

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	<b>CQ-D061-01</b> <b>CQ-D061-02</b> <b>CQ-D061-03</b>	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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## 一、Product specifications

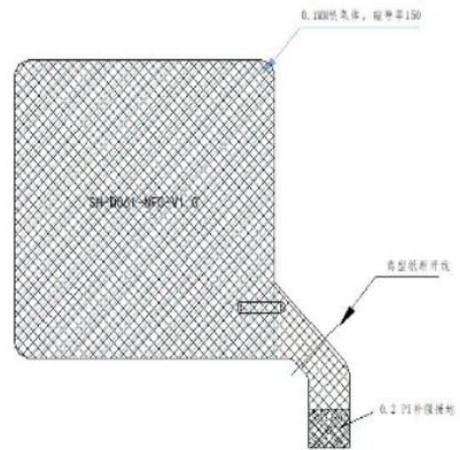
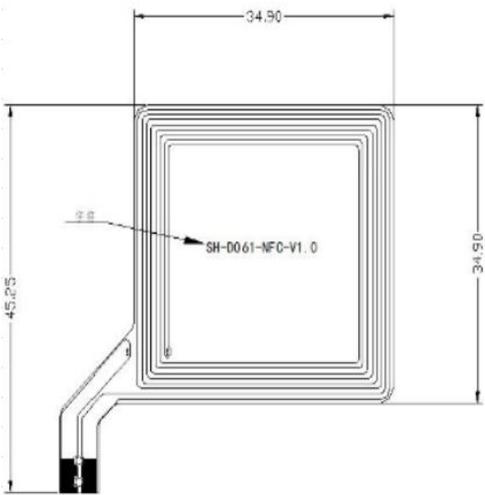
The report mainly provides parameter tests of S105 antenna performance. S105 antenna is 4G antenna. (As shown in the figure below)

### NFC antenna

NFC

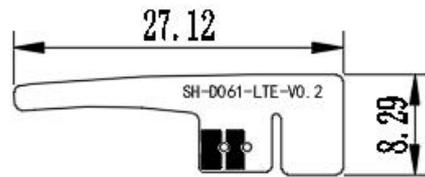
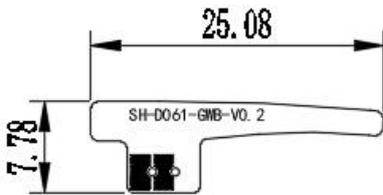
正面 Front

