

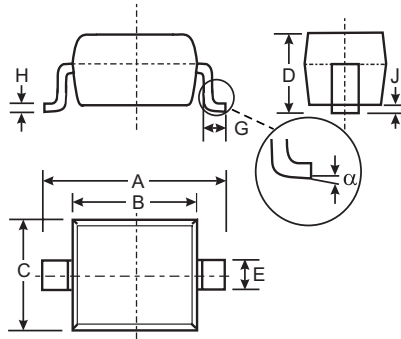
## SURFACE MOUNT SCHOTTKY BARRIER DIODE

### Features

- Low Forward Voltage Drop
- Guard Ring Die Construction for Transient Protection
- Ideal for low logic level applications
- Low Capacitance
- **Lead Free/RoHS Compliant (Note 3)**

### Mechanical Data

- Case: SOD-323
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Leads: Solderable per MIL-STD-202, Method 208
- Lead Free Plating (Matte Tin Finish annealed over Alloy 42 leadframe).
- Polarity: Cathode Band
- Marking: See Page 2
- Type Code: SG
- Weight: 0.004 grams (approximate)



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
$\alpha$	0°	8°
All Dimensions in mm		

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30	V
RMS Reverse Voltage	$V_{R(RMS)}$	21	V
Forward Continuous Current (Note 1)	$I_{FM}$	100	mA
Non-Repetitive Peak Forward Surge Current @ $t \leq 10\text{ms}$	$I_{FSM}$	750	mA
Power Dissipation (Note 1)	$P_d$	250	mW
Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to 150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 2)	$V_{(BR)R}$	30	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage Drop	$V_{FM}$	—	300 360 470 580	— — 550 800	mV	@ $I_F = 2.0\text{mA}$ @ $I_F = 15\text{mA}$ @ $I_F = 50\text{mA}$ @ $I_F = 100\text{mA}$
Peak Reverse Current (Note 2)	$I_{RM}$	—	—	1.0	$\mu\text{A}$	$V_R = 25\text{V}$
Total Capacitance	$C_T$	—	7	—	pF	$V_R = 10\text{V}$ $f = 1.0\text{MHz}$

- Notes: 1. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at <http://www.diodes.com/datasheets/ap02001.pdf>.  
2. Short duration test pulse used in minimizing self-heating effect.  
3. No purposefully added lead.

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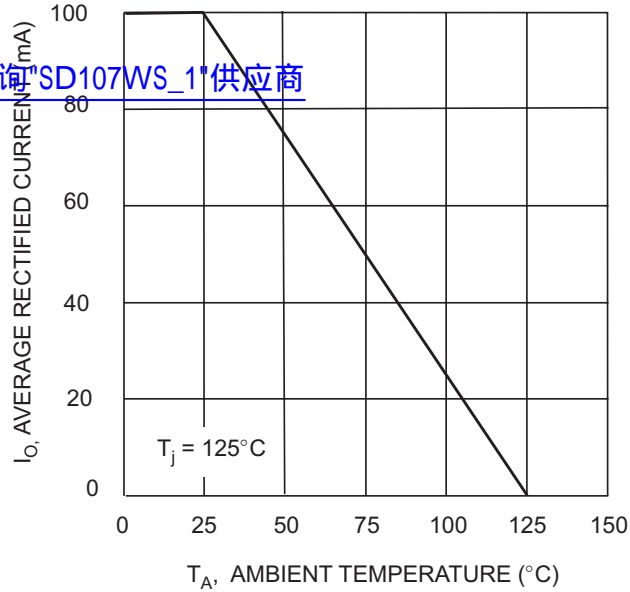


