

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) : 奥尔法
产品 (Product) : 5.8G 外置天线 (L=300MM)
型号 (Model) : 5.8G-WIFI 天线
料号 (Part Number) : LXC1BL105202407260004
制作人 (Written By) : 唐红交
签发时间 (Issued Date) : 2024-07-26
客户 CUSTOMER

频率范围(Frequency range)	WIFI: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)	外置胶棒天线 (Built-in 外置天线 antenna)
天线增益峰值(Antenna gain MAX (dBi))	5dBi+/-1
天线供应商 (Antenna supplier)	Shenzhen Lxc Electronics Technology Co., Ltd
天线型号 (Antenna Model)	5.8G/WIFI天线

RF by		Checked by	
ME by		Date	
Customer Confirm			

8Project:		Author:Wang	File Name: 5.8G/WIFI 天线
Date: 2024-07-26			
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
2024-07-26	RA	Measured with SUS301 sample.

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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

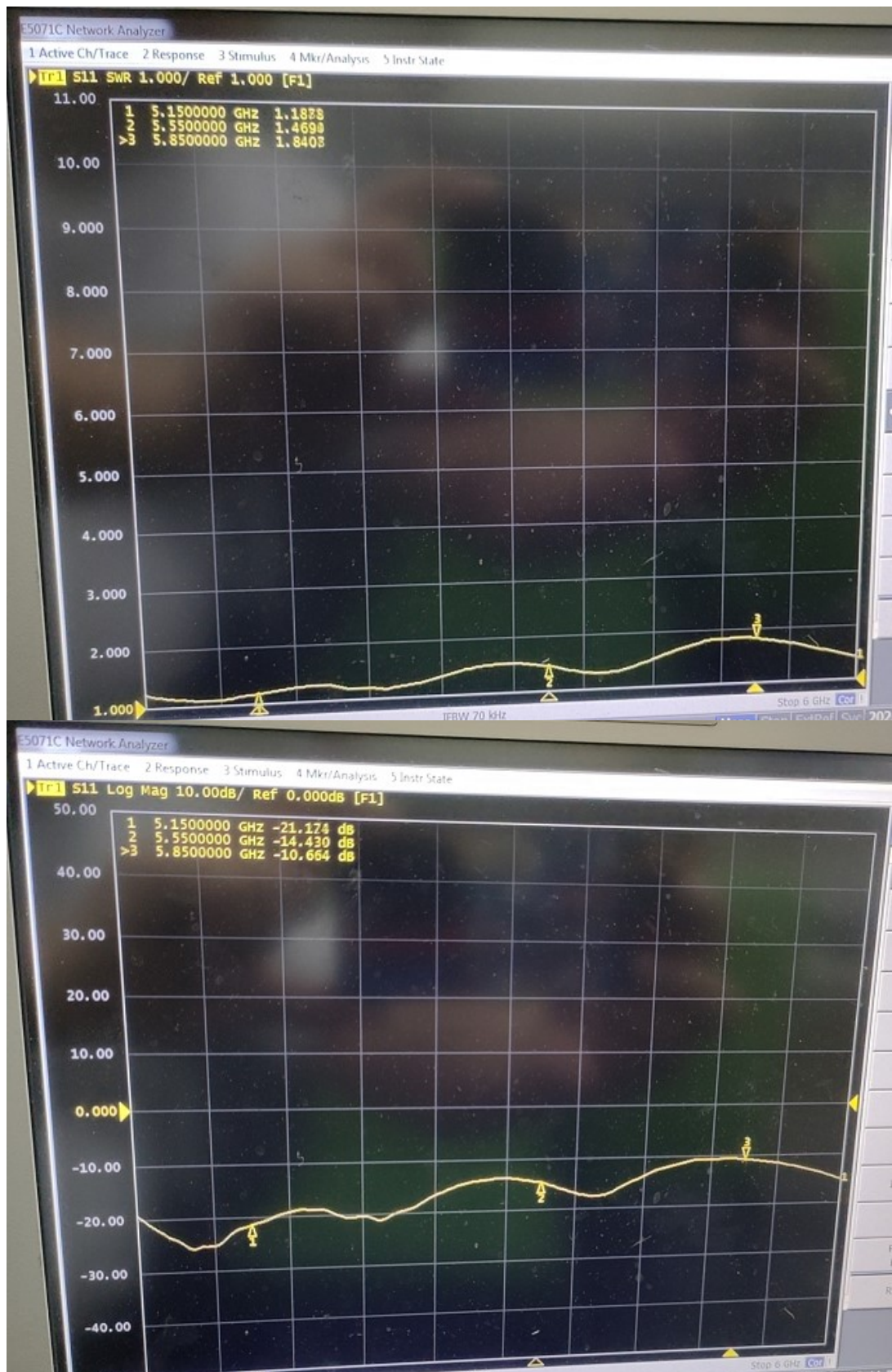
The gain of the antenna was measured in the Lxc's anechoic chamber. Coaxial chokes on the feed cable were used to mitigate surface currents. The chamber provides less than -30 dB reflectivity from 800 MHz through 3 GHz and an 18" diameter spherical quiet zone. The measurement results are calibrated using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

