



深圳麒鑫通达科技有限公司  
Shenzhen Qixin Tongda technology co., ltd

# 天线测试数据报告

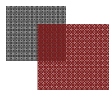
Antenna test data report

custom: Kechao Da  
项目: HY20A-850  
Frequency band: G4  
engineering: Ma Fei (134 1821 8312)  
date: May 15, 2023

## Test items and equipment

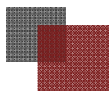
|                        | 测试项目                  | 设备                                                                        |
|------------------------|-----------------------|---------------------------------------------------------------------------|
| 1. s-parameter         | 1. RL<br>2. VSWR)     | network analyzer: Agilent 5071B                                           |
| 2. Coupling power test | 1. power<br>2. level) | Comprehensive measuring instrument:<br>CMW500/8960<br>Darkroom: 6*4*3微波暗室 |



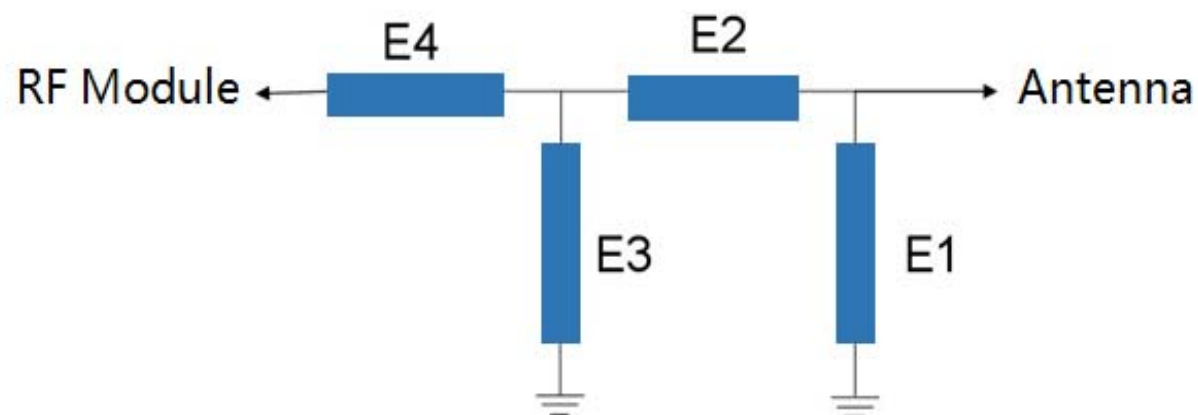


## Main board model and complete machine





## Main signal source matching circuit diagram

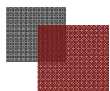


| Element | Value     |
|---------|-----------|
| E1      | Unchanged |
| E2      | Unchanged |
| E3      | Unchanged |
| E4      | Unchanged |
|         |           |

## Antenna radiation test data (active)

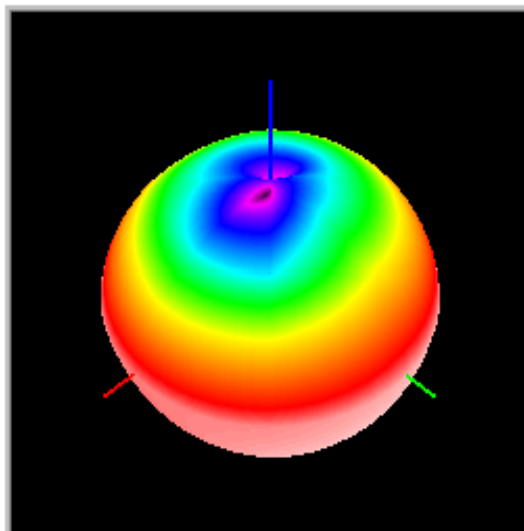


| 手机型号                          | 1# |                         |         |         |                          |         |         |
|-------------------------------|----|-------------------------|---------|---------|--------------------------|---------|---------|
| Test Item - Cover Opening     |    | GSM850Measurement value |         |         | PCS1900Measurement value |         |         |
| Channel                       |    | 128                     | 190     | 251     | 512                      | 661     | 810     |
| TRP (dBm)                     |    | 22.09                   | 23.16   | 23.8    | 25.54                    | 24.5    | 24.02   |
| TIS (dBm)                     |    | -102.15                 | -101.88 | -101.67 | -101.27                  | -100.23 | -99.24  |
| maximum power                 |    | 24.59                   | 25.72   | 26.31   | 29.1                     | 27.89   | 27.52   |
| Minimum receiving sensitivity |    | -105.39                 | -105.14 | -104.87 | -106.87                  | -105.9  | -104.91 |
| (DBI)                         |    | 0.5                     | 0.5     | 0.5     | 0.7                      | 0.7     | 0.7     |
| Test Item - Closure           |    | GSM850Measurement value |         |         | PCS1900Measurement value |         |         |
| Channel                       |    | 128                     | 190     | 251     | 512                      | 661     | 810     |
| TRP (dBm)                     |    | 26.05                   | 26.36   | 26.74   | 25.6                     | 24.89   | 24.37   |
| TIS (dBm)                     |    | -104.17                 | -103.76 | -103.48 | -102.13                  | -101.17 | -100.19 |
| maximum power                 |    | 28.81                   | 29.2    | 29.76   | 29.25                    | 28.46   | 28.0    |
| Minimum receiving sensitivity |    | -107.4                  | -107.05 | -106.71 | -107.4                   | -106.45 | -105.39 |
| (DBI)                         |    | 0.5                     | 0.5     | 0.5     | 0.8                      | 0.8     | 0.8     |

