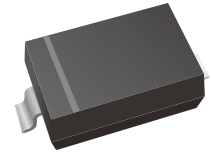


## Surface Mount Schottky Barrier Rectifier

### Features

- High Current Capability
- Low Forward Voltage Drop



### Mechanical Data

- Case: SOD-123
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any



### Ordering Information

Part Number	Marking	Shipping	Reel
LT54W-TR3	L9 or L4	3000PCS Tape&Reel	7 inches
LT54W-TR12	L9 or L4	12000PCS Tape&Reel	13 inches

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameters	Symbol	Limit	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	30	V
Maximum RMS voltage	$V_{RMS}$	21	V
Maximum DC blocking voltage	$V_{DC}$	30	V
Maximum average forward rectified current	$I_o$	200	mA
Peak forward surge current 8.3 ms single half sine-wave	$I_{FSM}$	600	mA
Typical thermal resistance	$R_{\theta JA}$	250	°C/W
Storage temperature range	$T_{STG}$	-50 ~ +125	°C

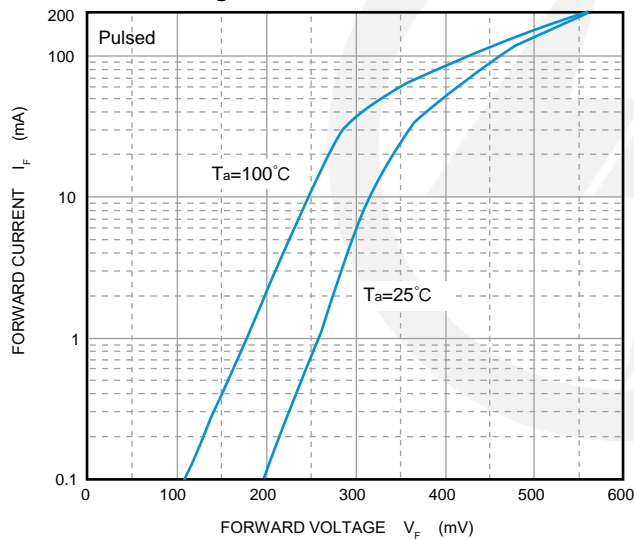
## Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

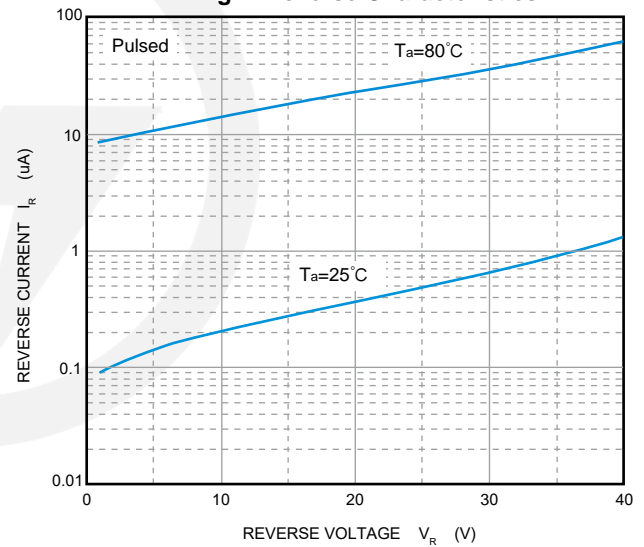
Parameters	Symbol	Test conditions	Min	Typ	Max	Unit
Maximum forward voltage	VF1	IF = 0.1mA			240	mV
	VF2	IF = 1.0mA			320	
	VF3	IF = 10mA			400	
	VF4	IF = 30mA			500	
	VF5	IF = 100mA			1000	
Maximum reverse breakdown voltage	VR	IR=100uA	30			V
Maximum reverse current	IR	VR=25V			2.0	uA
Type junction capacitance	Cj	VR = 1.0V, f = 1MHz		10		pF

