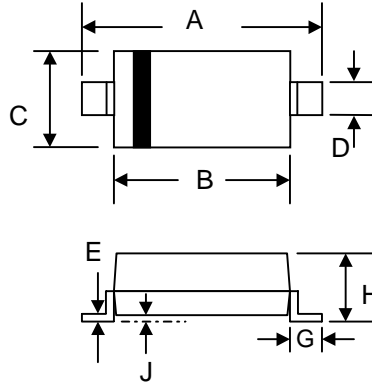


### Features

- High Conductance
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Application
- Plastic Material – UL Recognition Flammability Classification 94V-O



SOD-123		
Dim	Min	Max
A	3.6	3.9
B	2.5	2.8
C	1.4	1.8
D	0.5	0.7
E	—	0.2
G	0.4	—
H	0.95	1.35
J	—	0.12
All Dimensions in mm		

### Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: BAV19W A8  
BAV20W A80  
BAV21W A82
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

### Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Unit
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	$V_{RWM}$				
DC Blocking Voltage	$V_R$				
RMS Reverse Voltage	$V_{R(RMS)}$	70	105	140	V
Forward Continuous Current (Note 1)	$I_{FM}$	400			mA
Average Rectified Output Current (Note 1)	$I_O$	200			mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{ms}$ @ $t = 1.0\text{s}$	$I_{FSM}$	2.5 0.5			A
Power Dissipation	$P_d$	410			mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	500			K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150			$^\circ\text{C}$

## Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Unit
Forward Voltage Drop @ $I_F = 100\text{mA}$	$V_{FM}$	1.0			V
Peak Reverse Leakage Current At Rated DC Blocking Voltage	$I_{RM}$	100	150	200	nA
Typical Junction Capacitance ( $V_R = 0\text{V DC}$ , $f = 1.0\text{MHz}$ )	$C_j$	5.0			pF
Reverse Recovery Time (Note 2)	$t_{rr}$	50			nS

Note: 1. Valid provided that terminals are kept at ambient temperature.  
 2. Measured with  $I_F = I_R = 30\text{mA}$ ,  $I_{RR} = 0.1 \times I_R$ ,  $R_L = 100\Omega$ .

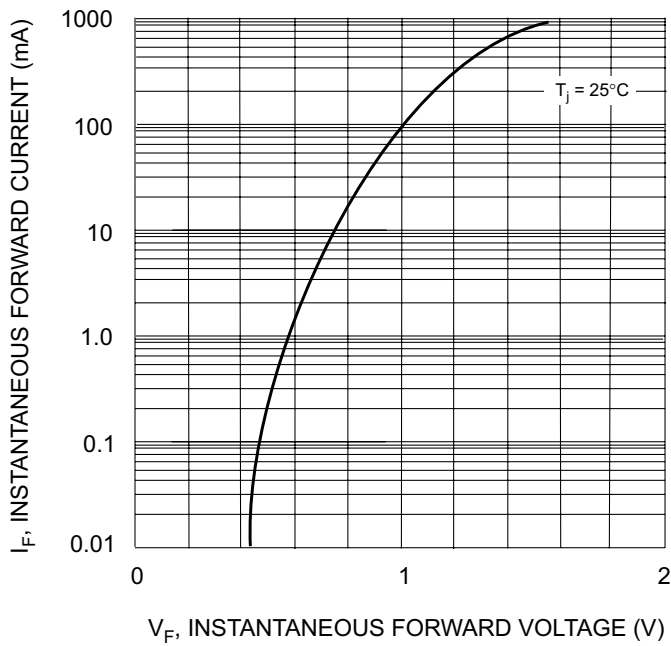


Fig. 1 Forward Characteristics

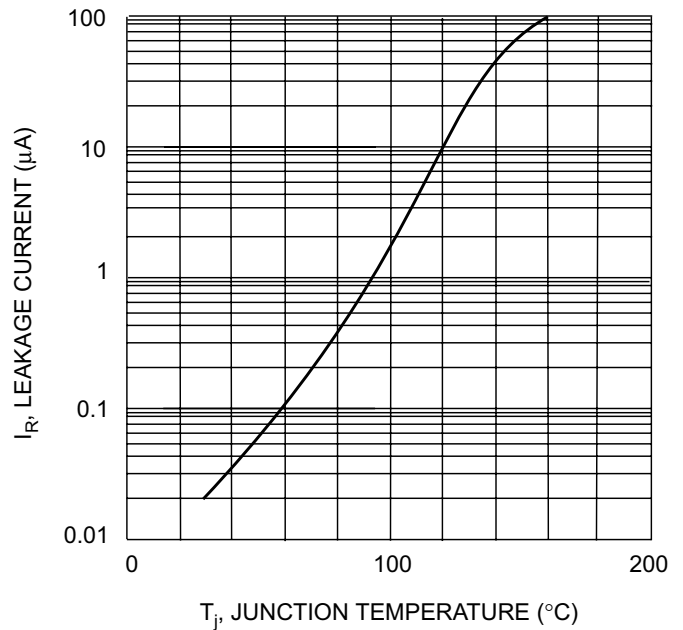


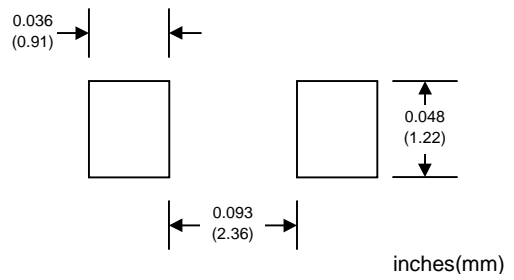
Fig. 2 Leakage Current vs Junction Temperature

## MARKING INFORMATION



Cathode = Polarity Band  
 Ax = Device Code  
 x = 8 (BAV19W)  
       80 (BAV20W)  
       82 (BAV21W)

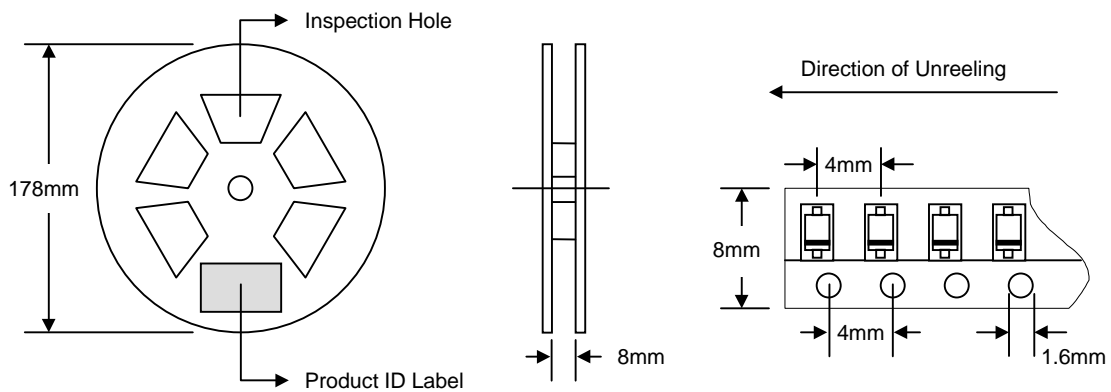
## RECOMMENDED FOOTPRINT



inches(mm)

## PACKAGING INFORMATION

### TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	10.0

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
BAV19W-T1	SOD-123	3000/Tape & Reel
BAV20W-T1	SOD-123	3000/Tape & Reel
BAV21W-T1	SOD-123	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, BAV19W-T1-LF.**

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