

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) : 威视达康

产品 (Product) : 黄色 WIFI-天线 (L=95MM)

型号 (Model) : WIFI

料号 (Part Number) : LXC-202406180001

制作人 (Written By) : 唐红交

签发时间 (Issued Date) : 2024-06-18

客户 CUSTOMER

频率范围 Frequency range	WIFI:(2.4/5.8) (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

RF by		Checked by	
ME by		Date	
Customer Confirm			

8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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			

Revision History

Date	Revision	Description of Changes
2024-06-04	RA	Measured with SUS301 sample.

深圳市连兴创电子科技有限公司 1

PROJECT 2

ANTENNA COMPONENTST 3

1 TECHNICAL SUMMARY 3

2 GENERAL DESCRIPTION 3

2.1 Components/Part revisions3

3 MECHANICAL DESCRIPTION3

4 ELECTRICAL PERFORMANCE3

4.1 Set-up3

4.1.1 VSWR3

4.1.2 Gain & Radiation Patterns3

4.1.3 Matching Circuit Description3

4.2 Measurement Data4

4.2.1 Active result（GSM）4

6 Mechanical drawing 5

7 RELIABILITY TESTS12

7.1 Test content 12

7.2 Test results12

8 CONCLUSION 9

8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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

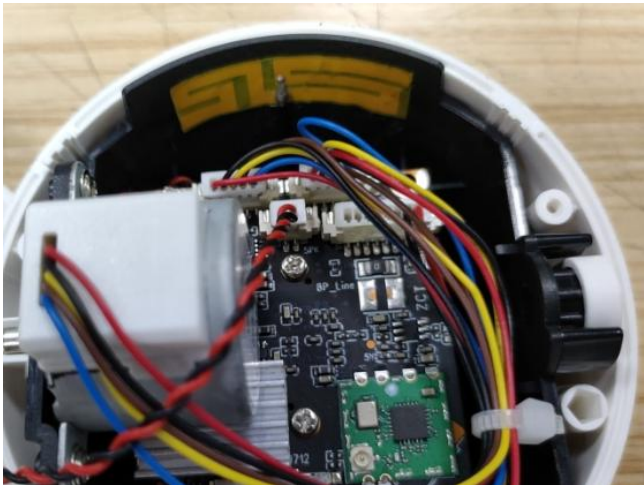
4.1.1 VSWR

 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.

