

MAN2450L62

2.4 GHz Chip Antenna

MECSINE 兆讯

2.4 GHz Chip Antenna
For WiFi and Bluetooth

MAN2450L62

6x2x1 mm

All Use For RF & Microwave

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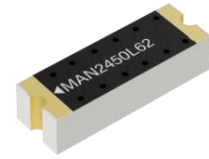
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Applications

1. 2.4 GHz WiFi device
2. Bluetooth gadget
3. Zigbee device
4. ISM band equipment



Features

1. Compact size
2. Omni-directional radiation
3. Tape & reel automatic mounting
4. Reflow process compatible
5. RoHS compliance (Pb-Free)

Description

The antenna is designed for superior performance, and can be widely used for wireless applications. We provide comprehensive antenna design support such as simulation, testing and manufacturing for custom antenna solutions to meet your specific application needs.

Electrical Specification

Table 1. MAN2450L62 Electrical Specification

Item	Min.	Type	Max.	Unit
Frequency Range	2400		2500	MHz
VSWR	1.1		1.4	
Efficiency	60		65	%
Peak Gain	1.04		2.23	dBi
Polarization		Linear		
Nominal Impedance		50		Ω

• Ta: +25±5°C

Mechanical Specification

Table 2. MAN2450L62 Mechanical Specification

Item	Min.	Type	Max.	Unit
Antenna Size		6*2* 1		Mm
Storage Temperature	-40		+125	°C
Operating temperature	-40		+125	°C

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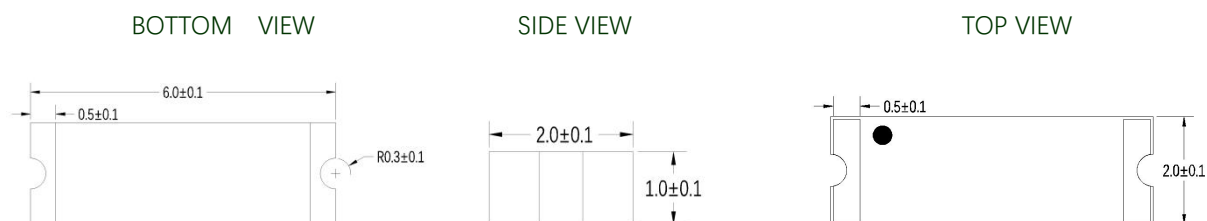
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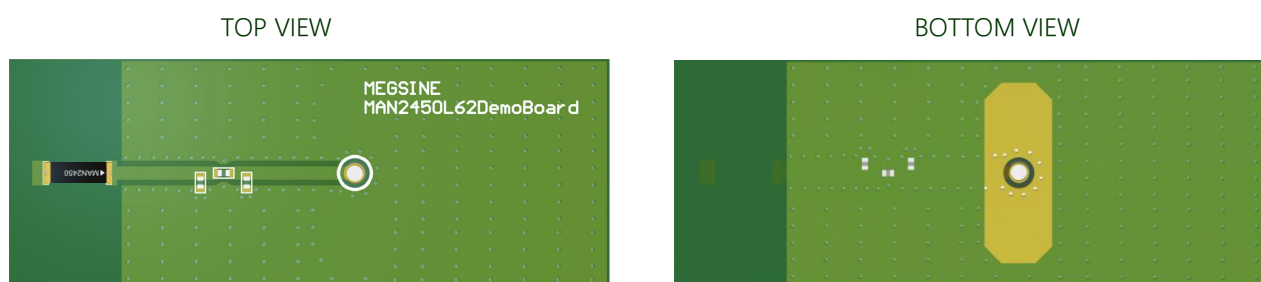
Outline Drawing

Figure 1. MAN2450L62 View (Unit: mm)



