

Shenzhen 3good Wireless Technology Co., Ltd

Antenna Specification

| | | | |
|---------------------------------|--|-----------------------|---|
| 客户 Customer | 传奇数码 SAGA Mobile | 规格型号 Specs | D061 |
| 三好料号 Part Number | CQ-D061-01 CQ-D061-02 CQ-D061-03 | 频 段 Frequency Band | BT&2.5G WIFI:2400~2483.5MHZ 5G WIFI:5100~5800MHZ GSM850/900/1800/1900 WCDMA1/2/4/5/6/8/19 CDMA BC0 BC1 B1.2.3.4.5.7.8.12.13.17.18.19.20.25.26.28.66.38 .39.40.41.66 |
| 颜 色 Color | black | 版 本 Edition | V02 |
| 销 售 Salesperson | | 设 计 Design | Bingkun.Guan |
| 结 构 Structure | Fulun. Li | 确 认 Confirm | Wu.Zhou |
| 日 期 Date | | 签字日期 Signing Date | |
| 客户确认 Customer confirmation: | | | |
| Join hands to create the future | | | |

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目录

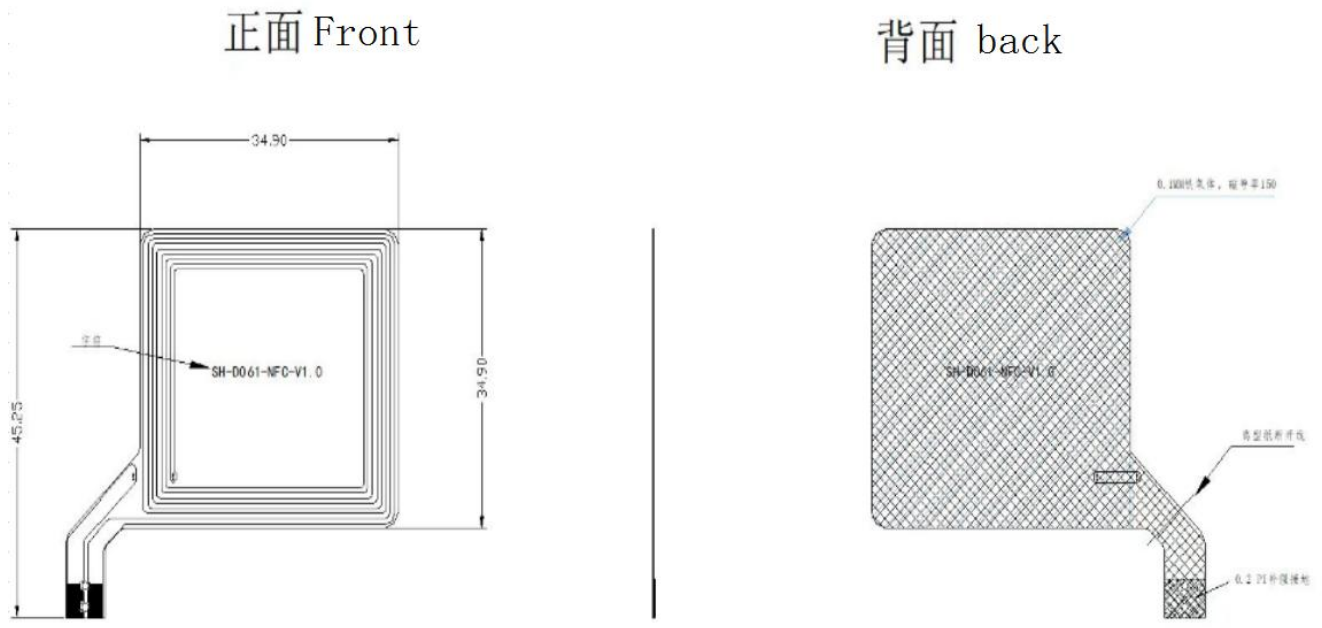
| | |
|-------------------------------------|---|
| 一、产品规格(Product specification)..... | 3 |
| 二、电器性能(Electrical performance)..... | 3 |
| 1.规格标准(Specification standard)..... | 3 |
| 2.天线的匹配电路(Matching circuit)..... | 3 |
| 三、参数的测试(Parameter test)..... | 4 |
| 1.测试的设置(Test settings)..... | 4 |
| 2.测试结果(Test result)..... | 4 |
| 四、有源测试的设置(Active test setup)..... | 5 |
| 1.测试的场地(Test site)..... | 5 |
| 2.测试结果(Test result)..... | 5 |
| 3.环境处理 Environmental treatment..... | 5 |

