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LITE-ON SEMICONDUCTORS

SBR3516

SILICON PASSIVATED THREE PHASE BRIDGE RECTIFIERS

REVERSE VOLTAGE – 1600 Volts FORWARD CURRENT – 35 Ampere

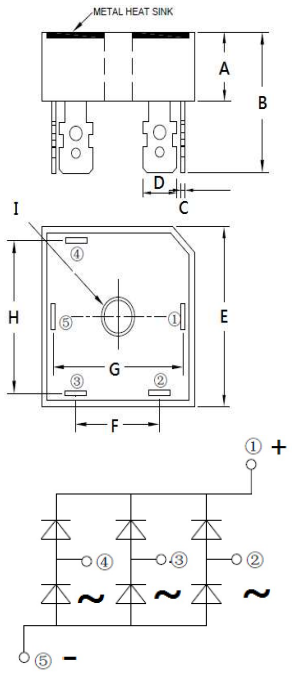
FEATURES

- Diffused Junction
- Low forward voltage drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- UL recognized file#E95060

MECHANICAL DATA

- Case : Molded plastic with Heatsink internally mounted in the bridge encapsulation
- Polarity : As marked on Body
- Terminals:Plated Leads Soiderable per MIL-STD-202,Method 208
- Weight:20 grams(approx.)
- Mounting Position: Bolt Down on Heatsink With Silicone Thermal Compound Between Bridge and Mounting Surface for Maximum Heat Transfer Efficiency
- Mounting Torque:20 in lbs. Max.

SBR



SBR		
Dim.	Min.	Max.
A	10.5	11.5
B	22.2	23.8
C	0.7	0.9
D	6.15	6.45
E	28.3	28.8
F	14.2	15.8
G	22.5	24.1
H	22.5	24.1
I	4.9	
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

A28BSOLUTE RATINGS

PARAMETER	SYMBOL	SBR3516	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1600	V
Maximum DC Blocking Voltage	V_{DC}	1600	V
Maximum Average Forward Rectified Current @TC = 60 ℃	$I_{(AV)}$	35	A
Non-Repetitive Peak Forward Surge Current (No Voltage Reapplied t=8.3ms at 60HZ) (No Voltage Reapplied t=10ms at 50HZ) (100% VRRM Reapplied t=8.3ms at 60HZ) (100% VRRM Reapplied t=10ms at 50HZ)	I_{FSM}	500 475 420 400	A
I2t Rating for fusing (No Voltage Reapplied t=8.3ms at 60HZ) (No Voltage Reapplied t=10ms at 50HZ) (100% VRRM Reapplied t=8.3ms at 60HZ) (100% VRRM Reapplied t=10ms at 50HZ)	I^2t	1030 1130 730 800	A^2S
RMS Isolation Voltage from Case to Lead	V_{ISO}	2500	V
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Thermal Resistance Case to Heatsink Mounting Surface, Smooth, Flat and Greased	$R_{\theta CS}$	0.2	K/W
Thermal Resistance Junction to Case at DC Operation per Bridge	$R_{\theta JC}$	1.16	K/W

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	SYMBOL	MAX.	UNIT
Maximum Forward Voltage drop per element at 17.5A Peak	V_F	1.2	V
Peak Reverse Current (per leg) @T_J=25℃	I_R	10	uA
At Rated DC Blocking Voltage @T_J=125℃		5	mA

