

DATA SHEET

SWITCHING DIODE
GENERAL PURPOSE

1N4148W

RoHS compliant & Halogen free

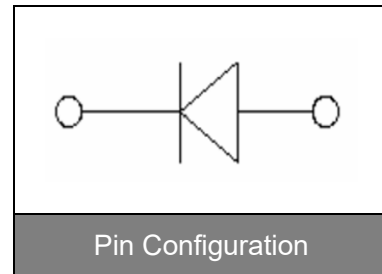
Product specification— May 14, 2026 V.2



Switching Diode

Features

- SOD-123 package
- Fast switching
- Moisture sensitivity level 1
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking: T4.



Application

- High frequency rectifier
- Signal switching

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	100	V
Forward Current	I_F	150	mA
Repetitive peak forward current	I_{FRM}	300	mA
Non-repetitive surge peak forward current@t=8.3ms half-sine wave	I_{FSM}	1	A
Non-repetitive surge peak forward current@t=1ms square wave	I_{FSM}	1.5	A
Non-repetitive surge peak forward current@t=1us square wave	I_{FSM}	2	A
Non-repetitive surge peak forward current@t=1s square wave	I_{FSM}	0.5	A
Power Dissipation	P_D	400	mW
Junction Temperature	T_j	-55 to+150	°C
Storage Temperature Range	T_{stg}	-55 to+150	°C

Characteristics at Ta = 25°C

Parameter	Symbol	Condition	Min.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=10\mu A$	100		V
Forward Voltage	V_F	$I_F=10mA$		1.0	V
Forward Voltage	V_F	$I_F=100mA$		1.25	V
Reverse leakage current	I_R	$V_R=20V$		25	nA
Reverse leakage current	I_R	$V_R=75V$		1	uA
Junction capacitance	C_j	$V_R=0V, f=1MHZ$		4	pF
Reverse Recovery Time	T_{rr}	$I_F=10mA, V_R=6V, I_{rr}=1mA, R_L=100\Omega$		4	ns

Characteristics at Ta = 25°C

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	315	°C/W
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	255	°C/W

Note: (1) Thermal resistance from junction to ambient and from junction to case mounted on P.C.B. with 8mm*9mm copper pad areas.

