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# **Antenna Data Sheet Catalogue**

- 1. Capability Status**
- 2. Antenna Location**
- 3. Antenna Passive Efficiency**
- 4. Simple Antenna Pattern Plot**
- 5. Antenna return loss**

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## 1. Capability Status

### a. Main software and hardware facilities for antenna R&D

#### Equipment introduction

Shanghai: Satimo:2 GTS1800:3 NFC Micropross:1

SAR DASY 5:1

Shenzhen: GTS1800:1 GTS2800:1 NFC Micropross:1

Xian: GTS2800:1

Beijing: GTS1800:2 GTS2800:1

Kunshan: GTS2800:1 Satimo:2 GTS1800:3

SAR DASY 4:2



Satimo SG24



GTS2800



DASY4/5



NFC

### b. Full category testing capability

#### Support system

GSM/WCDMA/EVDO/TDSCDMA/TDD/FDD/5G-SA/5G-NSA/eMTC/NB-iot/GPS/WiFi/BT/  
CA/ENDC

Common equipment

SP9500

Anritsu MT8820C

5071C

CMW500

DASY4/5 SAR

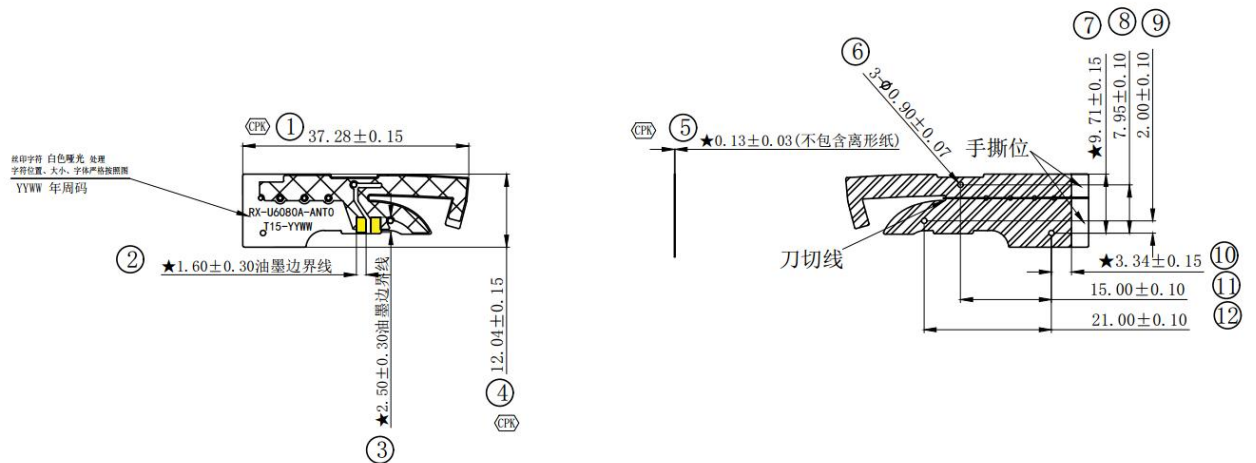


**StarPoint SP9500**

**Anritsu MT8820C**

2. **Antenna Location**

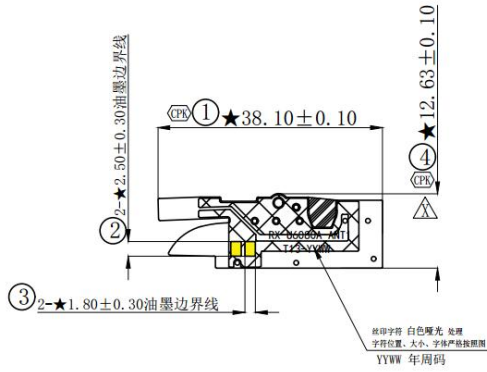
**ANT0:GPS L1+2.4G+5G WIFI**



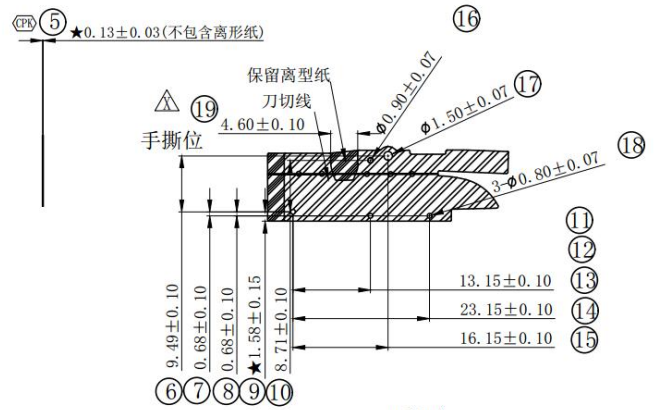
**ANT1:3G: WCDMA B2/4/5**

**4G: LTE B2/3/4/5/12/14/29/30/66**

**5G: n5/n2/n66/n30 DRX(RX2)**



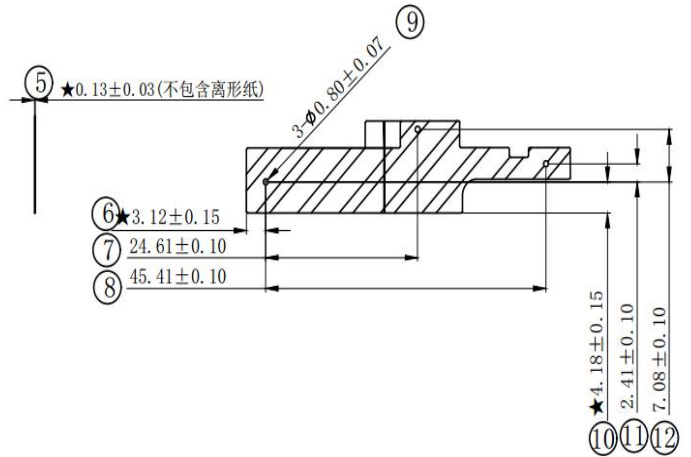
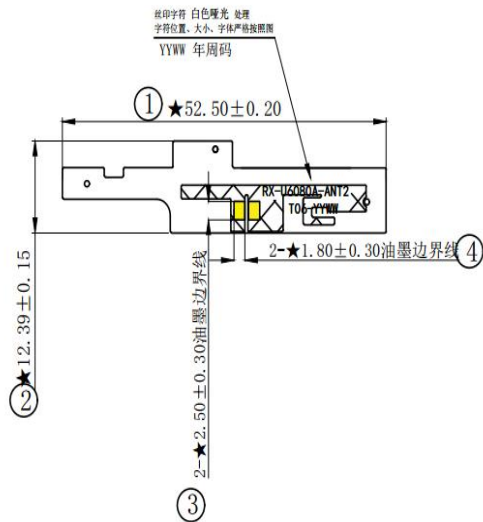
正面



