

SCHOTTKY BARRIER RECTIFIER

**REVERSE VOLTAGE – 40 to 45 Volts
FORWARD CURRENT – 20 Amperes**

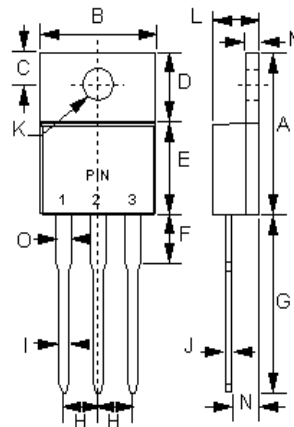
FEATURES

- 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 (Matte Tin Finish)
- Max. mounting torque = 0.5 N.m (5.1 Kgf-cm)

TO-220AB



TO-220AB		
DIM.	MIN.	MAX.
A	14.40	15.20
B	9.65	10.67
C	2.54	3.43
D	5.84	6.86
E	8.26	9.28
F	-	4.20
G	12.70	14.73
H	2.29	2.79
I	0.51	1.14
J	0.30	0.64
K	3.53 \varnothing	4.09 \varnothing
L	3.56	4.83
M	1.14	1.40
N	2.03	2.92
O	1.14	1.70

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	SBL2040CTW	SBL2045CTW	UNIT	
Device marking code	Note	SBL2040CTW	SBL2045CTW	---	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	45	V	
Maximum RMS Voltage	V_{RMS}	28	31.5	V	
Maximum DC Blocking Voltage	V_{DC}	40	45	V	
Average Rectified Output Current	@TC=100°C	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 +125		°C	
PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Max.	UNIT
Forward Voltage (2)	$I_F=10A$ $T_J=25^\circ C$	V_F	---	0.55	V
Leakage Current (2)	$V_R=Rated$ $T_J=25^\circ C$ $T_J=100^\circ C$	I_R	0.4 50		mA
THERMAL CHARACTERISTIC		SYMBOL	Typical		UNIT
Typical thermal resistance _ Junction to Case (3)		$R_{\theta JC}$	3.0		°C/W

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.

