深圳市连兴创电子科技有限公司（*研发部*）

Shenzhen Lxc Electronics Technology Co ., Ltd

Customer: Project Name: WIFI/BT

F Engineer:温 Testing Date:2025-07-05

Operating band: WIFI/2.4G/2.5G/5.15G/5.8G
BT/2.4G/2.5G

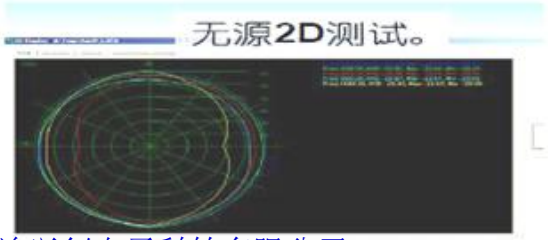
1. Project brief

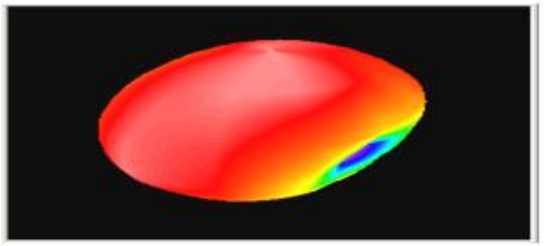
NO.	ITEMS	DETAILS
1	工作频段 Operating band	WIFI-BT
2	频率范围 Frequency range	2.4G-2.5G/5.15G-5.85G
3	天线类型 Antenna Type	内置FPC
4	主板版本 The mainboardversion	
5	输入阻抗 Input Impedance	50（Ω）

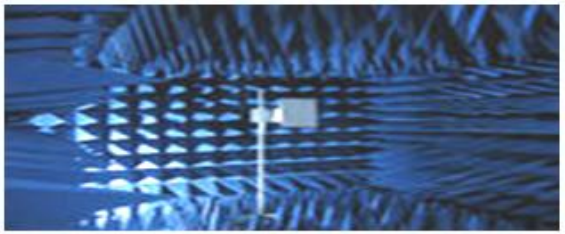
RF	温	13048903292
ME	唐红交	137 1359 3032

2. Test system and equipment

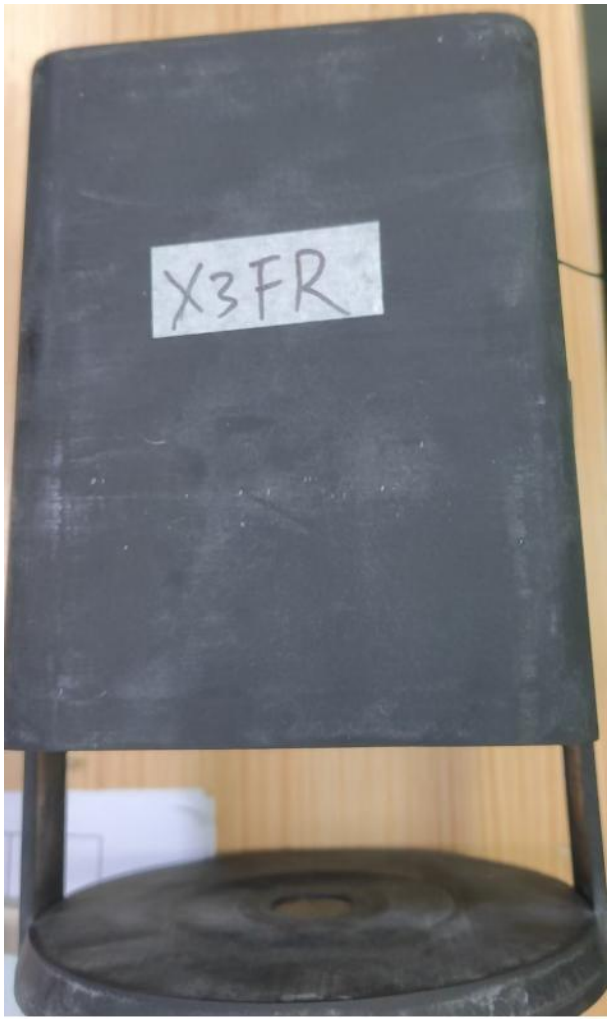
	测试项目	设备
1. S11参数	1. 回波损耗 2. 驻波比	网络分析仪: HP 8753D/R3765CH
2. 耦合功率测试	1. 发射功率 2. 接收灵敏度	GSM 测试仪: Agilent 8960 E5515C LTE 测试仪: 8820C/CMW500
3. 辐射模式与增益	1. 辐射模式 2. 天线增益	1. 暗室： 7x4x3 m (ETS-3D) 2. 网络分析仪：HP 8753D



