Technical Data
Data Sheet N0089, Rev.A

SB3100 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
- 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:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	100	V
Average Rectified Forward Current	$I_{F\ (AV)}$	50% duty cycle @T_C =105°C, rectangular wave form	3	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse, T_C =25°C	110	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 3A, Pulse, T_J = 25 °C	0.76	0.79	V
	V_{F2}	@ 3A, Pulse, T_J = 125 °C	0.65	0.70	V
Reverse Current*	I_{R1}	@V_R = Rated V_R, Pulse, T_J = 25 °C	0.01	1.0	mA
	I_{R2}	@V_R = Rated V_R, Pulse, T_J = 125 °C	0.1	10	mA
Junction Capacitance	C_T	@V_R = 5V, T_C = 25 °C f_{SIG} = 1MHz	90	250	pF

* Pulse width < 300 µs, duty cycle < 2%

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Case	$R_{\theta JC}$	DC operation	8	°C/W
Approximate Weight	wt	-	1.02	g

Ratings and Characteristics Curves

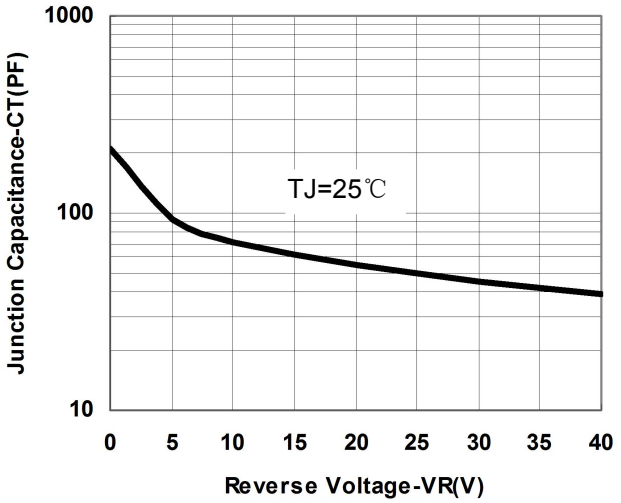

Fig.1-Typical Junction Capacitance

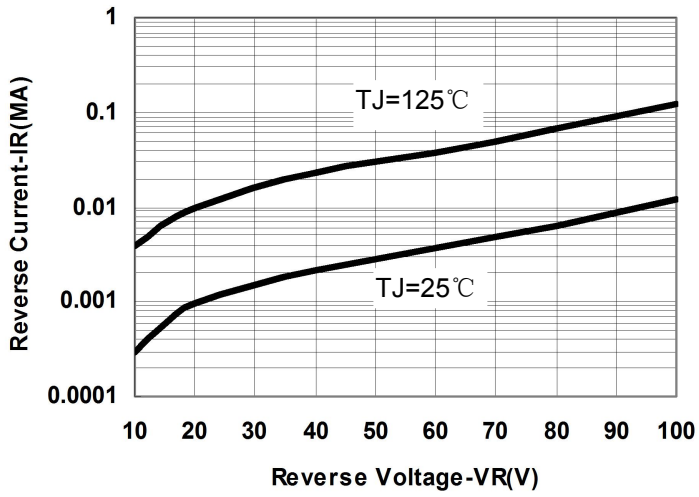

Fig.2-Typical Reverse Current

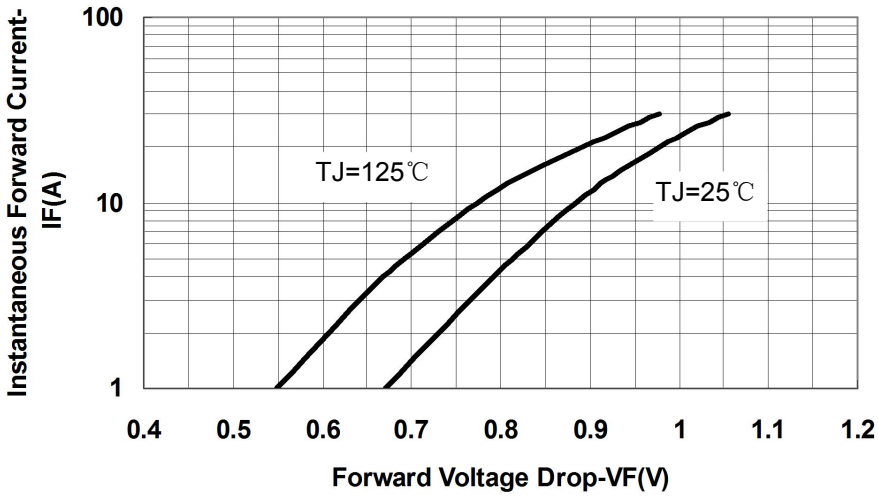

Fig.3-Typical Forward Voltage Drop Characteristics

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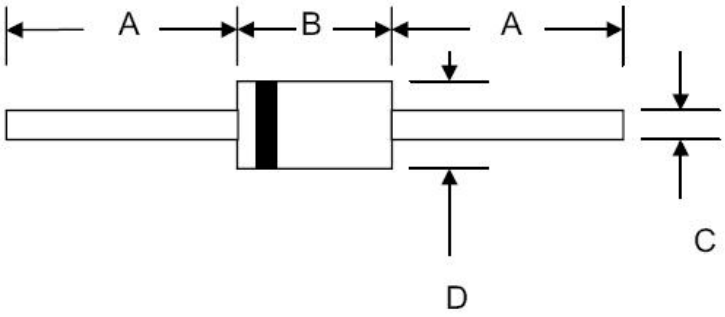
Mechanical Dimensions DO-201AD



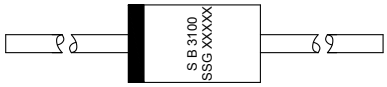
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

Ordering Information

Device	Package	Shipping
SB3100	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.

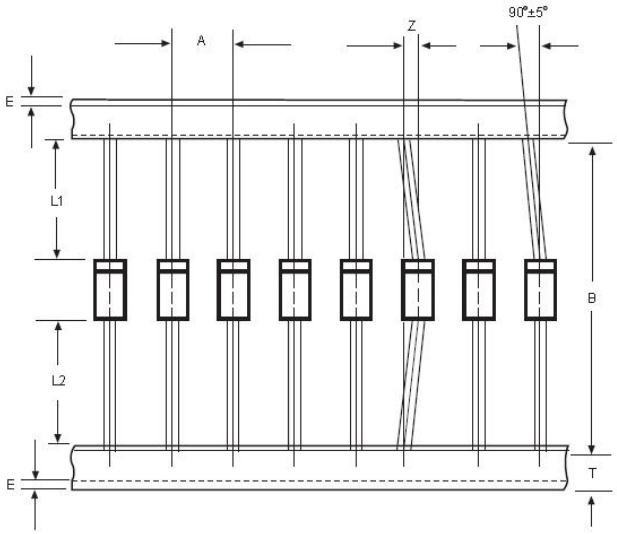
Marking Diagram



Where XXXXX is YYWWL

SB3100 = Part Name
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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