永辅通科技（上海）有限公司
Yongfutong Technology (ShangHai) Co.,LTD..

Antenna SPEC

Customer：xiangcheng
Project Name:T0452
Working Band：GSM 850/900/1800/1900 + WCDMA 1/2/4/5/8 +
FDDB1/2/3/4/5/7/8/19/20/28 TDDB38/40/41
+ GPS/BT/WIFI2.4G/5G

Forten BOM:

ANT Type	YFT P/N
MAIN	T0452_MIAN
DIV	T0452_SCAN
GPS+BT/WIFI2.4G	T0452_SCAN
WIFI5G	T0452_SCAN

Tel：＋86-021-20905889
Fax：＋86-021-20905889-802
Shanghai R & D center: Room 203, building 1, No.3408, Xiupu Road, Pudong New Area, Shanghai.

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1. PROJECT PICTURES

project pictures shown below：

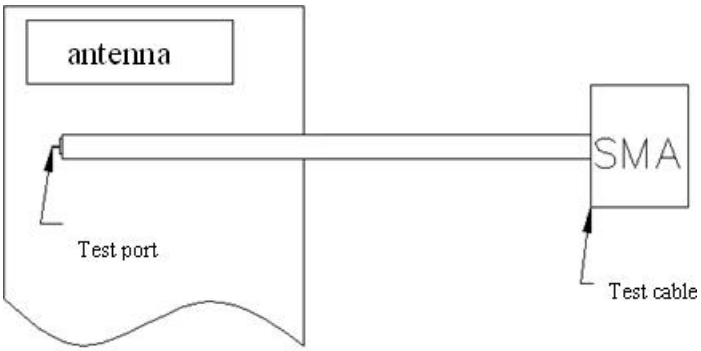
PS：

To ensure that the antenna shipment quality, the final mobile phone Clients validated the antenna's performance, should be kept in our company for at least a year time, facilitate solving antenna amount during abnormal situation.

2. TEST FIXTURE

Purpose： To test antenna passive parameters as accurately as possible 。

methods： the fixture is to use a 50 ohm coaxial cable, one end is connected to the pad after the antenna 's matching circuit (the front of the antenna switch) , and the other end is connected to the SMA connector.



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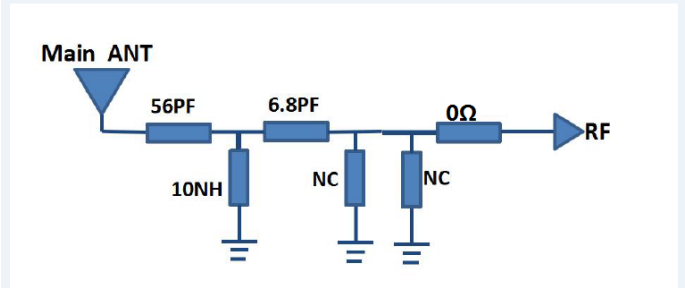
3. MATCHING CIRCUIT

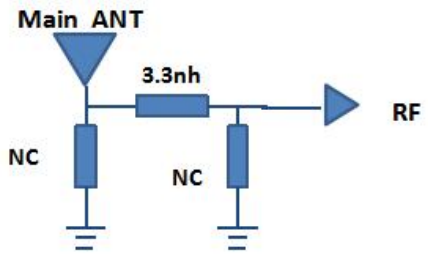
3.1 MAIN



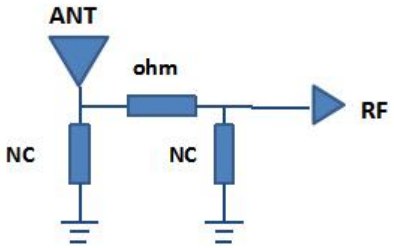
Antenna switch: RF1:0R RF2:2.7NH RF3:12NH

RF4: 1.8NH

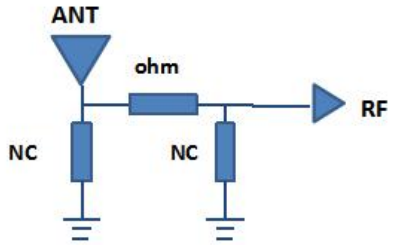
3.2 DIV



3.3 GPS/BT/WIFI 2.4G



3.4 WIFI 5G



PS: There's been a change in the matching circuit.

