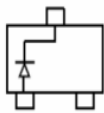
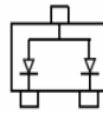
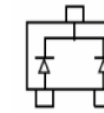
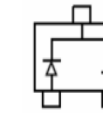
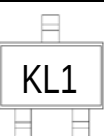
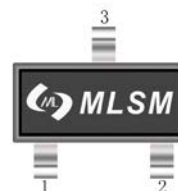


Features

- Extremely Fast Switching Speed

BAT54	BAT54A	BAT54C	BAT54S
			
Marking:KL1	Marking:KL2	Marking:KL3	Marking:KL4
			



SOT-23 top view



Halogen-Free

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

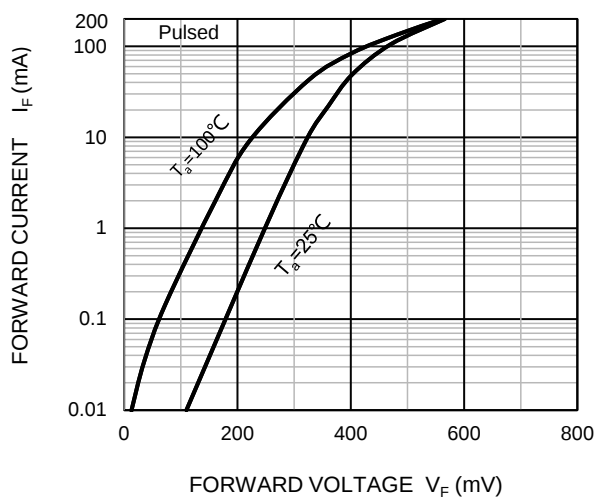
Symbol	Parameter	Value	Unit
V_R	DC Blocking Voltage	30	V
V_{RRM}	Peak Repetitive Reverse Voltage		
V_{RWM}	Working Peak Reverse Voltage		
I_{FM}	Forward Continuous Current	200	mA
I_{FRM}	Repetitive Peak Forward Current @ $t \leq 1\text{s}, \delta \leq 0.5$	300	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current @ $t = 8.3\text{ms}$	600	mA
P_D	Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	500	$^{\circ}\text{C/W}$
T_J	Operating 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)

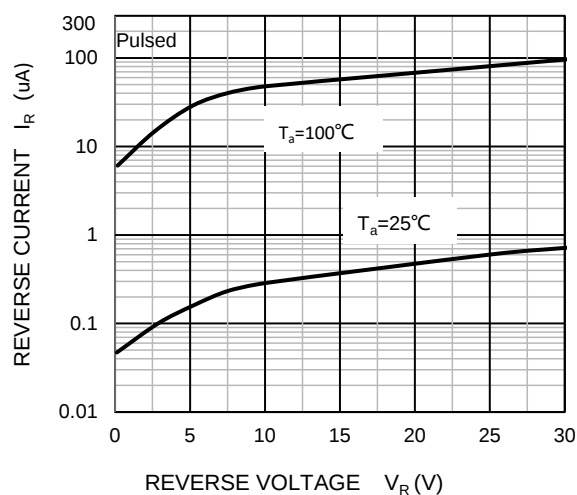
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R = 100\mu\text{A}$	30	--	--	V
I_R	Reverse current	$V_R = 25\text{V}$	--	--	2	μA
V_F	Forward voltage	$I_{F1} = 0.1\text{mA}$	--	--	0.24	V
		$I_{F2} = 1\text{mA}$	--	--	0.32	V
		$I_{F3} = 10\text{mA}$	--	--	0.4	V
		$I_{F4} = 30\text{mA}$	--	--	0.5	V
		$I_{F5} = 100\text{mA}$	--	--	1	V
C_D	Diode capacitance	$V_R = 1, f = 1\text{MHz}$	--	--	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

