



Shenzhen Lxc Electronics Technology Co ., Ltd

APPROVAL SHEET
For
DONGGUAN CE LINK LIMITED
IPC-14BU project
Antenna componentst
A02520005001

频率范围(Frequency range)	WIFI:2400-2500 (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)	内置 FPC 天线 (Built-in FPC antenna)
天线增益峰值(Antenna gain MAX (dBi)	3.01dBi
天线供应商 (Antenna supplier)	Shenzhen Lxc Electronics Technology Co ., Ltd
天线制造商地址 (Antenna manufacturer address)	4 / F, Building C, Jinruihua Industrial Park, No.12 Huafang Road, Dalang Street, Longhua District, Shenzhen
天线型号 (Antenna Model)	IPC-14BU

RF by		Checked by	
ME by		Date	2024-10-25
Customer Confirm			

Project:WIFI Antennae		Author: Zhu	File Name: IPC-14BU-APP-RA
Date: 2024-10-25			
TEST:	Language:	Check: Wang	
A	English		
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Revision History

Date	Revision	Description of Changes
2024-10-25	RA	Measured with FPC sample.

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1 Technical Summary

This report summarizes the electrical results of the proposed antenna to support the WIFI 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

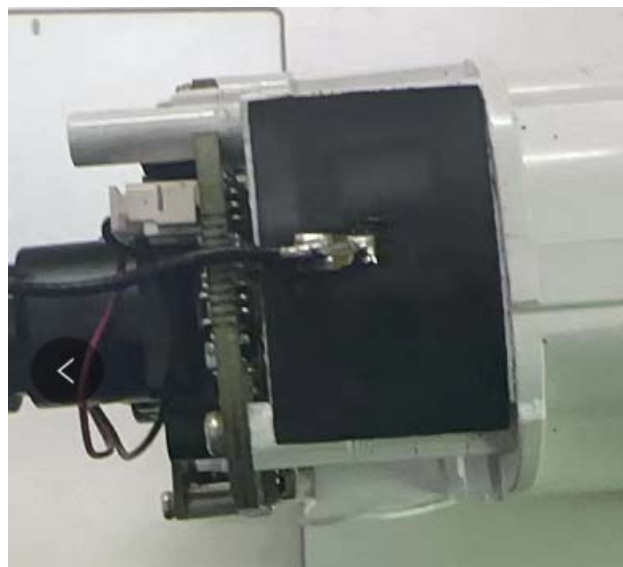
4.1 Set-up

4.1.1 VSWR

VSWR measurements (S21) 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

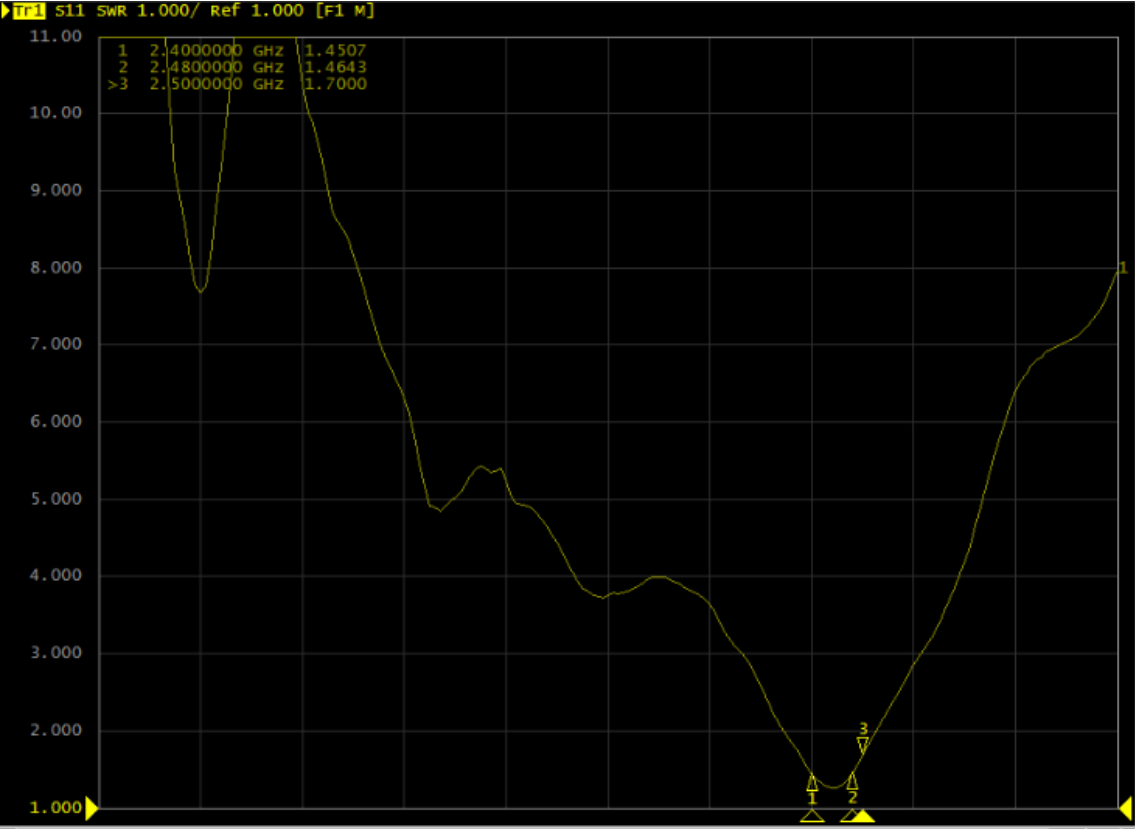
The gain of the antenna was measured in the HUMAN's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 800 MHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated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



