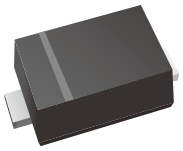
LT4148M9

Switching Diode

Features



- General purpose diodes
- Fast switching devices
- SOD923 Micro SMD package
- Matte Tin (Sn) Lead finish
- Cathode Band / Device
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case:SOD-923
- Polarity: Color band denotes cathode end
- Tape specification:Conductive

Ordering Information

Part Number	Marking	Shipping	Reel
LT4148M9-TR8	S1	8000PCS Tape&Reel	7 inchs

Maximum Ratings (Ta = 25 ℃)

Symbol	Parameter	Value	Units
V_{RSM}	Non-Repetitive Peak Reverse Voltage	100	V
V_{RRM}	Repetitive Peak Reverse Voltage	85	V
I_{FRM}	Repetitive Peak Forward Current	300	mA
I_{FSM}	Non-Repetitive Peak Forward Current *1	2	A
I_O	Continuous Forward Current	100	mA
P_D	Power Dissipation	200	mW
T_J	Junction Temperature	150	℃
T_{STG}	Storage Temperature	-55 to +150	℃

*1 Pulse width = 1μs

Electrical Characteristics (Ta = 25 ℃)

Symbol	Parameter	Conditions	Min	Max	Units
BV_R	Breakdown Voltage	I_R = 100μA	100		V
I_R	Reverse Current	V_R = 20V V_R = 80V		25 100	nA nA
V_F	Forward Voltage	I_F = 10mA I_F = 100mA		1.0 1.2	V V
C	Capacitance	V_R = 0V, f = 1MHz		4	pF
T_{RR}	Reverse Recovery Time	I_F = 10mA, V_R = 6V I_{RR} = 1mA, R_L = 100Ω		4	ns

