

**SURFACE MOUNT
SCHOTTKY BARRIER RECTIFIER**

**REVERSE VOLTAGE – 100Volts
FORWARD CURRENT – 2.0 Ampere**

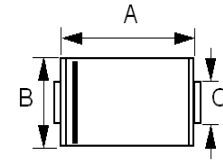
FEATURES

- Very Low forward voltage drop
- High current capability
- Qualified according to JEDEC
- 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)**

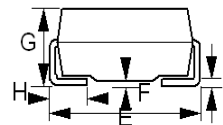
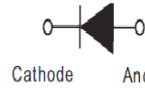
MECHANICAL DATA

- Case: JEDEC DO-214AC
- Case Material: Molding compound, UL Flammability classification 94V-0, (No Br. Sb. Cl.) "Halogen-free".
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Lead Free Plating (Matte Tin Finish.)
- Polarity indicator: Cathode Band

SMA



COLOR BAND DENOTES CATHODE



SMA		
DIM.	MIN.	MAX.
A	4.06	4.57
B	2.29	2.92
C	1.27	1.63
D	0.15	0.31
E	4.83	5.59
F	0.05	0.20
G	2.01	2.40
H	0.76	1.52

All Dimensions in millimeter

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	B2100A		UNIT	
Device marking code	Note	B2100A		---	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100		V	
Maximum RMS Voltage	V_{RMS}	70		V	
Average Rectified Output Current @ $T_L=110^\circ\text{C}$	$I_{(AV)}$	2.0		A	
Peak Forward Surge Current 8.3ms single half sine-wave	I_{FSM}	50		A	
Typical junction capacitance (4)	C_J	70		pF	
Operating junction and storage temperature range	T_{STG}, T_J	-65 to +150		°C	
PARAMETER	TEST CONDITIONS	SYMBOL	Min.	Max.	UNIT
Breakdown voltage	$I_R=20\mu\text{A}$ $T_j=25^\circ\text{C}$	V_B	100	---	V
Forward Voltage (5)	$I_F=2.0\text{A}$ $T_j=25^\circ\text{C}$ $T_j=100^\circ\text{C}$	V_F	---	0.79 0.69	V
Leakage Current	$V_R=100\text{V}$ $T_j=25^\circ\text{C}$ $T_j=100^\circ\text{C}$	I_R	---	0.02 15	mA
THERMAL CHARACTERISTIC		SYMBOL	Typical		UNIT
Typical thermal resistance_Junction to Case (6)		$R_{\theta JC}$	30		°C/W
Typical thermal resistance_Junction to Ambient		$R_{\theta JA}$	90		°C/W
Typical thermal resistance_Junction to Lead		$R_{\theta JL}$	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) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (5) 300us Pulse width, 2% Duty cycle.
- (6) Thermal Resistance test performed in accordance with JESD-51.
(Unit mounted on 0.75t glass-epoxy substrate with 2x3 mm copper pad.)

REV.-9, Oct-2021, KSHA15

RATING AND CHARACTERISTIC CURVES
B2100A(LS)