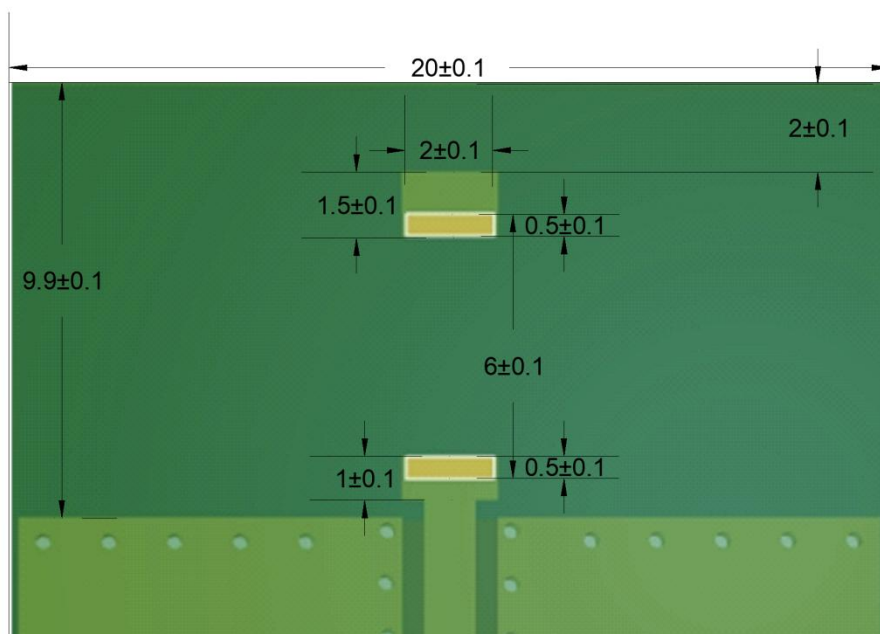
Recommend PCB Layout

Figure 2. MAN2450L62 PCB Layout (Unit: mm)



Size 53*20mm

Figure 3. MAN2450L62 Antenna Layout (Unit: mm)



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Figure 4. MAN2450L62 Matching Circuit (Unit: mm)

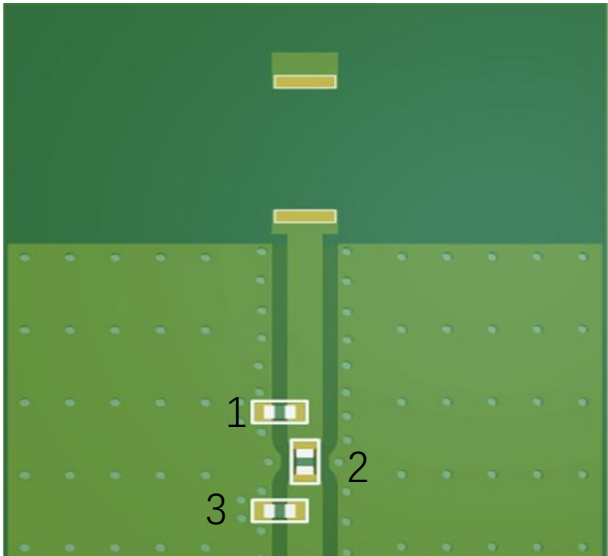
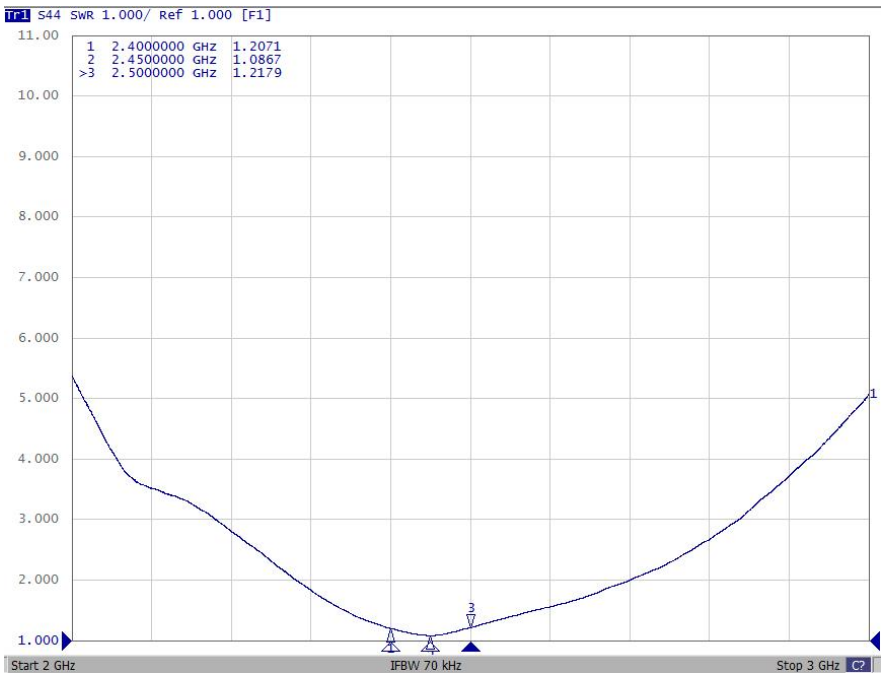


