

DATA SHEET

SWITCHING DIODE
GENERAL PURPOSE

1N4148WT

RoHS compliant & Halogen free

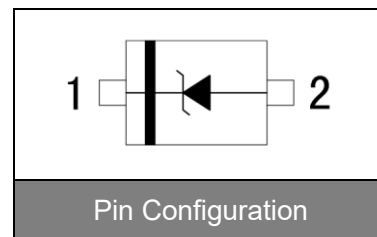
Product specification— May 14, 2026 V.3



Switching Diode

Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance
- Package: SOD523
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Cathode line denotes the cathode end
- Marking: T4.



Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Reverse Voltage	V_R	100	V
Average forward current	I_{FAV}	150	mA
Peak forward surge current at t = 1μs	I_{FSM}	2	A
Peak forward surge current at t = 100ms	I_{FSM}	1	A
Power Dissipation	P_{tot}	150	mW
Junction Temperature and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	°C

Characteristics at Ta = 25°C

Parameter	Symbol	Condition	Min.	Max.	Unit
Breakdown Voltage	V_R	$I_R=100\mu A$	100		V
Forward Voltage	V_F	$I_F=5mA$		0.715	V
	V_F	$I_F=10mA$		0.855	V
	V_F	$I_F=100mA$		1.00	V
	V_F	$I_F=150mA$		1.25	V
Reverse Leakage Current	I_R	$V_R=20V$		25	nA
	I_R	$V_R=75V$		1	uA
Capacitance	C_j	$V_R=0V, f=1MHz$		4	pF
Reverse Recovery Time	T_{rr}	$I_F=10mA, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$		4	ns

Electrical Characteristic Curves

Fig 1. Typical Instantaneous Forward Characteristics

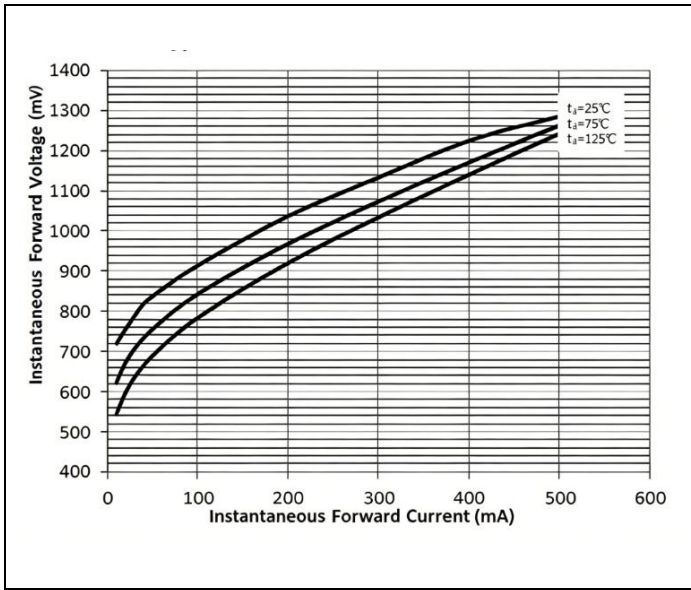


Fig 2. Power Derating Curve

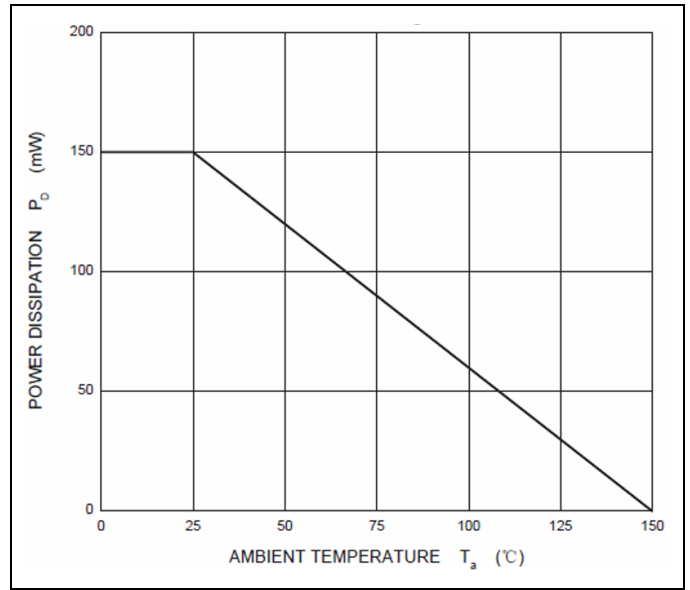
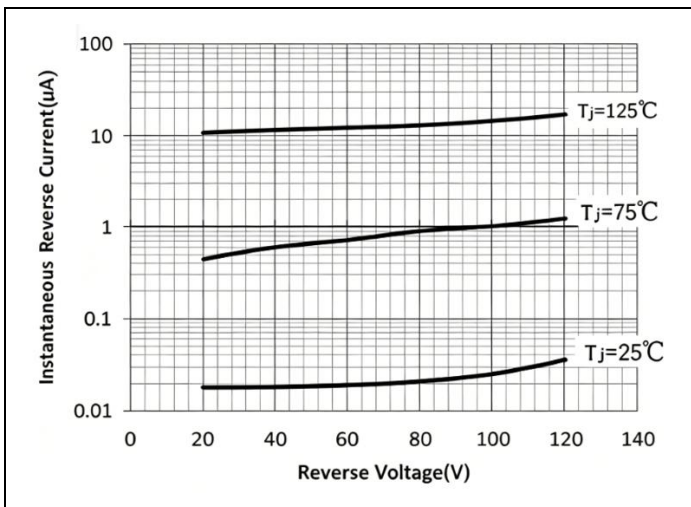
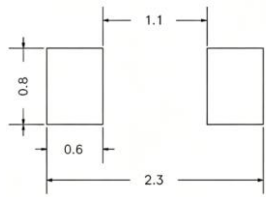
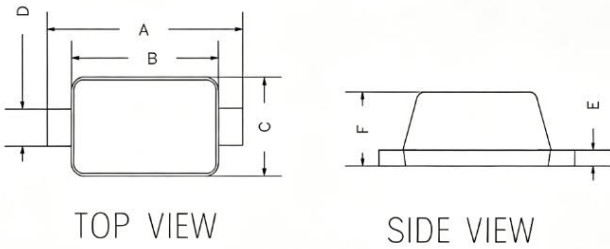