反面

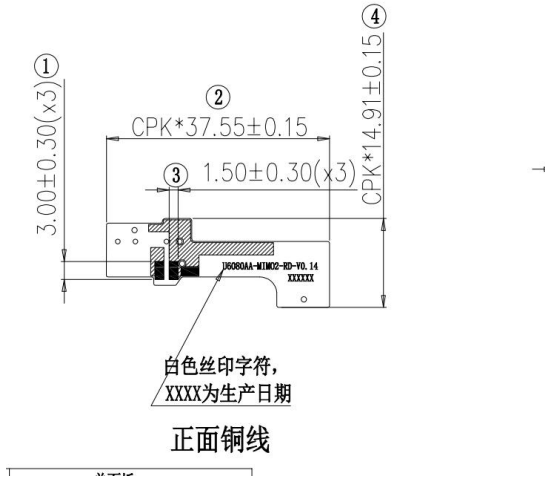
**ANT2: 4G: LTE B2/4/30/66**

**5G: n2/n66/n30/n77 PRX2 MIMO (RX3)**

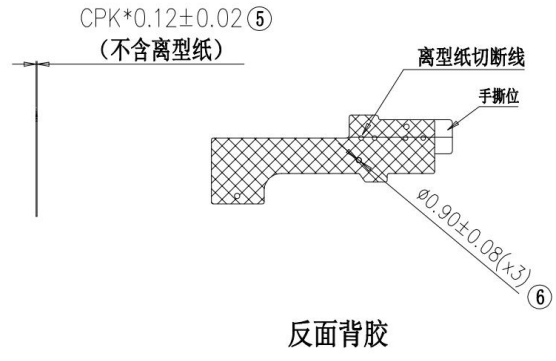


**ANT3:4G: LTE B2/4/30/66**

**5G: n2/n66/n30/n77 DRX2 MIMO (RX4)**

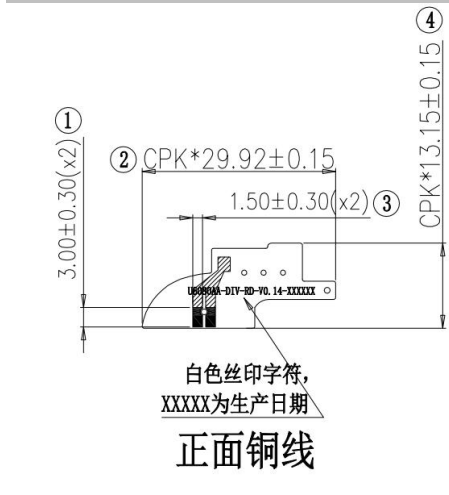


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变更符号	符号	项数	描述	日期	变更人
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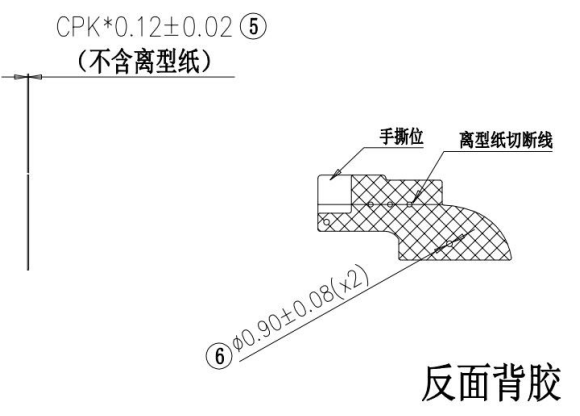


**ANT4: 4G: LTE B48**

**5G: n77 DRX(RX2)**



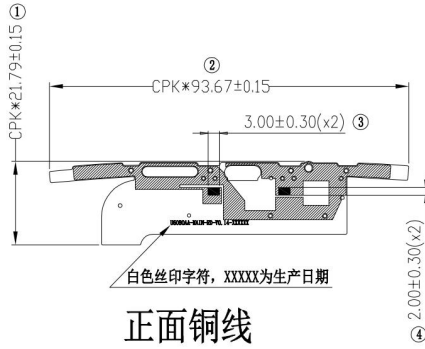
修改				
变更符号	符号	项数	描述	日期
△				



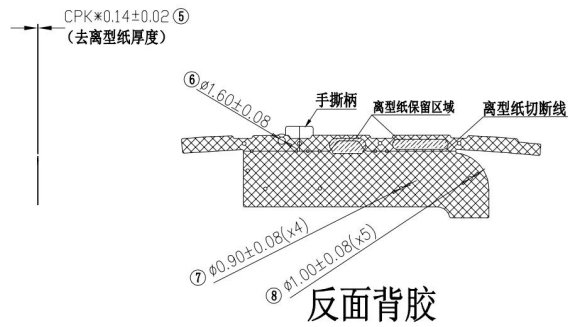
**ANT5:3G: WCDMA B2/4/5**

**4G: LTE B2/3/4/5/12/14/29/30/66**

**5G: n5/n2/n66/n30 TX/PRX(RX1)**



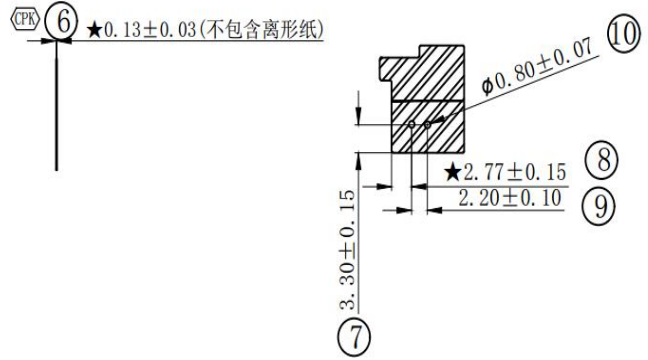
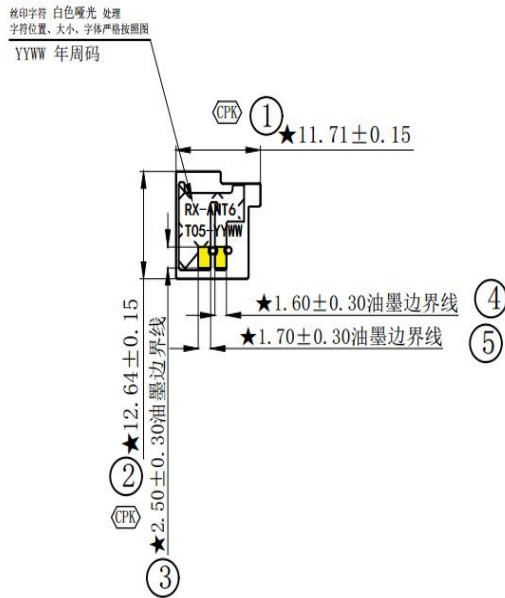
正面铜线



