THE DATASHEET OF

SB5100

Technical Data
Data Sheet N0092, Rev. B

SB5100 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
- "-A" is an AEC-Q101 qualified device
- 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	SB5100	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	100	V
Maximum RMS Voltage	V_{RMS}	70	V
Average Rectified Output Current (Note 1) @T_A = 105°C	$I_{F(AV)}$	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,T_A = 25°C @I_F = 5.0A,T_A = 125°C	V_{FM}	0.85 0.70	V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 125°C	I_{RM}	0.5 10	mA
Maximum Junction Capacitance (Note 2)	Cj	250	pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	25	K/W
Storage Temperature Range	T_J , T_{STG}	-55 to +150	°C
Case Style	DO-201AD		

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.

2. Measured at 1MHz and applied reverse voltage of 5.0V D.C.

Ratings and Characteristics Curves

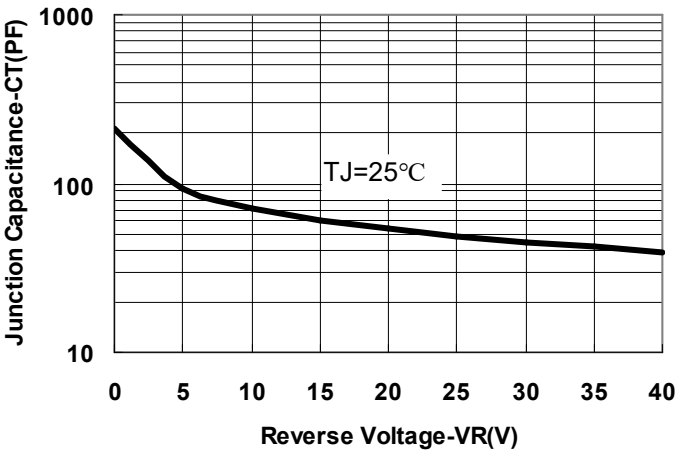

Fig.1-Typical Junction Capacitance

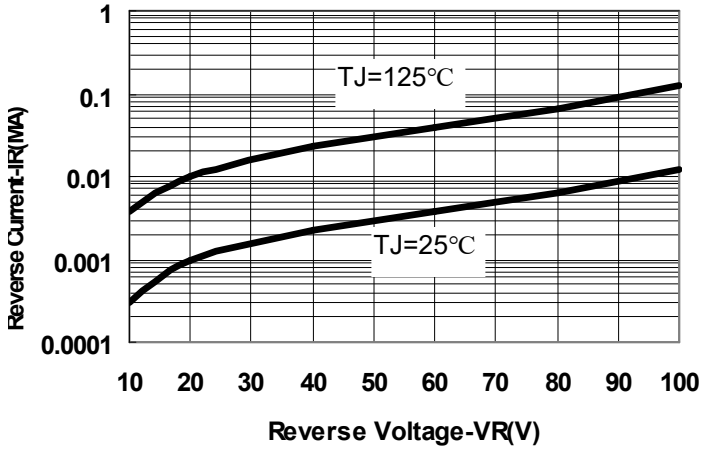

Fig.2-Typical Reverse Current

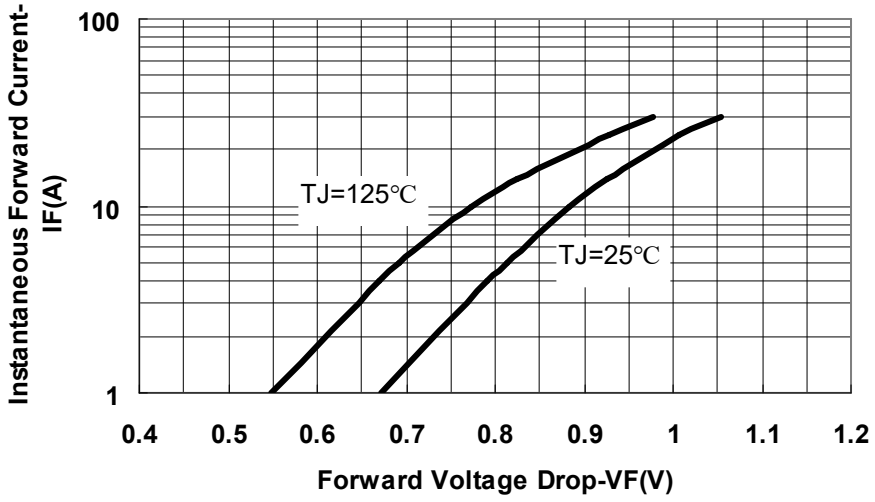

Fig.3-Typical Forward Voltage Drop Characteristics

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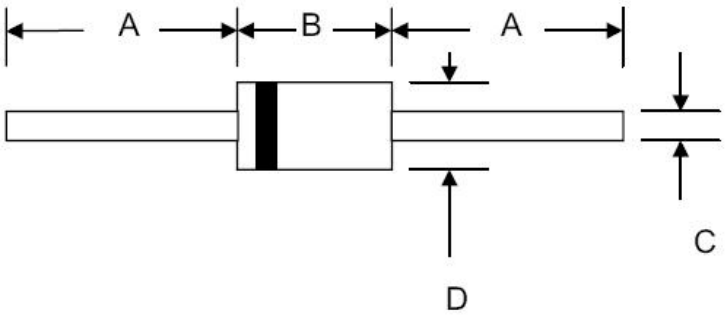
RoHS

Mechanical Dimensions DO-201AD



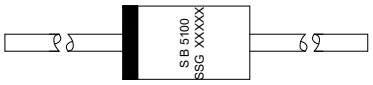
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

Ordering Information

Device	Package	Shipping
SB5100	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.

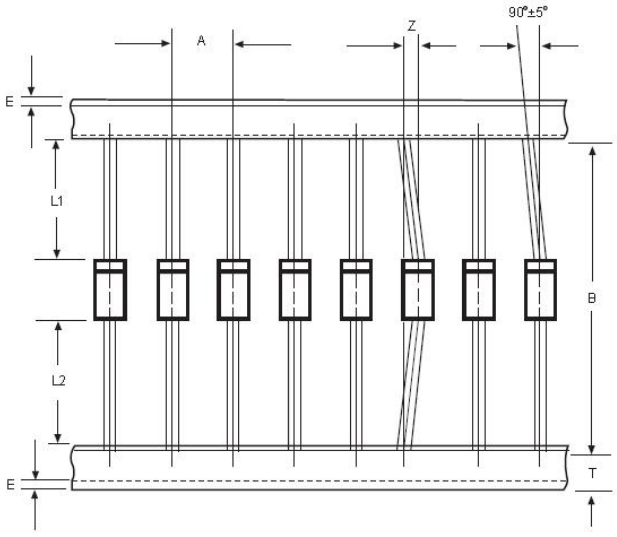
Marking Diagram



Where XXXXX is YYWWL

SB5100	= Part Name
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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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