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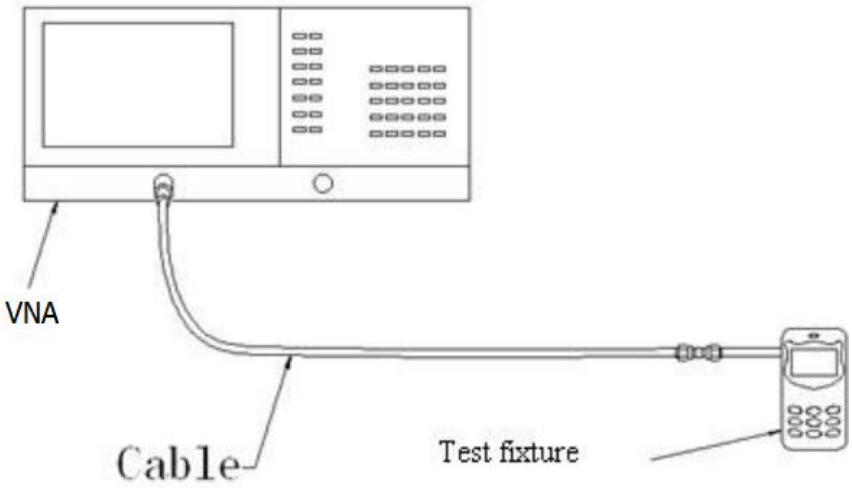
4. S11 test

4.0 S11 test method instructions

Test equipment：VNA(E5071C)

Test method： With a 50 ohm CABLE ,CABLE export from instrument testing port ， After the calibration with calibration Key, connected to the SMA connector， Records the return loss and VSWR of the related frequency points.

Test schematic diagram is as follows：



Test schematic diagram

4.1 S11 parameter

Main antenna

FRq（MHz）	880	960	1710	2170	2400	2690
Return loss	-21	-2.3	-15	-5.9	-9.0	-8.7

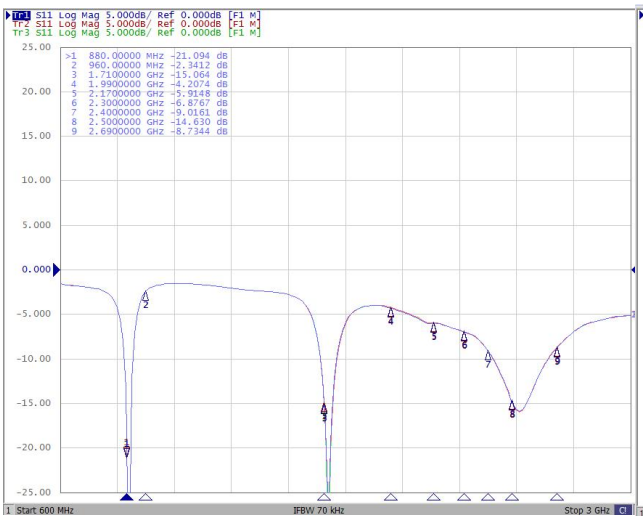
DIV antenna

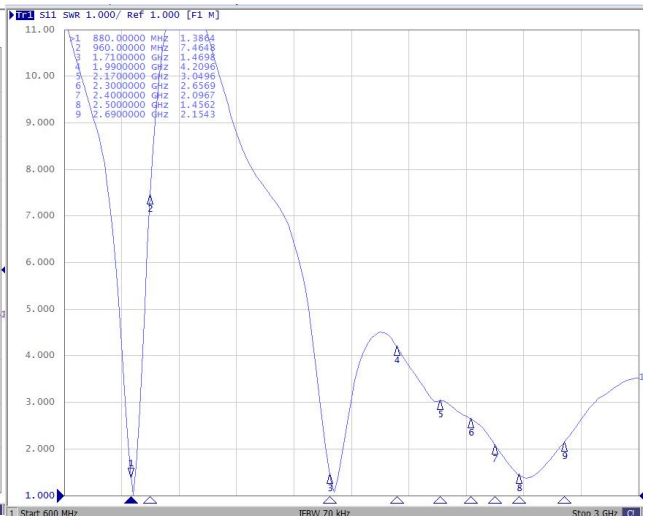
FRq（MHz）	925	960	1850	2300	2400	2690
V.S.W.R	2.6	3.4	4.1	2.6	2.3	2.5

GPS+WIFI antenna

FRq（MHz）	1575	2400	2500	5080	5880
V.S.W.R	1.8	1.7	1.4	1.1	2.5

Main antenna S11:





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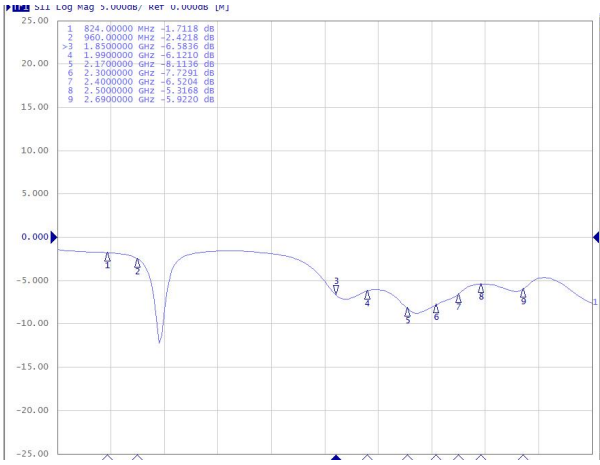
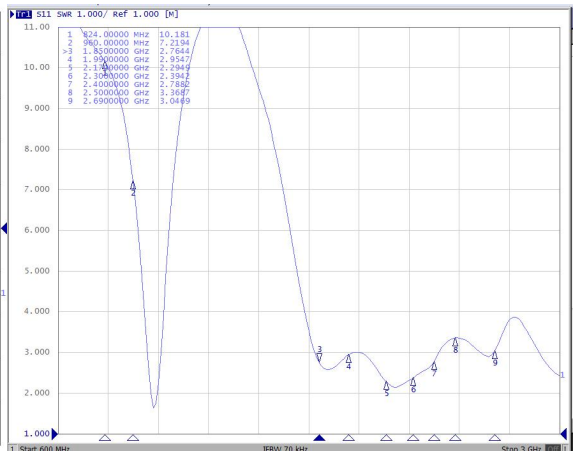
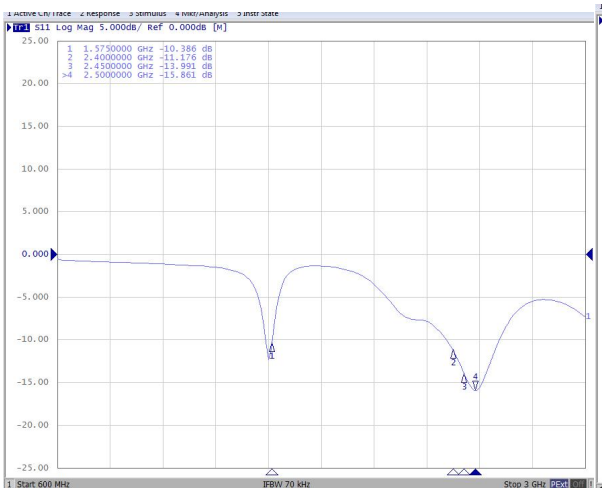
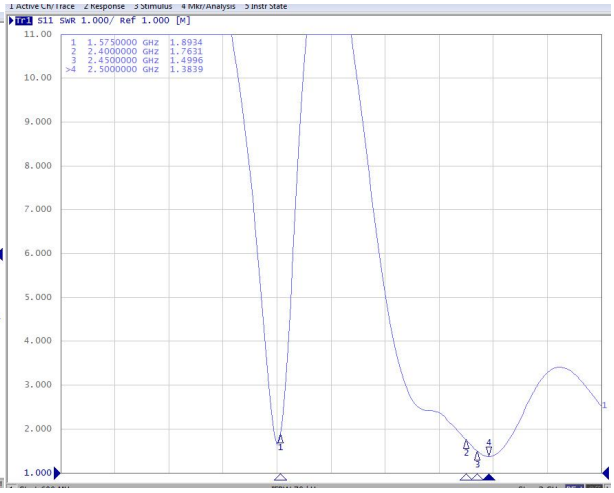
DIV antenna S11:



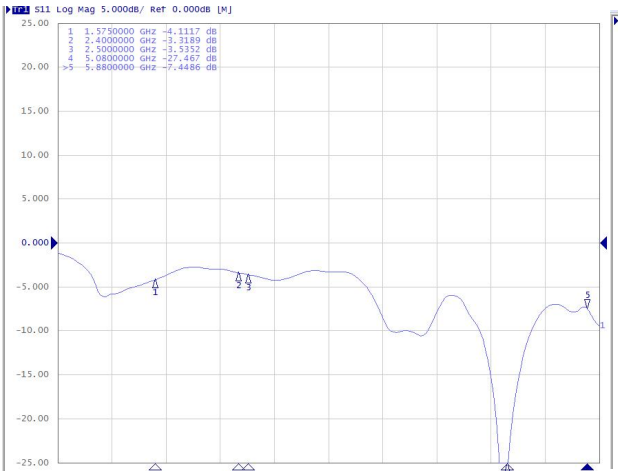


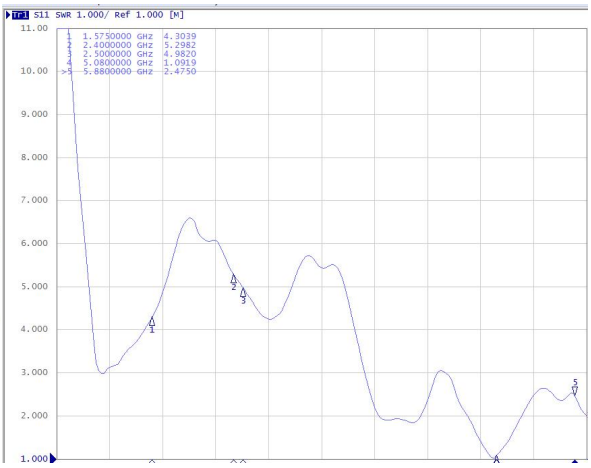
GPS+WIFI2.4G antenna S11:





WIFI5G antenna S11:





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5 OTA TEST DATA

Test system: Chamber（-24）

Test environment: the temperature of 22 ℃ + 3 ℃, humidity of 50% plus or minus 15%

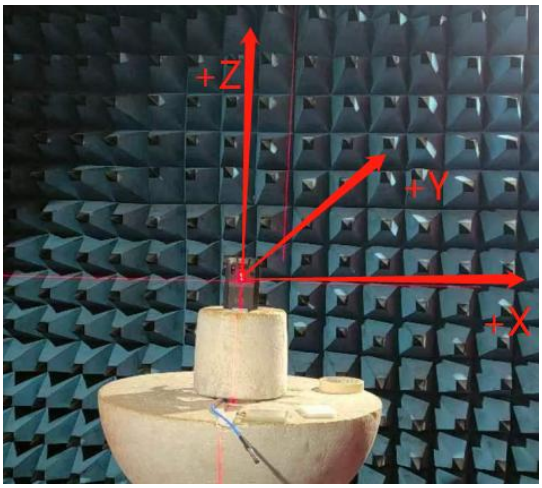
Test equipment: test passive status , use VNA Agilent E5071C; test active status, use CMW500

5.1 Passive Gain &efficiency:

Main Antenna

Operation Bands	Frequency Range(MHz)	Gain(dBi)
GSM850	824-849	-0.83
PCS1900	1850-1910	-1.32
WCDMA B2	1850-1910	-1.32
WCDMA B4	1710-1755	0.88
WCDMA B5	824-849	-0.83
LTE B5	824-849	-0.83
LTE B41	2555-2655	2.75
2.4GWIFI	2400-2500	2.06
5G WIFI	5150-5250	0.35
BT/BLE	2400-2500	2.06
GPS	1545-1620	3.33