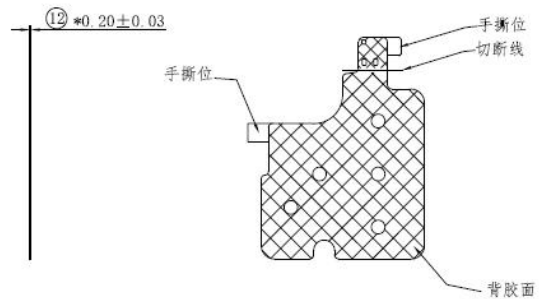
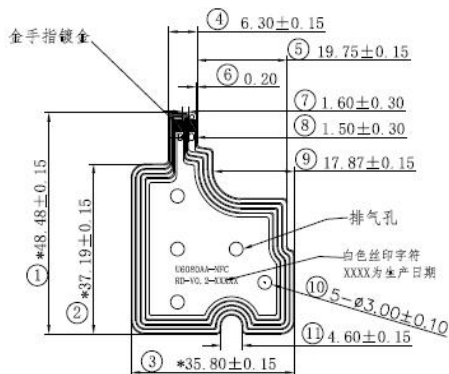
反面背胶

**ANT6:4G: LTE B48**

**5G: n77 TX/PRX(RX1)**



**ANT7:NFC**



Note:

ANT0/1/2/6

manufacturer: Kunshan Ruixiang Xun Communication Technology Co., LTD

Website:www.innowave.cn

Address: Building C, 1689 Zizhu Road, Yushan Town, Kunshan City, Jiangsu Province.  
 Antenna model number: RX-U6080

ANT3/4/5/7

manufacturer: Shenzhen Ruide Communication Technology Co., LTD

Website: www.myetheta.com.

Address: Zone B and Zone D, Floor 3, Building 1, Baisha Science and Technology Industrial Park, No. 3011, Shahe West Road, Nanshan District, Shenzhen.

Antenna model number: RD-U6080

### 3. Antenna Passive Efficiency

#### a.. Antenna0

	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
GPS	L1 1575.5	/	-4.1dB	/	1.0dBi
WIFI 2.4G	2.4Ghz-2.5 Ghz	-4.2dBi	-4.2dBi	1.5dBi	1.5dBi
WIFI 5G	5.15Ghz-5. 85Ghz	-5.9dBi	-5.9dBi	-0.5dBi	-0.5dBi
BT	2.4Ghz-2.5 Ghz	-4.2dBi	-4.2dBi	1.5dBi	1.5dBi

#### b. Antenna1

	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
WCDMA	WCDMA B2	-5.0dBi	-3.9dBi	-1.8dBi	-0.7dBi
	WCDMA B4	-7.9dBi	-4.1dBi	-3.6dBi	0.9dBi
	WCDMA B5	-11.7dBi	-8.0dBi	-7.5dBi	-3.6dBi
LTE	Band 2	-5.0dBi	-3.9dBi	-1.8dBi	-0.7dBi
	Band 3	-7.9dBi	-5.3dBi	-3.6dBi	-2.1dBi
	Band 4	-7.9dBi	-4.1dBi	-3.6dBi	0.9dBi
	Band 5	-11.7dBi	-8.0dBi	-7.5dBi	-3.6dBi

	Band 12	-9.6dBi	-8.9dBi	-5.9dBi	-4.9dBi
	Band 14	-11.0dBi	-8.6dBi	-6.0dBi	-4.6dBi
	Band 66	-7.9dBi	-4.1dBi	-3.6dBi	0.9dBi
	Band 30	-6.0dBi	-4.8dBi	-0.2dBi	0.8dBi
	Band 29	/	-8.7dBi	/	-4.9dBi
NR	N2	-5.0dBi	-3.9dBi	-1.8dBi	-0.7dBi
	N5	-11.7dBi	-8.0dBi	-7.5dBi	-3.6dBi
	N66	-7.9dBi	-4.1dBi	-3.6dBi	0.9dBi
	N30	-6.0dBi	-4.8dBi	-0.2dBi	0.8dBi

c. Antenna2

	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
LTE	Band 2	/	-7.1dBi	/	-2.5dBi
	Band 4	/	-7.4dBi	/	-2.1dBi
	Band 66	/	-7.4dBi	/	-2.1dBi
	Band 30	/	-8.6dBi	/	-3.2dBi
NR	N2	/	-7.1dBi	/	-2.5dBi
	N66	/	-7.4dBi	/	-2.1dBi
	N30	/	-8.6dBi	/	-3.2dBi
	N77	-7.6dBi	-7.6dBi	-2.4dBi	-2.4dBi

d. Antenna3

	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
LTE	B2	/	-15.2dBi	/	-9.9dBi
	B4	/	-13.2dBi	/	-8.6dBi
	B66	/	-13.2dBi	/	-8.6dBi
	B30	/	-12.1dBi	/	-6.3dBi
	NR	N2	/	-15.2dBi	/



	N66	/	-13.2dBi	/	-8.6dBi
	N30	/	-12.1dBi	/	-6.3dBi
	N77	-8.6dBi	-8.6dBi	-3.8dBi	-3.8dBi

e.Antenna4

	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
	B48	-6.9dBi	-6.9dBi	-1.7dBi	-1.7dBi
	N77	-6.6dBi	-6.6dBi	-0.5dBi	-0.5dBi

f.Antenna5

	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
WCDMA	Band 2	-4.8dBi	-5.8dBi	-1.1dBi	-1.2dBi
	Band 4	-4.7dBi	-6.8dBi	-1.9dBi	-1.1dBi
	Band 5	-6.4dBi	-6.4dBi	-3.1dBi	-3.0dBi
LTE	Band 2	-4.8dBi	-5.8dBi	-1.1dBi	-1.2dBi
	Band 3	-4.7dBi	-4.8dBi	-1.7dBi	-1.1dBi
	Band4	-4.7dBi	-6.8dBi	-1.9dBi	-1.1dBi
	Band 5	-6.4dBi	-6.4dBi	-3.1dBi	-3.0dBi
	Band 12	-4.8dBi	-5.2dBi	-2.4dBi	-2.6dBi
	Band 14	-5.5dBi	-6.0dBi	-2.5dBi	-3.0dBi
	Band 66	-4.7dBi	-6.8dBi	-1.9dBi	-1.1dBi
	Band 30	-4.2dBi	-4.8dBi	-0.2dBi	-0.7dBi
	Band 29	/	-4.9dBi	/	-2.3dBi
NR	N2	-4.8dBi	-5.8dBi	-1.1dBi	-1.2dBi
	N5	-6.4dBi	-6.4dBi	-3.1dBi	-3.0dBi
	N66	-4.7dBi	-6.8dBi	-1.9dBi	-1.1dBi

	N30	-4.2dBi	-4.8dBi	-0.2dBi	-0.7dBi
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g. Antenna6

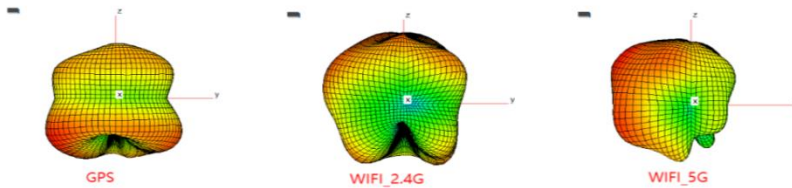
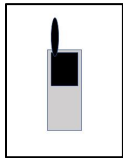
	Band	Average Gain		Maximum Gain	
		TX	RX	TX	RX
LTE	B48	-5.7dBi	-5.7dBi	-0.9dBi	-0.9dBi
NR	N77	-5.1dBi	-5.1dBi	-0.1dBi	-0.1dBi

h. Antenna7 NFC

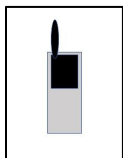
The devices does not support the test of NFC gain.In addition,all measurements were performed radiated and therefore additional antenna gain documentation is not required.

