

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 60 Volts
FORWARD CURRENT – 30 Amperes

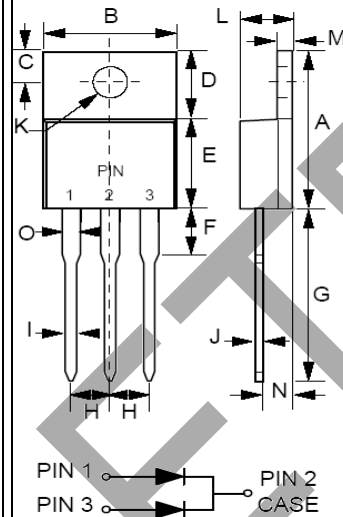
FEATURES

- 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 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)
- TO-220AB
 - **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- Available in "Green" Package: TO-220AB
 - **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
 - **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: TO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.08 ounces, 2.24 grams
- Mounting position: Any
- Max. mounting torque = 0.5N.m (5.1Kgf.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	1.70

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at +25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	SBL3060CT	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	60	V
Maximum RMS Voltage	V_{RMS}	42	V
Maximum DC Blocking Voltage	V_{DC}	60	V
Average Rectified Output Current @ $T_C=+95^\circ\text{C}$ See Fig.1	I_F	30	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	250	A
Maximum Forward Voltage (Note 4) $I_F=15\text{A}$ @ $T_J=+25^\circ\text{C}$	V_F	0.7	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=+25^\circ\text{C}$ $T_J=+100^\circ\text{C}$	I_R	0.1 50	mA
Typical Junction Capacitance per Element (Note 5)	C_J	500	pF
Typical Thermal Resistance Junction to Case (Note 6)	$R_{\theta JC}$	1.5	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	T_J	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to +150	$^\circ\text{C}$

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 reverse voltage of 4.0 V_{DC} .
6. Thermal Resistance Junction to Case, device mounted on L200 x W200 x H2mm_copper heat sink.

