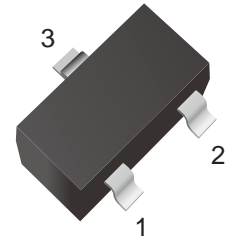
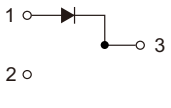
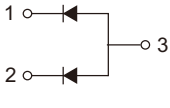
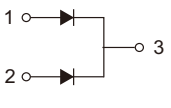
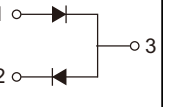


## Schottky Barrier Diodes

### Features

- Extremely Fast Switching Speed
- Lead free in comply with EU RoHS 2011/65/EU directives



LTS52TL1	LTS52TL2	LTS52TL3	LTS52TL4
			
MARKING:L1	MARKING:L2	MARKING:L3	MARKING:L4

### Ordering Information

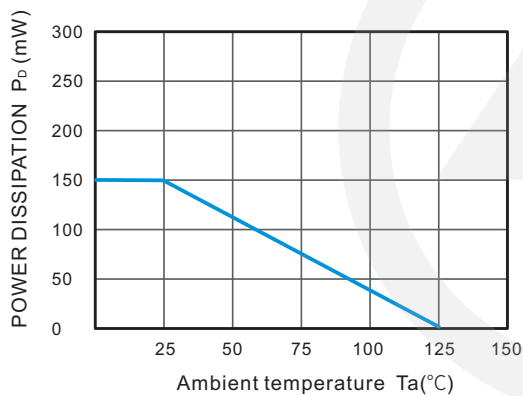
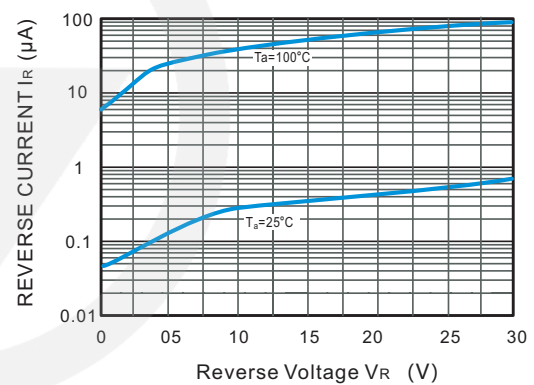
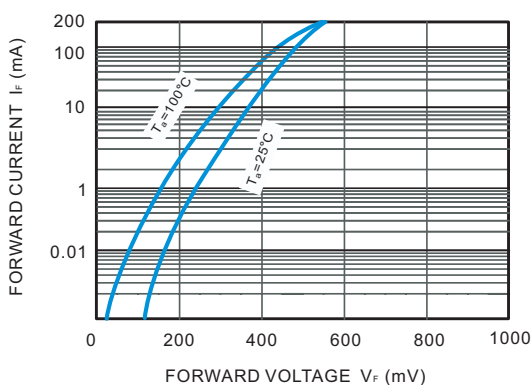
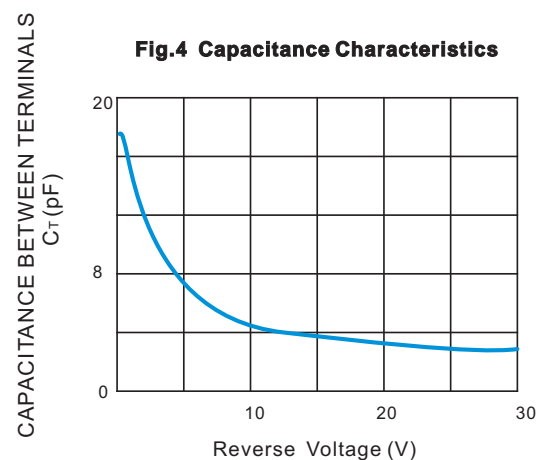
Part Number	Shipping	Reel
LTS52TL1/2/3/4-TR3	3000PCS Tape&Reel	7 inches
LTS52TL1/2/3/4-TR8	8000PCS Tape&Reel	7 inches

