Shenzhen Qixin Tongda Technology Co., Ltd.

Antenna Test Data Report

Project: WP20 Pro

Frequency band: G4+W1/2/4/5/8+FDD B2/4/5/7/12/17/28A/28B

Engineering: Li Gong (137 6025 5827)

Date: September 16, 2022

|	Test items	equipment
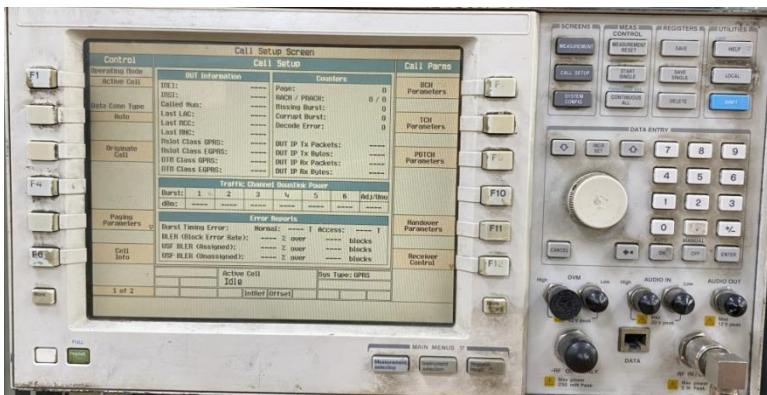
1. Sparameter	1. return loss(RL) 2. standing wave ratio(VSWR)	Network Analyzer: Agilent 5071B
2. Coupling power test （2G+3G+4G+5G）	1. transmit power （power） 2. Receive sensitivity(level) 3. TRP/TIS	Comprehensive tester: CMW500/8960 Darkroom: 24-probe microwave darkroom

一.Test items

二.Test Equipment


Agilent 5071B S-parameter (RL/VSWR)
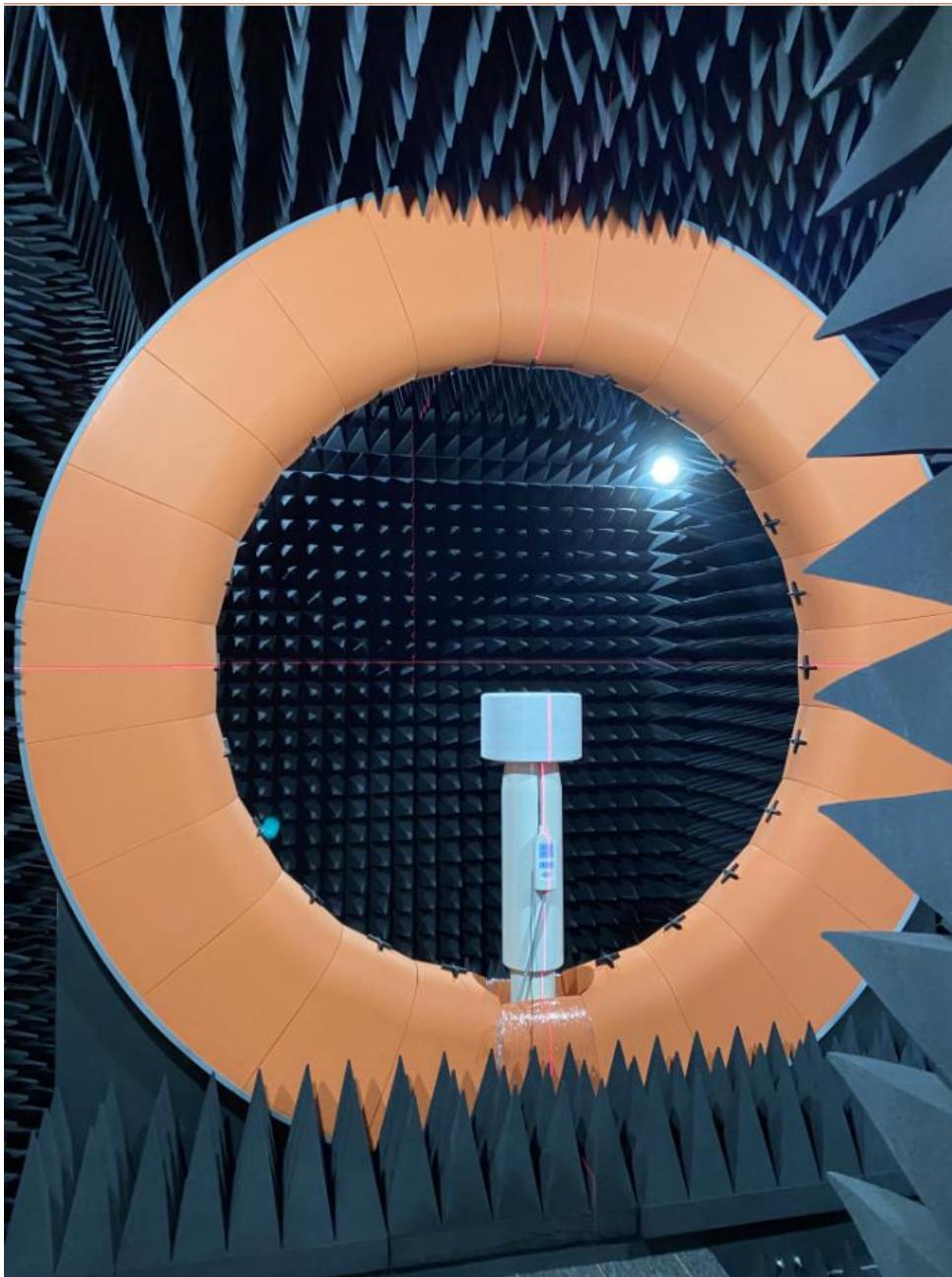
Agilent 8960 2G/3G test equipment