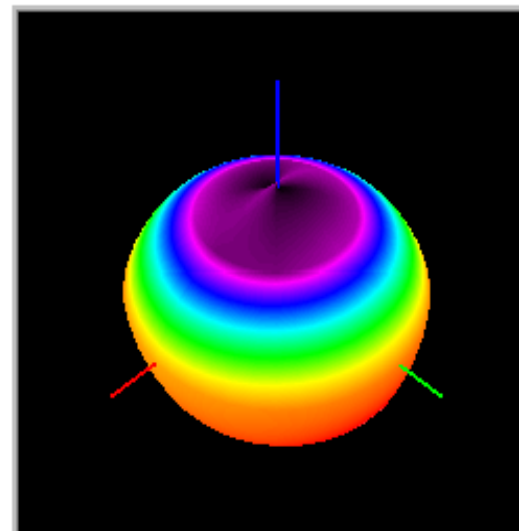


## 3D field strength map

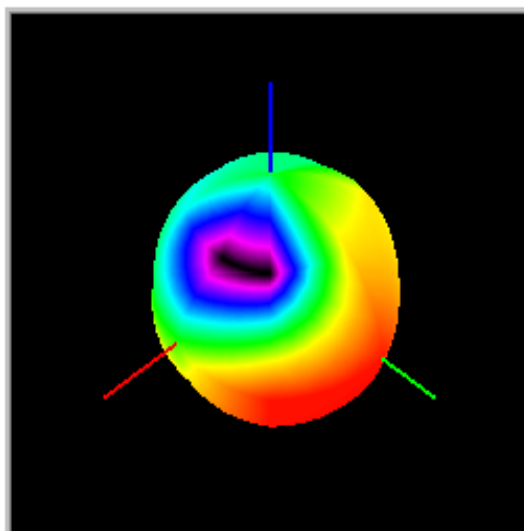
GSM850  
-TRP



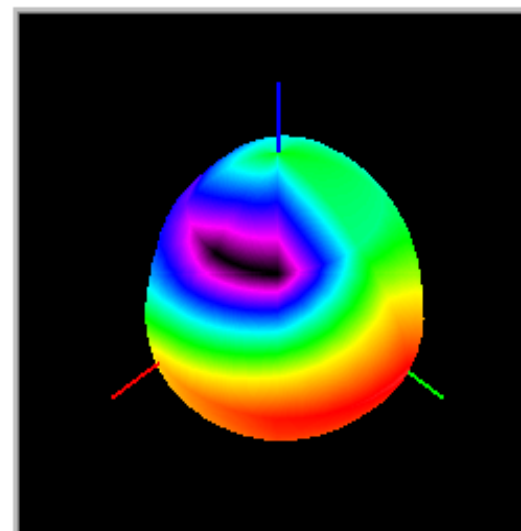
GSM850  
-TIS

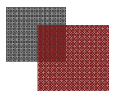


PCS1900  
-TRP



PCS1900  
-TRP

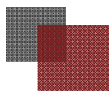




## Bluetooth parameters



| NO. | ITEMS                                    | DETAILS               |
|-----|------------------------------------------|-----------------------|
| 1   | Operating band                           | BT                    |
| 2   | Frequency range                          | (2400~2500MHz)        |
| 3   | Antenna Type                             | Monopole antenna      |
| 4   | Antenna material and implementation form | Pure copper core wire |
| 5   | Input Impedance                          | 50 ( $\Omega$ )       |
| 6   | Gain                                     | $\leq 1.5$ dBi        |



## Bluetooth parameters

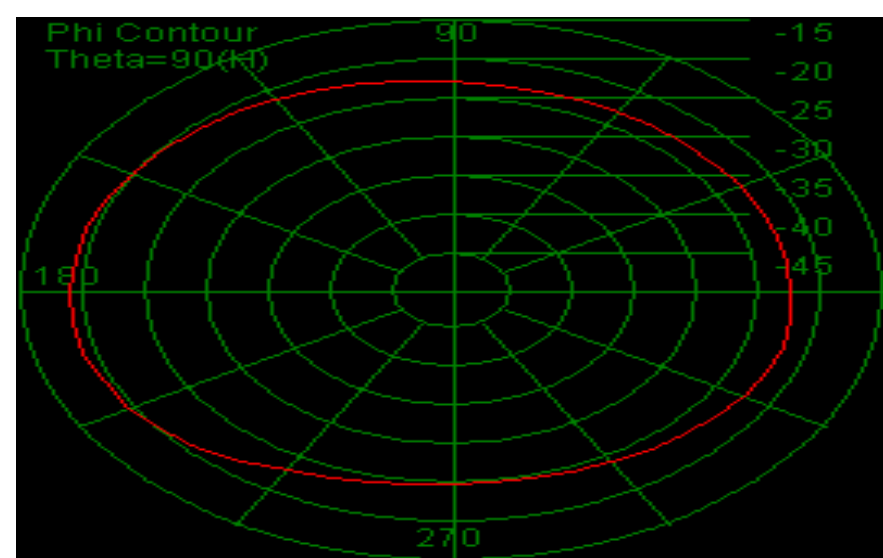
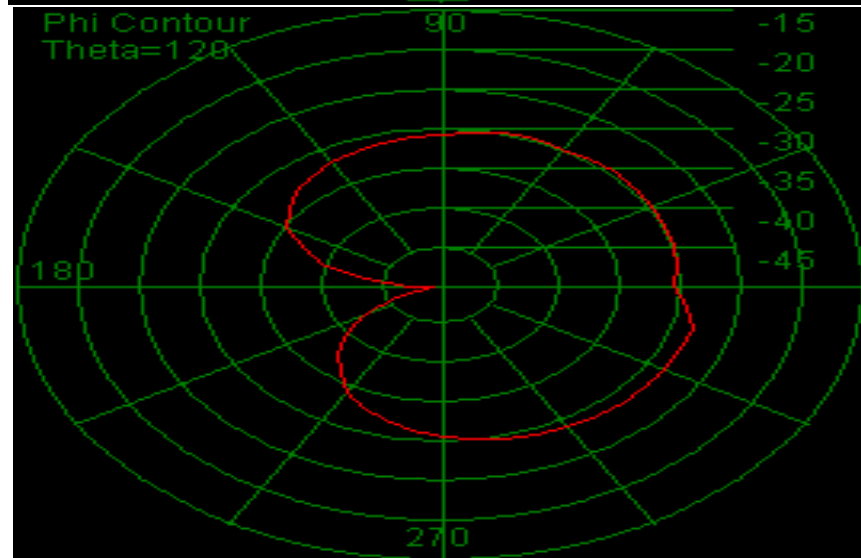
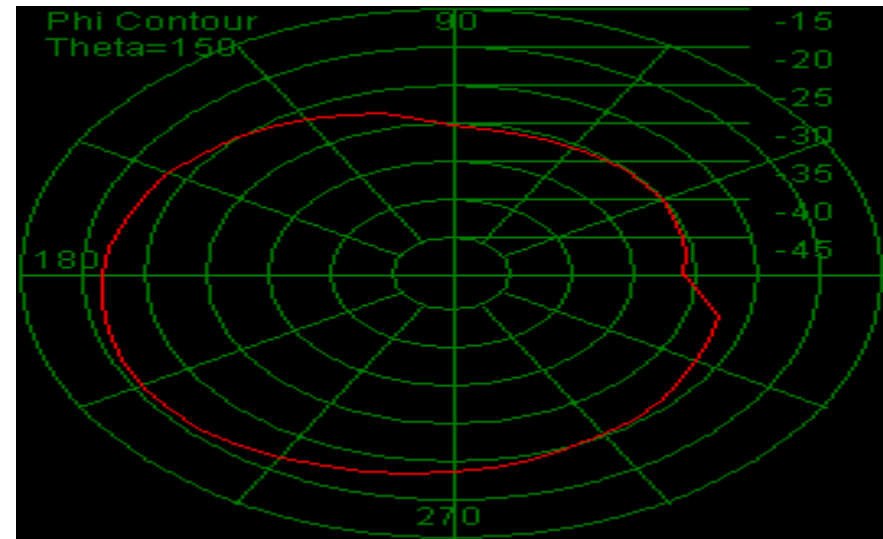
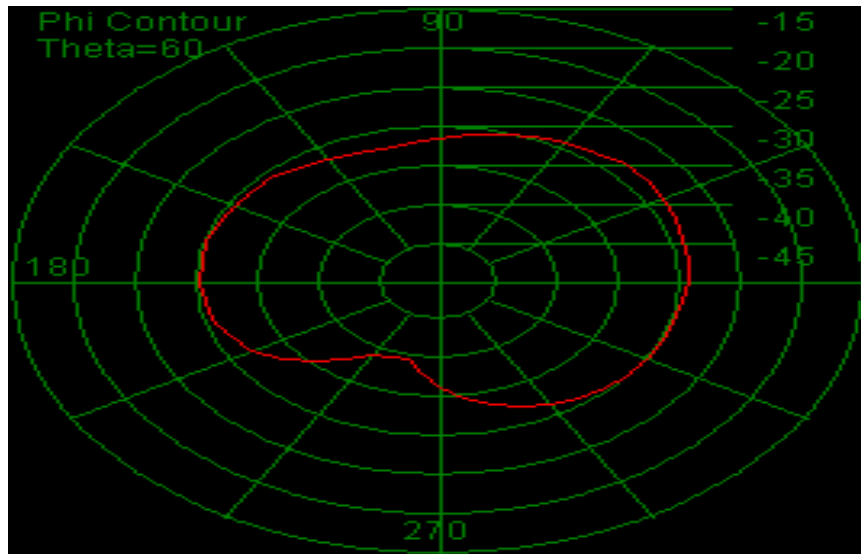


