

## Switching Diodes

### Features

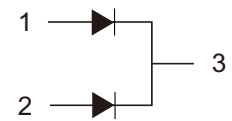
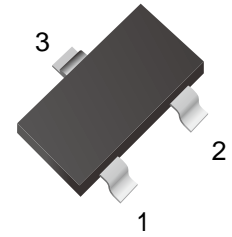
- Fast Switching Speed
- For General Purpose Switching Applications
- High Conductance
- Lead free in comply with EU RoHS 2011/65/EU directives

### Mechanical Data

- Case: SOT-23
- Approx. Weight: 8.1mg

### Ordering Information

Part Number	Marking	Shipping	Reel
LT23T70-TR3	A4	3000PCS Tape&Reel	7 inchs
LT23T70-TR12	A4	12000PCS Tape&Reel	13 inchs



### Limiting Values (Absolute Maximum Ratings)

Parameter	Symbol	Limit	Unit
Reverse Voltage	$V_R$	100	V
Forward Current	$I_F$	200	mA
Non-Repetitive Peak Forward Surge Current @ t=8.3ms	$I_{FSM}$	2.0	A
Power Dissipation	$P_D$	225	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	°C/W
Operation Junction and Storage Temperature Range	$T_J, T_{STG}$	-55~+150	°C

### Electrical Characteristics (Ta =25°C Unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Reverse breakdown voltage	$V_R$	100			V	$I_R=100\mu A$
Forward voltage	$V_{F1}$			0.715	V	$I_F=1mA$
	$V_{F2}$			0.855	V	$I_F=10mA$
	$V_{F3}$			1	V	$I_F=50mA$
	$V_{F4}$			1.25	V	$I_F=150mA$
Reverse current	$I_R$			2.5	$\mu A$	$V_R=70V$
Capacitance between terminals	$C_T$			1.5	pF	$V_R=0, f=1MHz$
Reverse recovery time	$t_{rr}$			6	ns	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$



