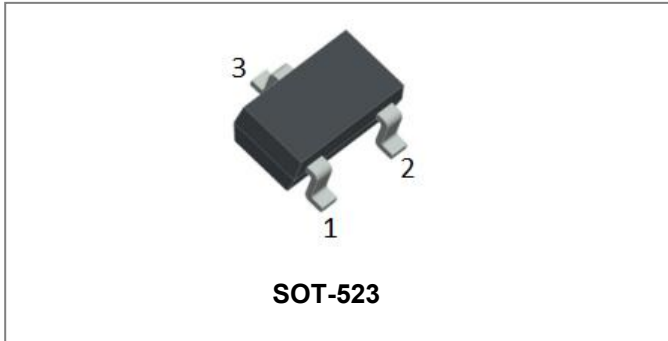
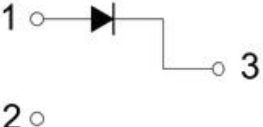
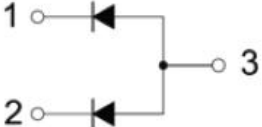
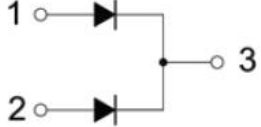
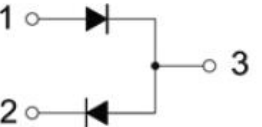
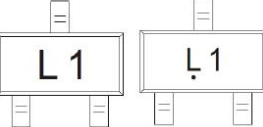





## BAT54T/AT/CT/ST SCHOTTKY BARRIER DIODE



### Features

- Low Forward Voltage Drop
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

BAT54T	BAT54AT	BAT54CT	BAT54ST
			
<b>MARKING:L1</b>	<b>MARKING:L2</b>	<b>MARKING:L3</b>	<b>MARKING:L4</b>
			

Solid dot = Green molding compound device, if none, the normal device.

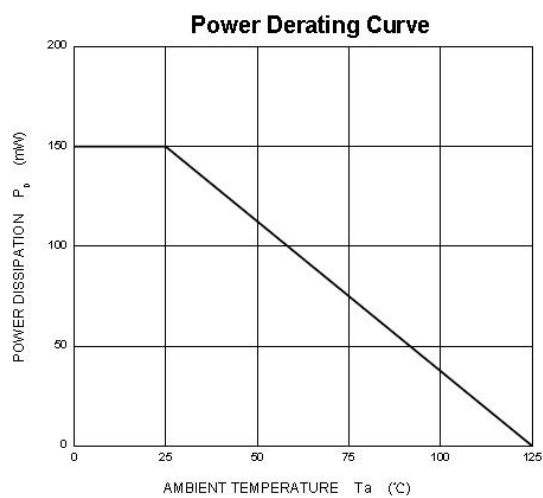
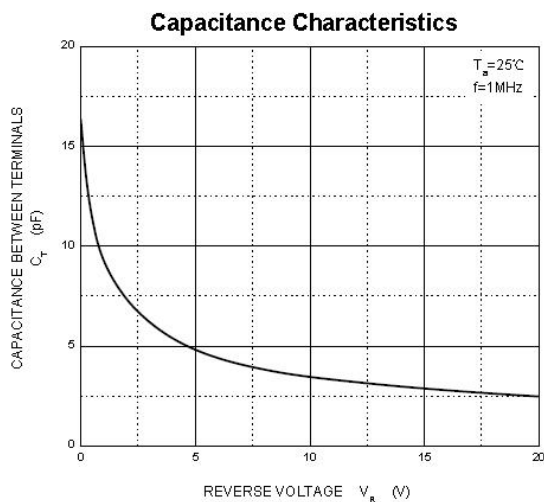
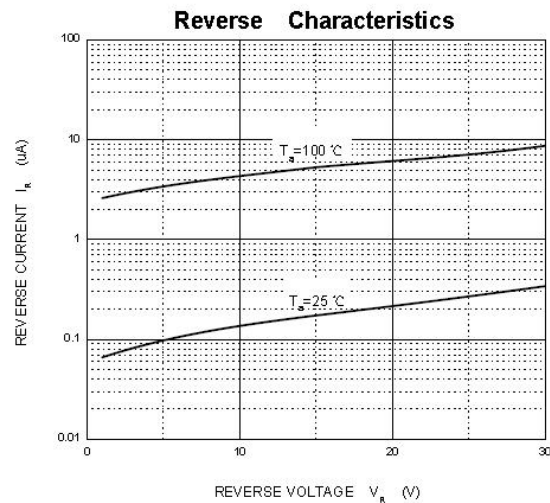
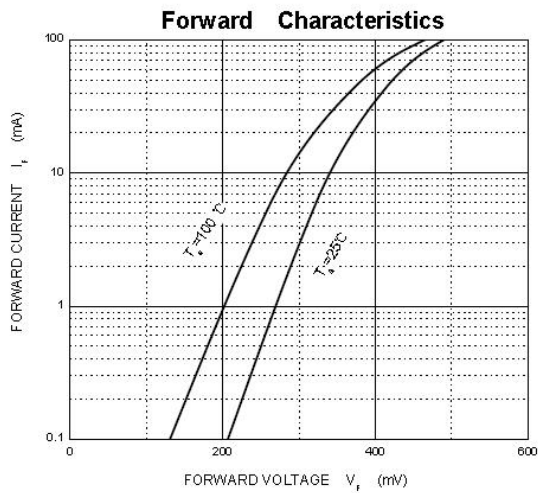
### Maximum Ratings@ $T_A=25^\circ\text{C}$ unless otherwise specified

