

Antenna test

- 1, hardware testing
- 2, software testing
- 3, data reading

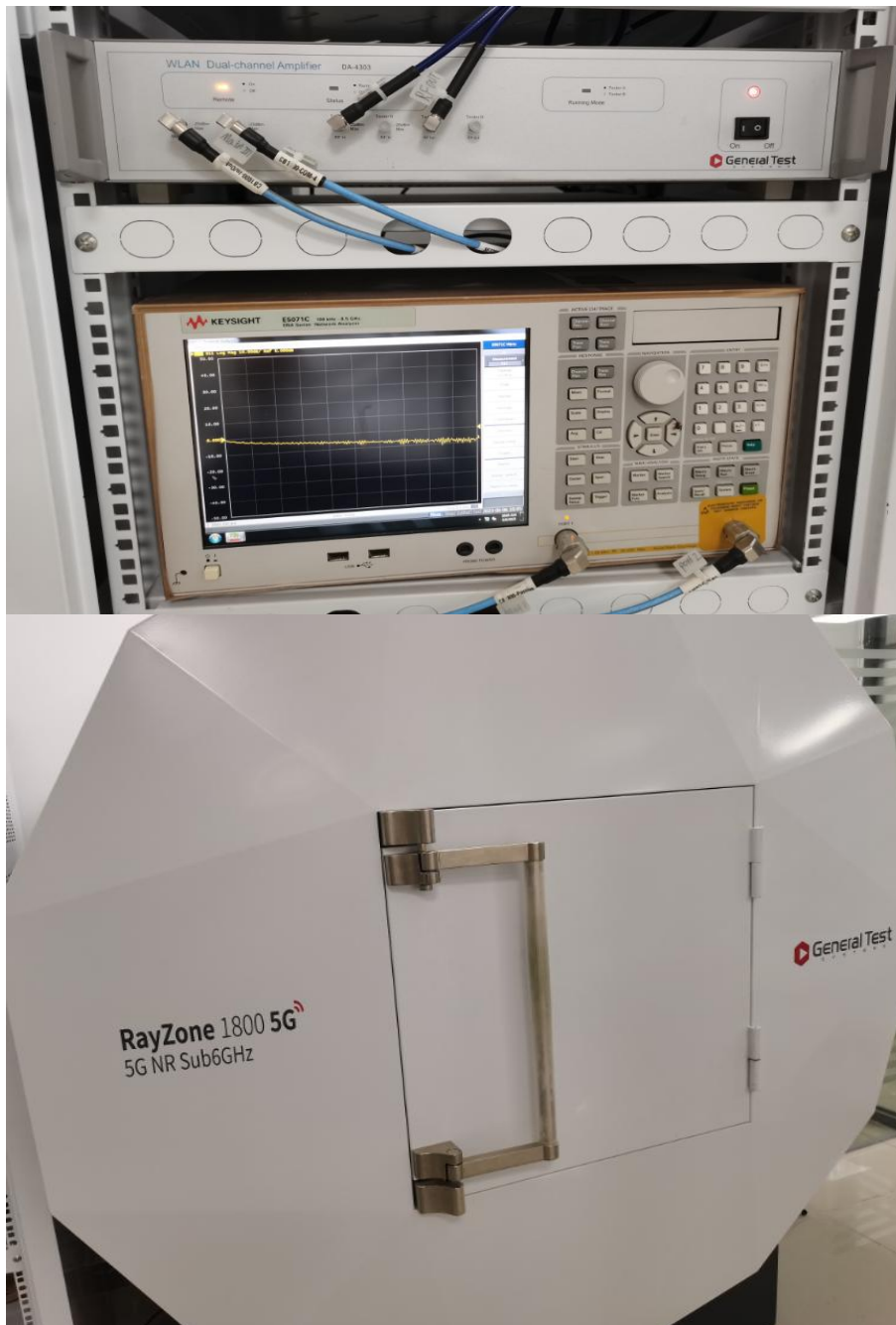
1. Hardware testing

1.1 PCBA bare board test

Solder the RF cable to the bare board and connect it to the OTA device.

