Shenzhen Anwei Wireless Technology Co., Ltd

Specification

客户 Customer	Cloud base	规格型号 Specs	S105
三好料号 Part Number	**CQ-D021-01** **CQ-D021-02** **CQ-D021-03**	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 CDMA BC0 BC1 B1.2.3.4.5.7.8.12.13.17.18.19.20.26.28.66.38.39.40.41
颜　色 Color	black	版　　本 Edition	REV:A1
销　售 Salesperson		设　　计 Design	JINGQIANG YE
结　构 Structure	李富伦	确　　认 Confirm	WUZHOU
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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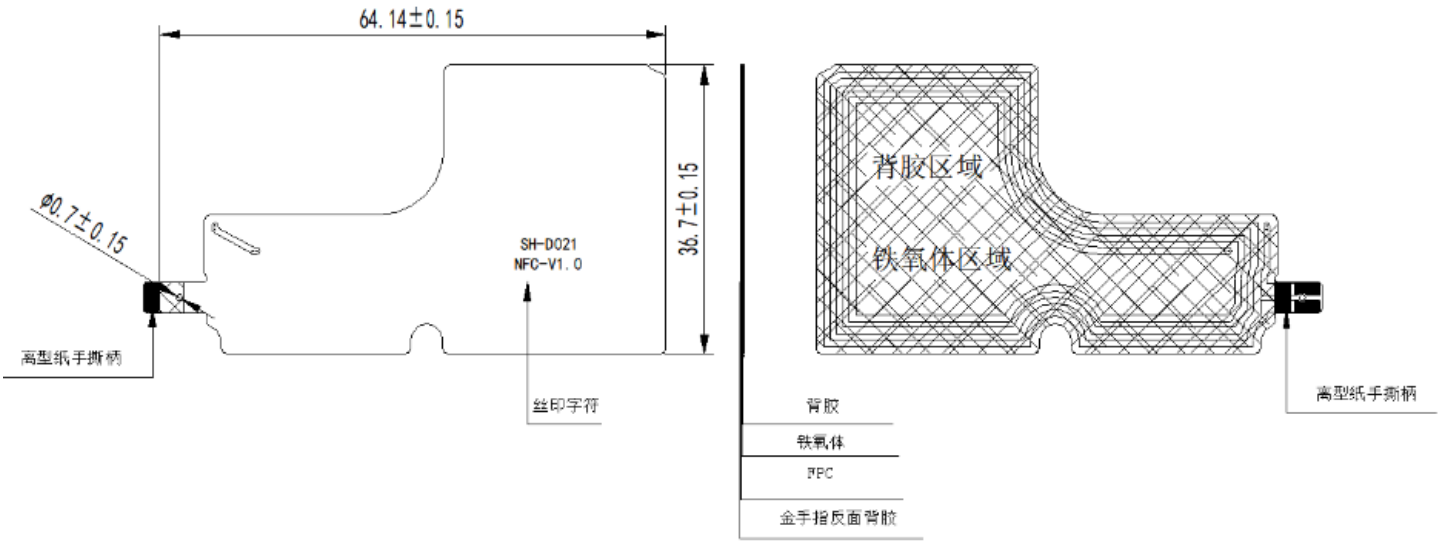
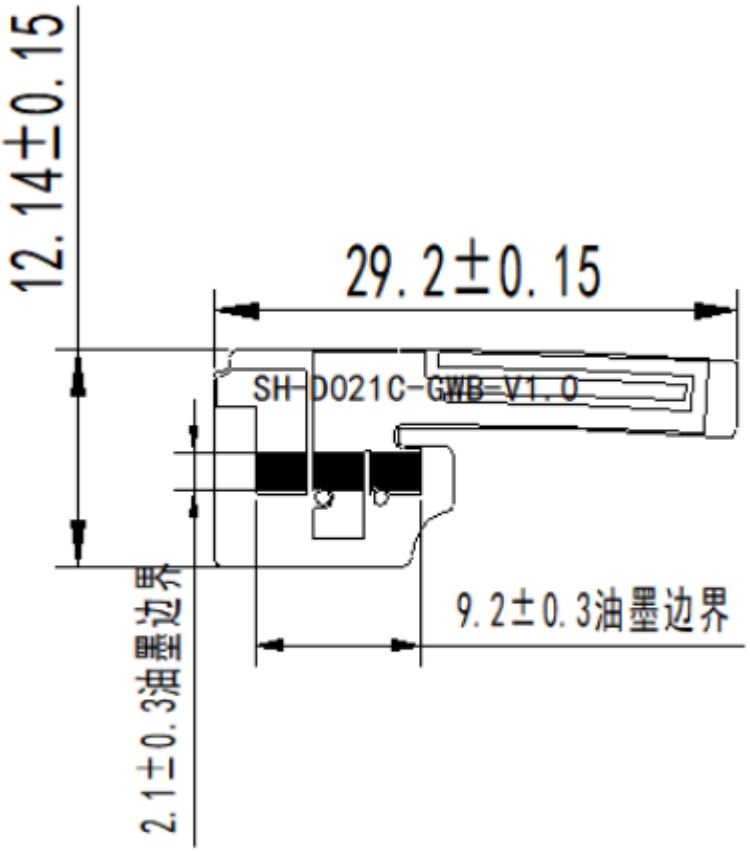
一、 Product specifications

