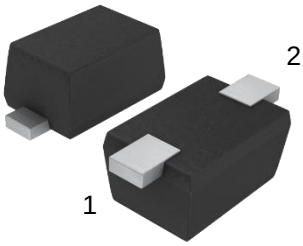
Prisemi®

P1N4148WT

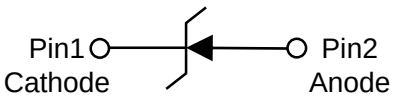
Switching Diode

Feature

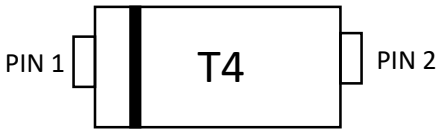
- For surface mounted applications
- Ideal for automated placement
- Fast reverse recovery time



SOD-523



Circuit Diagram



Marking (Top View)

Absolute maximum rating@25℃

Parameter	Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}		
Maximum RMS Voltage	V_{RMS}	53	V
Average Rectified Output Current	I_O	150	mA
Non-repetitive Peak Forward Surge Current@t= 8.3ms	I_{FSM}	0.8	A
Power Dissipation	P_D	150	mW
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55~+150	℃

Electrical characteristics per line@25℃

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Voltage	V_{BR}	I_R= 1μA	75	-	-	V
Reverse Current	I_R	V_R= 75V	-	-	1.0	μA
		V_R= 20V	-	-	25	nA
Forward Voltage	V_F	I_F = 1mA	-	-	0.715	V
		I_F = 10mA	-	-	0.855	
		I_F = 50mA	-	-	1.0	
		I_F = 150mA	-	-	1.25	
Total Capacitance	C_{tot}	V_R=0V, f=1MHz	-	-	2.0	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, I_{rr}=0.1xI_R, R_L=100Ω	-	-	4.0	ns

