
SHENZHEN LINRONG TECHNOLOGY CO. , LTD



01

Project Overview

02

Test Environment

03

Matching Circuit

04

Active Report

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Conclusion

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Additional Notes

2 Test Condition

2.1 Test Environment (Condition/Method)

① Voltage Standing Wave Ratio(VSWR)

Step 1. Set the frequency range after connect 50cm cable to

Network analyzer. Step 2. Connect Calibration Kit to Network analyzer and calibrate.

Step 3. Fix the cable and keep separation distance over 30cm for reducing effect by Network analyzer.

Step 4. Fix insulator over 5cm on the bottom of measuring antenna.

Step 5. Measure VSWR with setting marker of desired frequency.

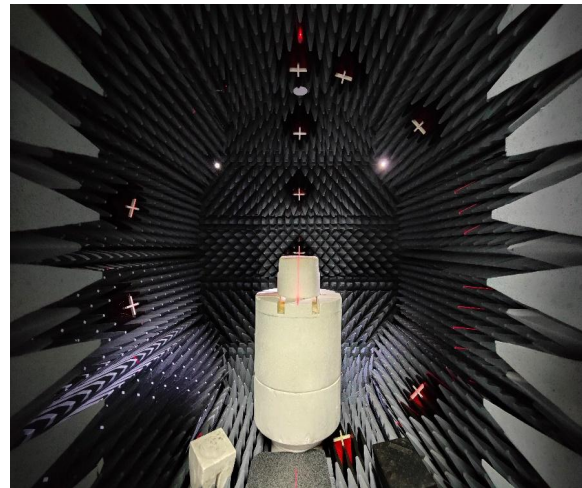
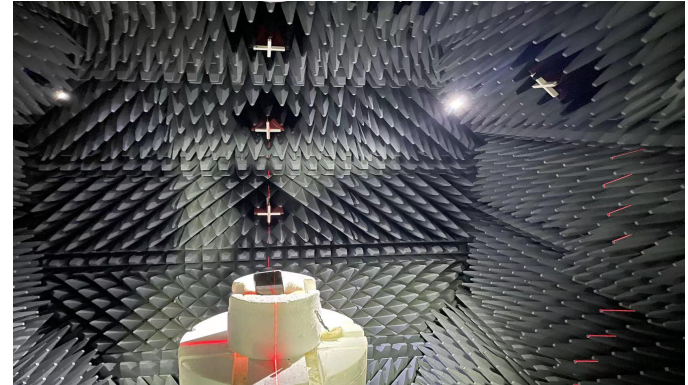
3 Antenna description

