深圳市千目通讯科技有限公司

Shenzhen Qianmu Communication Technology Co.,Ltd.

专注天线方案、设计与生产

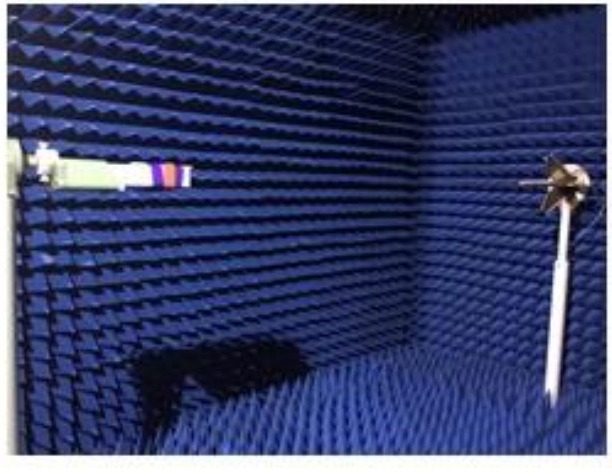
客 户customer：智汇创
项 目Project：MINI
日 期Date：2023-03-22
版 本Version：A1
射 频Radio：ZHANG LI

测试环境Test environment

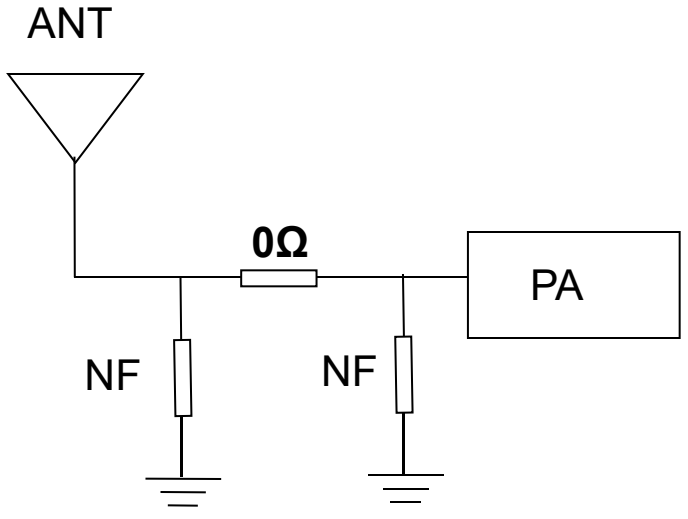
	测试项目	设备
1. S参数 （S-parameter）	1. 回波损耗 （Return Loss） 2. 电压驻波比（VSWR）	Network analyzer: Agilent E5071B HP 8753D
2. 有源测试（Active ）	1. 发射功率 （TRP） 2. 接收灵敏度 （TIS） 3. 频率误差 （Frequency error） 4. 屏灭、屏亮 (screen is off and on)	1. Dark room： ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2.Comprehensive tester: Agilent 8960 E5515B ×2 StarPoint SP6011
3.无源测试（Passive）	1.天线增益 （Gain） 2.天线效率 （Efficiency）	1. Dark room： ETS 7x4x3 m (3D) Chamber ETS 5x3x3 m (3D) Chamber 2. Comprehensive tester:Agilent E5071B HP 8753D







