LITE-ON SEMICONDUCTOR

SBL6040PT

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 40 Volts
FORWARD CURRENT – 60 Amperes

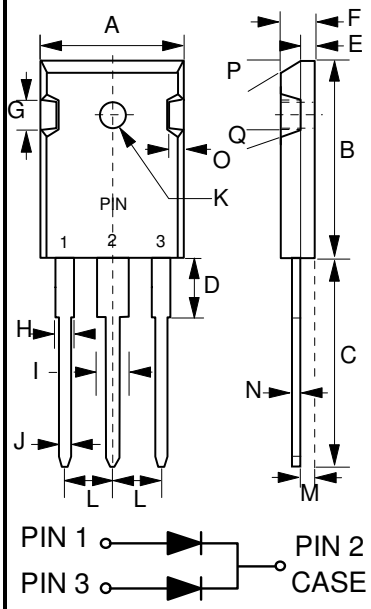
FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low V_F
- High surge capacity
- For use in low voltage, high frequency inverters, free wheeling and polarity protection applications

MECHANICAL DATA

- Case : TO-3P molded plastic
- Case Material: Molding compound, UL flammability classification 94V-0
- Mounting position: Any
- Polarity : As marked on the body
- Weight: 6.372grams (Approximate)
- Max. mounting torque= 0.5N.m(5.1 Kgf.cm)

TO-3P



TO-3P		
DIM	MIN	MAX
A	15.75	16.25
B	21.25	21.75
C	19.60	20.10
D	3.78	4.38
E	1.88	2.08
F	4.87	5.13
G	4.4TYP	
H	1.90	2.16
I	2.93	3.22
J	1.12	1.22
K	2.90Φ	3.20Φ
L	5.20	5.70
M	2.10	2.40
N	0.51	0.76
O	1.93	2.18
P	20° TYP	
Q	10° TYP	
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER		SYMBOL	SBL6040PT	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	40	V
Maximum DC Blocking voltage		V_{DC}	40	V
Maximum Average rectified forward current	@T_c=100°C	I_F	60	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load		I_{FSM}	450	A
Operating temperature range		T_J,	-55 ~ +125	°C
Storage temperature range		T_{STG}	-55 ~ +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION		SYMBOL	MAX	UNIT
Forward voltage (Note 1)	I_F=30A	T_J = 25°C	V_F	0.55	V
Reverse leakage current at Rated DC blocking voltage		T_J = 25°C T_J = 100°C	I_R	10 200	mA
Typical junction capacitance (Note 2)			C_j	1000	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 3)	$RthJ_C$	0.5	°C/W

Note :

(1) 300us pulse with, 2% duty cycle
(2) Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}
(3) Thermal Resistance Junction Case

REV. 8, Jul-2017, KTHD13

RATING AND CHARACTERISTIC CURVES
SBL6040PT

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FIG.1- FORWARD CURRENT DERATING CURVE

