

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-Q100/101/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please [contact us](https://www.diodes.com) or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

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

Ordering Information (Note 3)

Part Number	Case	Packaging
SB370-B	DO-201AD	500/Bulk
SB370-T (Note 4)	DO-201AD	1.2K/Tape & Reel, 13-inch
SB380-B	DO-201AD	500/Bulk
SB380-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SB390-B	DO-201AD	500/Bulk
SB390-T (Note 4)	DO-201AD	1.2K/Tape & Reel, 13-inch
SB3100-B	DO-201AD	500/Bulk
SB3100-T	DO-201AD	1.2K/Tape & Reel, 13-inch

- 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, visit our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.
 4. Not recommended for new design.

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	SB370	SB380	SB390	SB3100	Unit
Peak Repetitive Reverse Voltage	V _{RRM}					V
Working Peak Reverse Voltage	V _{RWM}	70	80	90	100	V
DC Blocking Voltage	V _R					V
RMS Reverse Voltage	V _{R(RMS)}	49	56	63	70	V
Average Rectified Output Current (Note 5)	I _O	3.0				A
@ T _L = +80°C						
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}		100			A
Forward Voltage	V _{FM}	0.79				V
@ I _F = 3.0A						
Peak Reverse Current	I _{RM}		0.5			mA
@ T _A = +25°C						
at Rated DC Blocking Voltage			20			
@ T _A = +100°C						
Typical Junction Capacitance (Note 6)	C _j		250			pF

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

Thermal Characteristics

Characteristic	Symbol	SB370	SB380	SB390	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

