

Shenzhen Lxc Electronics Technology Co., Ltd

深圳市连兴创电子科技有限公司

APPROVAL SHEET

承认书

客户 (Customer) : _____

产品 (Product) : 2.4G/5G Antenna (L=150MM)

型号 (Model) : Y4-4G/5. G

料号 (Part Number) : YN-PM0300471

制作人 (Written By) : 唐红交

签发时间 (Issued Date) : 2024-07-18

客户 CUSTOMER

频率范围(Frequency range)	WIFI:2400-2500 5150-5850 (MHz)
驻波比系数(VSWR)	<2.0
输入阻抗(Input Impedance)	50 (Ω)
极化方式(Polarization)	垂直极化 Vertical Polarization
半功率波束 (3dB) HPW	180° H-plane 120° E-plane
天线类型(Antenna type)	FPC Antenna (Built-in 内置天线 antenna)
天线增益峰值(Antenna gain MAX (dBi)	3dBi+/-1
天线供应商 (Antenna supplier)	Shenzhen Lxc Electronics Technology Co., Ltd
天线型号 (Antenna Model)	YN-PM0300471

RF by		Checked by	
ME by		Date	
Customer Confirm			

8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
Address: 4th Floor, Building C, Jinruihua Industrial Park, No. 12 Huafang Road, Dalang Street, Longhua District, Shenzhen, China Shenzhen Lxc Electronics Technology Co ., Ltd			

Revision History

Date	Revision	Description of Changes
2024-07-18	RA	Measured with SUS301 sample.

深圳市连兴创电子科技有限公司1

PROJECT2

ANTENNA COMPONENTST 3

1 TECHNICAL SUMMARY3

2 GENERAL DESCRIPTION3

2.1 Components/Part revisions 3

3 MECHANICAL DESCRIPTION3

4 ELECTRICAL PERFORMANCE.....3

4.1 Set-up 3

4.1.1 VSWR 3

4.1.2 Gain & Radiation Patterns 3

4.1.3 Matching Circuit Description 3

4.2 Measurement Data 5

4.2.1 Active result（GSM） 5

6 Mechanical drawing 5

7 RELIABILITY TESTS.....11

7.1 Test content 11

7.2 Test results 11

8 CONCLUSION9

8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话： 0755-29195258 传真： 0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the program. We test the antenna with the latest version handset. And it seems to be acceptable.

2 General Description

2.1 Components/Part revisions

VSWR: Voltage Standing Wave Rate.

3 Mechanical Description

4 Electrical Performance

4.1 Set-up

4.1.1 VSWR

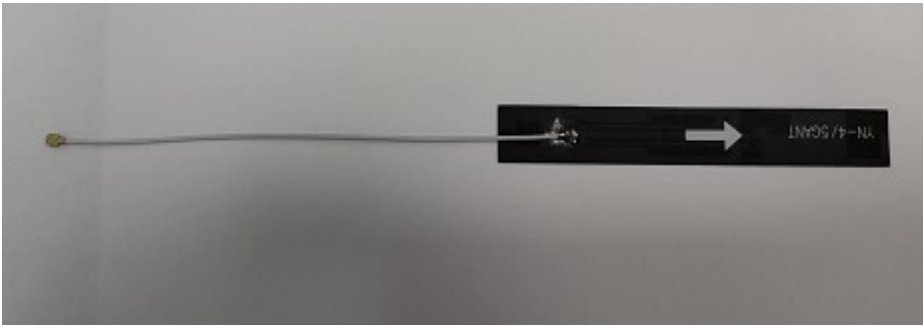
VSWR measurements (S11) were performed using an Agilent 8753D Network Analyzer and the previously described test fixture. Coaxial chokes were used to mitigate surface currents on the outside of the cabling. The testing was performed in free space.

4.1.2 Gain & Radiation Patterns

The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 800 MHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using both dipole and leaky wave horn standards.