## Characteristics Curve

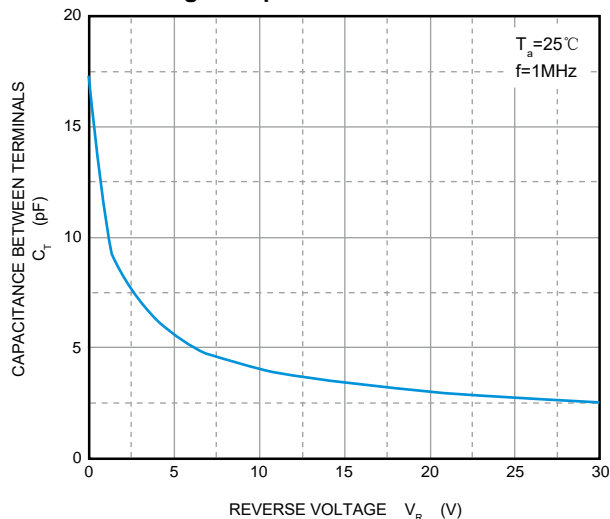
**Fig.1 Forward Characteristics**



**Fig.2 Reverse Characteristics**

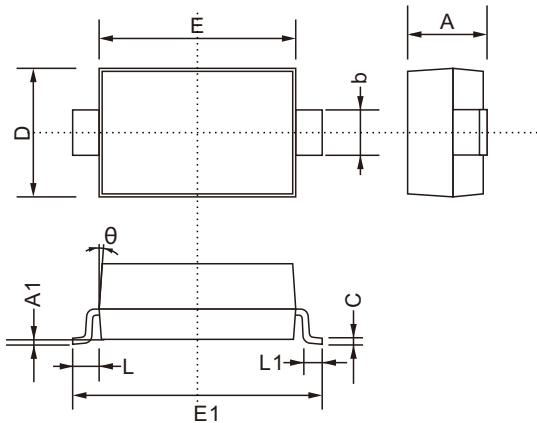


**Fig.3 Capacitance Characteristics**



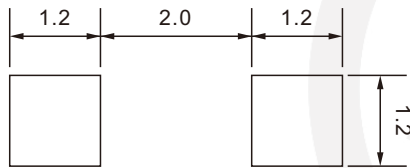
**SOD-123 Package Outline**

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.300
A1	0.000	0.200
b	0.450	0.750
C	0.080	0.230
D	1.500	1.800
E	2.500	2.800
E1	3.550	3.900
L1	0.250	0.450
L	0.5REF	
θ	8°	