4.1.3 Matching Circuit Description

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4.2 Measurement Data

4.2.1 Active result (WIFI)



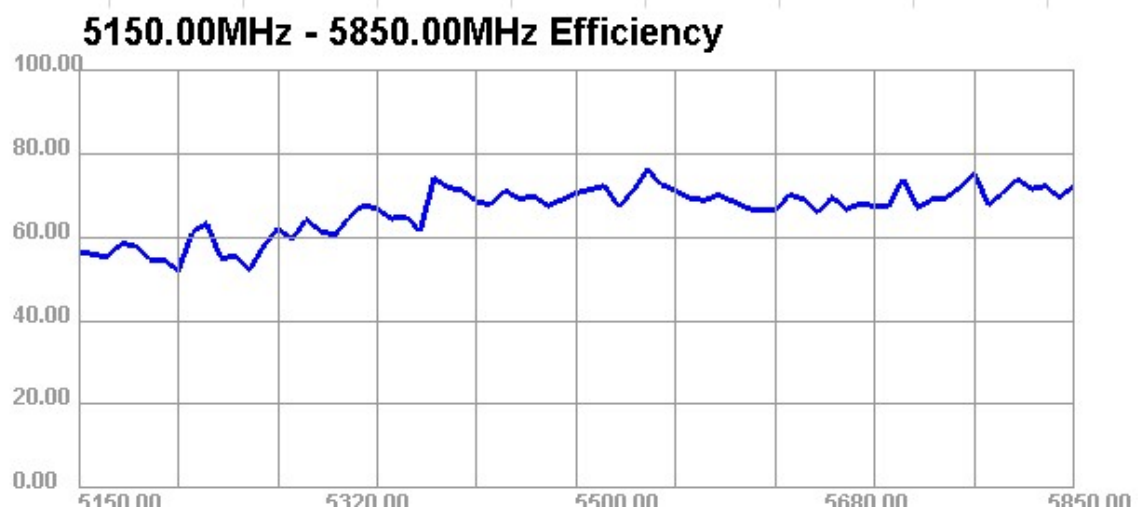
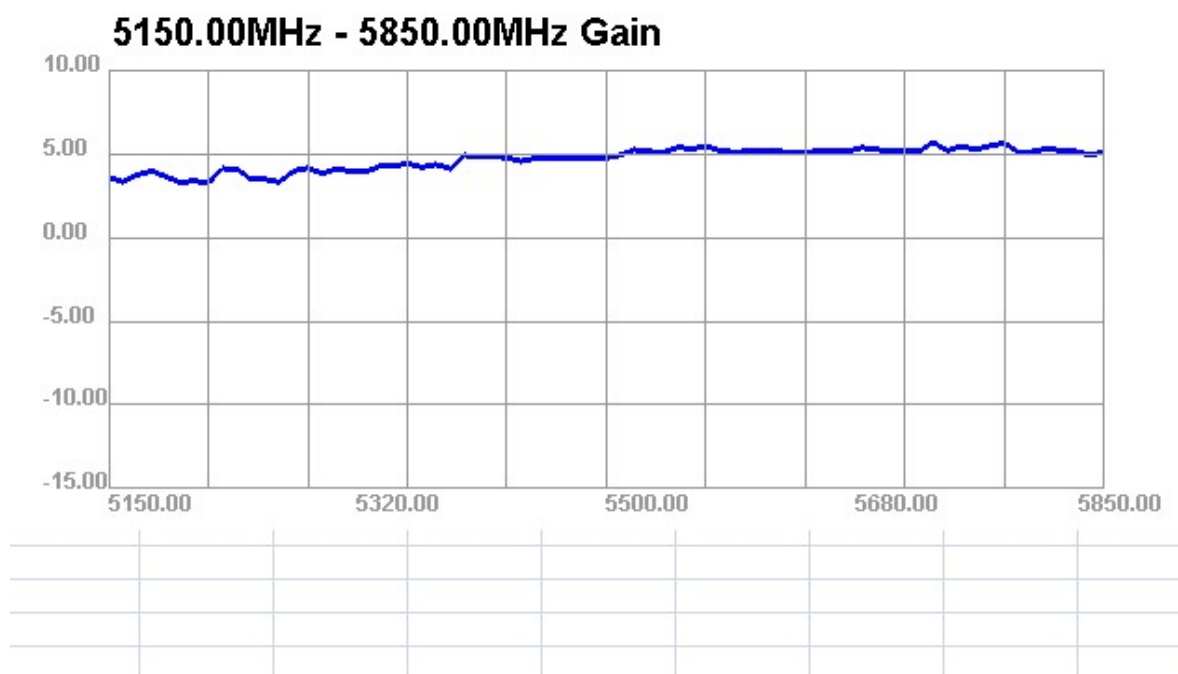
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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	56.58	-2.47	3.57
5160	55.91	-2.52	3.35
5170	55.28	-2.57	3.74
5180	58.44	-2.33	3.98
5190	58.03	-2.36	3.67
5200	54.46	-2.64	3.29
5210	54.53	-2.63	3.41
5220	52.03	-2.84	3.24
5230	61.21	-2.13	4.14
5240	63.31	-1.99	4.08
5250	54.9	-2.6	3.5
5260	55.48	-2.56	3.48
5270	52.08	-2.83	3.31
5280	57.77	-2.38	3.98
5290	62.08	-2.07	4.17
5300	59.42	-2.26	3.82
5310	64.34	-1.91	4.11
5320	61.41	-2.12	3.97
5330	60.44	-2.19	3.92
5340	64.68	-1.89	4.25
5350	67.69	-1.69	4.29
5360	66.74	-1.76	4.43
5370	64.44	-1.91	4.21
5380	64.95	-1.87	4.38
5390	61.41	-2.12	4.12
5400	74.11	-1.3	4.93
5410	71.88	-1.43	4.83
5420	71.13	-1.48	4.87
5430	68.55	-1.64	4.77
5440	67.75	-1.69	4.56
5450	71.2	-1.48	4.74
5460	69.14	-1.6	4.73
5470	69.77	-1.56	4.79
5480	67.51	-1.71	4.71
5490	69.02	-1.61	4.7
5500	70.57	-1.51	4.78
5510	71.39	-1.46	4.94
5520	72.22	-1.41	5.25
5530	67.26	-1.72	5.16
5540	71.13	-1.48	5.07
5550	76.16	-1.18	5.4

