

# 深圳市八方达通信有限公司

## Z6501E天线测试报告

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工程：毛宇峥

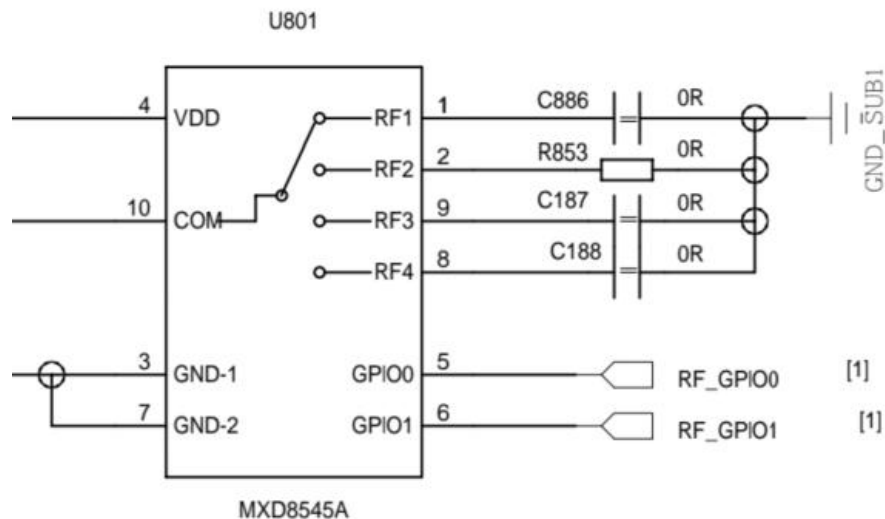
测试日期：2022-10-11

工程电话:13424326585

# 天线频段设计

|    |        |                                                    |             |
|----|--------|----------------------------------------------------|-------------|
| 射频 | 网络模式   | GSM+W+BT+WIFI+GPS                                  |             |
|    | 频段要求   | GSM: B2 B3 B5 B8<br>WCDMA: B2 B5<br>LTE: B2 B5 B66 |             |
|    | 通讯天线数量 | 主天线                                                | GSM+W+LTE   |
|    |        | 分集天线                                               |             |
|    |        | 三合一天线                                              | GPS+WIFI+BT |

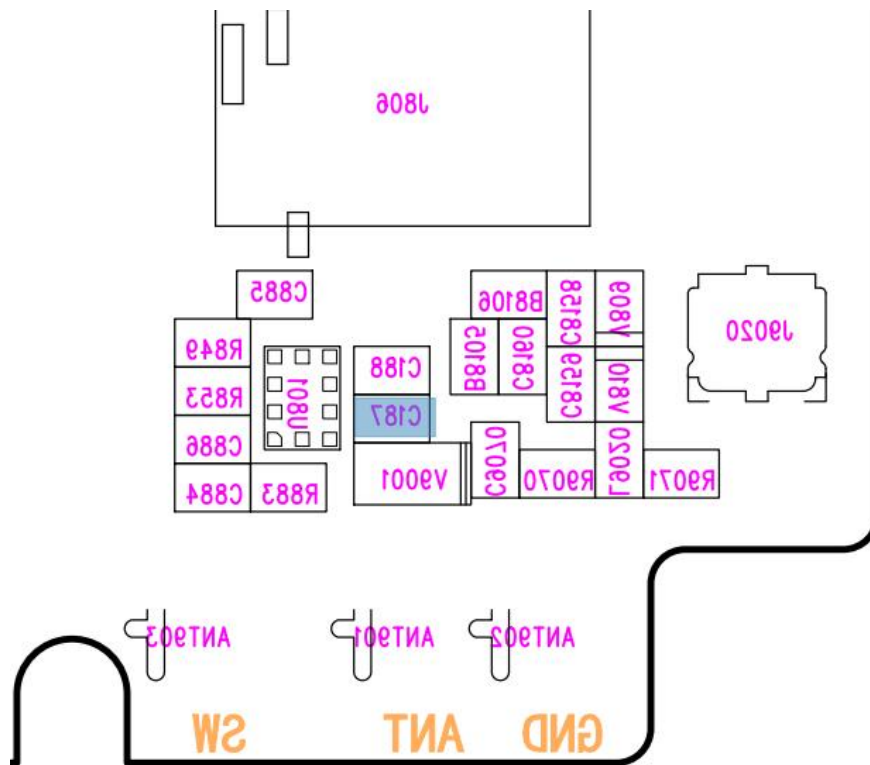
# 开关逻辑说明



RF1: GSM(B2/B3/B8) WCDMA(B2/B5) LTE(B2/B66)