CMW 500 2G/3G/4G test equipment

三.Test site environment
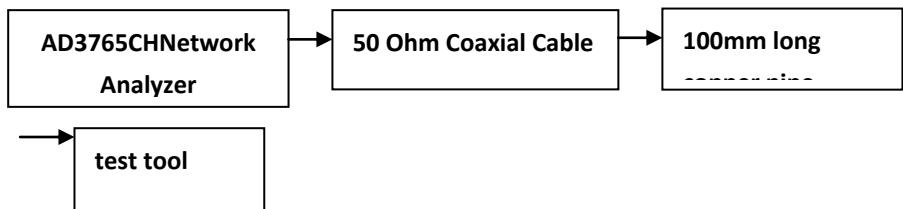
24-probe microwave anechoic chamber: the test frequency range is 600MHz-8GHz, the quiet zone range is 25cm circumference, and the reflectivity is less than -90dB.
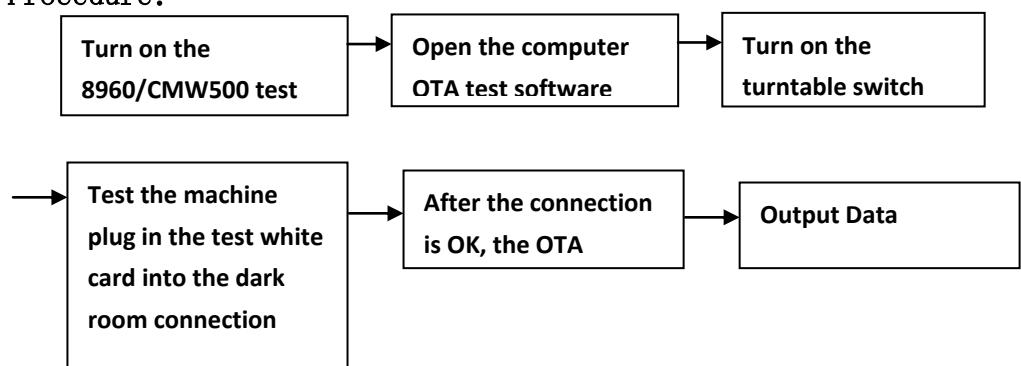
# 四. test steps

The passive VSWR/RL test steps are

:

| AD3765CHNetwork Analyzer | → | 50 Ohm Coaxial Cable | → | 100mm long copper pipe |

→ | test tool |
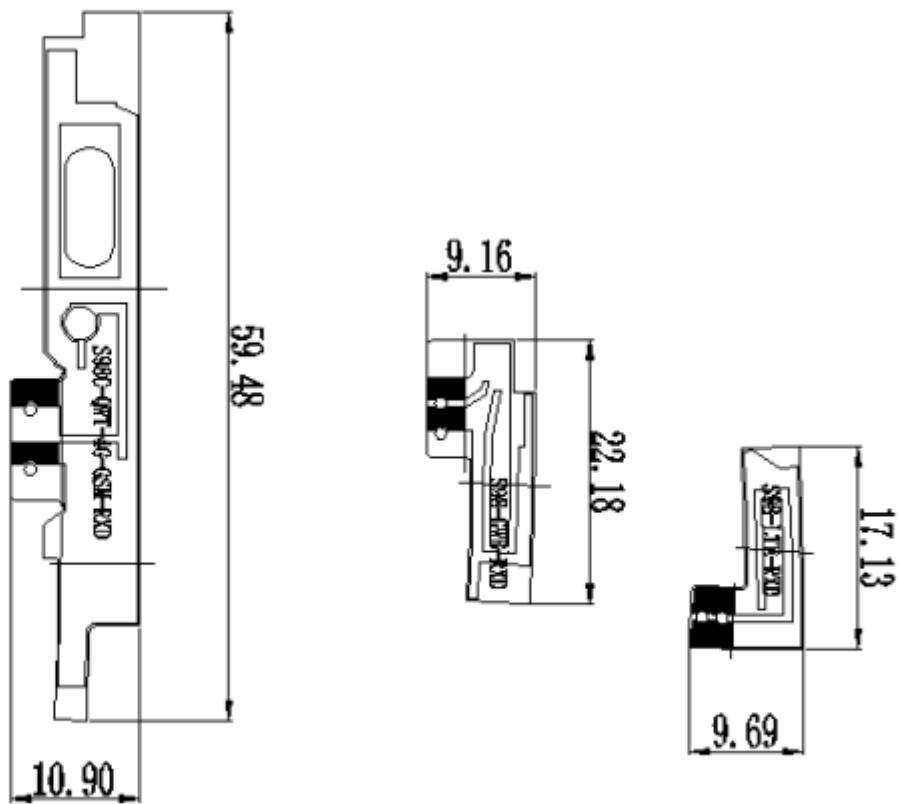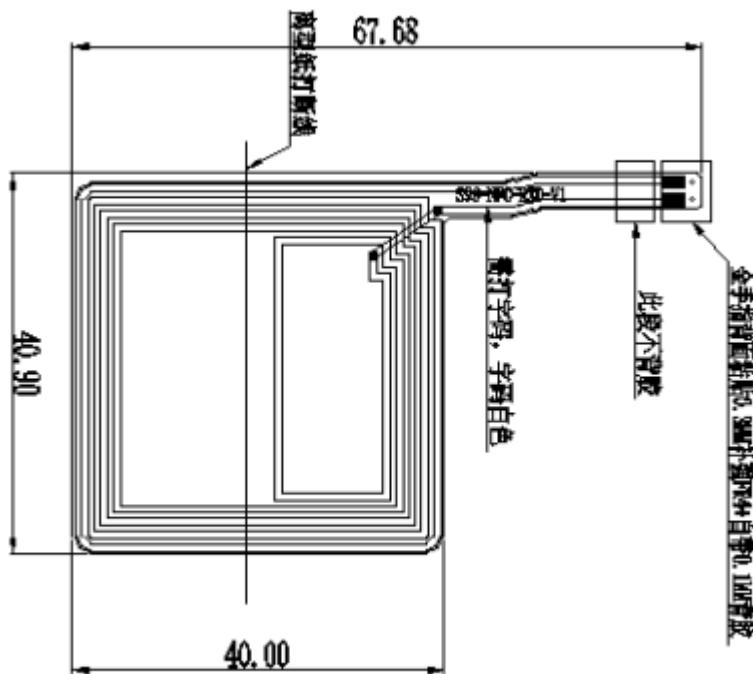
Active TRP/TIS Test Procedure：

