

BAT54xT

Schottky Barrier Diode

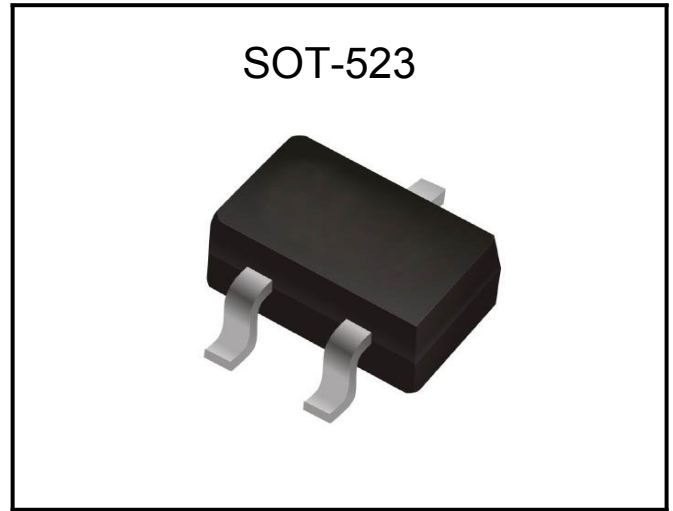
Features

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

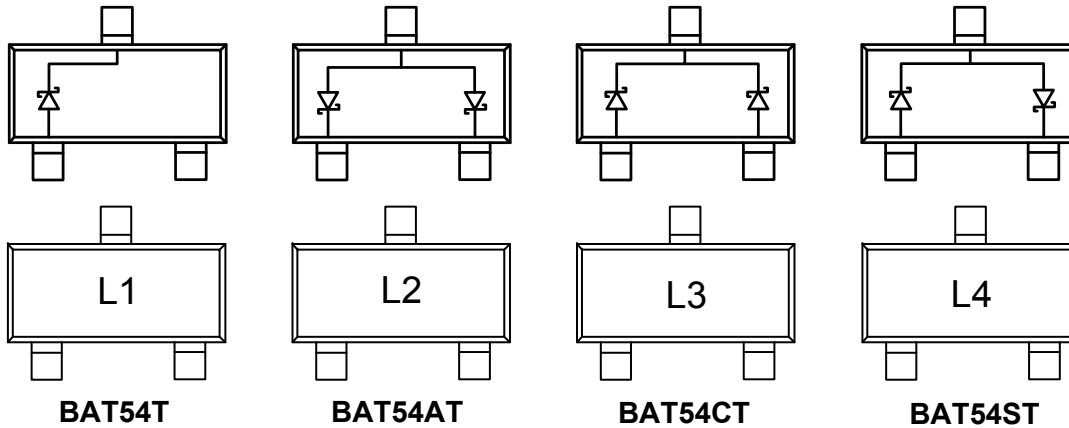
General Description

- Case: molded plastic
- Polarity: Color band denotes cathode
- Package: SOT-523 PlasticPackage

Package



Circuit & Marking



Ordering information

Order code	Package	Marking	Base qty	Delivery mode
BAT54T	SOT-523	L1	3K	Tape and reel
BAT54AT	SOT-523	L2	3K	Tape and reel
BAT54CT	SOT-523	L3	3K	Tape and reel
BAT54ST	SOT-523	L4	3K	Tape and reel



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Maximum Ratings@ $T_A=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameters	Value	Unit
V_{RRM}	Repetitive Peak Reverse voltage	30	V
V_{RWM}	Working Peak Reverse Voltage		
V_R	DC Blocking Voltage		
$I_{F(AV)}$	Maximum average forward rectified current	200	mA
I_{FSM}	Non-repetitive peak forward surge current 8.3ms singlehalf sine-wave	600	mA
P_d	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	667	$^{\circ}\text{C}/\text{W}$
T_j	Operating junction temperature range	-40 to +125	$^{\circ}\text{C}$
T_{STG}	Storage temperature range	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics@ $T_A=25^{\circ}\text{C}$ unless otherwisenoted

Symbol	Parameters	Test conditions	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage	$I_R=100\mu\text{A}$	30	—	—	V
V_F	Forward voltage	$I_F=0.1\text{mA}$	—	—	0.24	V
		$I_F=1\text{mA}$	—	—	0.32	
		$I_F=10\text{mA}$	—	—	0.40	
		$I_F=30\text{mA}$	—	—	0.50	
		$I_F=100\text{mA}$	—	—	1.00	
I_R	Reverse current	$V_R=25\text{V}$	—	—	2	μA
C_D	Diode Capacitance	$V_R=1\text{V}, f=1\text{MHz}$	—	—	10	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \times I_R, R_L=100\Omega$	—	—	5	nS