Fig 3. Typical Reverse Characteristics



Dimensions (SOD-523)

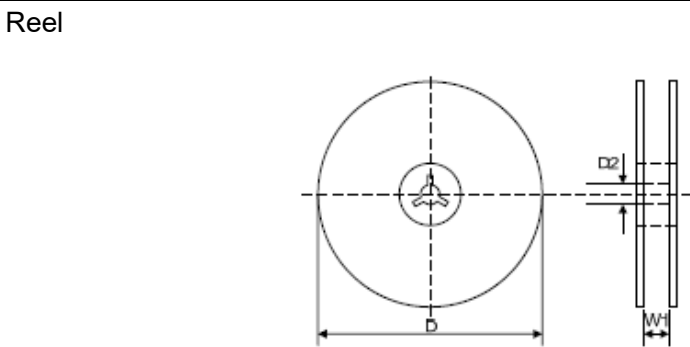
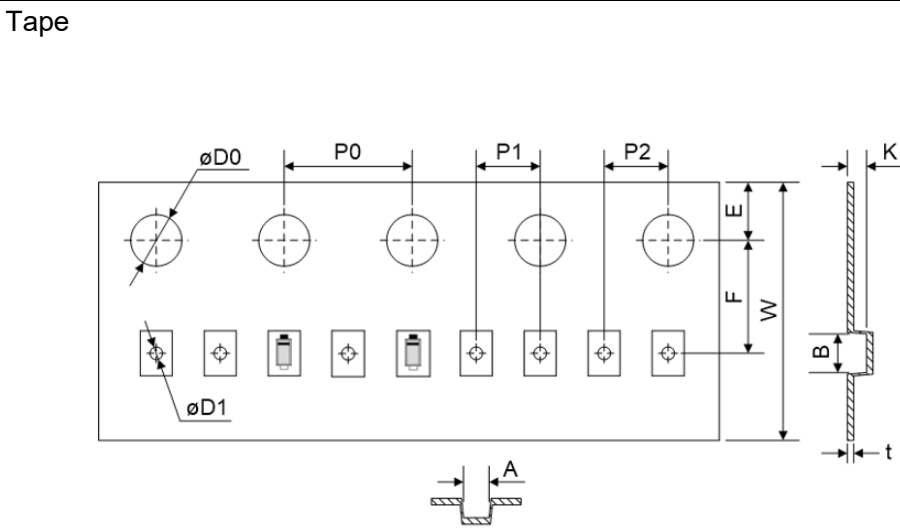
Symbol	Dimension (mm)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.50	1.70	0.059	0.067
B	1.10	1.30	0.043	0.051
C	0.70	0.90	0.028	0.035
D	0.25	0.35	0.010	0.014
E	0.05	0.20	0.002	0.008
F	0.50	0.70	0.020	0.028



UNIT: mm
 SUGGESTED SOLDER PAD LAYOUT

Packaging

Symbol	Dimension (mm)
W	8.00+0.3/-0.1
P0	4.00±0.10
P1	2.00±0.10
P2	2.00±0.10
D0	Φ1.55±0.05
D1	Φ0.40±0.15
E	1.75±0.10
F	3.50±0.05
A	0.91±0.05
B	1.79±0.05
K	0.68±0.05
t	0.20±0.02
D	Φ178±1.0
D2	Φ13.5±0.3
W1	9.3±1.5
Quantity: 8000PCS	



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