| Turn on the 8960/CMW500 test | → | Open the computer OTA test software | → | Turn on the turntable switch |

→ | Test the machine plug in the test white card into the dark room connection | → | After the connection is OK, the OTA | → | Output Data |

Antenna Dimensions

NFC size
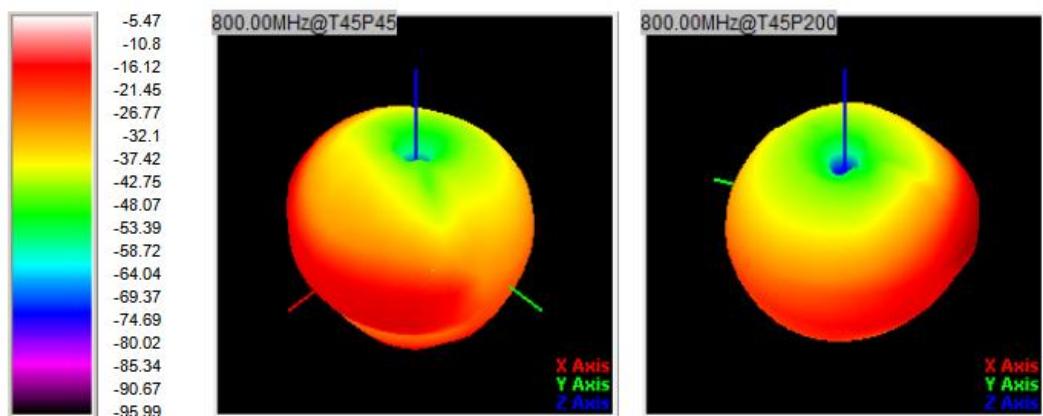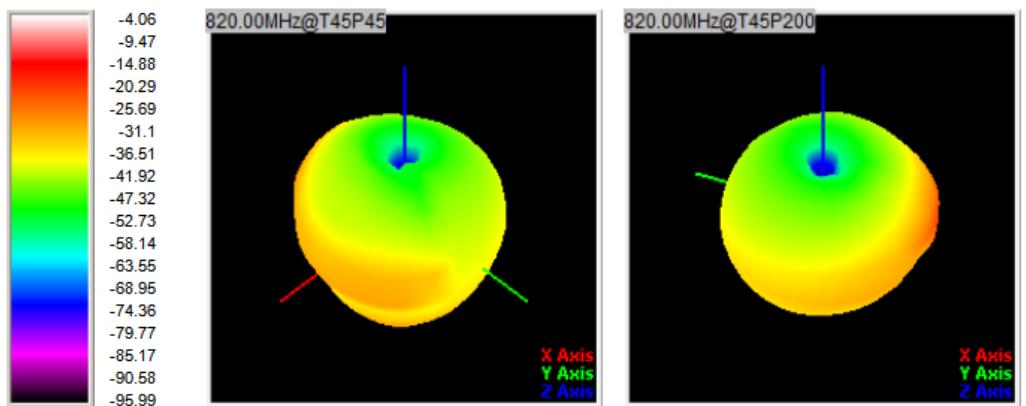
六. Antenna Gain Data

