

Shenzhen Lxc Electronics Technology Co ., Ltd

SPECIFICATION FOR APPROVAL

PRODUCT NAME: 2.4G+5G built-in FPC antenna

Model:XBY240035

Revision History

Date	Revision	Description of Changes
2025-07-25	RA	Measured with SUS301 sample.

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8Project:		Author:Wang	X7
Date: 2025-07-25			
TEST:	Language:	Check: Zhong	
A	English		
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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.

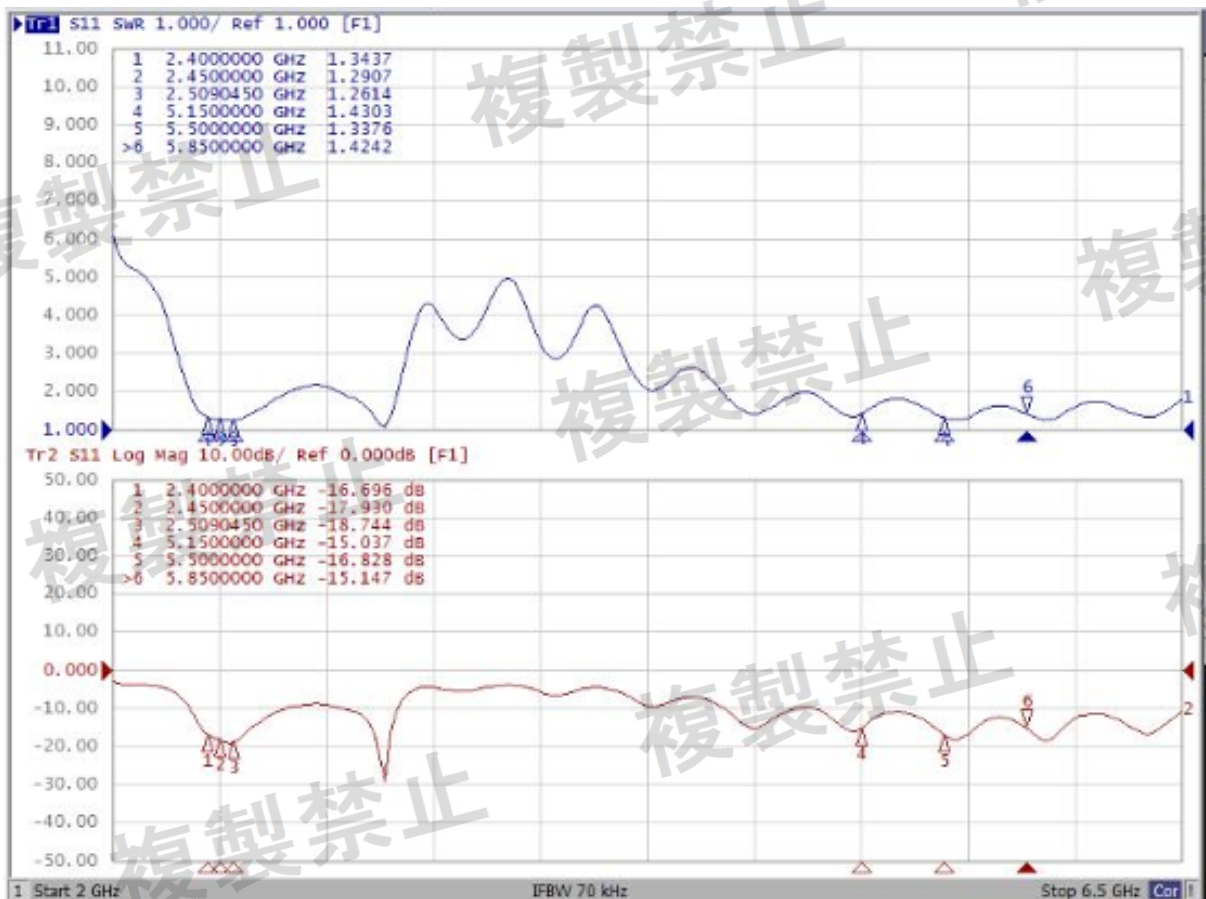
