Antenna Report

1. Test Laboratory

1.1 Test facility

GTS1800Microwave Anechoic Chamber ： testing frequency ranges from 600MHz to 6GHz .

1.2 Laboratory Environment

Temperature	Min.= 19℃, Max.=25℃	
Relative humidity	Min.=40%， Max.=72%	
Shield effect	0.6-7GHz	>100dB
Ground resistance	<0.5 Ω	

2. General Description of Equipment Under Test

2.1 Applicant and Product information

Applicant Name	Power Idea Technology (Shenzhen) Co., Ltd.
Applicant address	4th Floor, A Section, Languang Science&technology Building, No.7 Xinxi RD, Hi-Tech Industrial Park North, Nanshan District, ShenZhen, P.R.C.
Product Description	LTE Smart phone
Model Name	RG880

2.2 General Description of Equipment

EUT Description	
Product Name	RayZone1800
Model	GTS-ANT D-H
HW Version	RayZone1800 V1.0
SW Version	MaxSign 100
Antenna Type	PIFA
Antenna Manufacturer	Shenzhen General Test System Co., Ltd

Test Frequency	700MHz-5.8GHz

2.3 Applied Standards

According to the specifications of the manufacturer,it must comply with the requirements of the following standards:
Test Method:**ANSI/IEEE Std 149-2008**

3. Test Conditions

3.1 Test Configuration

The method is used to measure the antenna 3D GAIN of EUT in OTA qualified anechoic chamber. Equipment Under Test(EUT) geometry centre vertical projection at the centre of platform, the distance from EUT to measurement antenna is 1m.

3.2Test Measurement

Spherical coordinate system

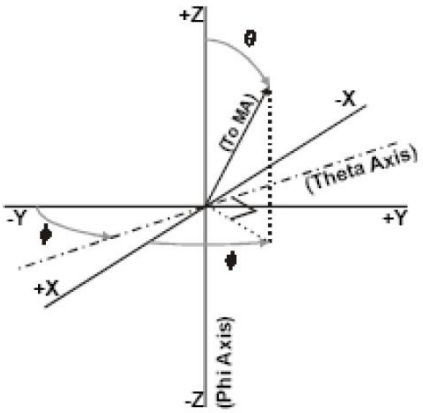
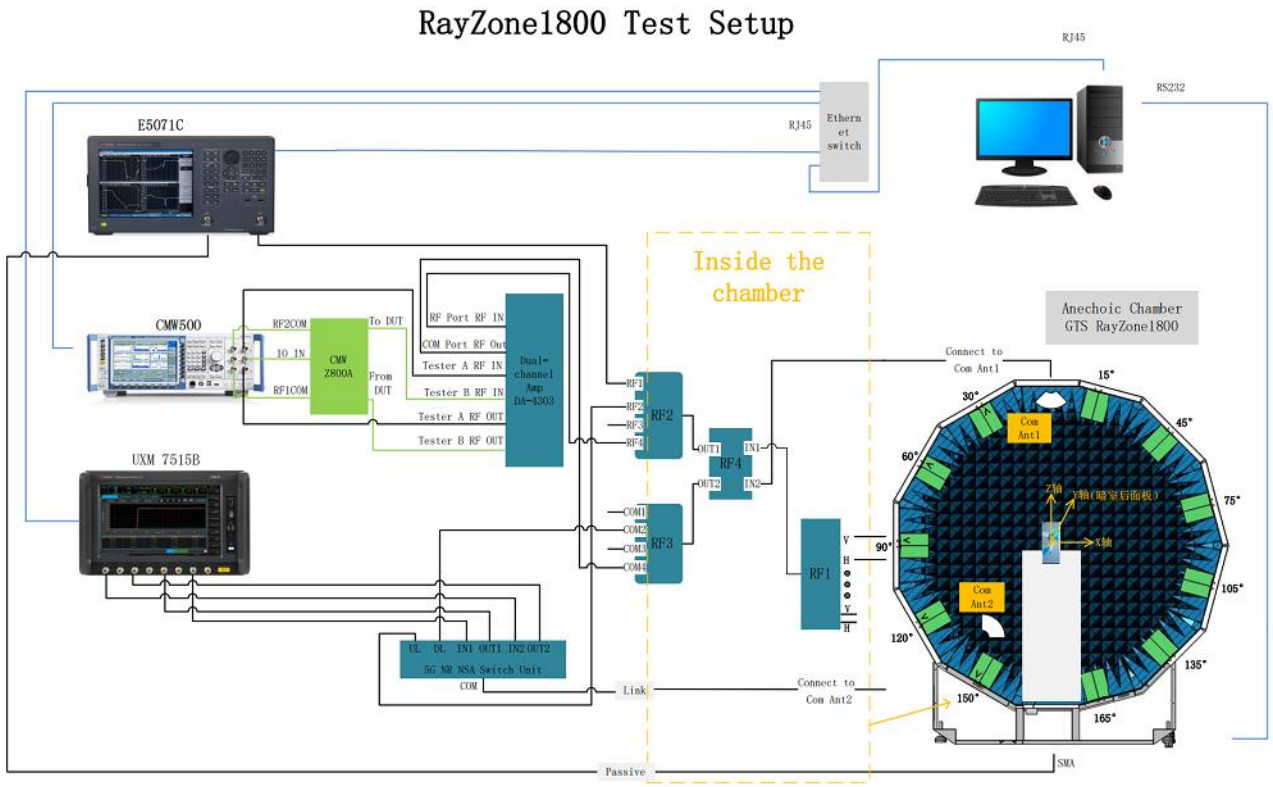