| Frequency | Efficiency(%) | Gain(db) |
|-----------|---------------|----------|
| 2400MHZ   | 43.1          | 1.4      |
| 2420MHZ   | 43.6          | 1.45     |
| 2440MHZ   | 40.8          | 1.3      |
| 2460MHZ   | 41.9          | 1.5      |
| 2480MHZ   | 43.7          | 1.6      |
| 2500MHZ   | 45.2          | 1.7      |



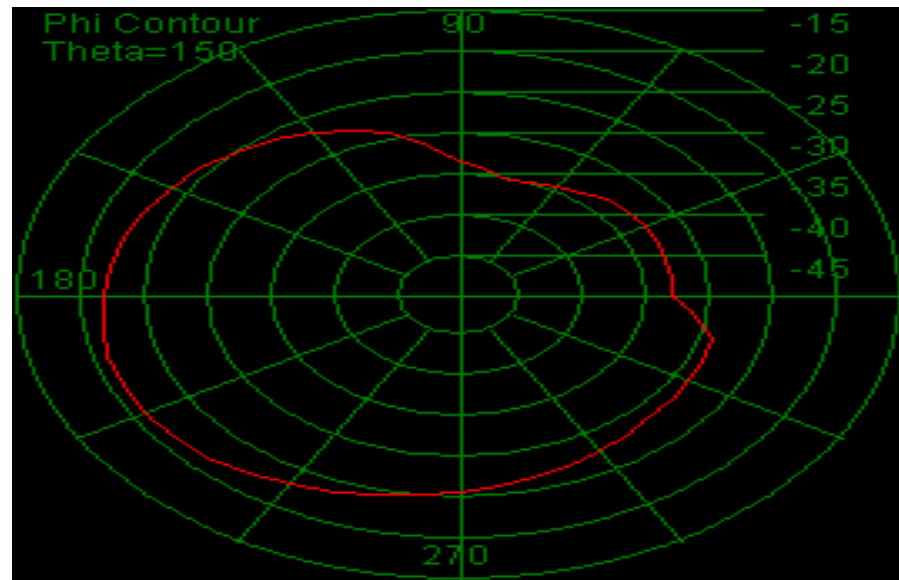
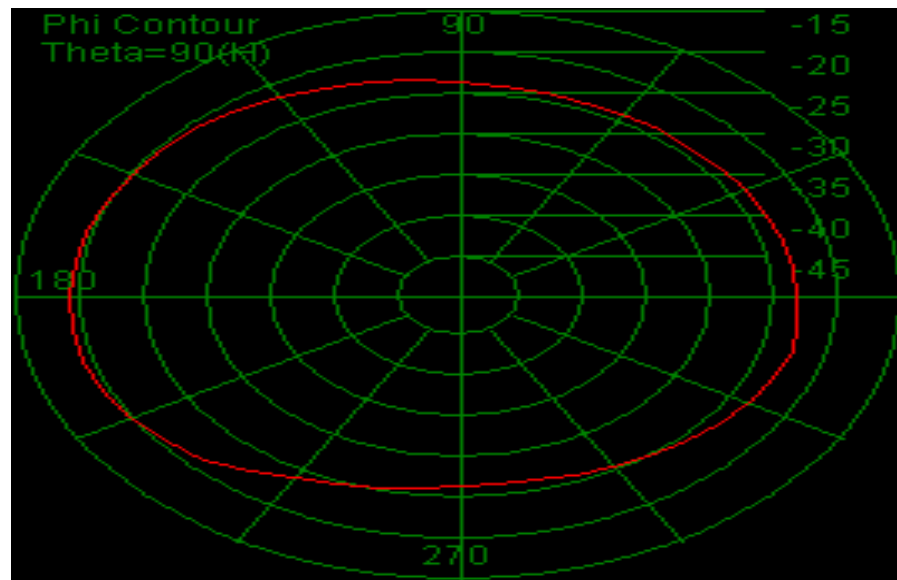
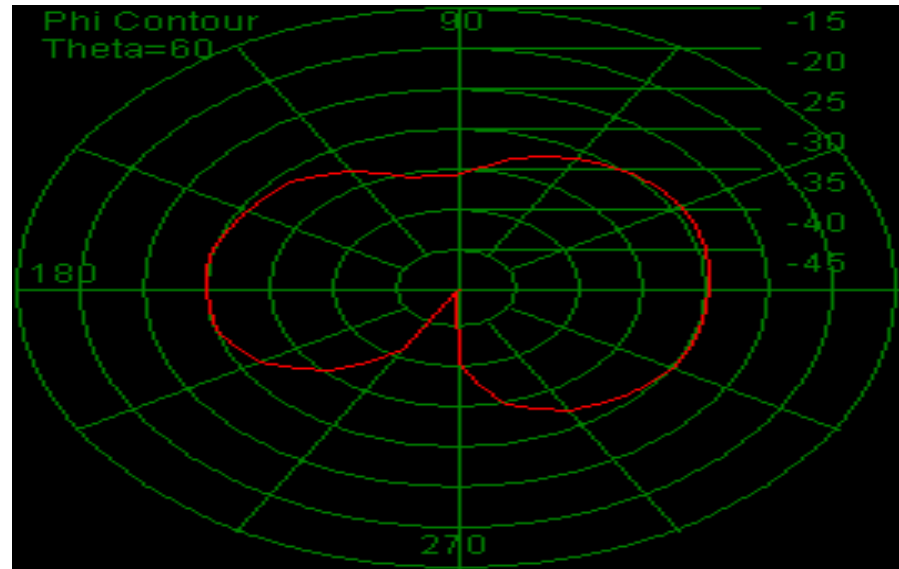
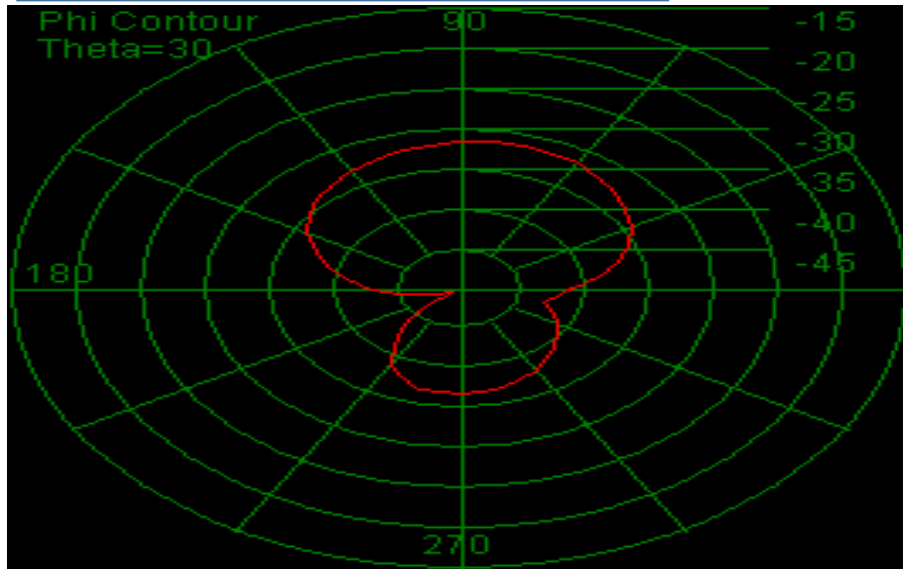
# Bluetooth parameters

