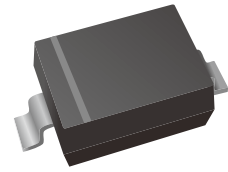


## Surface Mount Schottky Barrier Rectifier

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

### Ordering Information

Part Number	Marking	Shipping	Reel
LT40S-TR3	43	3000PCS Tape&Reel	7 inches
LT40S-TR12	43	12000PCS Tape&Reel	13 inches

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

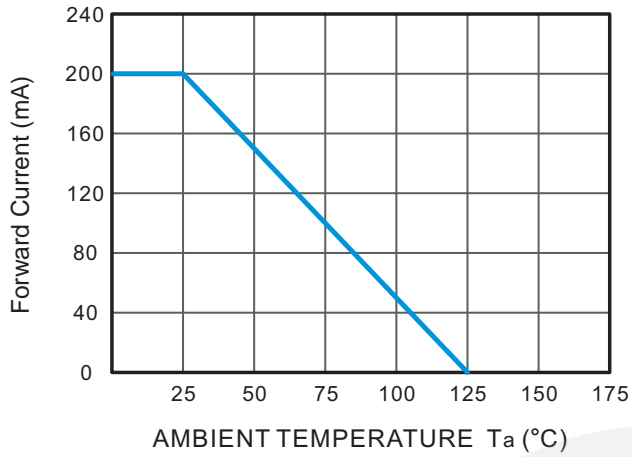
Parameter	Symbol	LT40S	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	40	V
RMS Reverse Voltage	$V_{R(RMS)}$	28	V
Forward Continuous Current	$I_F$	0.2	A
Non-Repetitive Peak Forward Surge Current @t = 8.3ms	$I_{FSM}$	0.6	A
Power dissipation	$P_D$	200	mW
Reverse Breakdown Voltage	$V_{BR}$	40	V
	$I_R = 10\mu A$		
Forward Voltage (Note2)	$V_F$	0.38 0.50 1.0	V
	$I_F = 1.0mA$ $I_F = 10 mA$ $I_F = 40 mA$		
Peak Reverse Current	$I_R$	0.2	$\mu A$
	$V_{R1} = 30V, T_j = 25^\circ C$		
Typical Junction Capacitance	$C_T$	5.0	pF
	$V_R = 0V, f = 1MHz$		
Reverse Recovery Time	$t_{rr}$	5	ns
	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R,$ $R_L = 100\Omega$		
Thermal Resistance, Junction to Ambient Air (Note1)	$R_{\theta JA}$	500	$^\circ C/W$
Junction Temperature	$T_j$	125	$^\circ C$
Storage Temperature	$T_{stg}$	-55 ~ +150	$^\circ C$

Notes: 1. Part mounted on FR-4 board with recommended pad layout.  
2. Short duration pulse test used to minimize self-heating effect.

