

# ***Antenna Test Report***

***SHENZHEN KURUIJIE***

***Customer: 图高***  
***Project: X2***

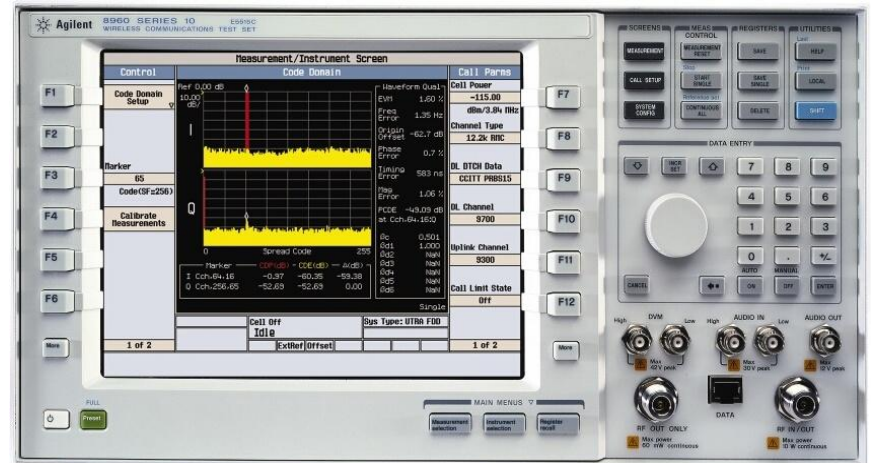
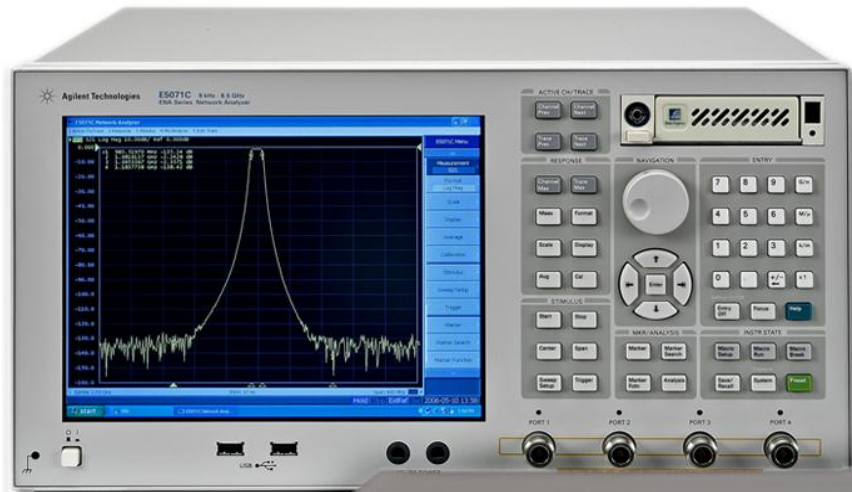
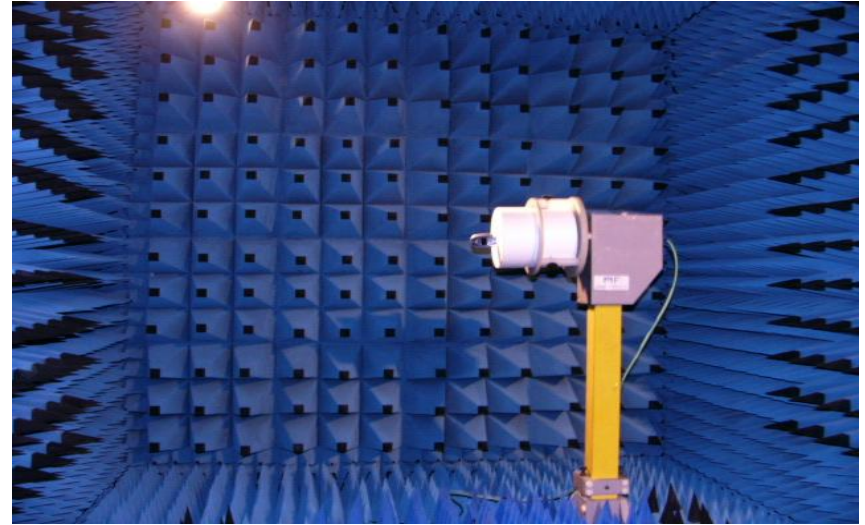
***RF Engineer: 安增侠***  
***Testing Date: 2024.2.20***

