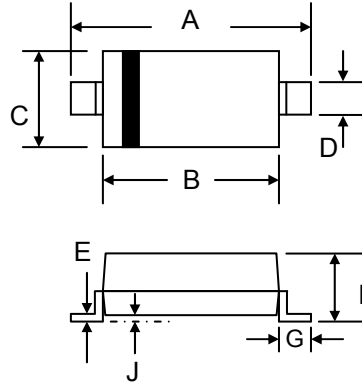


## Features

- Low Turn-On Voltage
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- 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	1.20	1.40
D	0.25	0.40
E	0.05	0.15
G	0.20	0.40
H	—	1.10
J	—	0.10
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	BAT42WS	BAT43WS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	30		V
Forward Continuous Current	$I_F$	200		mA
Repetitive Peak Forward Current @ $t < 1.0\text{s}$	$I_{FRM}$	500		mA
Non-Repetitive Peak Forward Surge Current @ $t < 10\text{ms}$	$I_{FSM}$	4.0		A
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +125		$^{\circ}\text{C}$

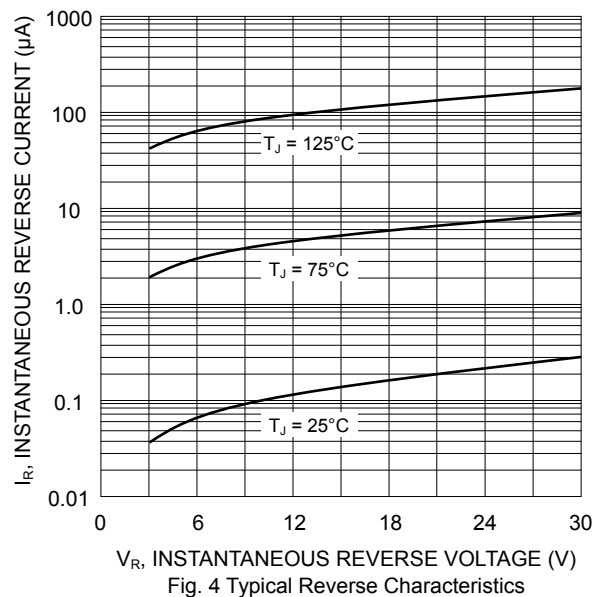
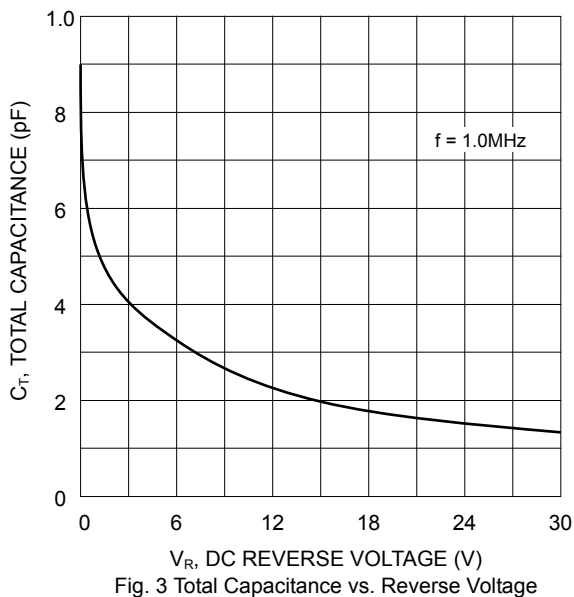
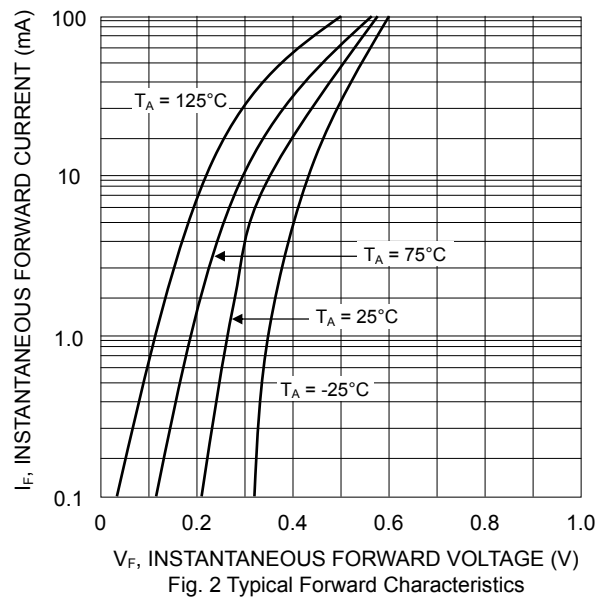
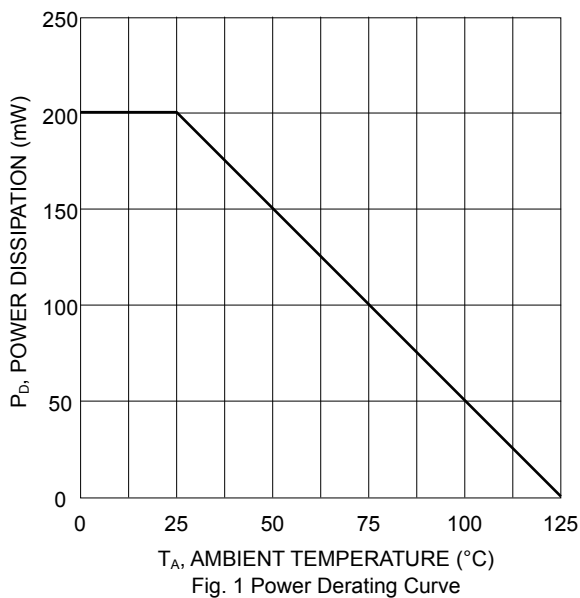
## Thermal Characteristics

