ANT Manufacturers: ANWEI commnuication Equipment Co.,Ltd
Address:2nd Floor, East Block, Building 5, Yifenghua Innovation Industrial Park,
Huaning Road, Dalang Street, Longhua District, Shenzhen City, Guangdong Province

# Antenna specifications

| | | | |
|---|---|---|---|
| 客户<br>Customer | Youmi | 规格型号<br>Specs | PG2311GBA |
| 安威料号<br>Part Number | G6 4G-MAIN-AW<br>G6 4G-DIV-AW<br>G6 4G-2.4GWIFI/GPS/5GWIFI-AW<br>G6 5G-NFC/FM-AW | 频　　段<br>Frequency Band | GSMB8/B2/B3/B5<br>WCDMA:B1/B2/B4/B8/B5/B6<br>LTE:1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/66/71/34/38/39/40/41<br>BT&2.5G WIFI:2400~2483.5MHZ<br>5G WIFI:5100~5800MHZ |
| 颜　色<br>Color | black | 版　　本<br>Edition | REV:A0 |
| 销　售<br>Salesperson | Mr.Xie | 设　　计<br>Design | WUXI |
| 结　构<br>Structure | QIN YUN LIN | | |
| 日　期<br>Date | 2023.12.5 | | |
| 客户确认 Customer confirmation: | | | |
| 携手共进 共创未来<br>Join hands to create the future | | | |

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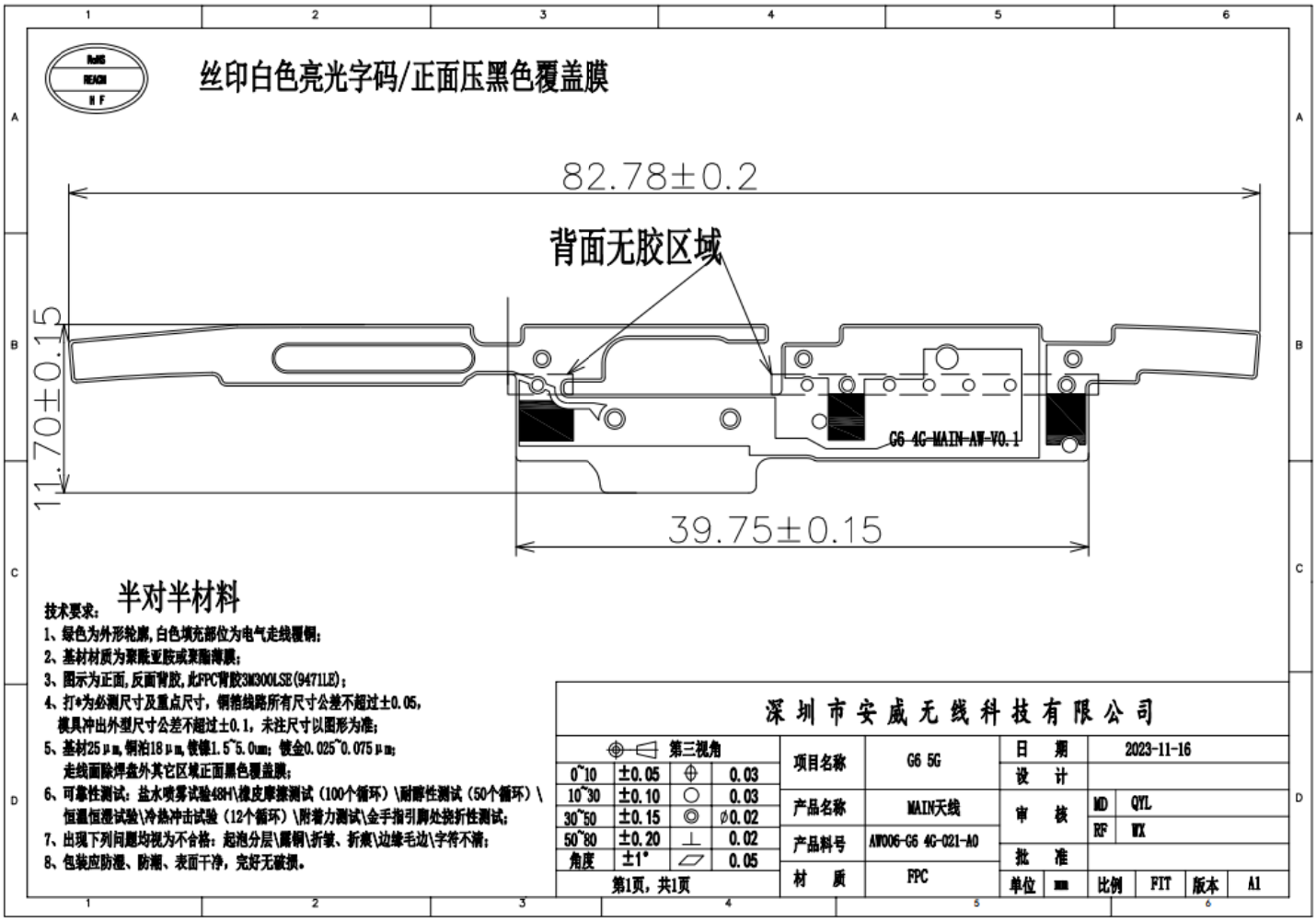
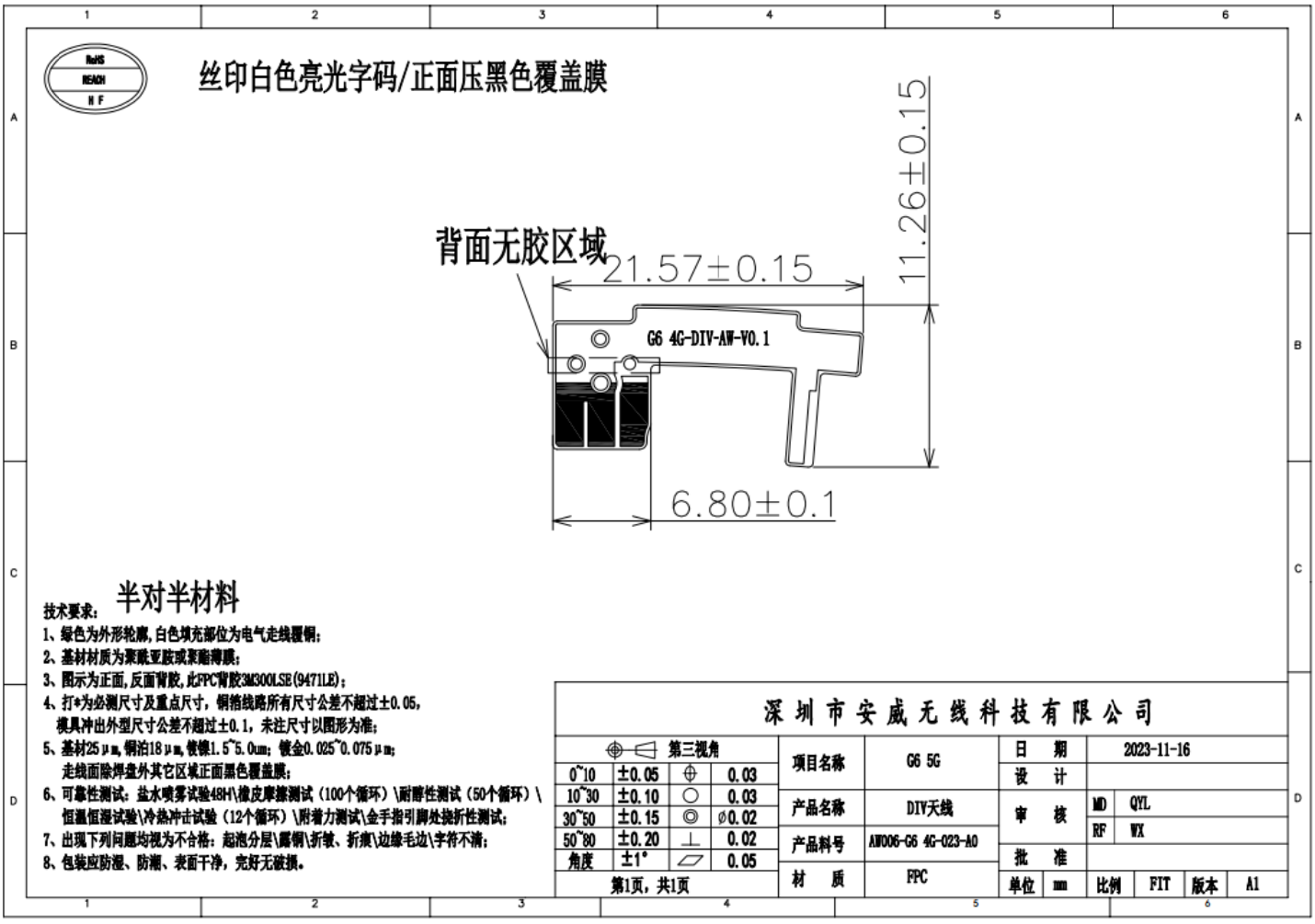
## 1. Product specifications