Figure 1 Test coordinate system

Note: Theta is from 0-180degree.Phi is from EUT and record the Date, the step of rotation is 15 degree.

Test Setup



4. Test Results

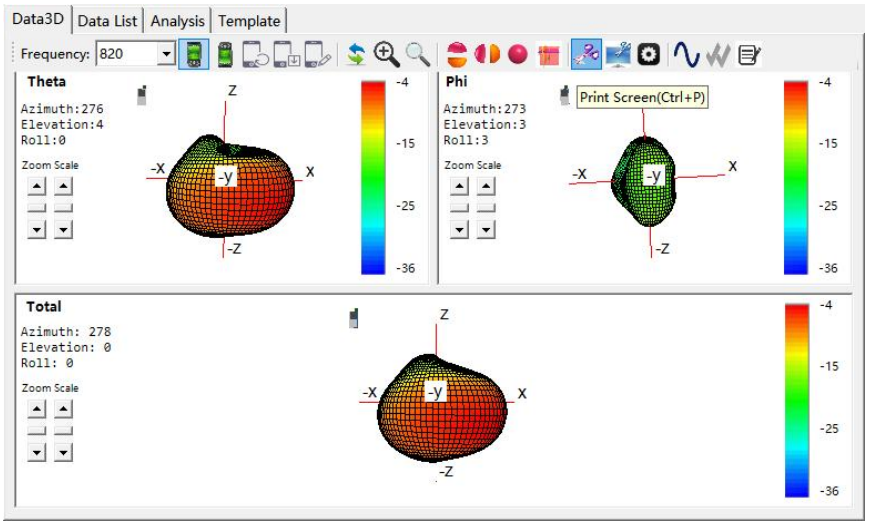
4.1 Gain and Efficiency

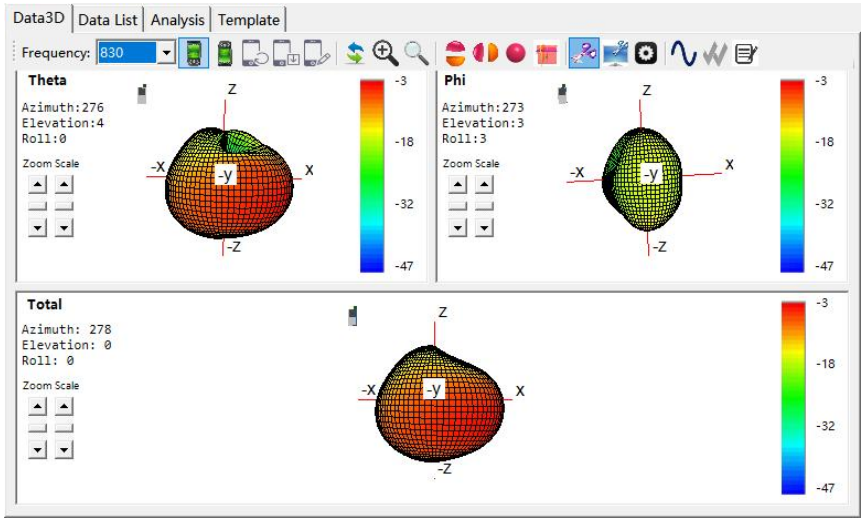
	Gain(dbi)
GSM850/WCDMA B5/LTE B5/BC0	-1.7
GSM900/WCDMA B8/LTE B8	0.2
WCDMA B1/LTE B1	-0.6
WCDMA B2/LTE B2/39/PCS1900/BC1	-0.3
GSM1800/LTE B3/4/66/WCDMA B4	-0.8
LTE B20	-1.2
LTE B28	-2.4
LTE B12/17	-2.7
LTE B13/14	-1.9
LTE B34	-1.3
LTE B40	-0.9
LTE B38/41/7	1.6
WIFI 2.4G/BT	1.8
WIFI 5G	0.8