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

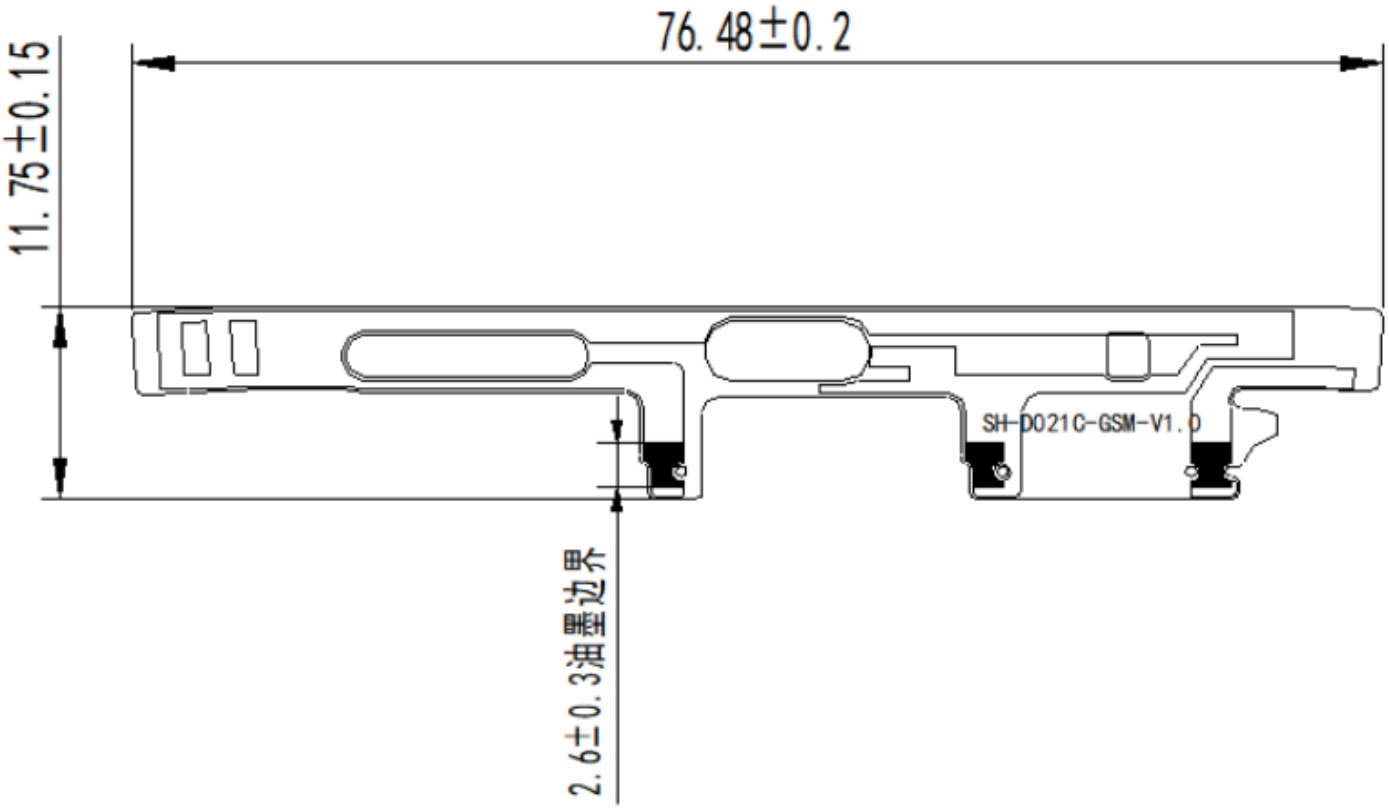
NFCCantenna



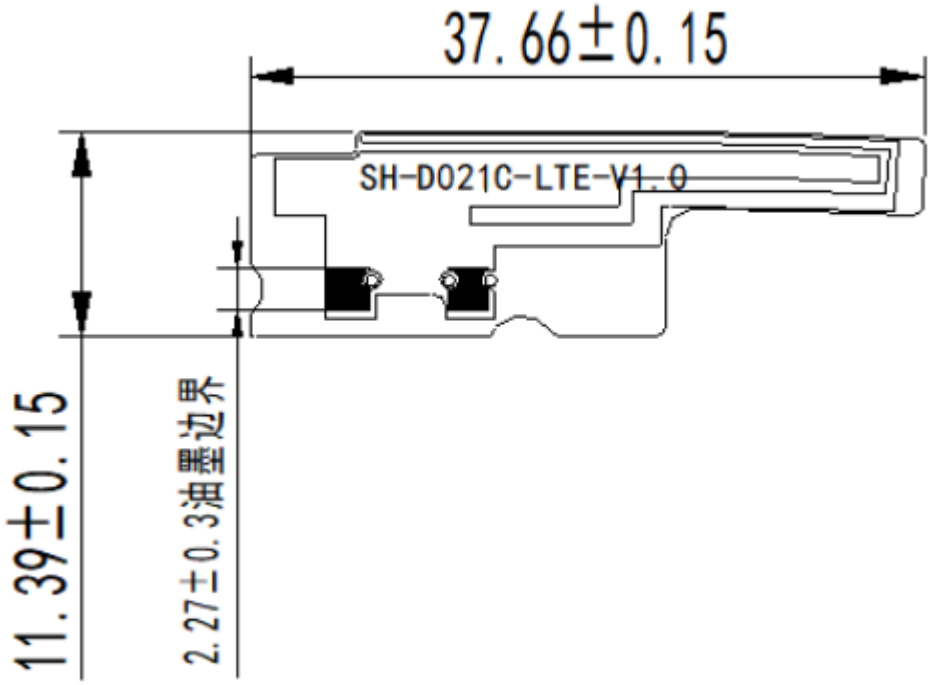
Three in one antenna



Main set antenna



Diversity antenna



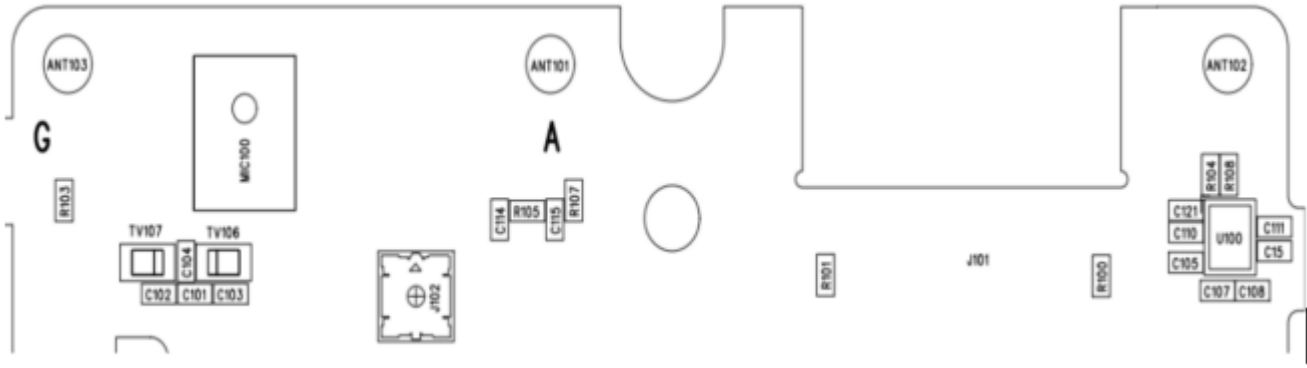
二、Electrical performance

1.Specifications

The operating frequency band of WP21 antenna is 699~960MHZ and 1710~2700MHZ, in which resonance occurs.

2.Matching circuit of antenna

主天线		开关	
Element	Value	Element	Value
R107	0欧	C121	O欧
C115	NC	C110	3NH
R105	0欧	C111	15NH
C114	7.5NH	C15	10NH



开关配置如下：

RF1路，0Ω: GSM900+W8+FDD7/8+TDD38/40/41

RF2路，3NH： GSM850+W5/6+FDD5/18/19/20/26/BC0

RF3路，15NH： FDD12/17/28AB

RF4路，10NH： FDD13

分集天线控制下面频段的TRP和TIS：

GSM1800/1900+W1/2/4+FDD1/2/3/4/66+TDD39+BC1

Structure of antenna：FPC

三、Test of parameters

1.Test settings

The connection of VSWR test device is：

E5071Bnetwork analyzer → 50Ohmic coaxialCable → 110mmLong copper tube → Test fixture

