

Antenna testing

1、 Hardware testing

2、 Software Testing

3、 Data Reading

1、 Hardware testing

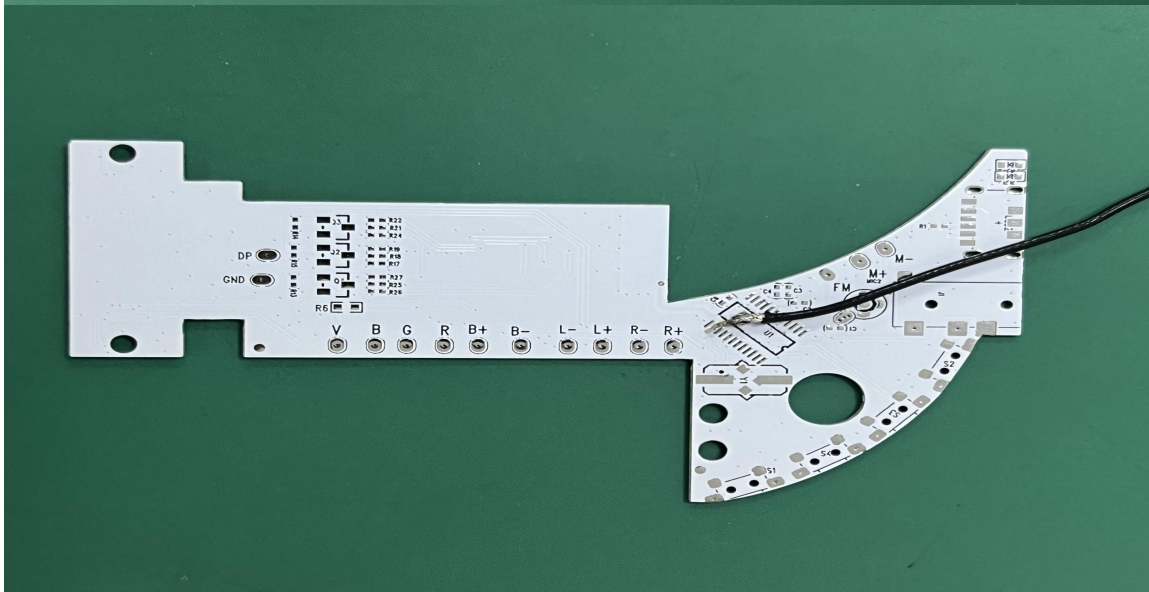
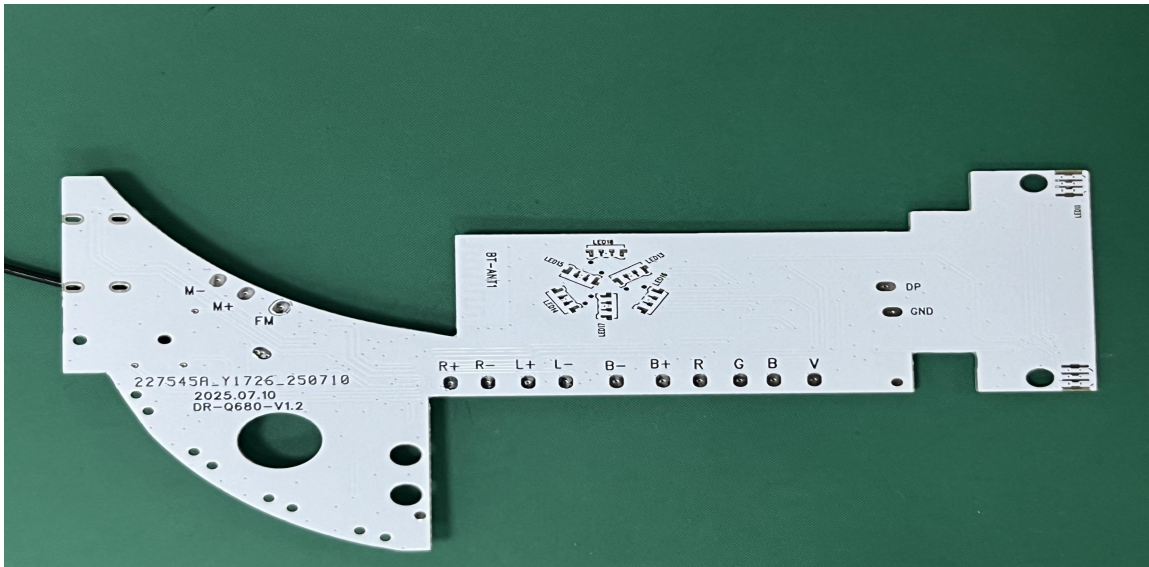
1.1 、 PCBA bare board testing