The report mainly provides parameter testing of PG2311GBA antenna performance. The PG2311GBA antenna is a 4G antenna. (As shown below)

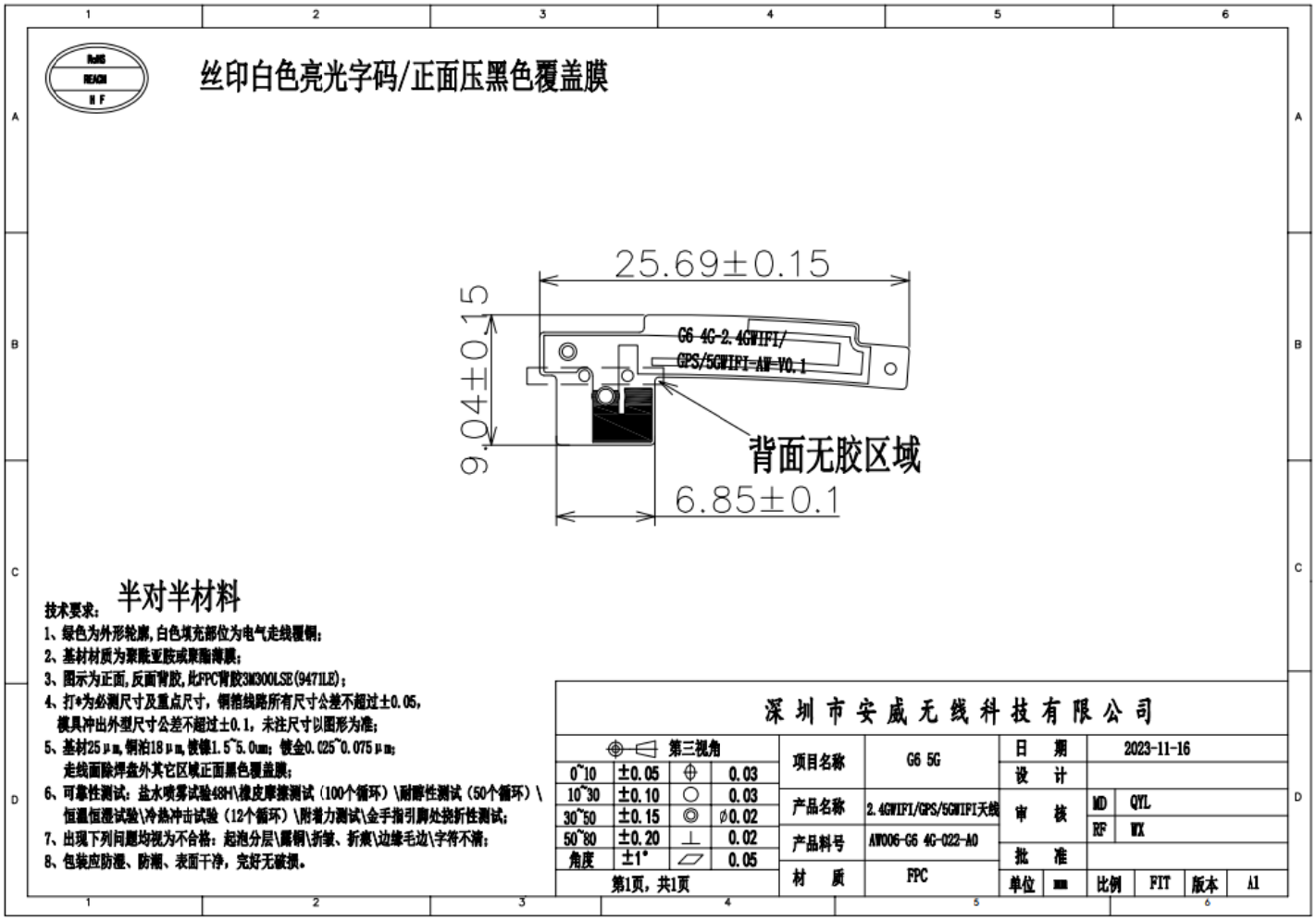
MAIN ANT



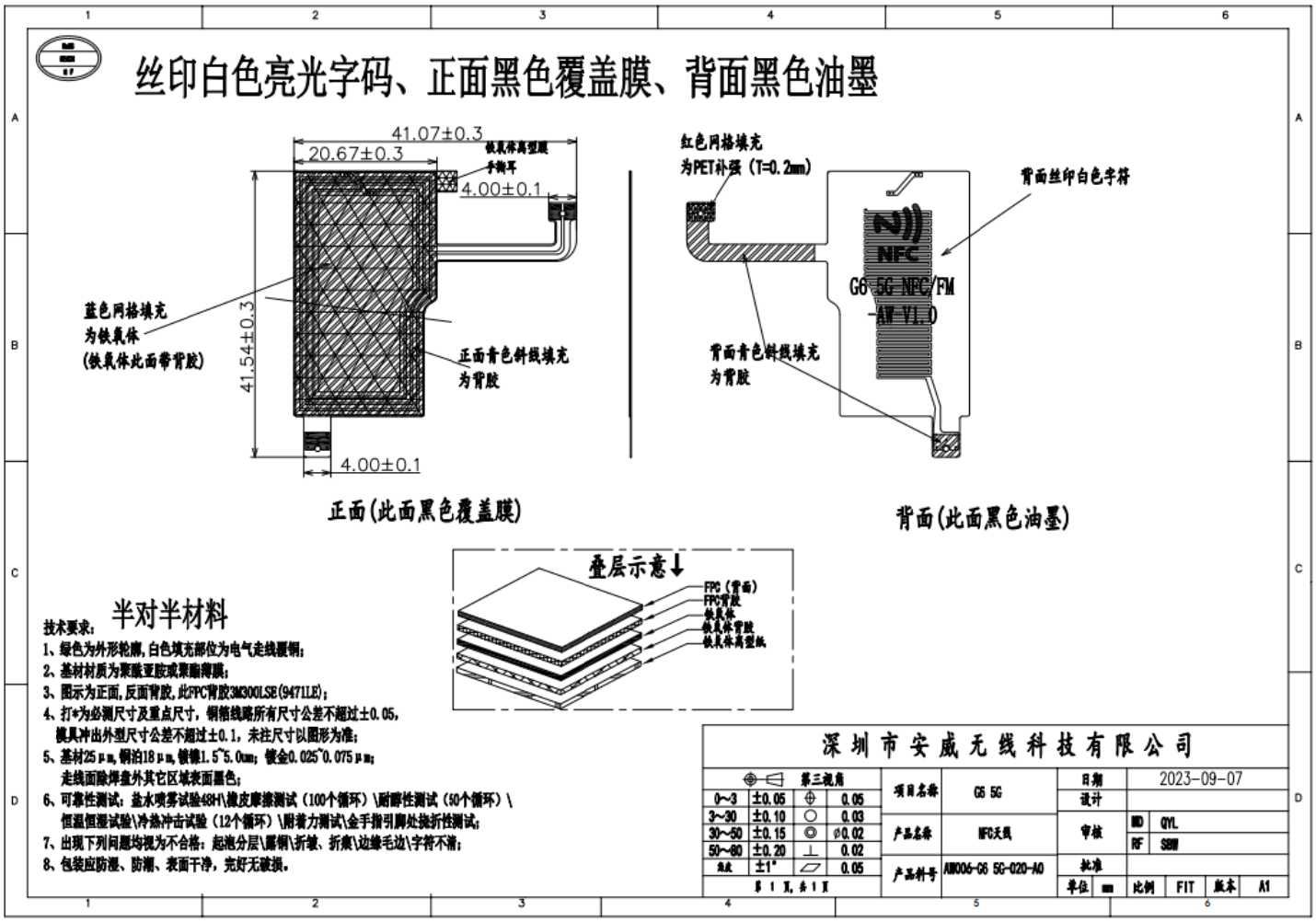
DIV ANT


丝印白色亮光字码/正面压黑色覆盖膜
RoHS
REACH
H F
背面无胶区域
21.57±0.15
11.26±0.15
G6 4G-DIV-AW-V0.1
6.80±0.1
半对半材料
技术要求：
1、绿色为外形轮廓,白色填充部位为电气走线覆铜；
2、基材材质为聚酰亚胺或聚酯薄膜；
3、图示为正面,反面背胶,此FPC背胶3M300LSE(9471LE)；
4、打*为必测尺寸及重点尺寸，铜箔线路所有尺寸公差不超过±0.05，
模具冲出外型尺寸公差不超过±0.1，未注尺寸以图形为准；
5、基材25μm,铜泊18μm,镀镍1.5~5.0um；镀金0.025~0.075μm；
走线面除焊盘外其它区域正面黑色覆盖膜；
6、可靠性测试：盐水喷雾试验48H\橡皮摩擦测试（100个循环）\耐醇性测试（50个循环）\
恒温恒湿试验\冷热冲击试验（12个循环）\附着力测试\金手指引脚处挠折性测试；
7、出现下列问题均视为不合格：起泡分层\露铜\折皱、折痕\边缘毛边\字符不清；
8、包装应防潮、防湿、表面干净，完好无破损。
深圳市安威无线科技有限公司
第三视角
0~10 ±0.05 0.03
10~30 ±0.10 0.03
30~50 ±0.15 ⌀0.02
50~80 ±0.20 ⊥ 0.02
角度 ±1° 0.05
第1页，共1页
项目名称 G6 5G
产品名称 DIV天线
产品料号 AW006-G6 4G-023-A0
材 质 FPC
日 期 2023-11-16
设 计
审 核 MD QYL
RF WX
批 准
单位 mm
比例 FIT
版本 A1

BT&WiFi&GNSS Antenna



NFC+FM ANT


丝印白色亮光字码、正面黑色覆盖膜、背面黑色油墨
41.07±0.3
20.67±0.3
铁氧体离型膜
手撕耳
4.00±0.1
41.54±0.3
蓝色网格填充
为铁氧体
(铁氧体此面带背胶)
正面青色斜线填充
为背胶
4.00±0.1
正面(此面黑色覆盖膜)
红色网格填充
为PET补强 (T=0.2mm)
背面丝印白色字符
NFC
G6 5G NFC/FM
-ANF V1.0
背面青色斜线填充
为背胶
背面(此面黑色油墨)
叠层示意↓
FPC(背面)
FPC背胶
铁氧体
铁氧体背胶
铁氧体离型纸
半对半材料
技术要求:
1、绿色为外形轮廓,白色填充部位为电气走线铜箔;
2、基材材质为聚酰亚胺或聚酯薄膜;
3、图示为正面,反面背胶,此FPC背胶3M300LSE(9471LE);
4、打*为必测尺寸及重点尺寸,铜箔线路所有尺寸公差不超过±0.05,
模具冲出外型尺寸公差不超过±0.1,未注尺寸以图形为准;
5、基材25μm,铜泊18μm,镀镍1.5~5.0um;镀金0.025~0.075μm;
走线面除焊盘外其它区域表面黑色;
6、可靠性测试:盐水喷雾试验48H\橡皮摩擦测试(100个循环)\耐醇性测试(50个循环)\
恒温恒湿试验\冷热冲击试验(12个循环)\附着力测试\金手指引脚处挨折性测试;
7、出现下列问题均视为不合格:起泡分层\露铜\折皱、折痕\边缘毛边\字符不清;
8、包装应防潮、防潮、表面干净,完好无破损。
深圳市安威无线科技有限公司
第三视角
项目名称 G6 5G
产品名称 NFC天线
产品料号 ANC006-G6 5G-020-A0
日期 2023-09-07
设计
审核
批准
单位 mm
比例 FIT
版本 A1

## 2. Electrical performance

(1.) Specifications and standards

The working frequency band of antenna is 699~960MHZ, 1710~2700MHZ, and resonates in this frequency band

Antenna structure: FPC

## 3. Parameter testing

### (1.) Test settings

The sequential connections of the VSWR test device are:

E5071B Network Analyzer → 50 ohm coaxial cable → 110mm long copper tube → Test Fixture

Handling of test fixtures:
Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to a copper tube covered with a choke, and then connect it to other devices in turn.

## 4. Settings for active testing

The active test device connections in sequence are:

Agilent8960 → 50 ohm coaxial cable → Satimo SG16 test system → Mobile phone to be tested

### (1.) test site

AW microwave anechoic chamber: The test frequency range is 400MHz-6GHz, the quiet zone range is 40cm circumference, and the reflectivity is less than -90 dB.

