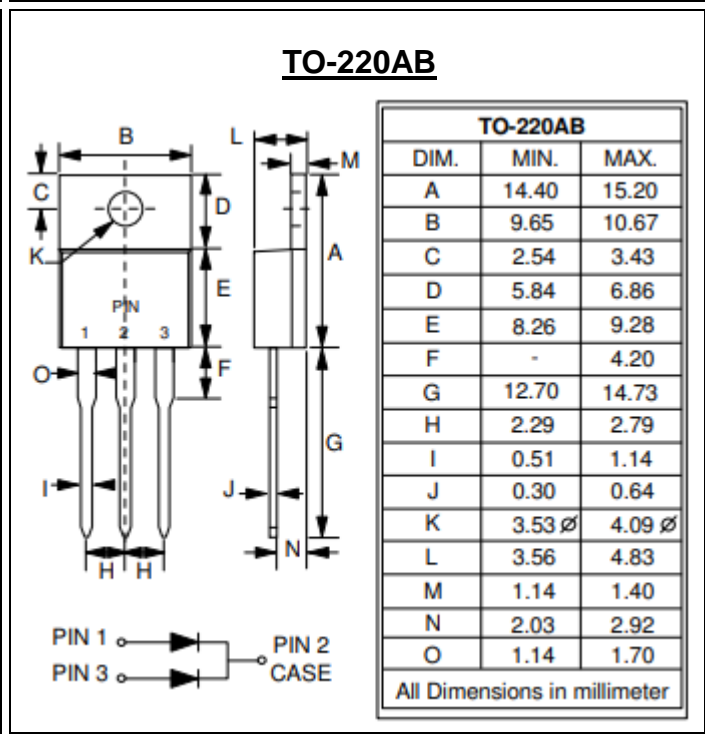


SBL1040CTW-SBL1045CTW

SCHOTTKY BARRIER RECTIFIERS	REVERSE VOLTAGE – 40 to 45 Volts FORWARD CURRENT – 10 Amperes
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- 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 capacity
 - Qualified according to AEC-Q101 Rev_C
 - Plastic package has UL flammability classification 94V-0
 - For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
 - **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
 - **Halogen and Antimony Free. "Green" Device (Note 3)**
- MECHANICAL DATA**
- Package : TO-220AB molded plastic
 - Terminals : Lead Free Plating (Matte Tin Finish)
 - 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)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
 Ratings at 25°C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	SBL1040CTW	SBL1045CTW	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	V
Maximum RMS Voltage	V_{RMS}	28	31.5	V
Maximum DC Blocking Voltage	V_{DC}	40	45	V
Maximum Average Forward Rectified Current (See Fig.1) @TC=95°C	$I_{(AV)}$	10		A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125		A
Maximum Forward Voltage at 5A DC (Note 4)	V_F	0.55		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @Tj=25°C @Tj=100°C	I_R	0.2 5		mA
Typical Junction Capacitance per element (Note 5)	C_J	250		pF
Typical Thermal Resistance (Note 6)	$R_{\theta JC}$	3.0		°C/W
Operating Temperature Range	T_J	-55 to +125		°C
Storage Temperature Range	T_{STG}	-55 to +150		°C

Note:

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 4.0V DC.
6. Thermal Resistance Junction to Case.

