Features

- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High Efficiency
- High Surge Capability
- High Current Capability
- Surge Overload Rating to 150A 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 or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

Mechanical Data

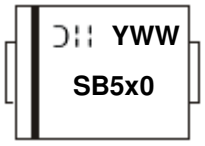
- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208 e3
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.1 grams (Approximate)

Ordering Information (Note 3)

Part Number	Case	Packaging
SB570-B	DO-201AD	500/Bulk
SB580-B	DO-201AD	500/Bulk
SB580-T (Note 4)	DO-201AD	1.2K/Tape & Reel, 13 inch
SB590-B	DO-201AD	500/Bulk
SB590-T	DO-201AD	1.2K/Tape & Reel, 13 inch
SB5100-B	DO-201AD	500/Bulk
SB5100-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. SB580-T is not recommended for new design- no alternate part.

Marking Information



SB5x0 = Product Type Marking Code, ex: SB570
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 0 for 2020)
WW = Week Code (01 to 53)

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	SB570	SB580	SB590	SB5100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V_{RRM} V_{RWM} V_R	70	80	90	100	V
RMS Reverse Voltage		$V_{R(RMS)}$	49	56	63	70	V
Average Rectified Output Current	@ T_L = +80°C	I_O	5.0				A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)		I_{FSM}	150				A
Forward Voltage	@ I_F = 5.0A	V_{FM}	0.80				V
Peak Reverse Current at Rated DC Blocking Voltage	@ T_A = +25°C	I_{RM}	0.5				mA
	@ T_A = +100°C		50				
Typical Junction Capacitance (Note 5)		C_J	400				pF
Typical Thermal Resistance Junction to Ambient		$R_{\theta JA}$	10				°C/W
Operating and Storage Temperature Range		T_J, T_{STG}	-65 to +150				°C

Note: 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

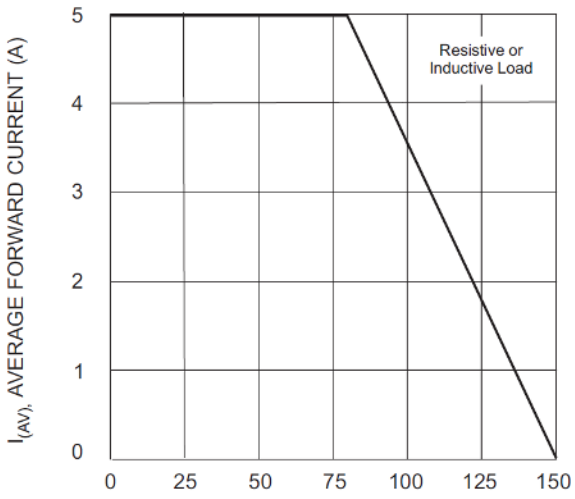


Fig. 1 Forward Current Derating Curve

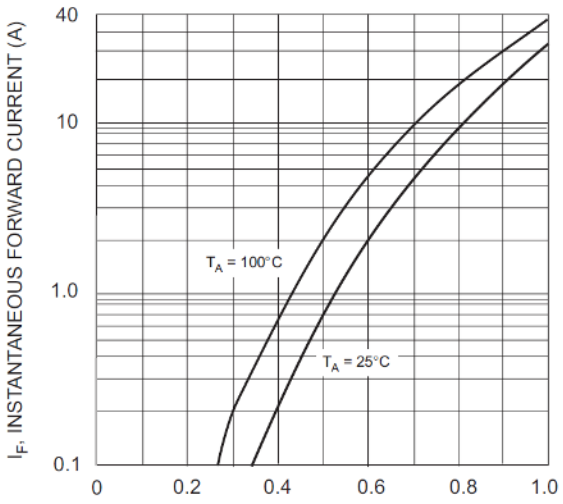


Fig. 2 Typical Forward Characteristics

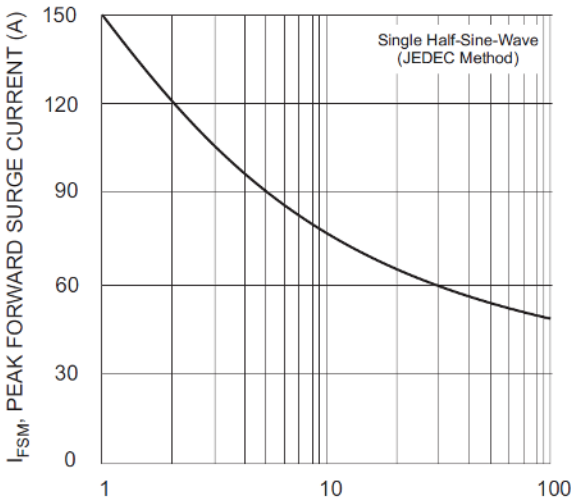


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

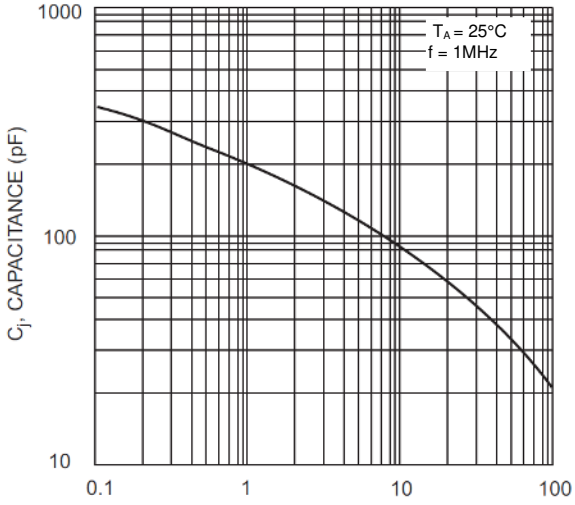


Fig. 4 Typical Junction Capacitance

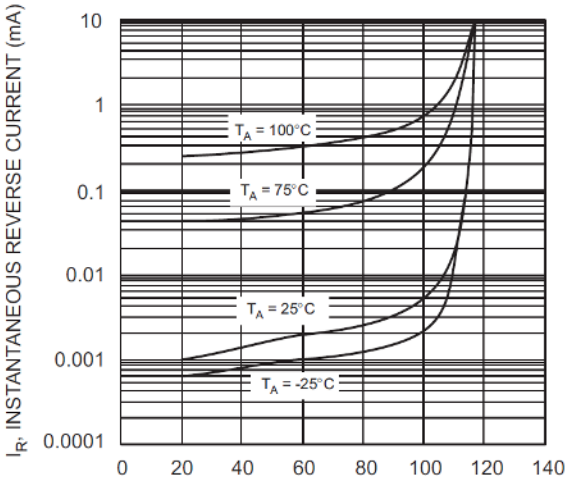
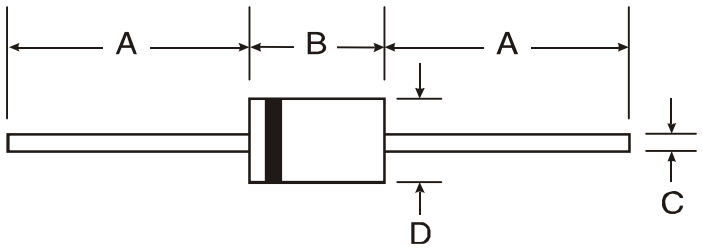


Fig. 5 Typical Reverse Characteristics

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		