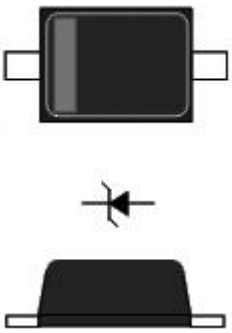
Extreme Low Forward Voltage Schottky Rectifiers

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Low Reverse Recovery Time
- Low Reverse Capacitance

SOD-523



Maximum Ratings and Electrical Characteristics, Single Diode @Ta=25℃

Parameter	Symbol	Value	Units
Peak repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Forward Continuous Current	I_{FM}	350	mA
Non-Repetitive Peak Forward Surge Current (@t=8.3ms)	I_{FSM}	2	A
Power Dissipation	P_D	150	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	667	℃/W
Junction Temperature	T_J	125	℃
Storage Temperature	T_{STG}	-55~+150	℃

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Electrical Characteristics (T_A=25℃ unless otherwise specified

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Units
Reverse Voltage	V_{BR}	I_R=100μA	40	--	--	V
Forward Voltage	V_F	I_F=1mA	--	0.27	--	V
		I_F=5mA	--	0.32	--	
		I_F=20mA	--	--	0.37	
		I_F=200mA	--	--	0.6	
Reverse current	I_R	V_R=30V	--	--	5	μA
		V_R=20V	--	--	2	
		V_R=10V	--	--	1	
Total capacitance	C_{tot}	V_R=0V,f=1MHz	--	50	--	pF
Reverse recovery time	t_{rr}	I_F= I_R=200mA, I_{rr}=0.1×I_R, R_L=100Ω	--	10	--	ns

Typical Characteristics

Fig1.Forward Characteristics

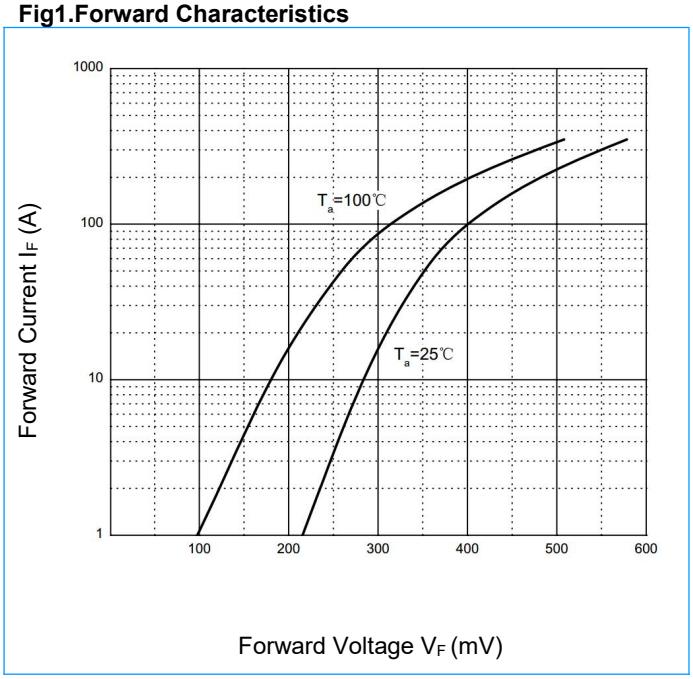
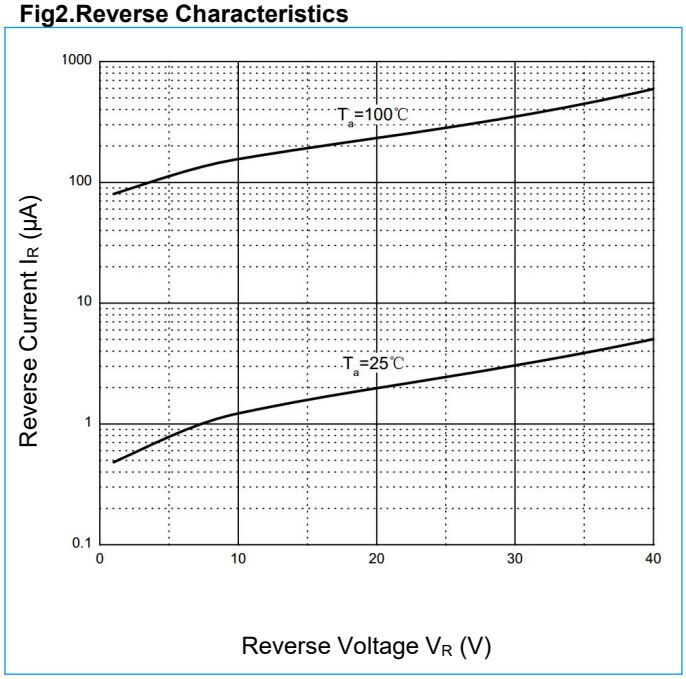


Fig2.Reverse Characteristics



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Typical Characteristics (Continue)

