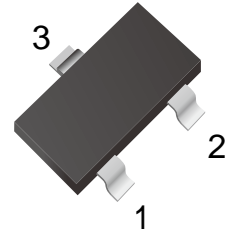
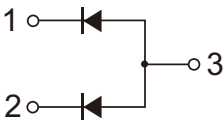
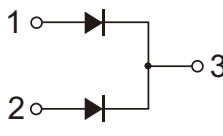
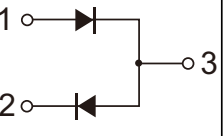


## Switching Diodes

### Features

- Fast Switching Speed
- Surface mount package ideally Suited for Automatic Insertio
- High Conductance
- Lead free in comply with EU RoHS 2011/65/EU directives
- Moisture Sensitivity Level 1
- ESD:2000V(HBM)



LTKT23A7	LTKT23C6	LTKL23S31
		
MARKING:KT7	MARKING:KT6	MARKING:KL31

### Ordering Information

Part Number	Shipping	Reel
LTKT23A7 / LTKT23C6/ LTKL23S31-TR3	3000PCS Tape&Reel	7 inches
LTKT23A7 / LTKT23C6/ LTKL23S31-TR12	12000PCS Tape&Reel	13 inches

### Maximum Ratings( @Ta=25°C )

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>	250	V
Average rectified output current	I <sub>O</sub>	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I <sub>FSM</sub>	1.0	A
Power dissipation	P <sub>D</sub>	350	mW
Thermal resistance junction to ambient	R <sub>thJA</sub>	357	°C/W
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>STG</sub>	-55 ~ +150	°C

### Electrical characteristics ( @Ta=25°C )

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V <sub>BR</sub>	I <sub>R</sub> =100μA	250			V
Reverse voltage leakage current	I <sub>R</sub>	V <sub>R</sub> =200V			0.1	μA
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =100mA I <sub>F</sub> =200mA			1.0 1.25	V
Diode capacitance	C <sub>D</sub>	V <sub>R</sub> =0V, f=1MHz		5		pF
Reveres recovery time	t <sub>rr</sub>	I <sub>F</sub> =I <sub>R</sub> =30mA, V <sub>R</sub> =6V I <sub>rr</sub> =3mA, R <sub>L</sub> =100Ω			50	ns