一、Product specifications

The report mainly provides parameter tests of S105 antenna performance. S105 antenna is 4G antenna. (As shown in the figure below)

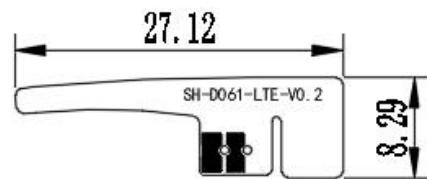
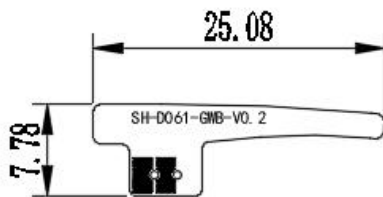
NFC antenna

NFC

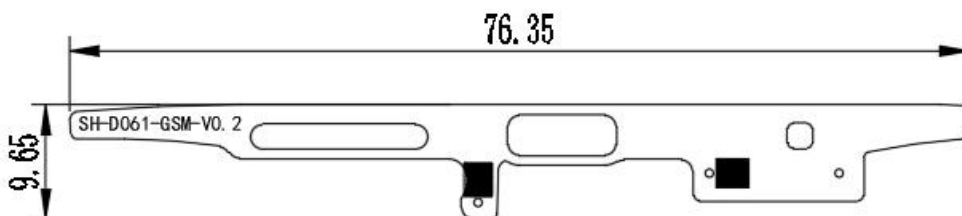


Three in one antenna

Diversity antenna



Main set antenna



二、Electrical performance

Main antenna (ANT0) switching logic

RF1(C211): 0Ω

Frequency band: GSM900/GSM850 RX+W8+LTE B8

RF2(C212): 12nH

Frequency band: LTE B12/B17/B28AB

RF3(C213): 3.9nH

Frequency band: GSM850 TX+BC0+W5/6/19+LTE B5/B18/B19/B20/B26

RF4(C214): 6.8nH

Frequency band: LTE B13

Diversity antenna (ANT1)

DCS1800/PCS1900+BC1+W1/2/4+LTE B1/2/3/4/7/25/38/39/40/41/66

Structure of antenna: FPC

三、Test of parameters

1.Test settings

The connection of VSWR test device is:

E5071B network analyzer → 50 Ohmic coaxial Cable → 110mm Long copper tube → Test fixture

Treatment of test fixture:

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 the copper tube with a choke, and then connect other devices in turn.

Passive parameters of main antenna:

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

GSM850/900/1800/1900

WCDMA1/2/4/5/6/8/19

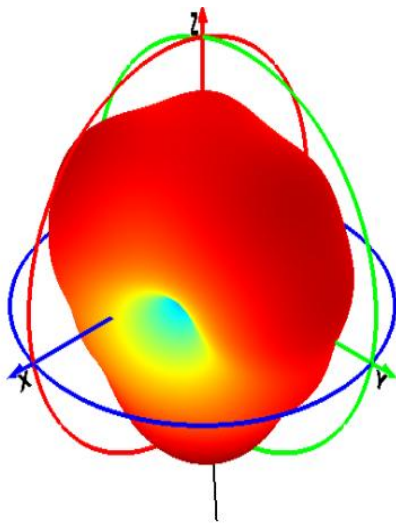
CDMA BC0 BC1

LTE B1.2.3.4.5.7.8.12.13.17.18.19.20.25.26.28.66.38.39.40.41

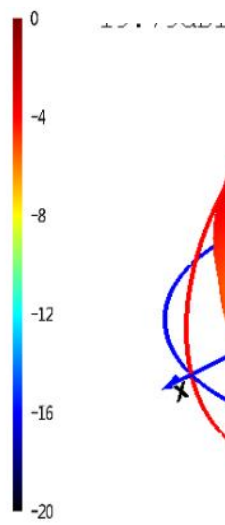
| Gain | | | |
|--|---------------------|---------------------|-----------------|
| 频段 Band | gain 增益 (dBi) | 频段 Band | gain 增益(dBi) |
| BC0/GSM850,WCDMA-B5/B6/19,LTE-B5/B18/ B19/B20/B26 | -0.64 | LTE-B7/B38/B41 | 0.92 |
| GSM900,WCDMA-B8,LTE-B8 | 0.13 | LTE-B12/B13/B17/B28 | -0.91 |
| DCS1800,WCDMA-B4,LTE-B3/B4/B66 | 0.87 | LTE-B40 | 0.79 |
| BC1,PCS1900,WCDMA-B1/B2,LTE-B1/B2/B39 | 0.97 | | |

700

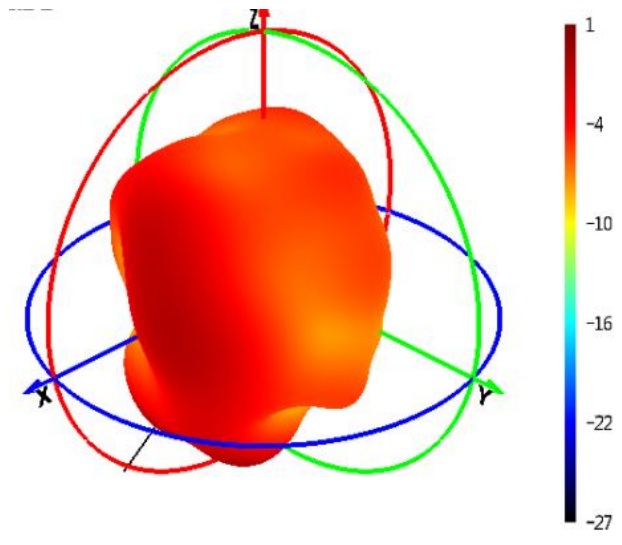
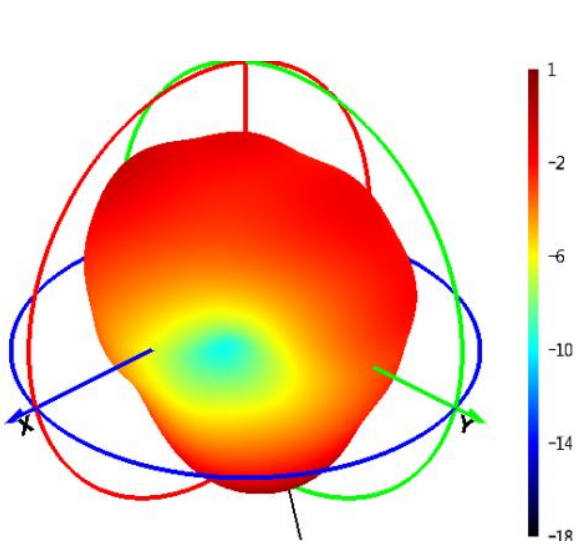
800

