

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) : 4G/L 天线 (L=325MM)
型号 (Model) : 4G
料号 (Part Number) : LXC-202406040001
制作人 (Written By) : 唐红交
签发时间 (Issued Date) : 2024-06-04
客户 CUSTOMER

频率范围 Frequency range	GSM:690-960 (MHz) , 1710-2690 (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	4G
Date: 2024-06-04			
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			
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Revision History

Date	Revision	Description of Changes
2024-06-04	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.

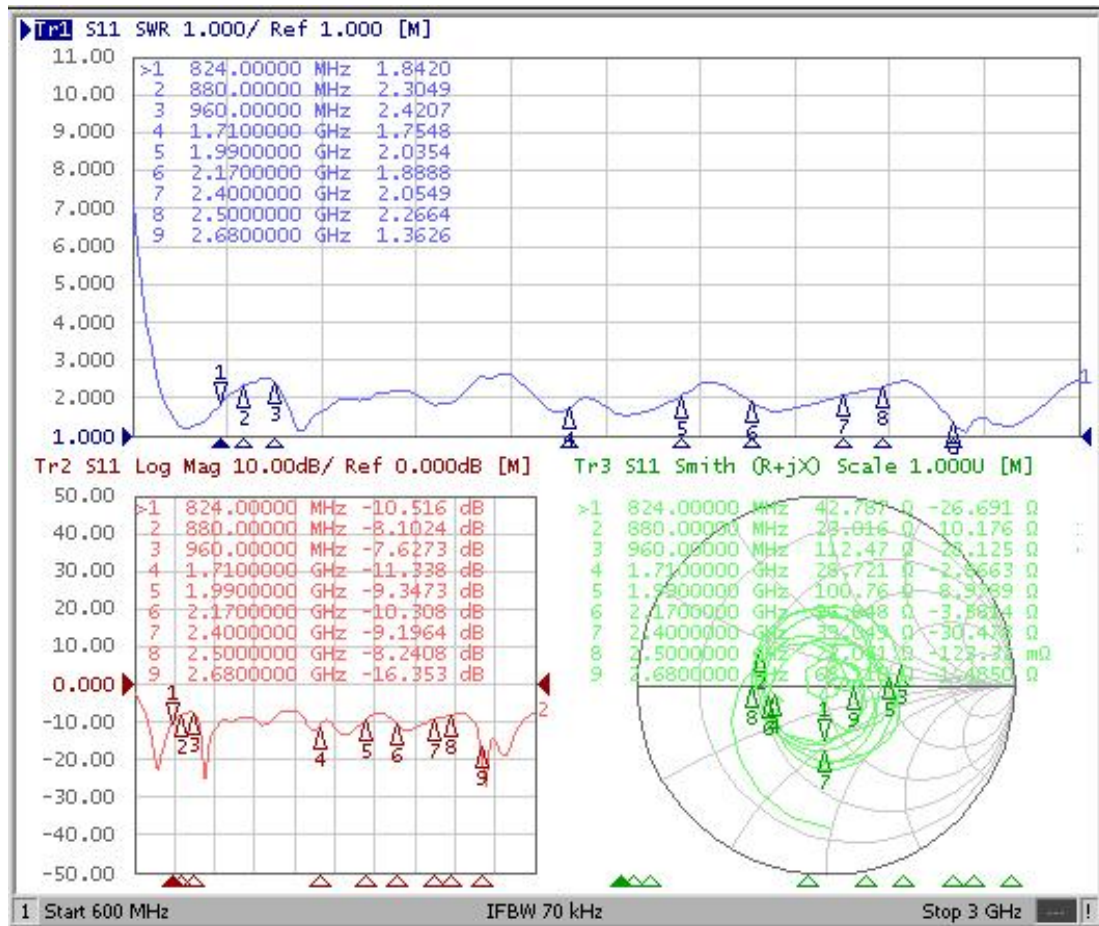
4.1.3 Matching Circuit Description



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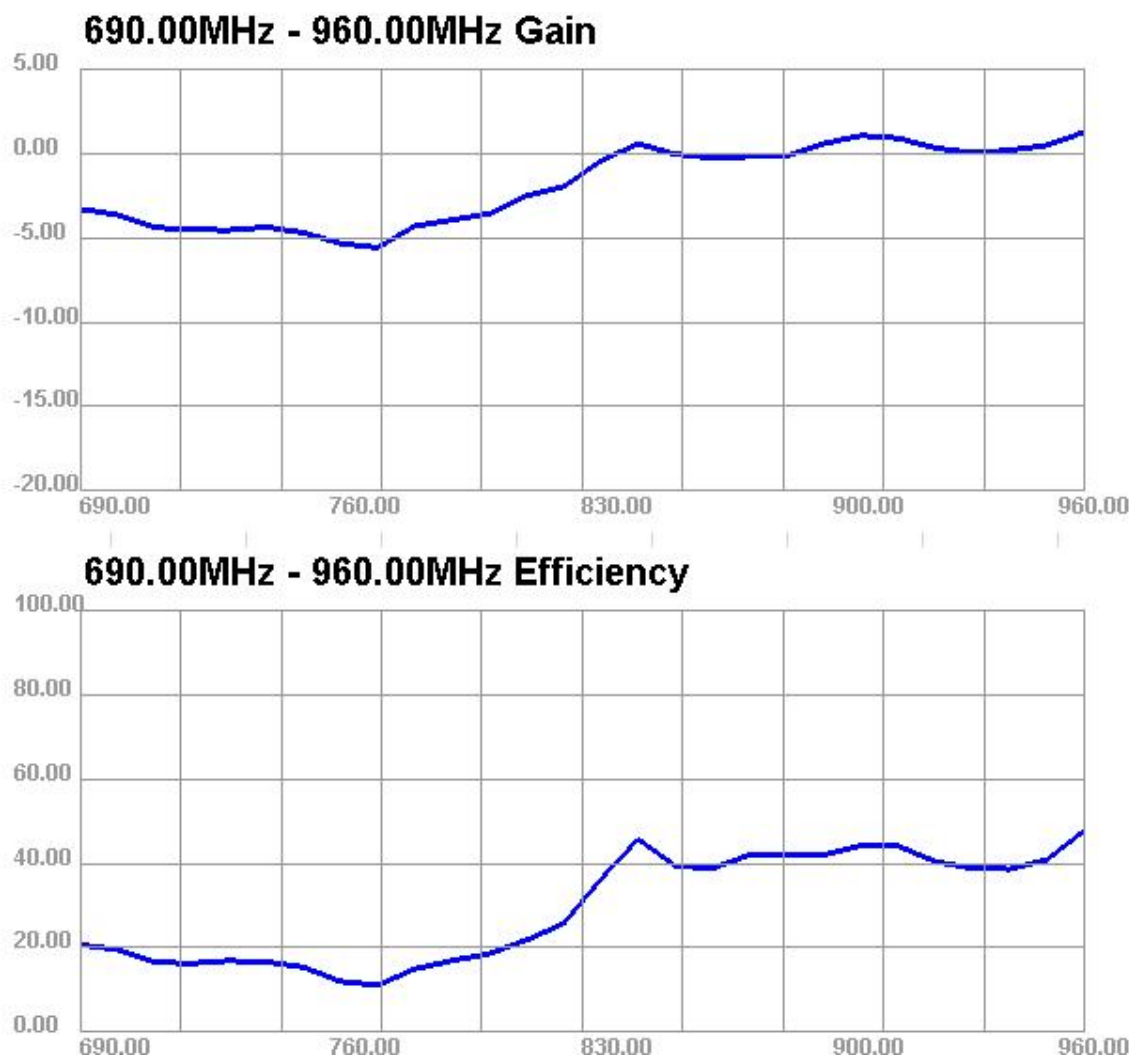
4.2 Measurement Data

