

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## 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
- 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

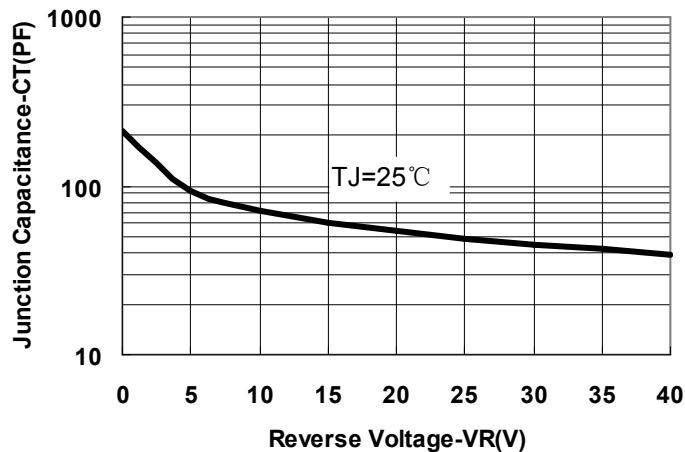
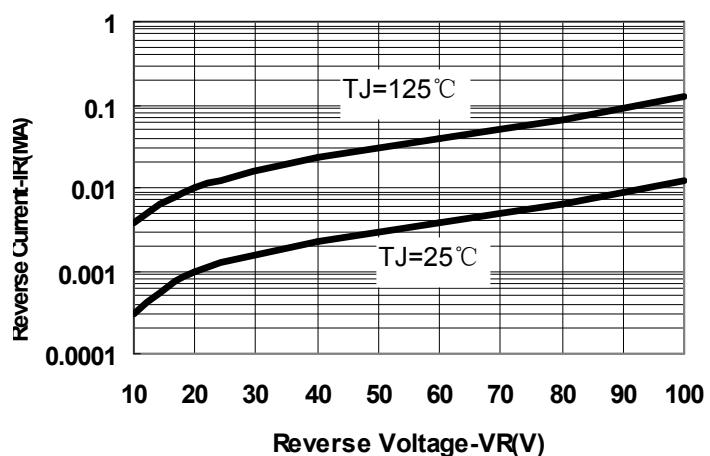
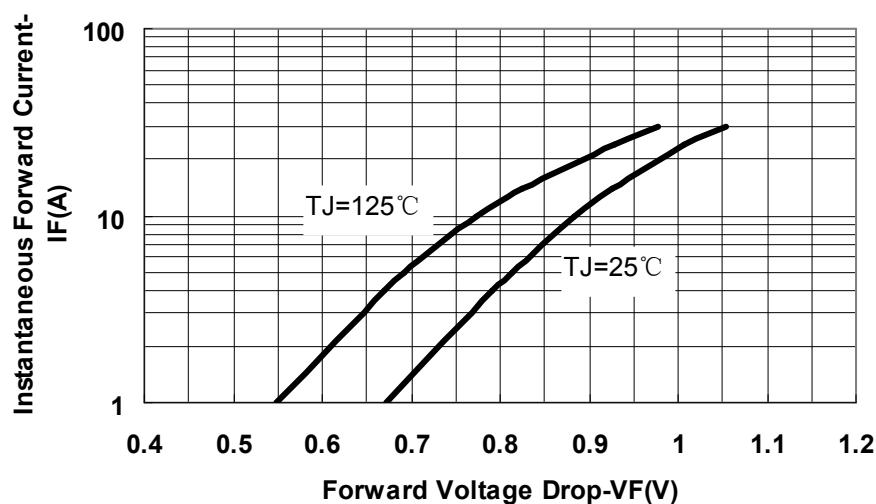
### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

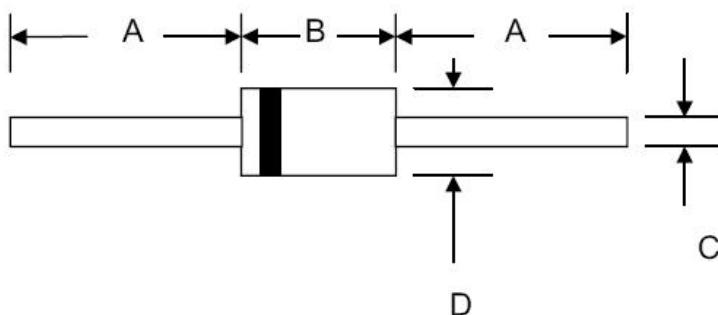
Characteristic	Symbol	SB5100	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	100	V
DC Blocking Voltage	$V_R$		
Maximum RMS Voltage	$V_{RMS}$	70	V
Average Rectified Output Current (Note 1) @ $T_A = 105^\circ\text{C}$	$I_{F(AV)}$	5.0	A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	120	A
Forward Voltage @ $I_F = 5.0\text{A}, T_A = 25^\circ\text{C}$ @ $I_F = 5.0\text{A}, T_A = 125^\circ\text{C}$	$V_{FM}$	0.85 0.70	V
Peak Reverse Current At Rated DC Blocking Voltage @ $T_A = 25^\circ\text{C}$ @ $T_A = 125^\circ\text{C}$	$I_{RM}$	0.5 10	mA
Maximum Junction Capacitance (Note 2)	$C_J$	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.

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- <http://www.smc-diodes.com> - [sales@smc-diodes.com](mailto:sales@smc-diodes.com) •

**Ratings and Characteristics Curves**

**Fig.1-Typical Junction Capacitance**

**Fig.2-Typical Reverse Current**

**Fig.3-Typical Forward Voltage Drop Characteristics**

**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

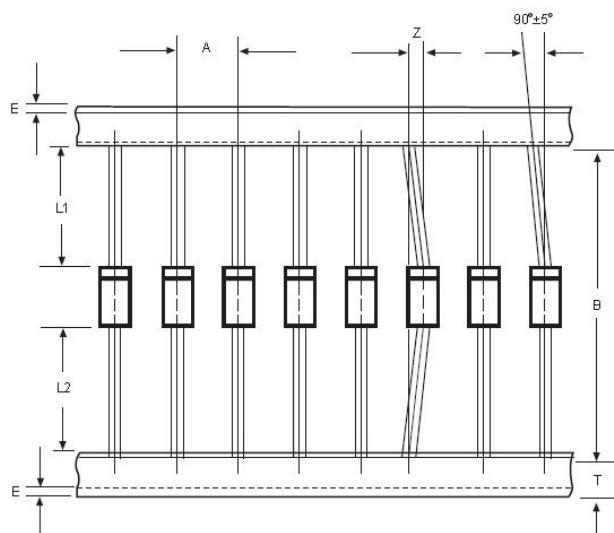
**Ordering Information**

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
L1-L2	-	1.0

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