### Characteristics Curves

Fig.1 Forward Characteristics

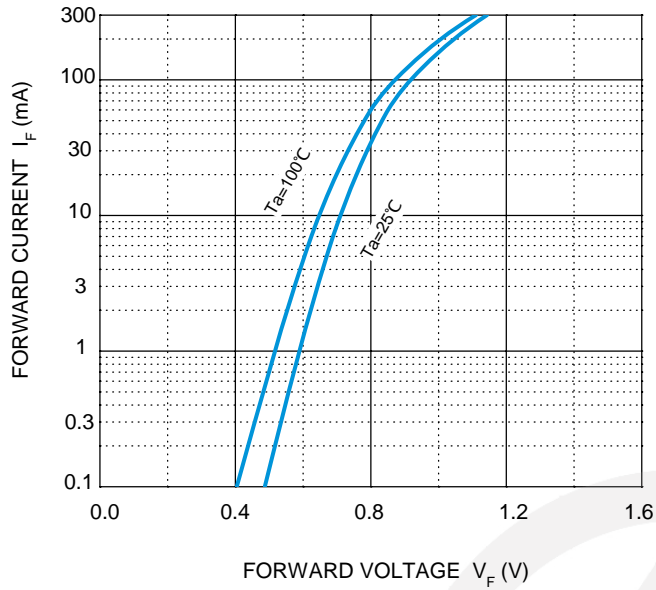


Fig.2 Typical Reverse Characteristics

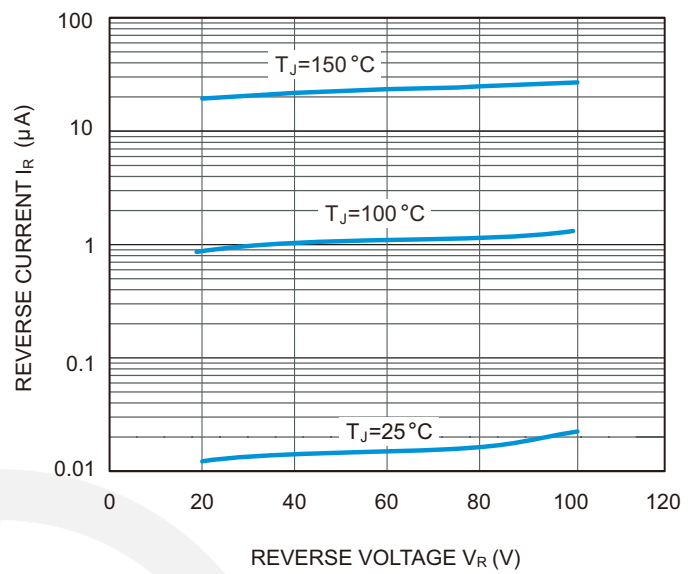


Fig.3 Capacitance Characteristics

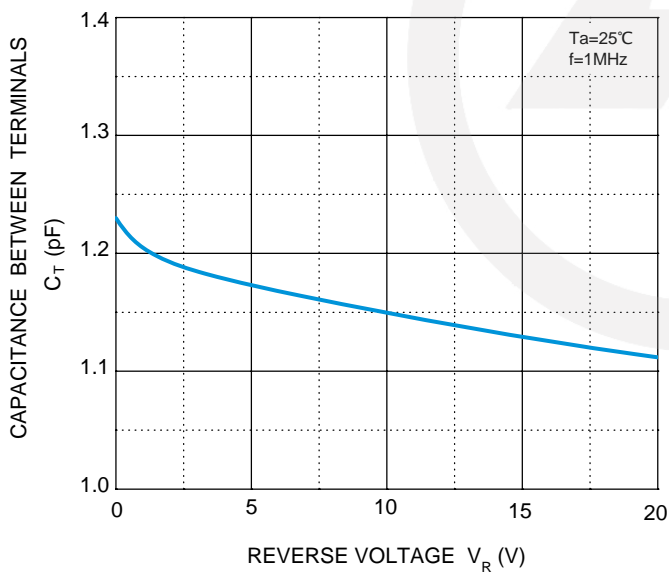
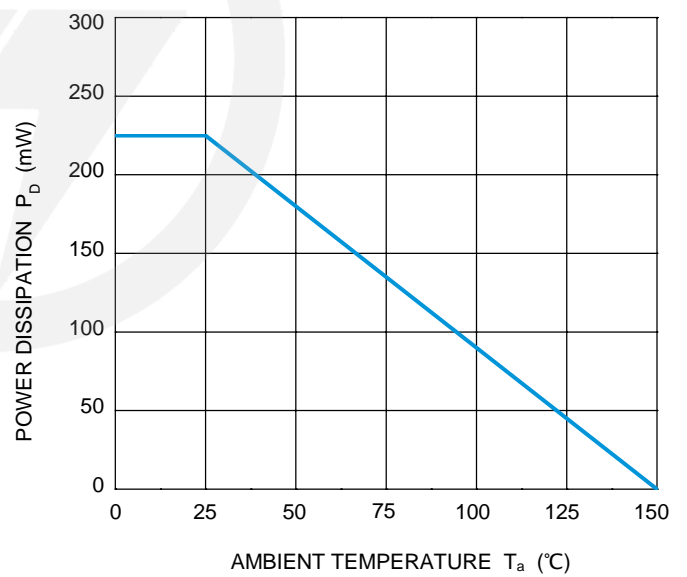
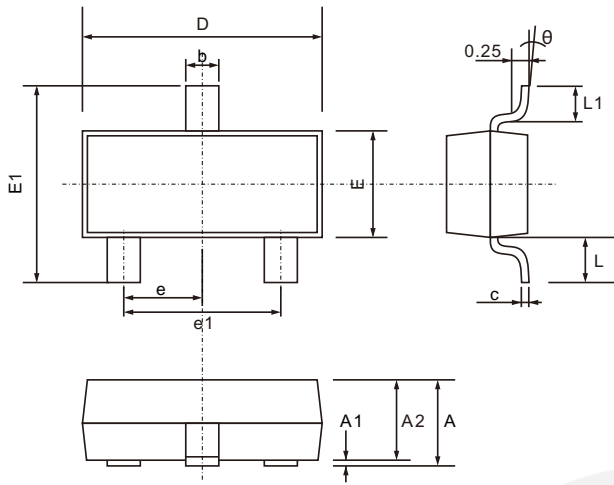


