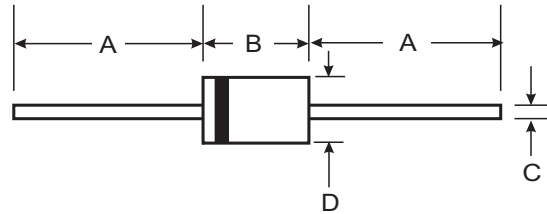


### Features

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



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		

### 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 (e3)
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.1 grams (approximate)

### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 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 Working Peak Reverse Voltage DC Blocking Voltage (Note 2)	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	20	30	40	50	60	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	14	21	28	35	42	V
Average Rectified Output Current (Note 1)	I <sub>O</sub>	3.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I <sub>FSM</sub>	80					A
Forward Voltage @ I <sub>F</sub> = 3.0A	V <sub>FM</sub>	0.50			0.74		V
Peak Reverse Current at Rated DC Blocking Voltage (Note 2)	I <sub>RM</sub>	0.5					mA
@ T <sub>A</sub> = 25°C @ T <sub>A</sub> = 100°C		20			10		
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	30					°C/W
	R <sub>θJL</sub>	10					
Operating Temperature Range	T <sub>J</sub>	-65 to +125			-65 to +150		°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150					°C

- Notes:
1. Measured at ambient temperature at a distance of 9.5mm from the case.
  2. Short duration pulse test used to minimize self-heating effect.
  3. 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.
  4. RoHS revision 13.2.2003. High Temperature Solder Exemption Applied, see *EU Directive Annex Note 7*.

