

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) : 和天创
产品 (Product) : 2.4G/5.8G 外置天线(L=105MM)
型号 (Model) : WIFI 天线
料号 (Part Number) : LXC1BL105202407260001
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:2.4G-5.8G (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)	PCB 天线 (Built-in PCB 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)	WIFI

RF by		Checked by	
ME by		Date	
Customer Confirm			

8Project:		Author:Wang	File Name: 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.

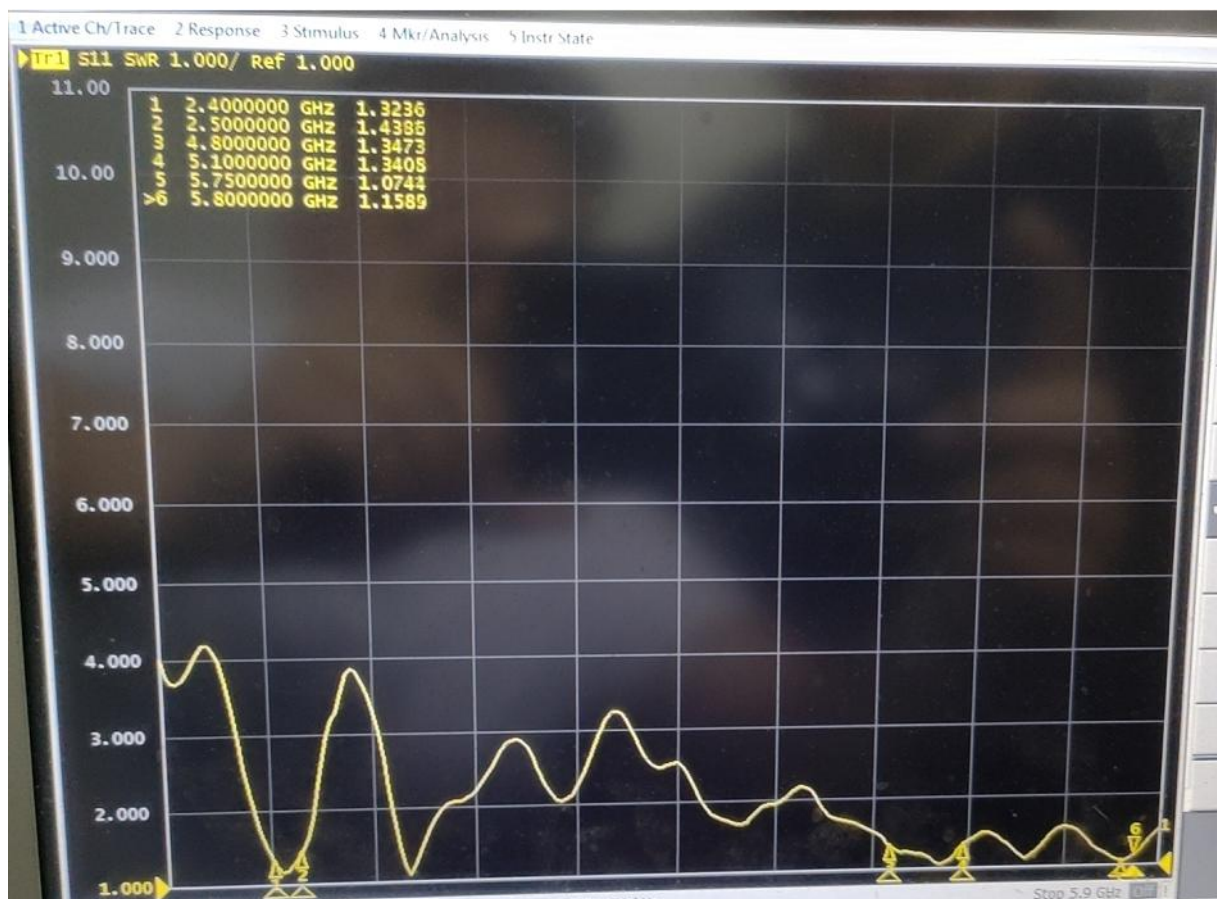
4.1.2 Gain & Radiation Patterns

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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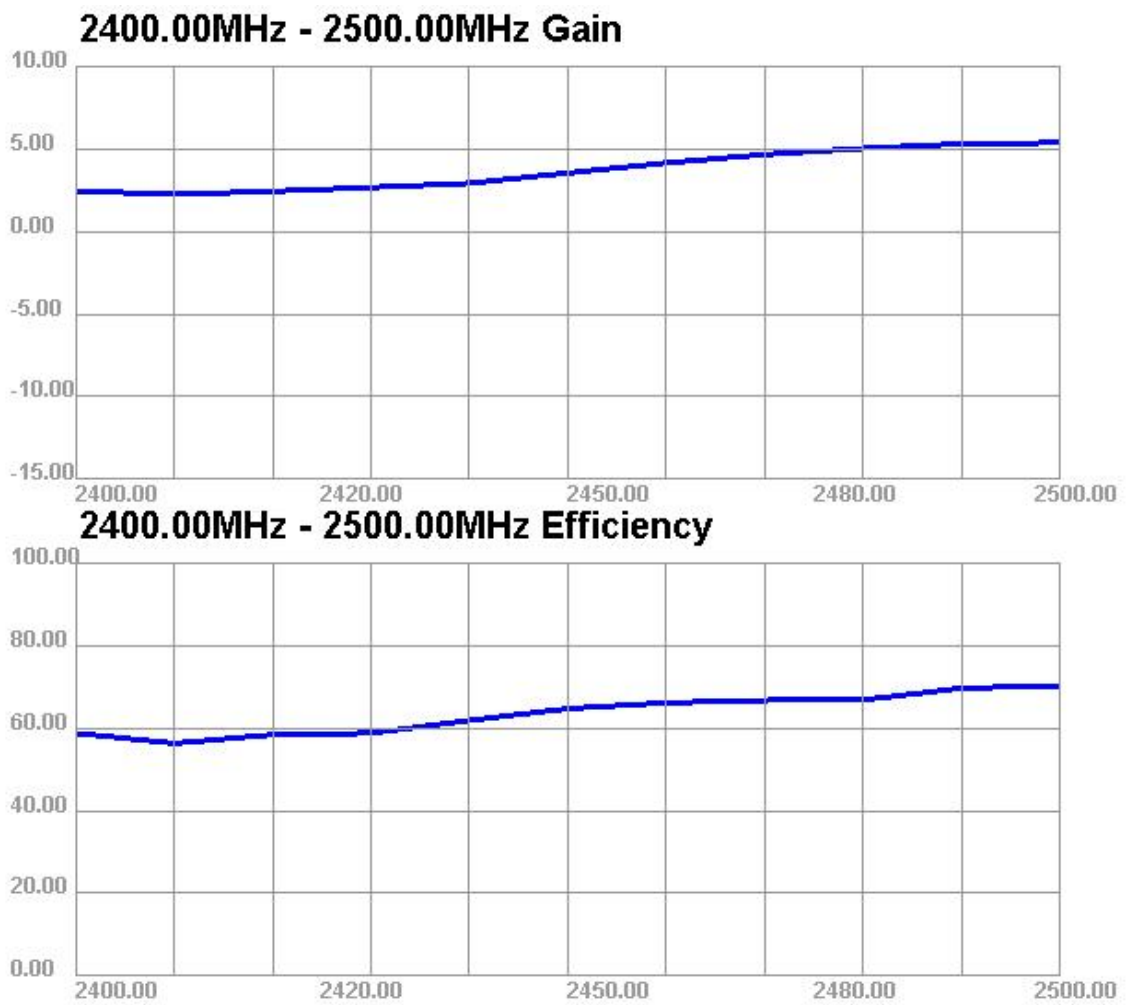


