

SCHOTTKY BARRIER RECTIFIERS

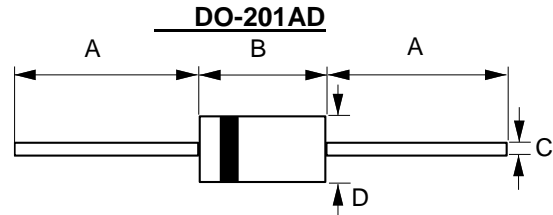
REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 5.0 Amperes

FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop and high current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection application
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

MECHANICAL DATA

- Package: JEDEC DO-201AD molded plastic
- Package Material: Molding compound, UL flammability classification 94V-0
- Mounting Position: Any
- Polarity: Color band denotes cathode
- Weight: 1.0675 grams (Approximate)



DO-201 AD		
DIM	MIN	MAX
A	25.4	--
B	7.30	9.50
C	1.20Φ	1.30Φ
D	4.80Φ	5.30Φ
All Dimensions in millimeter		

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 forward current	I_F	5.0	A
Peak forward surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	125	A
Operating and storage temperature range	T_J, T_{STG}	-55 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage (Note 4)	$I_F=5A$ $T_J=25^\circ C$ $T_J=125^\circ C$	V_F	0.85 0.75	V
Reverse leakage current at rated DC blocking voltage	$T_J=25^\circ C$ $T_J=125^\circ C$	I_R	0.02 50	mA
Typical junction capacitance (Note 5)		C_j	135	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Note 6)	R_{thJ_a} R_{thJ_L} R_{thJ_C}	30 8 10	°C/W

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. 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 with, 2% duty cycle
5. Measured at 1.0MHz and reverse voltage of 4.0V DC.
6. Thermal resistance junction to Ambient, Lead and Case.

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RATING AND CHARACTERISTIC CURVES