4.1.3 Matching Circuit Description

8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址：深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话：0755-29195258 传真：0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			



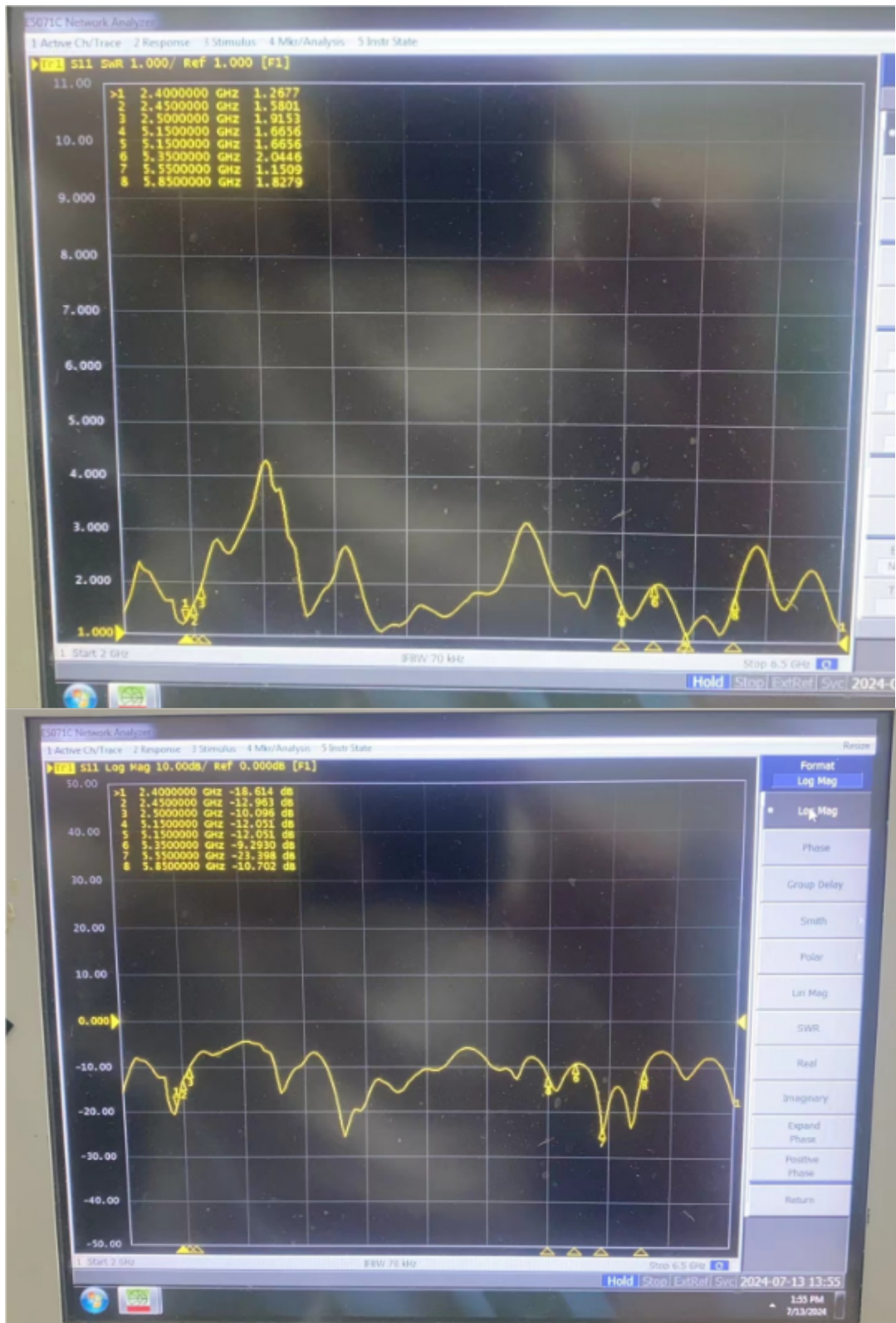
整机有源测试数据

WiFi(5G/A)	CH	功率(54M)	灵敏度(54M)	WiFi(2.4G/G)	CH	功率(54M)	灵敏度(54M)
	36	15.34	-75.64		1	14.35	-71.28
	149	15.46	-75.52		6	14.28	-71.45
	165	16.15	-74.61		11	14.68	-70.82
WiFi(2.4G/B)	CH	功率(11M)	灵敏度(11M)	WiFi(2.4G/N)	CH	功率(MCS7)	灵敏度(MCS7)
	1	14.41	-80.47		1	13.12	-68.72
	6	14.49	-81.20		6	13.32	-68.46
	11	14.70	-80.05		11	13.18	-68.84

