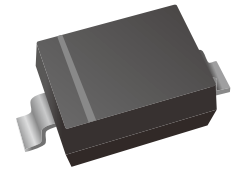


## Schottky Barrier Diode

### Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- Negligible Reverse Recovery Time
- Low Capacitance
- Lead free in comply with EU RoHS 2011/65/EU directives



### Mechanical Date

- Case:SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes cathode end

### Ordering Information

Part Number	Marking	Shipping	Reel
LT103AST-TR3	S4	3000PCS Tape&Reel	7 inches
LT103AST-TR12	S4	12000PCS Tape&Reel	13 inches

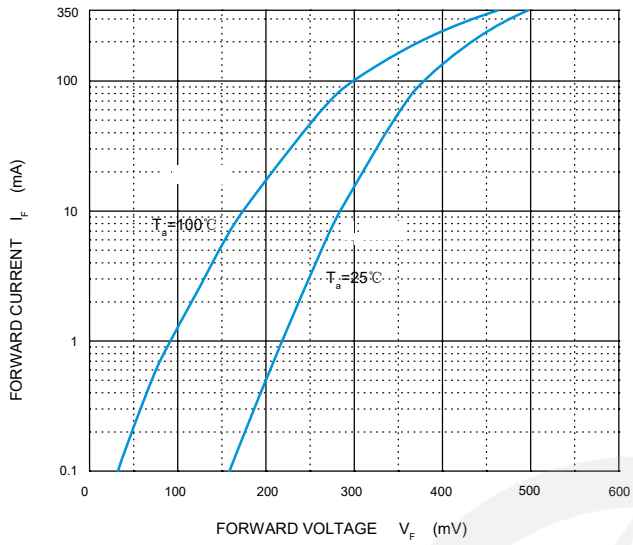
### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

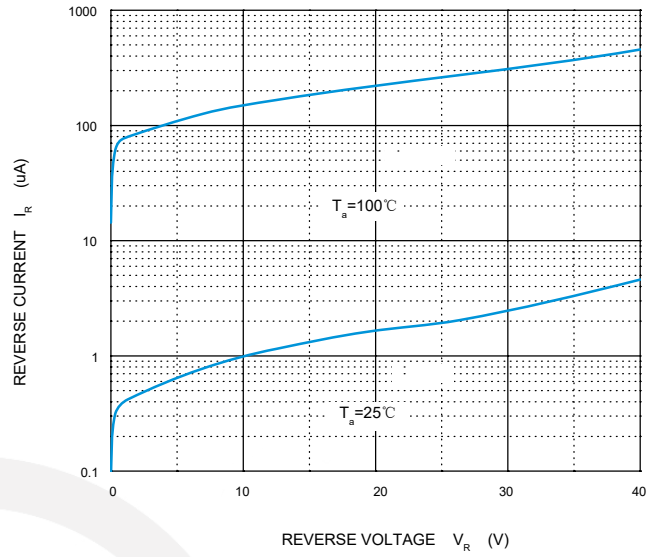
Parameter	Symbol	LT103AST	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	40	V
RMS reverse voltage	$V_{RMS}$	28	V
Working Peak Reverse Voltage	$V_{DC}$	40	V
Peak Forward Surge Current, 1.0s single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	1.5	A
Maximum Instantaneous Forward Voltage	$V_F$	0.37 0.60	V
Power Dissipation	$P_D$	200	mW
Reverse current	$I_R$	5	$\mu A$
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	500	$^{\circ}C/W$
Reverse voltage	$V_{(BR)}$	40	V
Reverse recovery time	$t_{rr}$	10	ns
Forward Continuons Current	$I_{FM}$	350	mA
Total capacitance	$C_{tot}$	50	pF
Junction temperature	$T_j$	-55 ~ +150	$^{\circ}C$
Storage temperature	$T_{stg}$	-55 ~ +150	$^{\circ}C$

