LITE-ON SEMICONDUCTORS

SB120 thru SB140

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 20 to 40 Volts
FORWARD CURRENT – 1.0 Amperes

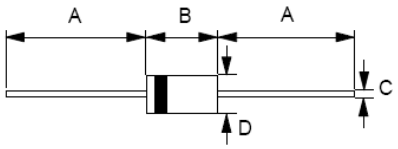
FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application
- IEC 61000-4-2, level 4 (ESD), > 15KV (air)

MECHANICAL DATA

- Case: JEDEC DO-41 molded plastic
- Polarity: Color band denotes cathode
- Weight:0.012 ounces, 0.34 grams
- Mounting position: Any

DO-41



	DO-41	
Dim.	Min.	Max.
A	25.4	-
B	4.10	5.20
C	0.71 ∅	0.86 ∅
D	2.00 ∅	2.70 ∅
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	SB120	SB130	SB140	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	V
Maximum Average Forward Rectified Current 0.395"(9.5mm) Lead length @T_L=105°C	I_{AV}	1.0			A
Peak Forward Surge 8.3ms single half sine-wave super imposed on rated load	I_{FSM}	40			A
Maximum forward Voltage at 1.0A DC	V_F	0.5			V
Maximum DC Reverse Current @Tj=25°C at Rated DC Blocking Voltage @Tj=100°C	I_R	0.1 10			mA
Typical Junction Capacitance(Note 1)	Cj	50			pF
Typical Thermal Resistance (Note 2)	$R_{\Theta JL}$	35			°C/W
Operating Temperature Range	Tj	-55 to +125			°C
Storage Temperature Range	T_{STG}	-55 to +150			°C

Note : (1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
(2) Thermal Resistance Junction to Lead