### (2.) Test Results

The maximum radiated power and maximum receiving sensitivity reflect the maximum power radiation value and best receiving performance of the antenna in the entire radiation space. TRP and TIS reflect the average radiated power and average receiving sensitivity of the antenna, that is, they reflect the overall receiving performance of the antenna.

**The following are the mobile phone antenna active test results:**

# 主天线暗室数据

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| GSM 850 | 128 | 24.67 | | W 1 | LOW | 18.75 | |
| | 190 | 24.76 | | | medium | 18.16 | |
| | 251 | 25.03 | -102.3 | | high | 18.55 | -102.2 |
| GSM 900 | 1 | 24.79 | | W 2 | LOW | 16.68 | |
| | 62 | 24.55 | | | medium | 17.14 | |
| | 124 | 25.02 | -100.41 | | high | 17.63 | -103.0 |
| DCS 1800 | 512 | 24.01 | | W 4 | LOW | 17.5 | |
| | 698 | 24.12 | | | medium | 17.29 | |
| | 885 | 24.1 | -102 | | high | 18.12 | -103.3 |
| PCS 1900 | 512 | 24.63 | | W 5 | LOW | 15.01 | |
| | 661 | 25.19 | | | medium | 15.18 | |
| | 810 | 25.12 | -100 | | high | 15.15 | -101 |
| | | | | W 6 | LOW | 15.36 | |
| | | | | | medium | 15.58 | |
| | | | | | high | 15.62 | -102.2 |
| | | | | W 8 | LOW | 15.08 | |
| | | | | | medium | 15.44 | |
| | | | | | high | 15.95 | -101.2 |

| | Channel | TRP (dBm) | TIS (dBm) |
|---|---|---|---|
| FDD B1 | LOW | 18.72 | |
| | medium | 18.11 | |
| | high | 18.41 | -89.2 |
| FDD B2 | LOW | 18.65 | |
| | medium | 18.98 | |
| | high | 18.19 | -90.4 |
| FDD B3 | LOW | 18.04 | |
| | medium | 17.84 | |
| | high | 17.7 | -90.4 |
| FDD B4 | LOW | 18.42 | |
| | medium | 17.55 | |
| | high | 18.41 | -90.2 |
| FDD B5 | LOW | 16.12 | |
| | medium | 16.06 | |
| | high | 16.62 | -89.6 |
| FDD B7 | LOW | 18.29 | |
| | medium | 18.37 | |
| | high | 18.71 | -90.4 |
| FDD B8 | LOW | 16.17 | |
| | medium | 16.32 | |
| | high | 16.39 | -88.3 |
| FDD B12 | LOW | 15.14 | |
| | medium | 15.72 | |
| | high | 15.12 | -88.1 |

| | | | |
|---|---|---|---|
| FDD B17 | LOW | 15.5 | |
| | medium | 15.12 | |
| | high | 15.38 | -88.2 |
| FDD B18 | LOW | 15.24 | |
| | medium | 15.09 | |
| | high | 15.35 | -90.24 |
| FDD B19 | LOW | 15.25 | |
| | medium | 15.12 | |
| | high | 15.14 | -90 |
| FDD B20 | LOW | 15.49 | |
| | medium | 15.44 | |
| | high | 15.01 | -90 |
| FDD B25 | LOW | 17.95 | |
| | medium | 17.21 | |
| | high | 17.72 | -89 |
| FDD B26 | LOW | 15.03 | |
| | medium | 15.3 | |
| | high | 15.27 | -89 |
| FDD B28A | LOW | 15.6 | |
| | medium | 15.47 | |
| | high | 15.76 | -89 |
| FDD B28B | LOW | 15.04 | |
| | medium | 15.12 | |
| | high | 15.27 | -89 |

