Antenna testing

1. Hardware test 2.

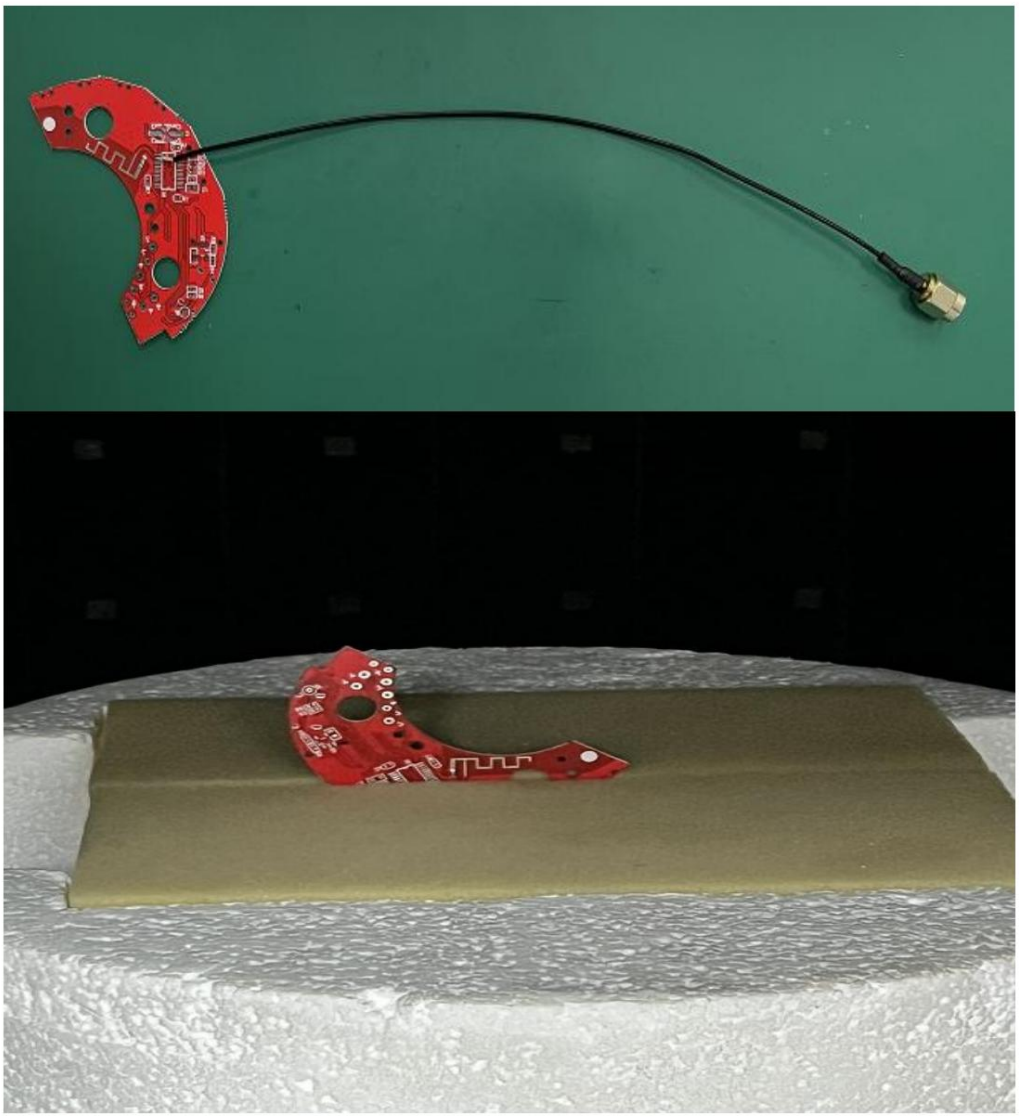
Software test 3. Data

reading

1. Hardware test **1.1 .**

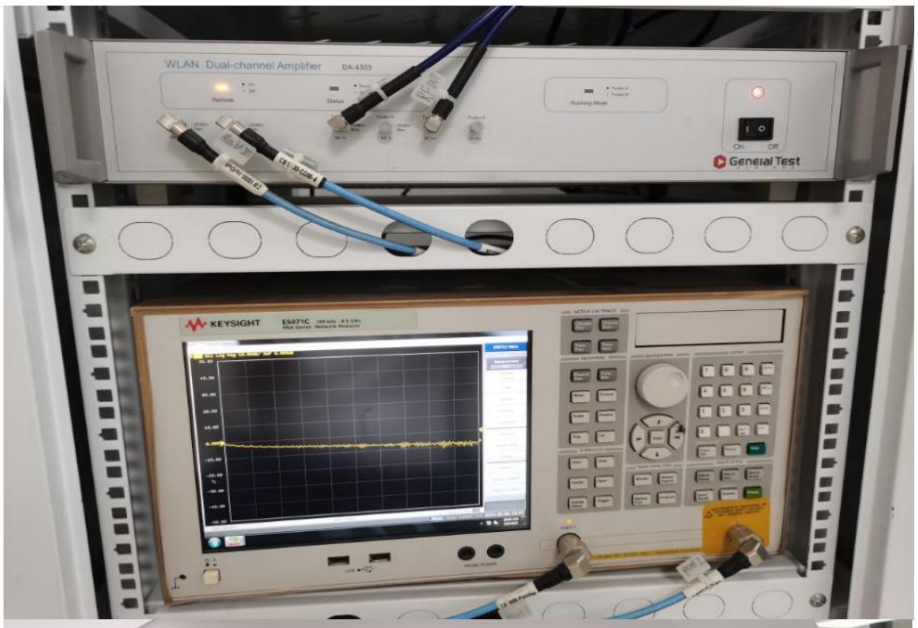
PCBA bare board test

Solder the RF cable to the bare board, and then connect it to the OTA device. The connection diagram of the RF cable and the bare board is as follows:

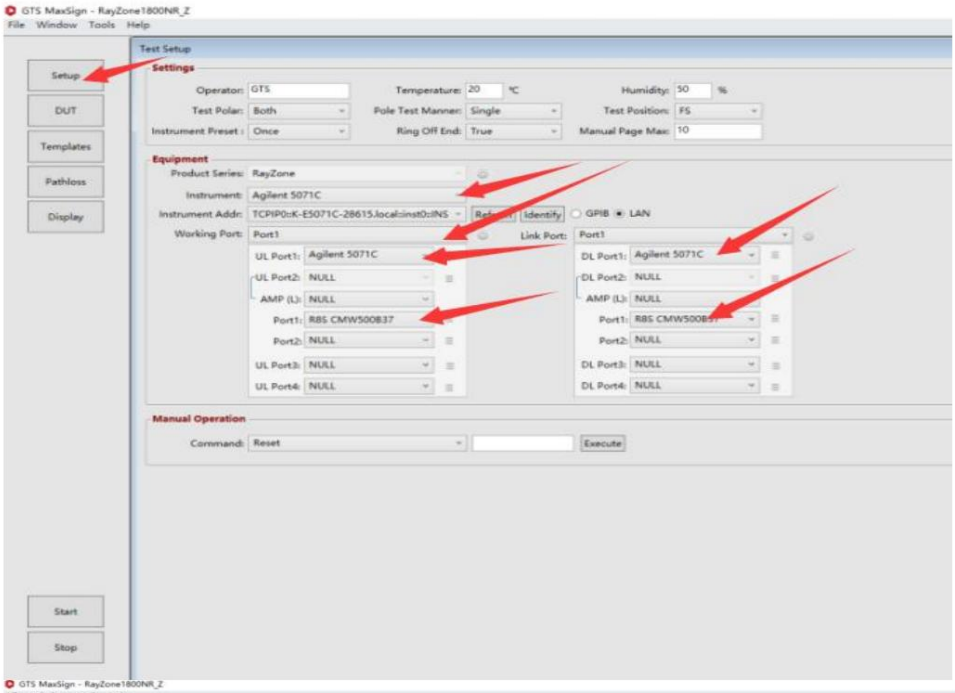


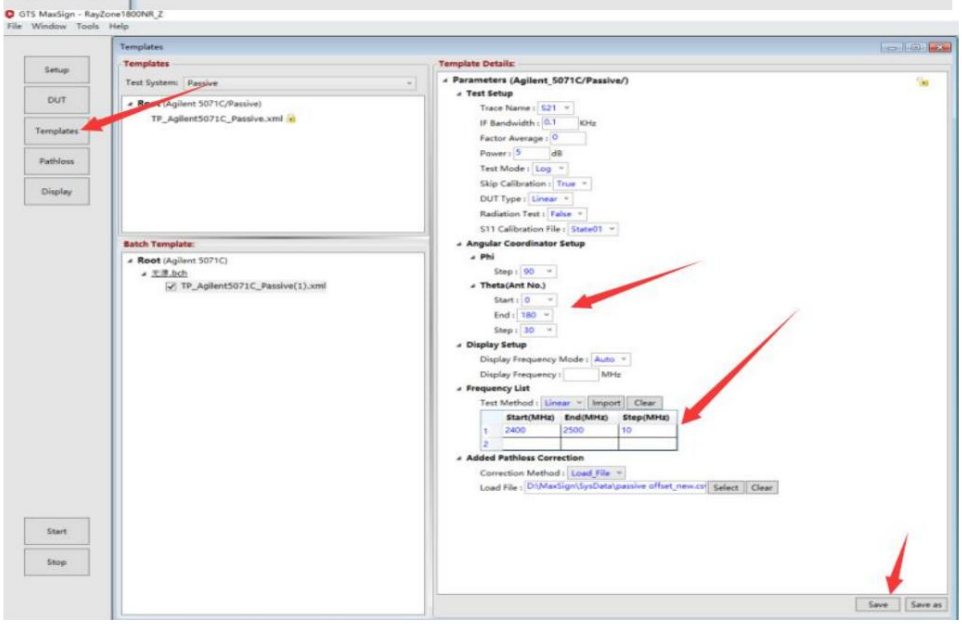
1.2 Equipment Environment

The equipment required for this test includes a computer, a spectrum analyzer, an amplifier, and a darkroom, as shown below:



2. Software Testing

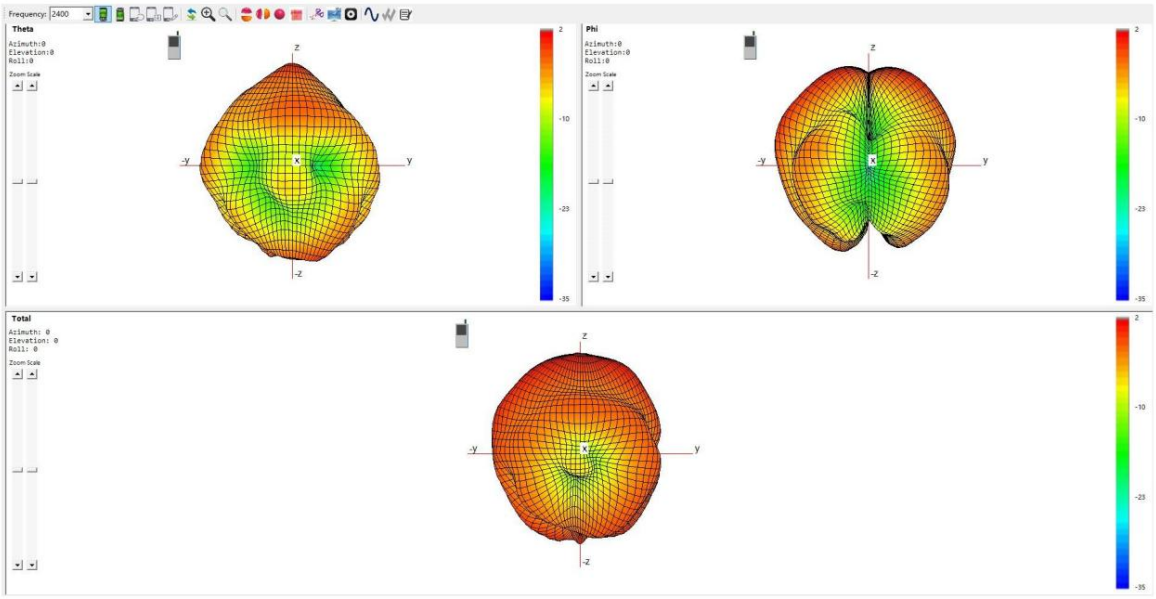




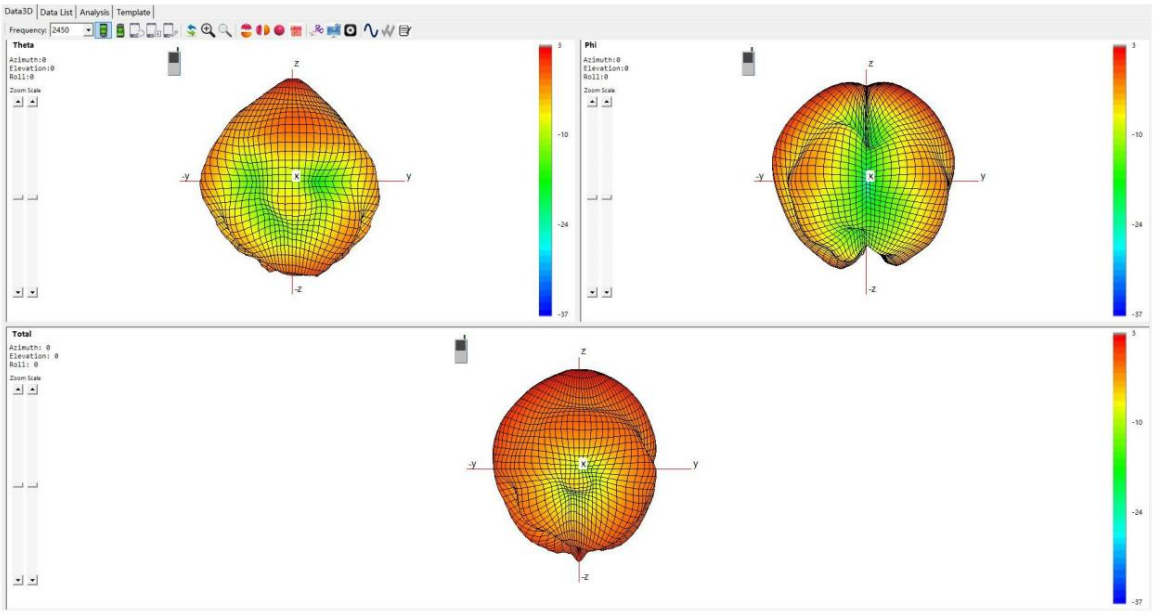
