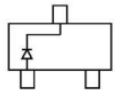
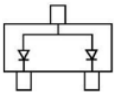
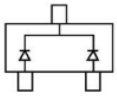
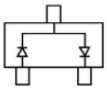
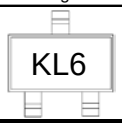
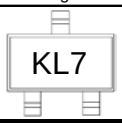
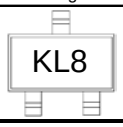
BAT54W/AW/CW/SW

SWITCHING BARRIER DIODE

Features

- Extremely Fast Switching Speed
- Low forward voltage

SOT-323 top view

BAT54W	BAT54AW	BAT54CW	BAT54SW
			
Marking:KL5	Marking:KL6	Marking:KL7	Marking:KL8
			

Pb-Free RoHS Halogen-Free

Maximum Ratings (Ta=25℃ unless otherwise noted)

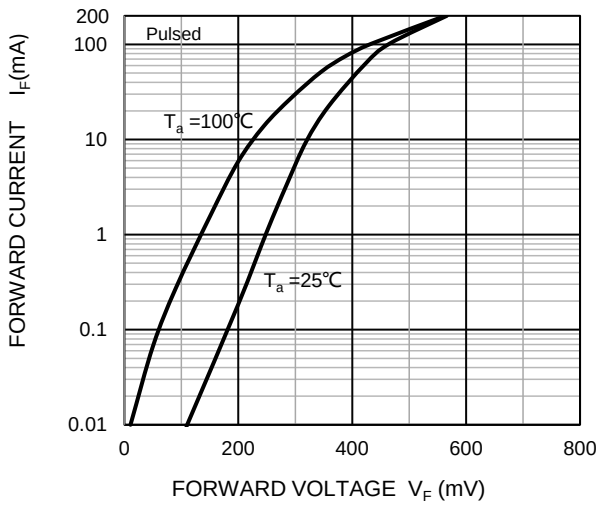
Symbol	Parameter	Value	Unit
V_R	DC Blocking Voltage	30	V
V_{RRM}	Peak repetitive reverse voltage		
V_{RWM}	Working peak reverse voltage		
I_{FM}	Forward Continuous Current	200	mA
I_{FSM}	Non-Repetitive Peak Forward Surge Current @t=8.3ms	600	mA
I_{FRM}	Repetitive Peak Forward Current@ t≤1s, δ ≤0.5	300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

Electrical Characteristics (Ta=25℃ unless otherwise specified)

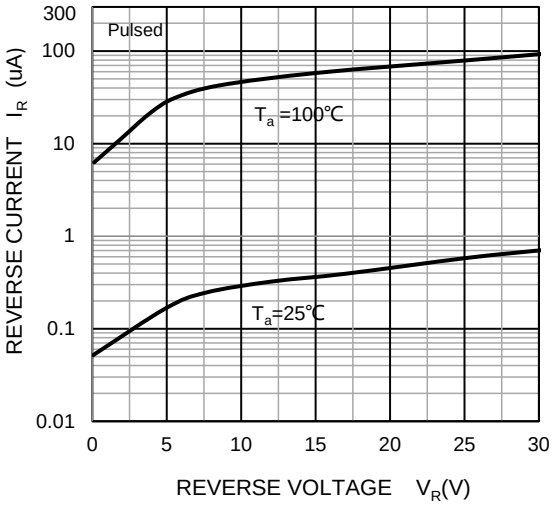
Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	I_R=100μA	30	--	--	V
I_R	Reverse current	V_R=25V	--	--	2	μA
V_F	Forward voltage	I_{F1}=0.1mA	--	--	0.24	mV
		I_{F2}=1mA	--	--	0.32	
		I_{F3}=10mA	--	--	0.4	V
		I_{F4}=30mA	--	--	0.5	V
		I_{F5}=100mA	--	--	1	V
C_D	Diode capacitance	V_R=1V, f=1MHZ	--	--	10	pF
t_{rr}	Reverse recovery time	I_F=I_R=10mA,I_{rr}=0.1xI_R, R_L=100Ω	--	--	5	ns