frequency band	gain（dBi）
GSM850（824-894MHz）	-2.31
GSM900（880-960MHz）	-1.20
DCS1800（1710-1880MHz）	0.20
PCS1900（1850-1990MHz）	0.15
WCDMA850 （824-894MHz）	-2.31
WCDMA900（880-960MHz）	-1.20
WCDMA1700（1710-2155MHz）	0.20
WCDMA1900（1850-1990MHz）	0.15
WCDMA2100（1920-2170MHz）	0.18
FDD B 2（1850-1990MHz）	0.15
FDD B 4（1710-2155MHz）	0.22
FDD B 5（824-894MHz）	-2.31
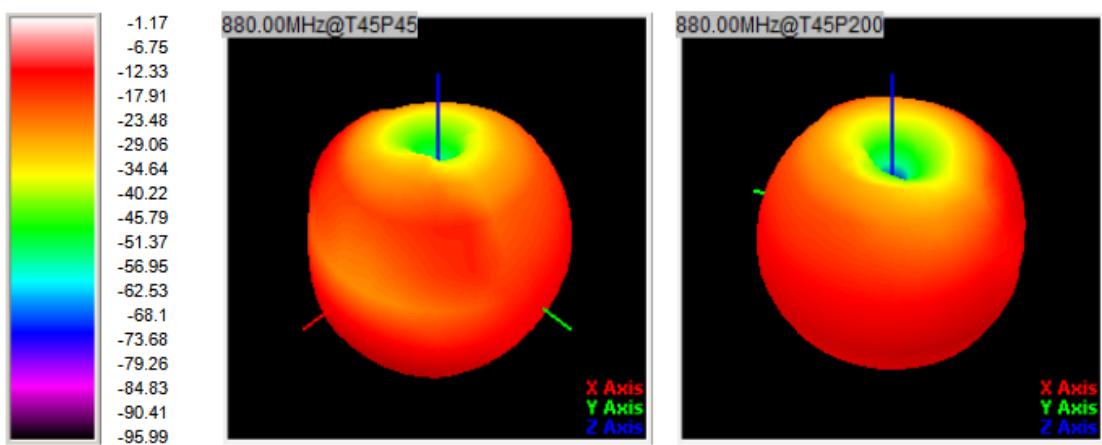
FDD B 7（2500-2690MHz）	0.35
FDD B 12（699-746MHz）	-2.52
FDD B 17（704-746MHz）	-2.50
FDD B 28AB（703-803MHz）	-2.46
2.4G-WIFI/BT（2300-2400MHz）	0.25
5G-WIFI（5150-5850MHz）	0.25
GPS（1575.42MHz）	0.11
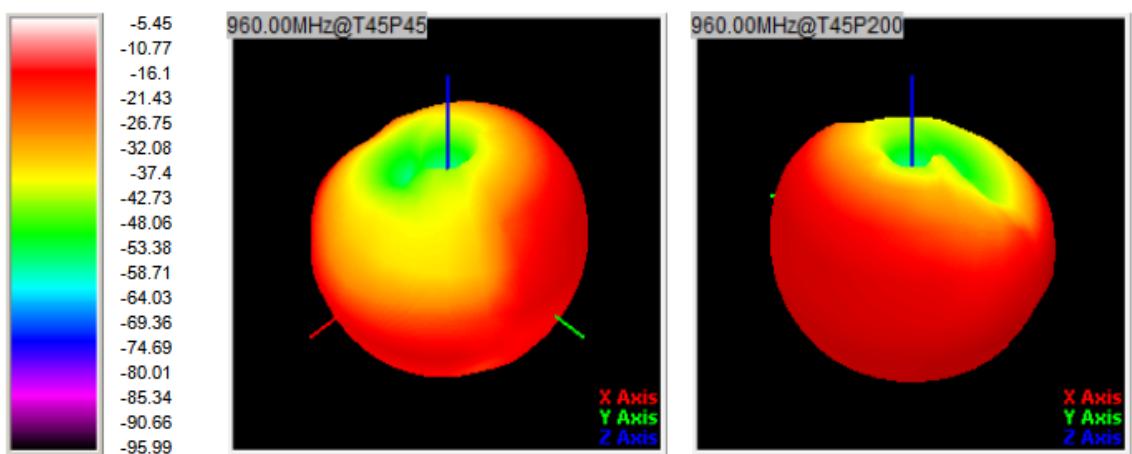
七．3D lobe map（一）

