

A1N4148W-HF

RoHS Device

Halogen Free



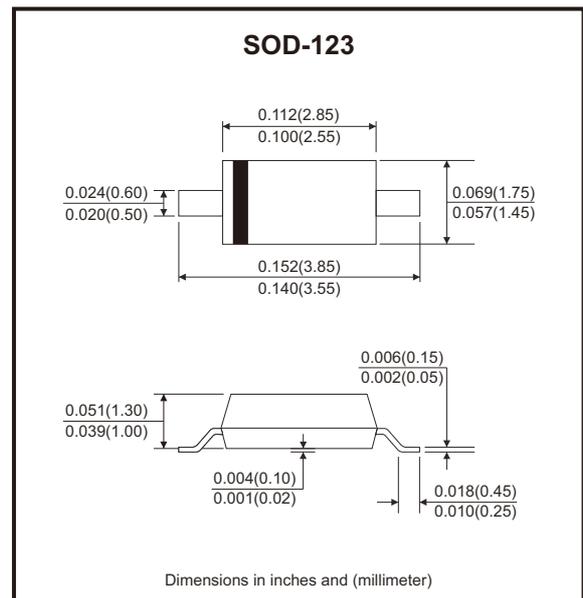
Features

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

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	V_{RRM}	75	V	
Working peak reverse voltage	V_{RWM}			
DC reverse voltage	V_R			
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	I_{FSM}	@ t=1μs	2.0	A
		@ t=1s	1.0	
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	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$		0.715 0.855 1.0 1.25	V
Maximum peak reverse current	I_{RM}	$V_R = 75\text{V}$ $V_R = 75\text{V}, T_J = 150^\circ\text{C}$ $V_R = 25\text{V}, T_J = 150^\circ\text{C}$ $V_R = 20\text{V}$		2.5 50 30 25	μA μA μA nA
Junction capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		2.0	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10\text{mA}, I_R = 1\text{mA},$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$		4	nS

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

Rating and Characteristic Curves (A1N4148W-HF)

