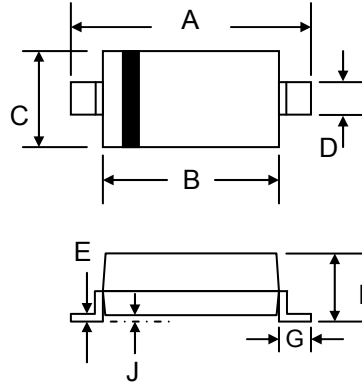


## Features

- Silicon Epitaxial Planar Die Construction
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOD-123		
Dim	Min	Max
A	3.60	3.90
B	2.50	2.80
C	1.40	1.80
D	0.30	0.78
E	—	0.25
G	0.15	—
H	0.95	1.35
J	—	0.15
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: Device Code, See Page 3
- **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
Peak Repetitive Reverse Voltage	$V_{RRM}$	120	200	250	V
Working Peak Reverse Voltage DC Blocking Voltage	$V_{RWM}$ $V_R$	100	150	200	V
Forward Continuous Current	$I_F$	200			mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	$I_{FSM}$	2.5 0.5			A
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150			$^\circ\text{C}$

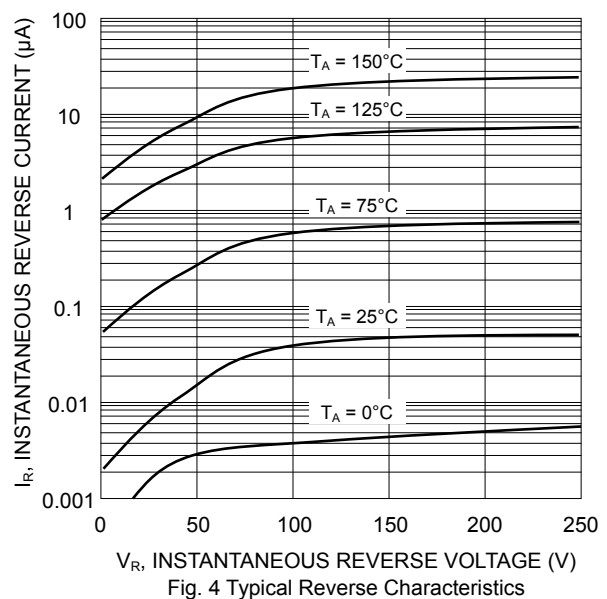
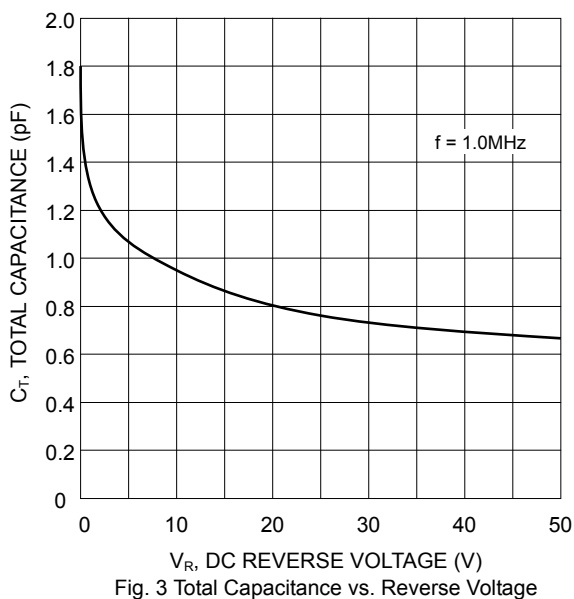
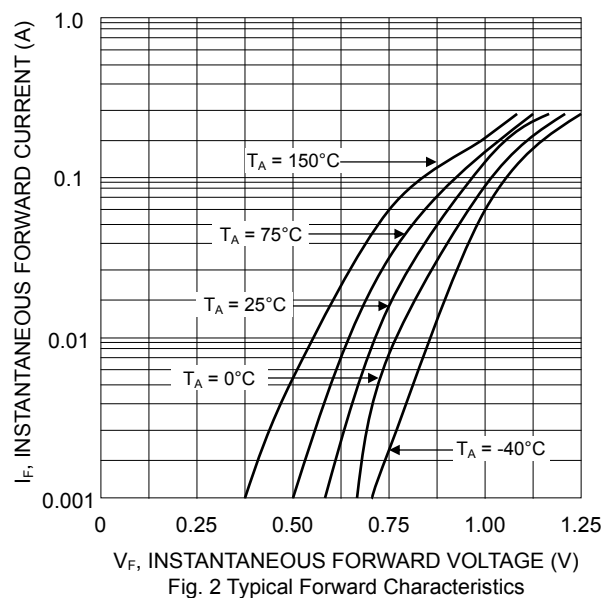
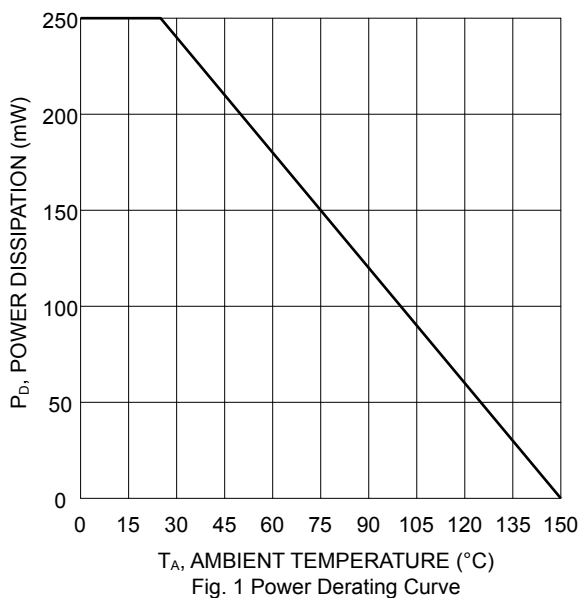
## Thermal Characteristics