八．3D lobe map（二）

960.00MHz@T45P45

960.00MHz@T45P200

九．3D lobe map（三）

1700.00MHz@T45P45

1700.00MHz@T45P200

十．3D lobe map（四）

2175.00MHz@T45P45 2175.00MHz@T45P200

十一．3D lobe map（五）

2500.00MHz@T45P45 2500.00MHz@T45P200
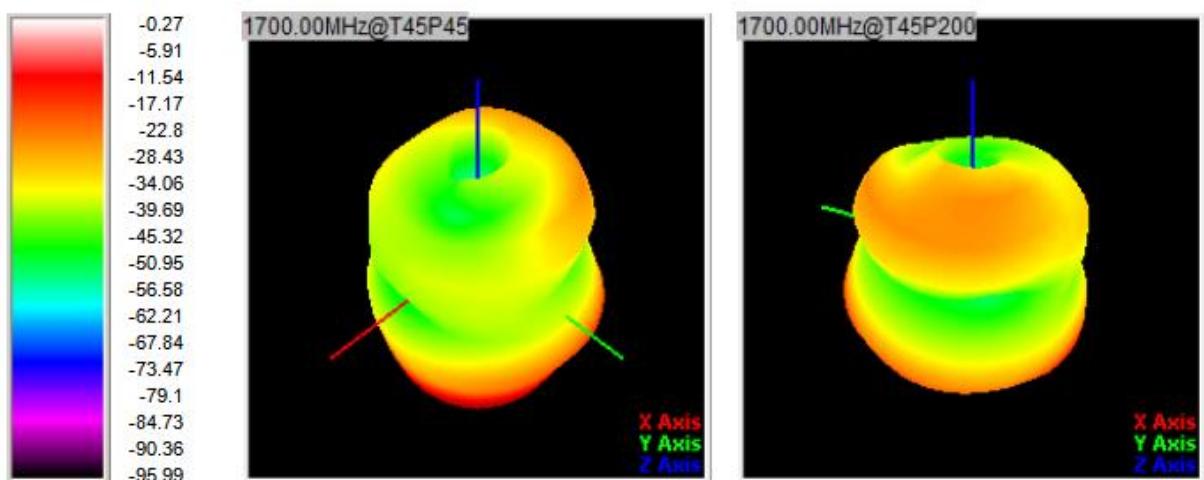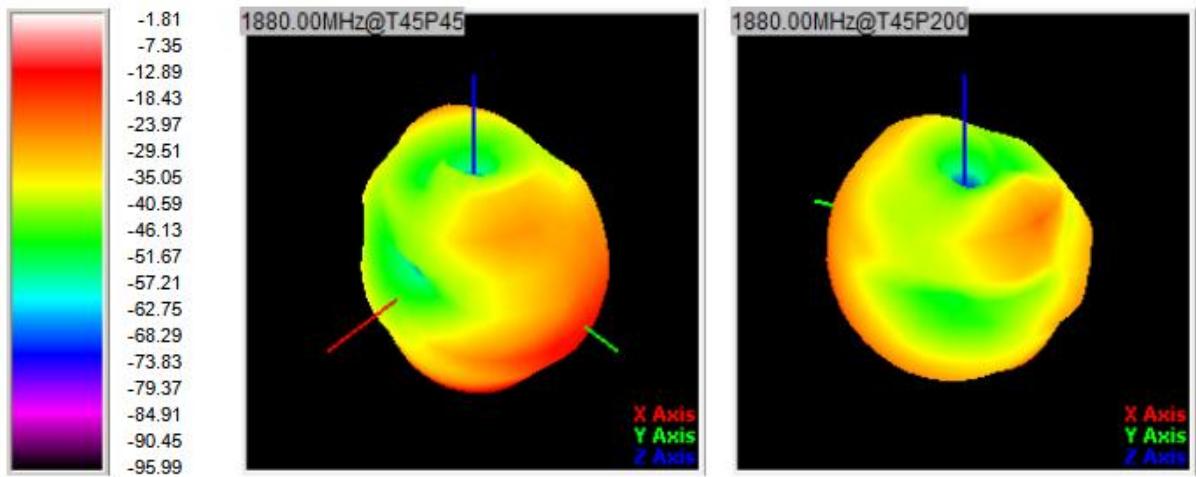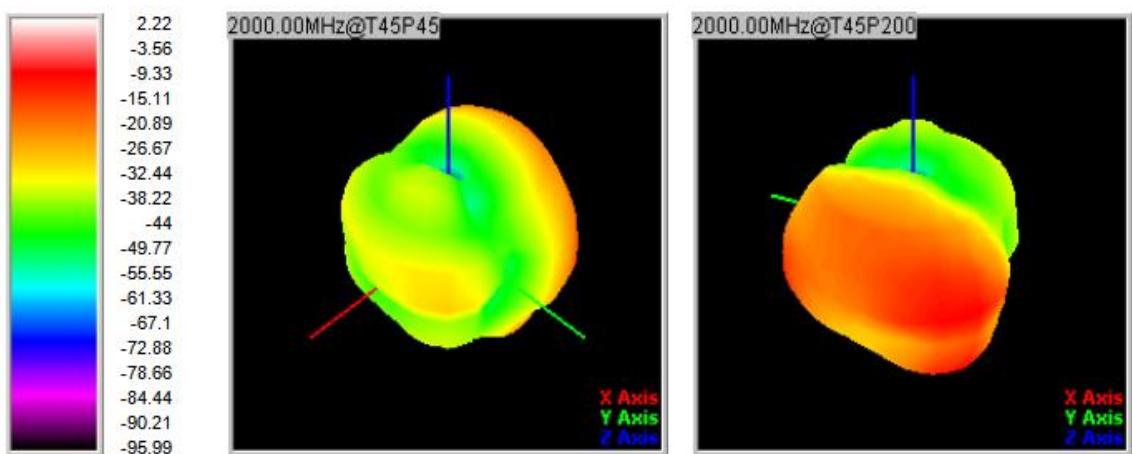