4.1.3 Matching Circuit Description

4.2 Measurement Data

4.2.1 Active result (WIFI)



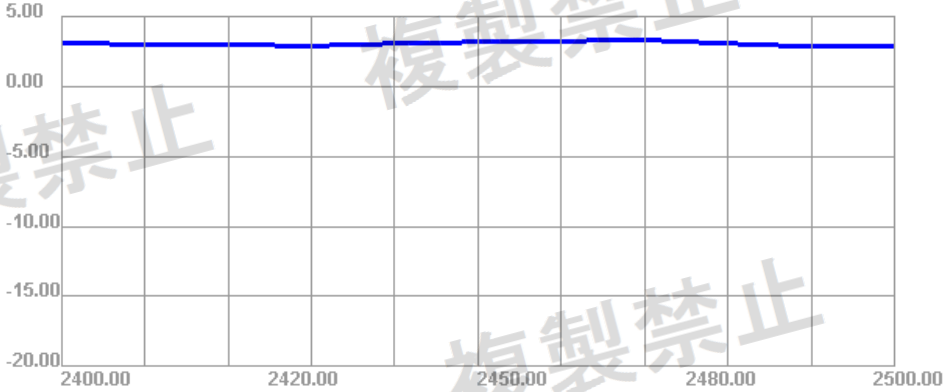
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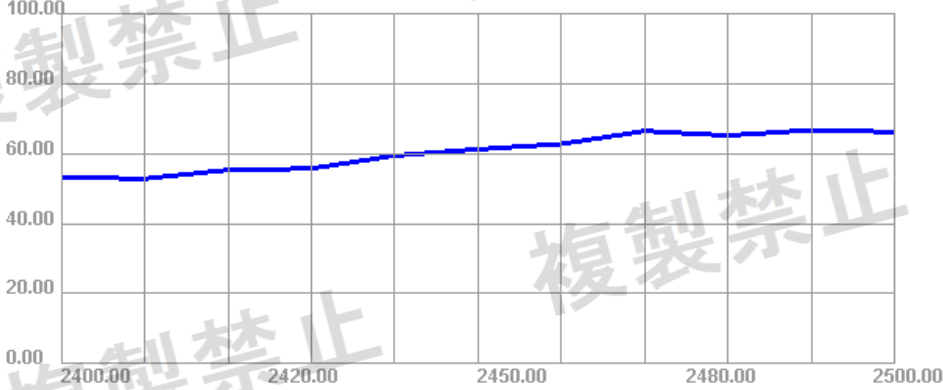
Freq (MHz)	Effi (%)	Gain (dBi)
2400	54.9	2.09
2410	54.6	2.02
2420	57.09	2.37
2430	57.7	2.72
2440	63.71	3.41
2450	63.26	3.64
2460	67.06	3.95
2470	69.01	3.95
2480	66.4	3.59
2490	68.26	3.53
2500	68.76	3.68

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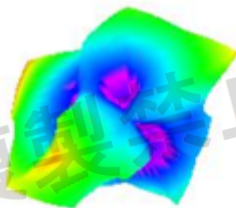
2400.00MHz - 2500.00MHz Gain