Characteristics Curves

Fig.1 Typical Instantaneous Forward Characteristics

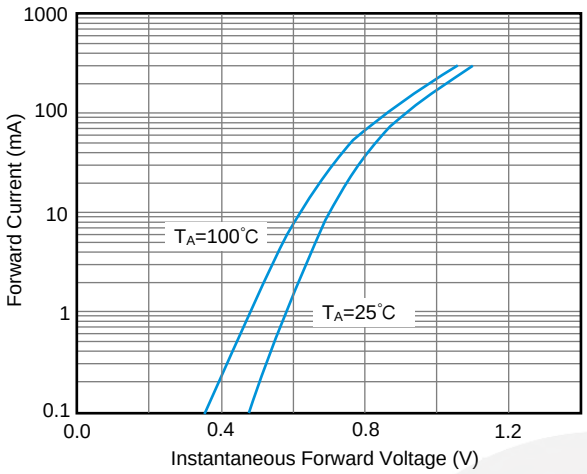


Fig.2 Typical Reverse Leakage Characteristics

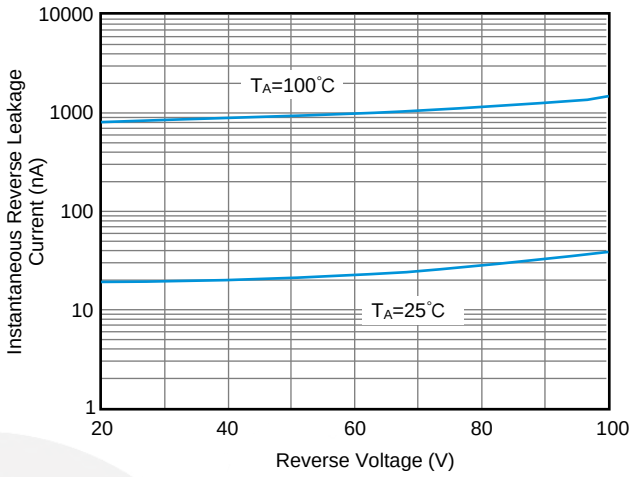


Fig.3 Capacitance Characteristics

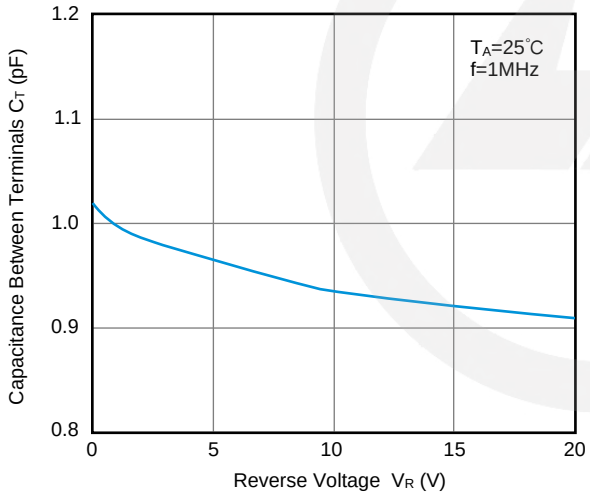
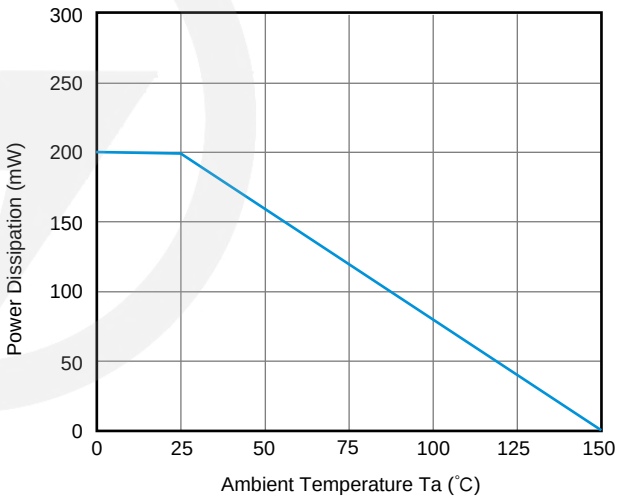
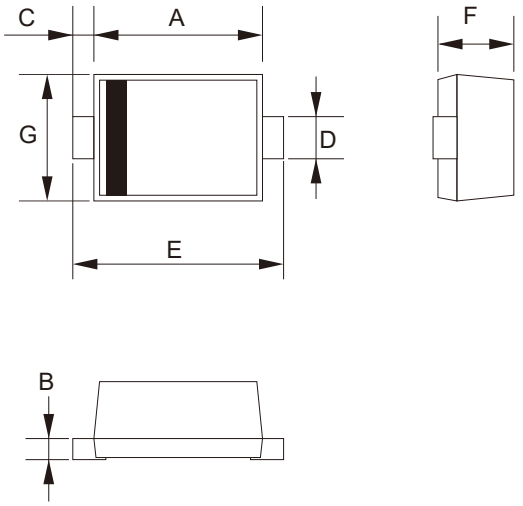


Fig.4 Power Derating Curve



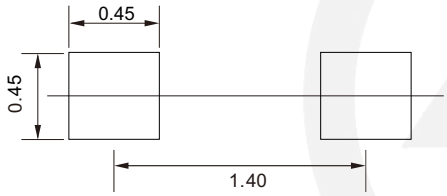
SOD-923 Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.700	0.900
B	0.050	0.200
C	0.050	0.150
D	0.150	0.300
E	0.090	1.100
F	0.340	0.450
G	0.550	0.650