2400mhz



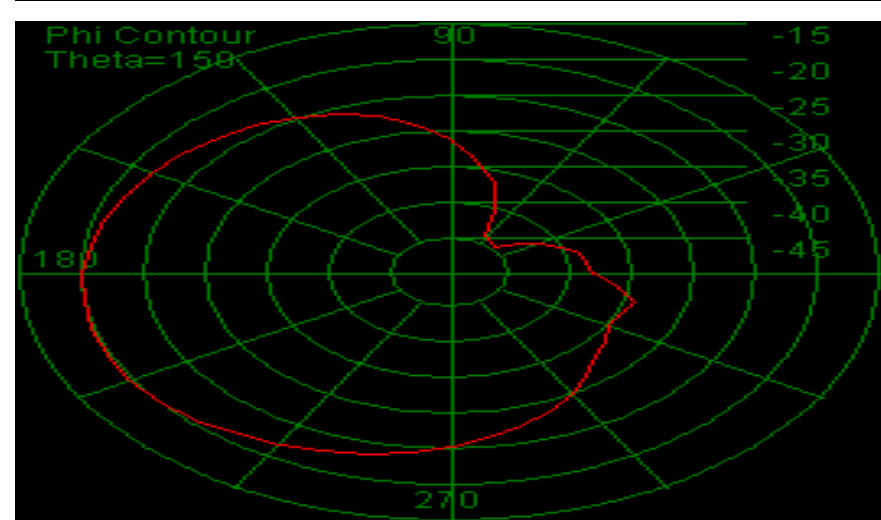
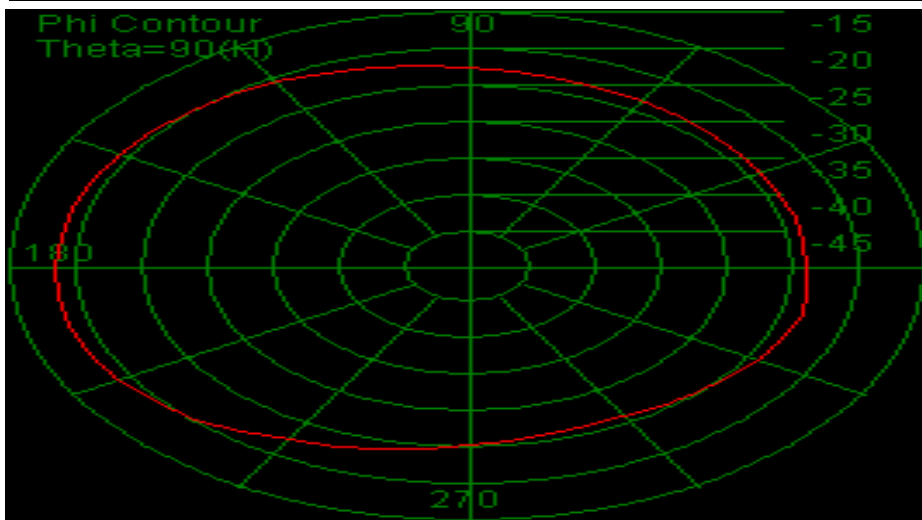
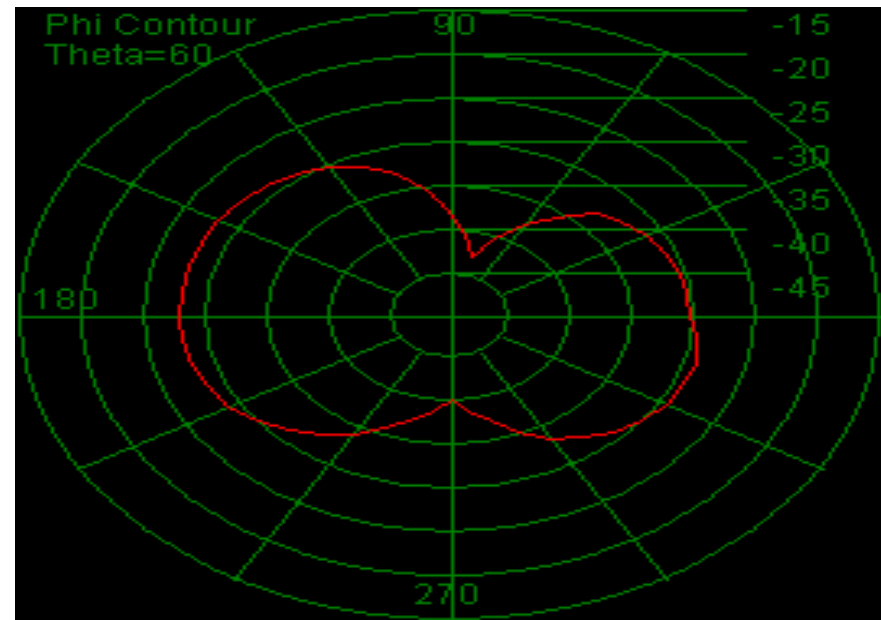
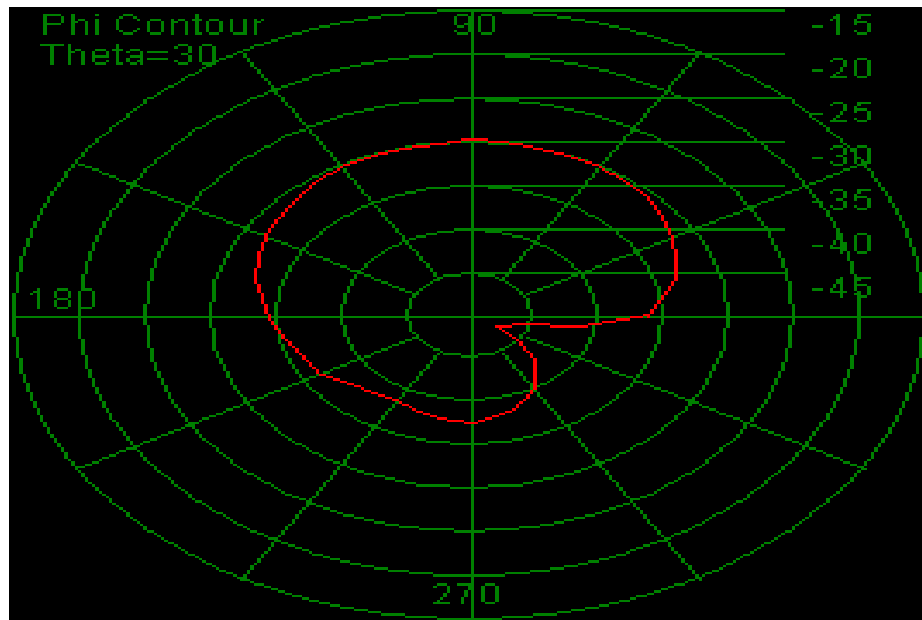
## Bluetooth parameters