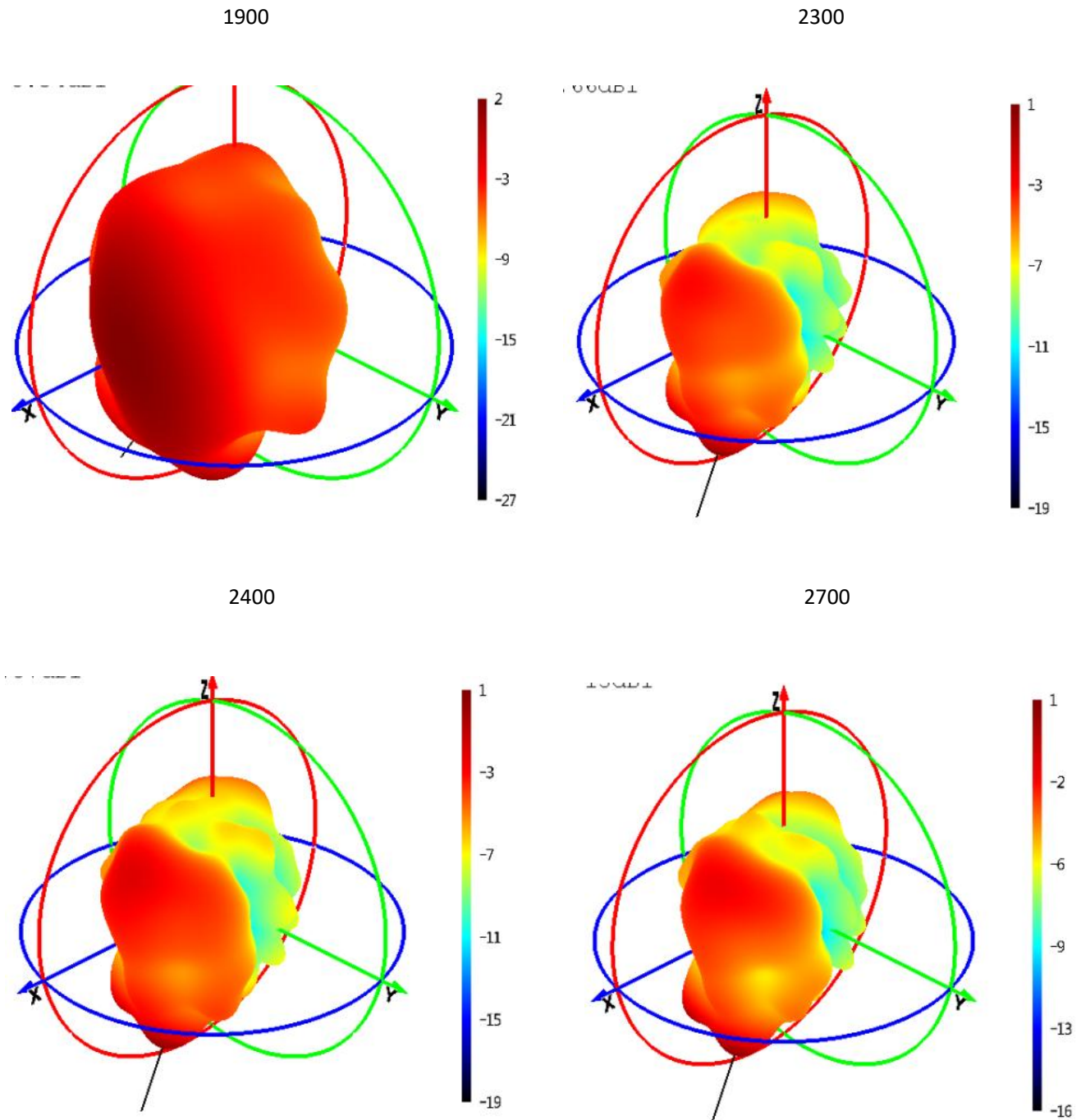


900



1700



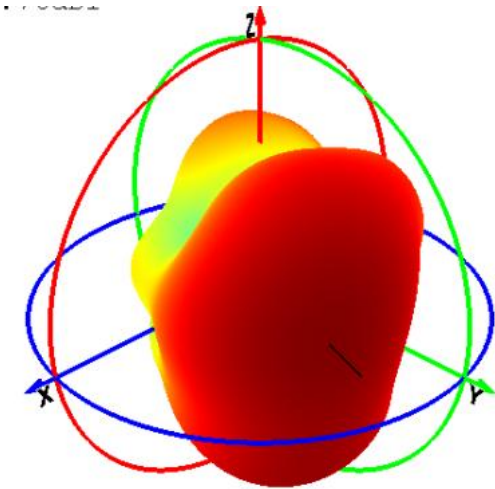


GPS/WIFI/BTPassive parameters of antenna:

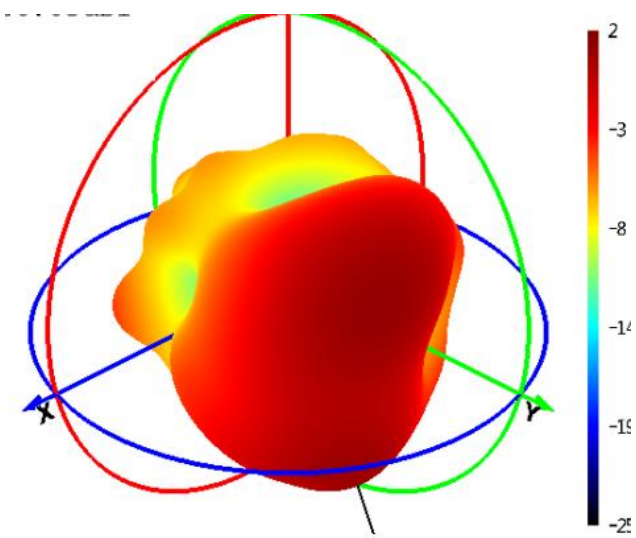
工作频段(Working frequency band): 1560~1580MHZ, 2400~2500MHZ,5180~8525MHZ

