

APPROVAL SPECIFICATION

Product : Internal Antenna

Model Name : TMRV085G

Date : 2025.03.04

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1. Manufacturer

-Welletronics Communication Technology Co., Limited
Add:West Room, 1st Floor, Building A11, Phase 2, Software New Town, Yuhua
Zhai Sub-district Office, Yanta District, Xi'an City (Xi'an Branch)
-Auden Communications & Multimedia Techno(Kunshan)Co.,Ltd
Add:No. 15, Yingbin Road, Zhongshi Town, Kunshan City, Jiangsu Province

2. Model Name

- **Basic Model: TMRV085G**

3. Antenna Type

ANT	Antenna type
ANT0	FPC Antenna, IFA
ANT1	FPC Antenna, IFA
ANT2	FPC Antenna, IFA
ANT3	FPC Antenna, IFA
ANT4	FPC Antenna, IFA
ANT5	FPC Antenna, IFA
ANT6	FPC Antenna, IFA
ANT7	FPC Antenna, IFA
ANT9	FPC Antenna, IFA

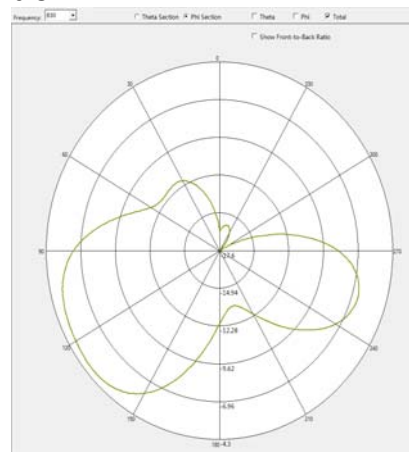
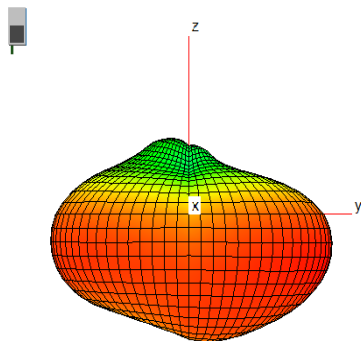
4. Electric Performance Data

4.1 Specification Sheet

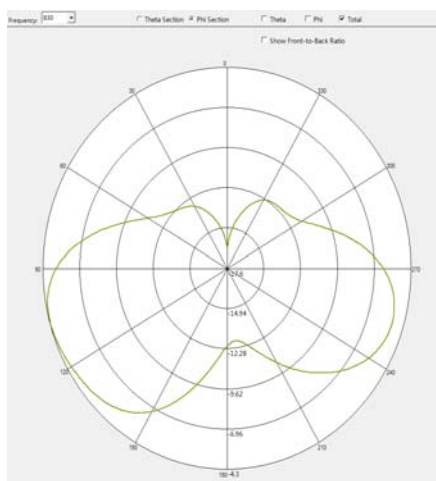
	Band	Antenna Gain(dBi)					
		config0			config1		
		Ant	peak Gain	Average Gain	Ant	peak Gain	Average Gain
GSM	GSM 850	ANT 0	-1.8	-2.6	ANT 3	-8.61	-10.38
	GSM 900	ANT 0	-1.0	-1.5	-	-	-
	GSM 1800	ANT 1	-1.3	-1.6	-	-	-
	GSM 1900	ANT 1	-1.0	-2.2	ANT 3	-3.13	-5.96
WCDMA	WCDMA B2	ANT 1	-1.0	-2.2	ANT 3	-3.13	-5.96
	WCDMA B4	ANT 1	-1.6	-1.7	ANT 3	-5.24	-7.96
	WCDMA B5	ANT 0	-1.8	-2.6	ANT 3	-8.61	-10.38
LTE	B2	ANT 1	-1.0	-2.2	ANT 3	-3.13	-5.96
	B4	ANT 1	-1.6	-1.7	ANT 3	-5.24	-7.96
	B5	ANT 0	-1.8	-2.6	ANT 3	-8.61	-10.38
	B7	ANT 3	-0.56	-6.42	-	-	-
	B12	ANT 0	-1.1	-1.3	ANT 3	-6.82	-9.37
	B28	ANT 0	-1.1	-1.3	ANT 3	-6.82	-9.37
	B25	ANT 1	-1.0	-2.2	ANT 3	-3.13	-5.96
	B26	ANT 0	-1.8	-2.6	ANT 3	-8.63	-10.42
	B41	ANT 3	-0.56	-6.42	ANT 1	-0.9	-5.3
	B66	ANT 1	-1.2	-1.6	ANT 3	-5.27	-7.98
	B48	ANT4	-2.84	-7.61	ANT 2	-2.46	-6.76
	B71	ANT 0	-2.5	-2.9	ANT 3	-5.38	-12.14
NR	N25	ANT 1	-1.0	-2.3	ANT 3	-3.13	-5.96
	N28	ANT 0	-1.1	-1.3	ANT 3	-6.82	-9.37
	N66	ANT 1	-1.2	-1.6	ANT 3	-5.27	-7.98
	N41	ANT 3	-0.56	-6.41	ANT 1	-0.9	-5.3
	N41	ANT 2	-3.04	-3.64			
	N71	ANT 0	-2.5	-2.9	ANT 3	-5.38	-12.14
	N48	ANT4	-2.84	-7.61	ANT 2	-2.46	-6.76
	N78	ANT4	-1.58	-6.33	ANT 2	-2.46	-6.76
WIFI	2.4G	ANT5	-0.57	-4.13			
	5G	ANT5	-2.17	-7.5			
BT	2.4G	ANT5	-0.57	-4.13			