Typical Operating Characteristics

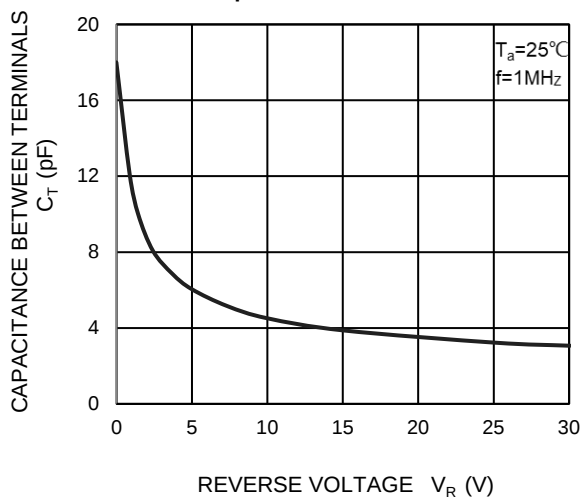
Forward Characteristics



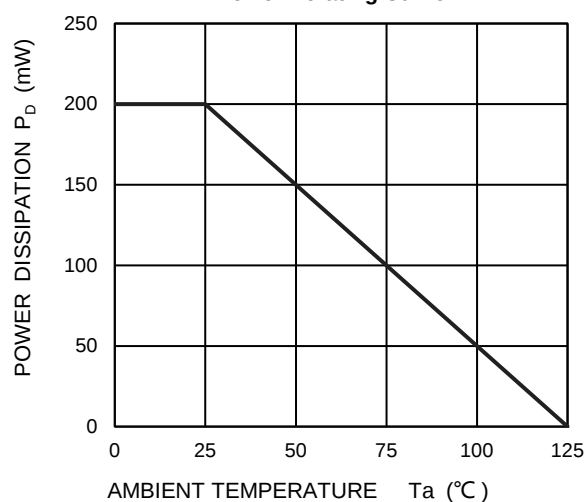
Reverse Characteristics



Capacitance Characteristics



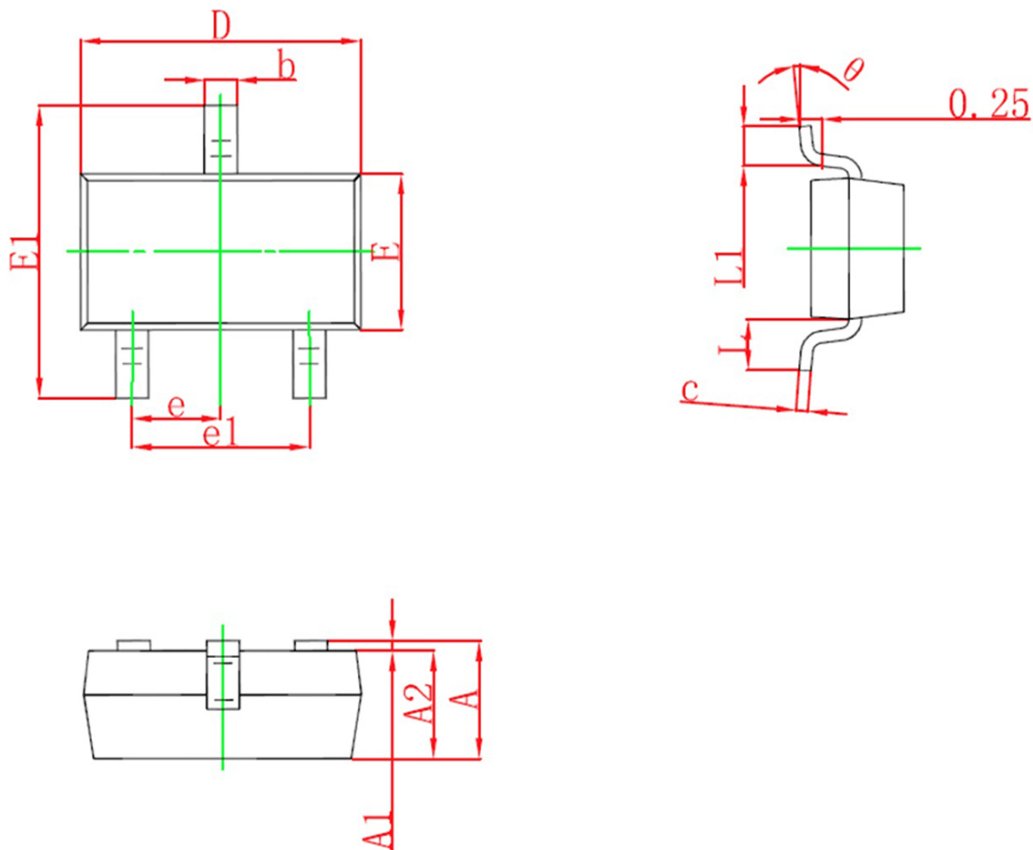
Power Derating Curve



Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BAT54	SOT-23	KL1	3,000	45,000	180,000	7"reel
BAT54A	SOT-23	KL2	3,000	45,000	180,000	7"reel
BAT54C	SOT-23	KL3	3,000	45,000	180,000	7"reel
BAT54S	SOT-23	KL4	3,000	45,000	180,000	7"reel

SOT-23 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°