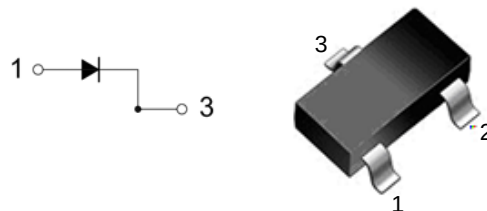


SOT-23 Plastic-Encapsulate Diodes

• Features

- Extremely Fast Switching Speed



SOT - 23

• MAXIMUM RATINGS (T_C=25°C)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current	I_{FM}	200	mA
Non-repetitive Peak Forward Surge Current @ t=8.3ms	I_{FSM}	600	mA
Repetitive Peak Forward Current @ t≤1s, δ≤0.5	I_{FRM}	300	mA
Power Dissipation	P_D	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500	°C/W
Operating Junction Temperature Range	T_j	-40 ~ +125	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

• ELECTRICAL CHARACTERISTICS (T_a=25°C)

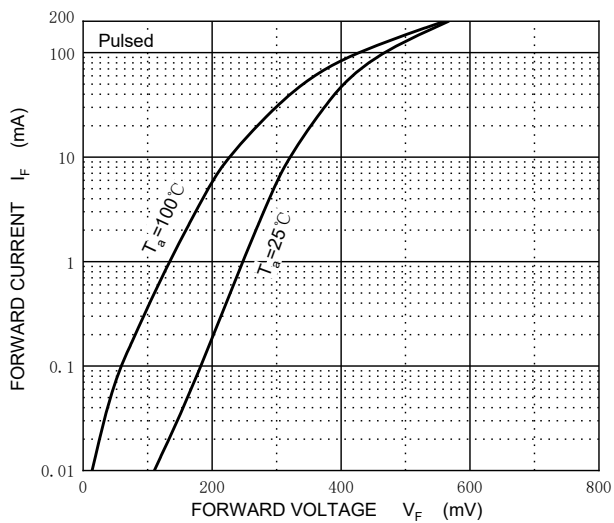
Parameter	Symbol	Min	Typ	Max	Unit	Test conditions
Reverse voltage	$V_{(BR)}$	30			V	$I_R=100\mu A$
Forward voltage	V_F			0.24	V	$I_{F1}=0.1mA$
				0.32	V	$I_{F2}=1mA$
				0.40	V	$I_{F3}=10mA$
				0.50	V	$I_{F4}=30mA$
				1	V	$I_{F5}=100mA$
Reverse current	I_R			2	μA	$V_R=25V$
Diode capacitance	C_D			10	pF	$V_R=1V, f=1MHz$
Reverse recovery time	t_{rr}			5	ns	$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$

• Ordering Information:

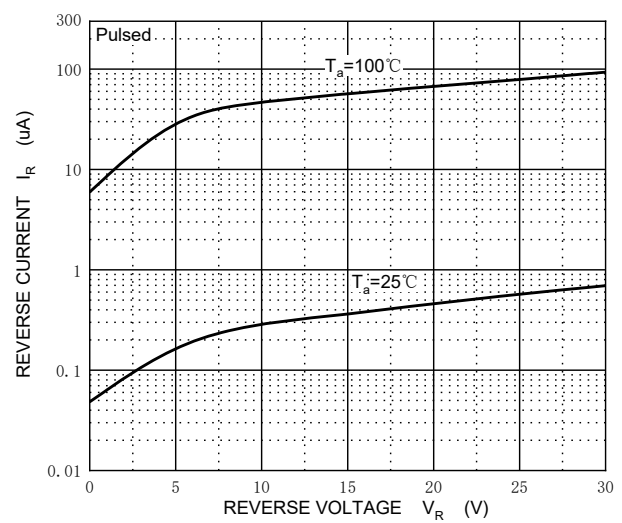
Part NO.	BAT54
Marking	KL1
Packing Information	REEL TAPE
Basic ordering unit (pcs)	3000

• Typical Characteristics

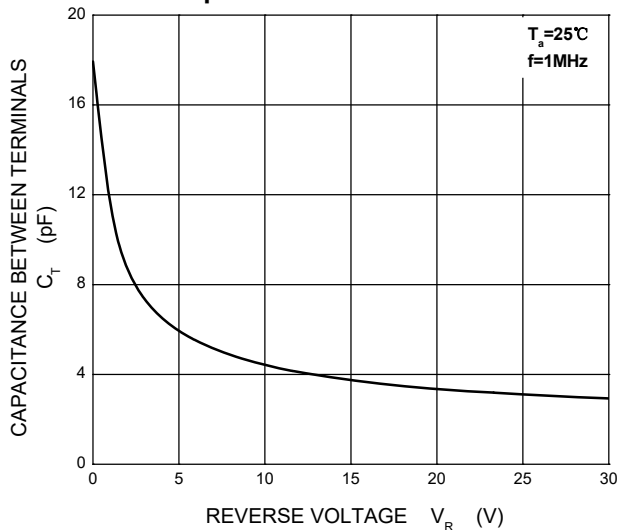
Forward Characteristics



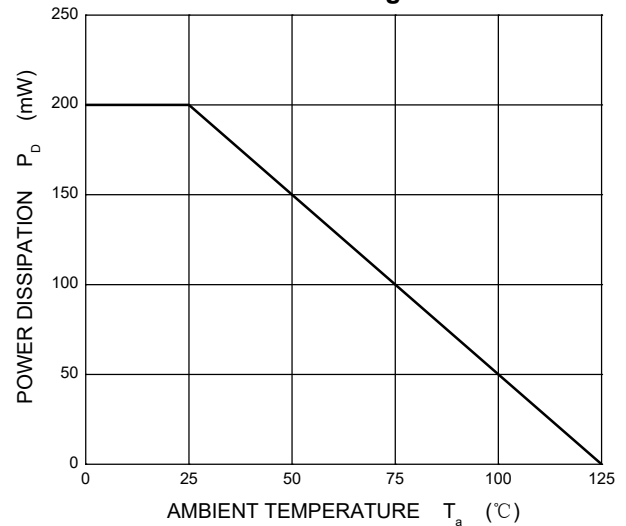
Reverse Characteristics



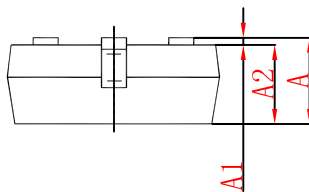
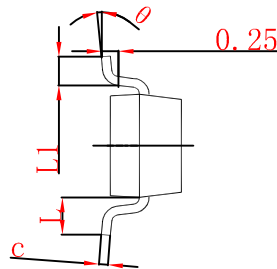
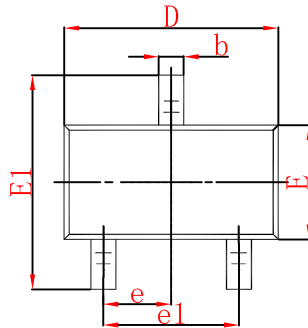
Capacitance Characteristics



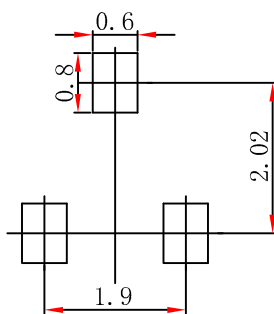
Power Derating Curve



SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		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
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
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°



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.