背面 back

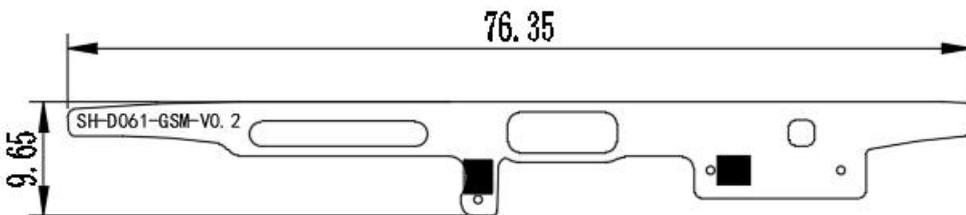


### Three in one antenna

### Diversity antenna



### Main set antenna



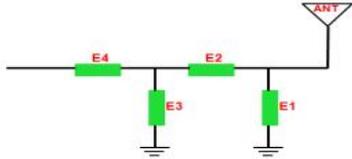
## 二、Electrical performance

## 1.Specifications

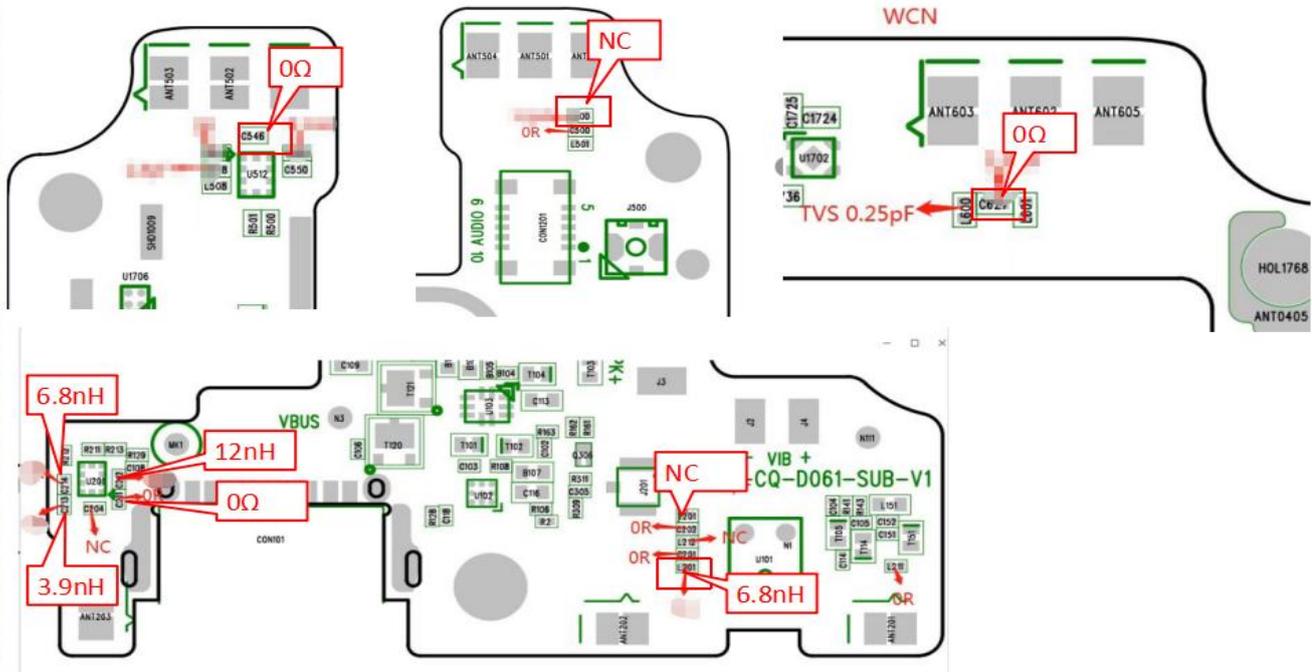
The operating frequency band of D061 antenna is 699~960MHZ and 1710~2700MHZ, in which resonance occurs.

## 2.Matching circuit of antenna

Matching circuits (匹配电路)



主元件		分集元件		三合一	
Element	Value	Element	Value	Element	Value
L201	6.8nH	E1(0402)	NC	E1(0402)	NC
C201	0Ω	E2(0402)	0Ω	E2(0402)	0Ω
L212	NC	E3(0402)	NC	E3(0402)	NC
C202	0Ω	E4(0402)	0Ω	E4(0402)	0Ω



**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)**

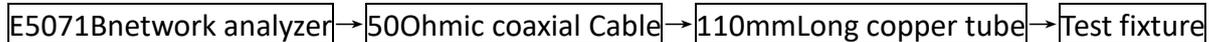
DCS1800/PCS1900+BC1+W1/2/4+LTE B1/2/3/4/7/25/38/39/40/41/66

Structure of antenna: FPC

### 三、 Test of parameters

#### 1. Test settings

The connection of VSWR test device is:



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

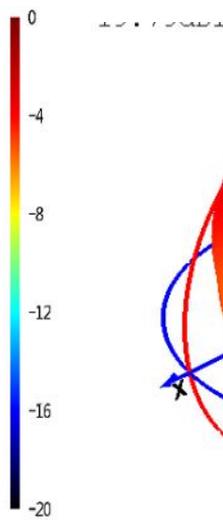
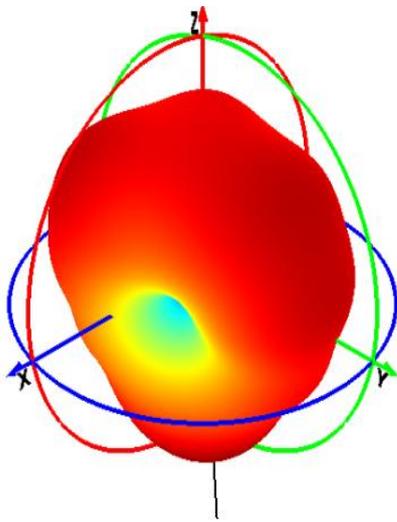
CDMA BC0 BC1

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		

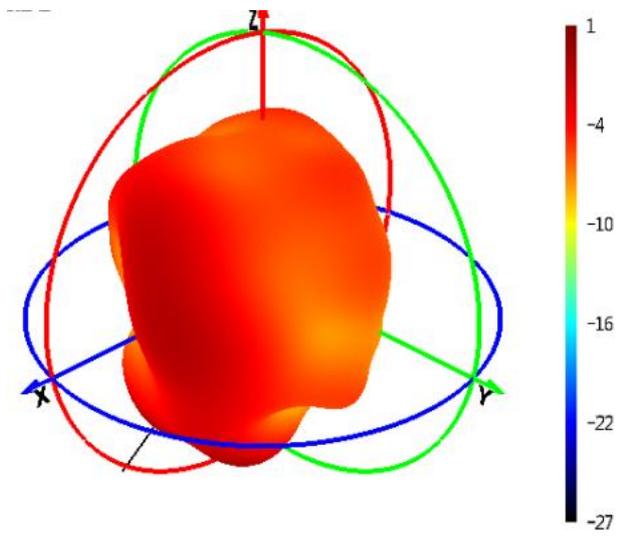
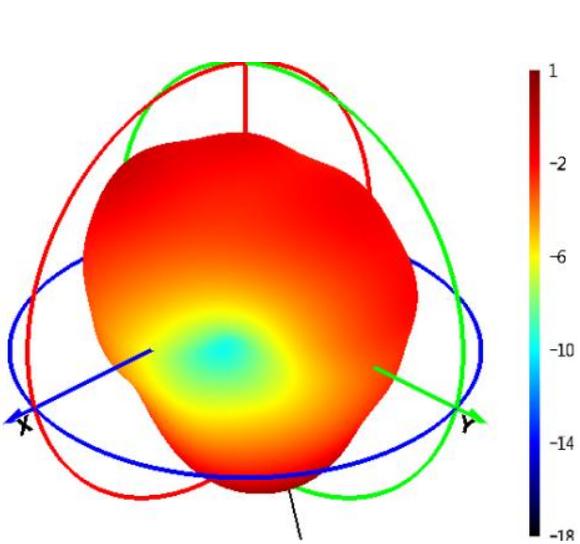
700

