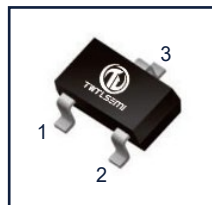
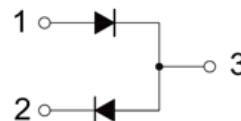


Features

- Low Forward Voltage Drop
- Fast Switching
- PN Junction Guard Ring for Transient and ESD Protection



SOT-523



Equivalent Circuit

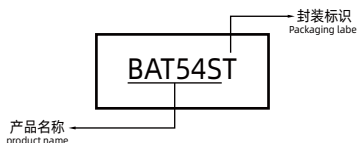
Absolute Maximum Ratings($T_A=25^{\circ}\text{C}$)

Symbol	Parameter	Value	Unit
V_{RRM}	Peak Repetitive Peak 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	Operation Junction Temperature Range	-40 ~ +125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature Range	-55 ~ +150	$^{\circ}\text{C}$

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

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage	$I_R=100\mu\text{A}$	30			V
I_R	Reverse voltage leakage current	$V_R=25\text{V}$			2	μA
V_F	Forward voltage	$I_F=1\text{mA}$			0.32	V
		$I_F=10\text{mA}$			0.4	
		$I_F=30\text{mA}$			0.5	
		$I_F=100\text{mA}$			1	
C_{tot}	Total 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

