

FAST SWITCHING DIODES

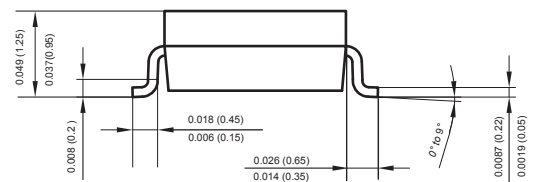
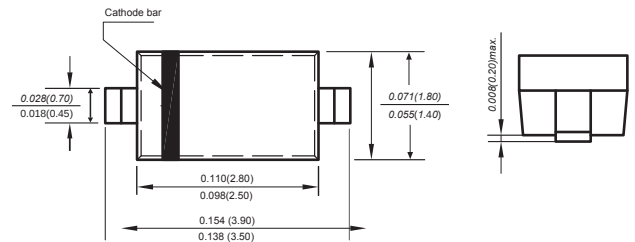
Features

- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

Mechanical Data

Case : JEDEC SOD-123 molded plastic body
 Terminals : Plated leads solderable per MIL-STD-750, Method 2026
 Polarity : Polarity symbols marked on case
 Weight : 0.00056ounce, 0.016grams
 Marking: T4

SOD-123



Dimensions in inches and (millimeters)

Absolute Maximum Ratings at 25 °C

Parameter	Symbols	1N4148W-E	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	75	V
Average rectified output current	$I_{F(AV)}$	150	mA
Non-reptitive Peak Forward Surge Current	I_{FSM}	0.5 1 4	A
at 1s at 1ms at 1us			
Total Power Dissipation	P_{tot}	400	mW
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	280	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +125	°C

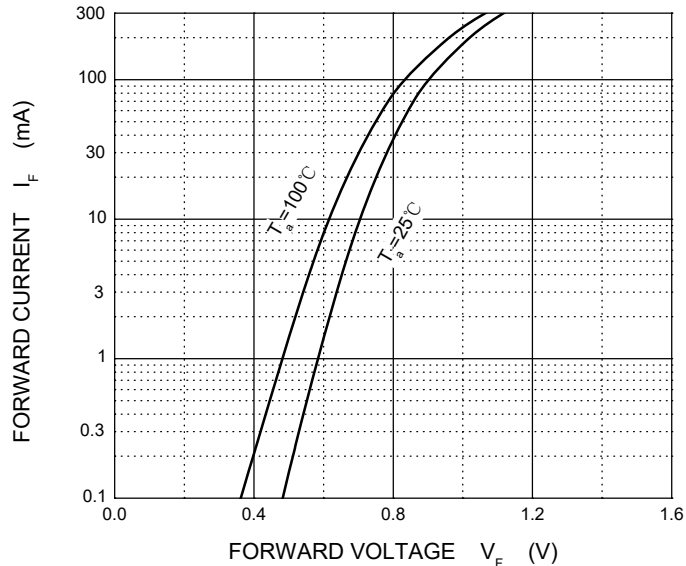
(1) P.C.B. mounted with 5 X 5 mm copper pad areas.

Characteristics at Ta= 25 °C

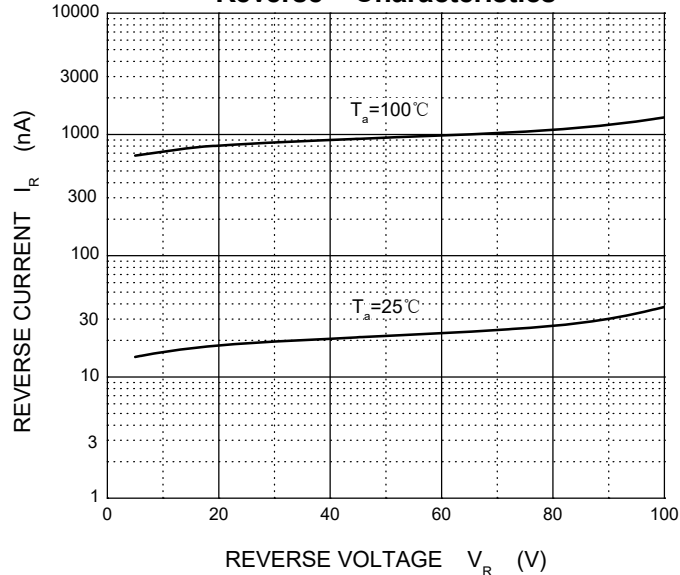
Parameter	Symbols	1N4148W-E	Units
Reverse BreakdownVoltage at $I_R=1\mu A$	$V_{(BR)R}$	75	V
Maximum Forward Voltage	V_F	0.715 0.855 1.00 1.25	V
at 1m A at 10 m A at 50 m A at 150mA			
Peak Reverse Current	I_R	0.025 1 30 50	uA
at $V_R=20V$ $T_j=25^\circ C$ at $V_R=75V$ $T_j=25^\circ C$ at $V_R=25V$ $T_j=150^\circ C$ at $V_R=75V$ $T_j=150^\circ C$			
Typical Junction Capacitance	C_j	2	pF
Maximum Reverse Recovery Time	t_{rr}	4	ns

