

SBL1645CT-SBL1660CT(LS)

SCHOTTKY BARRIER RECTIFIERS

REVERSE VOLTAGE – 45 to 60 Volts
FORWARD CURRENT – 16 Amperes

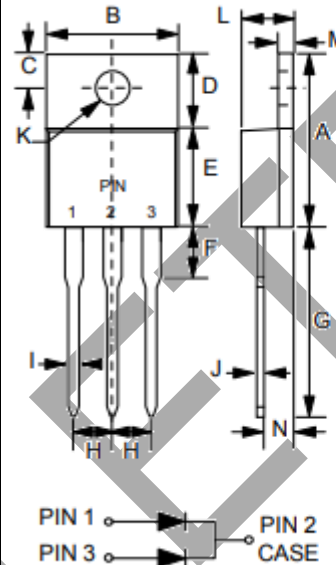
FEATURES

- 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
- IEC 61000-4-2, level 4 (ESD), >15KV (air)
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

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=0.5 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

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	SBL1645CT	SBL1660CT	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	45	60	V
Maximum RMS Voltage	V_{RMS}	31.5	42	V
Maximum DC Blocking Voltage	V_{DC}	45	60	V
Maximum Average Forward Rectified Current (See Fig.1) @TC=95°C	$I_{(AV)}$	16		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 3)	V_F	0.55	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	0.15 50		mA
Typical Junction Capacitance (Note 4)	C_J	350		pF
Typical Thermal Resistance (Note 5)	$R_{\theta JC}$	2.5		°C/W
Operating Temperature Range	T_J	-55 to +125		°C
Storage Temperature Range	T_{STG}	-55 to +150		°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. 300us Pulse Width, 2% Duty Cycle.
4. Measured at 1.0MHz and applied reverse voltage of 4.0 V_{DC}.
5. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES
SBL1645CT-SBL1660CT

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FIG.1 - FORWARD CURRENT DERATING CURVE