Typical Characteristics

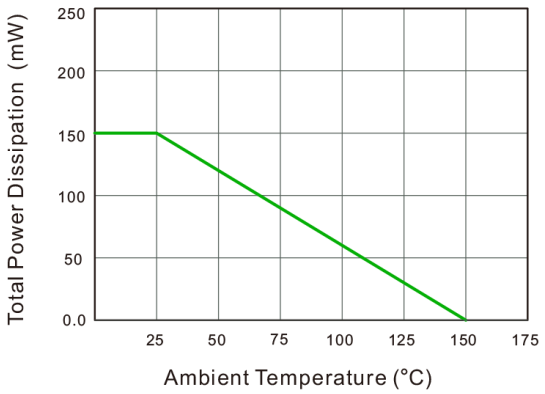


Fig.1 Power Derating Curve

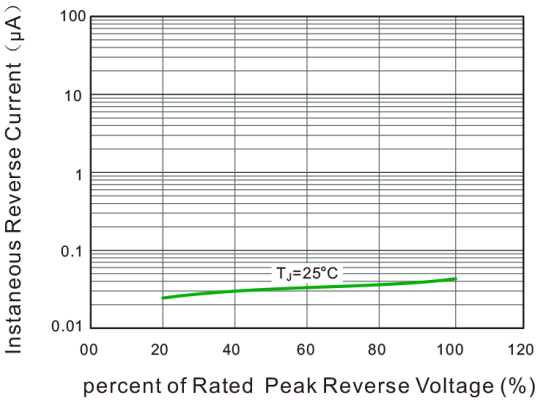


Fig.2 Typical Reverse Characteristics

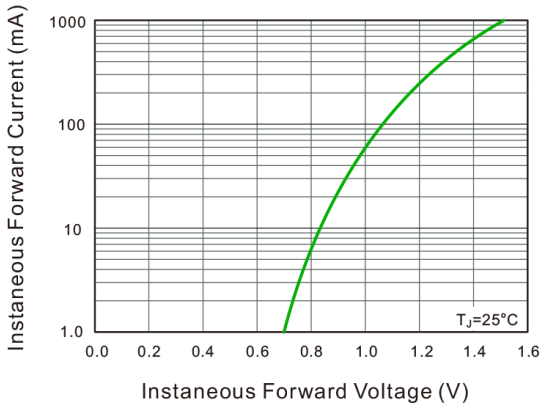


Fig.3 Typical Instaneous Forward Characteristics

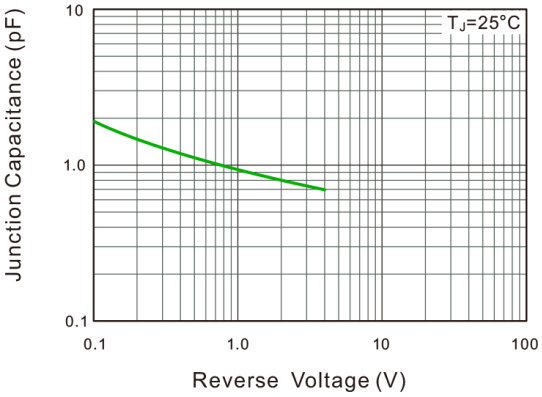
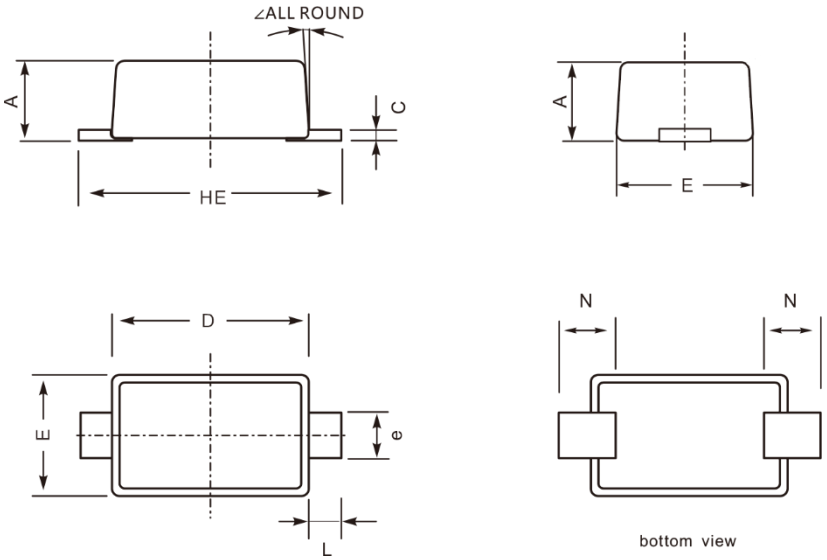
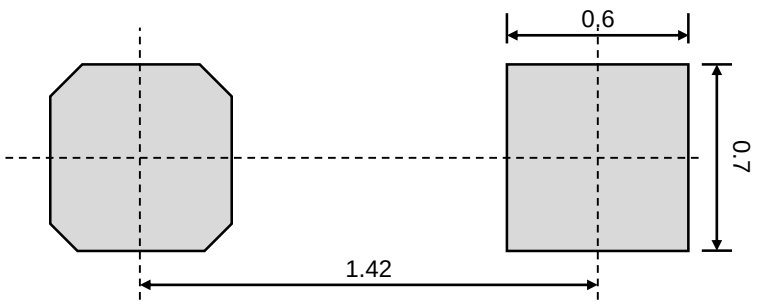


Fig.4 Typical Junction Capacitance

Product dimension (SOD-523)



Dim	Millimeters		Inches	
	Min	Max	Min	Max
A	0.51	0.77	0.020	0.030
e	0.25	0.35	0.010	0.014
C	0.08	0.15	0.003	0.006
D	1.10	1.30	0.043	0.051
E	0.75	0.99	0.030	0.039
HE	1.50	1.70	0.059	0.067
N	0.35 Ref.		0.014 Ref.	
L	0.20 Ref.		0.008 Ref.	
∠	10°		10°	



Suggested PCB Layout

Unit:mm

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◉ 新增 ○ 修订		申请部门	研发部	申请日期	2022-09-29
版本	**修改说明**			**申请/修改者**	**生效日期**
6.1	根据Switching Diode-SOD523-K-1N4148WT-150mA75V新增			Eddie/Tim	2022-09-29
6.1	增加丝印			David/Xenia	2023/05/11

审核	Maksim	日期	2022-09-29	核准	Ken	日期	2022-09-29