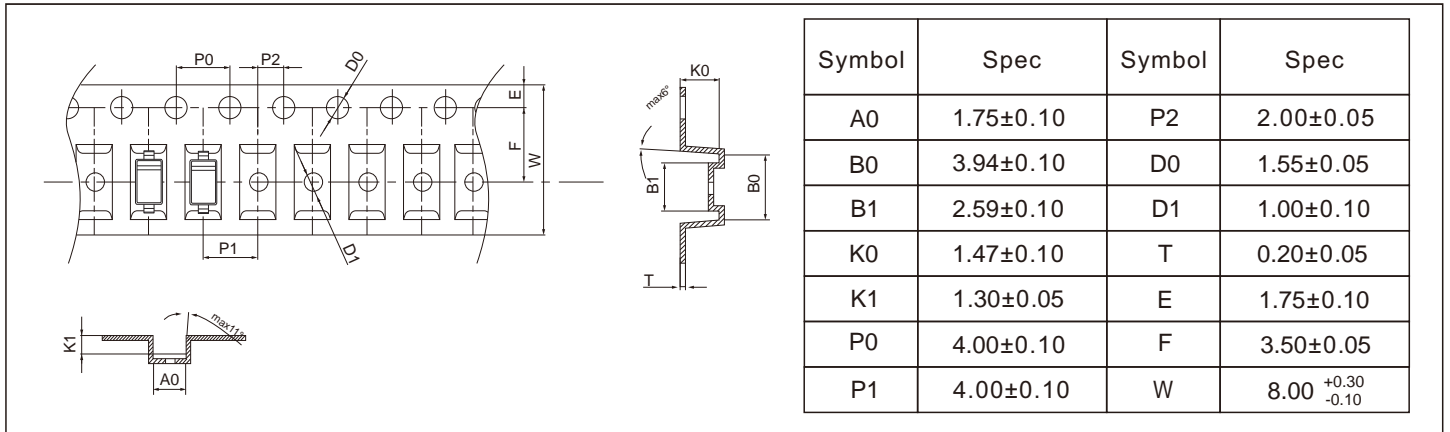
**SOD-123 Suggested Pad Layout**



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

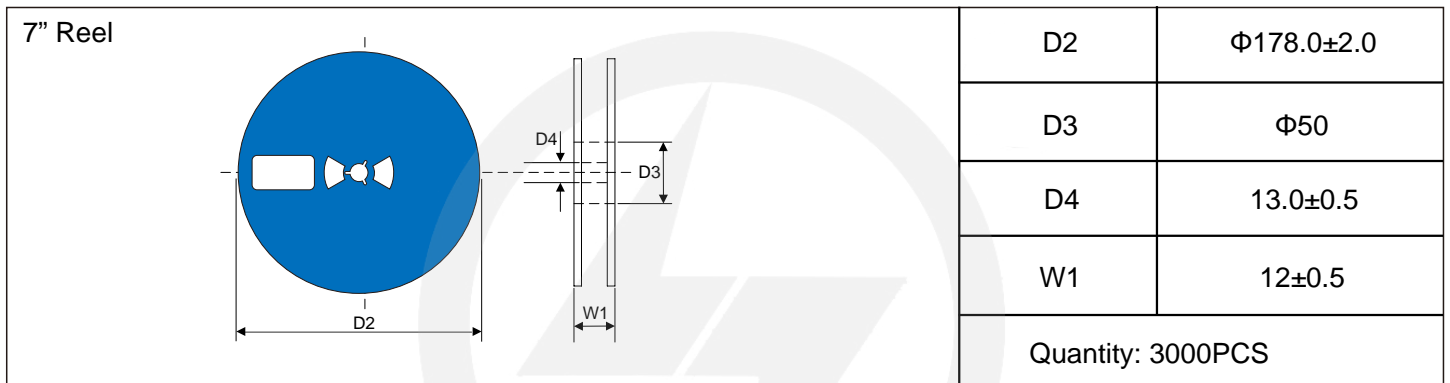
**Carrier Tape Dimensions**

Unit : mm



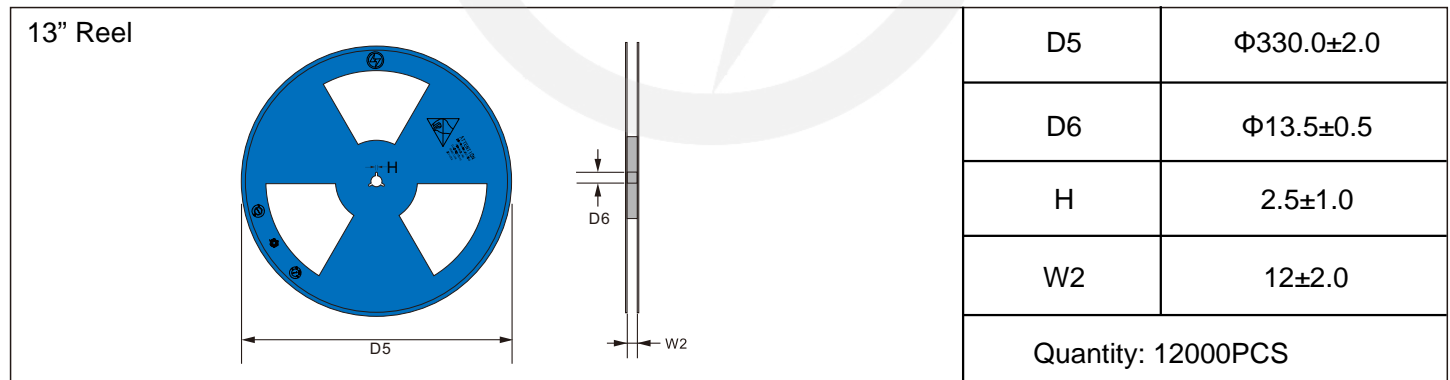
**Reel Dimensions**

Unit : mm

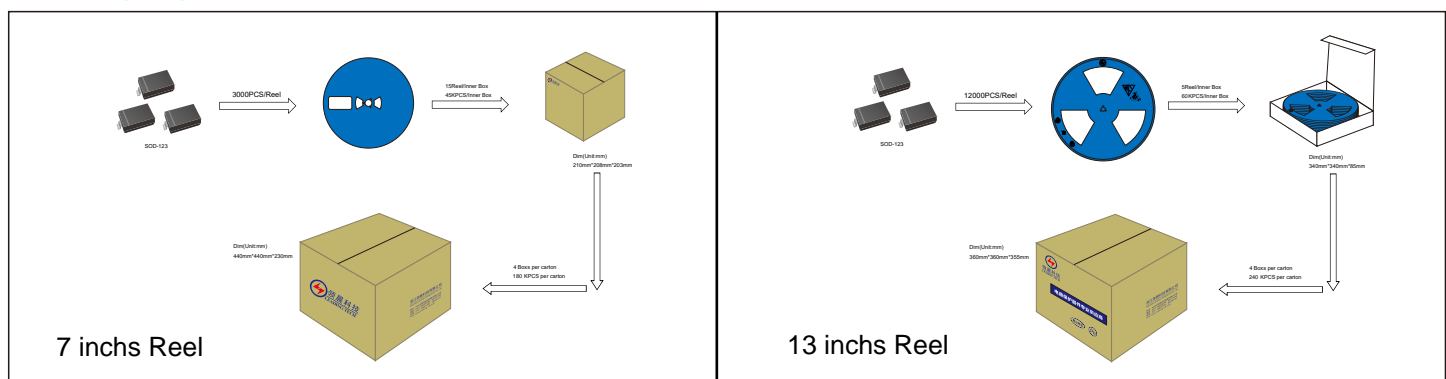


**Reel Dimensions**

Unit : mm



**Packaging**





## Recommended Soldering Conditions



### Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate ( $T_L$ to $T_P$ )	3°C/second max.
Preheat	
-Temperature Min ( $T_{S\ min}$ )	150°C
-Temperature Max ( $T_{S\ max}$ )	200°C
-Time (min to max) ( $t_s$ )	60-180 seconds
$T_{S\ max}$ to $T_L$	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature ( $T_L$ )	217°C
-Time ( $t_L$ )	60-150 seconds
Peak Temperature ( $T_P$ )	260°C
Time within 5°C of actual Peak Temperature ( $t_p$ )	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	2024.10.21	2024.10.21	3.0	New File	/	Ding	
02	2025.06.11	2025.06.11	3.1	Update packaging information	/	Ding	
03	2026.02.06	2026.02.06	3.2	Modify high temperature curve	/	Ding	