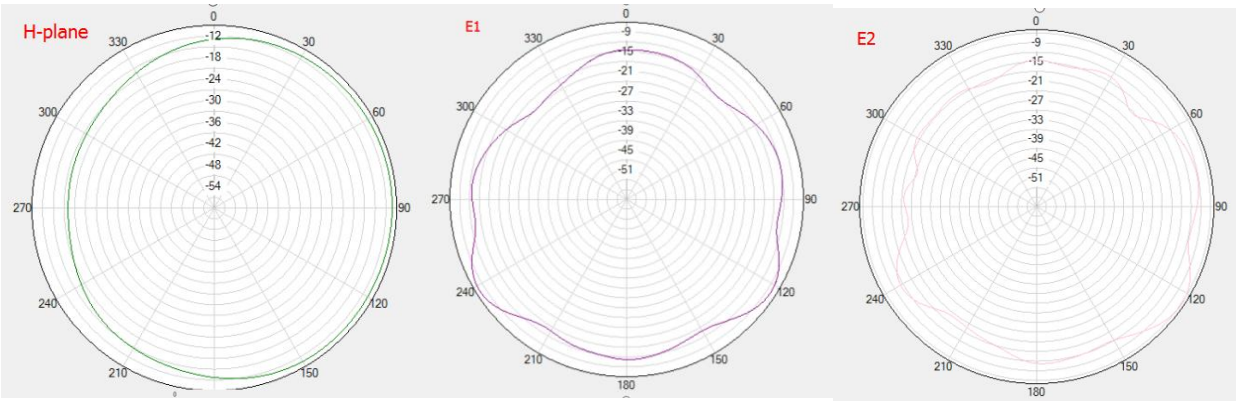
6. Radiation Pattern



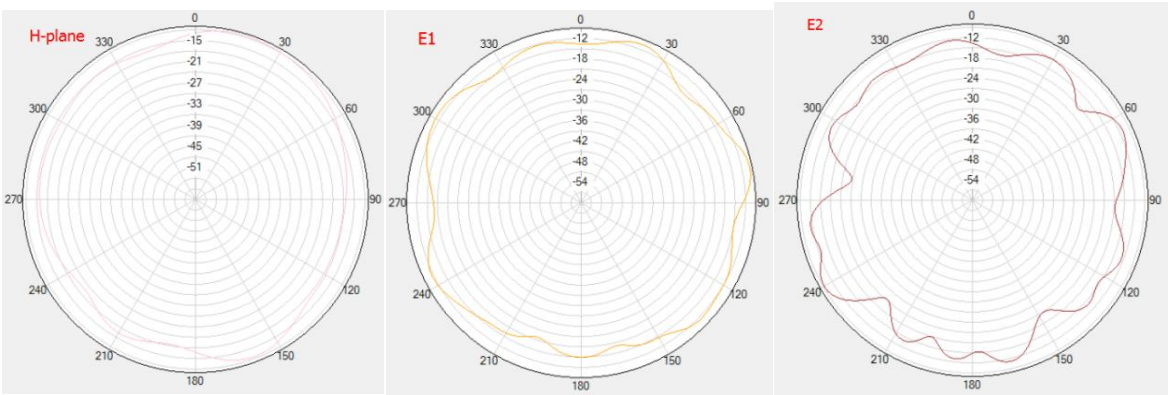
H plane: the tangent of XY
E1 plane: the tangent of XZ
E2 plane: the tangent of YZ

6.1 MAIN ANT

880MHZ



1710MHZ



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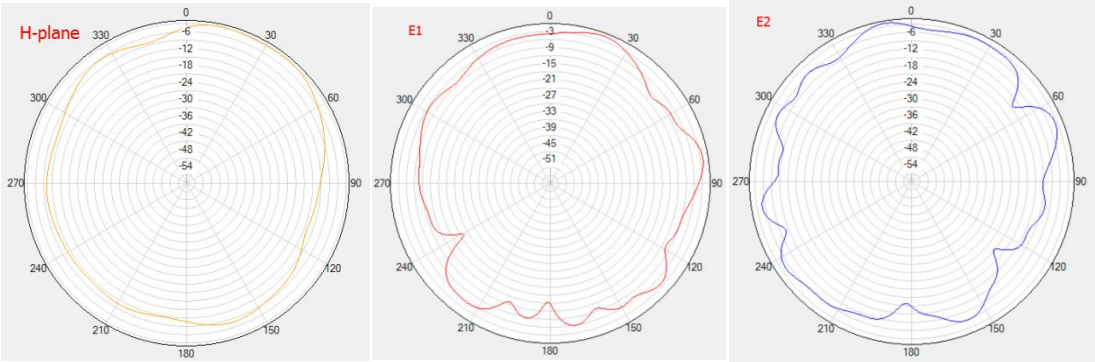
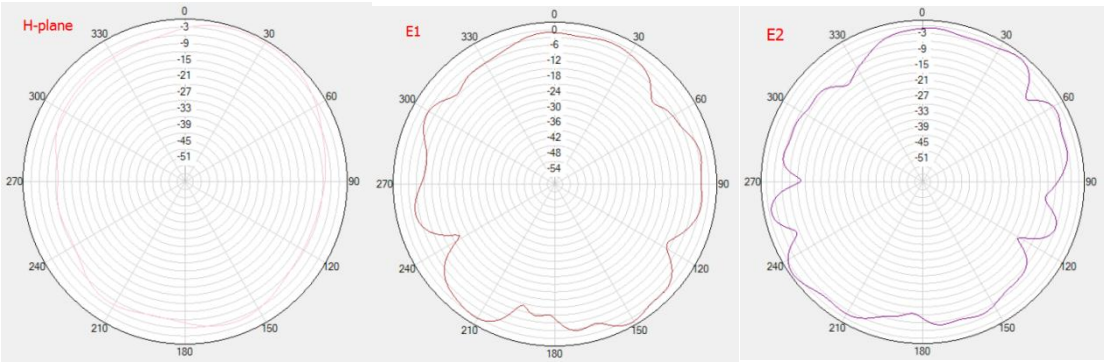
2400MHZ

