

SCHOTTKY BARRIER RECTIFIER

**REVERSE VOLTAGE – 150 Volts
FORWARD CURRENT – 3.0 Amperes**

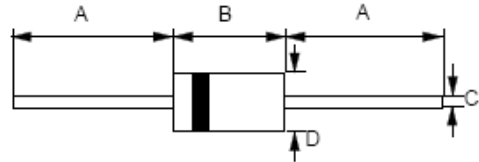
FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- 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
- Polarity: Color band denotes cathode
- Weight: 1.0675 grams (Approximate)
- Mounting position: Any

DO-201AD



DO-201AD		
Dim.	Min.	Max.
A	25.4	-
B	7.30	9.50
C	1.20	1.30
D	4.80	5.30
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}	150	V
Maximum RMS Voltage	V_{RMS}	105	V
Maximum DC blocking voltage	V_{DC}	150	V
Average rectified forward current	$I_{(AV)}$	3.0	A
@ $T_L=120^\circ\text{C}$			
Peak forward surge 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	80	A
Operating and Storage temperature range	T_J, T_{STG}	-55 ~ +175	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP	MAX	UNIT
Forward voltage	$I_F = 3\text{A}$ $T_J = 25^\circ\text{C}$	V_F	--	0.95	V
Reverse leakage current	$V_R = 150\text{V}$ $T_J = 25^\circ\text{C}$ $T_J = 150^\circ\text{C}$	I_R	--	0.01 20	mA
Typical junction capacitance (Note 4)		C_J		105	pF

THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Typical thermal resistance (Notes 5, 6)	R_{thJc} R_{thJA}	12 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 4.0 VDC.
 5. Thermal Resistance Junction to Lead.
 6. Thermal Resistance Junction to Case.