### Characteristics Curves

Fig.1 Power Derating Curve

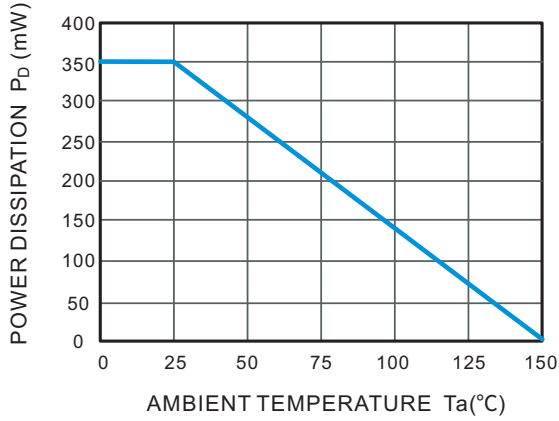


Fig.2 Reverse Characteristics

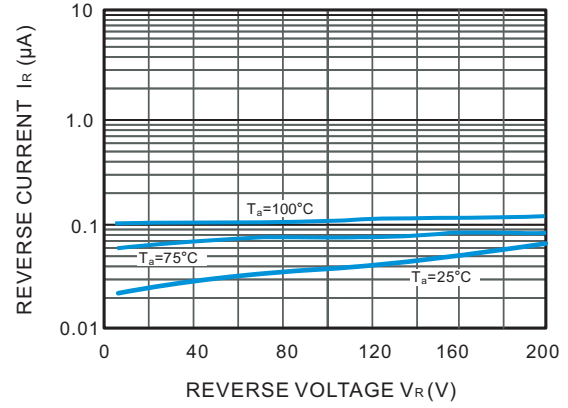


Fig.3 Forward Characteristics

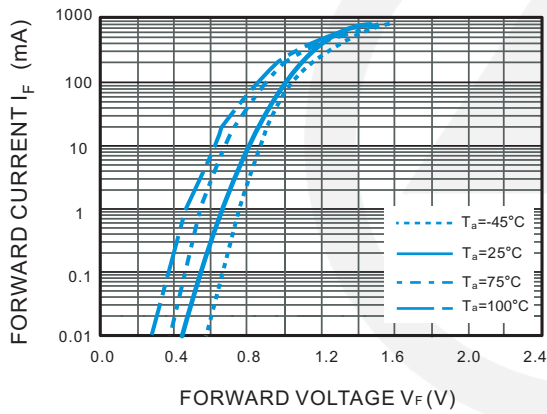
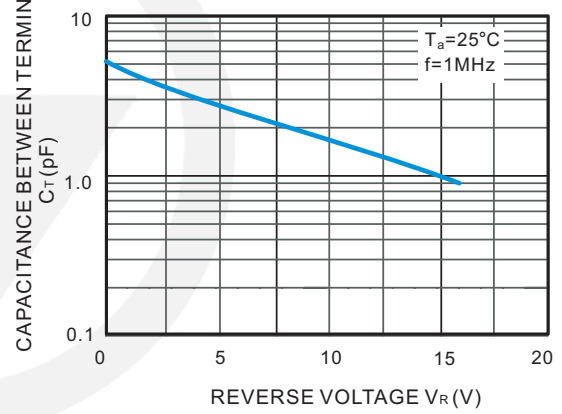
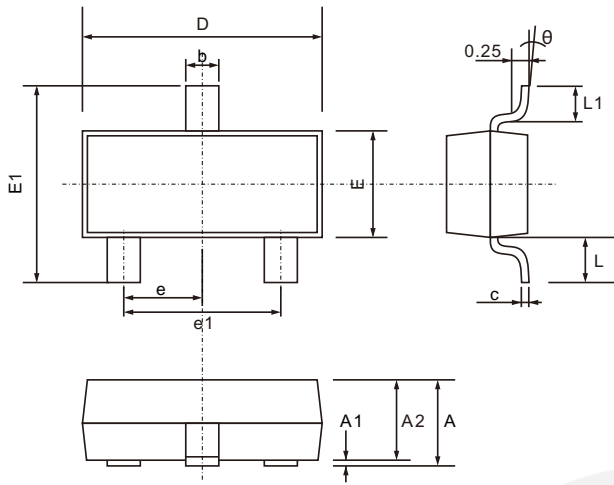


Fig.4 Capacitance Characteristics



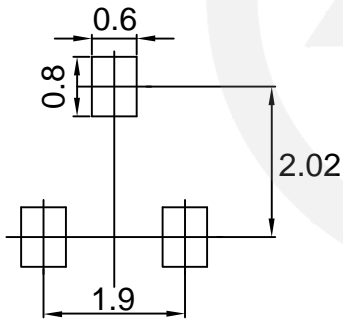
**SOT-23 Package Outline**

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.200
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.200
D	2.700	3.100
E	1.200	1.400
E1	2.200	2.600
e	0.950 TYP.	
e1	1.750	2.050
L	0.550 TYP.	
L1	0.300	0.500
θ	0°	8°