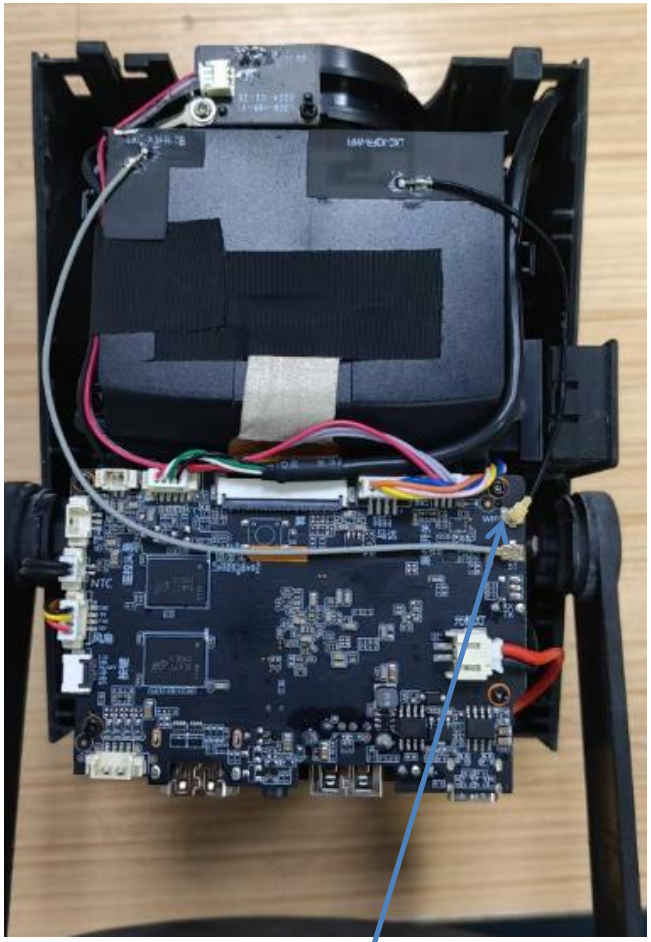




一.项目图Project Chart

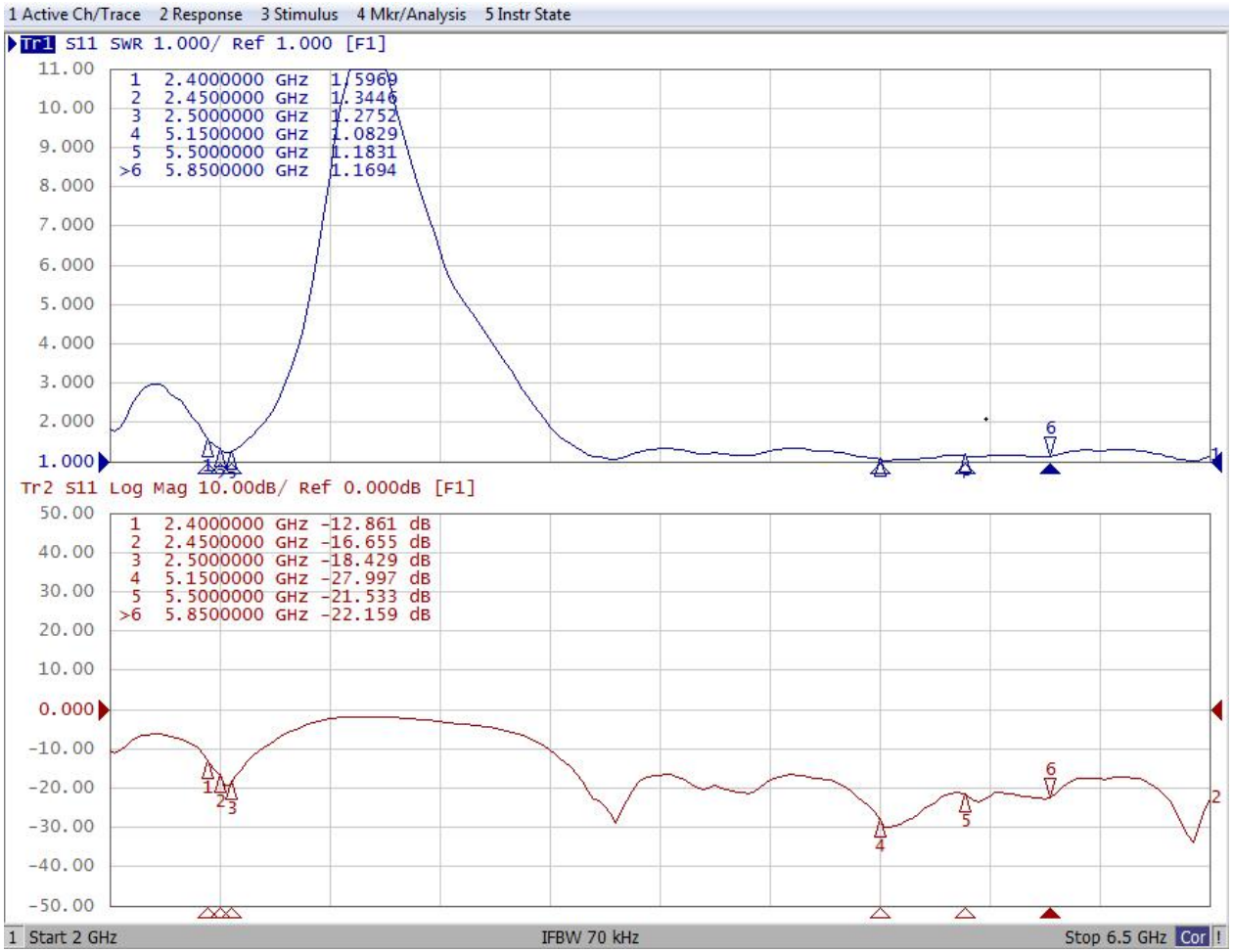


二.天线匹配Antenna Matching

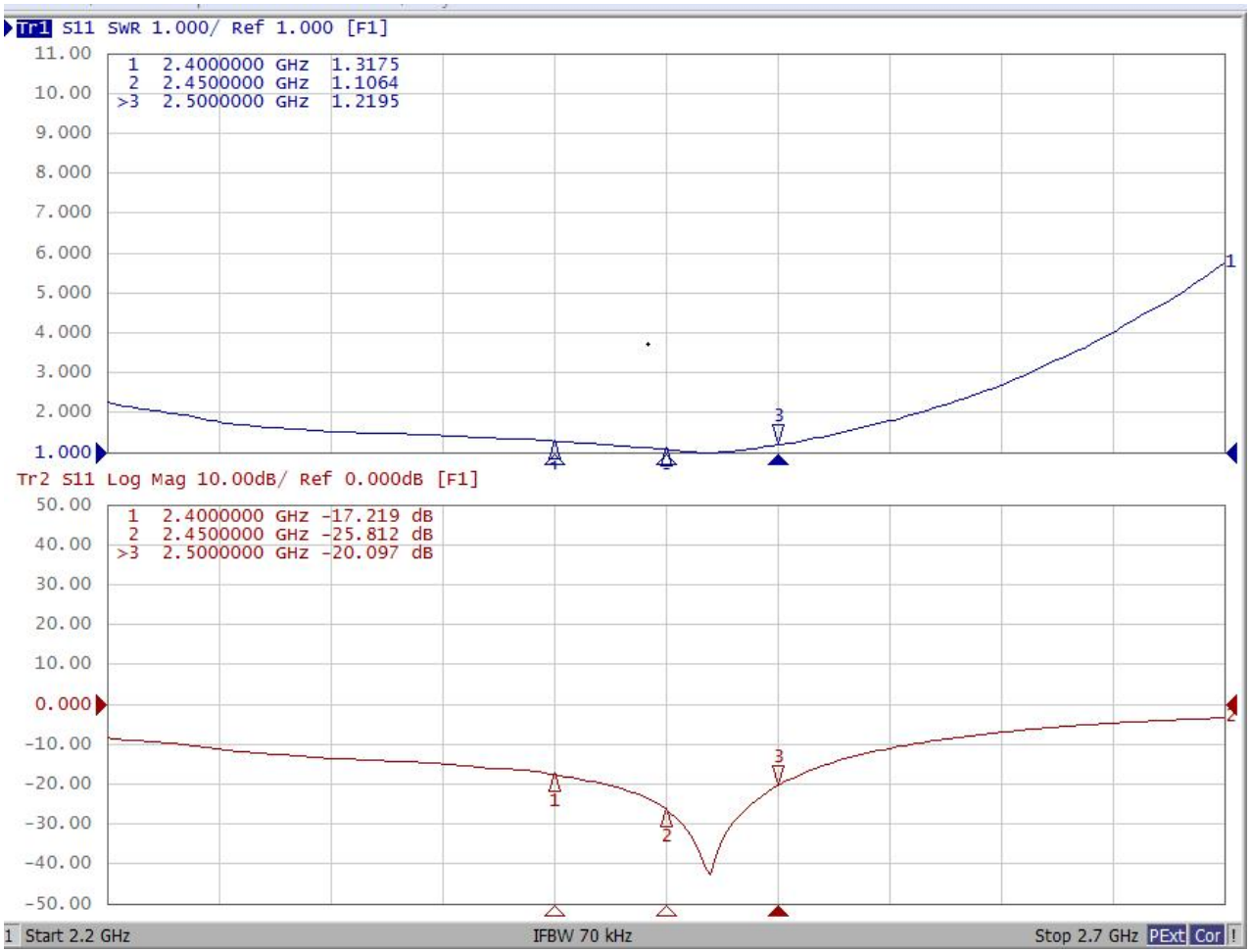


天线匹配未改动

三.无源数据 passive data



SWR-WIFI


Tr1 S11 SWR 1.000/ Ref 1.000 [F1]
1 2.4000000 GHz 1.3175
2 2.4500000 GHz 1.1064
>3 2.5000000 GHz 1.2195
11.00
10.00
9.000
8.000
7.000
6.000
5.000
4.000
3.000
2.000
1.000
Tr2 S11 Log Mag 10.00dB/ Ref 0.000dB [F1]
1 2.4000000 GHz -17.219 dB
2 2.4500000 GHz -25.812 dB
>3 2.5000000 GHz -20.097 dB
50.00
40.00
30.00
20.00
10.00
0.000
-10.00
-20.00
-30.00
-40.00
-50.00
1 Start 2.2 GHz
IFBW 70 kHz
Stop 2.7 GHz
PExt
Cor

SWR-BT

四. 增益效率 Gain Efficiency

WIFI-2.4G

Freq	Effi	Gain
(MHz)	(%)	(dBi)
2400	51.34	2.81
2410	50.3	2.53
2420	50.0	2.35
2430	50.1	2.31
2440	55.3	2.74
2450	60.38	3.07
2460	63.82	3.19
2470	62.92	2.91
2480	64.11	2.96
2490	65.43	2.90
2500	65.83	2.75