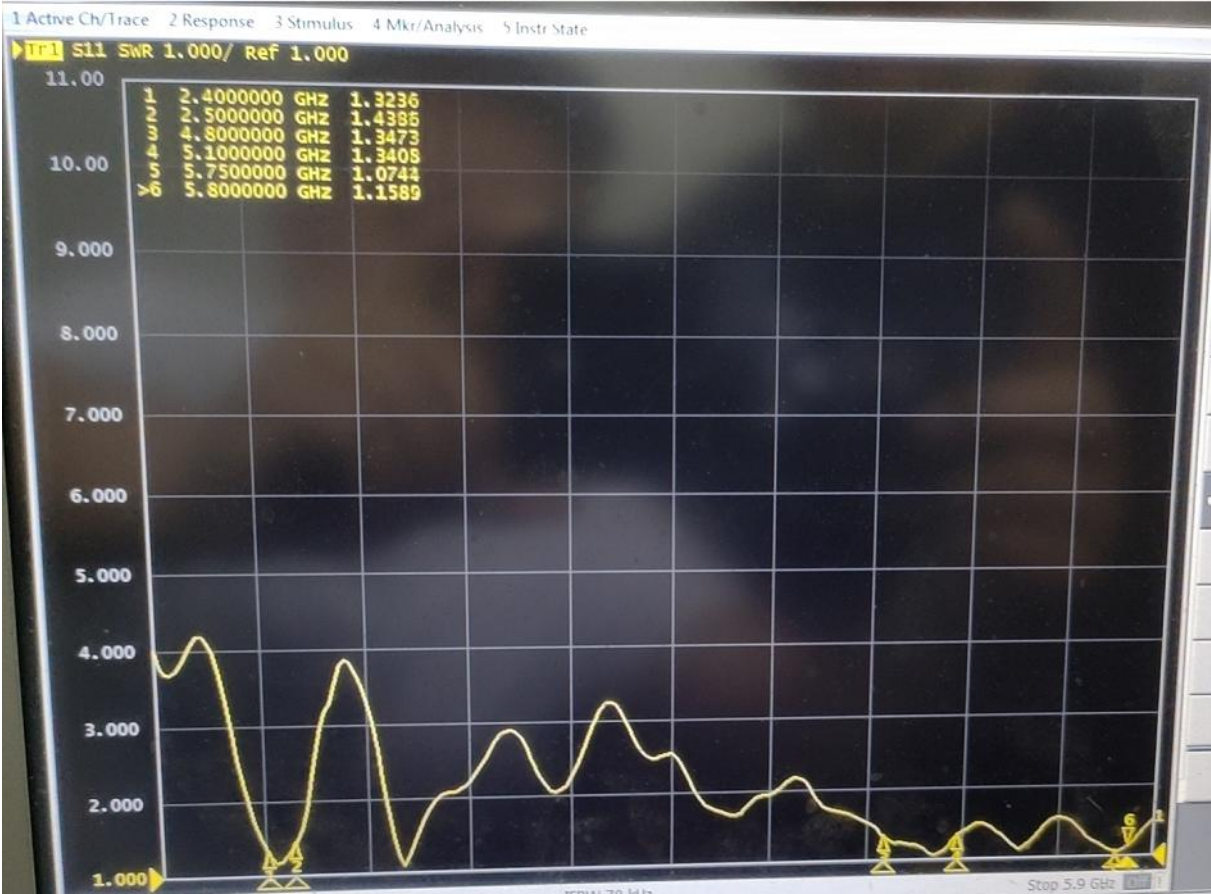
4.1.3 Matching Circuit Description



8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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 (WIFI)



