

# DATA SHEET

**SWITCHING DIODE**  
**GENERAL PURPOSE**

1N4148W

RoHS compliant & Halogen free

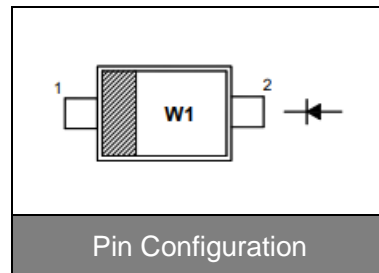
Product specification— July 26, 2023 V.0



## Switching Diode

## Features

- SOD-123 package
- Fast switching
- Halogen and Antimony Free(HAF), RoHS compliant
- Marking code:W1



## Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	75	V
Average Rectified Forward Current	$I_{F(AV)}$	150	mA
Peak Forward Current	$I_{FM}$	300	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	0.5 1 4	A
		at t = 1s at t = 1ms at t = 1us	
Power Dissipation	$P_{tot}$	400	mW
Thermal Resistance from Junction to Ambient Air	$R_{\theta JA}$	312	°C/W
Junction Temperature	$T_j$	150	°C
Storage Temperature Range	$T_{stg}$	- 65 to + 150	°C

## Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1 \mu A$	$V_{(BR)R}$	75	-	V
Forward Voltage at $I_F = 1 \text{ mA}$ at $I_F = 10 \text{ mA}$ at $I_F = 50 \text{ mA}$ at $I_F = 150 \text{ mA}$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75 \text{ V}$ at $V_R = 20 \text{ V}$ at $V_R = 75 \text{ V}, T_J = 150^\circ\text{C}$ at $V_R = 25 \text{ V}, T_J = 150^\circ\text{C}$	$I_R$	- - - -	1 25 50 30	$\mu A$ nA $\mu A$ $\mu A$
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	$C_T$	-	2	pF
Reverse Recovery Time at $I_F = 10 \text{ mA}, I_{rr} = 0.1 \cdot I_R, V_R = 6 \text{ V}, R_L = 100 \Omega$	$t_{rr}$	-	4	ns