Table 3. MAN2450L62 Matching

Location	Description	Vendor
1	N/C	N/C
2	0Ω	MURATA
3	N/C	N/C

Typical Performance

Figure 5. MAN2450L62 VSWR

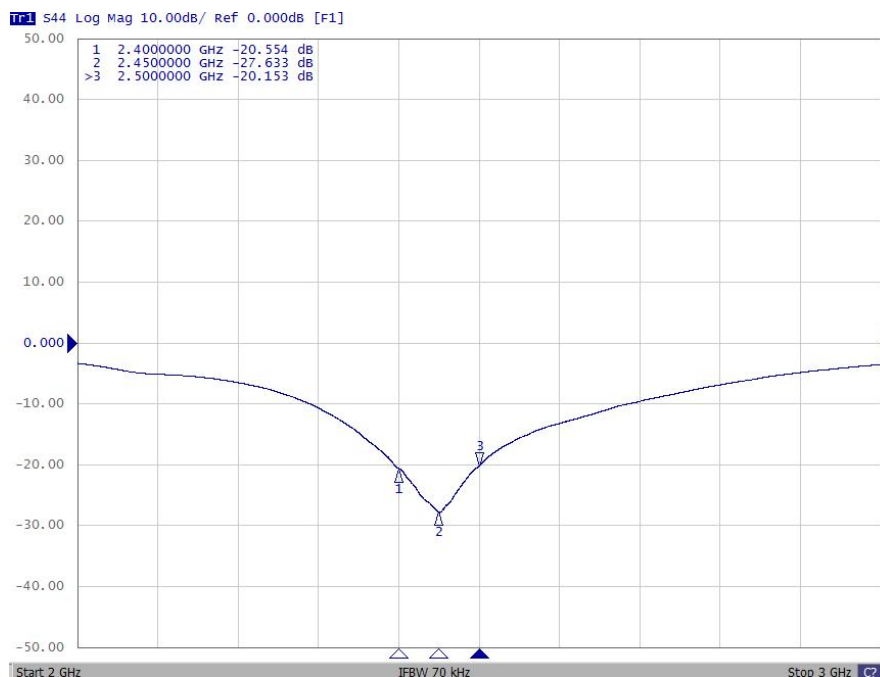


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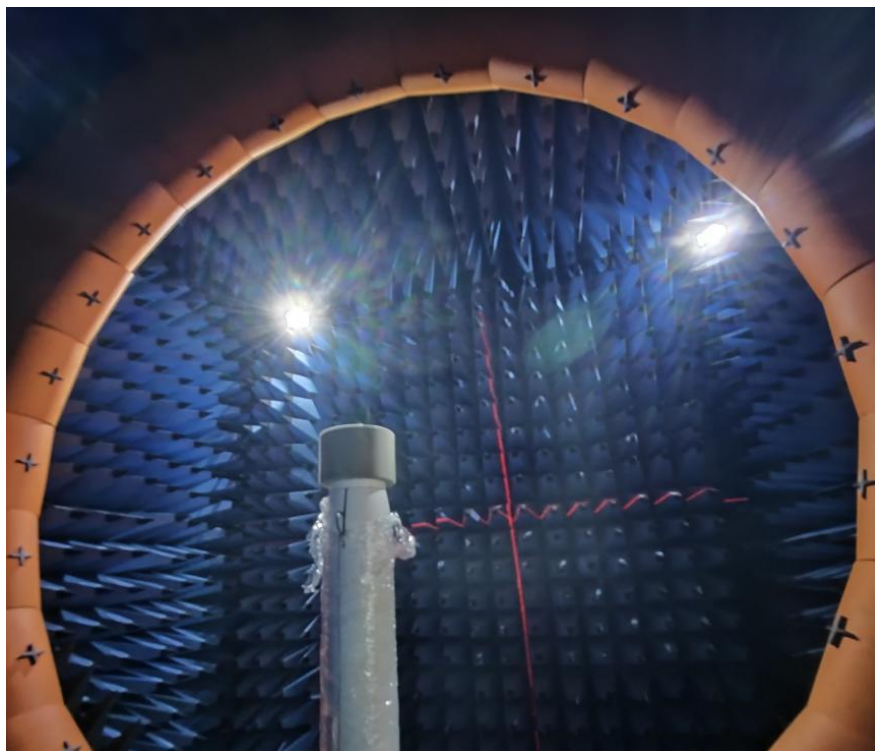
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Figure 6. MAN2450L62 Return Loss