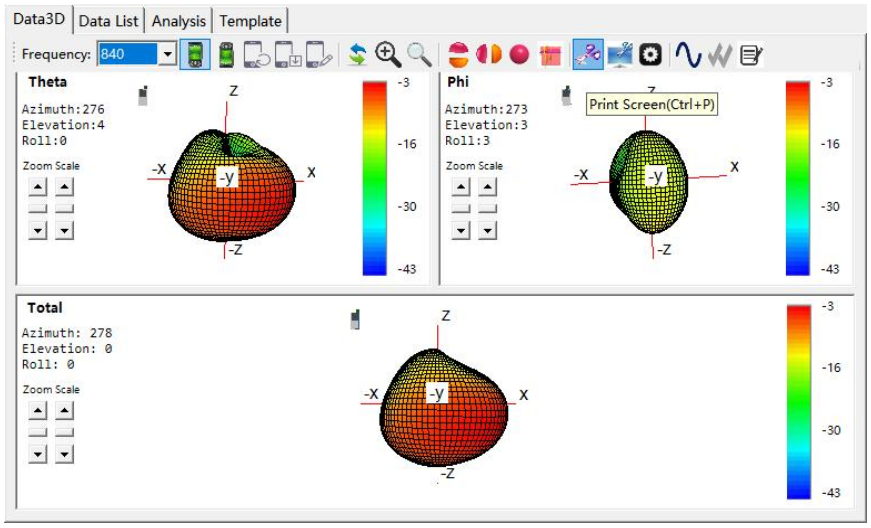
5. Equipment List

Type of Equipment	Manufacture	Model Number
Network Analyzer	Key sight	E5071C
Switch control System	GTS	RayZone1800
Software	GTS	MaxSign 100Patten Measurement software

