

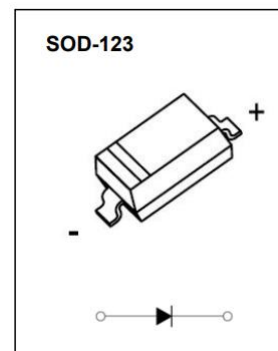


## AD-BAV19W/20W/21W Plastic-Encapsulated Diode

**AD-BAV19W/20W/21W      Switching diode**

### FEATURES

- Low reverse current
- Surface mount package ideally suited for automatic insertion
- Fast switching speed
- For general purpose switching applications
- AEC-Q101 qualified



### MARKING

AD-BAV19W	AD-BAV20W	AD-BAV21W
$\bar{A}8$	$\bar{T}2$	$\bar{T}3$

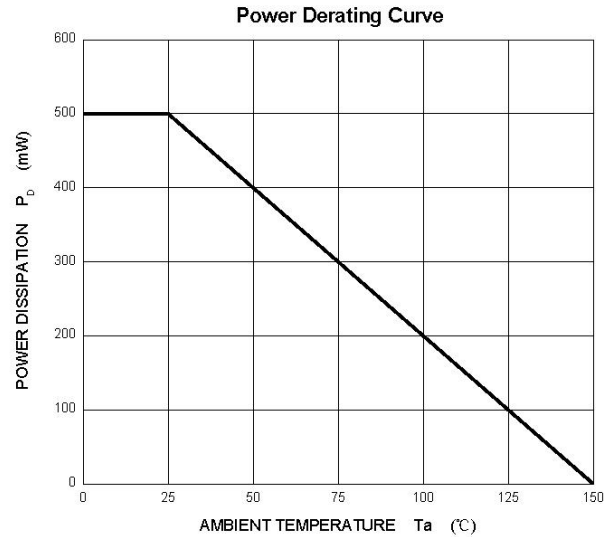
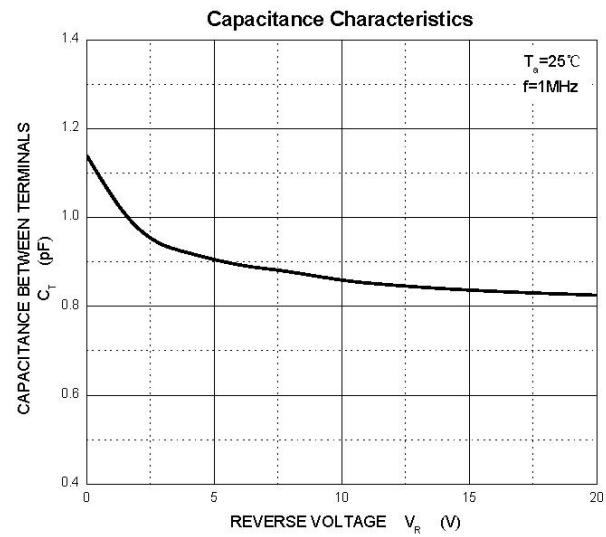
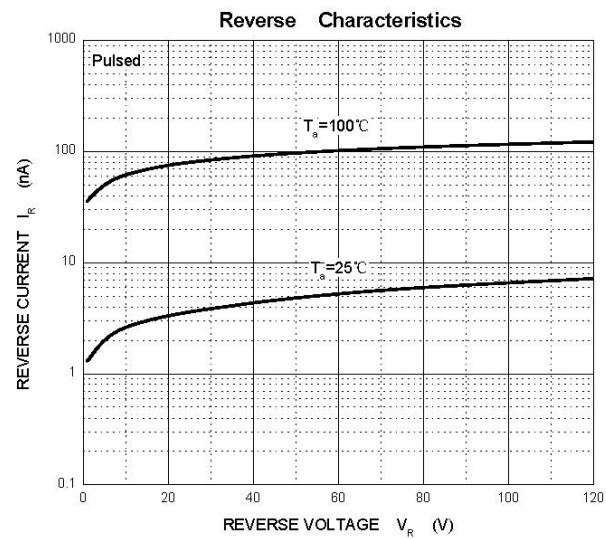
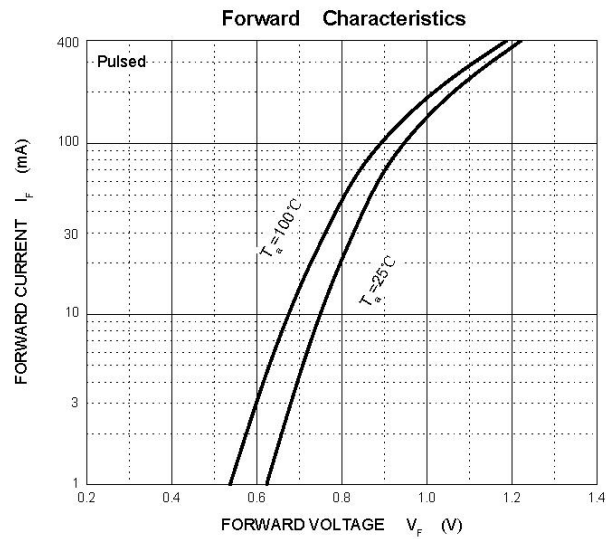
**MAXIMUM RATINGS ( $T_j = 25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Value			Unit
		BAV19W	BAV20W	BAV21W	
Non-repetitive peak reverse voltage	$V_{RM}$	120	200	250	V
Peak repetitive reverse voltage	$V_{RRM}$	100	150	200	V
Working peak reverse voltage	$V_{RWM}$	100	150	200	V
RMS reverse voltage	$V_{R(RMS)}$	71	106	141	V
Average rectified output current	$I_O$	200			mA
Non-repetitive peak forward surge current @ $t = 8.3\text{ms}$	$I_{FSM}$	2.0			A
Power dissipation	$P_D$	500			mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	250			$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 ~ 150			$^\circ\text{C}$