## Electrical Characteristic Curves

Figure 1. Power Dissipation vs. Ambient Temperature

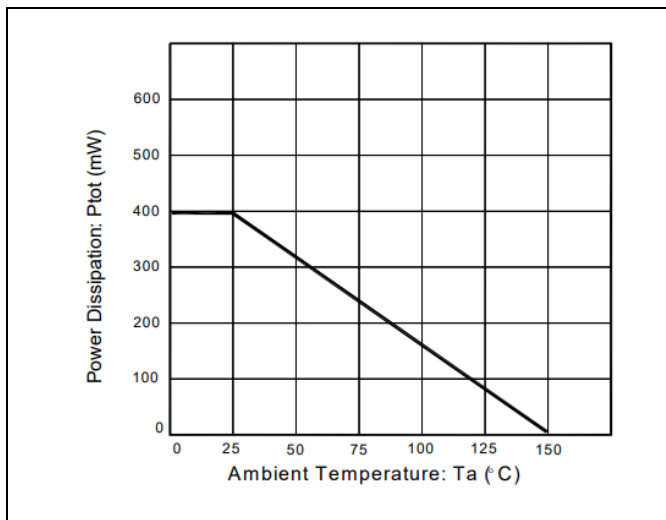


Figure 2. Total Capacitance vs. Reverse Voltage

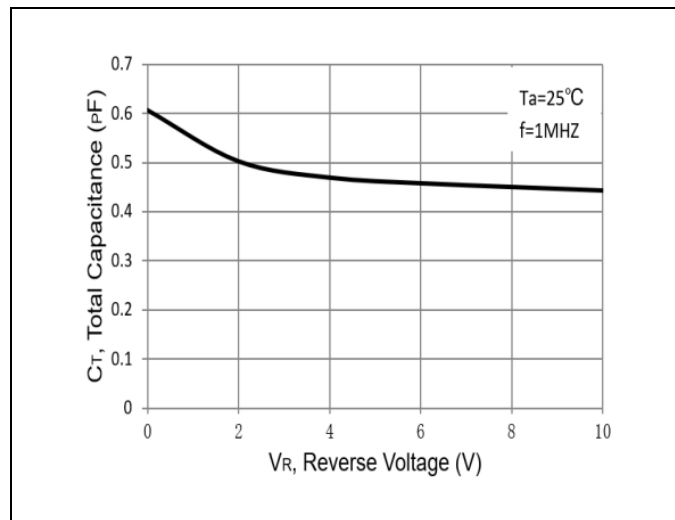


Figure 3. Reverse Current vs. Reverse Voltage

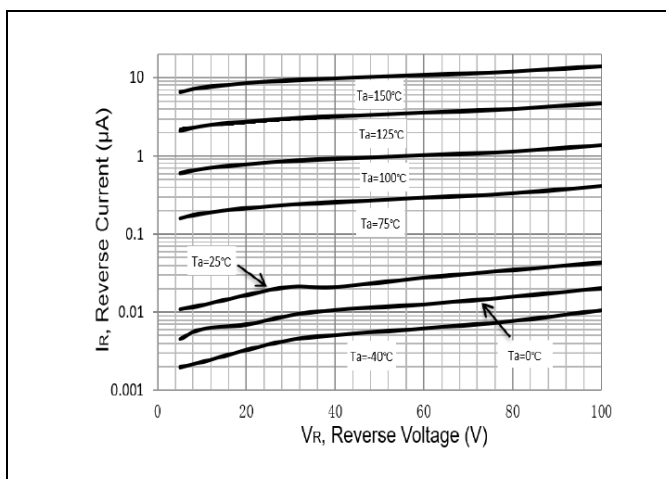
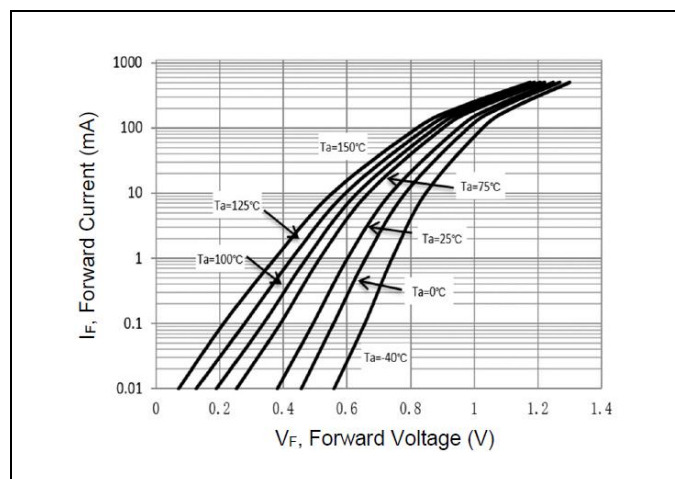
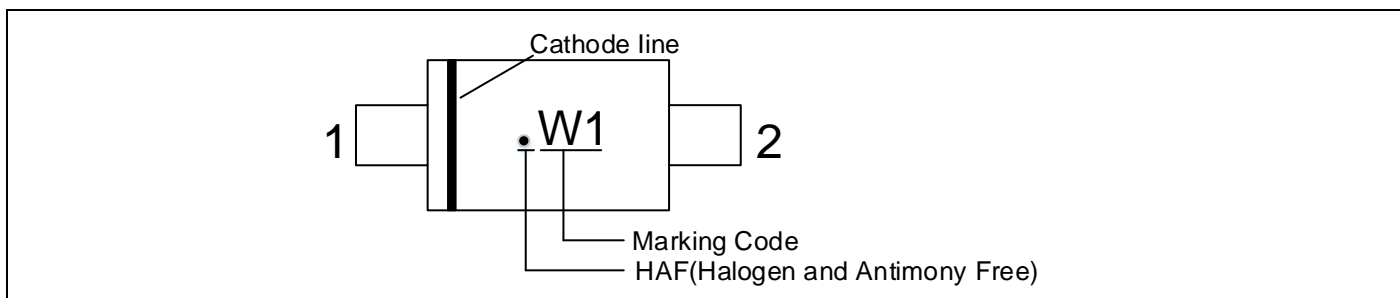