RATING AND CHARACTERISTIC CURVES
SBL3060CT

FIG.1- FORWARD CURRENT DERATING CURVE

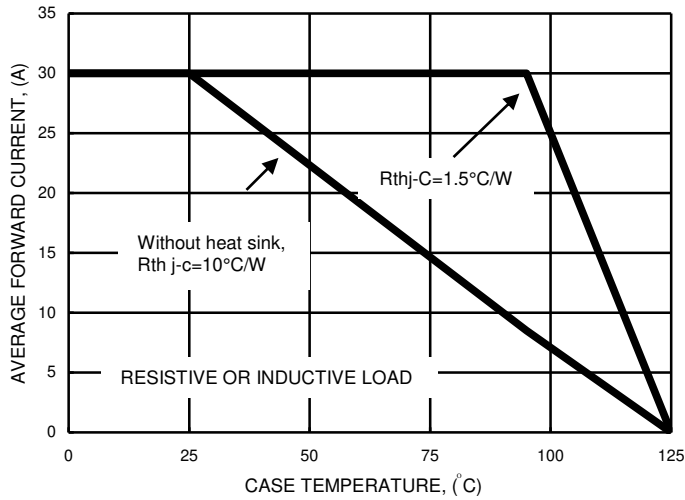


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

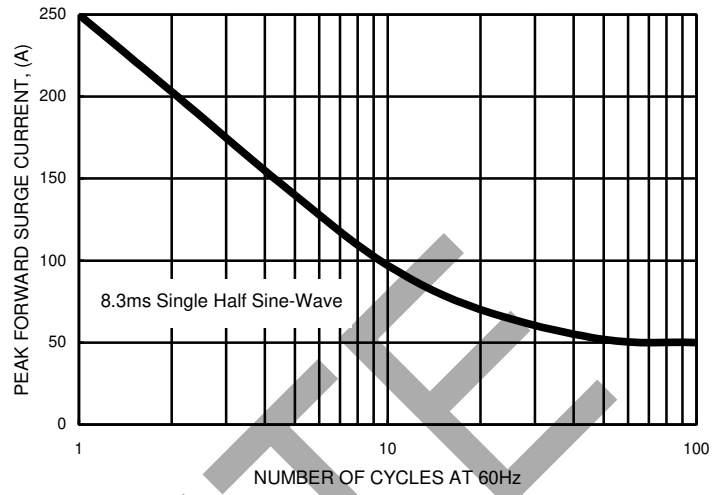


FIG.3- TYPICAL REVERSE CHARACTERISTICS

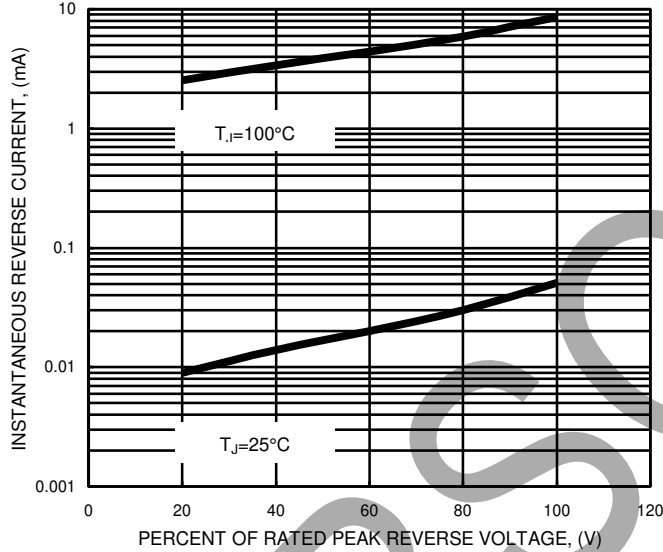


FIG.4- TYPICAL FORWARD CHARACTERISTICS

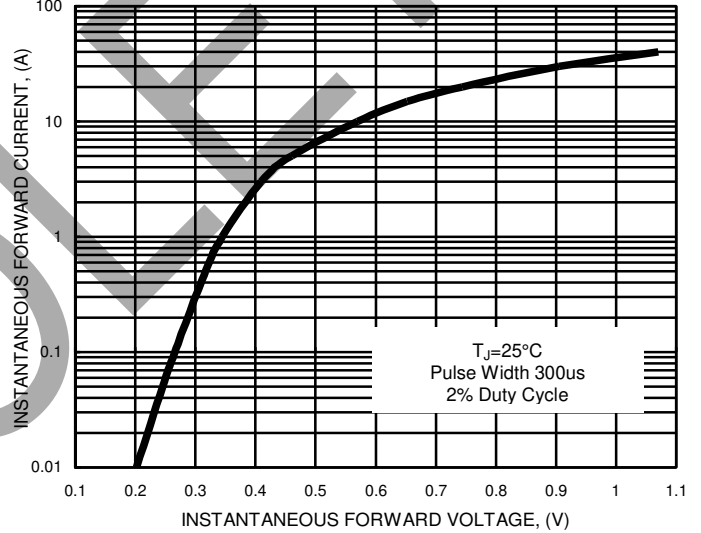


