

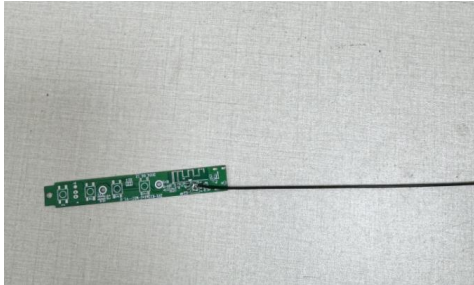
Antenna Testing

1. Hardware Testing
2. Software Testing
3. Data Reading

1. Hardware Testing

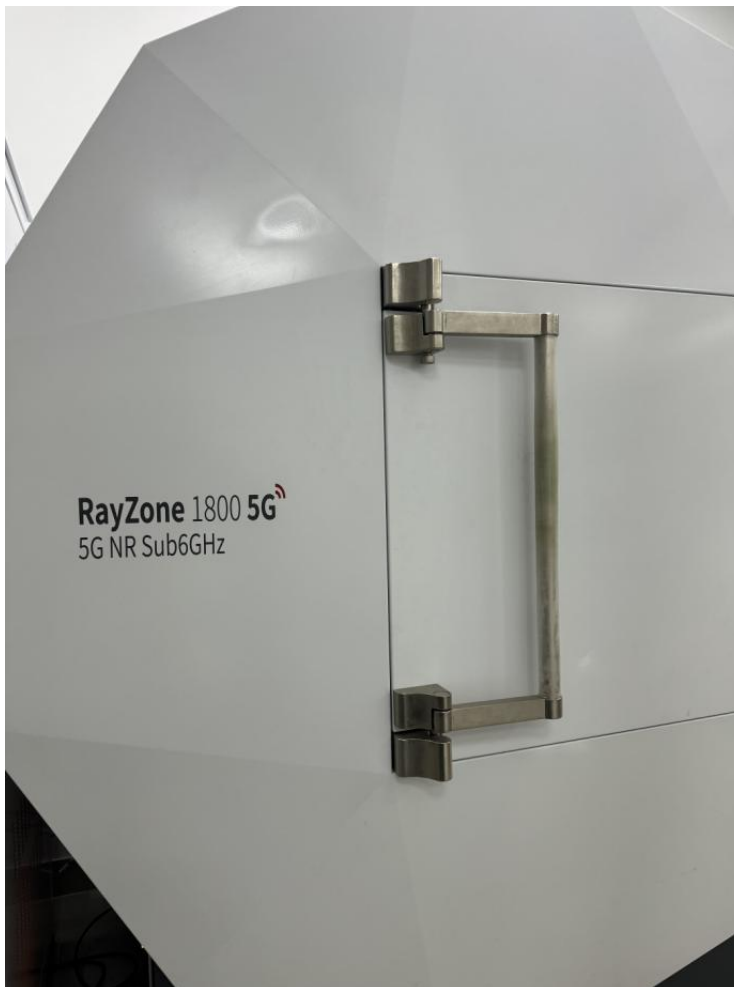
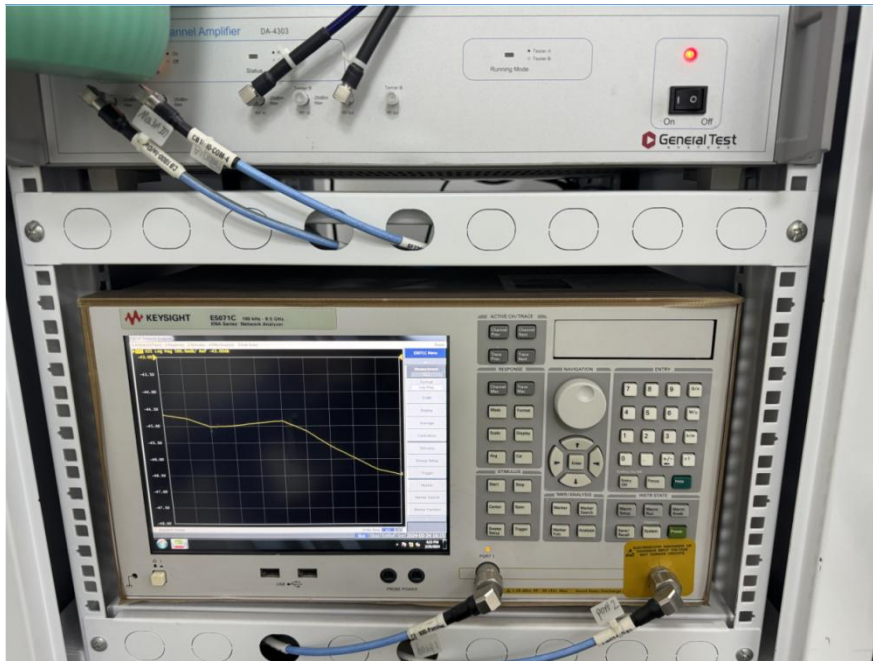
1.1 Testing of Bare PCBA Boards