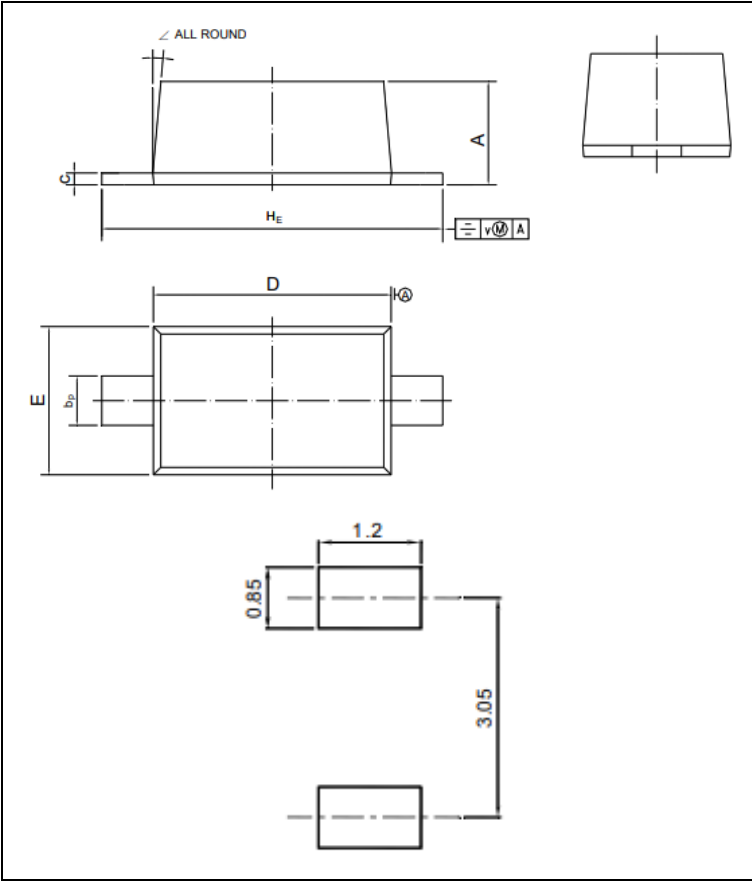
Figure 4. Forward Characteristics



## Marking Code

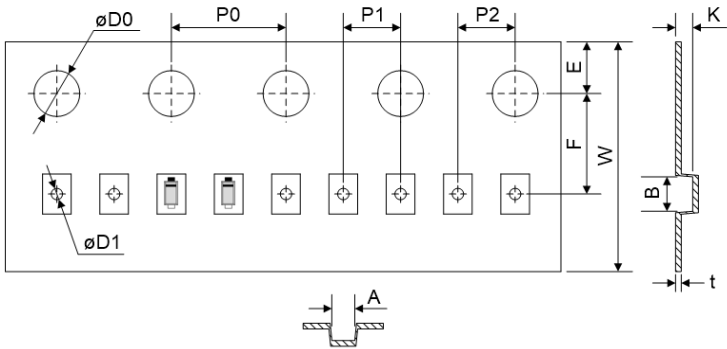


Dimensions (SOD-123)

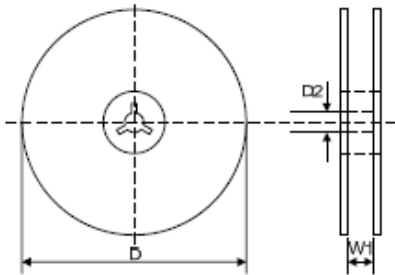
	Symbol	Dimension (mm)			
		Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A	1.05	1.15	0.041	0.045
	bp	0.50	0.60	0.020	0.024
	c	0.100	0.135	0.004	0.005
	D	2.60	2.70	0.102	0.106
	E	1.55	1.65	0.061	0.065
	HE	3.55	3.85	0.140	0.152

Packaging

Tape



Reel



Symbol	Dimension(mm)
W	8.00±0.10
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	Φ1.55±0.05
D1	Φ1.10±0.10
E	1.75±0.10
F	3.50±0.05
A	1.80±0.10
B	4.00±0.10
K	1.30±0.10
t	0.20±0.02
D	Φ177.5±0.30
D2	Φ13.0±0.30
W1	9.0±0.30
Quantity: 3000PCS	

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