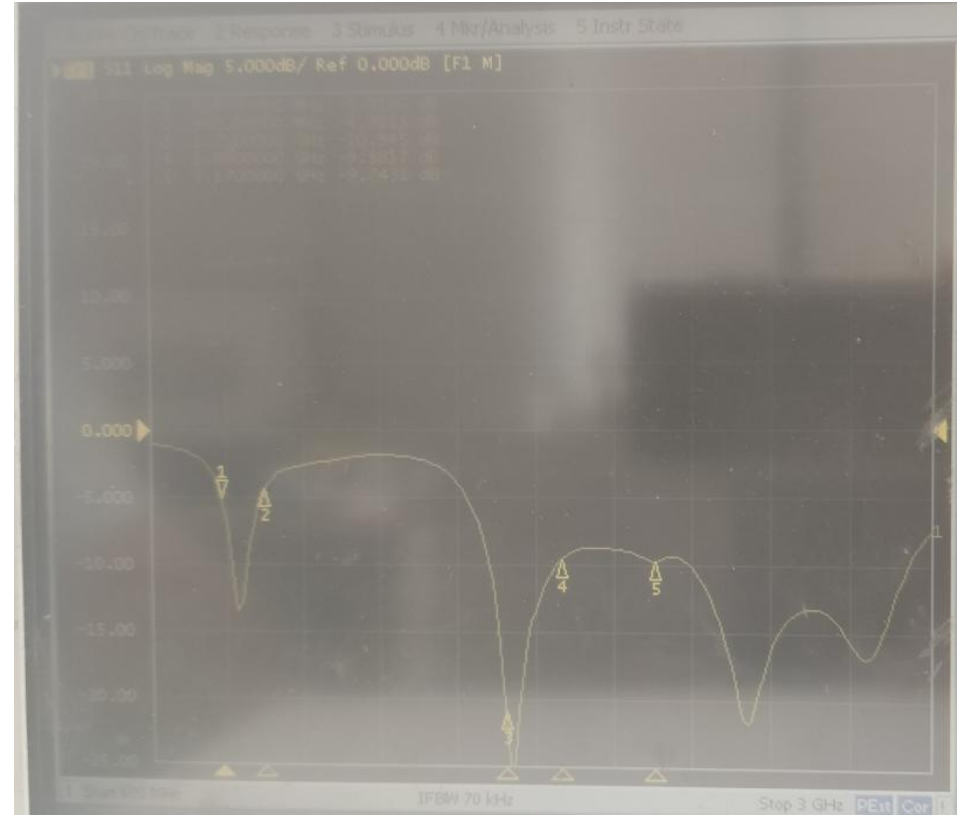
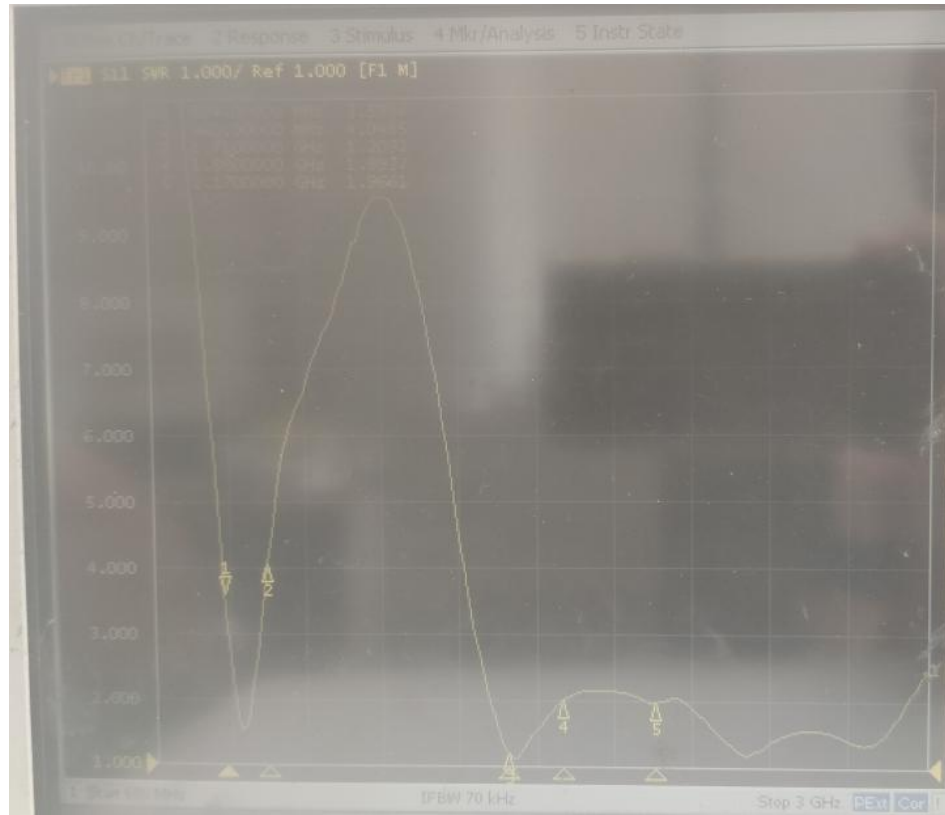
RF2: GSM-B5 WCDMA-B5 LTE-B5

# 天线匹配电路说明

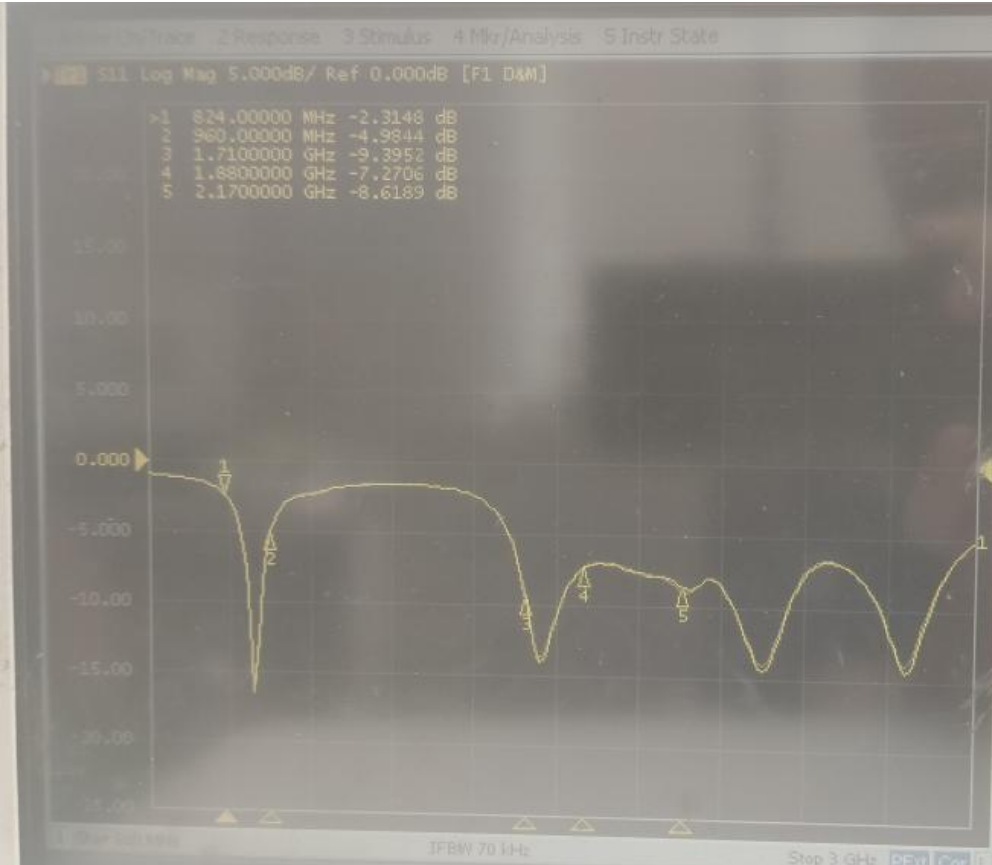
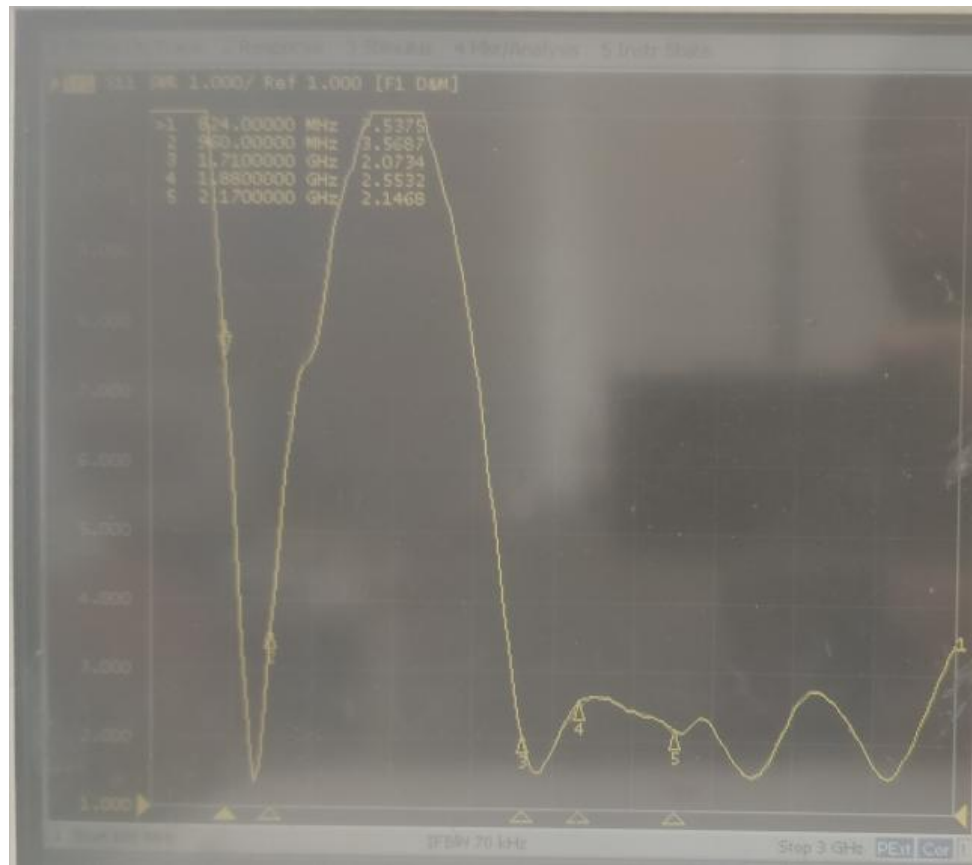