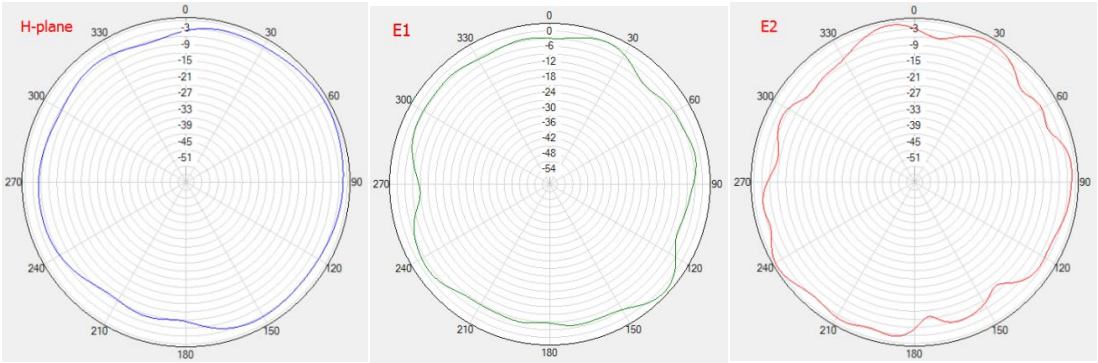


2690MHZ

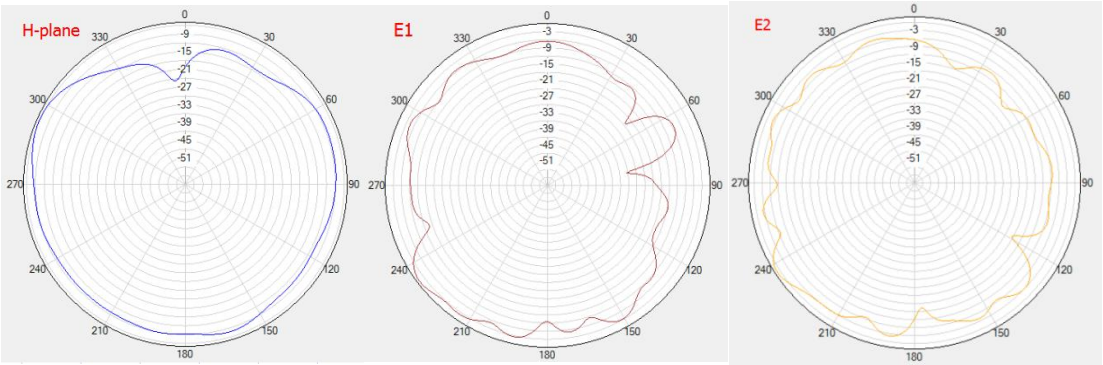


6.2 GPS/BT/WIFI

1575MHZ



2450MHZ



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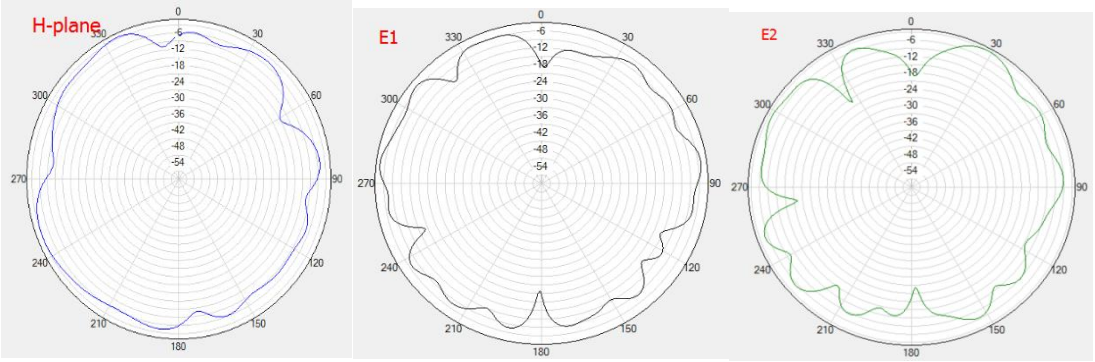
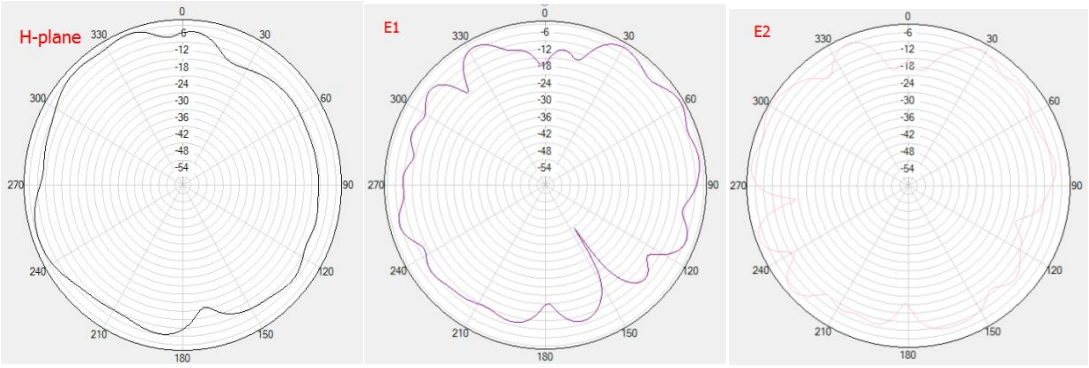
5200MHz