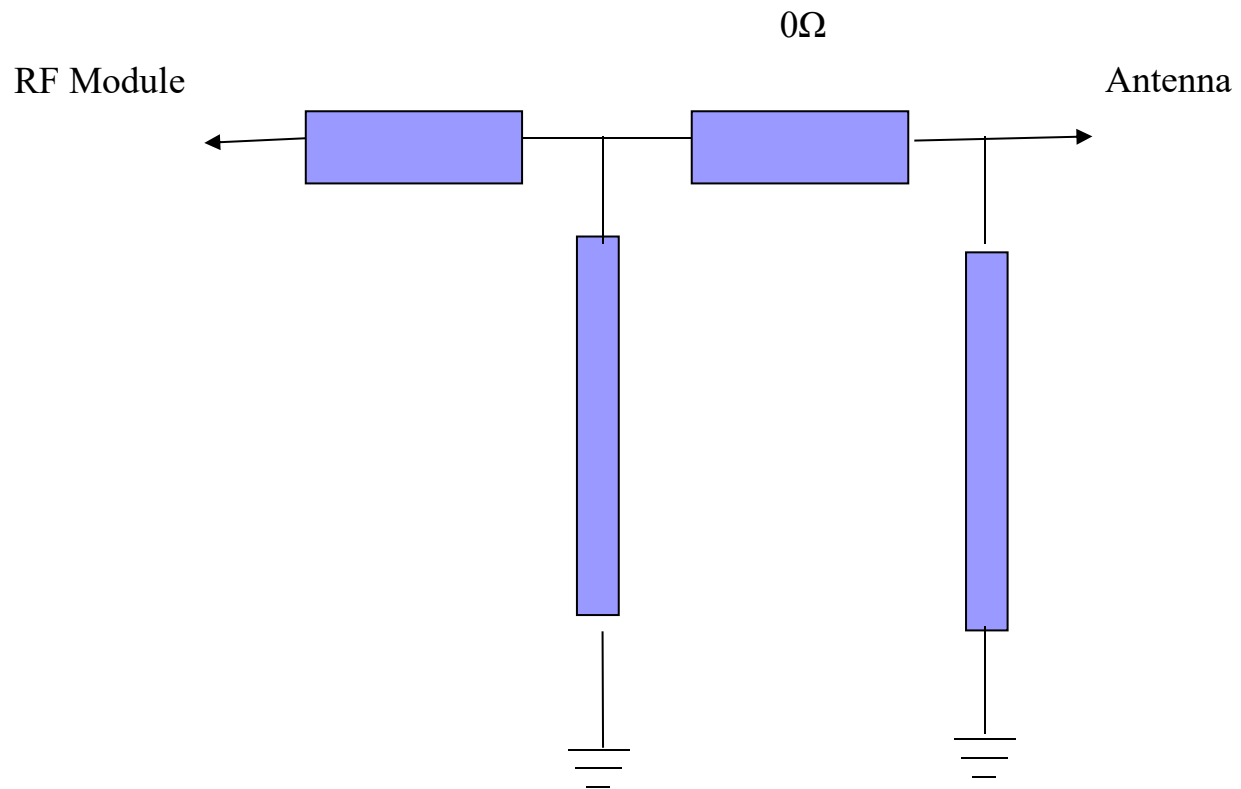
Type : PIFA

4 List of Measuring Equipment

Multi-Probe OTA Measurement System

DUT setup photo of free space OTA testing





1# 下边			
	CN	TRP	TIS
11B-11M	1	16.01	-78.79
	6	16.98	-81.35
	11	17.79	-81.85
11G-54M	1	15.52	-70.21
	6	16.59	-71.26
	11	17.17	-71.69
11N-65M	1	15.22	-66.57
	6	16.25	-67.51
	11	16.89	-68.05
11A-54M	36	15.96	-70.56
	56	16.74	-70.41
	165	16.32	-71.51

1# 侧边			
	CN	TRP	TIS
11B-11M	1	17.05	-80.75
	6	17.45	-82.22
	11	16.84	-82.64
11G-54M	1	16.53	-70.83
	6	17.03	-70.67
	11	16.29	-71.37
11N-65M	1	16.27	-67.45
	6	16.86	-66.96
	11	16.08	-67.89
11A-54M	36	16.64	-71.61
	56	16.59	-71.16
	165	16.09	-71.6

2# 下边

	CN	TRP	TIS
11B-11M	1	16.42	-81.41
	6	17.25	-83.28
	11	17.1	-82.67
11G-54M	1	15.98	-71.39
	6	16.95	-72.13
	11	16.66	-71.76
11N-65M	1	15.72	-67.7
	6	16.71	-68.25
	11	16.49	-67.94
11A-54M	36	16.12	-70.89
	56	15.93	-70.5
	165	16.69	-71.31

2# 侧边

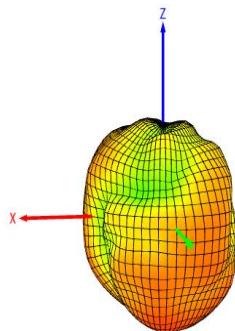
	CN	TRP	TIS
11B-11M	1	16.05	-81.5
	6	17.19	-83.36
	11	16.68	-83.03
11G-54M	1	15.57	-71.23
	6	16.56	-71.93
	11	16.17	-71.76
11N-65M	1	15.48	-67.57
	6	16.44	-68.36
	11	15.94	-67.98
11A-54M	36	15.41	-70.01
	56	15.05	-69.31
	165	15.71	-70.72