### Maximum Ratings ( Ta=25°C unless otherwise noted )

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	$P_D$	150	mW
Thermal Resistance from Junction to Ambient	$R_{thJA}$	667	°C/W
Operating Junction Temperature Range	$T_j$	-40~ +125	°C
Storage Temperature Range	$T_{stg}$	-40~ +125	°C

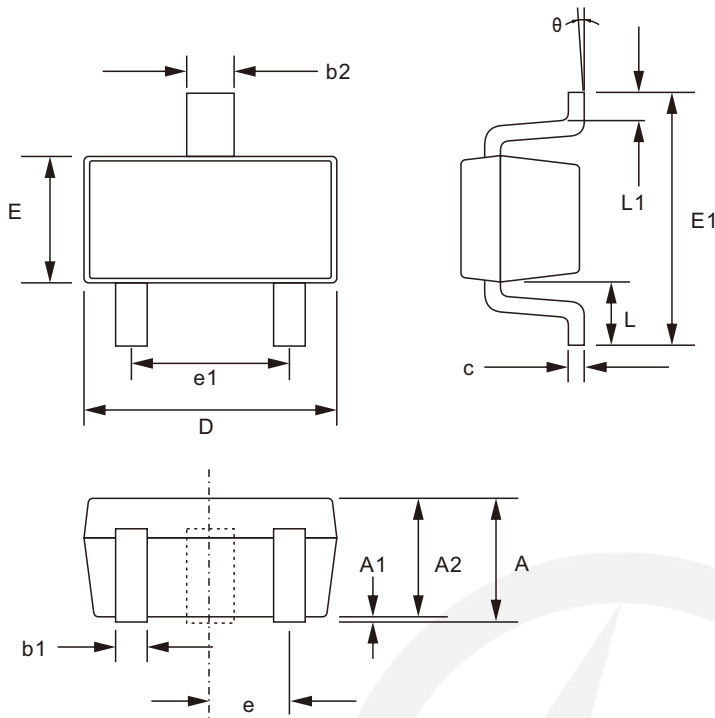
**Electrical Characteristics** ( $T_a=25^{\circ}\text{C}$  unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse voltage	$V_{BR}$	$I_R=100\mu\text{A}$	30			V
Reverse current	$I_R$	$V_R=25\text{V}$			2	$\mu\text{A}$
Forward voltage	$V_F$	$I_{F1}=0.1\text{mA}$			0.24	V
		$I_{F2}=1\text{mA}$			0.32	V
		$I_{F3}=10\text{mA}$			0.40	V
		$I_{F4}=30\text{mA}$			0.50	V
		$I_{F5}=100\text{mA}$			1	V
Diode capacitance	$C_D$	$V_R=4\text{V}, f=1\text{MHz}$		10		pF
Reverse recovery time	$T_{rr}$	$I_F=I_R=10\text{mA}, I_{rr}=0.1\times I_R, R_L=100\Omega$			5	ns

**Characteristics Curves**
**Fig.1 Power Derating Curve**

**Fig.2 Reverse Characteristics**

**Fig.3 Forward Characteristics**

**Fig.4 Capacitance Characteristics**




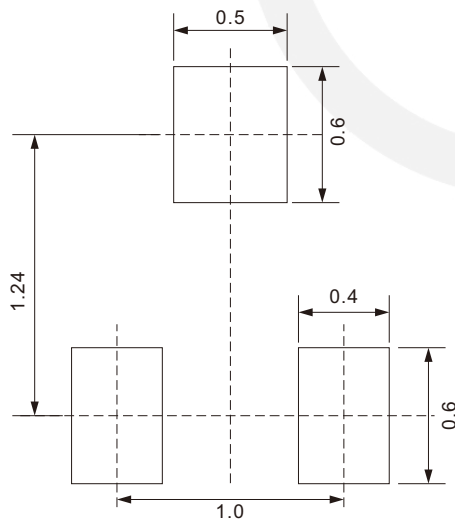
### SOT-523 Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.70	0.90
A1	0.00	0.10
A2	0.70	0.80
b1	0.15	0.25
b2	0.25	0.35
c	0.10	0.20
D	1.50	1.70
E	0.70	0.90
E1	1.45	1.75
e	0.50 TYP.	
e1	0.90	1.10
L	0.40 TYP.	
L1	0.10	0.30
theta	0°	8°

