

**SURFACE MOUNT  
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 100 Volts  
FORWARD CURRENT – 1 Amperes**

**FEATURES**

- For surface mounted application
- Epitaxial construction
- Low forward voltage drop and high current capability
- Qualification is according to AEC-Q101 Rev\_C
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

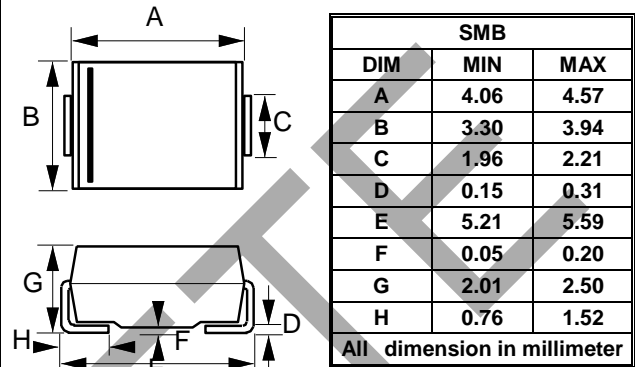
**APPLICATION**

- DC-DC
- AC-DC
- Polarity protection diodes

**MECHANICAL DATA**

- Package: JEDEC DO-214AA
- Package Material: "Green" molding compound, UL flammability classification 94V-0, "Halogen-free".
- Moisture Sensitivity Level 1 per J-STD-020
- Lead free finish, RoHS compliant
- Weight: 0.102 grams (Approximate)
- Marking code: B1100B

**SMB**



**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	$V_{RRM}$	100	V
Maximum DC blocking voltage	$V_{DC}$	100	V
Maximum Average rectified output current	$I_{(AV)}$	1	A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load.	$I_{FSM}$	30	A
Operating junction and Storage Temperature range	$T_J, T_{STG}$	-55 ~ +150	°C

**STATIC ELECTRICAL CHARACTERISTICS**

PARAMETER	TEST CONDITIONS		SYMBOL	TYP	MAX	UNIT
Forward voltage (Note 4)	$I_F=1A$	$T_J=25^\circ C$ $T_J=100^\circ C$	$V_F$	-- 0.65	0.79 0.69	V
Reverse Leakage current	$V_R=100V$	$T_J=25^\circ C$ $T_J=100^\circ C$	$I_R$	-- 0.05	0.02 5	mA
Typical junction capacitance (Note 5)			$C_j$	40		pF

**THERMAL CHARACTERISTICS**

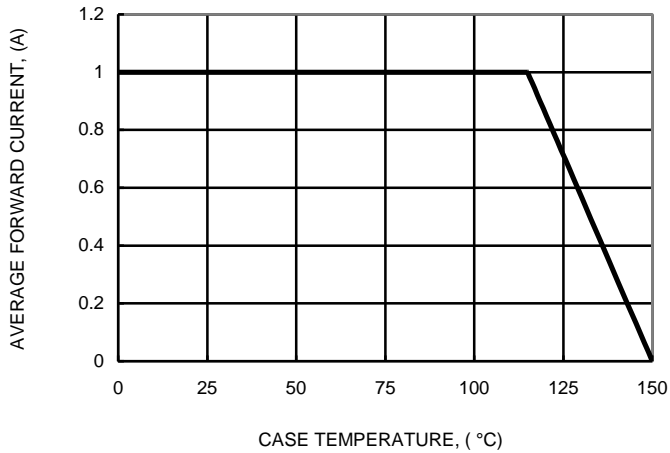
PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Notes 6,7)	$R_{thJc}$	45	°C/W
	$R_{thJL}$	35	°C/W

- 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. 300µs 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 glass-epoxy substrate with 1oz/ft<sup>2</sup> 4mmX7mm copper pad.