REV. 4, Jul-2012, KTHC90

RATING AND CHARACTERISTIC CURVES
SBL2040CTW thru SBL2045CTW



FIG.1- FORWARD CURRENT DERATING CURVE

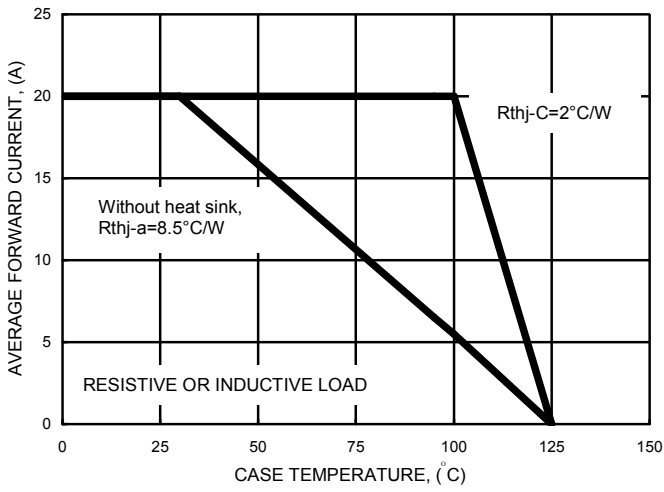


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

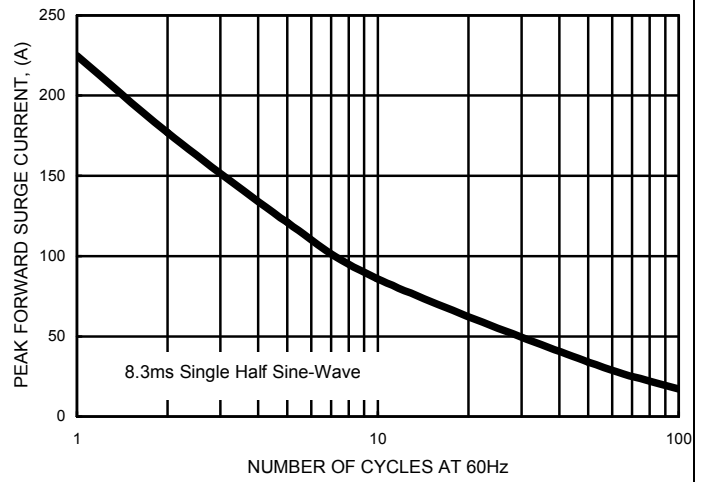


FIG.3- TYPICAL REVERSE CHARACTERISTICS

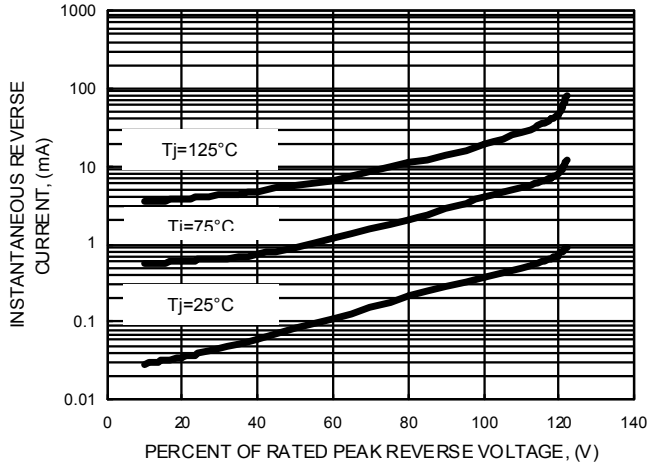


FIG.4- TYPICAL FORWARD CHARACTERISTICS

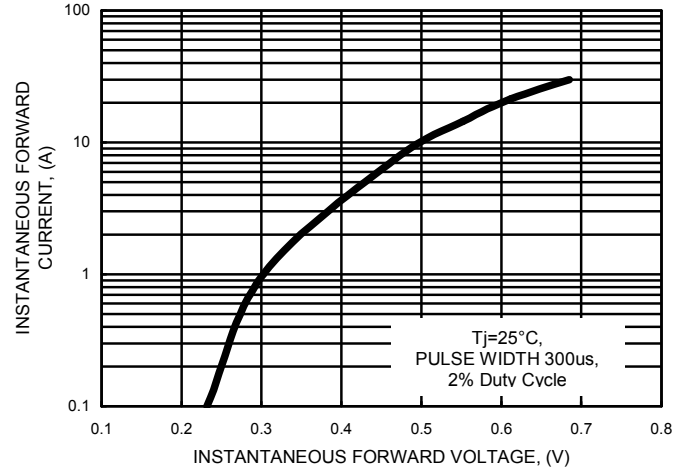


FIG.5- TYPICAL JUNCTION CAPACITANCE

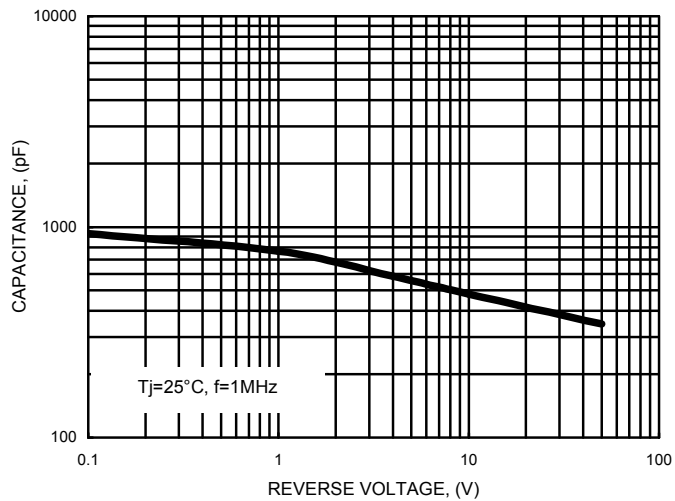
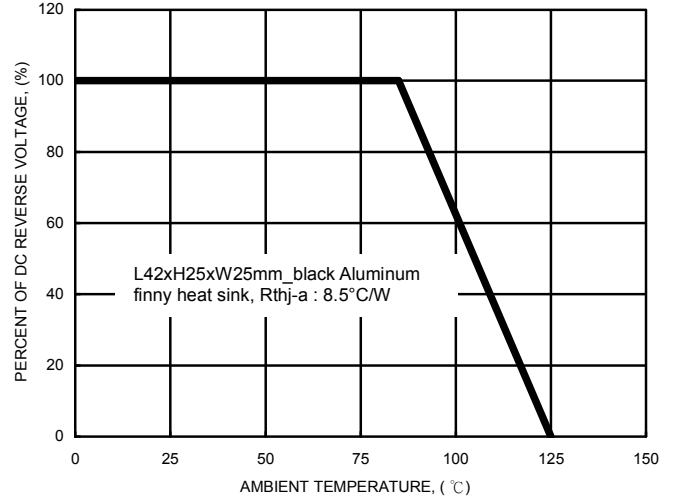


FIG.6- DC REVERSE VOLTAGE DERATING CURVE



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