Radiation Pattern & Efficiency & Peak Gain

Figure 7. The Gain pattern is measured in FAR-field chamber



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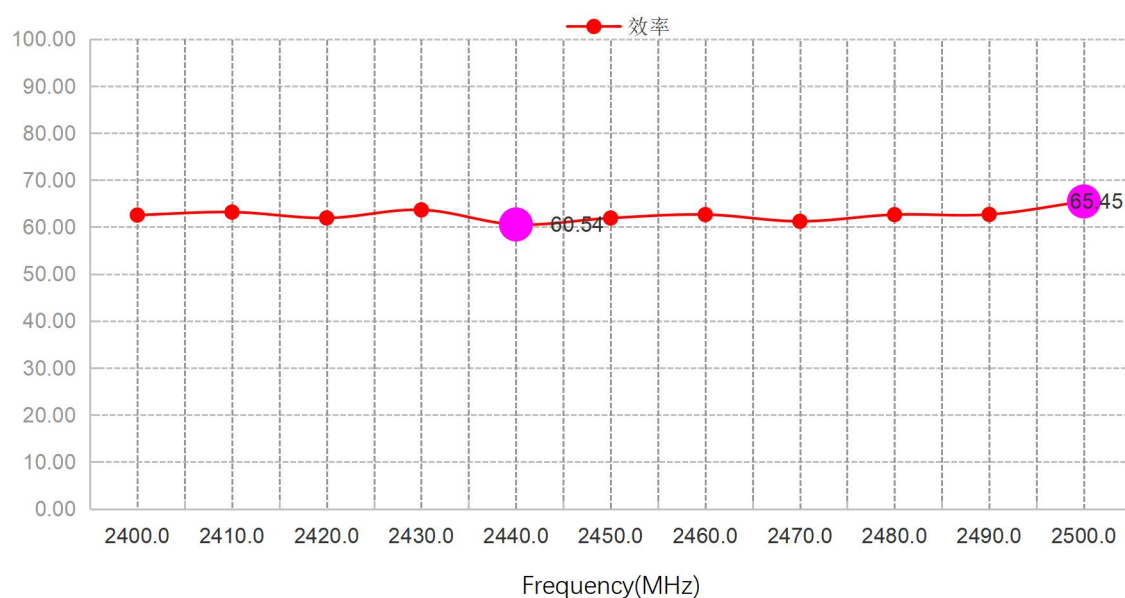
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Table 4. MAN2450L62 Total Efficiency&Peak Gain

Item (MHz)	Efficiency (%)	Peak Gain (dBi)
2400	62.54	1.31
2410	63.17	1.29
2420	61.93	1.23
2430	63.64	1.20
2440	60.54	1.04
2450	61.91	1.33
2460	62.64	1.49
2470	61.21	1.40
2480	62.63	1.67
2490	62.67	1.85
2500	65.45	2.23

Figure 8. MAN2450L62 Total Efficiency



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Figure 9. MAN2450L62 Peak Gain