Treatment of test fixture:

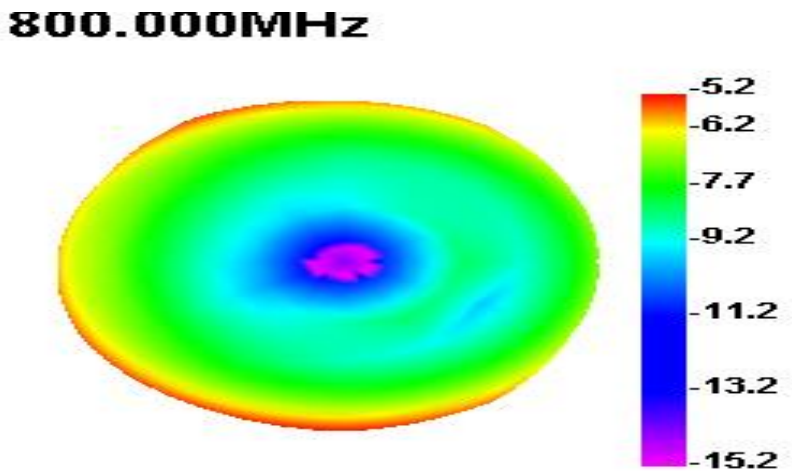
Use a hard cable to lead out the SMA-J connector from the 50 ohm test point of the antenna on the mobile phone PCB, connect it to the copper tube with a choke, and then connect other devices in turn.

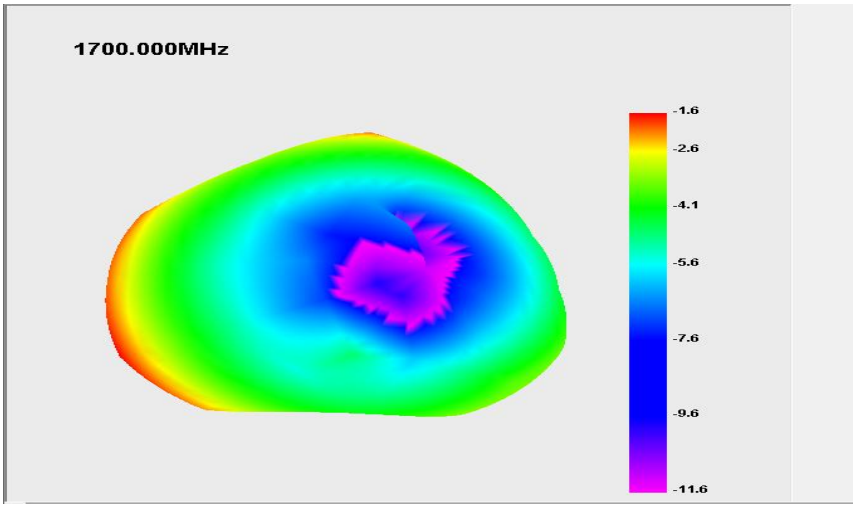
Passive parameters of main antenna：

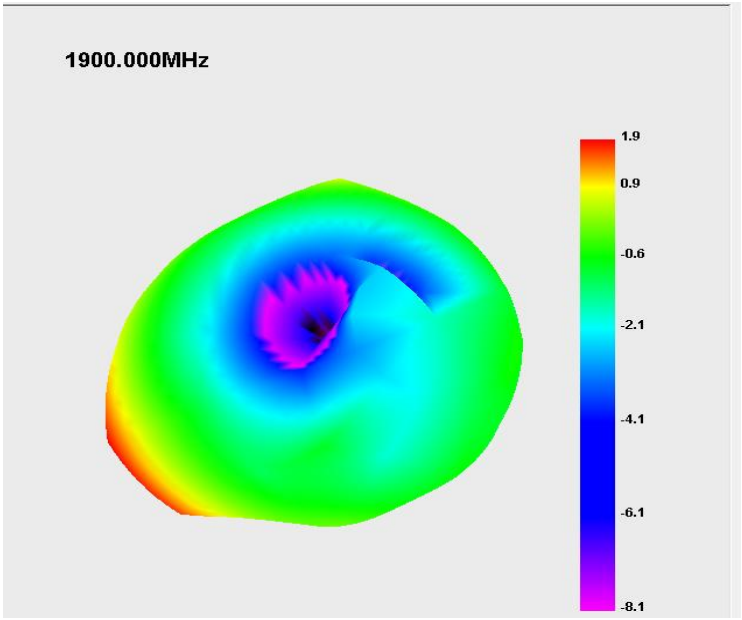
（**Working frequency band)**：699~960MHZ，1710~2700MHZ
GSM850/900/1800/1900
WCDMA1/2/4/5/6/8/
CDMA BC0 BC1 B1.2.3.4.5.7.8.12.13.17.18.19.20.26.28.66.38.39.40.41

