

B3100B(LS)

**SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 3 Amperes**

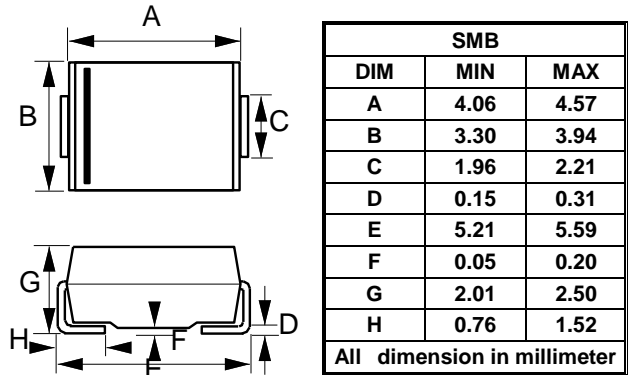
FEATURES

- For surface mounted application
- Metal-semiconductor junction with guardring
- Epitaxial construction
- Very low forward voltage drop
- High current capability
- Qualified according to AEC-Q101 Rec_C
- 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: Molded plastic
- Package Material: Molding compound, UL Flammability classification 94V-0, "Halogen-free"
- Polarity: Indicated by cathode band
- RoHS compliant
- Weight: 0.003 ounces, 0.093 grams

SMB



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	B3100B	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Maximum DC blocking voltage	V_{DC}	100	V
Maximum Average rectified output current	@ $T_L=100^\circ\text{C}$ $I_{(AV)}$	3.0	A
Peak Forward Surge Current 8.3ms single half sine-wave super imposed on rated load	I_{FSM}	100	A
Maximum forward Voltage at 3.0A DC	@ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$ V_F	0.79 0.69	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_J=25^\circ\text{C}$ @ $T_J=100^\circ\text{C}$ I_R	0.01 20	mA
Typical Junction Capacitance (Note 4)	C_T	120	pF
Typical Thermal Resistance (Note 5)	R_{thJL}	22	$^\circ\text{C/W}$
Operating Temperature Range	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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. Measured at 1.0MHz and applied voltage of 4.0V DC.
5. Unit mounted on 0.75t glass-epoxy substrate with 2x3mm copper pad.

RATING AND CHARACTERISTIC CURVES
B3100B(LS)