Freq(MHz)	Gain(dBi)	Efficiency(%)
2400	3.8	59.57
2410	3.94	61.58
2420	4.06	64.09
2430	4.07	64.34
2440	4.06	64.22
2450	4.32	64.62
2460	4.3	63.59
2470	4.39	64.04
2480	4.65	65.18
2490	4.74	64.52
2500	4.87	64.2

Freq(MHz)	Gain(dBi)	Efficiency(%)
5100	5.12	57.41
5120	5.58	58.35
5140	5.68	61.46
5160	5.58	66.24
5180	5.38	67.27
5200	5.95	64.7
5220	6.38	65.83
5240	5.99	66.48
5260	6	63.95
5280	5.24	65.71
5300	5.72	63.09
5320	5.28	58.93
5340	4.95	60.34
5360	4.32	61.16
5380	4.59	62.25
5400	4.53	62.22
5420	4.29	62.94
5440	6.03	61.61

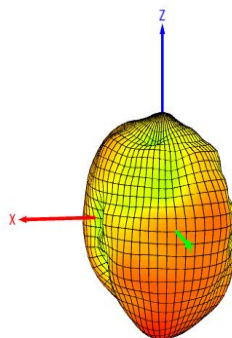
Freq(MHz)	Gain(dBi)	Efficiency(%)
5460	5.47	61.11
5480	5.08	64.36
5500	5.86	64.91
5520	5.42	62.5
5540	4.35	60.76
5560	5.6	60.09
5580	5.23	59.62
5600	5.73	62.27
5620	4.54	65.95
5640	6.05	64.89
5660	6.77	63.28
5680	5.23	63.88
5700	5.12	61.4
5720	4.93	61.35
5740	5.04	64.17
5760	5.88	64.92
5780	6.91	65.25
5800	6.78	67.42

频率(MHz)
2400
旋转方式
Manual
缩放等级
24 所有
☒ 显示网格线
☐ 黑色主题



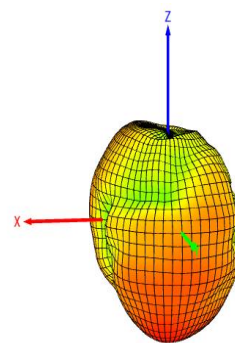
3.00
0.26
-3.28
-6.81
-10.35
-13.89
-17.43
-20.97
-24.51
-28.05
-31.59
-35.12
-38.66
-42.20

频率(MHz)
2450
旋转方式
Manual
缩放等级
24 所有
☒ 显示网格线
☐ 黑色主题



4.32
0.95
-2.43
-5.81
-9.19
-12.57
-15.94
-19.32
-22.70
-26.08
-29.45
-32.83
-36.21
-39.59

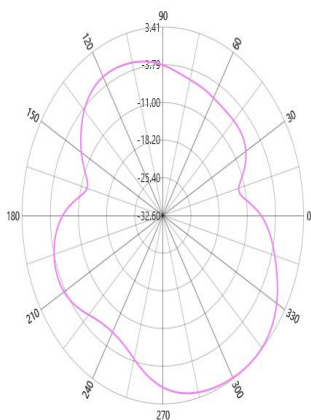
频率(MHz)
2500
旋转方式
Manual
缩放等级
24 所有
☒ 显示网格线
☐ 黑色主题



4.87
1.13
-2.61
-6.36
-10.10
-13.84
-17.58
-21.32
-25.07
-28.81
-32.55
-36.29
-40.03
-43.78

