

## SOD123 Plastic-Encapsulate Diodes

Small Signal Fast Switching Diodes

### Features

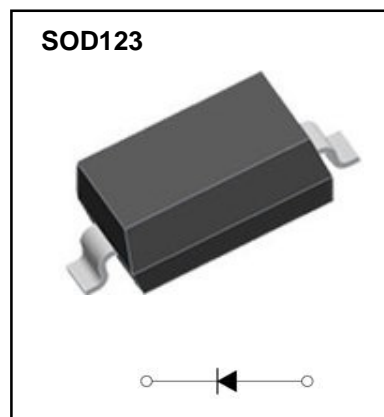
- Low Reverse Current
- Surface Mount Package Ideally Suited for Automatic Insertion
- Fast Switching Speed
- For General Purpose Switching Applications

### Applications

- Extreme fast switches

### Marking

- BAV19W: A8
- BAV20W: T2
- BAV21W: T3



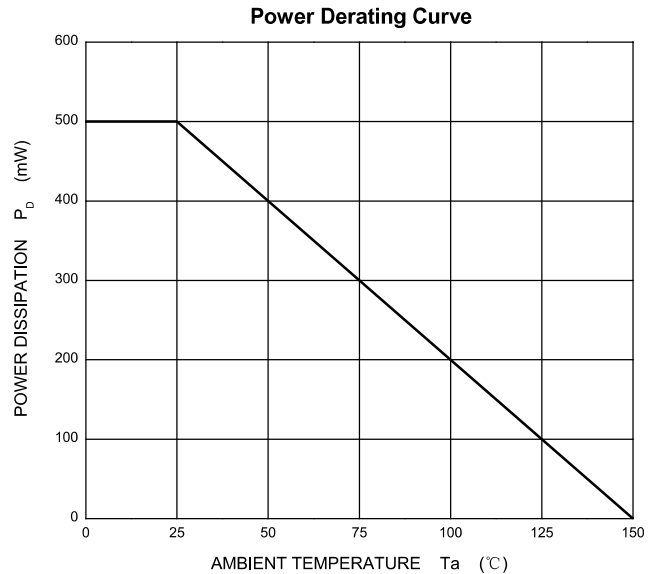
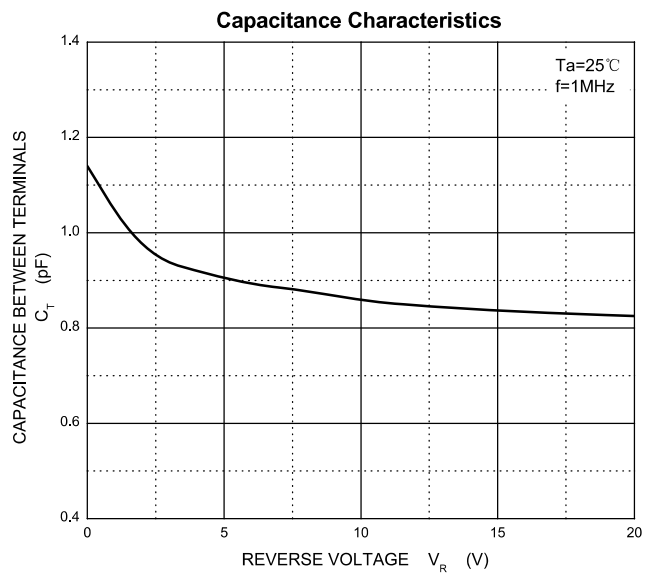
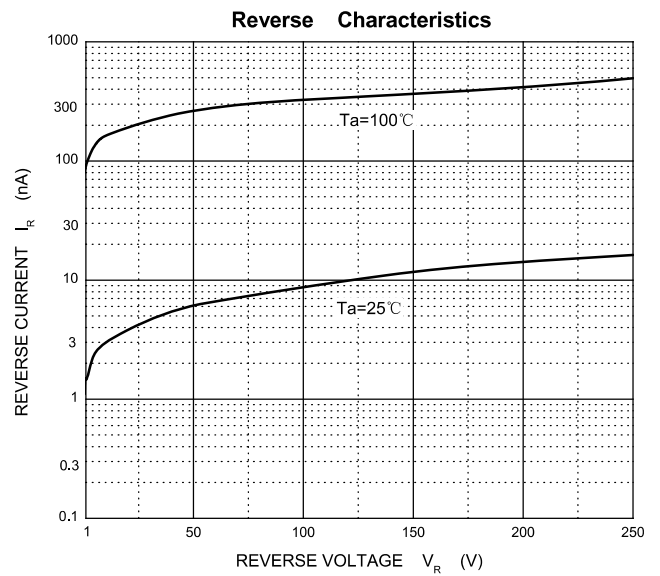
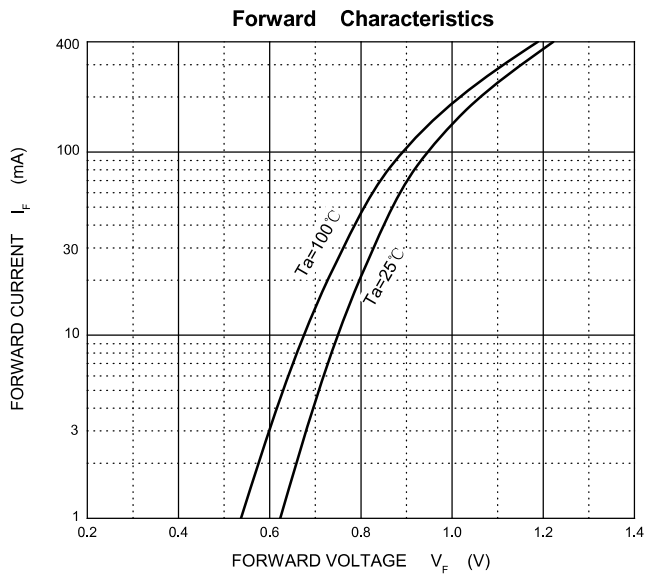
### Limiting Values (Absolute Maximum Rating)

