

DATA SHEET

SWITCHING DIODE
GENERAL PURPOSE

1N4148WT

RoHS compliant & Halogen free

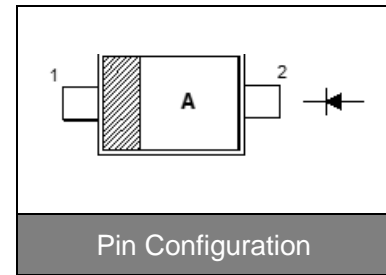
Product specification— July 26, 2023 V.0



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 μ s at t = 100ms	
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 $I_F = 1 \text{ mA}$ 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 $V_R = 75 \text{ V}, T_J = 150^{\circ}C$ at $V_R = 25 \text{ V}, T_J = 150^{\circ}C$	I_R	- - - -	1 25 50 30	μA nA μA μA
Total Capacitance at $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_T	-	2	pF
Reverse Recovery Time at $I_{rr} = 0.1 \times I_R, I_F = 10 \text{ mA}, R_L = 100 \Omega, V_R = 6 \text{ V}$	t_{rr}	-	4	ns

Electrical Characteristic Curves

Figure 1. Power Dissipation vs. Temperature

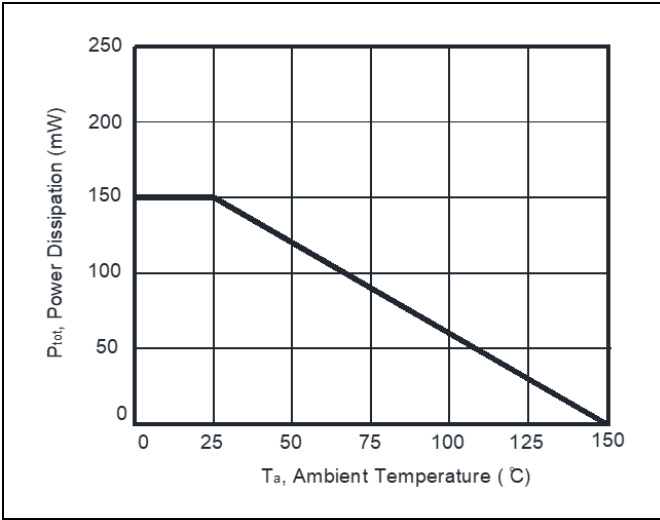


