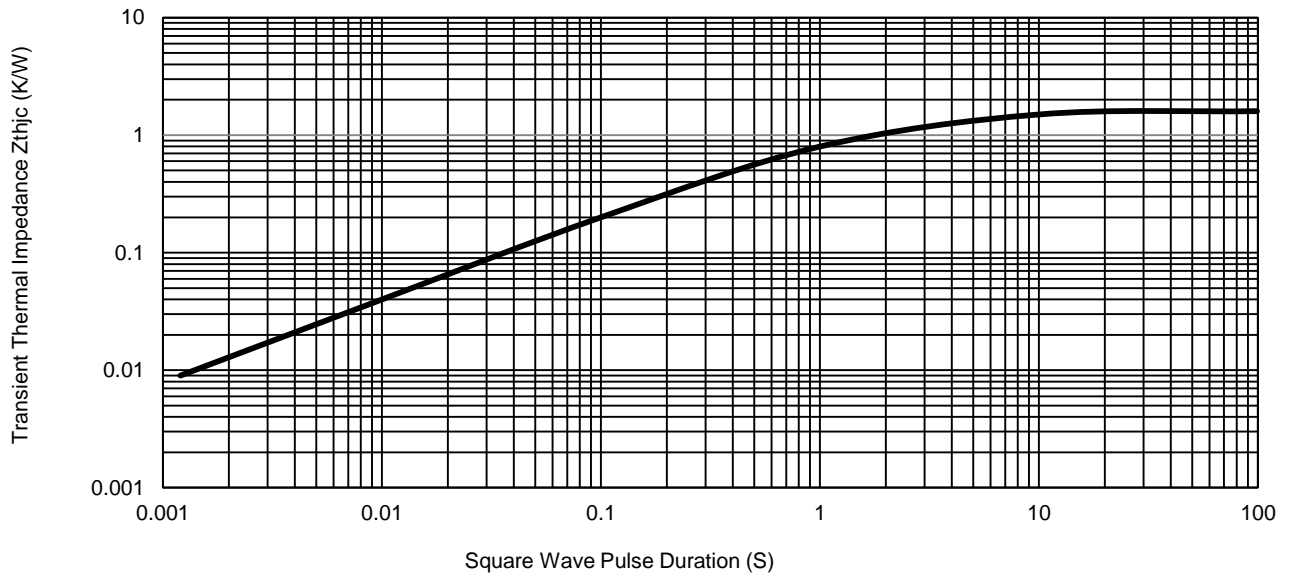


Fig. 6 - Maximum Non-repetitive Surge Current



The curve above is for reference only.

Fig. 7 - Thermal Impedance Z_{thjc} Characteristics



The curve above is for reference only.



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