# **Index:**

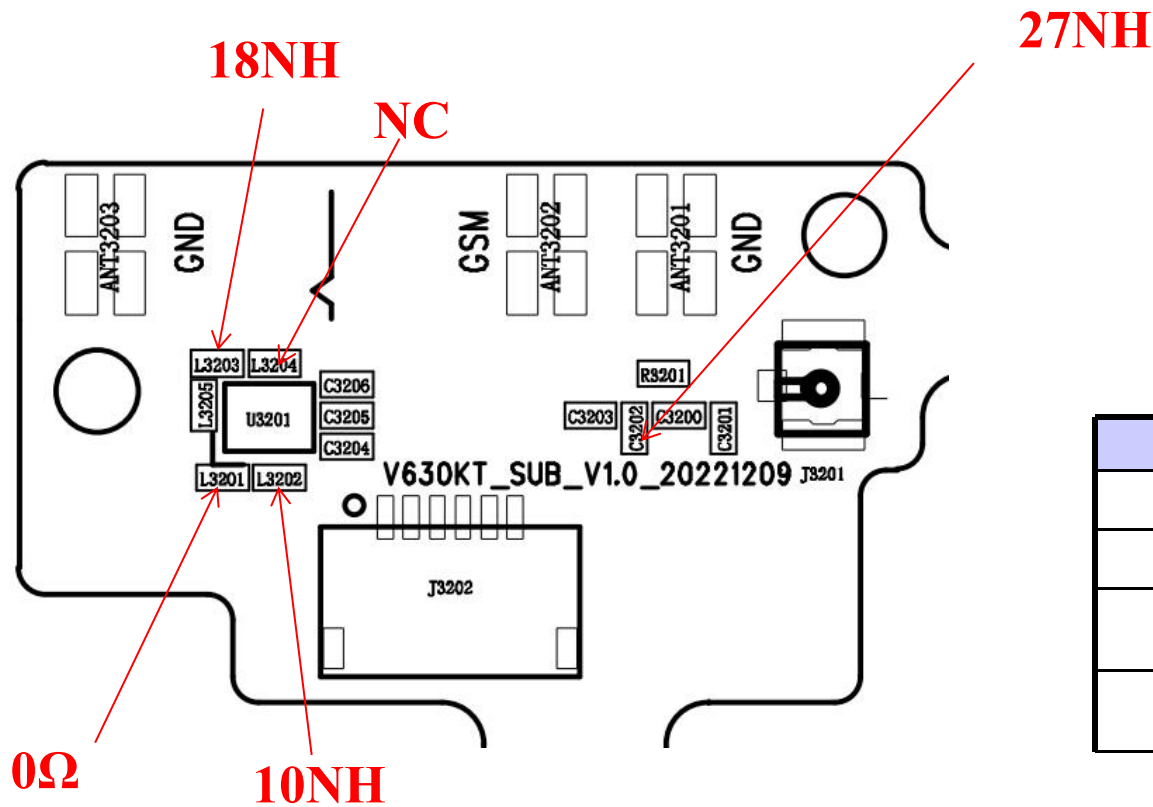
- 1. Testing Item & Equipments**
- 2. Matching Circuits**
- 3. Antenna Conditions**
- 4. Test Data**
- 5. GPS / WIFI / BT Test**
- 6. GPS / WIFI / BT PASSIVE DATA**

# 1. The Equipment of Active Test

- 1: Anechoic Chamber 7x4x3 m (3D)
- 2: Rohde & Schwarz CMW500
- 3: AGILENT 8960 5515C
- 4: Network Analyzer-AGILENT ENA5071B



## 2. Matching Circuits--主天线匹配



| Element | Value |
|---------|-------|
| C3202   | 27NH  |
|         |       |
|         |       |
|         |       |

| 开关匹配逻辑 | 开关路径      | 匹配值  | 2G频率              | 3G频率   | 4G频率        |
|--------|-----------|------|-------------------|--------|-------------|
|        | RF1=L3201 | 0Ω   | 850/900/1800/1900 | W2/4/5 | B2/4/5/7/66 |
|        | RF2=L3202 | 10NH |                   |        | B12/17/28AB |
|        | RF3=L3203 | 18NH |                   |        | B71         |
|        | RF4=L3204 | NC   |                   |        | B41         |