FIG.5- TYPICAL JUNCTION CAPACITANCE

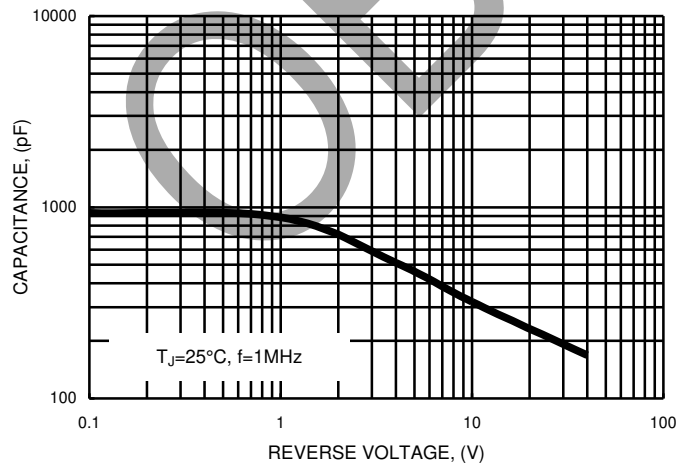
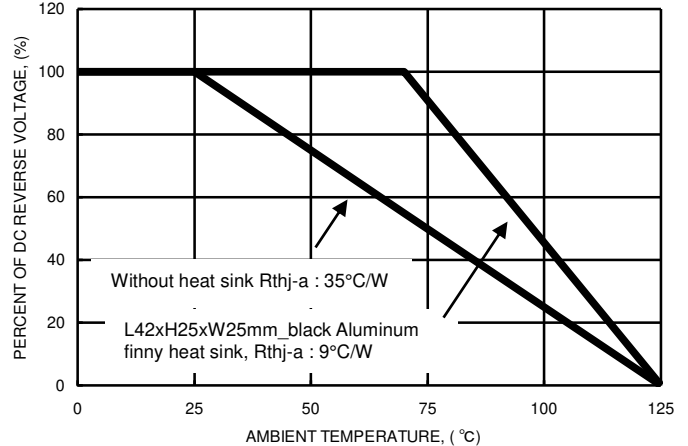


FIG.6- DC REVERSE VOLTAGE DERATING CURVE

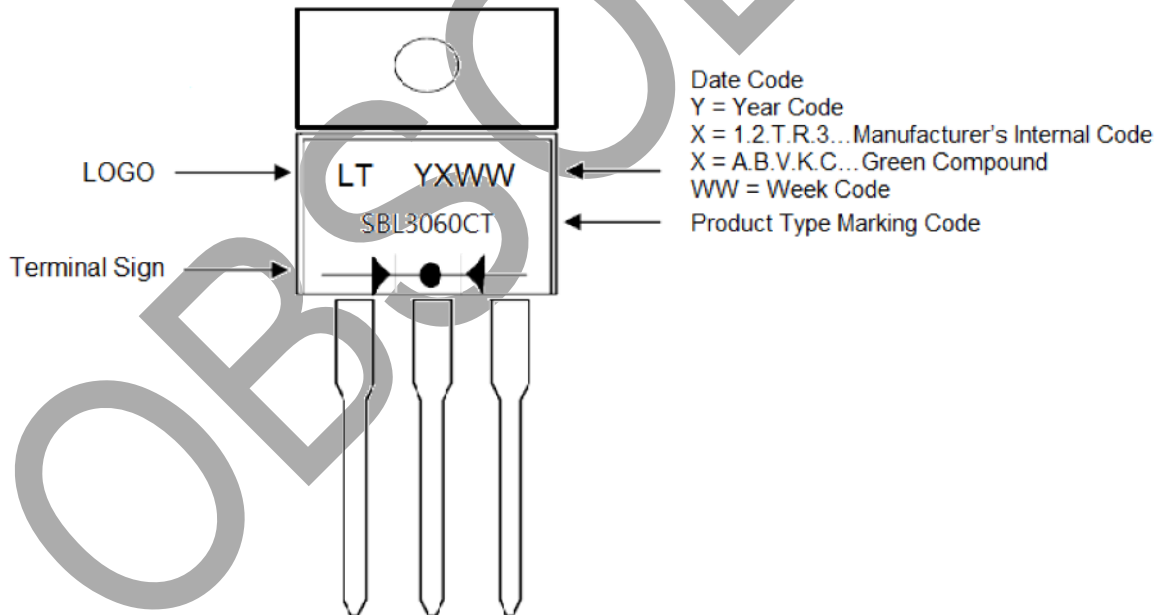


Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
SBL3060CT_HF	TO-220AB	50pcs	Tube
SBL3060CT-LS	TO-220AB	50pcs	Tube



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