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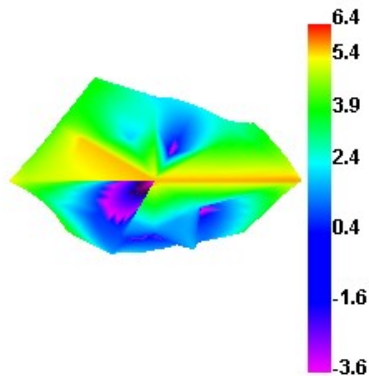
5560	72.55	-1.39	5.31
5570	71.1	-1.48	5.46
5580	69.35	-1.59	5.18
5590	68.83	-1.62	5.11
5600	70.1	-1.54	5.15
5610	68.59	-1.64	5.22
5620	66.91	-1.75	5.18
5630	66.36	-1.78	5.06
5640	66.37	-1.78	5.03
5650	70.19	-1.54	5.23
5660	68.97	-1.61	5.2
5670	65.95	-1.81	5.18
5680	69.6	-1.57	5.38
5690	66.73	-1.76	5.27
5700	67.93	-1.68	5.16
5710	67.49	-1.71	5.16
5720	67.56	-1.7	5.17
5730	74.05	-1.3	5.7
5740	67.03	-1.74	5.18
5750	68.97	-1.61	5.47
5760	69.39	-1.59	5.25
5770	72	-1.43	5.49
5780	75.25	-1.24	5.67
5790	67.68	-1.7	5.09
5800	70.53	-1.52	5.14
5810	73.97	-1.31	5.32
5820	71.57	-1.45	5.2
5830	72.23	-1.41	5.16
5840	69.39	-1.59	4.91
5850	72.38	-1.4	5.14