Weld the transmission line to the bare board, then connect it to the OTA device. The RF connection diagram for the bare board is shown below:

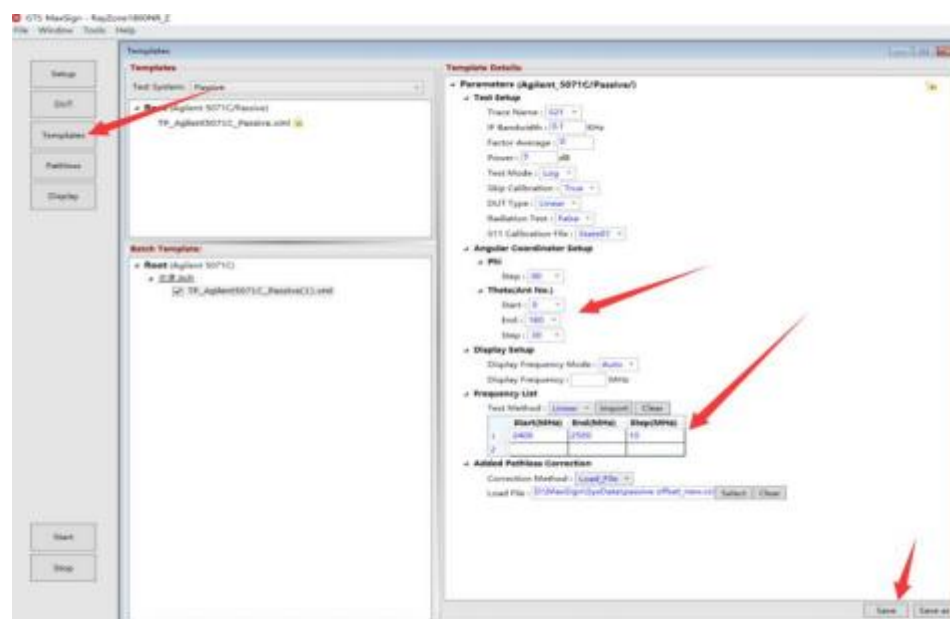
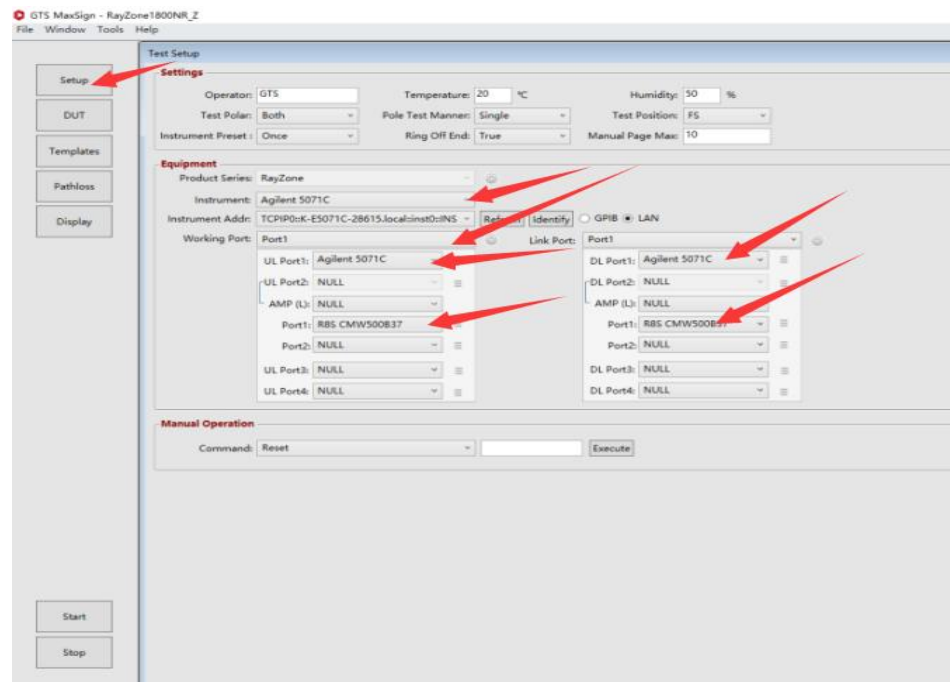


