

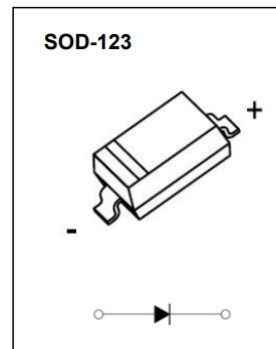


## AD-BAV16W/1N4148W Plastic-Encapsulated Diode

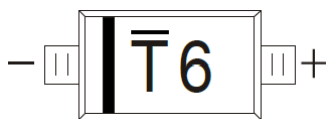
AD-BAV16W/1N4148W Fast switching diode

### FEATURES

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



### MARKING



T6 = Device code AD-BAV16W  
The marking bar indicates the cathode



T4 = Device code AD-1N4148W  
The marking bar indicates the cathode

**MAXIMUM RATINGS ( $T_j = 25^\circ\text{C}$  unless otherwise specified)**

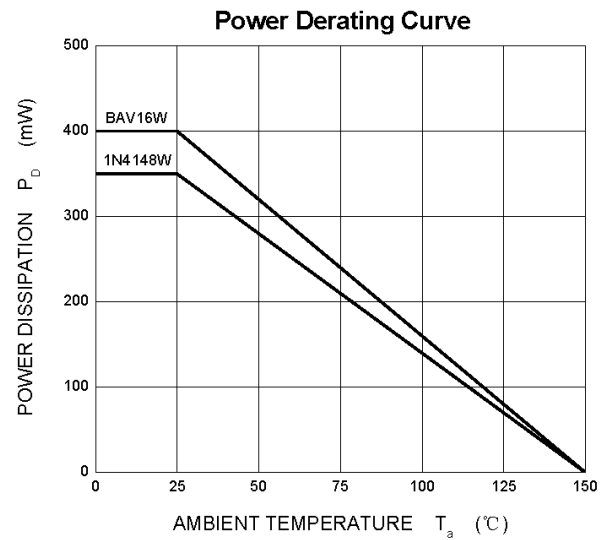
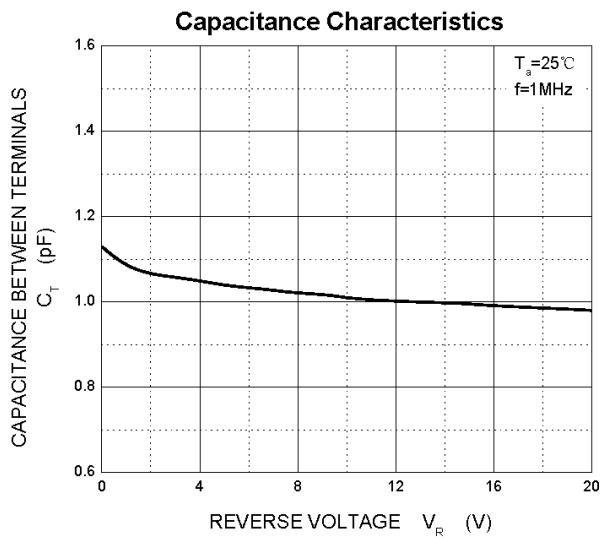
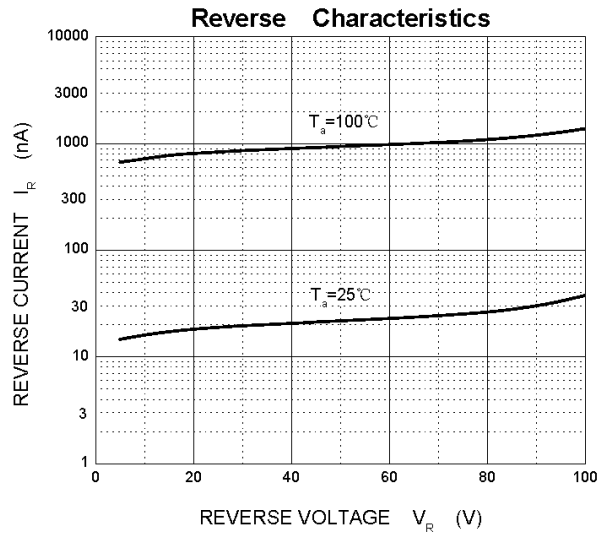
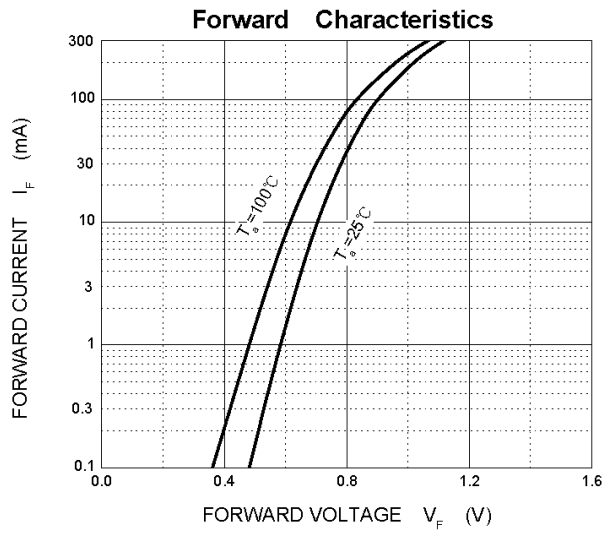
Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	$V_{RM}$	100	V
Peak repetitive reverse voltage	$V_{RRM}$	100	V
Working peak reverse voltage	$V_{RWM}$	100	V
DC blocking voltage	$V_R$	100	V
RMS reverse voltage	$V_{R(RMS)}$	71	V
Forward continuous current	$I_{FM}$	300	mA
Average rectified output current	$I_O$	150	mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	$I_{FSM}$	2.0	A
Power dissipation	AD-1N4148W	350	mW
	AD-BAV16W	400	
Thermal resistance from junction to ambient	AD-1N4148W	357.1	$^\circ\text{C/W}$
	AD-BAV16W	312.5	
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 ~ 150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS ( $T_j = 25^\circ\text{C}$  unless otherwise specified)**

