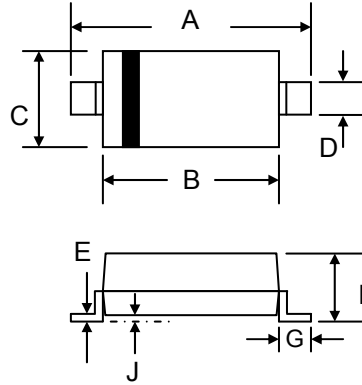


Features

- 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-123		
Dim	Min	Max
A	3.60	3.90
B	2.50	2.80
C	1.40	1.80
D	0.30	0.78
E	—	0.25
G	0.15	—
H	0.95	1.35
J	—	0.15
All Dimensions in mm		

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: 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	BAT42W	BAT43W	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		$^\circ\text{C}$

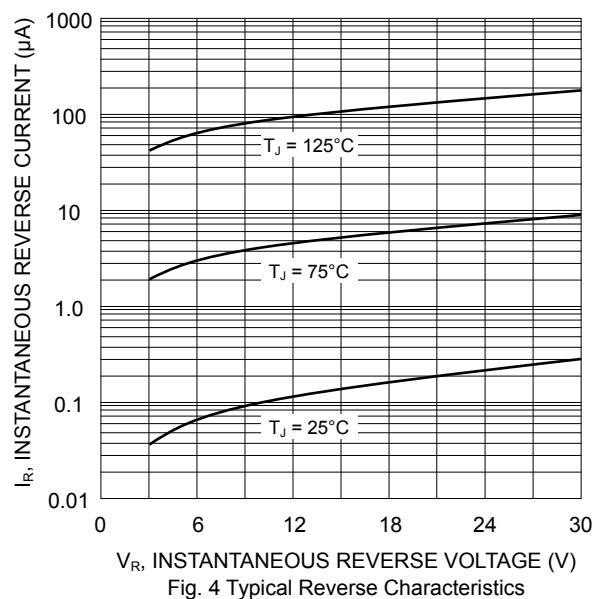
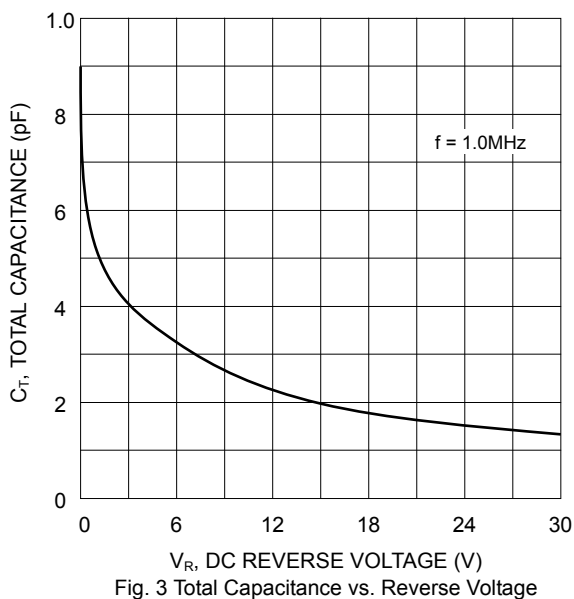
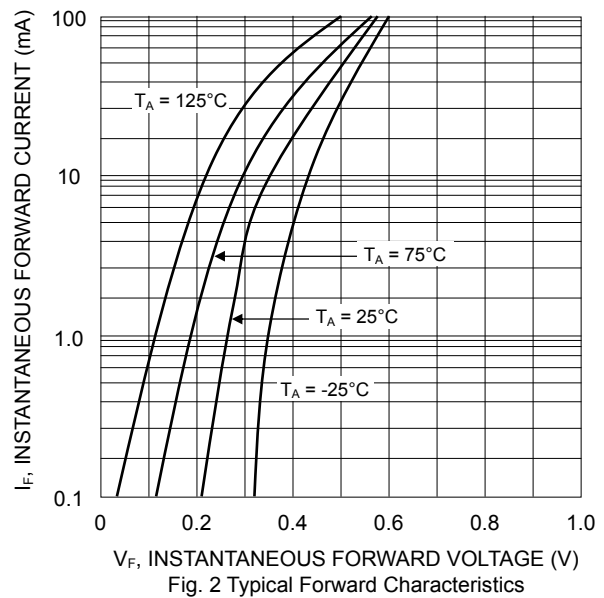
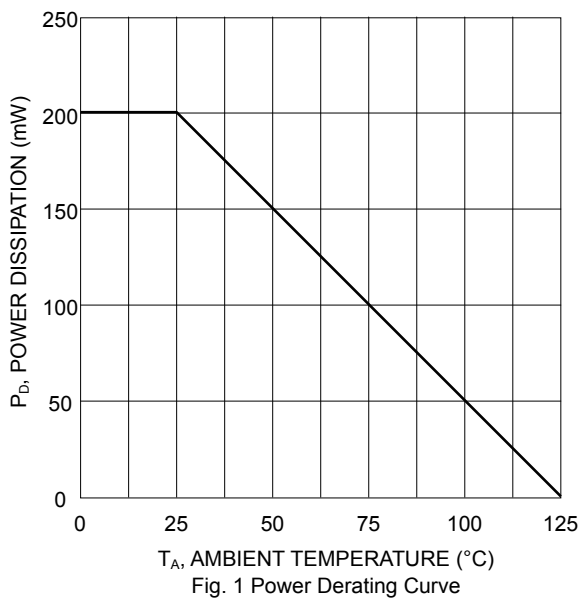
Thermal Characteristics

