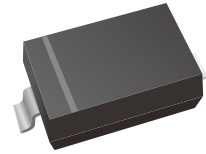


Features

- For surface mounted applications
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end

Ordering Information

Part Number	Shipping	Reel
LT19W THRU LT21W -TR3	3000PCS Tape&Reel	7inchs
LT19W THRU LT21W -TR12	12000PCS Tape&Reel	13inchs

Maximum Ratings ($T_a=25$ unless otherwise noted)

Parameter	Symbols	LT19W	LT20W	LT21W	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	120	200	250	V
RMS Reverse Voltage	V_{RMS}	71	106	141	V
Average Rectified Output Current	I_o	200			mA
Repetitive Peak Forward Current	I_{FRM}	625			mA
Non-repetitive Peak Forward Surge Current @ $t < 8.3\text{ms}$	I_{FSM}	2			A
Total Power Dissipation	P_{tot}	500			mW
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150			°C

Electrical characteristics ($T_a=25$ unless otherwise specified)

Parameter	Symbol	LT19W	LT20W	LT21W	Unit
Reverse Breakdown Voltage at $I_R=100\mu\text{A}$	$V_{(BR)R}$	120	200	250	V
Maximum Forward Voltage at 100 mA at 200 mA	V_F	1.00 1.25			V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage	I_R	0.1			μA
Typical Junction Capacitance at $V_R=0\text{V}$, $f=1\text{MHz}$	C_j	5			pF
Maximum Reverse Recovery Time (Note1)	t_{rr}	50			ns

Note : (1) Measured with $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$



Characteristics Curves

Fig.1 Power Derating Curve

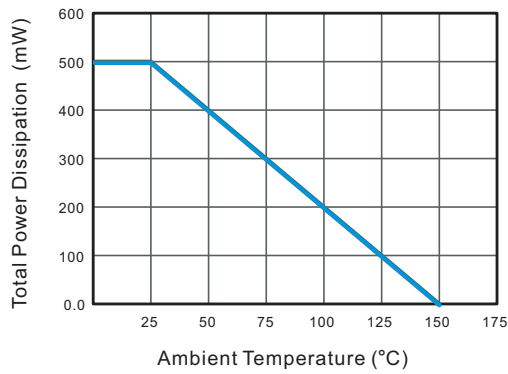


Fig.2 Typical Reverse Characteristics

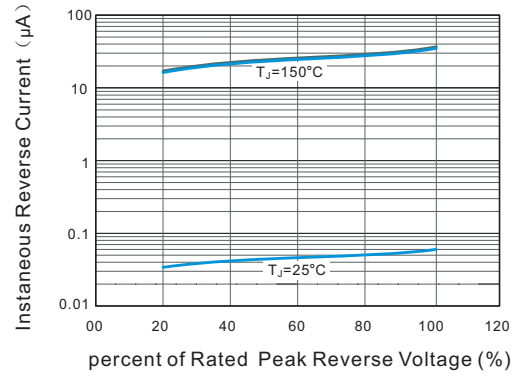


Fig.3 Typical Instantaneous Forward Characteristics

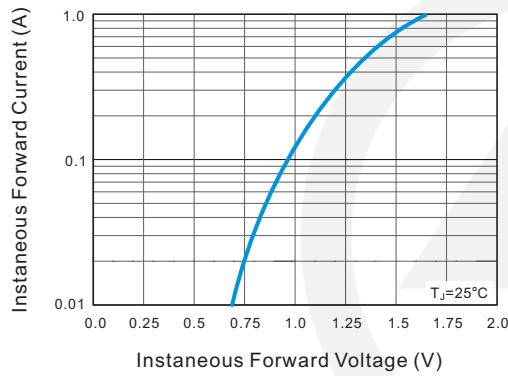
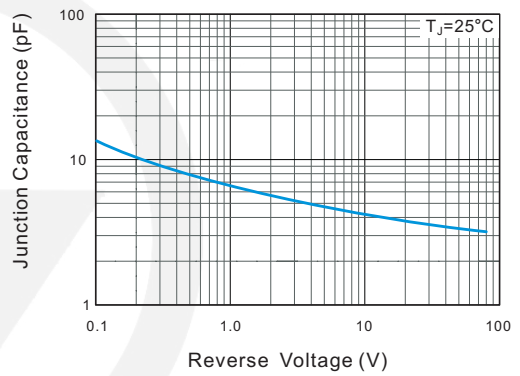
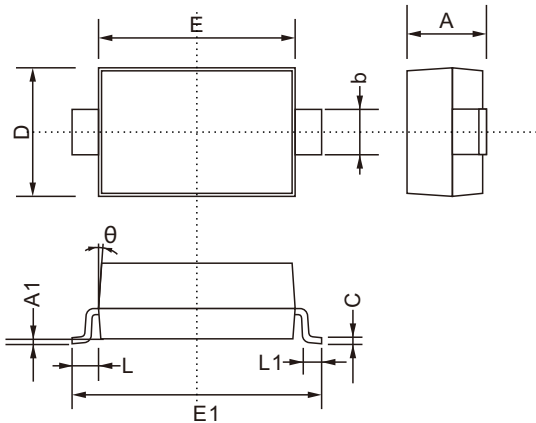


