

SPECIFICATION



Shenzhen Daxian Technology Co., Ltd.

SunWinon D110 WIFI antenna assembly

Product specification

Guest households	SunWinon	frequency band	2400~2500MHz
Project name	D110	version	V1.0
Material No.	1D-110MS-027	color	Black
R F design	ZhiQiang.Chen	structure design	RuiBin.Zhou
Quality Manager	YongJie.Pan	R & D director	Lei.Zhang
Date			

client confirmation:

Whether the assembly meets your requirements: ☐OK ☐NG

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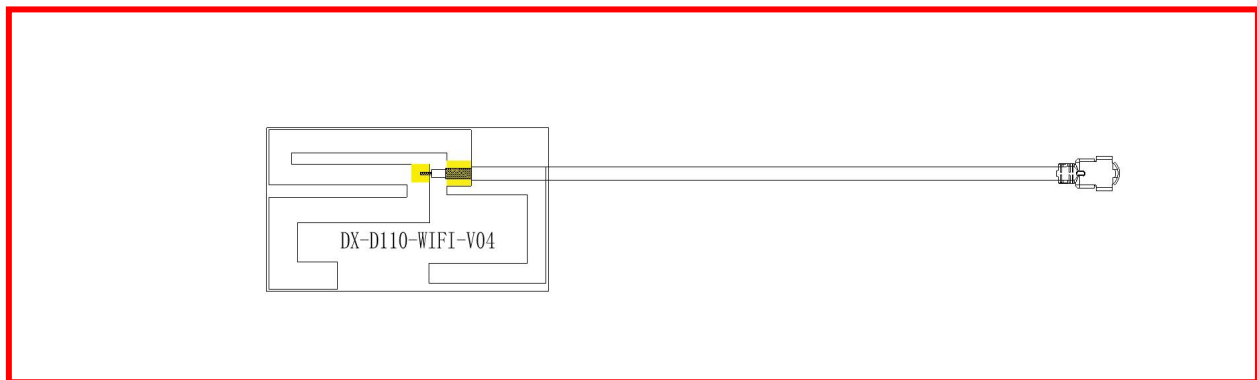
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I 、 Project description

Customer name:	SunWinon
Whole machine type:	Intelligent Lock
Antenna band:	2400 ~ 2500MHz
Antenna form:	FPC+Coaxial line
Feed form:	weld

II 、 WIFI antenna

This report provides a variety of measurements of the electrical performance of the D110 antenna. Figure 1 shows the antenna designed by the display.



antenna appearing diagram

Figure 1

1.1 Electrical specification standard

The frequency range of the antenna is 2400 ~ 2500 MHz. The following table indicates the electrical performance specifications of the antenna. The antenna is designed and manufactured by a large display.