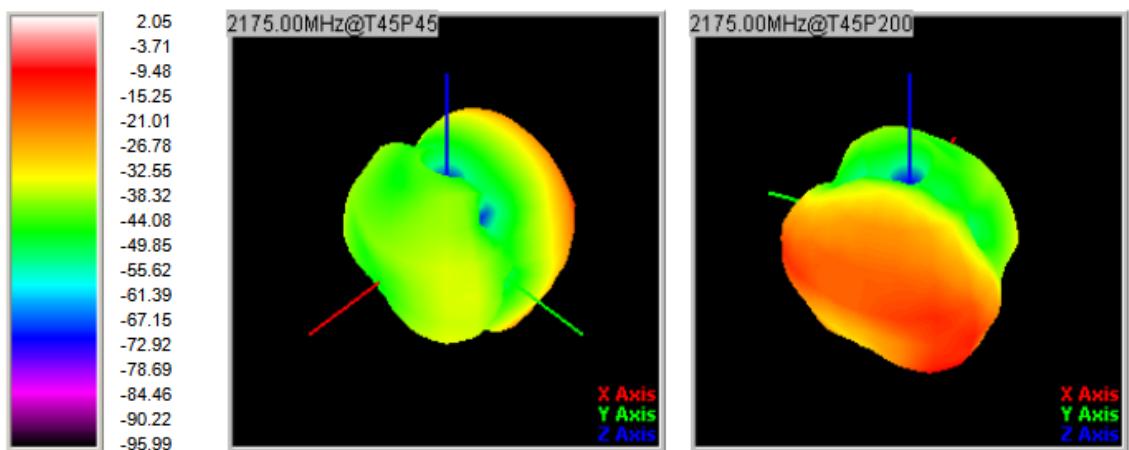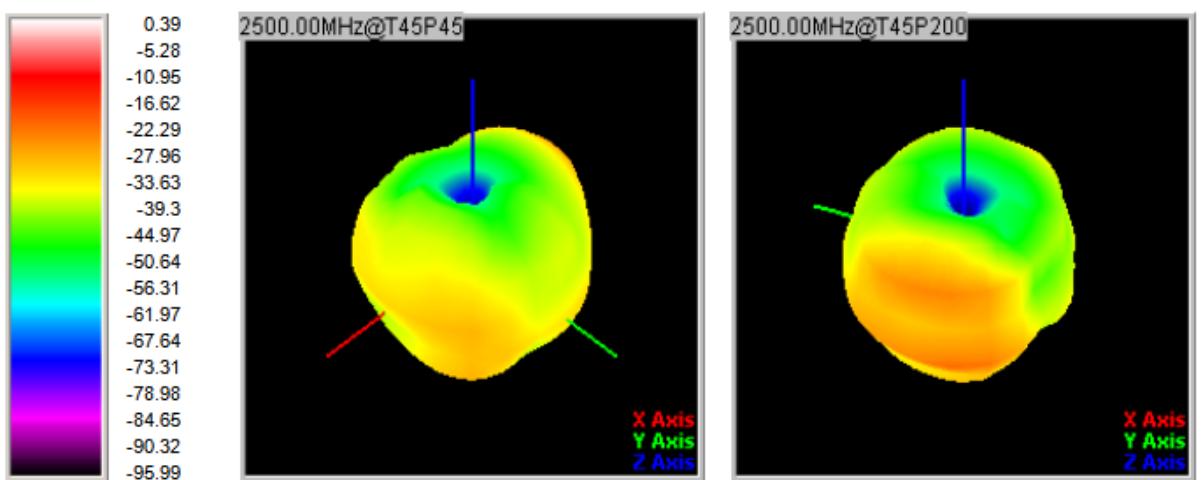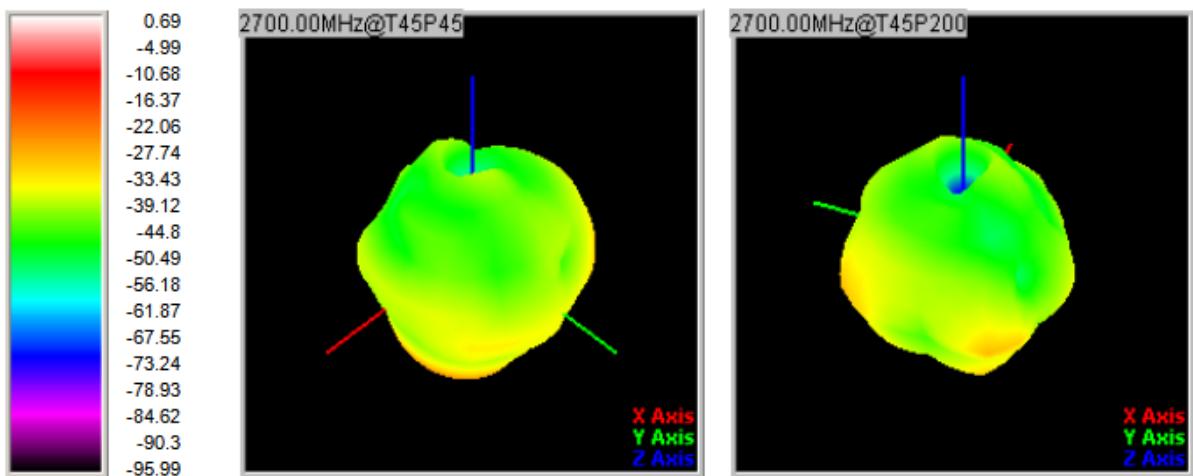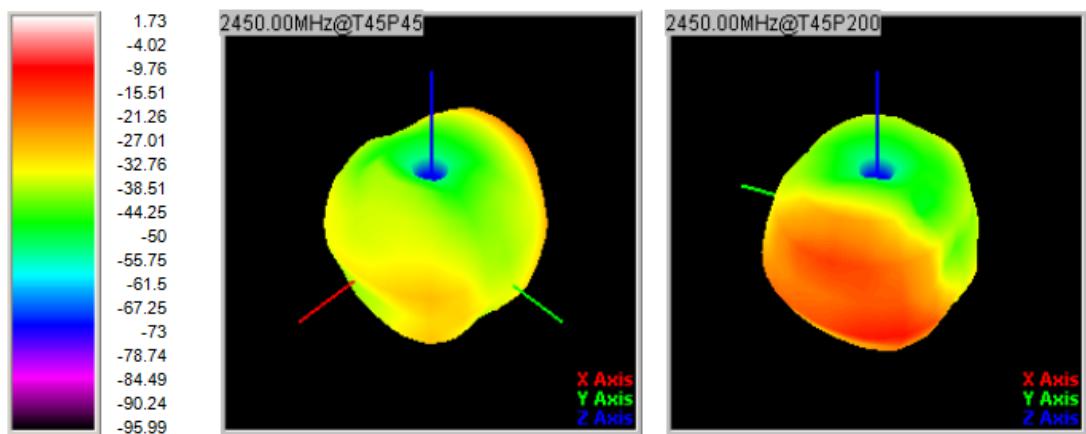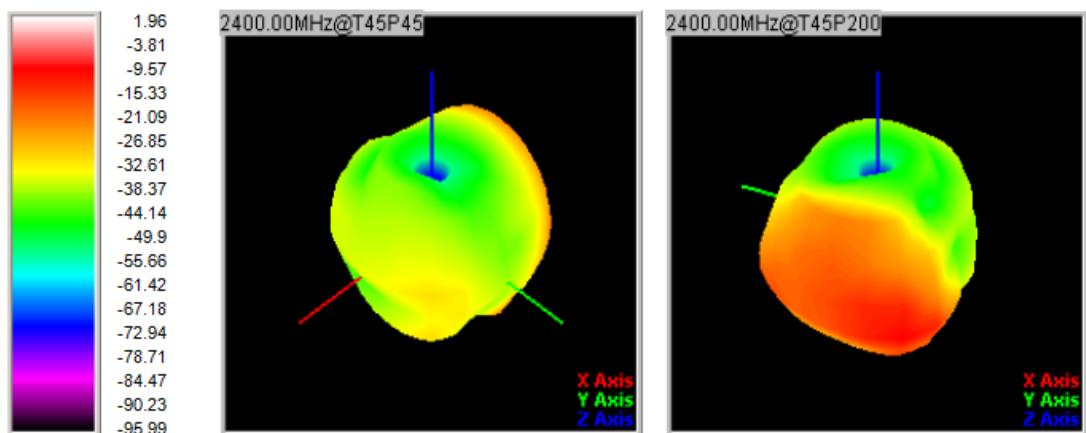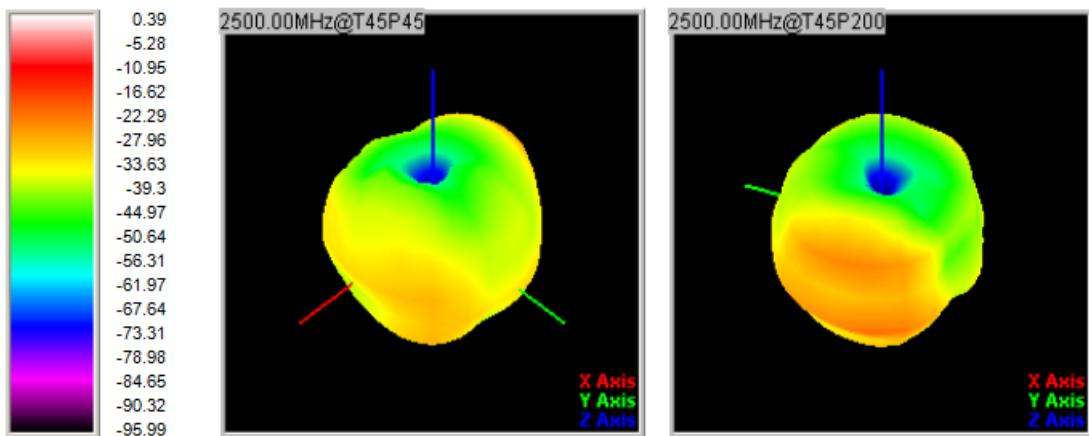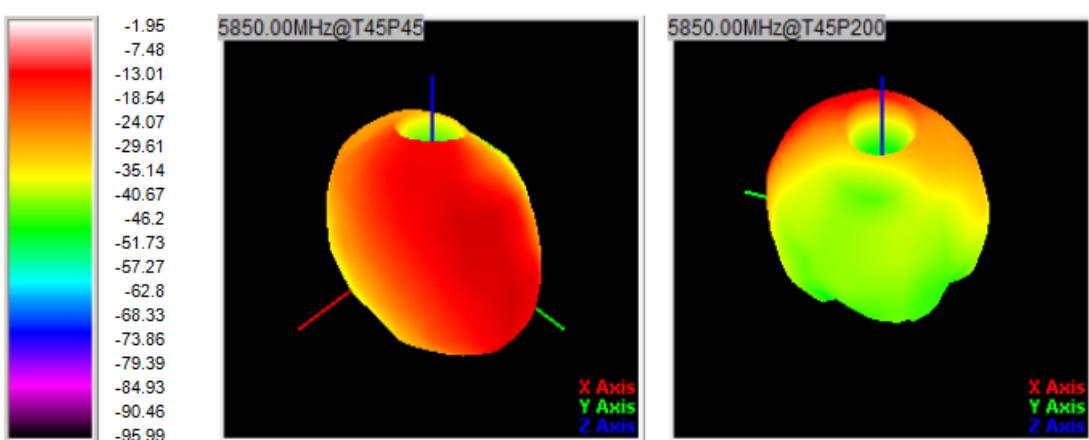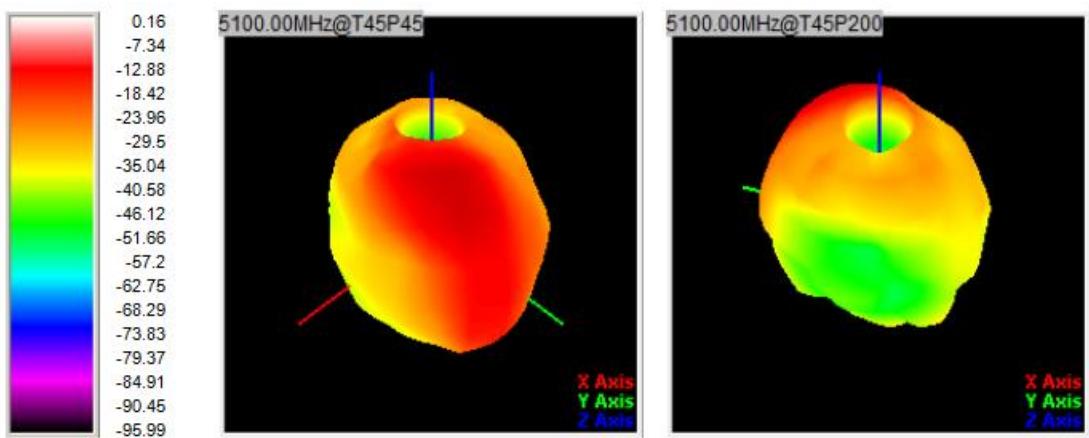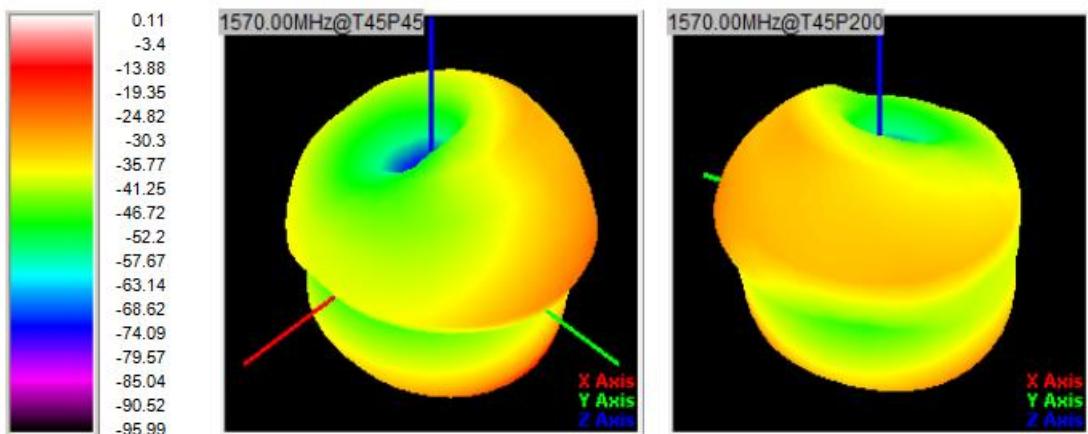
十三．3D lobe map（六）