|       |       |
|-------|-------|
| L9020 | 10nH  |
| C886  | 3.6nH |
| R853  | 8.2nH |

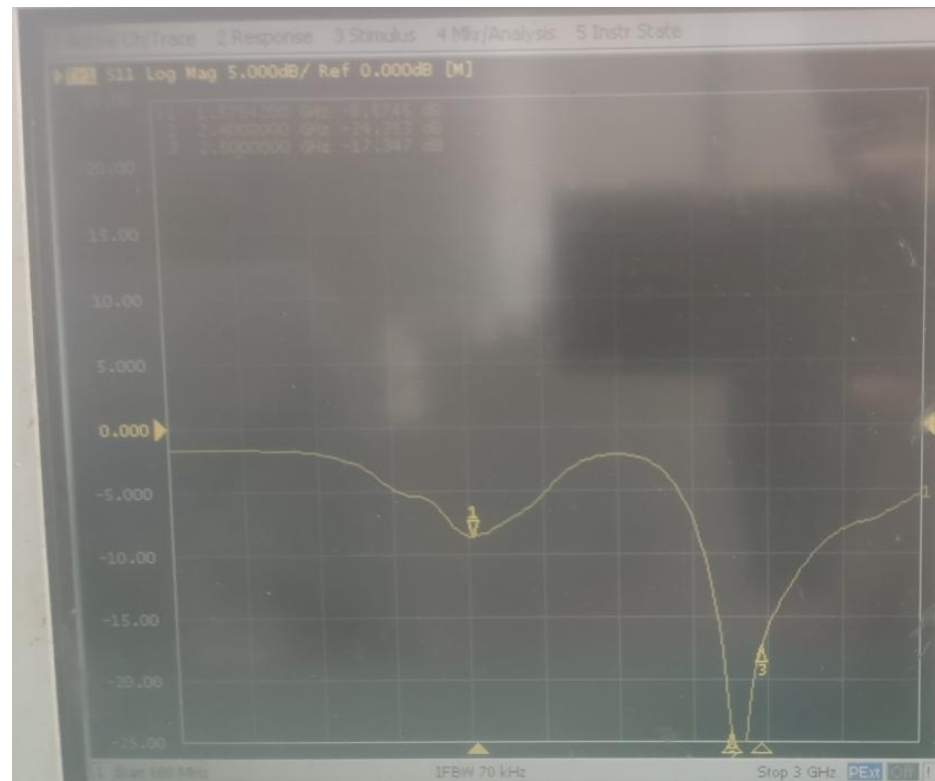
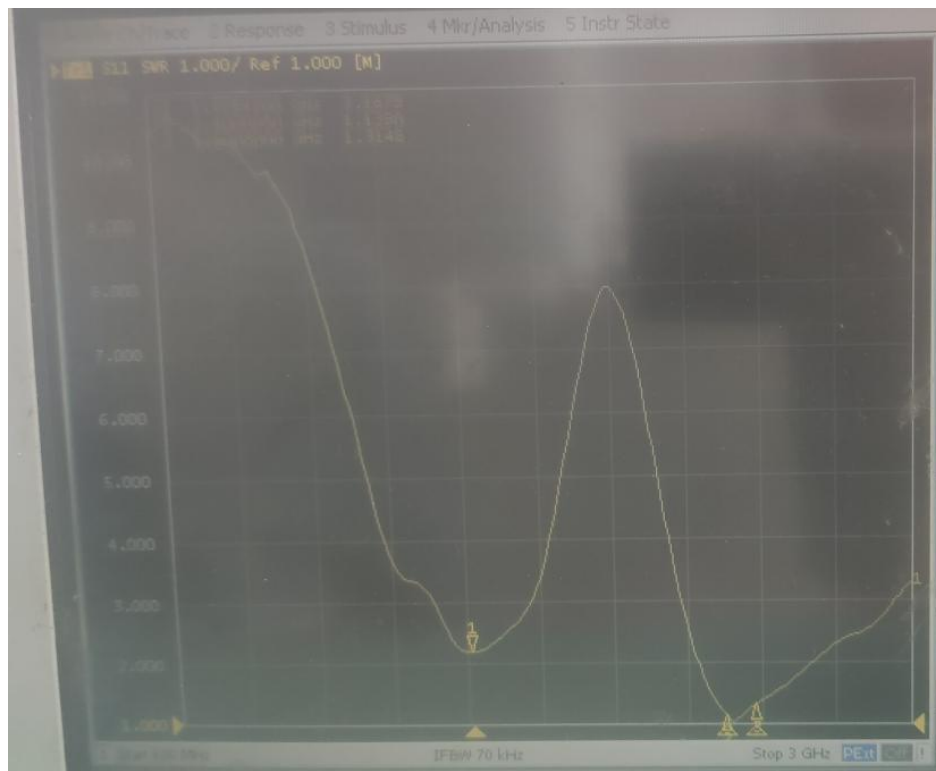
# 主天线无源数据