4.2.1 Active result (4G)

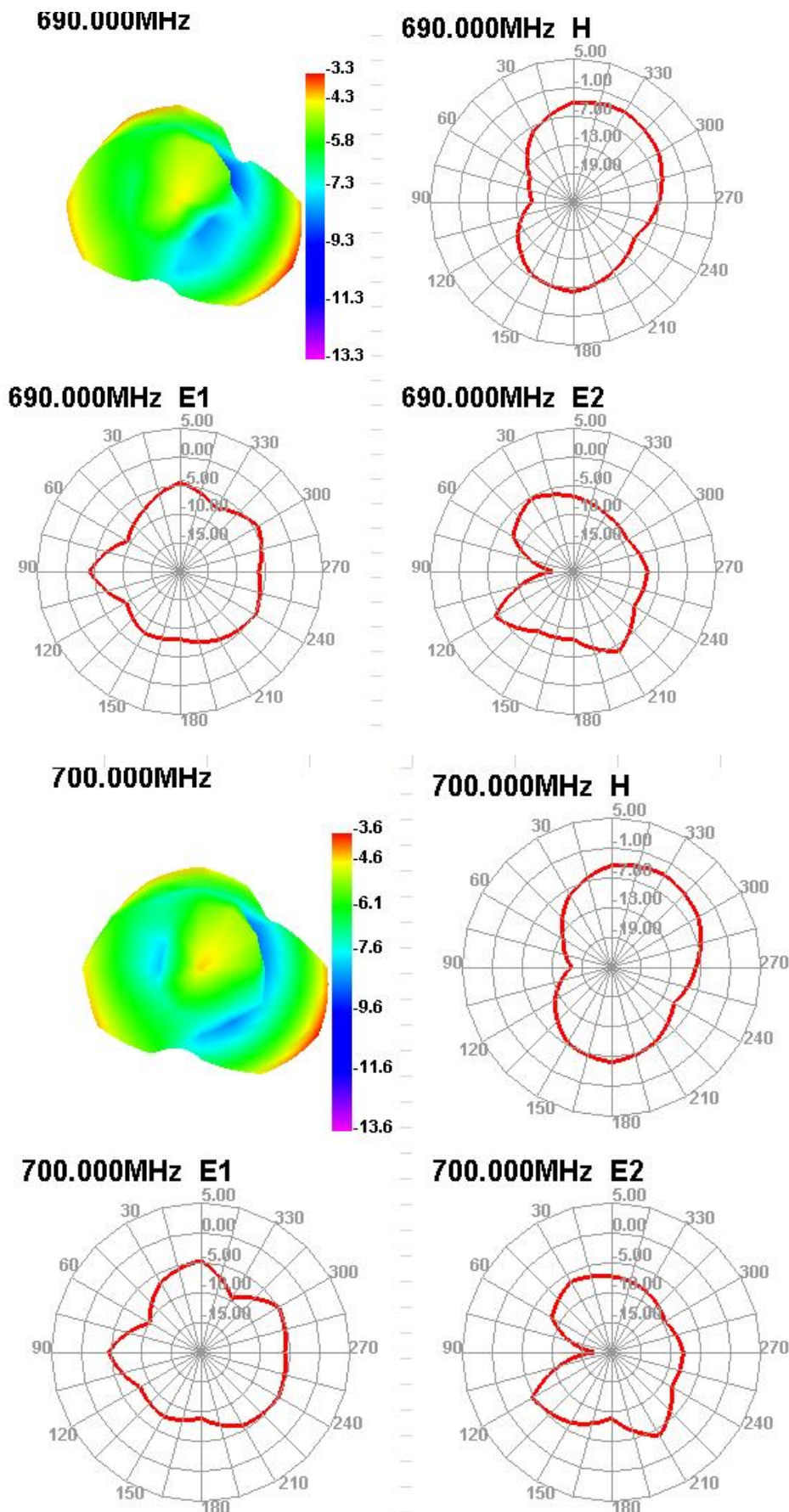


830	56.28	-4.4	1.89
840	56.79	-3.39	1.92
850	59.39	-4.05	2.05
860	58.82	-4.11	2.26
870	59.05	-3.76	2.19
880	59.91	-3.78	2.14
890	60.06	-3.76	2.58
900	60.29	-3.54	2.65
910	61.16	-3.56	2.69
920	60.41	-3.93	2.31
930	61.84	-4.11	2.34
940	62.68	-4.13	2.38
950	61.95	-3.88	2.48
960	63.82	-3.2	2.56