2420mhz



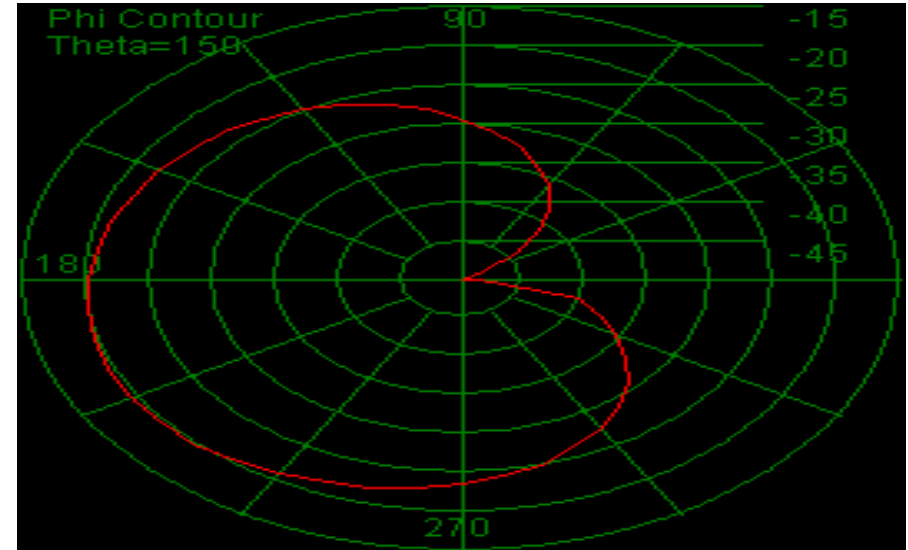
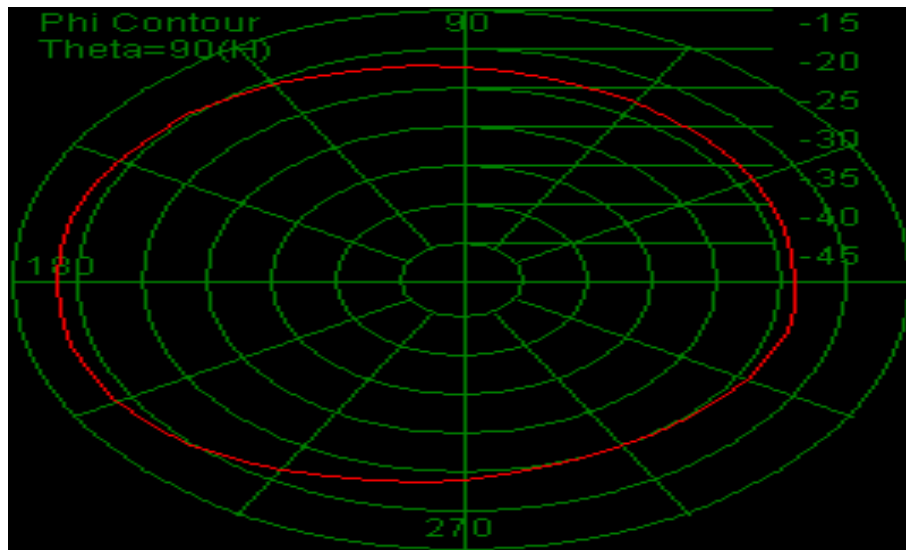
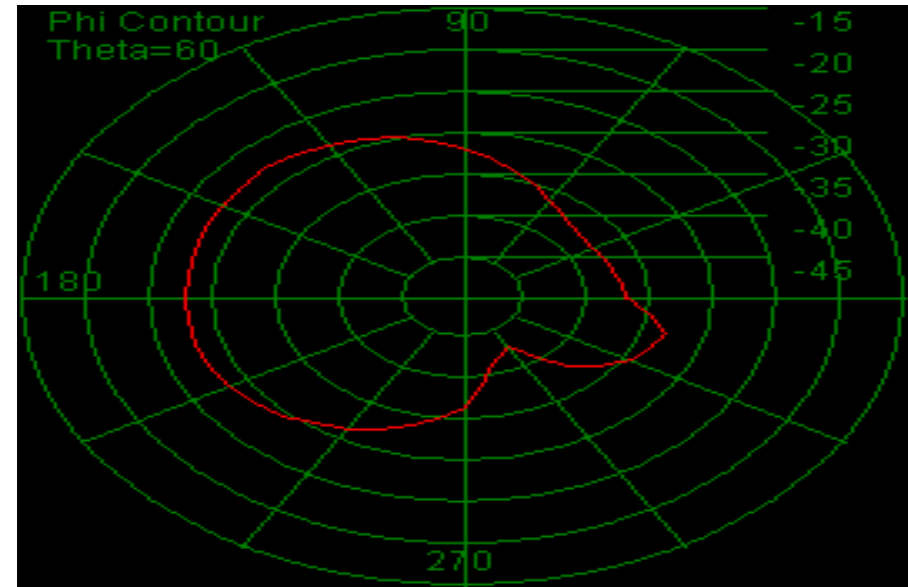
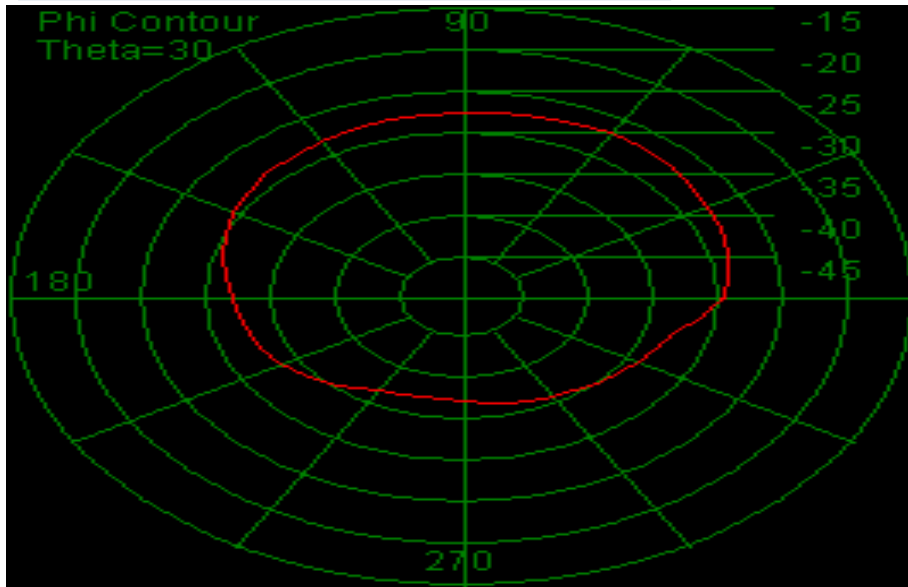
## Bluetooth parameters