4.2 Measurement Data

4.2.1 Active result (WIFI)

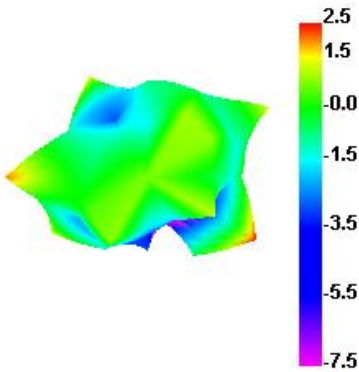
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	53.79	-2.31	2.19
2410	54.32	-2.49	2.25
2420	54.46	-2.33	2.44
2430	56.79	-2.31	2.66
2440	58.88	-2.08	2.92
2450	60.73	-1.89	3.04
2460	61.14	-1.8	3.25
2470	63.75	-1.76	3.29
2480	65.83	-1.75	3.32
2490	66.68	-1.57	3.37
2500	66.77	-1.53	3.41

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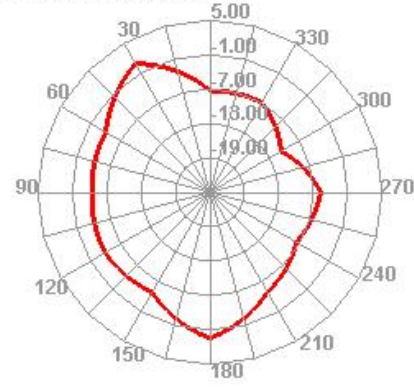


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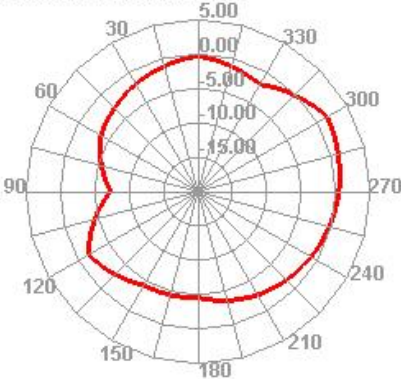
2400.000MHz



