Technical Data
Data Sheet N1708, Rev. A

SB520/SB530/SB550 SCHOTTKY RECTIFIER

DO-201AD

Features

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- High Current Capability
- Low Power Loss, High Efficiency
- High Surge Current Capability
- For Use in Low Voltage, High Frequency Inverters, Free Wheeling, and Polarity Protection Applications
- Green Products in Compliance with the RoHS Directive
- Terminals finish: 100% Pure Tin
- This is a Pb − Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram

Applications

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	SB520	SB530	SB550	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	20	30	50	V
Average Rectified Output Current(Note 1) @T_L = 100°C	Io	5.0			A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	120			A
Forward Voltage @I_F =5.0A	V_{FM}	0.55		0.70	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	0.5 20			mA
Typical Junction Capacitance (Note 2) @V_R = 5V	Cj	550		400	pF
Typical Thermal Resistance Junction to Ambient(Note 1)	$R_{\theta JA}$	25			K/W
Typical Thermal Resistance Junction to Lead (Note 3)	$R_{\theta JL}$	8			K/W
Junction Temperature	T_J	-55 to +150			°C
Storage Temperature Range	T_{STG}	-55 to +150			°C
Approximate Weight	wt	1.02			g

Note: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal resistance junction to lead vertical P.C.B. mounted, 0.375" (9.5mm) lead length.

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Ratings and Characteristics Curves

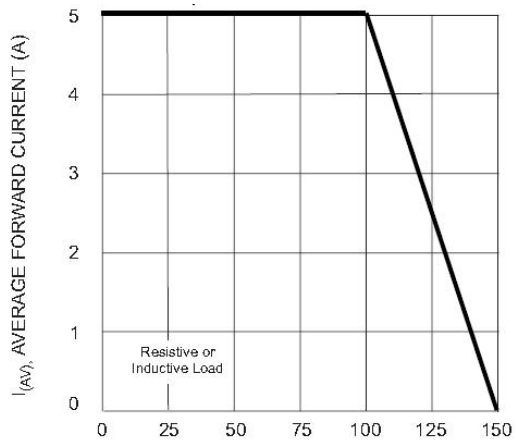

Fig. 1 Forward Current Derating Curve

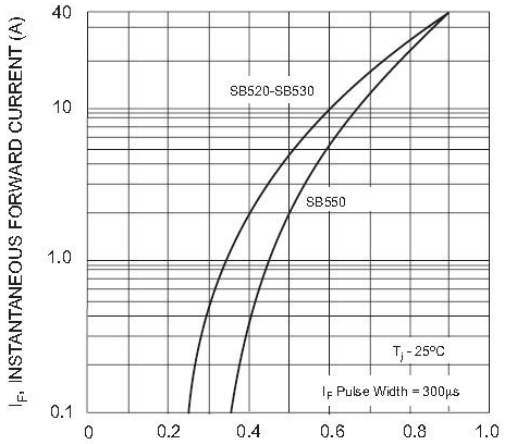

Fig. 2 Typical Forward Characteristics

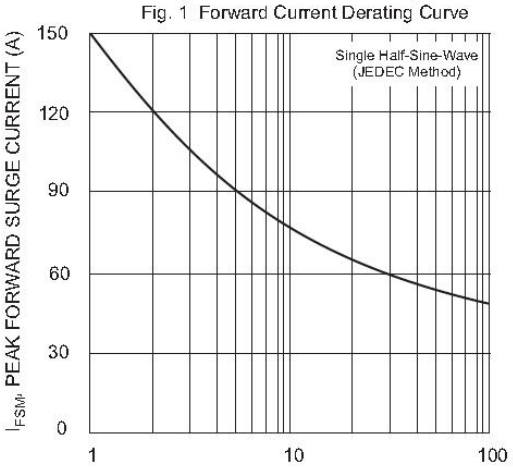

Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

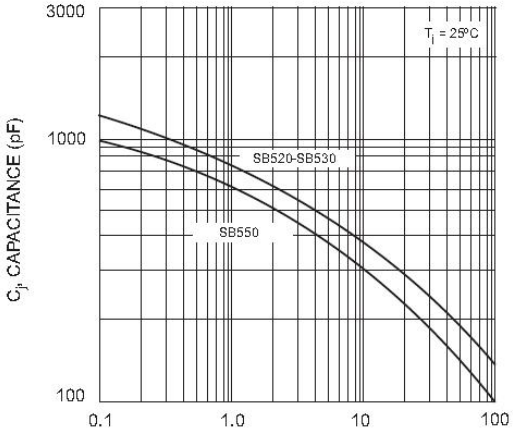

Fig. 4 Typical Junction Capacitance

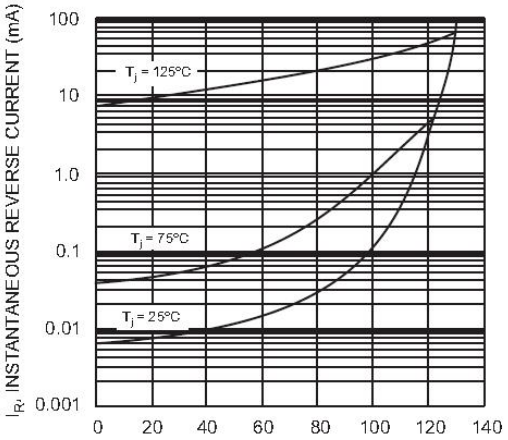

Fig. 5 Typical Reverse Characteristics

SB520
SB530
SB550

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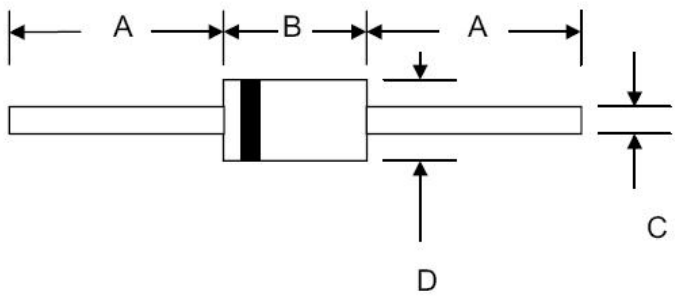
Mechanical Dimensions DO-201AD



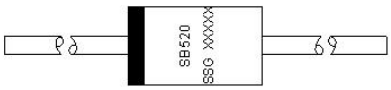
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

Ordering Information

Device	Package	Shipping
SB520-SB550	DO-201AD (Pb-Free)	1250pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

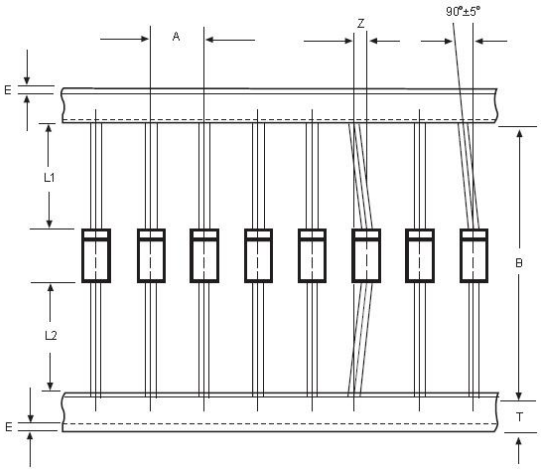


Where XXXXX is YYWWL

SB = Device Type
5 = Forward Current (5A)
20 = Reverse Voltage (20V)
SSG = SSG
YY = Year
WW = Week
L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Carrier Tape Specification DO-201AD



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

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