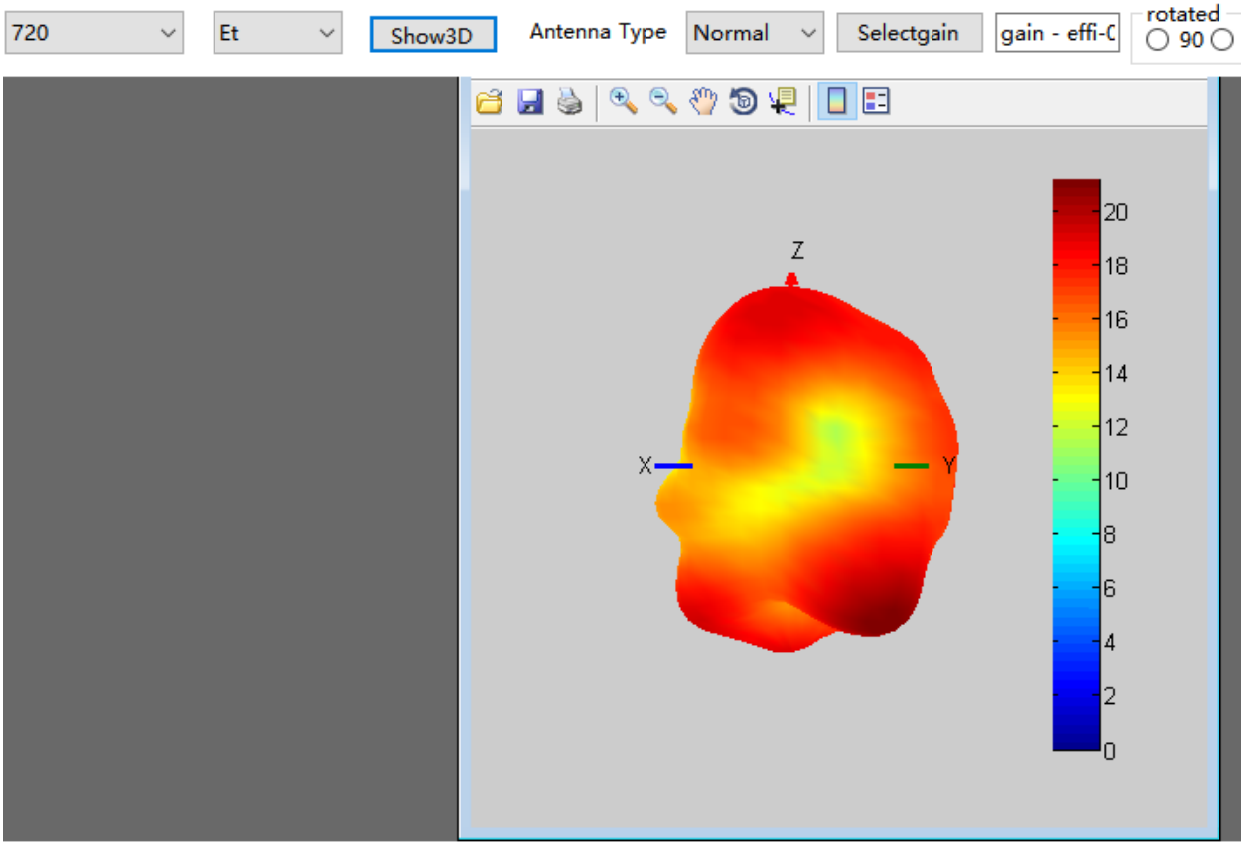
| | Channel | TRP (dBm) | TIS (dBm) |
|---|---|---|---|
| FDD B13 | LOW | | |
| | medium | 15.04 | -88.0 |
| | high | | |
| FDD B66 | LOW | 17.13 | |
| | medium | 17.11 | |
| | high | 17.21 | -90.3 |
| FDD B71 | LOW | 14.42 | |
| | medium | 14.67 | |
| | high | 14.1 | -90.12 |
| TDD B34 | LOW | 17.8 | |
| | medium | 18.61 | |
| | high | 17.7 | -89.2 |
| TDD B38 | LOW | 17.53 | |
| | medium | 17.85 | |
| | high | 16.06 | -88 |
| TDD B39 | LOW | 17.11 | |
| | medium | 17.54 | |
| | high | 17.58 | -88 |
| TDD B40 | LOW | 18.5 | |
| | medium | 18.54 | |
| | high | 18.29 | -89.2 |
| TDD B41 | LOW | | |
| | medium | 17.05 | -87.1 |
| | high | | |

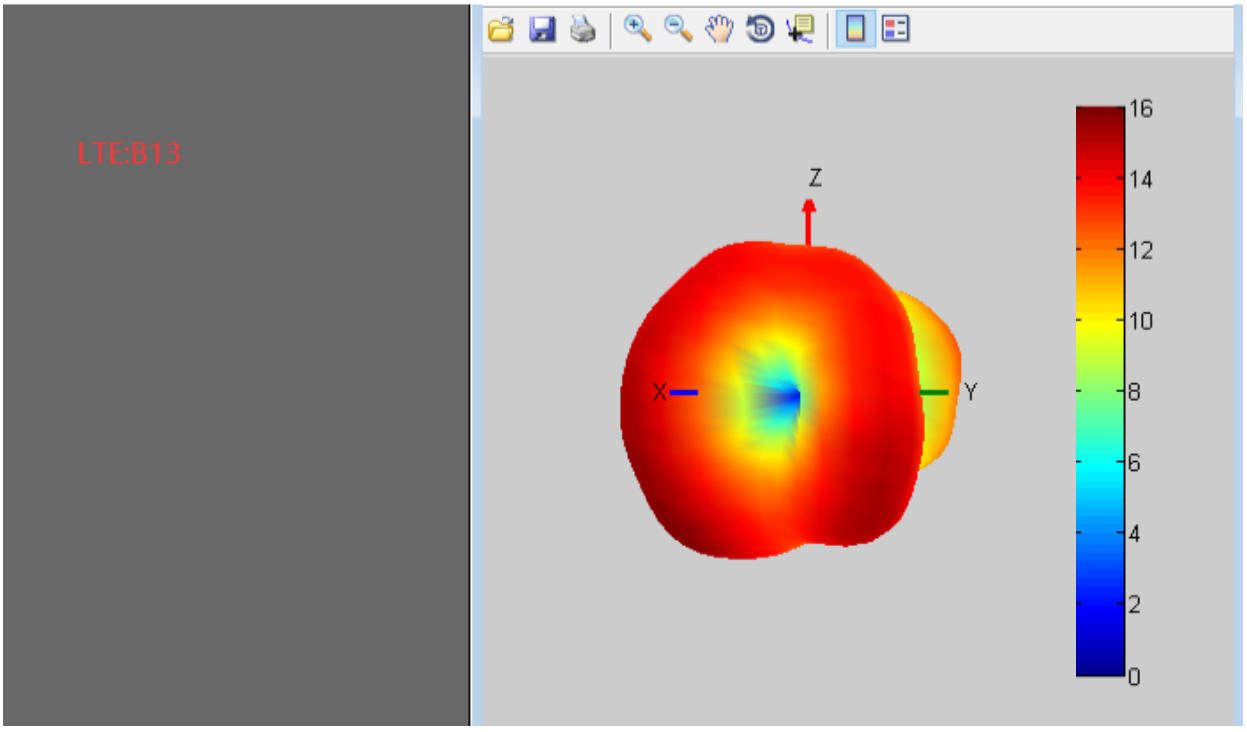
## Main antenna:

