LITE-ON SEMICONDUCTOR

SBL830 thru SBL860

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE **- 30** to **60** Volts
FORWARD CURRENT **- 8.0** Amperes

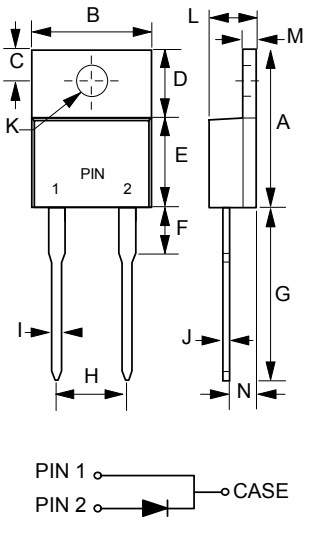
FEATURES

- Metal of silicon rectifier,majority carrier conducton
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage,high frequency inverters,free whelling,and polarity protection applications

MECHANICAL DATA

- Case : TO-220AC molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf.cm)

TO-220AC



TO-220AC		
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	4.83	5.33
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
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	SBL830	SBL835	SBL840	SBL845	SBL850	SBL860	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	30	35	40	45	50	60	V
Maximum RMS Voltage	V_{RMS}	21	24.5	28	31.5	35	42	V
Maximum DC Blocking Voltage	V_{DC}	30	35	40	45	50	60	V
Maximum Average Forward Rectified Current (See Fig.1) @T_C=95℃	$I_{(AV)}$	8						A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	175						A
Maximum Forward Voltage at 8A DC (Note 1)	V_F	0.55				0.70		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @T_J=25℃ @T_J=100℃	I_R	0.5 50						mA
Typical Junction Capacitance (Note 2)	C_J	450						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	3.0						℃/W
Operating Temperature Range	T_J	-55 to +125						℃
Storage Temperature Range	T_{STG}	-55 to +150						℃

NOTES : 1. 300us Pulse Width, 2% Duty Cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal Resistance Junction to Case.

REV. 5, Oct-2010, KTHA04

RATING AND CHARACTERISTIC CURVES
SBL830 thru SBL860

FIG.1 - FORWARD CURRENT DERATING CURVE

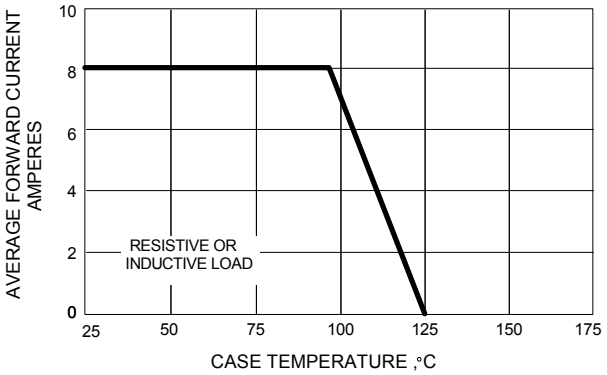


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

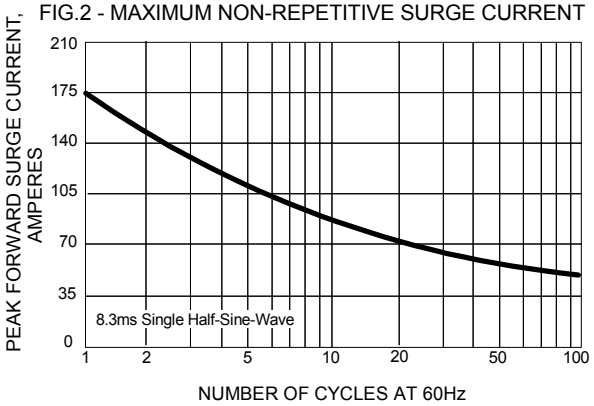


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

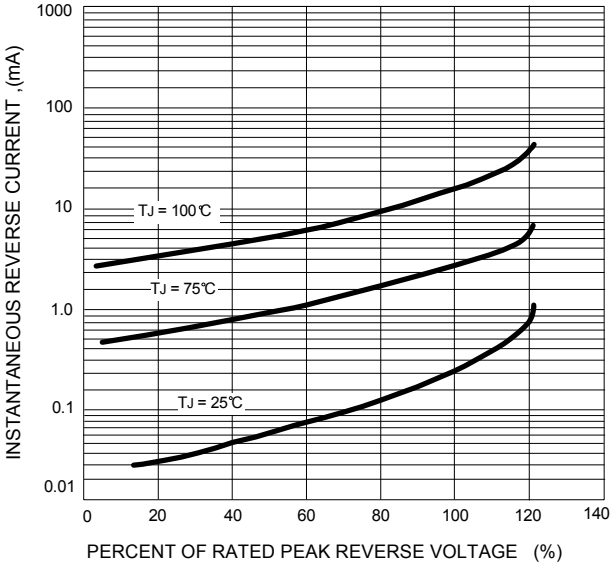


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

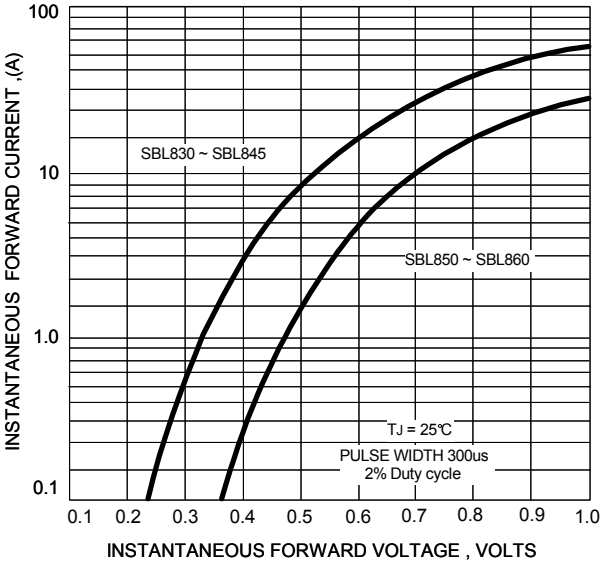
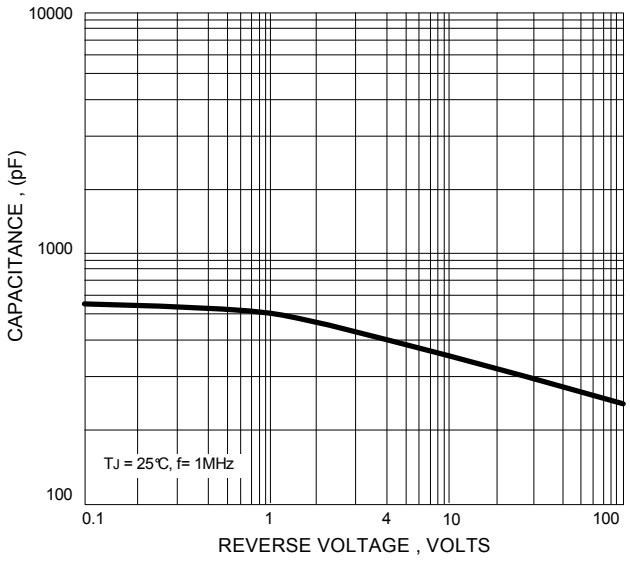


FIG.5 - TYPICAL JUNCTION CAPACITANCE



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