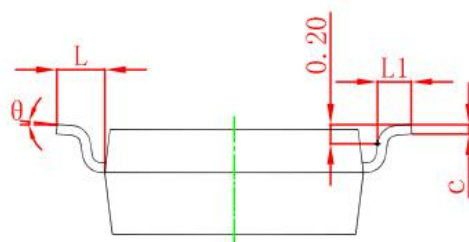
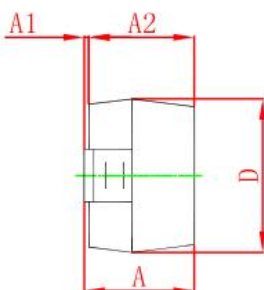
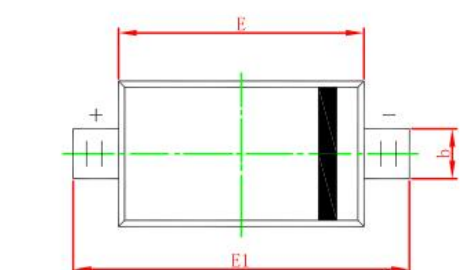
**ELECTRICAL CHARACTERISTICS ( $T_j = 25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Test condition		Min	Typ	Max	Unit
Forward voltage	$V_{F1}$	$I_F = 100\text{mA}$		-	-	1	V
	$V_{F2}$	$I_F = 200\text{mA}$		-	-	1.25	
Reverse current	$I_R$	$V_R = 100\text{V}$	BAV19W	-	-	0.1	$\mu\text{A}$
		$V_R = 150\text{V}$	BAV20W	-	-	0.1	$\mu\text{A}$
		$V_R = 200\text{V}$	BAV21W	-	-	0.1	$\mu\text{A}$
Capacitance between terminals	$C_T$	$V_R = 0\text{V}, f = 1\text{MHz}$		-	-	5	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 30\text{mA}, I_{rr} = 3\text{mA}, R_L = 100\Omega$		-	-	50	ns