Fig.4 Power Derating Curve



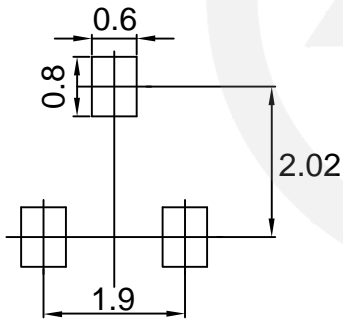
**SOT-23 Package Outline**

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°

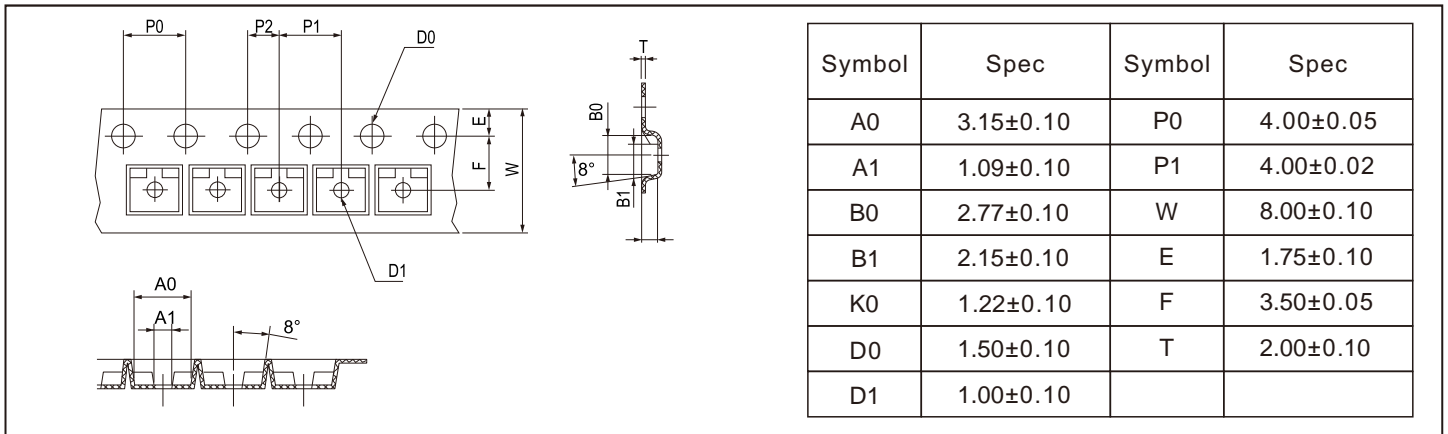
**SOT-23 Suggested Pad Layout**



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