**Characteristics Curves**

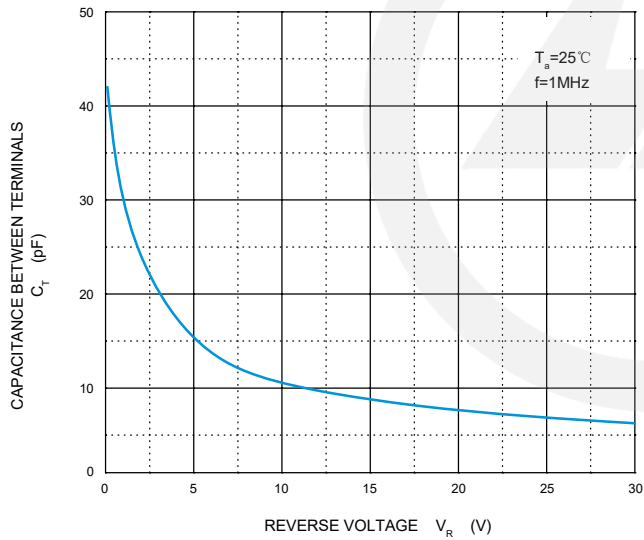
**Fig.1 Forward Characteristics**



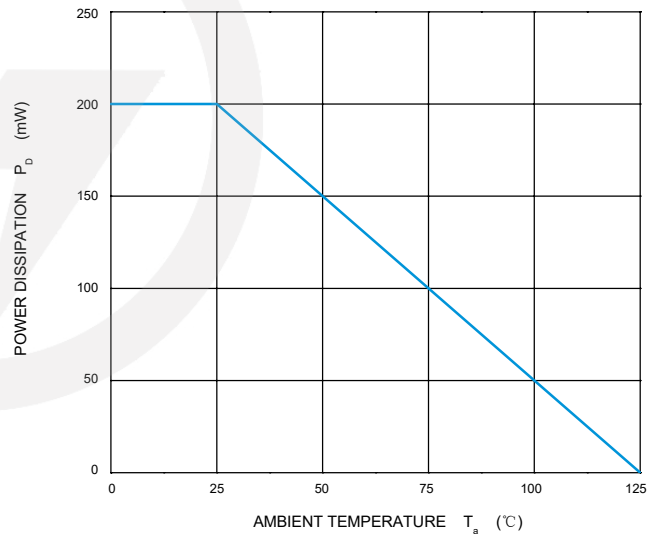
**Fig.2 Reverse Characteristics**



**Fig.3 Capacitance Characteristics**



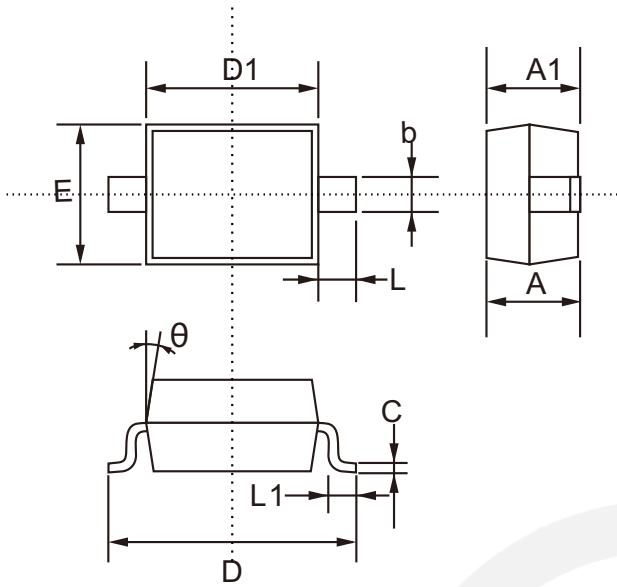
**Fig.4 Power Derating Curve**





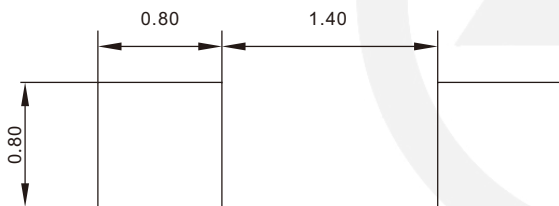
### SOD-323 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L1	0.100	0.400
L	0.475 TYP.	
$\theta$	8°	