# 分集天线无源数据



# 三合一天线无源数据



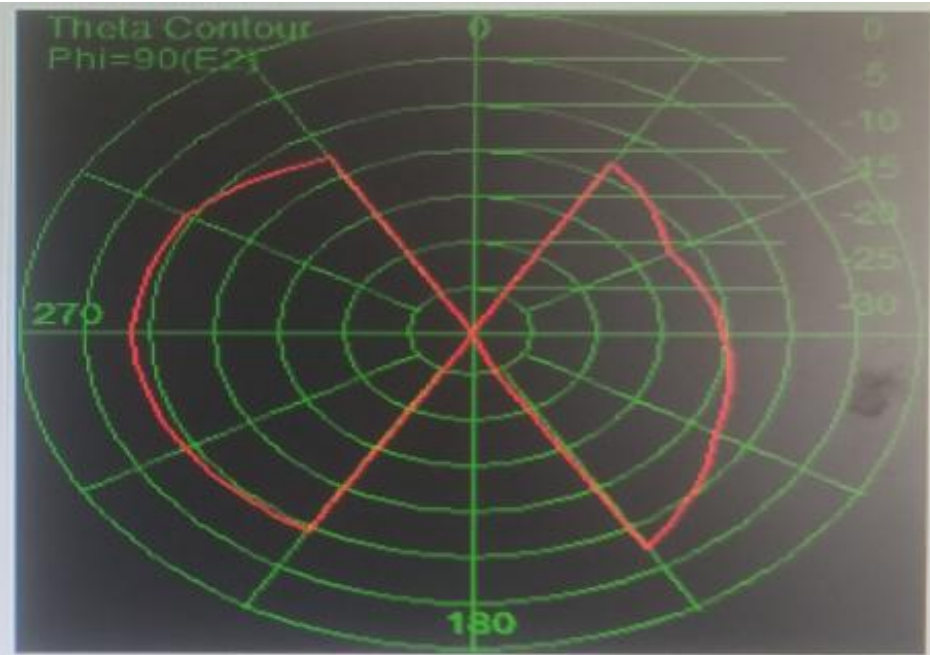
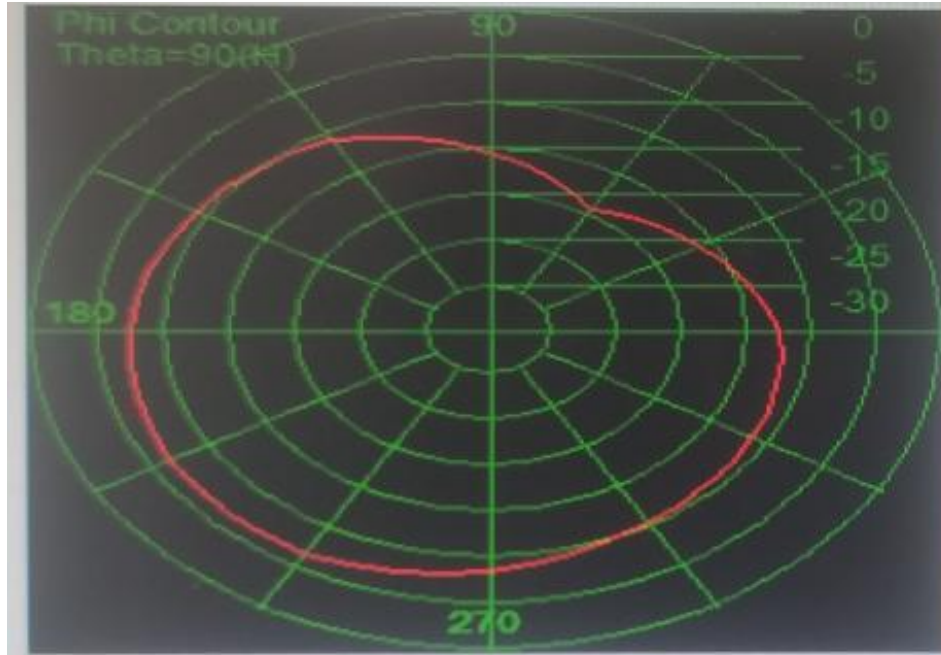
# 天线增益

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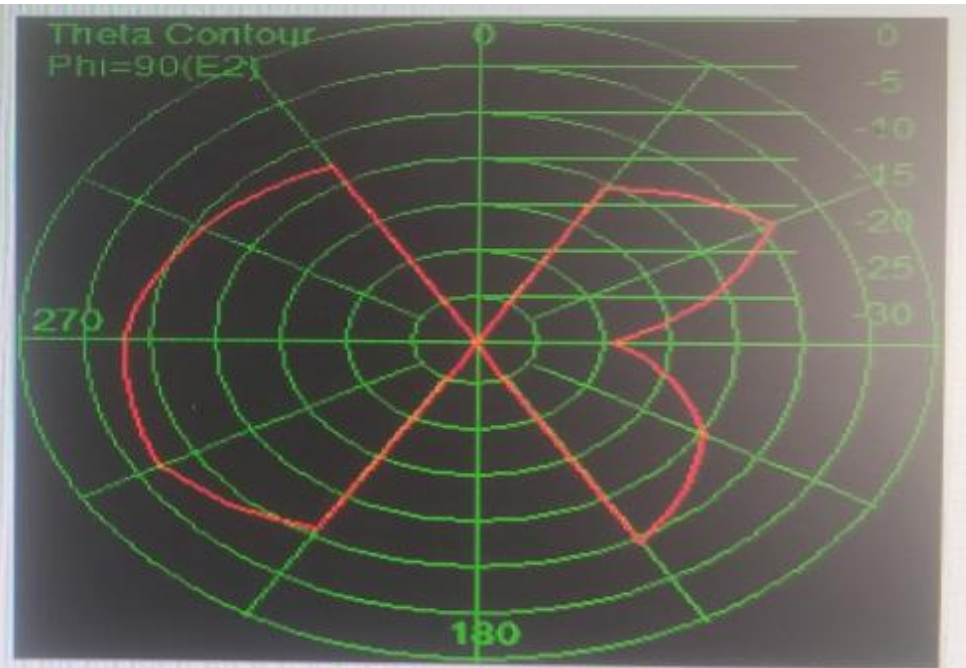
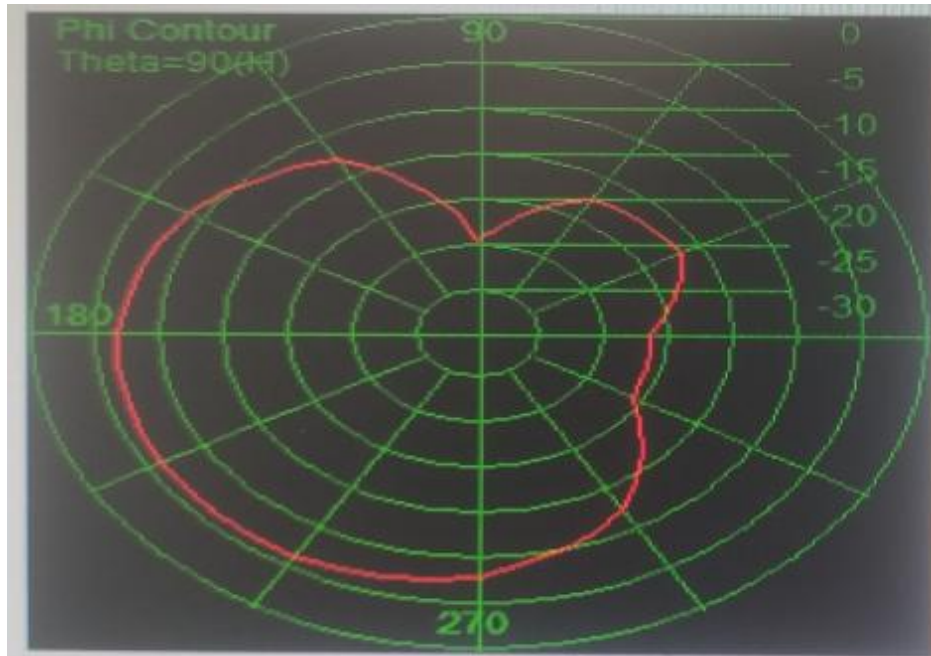
| Frequency(MHZ) | Average Gain(dB) | Peak Gain(dBi) |
|----------------|------------------|----------------|
| GSM850         | 0.31             | 0.74           |
| GSM900         | 0.35             | 0.79           |
| DCS1800        | 0.42             | 0.73           |
| PCS1900        | 0.51             | 0.83           |
| WCDMA850       | 0.33             | 0.75           |
| WCDMA1900      | 0.54             | 0.86           |
| LTE B2         | 0.52             | 0.83           |
| LTE B5         | 0.35             | 0.77           |
| LTE B66        | 0.55             | 0.85           |
| GPS            | 0.21             | 0.67           |
| WIFI/BT        | 0.25             | 0.34           |