| Gain | | | |
|---------|-----------------|--------------|-----------------|
| 频段 Band | gain 增益(dBi) | 频段 Band | gain 增益(dBi) |
| GPS | 0.54 | 2.4G WIFI/BT | 1.21 |
| 5G WIFI | 0.71 | | |

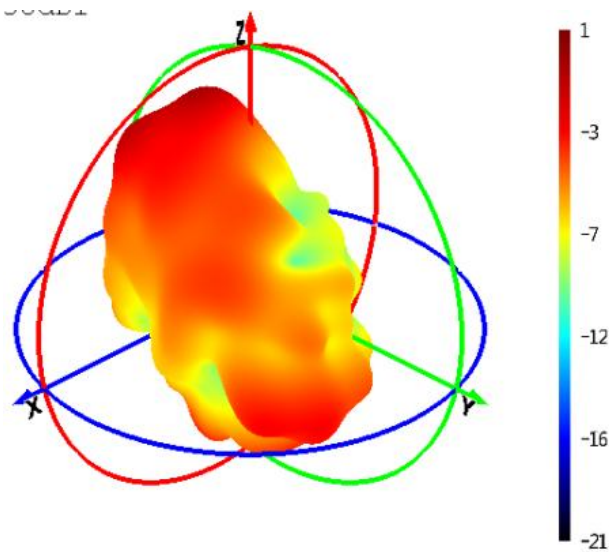
GPS



2.4G WIFI/BT



5G WIFI

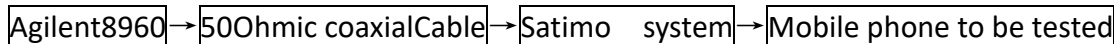


2.test result

business as usual.

四、 Active test setup

The active test devices are sequentially connected as follows:



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 result

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

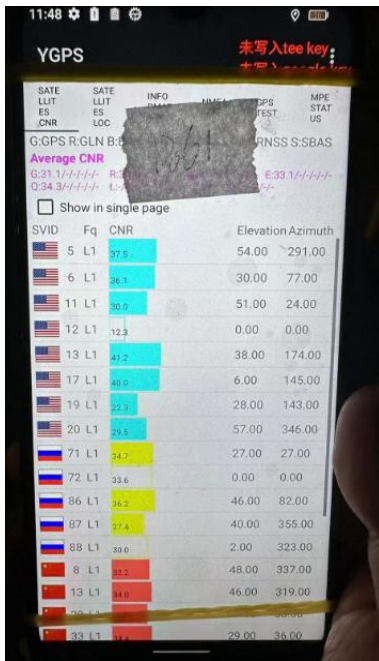
The following is the active test result of D061 mobile phone main antenna:

| | CH | TRP | TIS |
|----------------|-------|-------|---------|
| GSM850 | 128 | 25.52 | |
| | 190 | 26.39 | |
| | 251 | 26.63 | -102.04 |
| EGSM900 | 1 | 26.07 | |
| | 62 | 26.51 | |
| | 124 | 26.19 | -100.14 |
| DCS1800 | 512 | 24.54 | |
| | 698 | 24.6 | |
| | 885 | 24.7 | -103.47 |
| PCS1900 | 512 | 24.51 | |
| | 661 | 24.46 | |
| | 810 | 24.34 | -101.21 |
| W1 | 10562 | 17.35 | |
| | 10700 | 16.58 | |
| | 10838 | 16 | -102.88 |
| W2 | 9626 | 18.45 | |
| | 9400 | 17.98 | |
| | 9538 | 17.59 | -102.83 |
| W4 | 1312 | 16.45 | |
| | 1412 | 16.7 | |
| | 1512 | 16.37 | -103.12 |
| W5 | 4132 | 16.62 | |
| | 4183 | 17.17 | |
| | 4233 | 17.31 | -101.98 |
| W6 | 4162 | 16.01 | |
| | 4175 | 16.65 | |
| | 4188 | 16.78 | -102.06 |
| W8 | 2937 | 16.69 | |
| | 3013 | 16.75 | |
| | 3088 | 16.66 | -100.9 |
| W19 | 312 | 17.02 | |
| | 387 | 16.87 | |
| | 437 | 16.71 | -102.12 |
| BC0 | 1013 | 16.57 | |
| | 384 | 17.22 | |
| | 777 | 17.37 | -101.39 |
| BC1 | 25 | 18.22 | |
| | 600 | 17.69 | |
| | 1175 | 18.11 | -102.67 |