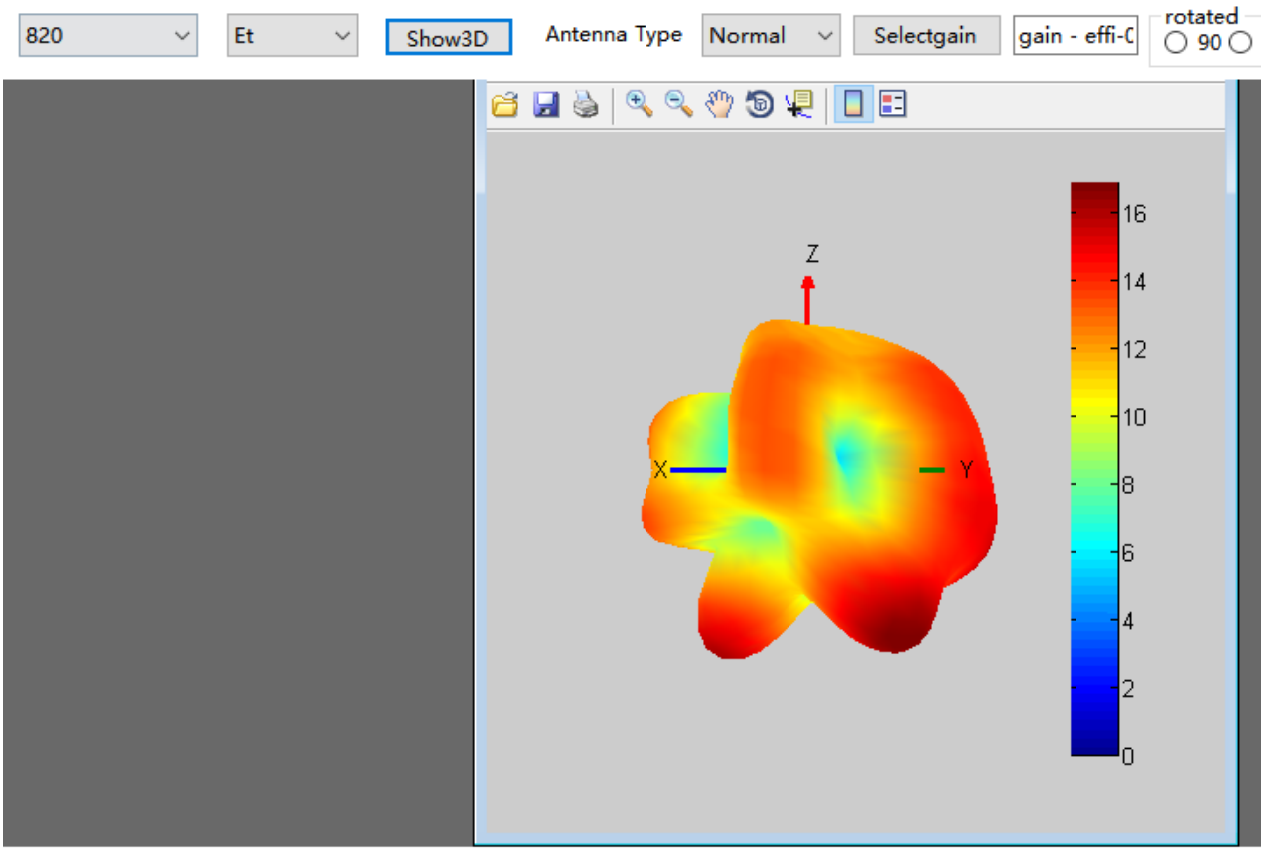
工作频段(**Working frequency band**)：699~960MHZ, 1710~2700MHZ

| | |
|---|---|
| 2G | 2/3/5/8 |
| 3G | 1/2/4/5/6/8<br>CDMA:BC0/BC10/BC1 |
| 4G | B1/2/3/4/5/7/8/12/13/17/18/19/20/25/26/28/66/71/34/38/39/40/41 |
| BT/WIFI | 2.4G+5G |
| GPS | 1575.42MHz |

| 频段 Band | Gain 增益 (dBi) |
|---|---|
| LTE:B12/17/28 NR:N28 | -4.55 |
| LTE:B13 | -3.69 |
| LTE:B71 | -5.03 |
| CDMA:BC0/BC10 GSM850,WCDMA-B5/6,LTE-B5/18/19/20/26 | -4.02 |
| GSM900,WCDMA-B8,LTE-B8 | -3.85 |
| DCS1800,WCDMA-B4 ,LTE-B3/4/66 | 1.2 |
| PCS1900,WCDMA-B2,LTE-B39/25/2 | 1.15 |
| CDMA:BC1 WCDMA-B1,LTE-B1/B34 | 0.68 |
| LTE-B7/B38/B41 | 0.47 |
| LTE-B40 | 1.46 |
| GPS | 1.5 |
| 2.4G WIFI/BT | 1.1 |
| 5G WIFI | 0.55 |
| NFC | 0.98 |
| FM | 1.02 |


720
Et
Show3D
Antenna Type
Normal
Selectgain
gain - effi-C
rotated
90
Z
X
Y
20
18
16
14
12
10
8
6
4
2
0


LTE:B13
Z
X
Y
16
14
12
10
8
6
4
2
0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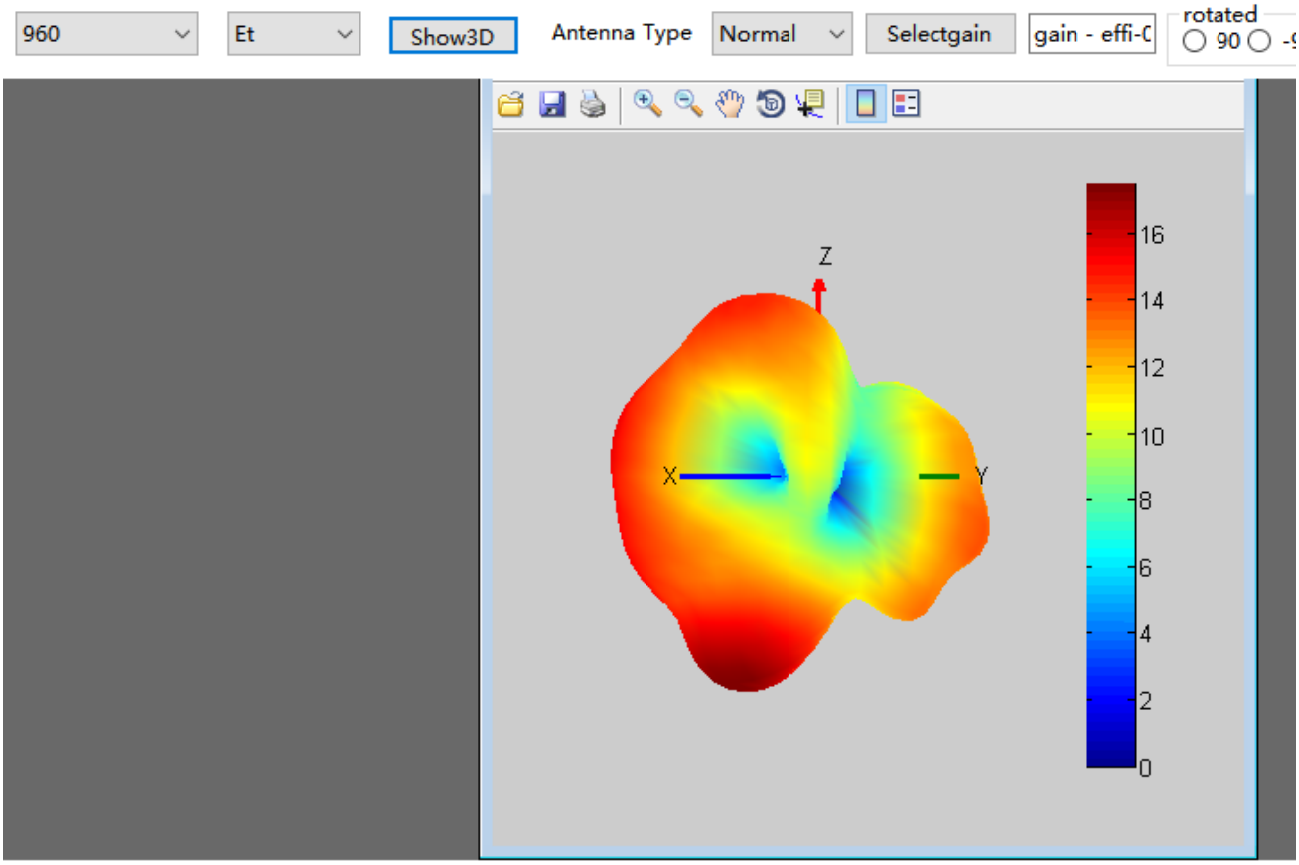
Show3D
Antenna Type
Normal
Selectgain
gain - effi-C
rotated
90
Z
X
Y
16
14
12
10
8
6
4
2
0