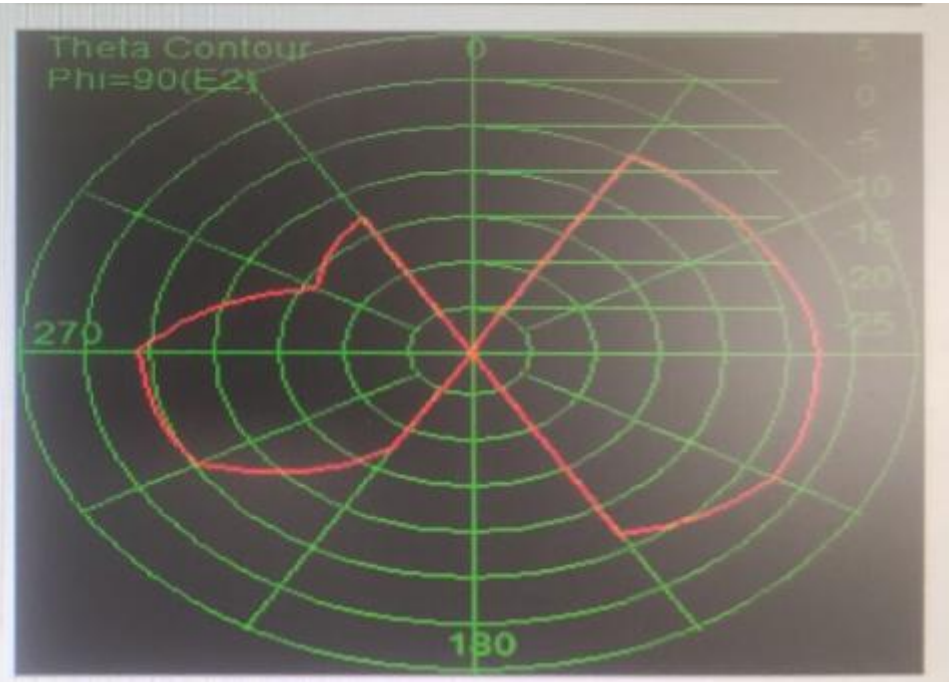
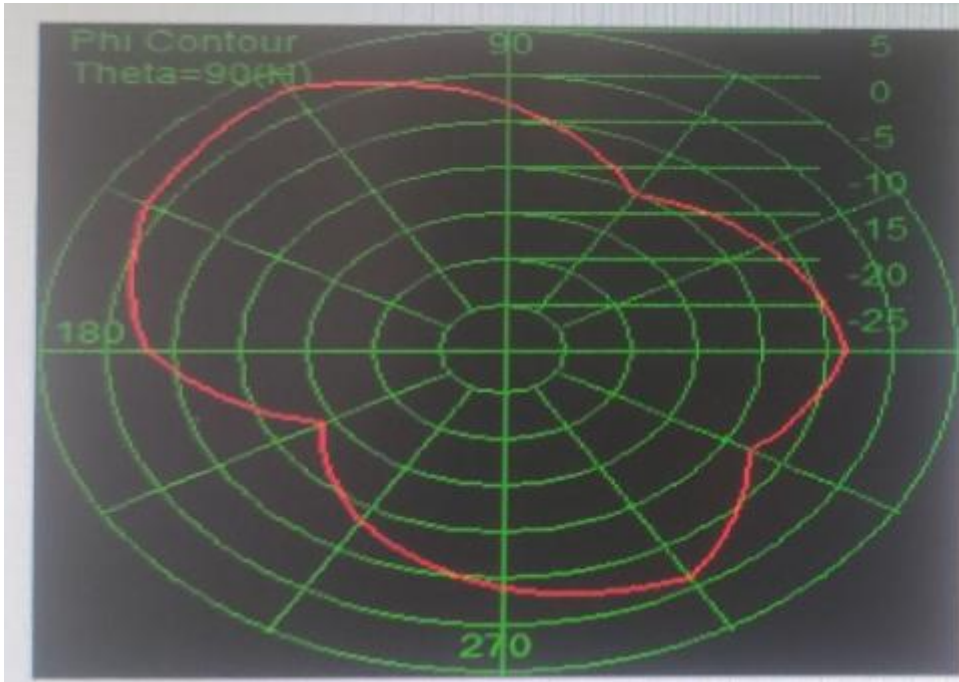
# 850MHZ增益波形图



