

# DATA SHEET

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

1N4148WT

RoHS compliant & Halogen free

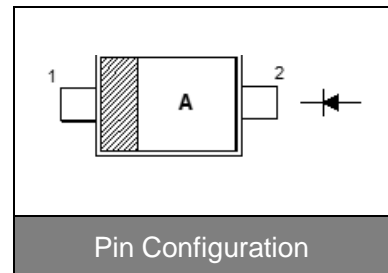
Product specification— January 03, 2023 V.0



## Switching Diode

## Features

- Fast switching speed
- Ultra-small surface mount package
- For general purpose switching applications
- High conductance
- Halogen and Antimony Free(HAF), RoHS compliant
- Marking code: A



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

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Reverse Voltage	$V_R$	80	V
Average Rectified Forward Current	$I_{F(AV)}$	125	mA
Forward Continuous Current	$I_{FM}$	250	mA
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	2 1	A
		at t = 1 $\mu$ s at t = 100 ms	
Power Dissipation	$P_{tot}$	150	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	833	$^{\circ}C/W$
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 150	$^{\circ}C$

## Characteristics at Ta = 25°C

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 1 \mu A$	$V_{(BR)R}$	80	-	V
Forward Voltage at $I_F = 1 mA$ at $I_F = 10 mA$ at $I_F = 50 mA$ at $I_F = 150 mA$	$V_F$	- - - -	0.715 0.855 1 1.25	V
Peak Reverse Current at $V_R = 75 V$ at $V_R = 20 V$ at $V_R = 75 V, T_J = 150^{\circ}C$ at $V_R = 25 V, T_J = 150^{\circ}C$	$I_R$	- - - -	1 25 50 30	$\mu A$ nA $\mu A$ $\mu A$
Total Capacitance at $V_R = 0 V, f = 1 MHz$	$C_T$	-	2	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R, I_F = 10 mA, R_L = 100 \Omega, V_R = 6 V$	$t_{rr}$	-	4	ns

**Electrical Characteristic Curves**

Figure 1. Power Dissipation vs. Temperature

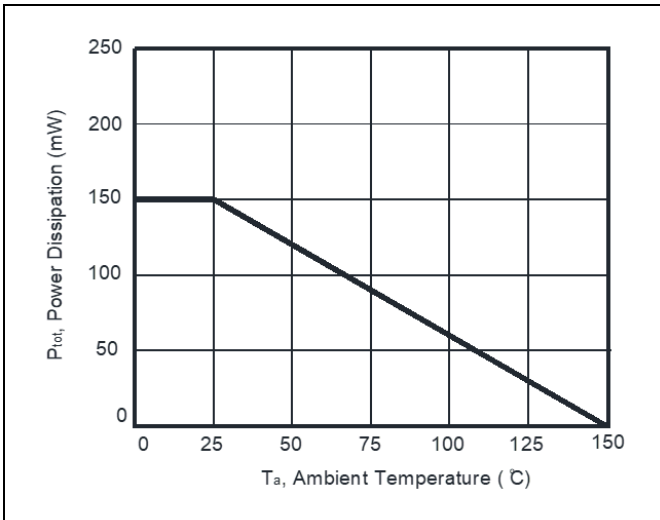


Figure 2. Total Capacitance vs. Reverse Voltage

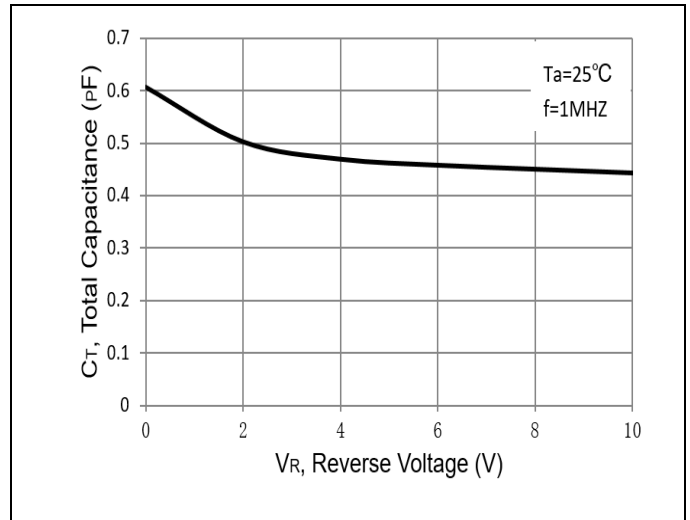


Figure 3. Reverse Current vs. Reverse Voltage

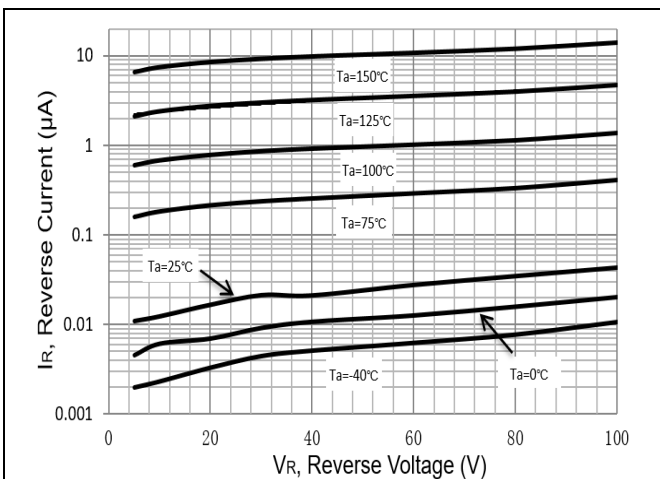
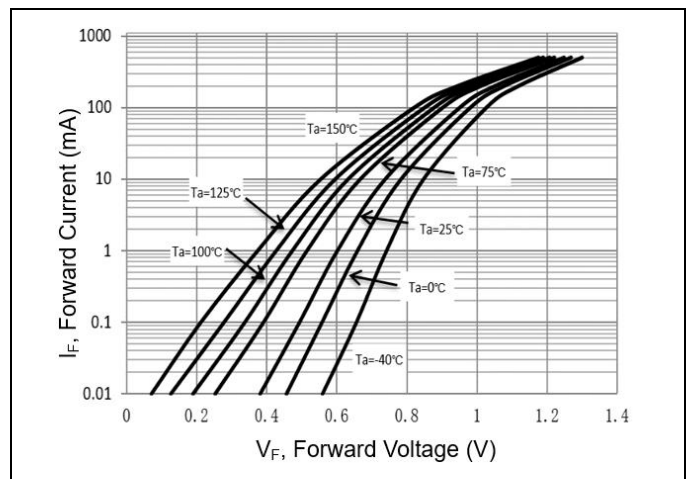


Figure 4. Forward Characteristics



**Dimensions (SOD-523)**

	Dimension				
	Symbol	Millimeters		Inches	
		Min.	Max.	Min.	Max.
	A	0.60	0.70	0.024	0.028
	b <sub>p</sub>	0.30	0.40	0.012	0.016
	C	0.100	0.135	0.004	0.005
	D	1.15	1.25	0.045	0.049
E	0.75	0.85	0.030	0.033	
HE	1.50	1.70	0.059	0.067	

**Packing information**

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOD-523	8	4 ± 0.1	0.157 ± 0.004	178	7	4,000