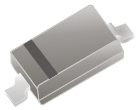
SMD Switching Diode

A1N4148W-HF

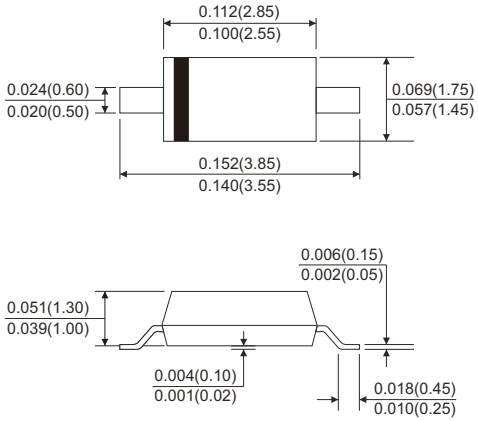
RoHS Device
Halogen Free



Features

- Fast switching speed.
- Surface mount package ideally suited for automatic insertion.
- For general purpose switching applications.
- High conductance.
- AEC-Q101 Qualified.

SOD-123



Dimensions in inches and (millimeter)

Mechanical data

- Case: Molded plastic, SOD-123

Circuit Diagram

Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage Working peak reverse voltage DC reverse voltage	V_{RRM} V_{RWM} V_R	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	I_O	150	mA
Forward current	I_{FM}	300	mA
Non-repetitive peak forward surge current @ t=1μs @ t=1s	I_{FSM}	2.0 1.0	A
Power dissipation	P_D	350	mW
Thermal resistance, junction to ambient air	$R_{\theta JA}$	357	K/W
Operating and storage temperature range	T_J, T_{STG}	-65 to +150	°C

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Max	Unit
Forward voltage	V_F	I_F = 1mA I_F = 10mA I_F = 50mA I_F = 150mA		0.715 0.855 1.0 1.25	V
Maximum peak reverse current	I_{RM}	V_R = 75V V_R = 75V, T_J = 150°C V_R = 25V, T_J = 150°C V_R = 20V		2.5 50 30 25	μA μA μA nA
Junction capacitance	C_J	V_R = 0V, f = 1MHz		2.0	pF
Reverse recovery time	t_{rr}	I_F = I_R = 10mA, I_R = 1mA, I_{rr} = 0.1 x I_R, R_L = 100Ω		4	nS

Note: 1. Valid provided that terminals are kept at ambient temperature.

Rating and Characteristic Curves (A1N4148W-HF)

Fig.1 - Forward Characteristics

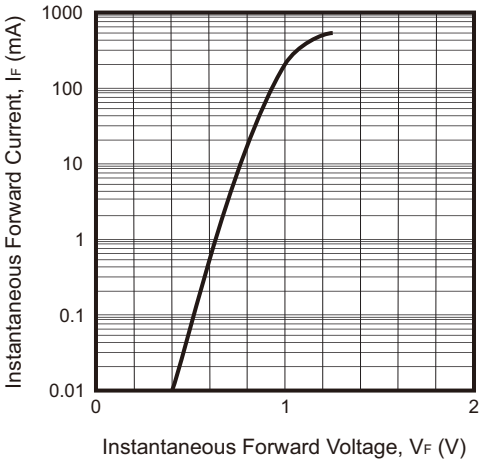
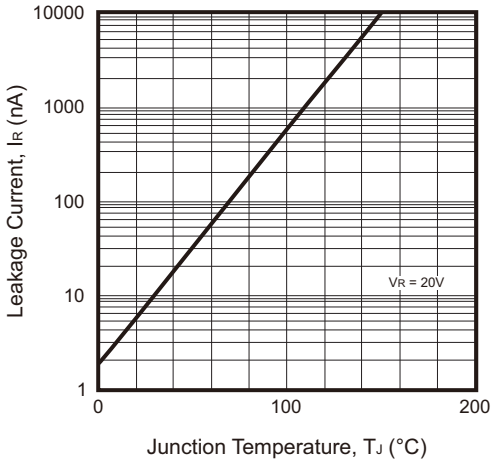
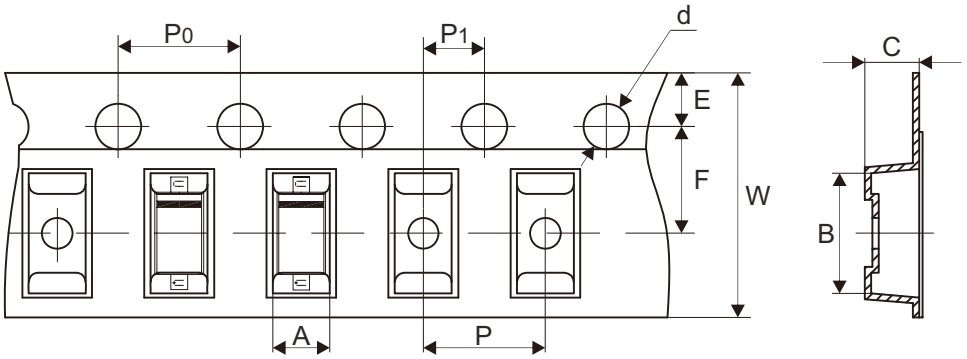


