

## Schottky Barrier Rectifiers

### Features

- Low Forward Voltage Drop
- Fast Switching Time
- Surface Mount Package Ideally Suited for Automated Insertion
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Data

- Case:SOD-523
- Polarity:Color band denotes cathode end

### Ordering Information

Part Number	Marking	Shipping	Reel
LTS40T-TR3	40	3000PCS Tape&Reel	7 inches
LTS40T-TR10	40	10000PCS Tape&Reel	7 inches

### Maximum Ratings and Electrical Characteristics

Parameter	Symbol	LTS40T	Unit
DC Reverse Voltage	$V_R$	40	V
Forward Continuous Current	$I_F$	200	mA
Power dissipation	$P_D$	150	mW
Breakdown Voltage	$I_R = 100\mu A$ $V_R$	40(Min)	V
Forward Voltage	$I_F = 1.0\text{ mA}$ $I_F = 40\text{ mA}$ $V_F$	0.38(Max) 1.00(Max)	V
Peak Reverse Current	$V_R = 30\text{ V}$ $I_R$	0.5(Max)	$\mu A$
Typical Junction Capacitance	$V_R = 0\text{ V}, f = 1\text{ MHz}$ $C_T$	5	pF
Reverse Recovery Time	$I_F = I_R = 5\text{ mA}$ , $I_{rr} = 0.1 \times I_R$ , $R_L = 100\Omega$ $t_{rr}$	5	ns
Junction Temperature	$T_j$	125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^{\circ}C$