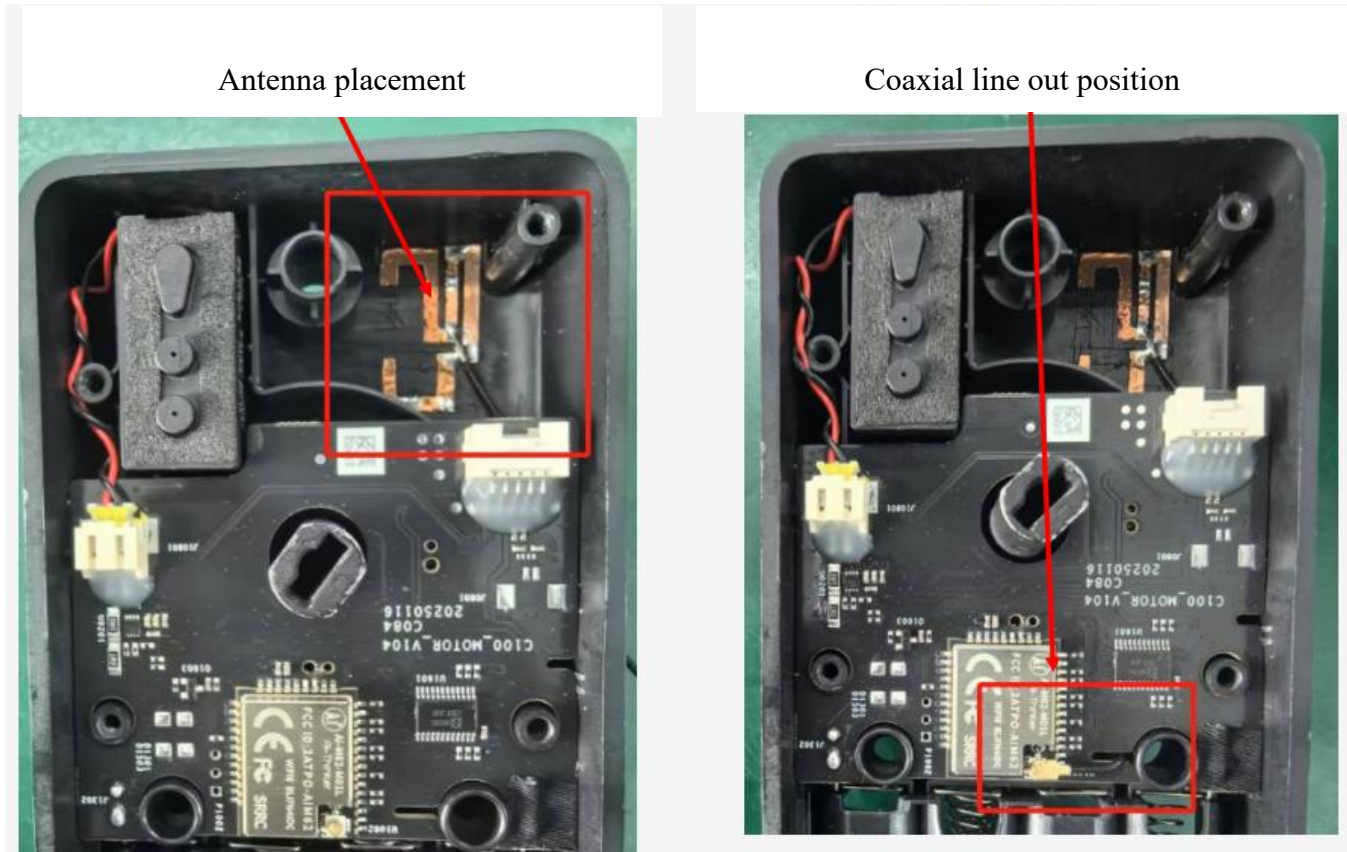
Frequency Range	Frequency (MHz)	VSWR
WIFI	2400 ~ 2500	≤ 2

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1.2 Antenna position picture



1.3 Antenna composition

The antenna is mainly composed of FPC+Coaxial line.

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2、 The Equipment of Active Test

Satimo 3D Chamber $6 \times 4 \times 4$ (m)

Agilent 8960 E5515c

Network analyzer-R&S ZVL



Figure 2

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3 test

3.1 The Test of standing Wave (VSWR)

3.1.1 The Test of standing Wave (VSWR): In turn, the connection of the VSWR testing device is as follows: RES ZVL Network Analyzer / testing Line / testing tool

Actual measurement (with diagram)

3.2 Measurement of Efficiency, Power (TRP) and Sensitivity (TIS)

3.2.1 Test site:

Large-scale microwave darkroom. The test frequency range is 400MHz / 6GHz, the static range is 50cm circumferential and the reflectivity is less than-50 dB.

3.2.2 Test instrument:

Rs ZVL Network Analyzer, Agilent8960 E5515C, Standard Horn Antenna, French SATIMO-SG24SYSTEM system, Printer, etc.