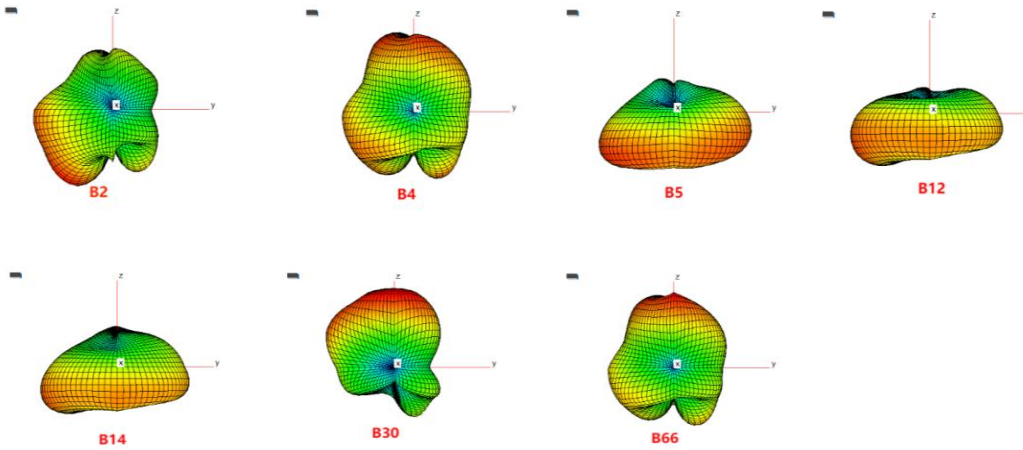
## 4. Simple Antenna Pattern Plot

a. Antenna0

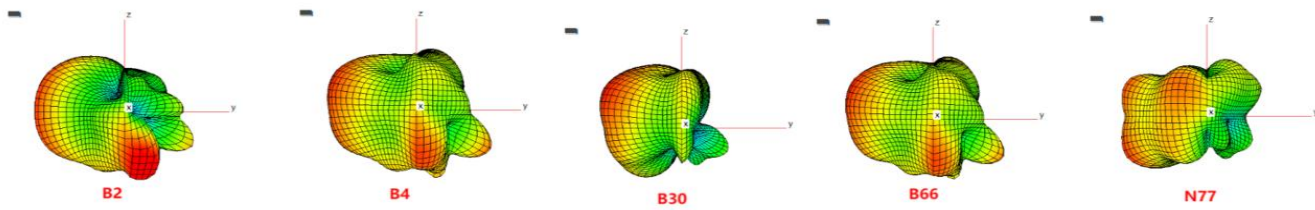
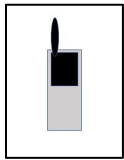


b. Antenna1

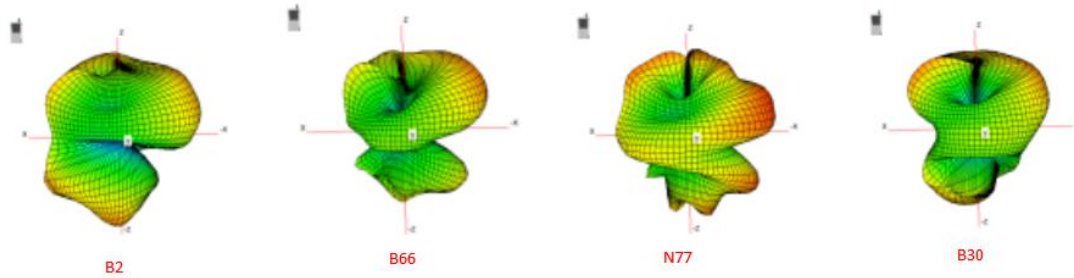
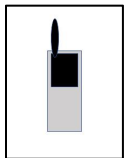




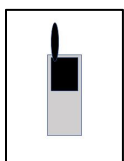
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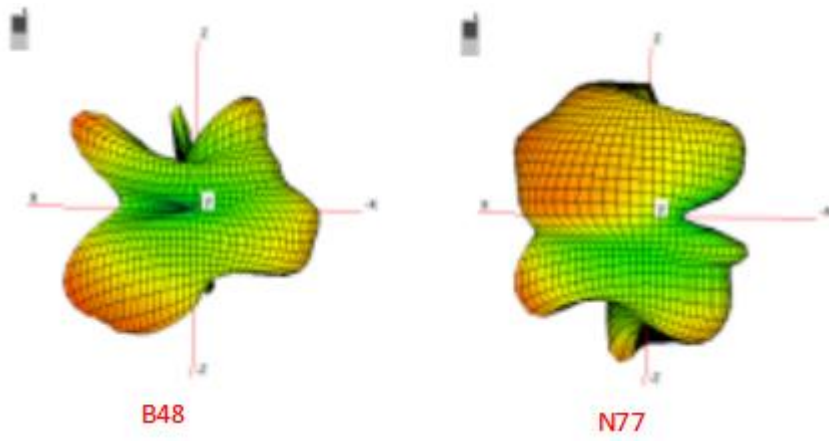


