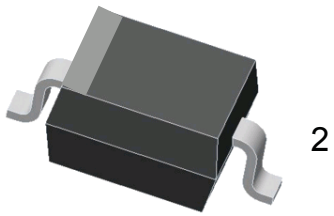
Switching Diodes

1KS1012F

SOD-323



Top View

PIN DESCRIPTION

PIN	DESCRIPTION
1	Cathode
2	Anode

■ Features

- Silicon epitaxial planar diode
- Fast switching diode

■ Absolute Maximum Ratings (T_a = 25℃,unless otherwise specified)

Parameter		Symbol	Value	Unit
Repetitive peak reverse voltage		V_{RRM}	130	V
Reverse Voltage		V_R	100	
Forward continuous current		I_F	250	mA
Non-repetitive peak forward current	t = 1μs	I_{FSM}	2	A
	t = 1ms		1	
	t = 1s		0.5	
Power dissipation		P_{tot}	200	mW
Thermal resistance junction to ambient air		R_{thJA}	650	℃/W
Junction Temperature		T_J	150	℃
Storage Temperature range		T_{stg}	-55 to 150	

■ Electrical Characteristics (T_a = 25 °C, unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse current	I_R	V_R = 100 V			1	μA
		V_R = 25 V, T_J = 150 ℃			30	
		V_R = 100 V, T_J = 150 ℃			50	
Forward voltage	V_F	I_F = 1 mA			0.715	V
		I_F = 10 mA			0.855	
		I_F = 50 mA			1	
		I_F = 150 mA			1.25	
Diode capacitance	C_D	V_R= 0 V, f= 1 MHz			2	pF
Reverse recovery time	t_{rr}	I_F = I_R = 10 mA, i_R = 1 mA, R_L = 100Ω			4	ns