3.2.3 test data : In microwave anechoic chambers, the power and sensitivity values measured are shown in the following table:

OTA Active Test:

	Channel	TRP(dBm)	TIS(dBm)
802.11b 11M	1	14.7	
	6	15.2	
	11	14.6	-78.63

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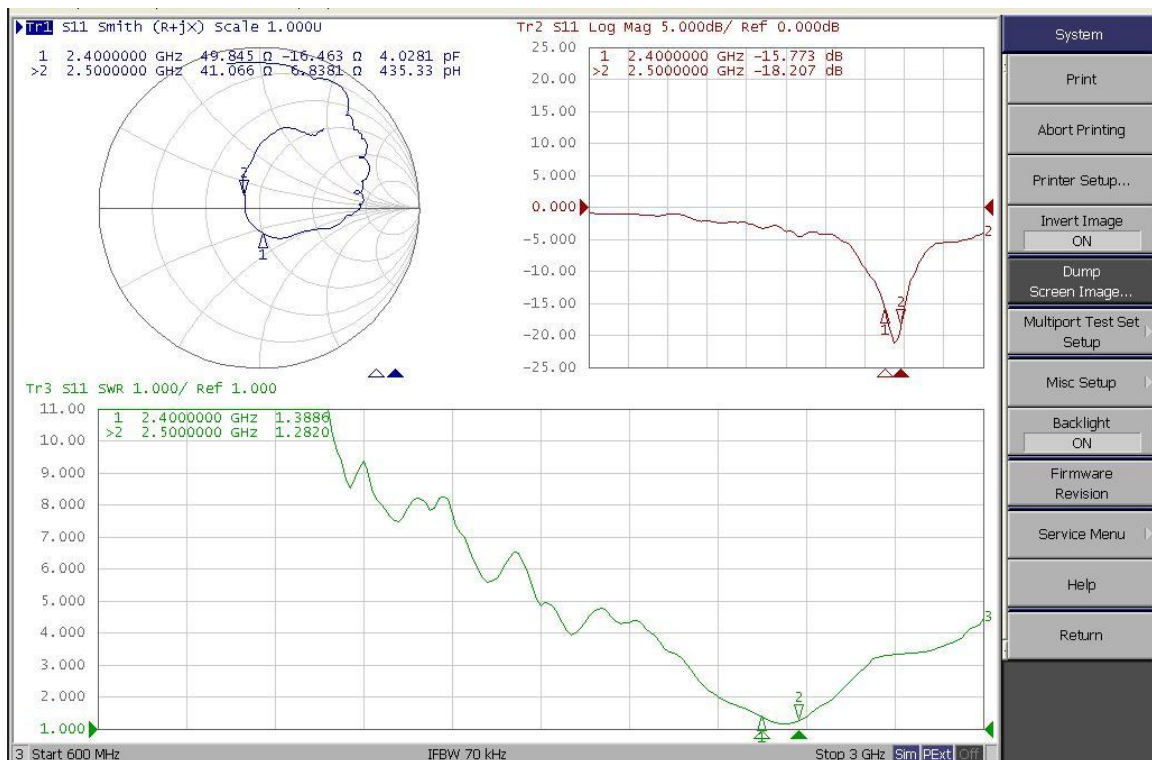
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OTA Passive Efficiency&Gain Test:

Frequency(MHz)	Efficiency(%)	Gain(dBi)
2400	61.37	4.65
2410	60.78	4.68
2420	60.08	4.47
2430	57.97	4.24
2440	56.19	4.44
2450	56.81	4.82
2460	57.79	5.02
2470	58.3	5.17
2480	59.44	5.26
2490	61.29	5.39
2500	61.54	5.52

