

天线测试 Antenna test

- 1, 硬件测试 Hardware test
- 2, 软件测试 Software testing
- 3, 数据读取 Data read

1, 硬件测试 Hardware test

1.1, PCBA 裸板测试 PCBA bare board test

将射连接线与裸板焊接好, 再将其与 OTA 设备连接, 射频连接线与裸板连接图, 如下图示:

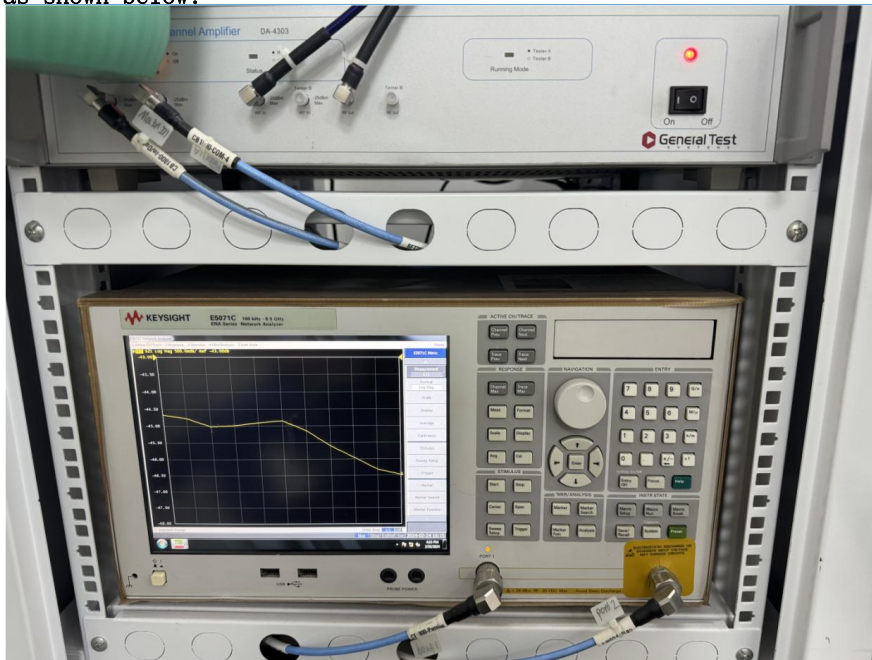
Weld the beam connection cable to the bare board, and then connect it to the OTA device.
The connection diagram between the RF connection cable and the bare board is shown as the following figure