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Weld the RF connection line to the bare board, and then connect it to the OTA device. The connection diagram of the RF connection line to the bare board is as shown in the following figure:

Manufacturer: Lianchuang Circuit Technology (Shenzhen) Co., Ltd.

Address: 1st Floor, Building B, Zhongxi Industrial Park, Tongfuji Industrial Zone, Bujiong Community, Shajing Street, Bao'an District, Shenzhen City



1.2 、 Equipment environment

The equipment required for this test includes a computer, a spectrum analyzer, an amplifier and a darkroom. As shown in the following picture:



2. Software Testing

GTS MaxSign - RayZone1800NR_Z

File Window Tools Help

Test Setup

Settings

Operation: GTS 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/IP: K-E5071C-28615.local; inst0: INS
Working Port: Port1

UL Port1: Agilent 5071C
UL Port2: NULL
AMP (L): NULL
Port1: RBS CMW500B37
Port2: NULL
UL Port3: NULL
UL Port4: NULL

DL Port1: Agilent 5071C
DL Port2: NULL
AMP (L): NULL
Port1: RBS CMW500B37
Port2: NULL
DL Port3: NULL
DL Port4: NULL

Manual Operation

Command: Reset Execute

Start Stop

GTS MaxSign - RayZone1800NR_Z

File Window Tools Help

Templates

Test System: 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: 0.1 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

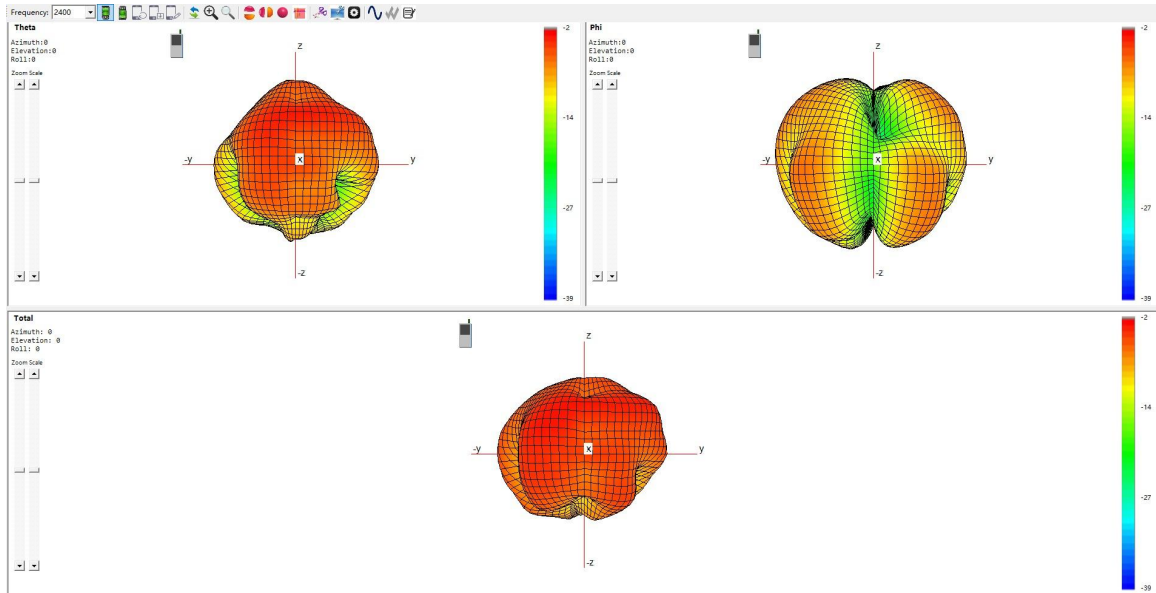
Correction Method: Load File
Load File: D:\MaxSign\sysData\passive offset_menus.cs Select Clear