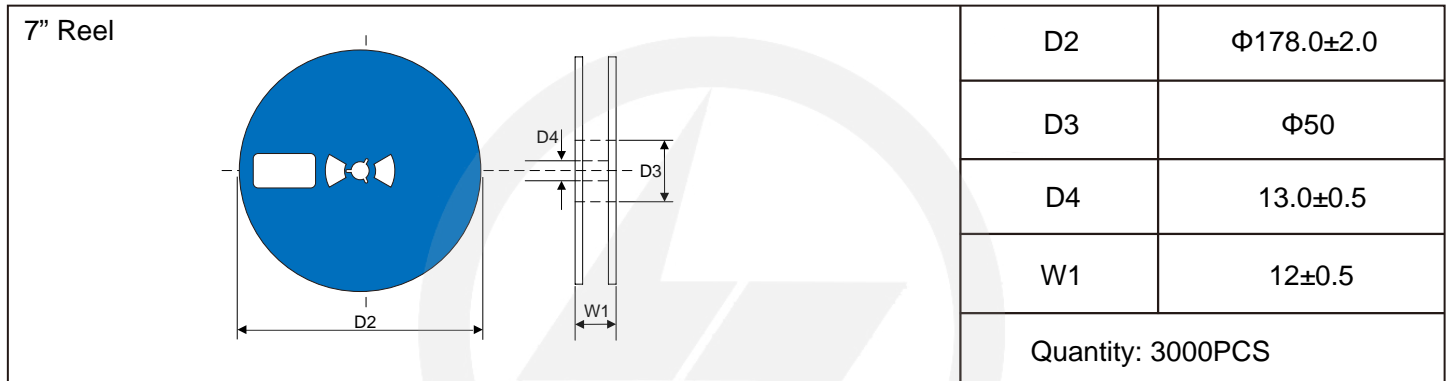
**Carrier Tape Dimensions**

Unit : mm



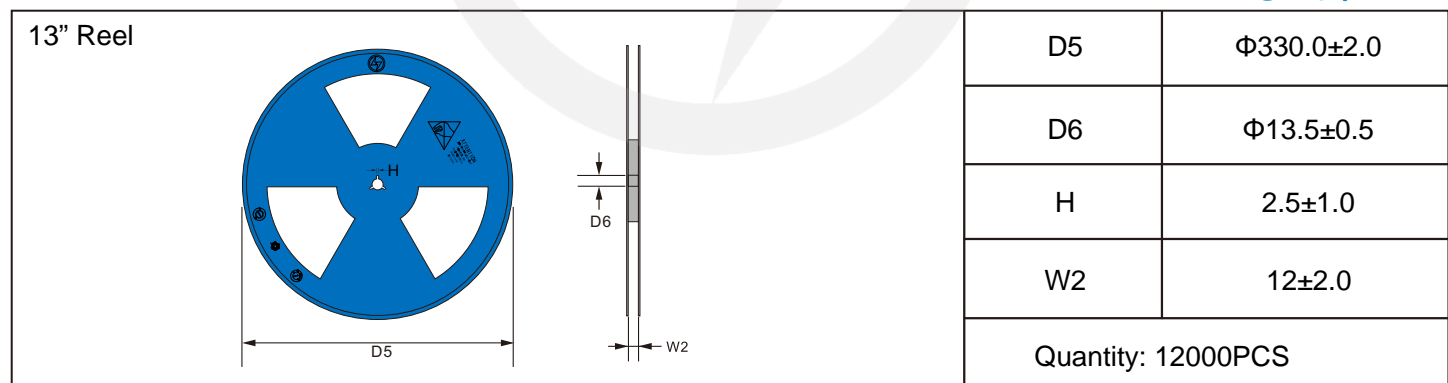
**Reel Dimensions**

Unit : mm

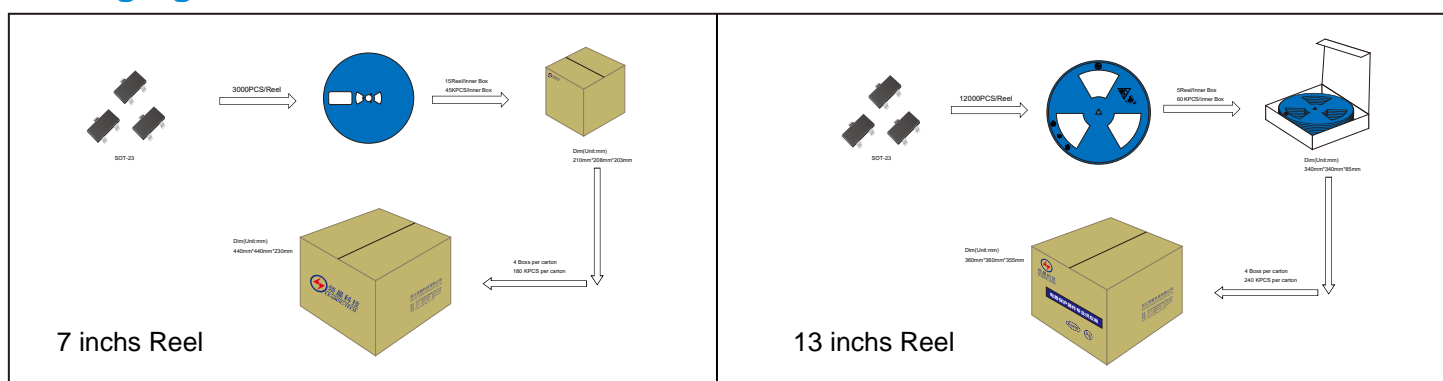


**Reel Dimensions**

Unit : mm

