



SSCS5817D1-SSCS5819D1

SSCS5817D1 / SSCS5818D1 / SSCS5819D1

Schottky Barrier Diode

● Features

- ❖ Low Forward Voltage Drop (VF)
- ❖ Better Efficiency and Cooler Operation
- ❖ Guard Ring Construction for Transient Protection

● PIN configuration



SOD-123

● Applications

- ❖ Low Voltage Rectification
- ❖ High-Efficiency DC-DC Conversion
- ❖ Switch Mode Power Supply
- ❖ Inverse Polarity Protection



Circuit Diagram



Marking

(5817: SJ 5818: SK 5819: SL)

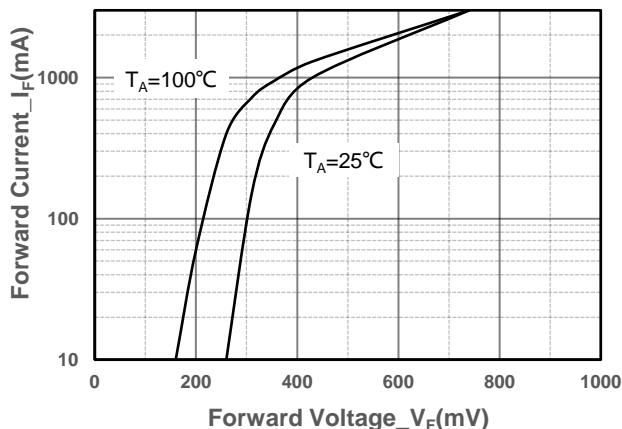
● Absolute maximum rating @ $T_A=25^\circ\text{C}$

Parameter	Symbol	5817D1	5818D1	5819D1	Unit
Non-repetitive Peak Reverse Voltage	V_{RM}				
Peak Repetitive Peak Reverse Voltage	V_{RRM}				
Working Peak Reverse Voltage	V_{RWM}	20	30	40	V
DC Blocking Voltage	V_R				
Average Rectified Output Current	I_o		1		A
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}		9		A
Power Dissipation	P_D		250		mW
Thermal Resistance Junction to Ambient (Typ)	$R_{\theta JA}$		170		$^\circ\text{C}/\text{W}$
Operating Temperature	T_J		-55 ~ +125		$^\circ\text{C}$
Storage Temperature	T_{STG}		-55 ~ +155		$^\circ\text{C}$

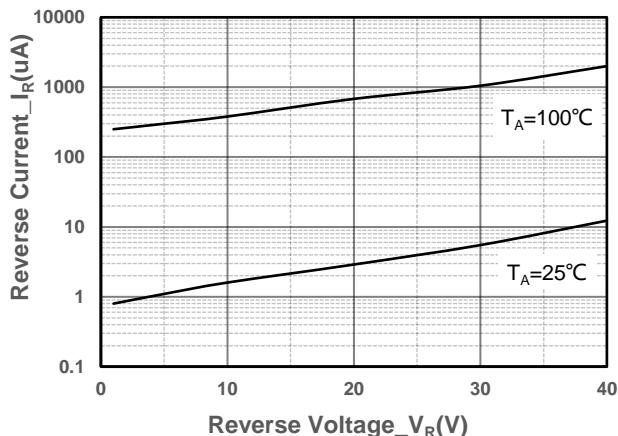
- **Electrical Characteristics @ $T_A=25^\circ\text{C}$**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit	
Reverse Voltage	V_R	$I_R = 1\text{mA}$	5817D1	20			
			5818D1	30			
			5819D1	40			
Forward Voltage	V_F	$I_F = 1\text{A}$	5817D1		0.45	V	
		$I_F = 3\text{A}$			0.75		
		$I_F = 1\text{A}$	5818D1		0.55		
		$I_F = 3\text{A}$			0.875		
		$I_F = 1\text{A}$	5819D1		0.6		
		$I_F = 3\text{A}$			0.9		
Reverse Current	I_R	$V_R = 20\text{V}$	5817D1				
		$V_R = 30\text{V}$	5818D1	1			
		$V_R = 40\text{V}$	5819D1				
Junction Capacitance	C_J	$V_R = 4\text{V}, f = 1\text{MHz}$			120	pF	

