



**THE DATASHEET OF
SB3100-B**



Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low-Power Loss, High Efficiency
- High-Surge Capability
- High-Current Capability and Low-Forward Voltage Drop
- Surge Overload Rating to 80A Peak
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](#) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

- Package: DO-201AD
- Package Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Tin. Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Cathode Band
- Weight: 1.1 grams (Approximate)

Ordering Information (Note 3)

Part Number	Package	Packing	
		Qty.	Carrier
SB380-T	DO-201AD	1.2K	13" Tape & Reel
SB3100-T	DO-201AD	1.2K	13" Tape & Reel

- 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. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

Maximum Ratings and Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SB380	SB3100	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	80	100	V
Working Peak Reverse Voltage	V _{RWM}			
DC Blocking Voltage	V _R			
RMS Reverse Voltage	V _{R(RMS)}	56	70	V
Average Rectified Output Current (Note 4)	I _O	3.0		A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	100		A
Forward Voltage @ I _F = 3.0A	V _{FM}	0.79		V
Peak Reverse Current @ T _A = +25°C	I _{RM}	0.5		mA
at Rated DC Blocking Voltage @ T _A = +100°C		20		
Typical Junction Capacitance (Note 5)	C _J	250		pF

- Notes:
4. Measured at ambient temperature at a distance of 9.5mm from the case.
 5. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

Thermal Characteristics

Characteristic	Symbol	SB380	SB3100	Unit
Typical Thermal Resistance Junction to Ambient	R _{θJA}	20		K/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150		°C