**RATING AND CHARACTERISTIC CURVES
SBL1040CTW-SBL1045CTW**

FIG.1 - FORWARD CURRENT DERATING CURVE

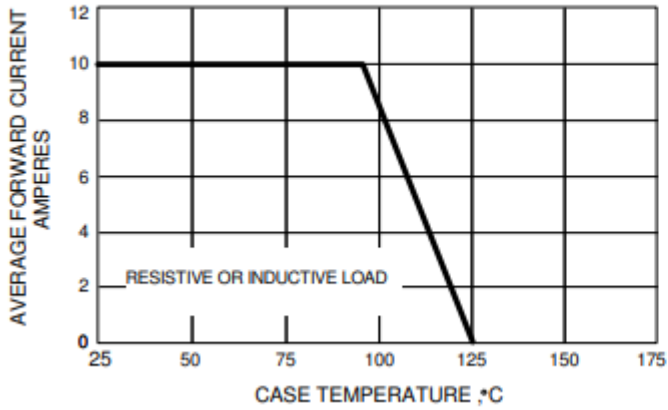


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

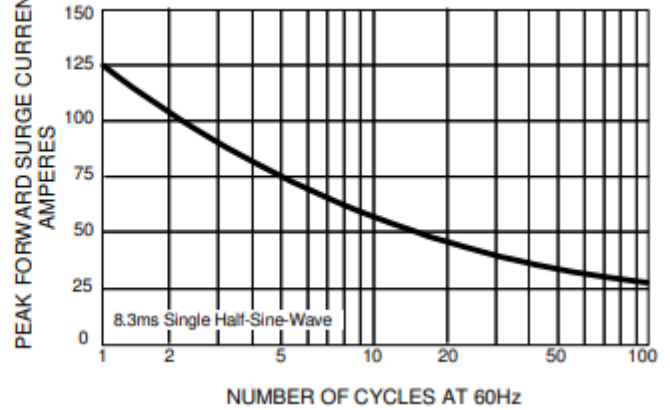


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

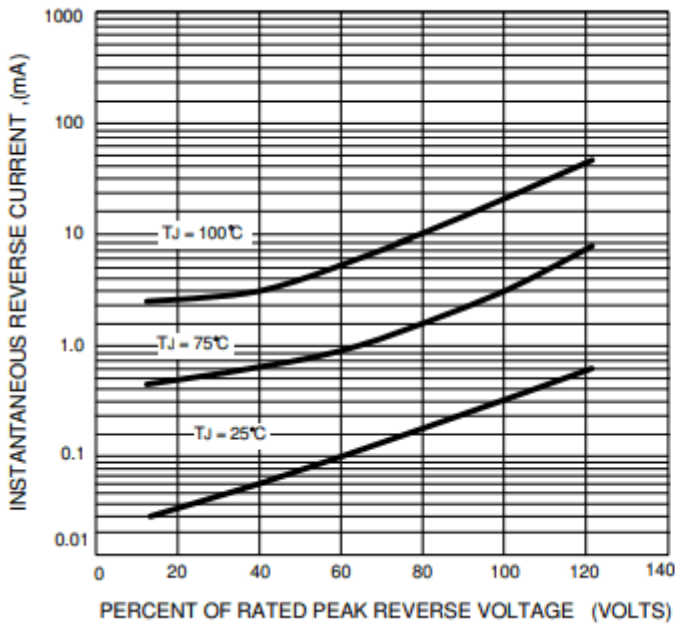


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

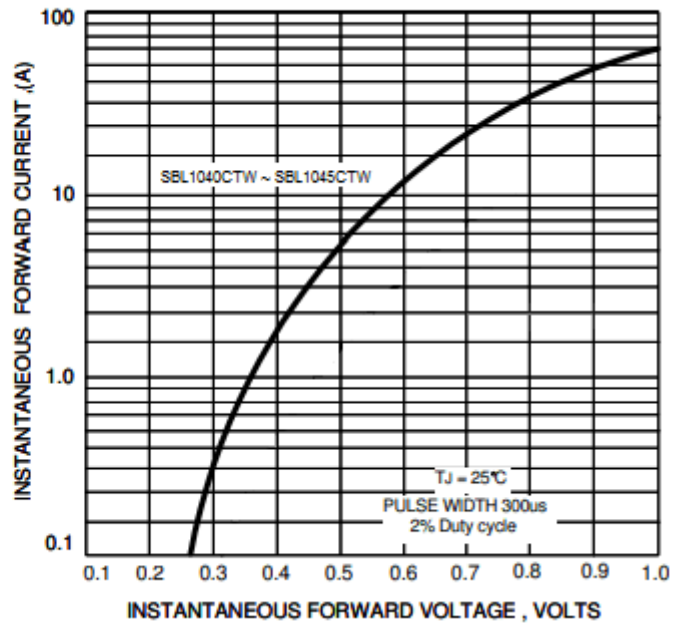
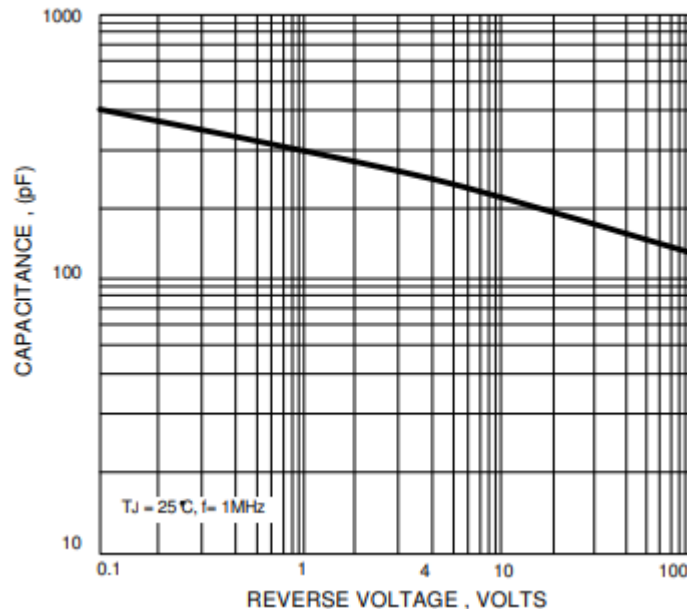