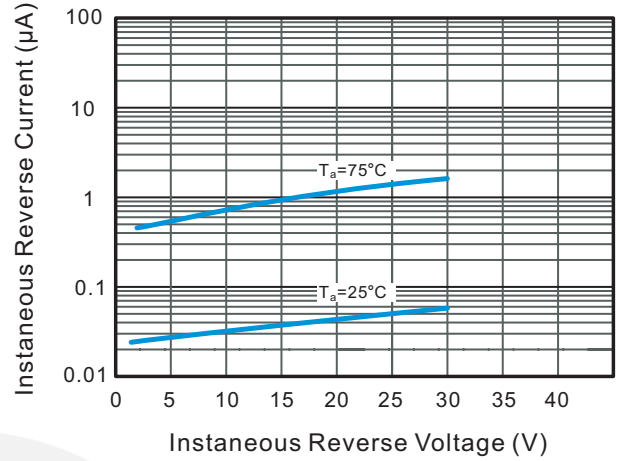


### Characteristics Curve

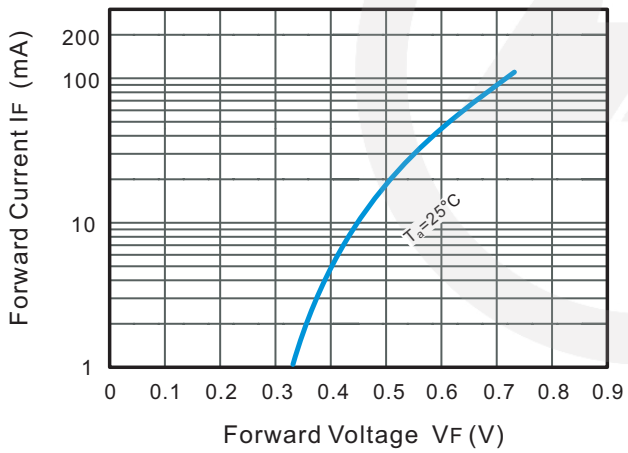
**Fig.1 Forward Current Derating Curve**



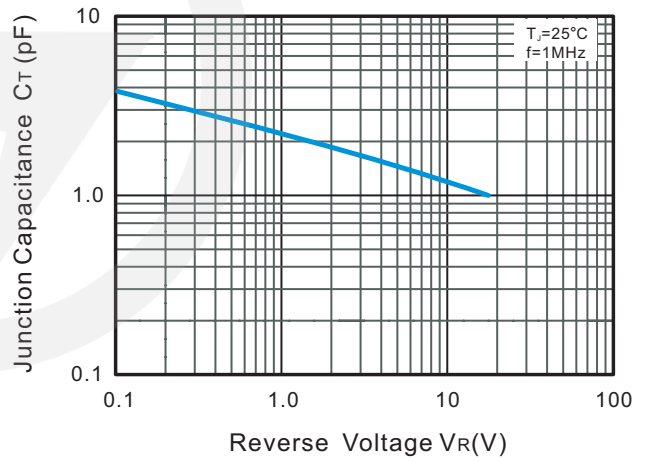
**Fig.2 Typical Instantaneous Reverse Characteristics**