4.2 Antenna Pattern Drawing

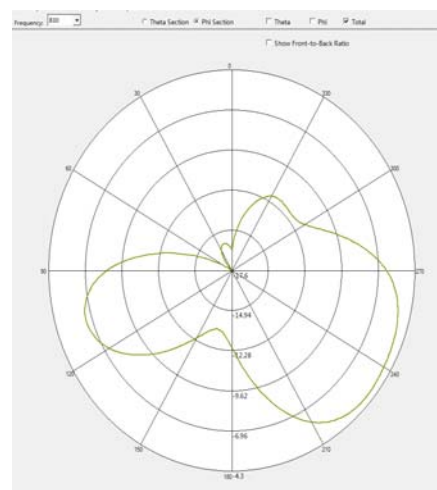
ANT0 Band5



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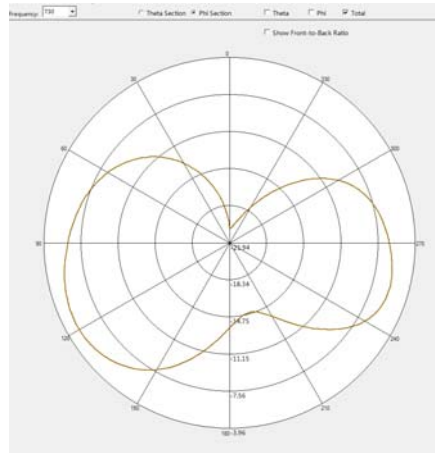
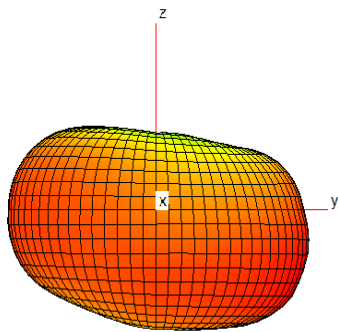


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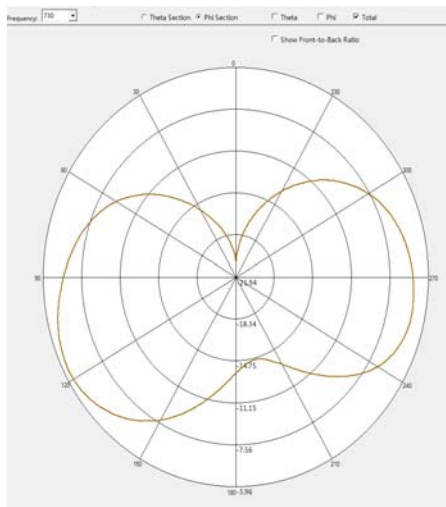