960
Et
Show3D
Antenna Type
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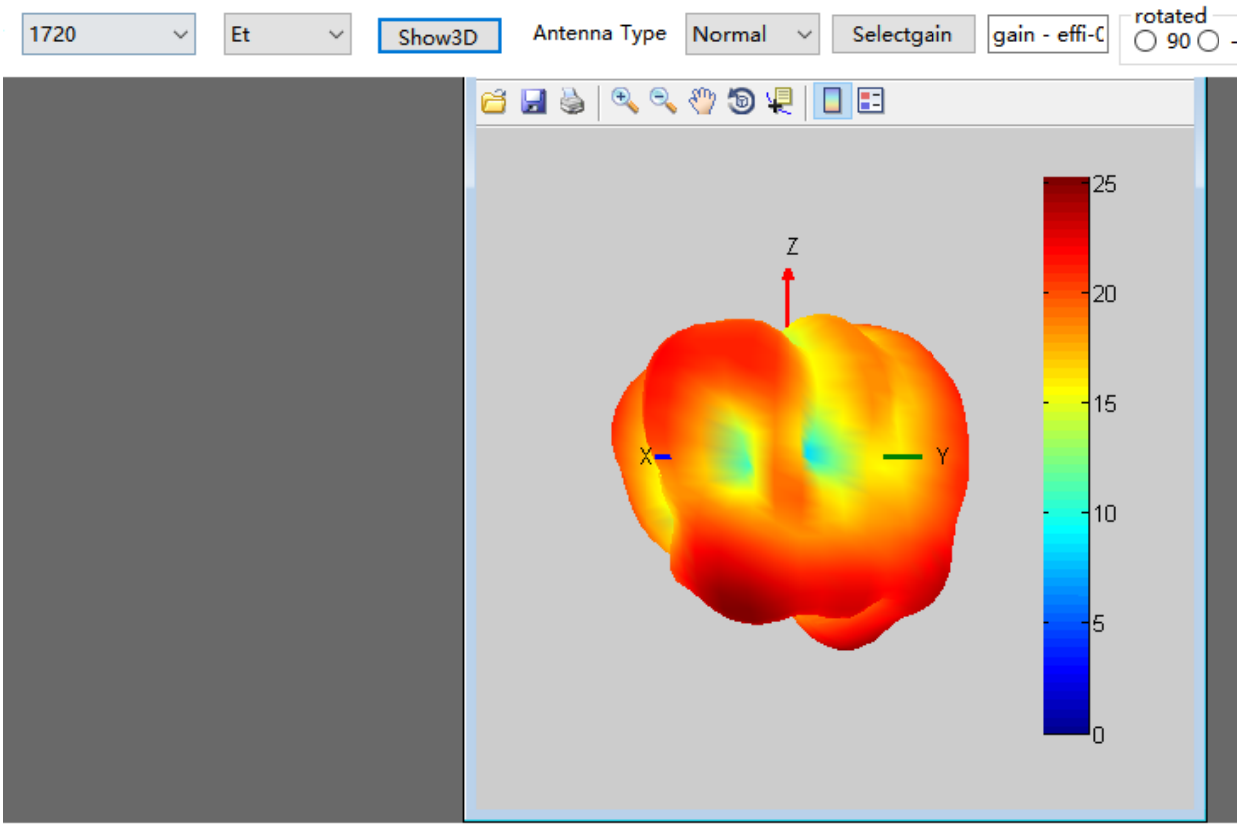
Selectgain
gain - effi-C
rotated
90
Z
X
Y
16
14
12
10
8
6
4
2
0


1720
Et
Show3D
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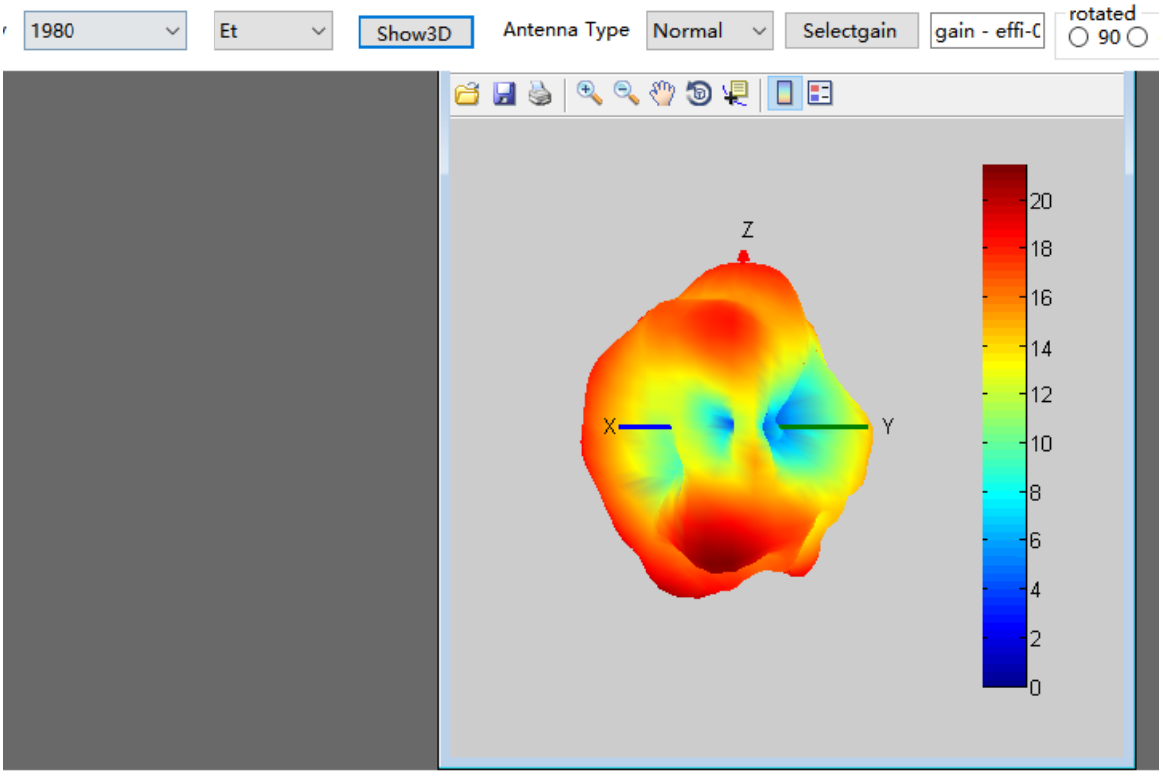
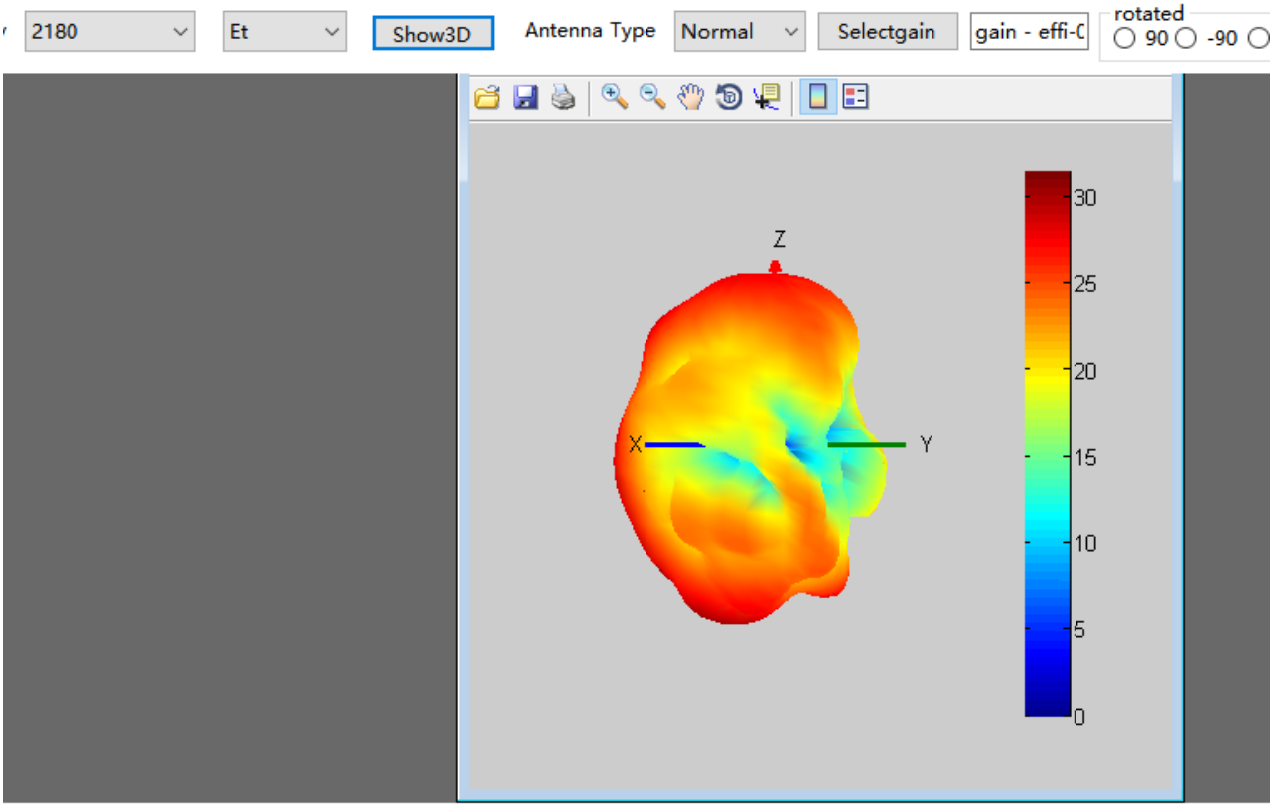
Selectgain
gain - effi-C
rotated
90
Z
X
Y
25
20
15
10
5
0