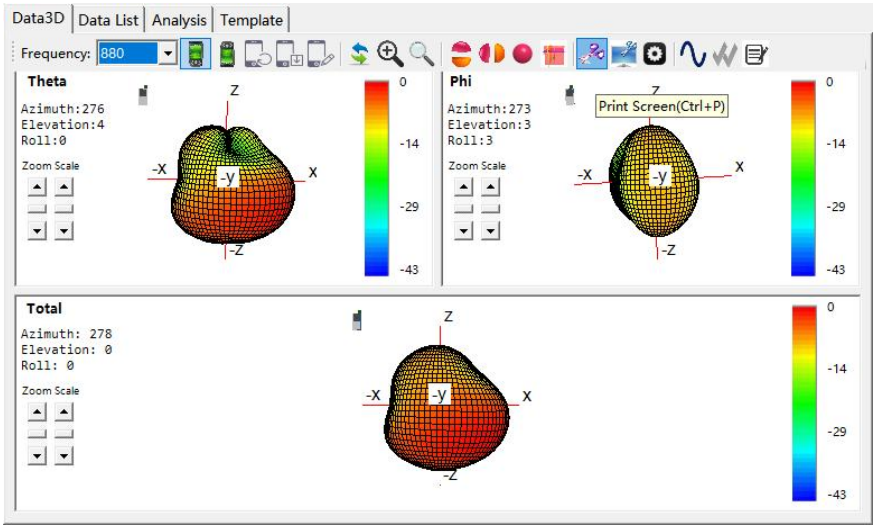
ANNEX A 3-D Patten Plots

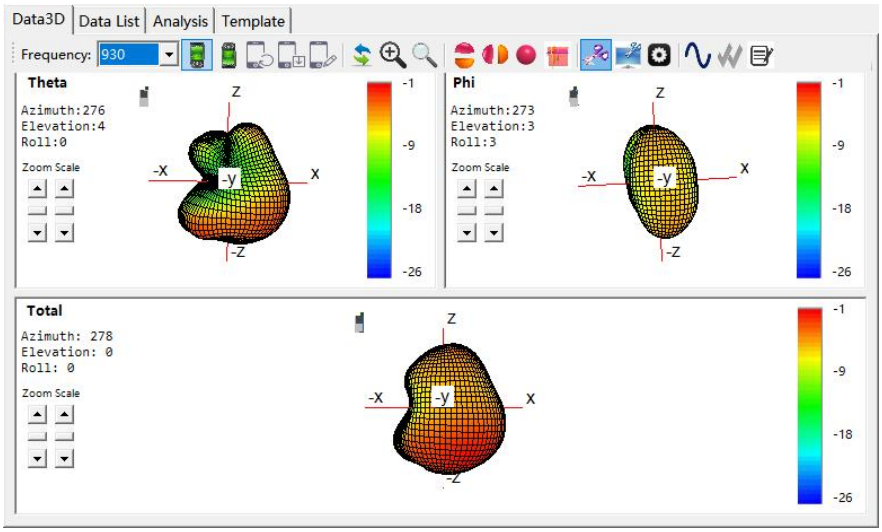




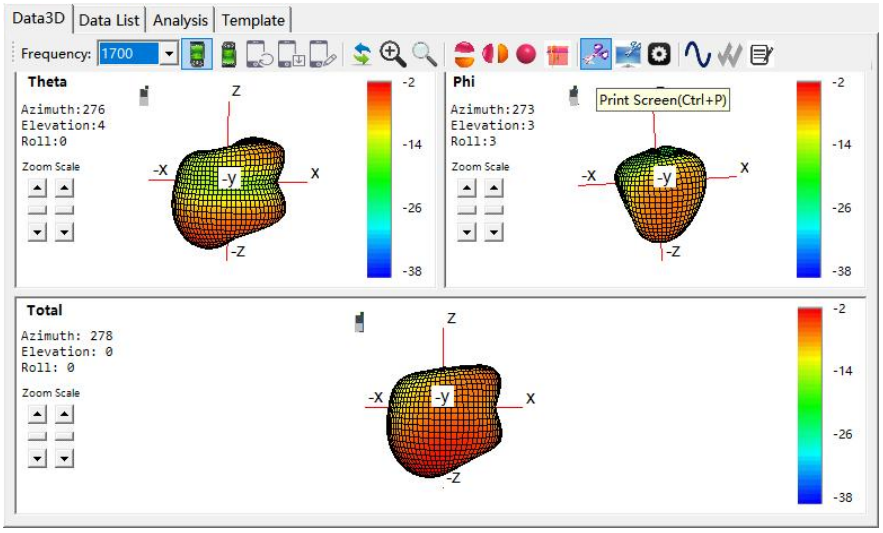


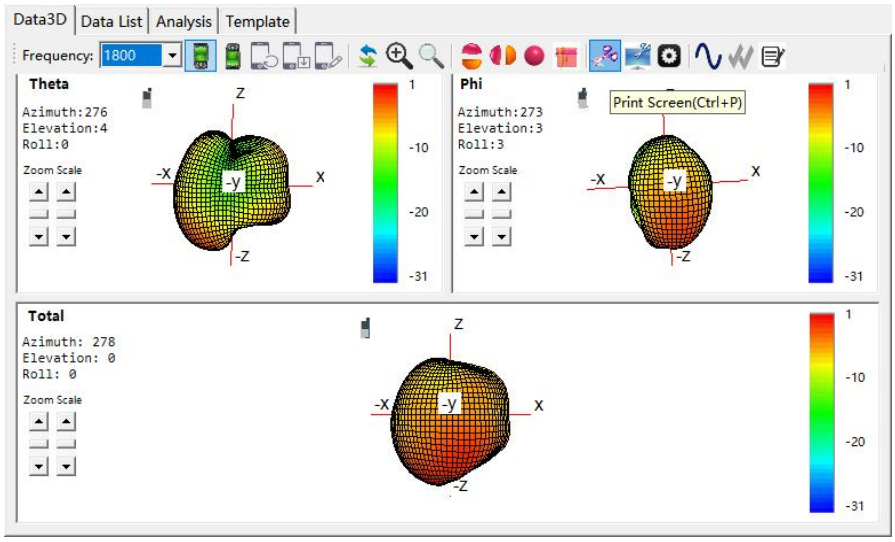
850MHz



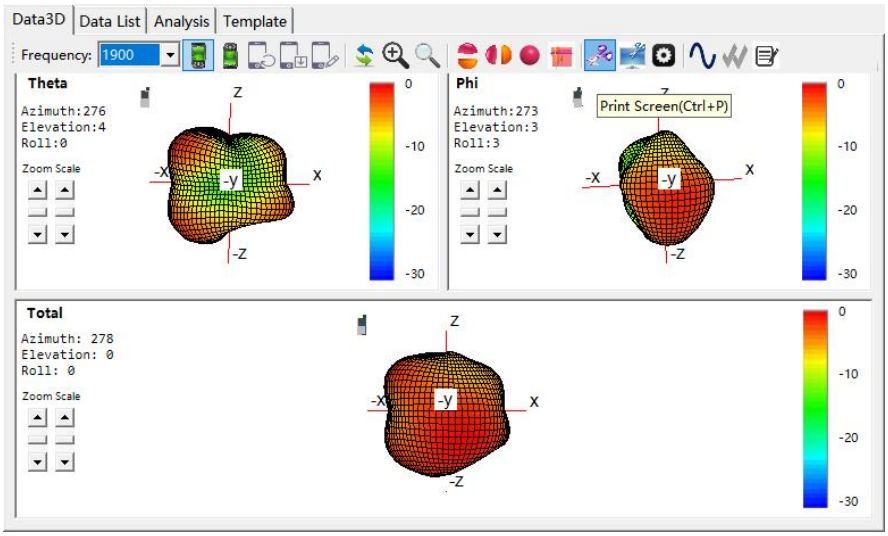


900MHz

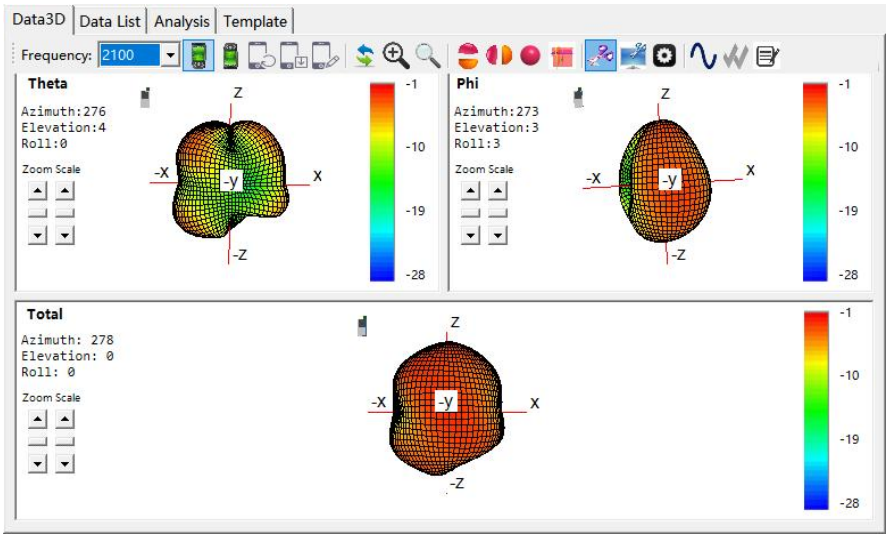