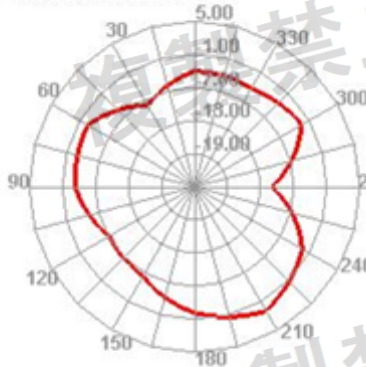
2400.00MHz - 2500.00MHz Efficiency



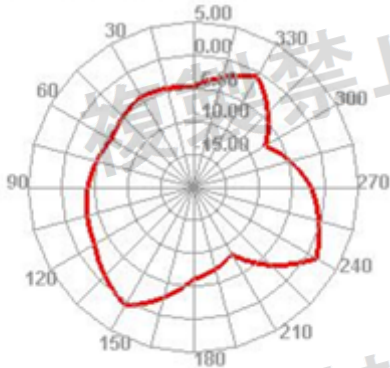
2400.000MHz



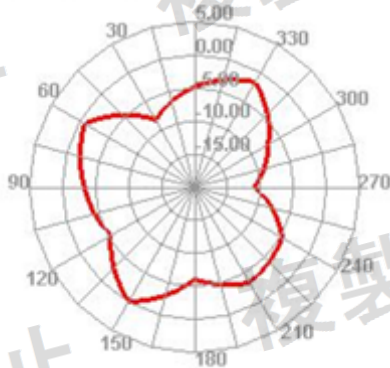
2400.000MHz H



2400.000MHz E1

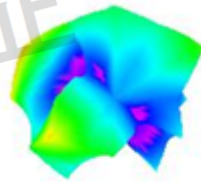


2400.000MHz E2

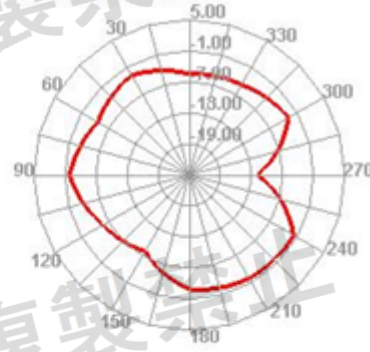


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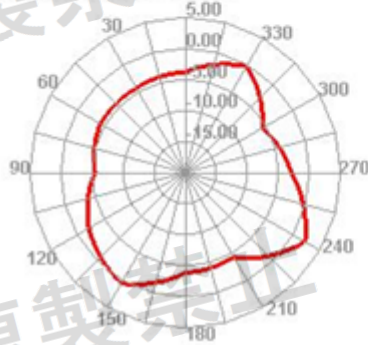
2450.000MHz