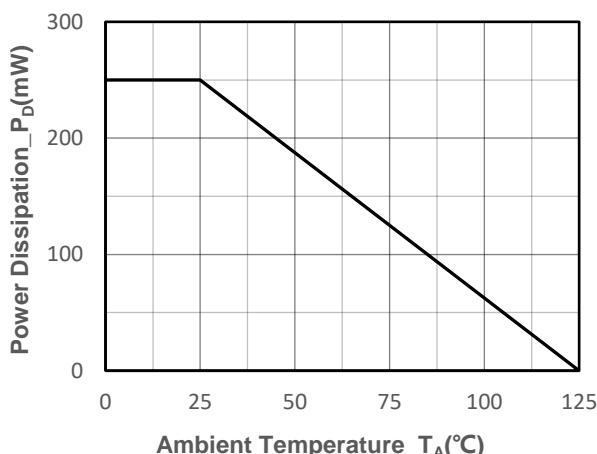
- **Typical Performance Characteristics**



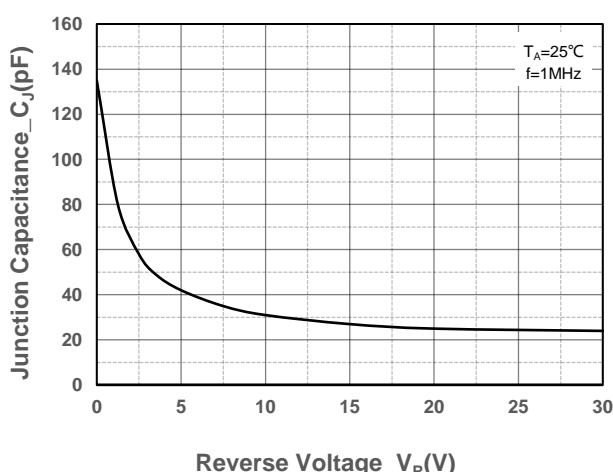
Forward Voltage vs. Forward Current



Reverse Voltage vs. Reverse Current



Power Derating vs. Ambient Temperature



Junction Capacitance vs. Reverse Voltage

- Package Information**

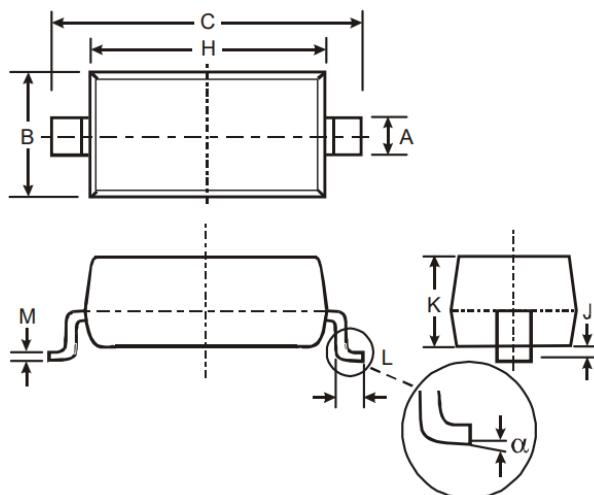
Ordering Information

Device	Package	Marking	Qty per Reel	Reel Size
SSCS5817D1	SOD-123	SJ	3000	7 Inch
SSCS5818D1	SOD-123	SK	3000	7 Inch
SSCS5819D1	SOD-123	SL	3000	7 Inch

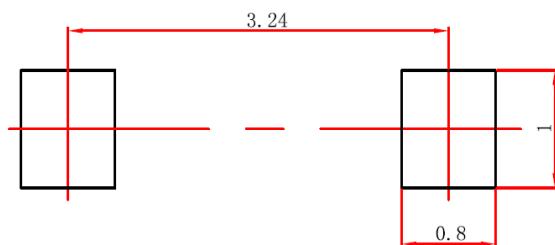
Mechanical Data

Case: SOD-123

Case Material: Molded Plastic. UL Flammability



DIM	Millimeters	
	Min	Max
A	0.45	0.65
B	1.50	1.70
C	3.55	3.85
H	2.6	2.8
J	0.00	0.10
K	1.05	1.15
L	0.25	0.45
M	0.08	0.15
α	0	8°

Recommended Pad outline (Unit:mm)




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