8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话： 0755-29195258 传真： 0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

4.2 Measurement Data

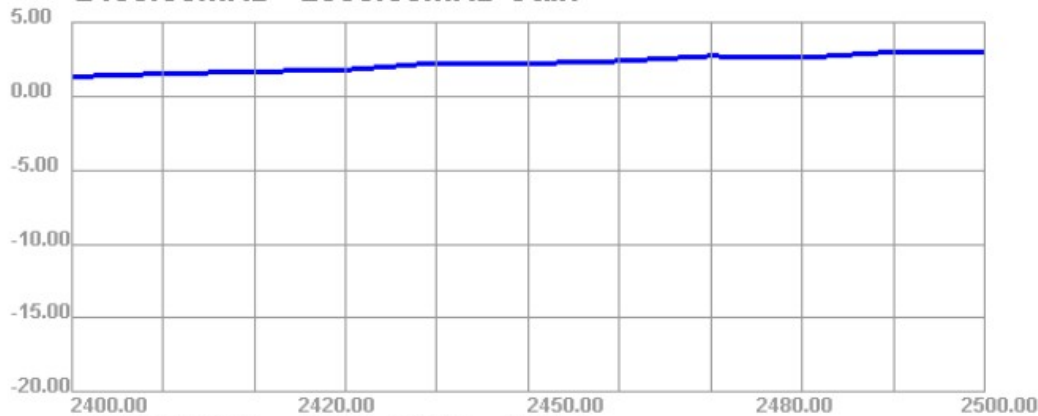
4.2.1 Active result (2.4G/5.8G/WIFI)



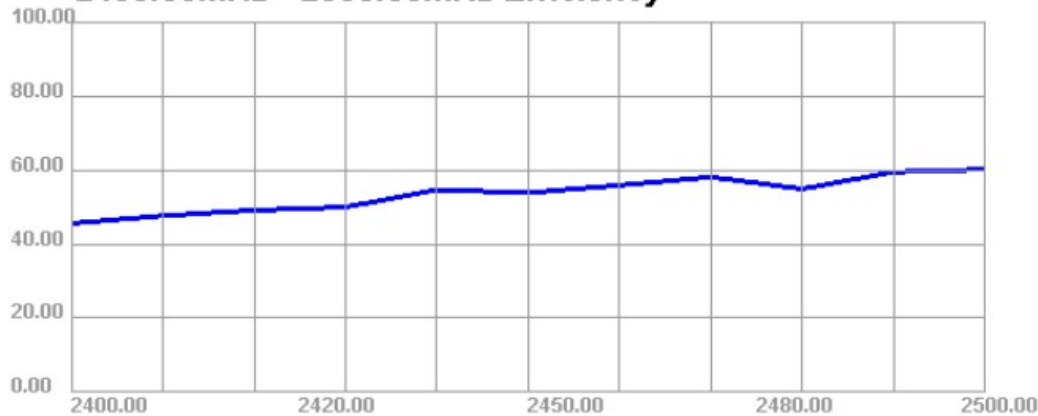
8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话：0755-29195258 传真：0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

Freq	Effi	Gain
(MHz)	(%)	(dBi)
2400	45.61	1.31
2410	47.68	1.52
2420	49.18	1.66
2430	50.03	1.78
2440	54.67	2.24
2450	53.89	2.2
2460	55.92	2.37
2470	58.14	2.71
2480	54.93	2.59
2490	59.53	2.99
2500	60.2	2.94

