

## Schottky Diode

### Features

- Low Forward Voltage Schottky Rectifier
- SOD523 Thin SMD package
- Matte Tin (Sn) Lead finish
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Data

- Package: SOD-523
- Tape specification: Conductive
- Polarity: Color band denotes cathode end

### Ordering Information

Part Number	Marking	Shipping	Reel
LT5L751-40-TR3	5	3000PCS Tape&Reel	7 inches
LT5L751-40-TR10	5	10000PCS Tape&Reel	7 inches

### Maximum Ratings (Ta = 25°C)

Symbol	Parameter	Value	Units
$V_{RRM}$	Repetitive Peak Reverse Voltage	40	V
$V_R$	DC Blocking Voltage	30	V
$I_O$	Continuous Forward Current	30	mA
$I_{FSM}$	Non-Repetitive Peak Forward Current <sup>*1</sup>	0.2	A
$T_J$	Junction Temperature	125	°C
$T_{STG}$	Storage Temperature	-55 to +125	°C

<sup>\*1</sup> 8.3 ms single half sine-wave

### Electrical Characteristics (Ta = 25°C)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
$V_F$	Forward Voltage	$I_F = 1\text{mA}$			0.37	V
$I_R$	Reverse Current	$V_R = 30\text{V}$			0.5	μA
C	Capacitance	$V_R = 1\text{V}, f = 1\text{MHz}$		2		pF



### Characteristics Curve

Fig.1 Forward Characteristics

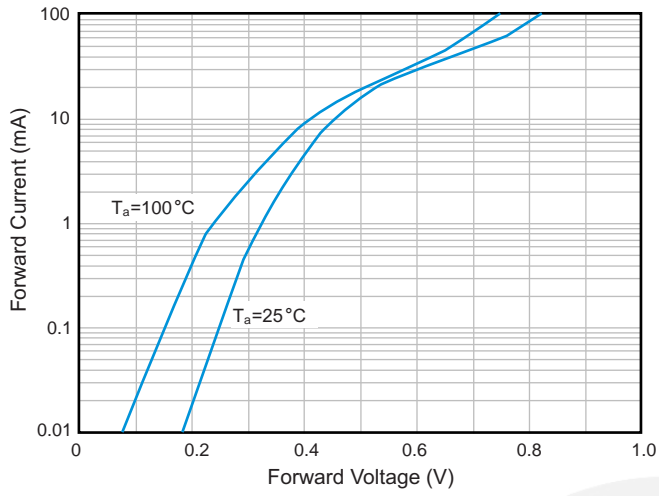


Fig.2 Reverse Characteristics

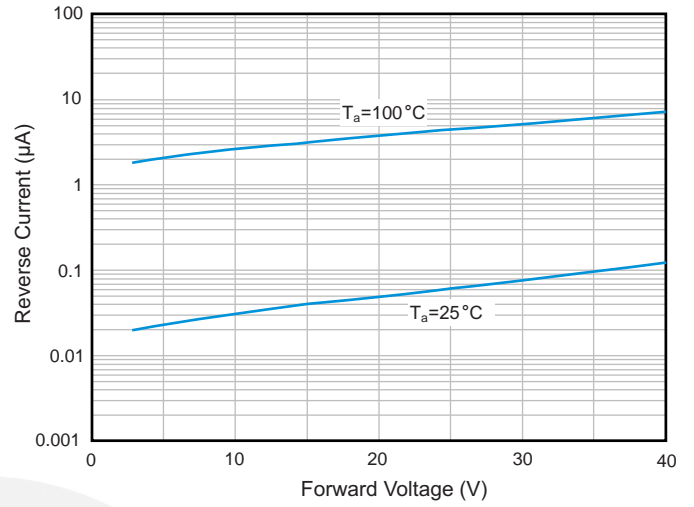
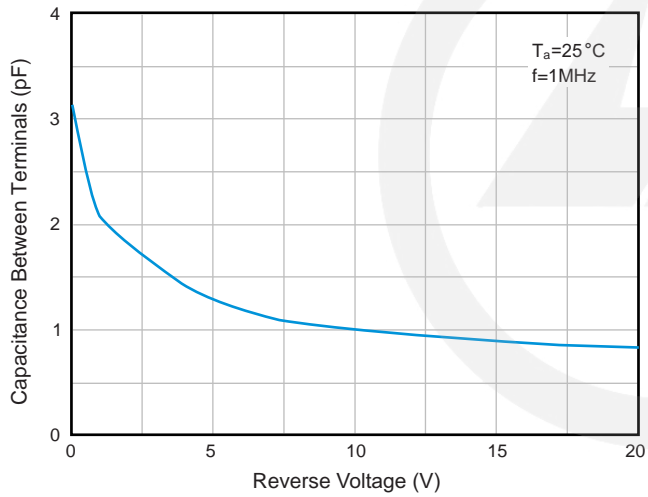
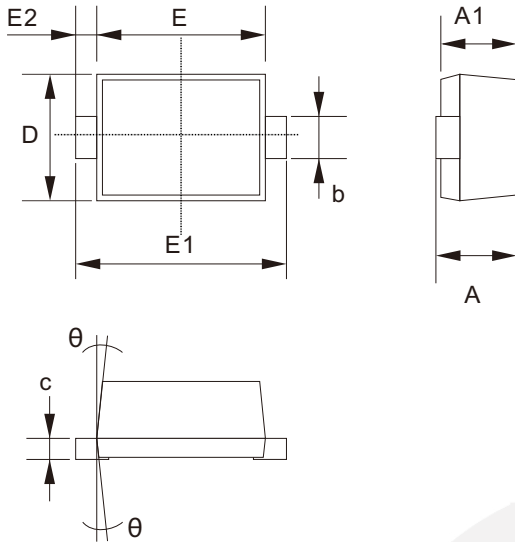