### Characteristics Curves

Fig.1 Power Derating Curve

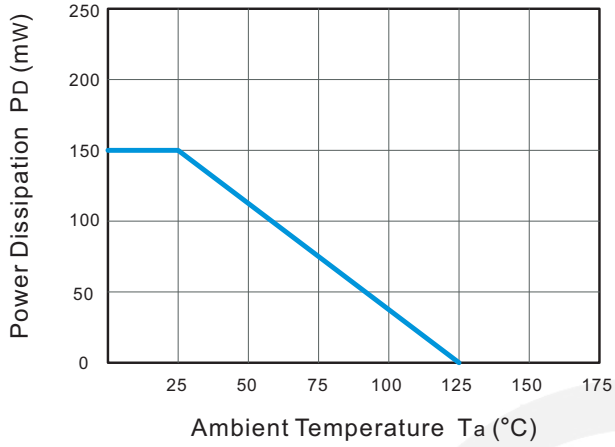


Fig.2 Typical Instantaneous Reverse Characteristics

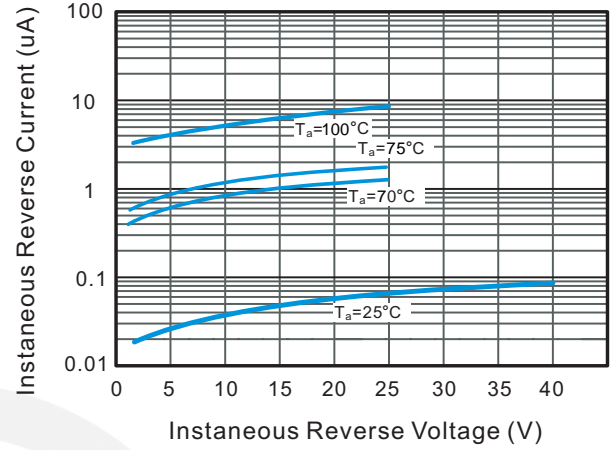


Fig.3 Typical Forward Characteristic

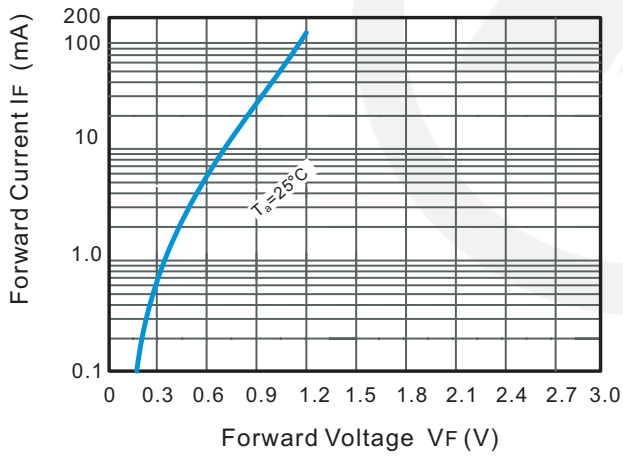
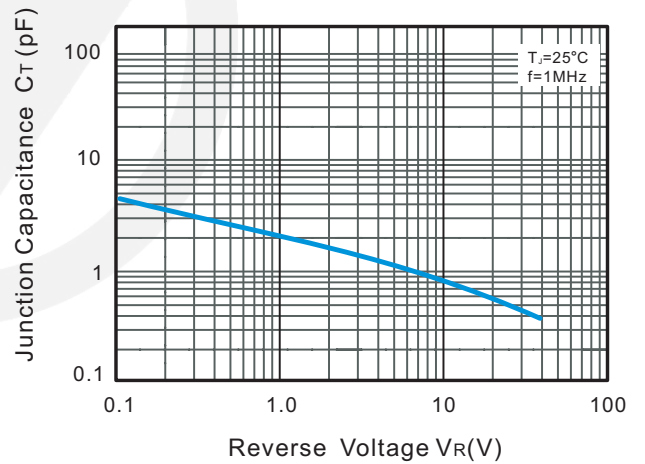
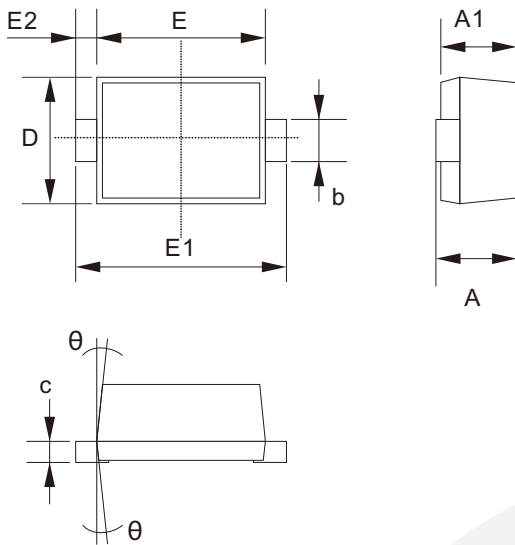