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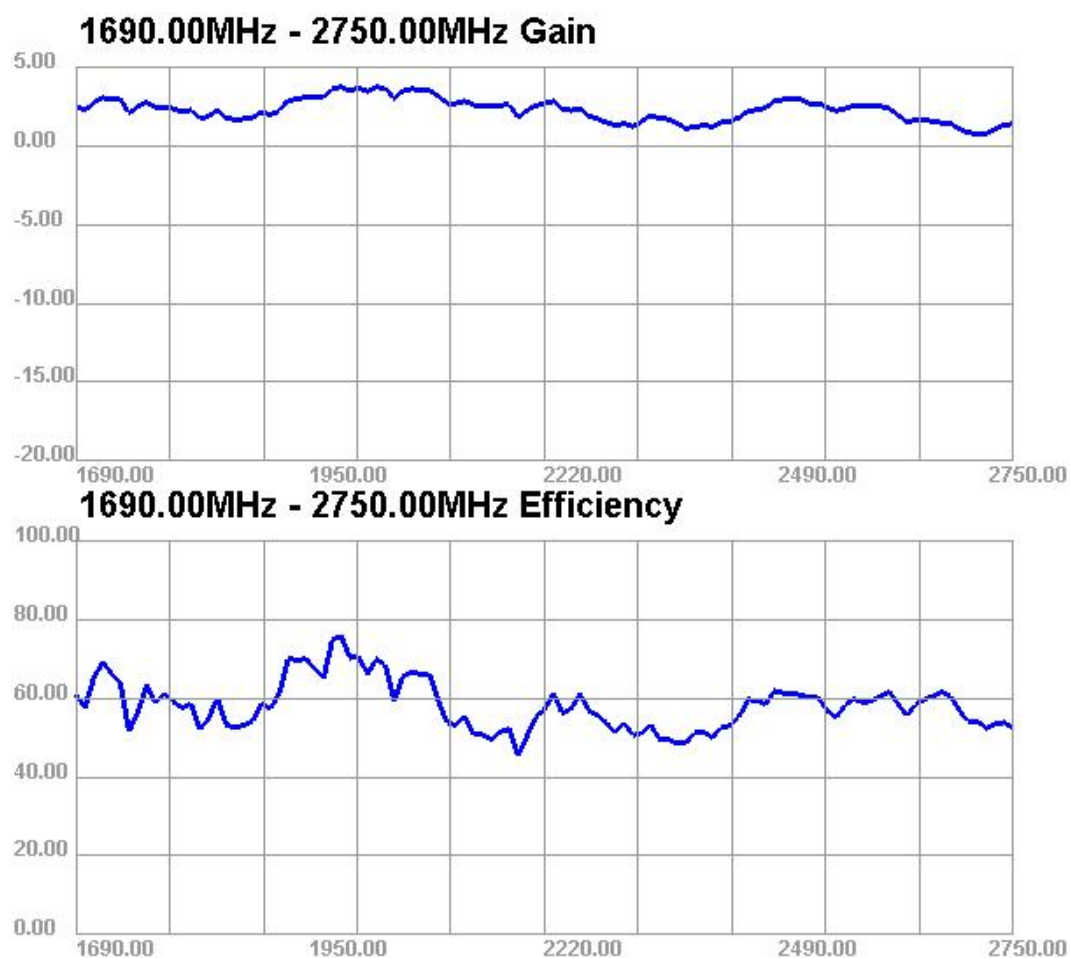
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1690	60.85	-2.16	2.51
1700	57.58	-2.4	2.24
1710	65.01	-1.87	2.73
1720	69.22	-1.6	3.06
1730	66.36	-1.78	2.93
1740	63.78	-1.95	2.98
1750	51.64	-2.87	2.06
1760	56.49	-2.48	2.5
1770	63.25	-1.99	2.76
1780	58.78	-2.31	2.44
1790	61.37	-2.12	2.46
1800	59.04	-2.29	2.35
1810	57.63	-2.39	2.15
1820	58.58	-2.32	2.26
1830	52.09	-2.83	2.68
1840	54.87	-2.61	2.88
1850	60.07	-2.21	2.27
1860	53.16	-2.74	2.75
1870	52.52	-2.8	2.67
1880	53.17	-2.74	2.71
1890	54.17	-2.66	2.78
1900	58.67	-2.32	2.14
1910	57.41	-2.41	2.96
1920	61.36	-2.12	2.22
1930	70.06	-1.55	2.91
1940	69.69	-1.57	2.93
1950	70.03	-1.55	3.14
1960	67.63	-1.7	3.04
1970	65.16	-1.86	3.03
1980	74.86	-1.26	3.6
1990	75.72	-1.21	3.75
2000	70.31	-1.53	3.48
2010	70.34	-1.53	3.67
2020	66.19	-1.79	3.43
2030	70.06	-1.55	3.73
2040	68.34	-1.65	3.62
2050	59.41	-2.26	2.99
2060	65.59	-1.83	3.49
2070	66.79	-1.75	3.6
2080	65.97	-1.81	3.56
2090	66.04	-1.8	3.52
2100	59.16	-2.28	3.14