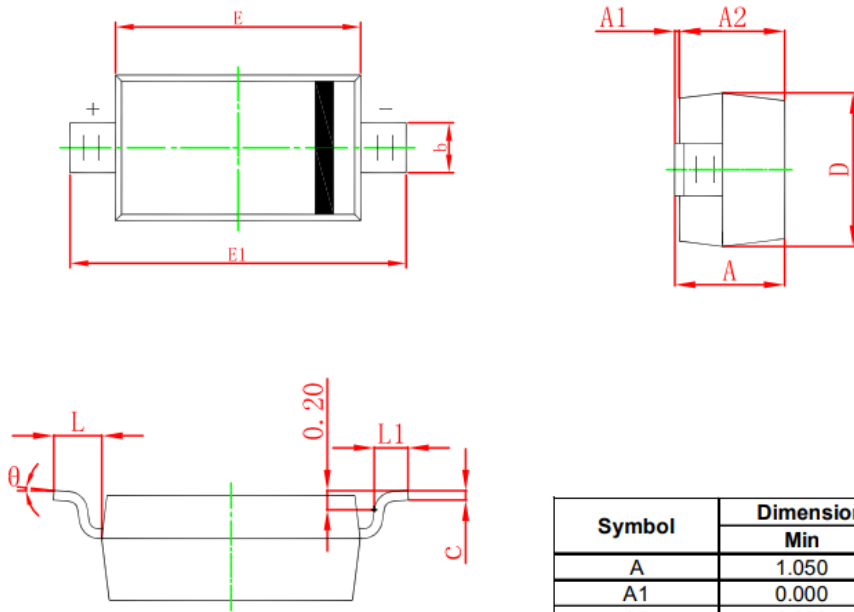
Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F = 1\text{mA}$	-	-	0.715	V
	$V_{F2}$	$I_F = 10\text{mA}$	-	-	0.855	
	$V_{F3}$	$I_F = 50\text{mA}$	-	-	1.0	
	$V_{F4}$	$I_F = 150\text{mA}$	-	-	1.25	
Reverse current	$I_{R1}$	$V_R = 75\text{V}$	-	-	1	$\mu\text{A}$
	$I_{R2}$	$V_R = 20\text{V}$	-	-	25	nA
Capacitance between terminals	$C_T$	$V_R = 0\text{V}, f = 1\text{MHz}$	-	-	2	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10\text{mA}, I_{rr} = 1\text{mA}, R_L = 100\Omega$	-	-	4	ns

1) Measured with the device mounted on 1 inch<sup>2</sup> FR-4 board with 1oz. single-side copper, in a still air environment with  $T_a = 25^\circ\text{C}$ .