Fig. 1 Forward Current Derating Curve

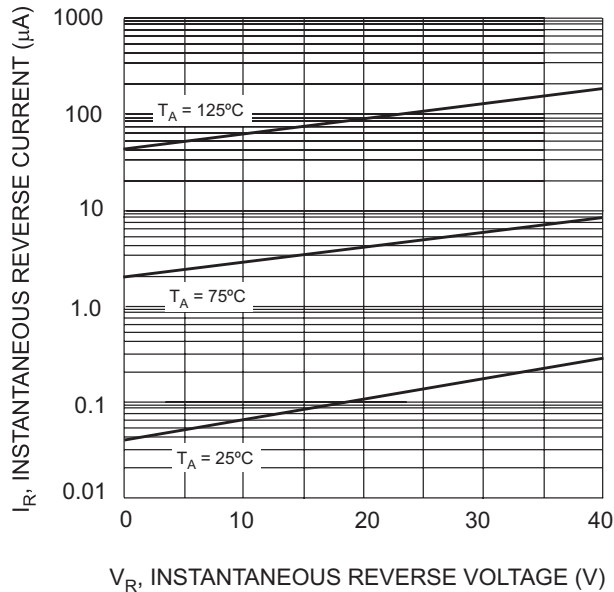


Fig. 3 Typical Reverse Characteristics

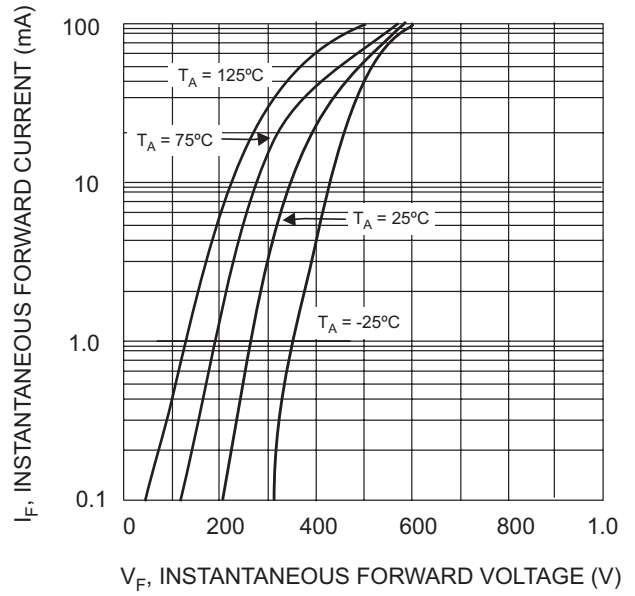


Fig. 2 Typical Forward Characteristics

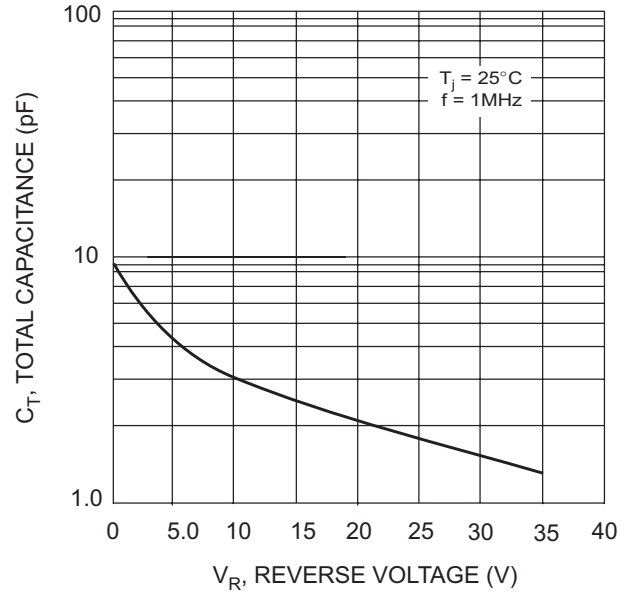


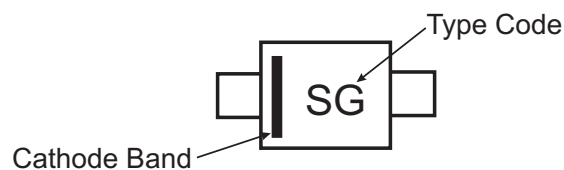
Fig. 4 Total Capacitance vs. Reverse Voltage

## Ordering Information (Note 4)

Device	Packaging	Shipping
SD107WS-7-F	SOD-323	3000/Tape & Reel

Notes: 4. For Packaging Details, go to our website at <http://www.diodes.com/datasheets/ap02007.pdf>.

## Marking Information



## IMPORTANT NOTICE

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