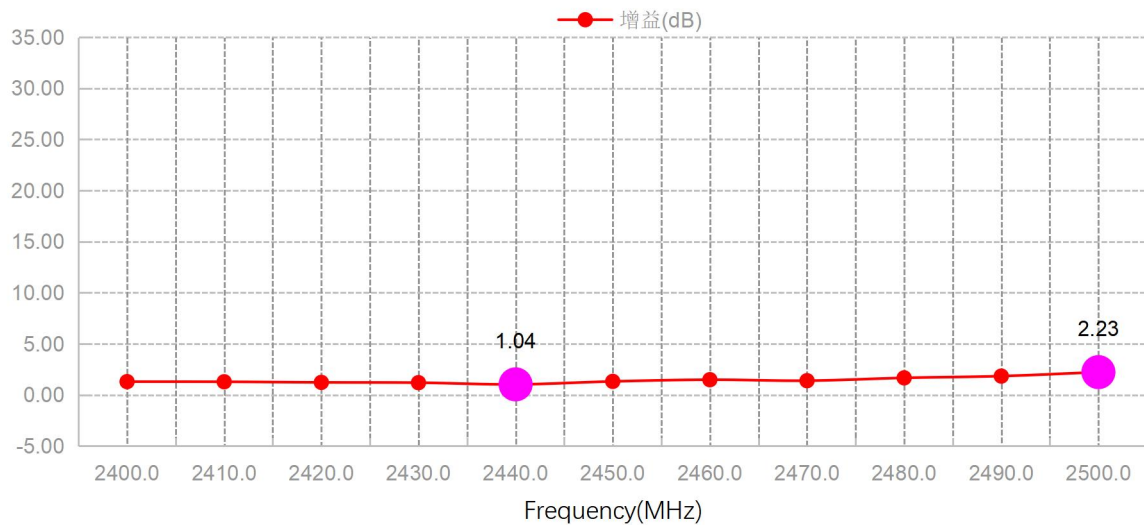
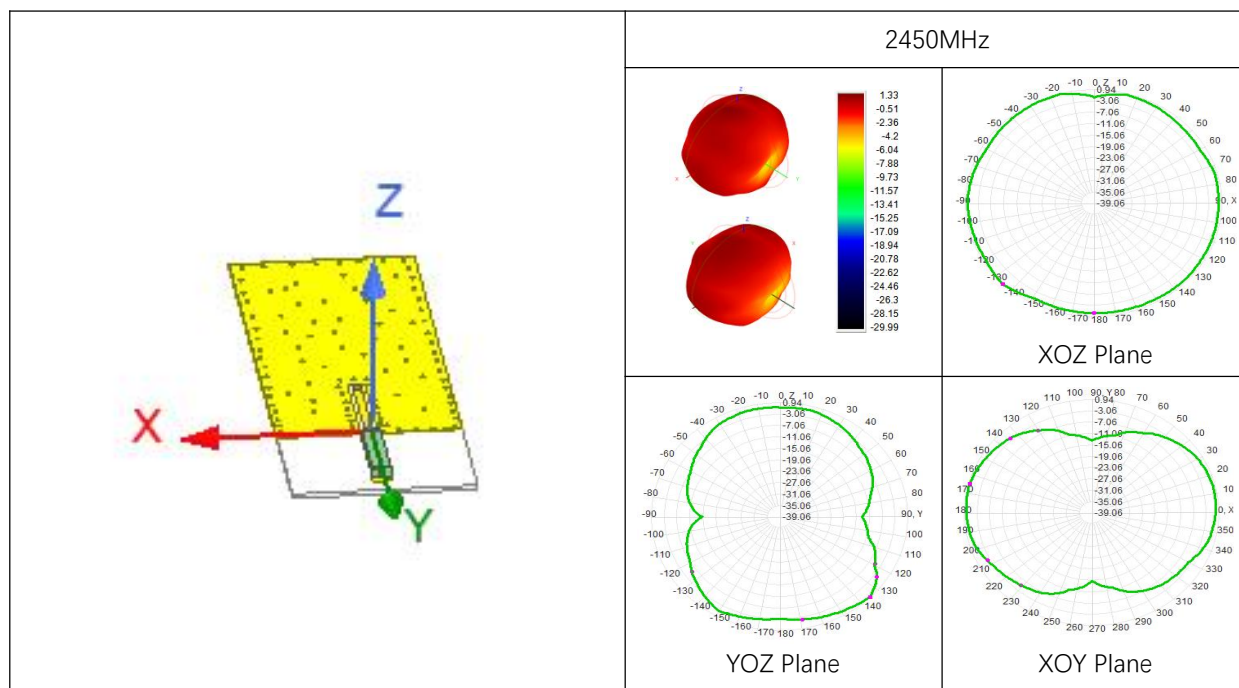


Figure 10. Radiation Pattern



*Antenna performance will also change in different environments, it is recommended to consult the relevant technical personnel before use to confirm the layout to ensure good performance.