| | CH | TRP | TIS |
|------------|-------|-------|--------|
| B1 | 18050 | 17.19 | |
| | 18300 | 16.86 | |
| | 18550 | 16.09 | -90.74 |
| B2 | 18650 | 17.5 | |
| | 18900 | 17.66 | |
| | 19150 | 16.5 | -90.91 |
| B3 | 19250 | 16.87 | |
| | 19575 | 17.48 | |
| | 19900 | 17.74 | -92.98 |
| B4 | 20000 | 16.5 | |
| | 20175 | 16.83 | |
| | 20300 | 16.91 | -90.98 |
| B5 | 20450 | 17.03 | |
| | 20525 | 16.52 | |
| | 20600 | 16.03 | -89.31 |
| B7 | 20800 | 16.65 | |
| | 21100 | 16.75 | |
| | 21400 | 16.67 | -89.97 |
| B8 | 21500 | 16.56 | |
| | 21625 | 16.53 | |
| | 21750 | 16.18 | -88.36 |
| B12 | 23035 | 16.46 | |
| | 23095 | 16.18 | |
| | 23155 | 16.31 | -91.21 |
| B13 | 23230 | 16.31 | -90.22 |
| | 23780 | 16.16 | |
| | 23790 | 16.06 | |
| B17 | 23800 | 16.15 | -90.17 |
| | 23850 | 16.06 | |
| | 23925 | 16.77 | |
| B18 | 23999 | 17.3 | -89.98 |
| | 24050 | 17.7 | |
| | 24075 | 17.07 | |
| B19 | 24100 | 17.15 | -89.86 |
| | 24200 | 17.01 | |
| | 24300 | 16.65 | |
| B20 | 24400 | 17.14 | -90.07 |

| | CH | TRP | TIS |
|------------|--------|-------|--------|
| B25 | 26065 | 16.89 | |
| | 26365 | 16.96 | |
| | 26665 | 15.61 | -90.36 |
| B26 | 26715 | 16.79 | |
| | 26865 | 16.6 | |
| | 27015 | 17.15 | -88.42 |
| B28 | 27260 | 16.69 | |
| | 27435 | 16.89 | |
| | 27610 | 16.23 | -88.69 |
| B66 | 132022 | 16.28 | |
| | 132322 | 16.8 | |
| | 132622 | 17.35 | -90.36 |
| B38 | 37850 | 16.44 | |
| | 38000 | 16.62 | |
| | 38150 | 16.46 | -88.22 |
| B39 | 38350 | 17.18 | |
| | 38450 | 17.34 | |
| | 38550 | 17.14 | -88.51 |
| B40 | 38750 | 16.54 | |
| | 39150 | 17.8 | |
| | 39550 | 17.83 | -88.02 |
| B41 | 40340 | 16.04 | |
| | 40620 | 16.67 | |
| | 41140 | 16.53 | -88.22 |

2-1.Three in one test results



| | CH | TRP | TIS |
|---------------|-----|-------|--------|
| WIFI-B | 1 | 1.1 | -80.12 |
| | 7 | 11.36 | -80.33 |
| | 13 | 11.57 | -80.14 |
| WIFI-A | 36 | 7.2 | -68.22 |
| | 149 | 7.6 | -68.13 |
| | 165 | 8.5 | -68.27 |
| BT | 0 | 8.3 | -86.36 |
| | 39 | 8.41 | -85.19 |
| | 78 | 8.69 | -86.24 |

2-2.蓝牙测试（Bluetooth Test）：

10 meters online listening to music, making calls smoothly without interruption

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