1980
Et
Show3D
Antenna Type
Normal
Selectgain
gain - effi-C
rotated
90
Z
X
Y
20
18
16
14
12
10
8
6
4
2
0


2180
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Show3D
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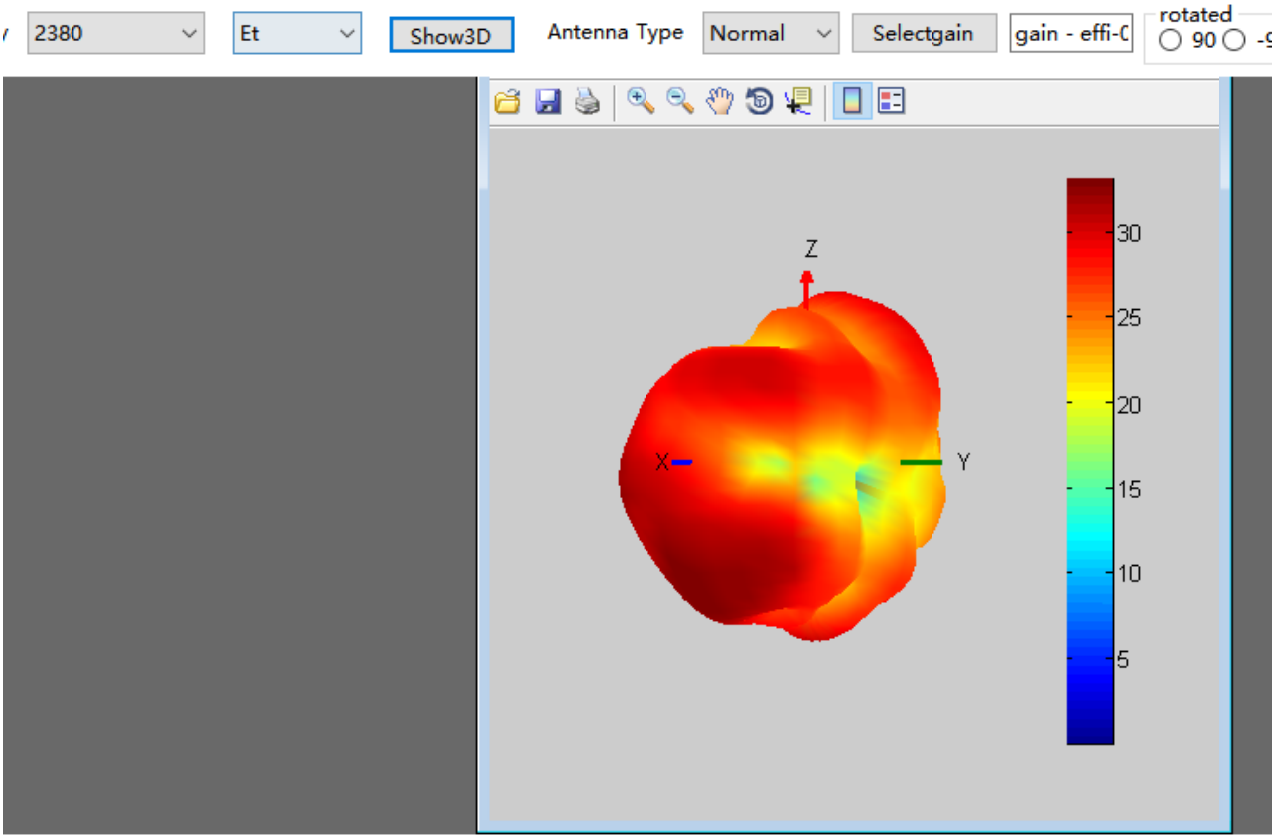
gain - effi-C
rotated
90
-90
Z
X
Y
30
25
20
15
10
5
0


