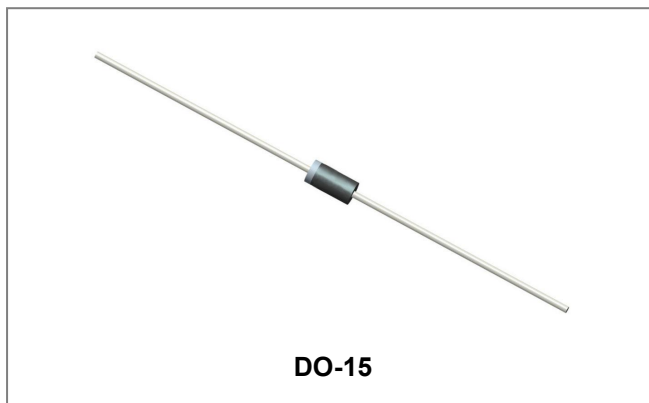


SB2100 SCHOTTKY RECTIFIER



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
- 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 @ $T_C = 100^\circ\text{C}$ rectangular wave form ($L=0.375"$)	2.0	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse, $T_J = 25^\circ\text{C}$	50	A

Electrical Characteristics

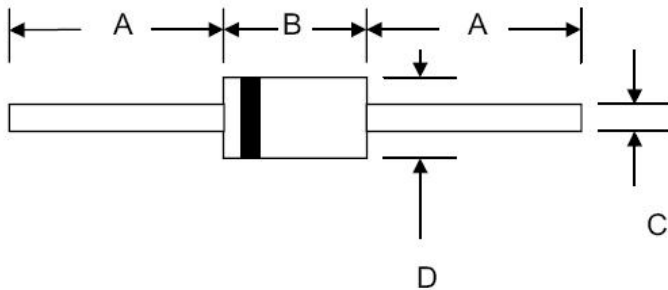
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 2.0A, Pulse, $T_J = 25^\circ\text{C}$	0.70	0.85	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R$ $T_J = 25^\circ\text{C}$	0.02	0.5	mA
	I_{R2}	@ $V_R = \text{rated } V_R$ $T_J = 100^\circ\text{C}$	10	20	mA
Junction Capacitance	C_J	@ $V_R = 5V$, $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	120	140	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	-	0.093	g

Mechanical Dimensions DO-15



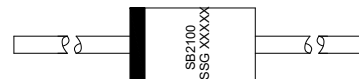
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	5.5	7.62	0.217	0.300
C	0.6	0.9	0.023	0.034
D	2.6	3.6	0.104	0.140

Ordering Information

Device	Package	Shipping
SB2100	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.