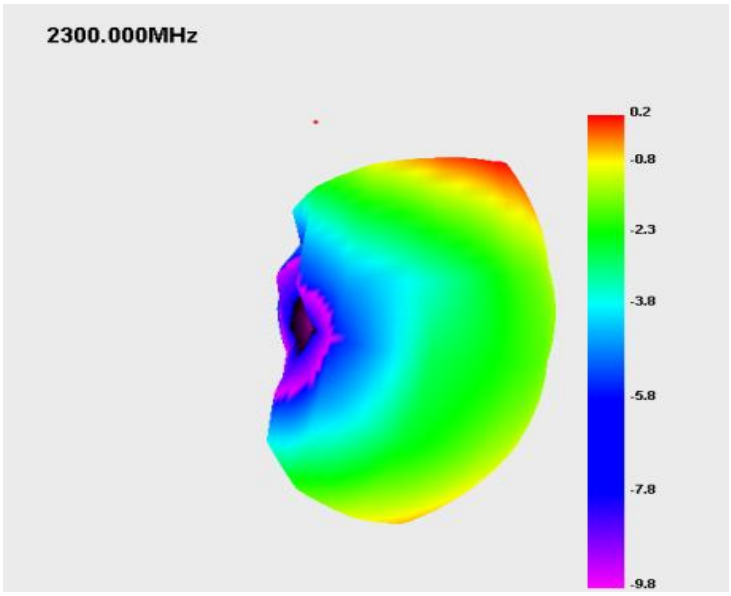
Gain	
频段 Band	gain 增益 (dBi)
LTE-B12/B13/B17/B28	-1.93
BC0/GSM850,WCDMA-B5/B6/,LTE-B5/B18/B19/B20/B26	-1.56
GSM900,WCDMA-B8,LTE-B8	-0.29
DCS1800,LTE-B3,	0.58

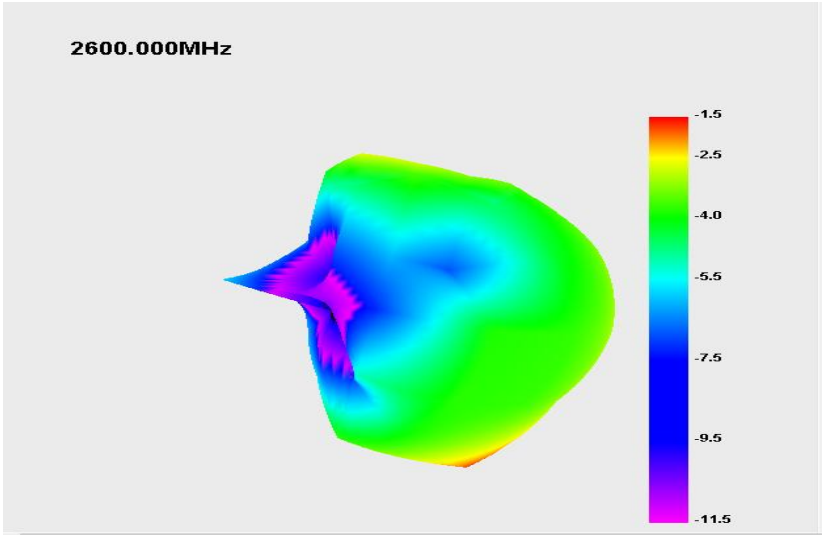
WCDMA-B4,LTE-B4/B66	0.65
BC1,PCS1900,WCDMA-B2,LTE-B2/B39	0.36
WCDMA-B1,LTE-B1	0.52
LTE-B7/B38/B41	-0.51
LTE-B40	-0.12
LTE13	-1.85
GPS	1.86
2.4G WIFI/BT	2.61
5G WIFI	1.55

