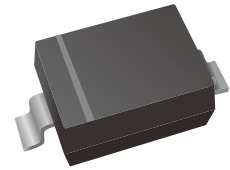


Fast Switching Diode

Features

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



Mechanical Characteristics

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

Ordering Information

Part Number	Marking	Shipping	Reel
LT4148SW-TR3	T4	3000PCS Tape&Reel	7 inches
LT4148SW-TR12	T4	12000PCS Tape&Reel	13 inches

Absolute Maximum Ratings at 25 °C

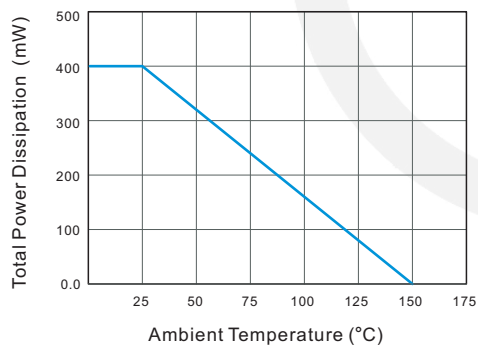
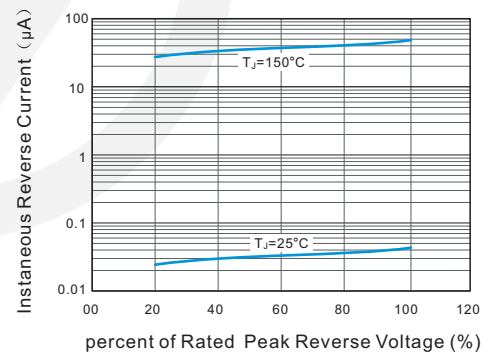
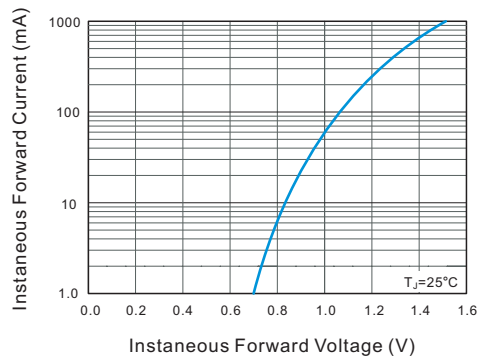
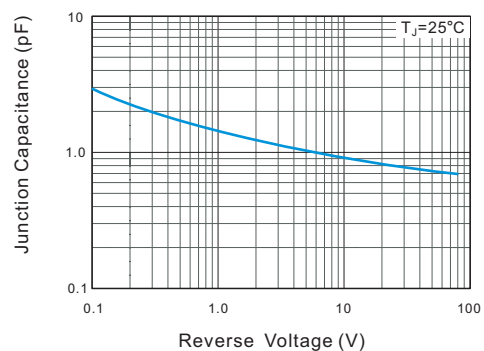
Parameter	Symbols	LT4148SW	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	75	V
Continuous Forward Current	I_F	150	mA
Non-reptitive Peak Forward Surge Current	I_{FSM}	0.5 1 4	A
Total Power Dissipation	P_{tot}	400	mW
Typical Thermal Resistance (1)	$R_{\theta JA}$ $R_{\theta JC}$	340 120	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) P.C.B. mounted with 5*5mm copper pad areas.

Characteristics at $T_a = 25^\circ\text{C}$

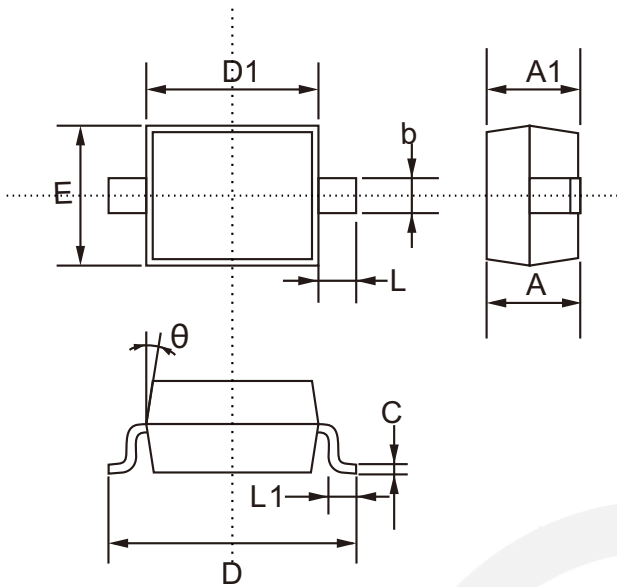
Parameter	Symbols	LT4148SW	Units
Reverse Breakdown Voltage at $I_R = 1\mu\text{A}$	$V_{(BR)R}$	75	V
Maximum Forward Voltage at 1 mA at 10 mA at 50 mA at 150 mA	V_F	0.715 0.855 1.00 1.25	V
Peak Reverse Current at $V_R = 20\text{V}$ $T_j = 25^\circ\text{C}$ at $V_R = 75\text{V}$ $T_j = 25^\circ\text{C}$ at $V_R = 25\text{V}$ $T_j = 150^\circ\text{C}$ at $V_R = 75\text{V}$ $T_j = 150^\circ\text{C}$	I_R	0.025 1 30 50	μA
Typical Junction Capacitance	C_j	2	pF
Maximum Reverse Recovery Time (2)	t_{rr} Typical	4	ns

