LITE-ON SEMICONDUCTORS

SBL2050CT thru 2060CT

SCHOTTKY BARRIER RECTIFIER

REVERSE VOLTAGE – 50 to 60 Volts
FORWARD CURRENT – 20 Amperes

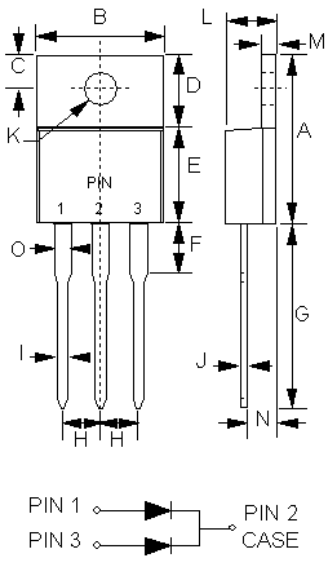
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capability
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- IEC 61000-4-2, level 4 (ESD). > 15KV (air)

MECHANICAL DATA

- Case: JEDEC TO-220AB
- Polarity indicator: As marked on the body
- Weight: 0.08 ounces, 2.24 grams
- Terminals: Lead Free Plating
- Max. mounting torque = 0.5 N.m (5.1 Kgf-cm)

TO-220AB



TO-220AB		
DIM.	MIN.	MAX.
A	14.22	15.88
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	6.35
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.30	0.64
K	3.53 ⌀	4.09 ⌀
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.50
All Dimensions in millimeter		

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

PARAMETER		SYMBOL	SBL2050CT	SBL2060CT	UNIT
Device marking code		Note	SBL2050CT	SBL2060CT	---
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	50	60	V
Maximum RMS Voltage		V_{RMS}	35	42	V
Maximum DC Blocking Voltage		V_{DC}	50	60	V
Average Rectified Output Current	@TC=100°C	I_F	20		A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	225		A
Typical Junction Capacitance per element (1)		C_J	600		pF
Storage temperature range		T_{STG}	-55 to +150		°C
Operating junction temperature range		T_J	-55 to +150		°C

PARAMETER	TEST CONDITIONS		SYMBOL	Min.	Max.	UNIT
Forward Voltage (2)	IF=10A	Tj=25°C	V_F	---	0.75	V
Leakage Current (2)	VR=Rated	Tj=25°C Tj=100°C	I_R	---	0.1 50	mA

THERMAL CHARACTERISTIC	SYMBOL	Typical	UNIT
Typical thermal resistance _ Junction to Case (3)	$R_{\Theta JC}$	2.0	°C/W

REV. 5, Jul-2012, KTHC81

Note :

(1) Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}.
(2) 300us Pulse Width, 2% Duty Cycle.
(3) Thermal Resistance Junction to Case.
Device mounted on L42xH25xW25mm_ black Aluminum finny heat sink.