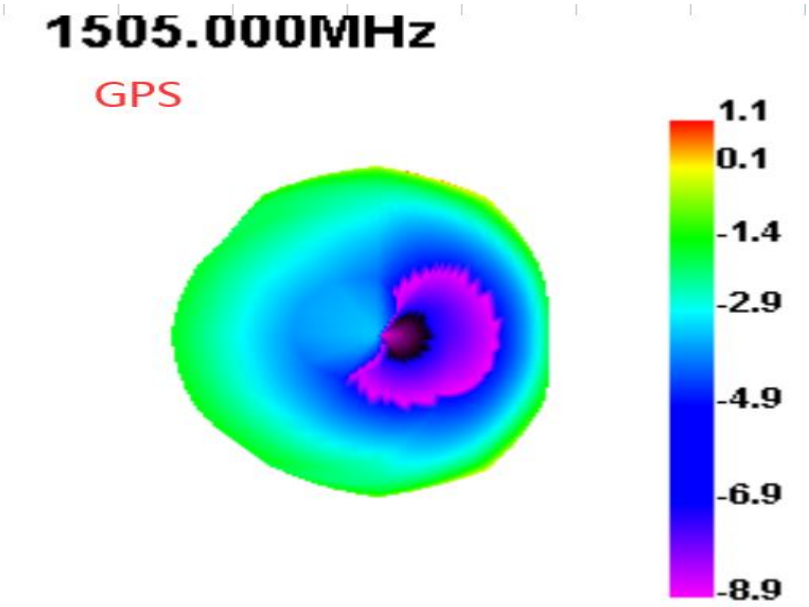


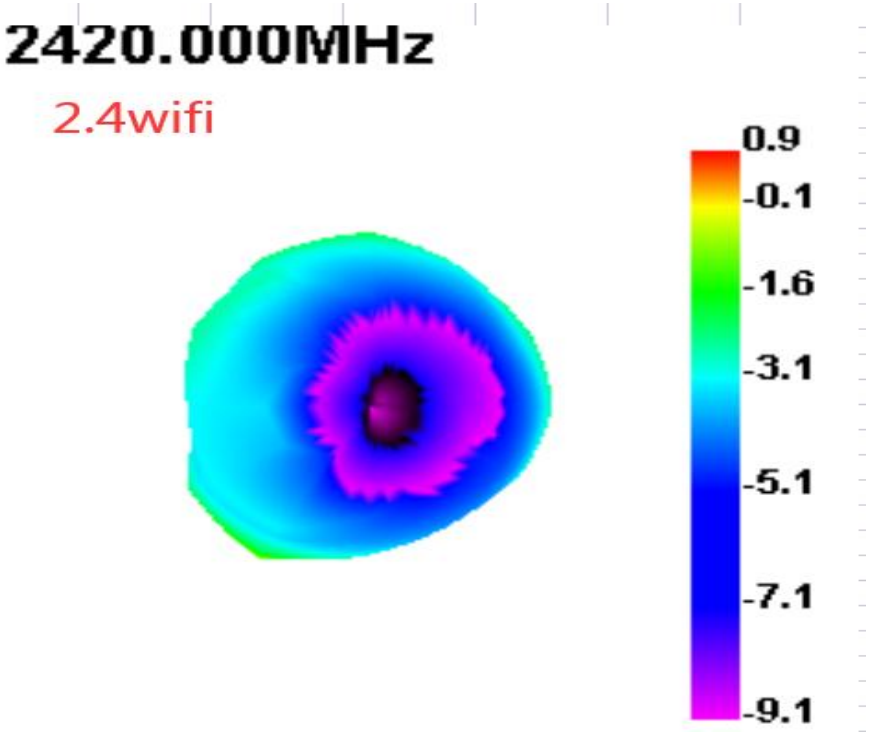

1700.000MHz
-1.6
-2.6
-4.1
-5.6
-7.6
-9.6
-11.6

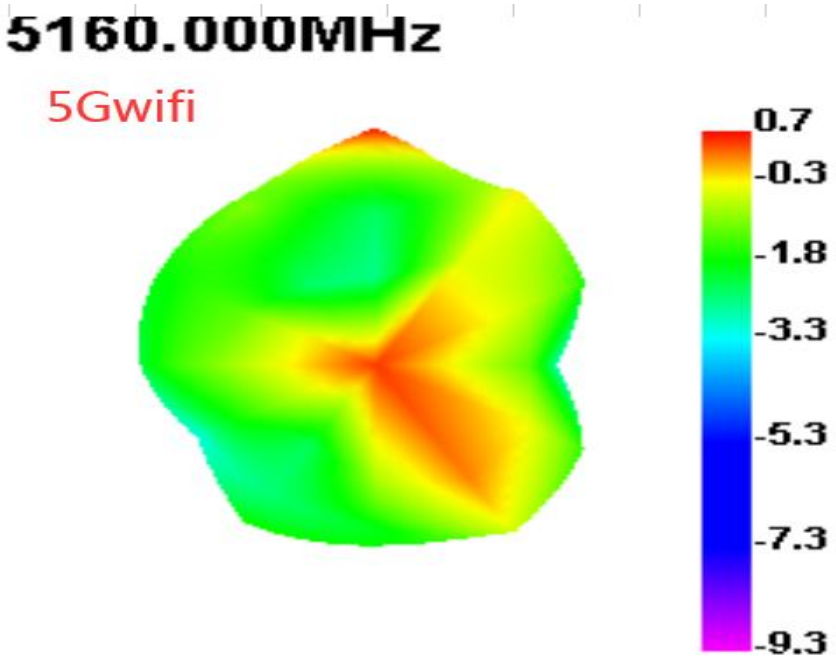

1900.000MHz
1.9
0.9
-0.6
-2.1
-4.1
-6.1
-8.1


2300.000MHz
0.2
-0.8
-2.3
-3.8
-5.8
-7.8
-9.8


2600.000MHz
-1.5
-2.5
-4.0
-5.5
-7.5
-9.5
-11.5


1505.000MHz
GPS
1.1
0.1
-1.4
-2.9
-4.9
-6.9
-8.9


2420.000MHz
2.4wifi
0.9
-0.1
-1.6
-3.1
-5.1
-7.1
-9.1



GPS/WIFI/BTPassive parameters of antenna：

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