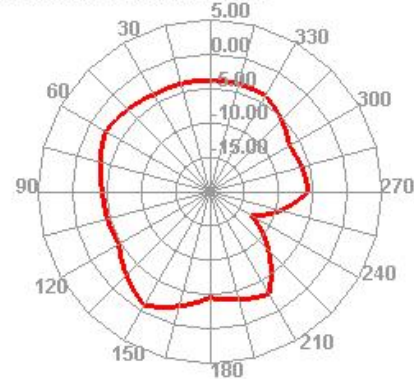
2400.000MHz H



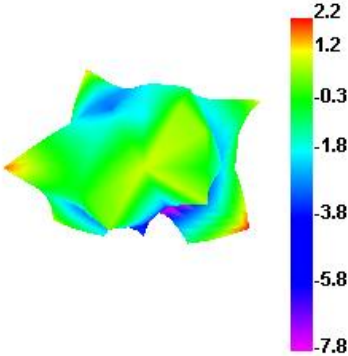
2400.000MHz E1



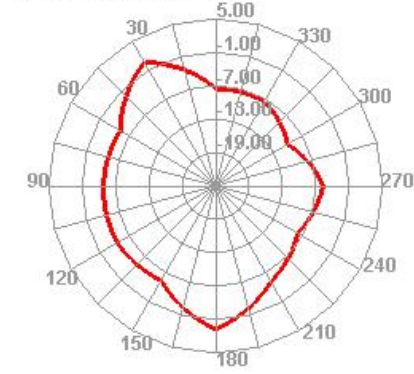
2400.000MHz E2



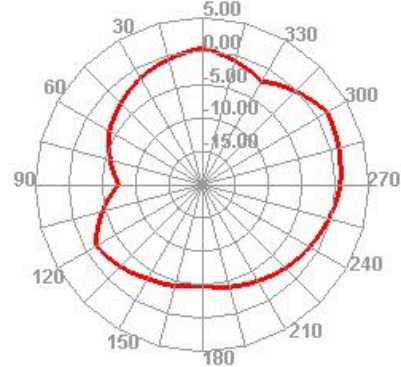
2410.000MHz



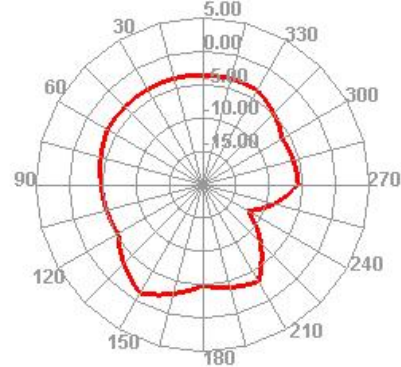
2410.000MHz H



2410.000MHz E1



2410.000MHz E2



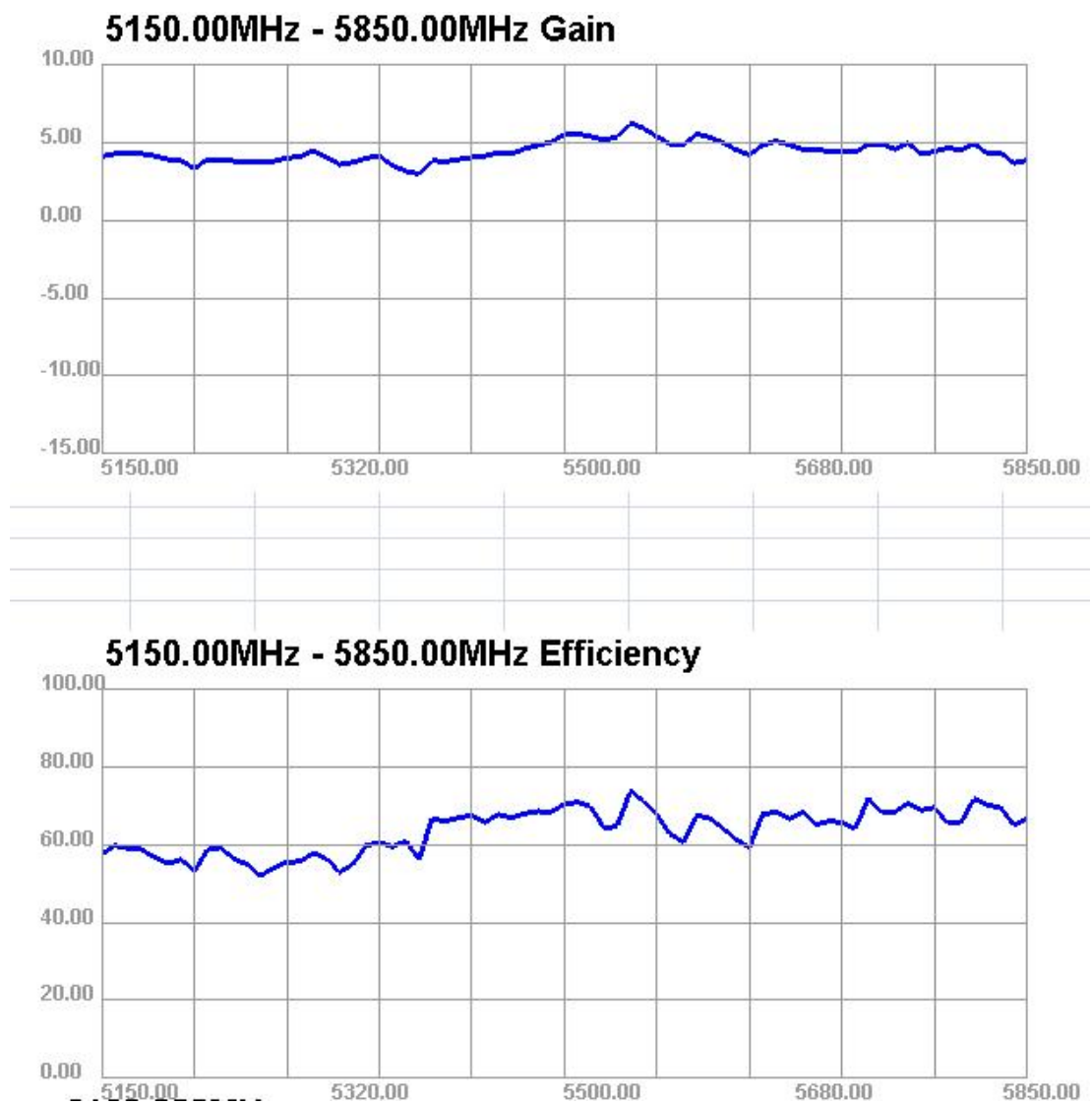
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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	50.43	-2.41	2.49
5160	50.69	-2.24	2.52
5170	51.03	-2.29	2.53
5180	51.77	-2.31	2.54
5190	52.24	-2.46	2.59
5200	55.15	-2.58	2.91
5210	56.24	-2.5	3.14
5220	56.27	-2.74	3.29
5230	58.66	-2.32	3.31
5240	59.23	-2.27	3.39
5250	56.29	-2.5	3.41
5260	54.9	-2.6	3.48
5270	55.01	-2.84	3.71
5280	55.93	-2.68	3.8
5290	55.55	-2.55	3.11
5300	55.65	-2.55	3.08
5310	57.83	-2.38	3.46
5320	56.42	-2.49	3.55
5330	56.87	-2.77	3.57
5340	54.92	-2.6	3.71
5350	59.77	-2.23	3.79
5360	59.54	-2.18	3.13
5370	59.41	-2.26	3.5
5380	59.93	-2.15	3.14
5390	56.24	-2.5	2.97
5400	56.63	-1.76	3.83
5410	57.01	-1.8	3.76
5420	61.87	-1.75	3.91
5430	62.56	-1.7	3.95
5440	62.76	-1.82	3.12
5450	63.69	-1.69	3.34
5460	63.84	-1.75	3.27
5470	63.92	-1.68	3.59
5480	64.55	-1.64	3.78
5490	65.33	-1.65	3.82
5500	65.38	-1.53	3.35

