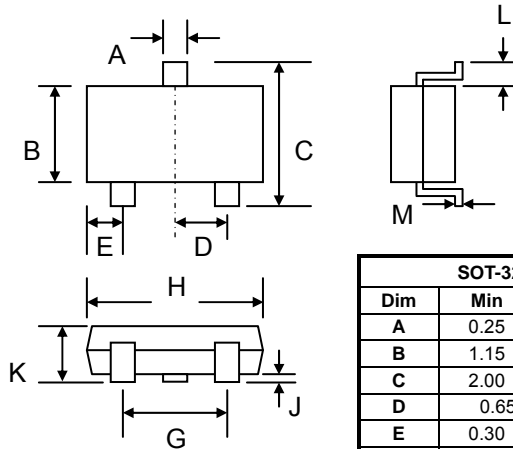


## Features

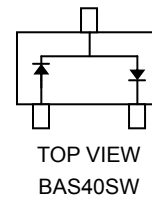
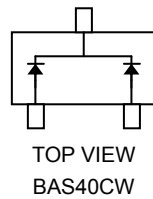
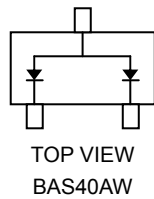
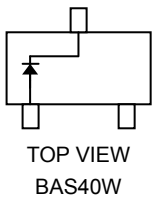
- Single and Dual Diode
- Low Forward Voltage
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOT-323		
Dim	Min	Max
A	0.25	0.40
B	1.15	1.35
C	2.00	2.40
D	0.65 Nominal	
E	0.30	0.40
G	1.20	1.40
H	1.80	2.20
J	—	0.10
K	0.90	1.10
L	0.25	—
M	0.05	0.15
All Dimensions in mm		

## Mechanical Data

- Case: SOT-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.006 grams (approx.)
- Marking: Device Code, See Page 3
- Mounting Position: Any
- **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	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
Forward Continuous Current	$I_F$	200	mA
Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{s}$	$I_{FSM}$	600	mA
Operating Temperature Range	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150	$^{\circ}\text{C}$

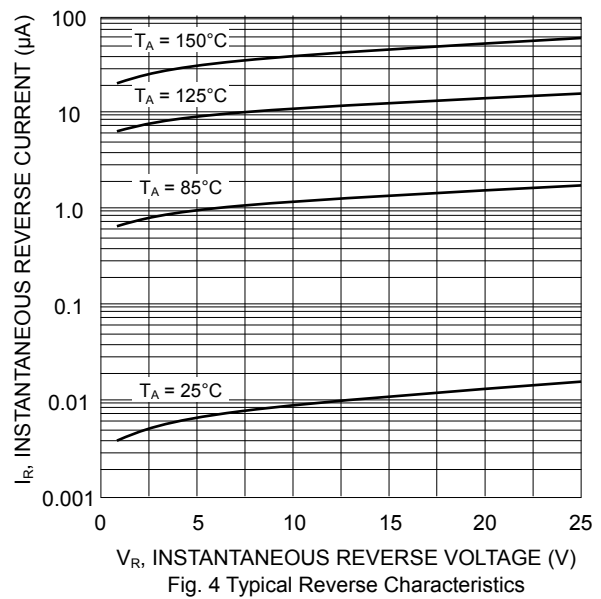
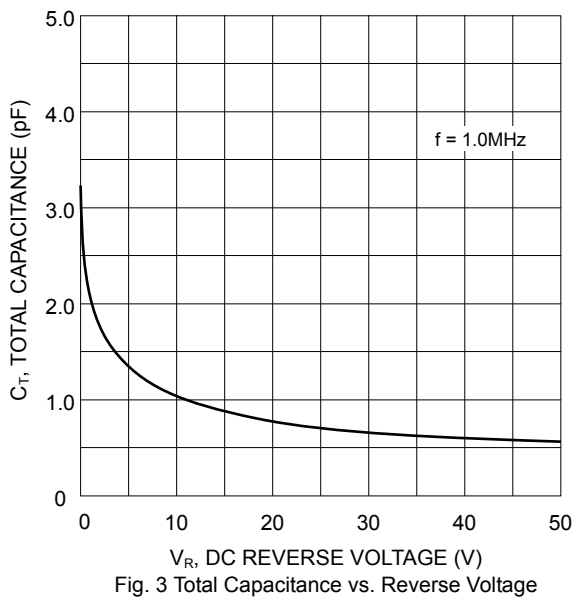
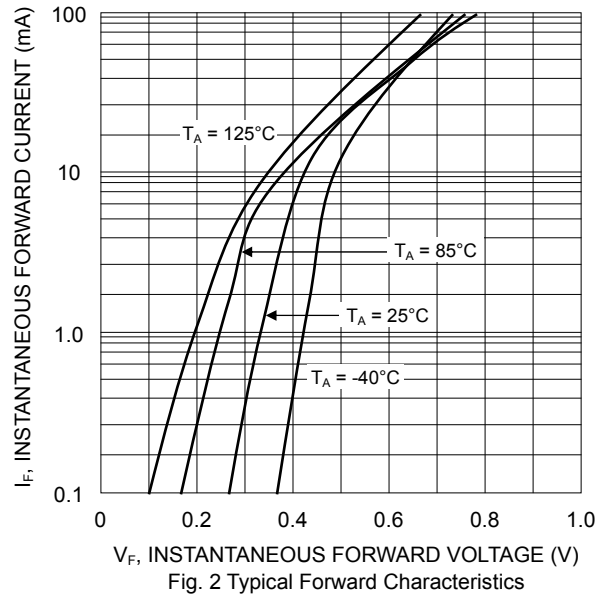
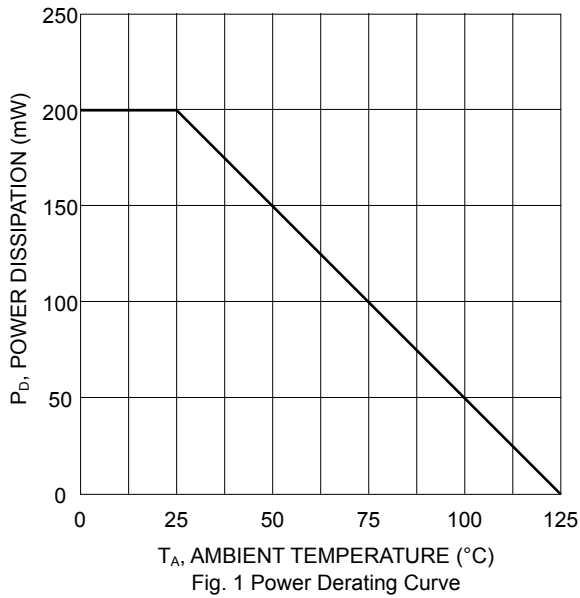
## Thermal Characteristics