# 900MHZ增益波形图

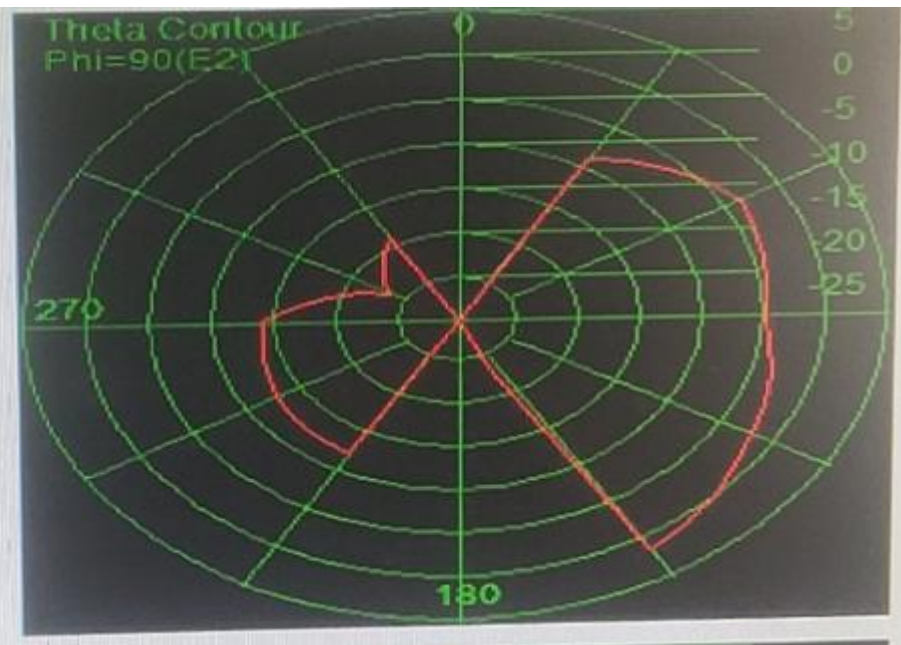
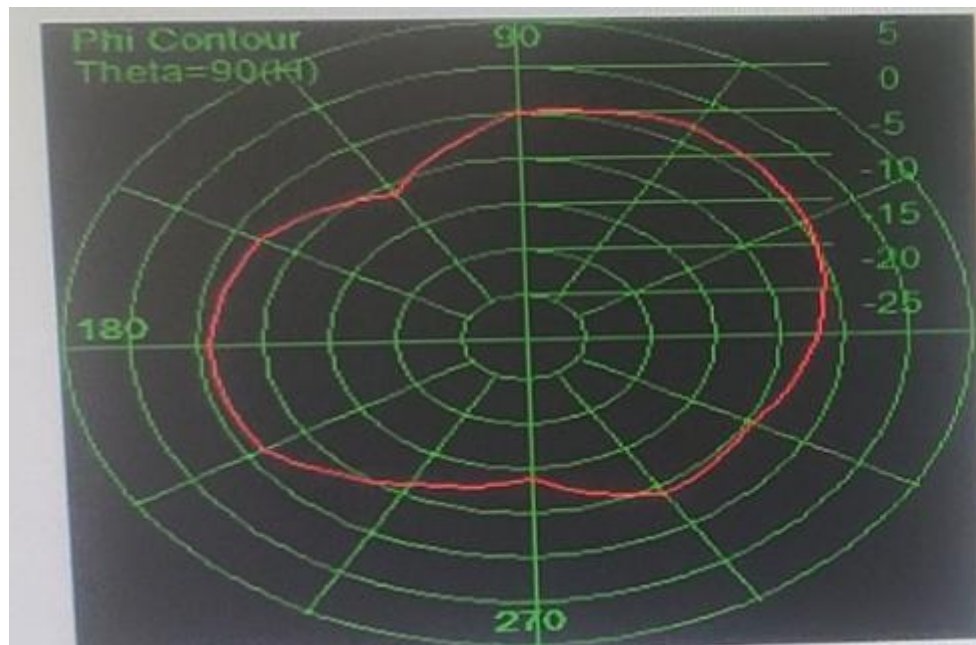


# 1800MHZ增益波形图

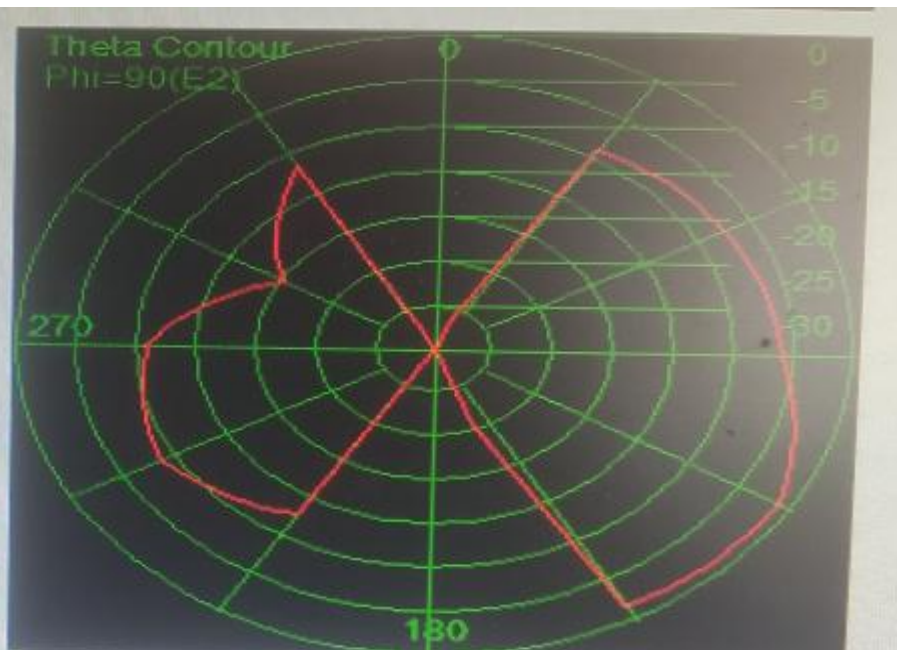
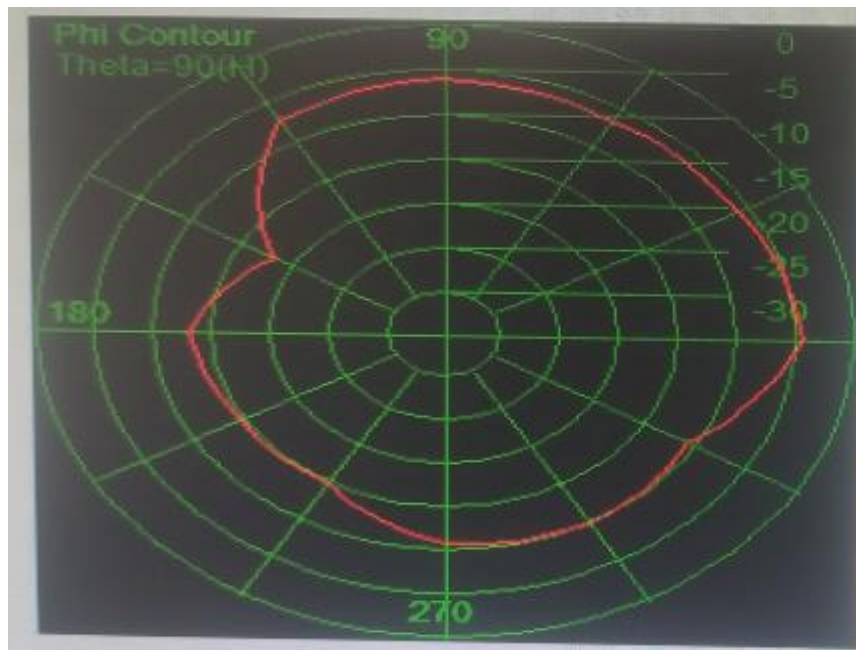




