THE DATASHEET OF

SB320-T

Features

- 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)**
- **IEC 61000-4-2 (ESD - 150pF/330Ω) Contact - ±15kV**

Mechanical Data

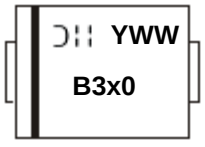
- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Tin. Solderable per MIL-STD-202, Method 208 e3
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.1 grams (Approximate)

Ordering Information (Note 3)

Device	Packaging	Shipping
SB320-B	DO-201AD	500/Bulk
SB320-T	DO-201AD	1200/13" Tape & Reel
SB330-B	DO-201AD	500/Bulk
SB330-T	DO-201AD	1200/13" Tape & Reel
SB340-B	DO-201AD	500/Bulk
SB340-T	DO-201AD	1200/13" Tape & Reel
SB350-B	DO-201AD	500/Bulk
SB350-T	DO-201AD	1200/13" Tape & Reel
SB360-B	DO-201AD	500/Bulk
SB360-T	DO-201AD	1200/13" Tape & Reel

Notes:
1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See http://www.diodes.com/quality/lead_free.html 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 http://www.diodes.com//products/packages.html

Marking Information



B3x0 = Product Type Marking Code, ex: B320
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 6 for 2016)
WW = Week Code (01 to 53)

Maximum Ratings (@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	SB320	SB330	SB340	SB350	SB360	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 5)	V_{RRM} V_{RWM} V_R	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	35	42	V
Average Rectified Output Current (Note 4) (See Figure 1)	I_O	3.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	80					A

Thermal Characteristics

Characteristic	Symbol	SB320	SB330	SB340	SB350	SB360	Unit
Typical Thermal Resistance (Note 6)	$R_{\theta JA}$	30					°C/W
	$R_{\theta JL}$	10					°C/W
Operating Temperature Range	T_J	-65 to +125			-65 to +150		°C
Storage Temperature Range	T_{STG}	-65 to +150					°C

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

Characteristic		Symbol	SB320	SB330	SB340	SB350	SB360	Unit
Forward Voltage	@ I_F = 3.0A	V_{FM}	0.50			0.74		V
Peak Reverse Current	@ T_A = +25°C	I_{RM}	0.5					mA
at Rated DC Blocking Voltage (Note 5)	@ T_A = +100°C		20			10		

Notes: 4. Measured at ambient temperature at a distance of 9.5mm from the case.
5. Short duration pulse test used to minimize self-heating effect.
6. Thermal resistance from junction to lead vertical P.C.B. mounted, 0.500" (12.7mm) lead length with 2.5" x 2.5" (63.5 x 63.5mm) copper pad.