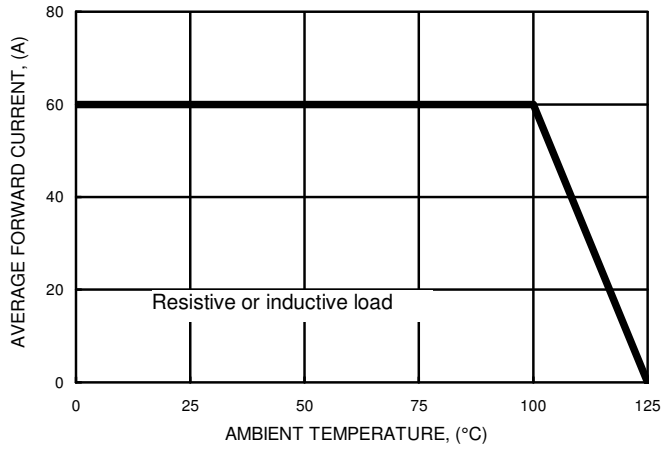


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

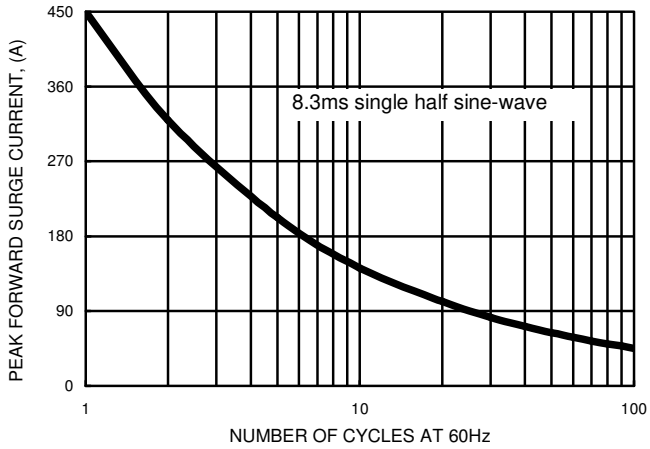


FIG.3- TYPICAL FORWARD CHARACTERISTICS

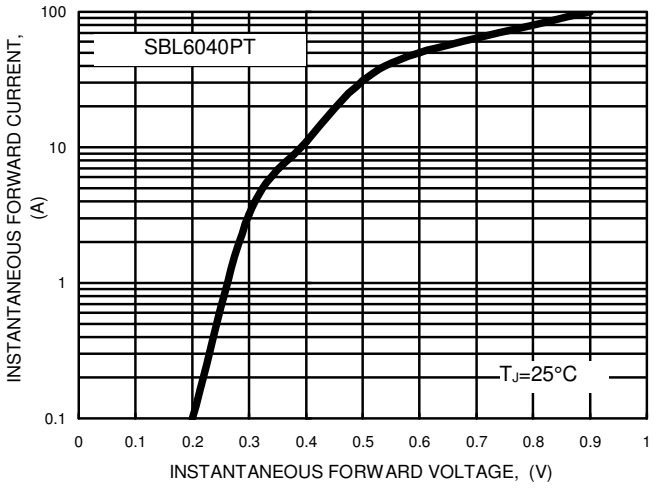


FIG.4- TYPICAL JUNCTION CAPACITANCE

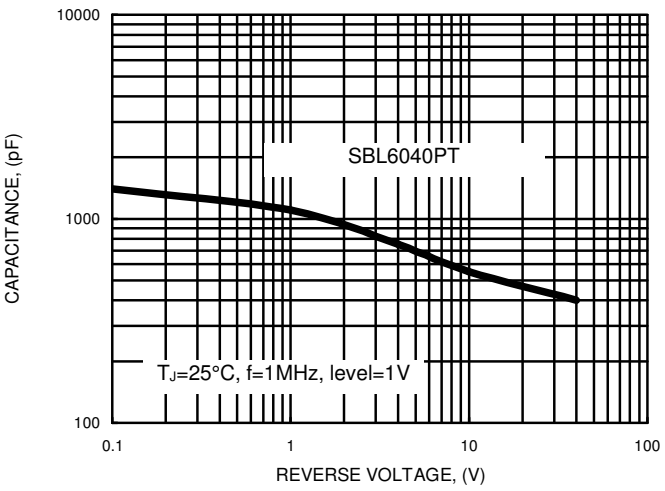
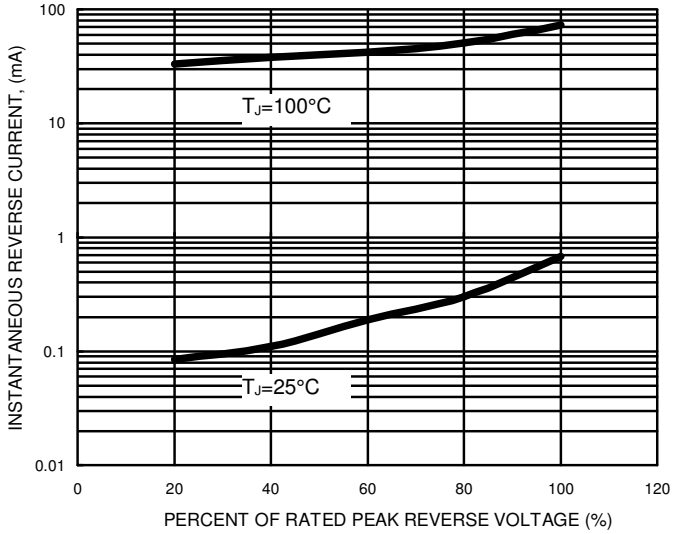


FIG.5- TYPICAL REVERSE CHARACTERISTICS



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