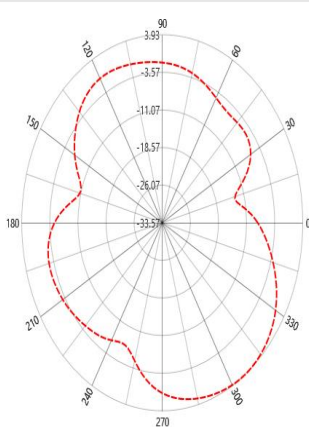
2D图 - Theta

俯视图仰角
90°
频率列表(MHz)
☒ 2400
☐ 所有频率
坐标系
Polar
缩放等级
20



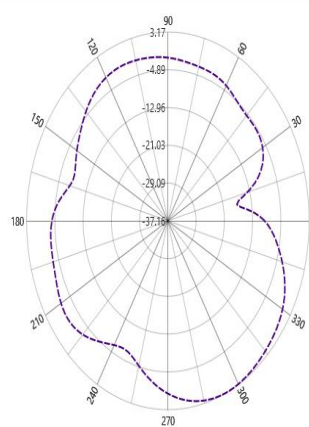
2D图 - Theta

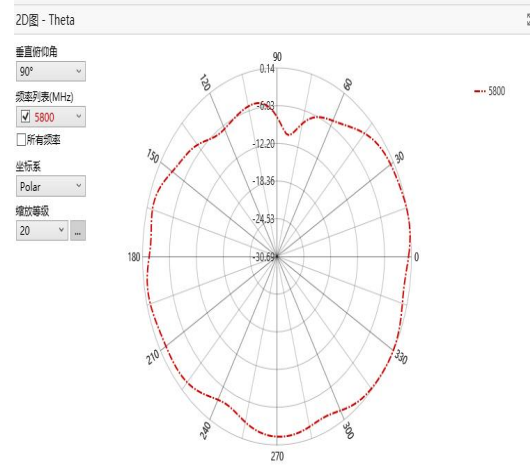
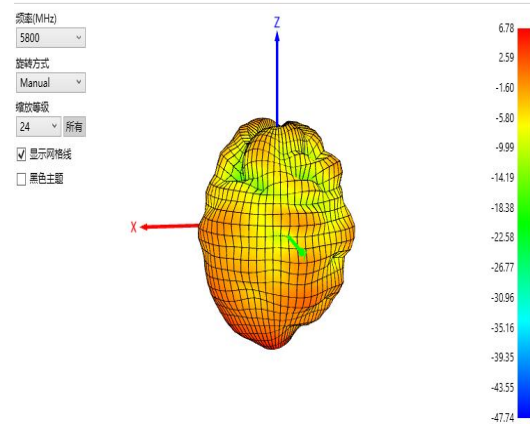
