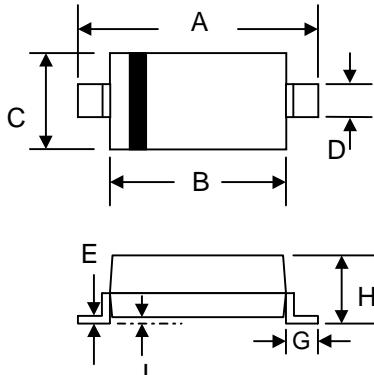


## Features

- Low Turn-on Voltage
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- Designed for Surface Mount Application
- Plastic Material – UL Recognition Flammability Classification 94V-O

## Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: BAT42W L2  
BAT43W L3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**



SOD-123		
Dim	Min	Max
A	3.6	3.9
B	2.5	2.8
C	1.4	1.8
D	0.5	0.7
E	—	0.2
G	0.4	—
H	0.95	1.35
J	—	0.12

All Dimensions in mm

## Maximum Ratings

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

Characteristic	Symbol	BAT42W / BAT43W	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RW\text{M}}$	30	V
DC Blocking Voltage	$V_R$		
Forward Continuous Current (Note 1)	$I_F$	200	mA
Repetitive Peak Forward Current (Note 1) @ $t < 1.0\text{s}$	$I_{FR\text{M}}$	500	mA
Non-Repetitive Peak Forward Surge Current @ $t < 10\text{ms}$	$I_{FS\text{M}}$	4.0	A
Power Dissipation	$P_d$	200	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating and Storage Temperature Range	$T_j, T_{STG}$	-55 to +125	°C

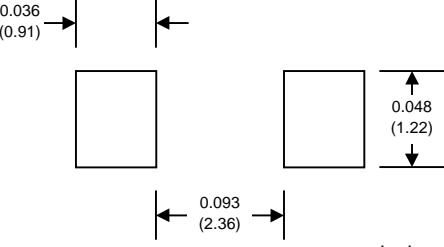
## Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	30	—	—	V	@ $I_{RS} = 100\mu\text{A}$
Forward Voltage	BAT42W	$V_F$	—	0.4	V	@ $I_F = 10\text{mA}$
	BAT42W			1.0		@ $I_F = 200\text{mA}$
	BAT43W			0.33		@ $I_F = 2\text{mA}$
	BAT43W			1.0		@ $I_F = 200\text{mA}$
Reverse Leakage Current	$I_R$	—	—	0.5	$\mu\text{A}$	@ $V_R = 25\text{V}$
Junction Capacitance	$C_j$	—	—	10	pF	$V_R = 1.0\text{V}$ , $f = 1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	—	—	5	nS	$I_F = 10\text{mA}$ through $I_R = 10\text{mA}$ to $I_R = 1\text{mA}$ , $R_L = 100\Omega$

Note: 1. Valid provided that terminals are kept at ambient temperature.

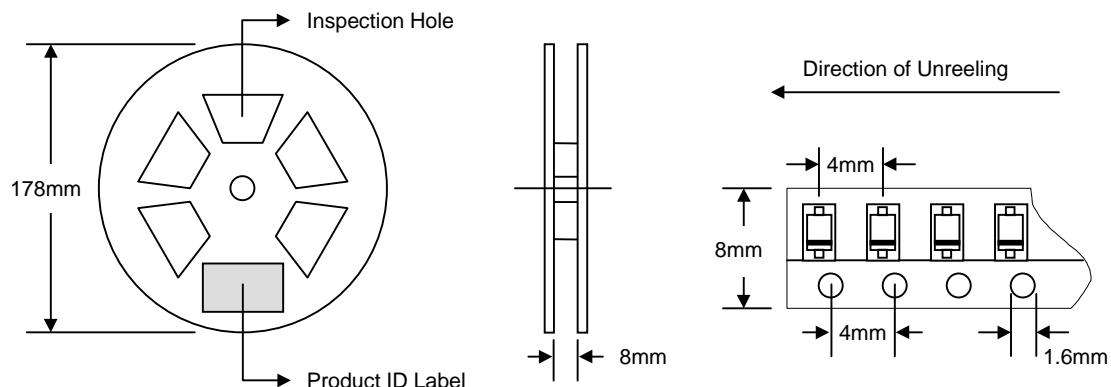
## MARKING INFORMATION

## RECOMMENDED FOOTPRINT

 <p>Cathode = Polarity Band Lx = Device Code x = 2 (BAT42W) or 3 (BAT43W)</p>	 <p>0.036 (0.91) 0.048 (1.22) 0.093 (2.36) inches(mm)</p>
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## 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
BAT42W-T1	SOD-123	3000/Tape & Reel
BAT43W-T1	SOD-123	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, BAT42W-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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