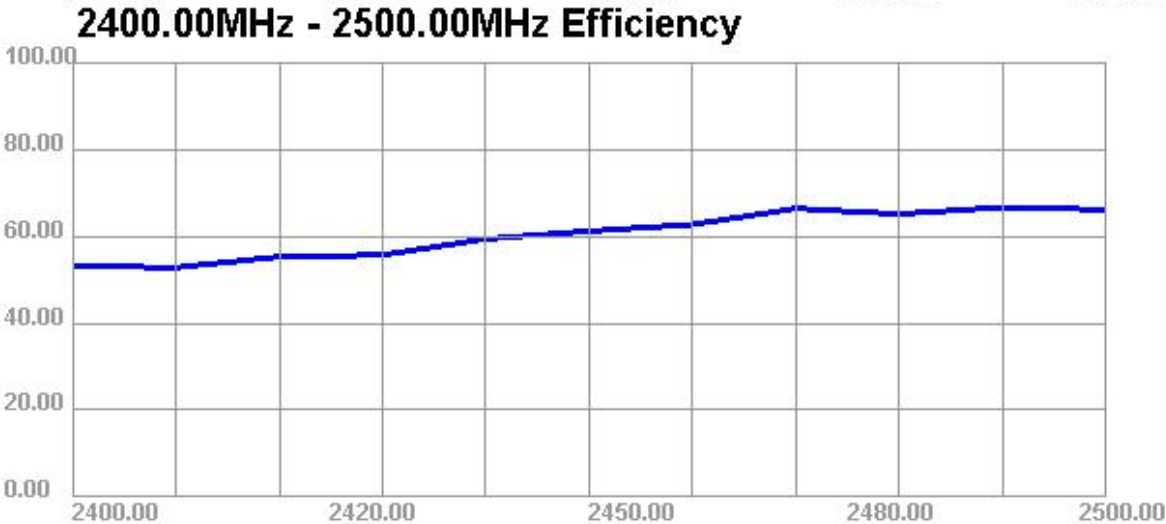
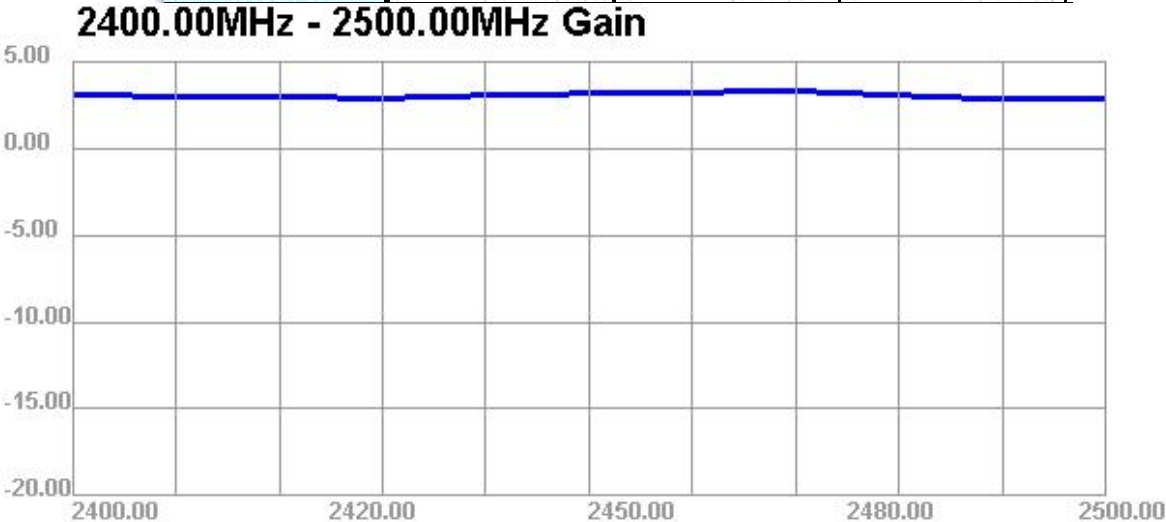
有源测试数据

天线测试报告	802.11B Antenna Performance Table			802.11G Antenna Performance Table		
Channel	CH 1	CH 6	CH11	CH 1	CH 6	CH 11
Max Power(dBm)	20.3	20.5	20.7	20.3	19.5	19.9
TRP(dBm)	17.2	17.4	17.8	17.4	16.6	16.8
Sensitivity(dBm)	-89.5	-89.7	-90.3	-78.5	-78.7	-79.9
TIS(dBm)	-87.3	-87.6	-88.9	-76.7	-76.9	-77.5