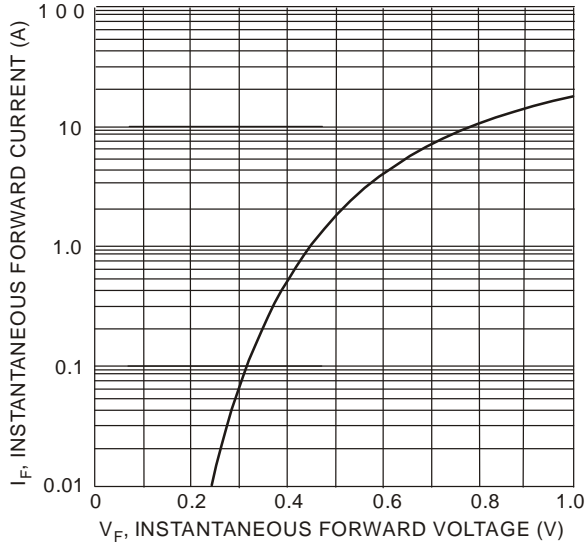


Fig. 1 Typical Forward Characteristics

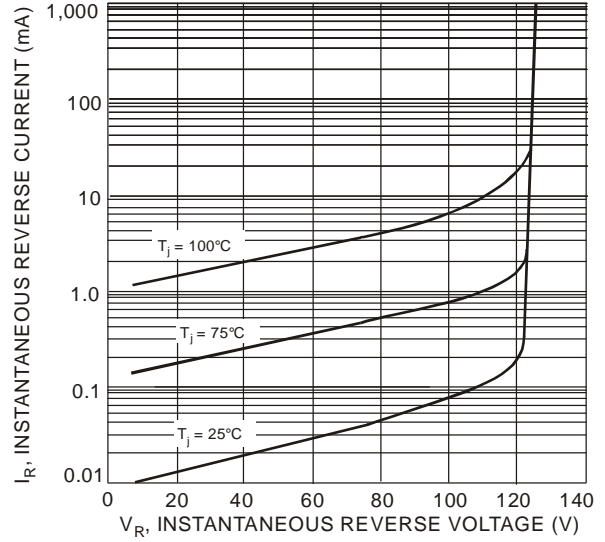


Fig. 2 Typical Reverse Characteristics

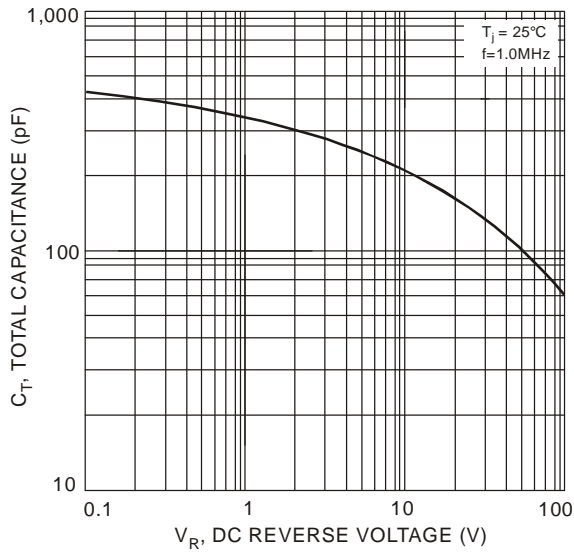


Fig. 3 Total Capacitance vs. Reverse Voltage

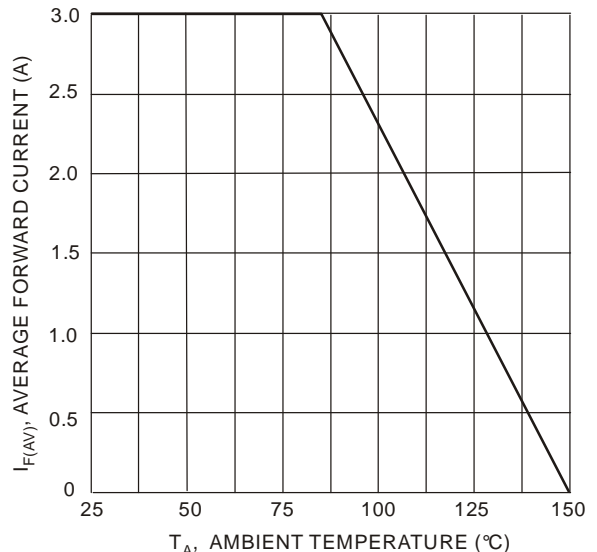


Fig. 4 Forward Current Derating Curve

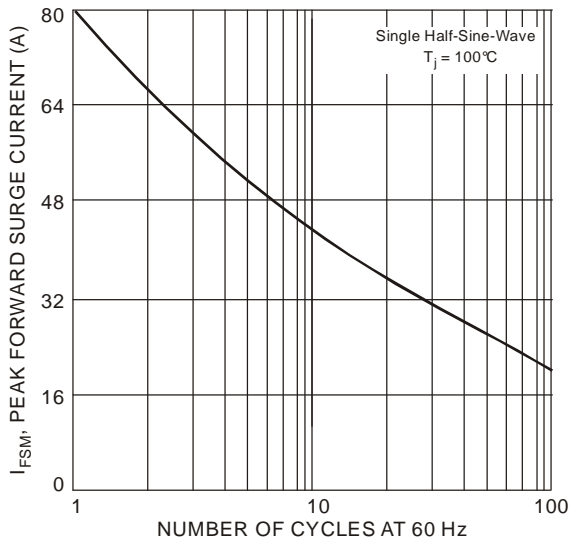
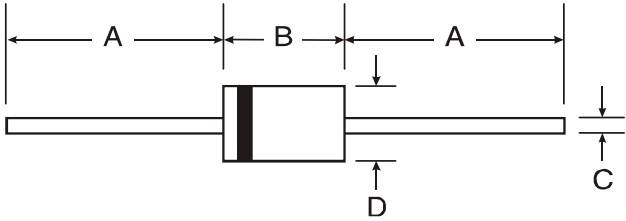


Fig. 5 Max Non-Repetitive Peak Forward Surge Current

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

DO-201AD



DO-201AD		
Dim	Min	Max
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

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