十四．3D lobe map（七）
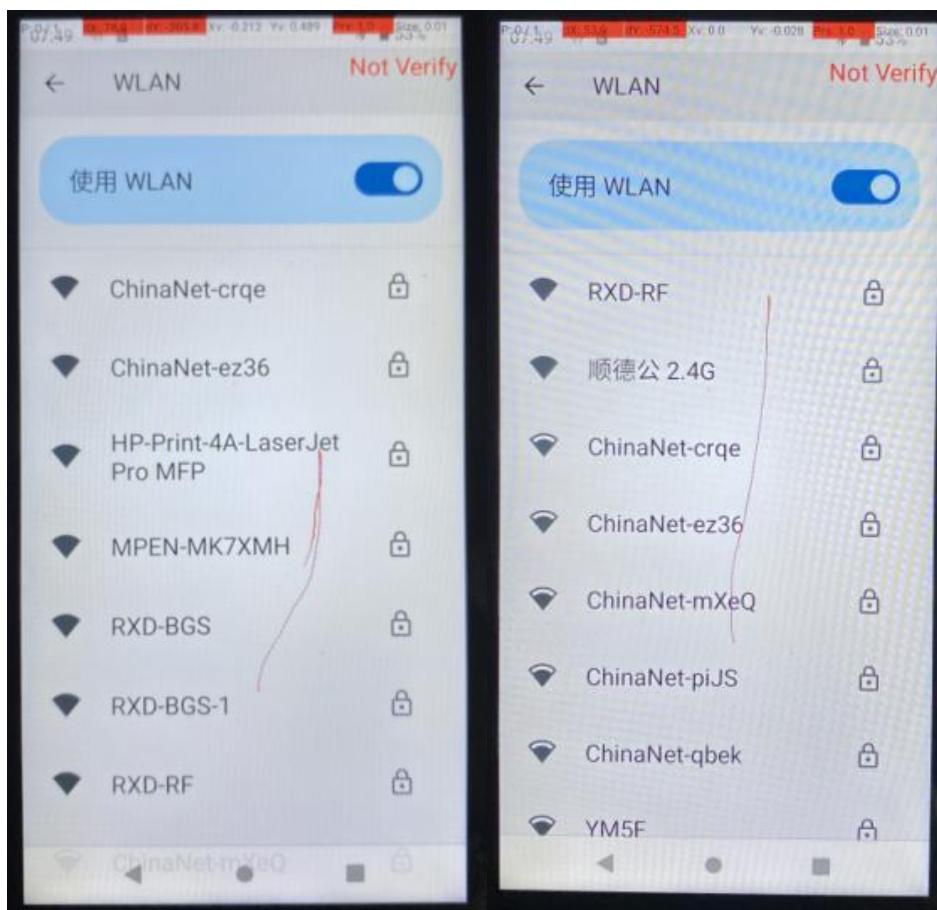
1570.00MHz@T45P45   1570.00MHz@T45P200