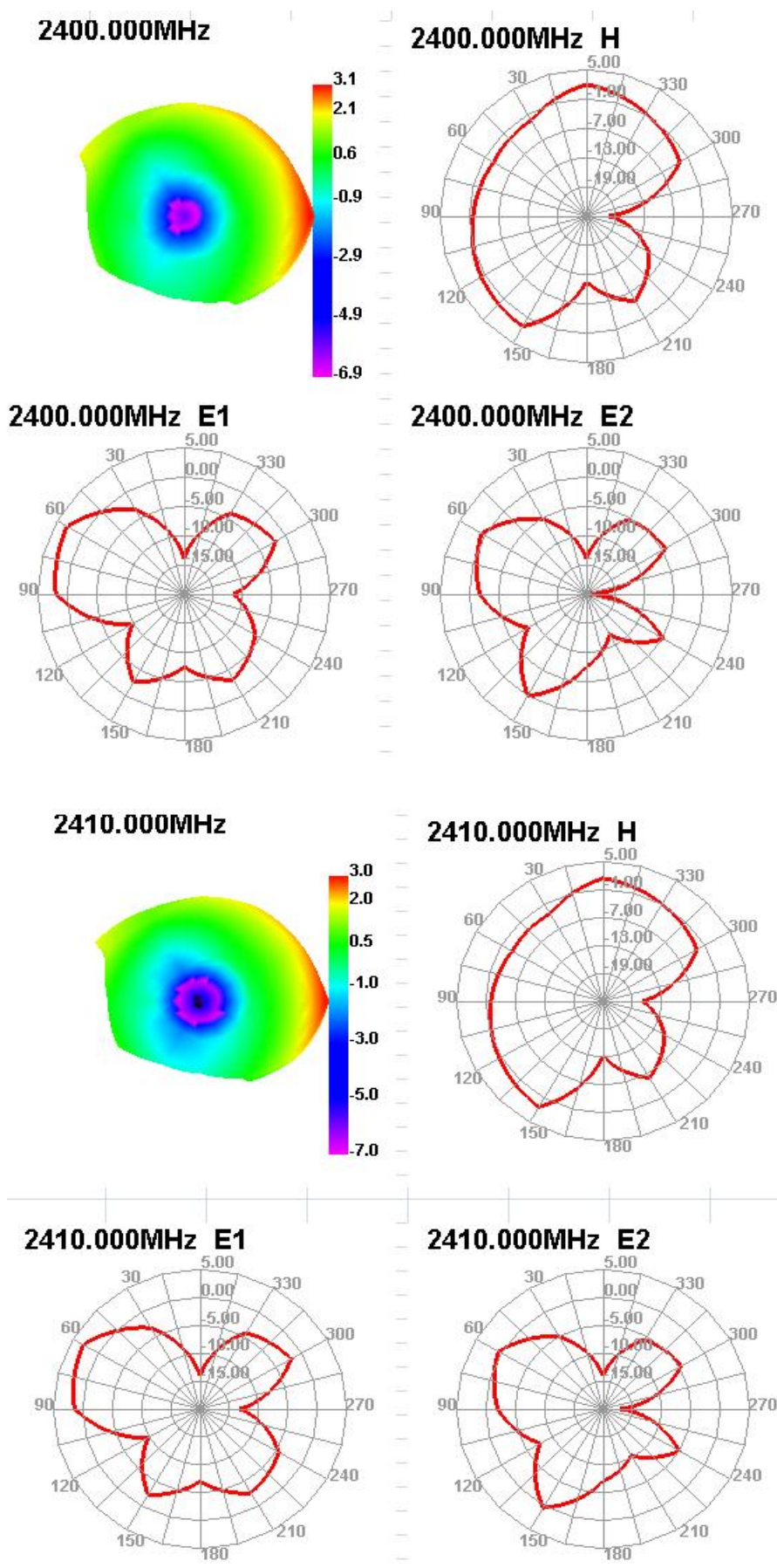
天线测试报告	802.11N Antenna Performance Table		
Channel	CH1	CH6	CH11
Max Power(dBm)	18.4	18.5	19.7
TRP(dBm)	16.7	16.9	17.3
Sensitivity(dBm)	-72.3	-72.5	-72.8
TIS(dBm)	-69.5	-69.8	-70.3

8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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 (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	52.18	-2.74	2.09
2410	52.84	-2.77	2.23
2420	53.31	-2.57	2.37
2430	55.72	-2.54	2.48
2440	56.42	-2.26	2.56
2450	56.53	-2.13	2.61
2460	57.34	-2.02	2.65
2470	57.43	-1.78	2.69
2480	58.16	-1.86	2.72
2490	59.27	-1.76	2.79
2500	60.16	-1.79	2.83



8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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			



8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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			