Fig.4 Typical Junction Capacitance



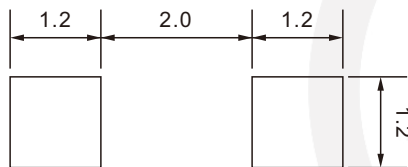
SOD-123 Package Outline

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



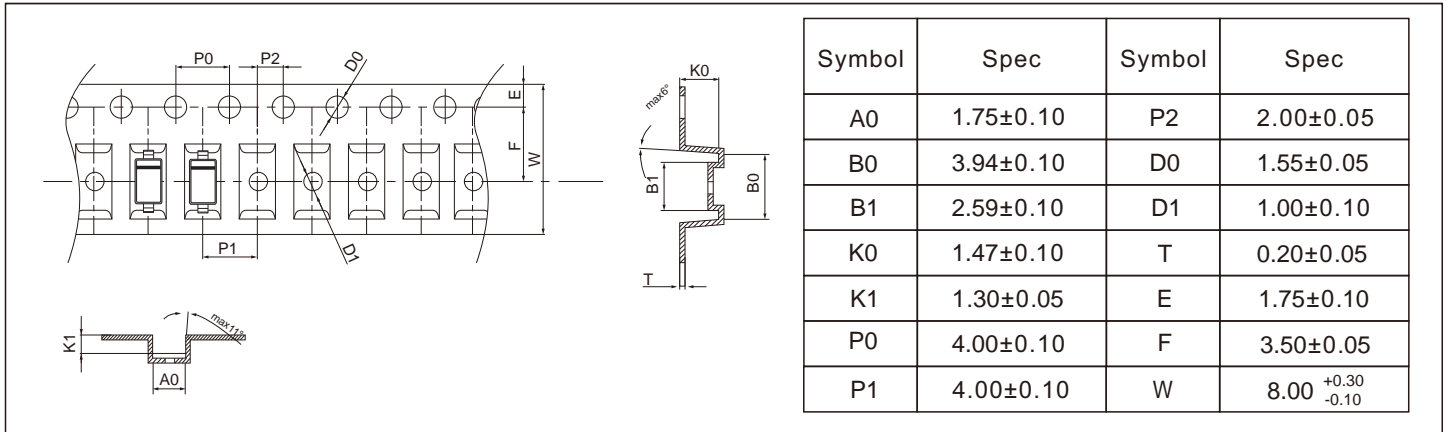
Note:

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

Marking

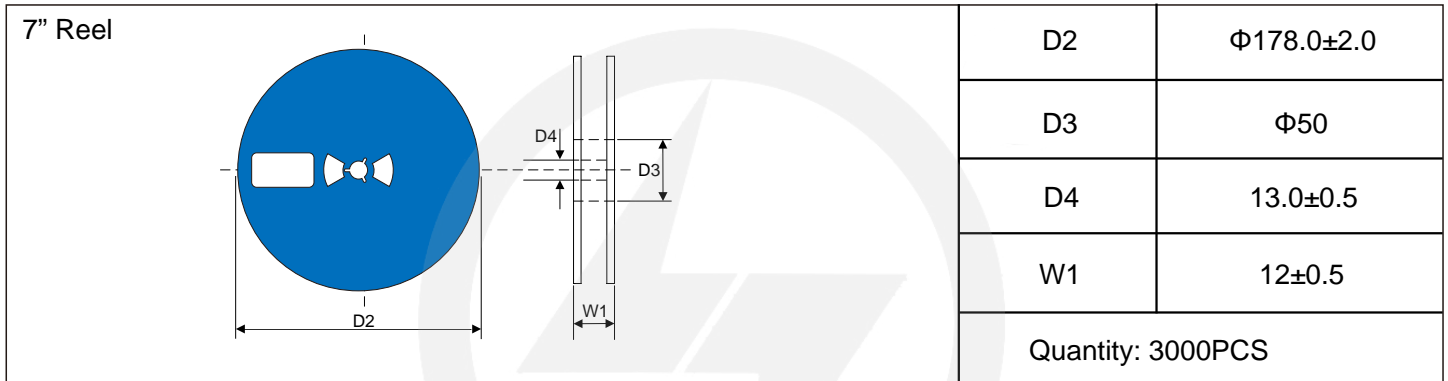
Type number	Marking code
LT19W	A8
LT20W	T2
LT21W	T3