(2) Measured with $I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R$, $R_L = 100\Omega$

Ratings and characteristics Curves
Fig.1 Power Derating Curve

Fig.2 Typical Reverse Characteristics

Fig.3 Typical Instantaneous Forward Characteristics

Fig.4 Typical Junction Capacitance


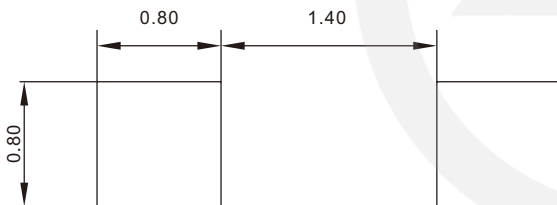
SOD-323 Package Outline

Unit: mm

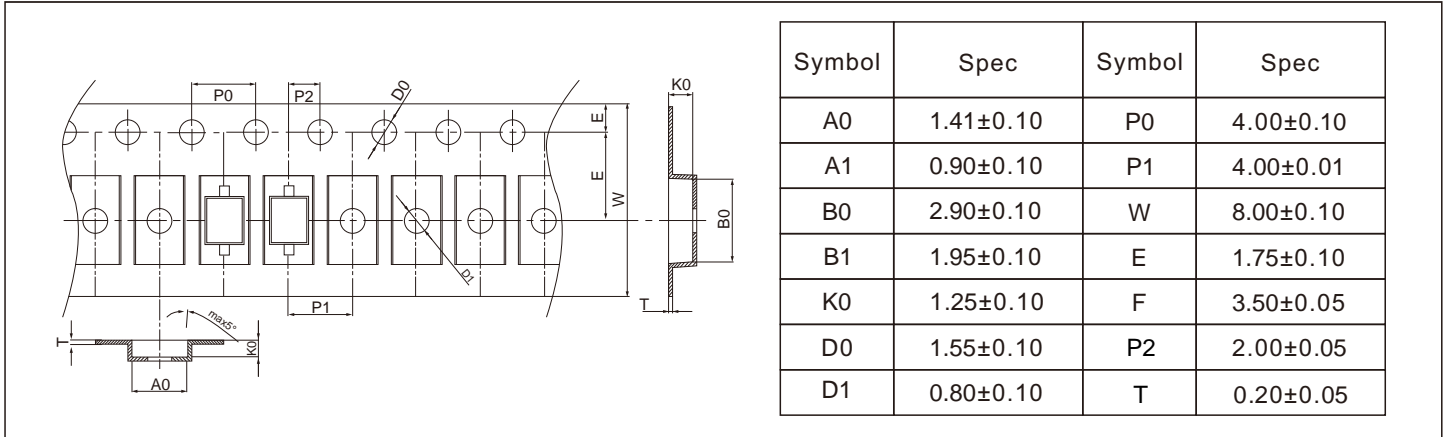
