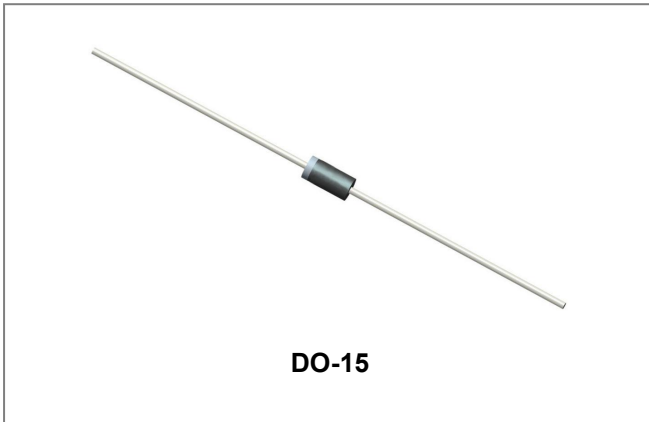


## SB2100 SCHOTTKY RECTIFIER



### Features

- Schottky Barrier Chip
- Ideally Suited for Automatic Assembly
- Low Power Loss, High Efficiency
- Surge Overload Rating to 50A Peak
- For Use in Low Voltage Application
- Guard Ring Die Construction
- Plastic Case Material has UL Flammability
- Classification Rating 94V-0
- 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

### Maximum Ratings

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$	-	100	V
Working Peak Reverse Voltage	$V_{RWM}$			
DC Blocking Voltage	$V_R$			
Average Rectified Forward Current	$I_F (AV)$	50% duty cycle @ $T_C = 100^\circ C$ rectangular wave form( $L=0.375"$ )	2.0	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse, $T_J = 25^\circ C$	50	A

### Electrical Characteristics

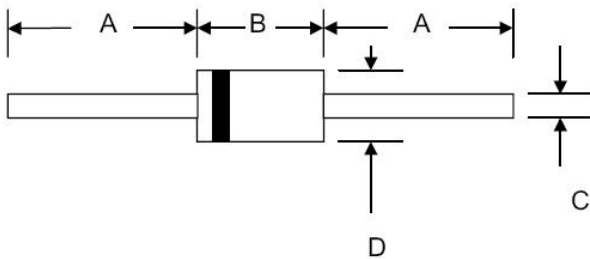
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 2.0A, Pulse, $T_J = 25^\circ C$	0.76	0.85	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ C$	0.05	500	$\mu A$
	$I_{R2}$	@ $V_R = \text{rated } V_R$ $T_J = 125^\circ C$	0.032	20	mA
Junction Capacitance	$C_J$	@ $V_R = 5V$ , $T_C = 25^\circ C$ $f_{SIG} = 1MHz$	65	140	pF

\* Pulse width < 300  $\mu s$ , 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	-	0.093	g

### Mechanical Dimensions DO-15



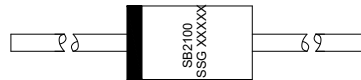
SYMBOL	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	25.4	26.0	-	1.000	1.024	-
B	6.1	6.27	6.4	0.240	0.247	0.252
C	0.6	0.7	0.8	0.023	0.028	0.031
D	3.0	3.3	3.6	0.104	0.130	0.140

### Ordering Information

Device	Package	Shipping
SB2100	DO-15 (Pb-Free)	3000pcs /tape
SB2100TA	DO-15 (Pb-Free)	3000pcs /tape

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

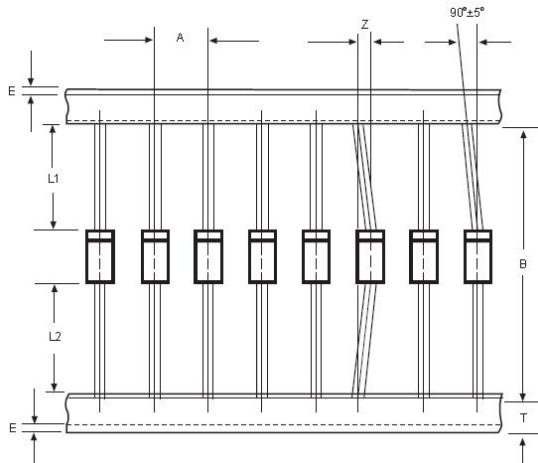
### Marking Diagram



Where XXXXX is YYWWL

SB = Device Type  
 2 = Forward Current (2A)  
 100 = Reverse Voltage (100V)  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

