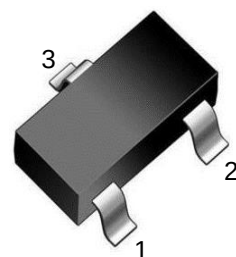
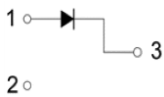
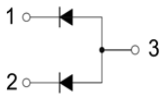
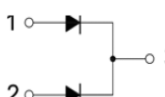
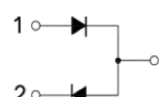
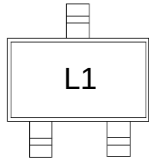
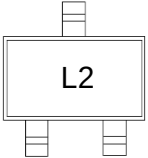
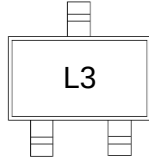
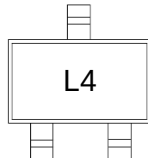


Features

- Low forward voltage drop
- Fast switching
- PN junction guard ring for transient and ESD protection



SOT-523 top view

BAT54T	BAT54AT	BAT54CT	BAT54ST
			
Marking:L1	Marking:L2	Marking:L3	Marking:L4
			



Maximum Ratings($T_a=25^{\circ}\text{C}$ unless otherwise noted)

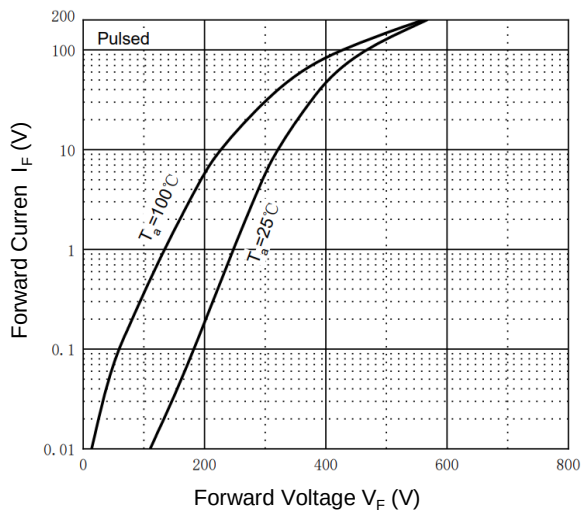
Symbol	Parameter	Value	Unit
V_{RRM}	Repetitive Peak Reverse Voltage	30	V
V_{RWM}	Peak Working Reverse Voltage	30	V
$V_{R(RMS)}$	DC Blocking Voltage	21	V
I_{FRM}	Peak repetitive forward current @ $t \leq 1\text{s}$, $\delta \leq 0.5$	300	mA
I_{FM}	Repetitive Peak Forward Current	300	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current@ $t= 8.3\text{ms}$	600	mA
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	667	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature Range	-40~+150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

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

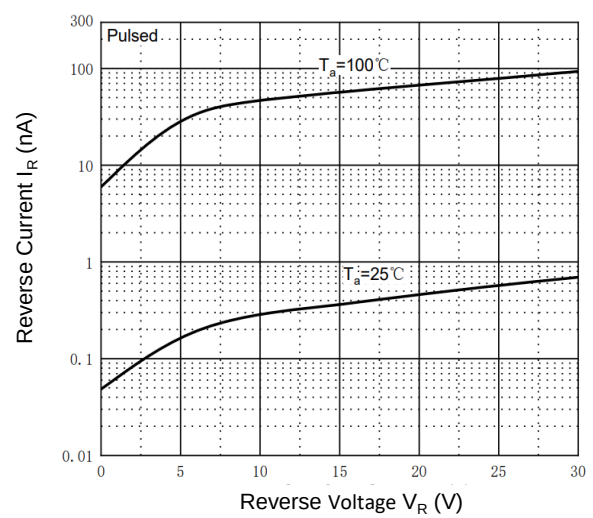
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=100\mu\text{A}$	30	--	--	V
I_R	Reverse current	$V_R=25\text{V}$	--	--	2	μA
V_F	Forward voltage	$I_F=1\text{mA}$	--	--	0.32	V
		$I_F=10\text{mA}$	--	--	0.4	
		$I_F=30\text{mA}$	--	--	0.5	
		$I_F=100\text{mA}$	--	--	1	
C_D	Diode capacitance	$V_R=1\text{V}$, $f=1\text{MHz}$	--	--	10	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}$, $I_{tr}=0.1 \times I_R$, $R_L=100\Omega$	--	--	4	ns