d. Antenna3

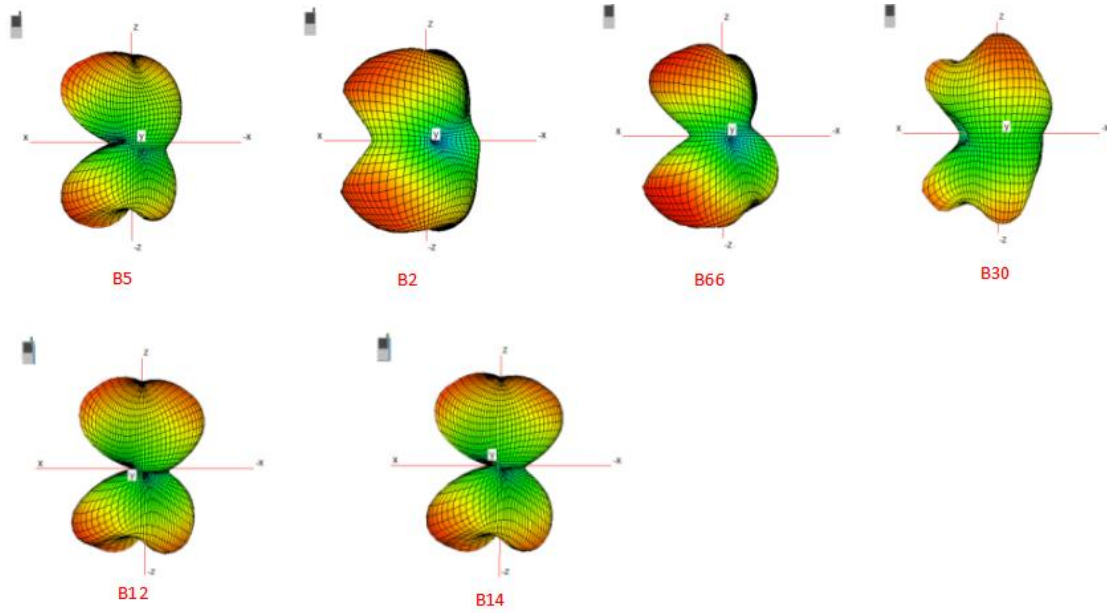
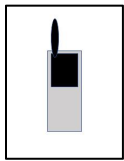


e. Antenna4

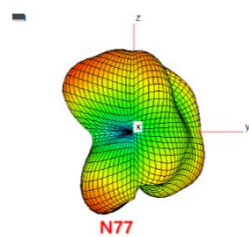
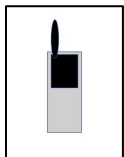