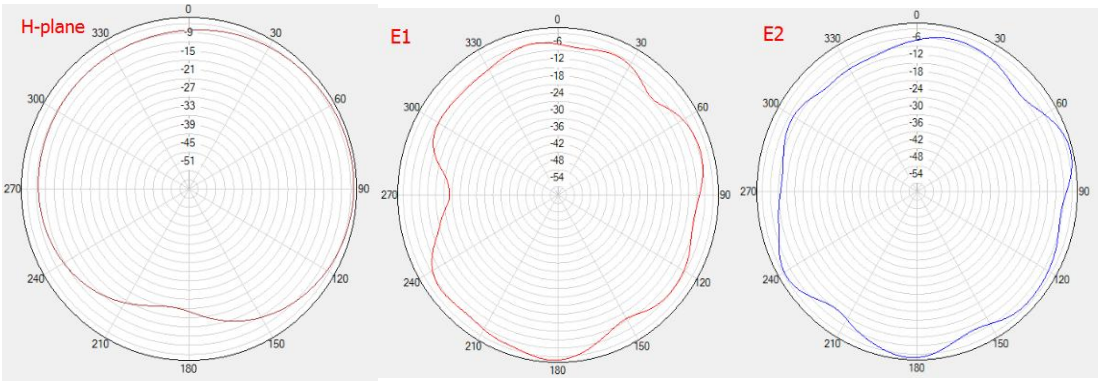


5800MHZ

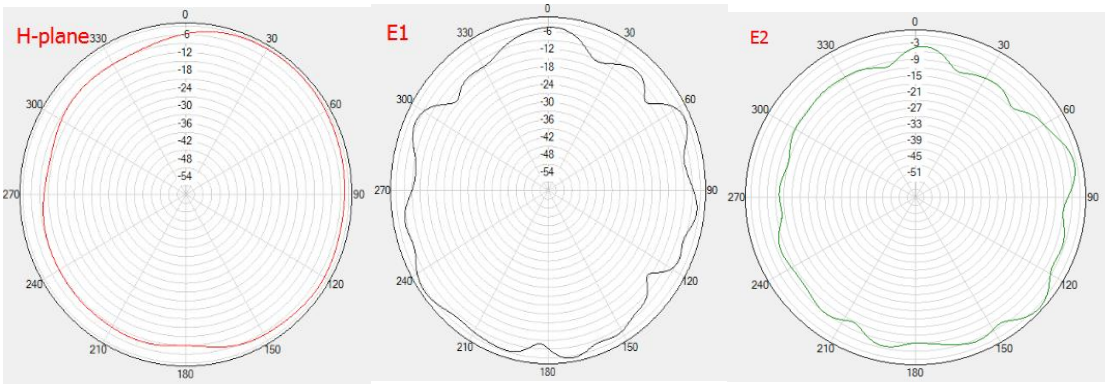


6.3 DIV ANT

920MHZ



2170MHz



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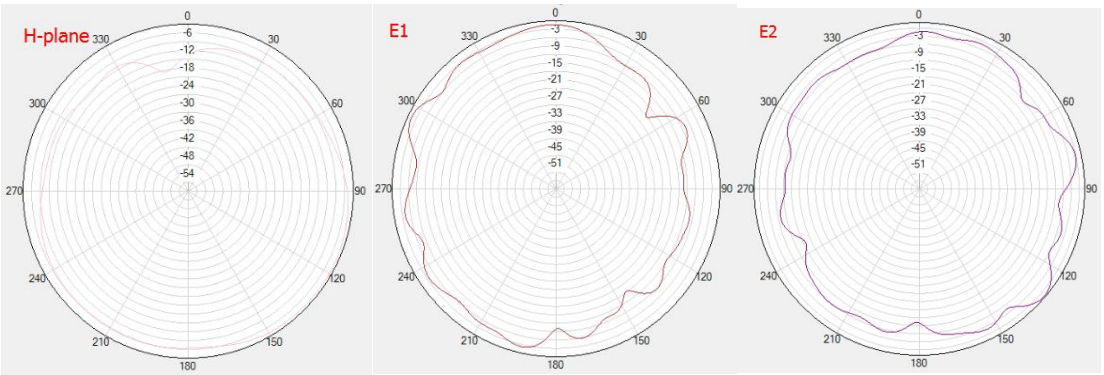
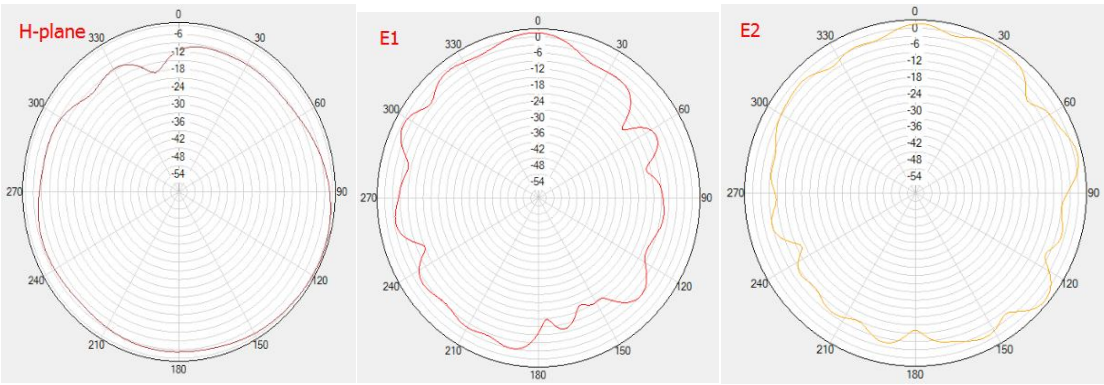
2500MHZ



