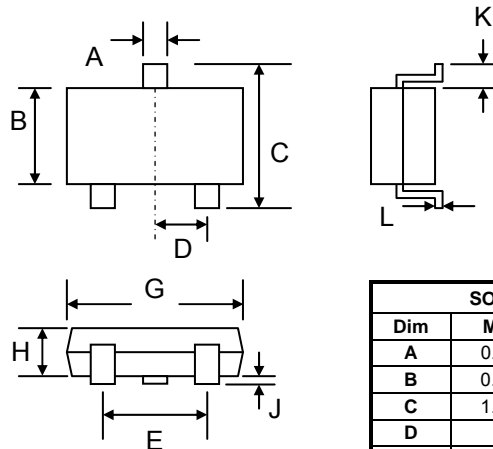


### Features

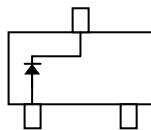
- Single and Dual Diode
- Low Forward Voltage
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



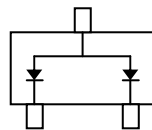
SOT-523		
Dim	Min	Max
A	0.15	0.30
B	0.75	0.85
C	1.45	1.75
D	0.50 Typical	
E	0.90	1.10
G	1.50	1.70
H	0.60	0.80
J	0.02	0.10
K	0.10	0.30
L	0.10	0.20
All Dimensions in mm		

### Mechanical Data

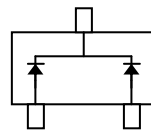
- Case: SOT-523, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.002 grams (approx.)
- Marking: Device Code, See Page 3
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



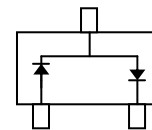
TOP VIEW  
BAT54T



TOP VIEW  
BAT54AT



TOP VIEW  
BAT54CT



TOP VIEW  
BAT54ST

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	30	V
Forward Continuous Current	I <sub>F</sub>	200	mA
Repetitive Peak Forward Current	I <sub>FRM</sub>	300	mA
Non-Repetitive Peak Forward Surge Current @ t < 1.0s	I <sub>FSM</sub>	600	mA
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +125	°C

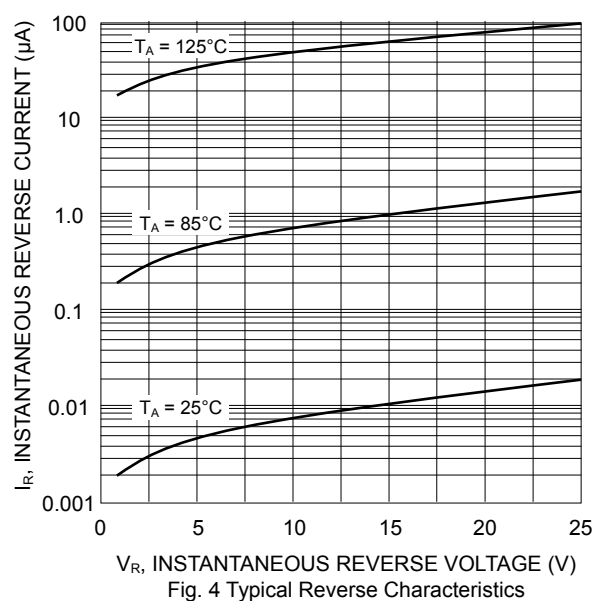
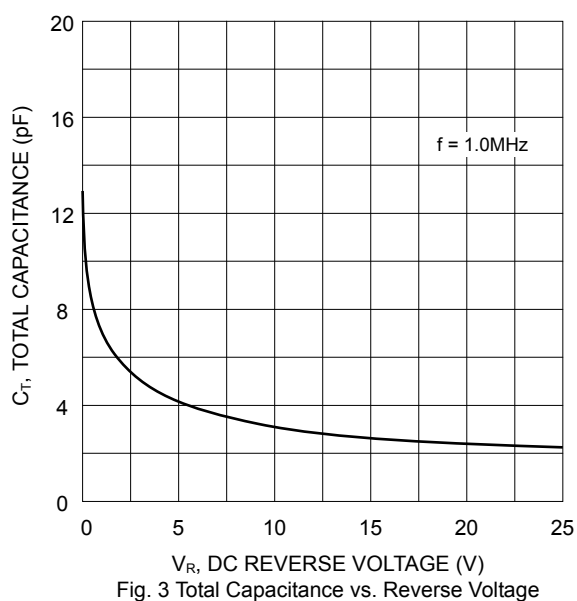
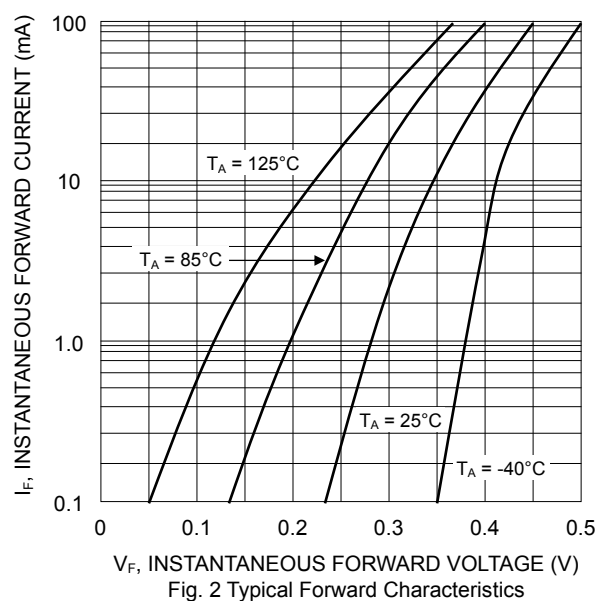
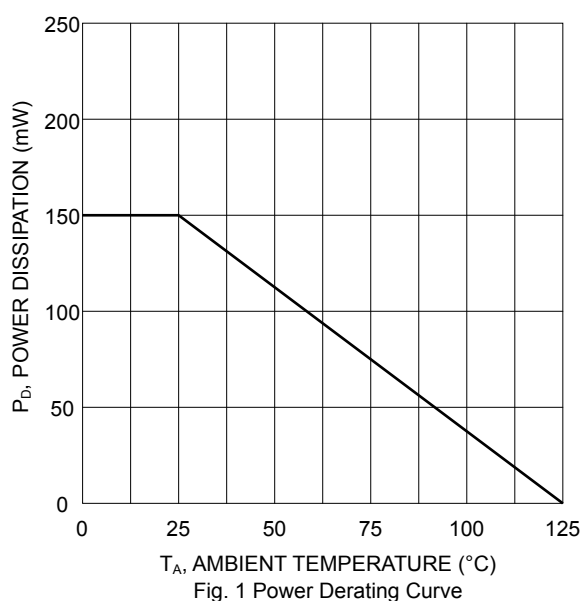
### Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P <sub>D</sub>	150	mW
Thermal Resistance, Junction to Ambient (Note 1)	R <sub>JA</sub>	833	°C/W