FIG.1 - FORWARD CURRENT DERATING CURVE

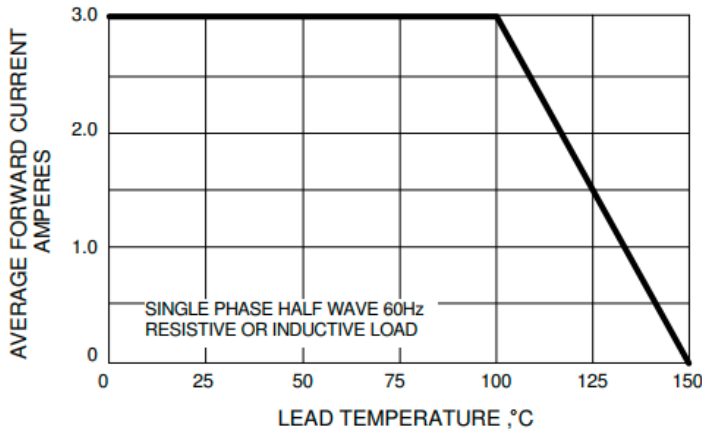


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

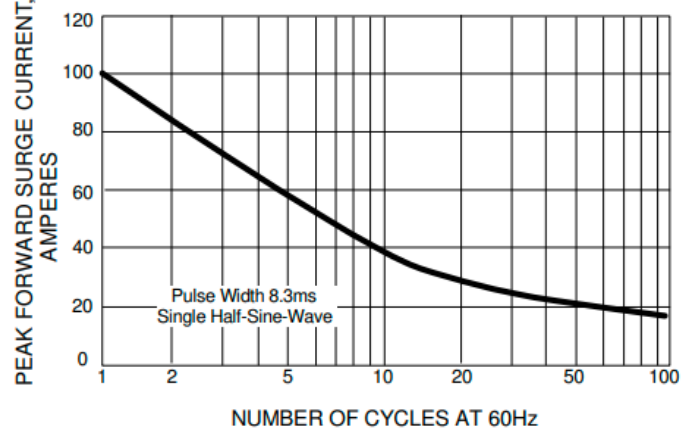


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

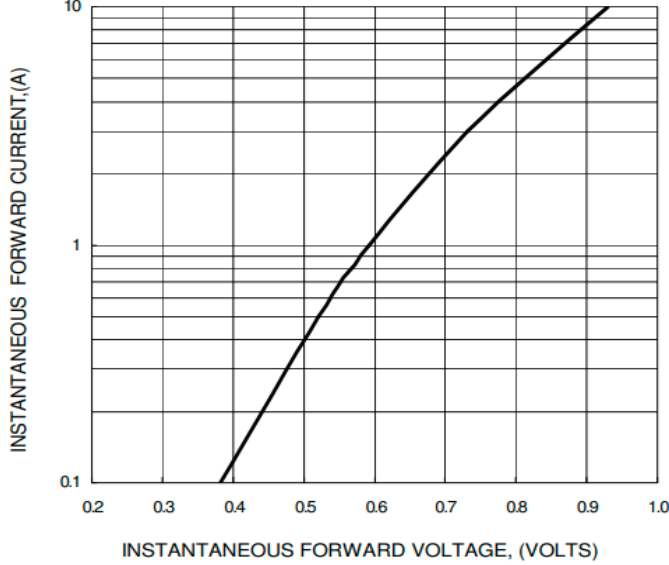


FIG.4 - TYPICAL JUNCTION CAPACITANCE

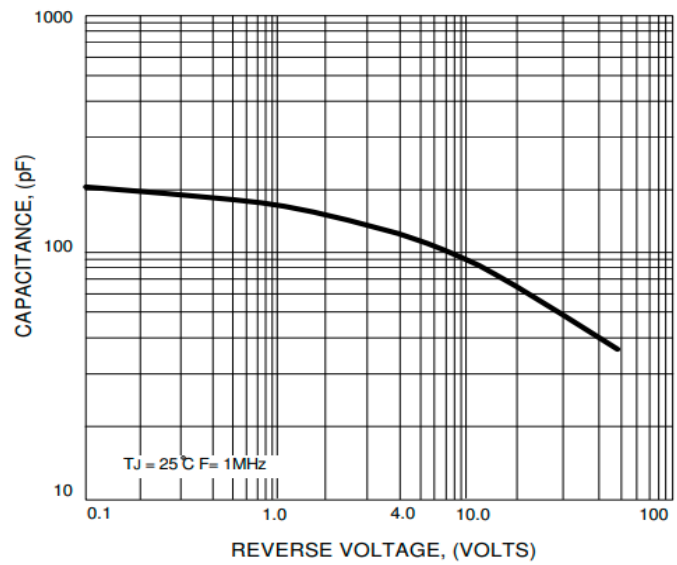
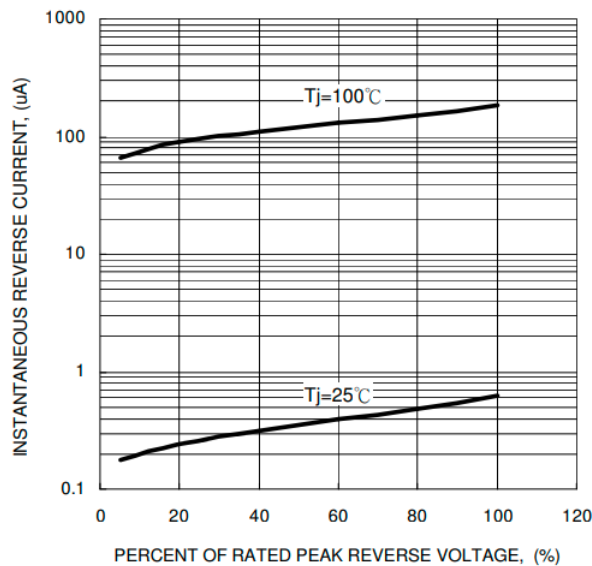


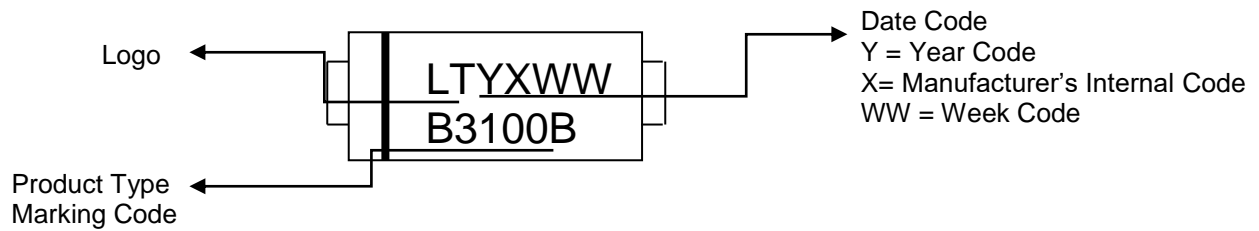
FIG.5 - TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
B3100B	SMB	3000	Tape & Reel

Marking Information:



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