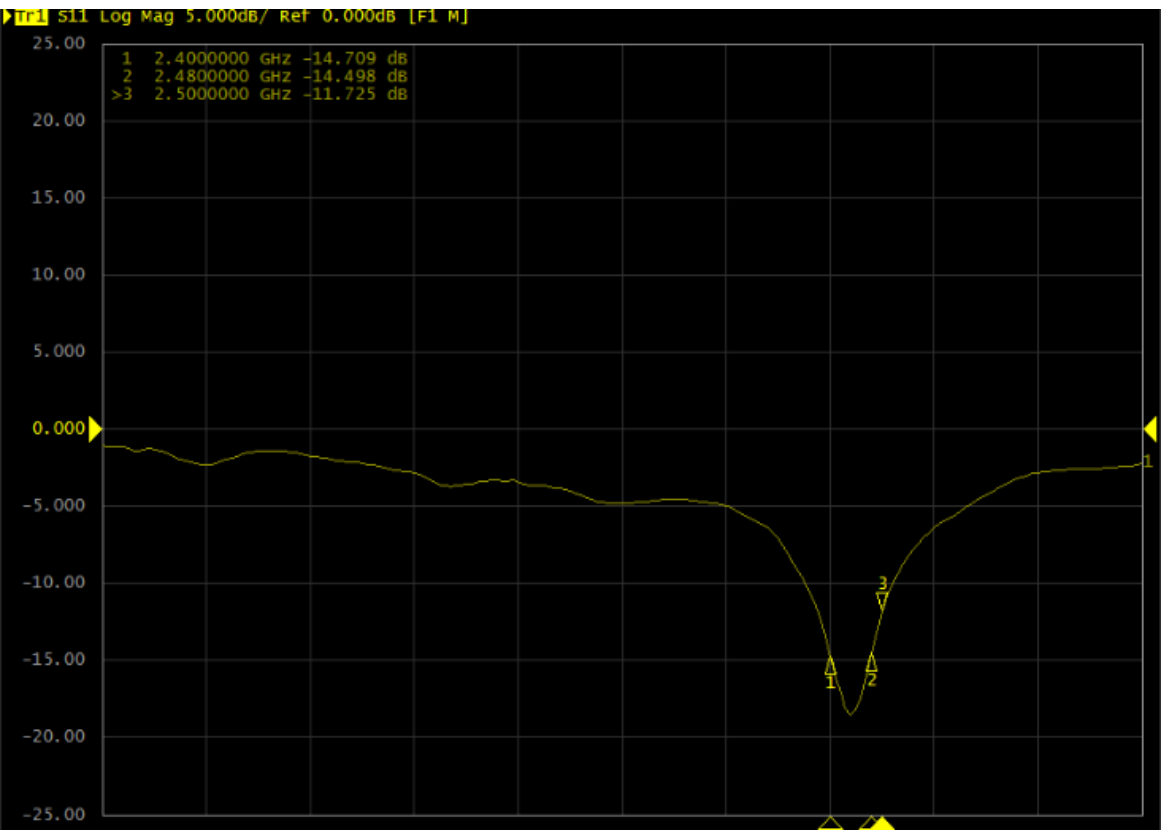
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5 Plots

