A Product Line of Diodes Incorporated

LITE-ON SEMICONDUCTOR

SBL3060PTW

SCHOTTKY BARRIER RECTIFIER

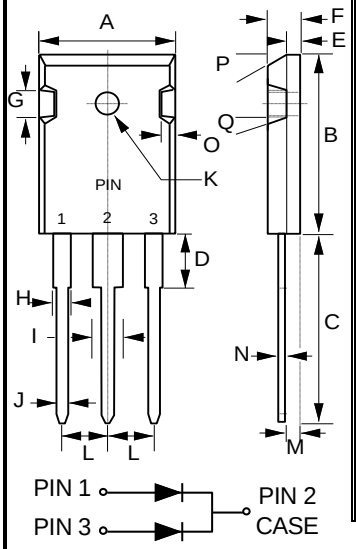
REVERSE VOLTAGE – 60 Volts
FORWARD CURRENT – 30 Amperes

FEATURES
- High surge capability
- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low V_F
- Qualification is according to AEC-Q101 Rev_C
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

APPLICATION
- Low voltage high frequency inverters
- Polarity protection applications
- Freewheeling diodes

MECHANICAL DATA
- Package: JEDEC TO-247
- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free"
- Weight: 6.4 grams (Approximate)
- Marking Code: SBL3060PTW

TO-247



TO-247		
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	4.4 TYP	
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	VALUE	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	60	V
Maximum DC blocking voltage		V_{DC}	60	V
Maximum average rectified output current	@T_C=100°C	$I_{(AV)}$	30	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.		I_{FSM}	275	A
Operating junction temperature range		$T_{J,}$	-55 to +125	°C
Storage temperature range		T_{STG}	-55 to +150	

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	I_F=15A	T_J=25°C T_J=100°C	V_F	-- 0.51	0.70 --	V
Leakage current	V_R=60V	T_J=25°C T_J=100°C	I_R	-- 10.9	0.2 50	mA
Typical junction capacitance (Note 5)			C_J	810		pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Notes 6, 7)	$RthJ_C$ $RthJ_L$	1 1	°C/W

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
4. 300us pulse width, 2% duty cycle.
5. Measured at 1.0MHz and applied voltage of 4.0V DC.
6. Thermal resistance test performed in accordance with JESD-51.
7. The unit mounted on fin type heat sink 50mm x 50mm x 22.05mm.