4、 Attachment chart

4.1 VSWR parameter diagram

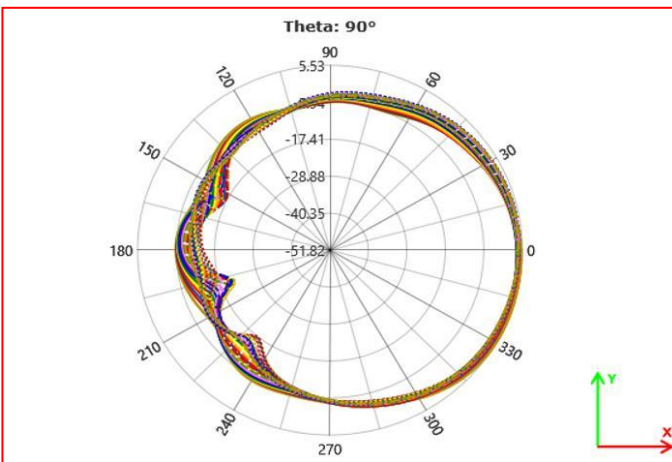
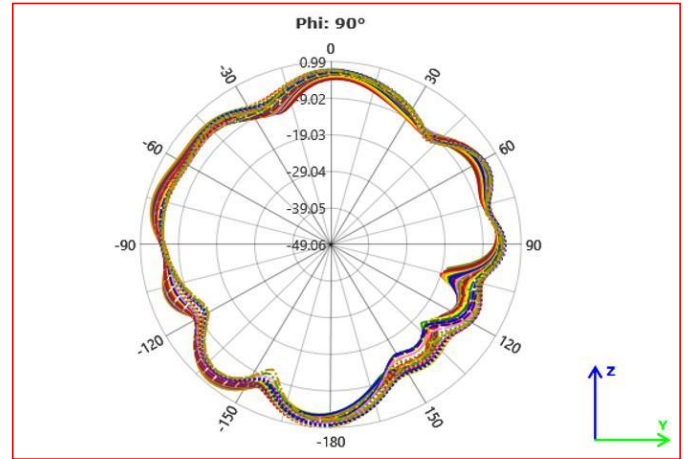
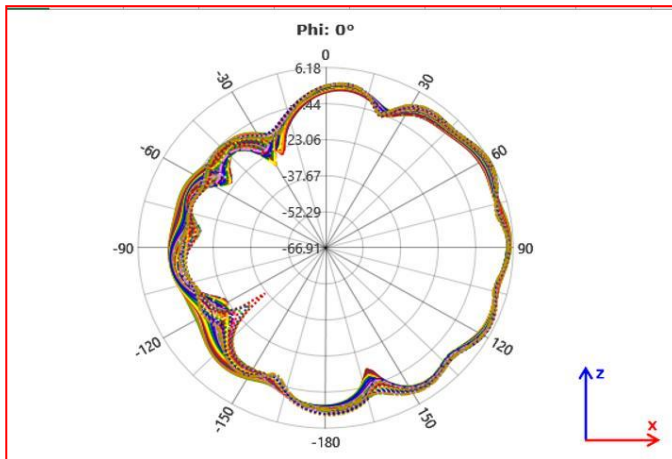


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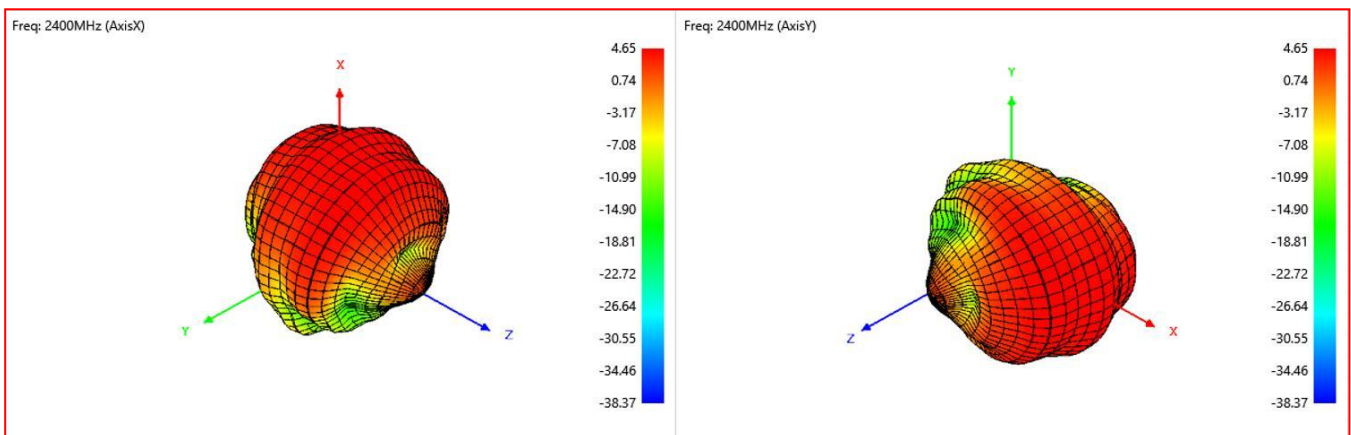
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5、Antenna passive field pattern diagram



