

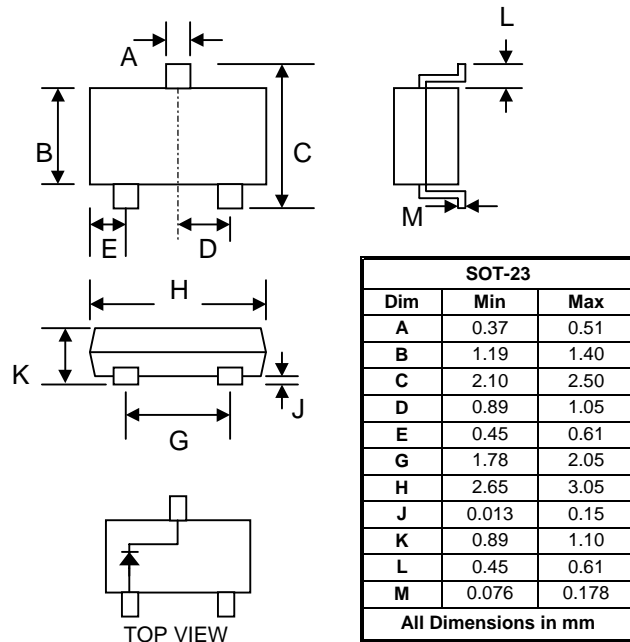
SURFACE MOUNT FAST SWITCHING DIODE

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-0

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
- **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

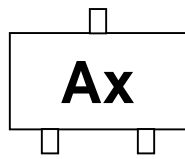
Characteristic	Symbol	BAS19	BAS20	BAS21	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
Peak Repetitive Reverse Voltage	V_{RRM}	100	150	200	V
Working Peak Reverse Voltage	V_{RWM}				
DC Blocking Voltage	V_R				
Forward Continuous Current (Note 1)	I_F	400			mA
Average Rectified Output Current (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	$I_F = I_R = 30\text{mA}$, $I_{RR} = 0.1 \times I_R$, $R_L = 100\Omega$

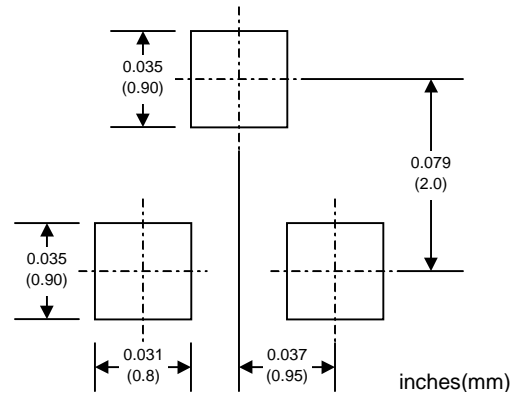
Note: 1. Device mounted on fiberglass substrate 40 x 40 x 1.5mm.

MARKING INFORMATION



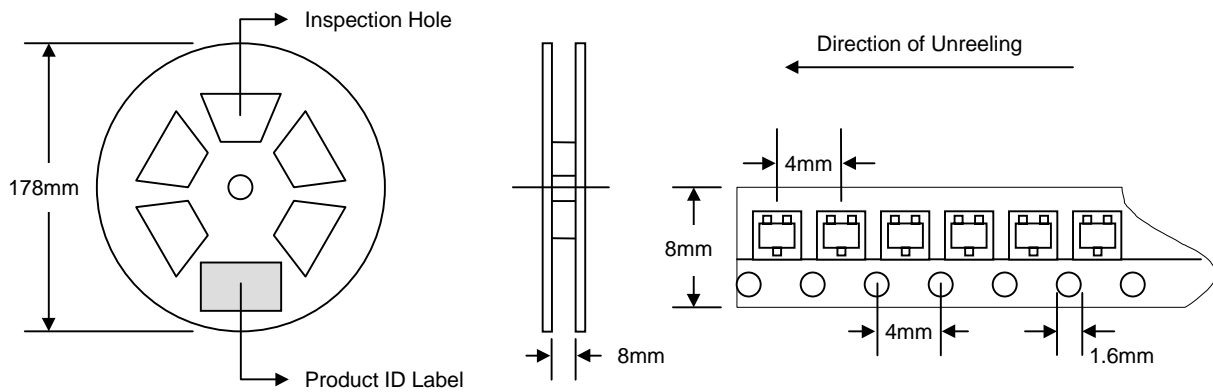
Ax = Device Code
 x = 8 (BAS19)
 80 (BAS20)
 82 (BAS21)

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
BAS19-T1	SOT-23	3000/Tape & Reel
BAS20-T1	SOT-23	3000/Tape & Reel
BAS21-T1	SOT-23	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, BAS19-T1-LF.**

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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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