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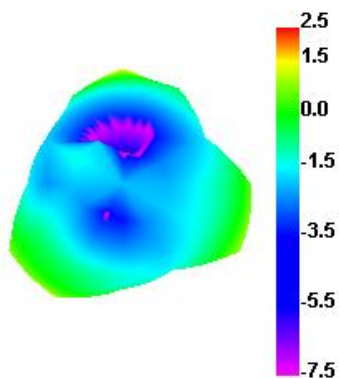
2120	53.21	-2.74	2.7				
2130	55.39	-2.57	2.83				
2140	50.75	-2.95	2.57				
2150	50.81	-2.94	2.56				
2160	51.68	-3.04	2.53				
2170	51.42	-2.89	2.58				
2180	52.31	-2.81	2.6				
2190	55.37	-3.43	2.8				
2200	50.24	-2.99	2.23				
2210	55.26	-2.58	2.56				
2220	57.14	-2.43	2.66				
2230	61.23	-2.13	2.83				
2240	56.27	-2.5	2.34				
2250	57.34	-2.42	2.25				
2260	61.1	-2.14	2.36				
2270	56.73	-2.46	2.89				
2280	55.74	-2.54	2.7				
2290	53.8	-2.69	2.48				
2300	51.35	-2.89	2.29	2510	61.79	-2.16	2.93
2310	53.72	-2.7	2.41	2520	62.08	-2.21	2.69
2320	50.68	-2.95	2.22	2530	62.25	-2.2	2.7
2330	50.91	-2.93	2.56	2540	63.75	-2.46	2.43
2340	53.36	-2.73	2.93	2550	55.15	-2.58	2.2
2350	54.58	-3.05	2.74	2560	58.25	-2.35	2.36
2360	54.68	-3.04	2.69	2570	59.74	-2.24	2.56
2370	58.5	-3.14	2.42	2580	58.99	-2.29	2.58
2380	58.52	-3.14	2.51	2590	59.3	-2.27	2.56
2390	51.34	-2.9	2.29	2600	60.41	-2.19	2.49
2400	51.34	-2.9	2.31	2610	61.66	-2.1	2.37
2410	52.08	-3	2.62	2620	58.48	-2.33	2.94
2420	52.53	-2.8	2.49	2630	58.55	-2.55	2.48
2430	53.05	-2.75	2.57	2640	59.52	-2.33	2.77
2440	55.23	-2.58	2.78	2650	60.6	-2.25	2.61
2450	59.7	-2.24	2.18	2660	60.64	-2.17	2.55
2460	59.38	-2.26	2.29	2670	61.61	-2.1	2.46
2470	58.55	-2.32	2.4	2680	63.49	-2.18	2.38
2480	61.92	-2.08	2.82	2690	64.58	-2.47	2.76
2490	61.38	-2.12	2.93				
2500	61.3	-2.13	3				