5.1 VSWR (S11)



LOG MAG (S11)



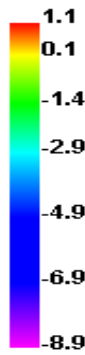
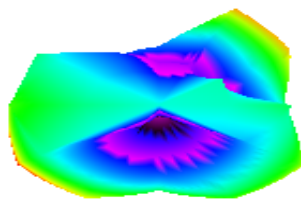
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5.2 Gain efficiency
2400-2480 (MHz)

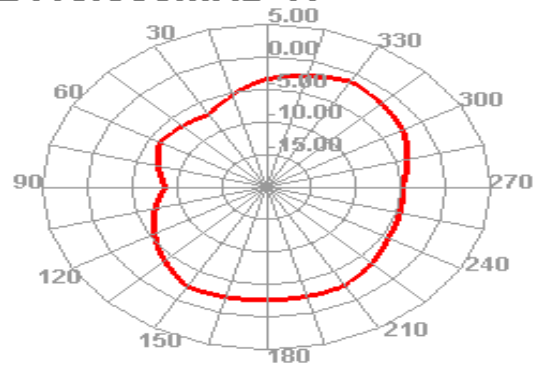
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	32.75	-4.85	0.56
2410	33.23	-4.79	0.88
2420	32.12	-4.93	0.95
2430	35.39	-4.51	1.55
2440	41.53	-3.82	2.43
2450	46.34	-3.34	2.92
2460	47.84	-3.2	3.01
2470	44.56	-3.51	2.67
2480	45.09	-3.46	2.76
2490	46.26	-3.35	2.96
2500	47.5	-3.23	3.11

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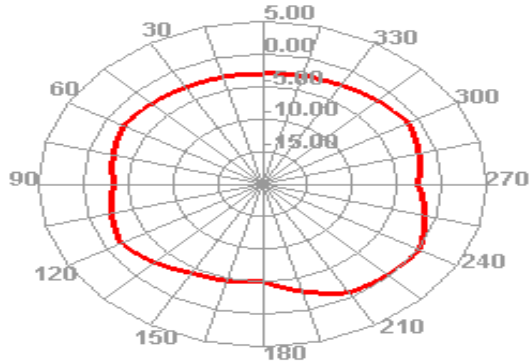
2410.000MHz



