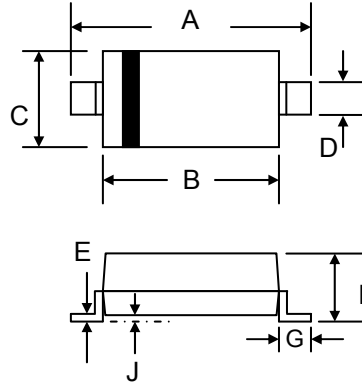


## Features

- 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-323		
Dim	Min	Max
A	2.30	2.75
B	1.60	1.80
C	1.15	1.35
D	0.25	0.40
E	0.09	0.18
G	0.20	0.40
H	0.80	1.15
J	—	0.12
All Dimensions in mm		

## Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 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	BAV19WS	BAV20WS	BAV21WS	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			$^{\circ}\text{C}$

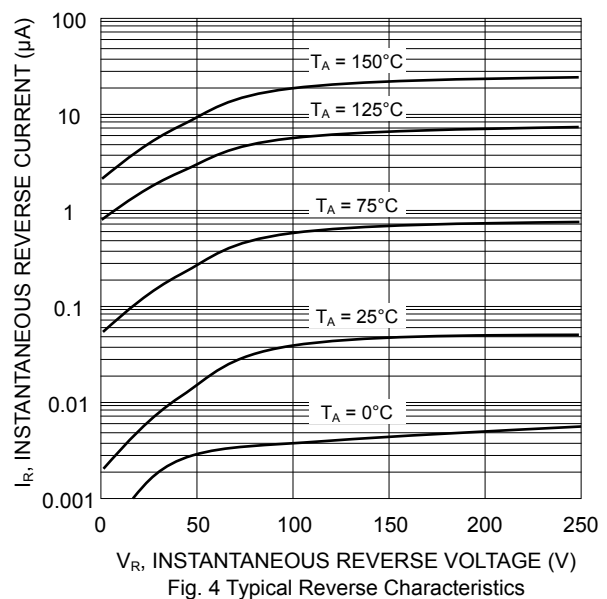
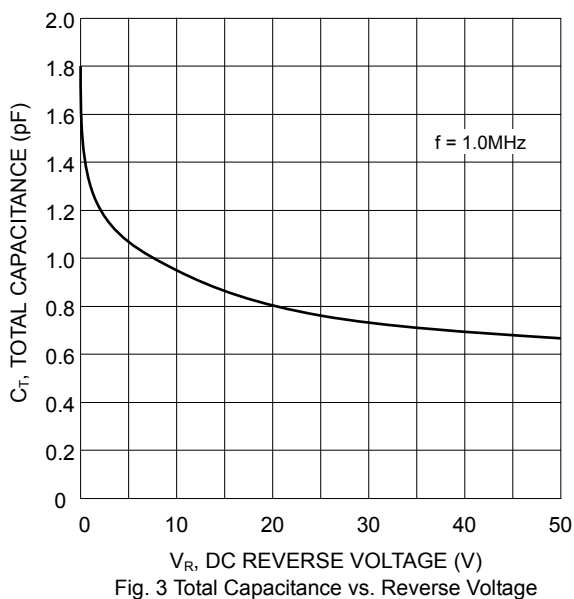
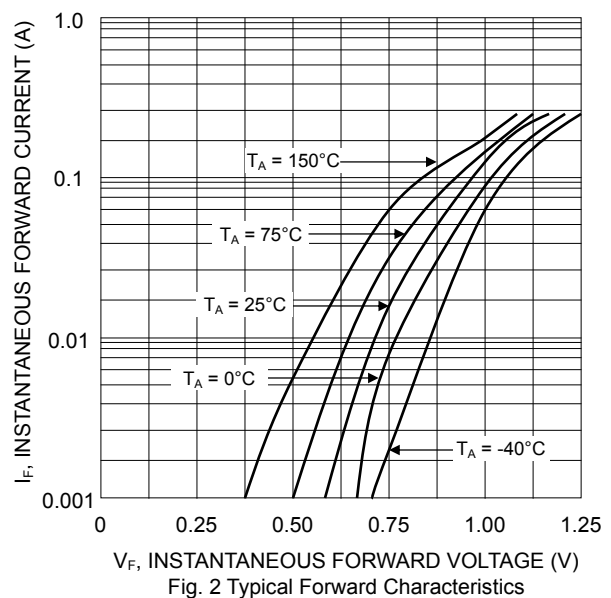
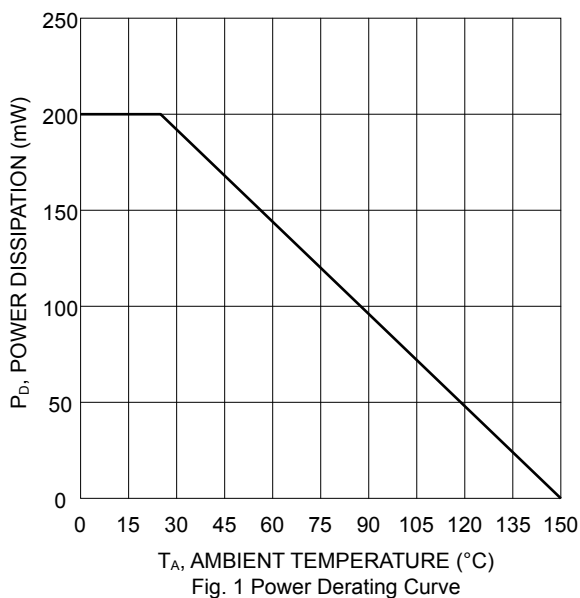
## Thermal Characteristics