f. Antenna5



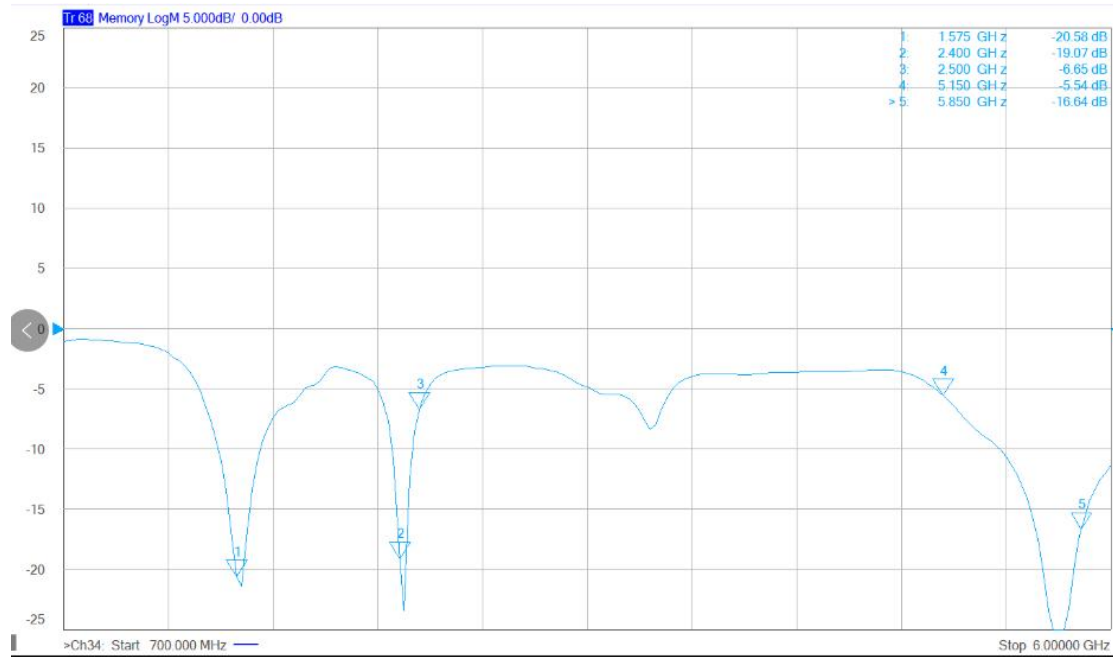
g. Antenna6



## 5. Antenna return loss

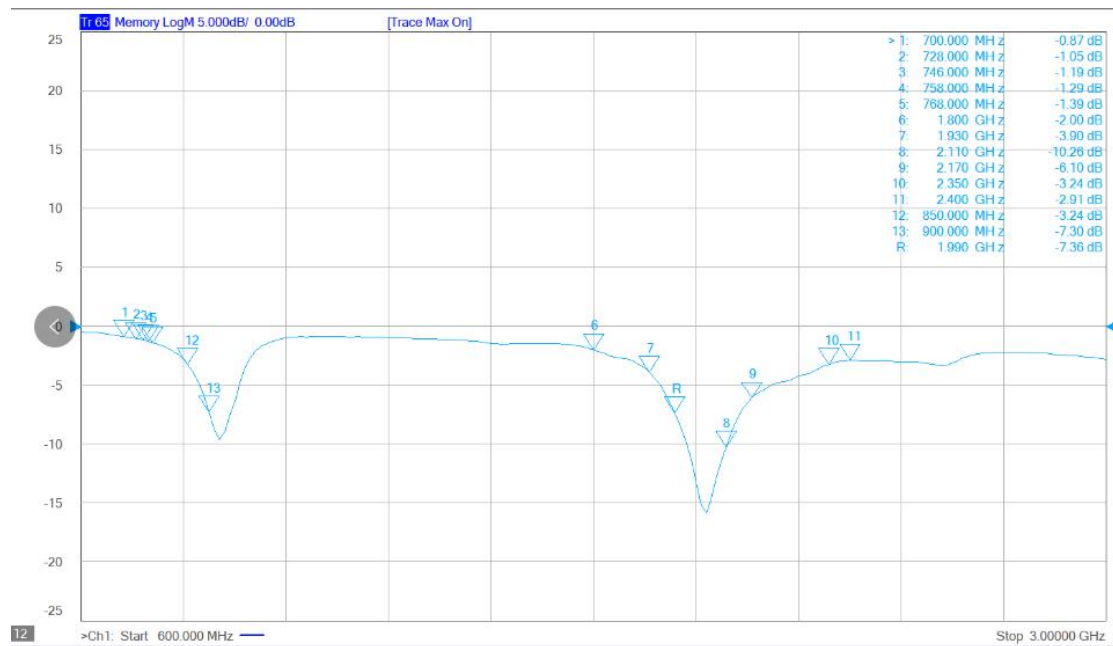
a. Antenna0

GPS/WIFI/BT

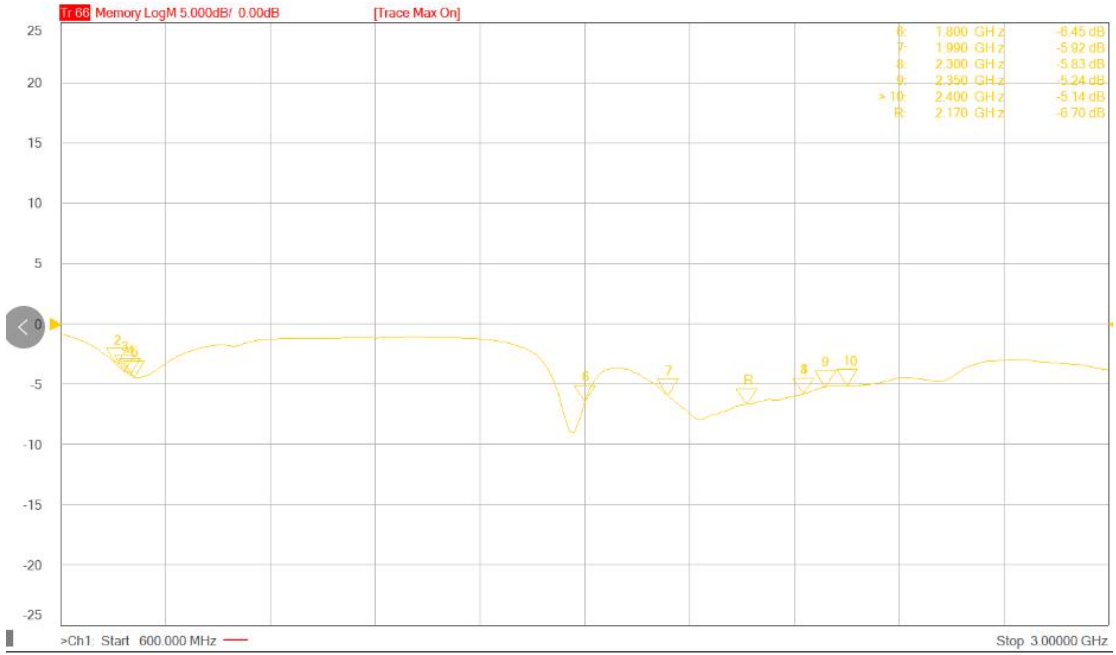


b. Antenna1

B2/4/5/30/66

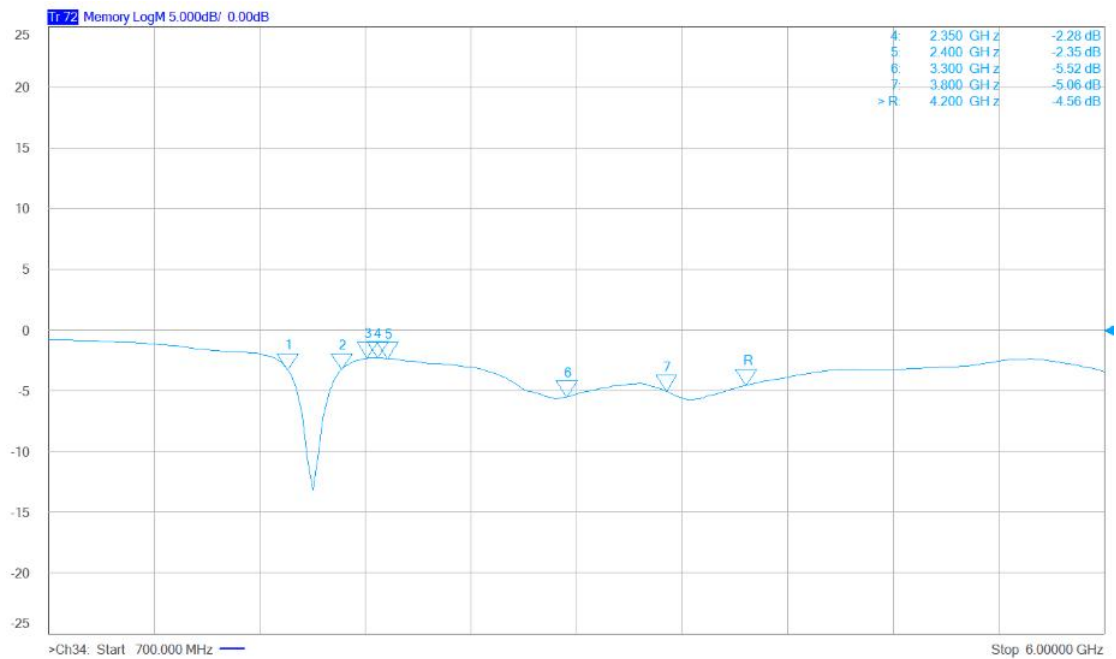


B12/14



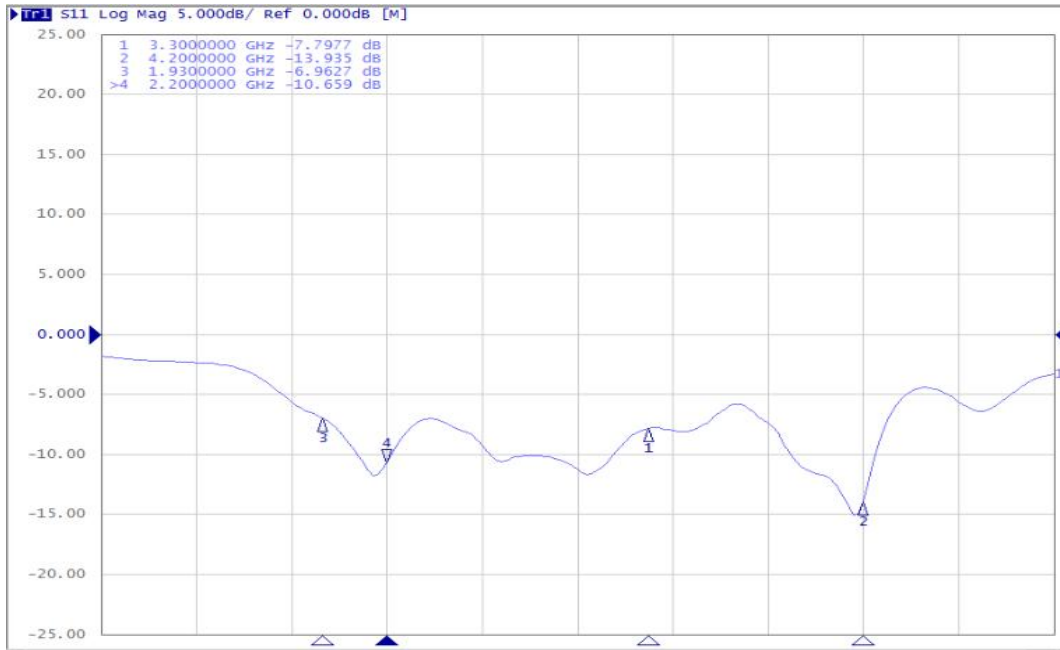
c. Antenna2

B2/4/30/66/N77



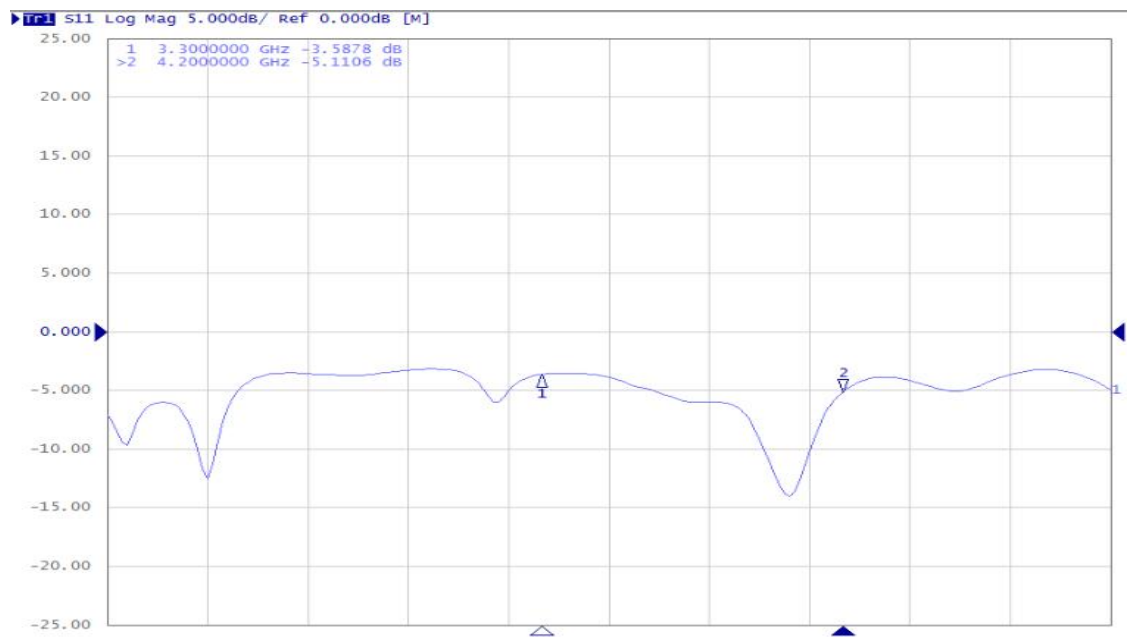
d. Antenna3

B2/4/30/66/N77



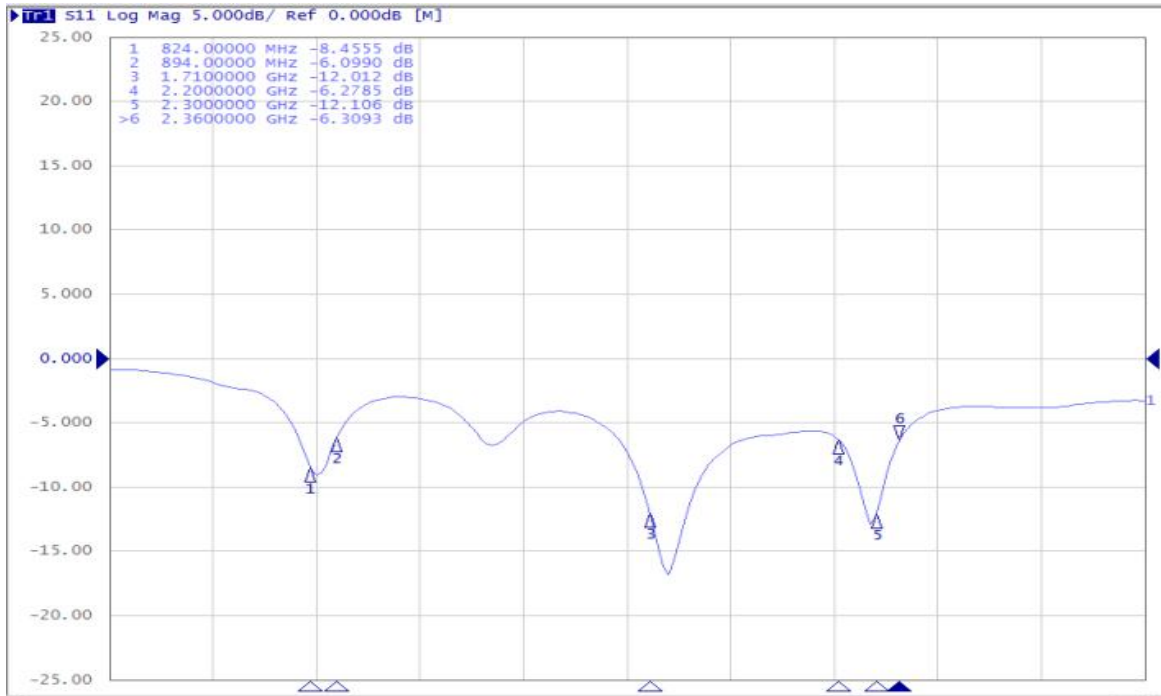
e. Antenna4

B48/N77

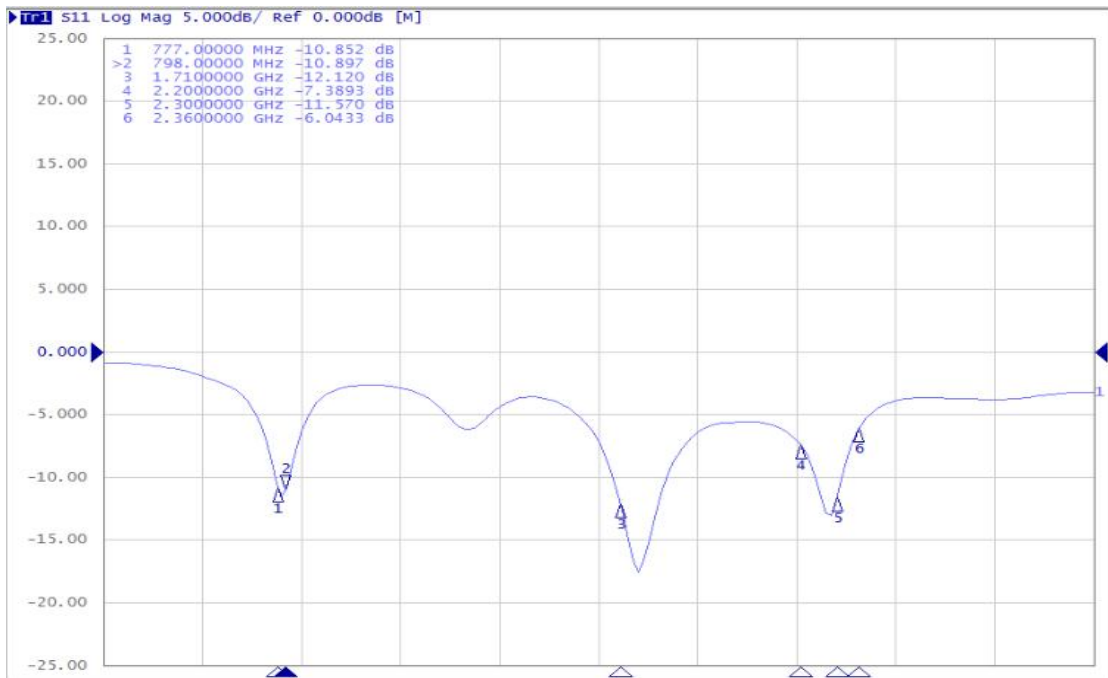


f. Antenna5

B2/4/5/66/30



B12



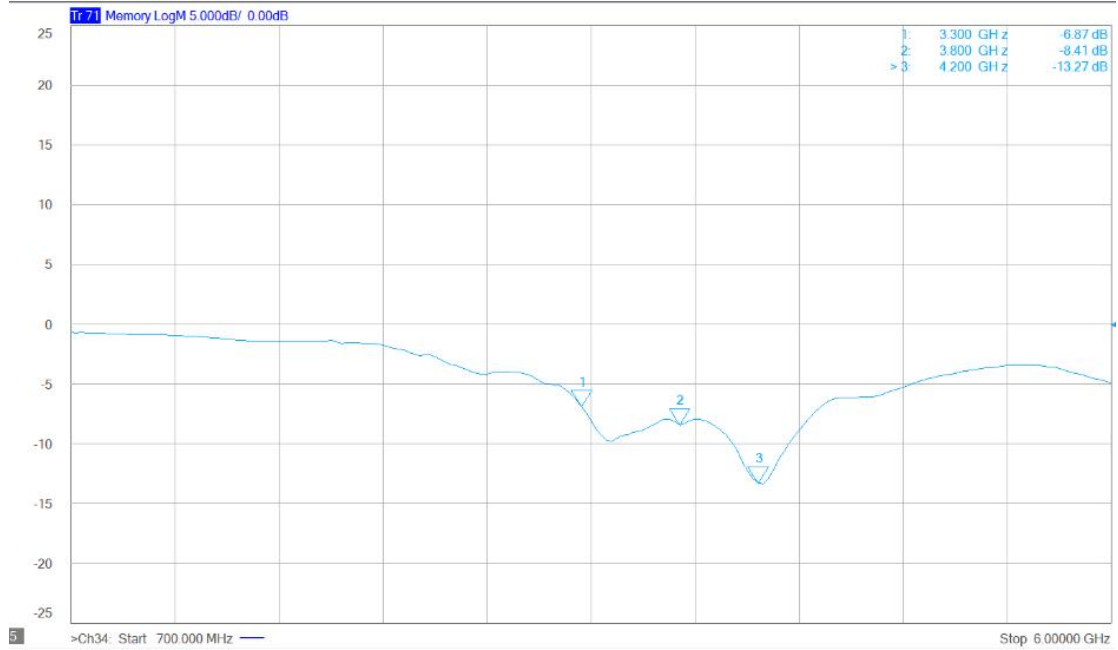
B14





**g.Antenna6**

**B48/N77**



**UL CA Combination**

Combination UL CA	DL_MIM O	UL Band		
CA_5B	2-2	5B	ANT5	ANT5
CA_2A-12A	2-2	2-12	ANT1	ANT5
CA_12A-66A	2-2	12-66	ANT5	ANT1
CA_2A-5A	2-2	2-5	ANT1	ANT5