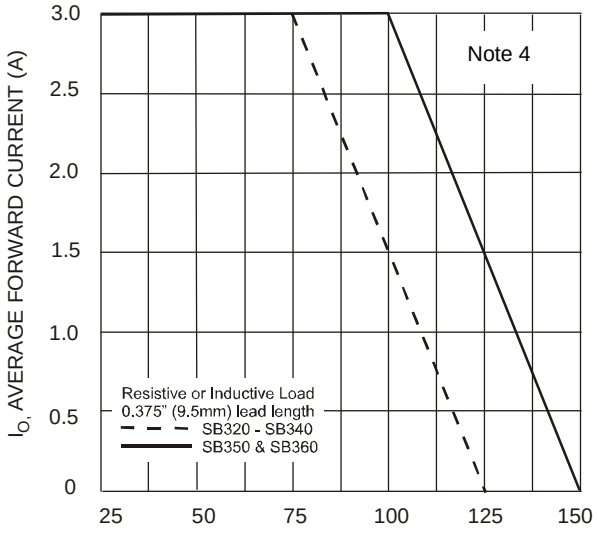


Fig. 1 Forward Current Derating Curve

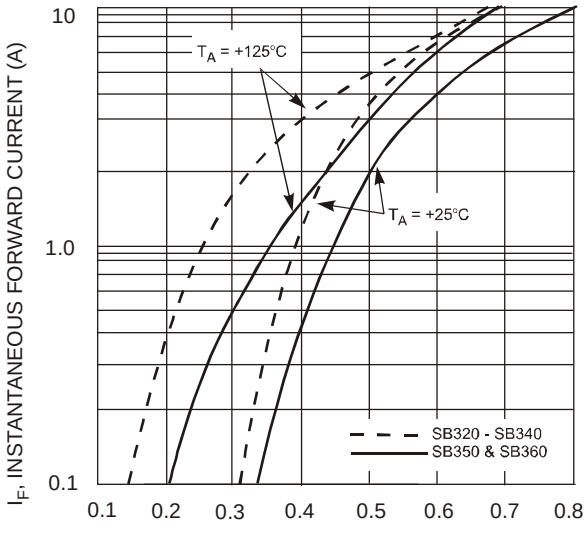


Fig. 2 Typical Forward Characteristics

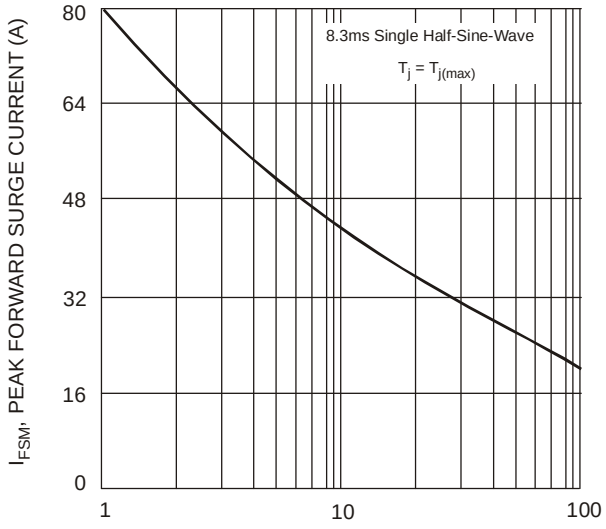


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

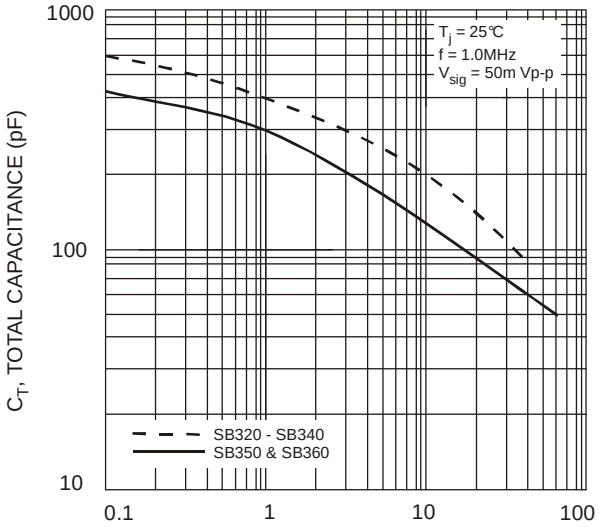


Fig. 4 Typical Total Capacitance

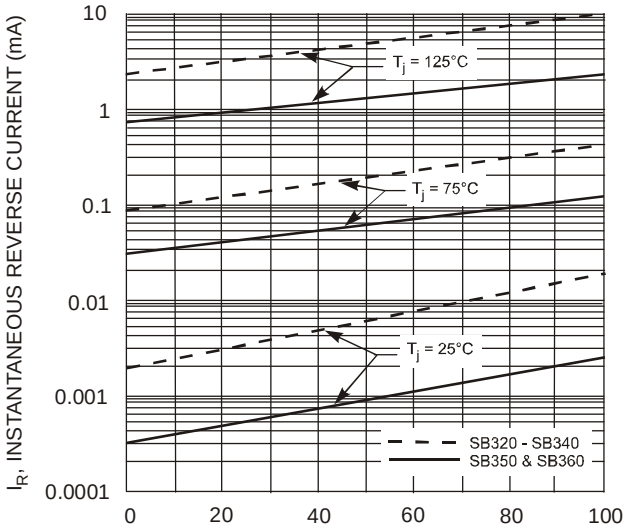
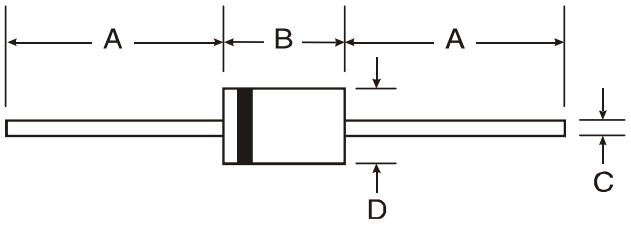


Fig. 5 Typical Reverse Characteristics

Package Outline Dimensions

Please see AP02001 at http://www.diodes.com/_files/datasheets/ap02001.pdf 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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