2400.00MHz - 2500.00MHz Gain

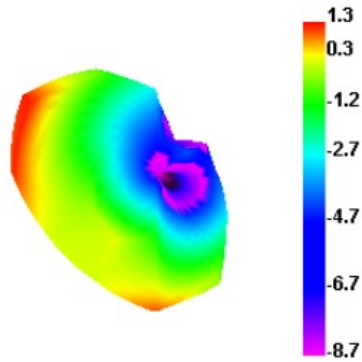


2400.00MHz - 2500.00MHz Efficiency

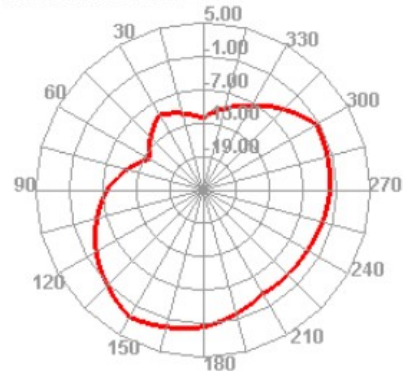


8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话： 0755-29195258 传真： 0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

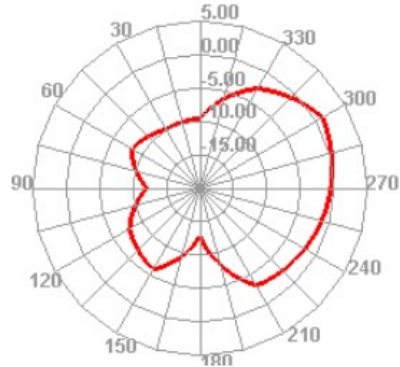
2400.000MHz



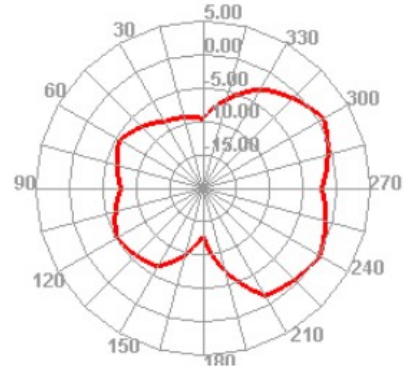
2400.000MHz H



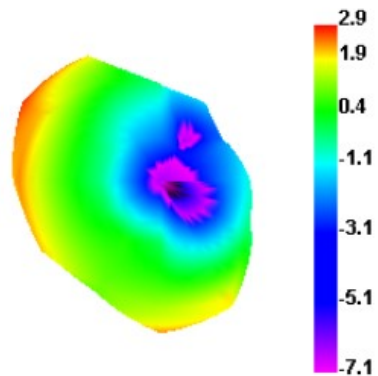
2400.000MHz E1



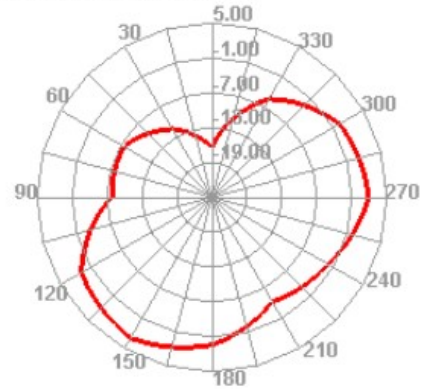
2400.000MHz E2



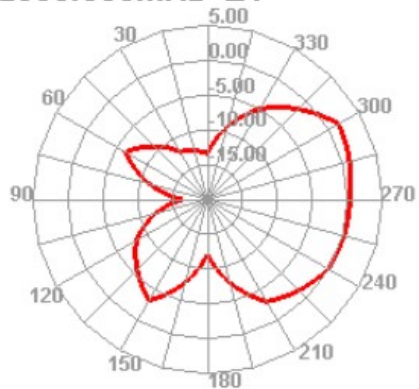
2500.000MHz