Fig.3 Capacitance Characteristics



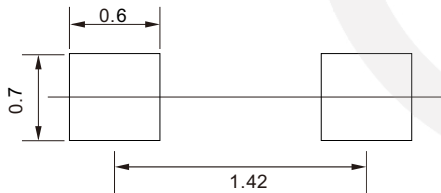
**SOD-523 Package Outline**

Unit: mm

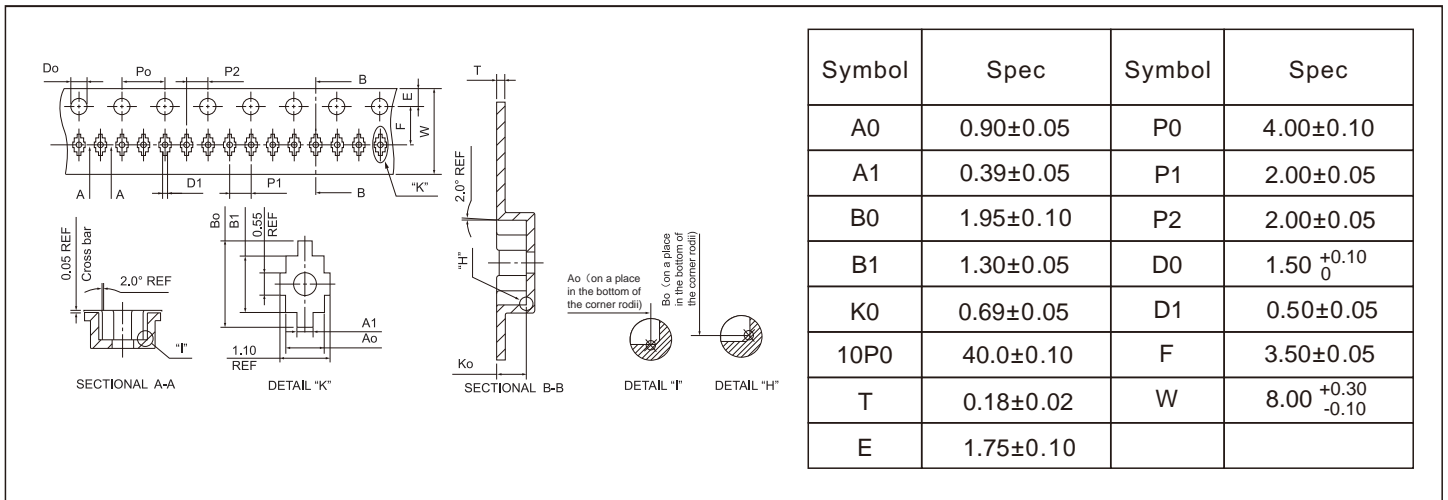
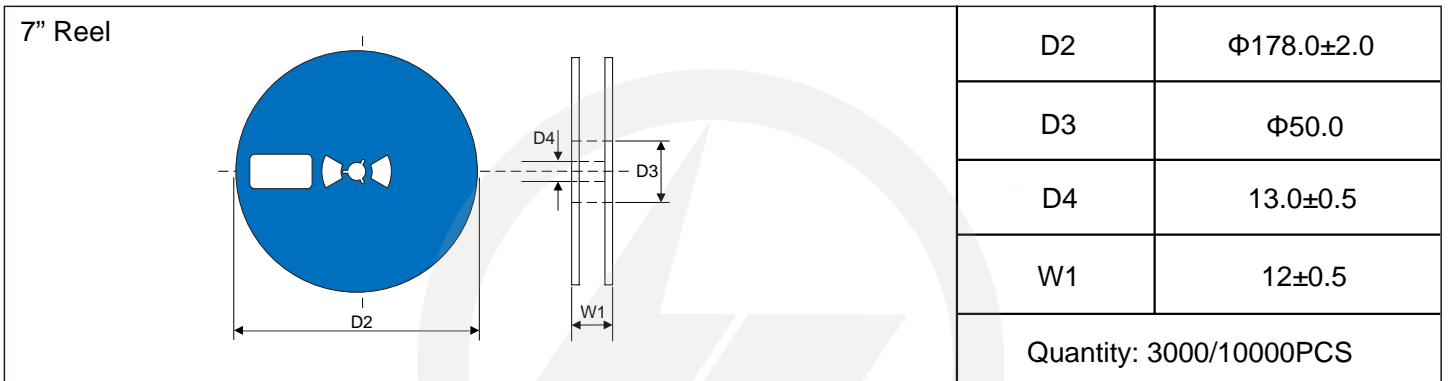
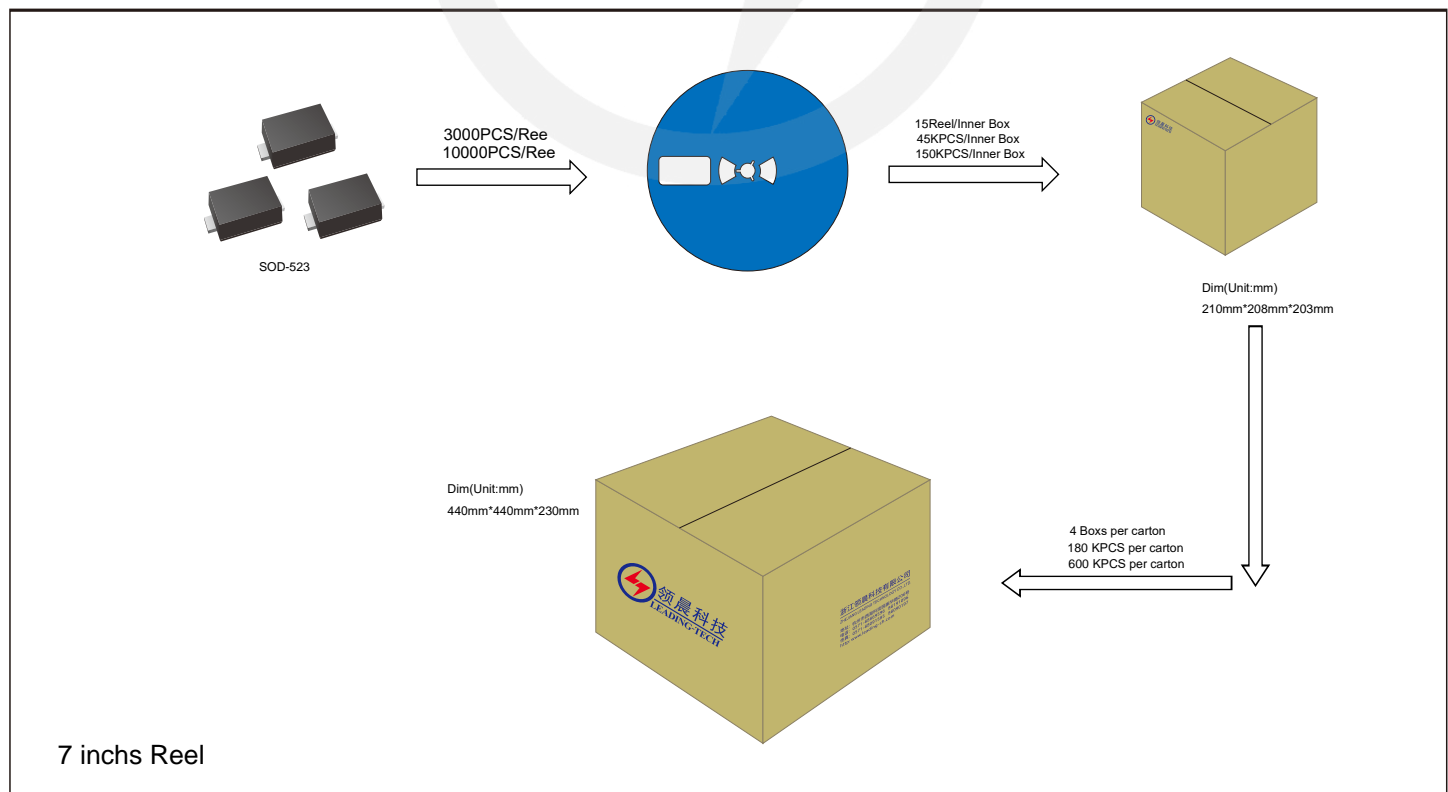