1.2. Device Environment

The equipment required for this test includes computer, spectrometer, amplifier and darkroom, as shown below:



2. Software testing

GT5 MaxSign - RayZone1800NR_Z

File Window Tools Help

Setup DUT Templates Pathloss Display

Test Setup

Operation: GT5 Temperature: 20 °C Humidity: 50 %
Test Polar: Both Pole Test Manner: Single Test Position: FS
Instrument Preset: Once Ring Off End: True Manual Page Max: 10

Equipment

Product Series: RayZone
Instrument: Agilent 5071C
Instrument Addr: TCP/IP0:K-E5071C-28615.local:inst0:INS
Working Port: Port1
Link Port: Port1
UL Port1: Agilent 5071C
UL Port2: NULL
AMP (L): NULL
Port1: R85 CMW500B37
Port2: NULL
UL Port3: NULL
UL Port4: NULL
DL Port1: Agilent 5071C
DL Port2: NULL
AMP (L): NULL
Port1: R85 CMW500B37
Port2: NULL
DL Port3: NULL
DL Port4: NULL

Manual Operation

Command: Reset Execute

Start Stop

GT5 MaxSign - RayZone1800NR_Z

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Templates

Test System: Passive
Root (Agilent 5071C/Passive)
TP_Agilent5071C_Passive.xml

Batch Template:

Root (Agilent 5071C)
TP_Agilent5071C_Passive(1).xml

Template Details:

Parameters (Agilent 5071C/Passive/)

Test Setup

Trace Name: S21
IF Bandwidth: 6.1 KHz
Factor Average: 0
Power: 5 dB
Test Mode: Log
Skip Calibration: True
DUT Type: Linear
Radiation Test: False
S11 Calibration File: State01

Angular Coordinator Setup

Phi

Step: 90

Theta (Ant No.)

Start: 0
End: 180
Step: 30

Display Setup

Display Frequency Mode: Auto
Display Frequency: MHz

Frequency List

Test Method: Linear Import Clear

	Start(MHz)	End(MHz)	Step(MHz)
1	2400	2500	10
2			

Added Pathloss Correction

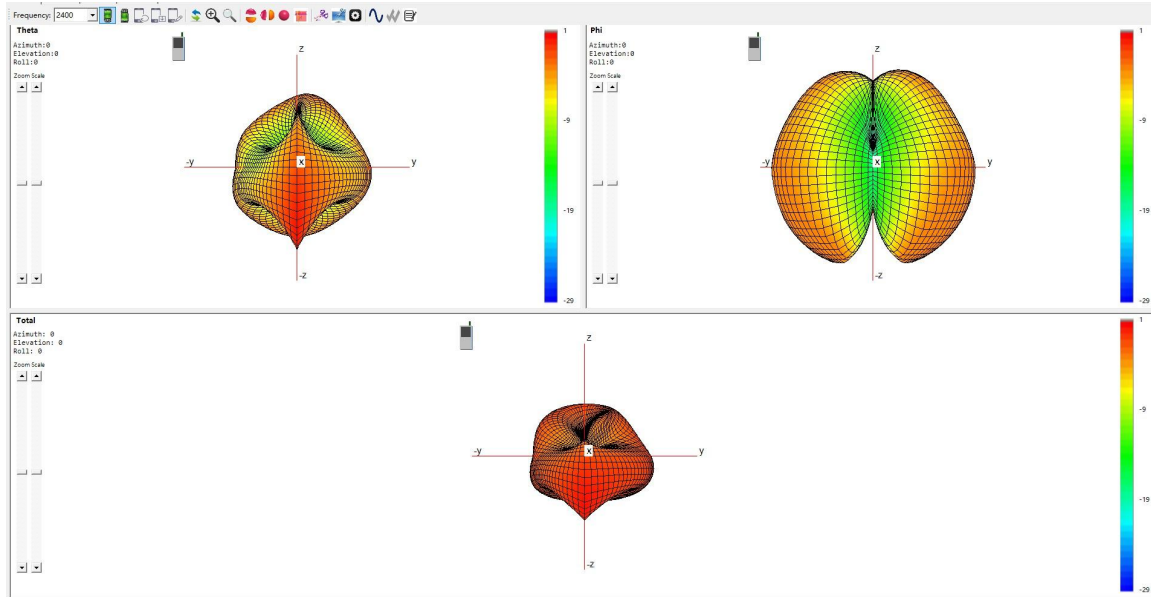
Correction Method: Load File
Load File: D:\MaxSign\YysData\passive\offset_new.csv Select Clear

