



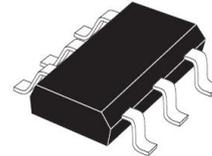
SSC1N4148SG

Switching Diode

● Features

- ✧ Fast Switching Device ($T_{rr} < 4\text{ns}$)
- ✧ Power Dissipation of 200mW
- ✧ Low reverse leakage
- ✧ High Stability and High Reliability
- ✧ RoHS Compliant

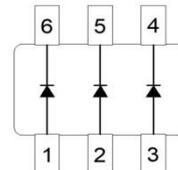
● PIN configuration



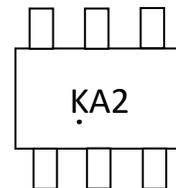
SOT-363

● Applications

- ✧ Ultra high-speed switching
- ✧ Voltage clamping
- ✧ Protection circuits
- ✧ Blocking diodes



Circuit Diagram



Marking(Top View)

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

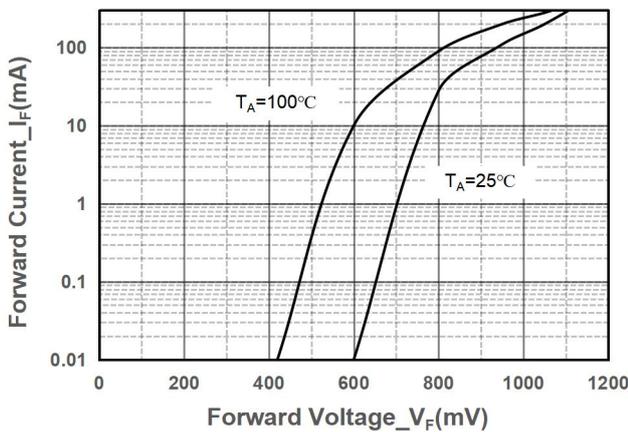
Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Continuous Reverse Voltage	V_R	75	V
Average Rectified Output Current	I_o	150	mA
Repetitive Peak Forward Current	I_{FM}	300	mA
Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	2.0	A
Power Dissipation	P_D	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	-55 ~ +150	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$



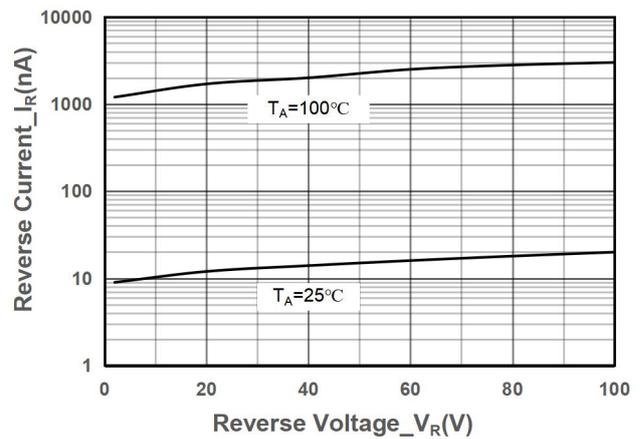
● Electrical Characteristics @T_A=25°C

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	V _{BR}	I _R = 10μA	75			V
Forward Voltage	V _F	I _F = 1mA			0.715	V
		I _F = 10mA			0.855	V
		I _F = 50mA			1	V
		I _F = 150mA			1.25	V
Reverse Current	I _R	V _R = 20V			25	nA
		V _R = 75V			1	μA
Junction Capacitance	C _J	V _R = 0V, f = 1MHz			2	pF
Reverse recovery time	t _{rr}	I _F =I _R =10mA, R _L =100Ω, I _r =0.1I _R			4	ns

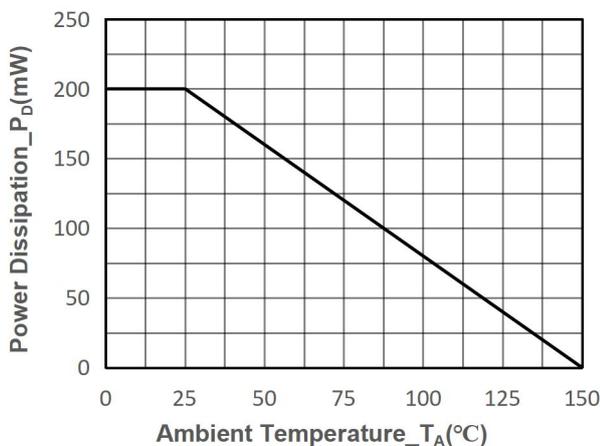
● Typical Performance Characteristics



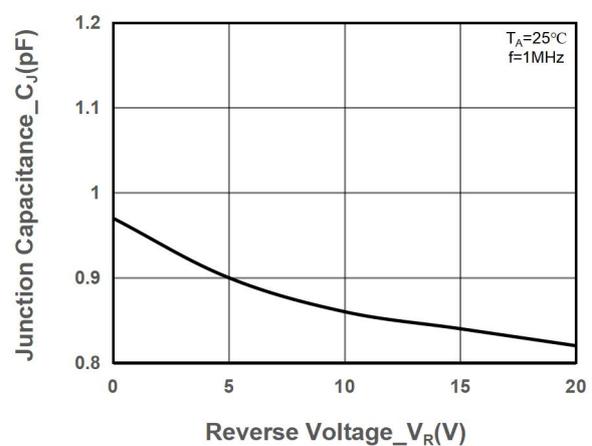
Forward Current vs. Forward Voltage



Reverse Current vs. Reverse Voltage



Power Derating vs. Ambient Temperature



Junction Capacitance vs. Reverse Voltage



● Package Information

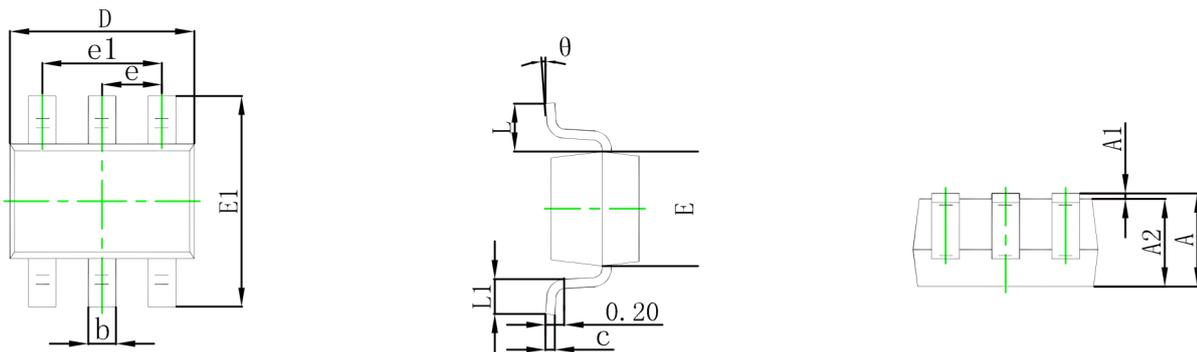
Ordering Information

Device	Package	Marking	Qty per Reel	Reel Size
SSC1N4148SG	SOT-363	KA2	3000	7 Inch

Mechanical Data

Case: SOT-363

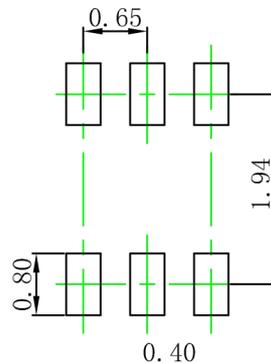
Case Material: Molded Plastic. UL Flammability



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°



Recommended Pad outline



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