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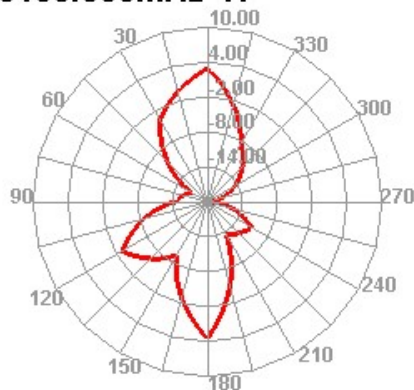


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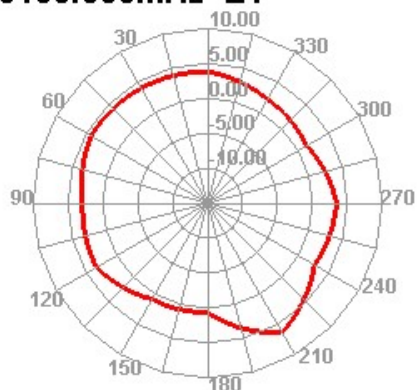
5150.000MHz



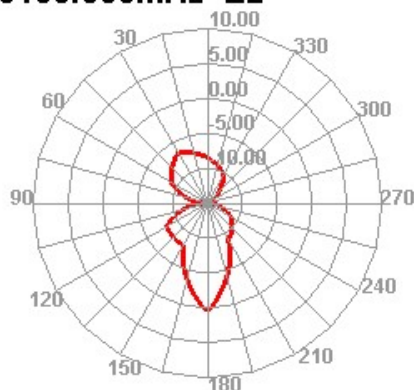
5150.000MHz H



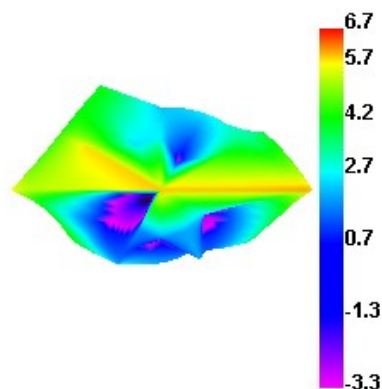
5150.000MHz E1



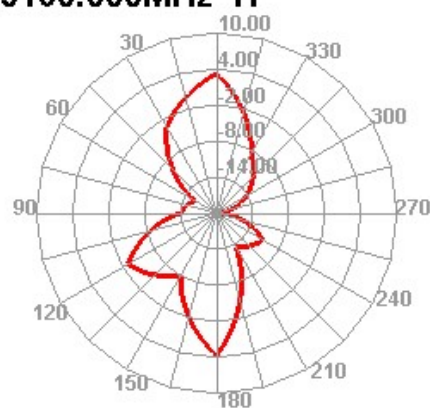
5150.000MHz E2



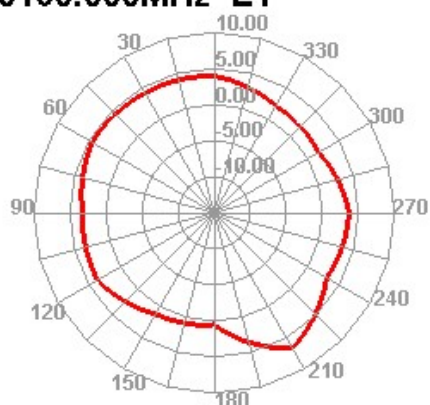
5160.000MHz



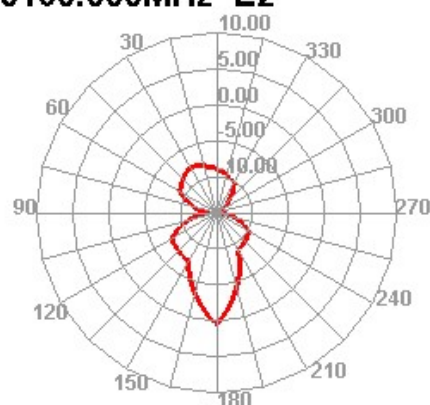
5160.000MHz H



5160.000MHz E1



5160.000MHz E2



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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 !

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