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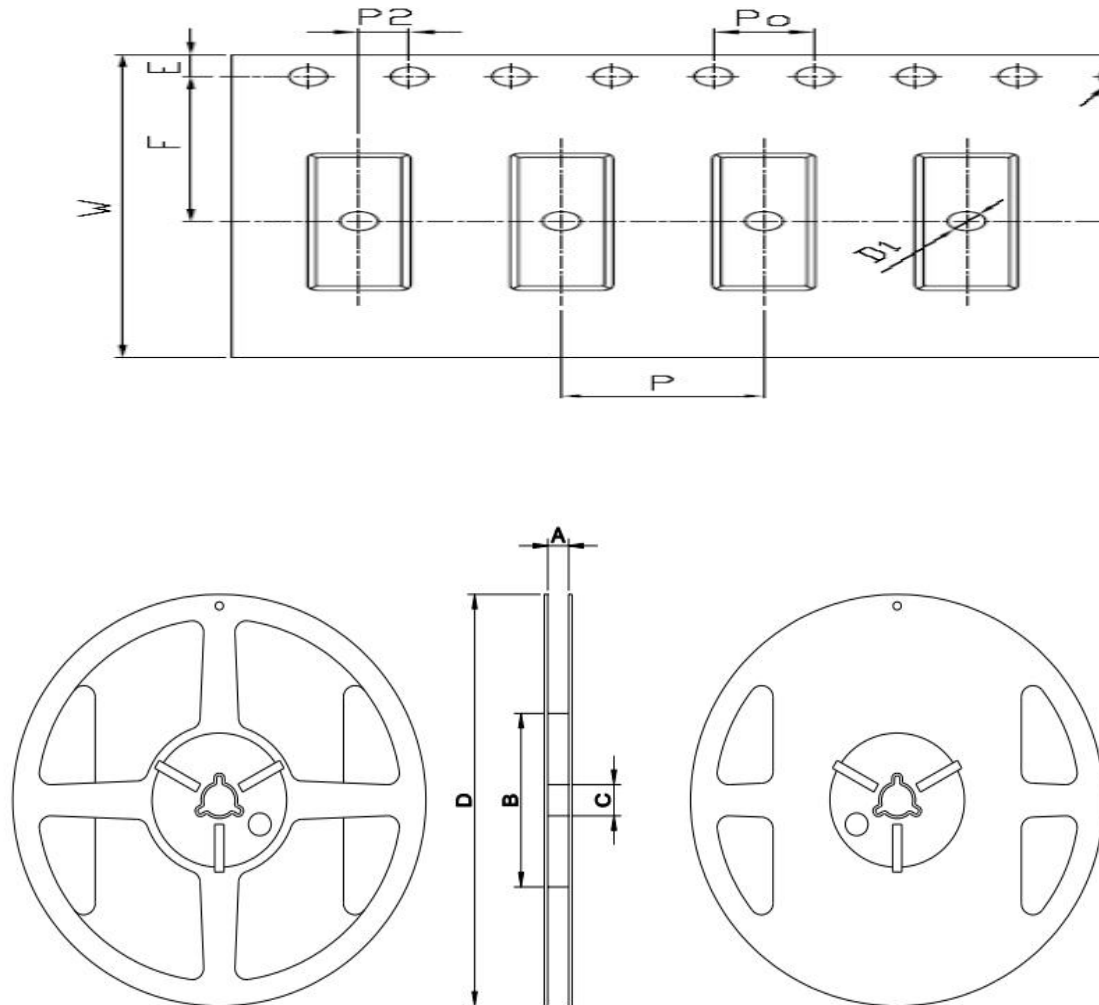
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Packaging and Ordering Information

Figure 11. Packaging Information



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Feature	Specification & Tolerances
W	24.00 $\pm$ 0.30
P	8.00 $\pm$ 0.10
E	1.75 $\pm$ 0.10
F	11.50 $\pm$ 0.10
P2	2.00 $\pm$ 0.10
D1	1.50 $\pm$ 0.10
P0	4.00 $\pm$ 0.10
A	29.80 $\pm$ 0.10
B	99.00 $\pm$ 0.10
C	15.00 $\pm$ 0.10
D	330.00 $\pm$ 0.10

Table 5. Packaging and Shipping

Device	Packaging	Reel	Shipping
MAN2450L62	SMD	13"	3000/Reel

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Revision	Description	Date
Rev0	Preliminary	2025/6/20

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