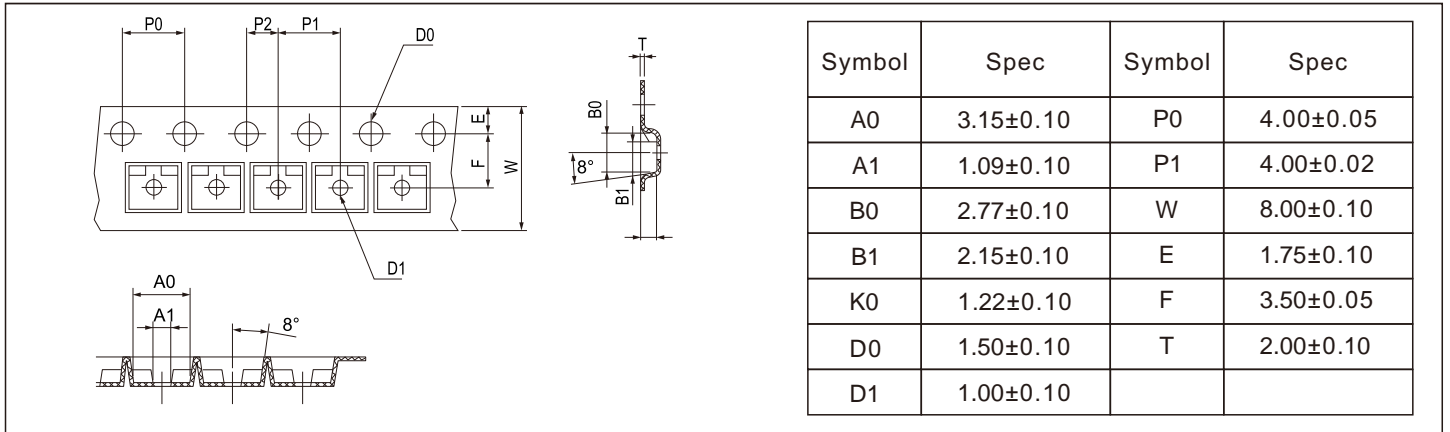
**SOT-23 Suggested Pad Layout**



Note:  
 1. Controlling dimension: in millimeters.  
 2. General tolerance:  $\pm 0.05$  mm  
 3. The pad layout is for reference purpose only.