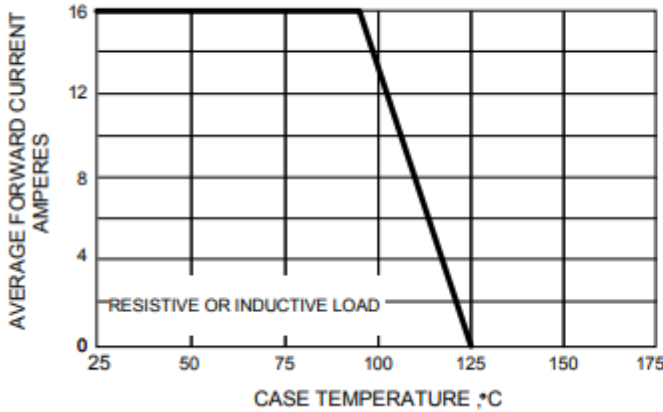


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

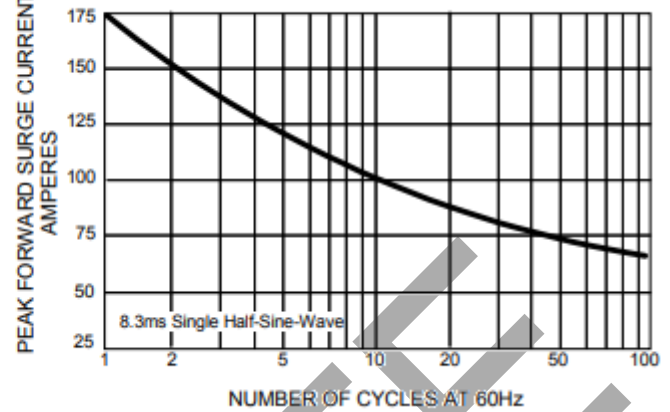


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

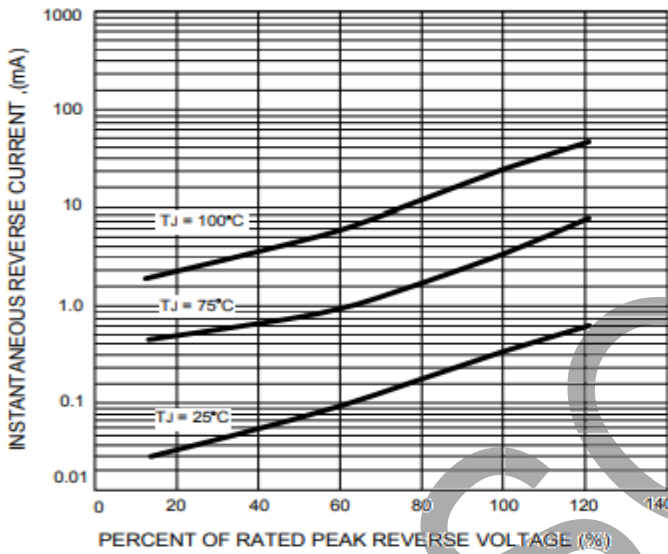


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

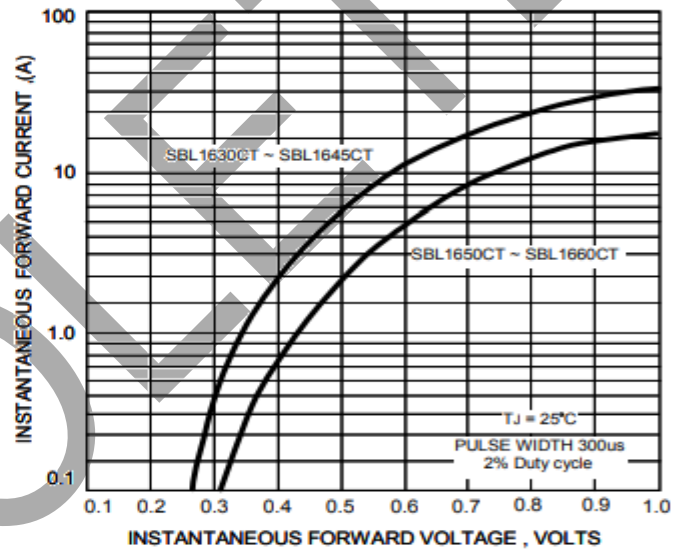
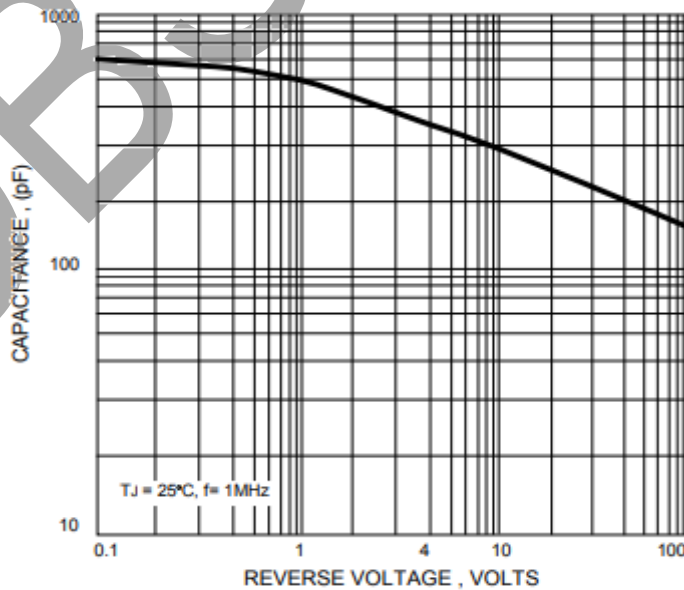


