

1N4448W



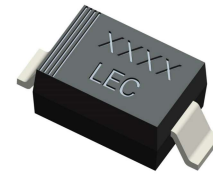
Small Signal Switching Diodes

Reverse Voltage : 75 Volts

Forward Current : 250mA

RoHS Device

Halogen Free

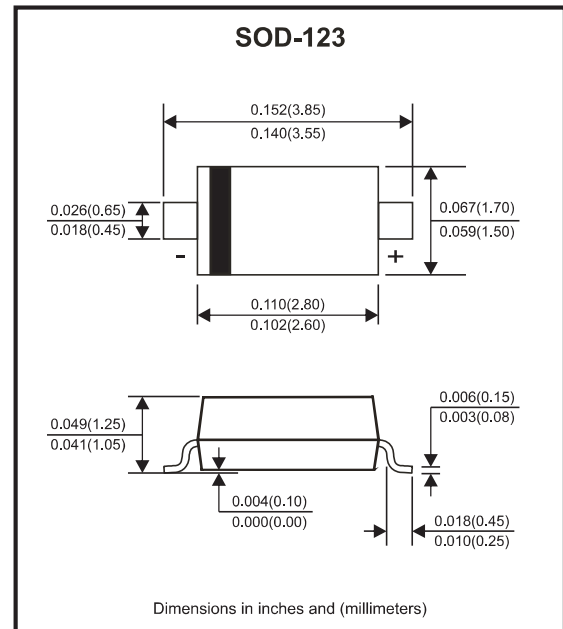


Features

- Small package.
- Low reverse current.
- Fast switching speed.
- Surface mount package ideally suited for automatic insertion.

Mechanical data

- Case: SOD-123, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: indicated by cathode band.
- Weight: 0.01 grams approx.



Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	V _{RRM}	75	V
Working peak reverse voltage	V _{RWM}		
DC blocking voltage	V _R		
RMS reverse voltage	V _{R(RMS)}	53	V
Average rectified output current	I _O	250	mA
Forward continuous current	I _{FM}	500	mA
Non-repetitive peak forward surge current @t=8.3ms	I _{FSM}	2.0	A
Power dissipation	P _D	500	mW
Thermal resistance from junction to ambient	R _{θJA}	250	°C/W
Junction temperature	T _J	150	°C
Storage temperature range	T _{STG}	-55 ~ +150	°C

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

Parameter	Conditions	Symbol	Min	Max	Unit
Reverse breakdown voltage	$I_R = 10 \mu A$	$V_{(BR)R}$	75		V
Forward voltage	$I_F = 5 \text{ mA}$	V_F	0.62	0.72	V
	$I_F = 10 \text{ mA}$			0.855	
	$I_F = 100 \text{ mA}$			1.0	
	$I_F = 150 \text{ mA}$			1.25	
Reverse current	$V_R = 75 \text{ V}$	I_R		2.5	μA
	$V_R = 20 \text{ V}$			25	nA
Capacitance between terminals	$f = 1 \text{ MHz}, V_R = 0 \text{ V}$	C_T		4	pF
Reverse recovery time	$I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega, I_{rr} = 0.1 \times I_R$	T_{rr}		4	nS

Rating and Characteristic Curves

Fig.1 - Forward Characteristics

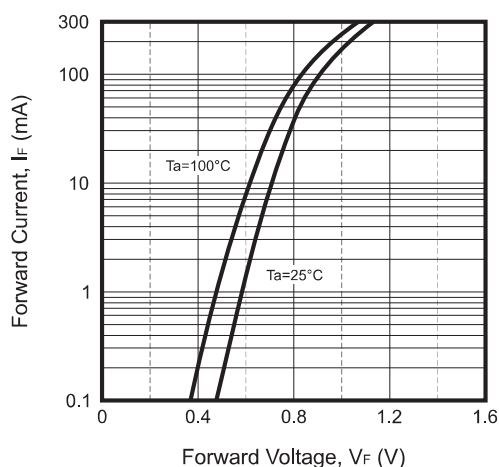


Fig.2 - Reverse Characteristics

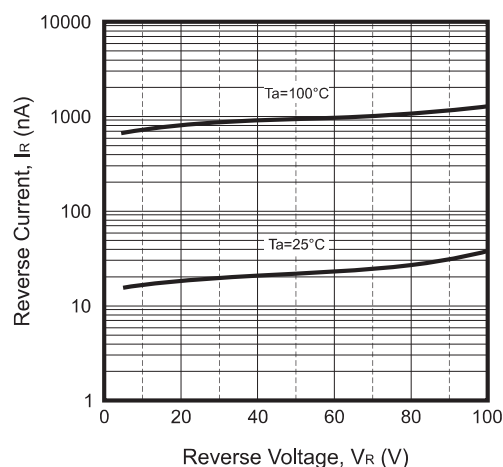


Fig.3 - Capacitance Characteristics

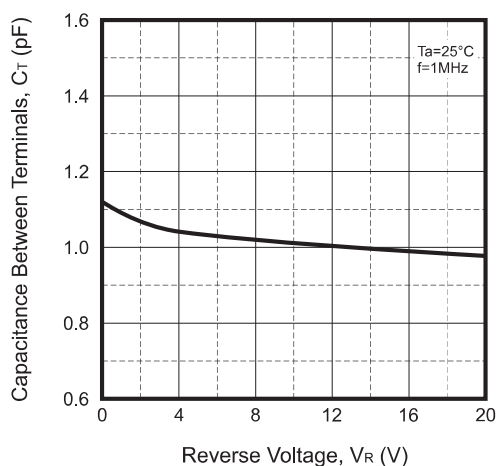
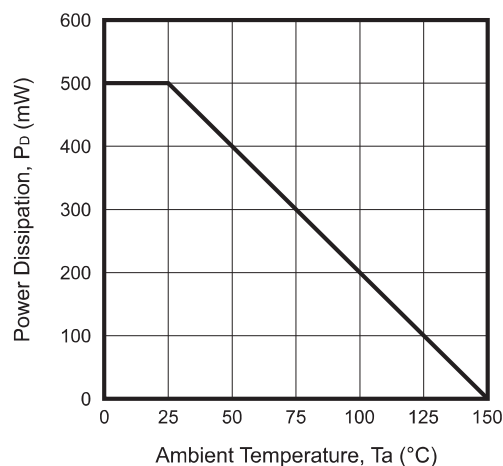