Characteristic	Symbol	BAV19WS	BAV20WS	BAV21WS	Unit
Power Dissipation (Note 1)	$P_D$	200			mW
Thermal Resistance, Junction to Ambient (Note 1)	$R_{JA}$	625			$^{\circ}\text{C/W}$

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	BAV19WS	BAV20WS	BAV21WS	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



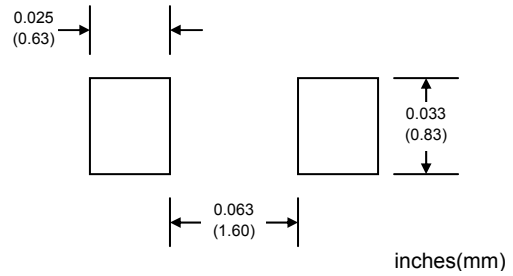
## MARKING INFORMATION



xx = Device Code, See Table Below

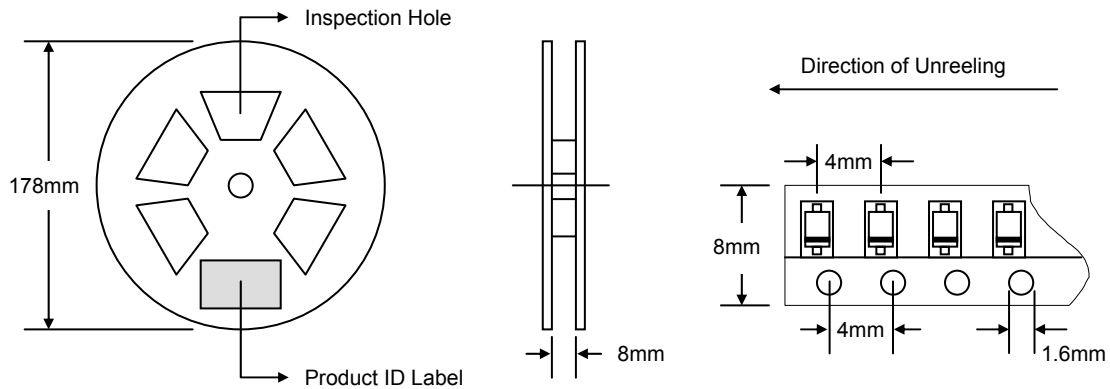
Mfg Site	BAV19WS	BAV20WS	BAV21WS
TW Plant	A8	A80	A82
CN Plant	A8	T2	T3

## 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	7.0

**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
BAV19WS-T1	SOD-323	3000/Tape & Reel
BAV20WS-T1	SOD-323	3000/Tape & Reel
BAV21WS-T1	SOD-323	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, BAV19WS-T1-LF.**

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