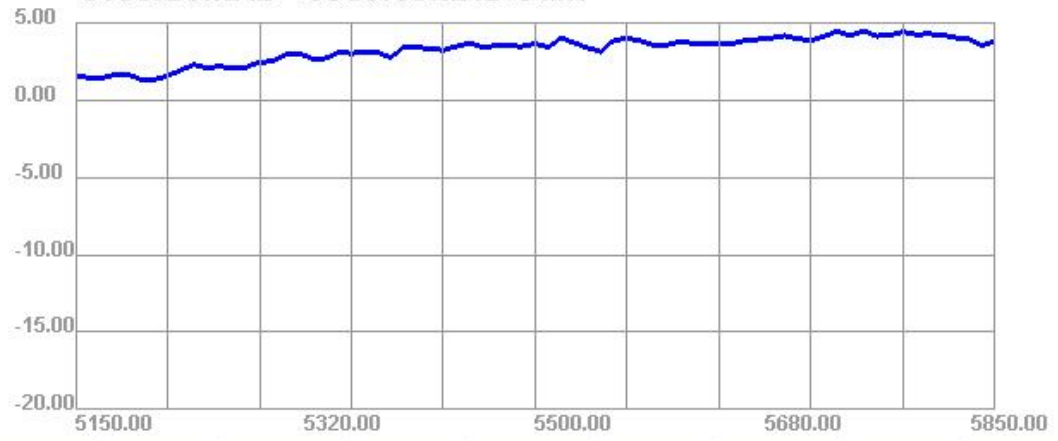
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	50.84	-3.2	2.55
5160	50.91	-2.95	2.44
5170	53.82	-2.69	2.46
5180	52.88	-2.77	2.64
5190	50.48	-2.97	2.66
5200	49.24	-3.26	2.32
5210	49.42	-3.06	2.33
5220	51.52	-2.88	2.56
5230	55.3	-2.57	2.93
5240	57.23	-2.42	2.28
5250	50.33	-2.98	2.09
5260	50.22	-2.99	2.17
5270	48.98	-3.1	2.03
5280	51.73	-2.86	2.11
5290	53.3	-2.73	2.46
5300	51.79	-2.86	2.49
5310	51.68	-2.87	2.94
5320	52.18	-2.83	3.01
5330	51.18	-2.91	2.68
5340	52.01	-2.84	2.68
5350	54.68	-2.62	3.09
5360	52.86	-2.77	3.01
5370	53.3	-2.73	3.09
5380	53.78	-2.69	3.11
5390	50.33	-2.98	2.71
5400	60.27	-2.2	3.47
5410	57.92	-2.37	3.4
5420	56.91	-2.45	3.31
5430	56.42	-2.49	3.23
5440	55.8	-2.53	3.46
5450	59.59	-2.25	3.69
5460	56.29	-2.5	3.43
5470	57.54	-2.4	3.5
5480	56.43	-2.48	3.49
5490	57.37	-2.41	3.47
5500	58.29	-2.34	3.63

8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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			