Fig.4 - Power Derating Curve



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Marking Code

Part Number	Marking Code
1N4448W	T5

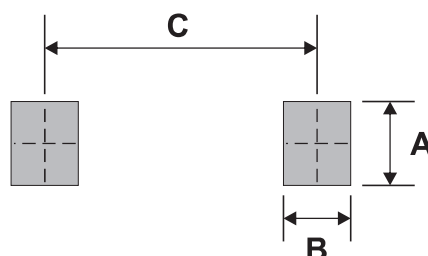


XX = Product type marking code

■ = Cathode band

Suggested PAD Layout

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

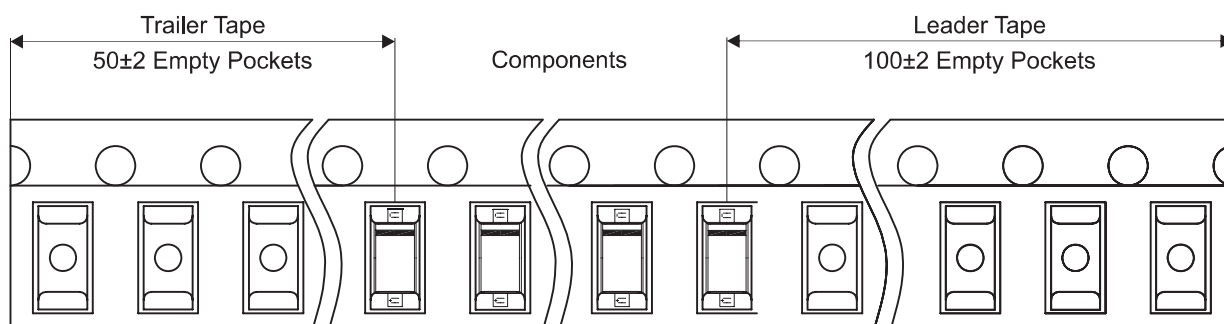
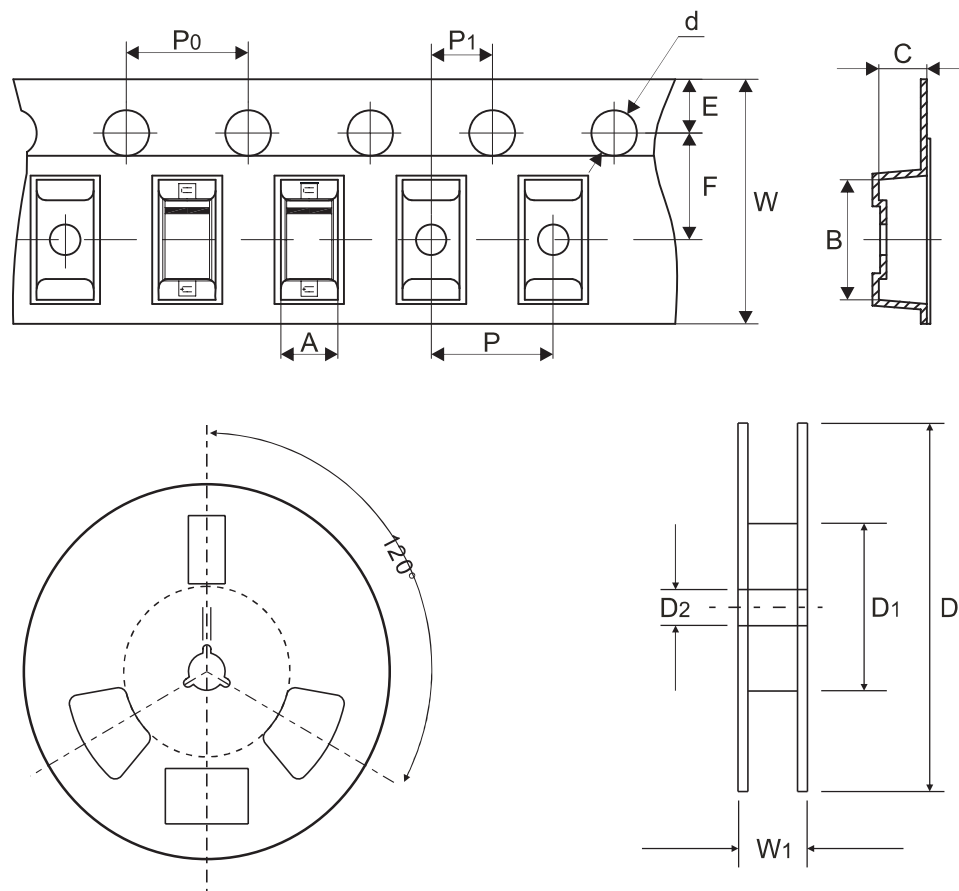


Note: 1.The pad layout is for reference purposes only.

Standard Packaging

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

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

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