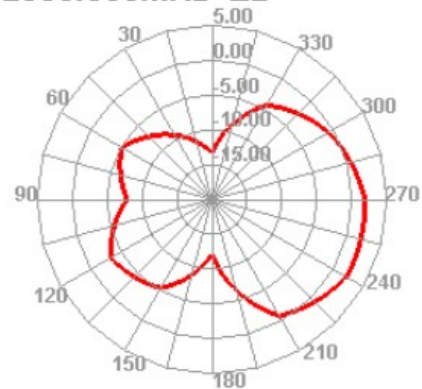
2500.000MHz H



2500.000MHz E1

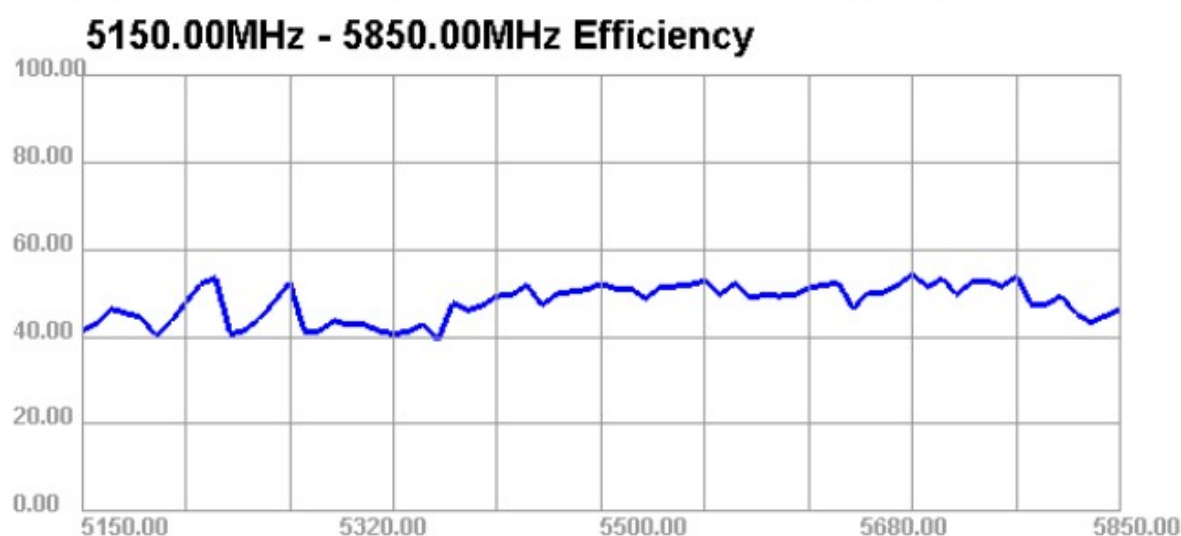


2500.000MHz E2



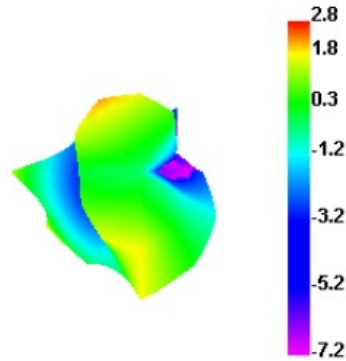
8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话： 0755-29195258 传真： 0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

Freq	Effi	Gain
(MHz)	(%)	(dBi)
5150	41.23	2.77
5350	41.38	1.67
5550	51.6	2.33
5650	51.85	2.74
5850	46.32	2.69

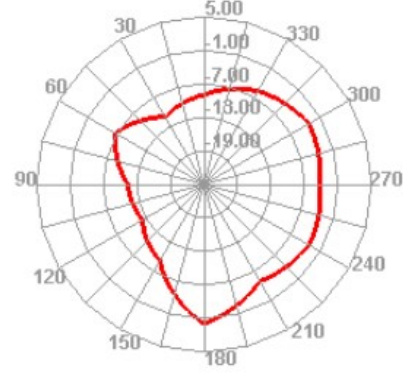


8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话：0755-29195258 传真：0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