CA_5A-66A	2-2	5-66	ANT5	ANT1
CA_12A-30A	2-2	12-30	ANT5	ANT1
CA_5A-30A	2-2	5-30	ANT5	ANT1
CA_2A-14A	2-2	2-14	ANT1	ANT5
CA_14A-66A	2-2	14-66	ANT5	ANT1
CA_14A-30A	2-2	14-30	ANT5	ANT1

ENDC Combination

Combination ENDC	DL_MIMO	UL Band		
			LTE	NR
DC_2A_n5A	4_2	2_5	ANT1	ANT5
DC_30A_n5A	4_2	30_5	ANT1	ANT5
DC_66A_n5A	4_2	66_5	ANT1	ANT5
DC_2A_n66A	2_4	2_66	ANT1	ANT5
DC_5A_n66A	2_4	5_66	ANT1	ANT5
DC_12A_n66A	2_4	12_66	ANT1	ANT5
DC_5A_n2A	2_4	5_2	ANT1	ANT5
DC_12A_n2A	2_4	12_2	ANT1	ANT5
DC_66A_n2A	2_4	66_2	ANT1	ANT5
DC_5A_n30A	2_4	5_30	ANT1	ANT5
DC_12A_n30A	2_4	12_30	ANT1	ANT5
DC_2A-2A_n5A	2-2_2	2_5	ANT1	ANT5
DC_2A-66A_n5A	2-2_2	2_5, 66_5	ANT1	ANT5
DC_66A-66A_n5A	2-2_2	66_5	ANT1	ANT5
DC_2A-5A_n66A	2-2_4	2_66, 5_66	ANT1	ANT5
DC_2A-12A_n66A	2-2_4	2_66, 12_66	ANT1	ANT5
DC_2A-29A_n66A	2-2_4	2_66	ANT1	ANT5