## 2. Matching Circuits-三合一天线匹配



此处改为NC

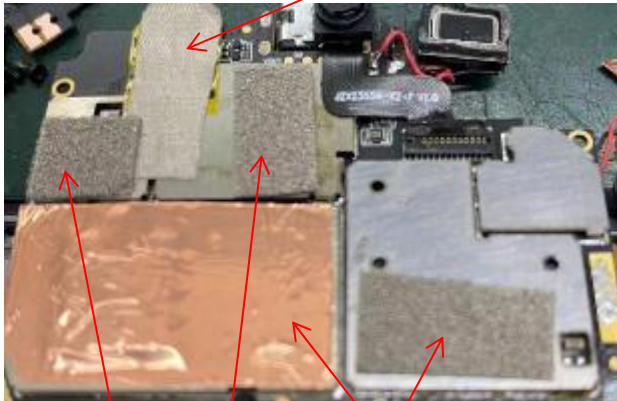
串 $0\Omega$

## 2. Matching Circuits-分集天线匹配

分集天线匹配无改动

### 3. Antenna Conditions

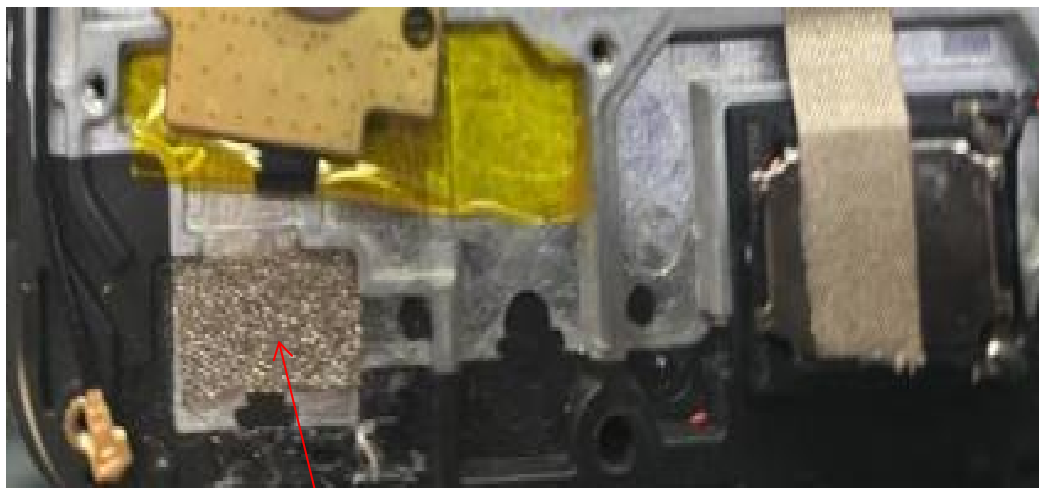
耳机座接地处理  
(导电布需完全盖住耳机座)