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Typical Performance Characteristics ($T_J = 25^\circ\text{C}$, unless otherwise noted)

Figure 1: Forward Characteristics

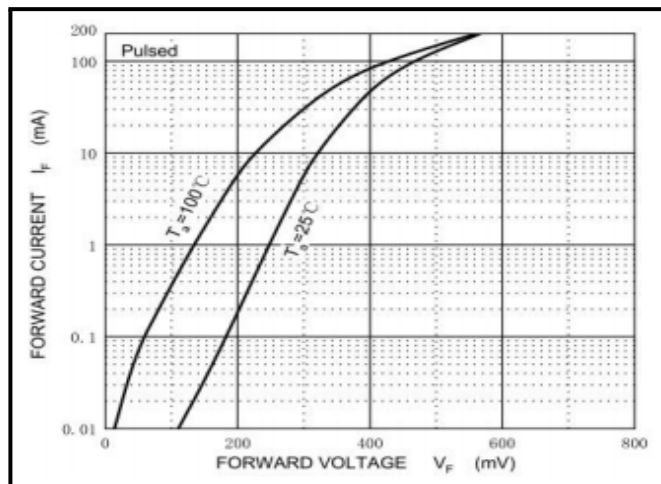


Figure 2: Reverse Characteristics

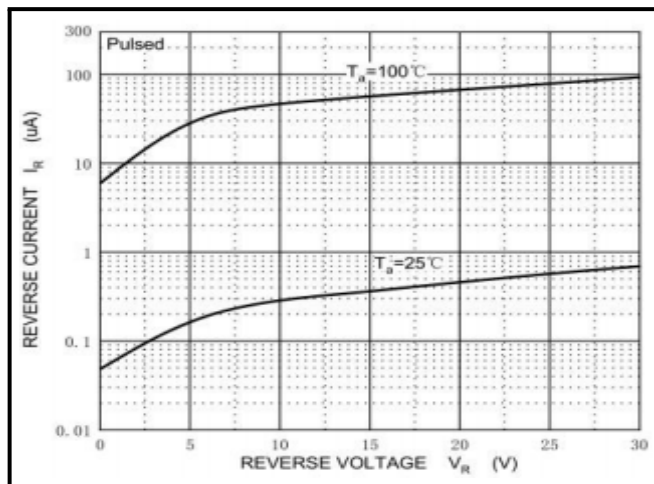


Figure 3: Capacitance Characteristics

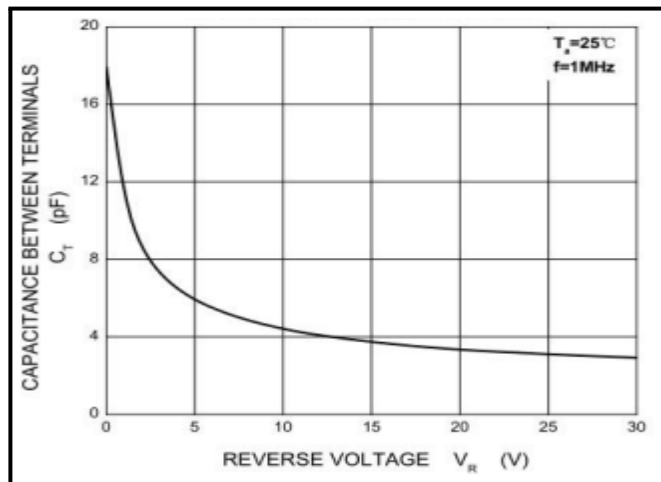
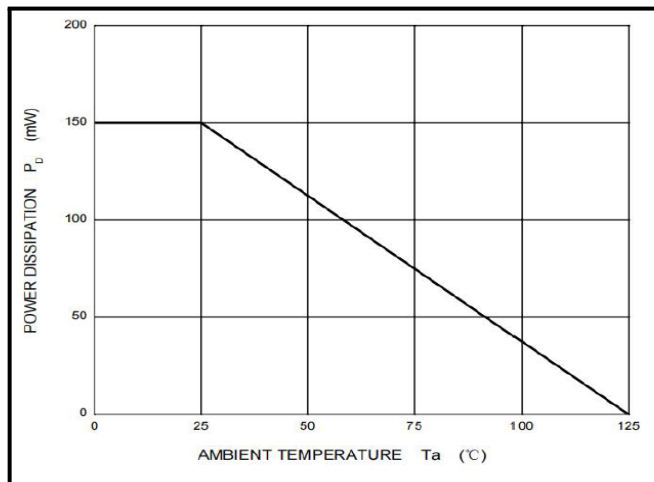


