

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
- IEC 61000-4-2 (ESD - 150pF/330Ω) Contact - ±15kV
- **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 or your local Diodes representative. <https://www.diodes.com/quality/product-definitions/>**

Mechanical Data

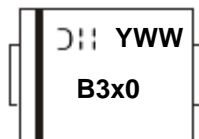
- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Tin. Solderable per MIL-STD-202, Method 208③
- Polarity: Cathode Band
- Weight: 1.1 grams (Approximate)

Ordering Information (Note 3)

Part Number	Packaging	Shipping
SB320-B	DO-201AD	500/Bulk
SB320-T	DO-201AD	1200/13" Tape & Reel
SB330-B	DO-201AD	500/Bulk
SB330-T (Note 4)	DO-201AD	1200/13" Tape & Reel
SB340-T	DO-201AD	1200/13" Tape & Reel
SB350-B	DO-201AD	500/Bulk
SB350-T (Note 4)	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) & 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/>.
 4. NRND: Not recommended for new design.

Marking Information



B3x0 = Product Type Marking Code, ex: B320
 ⎓⎓⎓ = Manufacturers' Marking
 YWW = Date Code Marking
 Y = Last Digit of Year (ex: 9 for 2019)
 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 capacitive load, derate current by 20%.

Characteristic	Symbol	SB320	SB330	SB340	SB350	SB360	Unit
Peak Repetitive Reverse Voltage	V _{RRM}						
Working Peak Reverse Voltage	V _{RWM}	20	30	40	50	60	V
DC Blocking Voltage (Note 6)	V _R						
RMS Reverse Voltage	V _{R(RMS)}	14	21	28	35	42	V
Average Rectified Output Current (Note 5) (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 7)	R _{θJA}	30					°C/W
	R _{θJL}	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 at Rated DC Blocking Voltage (Note 6)	I _{RM}	0.5					mA
		20			10		