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Unit
Power Dissipation (Note 1)	$P_D$	250			mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{JA}$	500			$^\circ\text{C/W}$

Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

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

Characteristic	Symbol	BAV19W	BAV20W	BAV21W	Unit
Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$	$V_{(BR)}$	120	200	250	V
Forward Voltage Drop @ $I_F = 100\text{mA}$ @ $I_F = 200\text{mA}$	$V_{FM}$		1.0 1.25		V
Peak Reverse Leakage Current @ Rated $V_R$ , $T_J = 25^\circ\text{C}$ @ Rated $V_R$ , $T_J = 150^\circ\text{C}$	$I_{RM}$		100 100		nA $\mu\text{A}$
Diode Capacitance ( $V_R = 0\text{V}$ , $f = 1.0\text{MHz}$ )	$C_D$		5.0		pF
Reverse Recovery Time ( $I_F = I_R = 30\text{mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\Omega$ )	$t_{rr}$		50		nS



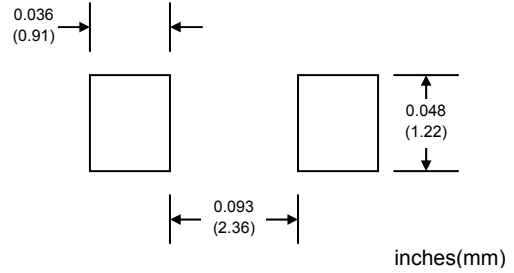
## MARKING INFORMATION



xx = Device Code, See Table Below

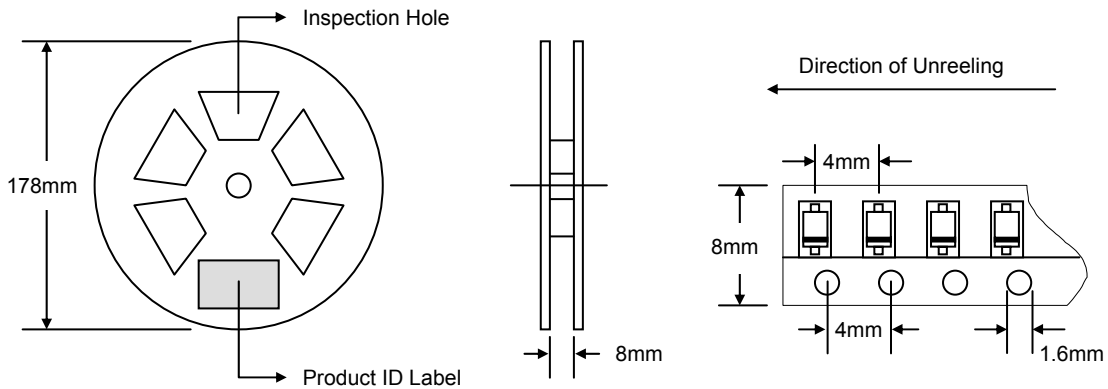
Mfg Site	BAV19W	BAV20W	BAV21W
TW Plant	A8	A80	A82
CN Plant	A8	T2	T3

## RECOMMENDED FOOTPRINT



## 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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