

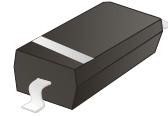
## 1N4148W-HF

Reverse Voltage: 100 V

Forward Current: 150mA

RoHS Device

Halogen Free

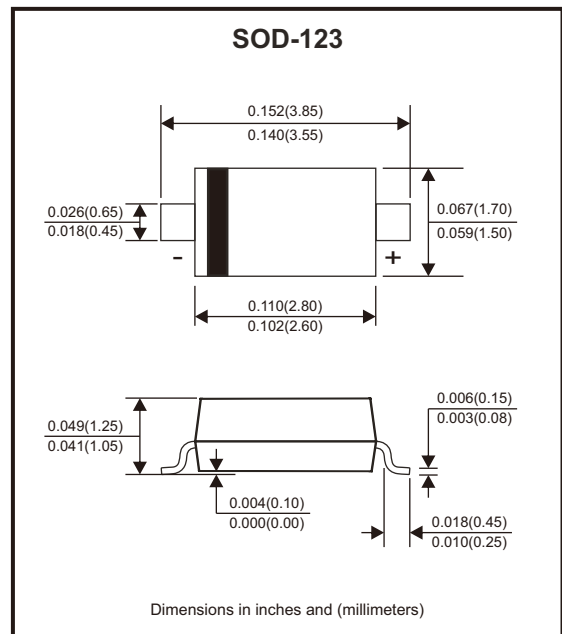


### Features

- Fast switching device ( $T_{rr} < 4.0\text{nS}$ ).
- Power dissipation of 500mW.
- High stability and high reliability.
- Low reverse leakage.

### Mechanical data

- Case: SOD-123, molded plastic.
- Polarity: Color band denotes cathode end.
- Epoxy UL: 94V-0.
- Mounting position: Any.



### Circuit Diagram



### Maximum Rating (at $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak reverse voltage	$V_{RM}$	100	V
Power dissipation	$P_D$	500	mW
Average rectified current	$I_O$	150	mA
Non-repetitive peak forward current	$I_{FM}$	300	mA
Peak forward surge current @ $t_p=1\mu\text{s}$ , $T_A=25^\circ\text{C}$	$I_{FSM}$	2	A
Thermal resistance from junction to ambient	$R_{\theta JA}$	250	$^\circ\text{C/W}$
Operating junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-65 to +150	$^\circ\text{C}$

Note: Valid provided that electrodes are kept at ambient temperature.

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	$I_R = 100\mu A$	$B_V$	100			V
Reverse leakage current	$V_R = 20V$	$I_R$			25	nA
	$V_R = 20V, T_j = 150^\circ C$				50	$\mu A$
	$V_R = 75V$				5	
Forward voltage	$I_F = 10mA$	$V_F$			1.00	V
	$I_F = 100mA$				1.25	
Capacitance	$V_R = 0V, f = 1MHz$	$C$			4	pF
Reverse recovery time	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R$ $R_L = 100\Omega$	$T_{RR}$			4	nS