Fig.4 Typical Junction Capacitance



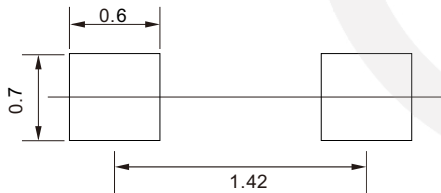
**SOD-523 Package Outline**

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	

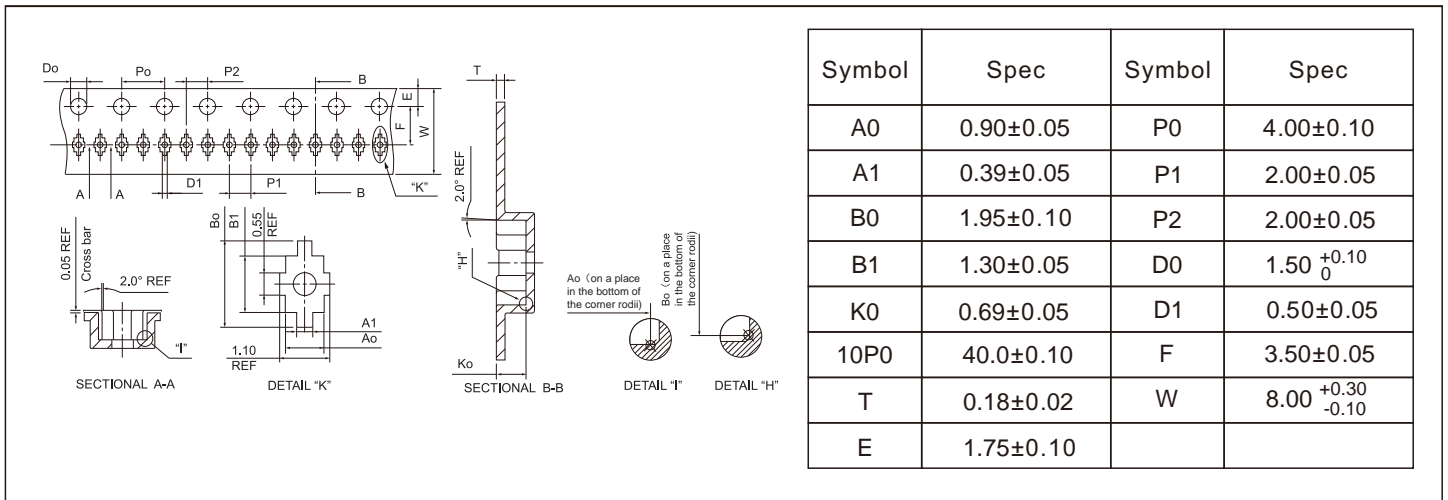
**SOD-523 Suggested Pad Layout**



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