### SOT-523 Suggested Pad Layout

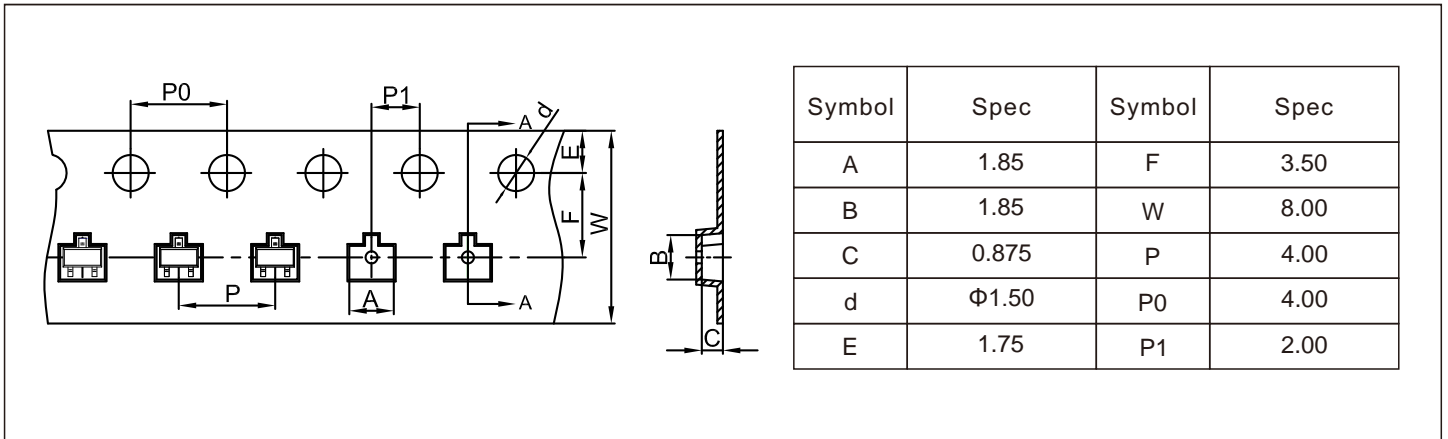


**Note:**

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

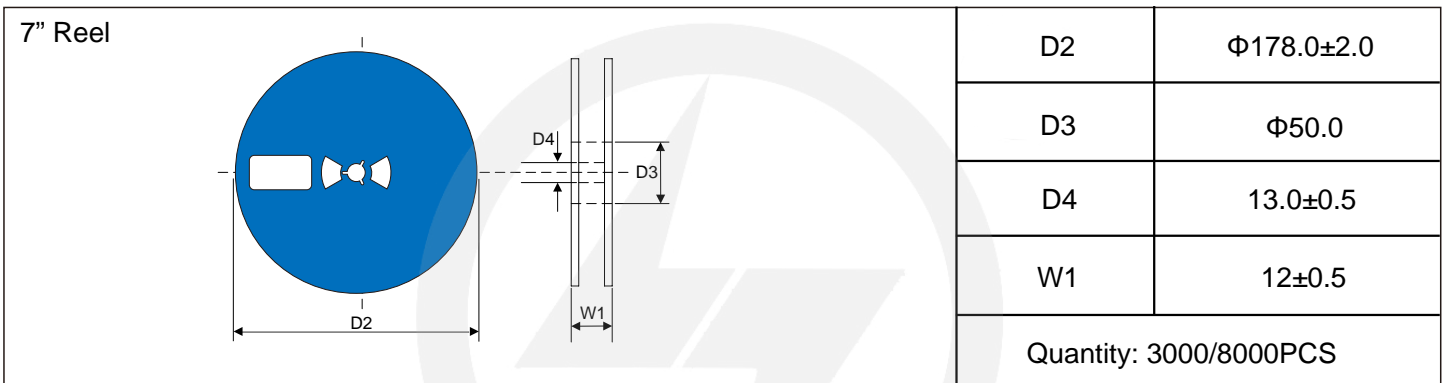