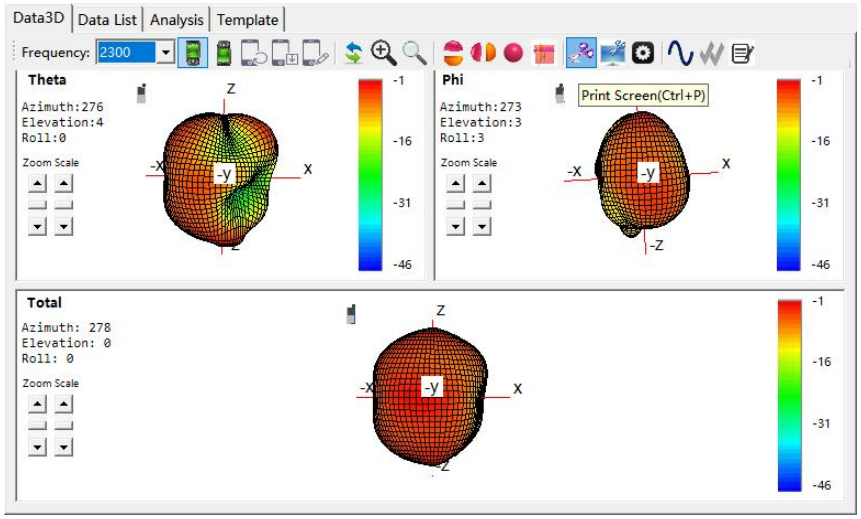
1800MHz

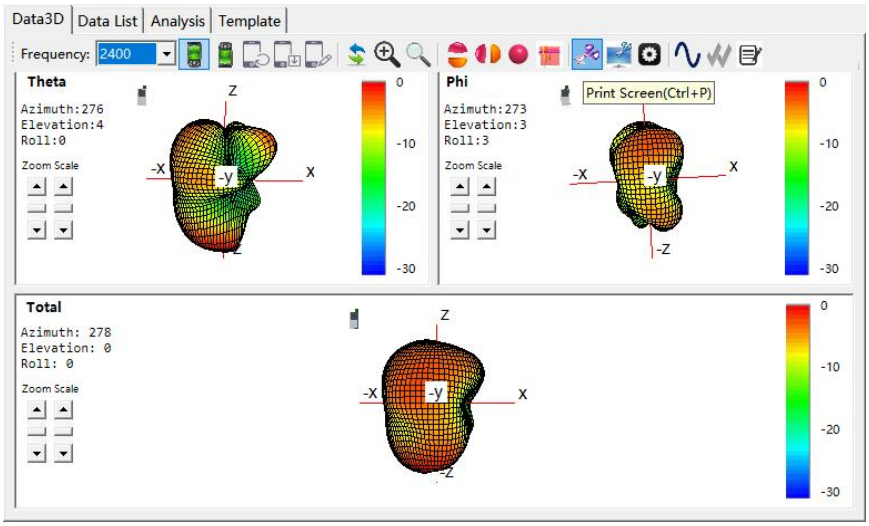


1900MHz

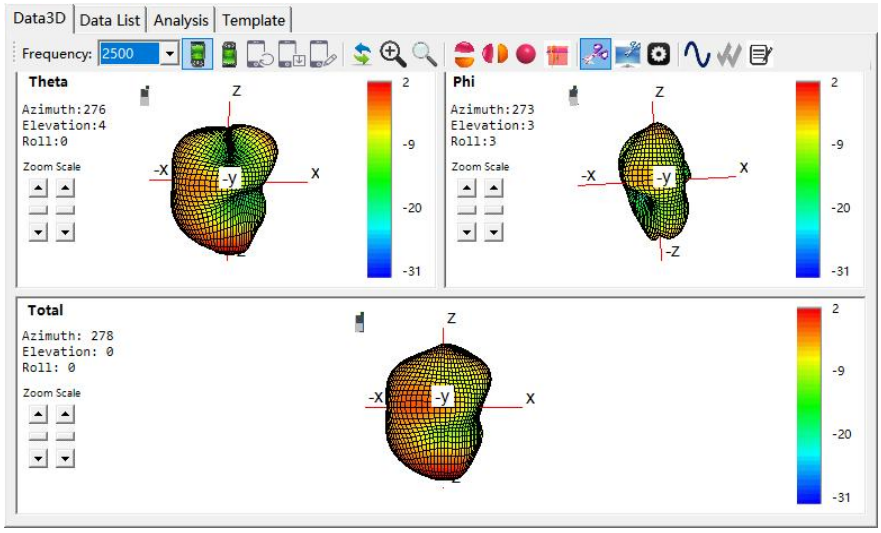


2100MHz



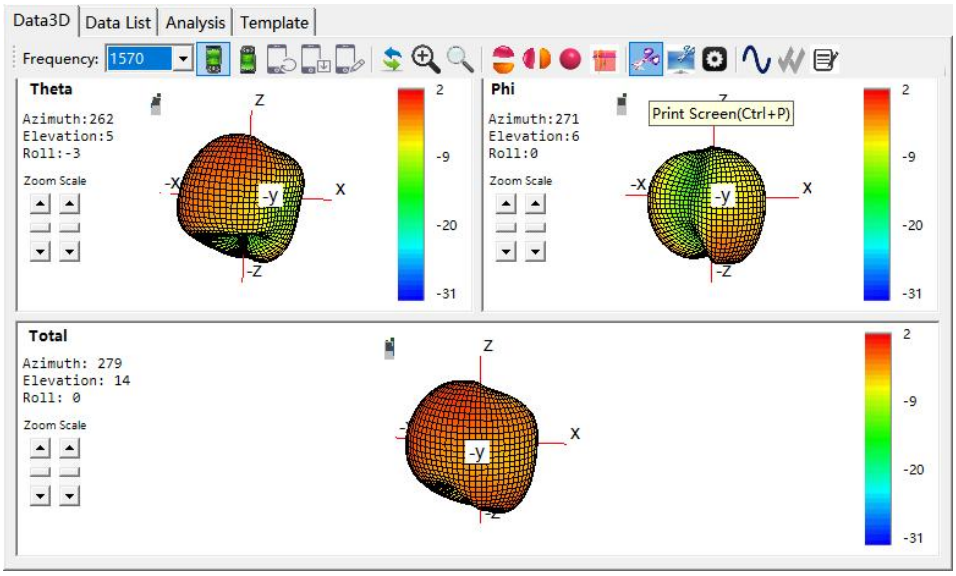


2300MHz

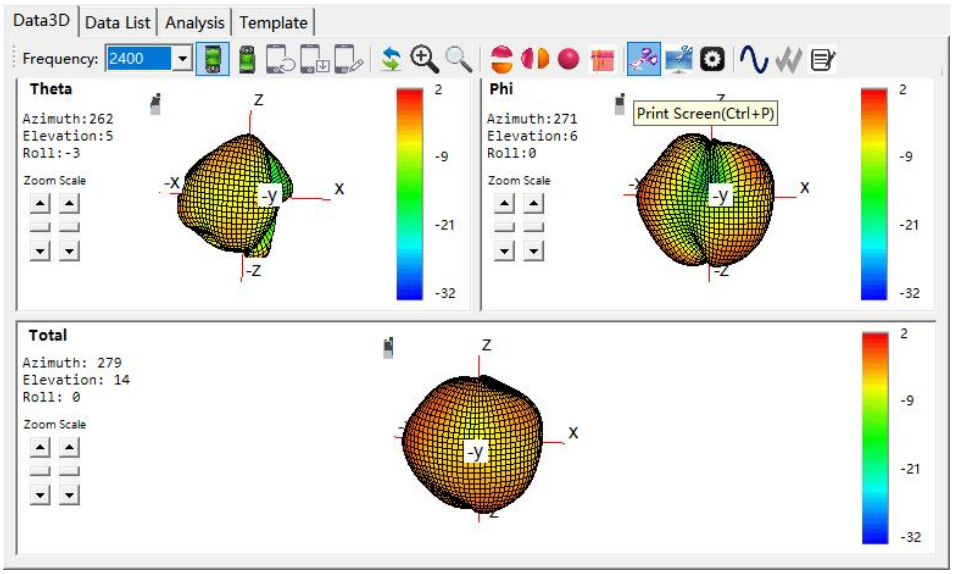


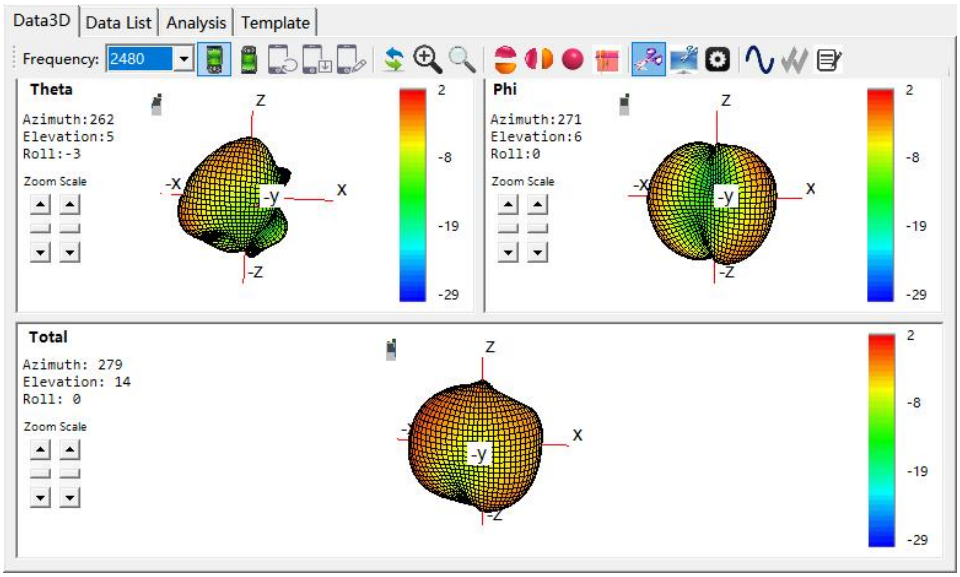