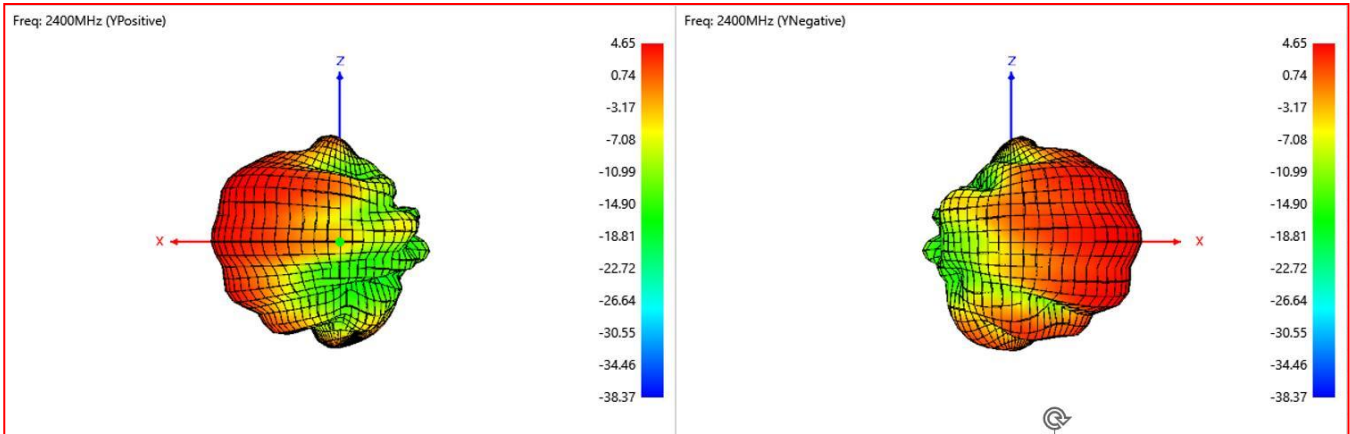
2400MHZ



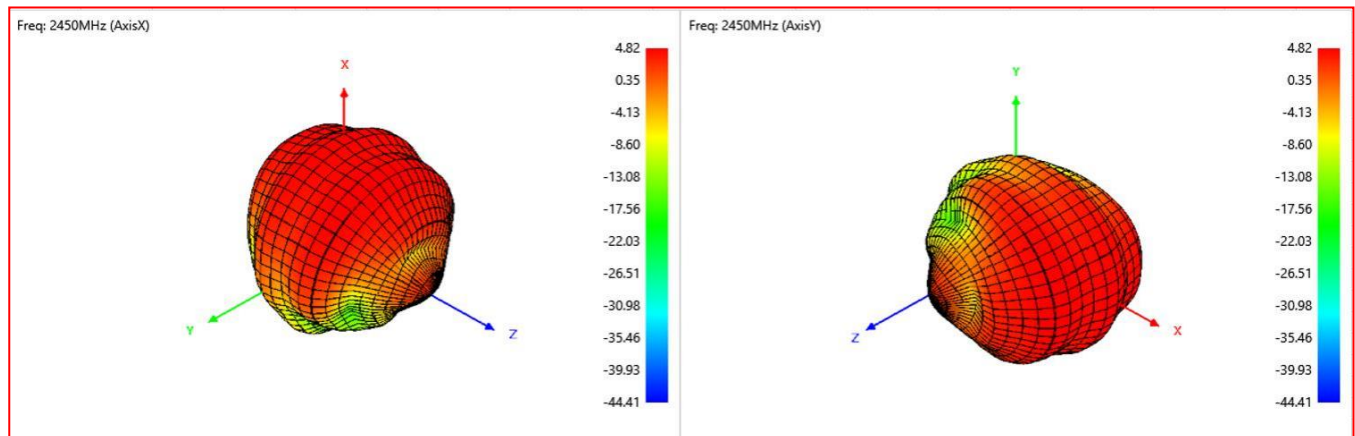
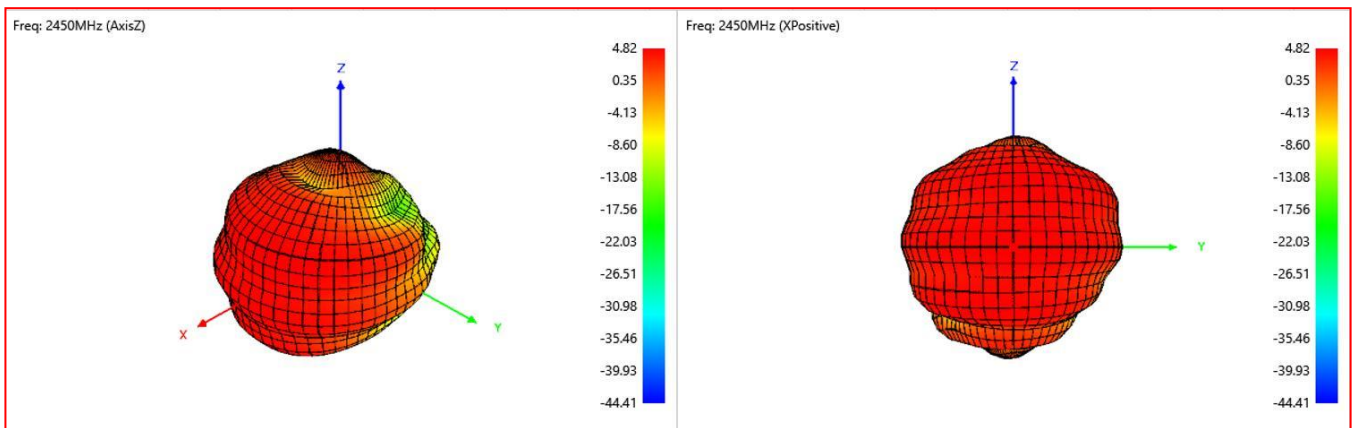