BT-2.4G

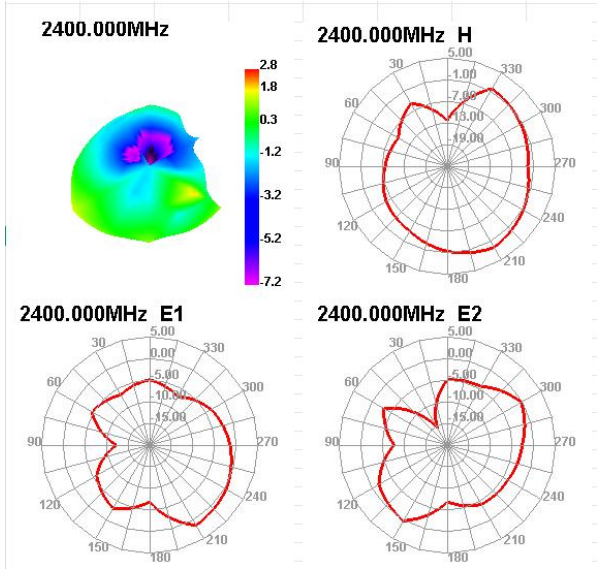
Freq	Effi	Gain
(MHz)	(%)	(dBi)
2400	48.94	4.4
2410	49.41	4.44
2420	47.41	4.23
2430	47.68	4.22
2440	51.93	4.67
2450	51.33	4.63
2460	52.93	4.76
2470	52.96	4.71
2480	50.23	4.39
2490	50.86	4.34
2500	51.22	4.26

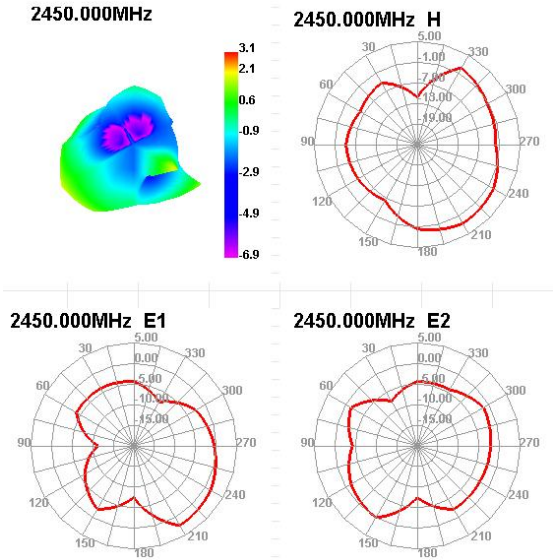
WIFI-5G

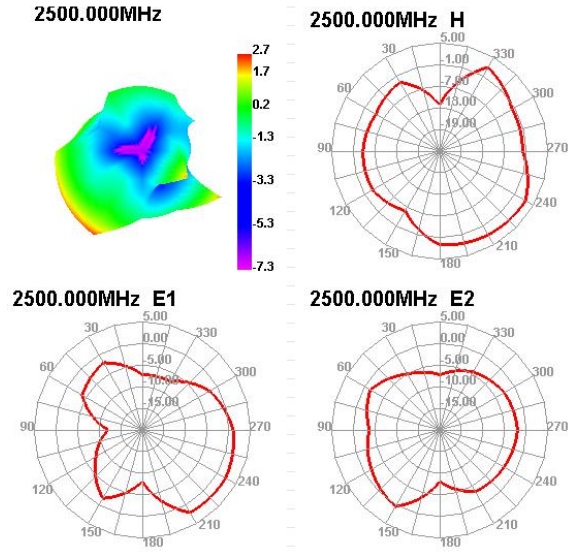
Freq	Effi	Gain
(MHz)	(%)	(dBi)
5150	63.3	2.52
5350	66.31	3.46
5550	55.09	2.81
5650	55.48	2.76
5850	54.62	3.75