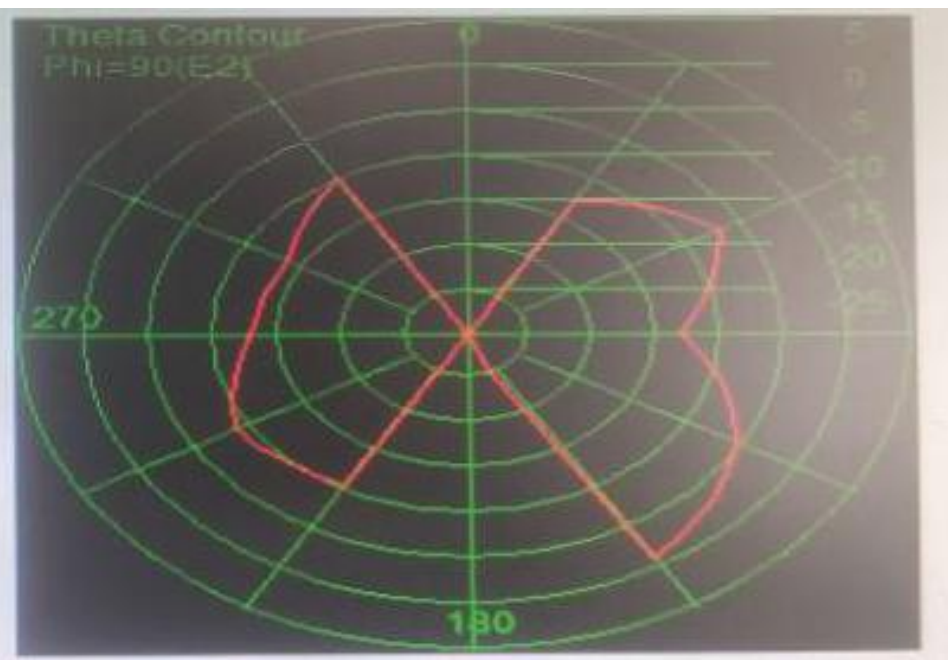
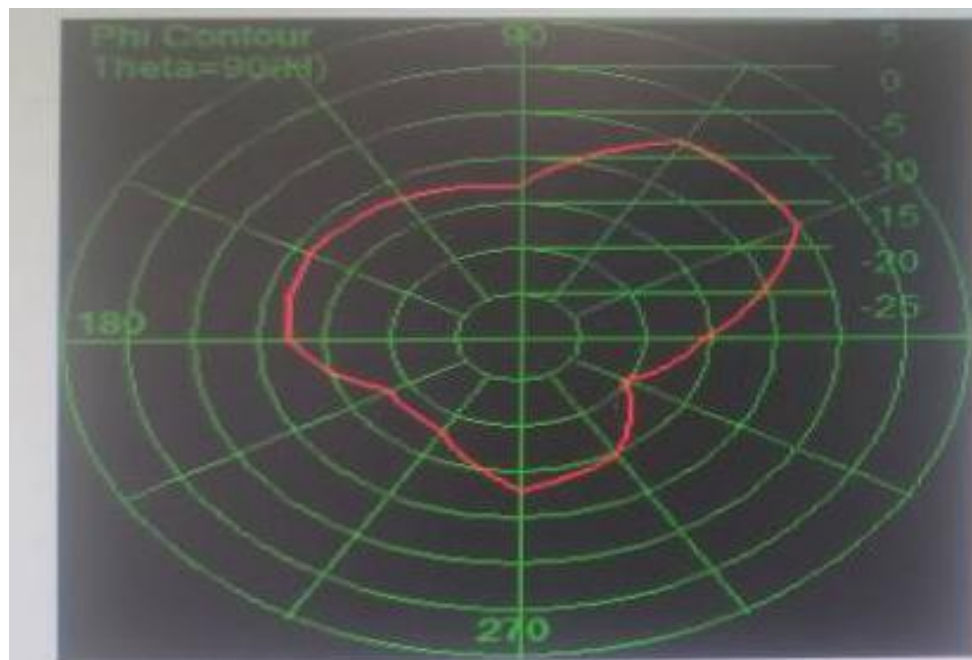
# 1900MHZ增益波形图



# 2100MHZ增益波形图



# WiFi增益波形图

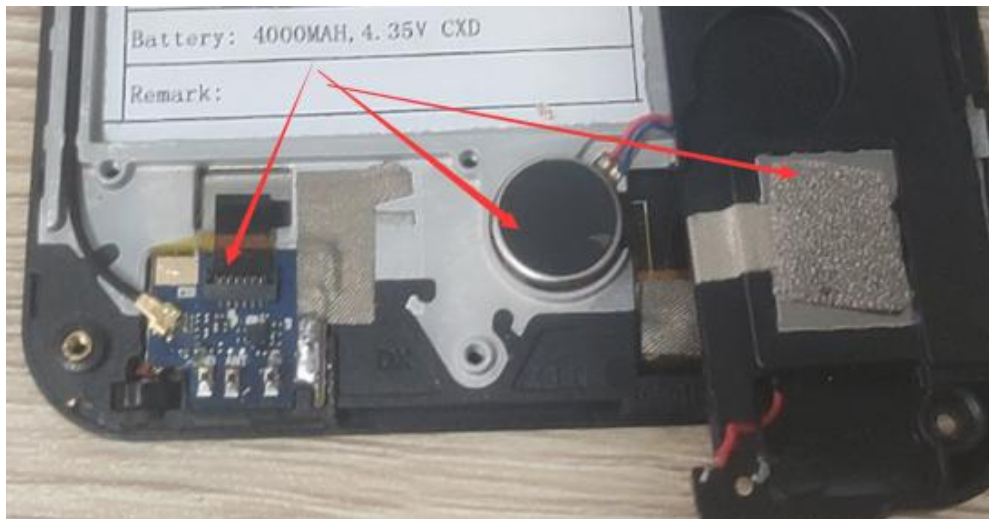


# 天线数据

| Modulation | GSM 850  |         |         | GSM 900 |         |         | DCS 1800 |        |         | PCS 1900 |         |         |
|------------|----------|---------|---------|---------|---------|---------|----------|--------|---------|----------|---------|---------|
| Channel    | Low      | Medium  | High    | Low     | Medium  | High    | Low      | Medium | High    | Low      | Medium  | High    |
| TRP        | 25.03    | 25.06   | 25.13   | 25.43   | 25.41   | 26.08   | 23.71    | 24.74  | 25.26   | 24.21    | 25.02   | 25.34   |
| TIS        | -100.09  | -100.23 | -101.04 | -101.53 | -102.25 | -101.19 | -104.63  | -104.9 | -104.32 | -104.95  | -105.65 | -105.74 |
| Modulation | WCDMA B2 |         |         | WCDMAB5 |         |         |          |        |         |          |         |         |
| Channel    | Low      | Medium  | High    | Low     | Medium  | High    |          |        |         |          |         |         |
| TRP        | 17.99    | 17.14   | 17.05   | 15.42   | 16.35   | 15.63   |          |        |         |          |         |         |
| TIS        | -104.59  | -104.36 | -104.17 | -103.06 | -102.84 | -102.70 |          |        |         |          |         |         |

| Modulation | LTE B2 |        |        | LTE B5 |        |        | LTEB66 |        |        |
|------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Channel    | Low    | Medium | High   | Low    | Medium | High   | Low    | Medium | High   |
| TRP        | 18.89  | 17.84  | 17.99  | 15.49  | 15.86  | 15.92  | 17.04  | 17.44  | 17.13  |
| TIS        | -93.58 | -93.35 | -93.09 | -92.21 | -92.15 | -92.04 | -92.42 | -92.45 | -92.29 |