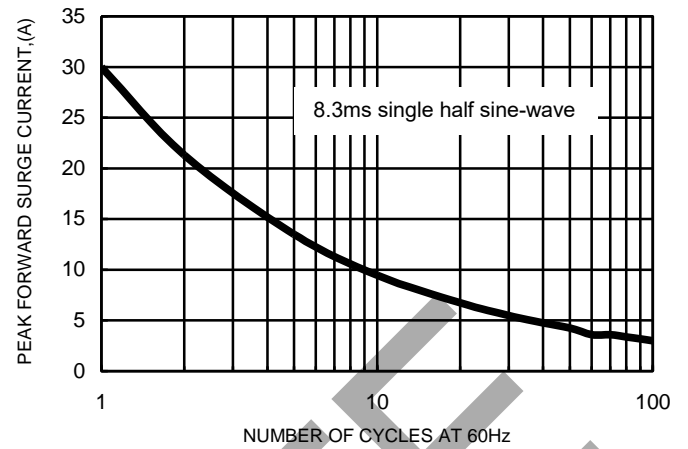
**RATING AND CHARACTERISTIC CURVES**  
**B1100B(LS)**

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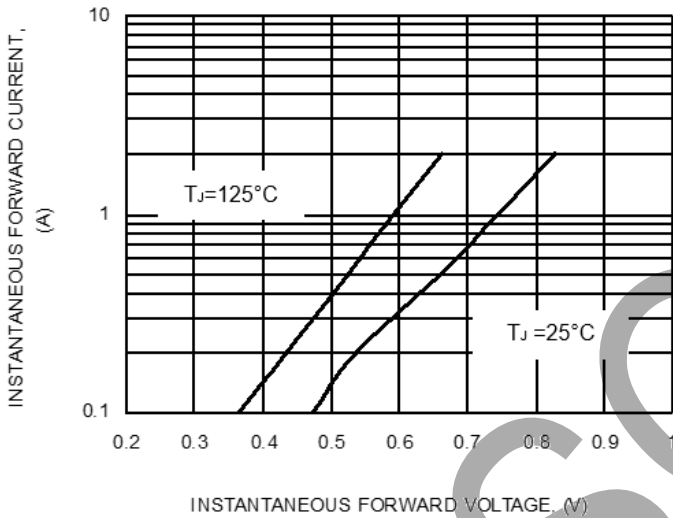
**FIG.1 FORWARD CURRENT DERATING CURVE**



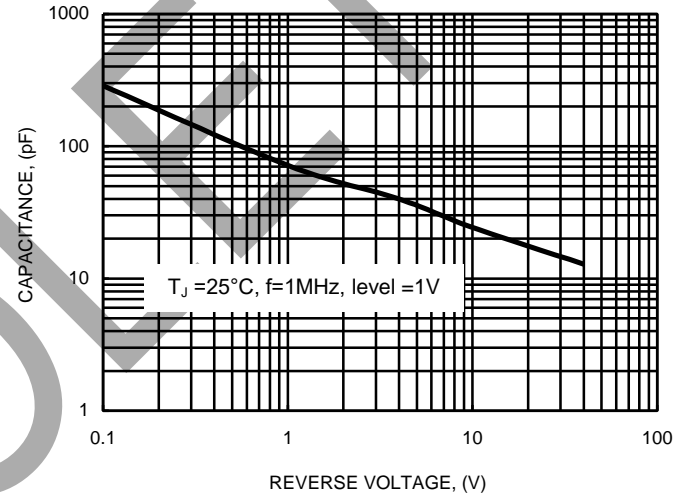
**FIG.2 MAXIMUM NON-REPETITIVE SURGE CURRENT**



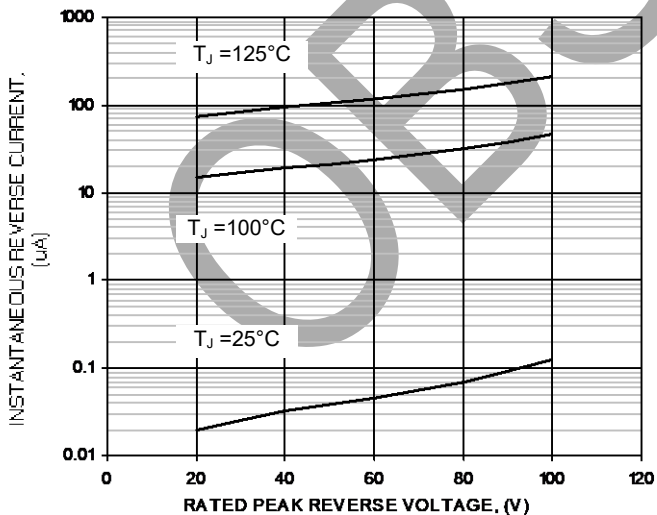
**FIG.3 TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



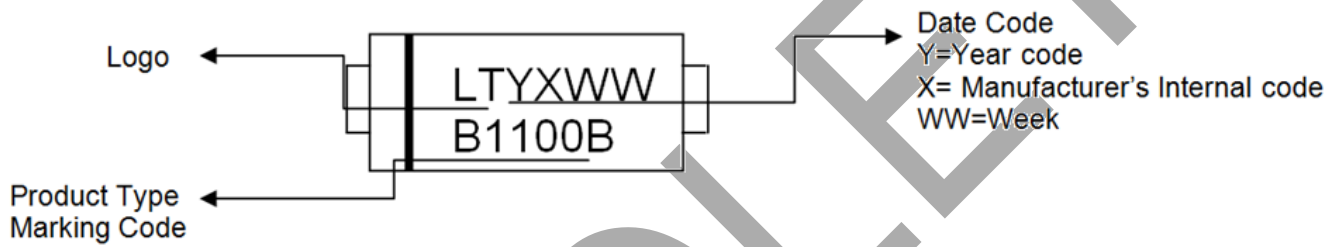
**FIG.5 TYPICAL REVERSE CHARACTERISTICS**



**Ordering Information:**

Part Number	Package	Packing	
		Qty.	Carrier
B1100B	SMB	3000	Tape & Reel

**Marking Information:**



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