

SCHOTTKY BARRIER RECTIFIER

**REVERSE VOLTAGE – 30 to 45 Volts
FORWARD CURRENT – 20 Amperes**

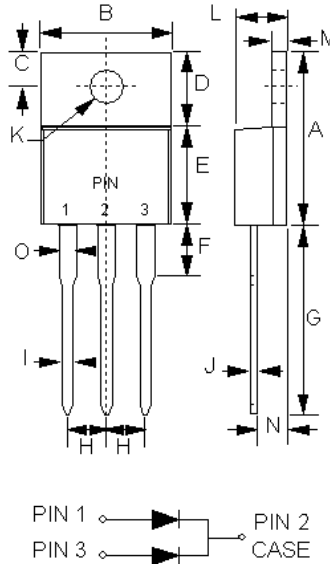
FEATURES

- 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

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 \varnothing	4.09 \varnothing
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.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	SBL2030CT	SBL2035CT	SBL2040CT	SBL2045CT	UNIT
Device marking code	Note	SBL2030CT	SBL2035CT	SBL2040CT	SBL2045CT	---
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	35	40	45	V
Maximum RMS Voltage	V_{RMS}	21	24.4	28	31.5	V
Maximum DC Blocking Voltage	V_{DC}	30	35	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	---	1.0 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.

RATING AND CHARACTERISTIC CURVES
SBL2030CT thru SBL2045CT



FIG.1- FORWARD CURRENT DERATING CURVE

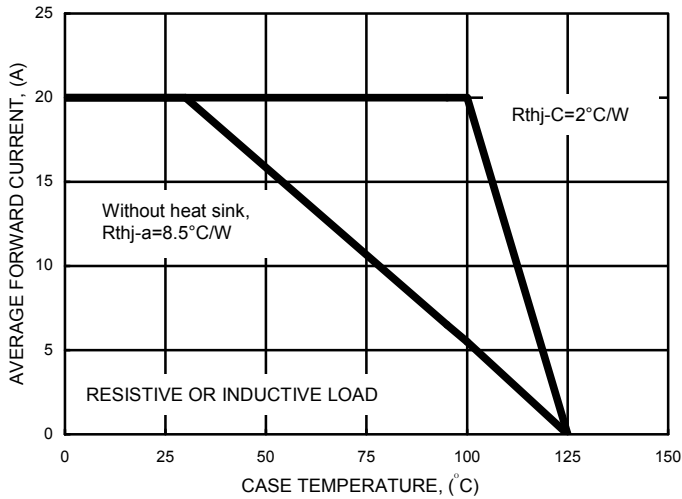


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

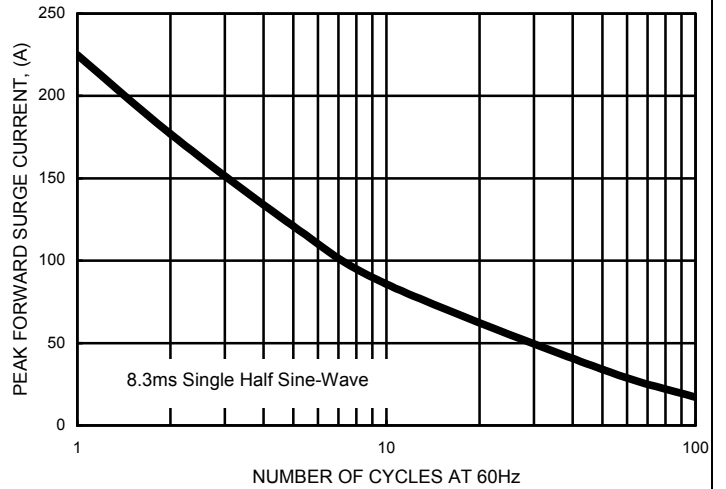


FIG.3- TYPICAL REVERSE CHARACTERISTICS

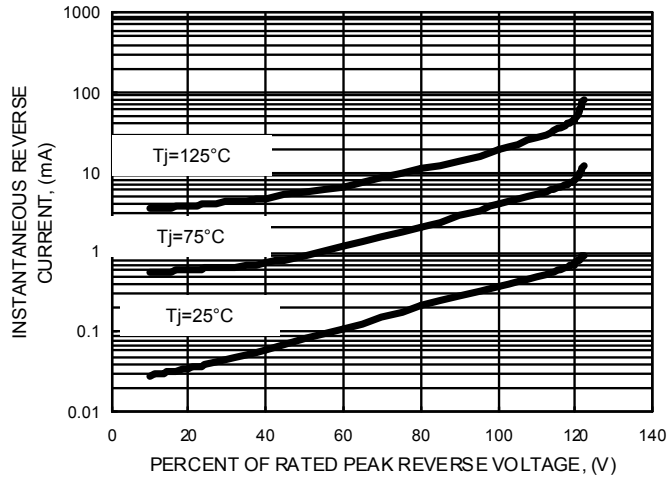


FIG.4- TYPICAL FORWARD CHARACTERISTICS

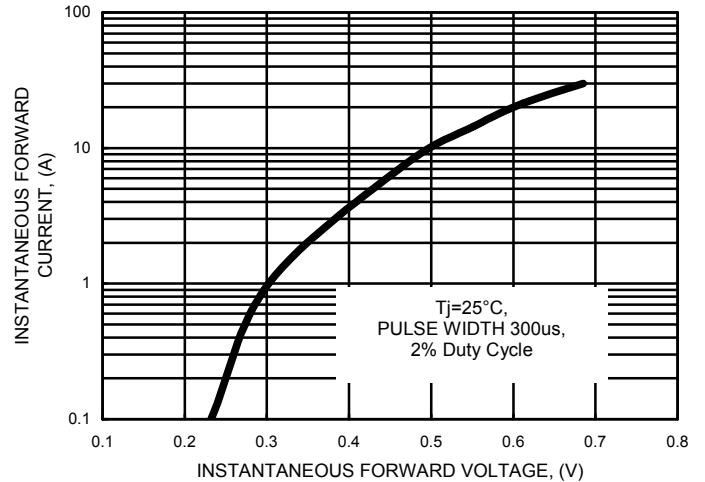


FIG.5- TYPICAL JUNCTION CAPACITANCE

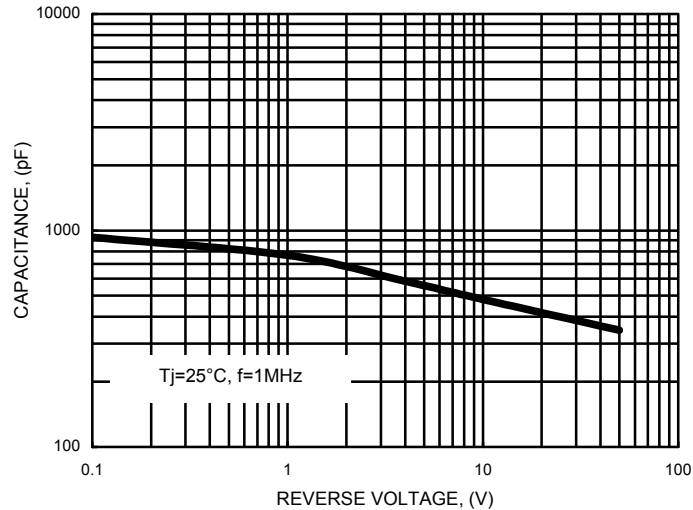


FIG.6- DC REVERSE VOLTAGE DERATING CURVE

