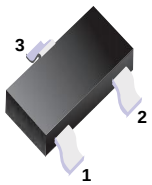
VOLTAGE RANGE
30 Volts
CURRENT
0.2 Ampere

FEATURES

Extremely Fast Switching Speed

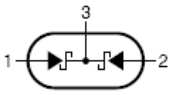
Low forward voltage

KL7



Simplified outline(SOT-323)

Equivalent Circuit



BAT54CW

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

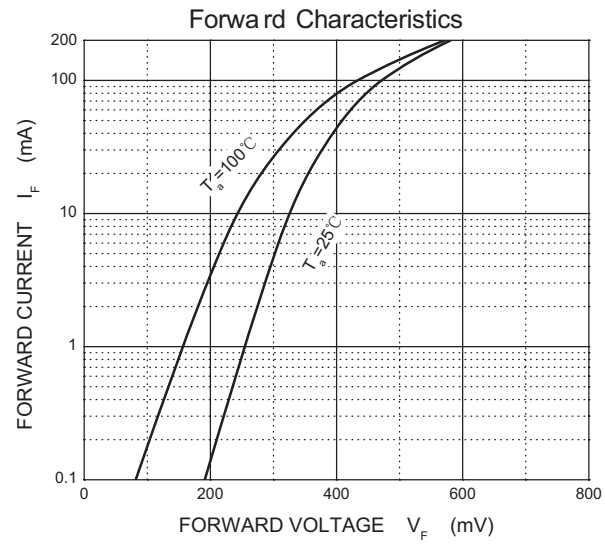
Maximum ratings (T =25℃ unless otherwise noted)

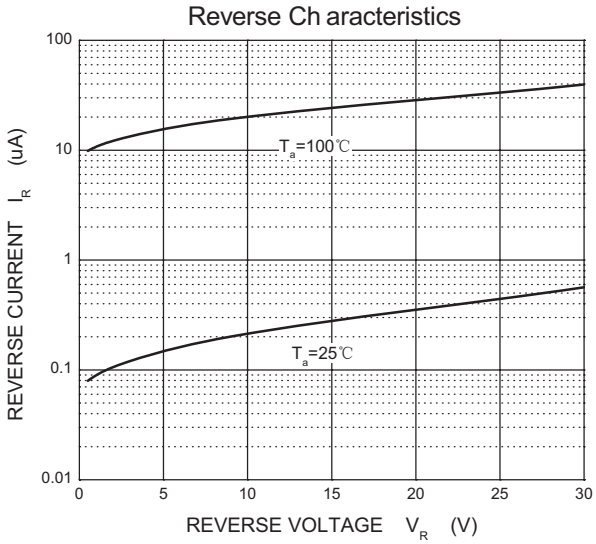
Parameter	Symbol	Rating	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	30	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current	I_{FM}	200	mA
Non-repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	600	
Repetitive Peak Forward Current @ t≤1s,δ≤0.5	I_{FRM}	300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

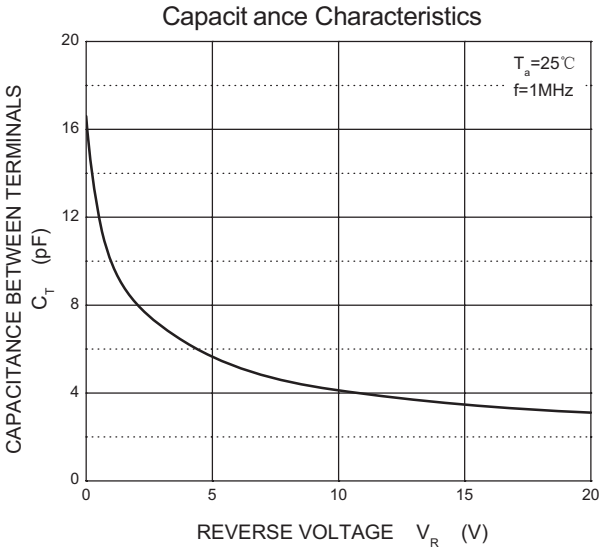
Electrical Characteristics

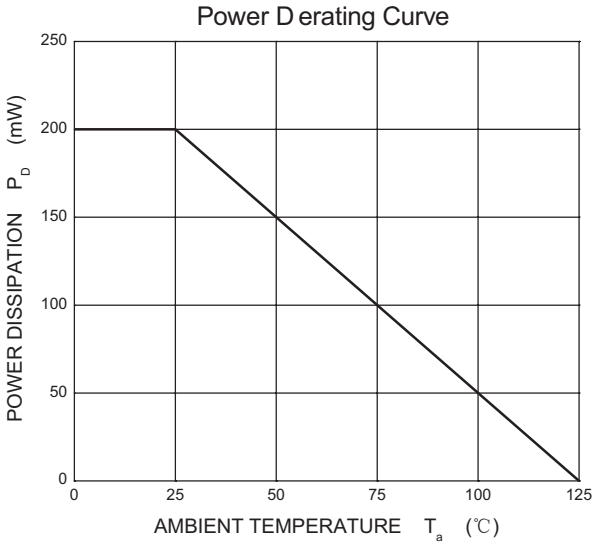
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse Voltage	$V_{(BR)}$	I_R= 100 μA	30			V
Forward Voltage	V_{F1}	I_F= 0.1 mA			0.24	
	V_{F2}	I_F= 1 mA			0.32	
	V_{F3}	I_F= 10 mA			0.40	
	V_{F4}	I_F= 30 mA			0.50	
	V_{F5}	I_F= 100 mA			1	
Leakage Current	I_R	V_R = 25 V			2	μA
Diode Capacitance	C_D	V_R= 0 V, f= 1 MHz			10	pF
Reverse Recovery Time	t_{rr}	I_F=I_R=10mA, I_{rr}=0.1× I_R, R_L=100 Ω			5	ns