Carrier Tape Dimensions



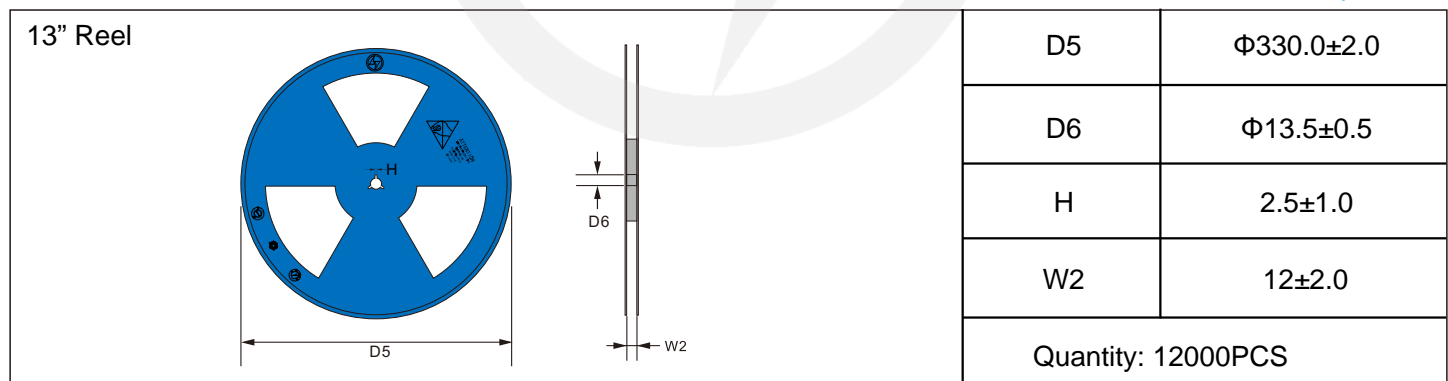
Reel Dimensions

Unit : mm

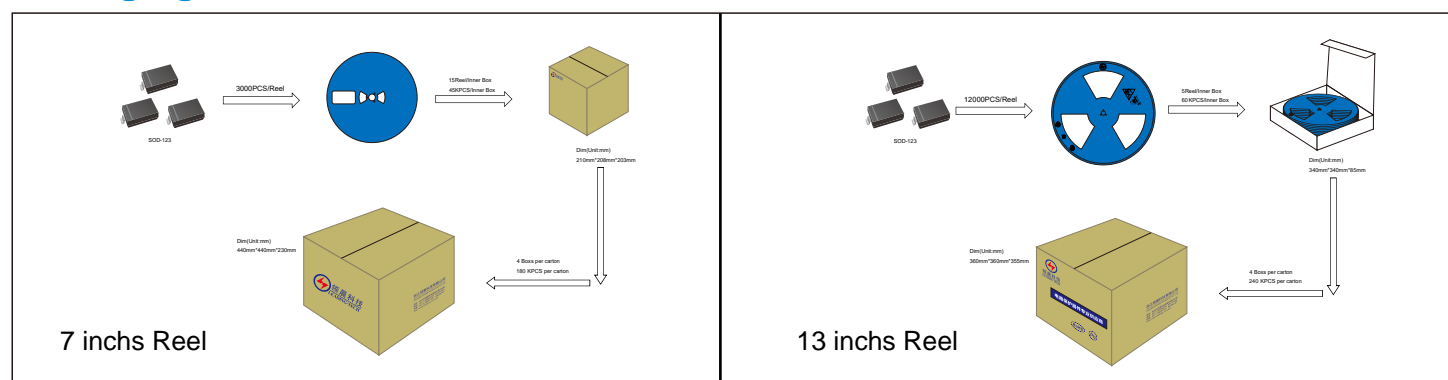


Reel Dimensions

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	2024.4.15	2024.4.15	3.1	New File	/	Ding	
02	2025.06.18	2025.06.18	3.1	Update packaging information	/	Ding	