Characteristic	Symbol	BAT42W	BAT43W	Unit
Power Dissipation (Note 1)	P_D	200		mW
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	500		$^\circ\text{C/W}$

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	BAT42W	BAT43W	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		μA
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



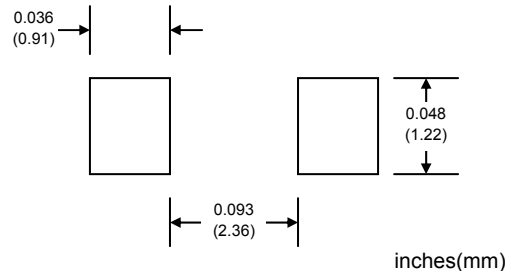
MARKING INFORMATION



xx = Device Code, See Table Below

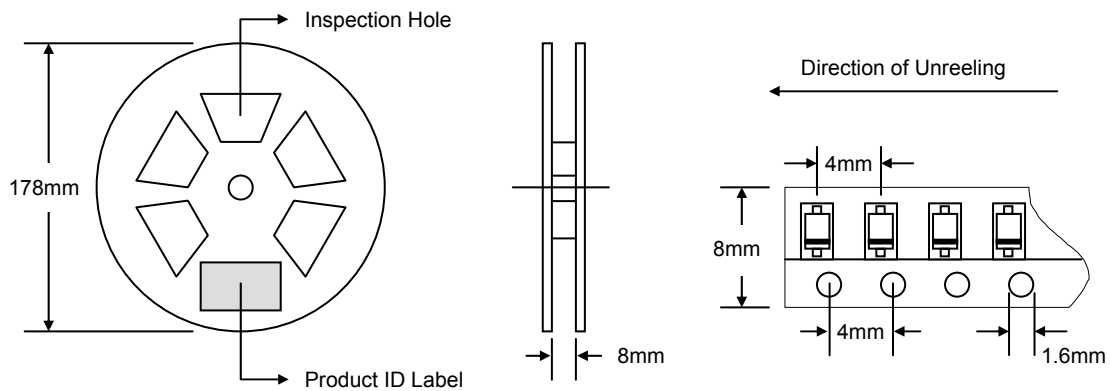
Mfg Site	BAT42W	BAT43W
TW Plant	L2	L3
CN Plant	S7	S8

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	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.

Won-Top Electronics Co., Ltd.
No. 44 Yu Kang North 3rd Road,
Chine Chen Dist., Kaohsiung 806, 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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