五. 苹果图方向图 Apple map direction map

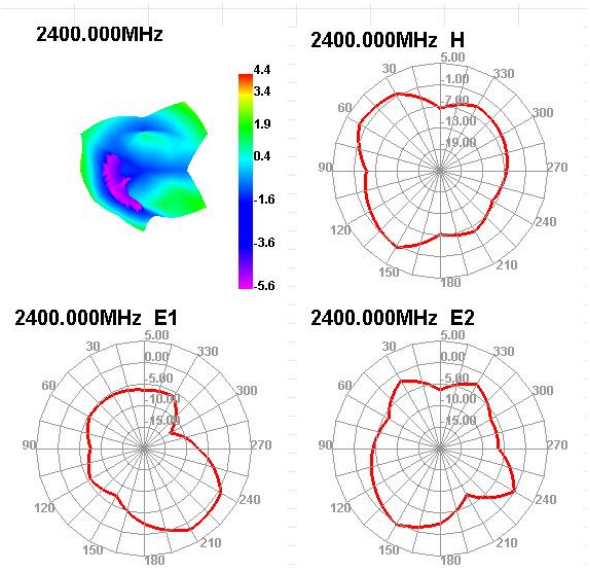
WIFI-2.4G

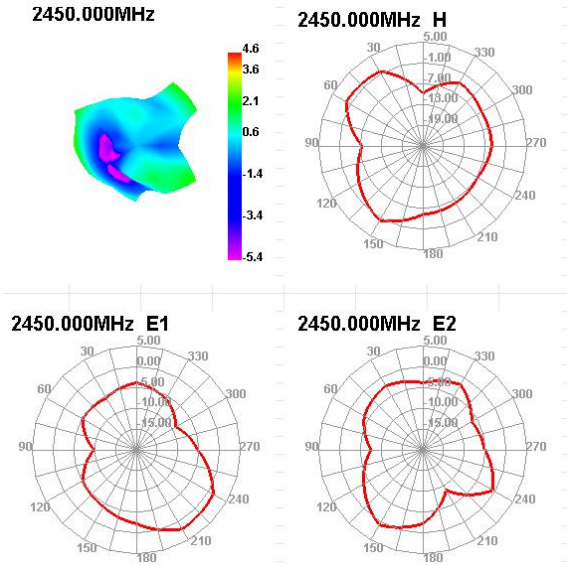


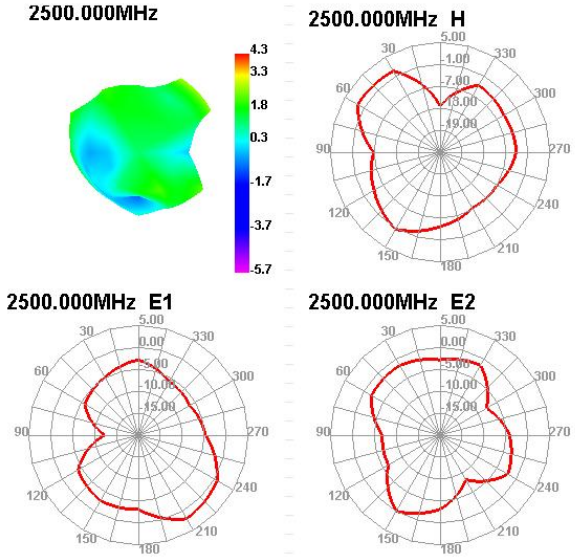




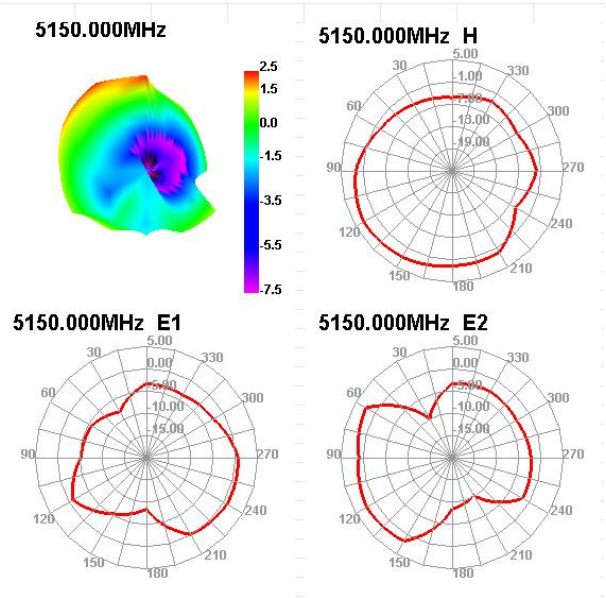
BT-2.4G

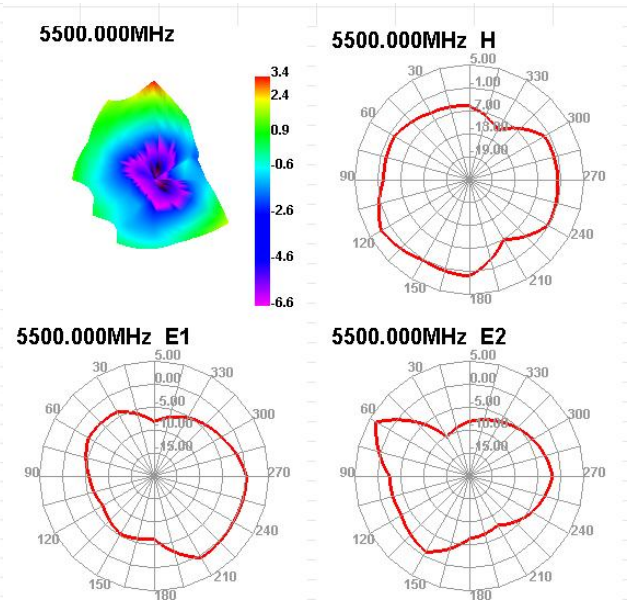


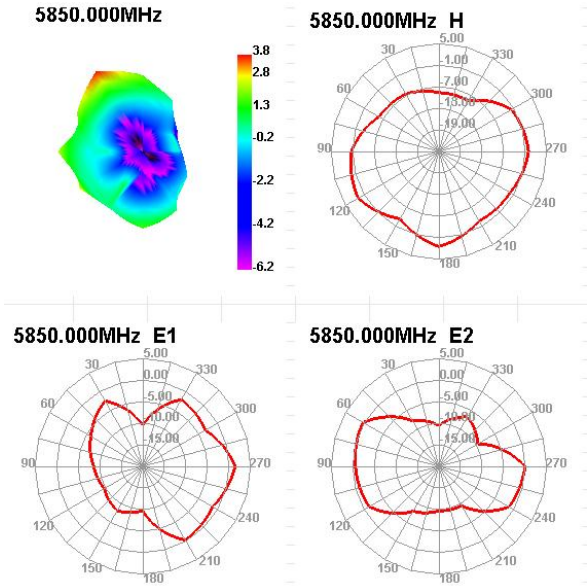




