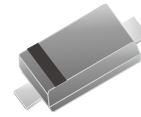


## A1N4148WT-HF

RoHS Device

Halogen Free



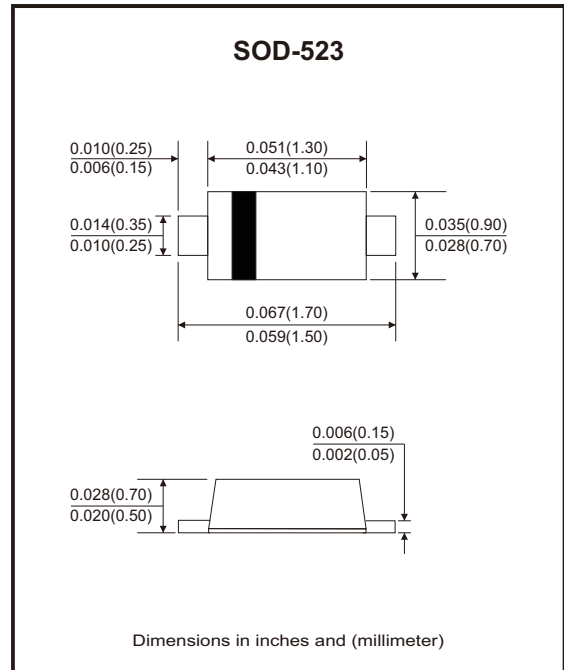
### Features

- Fast switching speed.
- Ultra-small surface mount package.
- For general purpose switching applications.
- High conductance.
- AEC-Q101 Qualified.

### Mechanical data

- Case: Molded plastic, SOD-523

### Circuit Diagram



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

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	100	V
Reverse voltage	$V_R$	75	V
RMS reverse voltage	$V_{R(RMS)}$	75	V
Average rectified output current	$I_o$	125	mA
Non-repetitive peak forward surge current @ t=1µs @ t=100ms	$I_{FSM}$	2.0 1.0	A
Total power dissipation	$P_{tot}$	150	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	833	°C/W
Thermal resistance junction to lead	$R_{\theta JL}$	829	°C/W
Thermal resistance junction to case	$R_{\theta JC}$	561	°C/W
junction temperature range	$T_J$	-65 to +150	°C
Storage temperature range	$T_{STG}$	-65 to +150	°C

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

Parameter	Symbol	Conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)R}$	$I_R = 1.0\mu A$	75		V
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
Reverse current	$I_R$	$V_R = 75V$ $V_R = 20V$		1.0 25	$\mu A$ nA
Diode capacitance	$C_d$	$V_R = 0V, f = 1MHz$		2.0	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$		4.0	nS

## Rating and Characteristic Curves (A1N4148WT-HF)

Fig.1 - Derating Curve

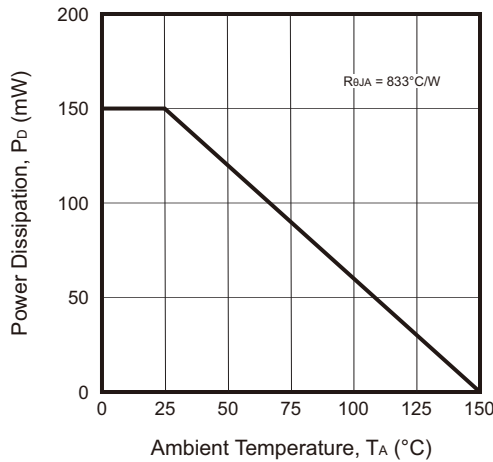


Fig.2 - Forward Characteristics

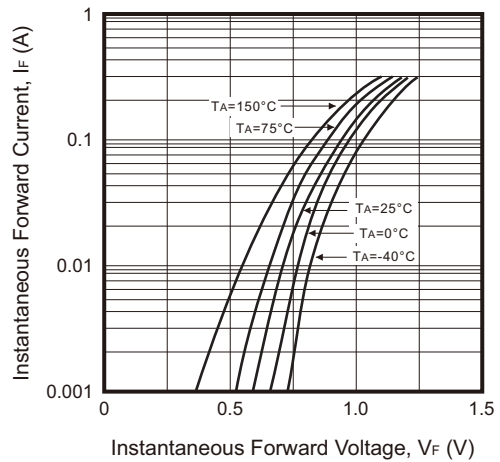


Fig.3 - Typical Reverse Characteristics

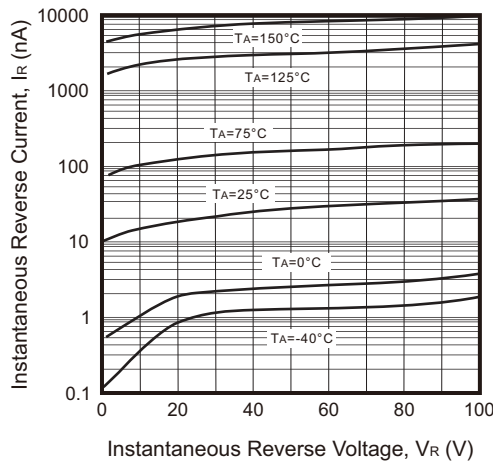
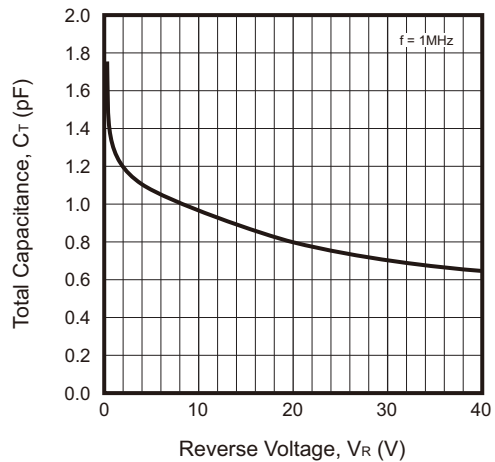


