

## 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

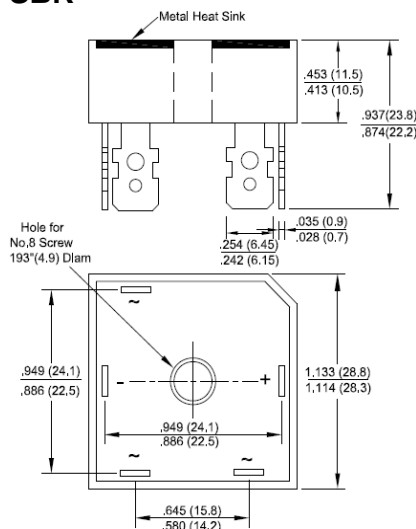
### Mechanical Data

- 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

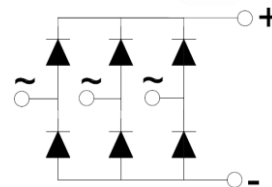
### Applications

- 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 @ $T_C=60^\circ\text{C}$	$I_{(AV)}$	25										A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	375										A
$I^2t$ Rating for Fusing ( $t < 8.3\text{mS}$ )	$I^2t$	580										$\text{A}^2\text{S}$
Peak Forward Voltage per Diode at 12.5A DC	$V_F$	1.1										V
Maximum DC Reverse Current at Rated @ $T_J=25^\circ\text{C}$	$I_R$	10										$\mu\text{A}$
DC Blocking Voltage per Diode @ $T_J=125^\circ\text{C}$		5.0										mA
Typical Thermal Resistance Junction to Case per Diode	$R_{\theta JC}$	1.42										$^\circ\text{C/W}$
Typical Thermal Resistance Case to Heatsink per Diode	$R_{\theta CS}$	0.2										$^\circ\text{C/W}$
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 +150										$^\circ\text{C}$