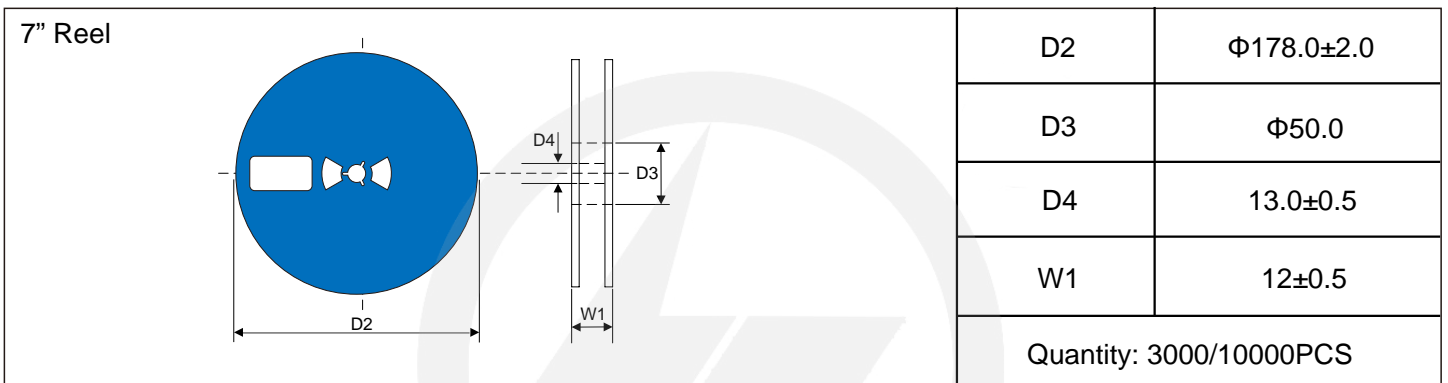
**Carrier Tape Dimensions**

Unit : mm

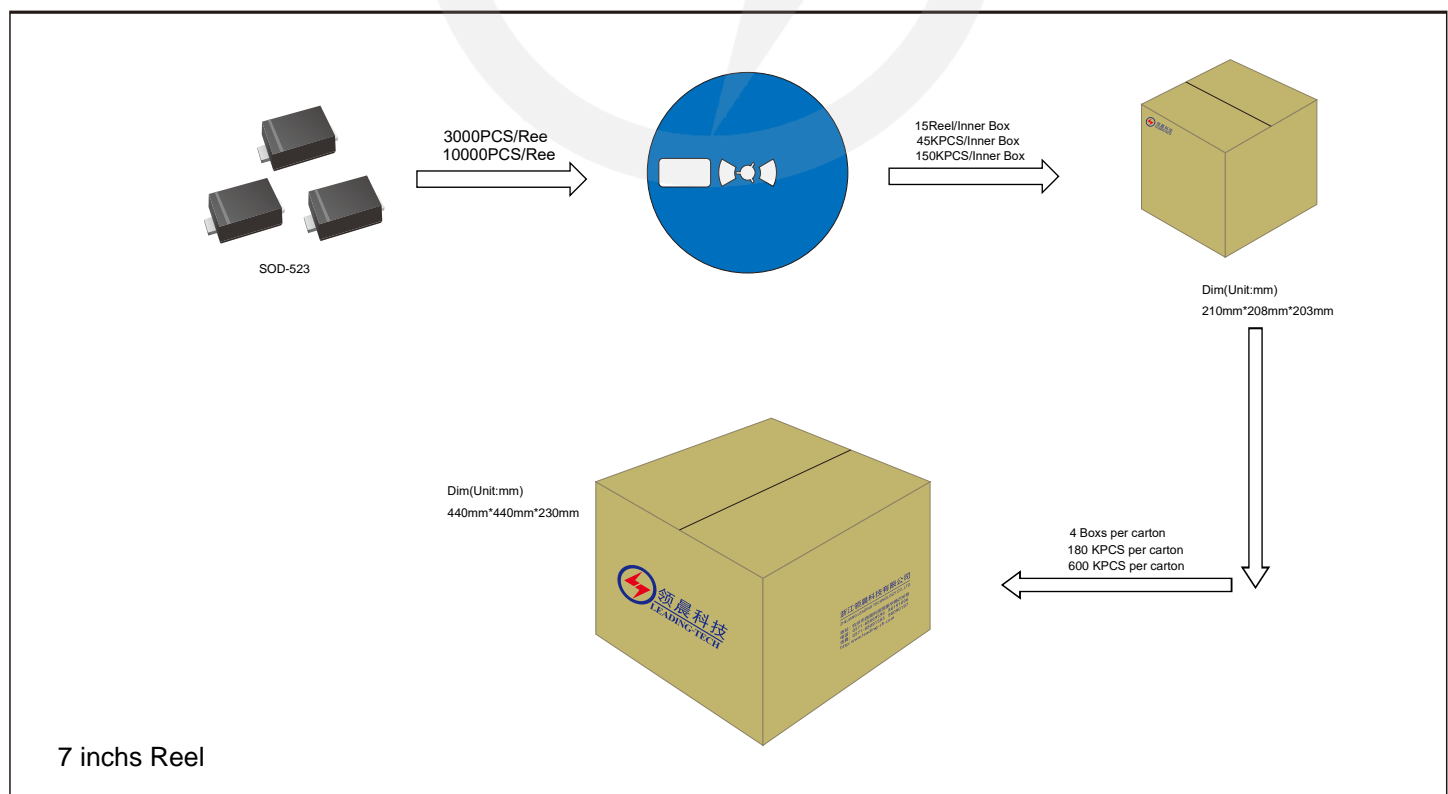


**Reel Dimensions**

Unit : mm

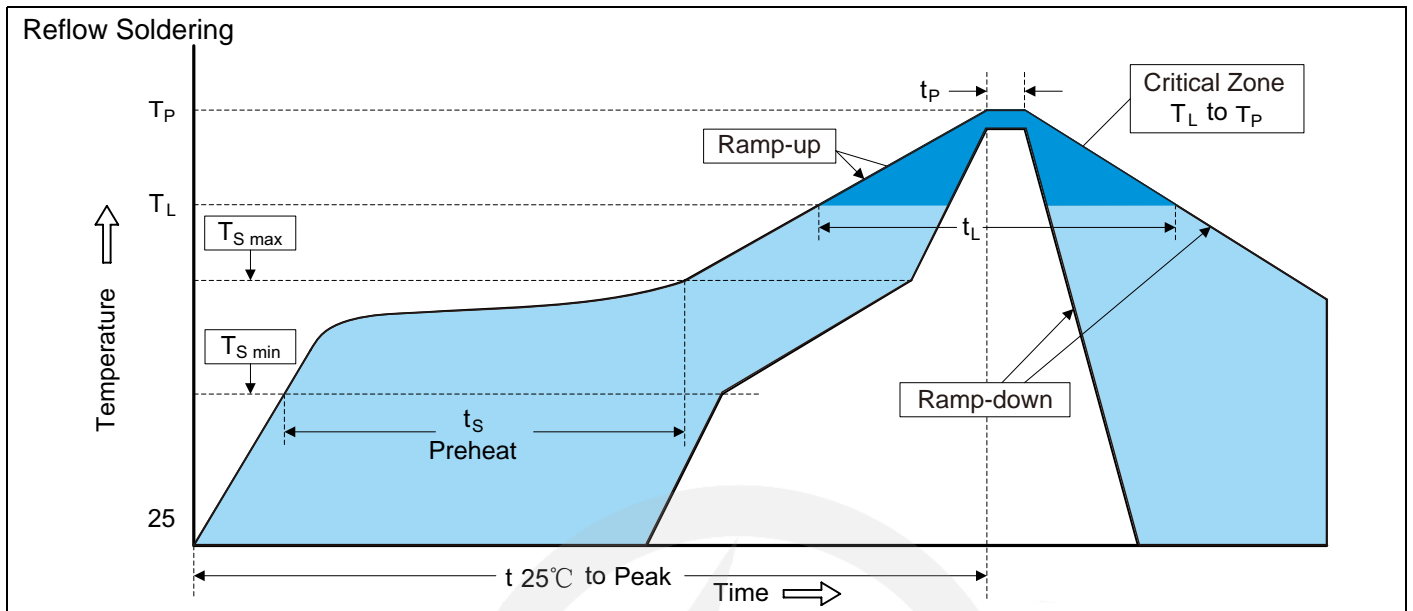


**Packaging**





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	2024.5.5	2024.5.5	3.0	New File	/	Ding	