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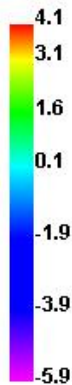
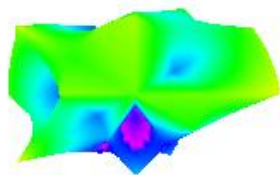
5510	65.86	-1.5	3.54
5520	66.74	-1.57	3.38
5530	64.12	-1.93	3.64
5540	64.83	-1.88	3.44
5550	63.76	-1.32	3.25
5560	64.17	-1.48	3.89
5570	64.64	-1.7	3.37
5580	62.61	-2.03	3.59
5590	60.72	-2.17	3.82
5600	65.5	-1.71	3.54
5610	66.69	-1.76	3.31
5620	64.18	-1.93	3.96
5630	61.2	-2.13	4.11
5640	59.42	-2.26	4.18
5650	61.89	-1.68	3.83
5660	66.93	-1.66	3.87
5670	66.66	-1.76	3.84
5680	68.38	-1.65	4.14
5690	65.14	-1.86	4.29
5700	66.02	-1.8	4.35
5710	65.69	-1.82	4.46
5720	64.13	-1.93	4.36
5730	61.91	-1.43	3.89
5740	68.11	-1.67	4.9
5750	68.29	-1.66	3.56
5760	67.69	-1.51	3.95
5770	67.82	-1.62	4.26
5780	66.48	-1.58	4.41
5790	67.39	-1.85	4.47
5800	65.66	-1.83	4.51
5810	65.84	-1.44	3.91
5820	66.12	-1.54	4.28
5830	66.49	-1.58	3.34
5840	66.89	-1.88	3.66
5850	66.93	-1.75	3.84