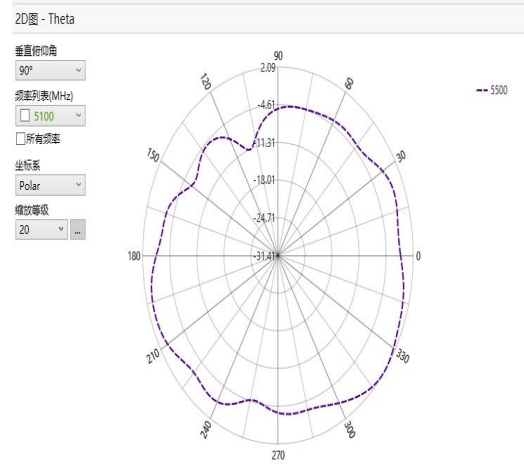
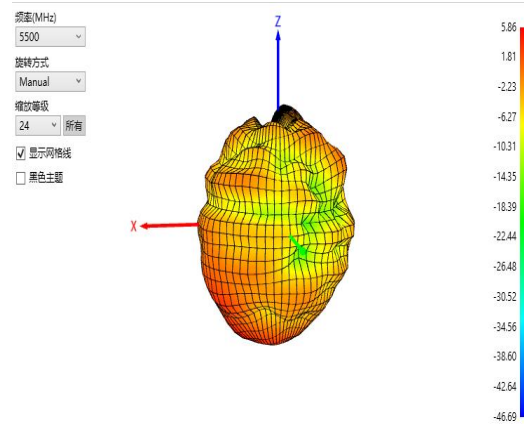
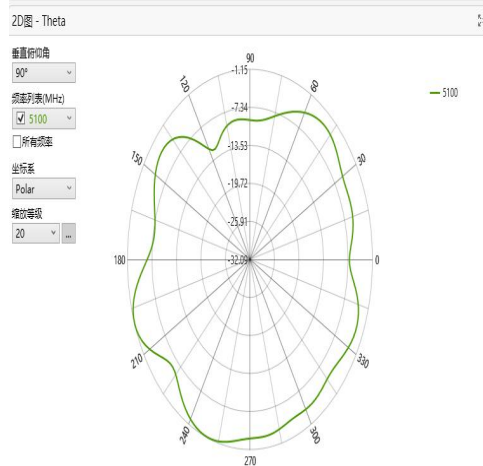
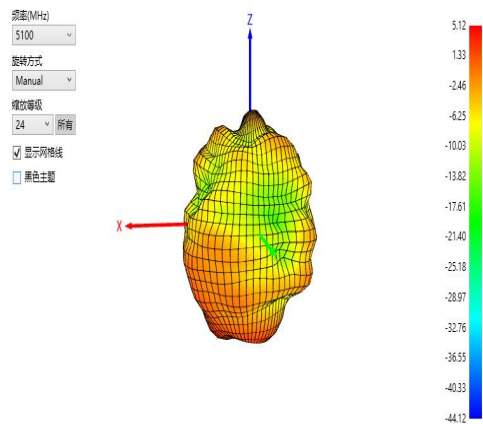
俯视图仰角
90°
频率列表(MHz)
☒ 2450
☐ 所有频率
坐标系
Polar
缩放等级
20