2500MHz

WIFI/BT Antten：

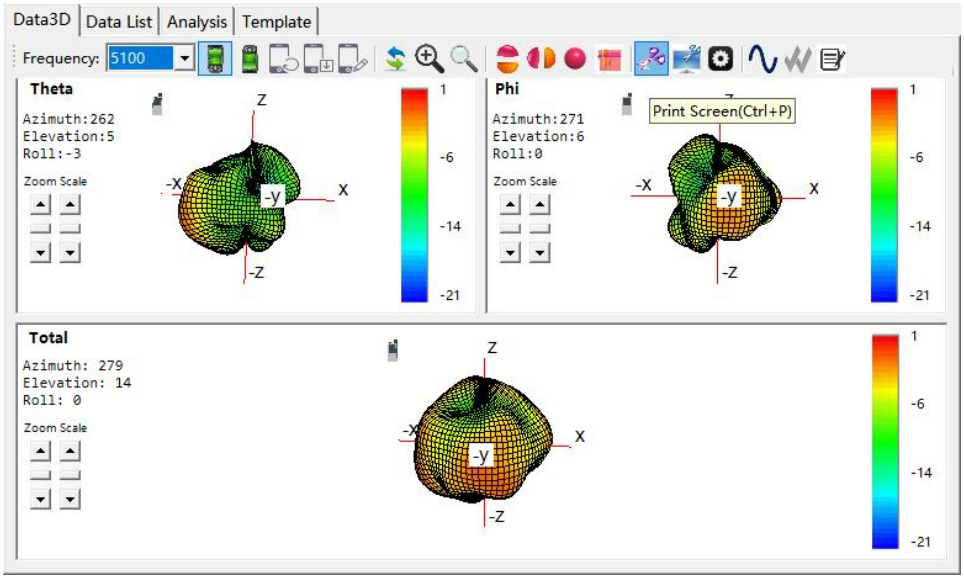


1575MHz

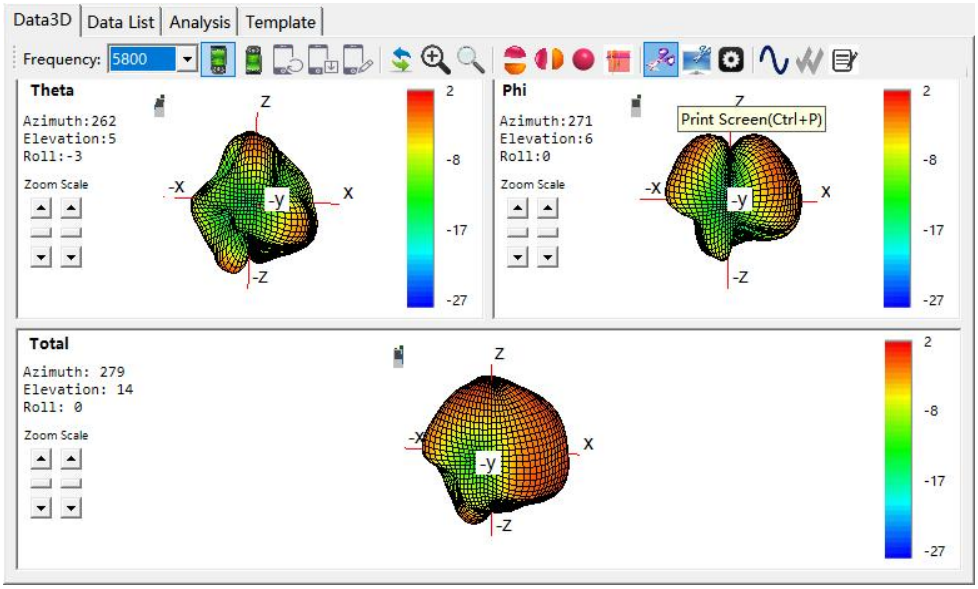

Data3D
Data List
Analysis
Template
Frequency: 2400
Theta
Azimuth:262
Elevation:5
Roll:-3
Zoom Scale
Phi
Azimuth:271
Elevation:6
Roll:0
Print Screen(Ctrl+P)