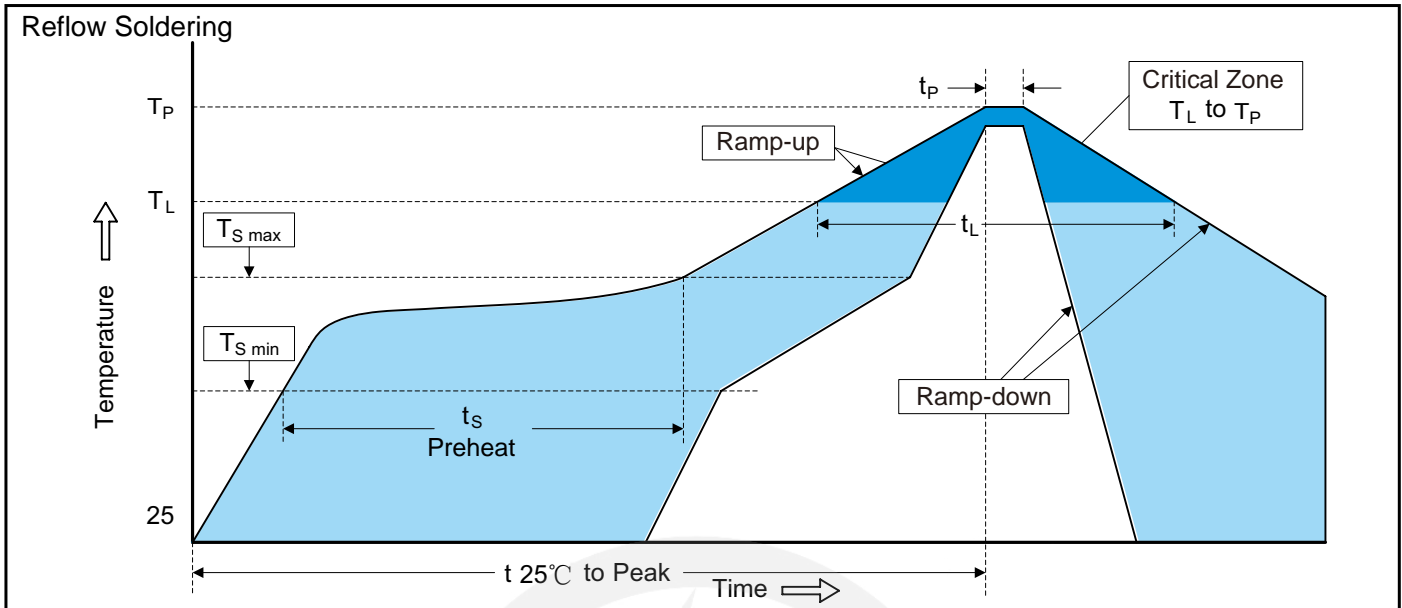


**Packaging**





## 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	2025.06.18	2025.06.18	3.1	Update packaging information	/	Ding	
03	2026.03.03	2026.03.03	3.2	Add the IR curve at 150°C	/	Ding	