**Fig.3 Typical Forward Characteristic**

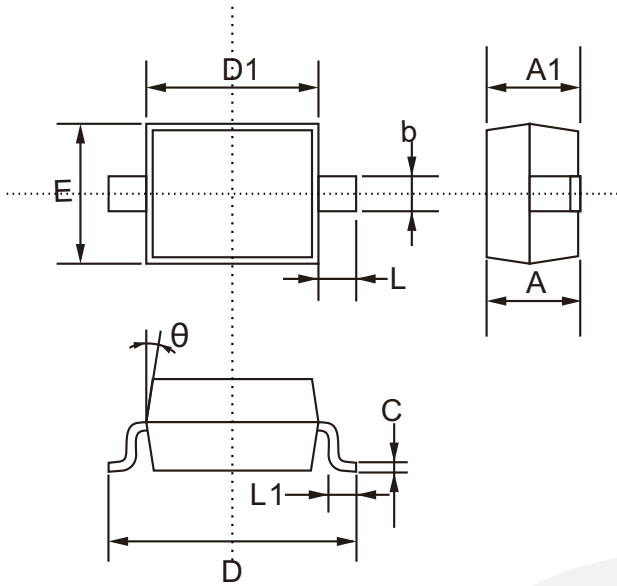


**Fig.4 Typical Junction Capacitance**



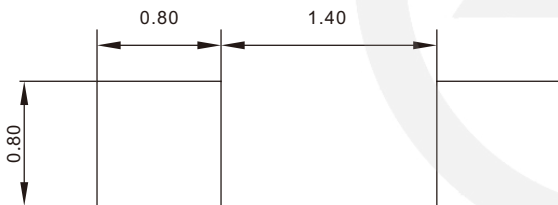
**SOD-323 Package Outline**

Unit: mm

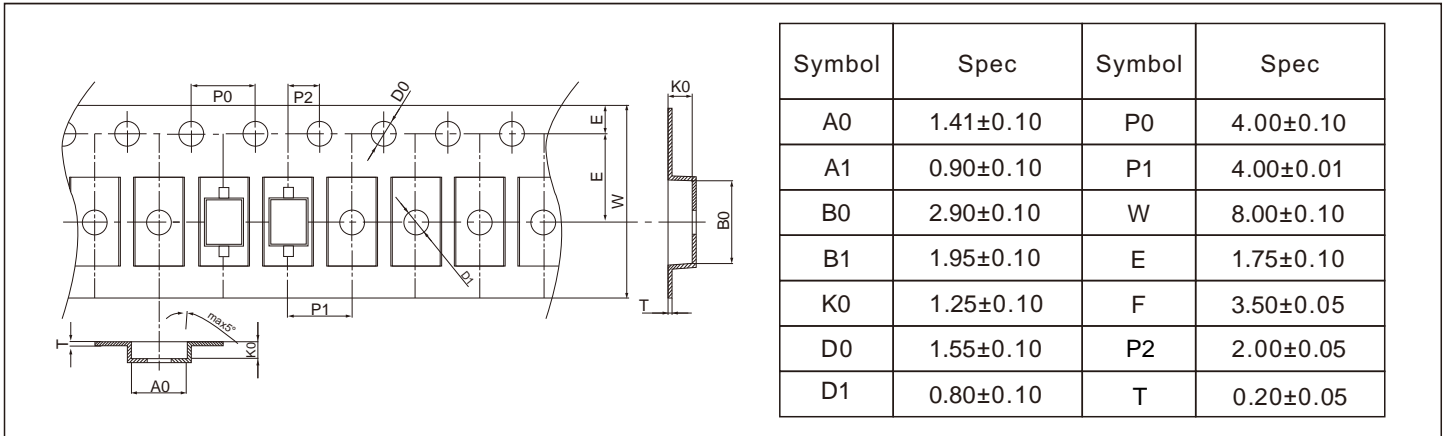
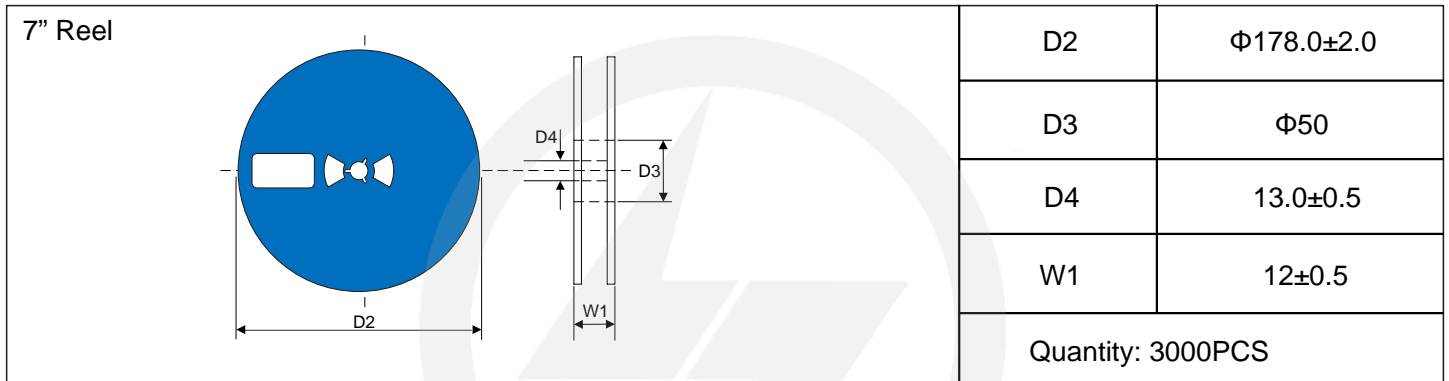