屏蔽盖必须封孔，不然对低频灵敏度影响有5DB左右干扰！！

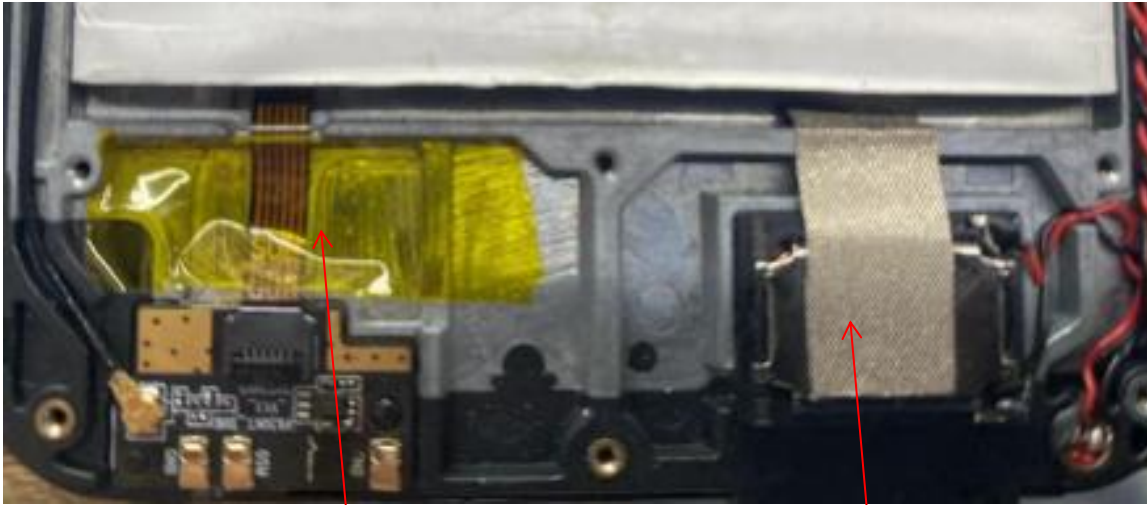
主板使用导电泡棉接地

屏蔽盖使用铜箔封孔处理



小板使用导电泡棉接地处理





小板排线使用绝缘胶纸贴住，  
防止翘起来影响中频灵敏度

喇叭需用导电布接地

# 4. Test Data

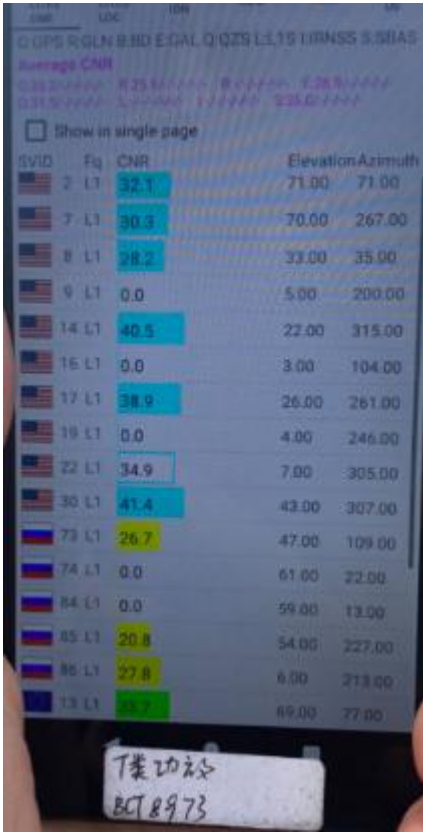
| 2G/3G   | TRP   | TIS（灭）  | TIS（亮）  | 4G       | TRP   | TIS（灭） | TIS（亮） | 4G              | TRP   | TIS（灭） | TIS（亮） |
|---------|-------|---------|---------|----------|-------|--------|--------|-----------------|-------|--------|--------|
| GSM850  | 26.2  |         |         | LTEB2    | 17.15 |        |        | LTEB66          | 18.09 |        |        |
|         | 26.74 | -102.38 | -101.68 |          | 17.29 | -91.26 | -90.98 |                 | 18.18 | -91.17 | -90.53 |
| GSM900  | 25.33 |         |         | LTEB4    | 18.32 |        |        | LTEB71          | 16.15 |        |        |
|         | 23.22 | -97.4   | -96.22  |          | 18.54 | -91.74 | -90.85 |                 | 17.32 | -89.59 | -88.05 |
| DCS1800 | 24.6  |         |         | LTEB5    | 17.23 |        |        | LTEB41<br>（10M） | 20.81 |        |        |
|         | 25.15 | -103.52 | -103.1  |          | 18.34 | -91.14 | -90.59 |                 | 21.33 | -90.21 | -89.17 |
| PCS1900 | 25.2  |         |         | LTEB7    | 17.93 |        |        |                 |       |        |        |
|         | 25.1  | -102.34 | -101.68 |          | 17.95 | -90.45 | -89.72 |                 |       |        |        |
| WCDMAB2 | 17.22 |         |         | LTEB12   | 17.18 |        |        |                 |       |        |        |
|         | 17.28 | -103.43 | -102.91 |          | 17.21 | -90.91 | -89.33 |                 |       |        |        |
| WCDMAB4 | 18.31 |         |         | LTEB17   | 17.15 |        |        |                 |       |        |        |
|         | 18.55 | -103.43 | -103.43 |          | 17.35 | -90.96 | -89.52 |                 |       |        |        |
| WCDMAB5 | 17.17 |         |         | LTEB28AB | 17.19 |        |        |                 |       |        |        |
|         | 17.38 | -103.26 | -102.16 |          | 18.02 | -91.44 | -90.06 |                 |       |        |        |
|         |       |         |         |          | 18.22 |        |        |                 |       |        |        |
|         |       |         |         |          | 18.36 | -90.12 | -89.16 |                 |       |        |        |

# 5. GPS / WIFI / BT

## GPS实测报告

| 位 置  | 测试结果                       |
|------|----------------------------|
| 我司楼顶 | 冷启动80秒定位,最大CN值41,可使用星数5颗以上 |

|     | Wifi 2.4G b/11M |        |        |
|-----|-----------------|--------|--------|
|     | 1               | 6      | 11     |
| TRP | 11.14           | 12.35  | 11.48  |
| TIS | -82.35          | -81.46 | -81.64 |
|     | Wifi 5G a/54M   |        |        |
|     | 36              | 165    |        |
| TRP | 12.33           | 10.12  |        |
| TIS | -71.34          | -70.69 |        |

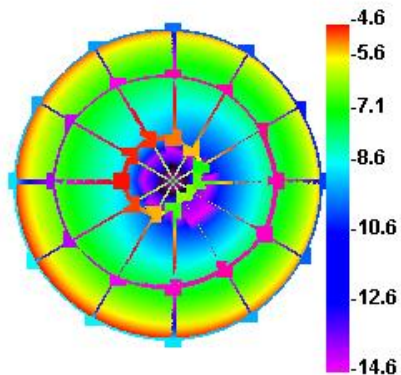


# 6. 天线增益

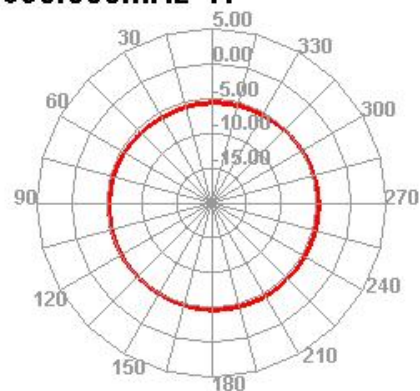
| 主天线                      | 频率段          | 增益值（dBi） |
|--------------------------|--------------|----------|
| B2/WCDMAII/GSM1900       | 1850-1900MHZ | 1.0      |
| B4/WCDMA IV              | 1710-2155    | 1.5      |
| B5/WCDMA V/GSM850/GSM900 | 824-894MHZ   | -1.3     |
| B7                       | 2500-2600MHZ | 1.1      |
| B12                      | 699-746MHZ   | -3.0     |
| B17                      | 704-746MHZ   | -3.0     |
| B28AB                    | 703-803MHZ   | -3.0     |
| B66                      | 1710-2200MHZ | 1.5      |
| B41                      | 2496-2690MHZ | 1.1      |
| B71                      | 663-652MHZ   | -3.8     |
| GSM1800                  | 1710-1880MHZ | 1.5      |

| 小天线            | 频率段           | 增益值（dBi） |
|----------------|---------------|----------|
| wifi2.4/<br>BT | 2400-2500MHZ  | 1.0      |
| wifi5.8/<br>BT | 51500-5850MHZ | 0.5      |
| GPS            | 1575.42MHZ    | 0.3      |