### SOD-323 Suggested Pad Layout

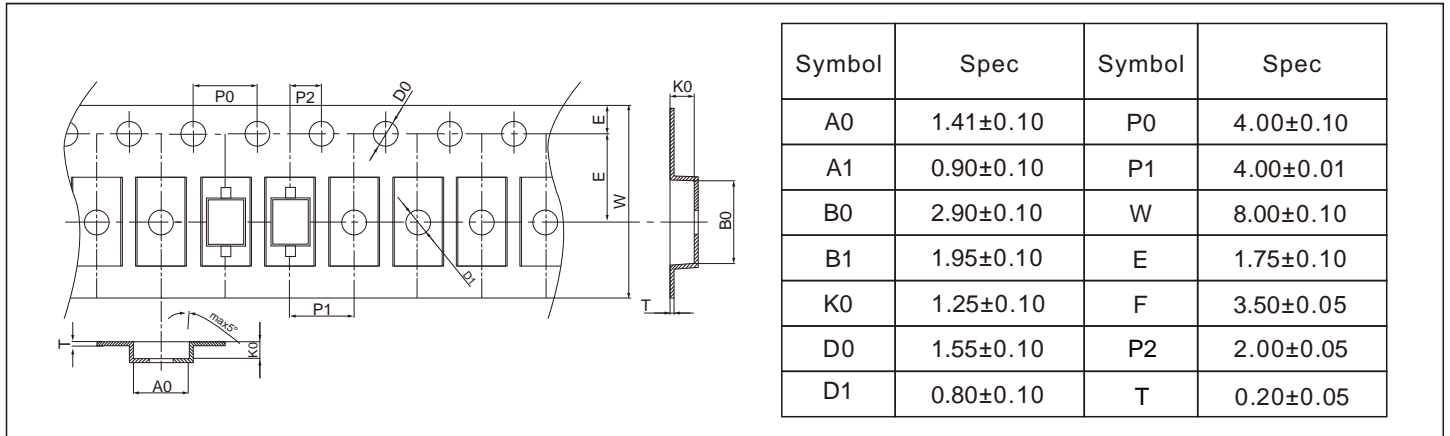


**Note:**

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

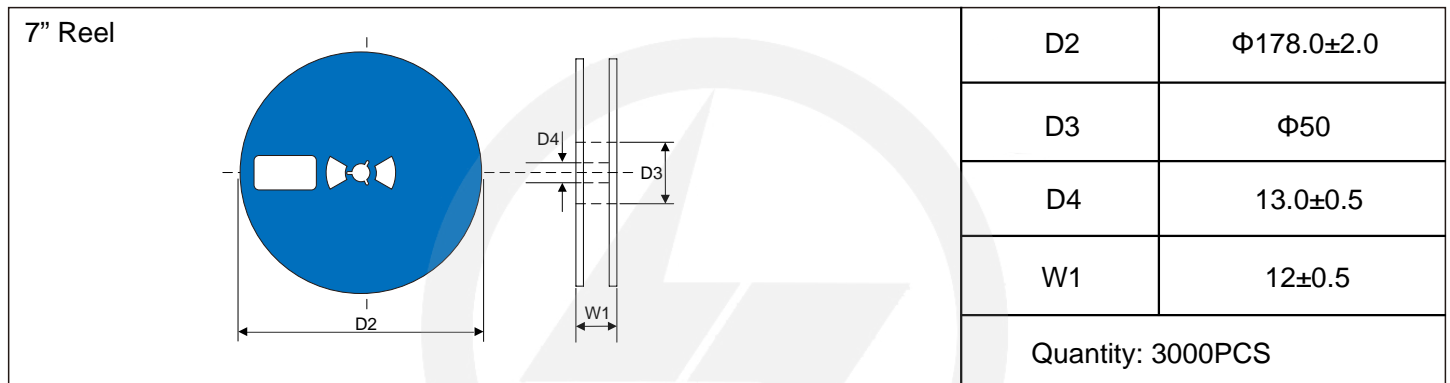
## Carrier Tape Dimensions

Unit : mm