Fig.1 - Forward Characteristics

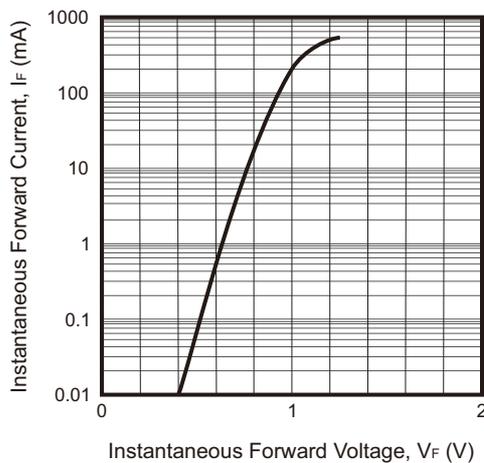
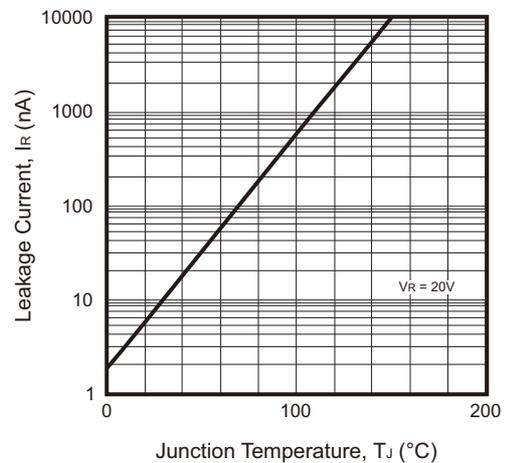
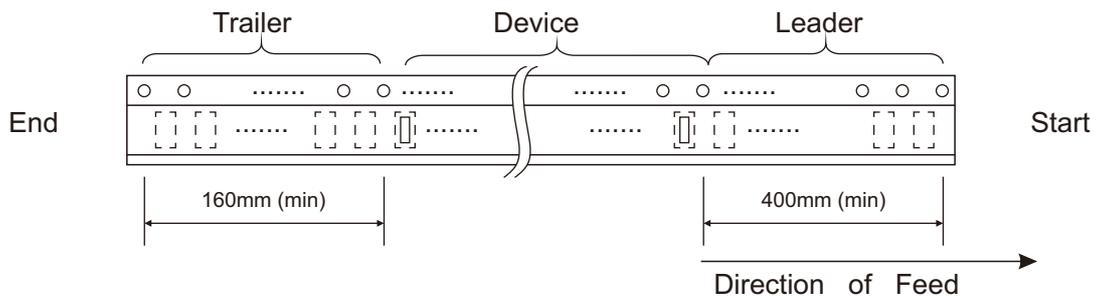
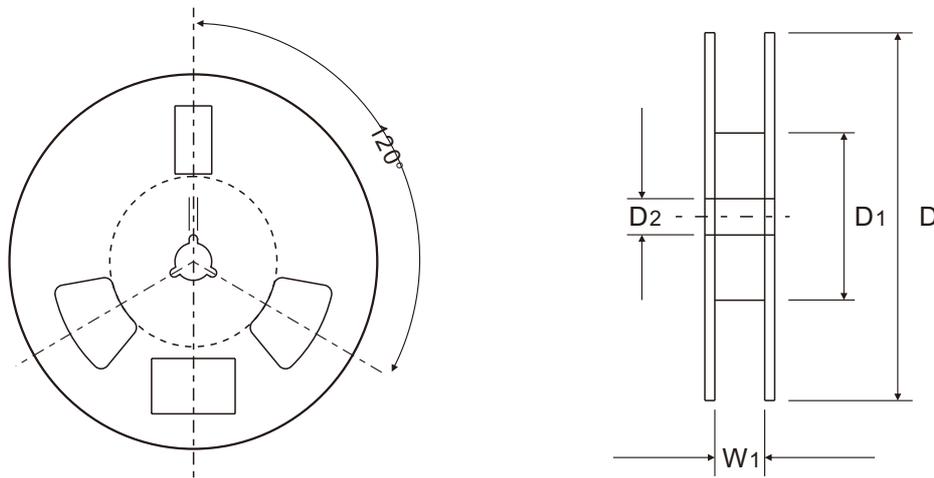
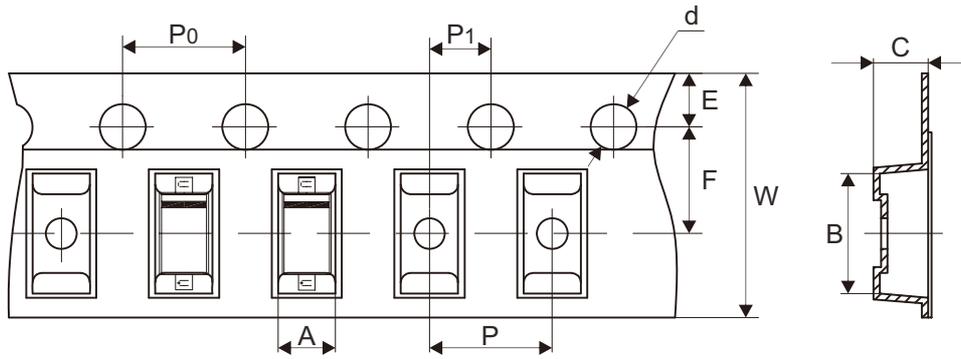


Fig.2 - Leakage Current vs Junction Temperature



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(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

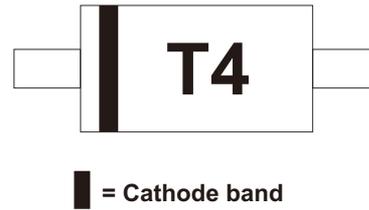
SOD-123	SYMBOL	E	F	P	P1	P0	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	4.00 ± 0.10	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.157 ± 0.004	0.315 + 0.012 - 0.004	0.374 ± 0.039

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

REV:A

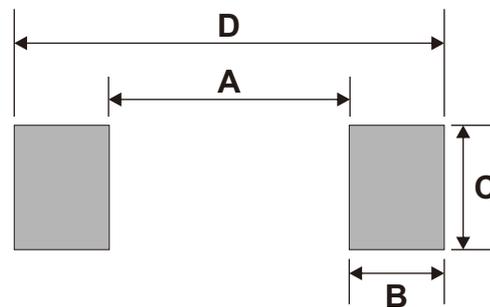
Marking Code

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

Mouser Electronics

Authorized Distributor

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