# 环境处理及说明



## 文字说明

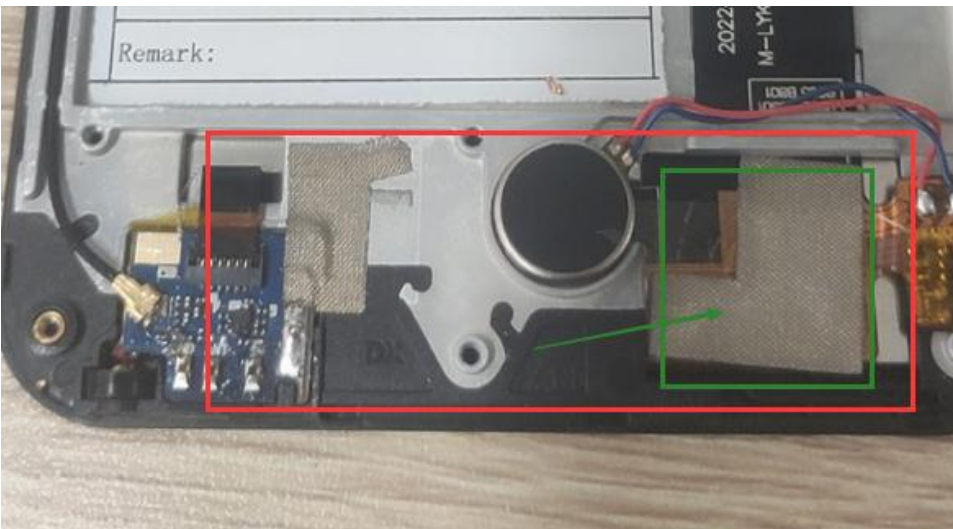
如图所示:

小板背面露铜区充分接地，正面露铜区贴导电布。

喇叭磁缸，马达做好接地。



# 环境处理及说明



## 文字说明

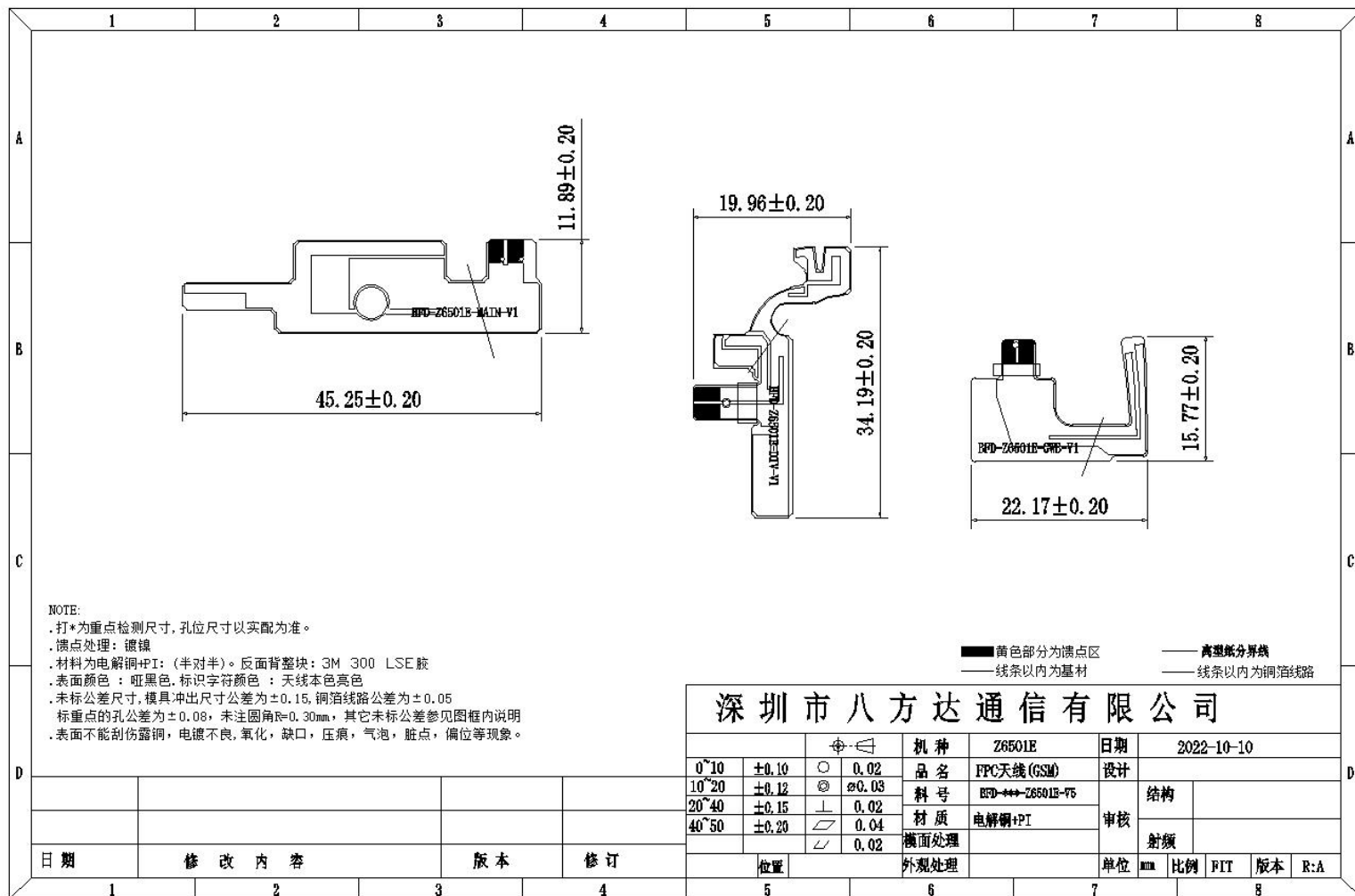
如图所示:

红框内屏排线需要全部用导电布屏蔽，目前只屏蔽了绿框区域，作用不大。

# GPS/WIFI/BT有源测试报告

|      |                   |      |           |      |
|------|-------------------|------|-----------|------|
| GPS  | 最大信号强度            | 搜星数量 | 平均定位时间    | 天气状况 |
|      | 40                | 9    | 120S      | 晴    |
| WIFI | 距WIFI路由器6m处接收信号强度 |      | 无障碍正常上网距离 |      |
|      | -55dB             |      | 20m       |      |
| BT   | 背向无障碍清晰通话距离       |      |           |      |
|      | 7m                |      |           |      |

# Antenna Dimensions (unit: mm)



# 深圳市八方达通信有限公司

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