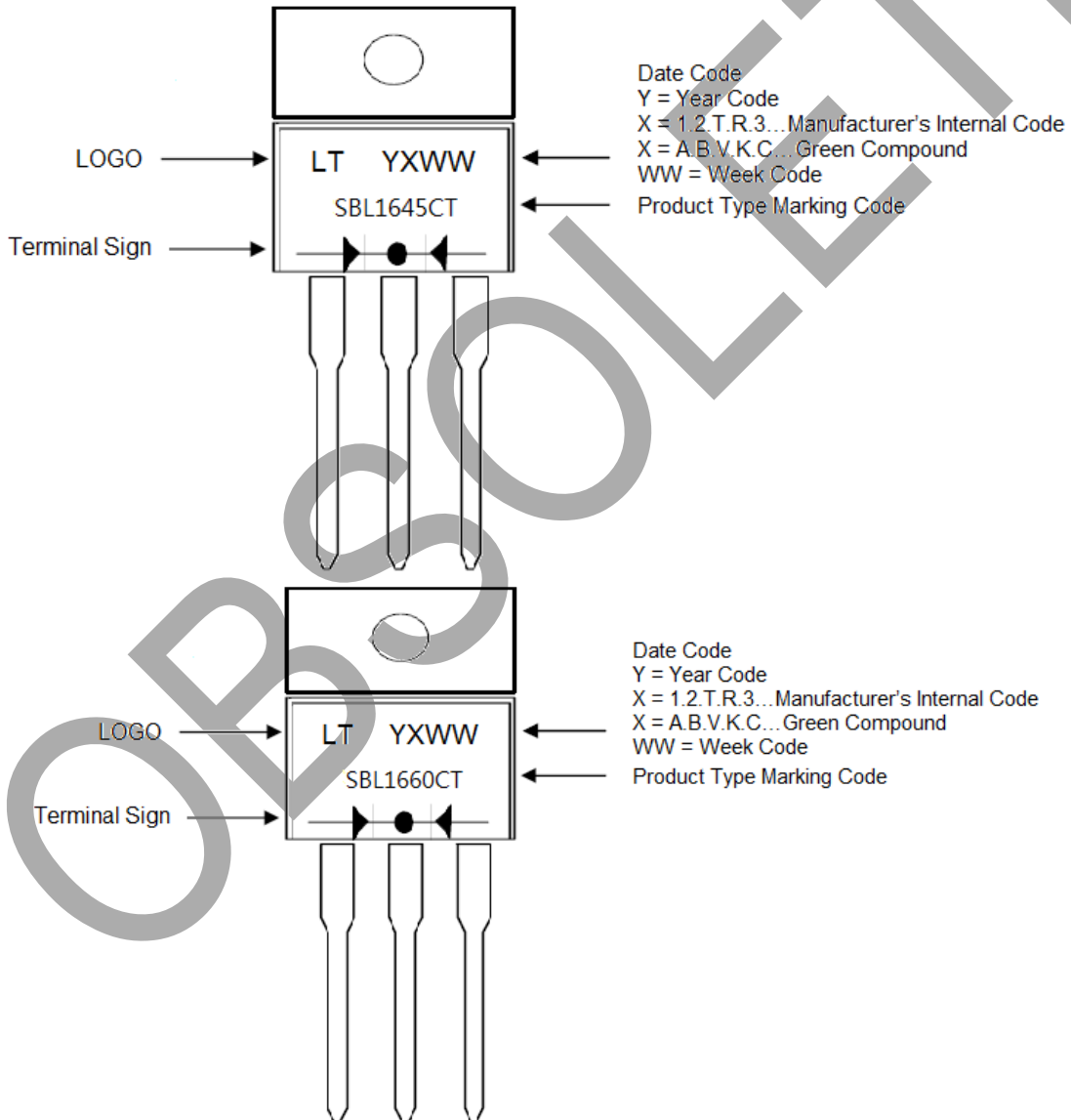
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
SBL1645CT-LS	TO-220AB	50pcs	Tube
SBL1660CT-LS	TO-220AB	50pcs	Tube

Marking Information:



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