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

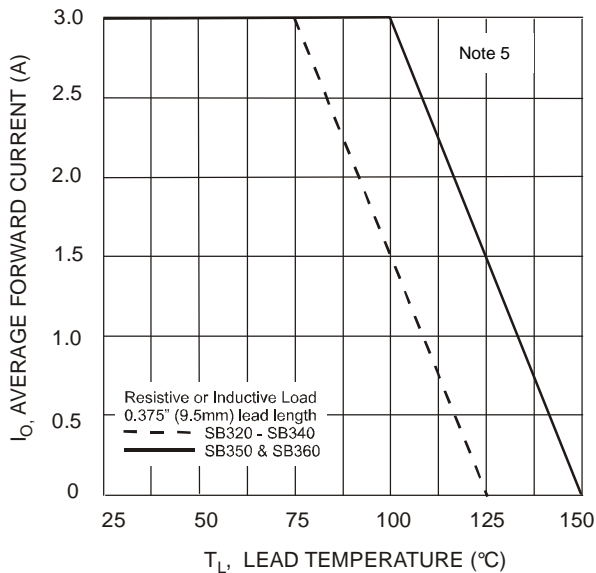


Fig. 1 Forward Current Derating Curve

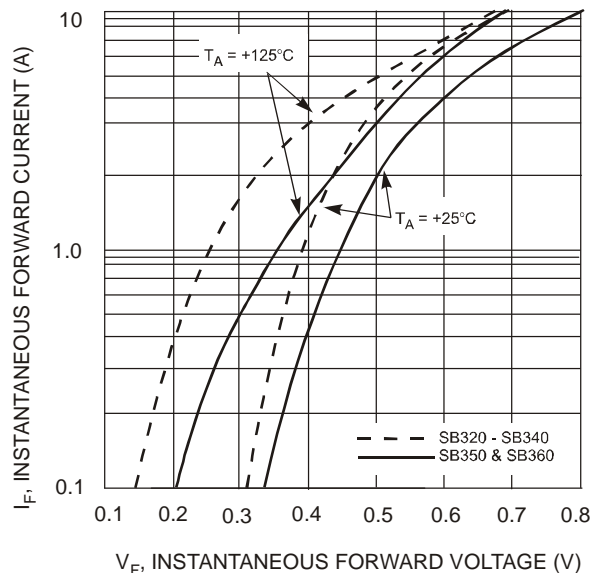


Fig. 2 Typical Forward Characteristics

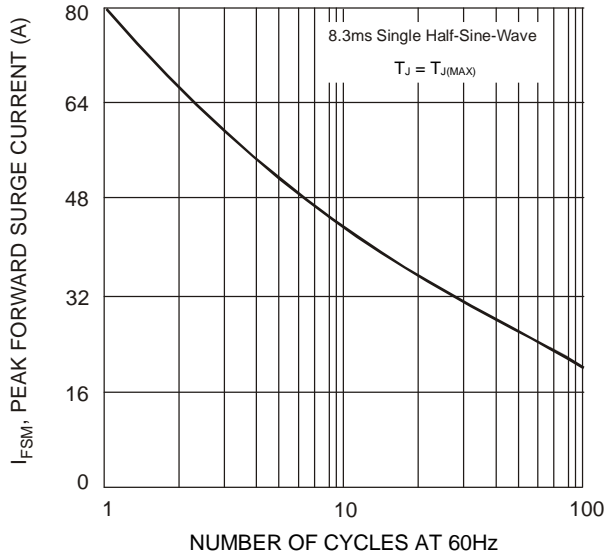


Fig. 3 Max Non-Repetitive Peak Forward Surge Current

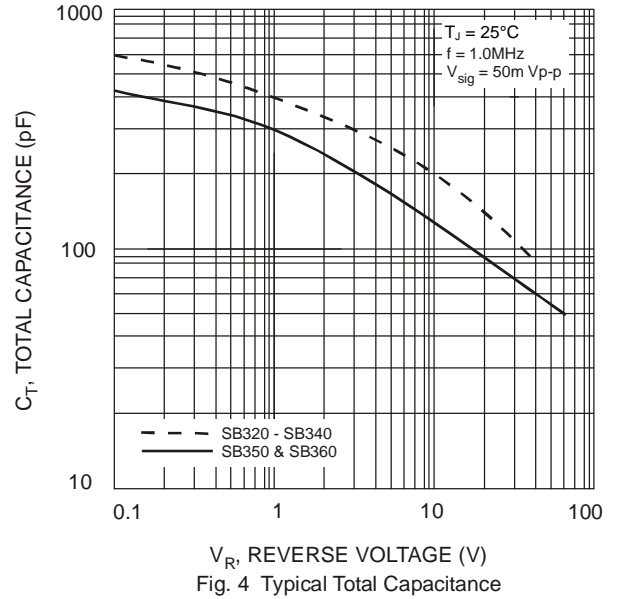


Fig. 4 Typical Total Capacitance

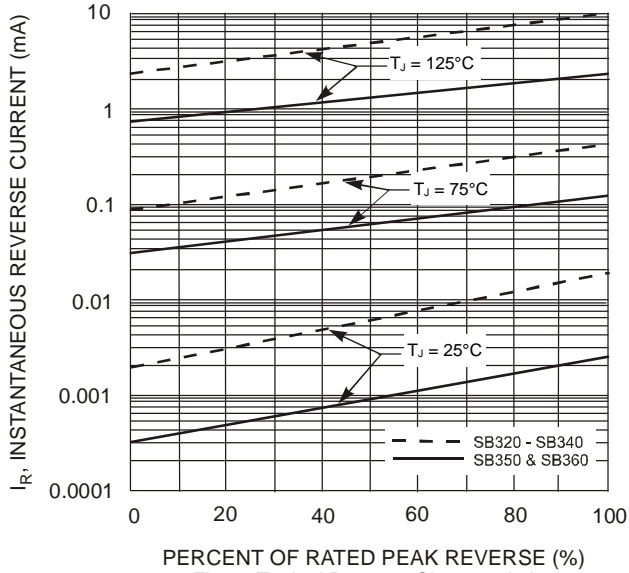
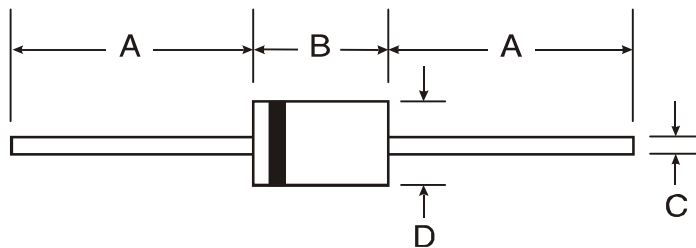


Fig. 5 Typical Reverse Characteristics

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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