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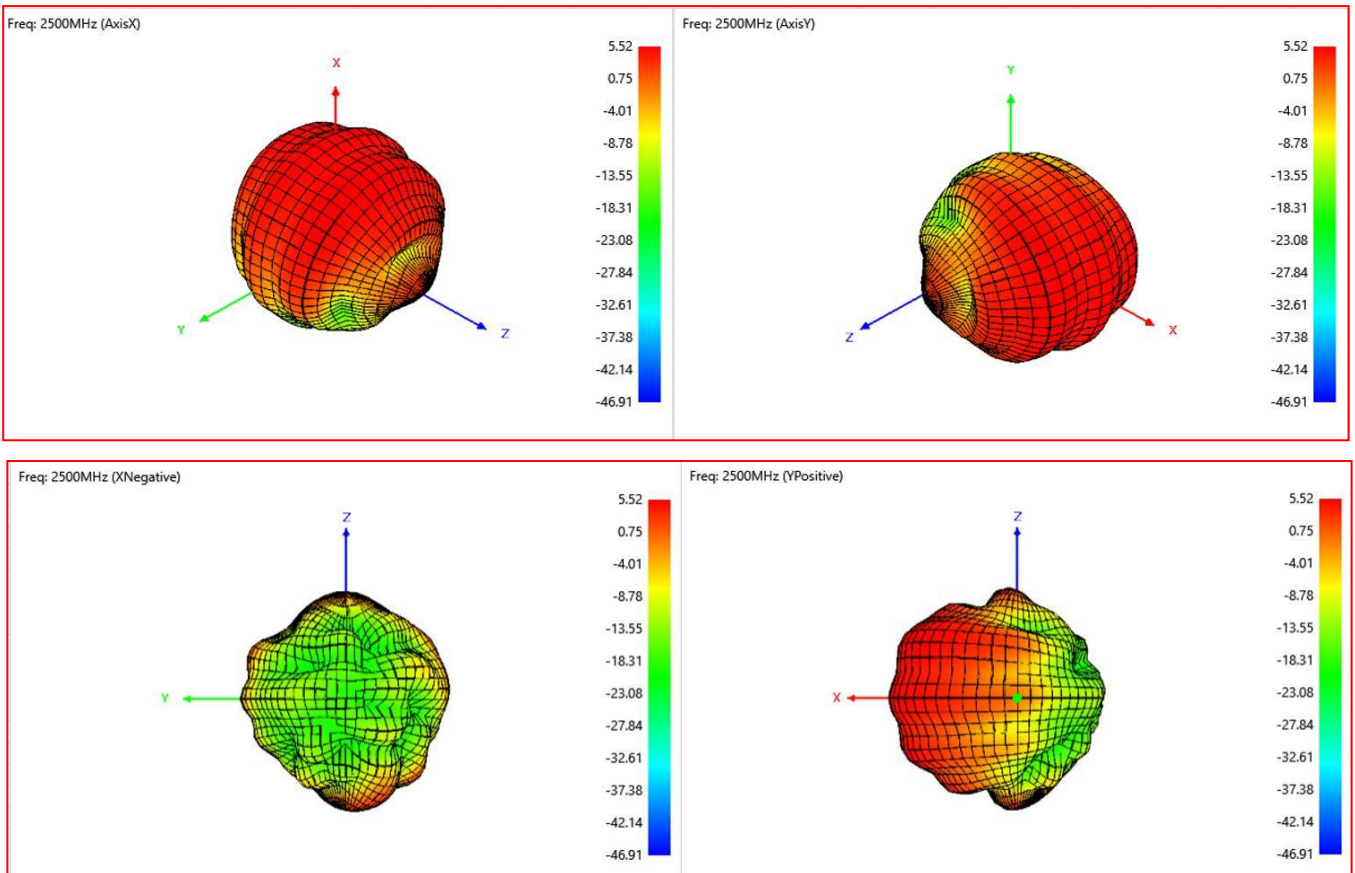
2450MHZ



