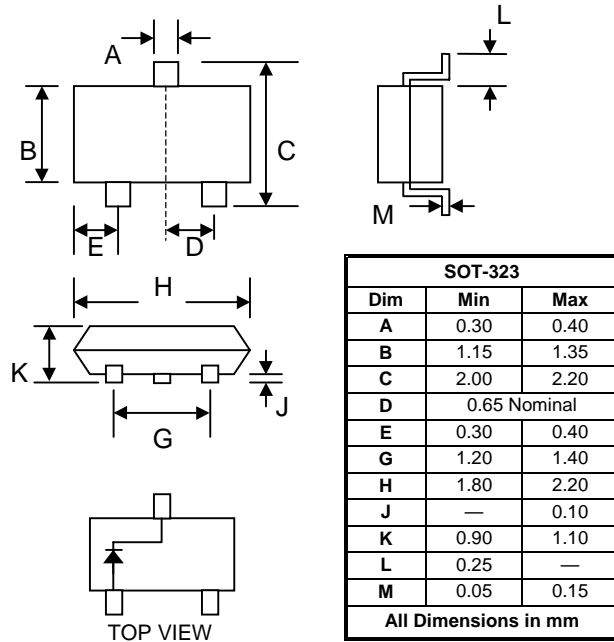


## Features

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

## Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.006 grams (approx.)
- Mounting Position: Any
- Marking: BAS19W A8  
BAS20W A80  
BAS21W A82
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



## Maximum Ratings @<sub>T<sub>A</sub></sub>=25°C unless otherwise specified

Characteristic	Symbol	BAS19W	BAS20W	BAS21W	Unit
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	120	200	250	V
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>	100	150	200	V
Working Peak Reverse Voltage	V <sub>RWM</sub>				
DC Blocking Voltage	V <sub>R</sub>				
Forward Continuous Current (Note 1)	I <sub>F</sub>	400			mA
Average Rectified Output Current (Note 1)	I <sub>O</sub>	200			mA
Peak Forward Surge Current (Note 1) @ t = 1.0μs	I <sub>FSM</sub>	2.5			A
Power Dissipation (Note 1)	P <sub>d</sub>	200			mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	R <sub>θJA</sub>	625			K/W
Operating and Storage Temperature Range	T <sub>i</sub> , T <sub>STG</sub>	-65 to +150			°C

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Forward Voltage	$V_F$	—	1.0 1.25	V	@ $I_F = 100\text{mA}$ @ $I_F = 200\text{mA}$
Reverse Leakage Current	$I_R$	—	100	nA	@ Rated DC Blocking Voltage
Junction Capacitance	$C_j$	—	5.0	pF	$V_R = 0\text{V}$ , $f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	50	nS	$I_F = I_R = 30\text{mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\Omega$

Note: 1. Device mounted on fiberglass substrate 40 x 40 x 1.5mm.

