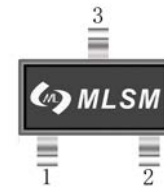
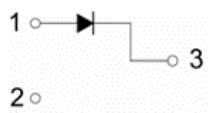
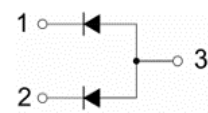
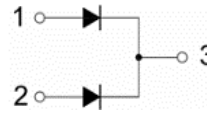
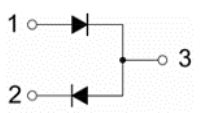
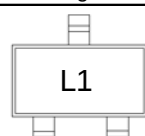
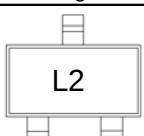
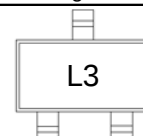


Features

- 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
			



Halogen-Free

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

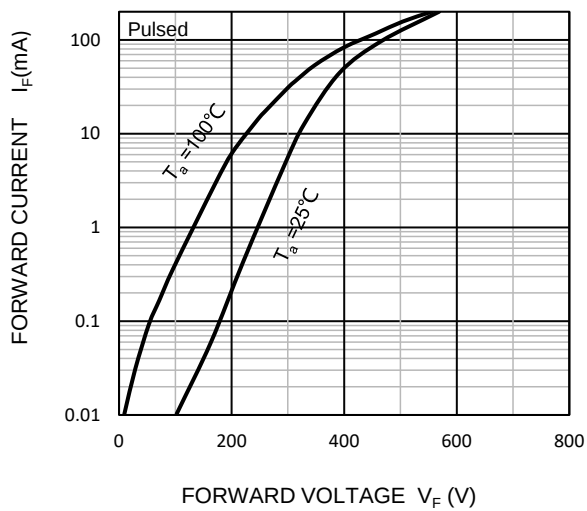
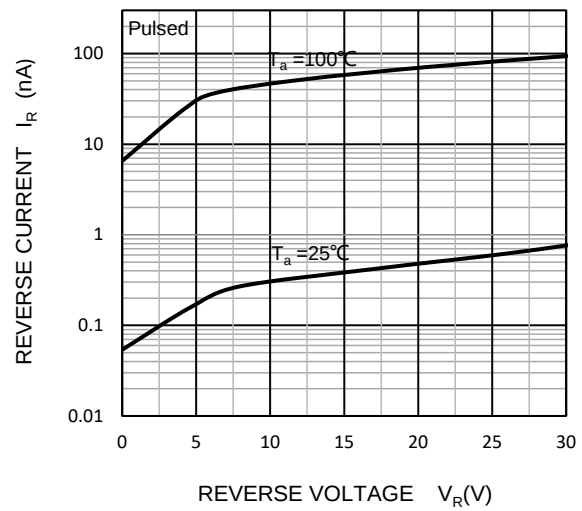
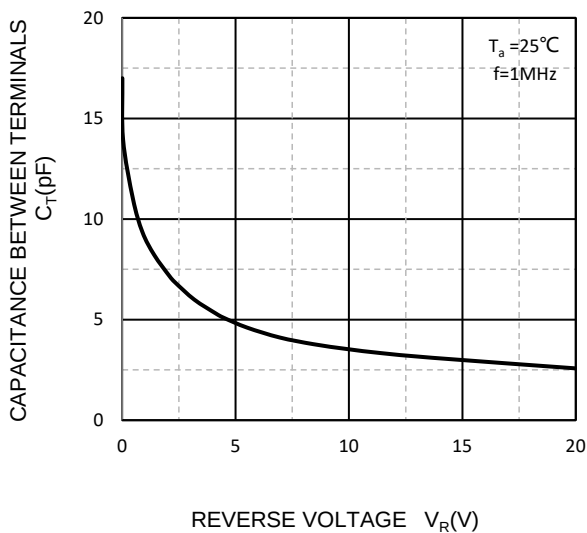
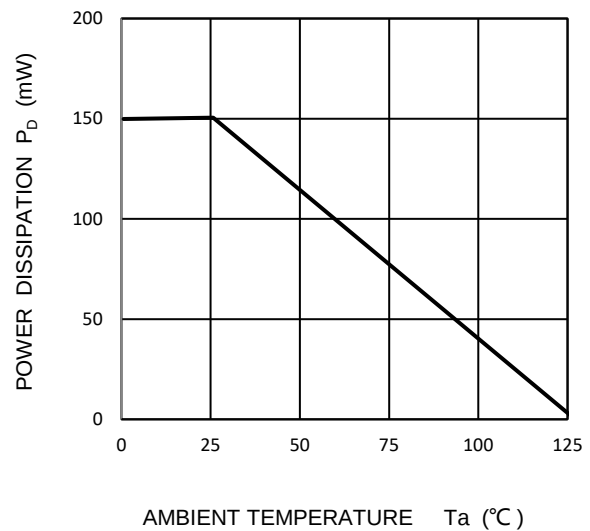
Symbol	Parameter	Limit	Unit
V_{RRM}	Peak Repetitive Peak Reverse Voltage	30	V
V_{RWM}	Working Peak Reverse Voltage		
$V_{R(RMS)}$	RMS Reverse Voltage	21	V
I_O	Average Rectified Output Current	0.2	A
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	600	mA
I_{FRM}	Repetitive Peak Forward Surge Current @ $t \leq 1\text{s}; \delta \leq 0.5$	300	mA
P_D	Power Dissipation	150	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient	667	$^{\circ}\text{C/W}$
T_J	Operating Junction Temperature Range	-40~ +125	$^{\circ}\text{C}$
T_{STG}	Operation Junction and Storage Temperature Range	-55~ +150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise specified)