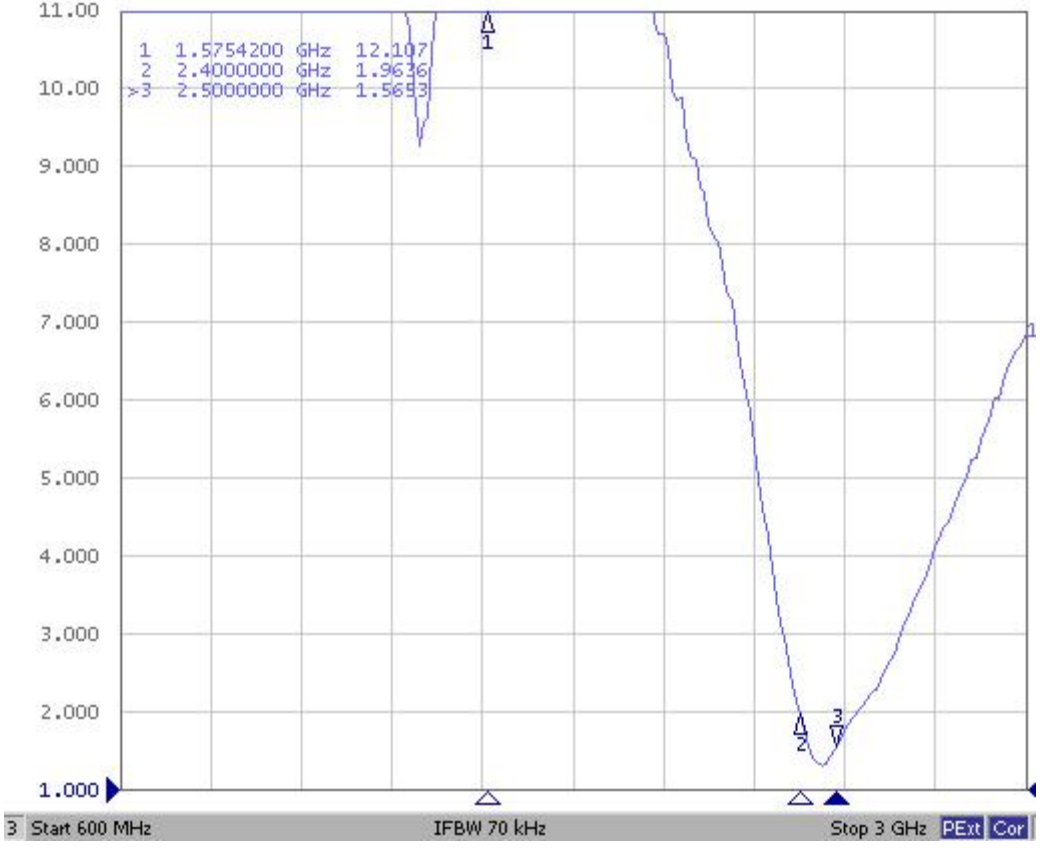
Matching circuit -WIFI antenna



matching circuit has not made any changes

WIFI Passive parameter：

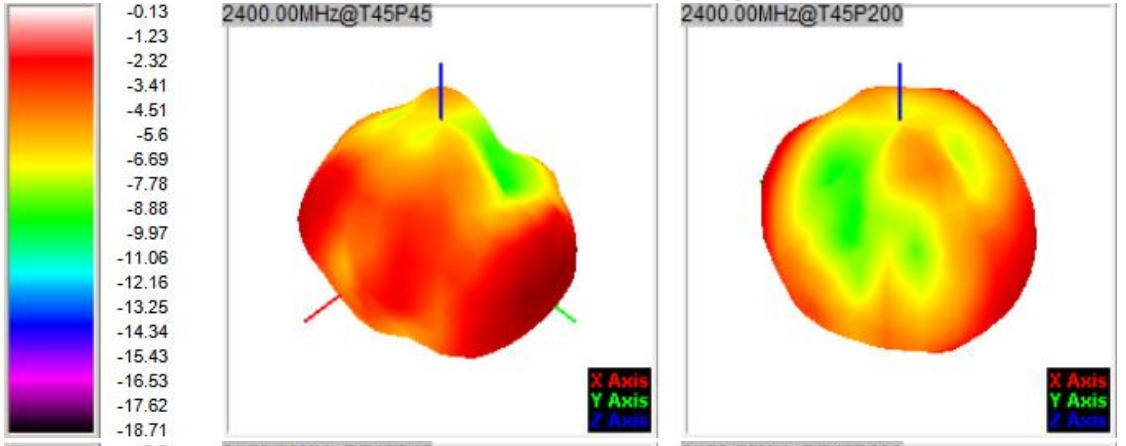
Band	WIFI	
	2400	2500
VSWR	1.9	1.5

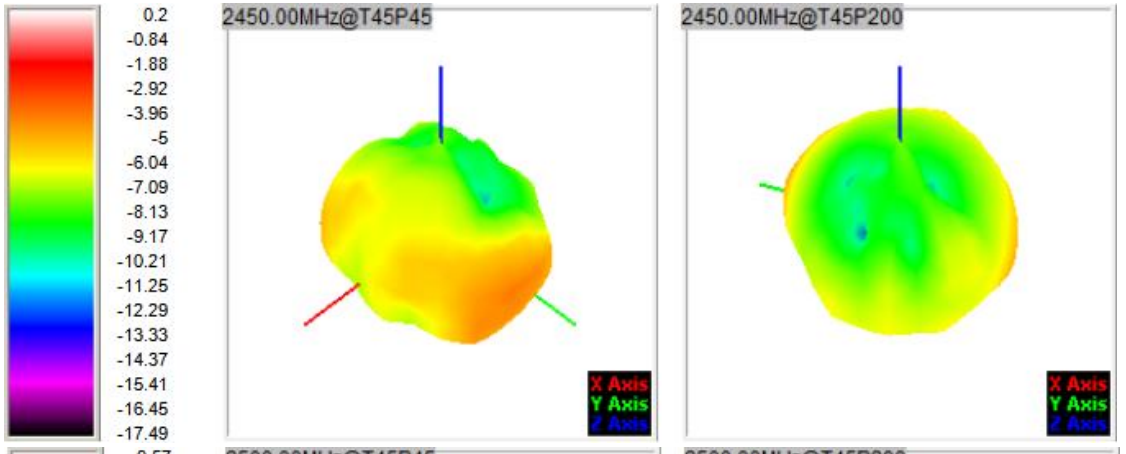


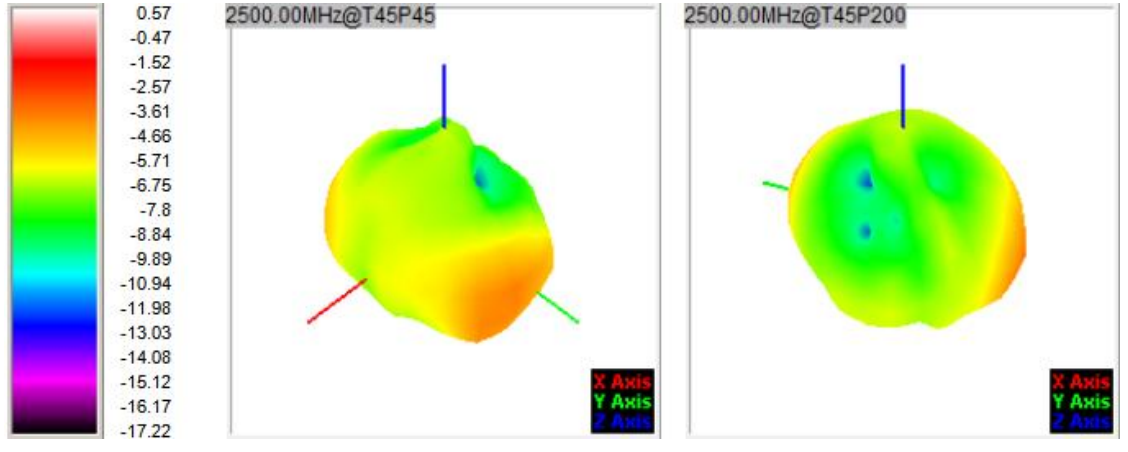
WiFi Antenna efficiency and gain:

FEITUKEJI											
Frequency ID	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**
Frequency (MHz)	**2400.0**	**2410.0**	**2420.0**	**2430.0**	**2440.0**	**2450.0**	**2460.0**	**2470.0**	**2480.0**	**2490.0**	**2500.0**
Point Values											
Ant. Port Input Pwr. (dBm)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Tot. Rad. Pwr. (dBm)	**-4.78**	**-4.84**	**-4.73**	**-4.59**	**-4.57**	**-4.36**	**-4.38**	**-4.62**	**-4.58**	**-4.41**	**-4.45**
Peak EIRP (dBm)	**-0.13**	**-0.38**	**-0.46**	**-0.34**	**-0.13**	**0.20**	**0.24**	**-0.03**	**0.06**	**0.52**	**0.57**
Directivity (dBi)	4.64	4.46	4.27	4.24	4.44	4.56	4.62	4.60	4.64	4.93	5.03
Efficiency (dB)	**-4.78**	**-4.84**	**-4.73**	**-4.59**	**-4.57**	**-4.36**	**-4.38**	**-4.62**	**-4.58**	**-4.41**	**-4.45**
Efficiency (%)	**33.30**	**32.80**	**33.70**	**34.80**	**34.90**	**36.60**	**36.50**	**34.50**	**34.90**	**36.20**	**35.90**
Gain (dBi)	-0.13	-0.38	-0.46	-0.34	-0.13	0.20	0.24	-0.03	0.06	0.52	0.57
NHPRP ±Pi/4 (dBm)	-5.48	-5.52	-5.39	-5.23	-5.20	-4.99	-5.01	-5.25	-5.21	-5.04	-5.09
NHPRP ±Pi/6 (dBm)	-6.46	-6.50	-6.37	-6.20	-6.16	-5.95	-5.96	-6.20	-6.15	-5.97	-6.01