Characteristic	Symbol	BAT42WS	BAT43WS	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	BAT42WS	BAT43WS	Unit
Min. Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$	$V_{(BR)}$	30		V
Max. Forward Voltage Drop @ $I_F = 2.0\text{mA}$ @ $I_F = 10\text{mA}$ @ $I_F = 200\text{mA}$	$V_{FM}$	— 0.4 1.0	0.33 — 1.0	V
Peak Reverse Leakage Current @ $V_R = 25\text{V}, T_J = 25^\circ\text{C}$ @ $V_R = 25\text{V}, T_J = 100^\circ\text{C}$	$I_{RM}$	0.5 100		$\mu\text{A}$
Diode Capacitance ( $V_R = 1.0\text{V}, f = 1.0\text{MHz}$ )	$C_D$	10		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



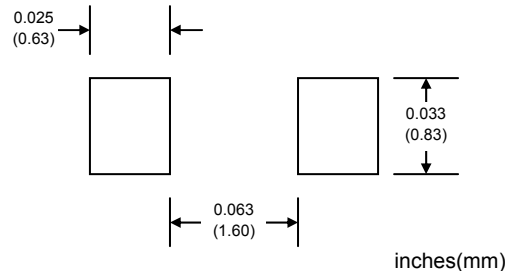
## MARKING INFORMATION



xx = Device Code, See Table Below

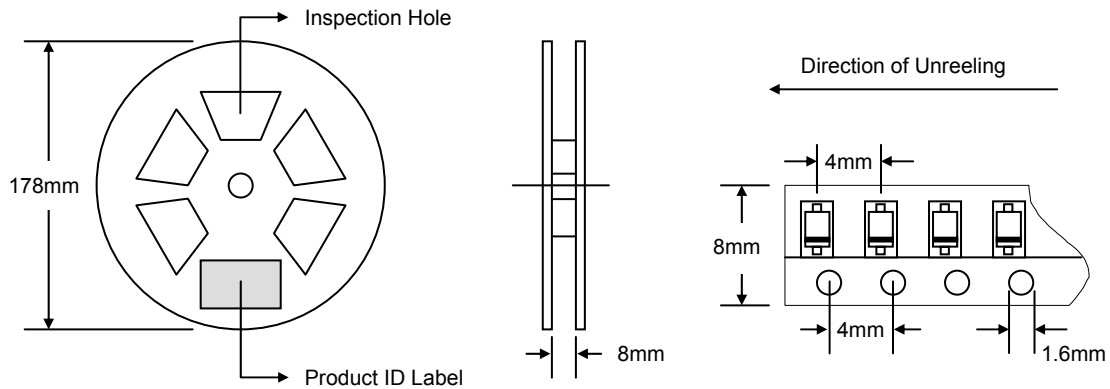
Mfg Site	BAT42WS	BAT43WS
TW Plant	L2	L3
CN Plant	S7	S8

## 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
BAT42WS-T1	SOD-323	3000/Tape & Reel
BAT43WS-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, BAT42WS-T1-LF.**

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