FIG.1- FORWARD CURRENT DERATING CURVE

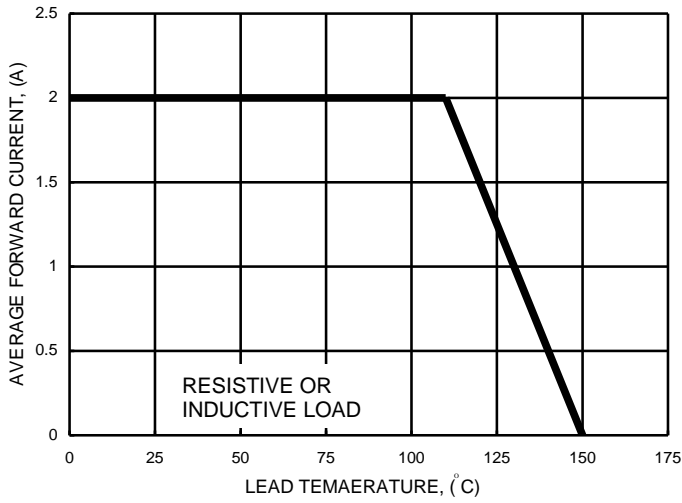


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

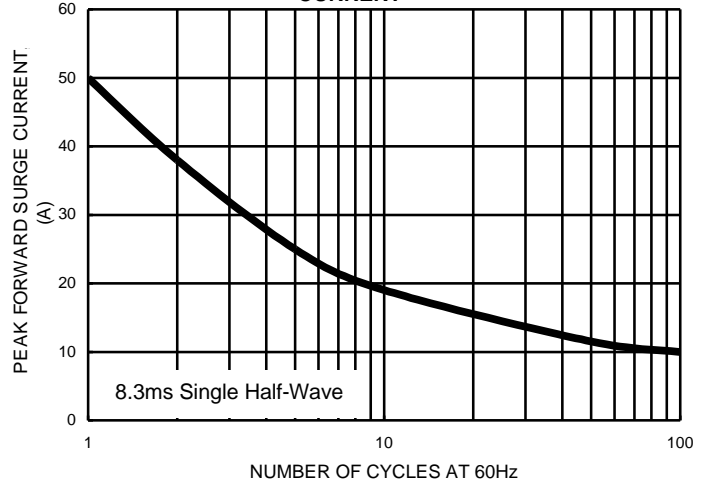


FIG.3- TYPICAL FORWARD CHARACTERISTICS

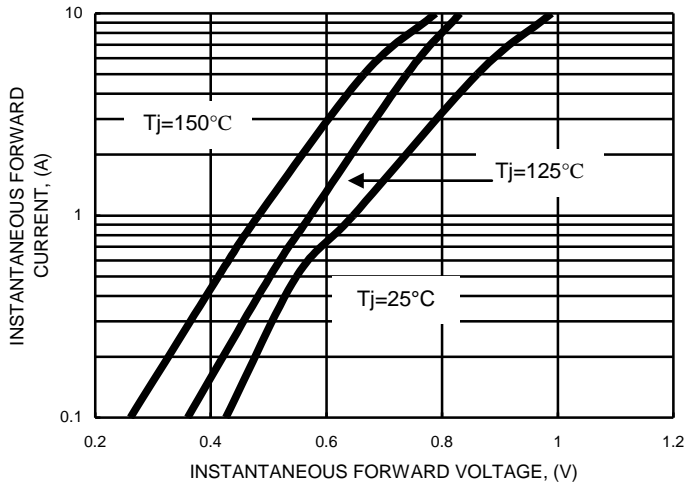


FIG.4- TYPICAL JUNCTION CAPACITANCE

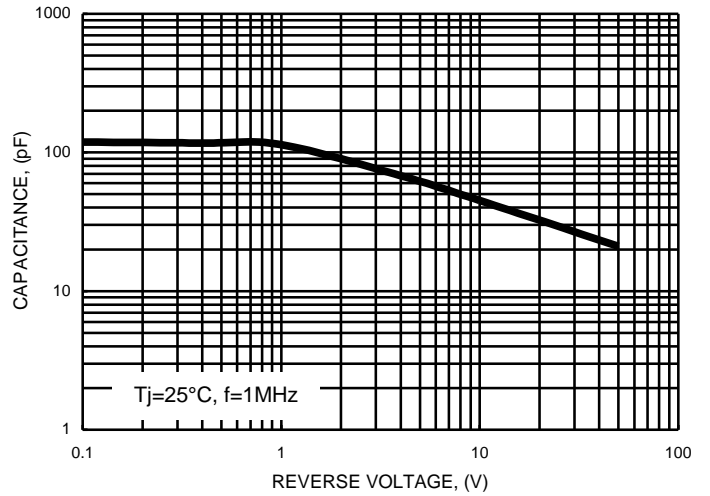
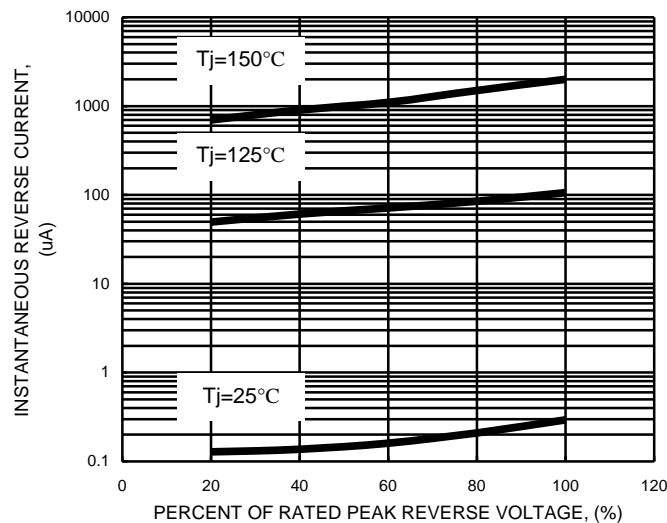


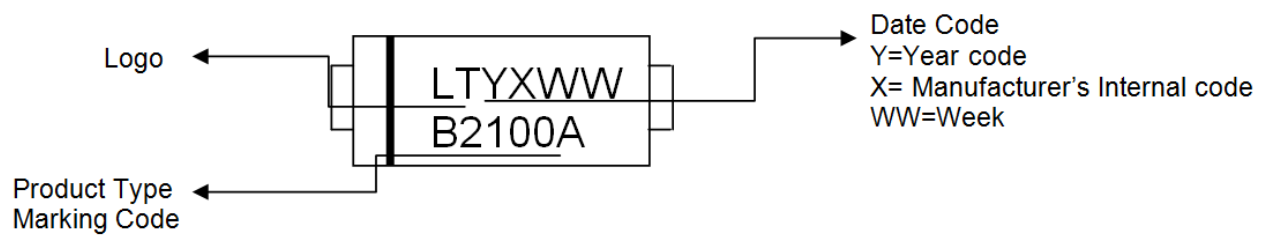
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information :

Part Number	Case	Packaging
B2100A	SMA	5000 / Tape & Reel

Marking Information :



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