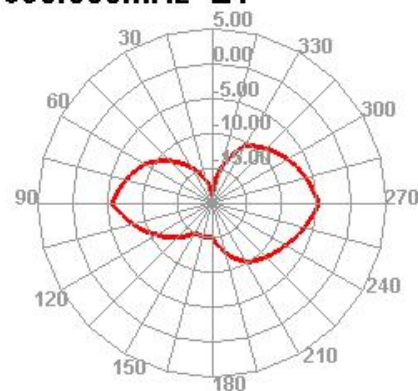
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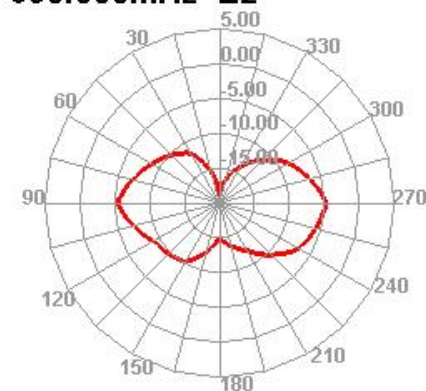
690.000MHz H



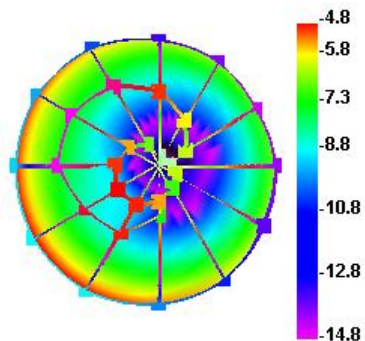
690.000MHz E1



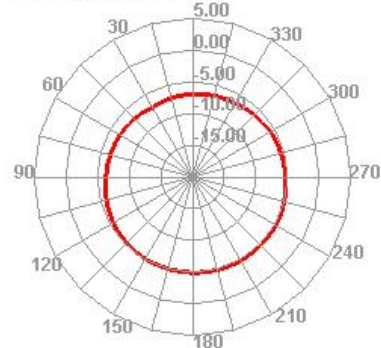
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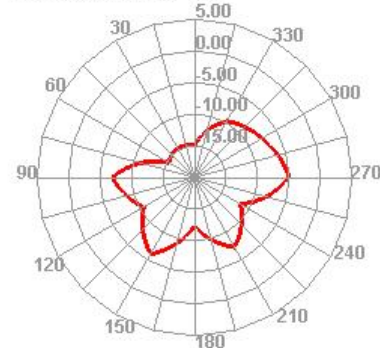
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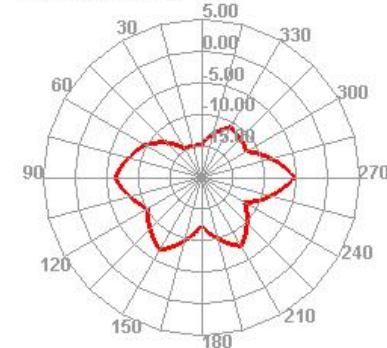
730.000MHz H



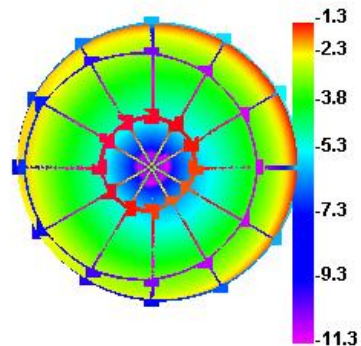
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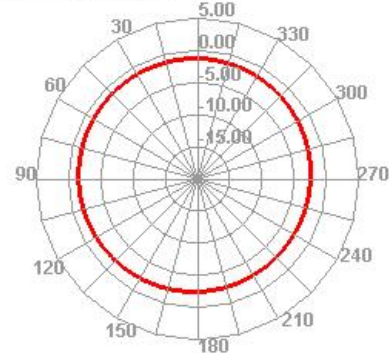
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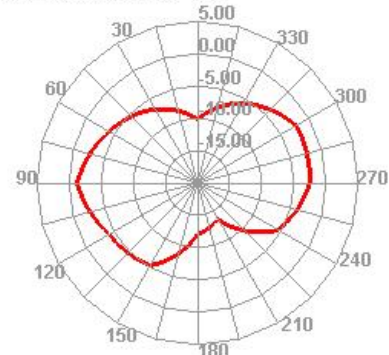
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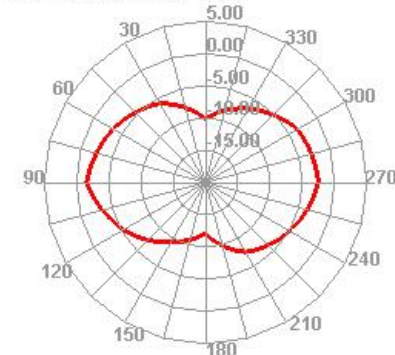
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850.000MHz E1