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2500MHZ**6、 conclusion:**

This antenna is designed on the basis of the prototype provided by the customer, electrical parameters and structural performance have reached the technical requirements, please confirm!

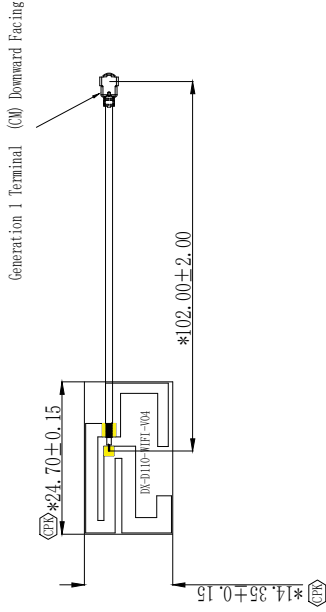
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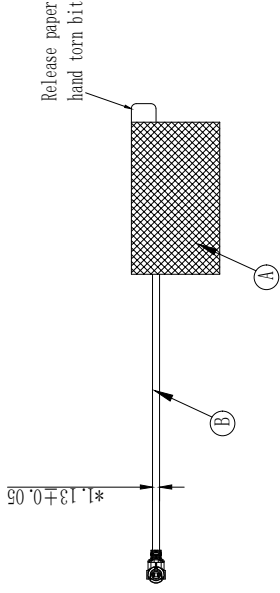
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1		2		3		4		5		6	
				0~10	10~30	30~50	50~		⊙	⊥	↗
				0.05	0.10	0.15	0.20	1°	0.02	0.03	0.05

A



B



A

C

Technical requirement:

1. "*" is the key dimension;
2. Please refer to the drawing for unspecified dimensions;
3. There should be no poor operation such as faulty soldering, missing soldering, short wires, broken wires, etc;
4. Meet RoHS requirements.

D

B	RF connector	Cable	black	
A	FPC	Electrolytic copper PI	black	
Serial number	Part Name	Material	Colour	Note



Shenzhen Daxian Technology Co., Ltd.

Machine model	DI10	Product Color	Black	Date	2025/05/29
Project Code	CD-110MS-027	Mold surface treatment	NA	MD	ZhouRuibin
Part Name	WiFi天线(WiFi antenna)	Unit	比例 (scale) 1:1	RF	ChenZhiqiang
Part Number	ID-110MS-027	Third perspective	⊙	Check	ZhouKang
material	FPC+RF connector			Ratify	ZhangLei
Save Path				Current version	A

1

2

3

4

5

6