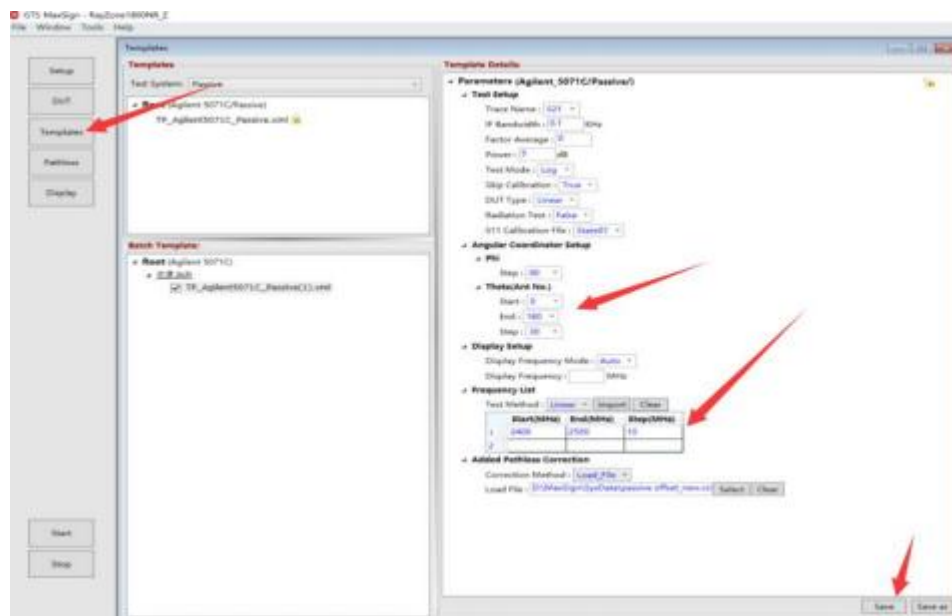
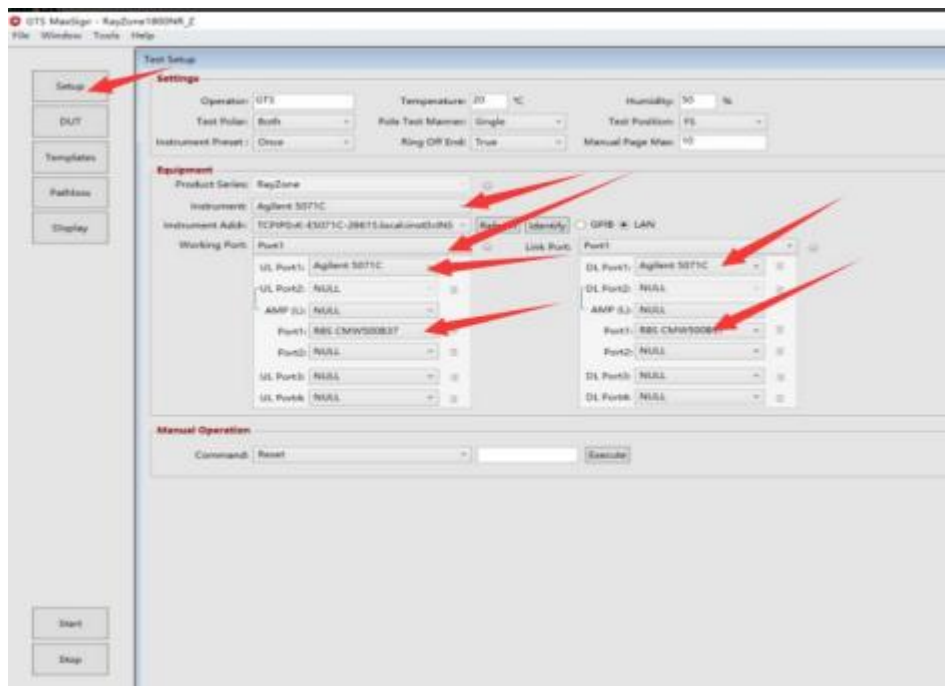
1.2, 设备环境 Equipment environment

本次测试需要用到设备有电脑，频谱仪，放大器和暗室，如下图示：

This test requires equipment including computer, spectrometer, amplifier and darkroom, as shown below:



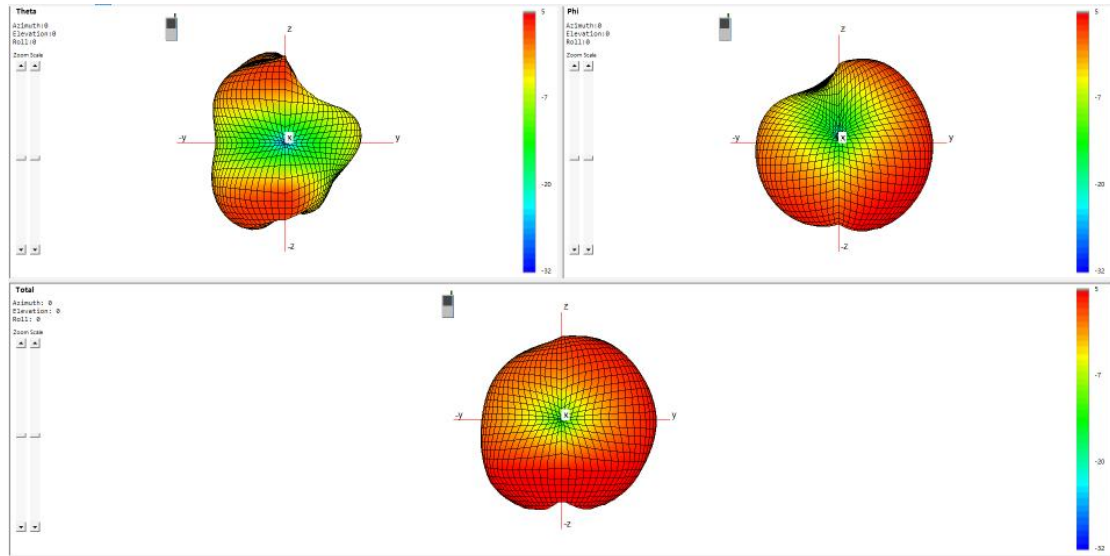
2, 软件测试 Software testing



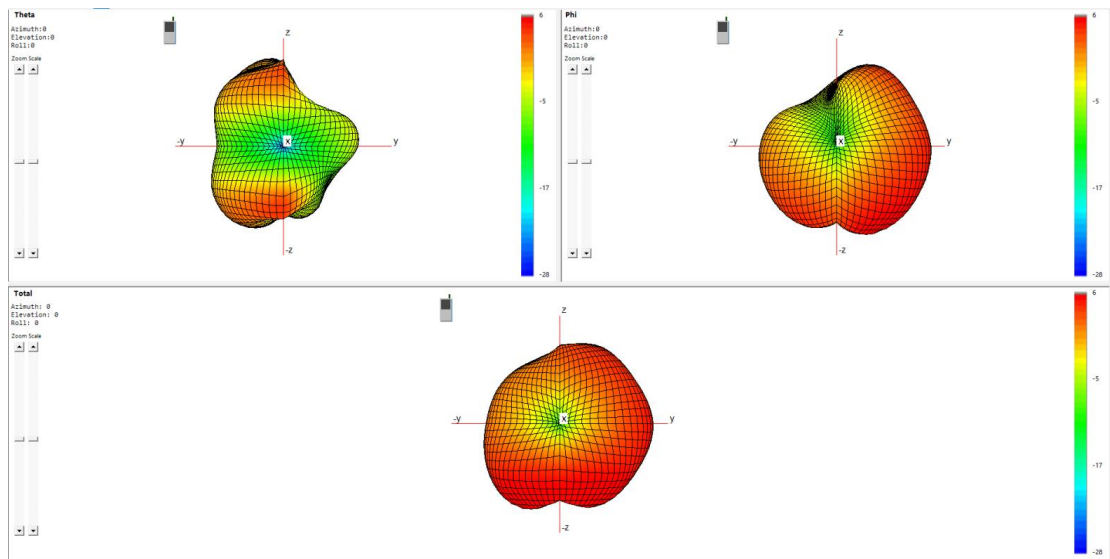
3, 数据读取 Data read

3.1, 扫描天线的 3D 图辐射图 Scanning the antenna in 3D radiation

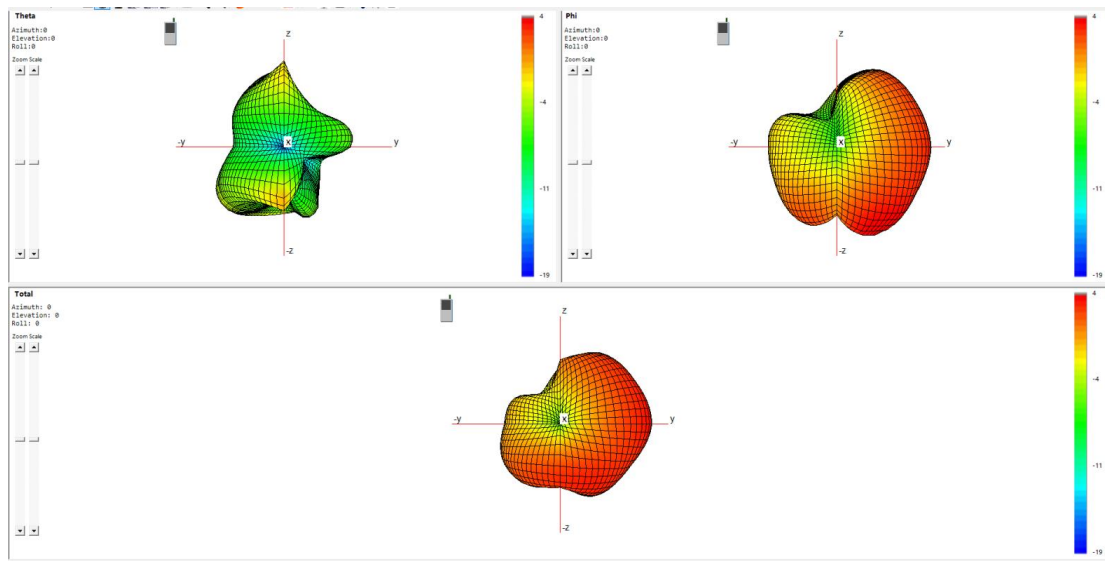
2400MHz:



