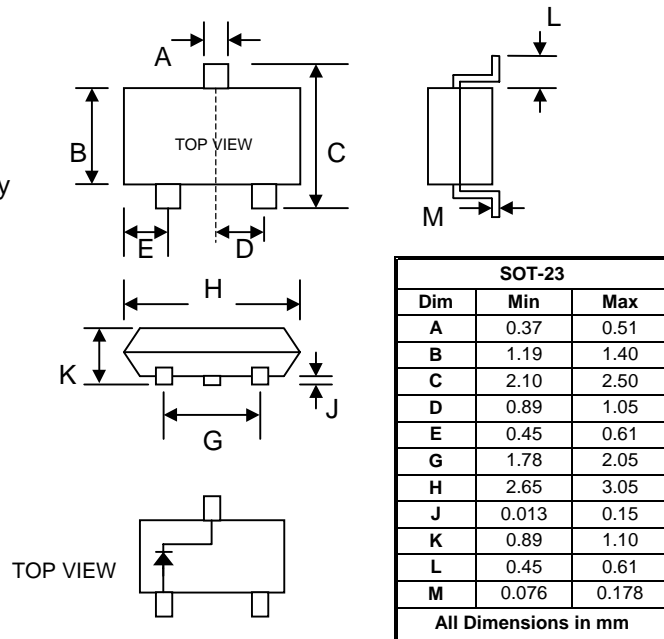


### Features

- 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-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)
- Mounting Position: Any
- Marking: BAS19 A8  
BAS20 A80  
BAS21 A82



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

Characteristic	Symbol	BAS19	BAS20	BAS21	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	$V_R$				
Forward Continuous Current (Note 1)	$I_F$	400			mA
Average Rectified Output Current (Note 1)	$I_O$	200			mA
Peak Forward Surge Current (Note 1) @ $t = 1.0\mu\text{s}$	$I_{FSM}$	2.5			A
Power Dissipation (Note 1)	$P_d$	350			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	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.

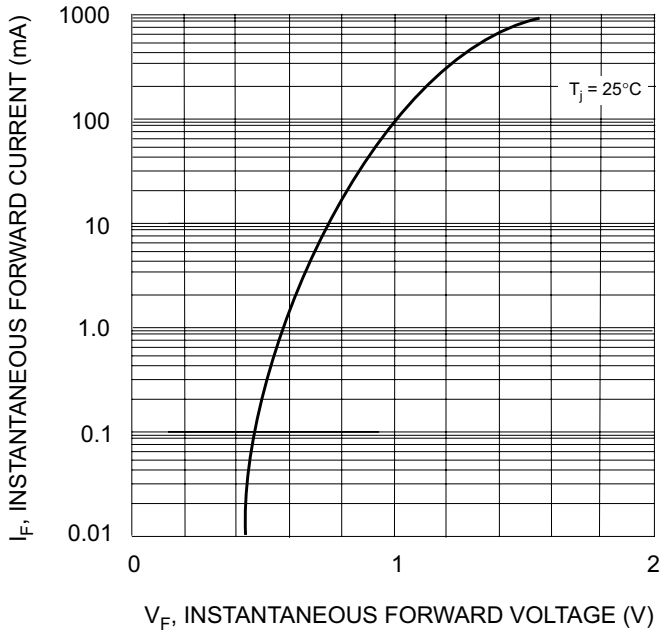


Fig. 1 Forward Characteristics

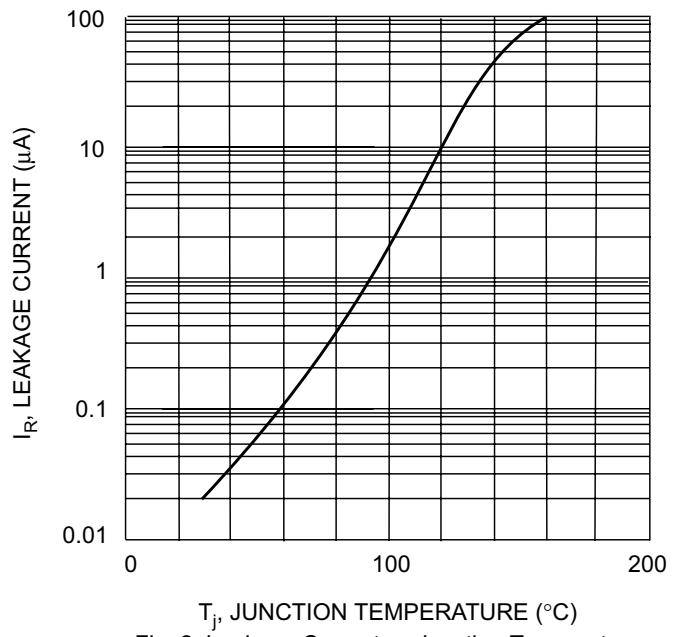


Fig. 2 Leakage Current vs Junction Temperature

## ORDERING INFORMATION

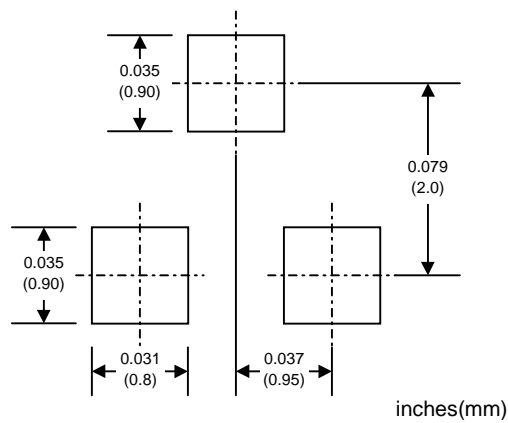
Product No. ♦	Package Type	Shipping Quantity
<b>BAS19-T1</b>	SOT-23	3000/Tape & Reel
BAS19-T3	SOT-23	10000/Tape & Reel
<b>BAS20-T1</b>	SOT-23	3000/Tape & Reel
BAS20-T3	SOT-23	10000/Tape & Reel
<b>BAS21-T1</b>	SOT-23	3000/Tape & Reel
BAS21-T3	SOT-23	10000/Tape & Reel

Products listed in **bold** are WTE **Preferred** devices.

♦T1 suffix refers to a 7" reel. T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

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