RATING AND CHARACTERISTIC CURVES
SB3150

FIG.1- FORWARD CURRENT DERATING CURVE

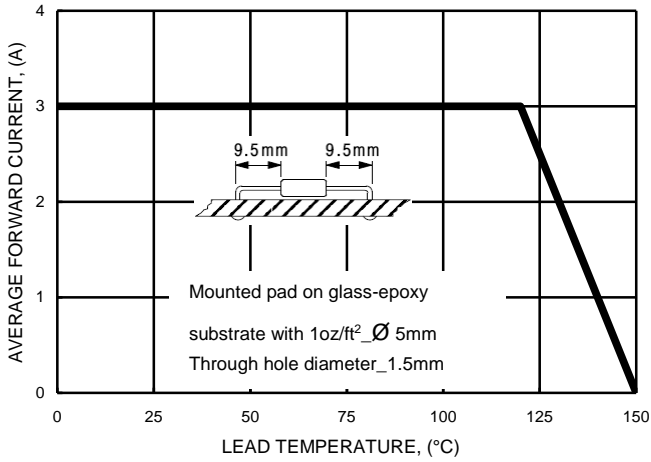


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

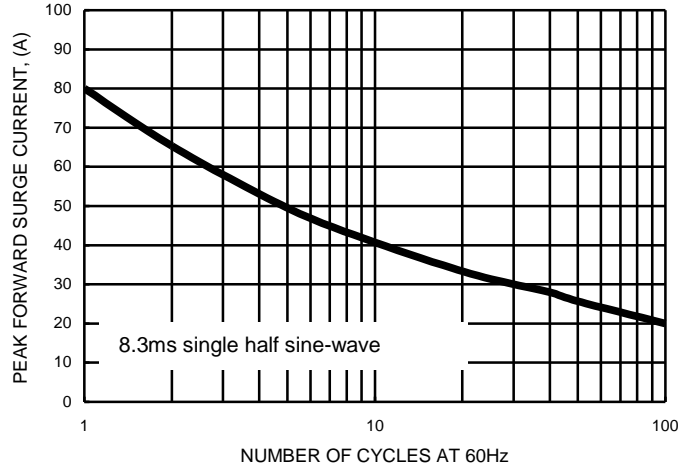


FIG.3- TYPICAL FORWARD CHARACTERISTICS

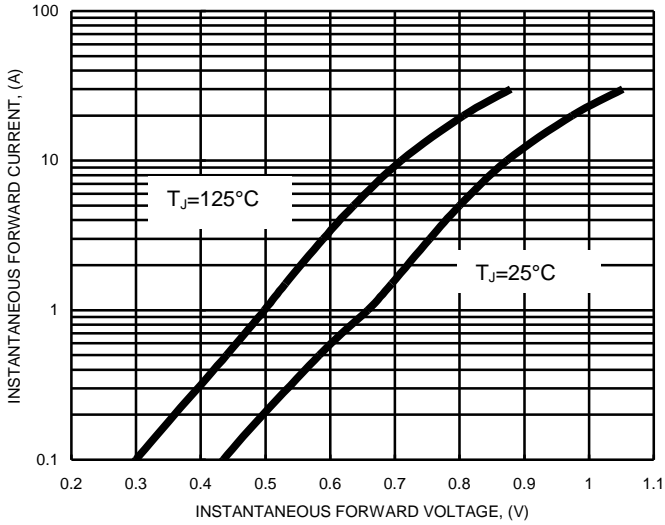


FIG.4- TYPICAL JUNCTION CAPACITANCE

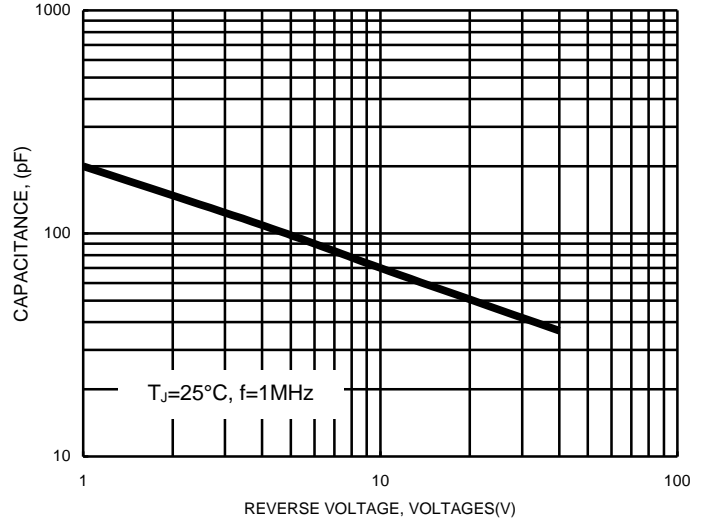


FIG.5- TYPICAL REVERSE CHARACTERISTICS

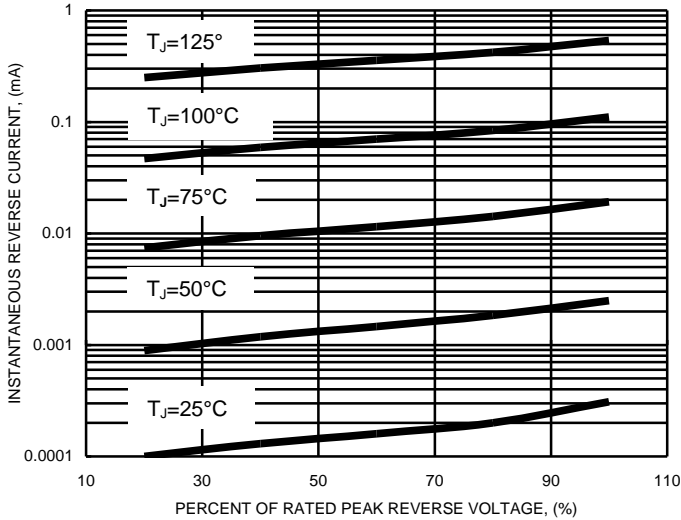
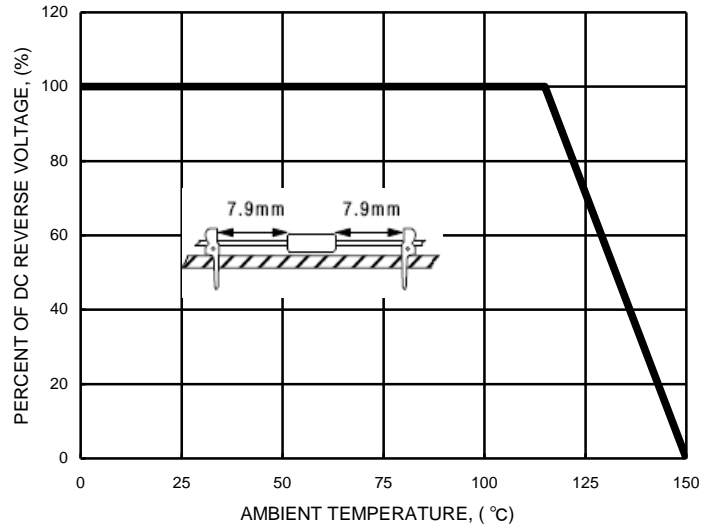


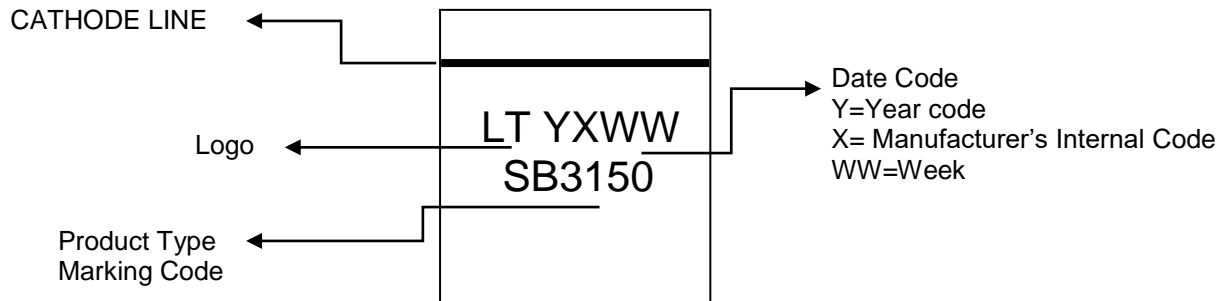
FIG.6- DC REVERSE VOLTAGE DERATING CURVE



Ordering Information :

Part Number	Package	Packing	
		Qty.	Carrier
SB3150	DO-201AD	1200	Tape & Reel
SB3150_M20	DO-201AD	500	Bulk Pack
SB3150E	DO-201AD	500	Bulk Pack

Marking Information :



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