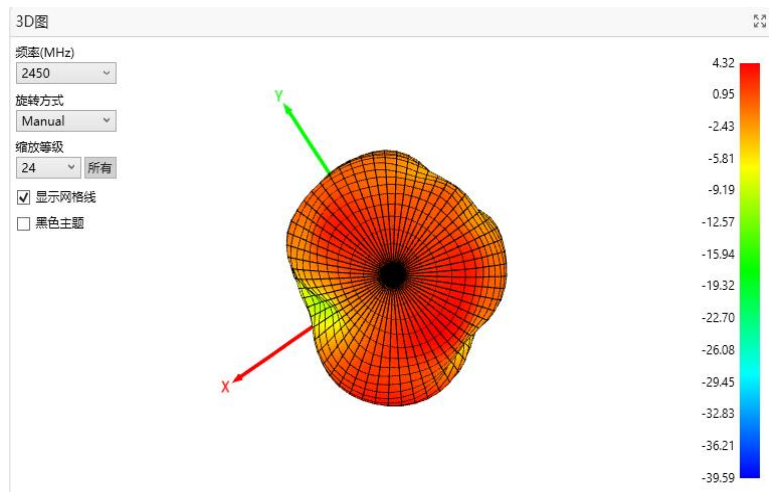
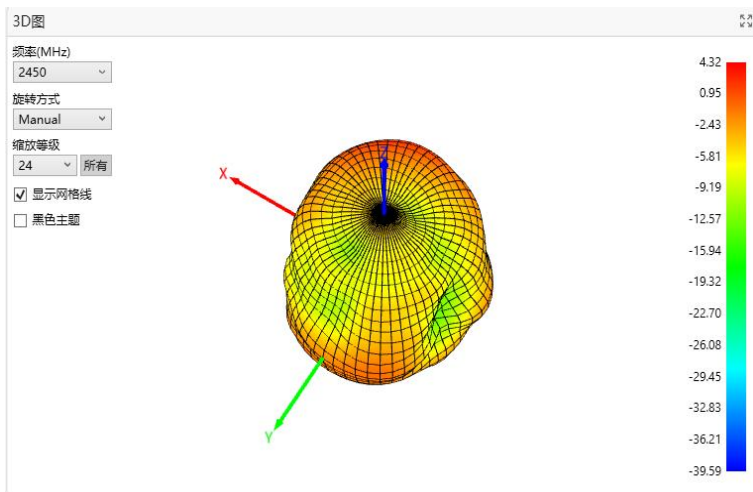
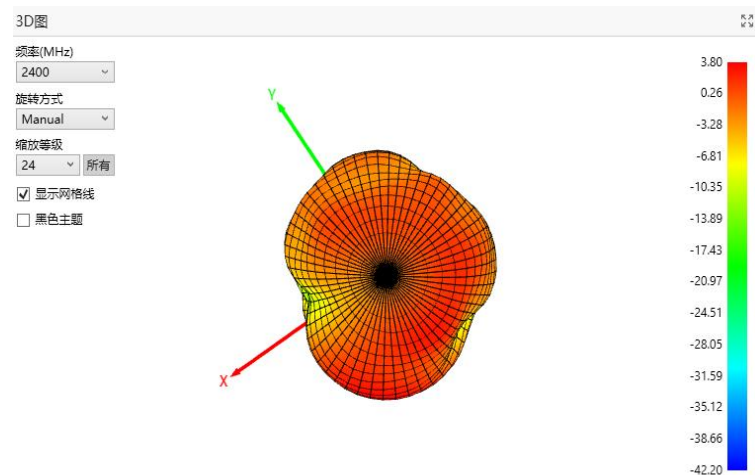
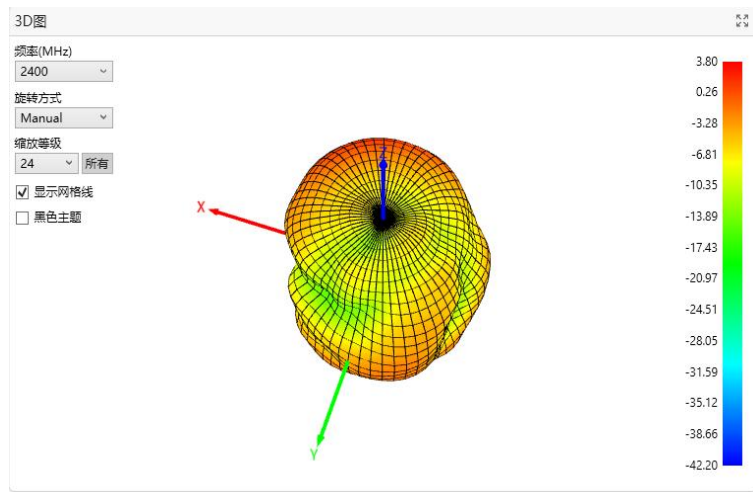