2690MHz



7. Ground handling（）

According to your existing processing, no additional other processing.

8. Mass production antenna Spec（）

During Mass production, to test VSWR as production test standard According to the difference of the project itself, the following specification:

Frequence（MHz）	SPEC ,Mass Production
824—960；1710—2690MHz	VSWR（MP performance）<VSWR(Verify performance)+0.5
1575；2400—2500；5100—5900MHz	VSWR（MP performance）<VSWR(Verify performance)+0.5

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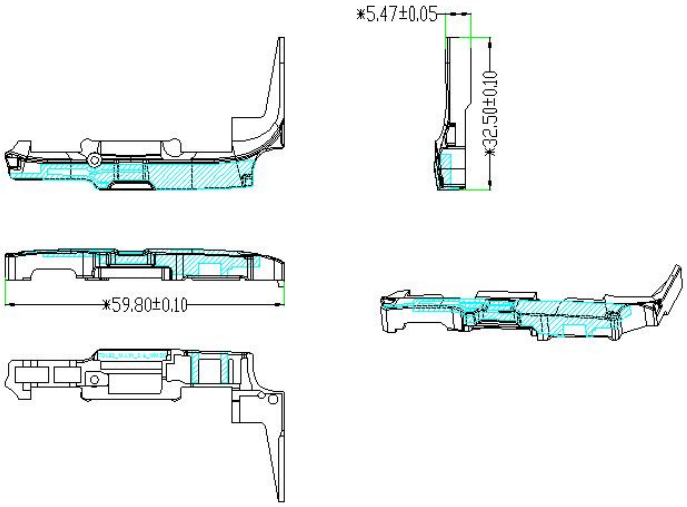
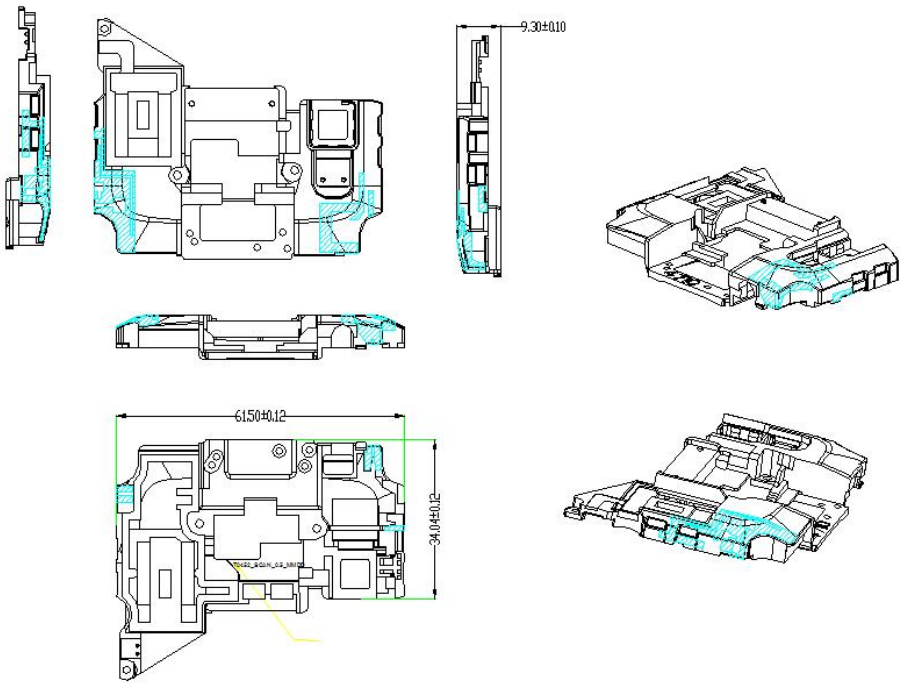
9. Product Size

9.1 MAIN ANT



9.2 SCAN ANT



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