Typical Characteristics

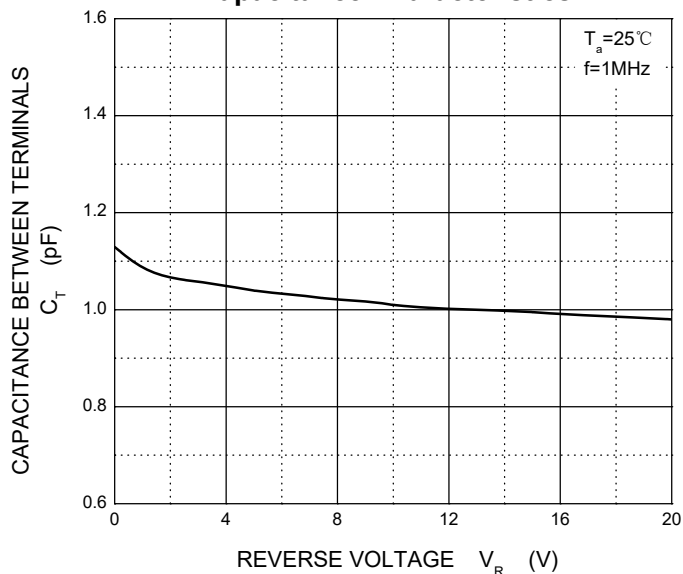
Forward Characteristics



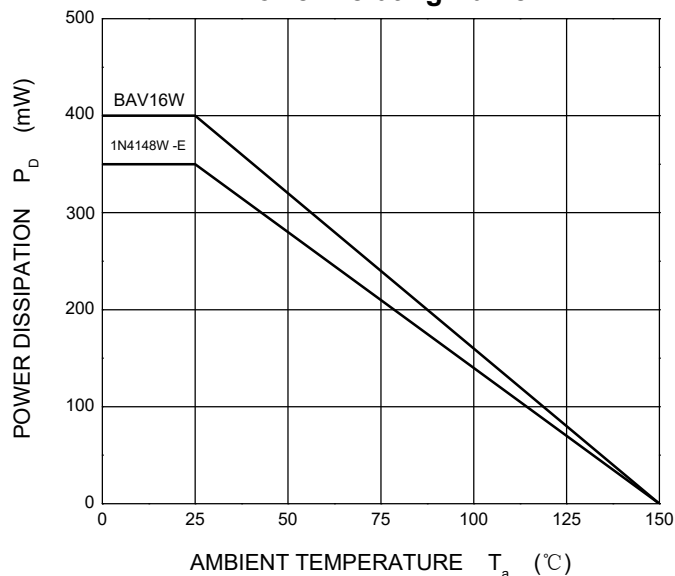
Reverse Characteristics



Capacitance Characteristics

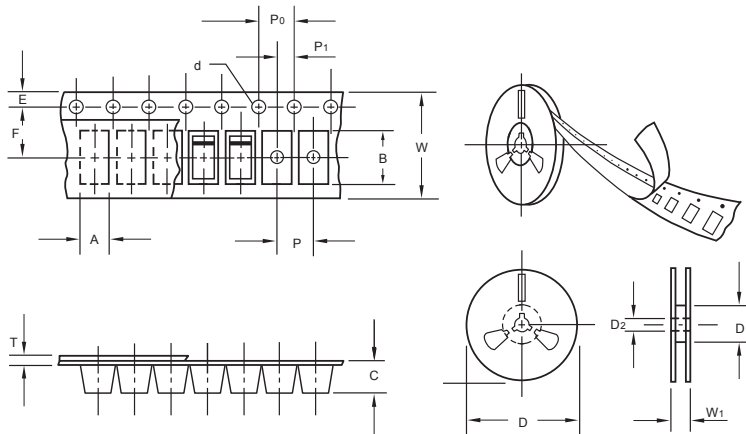


Power Derating Curve



The curve above is for reference only.

Packing information



unit:mm

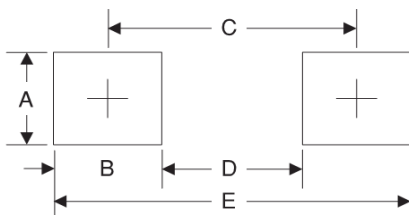
Item	Symbol	Tolerance	SOD-123
Carrier width	A	0.1	2.1
Carrier length	B	0.1	4.0
Carrier depth	C	0.1	1.60
Sprocket hole	d	0.05	1.55
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D ₁	min	50.0
Feed hole diameter	D ₂	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P ₀	0.1	4.00
Embossment center	P ₁	0.1	2.00
Overall tape thickness	T	0.1	0.25
Tape width	W	0.3	8.15
Reel width	W ₁	1.0	10.5

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123	7"	3,000	4.0	45,000	210*208*203	178	430*430*235	180,000	9.0

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	1.2	0.047
B	1.2	0.047
C	3.2	0.126
D	2.0	0.079
E	4.4	0.173

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