2440mhz



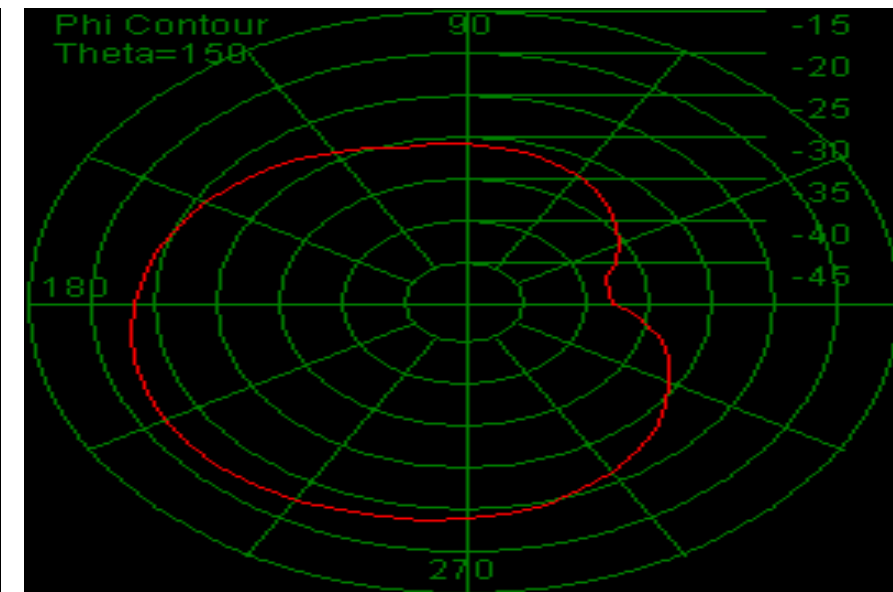
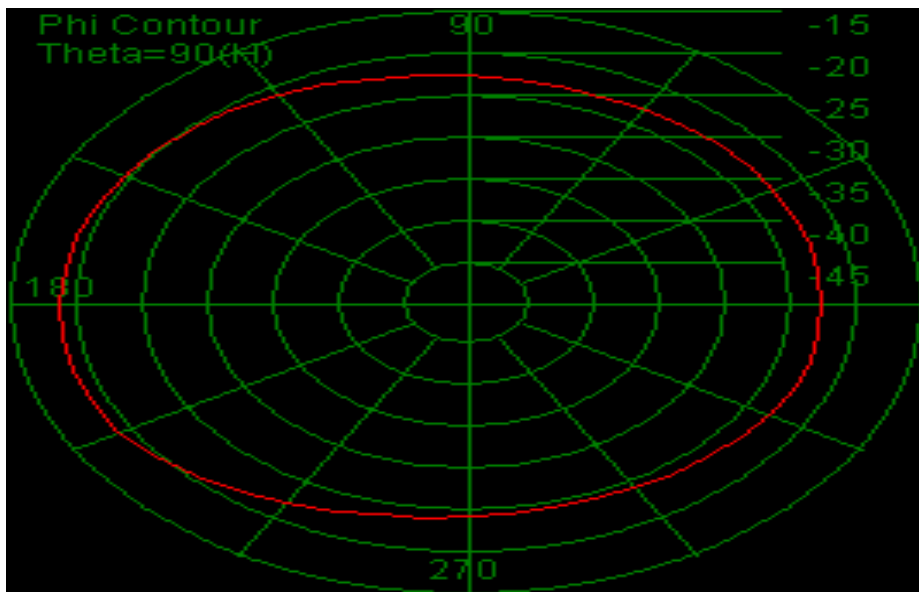
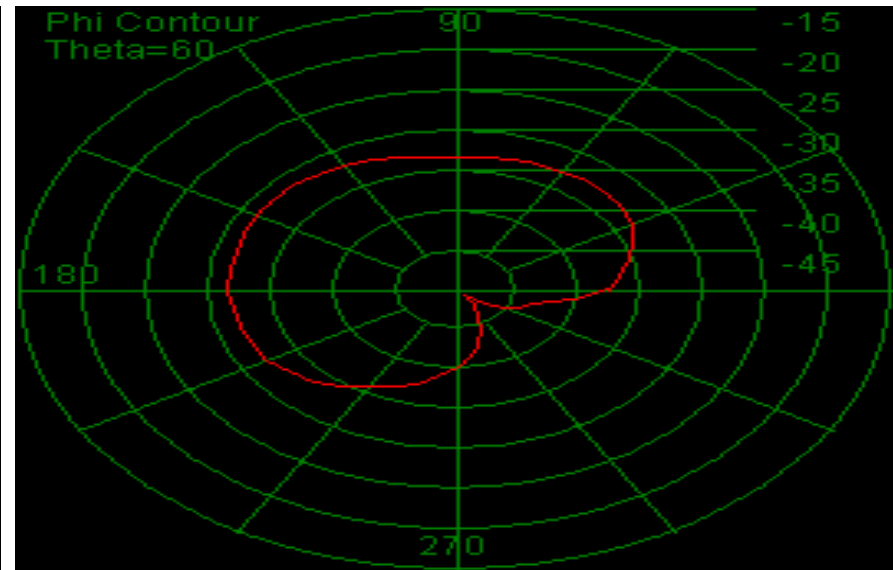
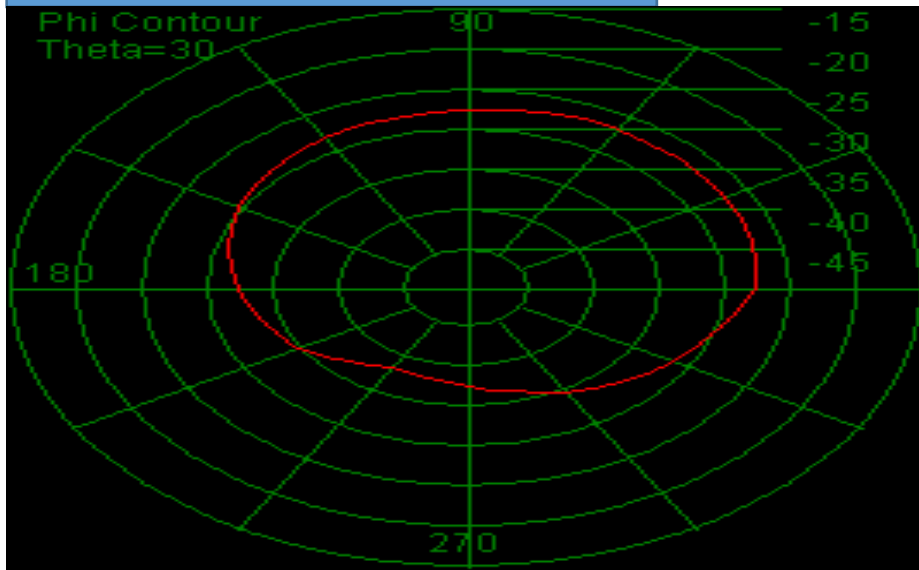
## Bluetooth parameters