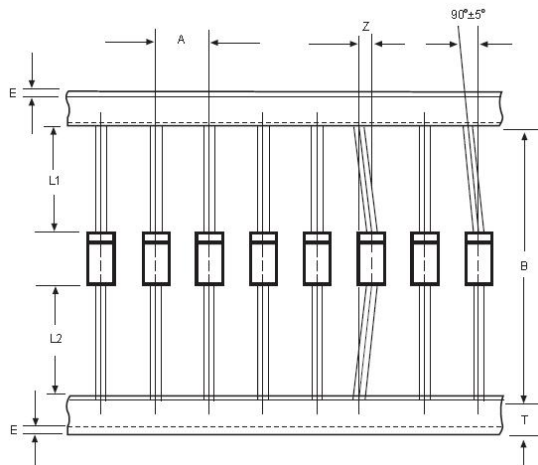
Marking Diagram



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

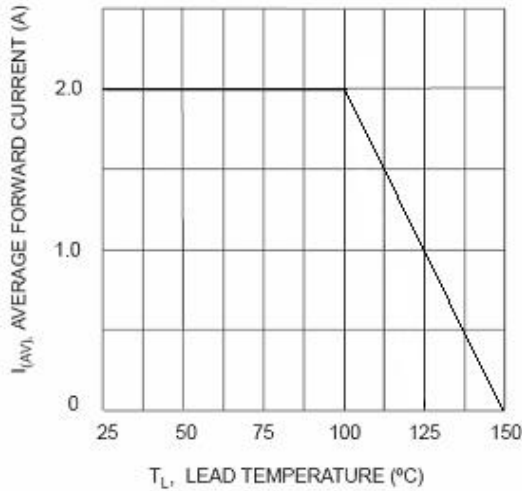


Fig. 1 Forward Current Derating Curve

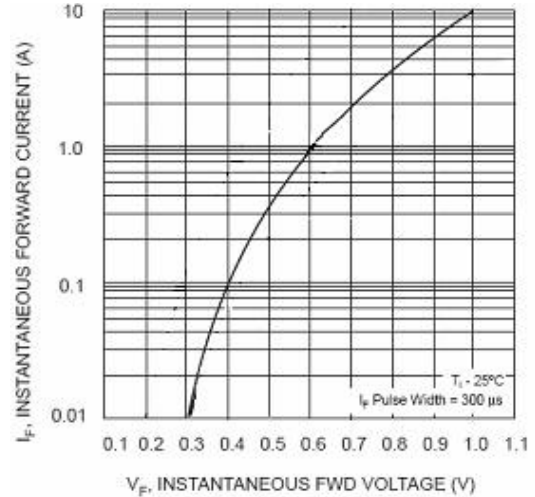


Fig. 2 Typ. Forward Characteristics

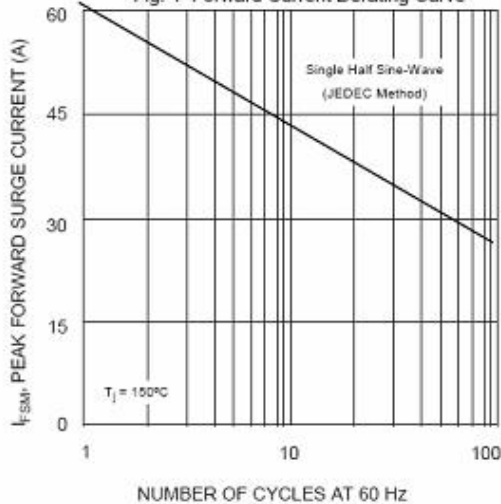


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

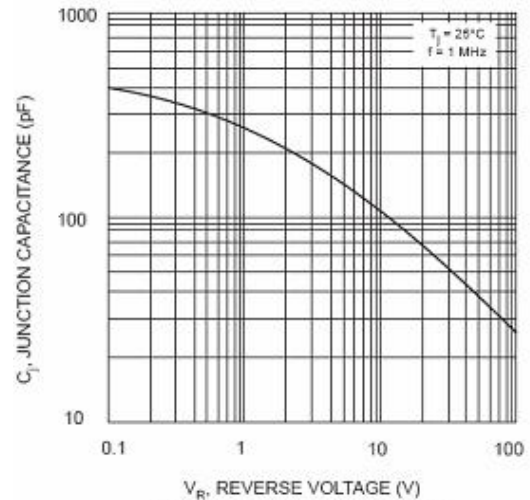


Fig. 4 Typical Junction Capacitance

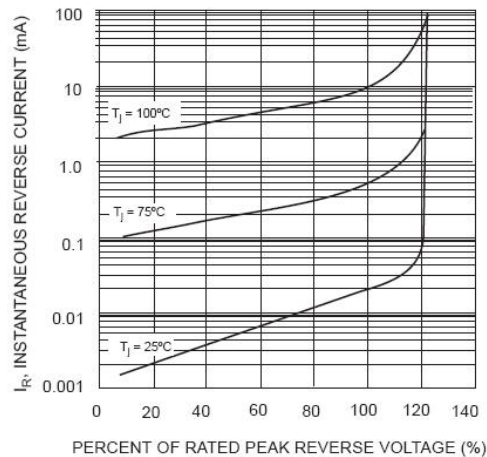


Fig. 5 Typical Reverse Characteristics

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