LITE-ON SEMICONDUCTORS

B520C thru B540C

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 20 to 40 Volts
FORWARD CURRENT – 5.0 Amperes

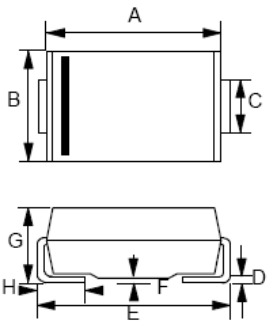
FEATURES

- For surface mounted applications
- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Very Low forward voltage drop
- High current capability
- Plastic material has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application

MECHANICAL DATA

- Case: Molded plastic
- 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	2.62
H	0.76	1.52
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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	B520C	B530C	B540C	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	VDC	20	30	40	A
Maximum Average Forward Rectified Current @TL=85°C	I_{AV}	5.0			A
Peak Forward Surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125			A
Maximum Forward Voltage at 5.0A DC	V_F	0.55			V
Maximum DC Reverse Current @Tj=25°C at Rated DC Blocking Voltage @Tj=100°C	I_R	0.5 20			mA
Typical Junction Capacitance (Note 1)	Cj	300			pF
Typical Thermal Resistance (Note 2, 4)	$R_{\Theta JL}$	14			°C/W
Typical Thermal Resistance (Note 3, 4)	$R_{\Theta JA}$	50			°C/W
Operating Junction Temperature Range	Tj	-55 to +125			°C
Storage Temperature Range	T_{STG}	-55 to +150			°C

REV.1, Nov-2008, KSHC10

Note: (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
(4) Unit mounted on glass epoxy substrate 1oz/ft2 35x35 mm copper pad.