1.2 Equipment Environment

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



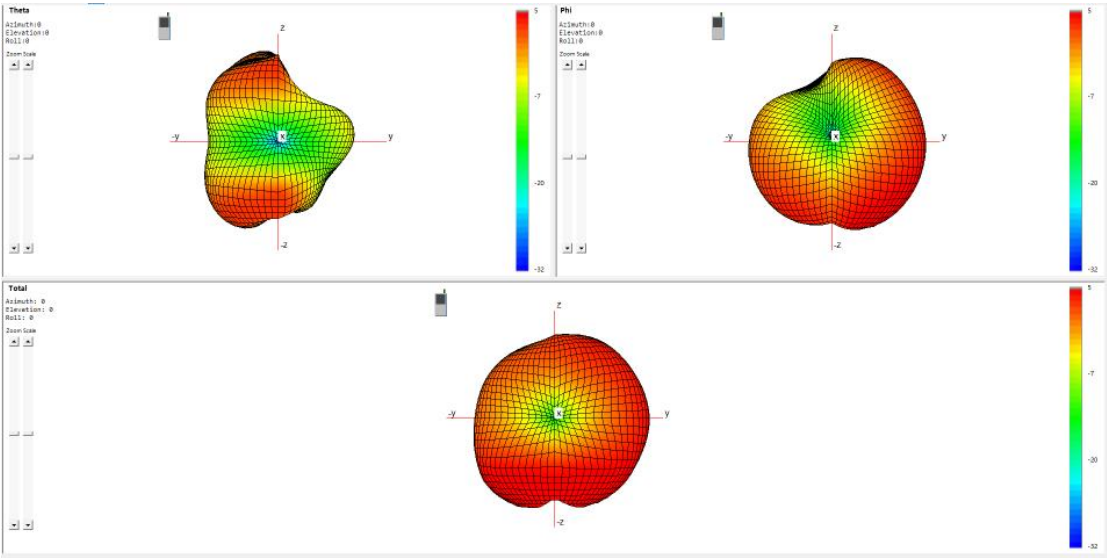
2. Software Testing



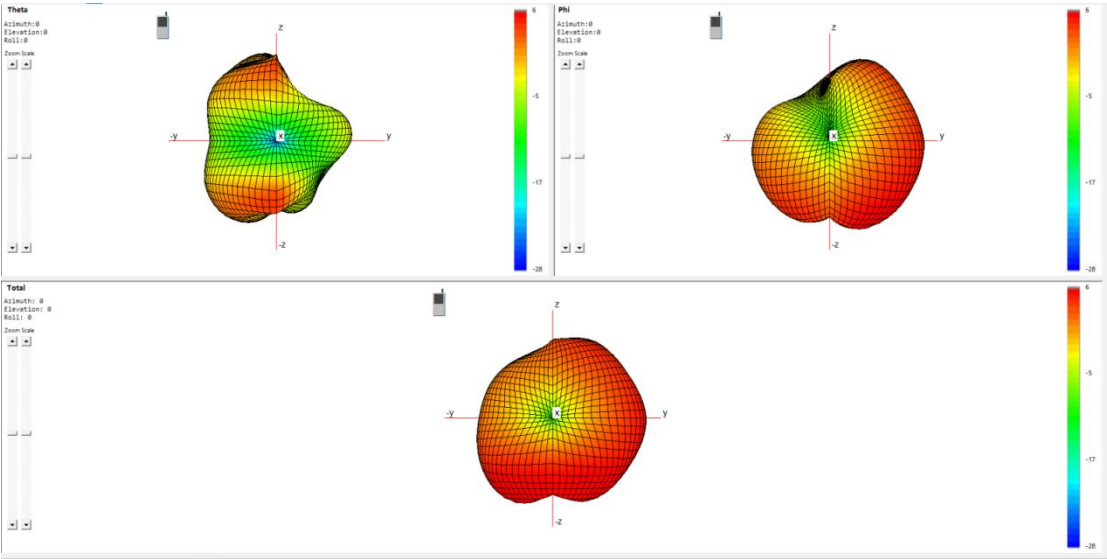