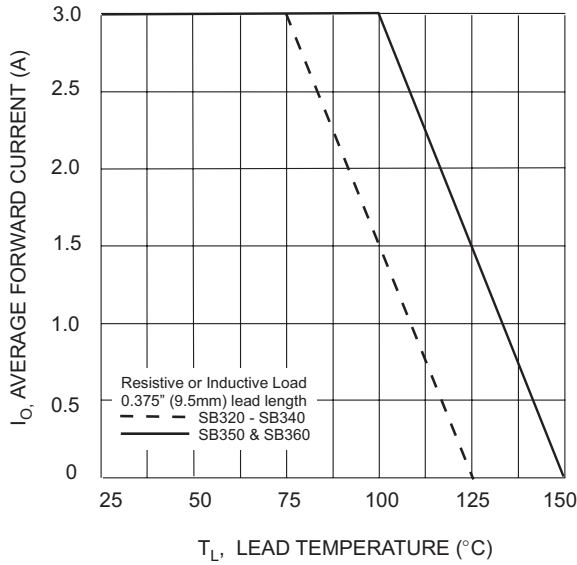


Fig. 1 Forward Current Derating Curve

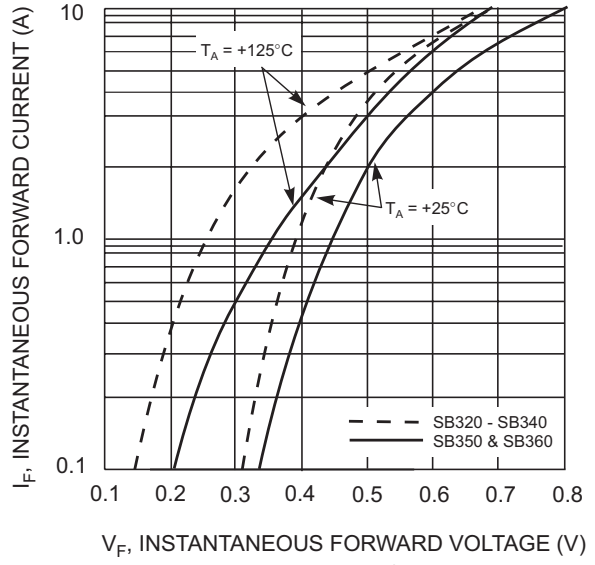


Fig. 2 Typical Forward Characteristics

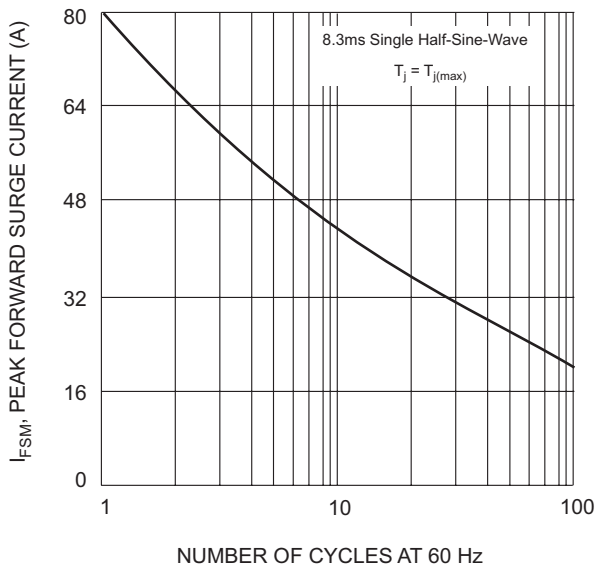


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

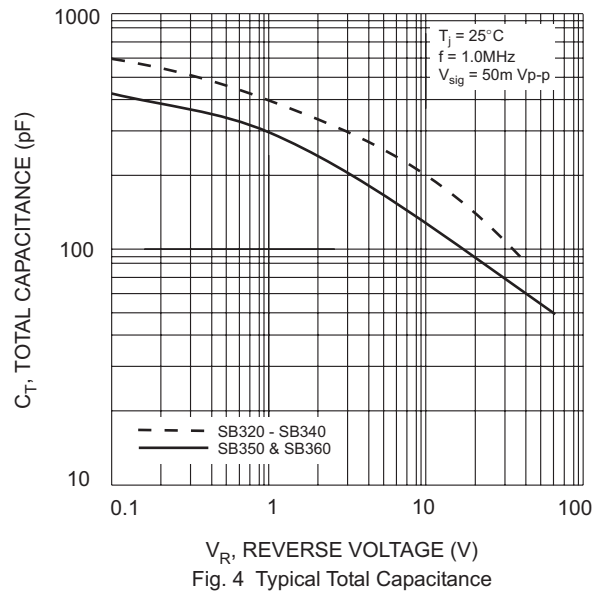


Fig. 4 Typical Total Capacitance

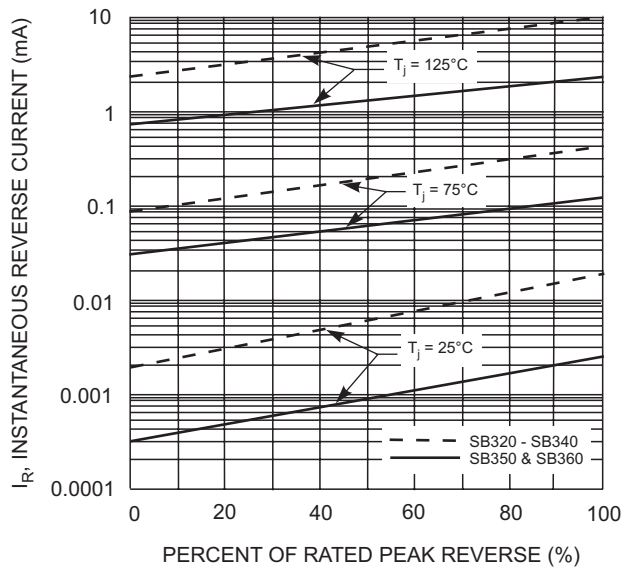


Fig. 5 Typical Reverse Characteristics

**Ordering Information** (Note 5)

Device	Packaging	Shipping
SB320-B	DO-201AD	500/Bulk
SB330-B	DO-201AD	500/Bulk
SB340-B	DO-201AD	500/Bulk
SB350-B	DO-201AD	500/Bulk
SB360-B	DO-201AD	500/Bulk

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>

**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.