Note: The typical data above is for reference only

Fig. 1 - Current Rating Characteristics

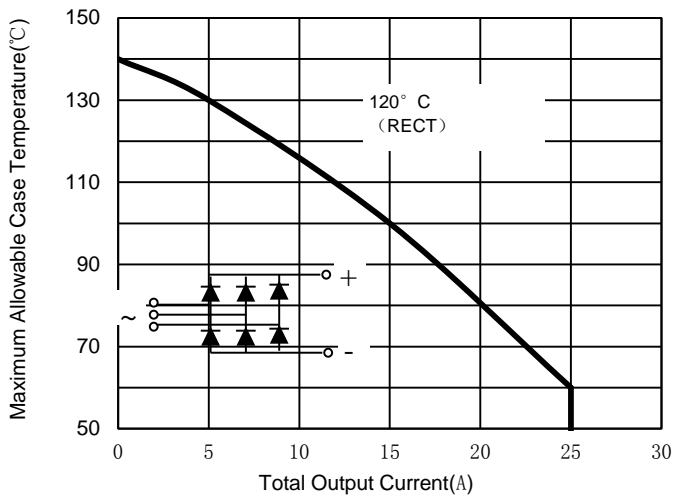


Fig. 2 - Typical Forward Characteristics

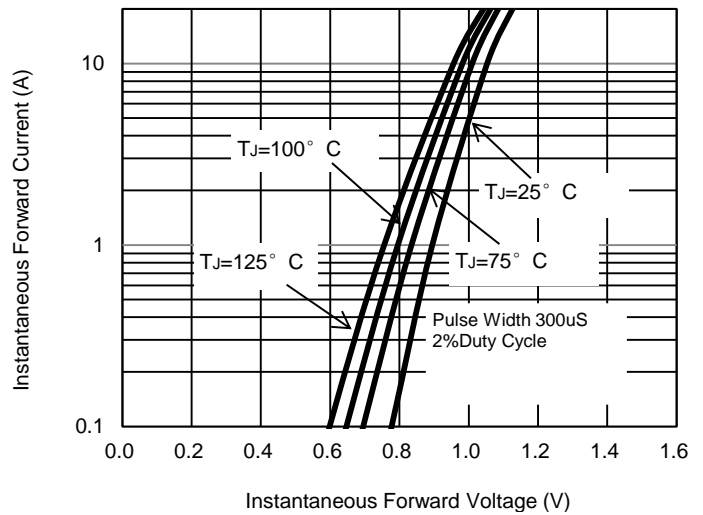


Fig. 3 - Total Power Loss Characteristics

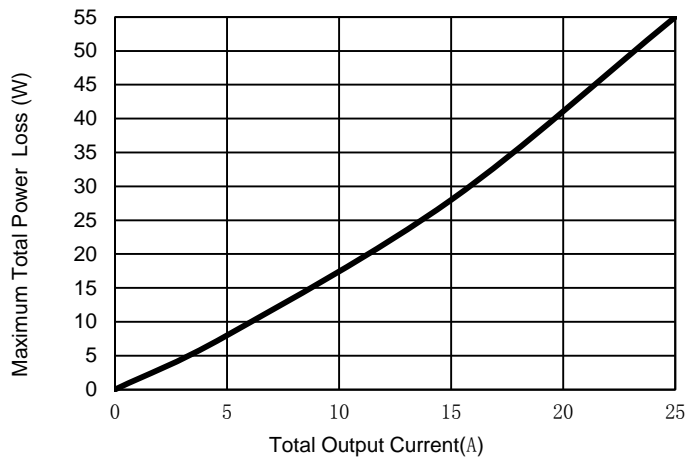


Fig. 4 - Total Power Loss Characteristics

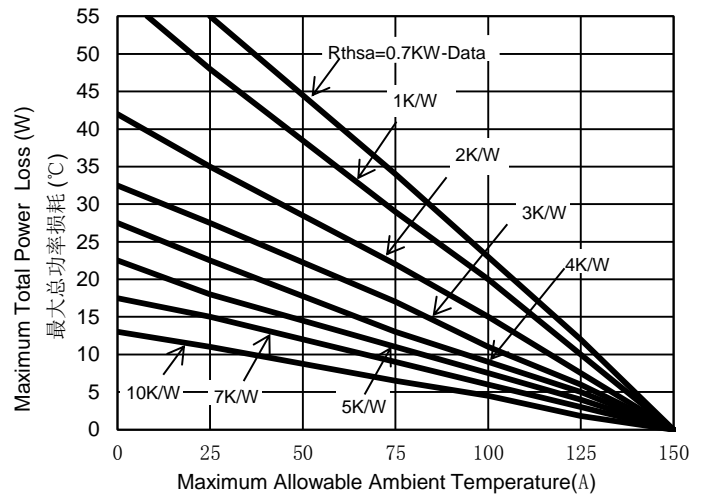


Fig. 5 - Maximum Non-repetitive Surge Current

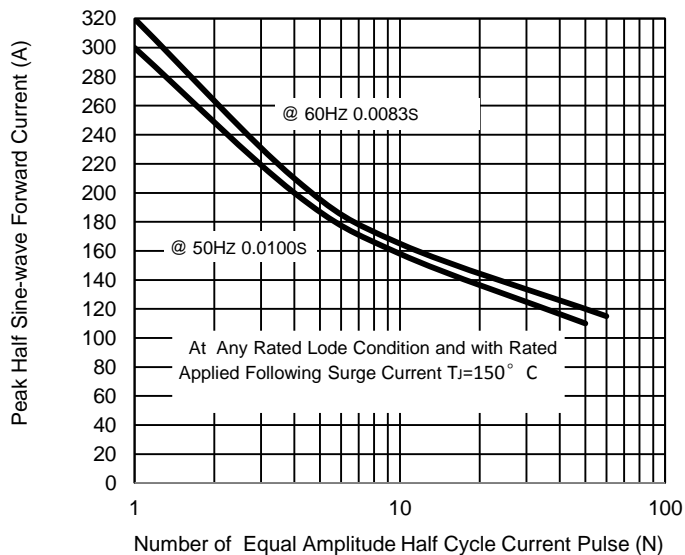
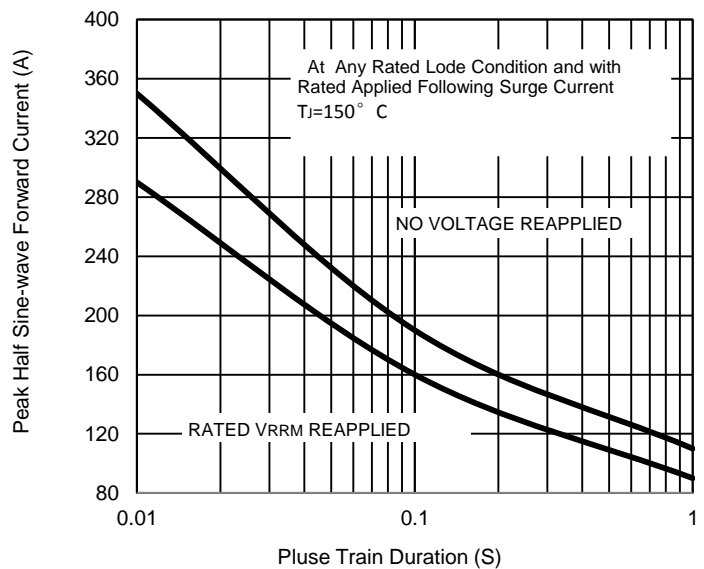