RATING AND CHARACTERISTIC CURVES
SBL3060PTW

FIG.1 FORWARD CURRENT DERATING CURVE

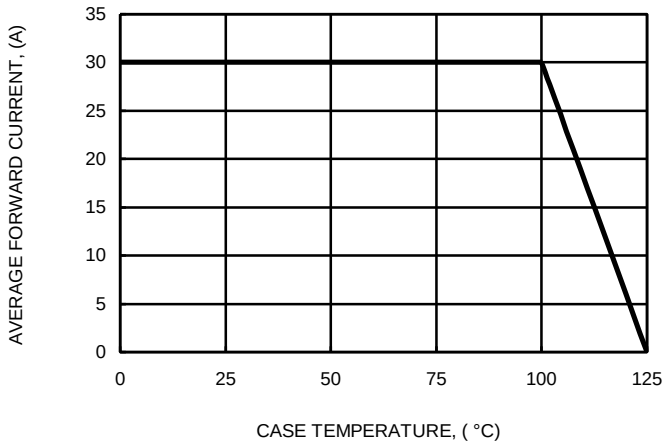


FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

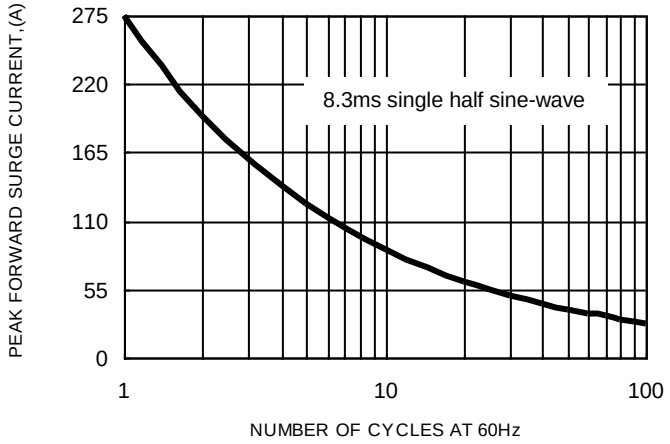


FIG.3 TYPICAL FORWARD CHARACTERISTICS

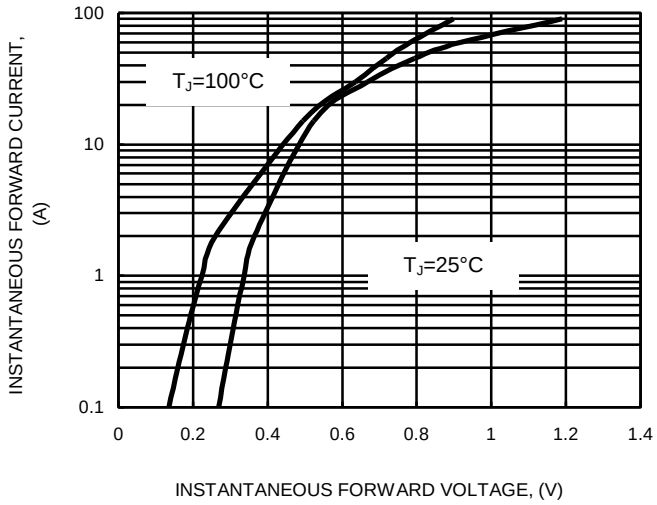


FIG.4 TYPICAL JUNCTION CAPACITANCE

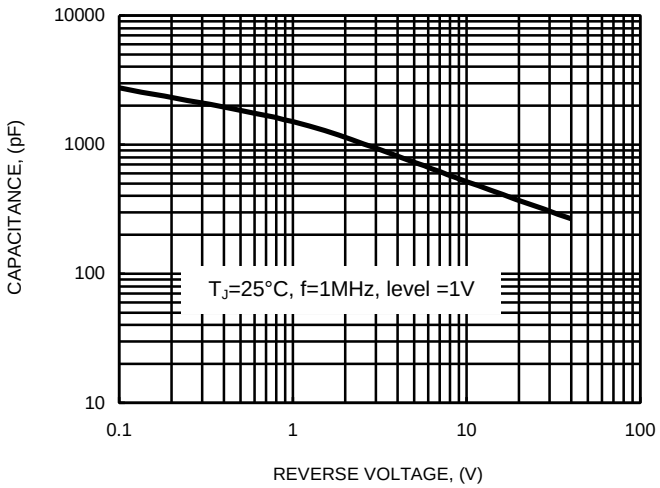
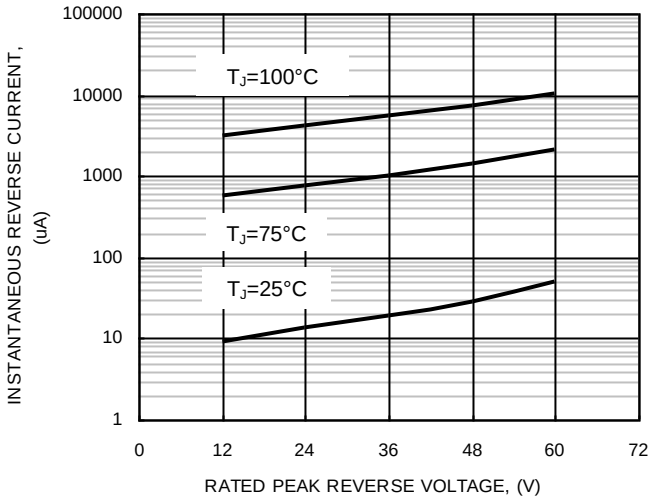


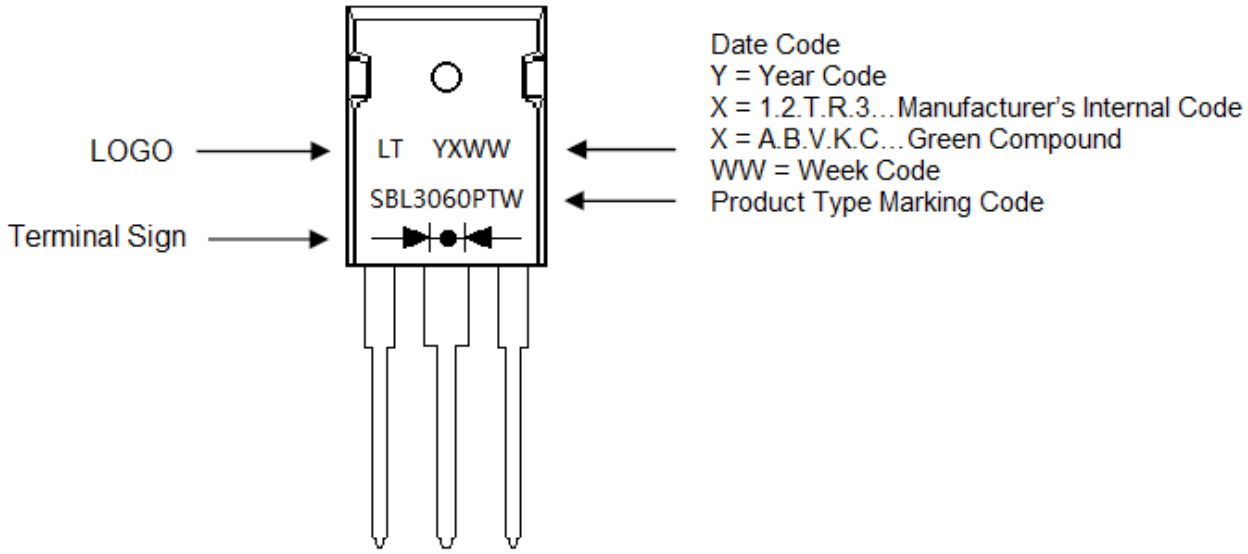
FIG.5 TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
SBL3060PTW	TO-247	30 pcs	Tube

Marking Information:



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