TYPICAL CHARACTERISTICS

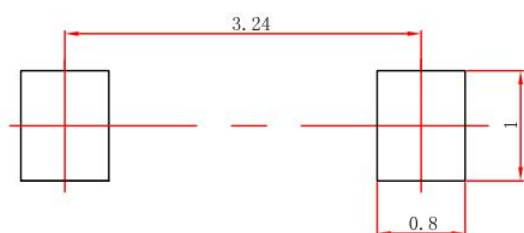


## SOD-123 PACKAGE OUTLINE DIMENSIONS



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

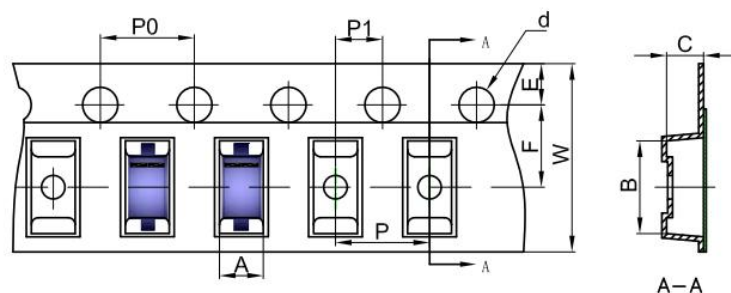


Note:

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

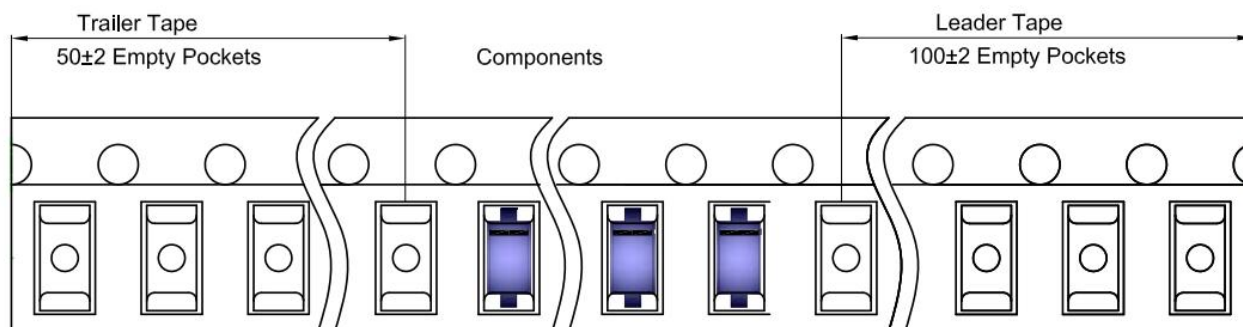


#### Packaging Description:

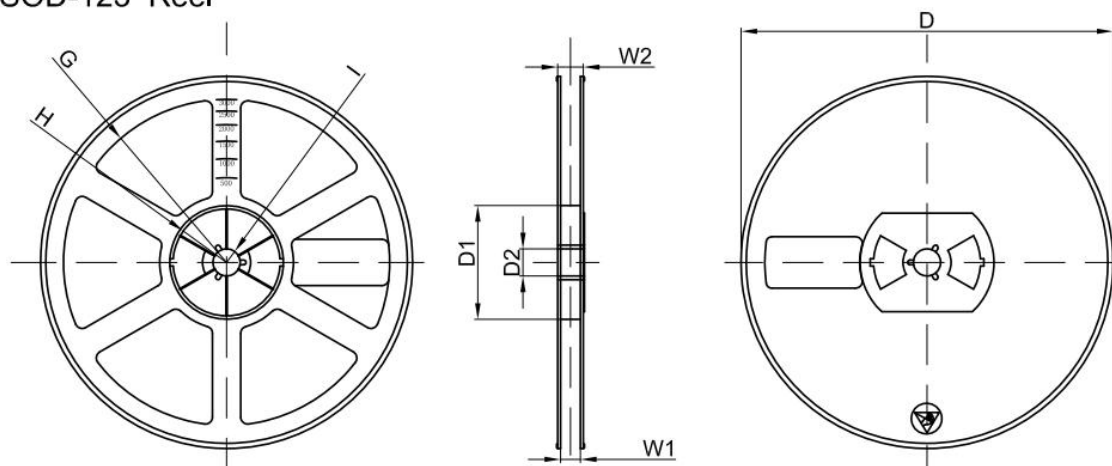
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts 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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