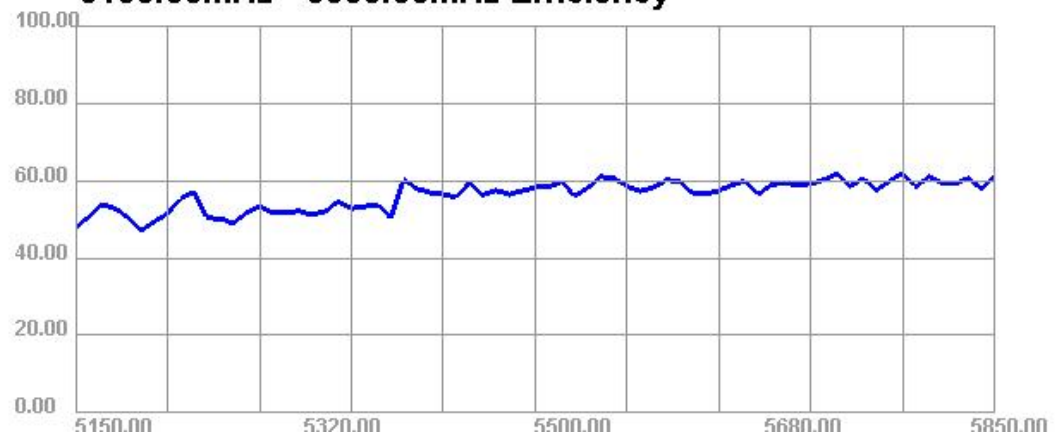
5510	58.34	-2.34	3.42
5520	59.76	-2.24	3.51
5530	56.02	-2.52	3.7
5540	58.12	-2.36	3.37
5550	61.06	-2.14	3.13
5560	60.62	-2.17	3.87
5570	58.55	-2.32	3.98
5580	57.27	-2.42	3.82
5590	58.2	-2.35	3.56
5600	60.17	-2.21	3.55
5610	59.79	-2.23	3.79
5620	56.76	-2.46	3.68
5630	56.56	-2.47	3.7
5640	57.45	-2.41	3.6
5650	58.91	-2.3	3.62
5660	59.94	-2.22	3.88
5670	56.49	-2.48	3.92
5680	58.98	-2.29	3.72
5690	59.39	-2.26	3.15
5700	58.88	-2.3	3.96
5710	59.26	-2.27	3.85
5720	60.22	-2.2	3.91
5730	61.8	-2.09	3.46
5740	58.63	-2.32	3.45
5750	60.52	-2.18	3.48
5760	57.48	-2.4	3.64
5770	59.96	-2.22	3.69
5780	61.97	-2.08	3.71
5790	58.48	-2.33	3.24
5800	61.07	-2.14	3.27
5810	59.34	-2.27	3.2
5820	59.25	-2.27	3.53
5830	60.59	-2.18	3.98
5840	57.94	-2.37	3.53
5850	61.11	-2.14	3.79

8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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			

5150.00MHz - 5850.00MHz Gain

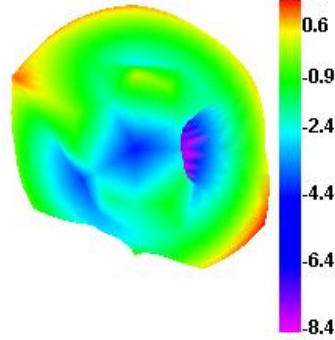


5150.00MHz - 5850.00MHz Efficiency

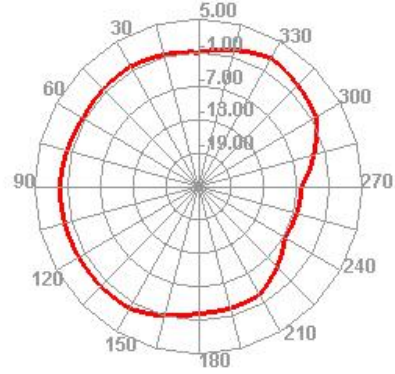


8Project:		Author:Wang	WIFI
Date: 2024-06-18			
TEST:	Language:	Check: Zhong	
A	English		
地址： 深圳市龙华区大浪街道华芳路 12 号金瑞华工业园 C 栋 4 楼			
电话：0755-29195258 传真：0755-29590286			
Shenzhen Lxc Electronics Technology Co ., Ltd			