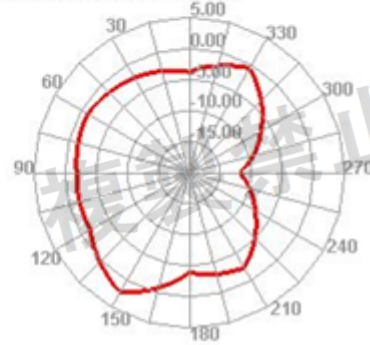
2450.000MHz H



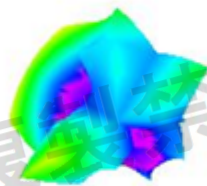
2450.000MHz E1



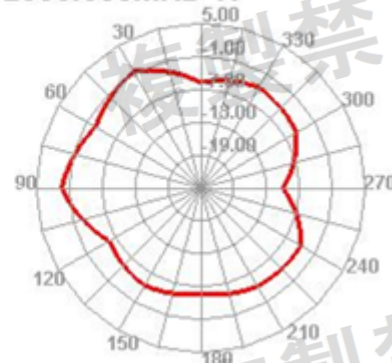
2450.000MHz E2



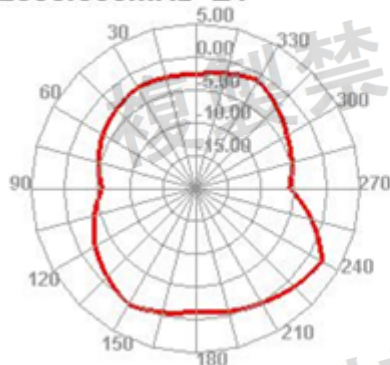
2500.000MHz



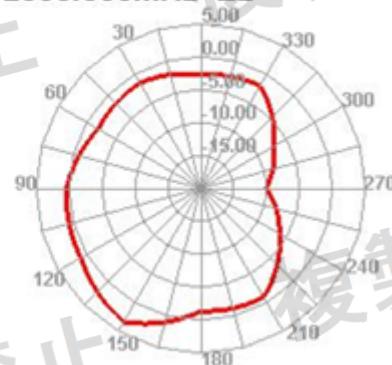
2500.000MHz H



2500.000MHz E1

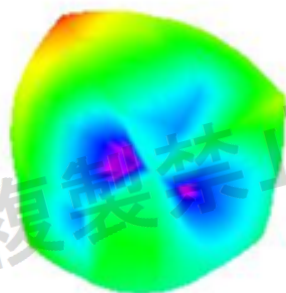


2500.000MHz E2

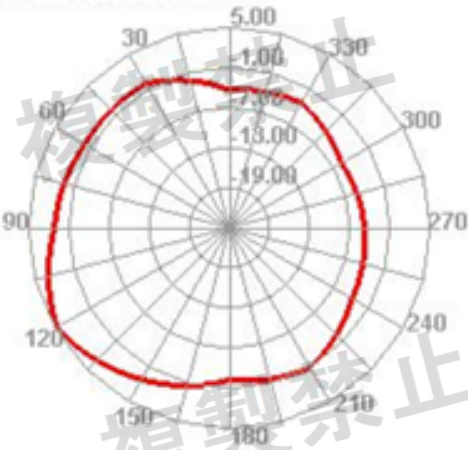


Freq	Effi	Gain
(MHz)	(%)	(dBi)
5150	68.1	2.62
5350	65.24	3.21
5550	69.99	3.11
5650	69.82	3.02
5850	69.88	3.57

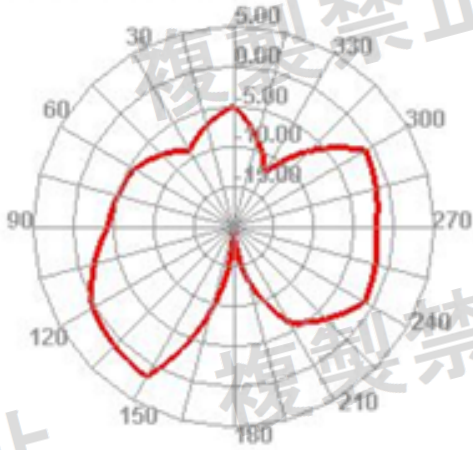
5150.000MHz



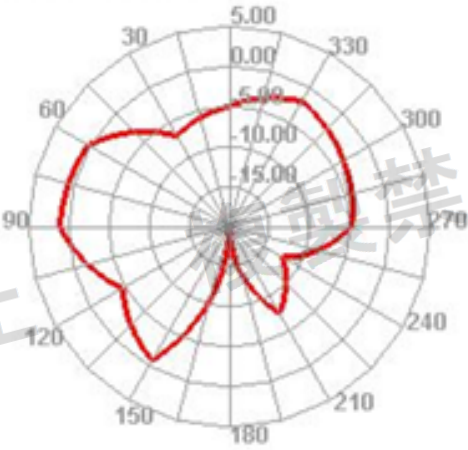
5150.000MHz H



5150.000MHz E1

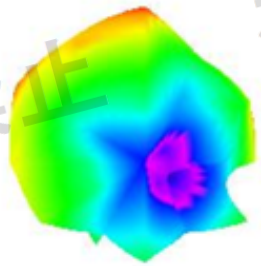


5150.000MHz E2

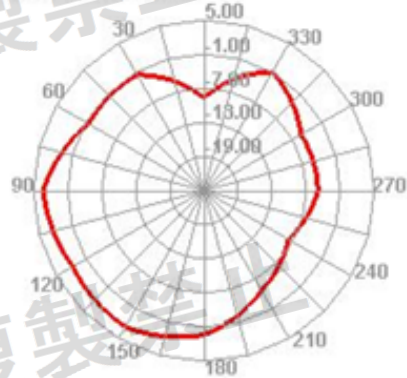


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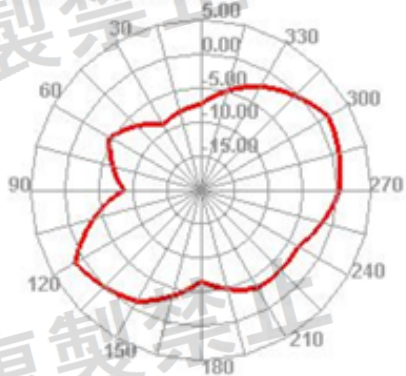
5500.000MHz