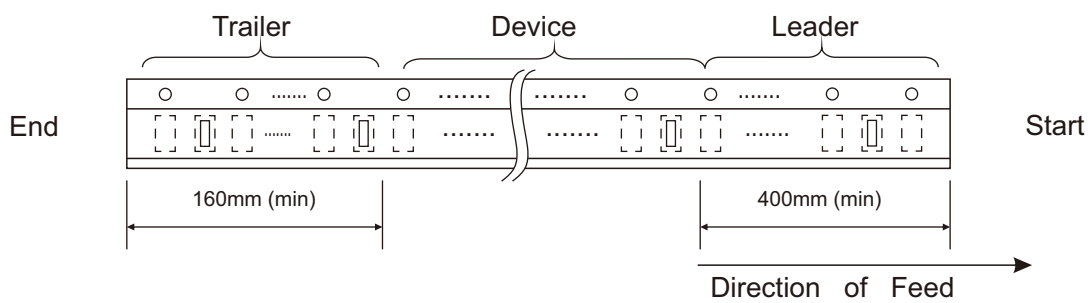
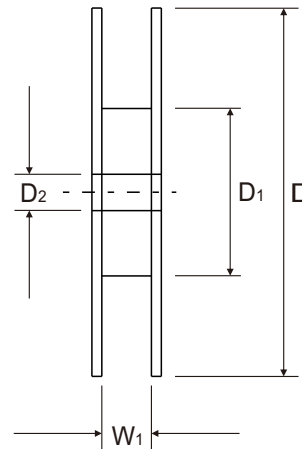
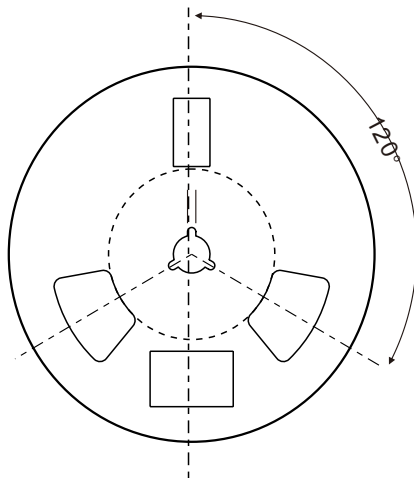
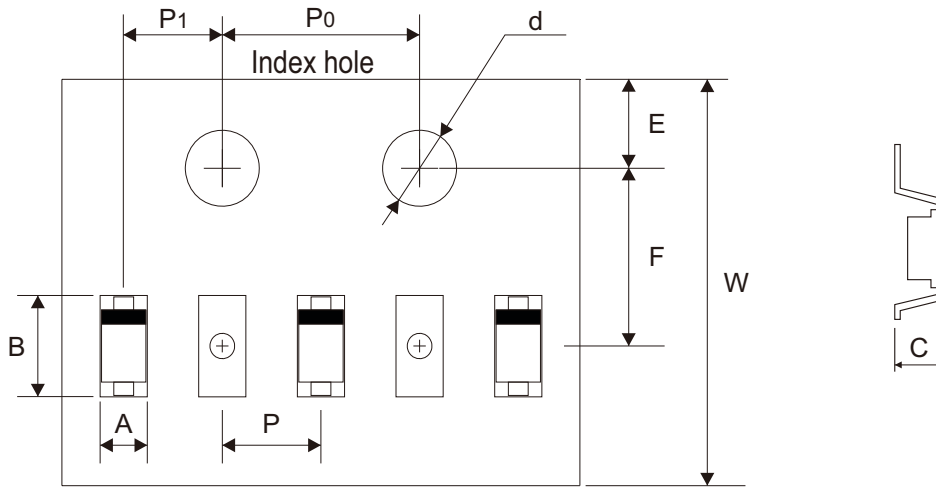
Fig.4 - Typical Capacitance vs. Reverse Voltage



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

REV:A

## Reel Taping Specification



SOD-523	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.96 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 + 0.10	178 ± 1.00	54.00 ± 0.50	13.00 ± 0.50
	(inch)	0.038 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 + 0.004	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

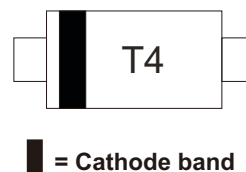
SOD-523	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.374 ± 0.039

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

REV:A

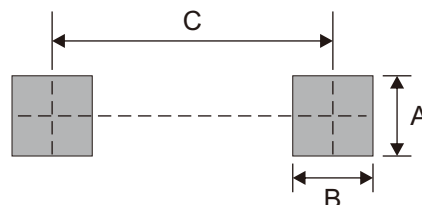
## Marking Code

Part Number	Marking Code
A1N4148WT-HF	T4



## Suggested PAD Layout

SIZE	SOD-523	
	(mm)	(inch)
A	0.40	0.016
B	0.40	0.016
C	1.40	0.055



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

## Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-523	3,000	7