## Carrier Tape Diemensions

Unit : mm

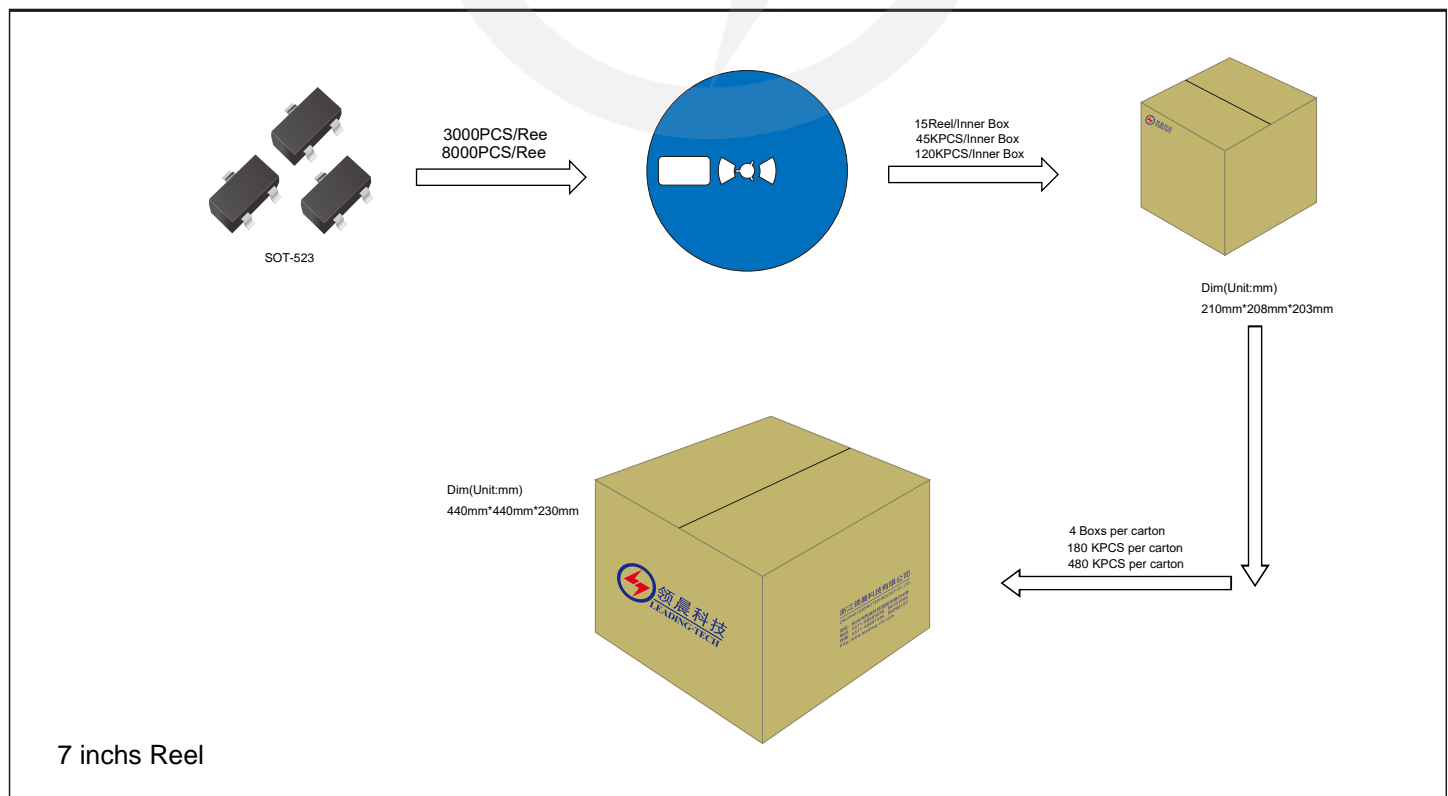


## Reel Diemensions

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	2025.02.21	2025.02.21	3.0	New File	/	Ding	