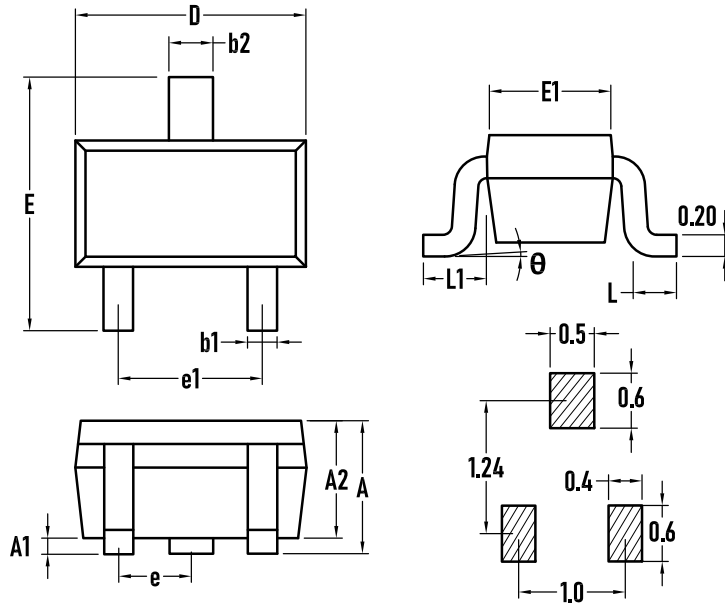
Figure 4: Power Derating Curve



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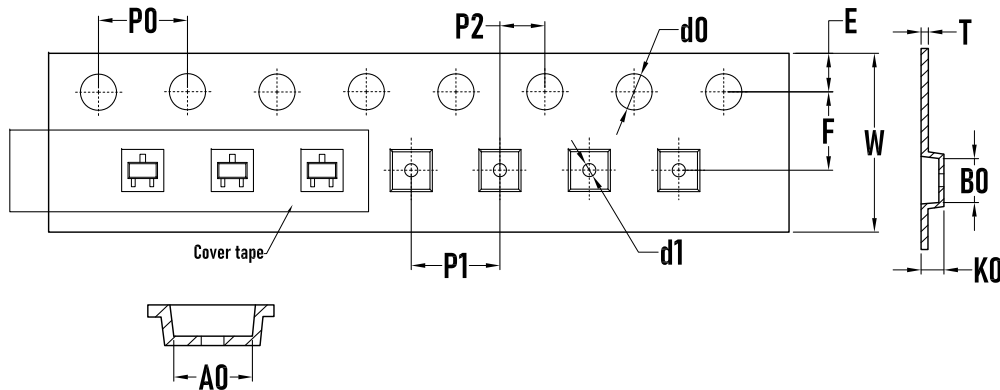
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Outline Drawing – SOT-523



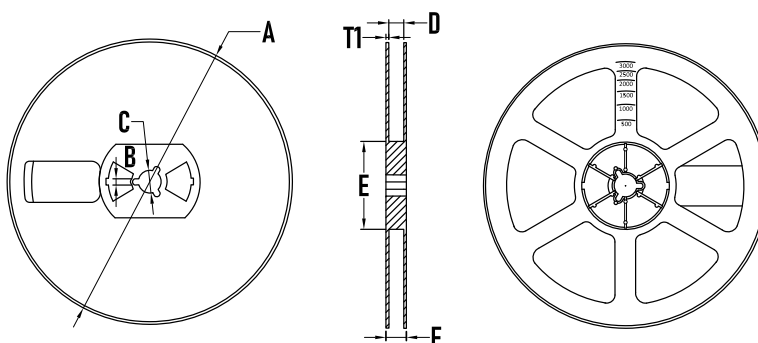
SYMBOL	MILLIMETER		
	MIN	TYP	MAX
A	0.70	0.80	0.90
A1	0.00	0.05	0.10
A2	0.70	0.75	0.80
b1	0.15	0.22	0.29
b2	0.25	0.32	0.39
D	1.50	1.60	1.70
E	1.45	1.60	1.75
E1	0.70	0.80	0.90
e	0.50(TPY.)		
e1	0.90	1.00	1.10
L	0.26	0.36	0.46
L1	0.40(REF)		
θ	0°	4°	8°

Packaging Tape - SOT-523



SYMBOL	MILLIMETER
A0	1.78±0.05
B0	1.78±0.05
d0	1.50±0.10
d1	0.50±0.10
E	1.75±0.10
F	3.50±0.05
K0	0.69±0.05
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
W	8.00±0.20
T	0.20±0.02

Packaging Reel



SYMBOL	MILLIMETER
A	177.8±0.2
B	2.7±0.2
C	13.5±0.2
D	9.6±0.3
E	54.5±0.2
F	12.3±0.3
T1	1.0±0.2
Quantity	3000PCS

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Specifications are subject to change without notice.

Please refer to <http://www.born-tw.com> for current information.

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