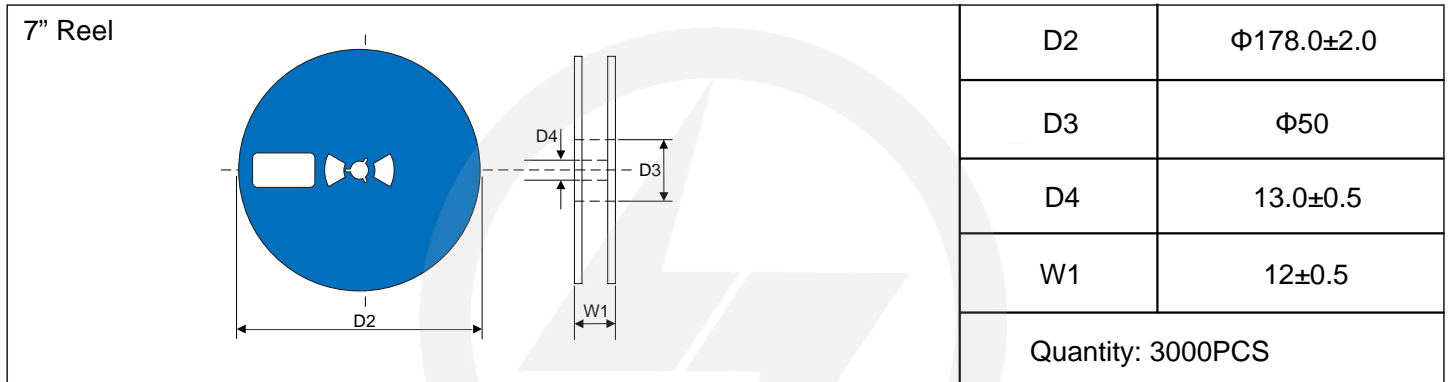
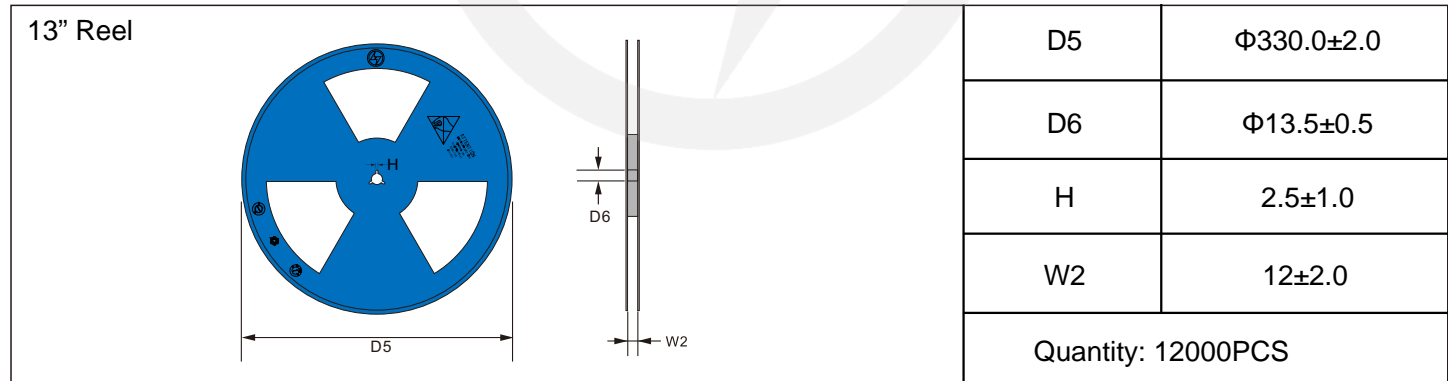
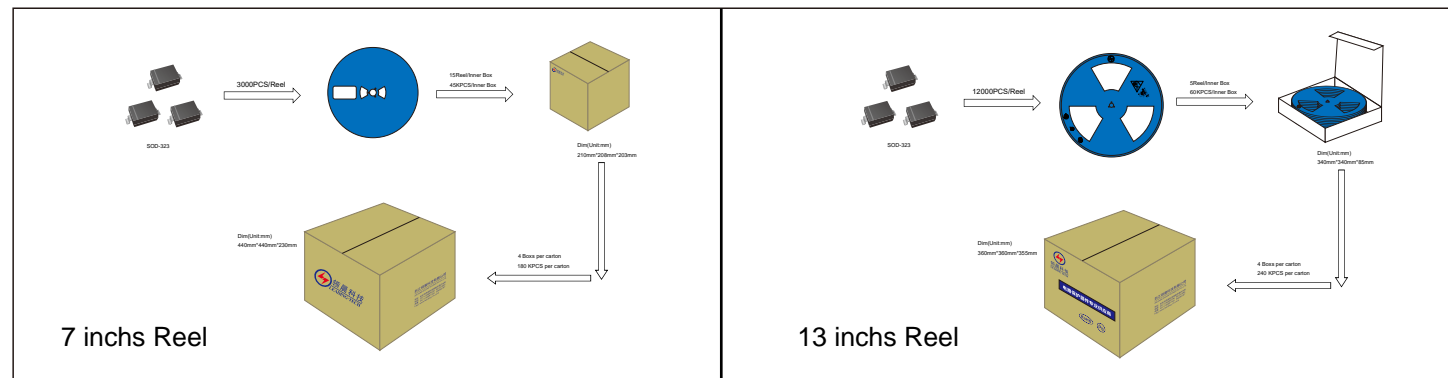


SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L1	0.100	0.400
L	0.475 TYP.	
θ	8°	

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 _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	2024.05.16	2024.05.16	3.0	New File	/	Ding	
02	2025.06.17	2025.06.17	3.1	Update packaging information	/	Ding	