3. Data reading

3.1 3D Radiation Pattern of Scanning Antenna

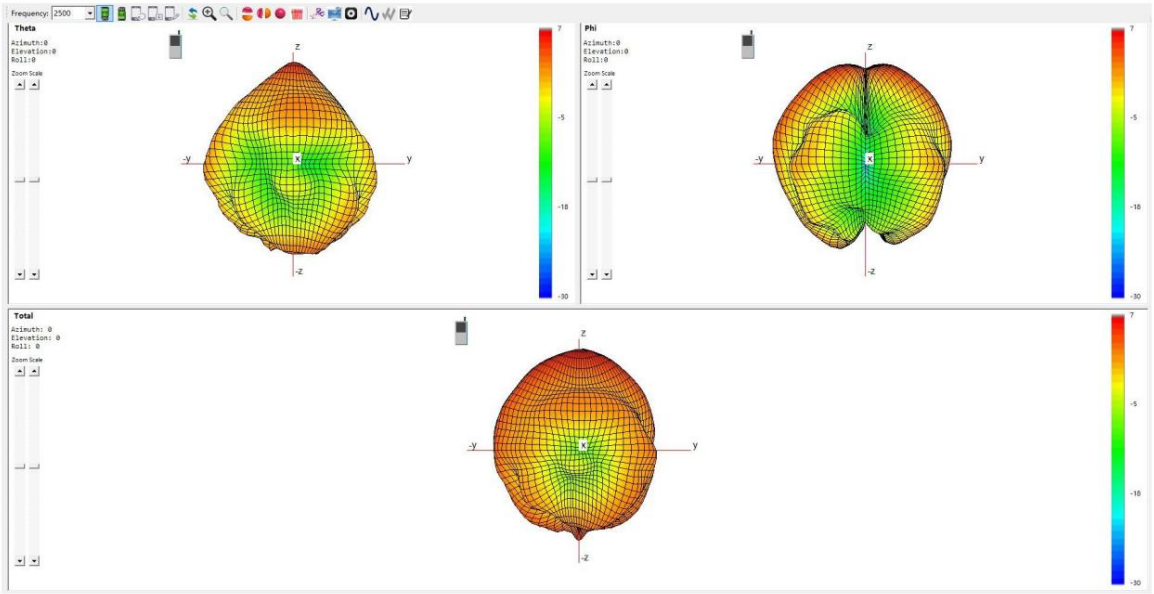
2400MHz:



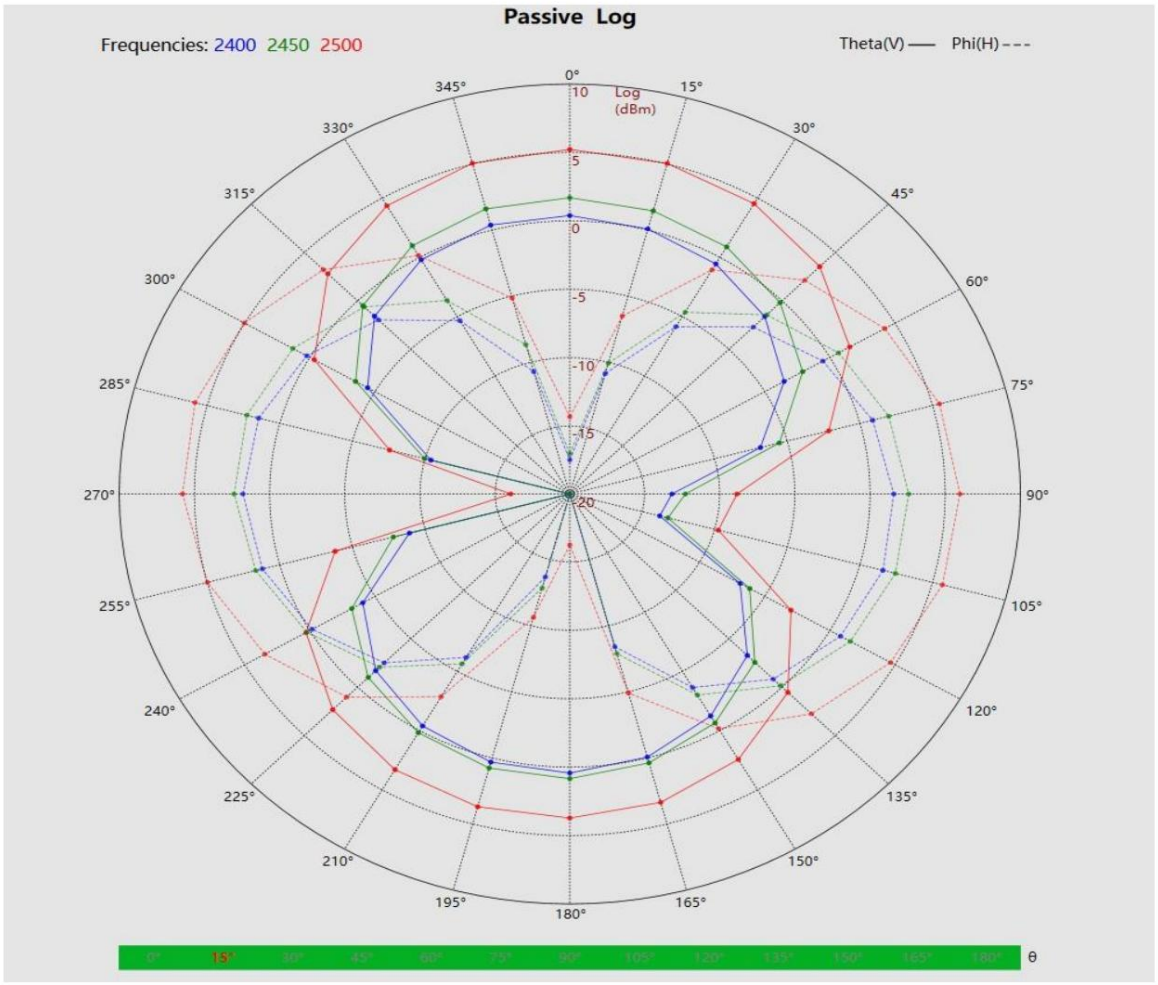
2450MHz:



2500MHz



3.2 2D Radiation Pattern of Scanning Antenna



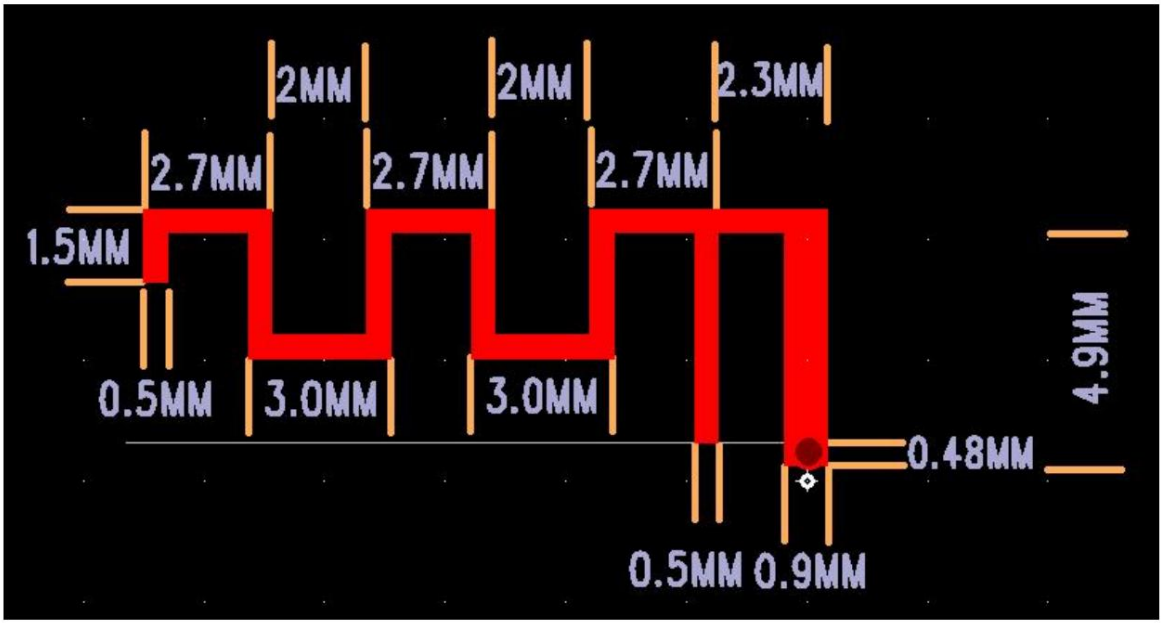
3.3. Detailed scan output data results

Freq(MHz)	Gain(dBi)	Efficiency(dB)	Efficiency(%)
2400	1.815831909	-2.499486625	56.24078029
2410	1.939995668	-2.580640208	55.19960617
2420	1.77499888	-2.884243292	51.47254842
2430	1.943168315	-2.880329896	51.51895086
2440	2.715976951	-2.201989271	60.22836489
2450	3.032635009	-1.945437241	63.89344072
2460	3.506054659	-1.60520093	69.10029588
2470	4.184921528	-1.029561927	78.89396939
2480	4.713058465	-0.473151401	89.67778232
2490	5.716965927	0.441459087	110.6995636
2500	6.397169322	1.014302939	126.3078358

Summary

ITEM	ANT SPEC		
Model Name	2.4G ANT		
Antenna plate	PCB antenna		
Center Frequency	2400MHz	2450MHz	2500MHz
	1.74dBi	2.68dBi	6.14dBi
MAX. Gain	6.4dBi		
Polarization	Horizontal and Vertical		
Impedance	50Ohm		
Manufacture			

AntennaPhoto&Length(mm)



Frequency (MHz)	Gain(dBi)			
	Horizontal		Vertical	
	MAX	MIN	MAX	MIN
2400	1.76	-34.76	1.76	-29.84
2450	2.95	-34.03	2.95	-36.2
2500	6.4	-27.86	6.4	-29.82