## Rating and Characteristic Curves (1N4148W-HF)

Fig.1 - Forward Characteristics

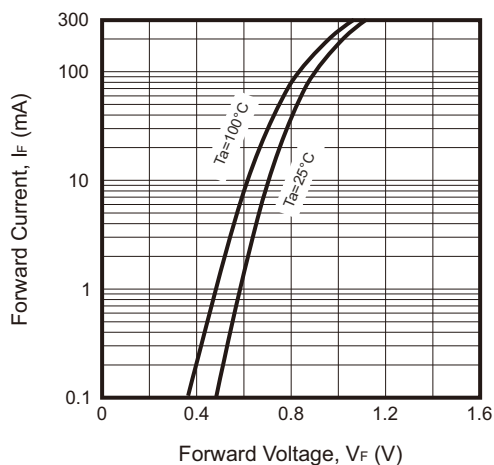


Fig.2 - Reverse Characteristics

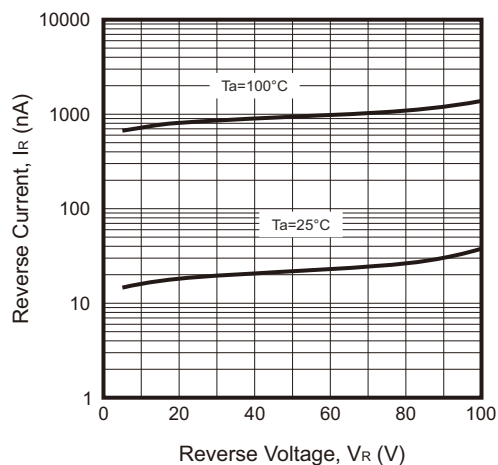


Fig.3 - Capacitance Characteristics

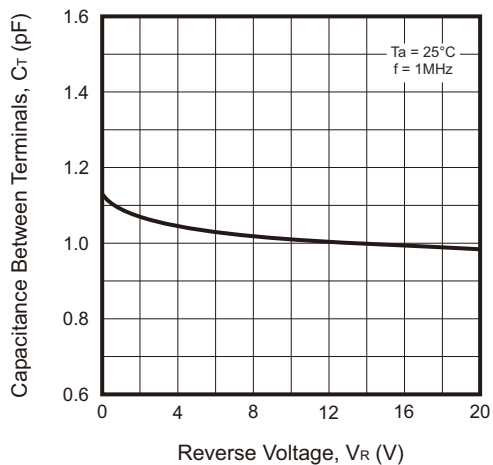
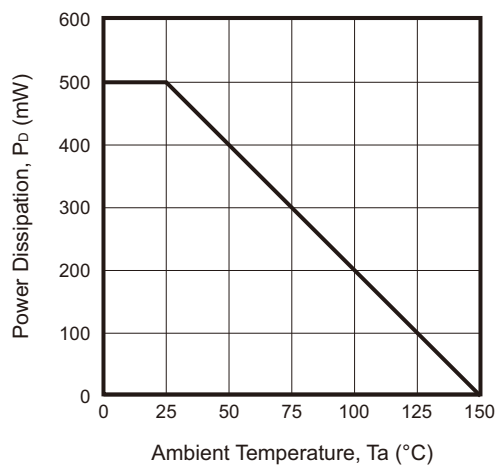
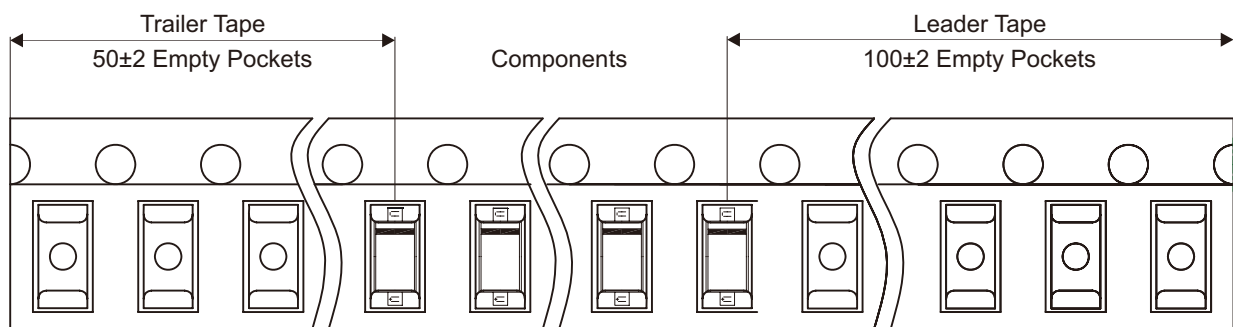
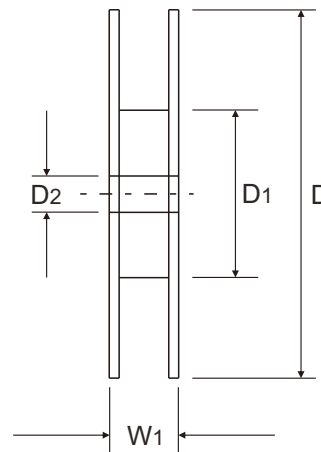
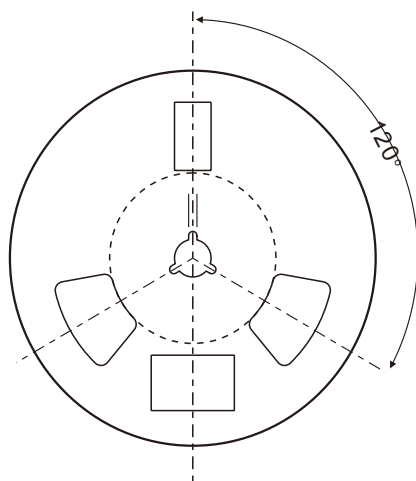
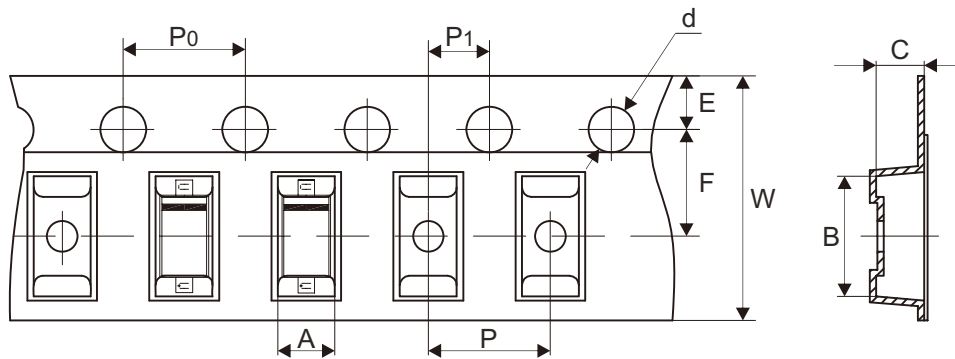


Fig.4 - Power Derating Curve



## Reel Taping Specification

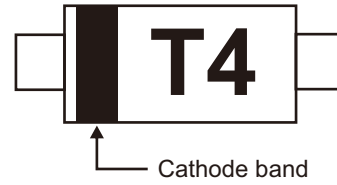


SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.05	3.94 ± 0.05	1.57 ± 0.05	1.55 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.073 ± 0.002	0.155 ± 0.002	0.062 ± 0.002	0.061 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-123	SYMBOL	E	F	P	P1	P0	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	8.00 + 0.06 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.157 ± 0.004	0.315 + 0.002 - 0.004	0.484 ± 0.039

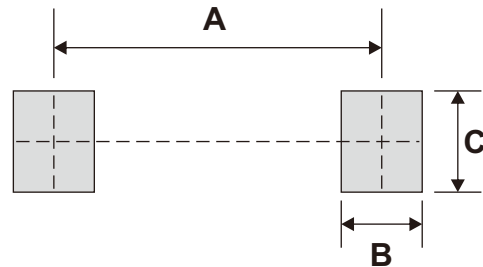
## Marking Code

Part Number	Marking Code
1N4148W-HF	T4



## Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.24	0.128
B	0.80	0.031
C	1.00	0.039



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