2460mhz



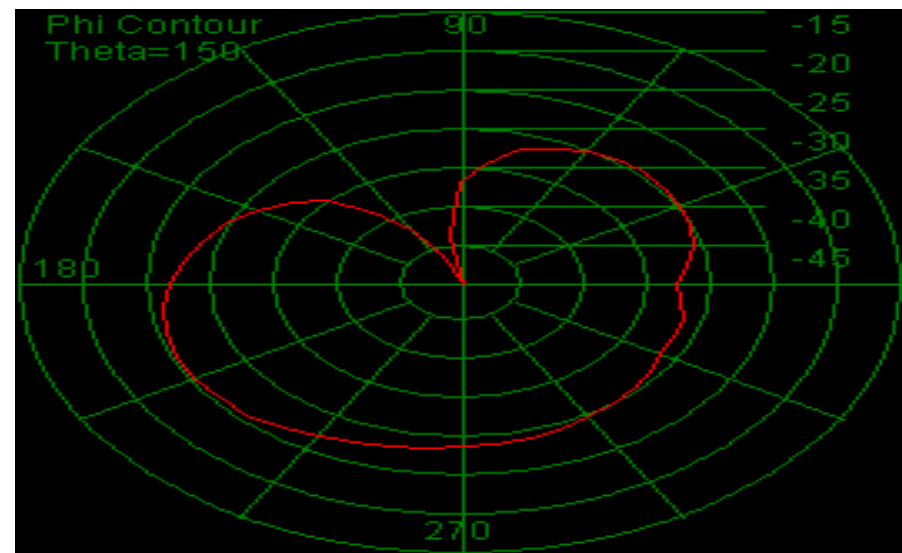
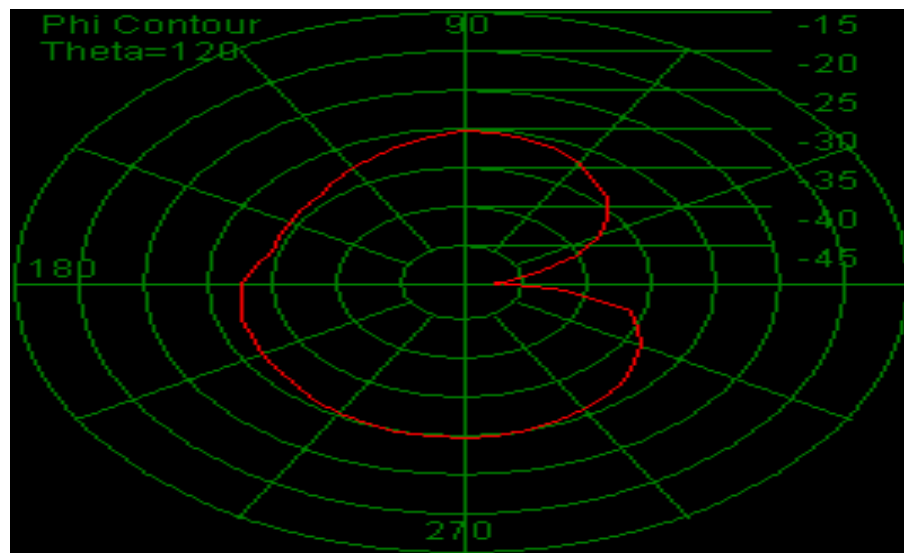
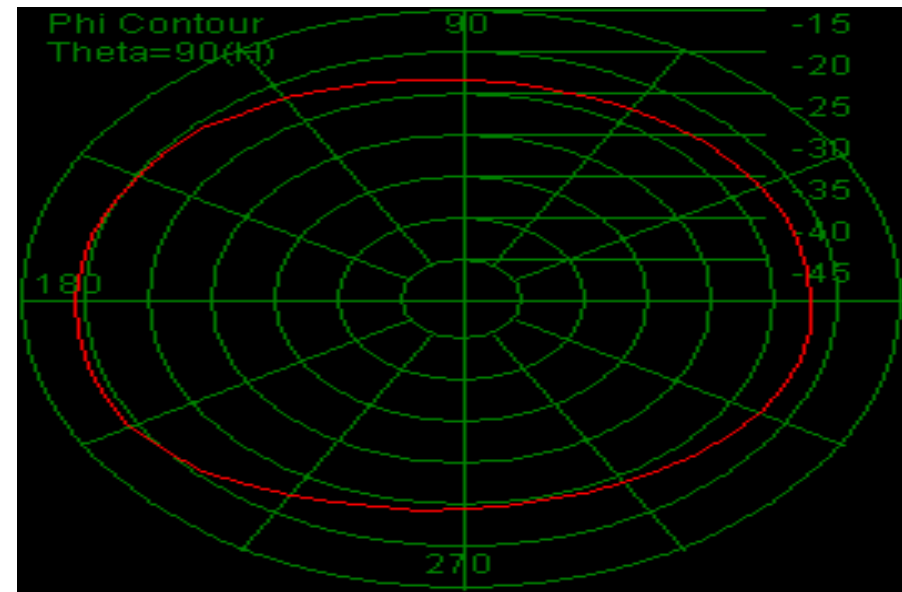
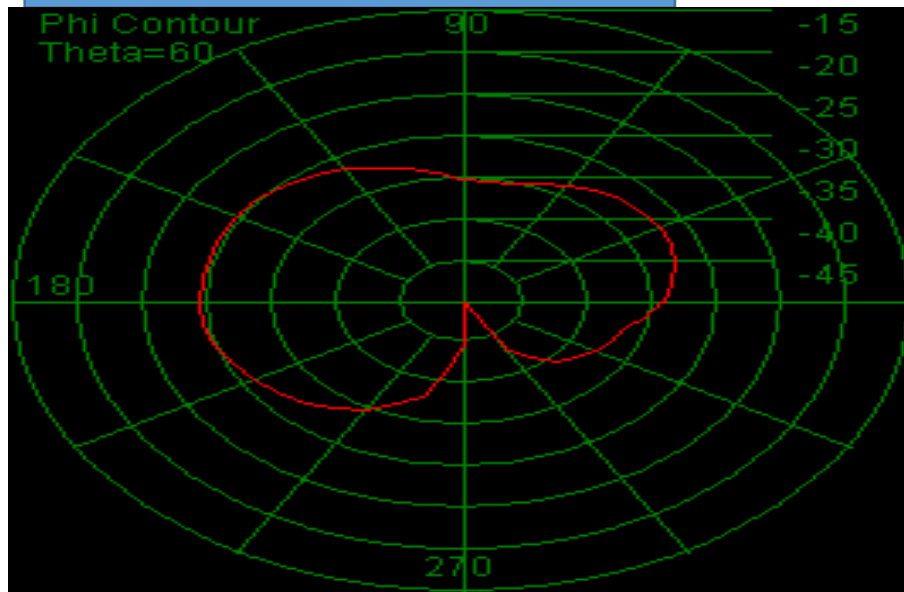
## Bluetooth parameters