RATING AND CHARACTERISTIC CURVES
B520C thru B540C

FIG.1- FORWARD CURRENT DERATING CURVE

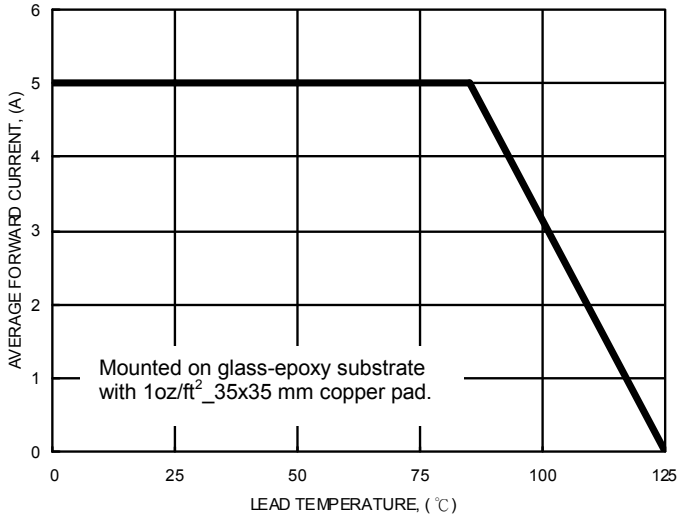


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

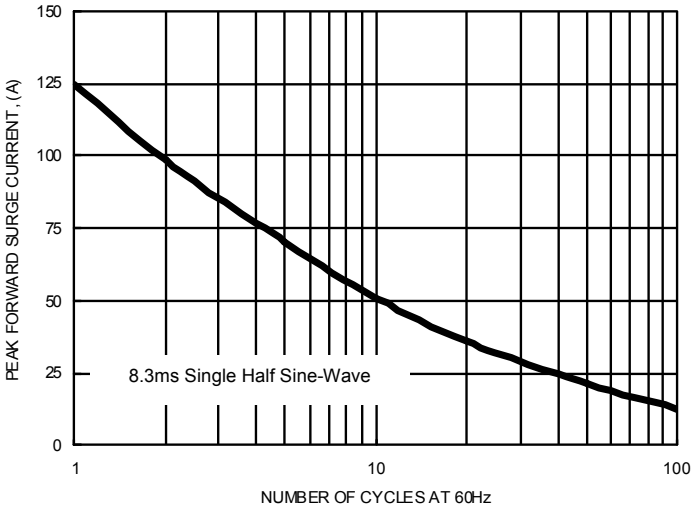


FIG.3- TYPICAL JUNCTION CAPACITANCE

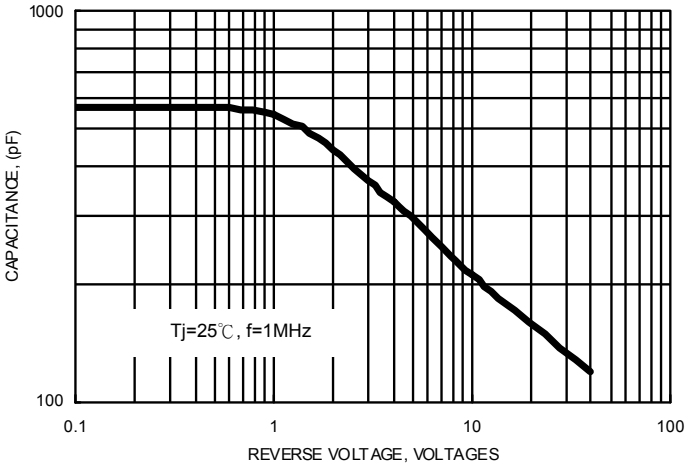


FIG.4- TYPICAL FORWARD CHARACTERISTICS

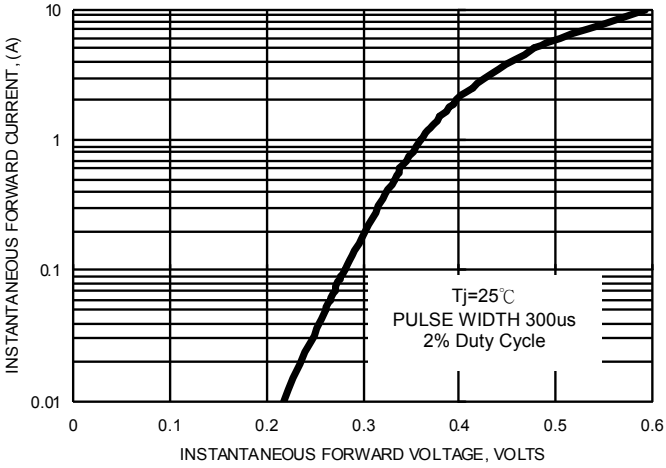


FIG.5- TYPICAL REVERSE CHARACTERISTICS

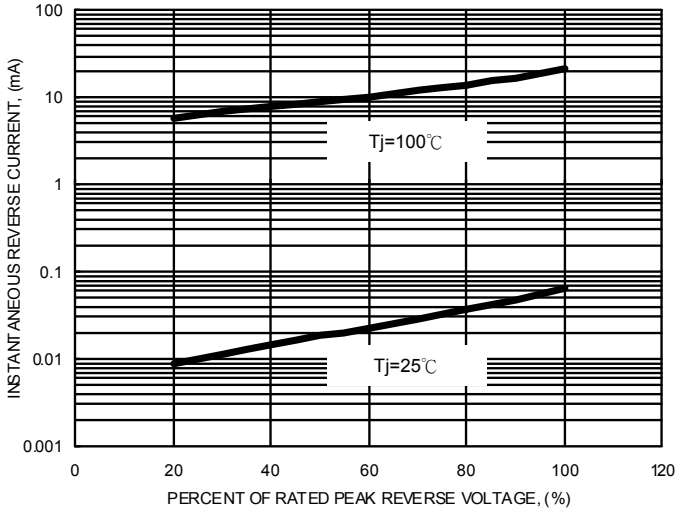
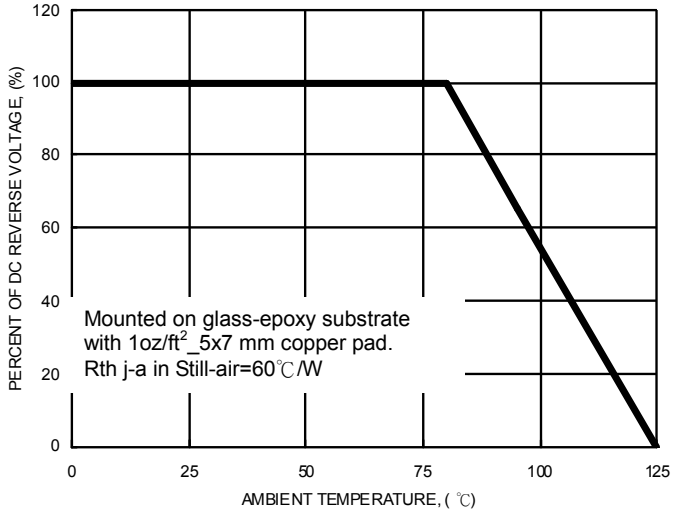


FIG.6- DC REVERSE VOLTAGE DERATING CURVE



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