Total
Azimuth: 279
Elevation: 14
Roll: 0


Data3D
Data List
Analysis
Template
Frequency: 2480
Theta
Azimuth:262
Elevation:5
Roll:-3
Zoom Scale
Phi
Azimuth:271
Elevation:6
Roll:0
Total
Azimuth: 279
Elevation: 14
Roll: 0

2400MHz


Data3D
Data List
Analysis
Template
Frequency: 5100
Theta
Azimuth:262
Elevation:5
Roll:-3
Zoom Scale
Phi
Azimuth:271
Elevation:6
Roll:0
Print Screen(Ctrl+P)
Total
Azimuth: 279
Elevation: 14
Roll: 0

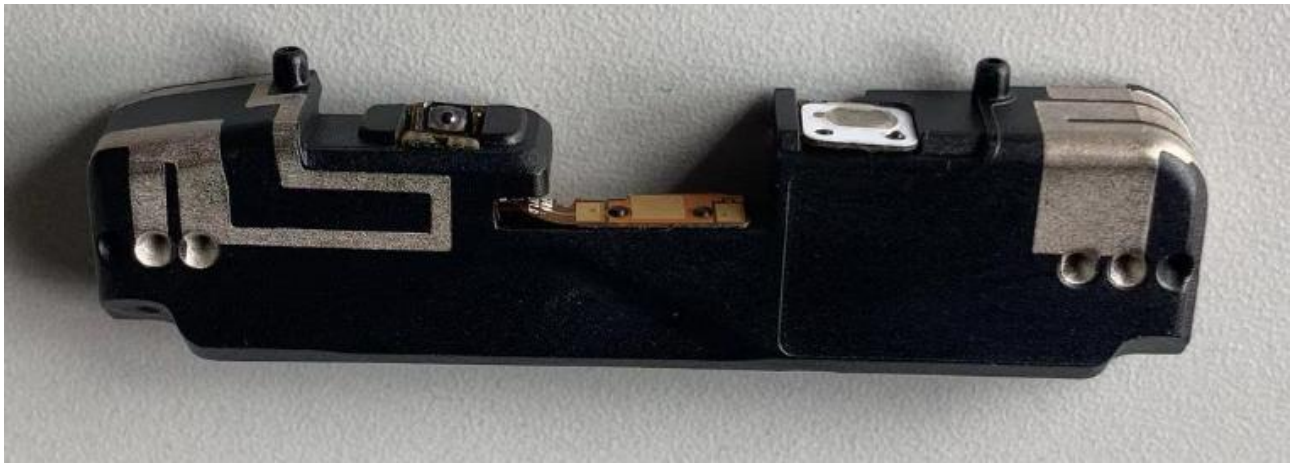
5100MHz



5800Mhz

ANNEX B: The EUT Appearance and Test Configuration

B.1 EUT Appearance



B.2 Test Configuration