RATING AND CHARACTERISTIC CURVES
SBR3516

FIG.1-CURRENT RATING CHARACTERISTICS

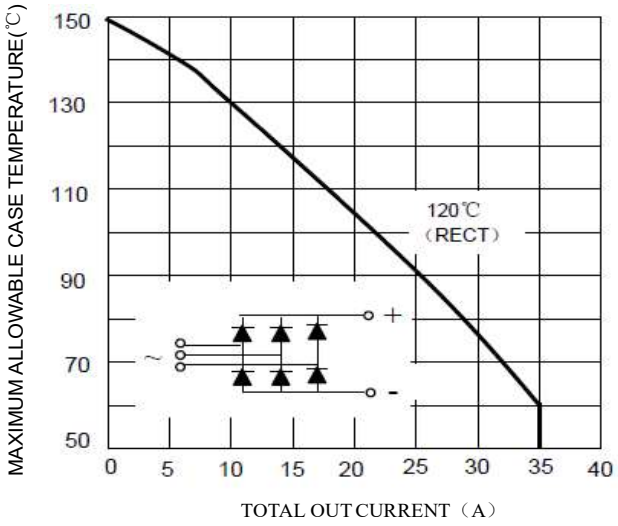


FIG.2-FORWARD VOLTAGE DROP CHARACTERISTICS

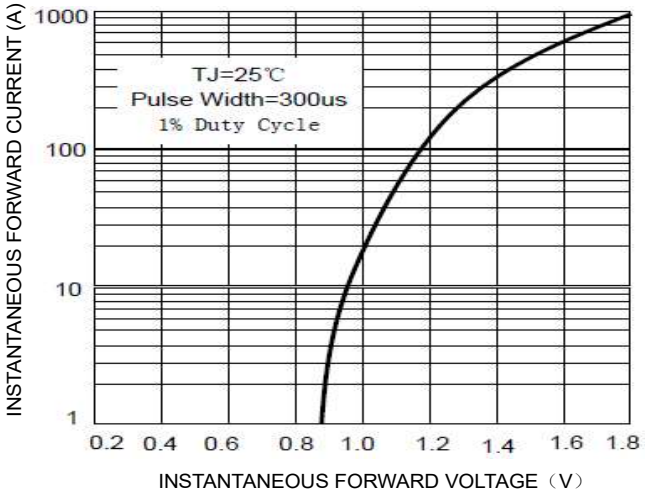


FIG.3-TOTAL POWER LOSS CHARACTERISTICS

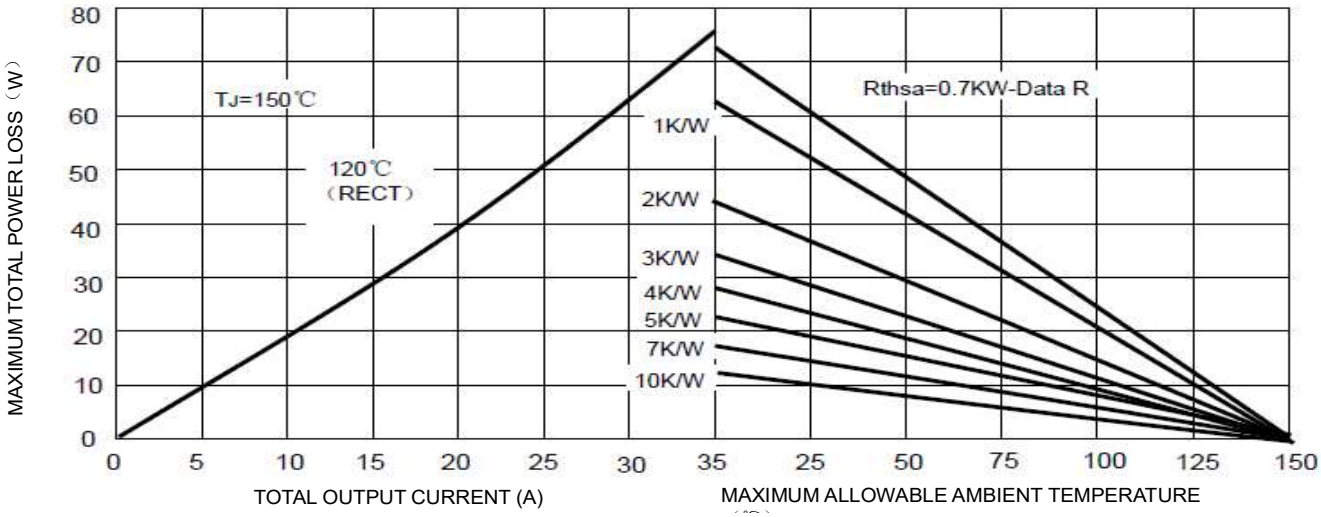


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