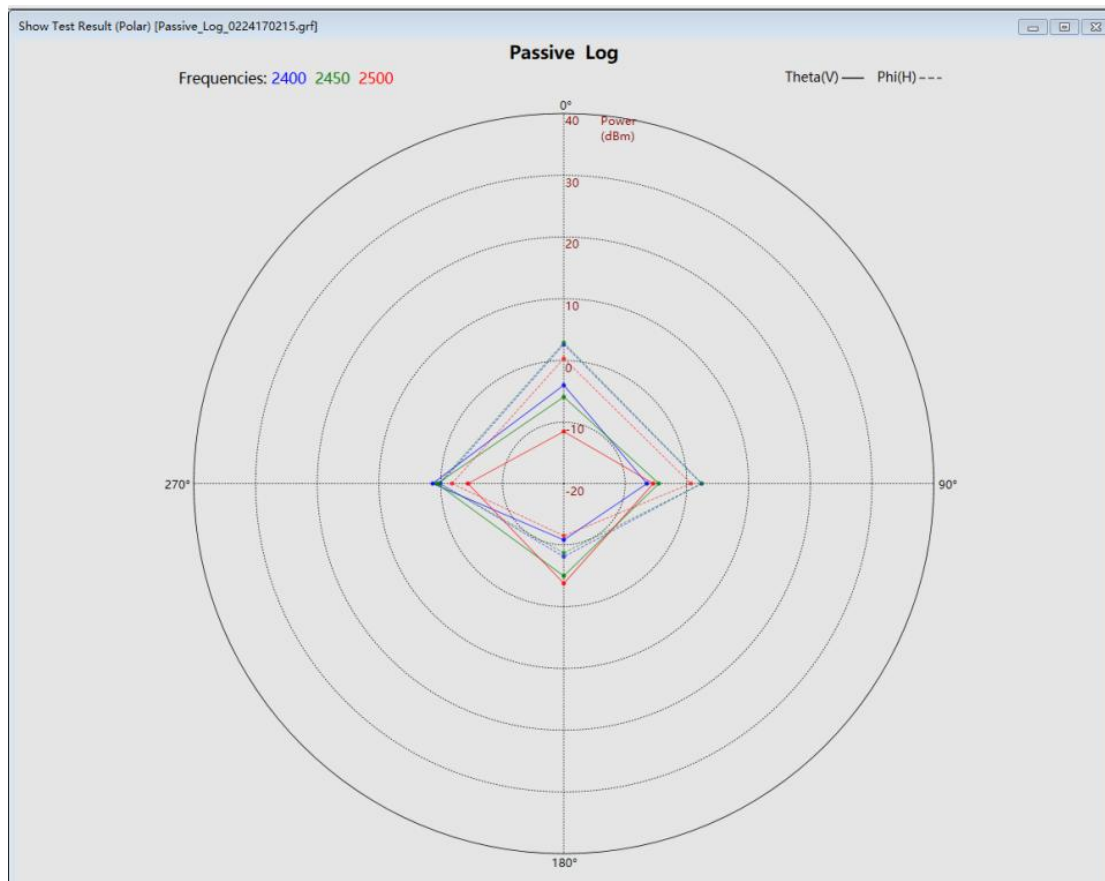
2450MHz:



2500MHz:



3.2, 扫描天线 2D 辐射图 Scan the 2D radiation pattern of the antenna

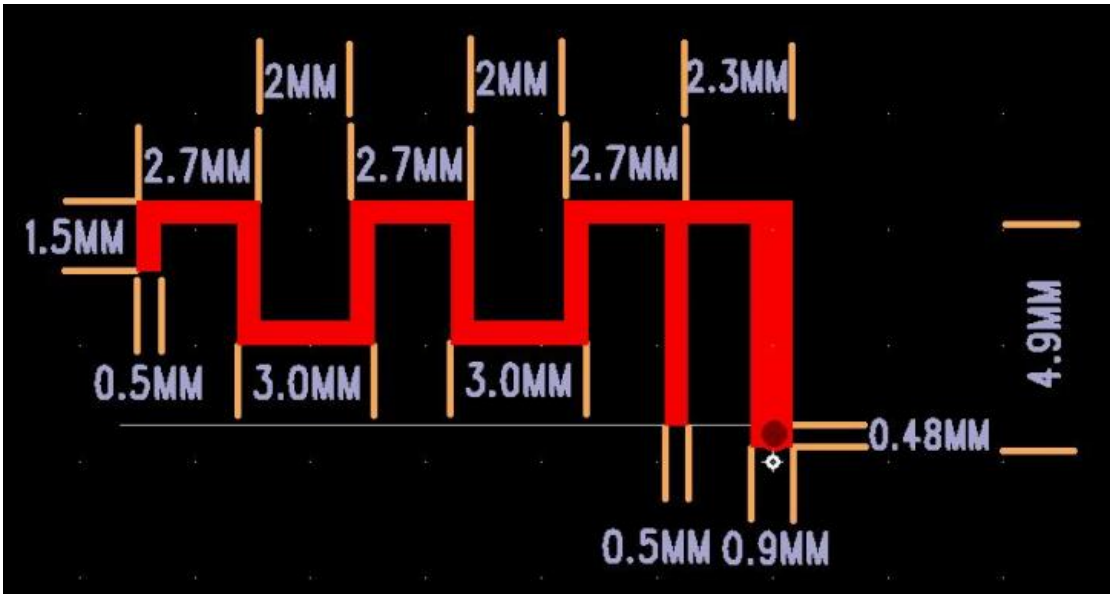


3.3，详细的扫描输出数据结果 Detailed scan output data results

Freq (MHz)	Gain (dBi)	Efficiency (dB)	Efficiency (%)
2400	4.73342591	1.773815678	150.4463195
2410	4.961265122	1.895608836	154.7251398
2420	5.067302169	1.962652587	157.1322245
2430	5.368003414	2.188791154	165.5309149
2440	5.600528892	2.350140377	171.7963916
2450	5.655040851	2.390523367	173.4012951
2460	5.521399269	2.267430619	168.5555519
2470	5.001927509	1.794395308	151.1609215
2480	4.563397682	1.323160534	135.6175997
2490	4.023180436	0.746943067	118.7665953
2500	3.691213759	0.453532901	111.0077475

ITEM	ANT SPEC		
Model Name	2.4G ANT		
Antenna plate	PCB antenna		
Center Frequency	2400MHz	2450MHz	2500MHz
	4.73dBi	5.65dBi	3.69dBi
MAX.Gain	5.65dBi		
Polarization	Horizontal and Vertical		
Impedance	50Ohm		
Manufacture	SHENZHEN CLEVER BRIGHT IMP. & EXP. CO., LTD.		
Address	Rm.1701, Zhuoyue Building, Fuhua Yi Rd., Futian Central Zone, Shenzhen, P.R.China.		

AntennaPhouo&Length(mm)



Frequency (MHz)	Gain (dBi)			
	Horizontal		Vertical	
	MAX	MIN	MAX	MIN
2400	2.89	-31.04	4.16	-24.07
2450	2.95	-25.14	5.08	-13.43
2500	-0.07	-18.60	3.18	-11.53