Figure 2. Total Capacitance vs. Reverse Voltage

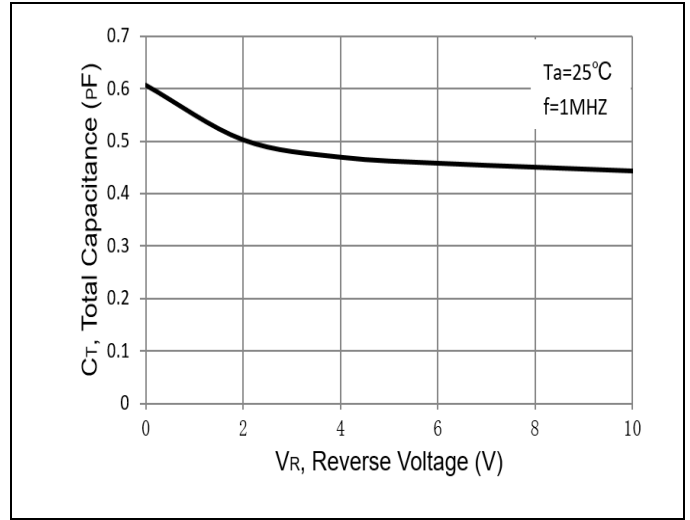


Figure 3. Reverse Current vs. Reverse Voltage

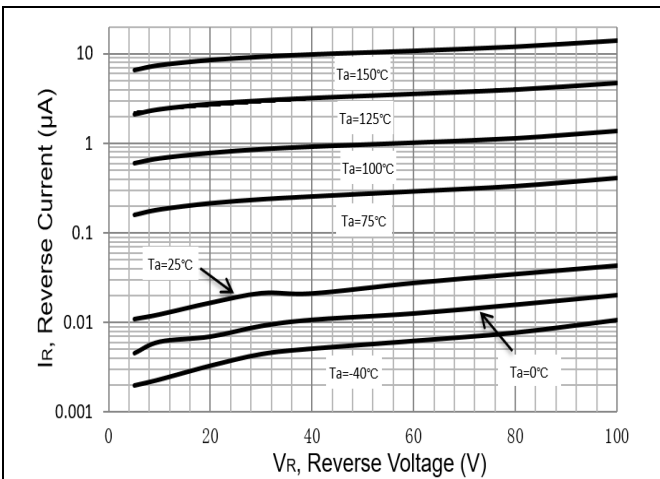
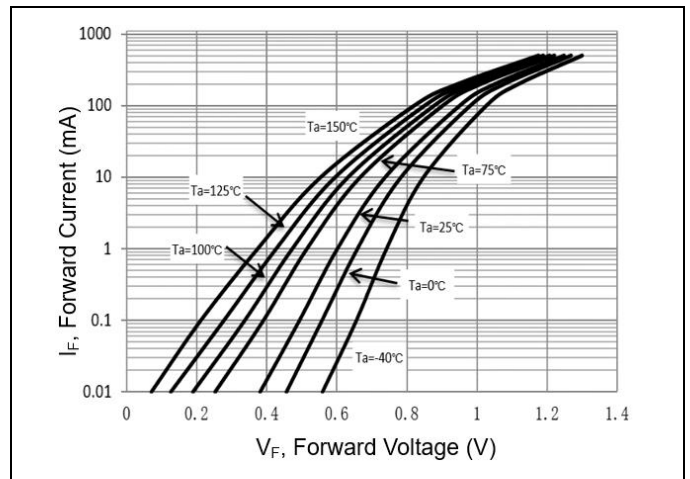
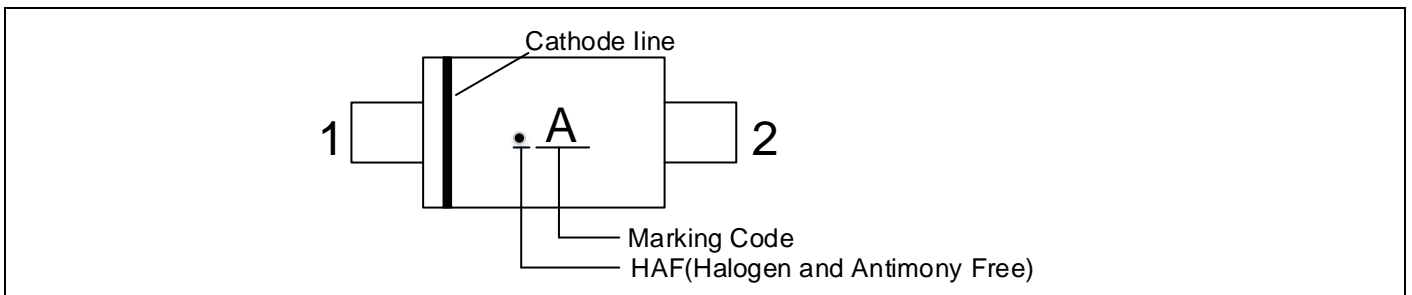


Figure 4. Forward Characteristics



Marking Code



Dimensions (SOD-523)

Symbol	Dimension (mm)			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	0.60	0.70	0.024	0.028
b _p	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

Packaging

Tape		Symbol	Dimension (mm)		
		W	8.00±0.10		
		P0	4.00±0.10		
		P1	2.00±0.10		
		P2	2.00±0.05		
		D0	Φ1.55±0.05		
		D1	Φ0.50±0.05		
		E	1.75±0.10		
		F	3.50±0.05		
		A	0.90±0.05		
		B	1.94±0.05		
		K	0.75±0.05		
		t	0.20±0.02		
		Reel		D	Φ177.5±0.30
				D2	Φ13.0±0.30
W1	9.0±0.30				
Quantity: 4000PCS					

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