SB5100

FIG.1- FORWARD CURRENT DERATING CURVE

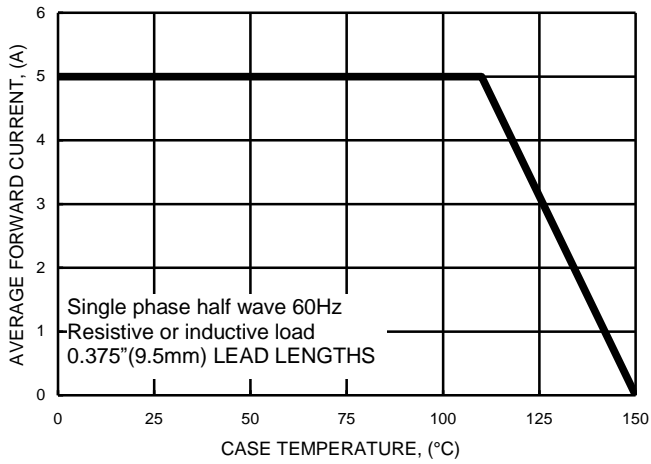


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

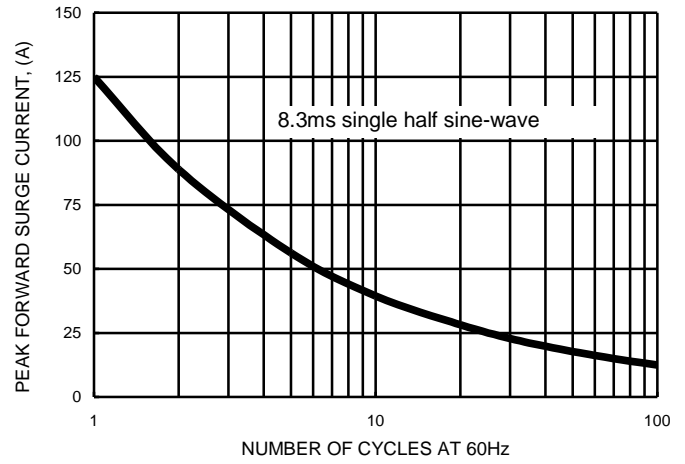


FIG.3- TYPICAL FORWARD CHARACTERISTICS

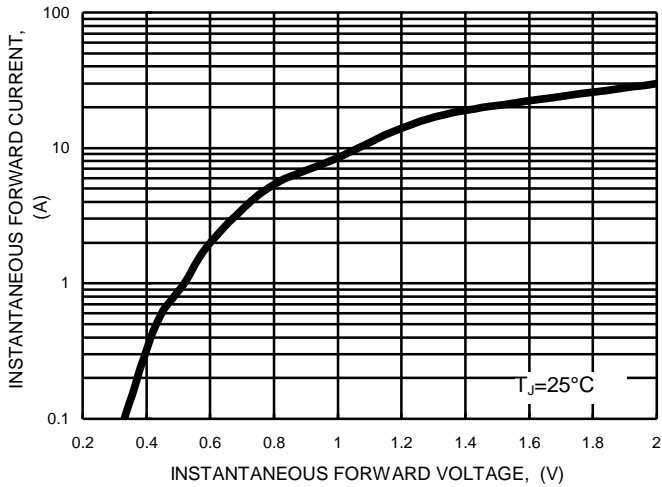


FIG.4- TYPICAL JUNCTION CAPACITANCE

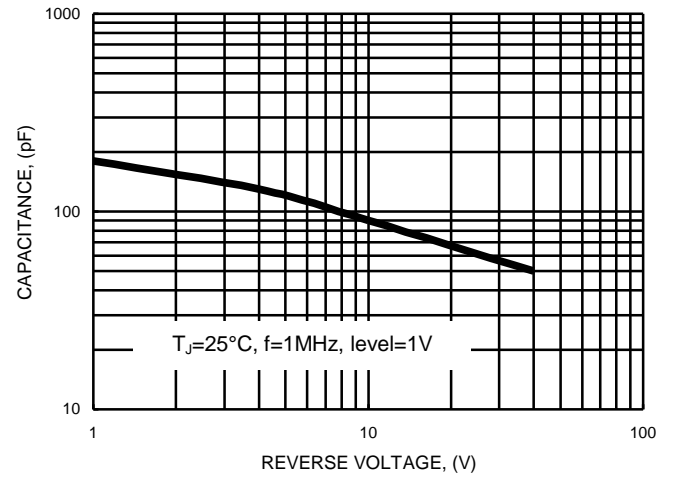
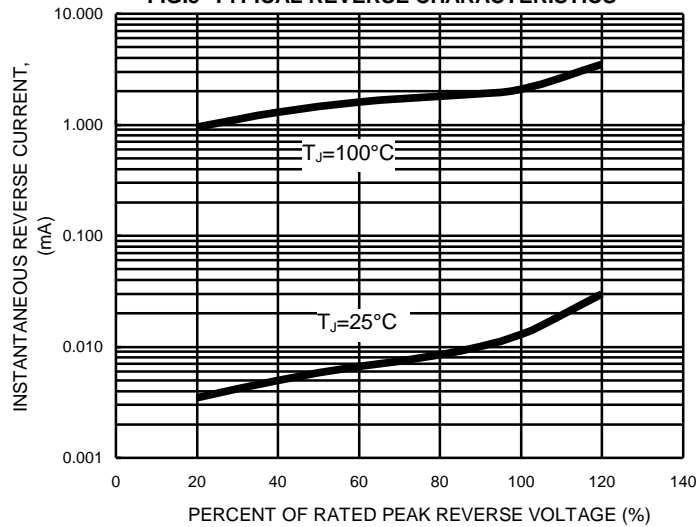


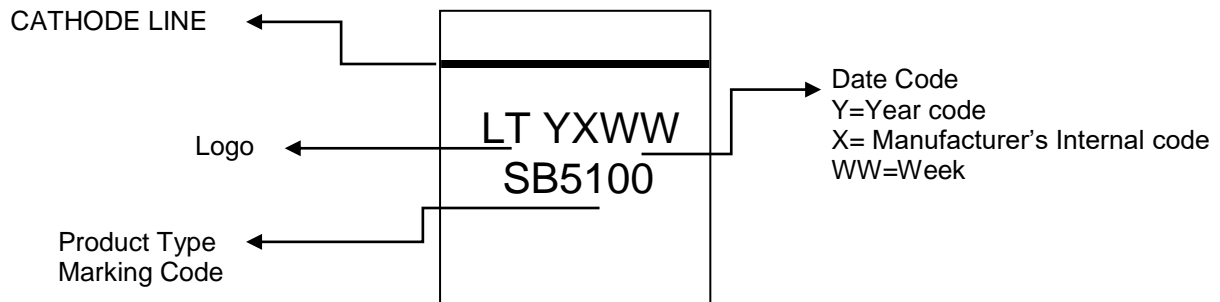
FIG.5- TYPICAL REVERSE CHARACTERISTICS



Ordering Information:

Part Number	Package	Packing	
		Qty.	Carrier
SB5100	DO-201AD	1200	Tape & Reel
SB5100_FC	DO-201AD	500	Bulk Pack
SB5100_MC175	DO-201AD	500	Bulk Pack
SB5100_FR	DO-201AD	500	Bulk Pack
SB5100-A52	DO-201AD	1000	Ammo Box

Marking Information:



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