


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 (Note 3)**

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
- Marking Information: See Page 3
- Ordering Information: See Page 3
- Weight: 1.1 grams (approximate)

Maximum Ratings and Electrical Characteristics @T_A = 25°C unless otherwise specified

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

Characteristic	Symbol	SB370	SB380	SB390	SB3100	Unit
Peak Repetitive Reverse Voltage	V _{R(RM)}					
Working Peak Reverse Voltage	V _{R(WM)}	70	80	90	100	V
DC Blocking Voltage	V _R					
RMS Reverse Voltage	V _{R(RMS)}	49	56	63	70	V
Average Rectified Output Current (Note 1) @ T _L = 80°C	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 2)	C _j	250				pF

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

- Notes:
1. Measured at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
 3. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, See *EU Directive Annex Notes 5 and 7*.

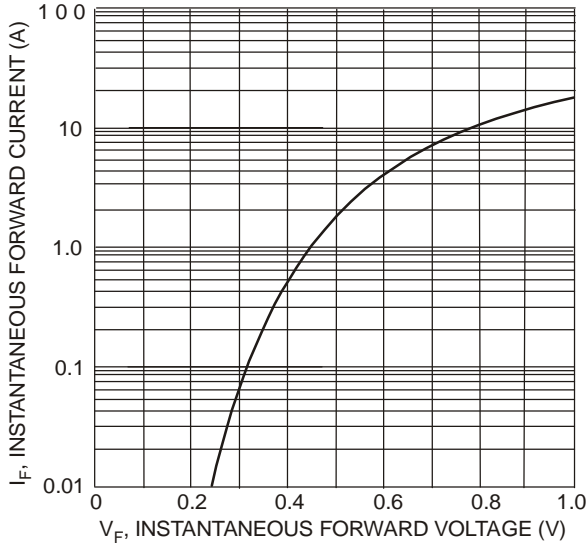


Fig. 1 Typical Forward Characteristics

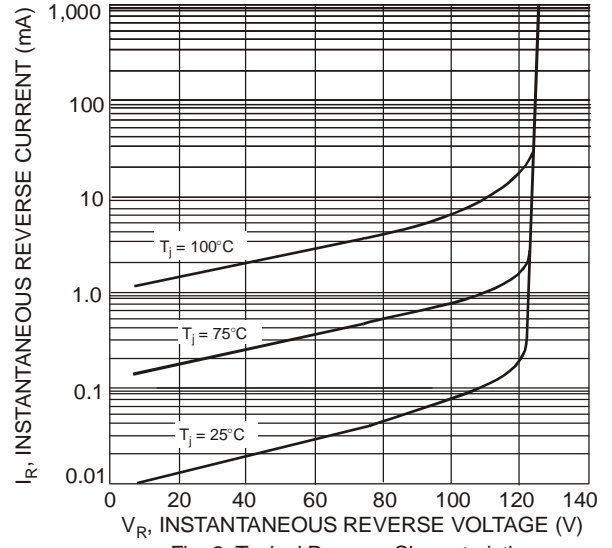


Fig. 2 Typical Reverse Characteristics

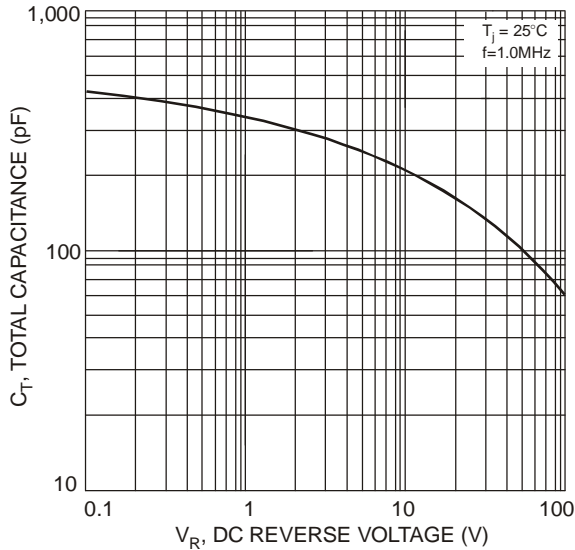


Fig. 3 Total Capacitance vs. Reverse Voltage

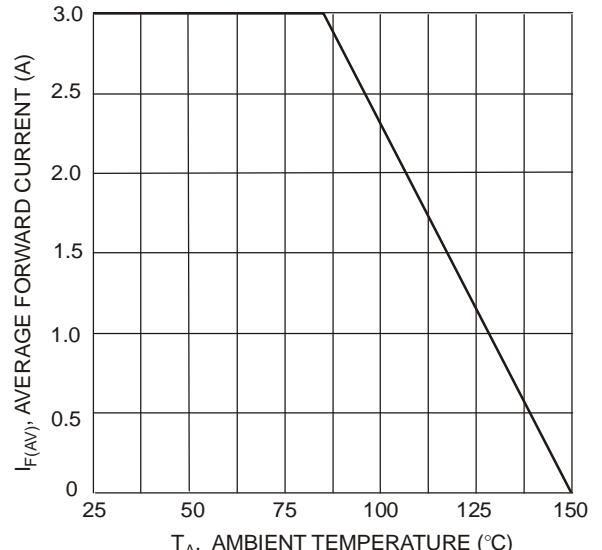


Fig. 4 Forward Current Derating Curve

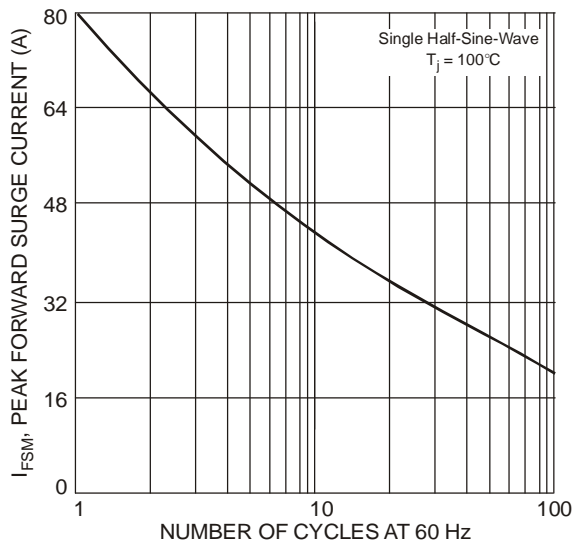


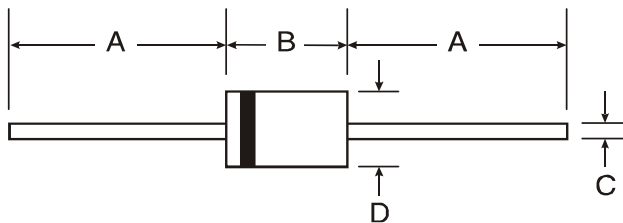
Fig. 5 Max Non-Repetitive Peak Forward Surge Current

Ordering Information (Note 4)

Part Number	Case	Packaging
SB370-B	DO-201AD	500/Bulk
SB370-T	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	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: 4. For packaging details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

Package Outline Dimensions



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		

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Diodes Incorporated:](#)

[SB3100-T](#) [SB370-T](#) [SB380-T](#) [SB390-T](#)