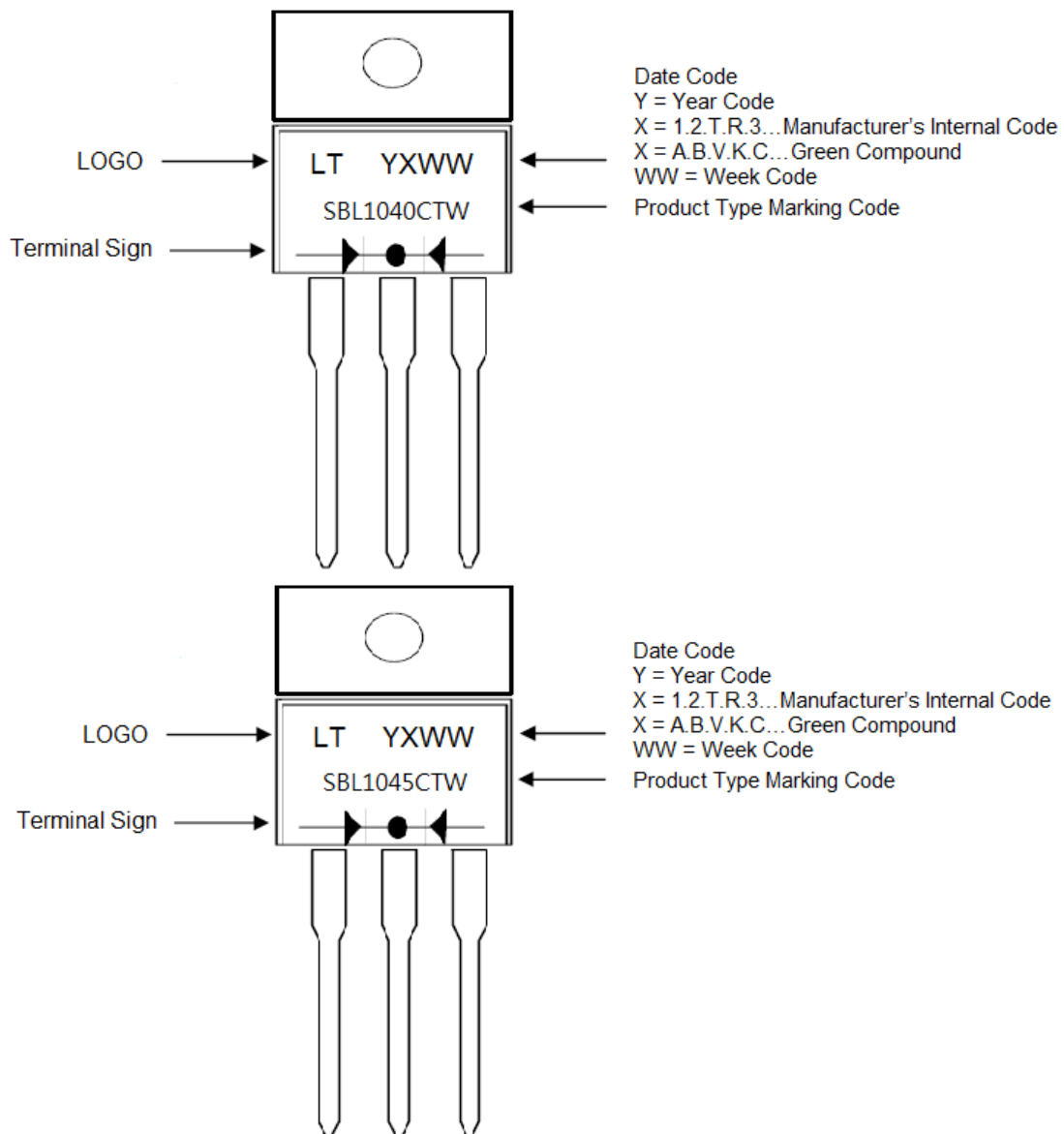
FIG.5 - TYPICAL JUNCTION CAPACITANCE



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
SBL1040CTW	TO-220AB	50pcs	Tube
SBL1045CTW	TO-220AB	50pcs	Tube

Marking Information :



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