WIFI-5G


5150.000MHz
2.5
1.5
0.0
-1.5
-3.5
-5.5
-7.5
5150.000MHz H
5150.000MHz E1
5150.000MHz E2

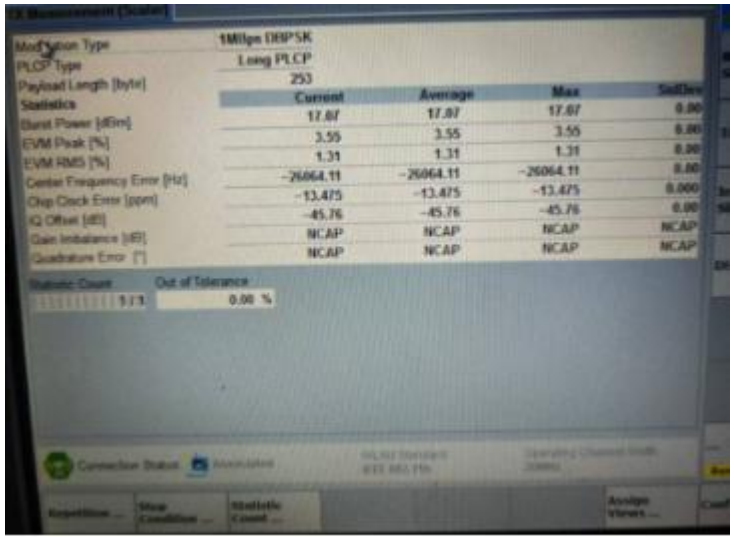

5500.000MHz
3.4
2.4
0.9
-0.6
-2.6
-4.6
-6.6
5500.000MHz H
5500.000MHz E1
5500.000MHz E2


5850.000MHz
3.8
2.8
1.3
-0.2
-2.2
-4.2
-6.2
5850.000MHz H
5850.000MHz E1
5850.000MHz E2