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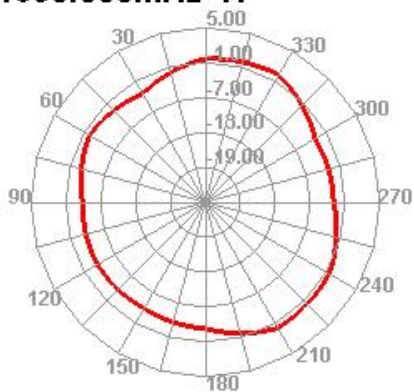


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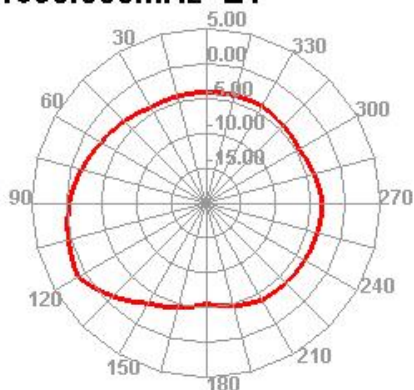
1690.000MHz



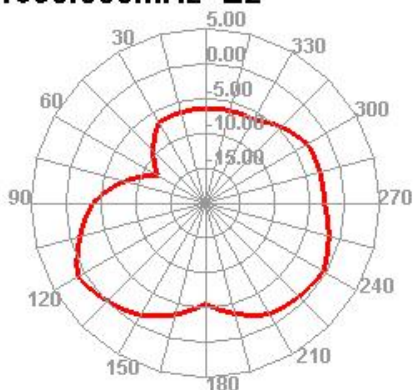
1690.000MHz H



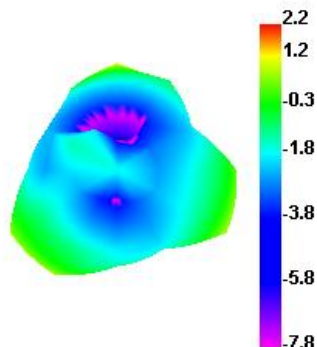
1690.000MHz E1



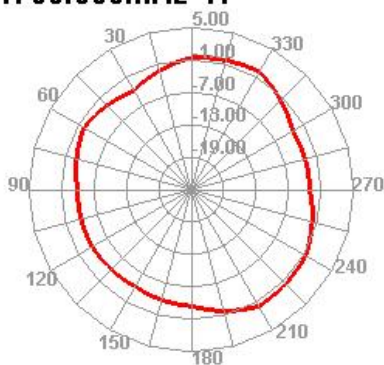
1690.000MHz E2



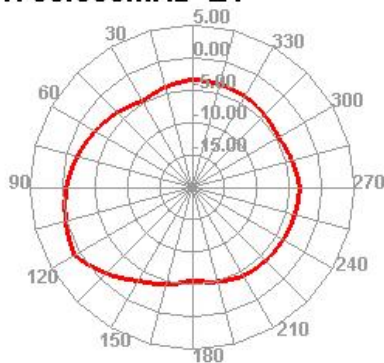