Symbol	Parameter	Value	Units
$V_{RRM}$	Peak Repetitive Reverse Voltage	30	V
$V_{RWM}$	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	21	V
$I_O$	Average Rectified Output Current	0.2	A
$I_{FSM}$	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	600	mA
$I_{FRM}$	Repetitive Peak Forward Surge Current @ $t \leq 1\text{s}; \delta \leq 0.5$	300	mA
$P_D$	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	667	$^\circ\text{C/W}$
$T_j$	Junction Temperature	125	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~+150	$^\circ\text{C}$

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Units
Reverse voltage*	$V_{(BR)}$	$I_R=100\mu\text{A}$	30	-	-	V
Reverse current*	$I_R$	$V_R=25\text{V}$	-	-	2	$\mu\text{A}$
Forward voltage*	$V_F$	$I_F=1\text{mA}$	-	-	0.32	V
		$I_F=10\text{mA}$	-	-	0.4	
		$I_F=30\text{mA}$	-	-	0.5	
		$I_F=100\text{mA}$	-	-	1	
Total capacitance	$C_{tot}$	$V_R=1\text{V}, f=1\text{MHz}$	-	-	10	pF
Reverse recovery time	$T_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=0.1\times I_R, R_L=100\Omega$	-	-	5	ns

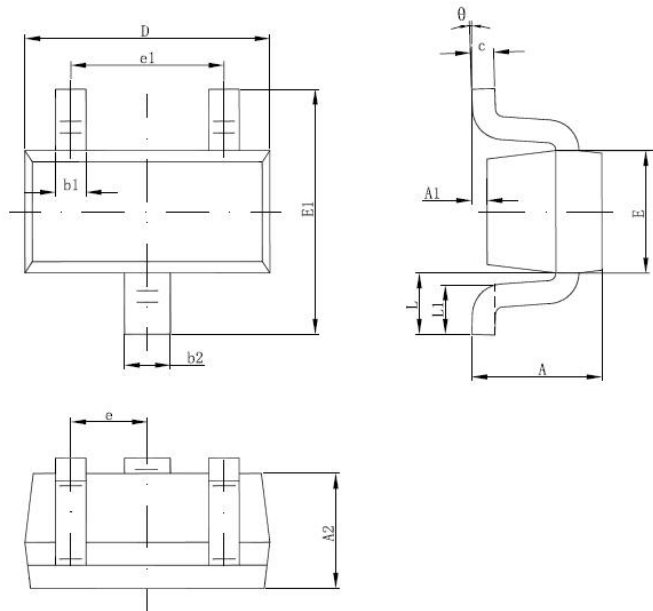
\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

**Ratings and Characteristics Curves**


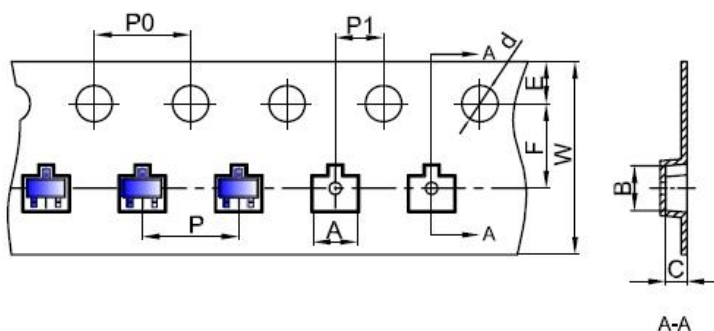
**Ordering Information**

Device	Package	Shipping
BAT54T/AT/CT/ST	SOT-523(Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Mechanical Dimensions SOT-523**


SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

**Carrier Tape Specification SOT-523**


SYMBOL	Millimeters	
	Min.	Max.
A	1.80	1.90
B	1.80	1.90
C	0.825	0.925
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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