LITE-ON SEMICONDUCTOR

B5100C

SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE - **100** Volts
FORWARD CURRENT - **5.0** Amperes

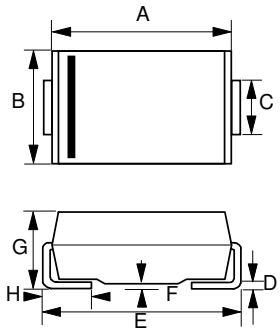
FEATURES

- For surface mounted applications
- Metal-Semiconductor junction with guardring
- Epitaxial construction
- Very Low forward voltage drop
- High current capability
- Qualified according to AEC-Q101 Rev_C
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case : Molded plastic
- Case Material: Molding compound, UL Flammability classification 94V-0, "Halogen-free".
- Polarity : Color band denotes cathode
- Weight : 0.007 ounces, 0.21 grams

SMC



SMC		
DIM.	MIN.	MAX.
A	6.60	7.11
B	5.59	6.22
C	2.92	3.18
D	0.15	0.31
E	7.75	8.13
F	0.05	0.20
G	2.01	2.50
H	0.76	1.52
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	B5100C	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	V
Maximum DC Blocking Voltage	V_{DC}	100	V
Maximum Average Forward Rectified Current @Tc=100 ℃ @TL =75 ℃	$I_{(AV)}$	5.0	A
Peak Forward Surge Current 8.3ms single half sine-wave @TA =25 ℃	I_{FSM}	100	A
Maximum forward Voltage at 5.0A DC	V_F	0.85	V
Maximum DC Reverse Current at Rated DC Blocking Voltage @TJ =25 ℃ @TJ =100 ℃	I_R	0.02 1	mA
Typical Junction Capacitance (Note 1)	C_J	300	pF
Typical Thermal Resistance (Note 2, 3)	$R_{\theta Jc}$ $R_{\theta JL}$ $R_{\theta JA}$	12 17 55	°C/W
Operating Temperature Range	T_J	-55 to +150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

NOTES : 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal Resistance Junction to Lead
3. Thermal Resistance Junction to ambient

REV.-7,Sep-2019, KSHC05

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FIG.1 - FORWARD CURRENT DERATING CURVE

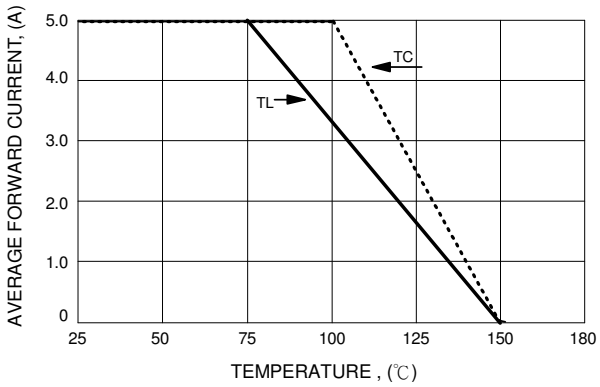


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

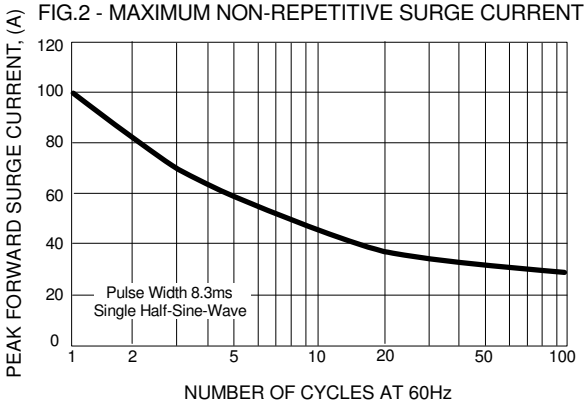


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

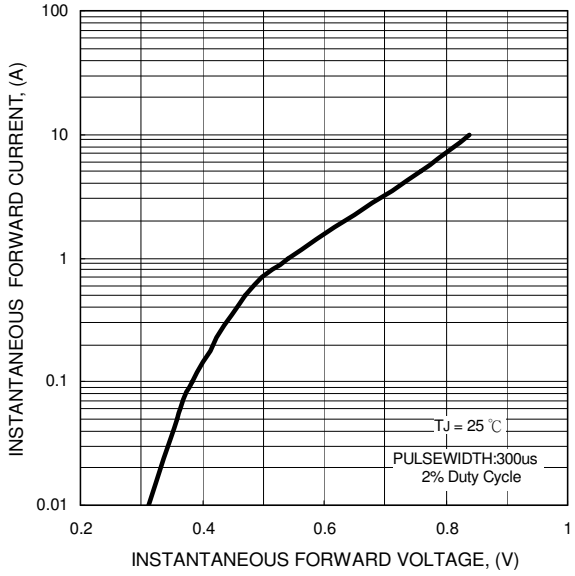


FIG.4 - TYPICAL JUNCTION CAPACITANCE

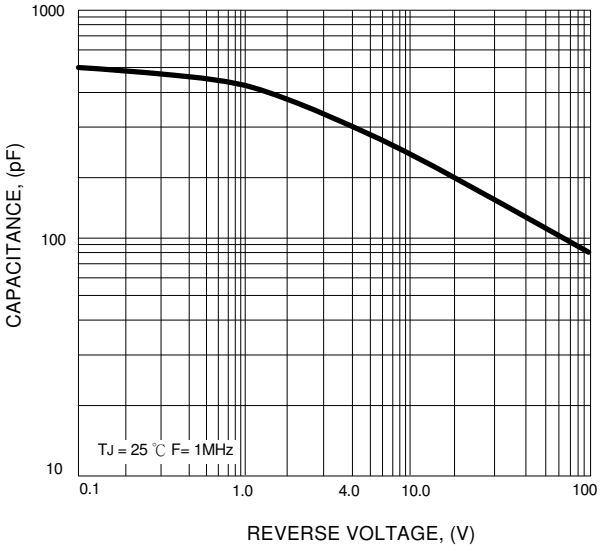
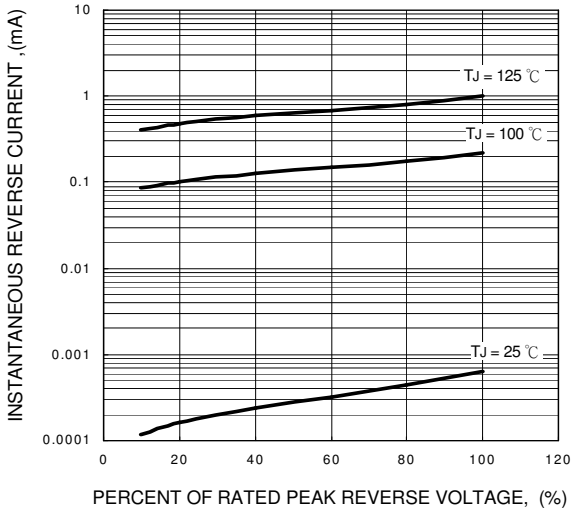


FIG.5 - TYPICAL REVERSE CHARACTERISTICS



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