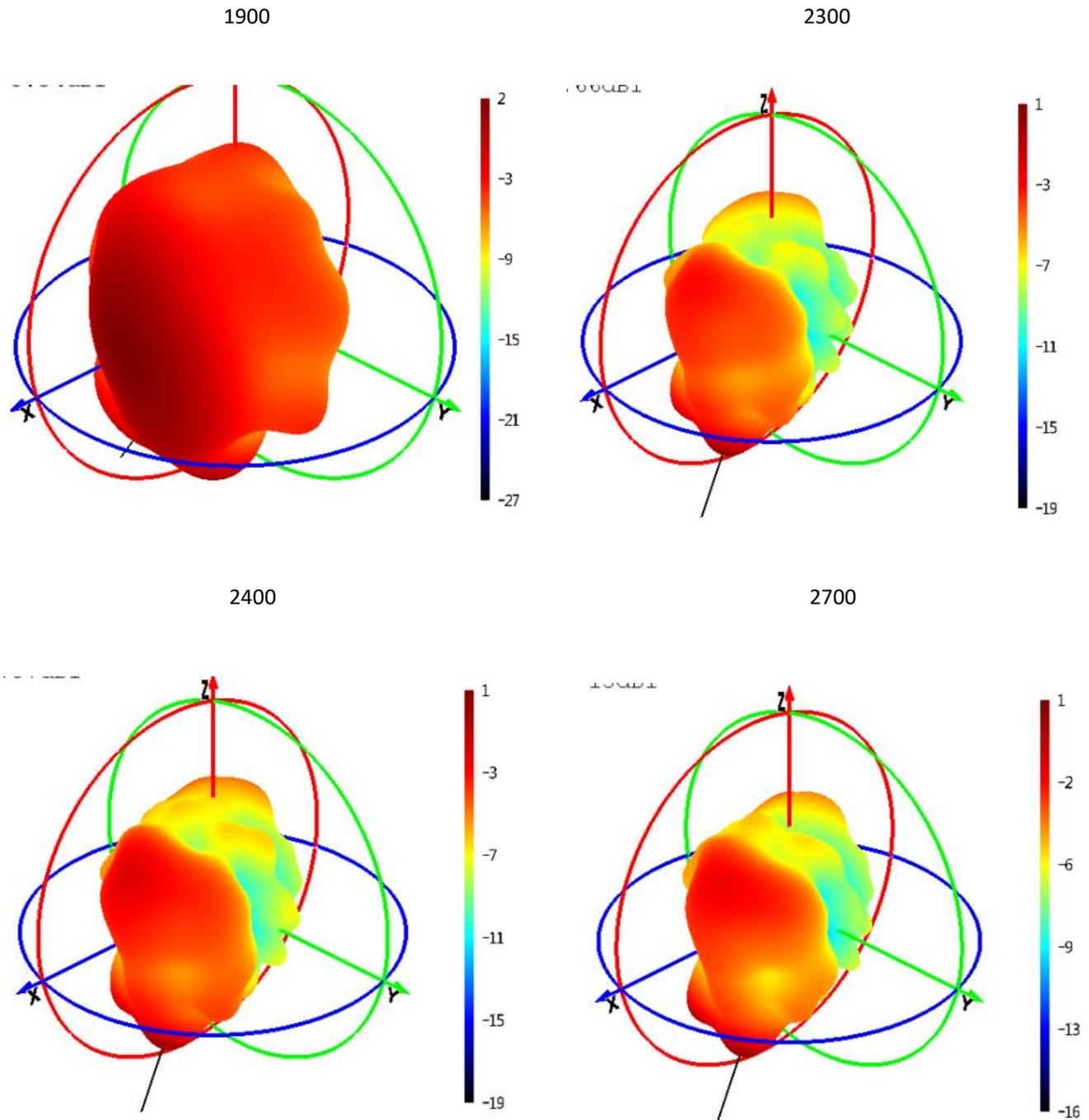
800



900

1700



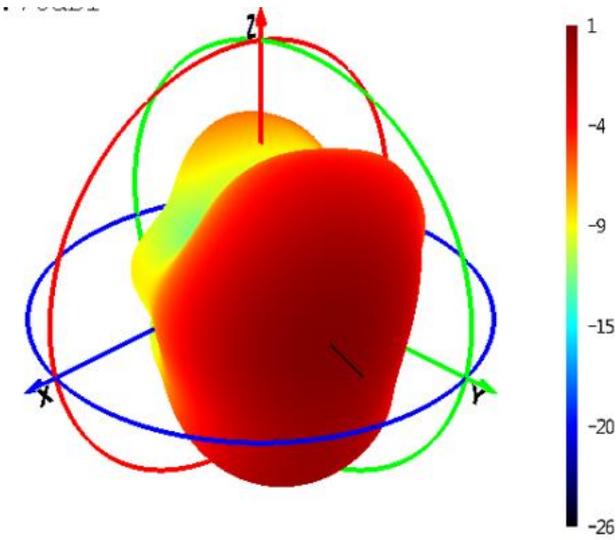


**GPS/WIFI/BTPassive parameters of antenna:**

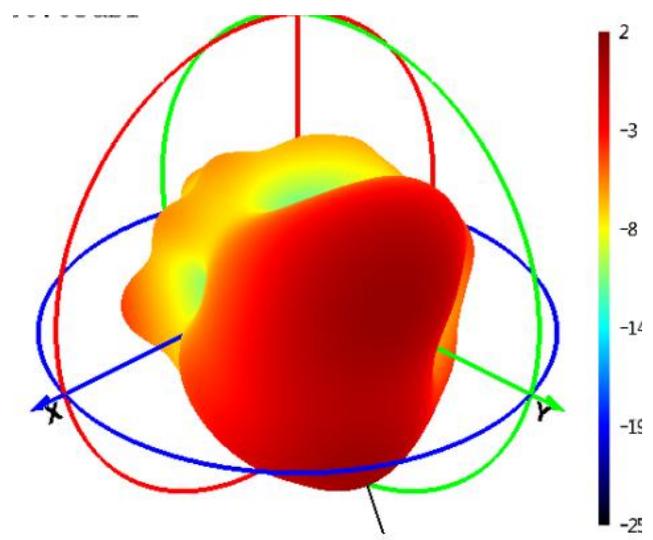
工作频段(Working frequency band): 1560~1580MHZ, 2400~2500MHZ,5180~8525MHZ

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		