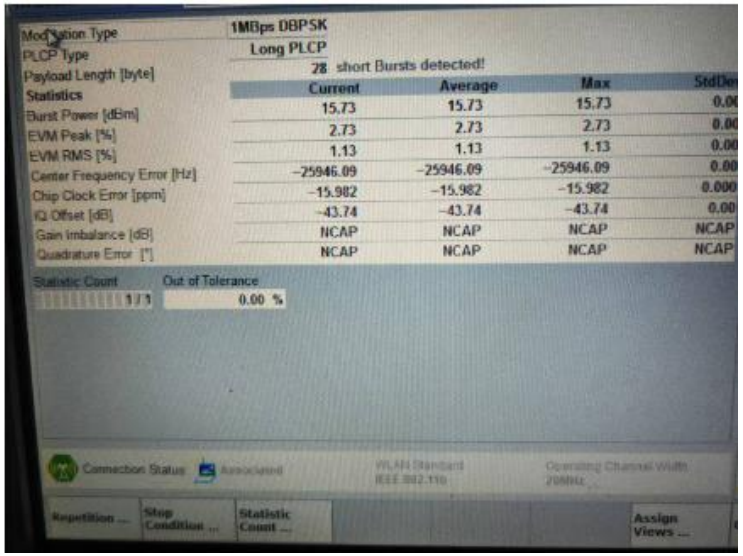
六. 有源数据 Active data

WiFi(2.4G/B)	CH	TRP-(11M)	TIS-(11M)	WiFi(5G/A)	CH	TRP-(54M)	TIS-(54M)
	1	16.1			36	14.0	
	6	15.5			149	16.7	
	11	15.0	-80.0		165	16.0	-70.2

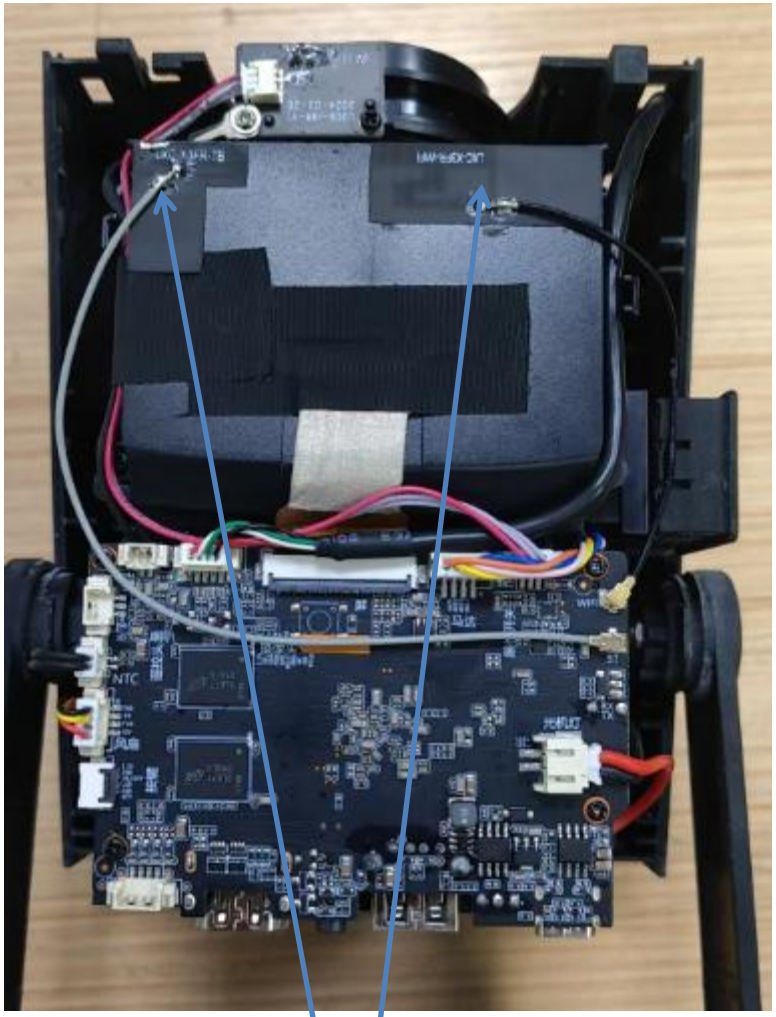
B模-1信道传导数据



B模-11信道传导数据



七.环境处理EnvionmentItreatment



按图安装天线

The end , thanks!