DC_2A-2A_n66A	2-2_4	2_66	ANT1	ANT5
DC_5A-66A_n2A	2-2_4	5_2, 66_2	ANT1	ANT5
DC_12A-66A_n2A	2-2_4	12_2, 66_2	ANT1	ANT5
DC_29A-66A_n2A	2-2_4	66_2	ANT1	ANT5
DC_2A-5A_n2A	2-2_4	2_2, 5_2	ANT1	ANT5
DC_2A-12A_n2A	2-2_4	2_2, 12_2	ANT1	ANT5
DC_2A_n77A	4_4	2_77	ANT1	ANT6/4/3/2

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DC_5A_n77A	2_4	5_77	ANT1	ANT6/4/3/2
DC_66A_n77A	4_4	66_77	ANT1	ANT6/4/3/2
DC_30A_n77A	4_4	30_77	ANT1	ANT6/4/3/2
DC_12A_n77A	2_4	12_77	ANT1	ANT6/4/3/2
DC_2A-14A_n66A	2-2_4	2_66, 14_66	ANT1	ANT5
DC_66A_n66A	4_4	66_66	ANT1	ANT5
DC_2A_n2A	4_4	2_2	ANT1	ANT5
DC_29A-66A_n66A	2-2_2	66_66	ANT1	ANT5
DC_2A-29A_n2A	2-2_2	2_2	ANT1	ANT5
DC_2A-66A_n66A	2-2_2	2_66, 66_66	ANT1	ANT5
DC_5A-66A_n66A	2-2_2	5_66, 66_66	ANT1	ANT5
DC_12A-66A_n66A	2-2_2	12_66, 66_66	ANT1	ANT5
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