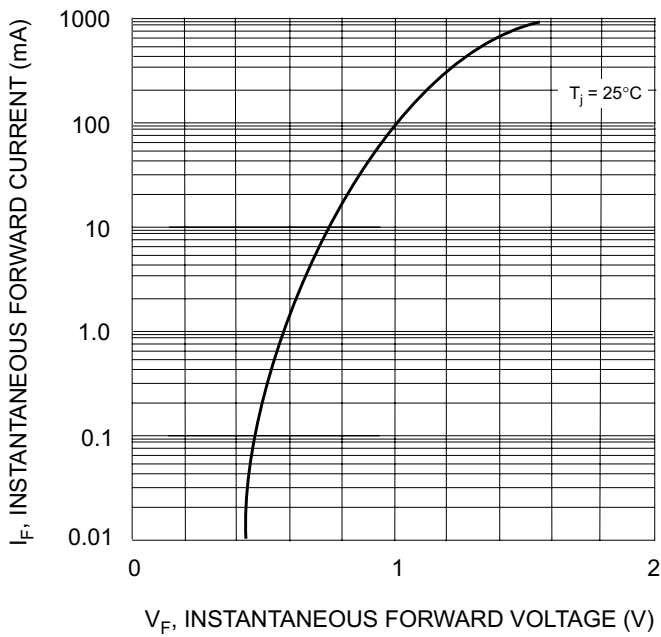


Fig. 1 Forward Characteristics

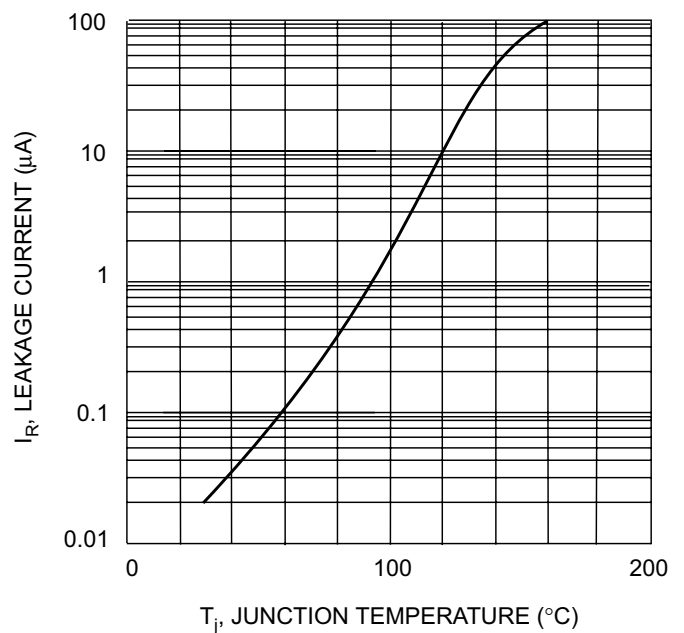
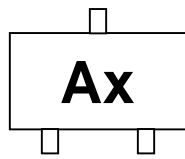


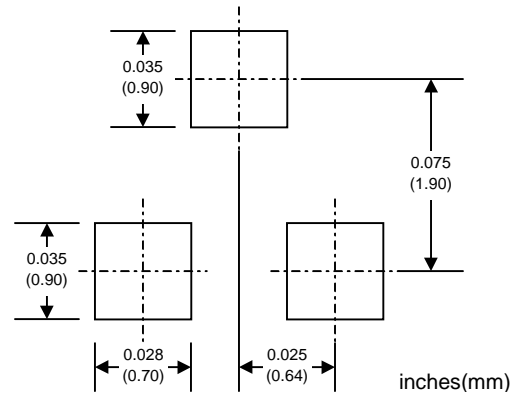
Fig. 2 Leakage Current vs Junction Temperature

## MARKING INFORMATION



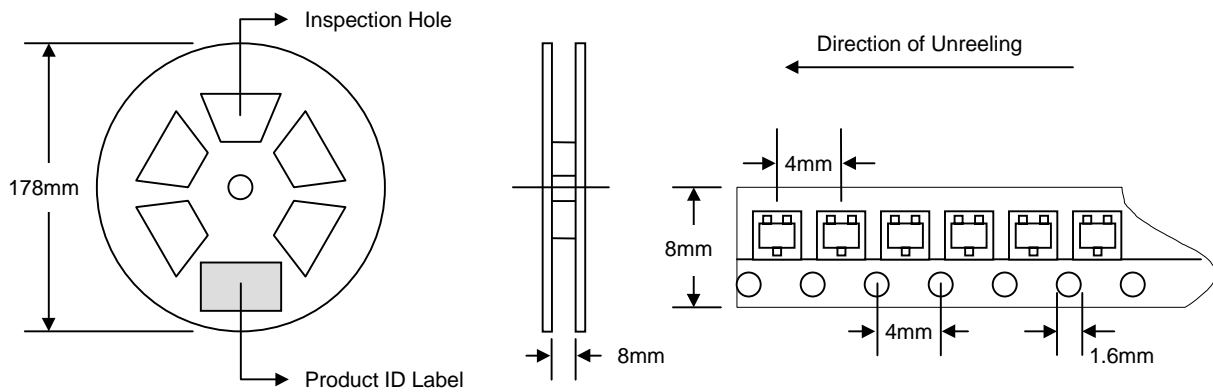
Ax = Device Code  
 x = 8 (BAS19W)  
 80 (BAS20W)  
 82 (BAS21W)

## 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
BAS19W-T1	SOT-323	3000/Tape & Reel
BAS20W-T1	SOT-323	3000/Tape & Reel
BAS21W-T1	SOT-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, BAS19W-T1-LF.**

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