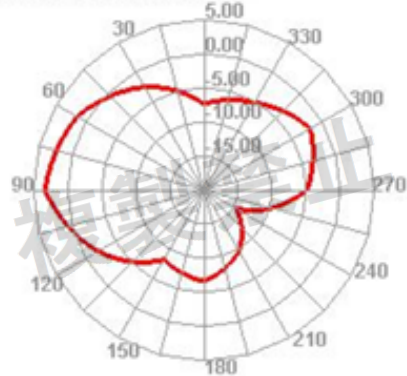
5500.000MHz H



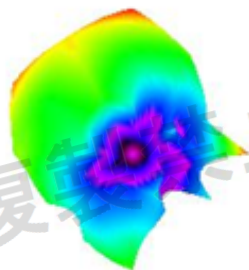
5500.000MHz E1



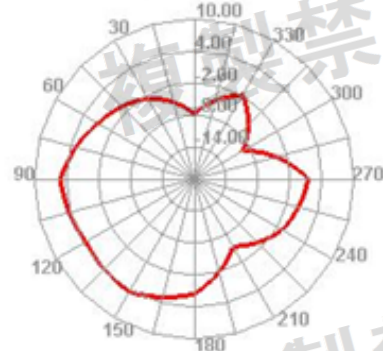
5500.000MHz E2



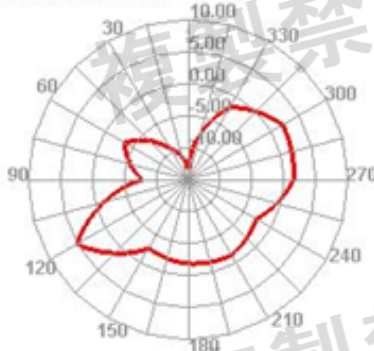
5850.000MHz



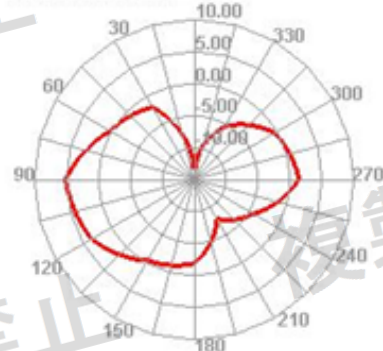
5850.000MHz H



5850.000MHz E1



5850.000MHz E2



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WiFi(2.4G/B)	CH	TRP-(11M)	TIS-(11M)	WiFi(5G/A)	CH	TRP-(54M)	TIS-(54M)
	1	15.4			36	12.1	
	6	15.0			149	17.4	
	11	14.5	-72		165	18.5	-72.5

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Technical drawing of a cable assembly. The drawing shows a cross-section of a cable with a diameter of 12.90. The length of the cable is 35.70. The cable is labeled "ZBE340035-1009-4171". The cable is connected to a connector with a length of 1.13. The connector is labeled "端子口朝下". The drawing includes a table with dimensions and a table with material specifications.

NO.	DESCRIPTION	MATERIAL	REMARKS	QTY
1	PPC			
2	cable	Ø11.3mm Cable, 黑色, 50Ω, 无源材料		
3	端子	PPC		
4				

尺寸	第三类角	项目名称	材料	PPC	单位	比例	版本
0~3	±0.05	φ	0.03				
3~30	±0.08	○	0.03				
30~50	±0.10	◎	0.02				
50~80	±0.12	⊥	0.02				
80~	±1°	∇	0.05				

日期	设计	审核	批准
2025-07-25			

修改内容	日期

7Conclusion

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 !

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