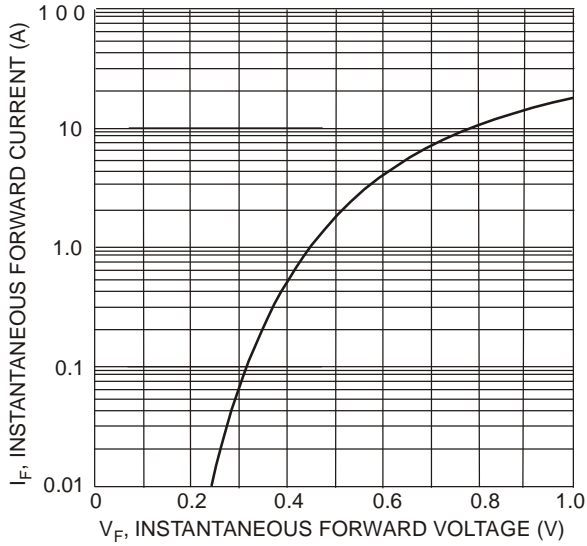


Fig. 1 Typical Forward Characteristics

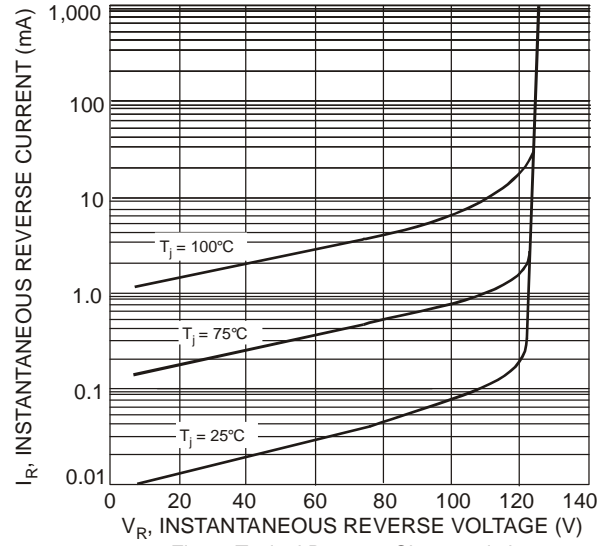


Fig. 2 Typical Reverse Characteristics

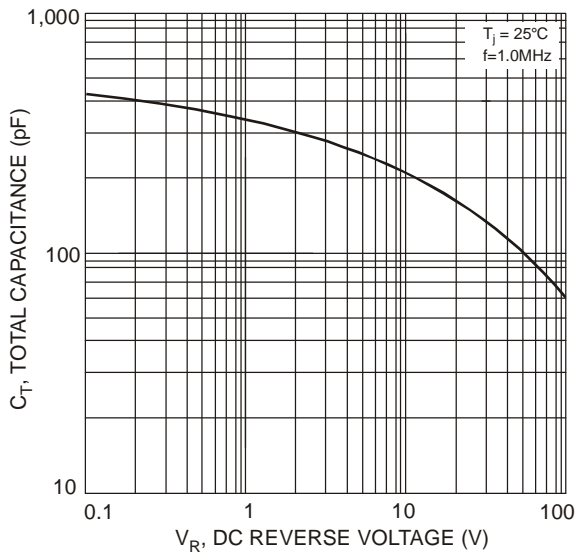


Fig. 3 Total Capacitance vs. Reverse Voltage

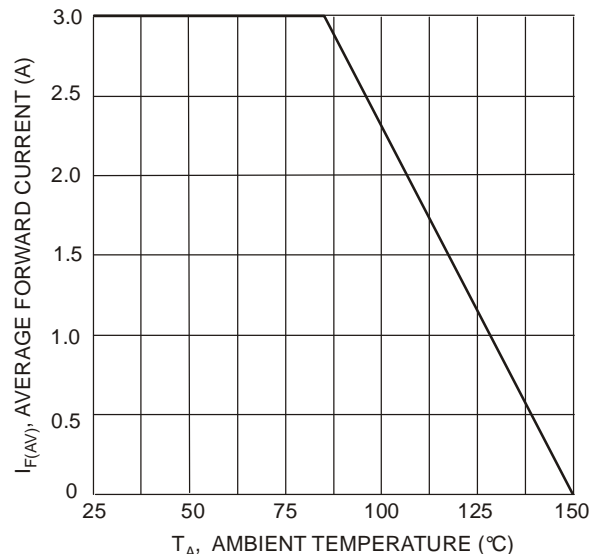


Fig. 4 Forward Current Derating Curve

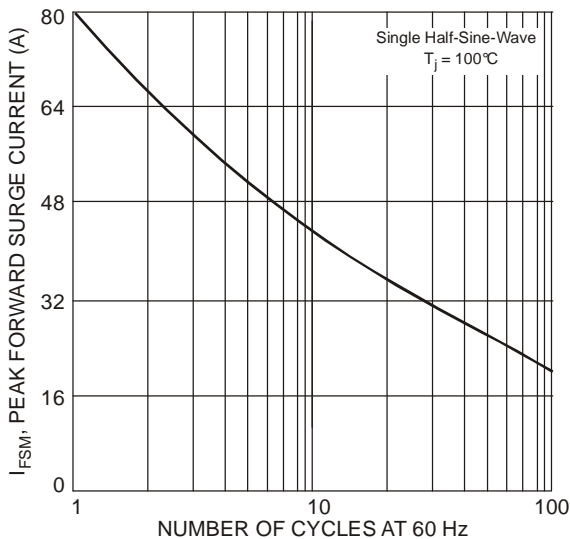
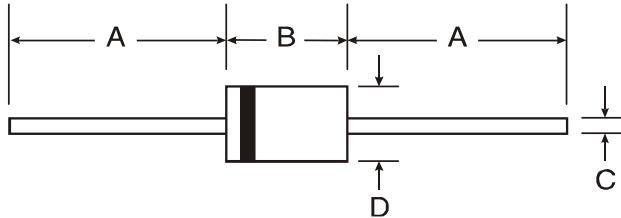


Fig. 5 Max Non-Repetitive Peak Forward Surge Current

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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