

## SBS5100 SCHOTTKY RECTIFIER

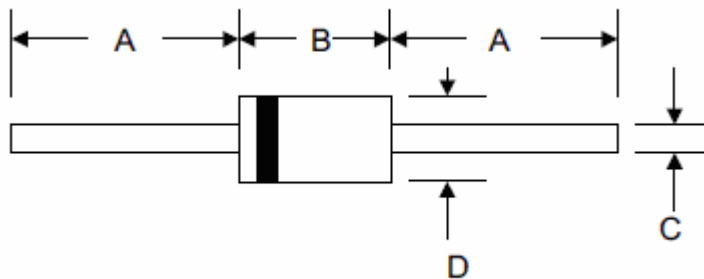
### Applications:

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Disk drives
- Battery charging

### 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

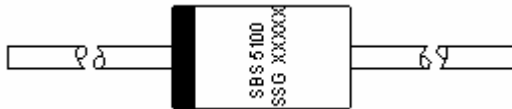
### Mechanical Dimensions: In mm/Inches



DO-201AE				
Dim	Min	Max	Min	Max
A	25.4	-	1.000	-
B	7.20	9.50	0.283	0.374
C	0.94	1.07	0.037	0.042
D	4.80	5.30	0.189	0.209
All	In mm		In inch	

### DO-201AE

**Marking Diagram:**



Where XXXXX is YYWWL

- SBS = Device Type
- 5 = Forward Current (5A)
- 100 = Reverse Voltage (100V)
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

**Cautions** : Molding resin  
Epoxy resin UL:94V-0

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

Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	SBS5100	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	100	V
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	$^\circ\text{C}$
Case Style	DO-201AE		

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.

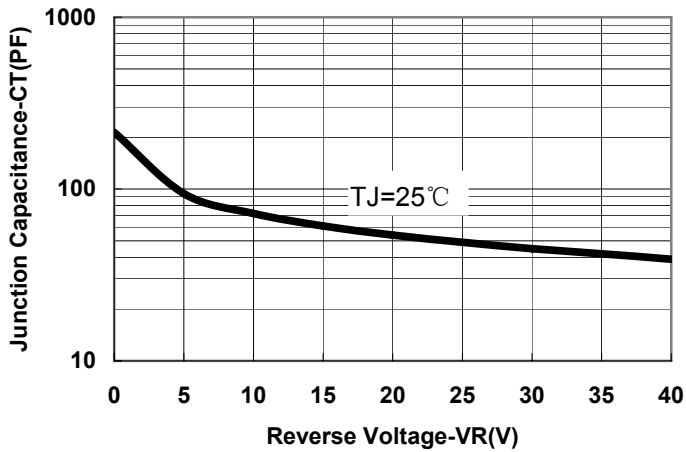


Fig.1-Typical Junction Capacitance Vs.Reverse Voltage

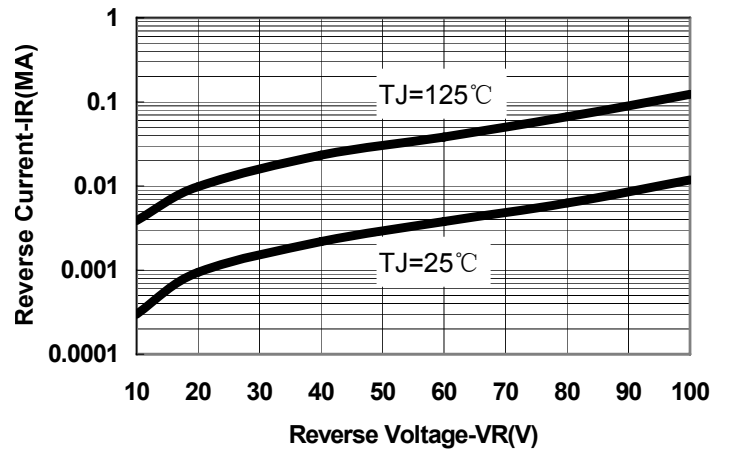


Fig.2-Typical Values Of Reverse Current Vs.Reverse Voltage

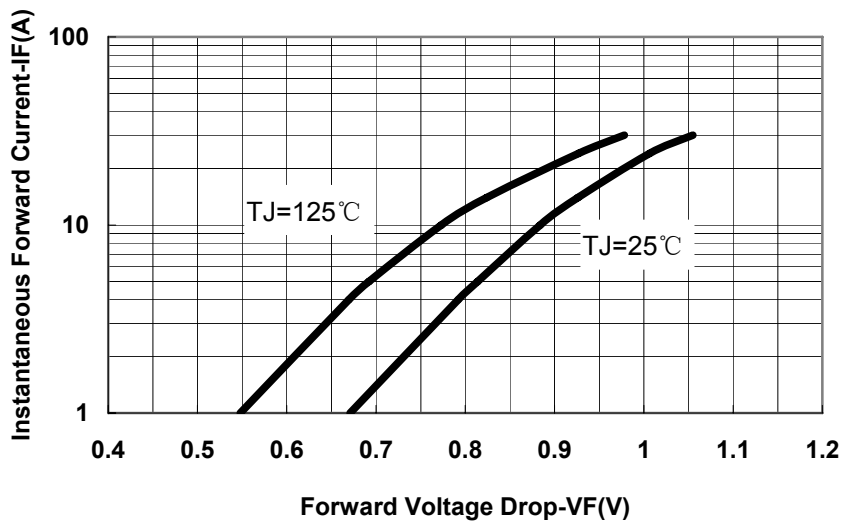


Fig.3-Typical Forward Voltage Drop Characteristics



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