1700.000MHz



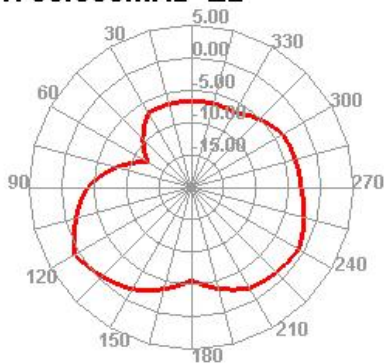
1700.000MHz H



1700.000MHz E1

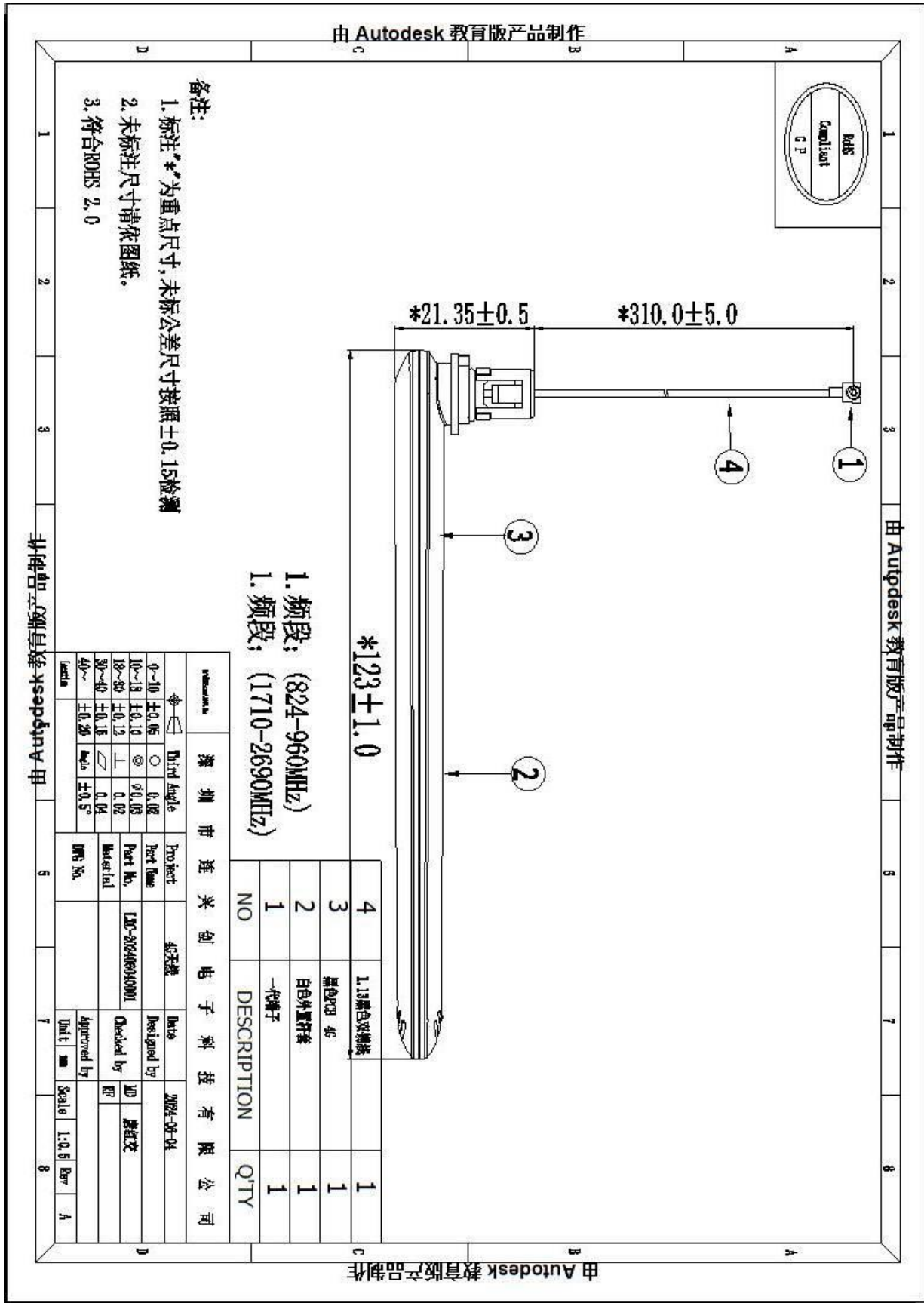


1700.000MHz E2



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6 Mechanical drawing



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7 Reliability tests

7.1 Test content

No	试验项目	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 !

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