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

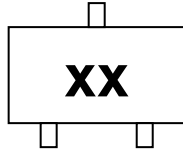
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

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

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage @ $I_R = 10\mu\text{A}$	$V_{(BR)}$	40			V
Forward Voltage Drop @ $I_F = 1.0\text{mA}$ @ $I_F = 40\text{mA}$	$V_F$			0.38 1.00	V
Reverse Leakage Current @ $V_R = 30\text{V}$	$I_R$		20	200	nA
Diode Capacitance ( $V_R = 0\text{V}$ , $f = 1.0\text{MHz}$ )	$C_D$		4.0	5.0	pF
Reverse Recovery Time ( $I_F = I_R = 10\text{mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\Omega$ )	$t_{rr}$			5.0	nS



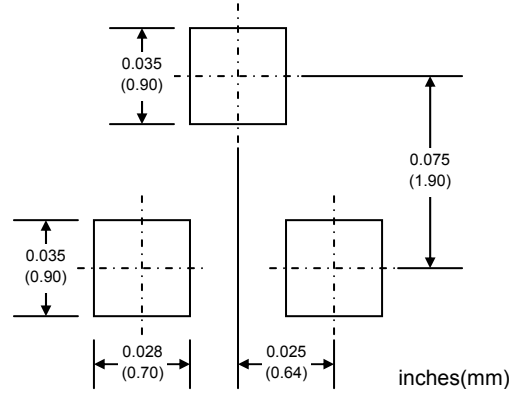
## MARKING INFORMATION



xx = Device Code, See Table Below

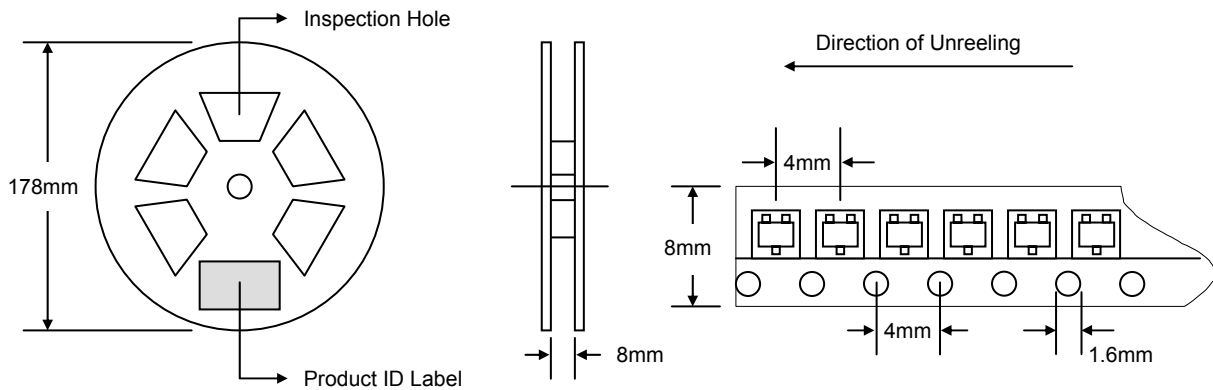
Mfg Site	BAS40W	BAS40AW	BAS40CW	BAS40SW
TW Plant	S40	S42	S43	S44
CN Plant	43	46	45	44

## 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
BAS40W-T1	SOT-323	3000/Tape & Reel
BAS40AW-T1	SOT-323	3000/Tape & Reel
BAS40CW-T1	SOT-323	3000/Tape & Reel
BAS40SW-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, BAS40W-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.

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**Email:** sales@wontop.com

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

*We power your everyday.*