Symbol	Parameter	Value			Unit
		BAV19W	BAV20W	BAV21W	
$V_{RM}$	Non-Repetitive Peak Reverse Voltage	120	200	250	V
$V_{RRM}$	Peak Repetitive Reverse Voltage	100	150	200	V
$V_{RWM}$	Working Peak Reverse Voltage				
$V_{R(RMS)}$	RMS Reverse Voltage	71	106	141	V
$I_O$	Average Rectified Output Current	200			mA
$I_{FSM}$	Non-repetitive Peak Forward Surge Current @ t=8.3ms	2.0			A
$P_D$	Power Dissipation	500			mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	250			°C/W
$T_j$	Junction Temperature	150			°C
$T_{stg}$	Storage Temperature	-55~+150			°C

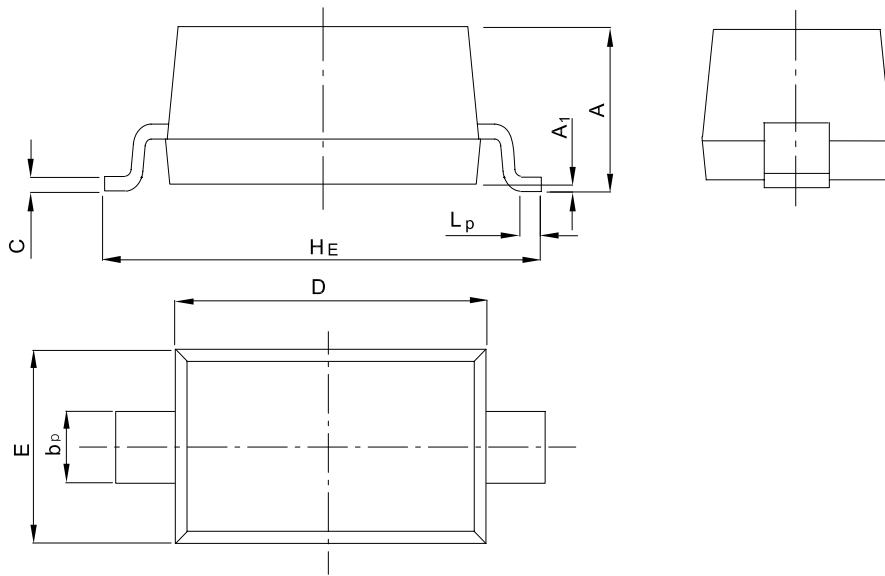
### ELECTRICAL CHARACTERISTICS( $T_a=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse current	$I_R$	$V_R=100\text{V}$	BAV19W		0.1	uA
		$V_R=150\text{V}$	BAV20W		0.1	
		$V_R=200\text{V}$	BAV21W		0.1	
Forward voltage	$V_F$	$I_F=100\text{mA}$			1	V
		$I_F=200\text{mA}$			1.25	
Total capacitance	$C_{tot}$	$V_R=0\text{V}, f=1\text{MHz}$			5	pF
Reverse recovery time	$t_{rr}$	$I_F=I_R=30\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$			50	ns