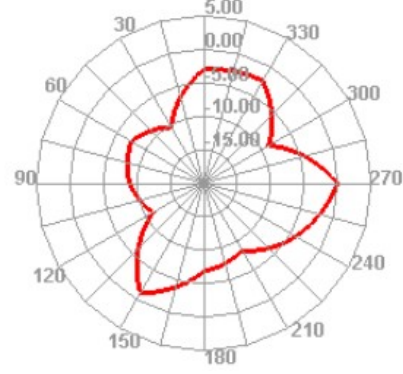
5150.000MHz



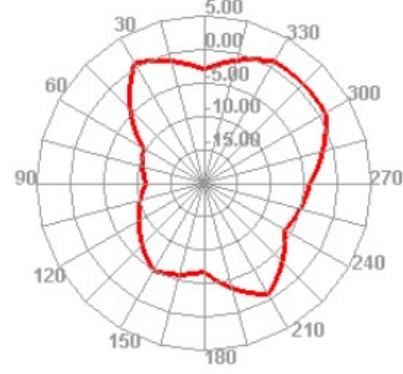
5150.000MHz H



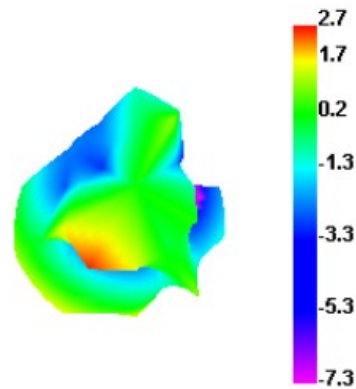
5150.000MHz E1



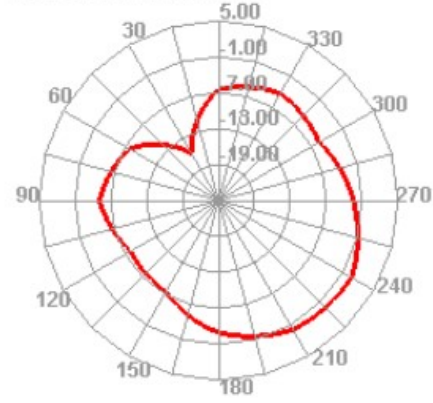
5150.000MHz E2



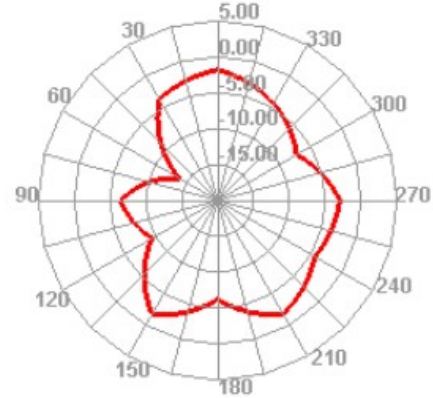
5850.000MHz



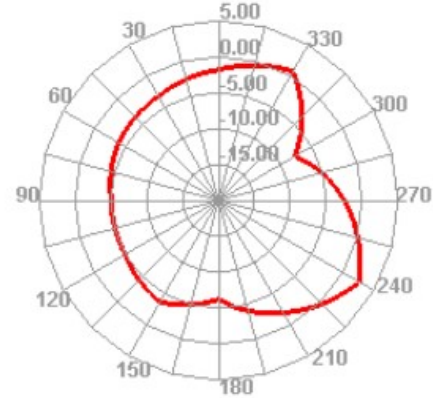
5850.000MHz H



5850.000MHz E1

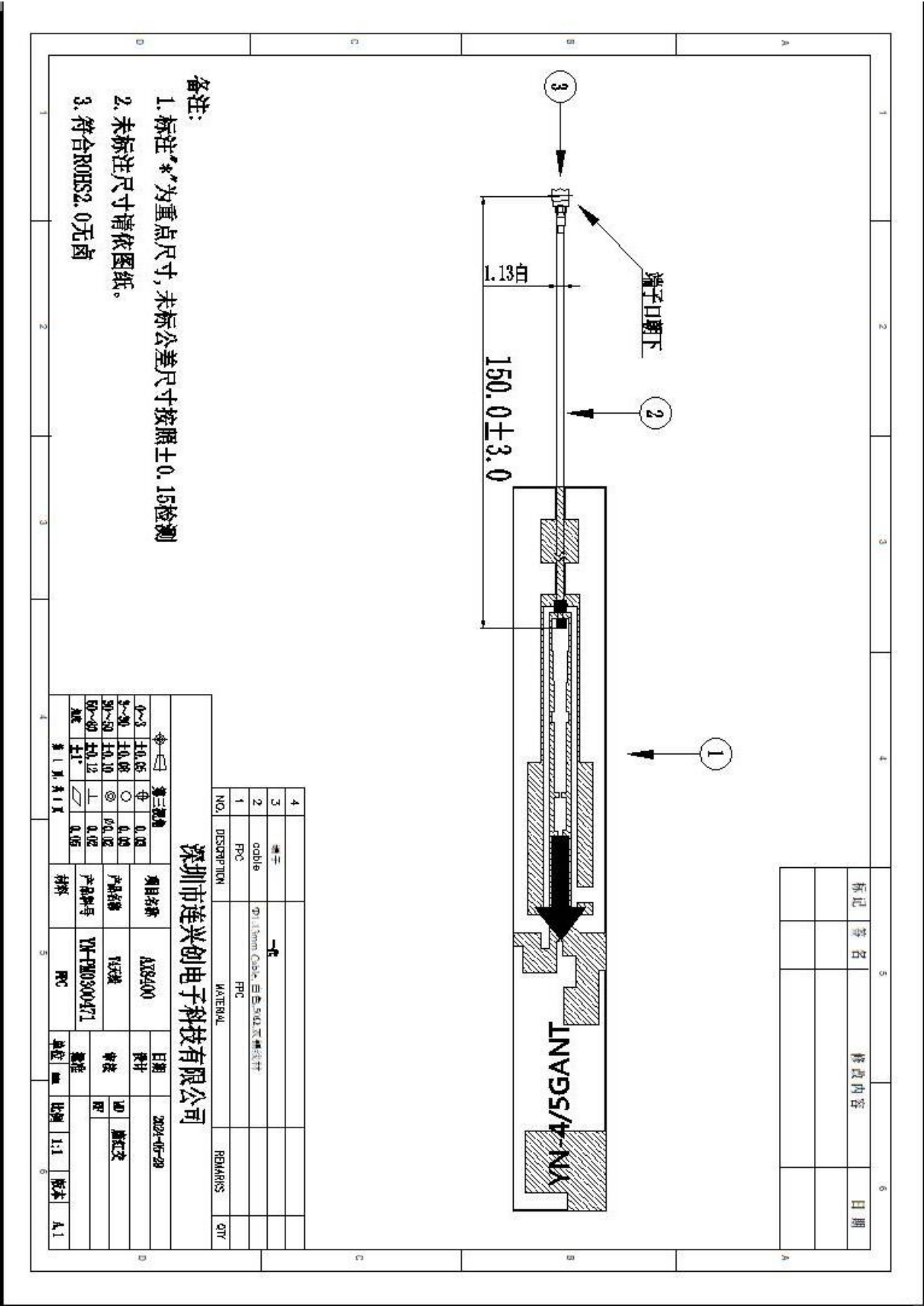


5850.000MHz E2



8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话： 0755-29195258 传真： 0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			

6 Mechanical drawing



8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18		Check: Zhong	
TEST:	Language:		
A	English		

地址: 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼
电话: 0755-29195258 传真: 0755-29590286
Shenzhen Lxc Electronics Technology Co., Ltd

7 Reliability tests

7.1 Test content

No	试验项目	试验方法	判定基准
1	盐水喷雾试验	把盐浓度 5%的溶液喷雾 48HR	不能有变色, 歪 (变形) 脱落等的缺点 腐蚀面积不能过大

7.2 Test results

NO	样品数	试验期间	实验结果	备注
1	50	24 小时	OK	技术等级为 9 级 腐蚀<0.4mm
2	50	48 小时	OK	技术等级为 9 级 腐蚀<0.4mm

8 Conclusion

From the above test results, we can know the electrical performance of the antenna is seems good.

Shenzhen Lxc Electronics Technology Co ., Ltd ,look forward to your confirmation,
thank you for your cooperation !

8Project:		Author:Wang	File Name: YN-PM0300471 天线
Date: 2024-07-18			
TEST:	Language:	Check: Zhong	
A	English		
地址：深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼 电话：0755-29195258 传真：0755-29590286 Shenzhen Lxc Electronics Technology Co ., Ltd			