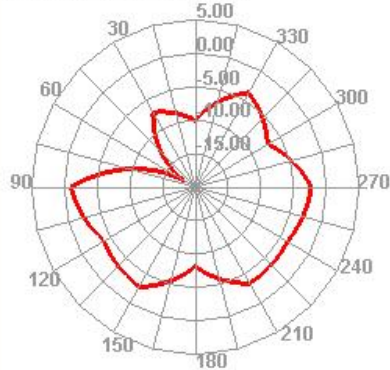
5150.000MHz



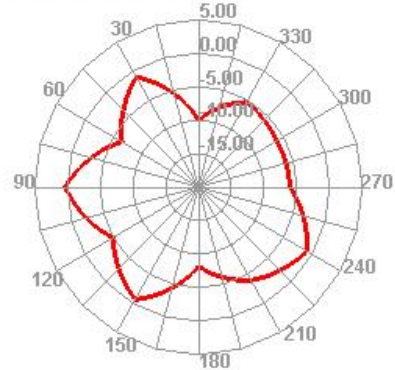
5150.000MHz H



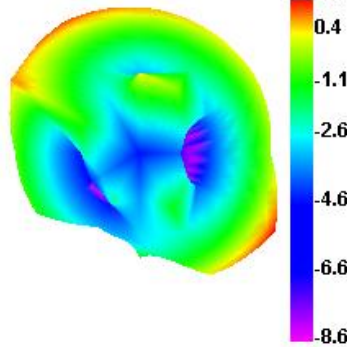
5150.000MHz E1



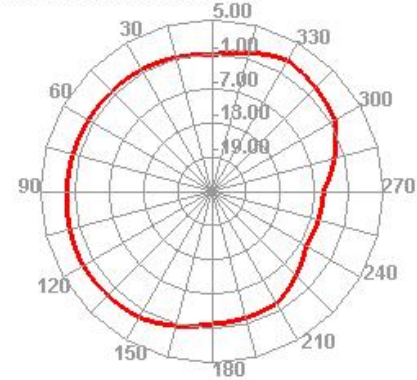
5150.000MHz E2



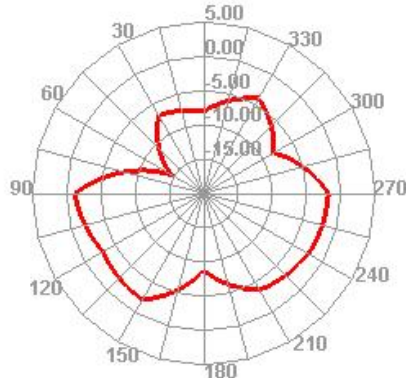
5160.000MHz



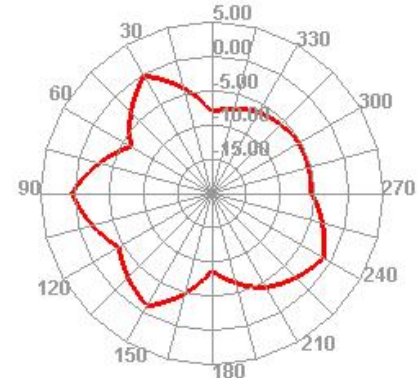
5160.000MHz H



5160.000MHz E1



5160.000MHz E2



8Project:		Author:Wang	WIFI
Date: 2024-06-18			
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			

备注:

1. 标注“*”为重点尺寸, 未标公差尺寸按照 ± 0.15 检测
2. 未标注尺寸请依图纸。
3. 符合ROHS2.0无卤

NO.	DESCRIPTION	MATERIAL	REMARKS	QTY
4	端子	1-PEX 20278-112-13		
3	cable	41.13mm Cable, 黑色, 50Ω, 双端接好		
2	PVC	黄PVC		
1	DESCRIPTION	MATERIAL	REMARKS	QTY

材料	PVC	黄PVC	黄PVC	黄PVC
规格	10.00	10.00	10.00	10.00
数量	1	1	1	1
单位	mm	mm	mm	mm
比例	1:1	1:1	1:1	1:1
版本	A.1	A.1	A.1	A.1

深圳市连兴创电子科技有限公司

项目: 无线天线

日期: 2024-08-18

设计: 审核: 批准: 日期: 2024-08-18

材料: PVC

规格: 10.00

数量: 1

单位: mm

比例: 1:1

版本: A.1

- 11 -

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

8Conclusion

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	WIFI
Date: 2024-06-18			
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			