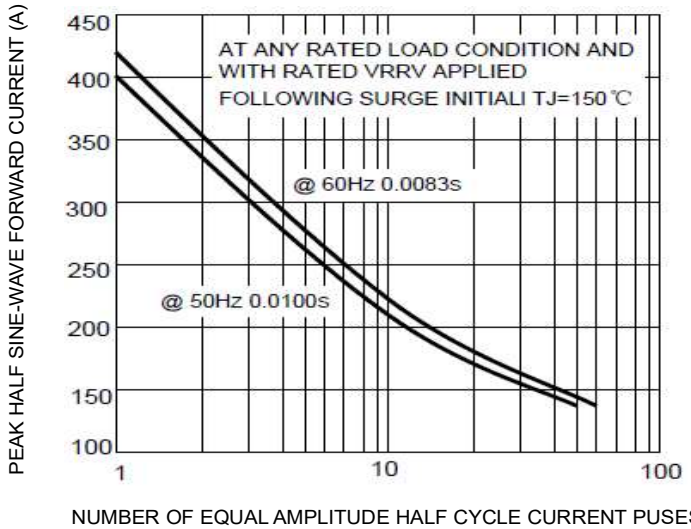
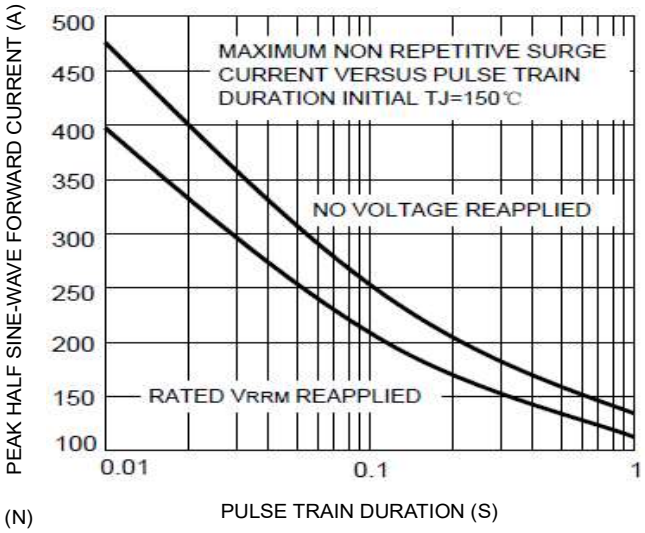


FIG.5-MAXIMUM NON-REPETITIVE SURGE CURRENT



RATING AND CHARACTERISTIC CURVES
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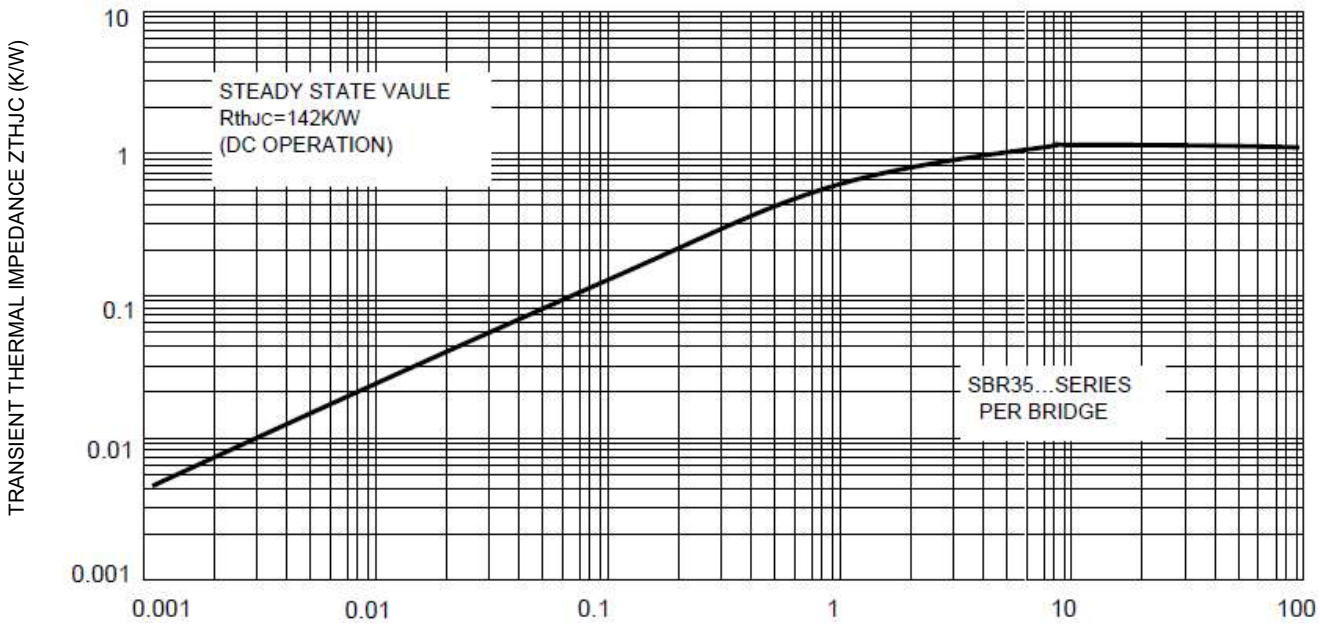
FIG.6-THERMAL IMPEDANCE ZTHJC CHARACTERISTICS



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