Fig3.Capacitance Characteristics

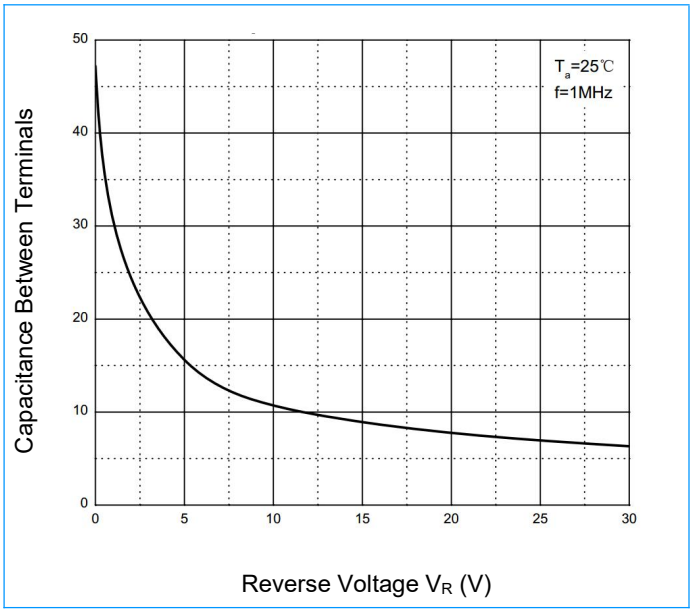
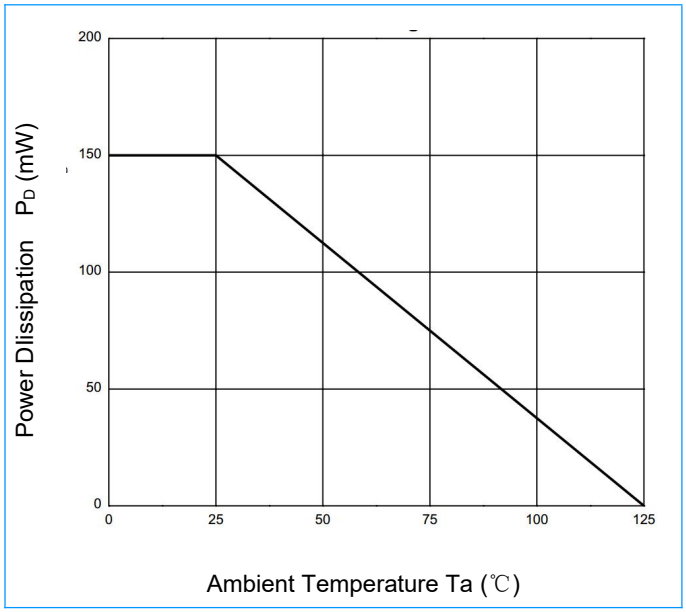
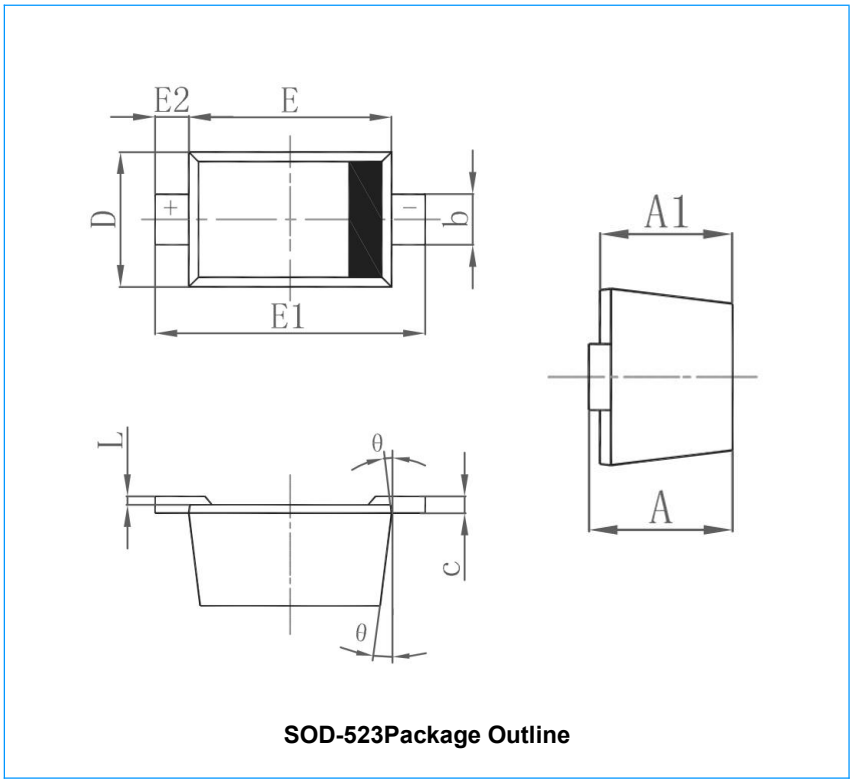


Fig4.Power Derating Curve



SOD-523Package Dimensions



SOD-523Package Outline

Symbol	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.510	0.770	0.020	0.031
A1	0.500	0.700	0.020	0.028
b	0.250	0.350	0.010	0.014
c	0.080	0.150	0.003	0.006
D	0.750	0.850	0.030	0.033
E	1.100	1.300	0.043	0.051
E1	1.500	1.700	0.059	0.067
E2	0.200 REF		0.008 REF	
L	0.010	0.070	0.001	0.003
θ	7° REF		7° REF	

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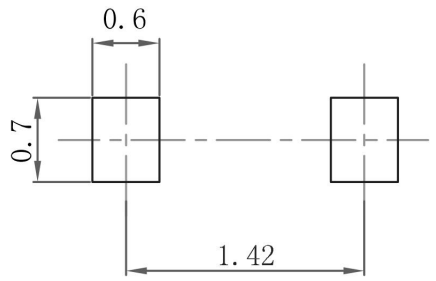
SOD-523Suggested Pad Layout



Notes:

1. Controlling dimension: in millimeters.

2. General tolerance: ±0.05mm.

3. The pad layout is for reference purposes only.