2D图 - Theta

俯视图仰角
90°
频率列表(MHz)
☒ 2500
☐ 所有频率
坐标系
Polar
缩放等级
20







3D图

频率(MHz)

2500

旋转方式

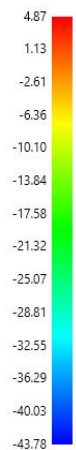
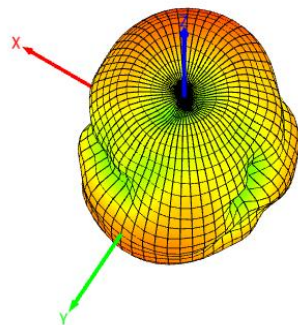
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

2500

旋转方式

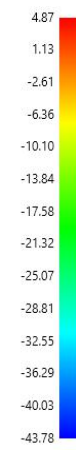
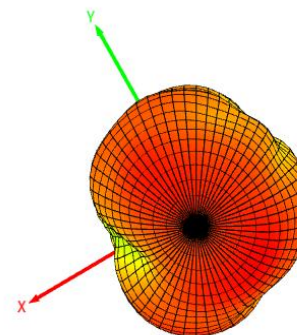
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

5100

旋转方式

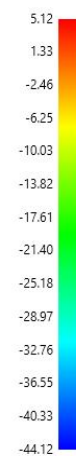
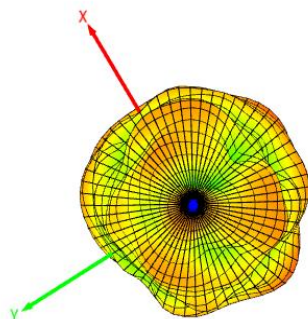
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

5100

旋转方式

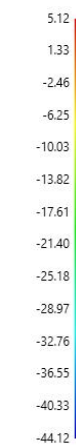
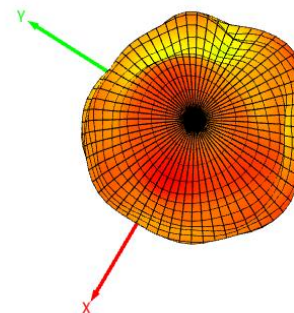
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

5500

旋转方式

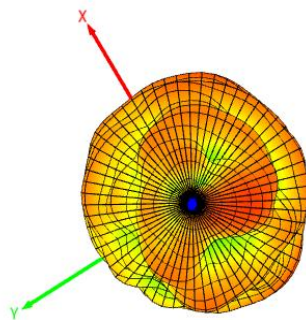
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

5500

旋转方式

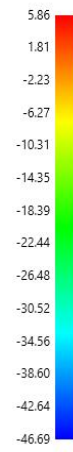
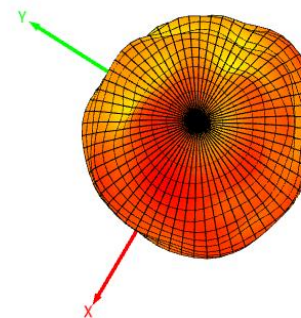
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

5800

旋转方式

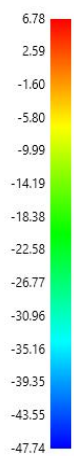
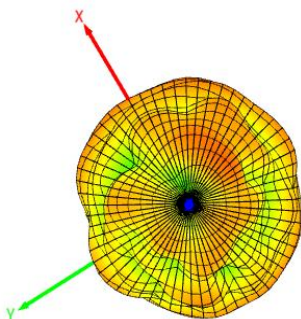
Manual

缩放等级

24 所有

☒ 显示网格线

☐ 黑色主题



3D图

频率(MHz)

5800

旋转方式

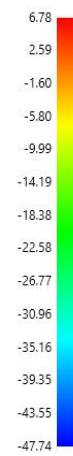
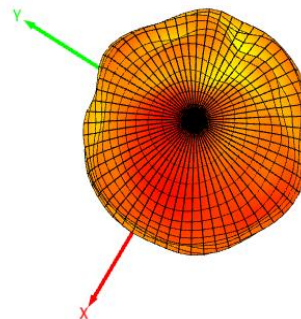
Manual