GPS measurement

G:GPS R:GLN B:BD E:GAL Q:QZS L:L1S I:IRNSS S:SBAS

Average CNR   ☐ Show in single page
G:29.8/-/-/-   R:22.9/-/-/-
B:26.1/-/-/-   E:-/-/-/-   Q:13.0/-/-/-
L:-/-/-/-   I:-/-/-/-   S:23.0/-/-/-

SVID	Fq	CNR	Elevation	Azimuth
🇺🇸 5	L1	0.0	46.00	14.00
🇺🇸 6	L1	22.8	7.00	126.00
🇺🇸 11	L1	30.3	40.00	107.00
🇺🇸 12	L1	0.0	2.00	199.00
🇺🇸 13	L1	0.0	74.00	49.00
🇺🇸 15	L1	31.8	64.00	244.00
🇺🇸 18	L1	16.9	14.00	320.00
🇺🇸 20	L1	42.9	31.00	54.00
🇺🇸 23	L1	24.2	4.00	274.00
🇺🇸 24	L1	33.3	14.00	183.00
🇺🇸 29	L1	40.1	47.00	286.00
🇺🇸 30	L1	0.0	12.00	58.00
🇷🇺 70	L1	0.0	20.00	28.00
🇷🇺 71	L1	28.6	54.00	337.00
🇷🇺 72	L1	19.1	38.00	261.00

WiFi antenna measurement

Bluetooth measurement

Connect the Bluetooth headset to the mobile phone, plug in the network card to test the call, the distance is 15m, the call is clear, and there is no intermittent;