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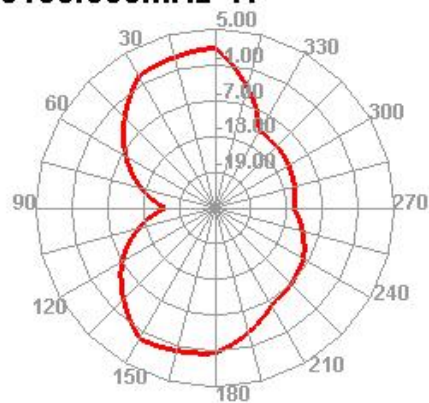


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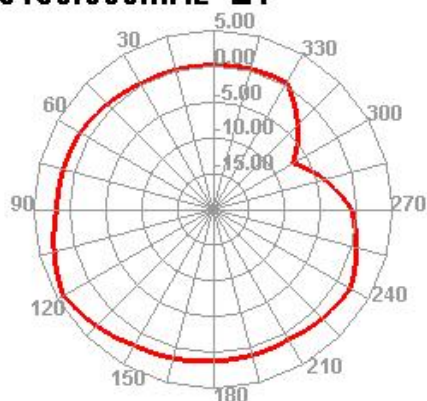
5150.000MHz



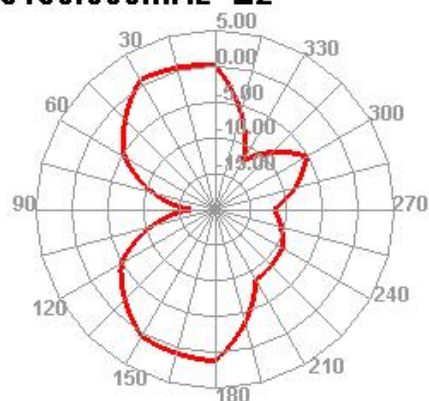
5150.000MHz H



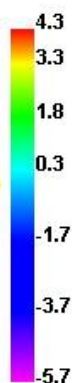
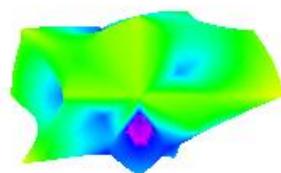
5150.000MHz E1



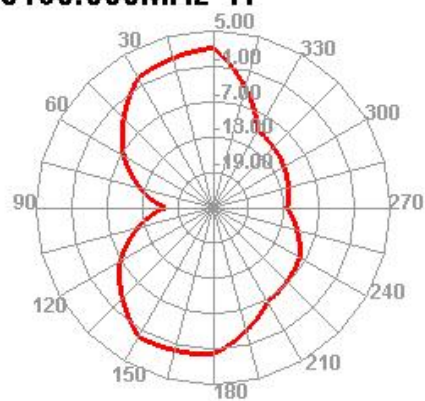
5150.000MHz E2



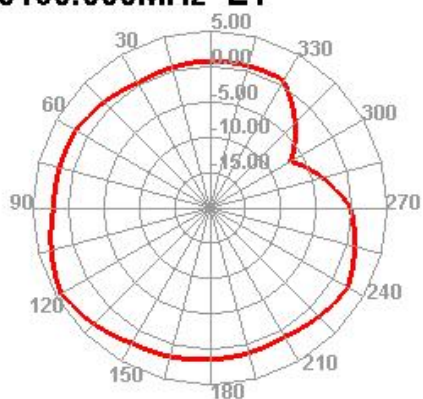
5160.000MHz



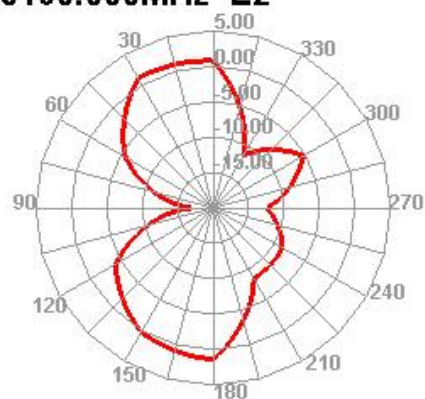
5160.000MHz H



5160.000MHz E1



5160.000MHz E2



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6 Mechanical drawing

4	3	2	1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	4
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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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TEST:	Language:	Check: Zhong	
A	English		
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