RATING AND CHARACTERISTIC CURVES





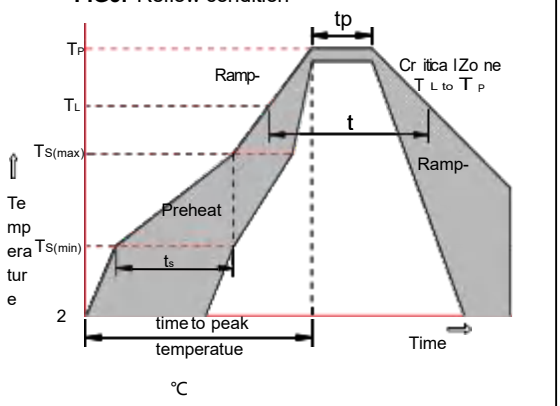




Soldering parameters

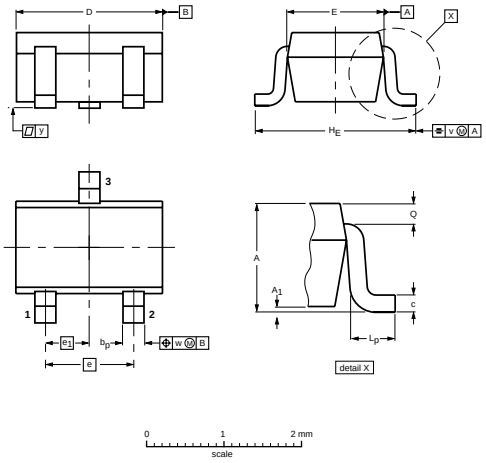
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

FIG5: Reflow condition



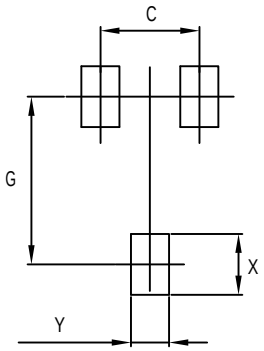
Package Dimensions & Suggested Pad Layout

SOT-323



DIMENSIONS (mm are the original dimensions)

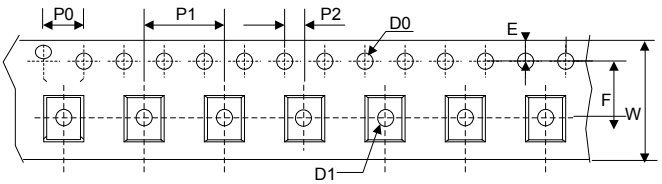
UNIT	A	A_1 max	b_p	c	D	E	e	e_1	H_E	L_p	Q	v	w
mm	1.1 0.8	0.1	0.4 0.3	0.25 0.10	2.2 1.8	1.35 1.15	1.3	0.65	2.2 2.0	0.45 0.15	0.23 0.13	0.2	0.2

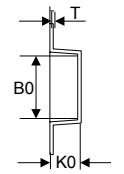


Dimensions	Value (in mm)
C	1.30
G	2.00
X	0.90
Y	0.65

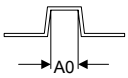
Tape & rell specification

Tape





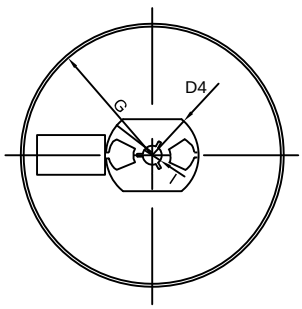
SECTION : B-B

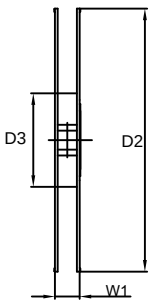


SECTION : A-A

Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.20
D1	1.00±0.20
E	1.55±0.25
F	3.60±0.20
W	8.00±0.20
A0	2.50±0.20
B0	2.60±0.20
K0	1.40±0.20
T	0.20±0.20

7” Reel





D2	177.0±5.0
D3	55Min.
D4	R24.6±2.0
G	R82.0±2.0
I	13.0±2.0
W1	10.20±3.0

Quantity: 3000PCS