2.test result

business as usual.

四、Active test setup

The active test devices are sequentially connected as follows：

Agilent8960→50Ohmic coaxialCable→Satimo system→Mobile phone to be tested

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 D021 mobile phone main antenna：

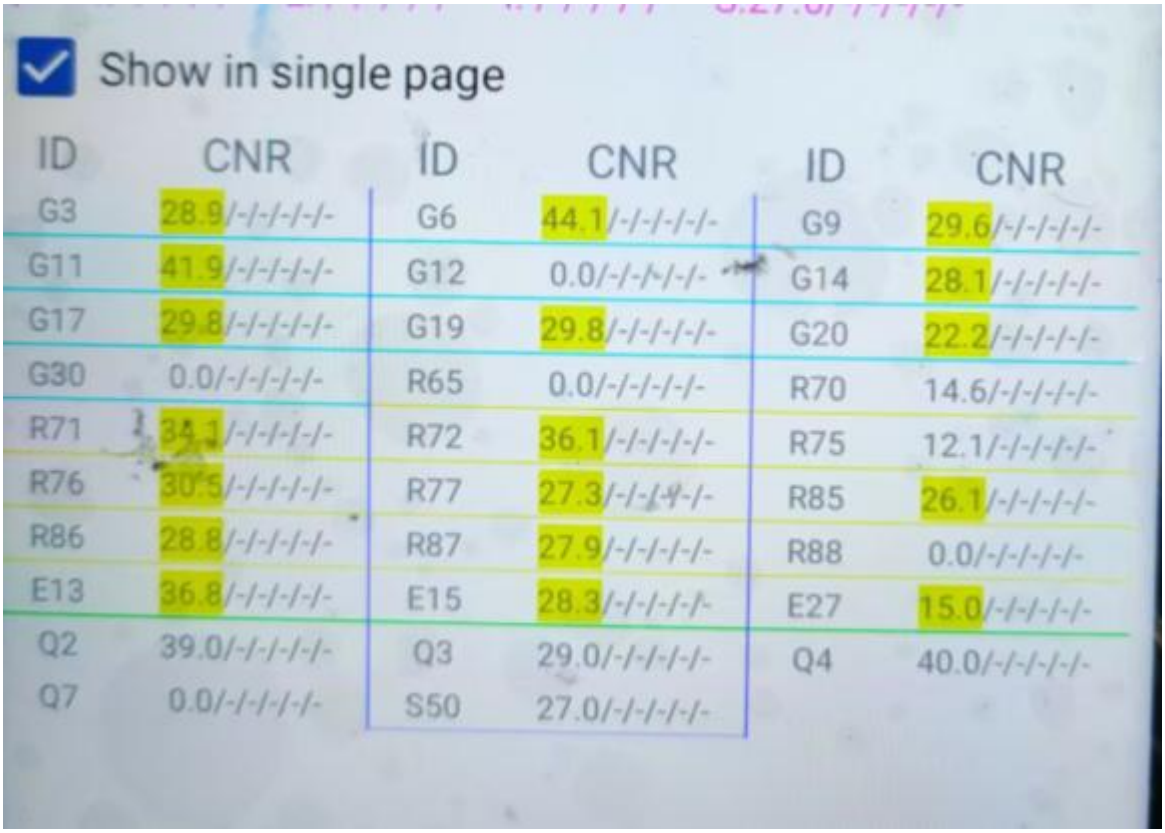
2G	CH	TRP	TIS
GSM850	128	26.21	
	190	25.96	
	251	25.53	-102.73
EGSM900	1	26.13	
	62	26.66	
	124	26.29	-102.46
DCS1800	512	24.35	
	698	24.19	
	885	24.38	-105.6
PCS1900	512	24.2	
	661	25.87	
	810	26.17	-104.39