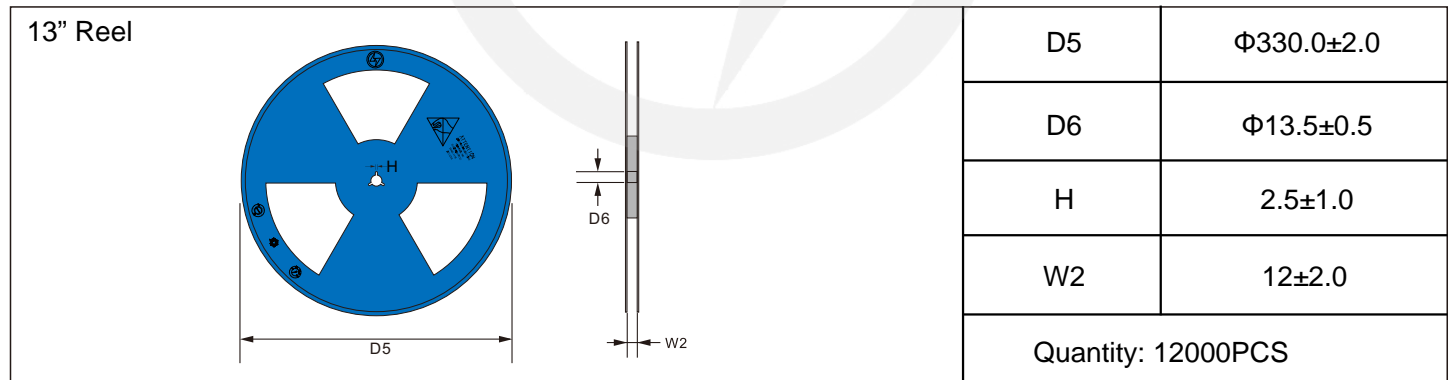
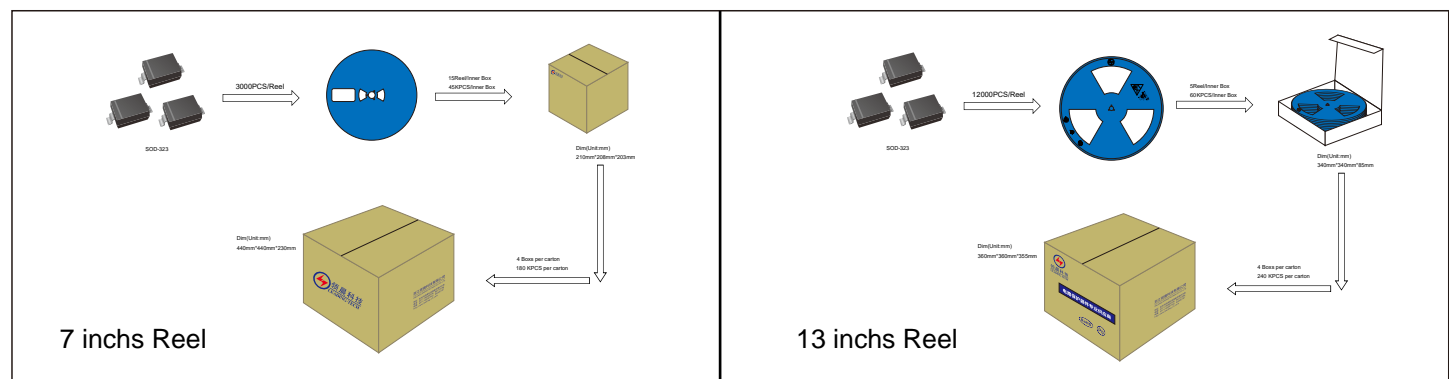


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L1	0.100	0.400
L	0.475 TYP.	
$\theta$	8°	

**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	2024.4.19	2024.4.19	3.0	New File	/	Ding	