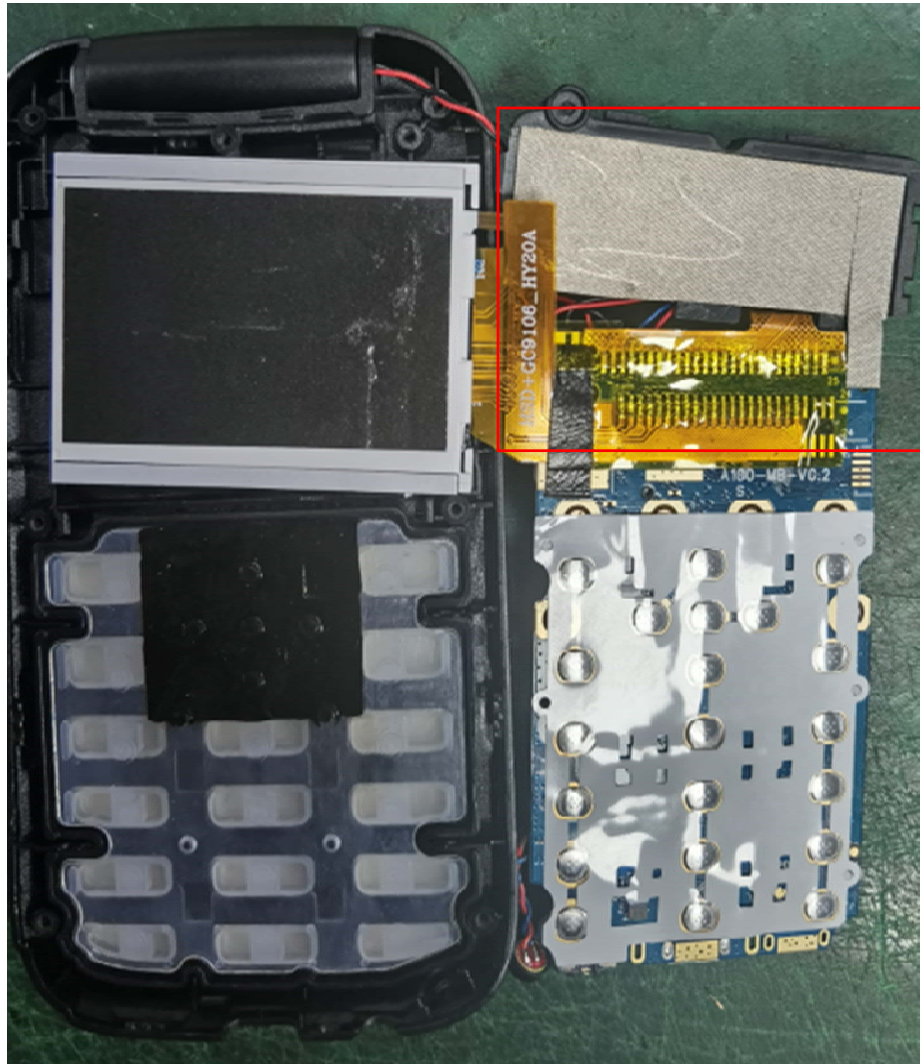
2480mhz



## Bluetooth parameters

2500mhz





Attach conductive cloth as shown in the picture to increase low-frequency power and sensitivity.



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