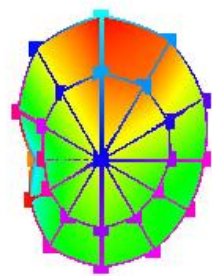


850.000MHz E2

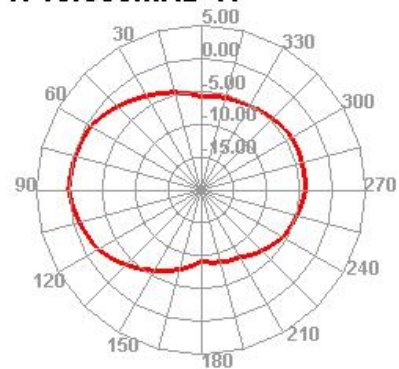




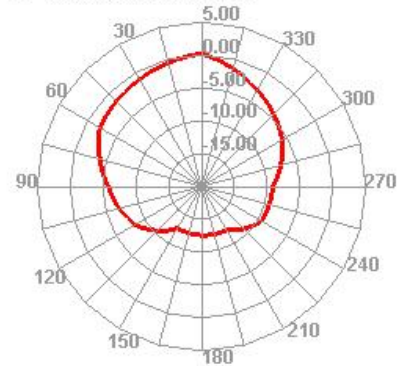
**1710.000MHz**



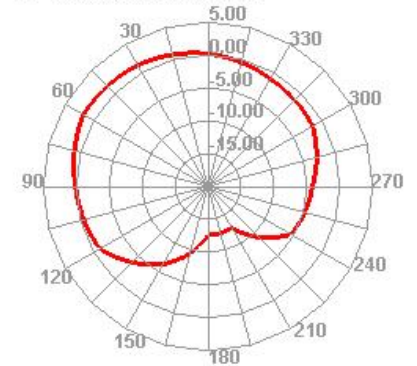
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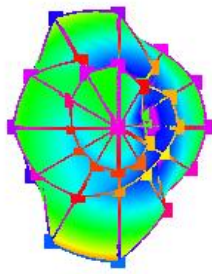
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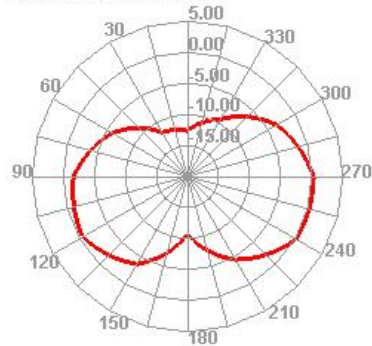
**1710.000MHz E2**



