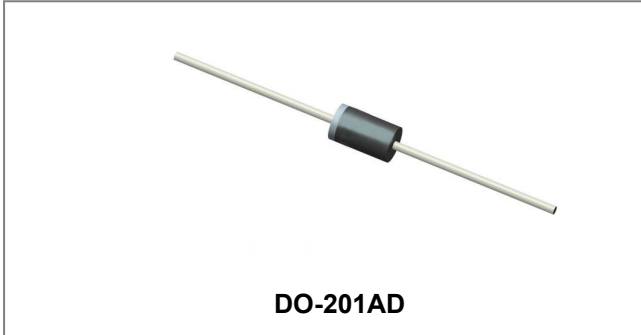


## SB20100 SCHOTTKY RECTIFIER



### 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 @ $T_C=105^\circ\text{C}$ , rectangular wave form	20	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse, $T_C=25^\circ\text{C}$	280	A

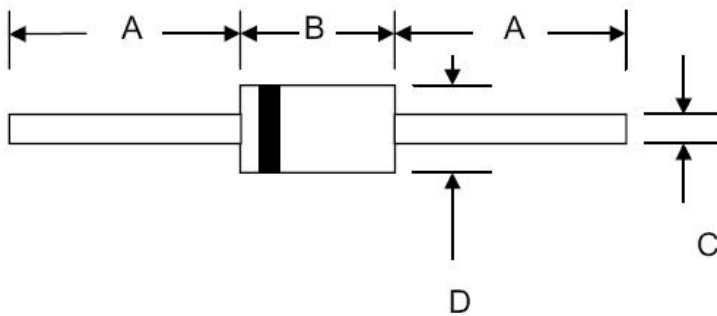
### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 20A, Pulse, $T_J = 25^\circ\text{C}$	-	0.93	V
	$V_{F2}$	@ 20A, Pulse, $T_J = 125^\circ\text{C}$	-	0.80	V
Reverse Current*	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25^\circ\text{C}$	-	1	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 125^\circ\text{C}$	-	10	mA
Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	-	500	pF
Series Inductance	$L_S$	Measured lead to lead 5 mm from package body	8.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/ $\mu\text{s}$

\* Pulse width < 300  $\mu\text{s}$ , 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	4.5	°C/W
Approximate Weight	wt	-	1.02	g

**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
SB20100	DO-201AD (Pb-Free)	1250pcs / tape

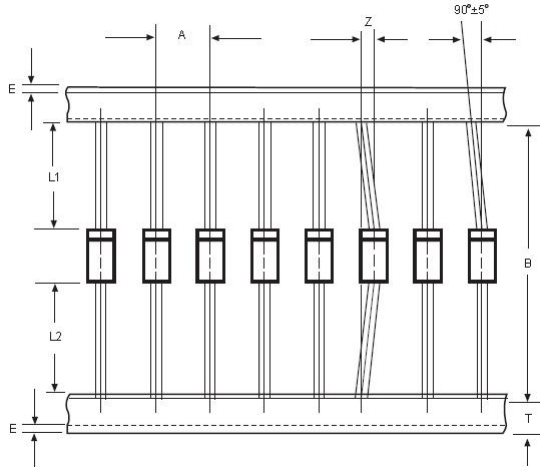
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**


Where XXXXX is YYWWL

SB20100 = 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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