2380
Et
Show3D
Antenna Type
Normal
Selectgain
gain - effi-C
rotated
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Z
X
Y
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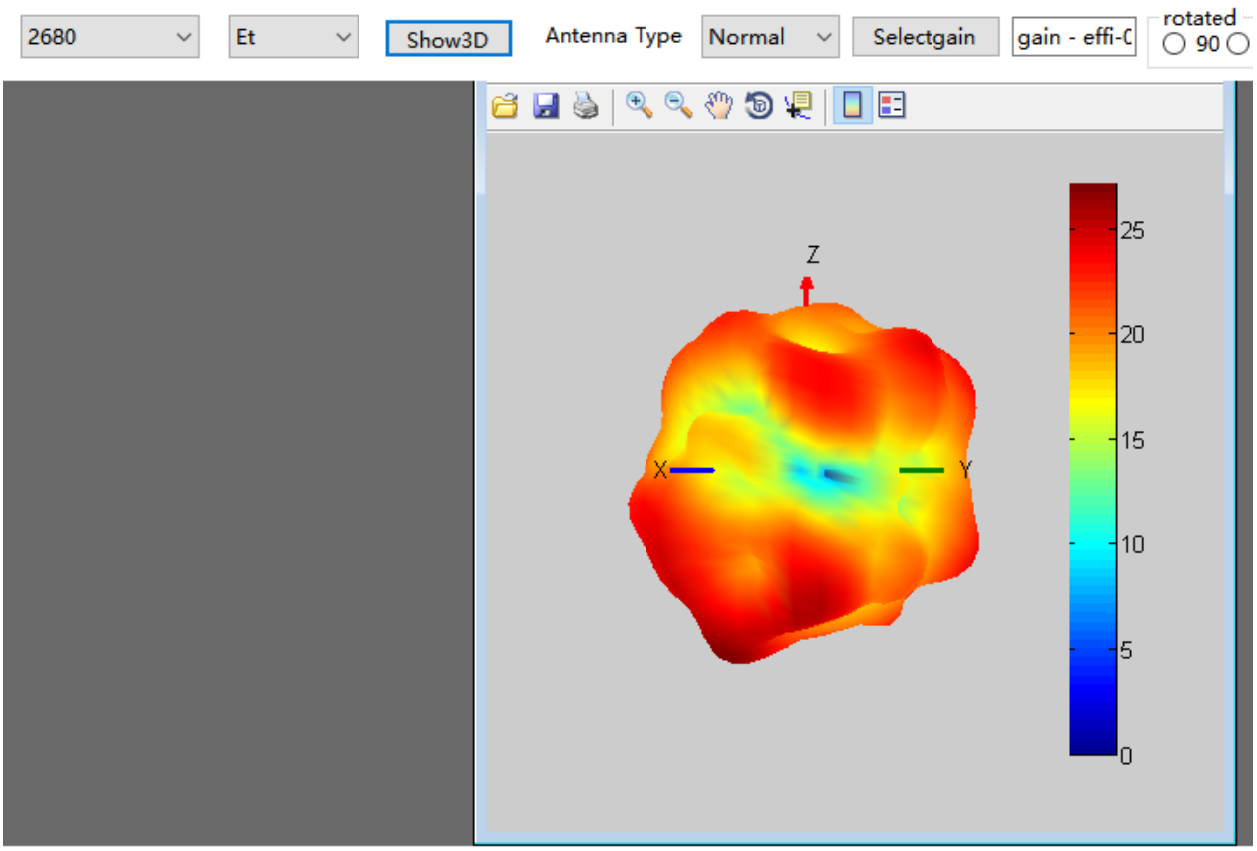
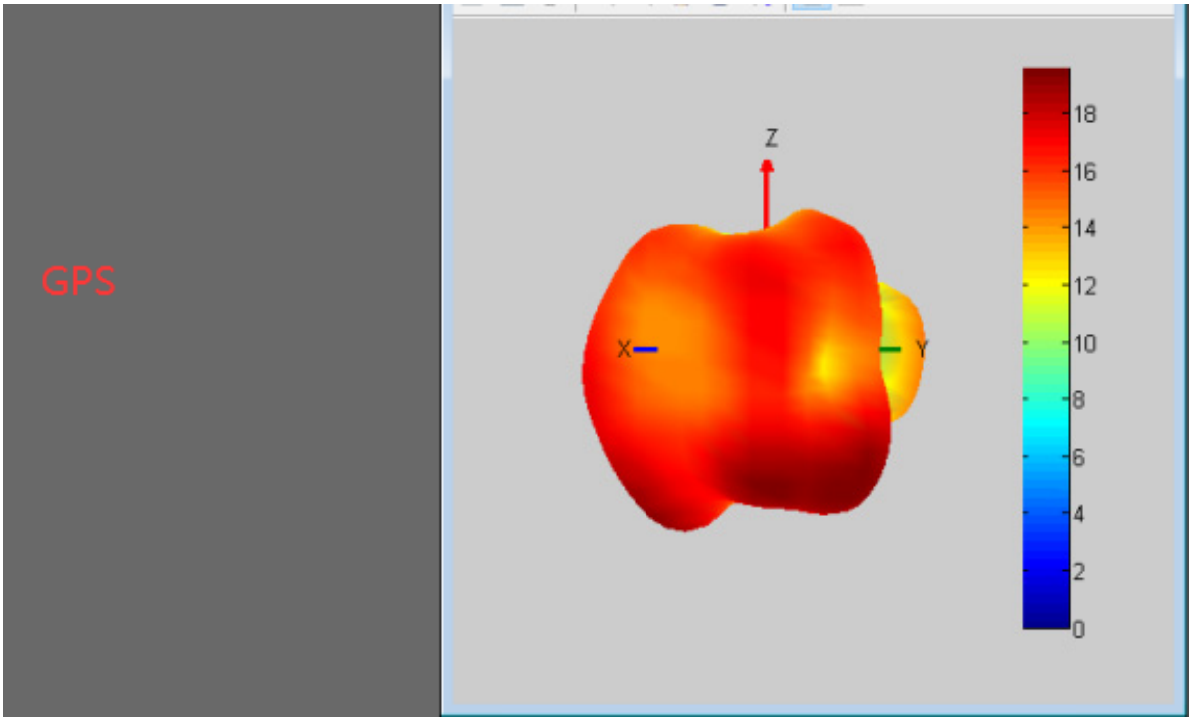
20
15
10
5

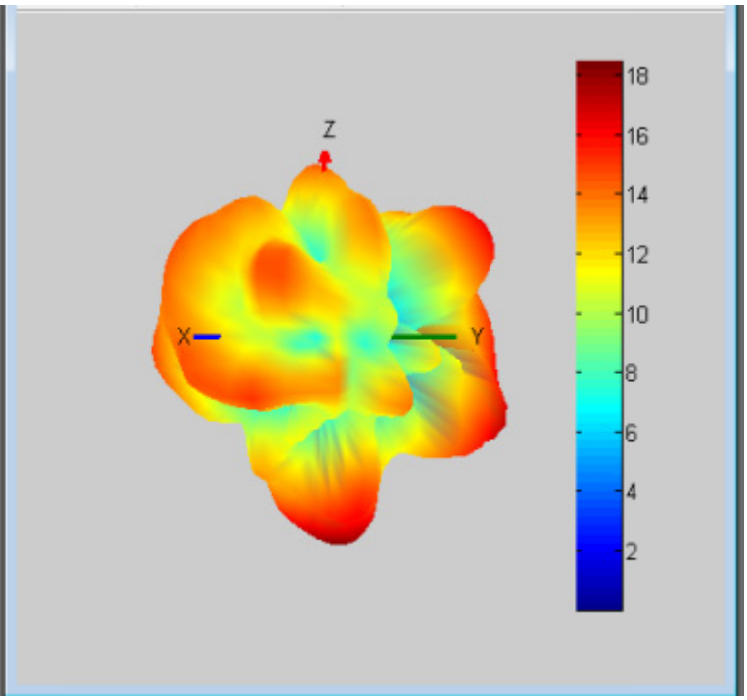



## GPS/WIFI/BT:

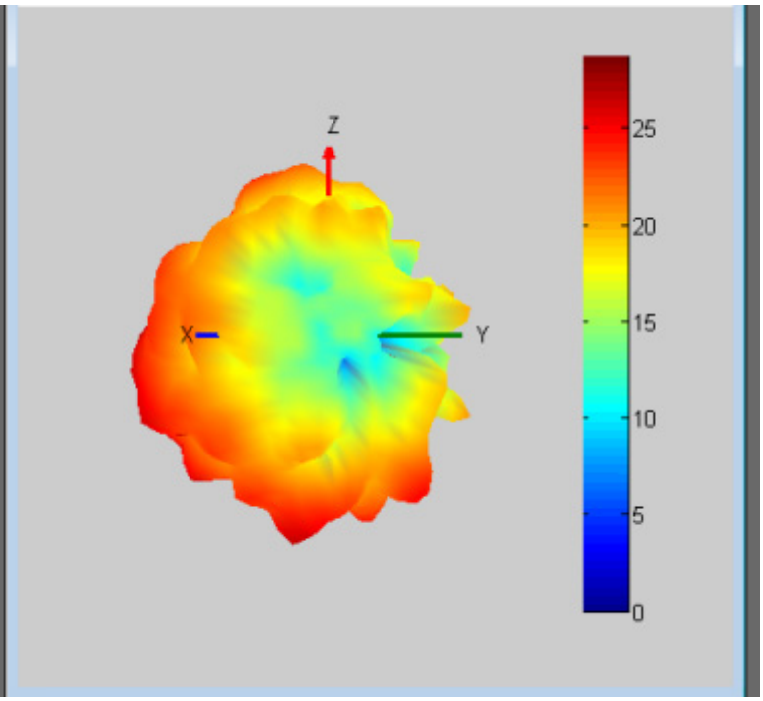
工作频段(**Working frequency band**)：1560~1580MHZ，2400~2500MHZ,5180~8525MHZ



2.4WIFI




5G WIFI

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