REV. 3, Mar-2012, KDHC06

RATING AND CHARACTERISTIC CURVES
SB120 thru SB140

FIG.1- FORWARD CURRENT DERATING CURVE

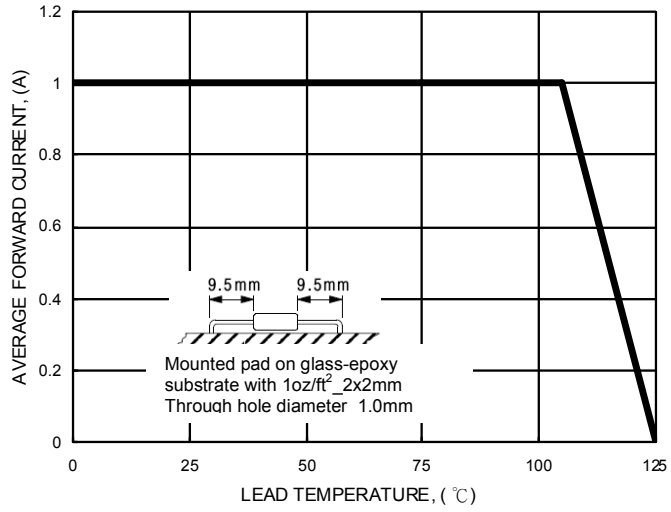


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

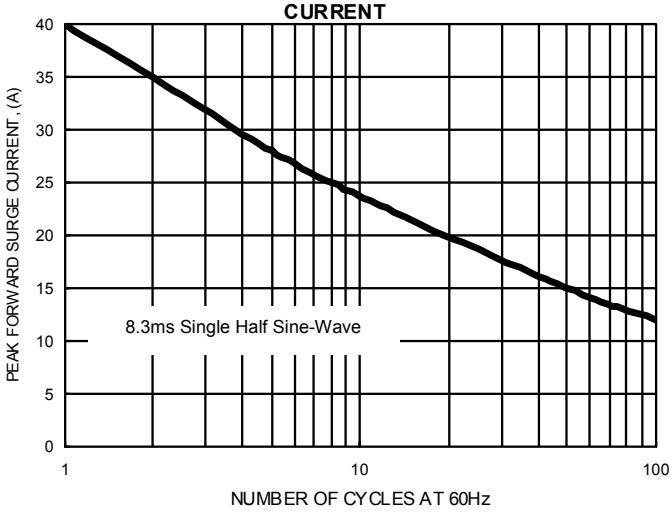


FIG.3- TYPICAL JUNCTION CAPACITANCE

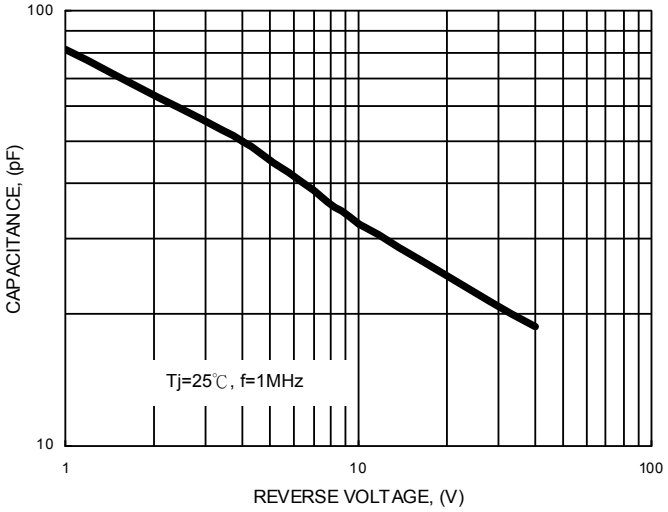


FIG.3- TYPICAL FORWARD CHARACTERISTICS

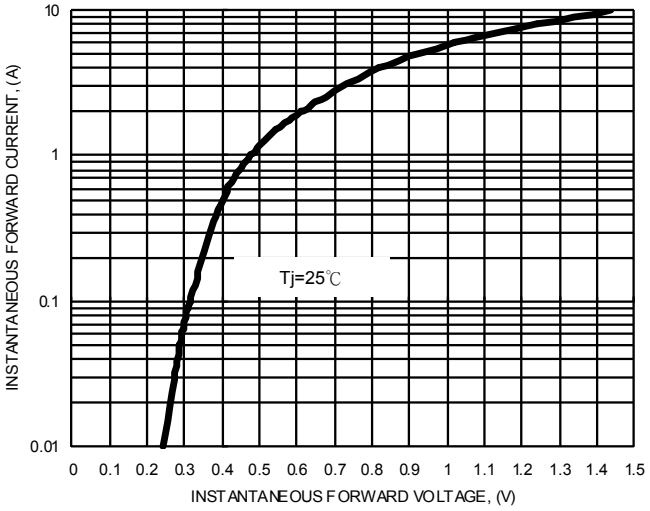


FIG.5- TYPICAL REVERSE CHARACTERISTICS

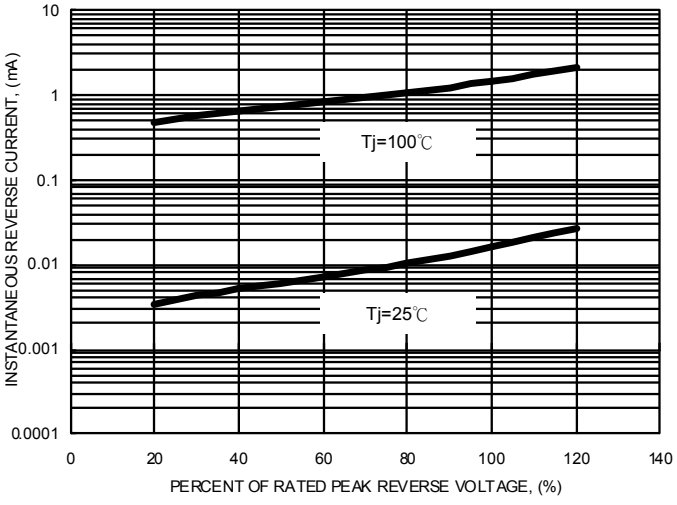
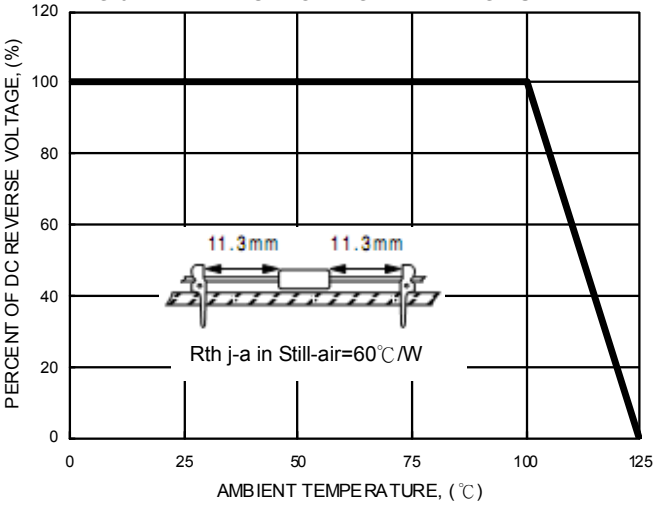


FIG.6- DC REVERSE VOLTAGE DERATING CURVE



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