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.500	0.770
A1	0.500	0.700
b	0.250	0.380
c	0.070	0.200
D	0.700	0.900
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
θ	7° REF	

**SOD-523 Suggested Pad Layout**

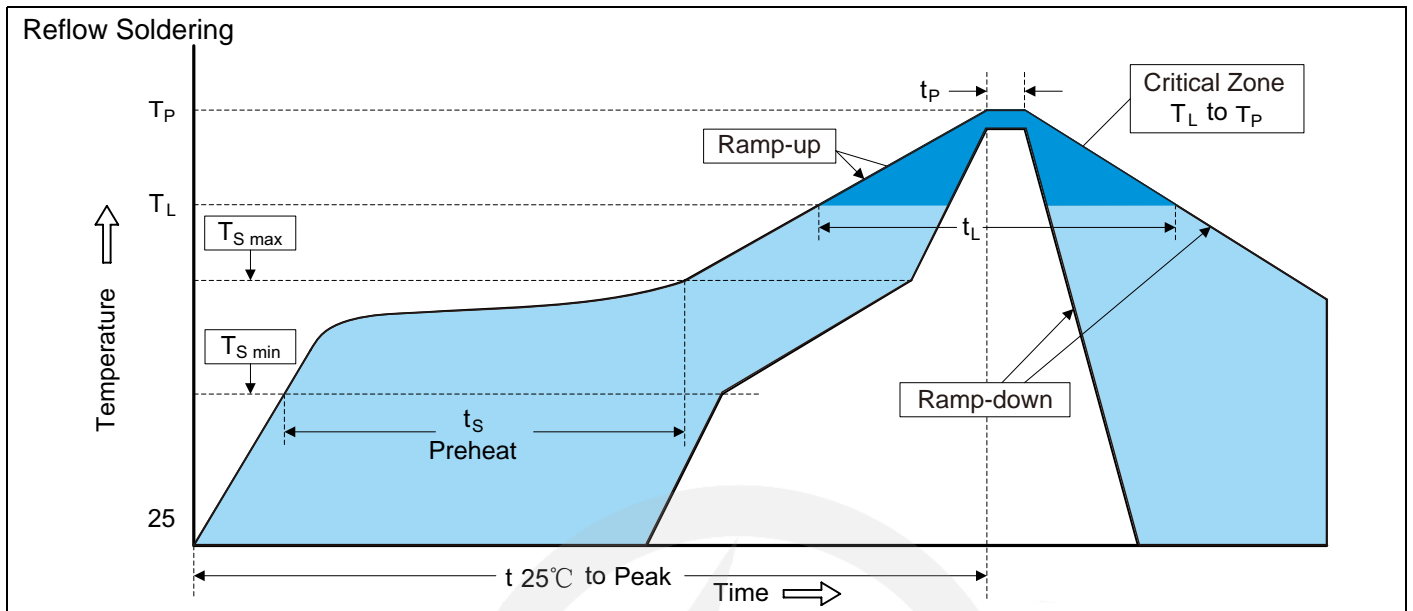


- Note:
1. Controlling dimension: in millimeters.
  2. General tolerance:  $\pm 0.05$  mm.
  3. The pad layout is for reference purposes only.

**Carrier Tape 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	2024.12.09	2024.12.09	3.0	New File	/	Ding	
02	2025.06.11	2025.06.11	3.1	Symbol modification	/	Ding	