3. Data Reading

3.1 3D Radiation Diagram of the Scanning Antenna

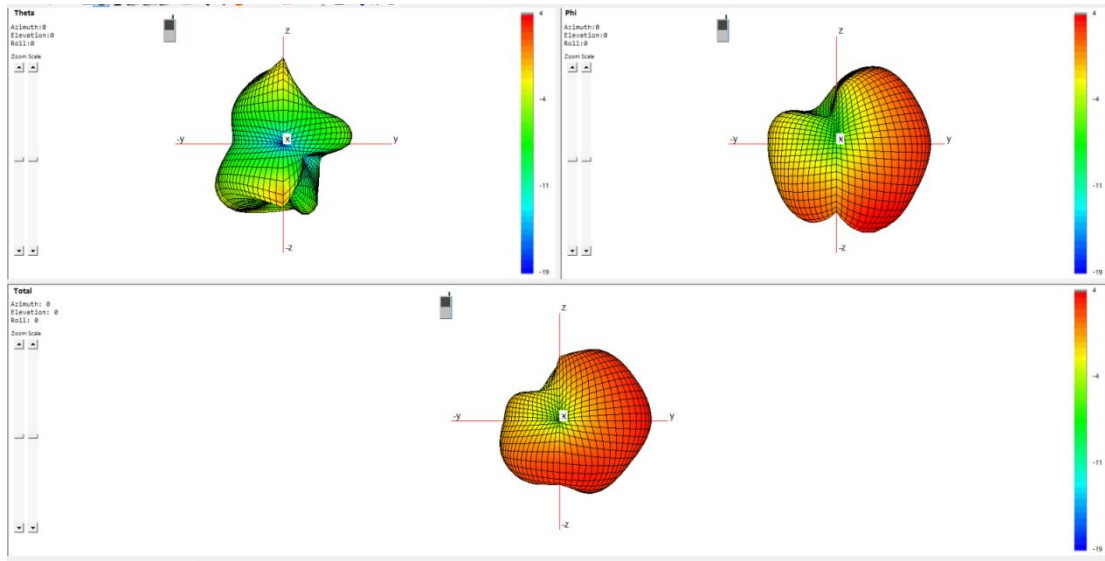
2400MHz:



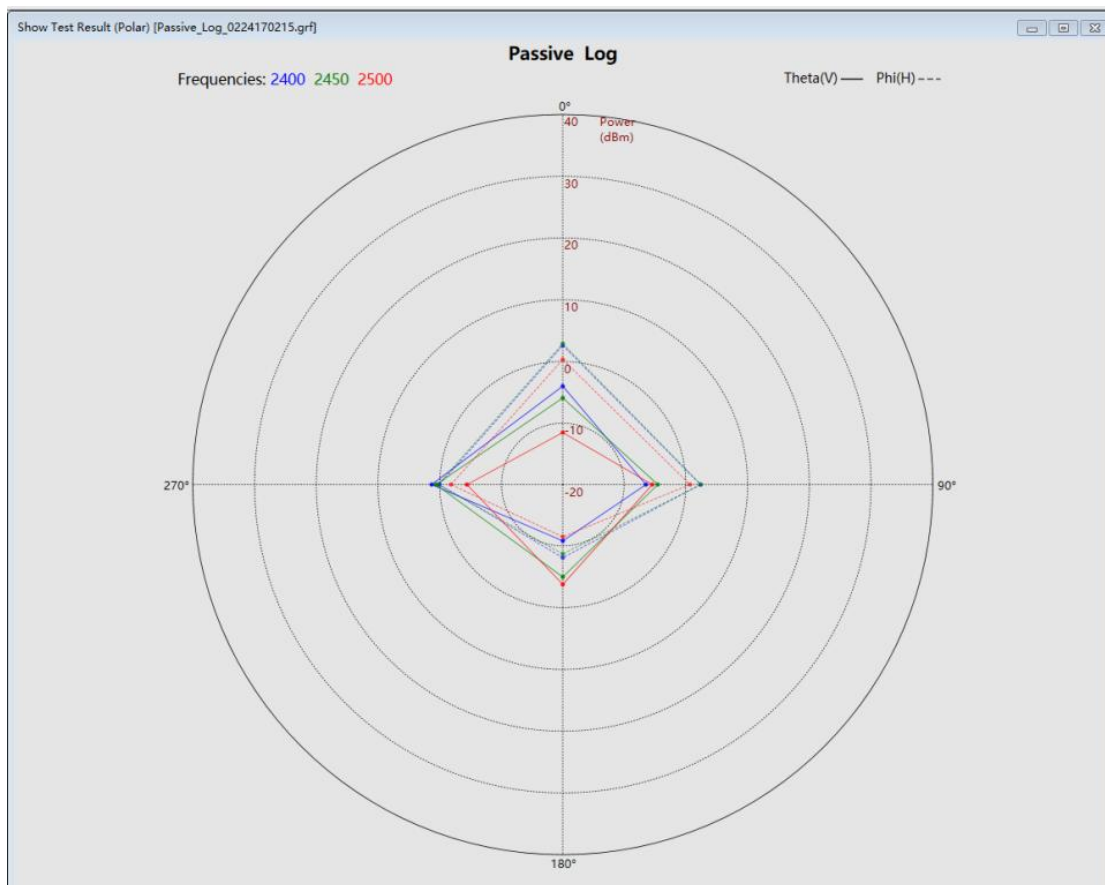
2450MHz:



2500MHz:



3.2 Scan Antenna 2D Radiation Pattern

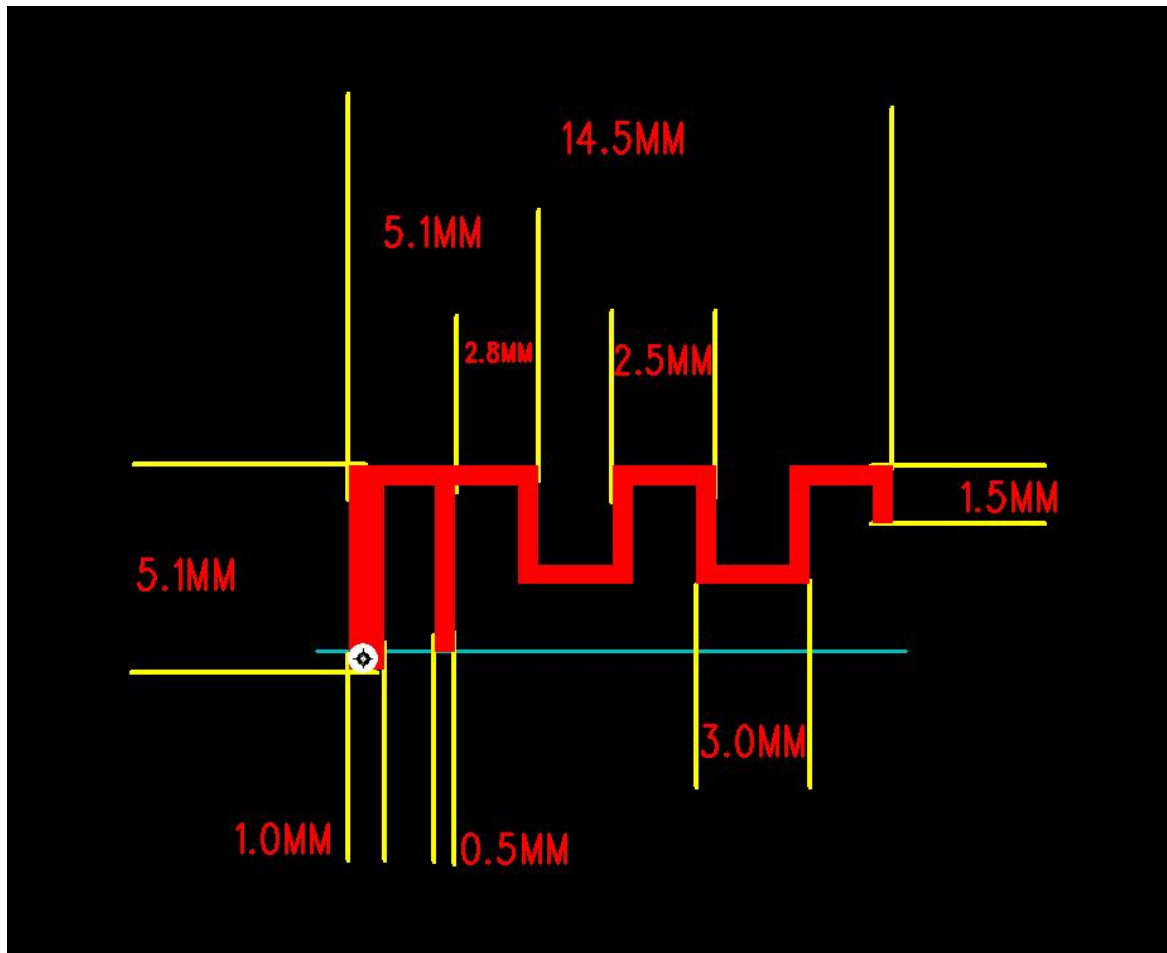


3.3 Detailed Scan Output Data Results

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			

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