Typical Operating Characteristics

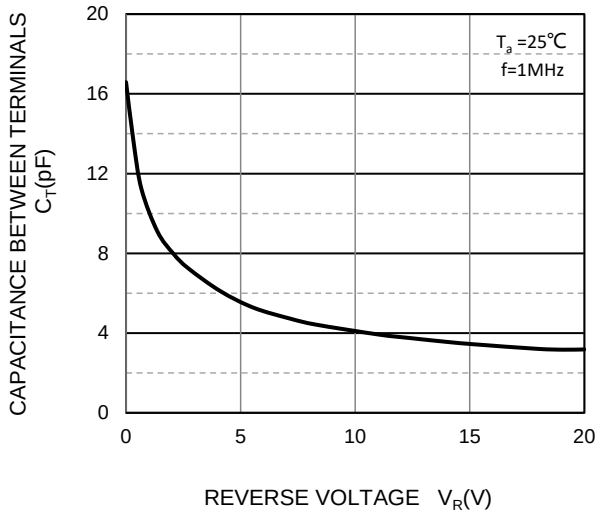
Forward Characteristics



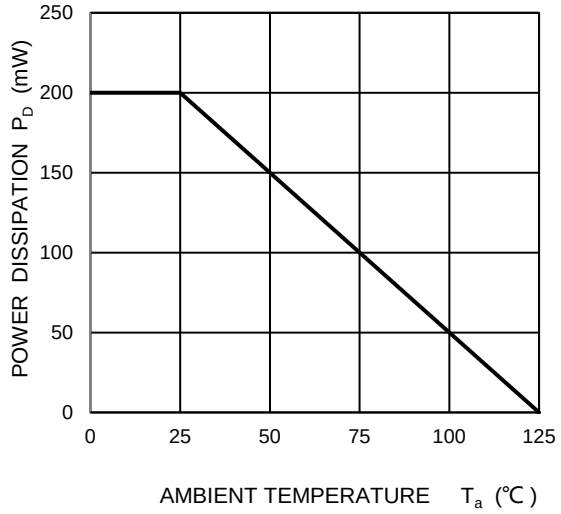
Reverse Characteristics



Capacitance Characteristics



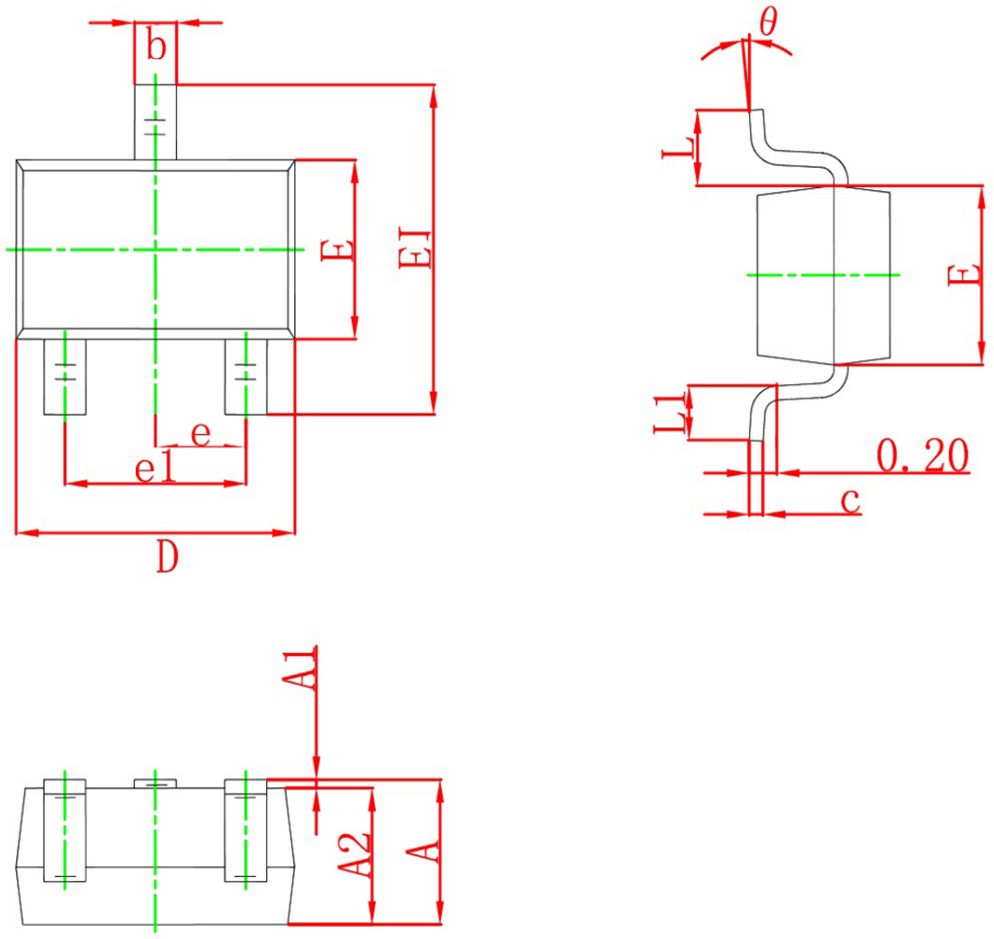
Power Derating Curve



Ordering Information (Example)

Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
BAT54W	SOT-323	KL5	3,000	45,000	180,000	7"reel
BAT54AW	SOT-323	KL6	3,000	45,000	180,000	7"reel
BAT54CW	SOT-323	KL7	3,000	45,000	180,000	7"reel
BAT54SW	SOT-323	KL8	3,000	45,000	180,000	7"reel

SOT-323 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650TYP		0.026TYP	
e1	1.200	1.400	0.047	0.055
L	0.525REF		0.021REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°