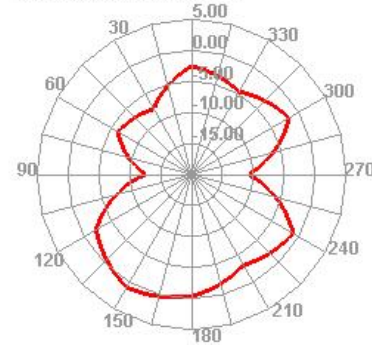
**1990.000MHz**



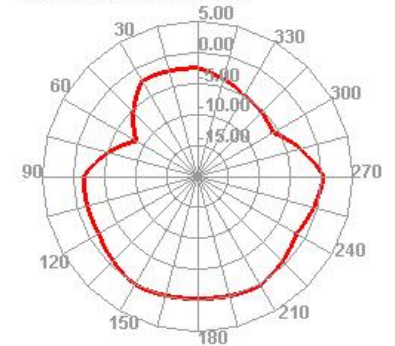
**1990.000MHz H**



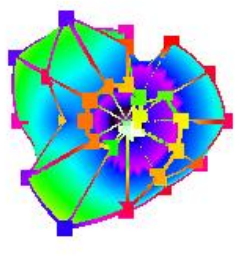
**1990.000MHz E1**



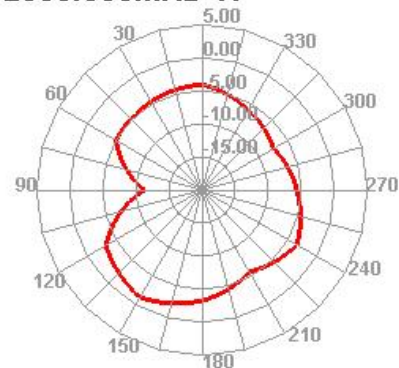
**1990.000MHz E2**



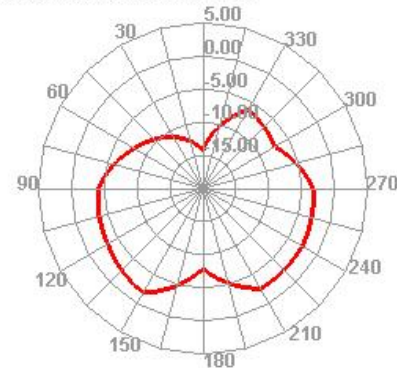
**2550.000MHz**



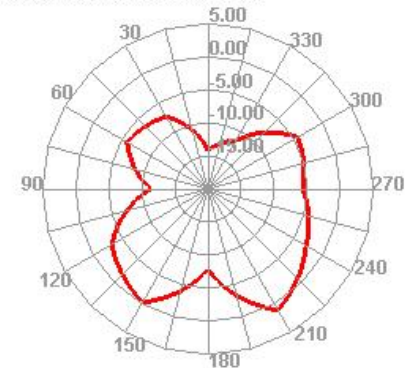
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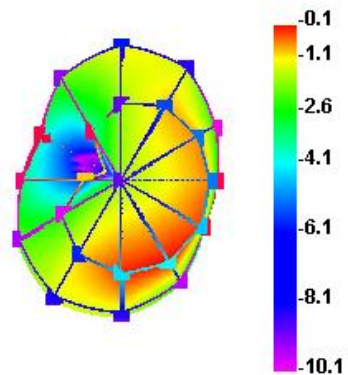
**2550.000MHz E1**



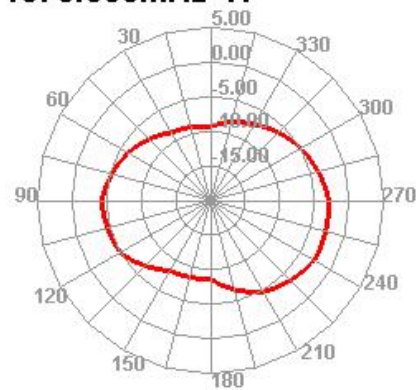
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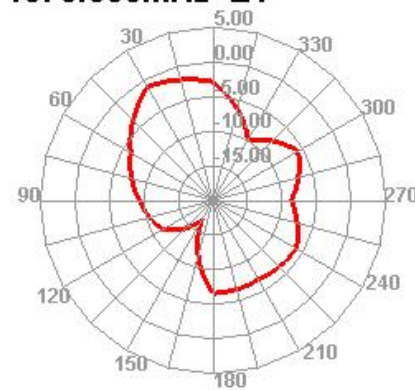
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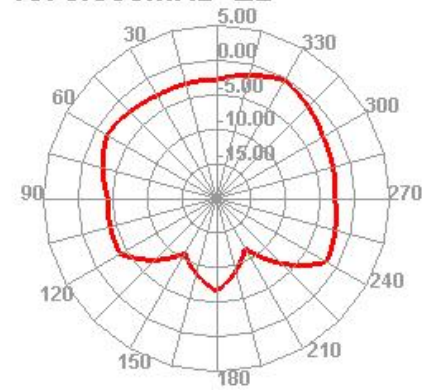
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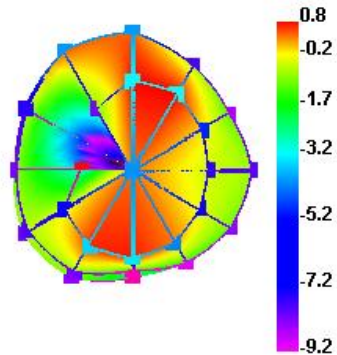
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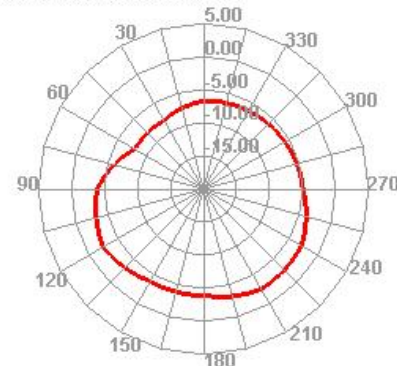
1575.000MHz E2