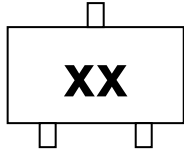
Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

## Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage @ I <sub>R</sub> = 100μA	V <sub>(BR)</sub>	30			V
Forward Voltage Drop @ I <sub>F</sub> = 0.1mA @ I <sub>F</sub> = 1.0mA @ I <sub>F</sub> = 10mA @ I <sub>F</sub> = 30mA @ I <sub>F</sub> = 100mA	V <sub>F</sub>			0.24 0.32 0.40 0.50 0.80	V
Reverse Leakage Current @ V <sub>R</sub> = 25V	I <sub>R</sub>			2.0	μA
Diode Capacitance (V <sub>R</sub> = 1.0V, f = 1.0MHz)	C <sub>D</sub>			10	pF
Reverse Recovery Time (I <sub>F</sub> = I <sub>R</sub> = 10mA, I <sub>RR</sub> = 0.1 x I <sub>R</sub> , R <sub>L</sub> = 100Ω)	t <sub>rr</sub>			5.0	nS



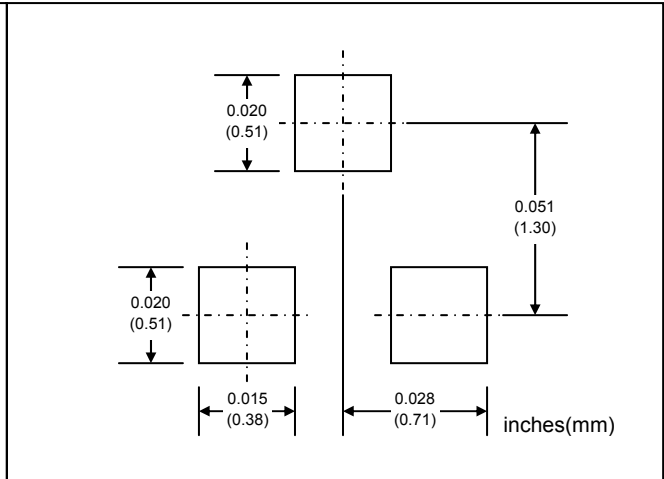
## MARKING INFORMATION



xx = Device Code, See Table Below

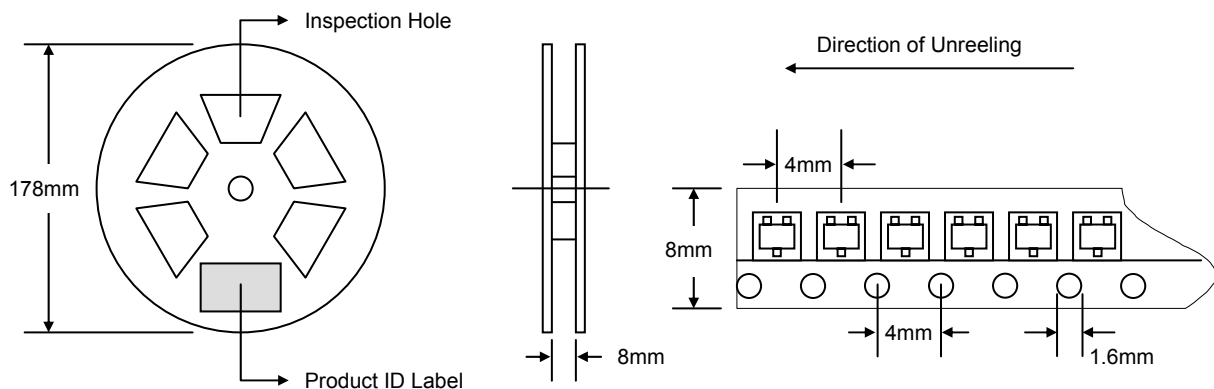
BAT54T	BAT54AT	BAT54CT	BAT54ST
L1	L2	L3	L4

## 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	8.0

**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
BAT54T-T1	SOT-523	3000/Tape & Reel
BAT54AT-T1	SOT-523	3000/Tape & Reel
BAT54CT-T1	SOT-523	3000/Tape & Reel
BAT54ST-T1	SOT-523	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, BAT54T-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  
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*We power your everyday.*