Electrical Characteristic Curves

Figure 1. Power Dissipation vs. Ambient Temperature

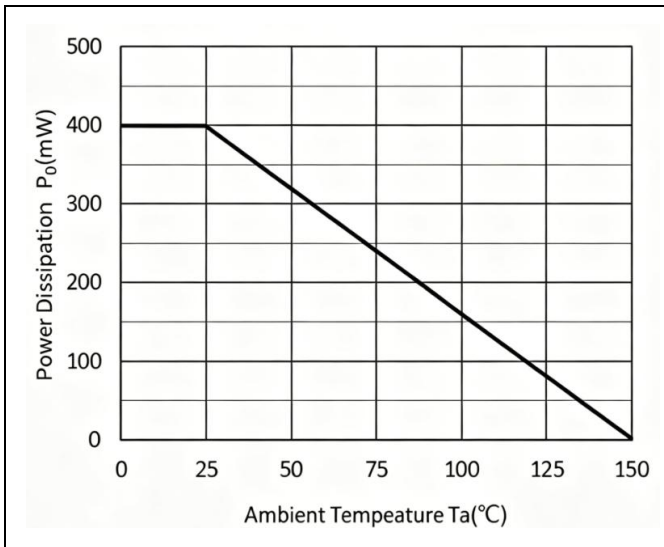


Figure 2. Total Capacitance vs. Reverse Voltage

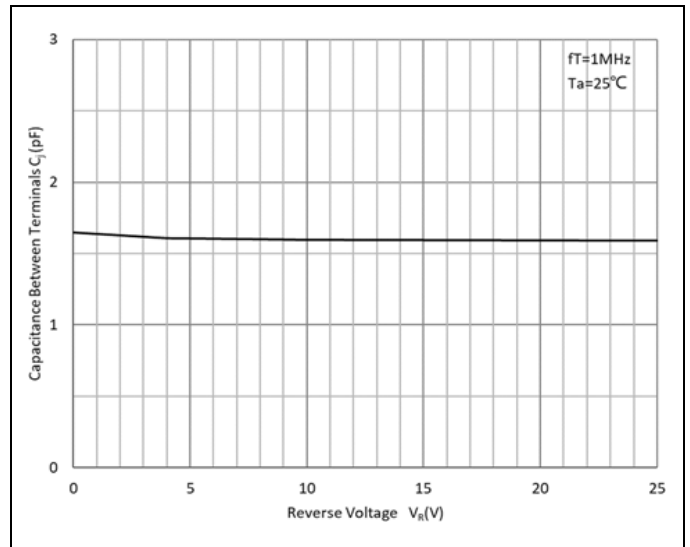


Figure 3. Reverse Current vs. Reverse Voltage

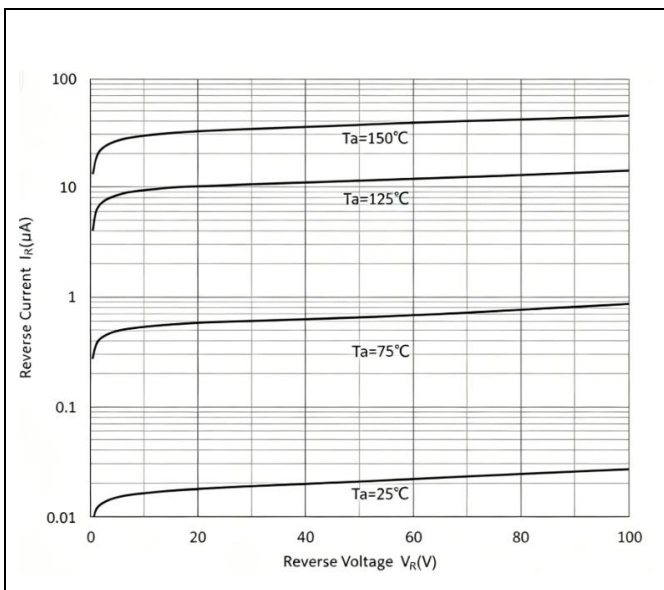
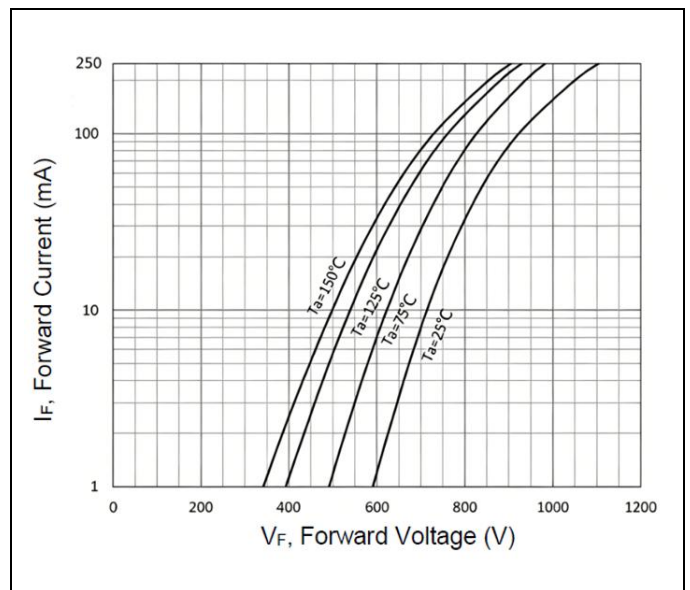
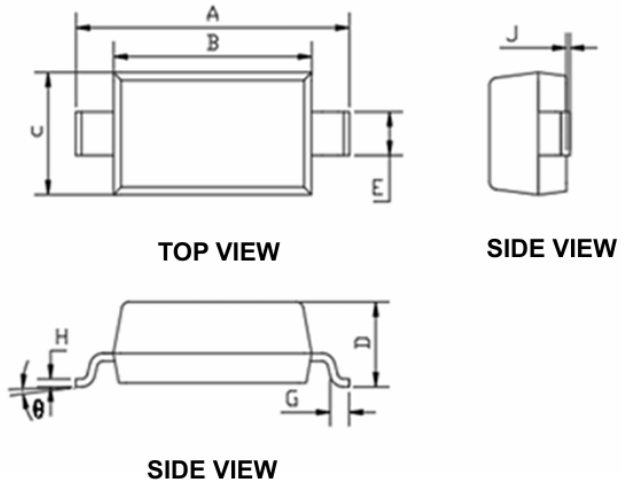


Figure 4. Forward Characteristics



Dimensions (SOD-123)

Symbol	Dimension (mm)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.055	0.071
D	0.95	1.35	0.037	0.053
E	0.51	0.71	0.020	0.028
G	0.15	0.45	0.006	0.018
H	0.08	0.25	0.003	0.010
J	0.00	0.15	0.000	0.006
θ	0	8°	0	8°



Packaging

	Symbol	Dimension(mm)
<p>Tape</p>	W	8.00±0.20
	P0	4.00±0.10
	P1	4.00±0.10
	P2	2.00±0.10
	R	Φ1.50±0.10
	R0	Φ1.00±0.25
	E	1.75±0.10
	F	3.50±0.05
	A0	1.75±0.10
	B0	3.94±0.10
	B1	2.59±0.20
	T	0.20±0.02
	T1	1.52±0.10
	<p>Reel</p>	D
D2		Φ13.5±0.30
W1		9.3±1.5
Quantity: 3000PCS		

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