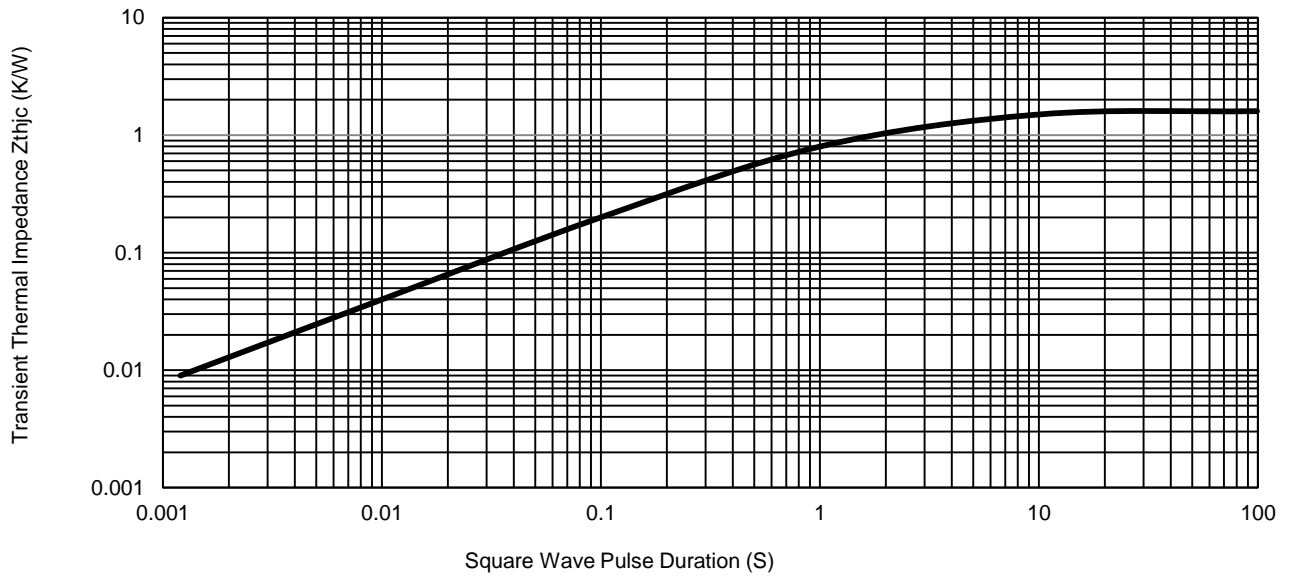
Fig. 6 - Maximum Non-repetitive Surge Current



The curve above is for reference only.

SBR25\*-B-00/99/92-00/01

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Fig. 7 - Thermal Impedance  $Z_{thjc}$  Characteristics


The curve above is for reference only.

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