# Typical Characteristics

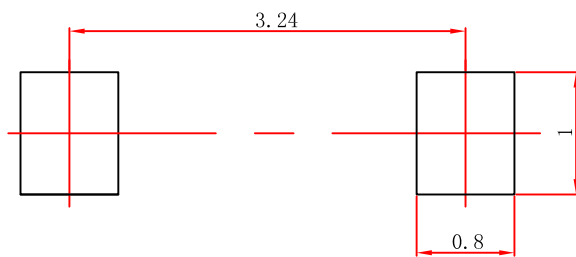


## SOD-123 Package Outline Dimensions



UNIT	A	$b_p$	C	D	E	$H_E$	$A_1$	$L_p$
mm	1.20 0.90	0.60 0.50	0.135 0.100	2.75 2.55	1.65 1.55	3.85 3.55	0.10 0.01	0.50 0.20

## SOD-123 Suggested Pad Layout



### Note:

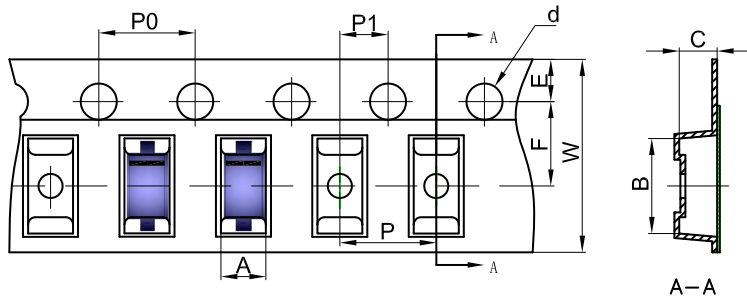
1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

### NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

# Reel Taping Specifications For Surface Mount Devices-SOD123

## SOD-123 Embossed Carrier Tape

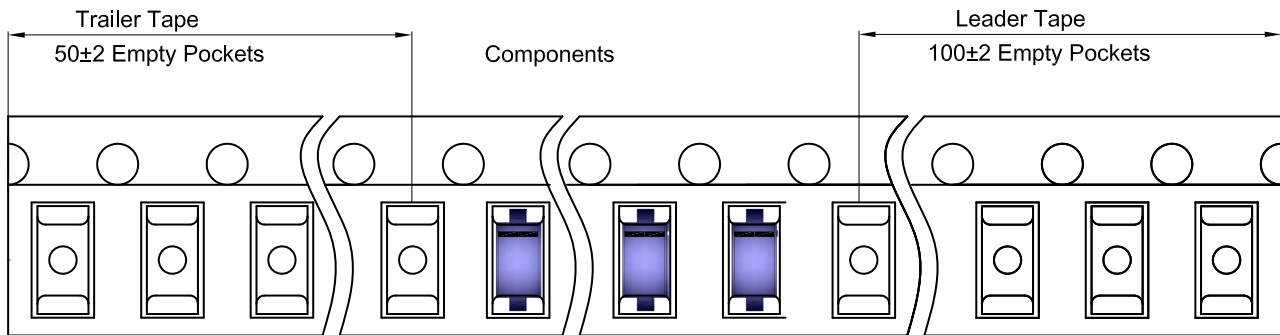


### Packaging Description:

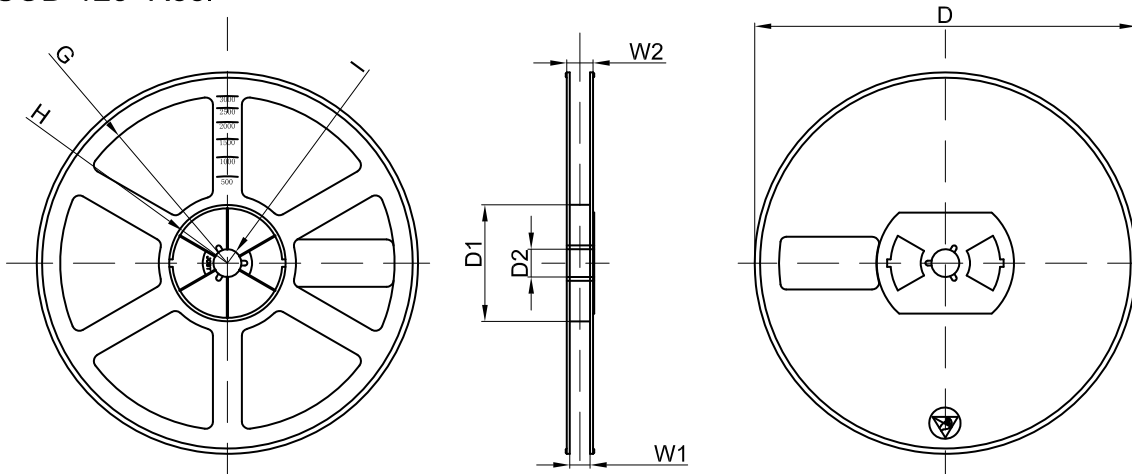
SOD-123 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts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