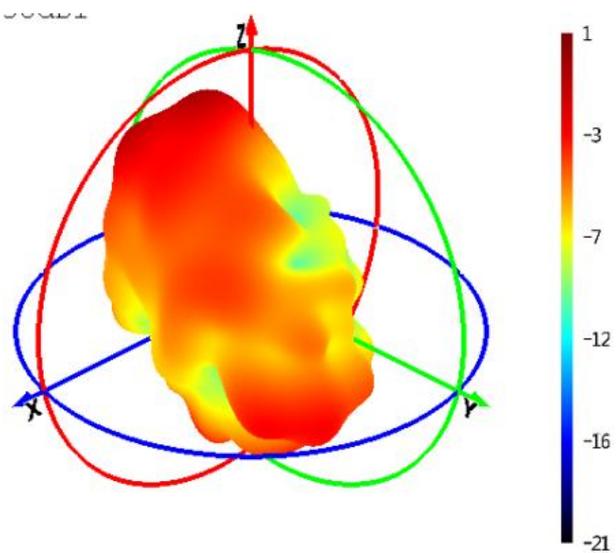
GPS



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.**

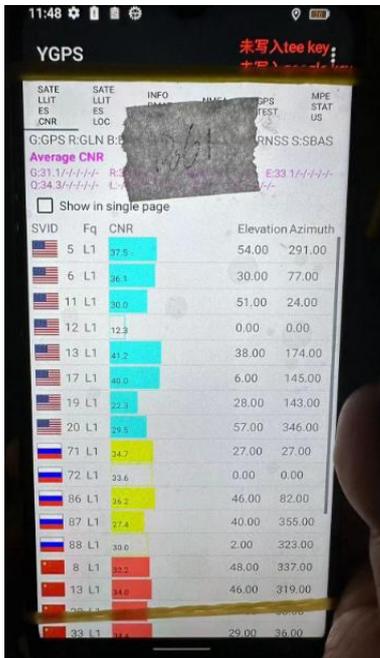
**The following is the active test result of D061 mobile phone main antenna:**

	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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