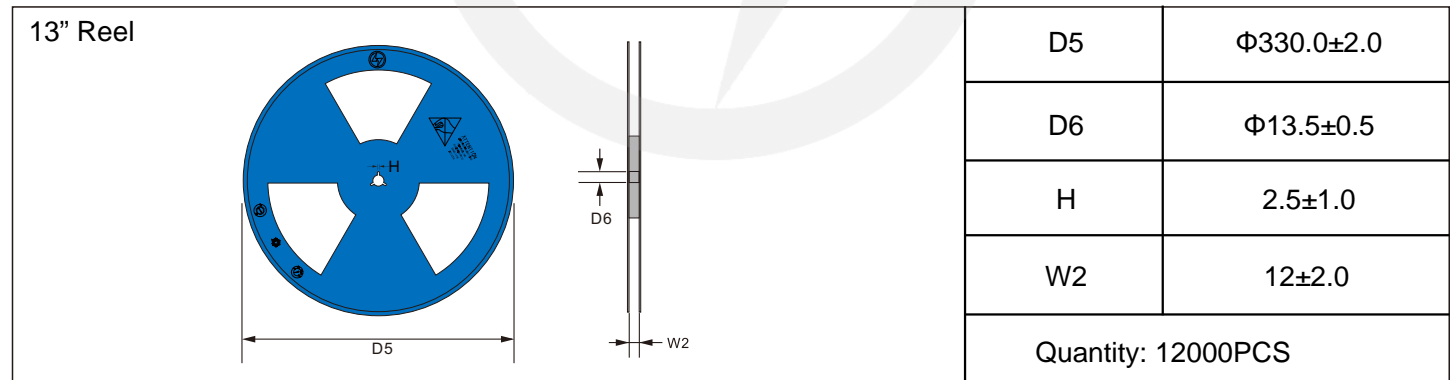
## Reel Dimensions

Unit : mm

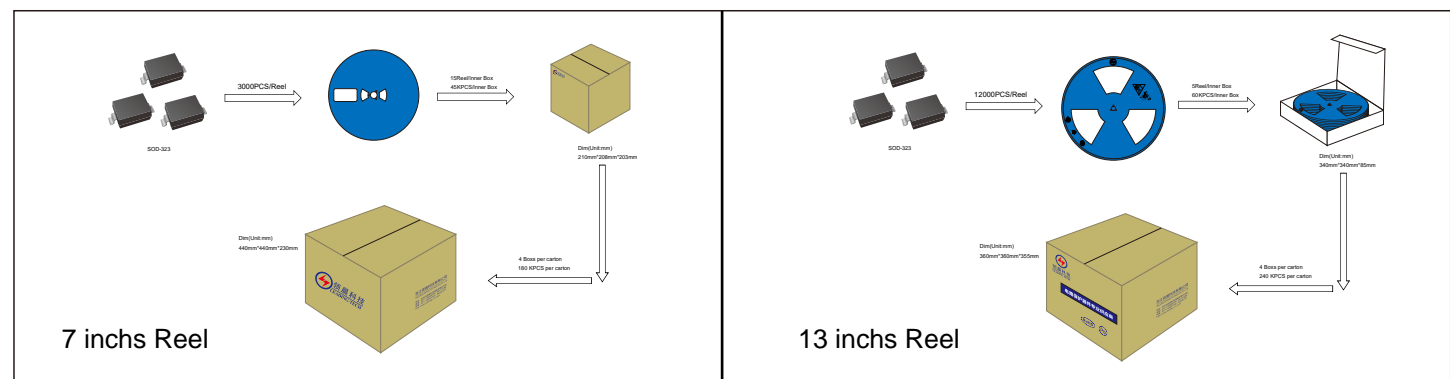


## Reel Dimensions

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	2024.5.12	2024.5.12	3.0	New File	/	Ding	