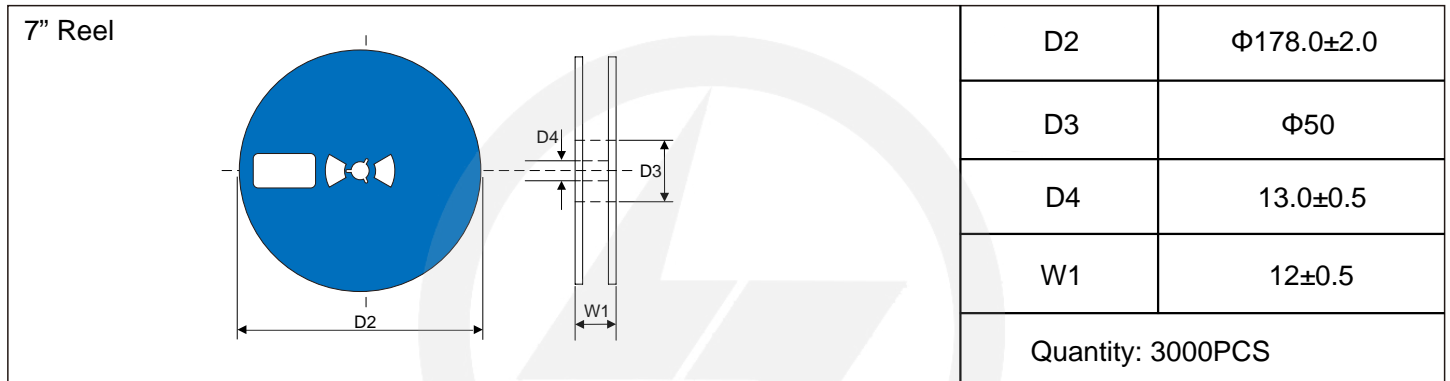
**Carrier Tape Dimensions**

Unit : mm



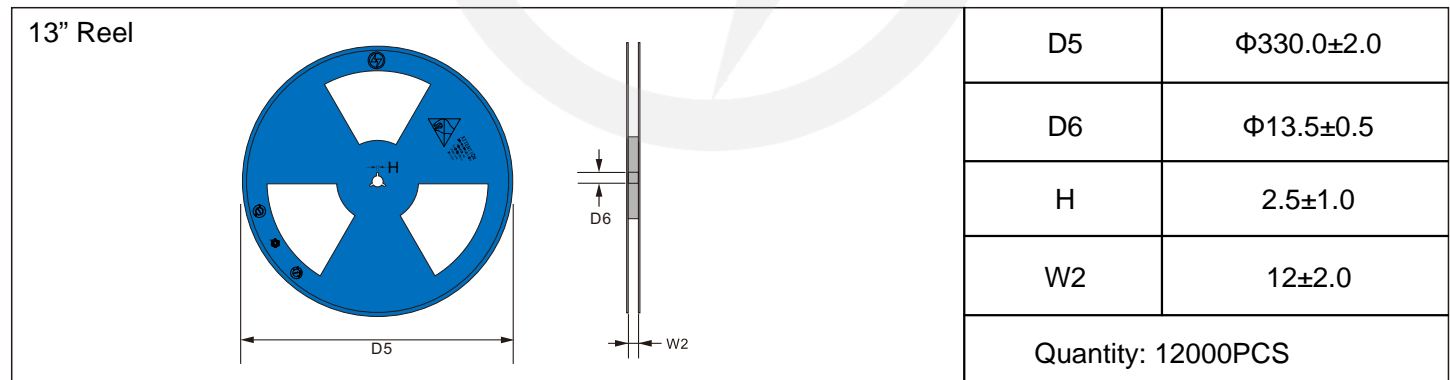
**Reel Dimensions**

Unit : mm

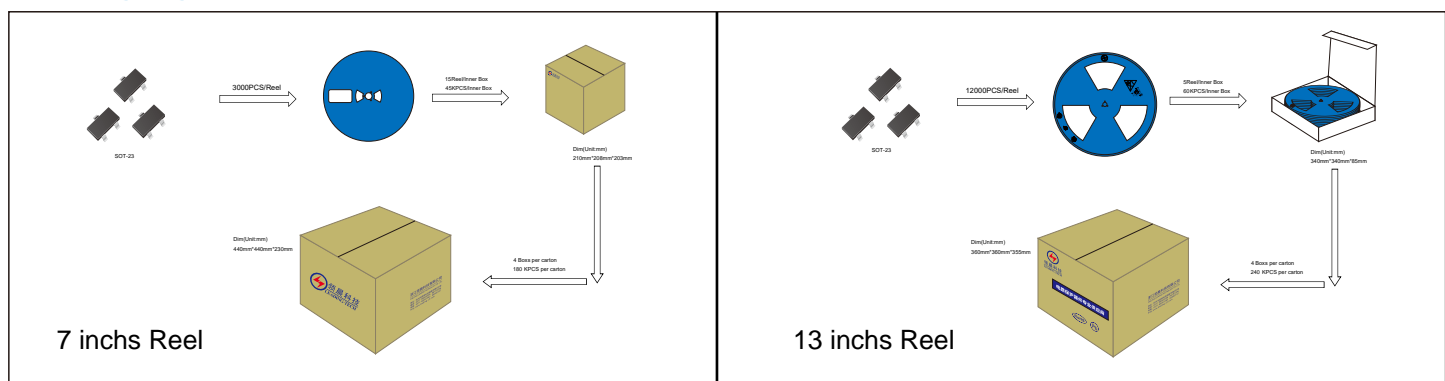


**Reel Dimensions**

Unit : mm



**Packaging**





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/second max.
Preheat	
-Temperature Min (T <sub>S min</sub> )	150°C
-Temperature Max (T <sub>S max</sub> )	200°C
-Time (min to max) (t <sub>s</sub> )	60-180 seconds
T <sub>S max</sub> to T <sub>L</sub>	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T <sub>L</sub> )	217°C
-Time (t <sub>L</sub> )	60-150 seconds
Peak Temperature (T <sub>P</sub> )	260°C
Time within 5°C of actual Peak Temperature (t <sub>p</sub> )	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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## Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision Content	Revision Reason	Revision Person	Note
01	2024.03.18	2024.03.18	3.0	New file	/	Ding	
02	2025.06.17	2025.06.17	3.1	Update packaging information	/	Ding	
03	2026.03.09	2026.03.09	3.2	1.Package outline E1(max)=2.6mm 2.Add MSL1 and ESD:2000V(HBM) 3.Add VF and IR Curves	/	Ding	