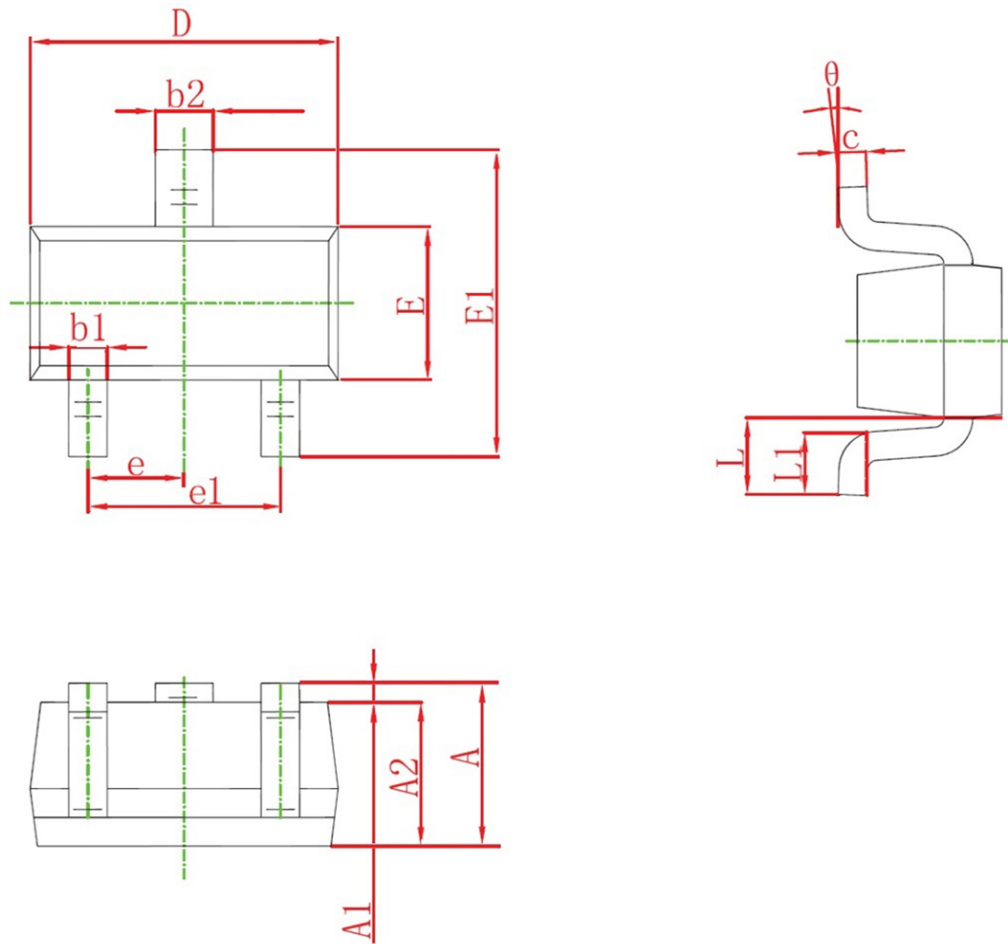
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse breakdown voltage	$I_R=100\mu\text{A}$	30	--	--	V
V_F	Forward voltage	$I_F=1\text{mA}$	--	--	0.32	V
		$I_F=10\text{mA}$	--	--	0.4	
		$I_F=30\text{mA}$	--	--	0.5	
		$I_F=100\text{mA}$	--	--	1	
I_R	Reverse current	$V_R=25\text{V}$	--	--	2	μA
C_T	Capacitance between terminals	$V_R=0\text{V}, f=1\text{MHz}$	--	--	10	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}, I_{rr}=0.1I_R, R_L=100\Omega$	--	--	5	ns

Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BAT54T	SOT-523	L1	3,000	45,000	180,000	7"reel
BAT54AT	SOT-523	L2	3,000	45,000	180,000	7"reel
BAT54CT	SOT-523	L3	3,000	45,000	180,000	7"reel
BAT54ST	SOT-523	L4	3,000	45,000	180,000	7"reel

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°