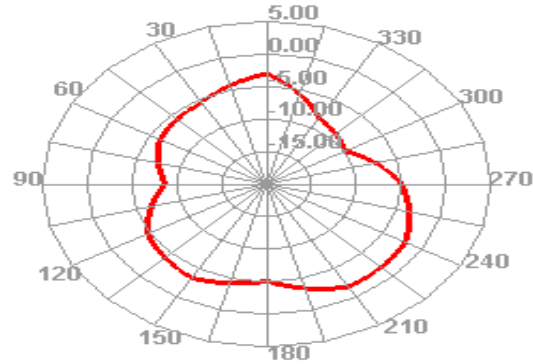
2410.000MHz H



2410.000MHz E1

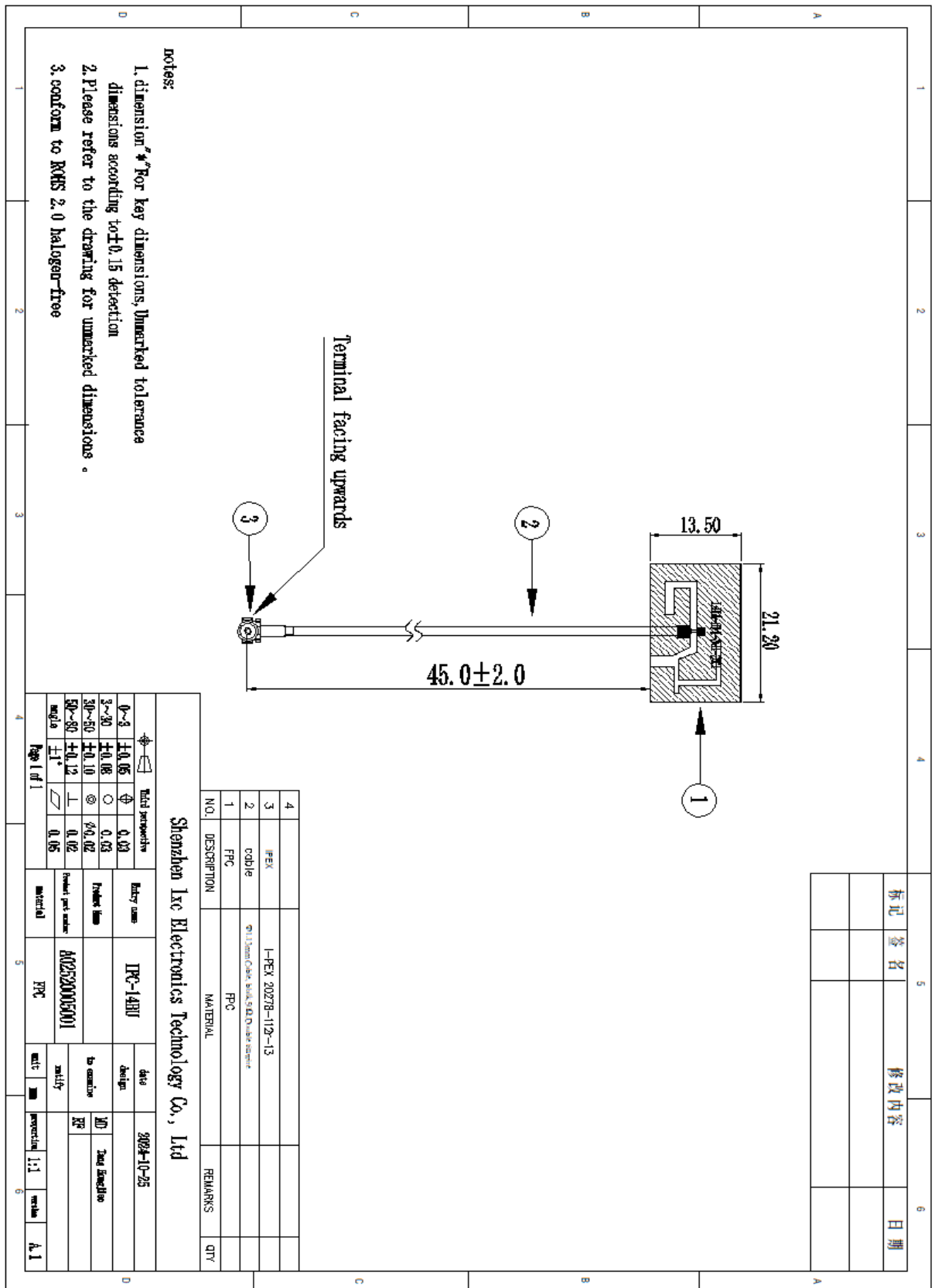


2410.000MHz E2



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6 Mechanical drawing



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7 Reliability tests

7.1 Test content

No	试验项目 (pilot projects)	试验方法 (test mode)	判定基准 (defining principle)
1	盐水喷雾试验 (salt spray test)	把盐浓度 5%的溶液喷雾 48HR (Spray the solution with salt concentration of 5% for 48H)	不能有变色, 歪 (变形) 脱落等的缺点 腐蚀面积不能过大 (Spray the solution with salt concentration of 5% for 48H without discoloration, deflection (deformation), falling off, etc. The corrosion area shall not be too large)
2	工作温度 (Operational Temperature)	-40℃~+65℃	
3	储存温度 (Storage Temperature)	-50℃~+85℃	
4	湿度 (Humidity)	40%~95%	

7.2 Test results

NO	样品数 (Number of samples)	试验期间 (During the test)	实验结果 (experimental result)	备注 (remarks)
1	50	24 hour	OK	技术等级为 9 级 腐蚀<0.4mm(Remarks The technical level is Level 9 Corrosion<0.4mm)
2	50	48 hour	OK	技术等级为 9 级 腐蚀<0.4mm(Remarks The technical level is Level 9 Corrosion<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!

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