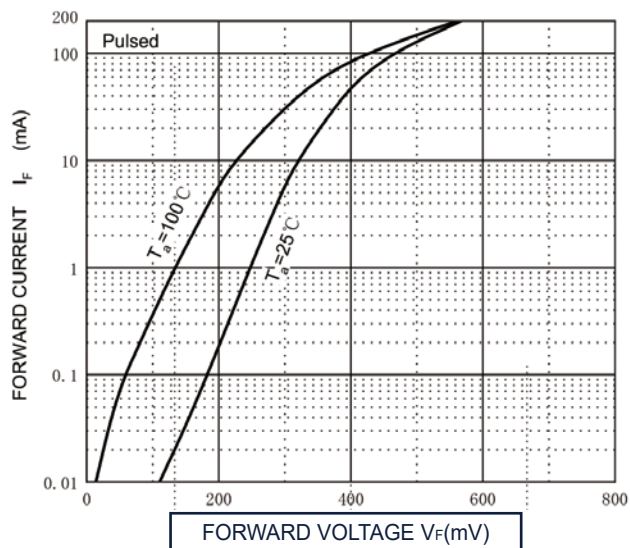
Ordering information

Product ID	Pack	Naming rule	Marking	Qty(PCS)
BAT54ST	SOT-523		L4	3000

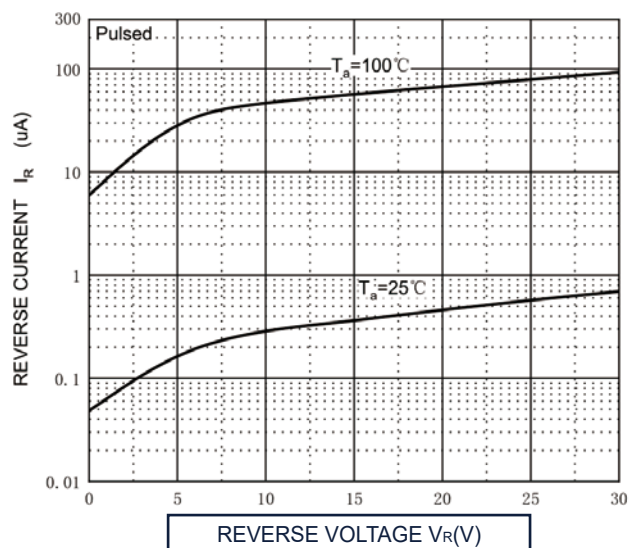


Typical Characteristics

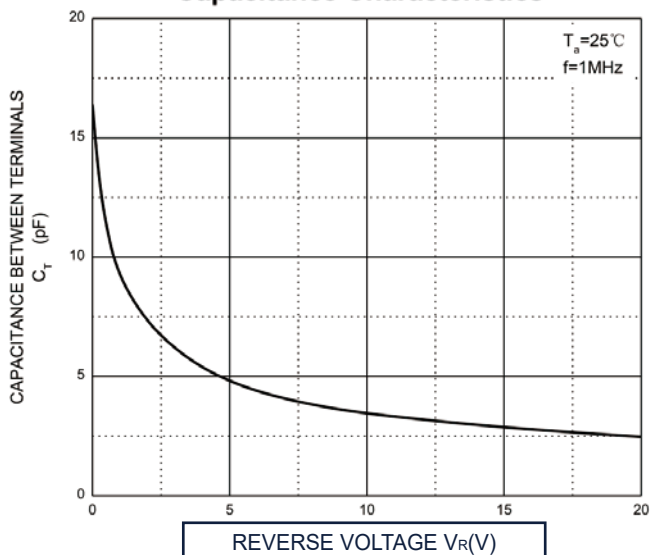
Forward Characteristics



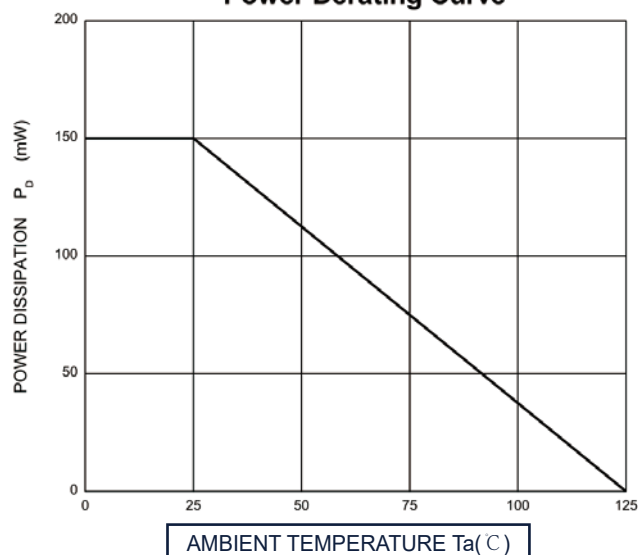
Reverse Characteristics



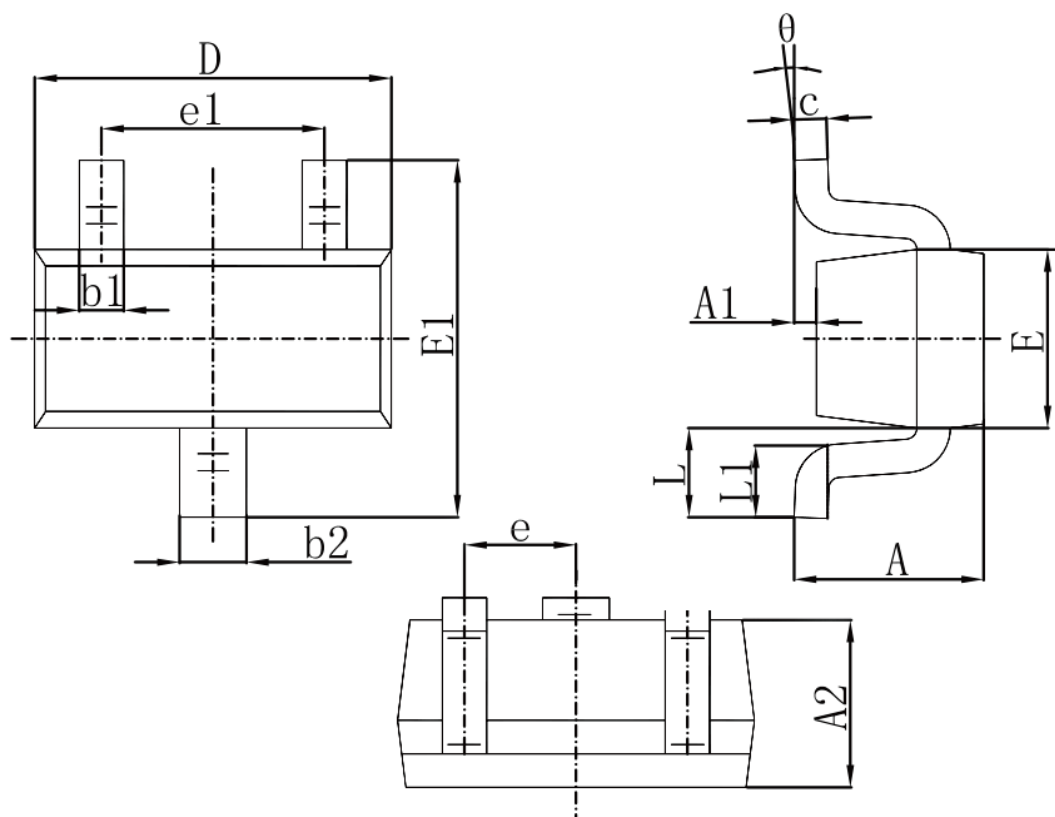
Capacitance Characteristics



Power Derating Curve



SOT-523 Package Outline Dimensions



Symbol	Dimensions in Millimeters		Dimensions in 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°