

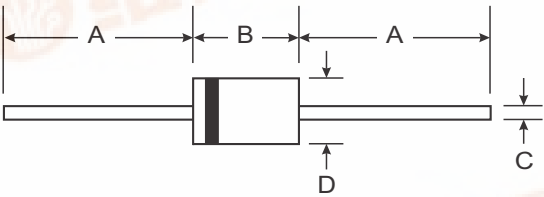


SB570 - SB5100

5.0A SCHOTTKY BARRIER RECTIFIER

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 (Note 2)**



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 - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 1.1 grams (approximate)

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		

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	V _{RRM}	70	80	90	100	V
Working Peak Reverse Voltage	V _{RWM}					
DC Blocking Voltage	V _R					
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 @ T _A = 25°C at Rated DC Blocking Voltage @ T _A = 100°C	I _{RM}	0.5 50				mA
Typical Junction Capacitance (Note 1)	C _j	400				pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	10				K/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150				°C

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.



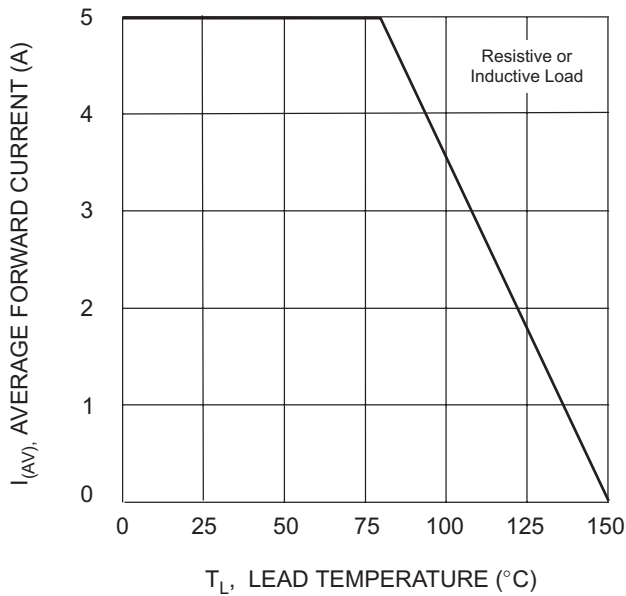


Fig. 1 Forward Current Derating Curve

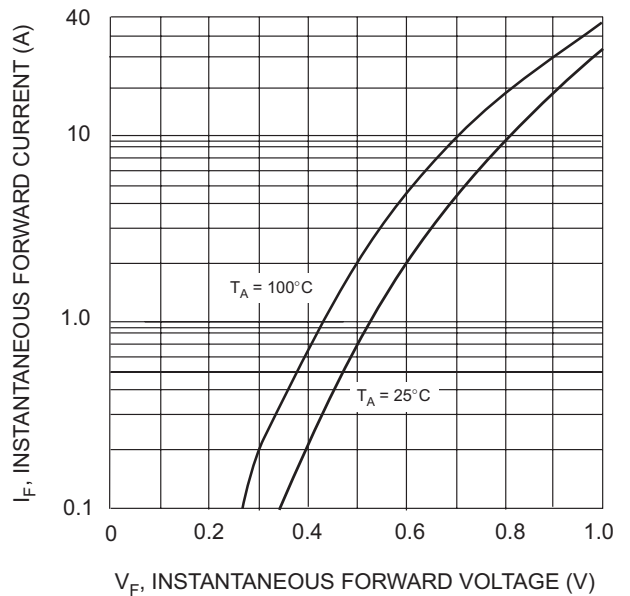


Fig. 2 Typical Forward Characteristics

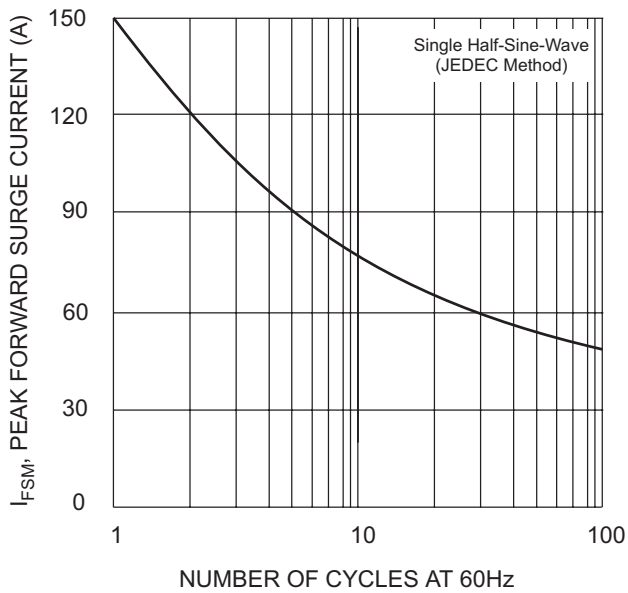


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

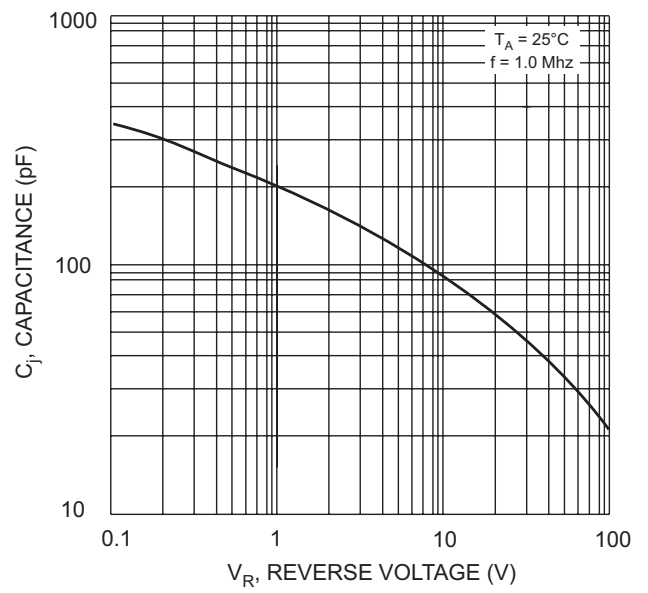


Fig. 4 Typical Junction Capacitance

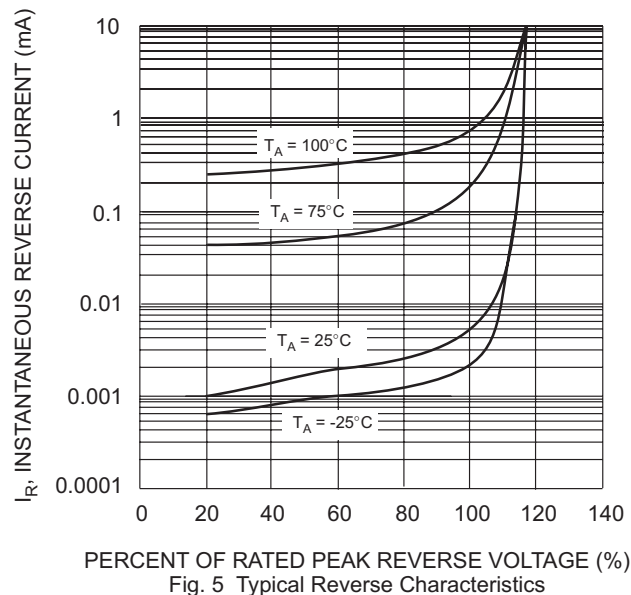


Fig. 5 Typical Reverse Characteristics



Ordering Information (Note 3)

Device	Packaging	Shipping
SB570-B	DO-201AD	500/Bulk
SB570-T	DO-201AD	1.2K/Tape & Reel, 13-inch
SB580-B	DO-201AD	500/Bulk
SB580-T	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: 3. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.