Typical Operating Characteristics

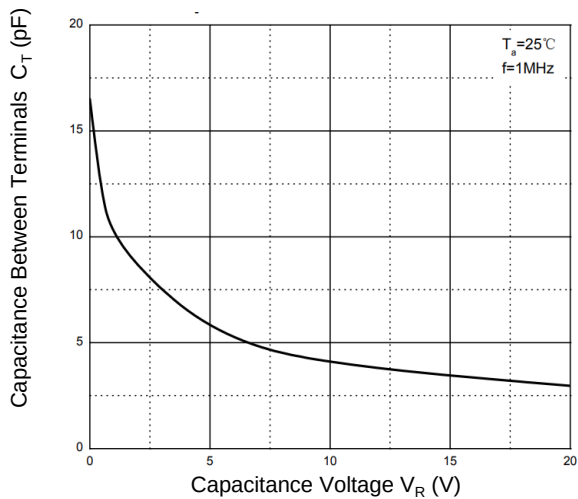
Forward Characteristics



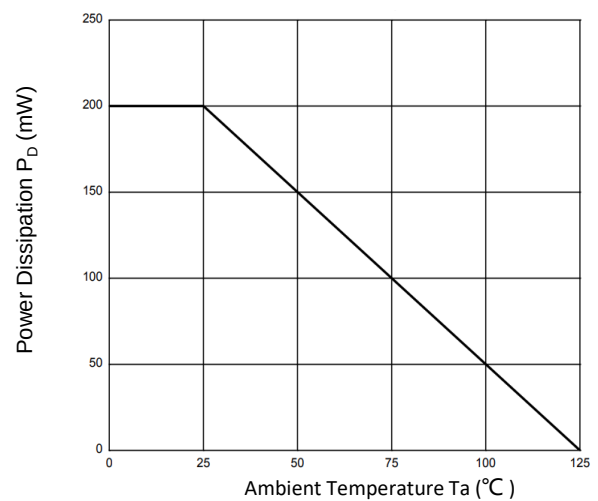
Reverse Characteristics



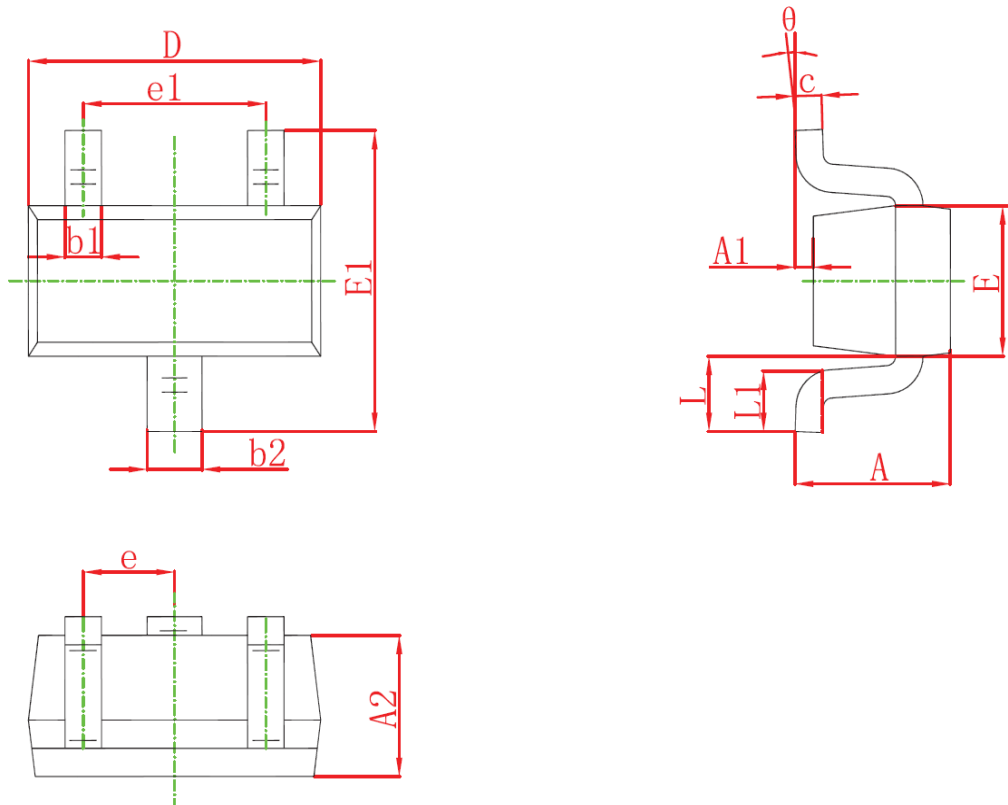
Capacitance Characteristics



Power Derating Curve



SOT-523 Package information



Symbol	Dimensions in Millimeters(mm)		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	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°