■ Marking

Marking	A

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■ Typical Characterisitics

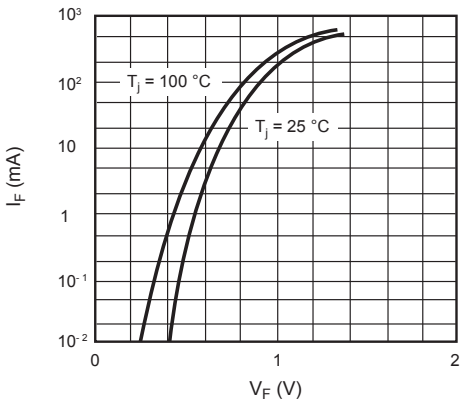

Fig. 1 - Forward Characteristics

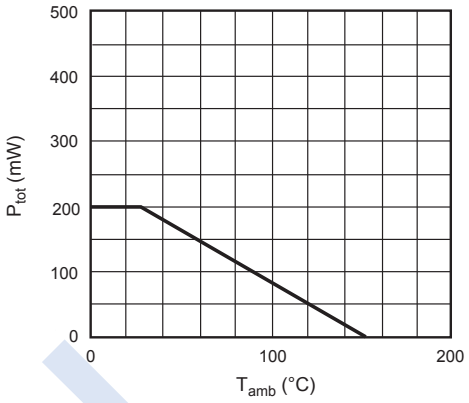

Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

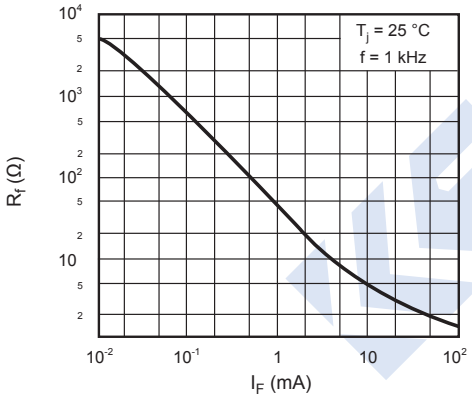

Fig. 2 - Dynamic Forward Resistance vs. Forward Current

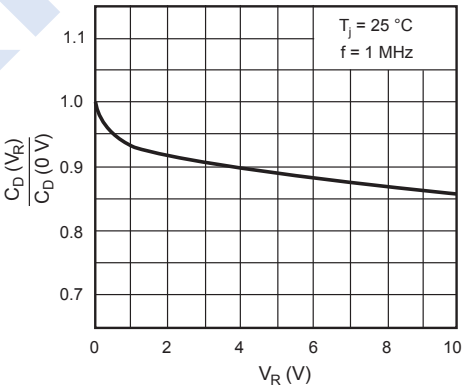

Fig. 4 - Relative Capacitance vs. Reverse Voltage

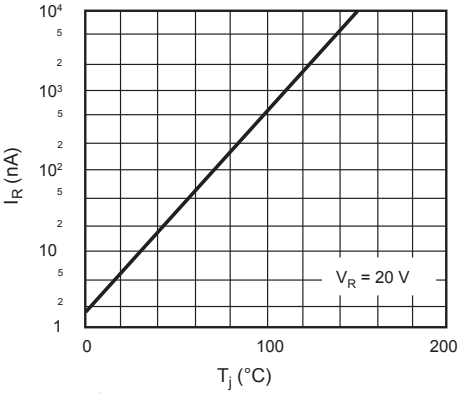

Fig. 5 - Leakage Current vs. Junction Temperature

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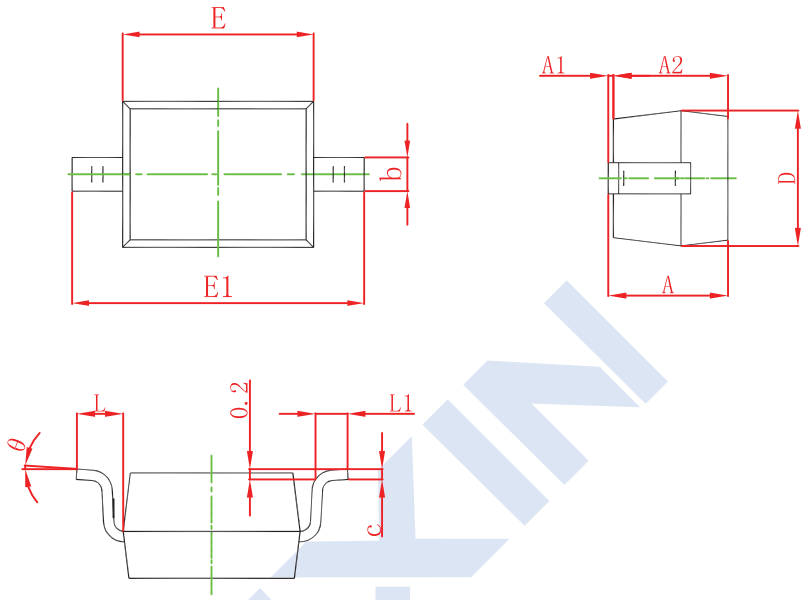
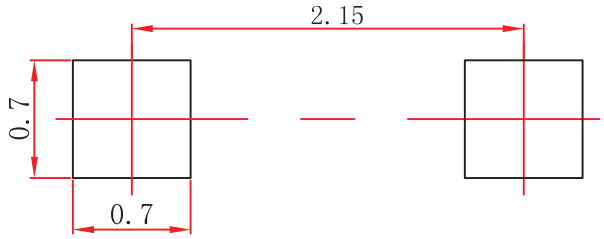
■ Package Outline Dimensions

Plastic surface mounted package; 2 leads SOD-323



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A		1.000		0.039
A1	0.000	0.100	0.000	0.004
A2	0.800	0.900	0.031	0.035
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	1.200	1.400	0.047	0.055
E	1.600	1.800	0.063	0.071
E1	2.550	2.750	0.100	0.108
L	0.475 REF.		0.019 REF.	
L1	0.250	0.400	0.010	0.016
θ	0°	8°	0°	8°

■ The Recommended Mounting Pad Size



Note:

1.Controlling dimension: in millimeters.

2.General tolerance:±0.05mm.

3.The pad layout is for reference purposes only.