SOD-923 Suggested Pad Layout

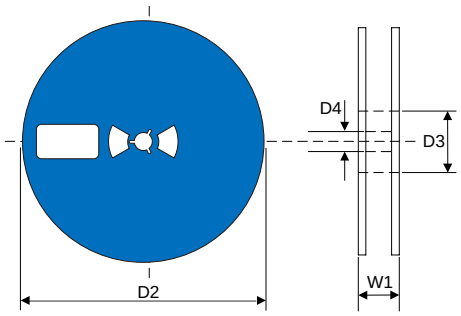


Note:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

Reel Dimensions

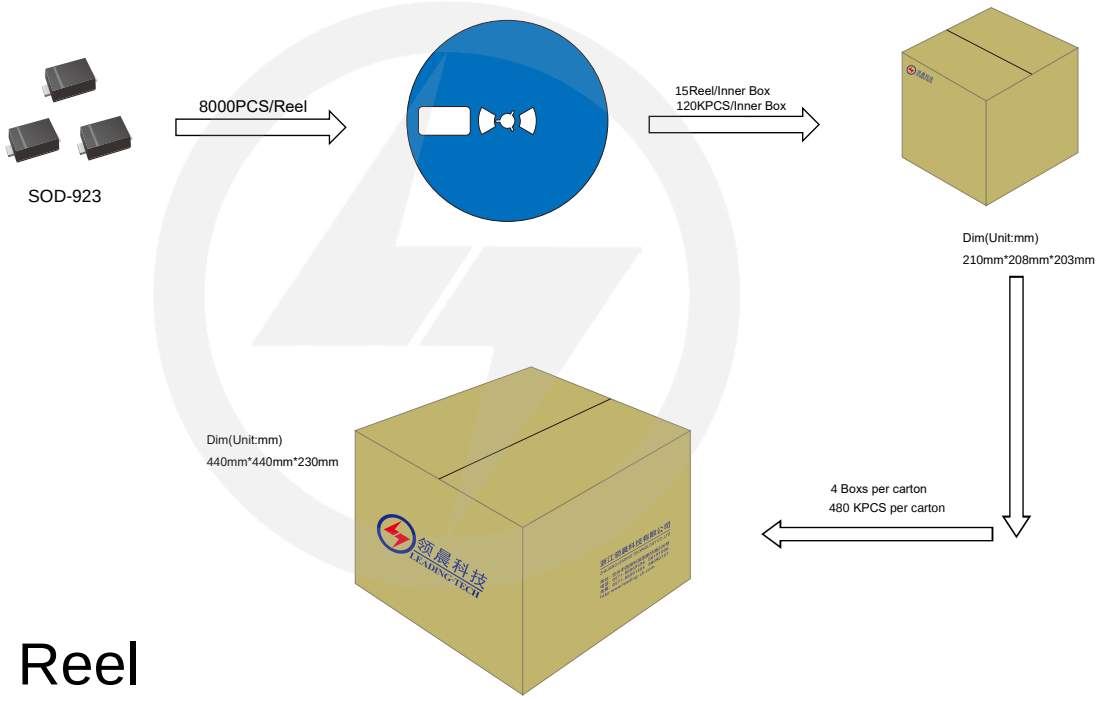
Unit：mm

7” Reel



D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 8000PCS	

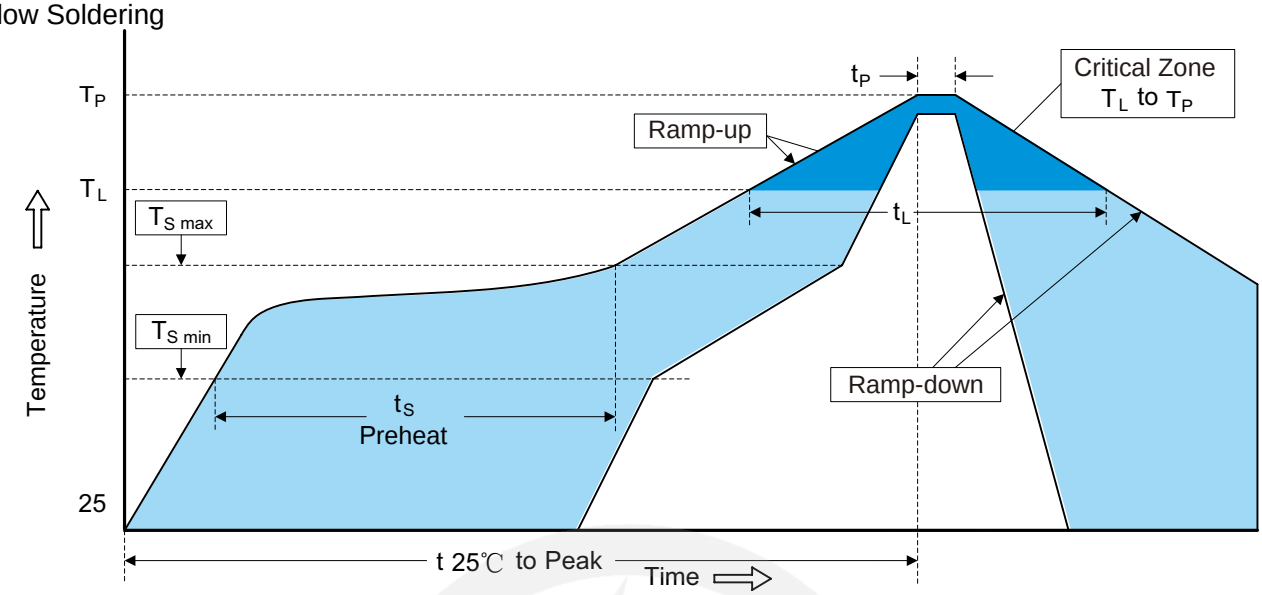
Packaging



7 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ 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	2025.01.10	2025.01.10	3.0	New File	/	Ding	