# TYPICAL CHARACTERISTICS

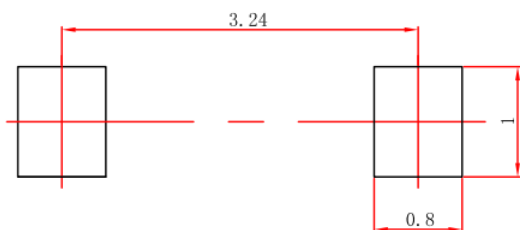


### SOD-123 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

### SOD-123 SUGGESTED PAD LAYOUT

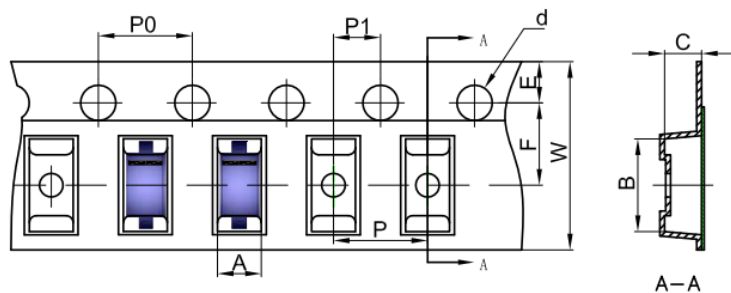


Note:

1. Controlling dimension in millimeters.
2. General tolerance:  $\pm 0.05\text{mm}$ .
3. The pad layout is for reference purpose only.

### SOD-123 TAPE AND REEL

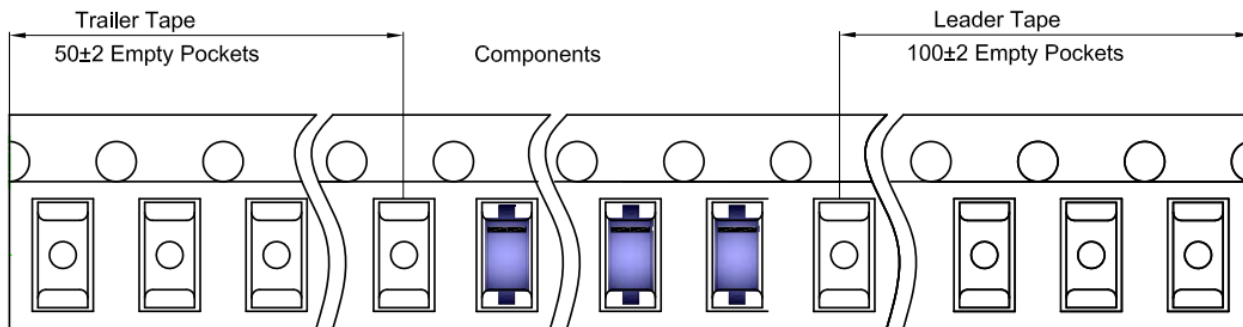
#### SOD-123 Embossed Carrier Tape



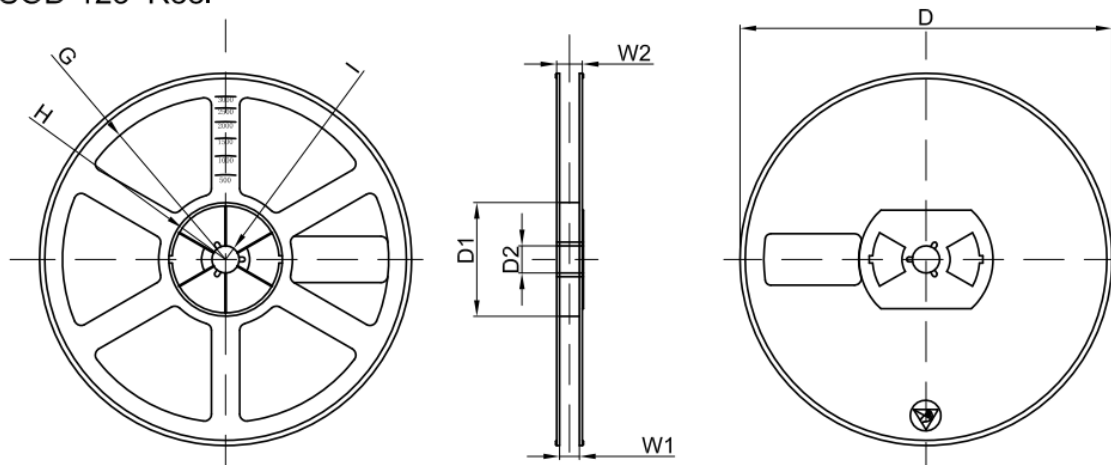
**Packaging Description:**  
 SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOD-123	1.85	3.95	1.57	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

#### SOD-123 Tape Leader and Trailer



#### SOD-123 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	

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