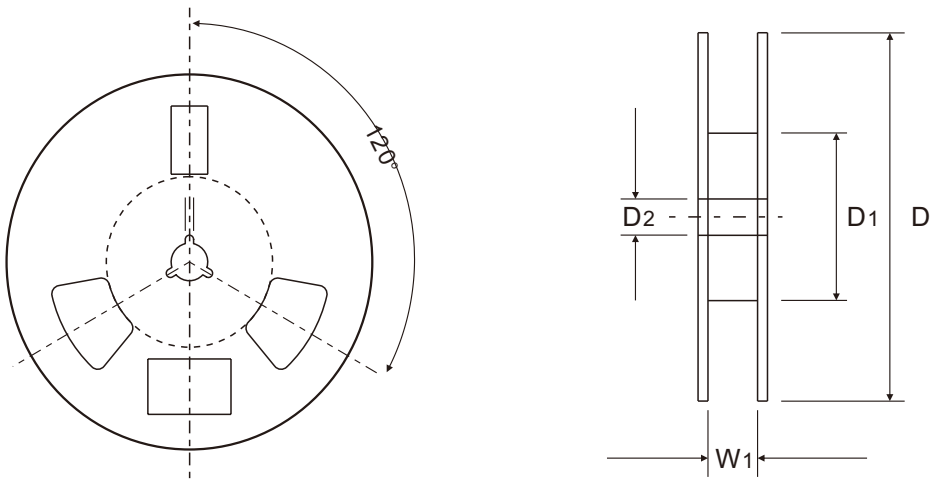
Fig.2 - Leakage Current vs Junction Temperature

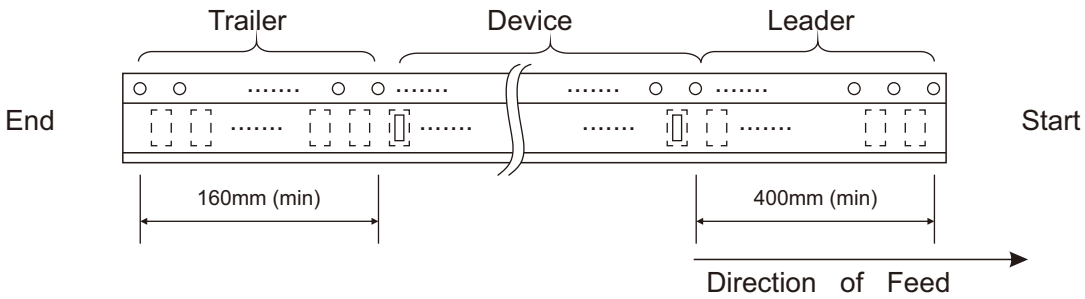


Company reserves the right to improve product design , functions and reliability without notice.

Reel Taping Specification





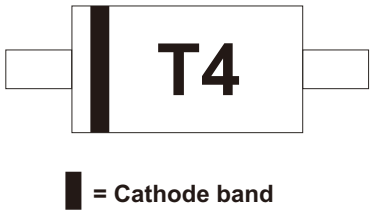


	SYMBOL	A	B	C	d	D	D_1	D_2
SOD-123	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178.00 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

	SYMBOL	E	F	P	P_1	P_0	W	W_1
SOD-123	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	8.00 + 0.30 − 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.157 ± 0.004	0.315 + 0.012 − 0.004	0.374 ± 0.039

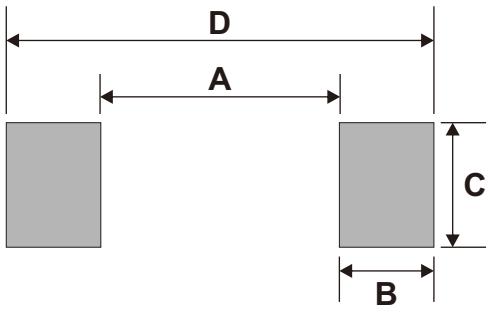
Marking Code

Part Number	Marking Code
A1N4148W-HF	T4



Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	2.36	0.093
B	0.91	0.036
C	1.22	0.048
D	4.19	0.165



Note: 1.The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123	3,000	7