RATING AND CHARACTERISTIC CURVES
SBL2050CT thru SBL2060CT

FIG.1- FORWARD CURRENT DERATING CURVE

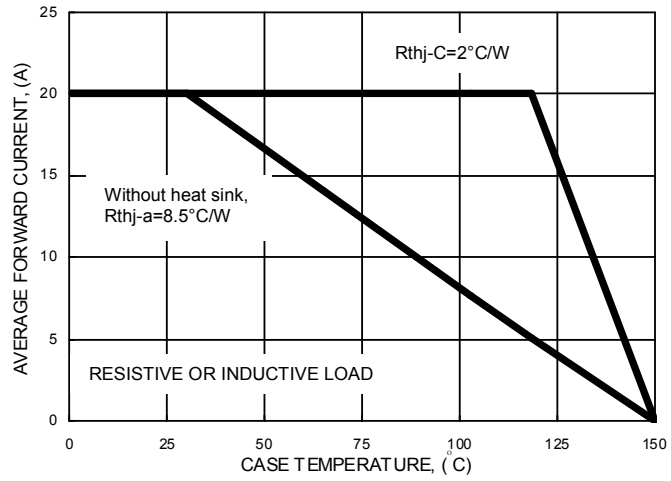


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

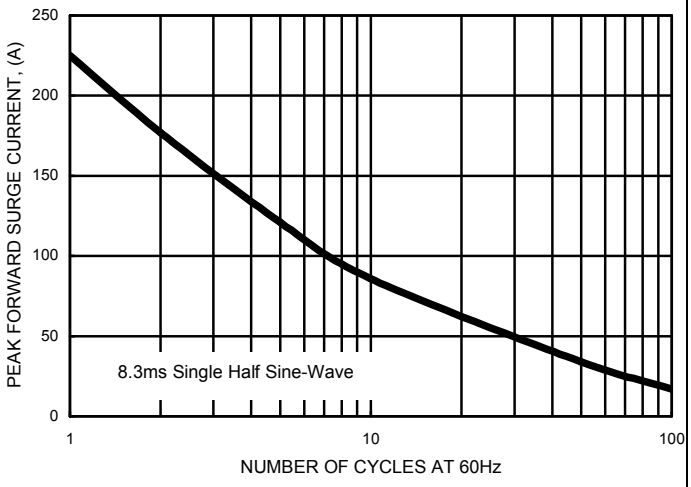


FIG.3- TYPICAL REVERSE CHARACTERISTICS

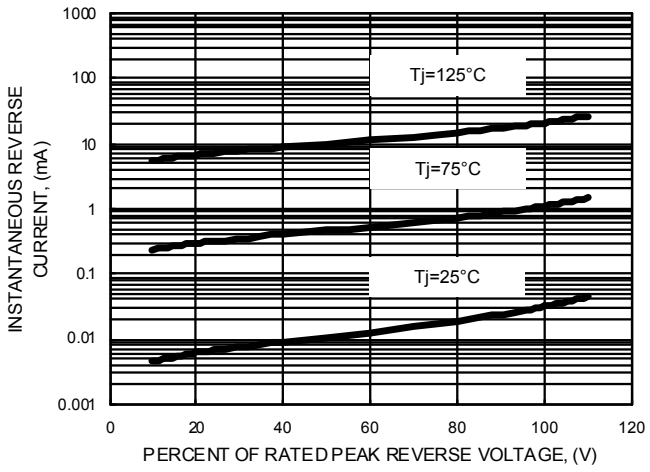


FIG.4- TYPICAL FORWARD CHARACTERISTICS

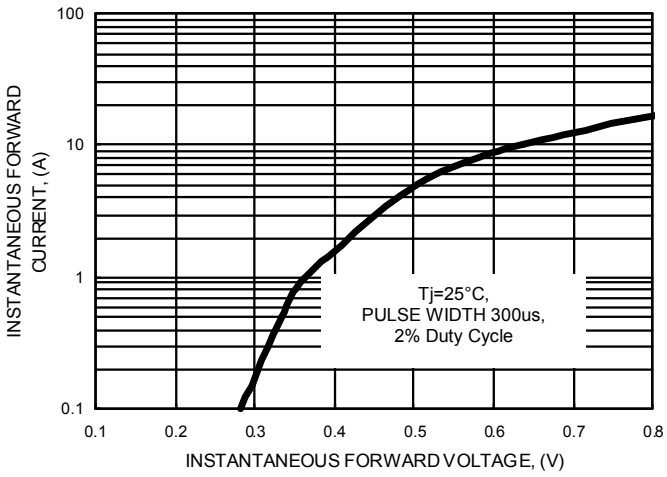


FIG.5- TYPICAL JUNCTION CAPACITANCE

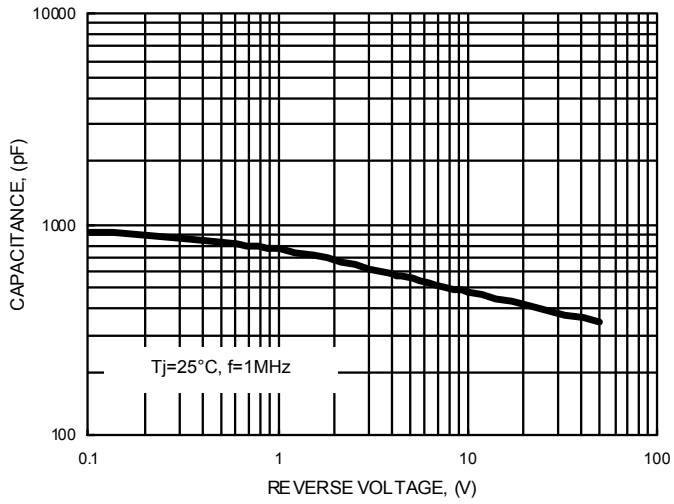
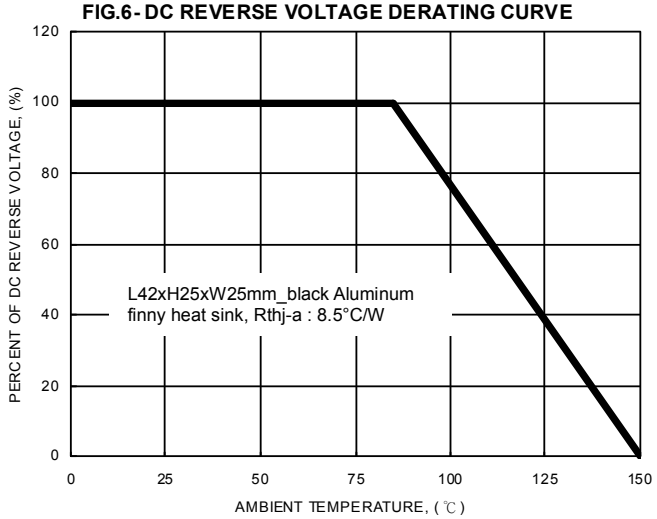


FIG.6- DC REVERSE VOLTAGE DERATING CURVE



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