3G	CH	TRP	TIS
WCDMA1	10562	18.77	
	10700	18.58	
	10838	18.09	-103.38
WCDMA2	9662	17.96	
	9800	18.16	
	9938	18.85	-103.69
WCDMA4	1537	15.51	
	1625	15.45	
	1738	15.78	-103.26
WCDMA5	4357	16.13	
	4408	16.17	
	4458	16.24	-101.21
WCDMA6	4162	17.88	
	4175	18.04	
	4188	18.17	-103.67
WCDMA8	2937	16.79	
	3013	15.64	
	3088	15.23	-102.15

4G	CH	TRP	TIS
FDD-B1	18050	18.62	
	18300	18.57	
	18550	18.38	-93.96
FDD-B2	18650	17.54	
	18900	18.21	
	19150	17.97	-93.46
FDD-B3	19250	15.38	
	19575	16.03	
	19900	16.12	-95.28
FDD-B4	20000	15.73	
	20175	16.05	
	20350	16.79	-91.75
FDD-B5	20450	16.06	
	20525	16.16	
	20600	16.91	-91.02
FDD-B7	20800	17.09	
	21100	16.58	
	21400	15.62	-90.72
FDD-B8	21500	16.77	
	21625	15.87	
	21750	15.36	-90.65
FDD-B12	23060	16.79	
	23095	17.29	
	23130	17.84	-91.37
FDD-B13			
	23230	16.23	-90.02
FDD-B17	23780	16.21	
	23790	16.59	
	23800	16.91	-92.31
FDD-B18	23900	16.9	
	23925	17.54	
	23950	17.9	-93.56

4G	CH	TRP	TIS
FDD-B19	24050	18.18	
	24075	18.48	
	24100	18.61	-92.26
FDD-B20	24200	16.54	
	24300	17.02	
	24400	16.66	-92.22
FDD-B26	26715	16.55	
	26865	18.15	
	27015	18.44	-92.01
FDD-B28	27260	16.59	
	27435	16.72	
	27610	16.68	
	27410	17.63	
	27510	16.35	-89.68
FDD-B66	132022	15.85	
	132322	16.28	
	132622	16.93	-93.24
TDD-B38	37850	16.3	
	38000	16.33	
	38150	16.63	-88.16
TDD-B39	38350	18.62	
	38450	18.99	
	38550	18.18	-90.26
TDD-B40	38750	18.86	
	39150	18.48	
	39550	18.52	-90.16
TDD-B41	40340	16.46	
	40620	16.24	
	41140	17.32	-88.69

2-1.Three in one test results



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ID	CNR	ID	CNR	ID	CNR
G3	28.9/-/-/-/-/-	G6	44.1/-/-/-/-/-	G9	29.6/-/-/-/-/-
G11	41.9/-/-/-/-/-	G12	0.0/-/-/-/-/-	G14	28.1/-/-/-/-/-
G17	29.8/-/-/-/-/-	G19	29.8/-/-/-/-/-	G20	22.2/-/-/-/-/-
G30	0.0/-/-/-/-/-	R65	0.0/-/-/-/-/-	R70	14.6/-/-/-/-/-
R71	34.1/-/-/-/-/-	R72	36.1/-/-/-/-/-	R75	12.1/-/-/-/-/-
R76	30.5/-/-/-/-/-	R77	27.3/-/-/-/-/-	R85	26.1/-/-/-/-/-
R86	28.8/-/-/-/-/-	R87	27.9/-/-/-/-/-	R88	0.0/-/-/-/-/-
E13	36.8/-/-/-/-/-	E15	28.3/-/-/-/-/-	E27	15.0/-/-/-/-/-
Q2	39.0/-/-/-/-/-	Q3	29.0/-/-/-/-/-	Q4	40.0/-/-/-/-/-
Q7	0.0/-/-/-/-/-	S50	27.0/-/-/-/-/-		

		TRP	TIS
wifi-B	1	12.56	-81.22
	7	13.03	-81.38
	13	13.18	-82.56
		TRP	TIS
wifi-A	36	10.87	-70.45
	149	10.25	-69.59
	165	9.05	-69.42

2-2.蓝牙测试（Bluetooth Test）：

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

NFCpart

实部调试为11.498Ω，虚部调试为-1.0474Ω

Passive graph

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