Save Save as

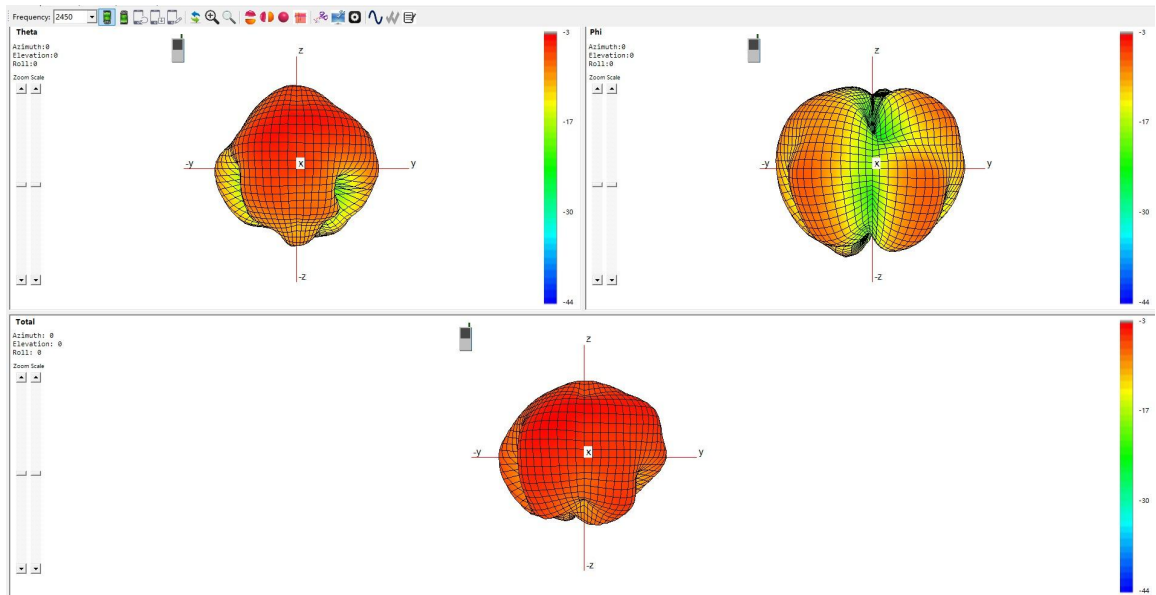
3.Data Reading

3.1、 The 3D radiation pattern of the scanning antenna

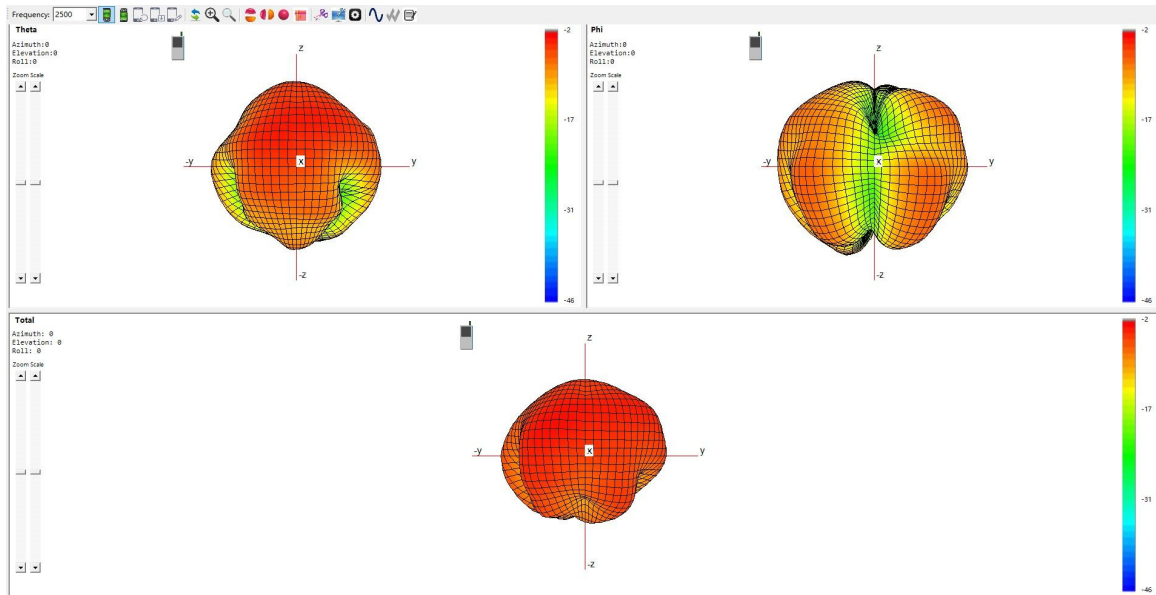
2400MHz:



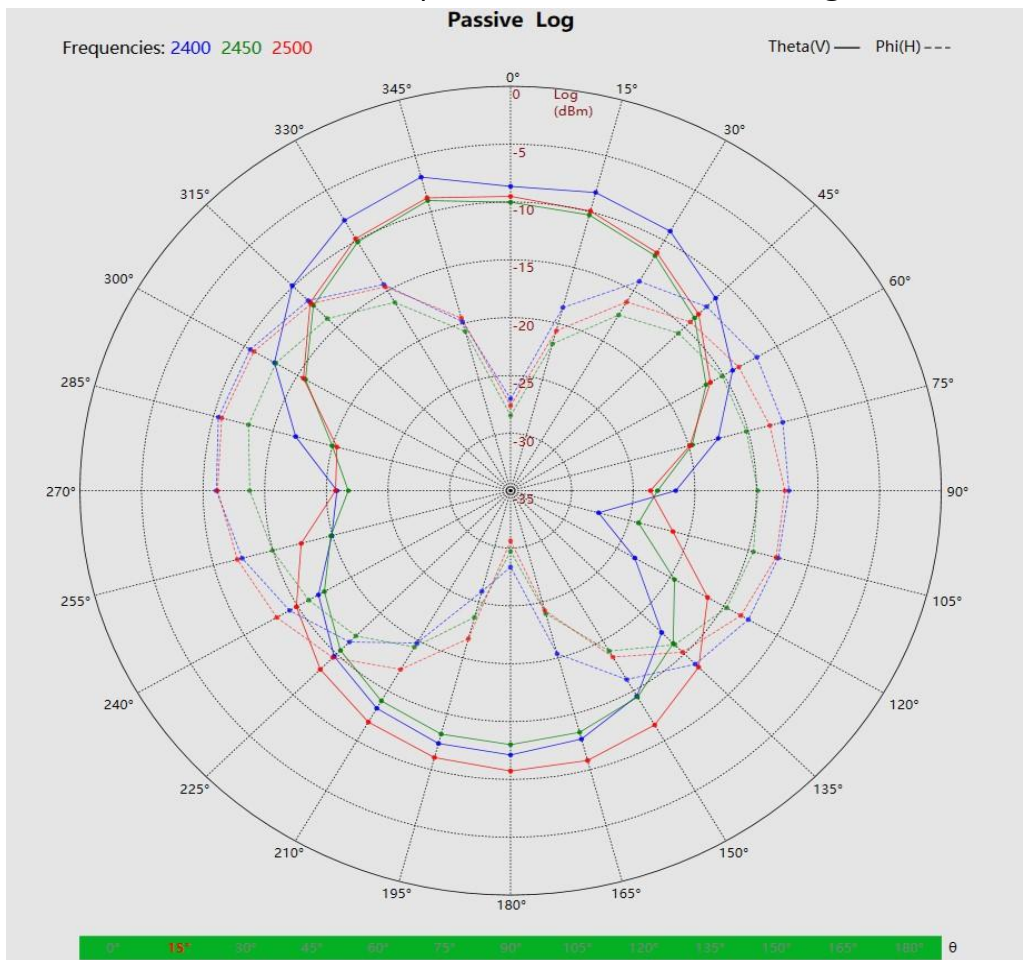
2450MHz:



2500MHz



3.2、 The 2D radiation pattern of the scanning antenna



3.3、 Detailed scan output data results