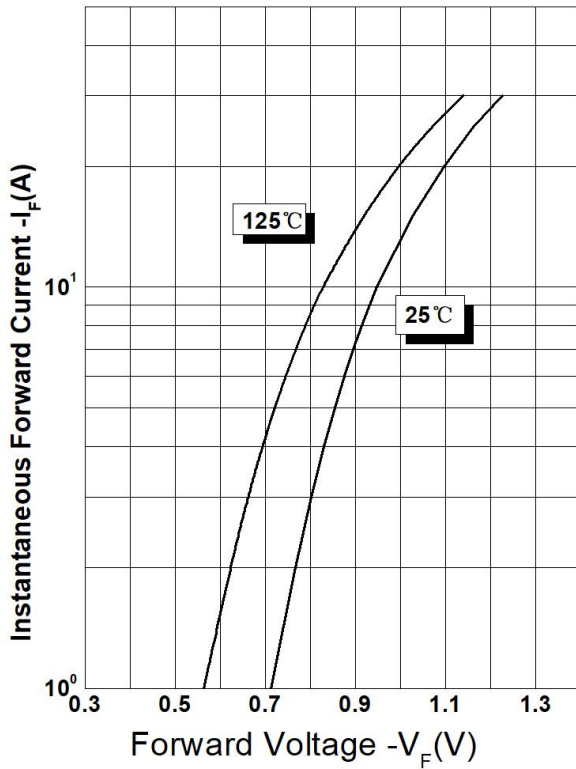
### Carrier Tape Specification DO-15



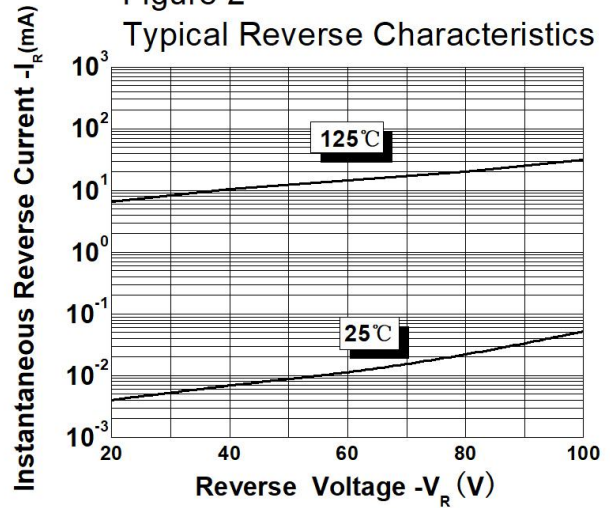
SYMBOL	Millimeters	
	Min.	Max.
A	4.50	5.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

**Ratings and Characteristics Curves**

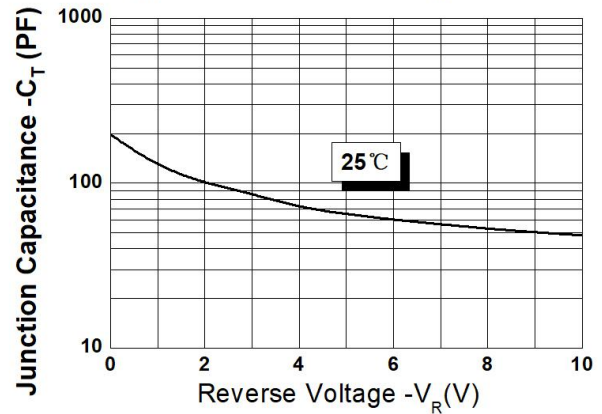
**Figure 1**  
Typical Forward Characteristics



**Figure 2**  
Typical Reverse Characteristics



**Figure 3**  
Typical Junction Capacitance



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