NHPRP ±Pi/8 (dBm)	-7.28	-7.33	-7.20	-7.02	-6.98	-6.75	-6.75	-6.99	-6.93	-6.74	-6.78
Upper Hem. PRP (dBm)	-7.65	-7.71	-7.61	-7.47	-7.45	-7.27	-7.32	-7.61	-7.58	-7.40	-7.42
Lower Hem. PRP (dBm)	-7.93	-8.00	-7.87	-7.72	-7.71	-7.48	-7.46	-7.66	-7.59	-7.43	-7.51
Upper Hem. PRP (%)	17.18	16.96	17.35	17.89	17.98	18.76	18.55	17.33	17.46	18.18	18.13
Lower Hem. PRP (%)	16.12	15.86	16.32	16.90	16.95	17.85	17.96	17.16	17.40	18.06	17.75

WiFi Antenna evaluation diagram:







Prompt note

note:

I. This data only refers to the data generated by the prototype provided by the customer, and does not represent the final mass production status of the customer;

2. Please carefully confirm the description of matching circuit modification and environmental treatment in our report;

Iii. Please provide trial production prototype to our company for secondary verification before mass production; Please inform us in advance of material replacement, software update and environmental treatment.

Iv. If the customer needs the third party to retest, or send the customer to test, please come to our company for verification before sending the prototype; To prevent the difference between the machine and the test machine;

V: Our company does not accept the machine data other than our debugging and other implied test data, but you can refer to it, except the certification darkroom. If there is any difference in data, all the reasons shall be based on the commissioning machine.

Thank you!