Save Save as

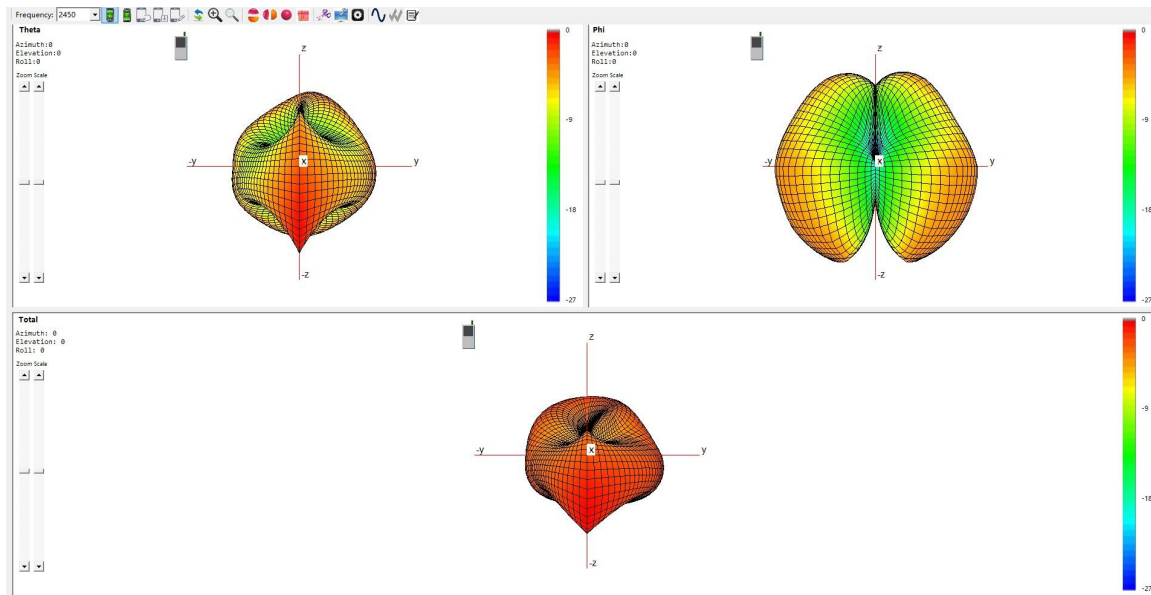
3、Data read

3.1、 Scan the antenna for 3D radiation

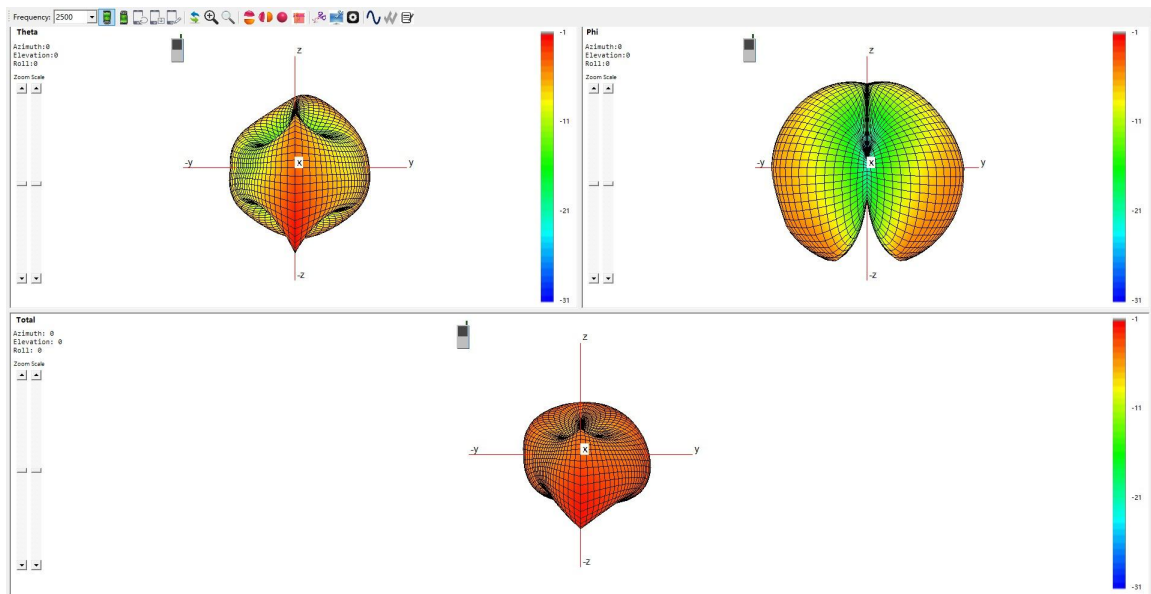
2400MHz:



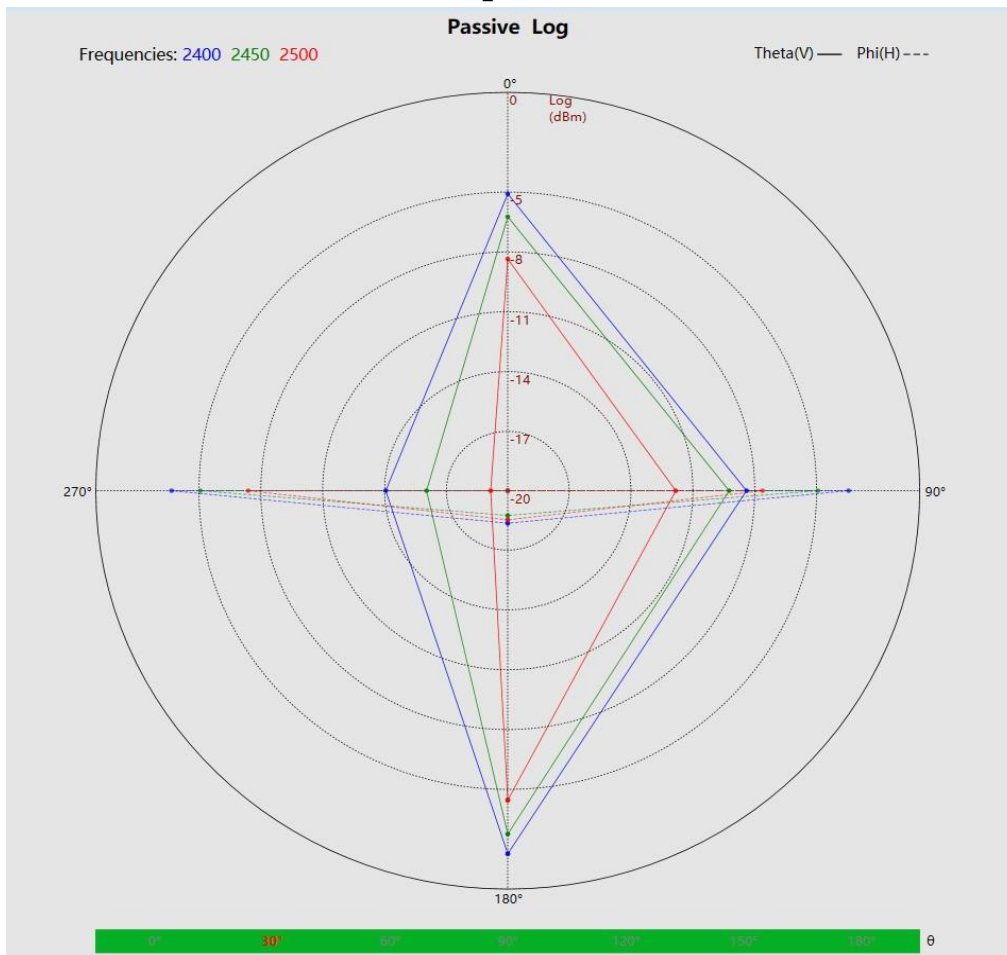
2450MHz:



2500MHz



3.2、Scan the 2D radiation pattern of the antenna



3.3、Data result

Summary

ITEM	ANT SPEC		
Model Name	2.4G ANT		
Antenna plate	PCB antenna		
Center Frequency	2400MHz	2450MHz	2500MHz
	0.07dBi	-0.03dBi	-1.51dBi
MAX. Gain	0dBi		
Polarization	Horizontal and Vertical		
Impedance	50Ohm		
Manufacture			

AntennaPhoto&Length(mm)