缩放等级

24 所有

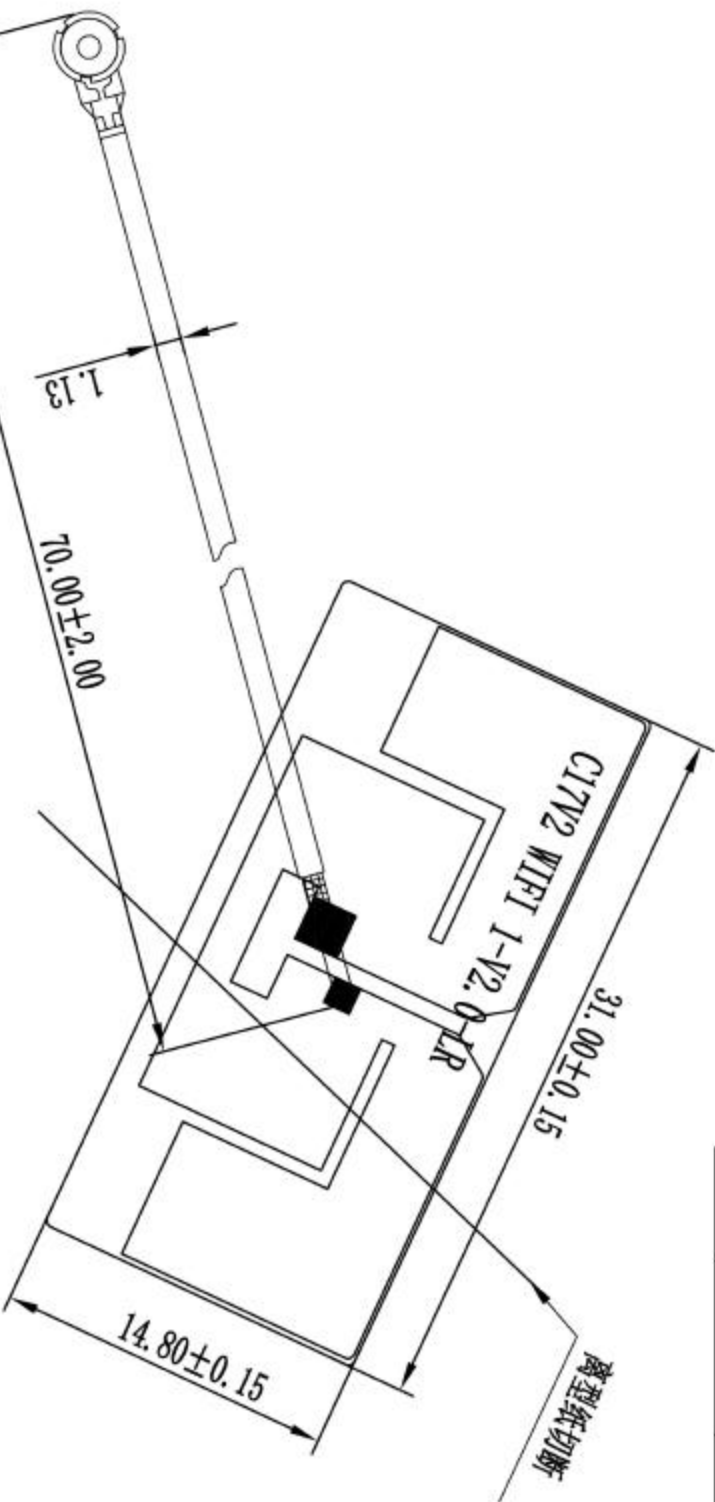
☒ 显示网格线

☐ 黑色主题



标记	签名	修改内容	日期

字码丝印亮黑色



Technical Requirements:

- 1、Material:FPC (single-sided board, electrolytic copper), thickness < 0.12 mm; Polyimide (PI) 1825 with black solder mask;3M 467 double-sided adhesive tape applied on the backside.
- 2、Gold Fingers:No gold plating—apply anti-oxidation treatment instead.The circuit area must not exhibit defects such as easy breakage or cracking.The product must pass a 24-hour salt spray test.
- 3、Electrical Performance Testing:100% VSWR (Voltage Standing Wave Ratio) consistency testing
- 4、Dimensional Tolerances:Dimensions marked with an asterisk (*) are critical control dimensions.All unspecified tolerances shall comply with the general tolerance specified in the drawing frame.
- 5、Surface Quality:The surface must be free of contaminants, scratches, black spots, or other visible defects.
- 6、Compliance:The product must comply with RoHS standards.
- 7、Packaging & Delivery:Ship in full-panel format (not depanelized).

直接出货成品料号

深圳市林荣科技有限公司

第三视角				项目				日期			
0~3	±0.05	±	0.03	C17V2				2026-07-09			
3~30	±0.08	○	0.03	产品名称				设计			
30~50	±0.10	◎	0.02	WiFi-FPC天线				审核			
50~80	±0.12	⊥	0.02	产品料号				批准			
角度	±1°	∠	0.05	材料				FPC			
第 1 页, 共 1 页				单位				mm			
				比例				1:1			
				版本				A.1			

The end, Thanks !