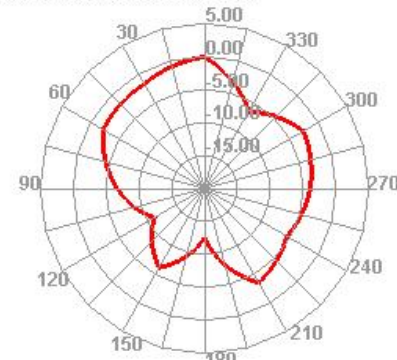
2450.000MHz



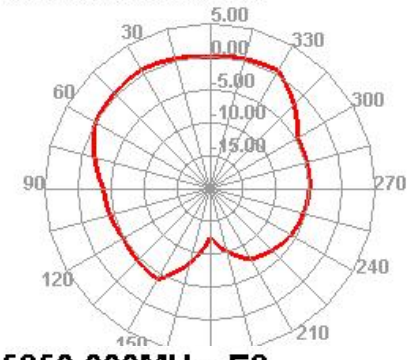
2450.000MHz H



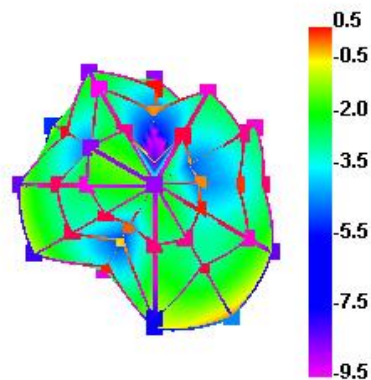
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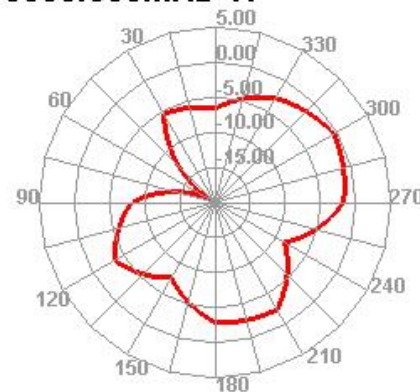
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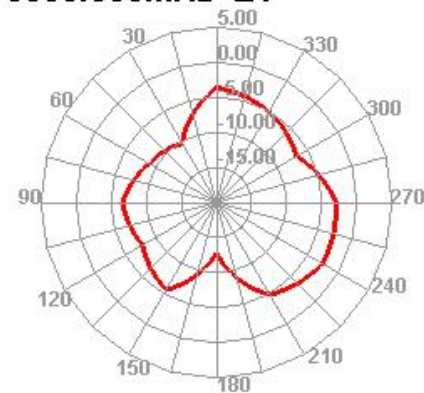
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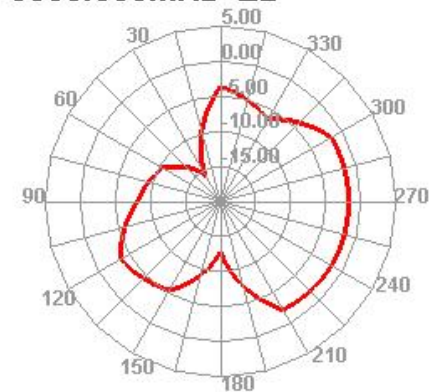
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5850.000MHz E1

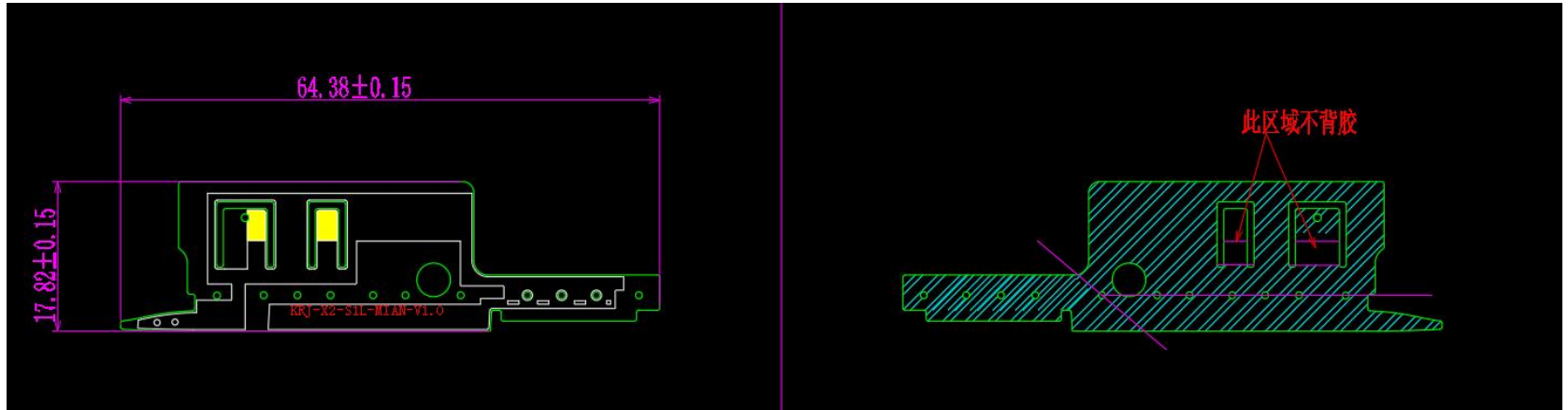


5850.000MHz E2



## 6.drawing sheet

### 主天线





## 分集天线



## 三合一天线