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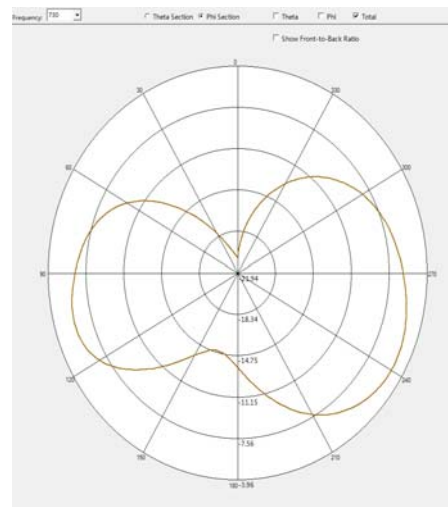
ANT0 Band12/28&N28



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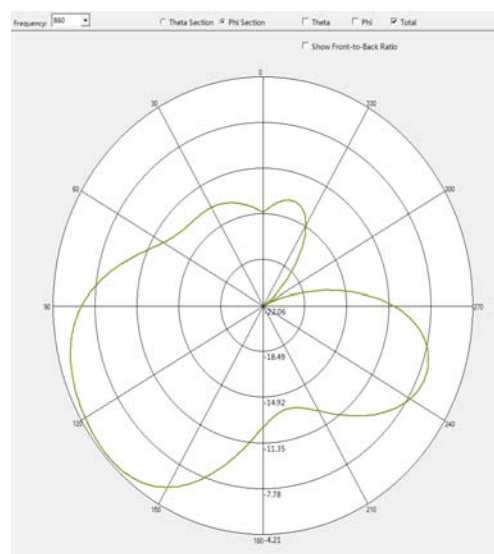
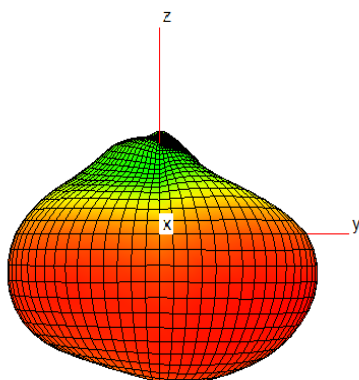


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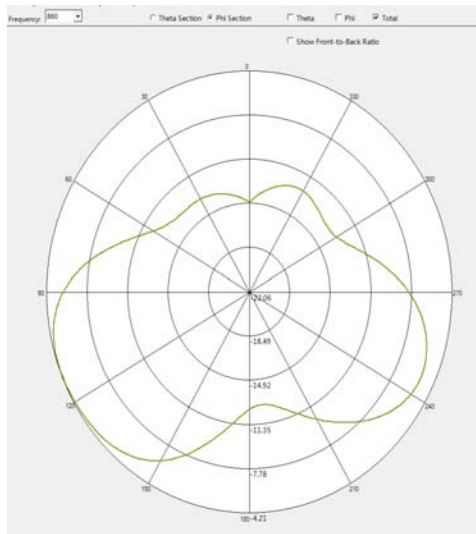


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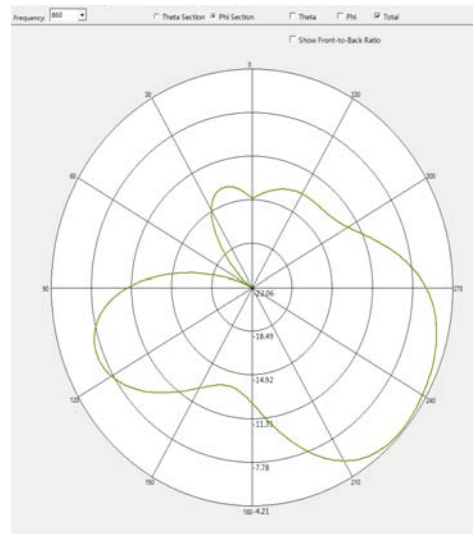
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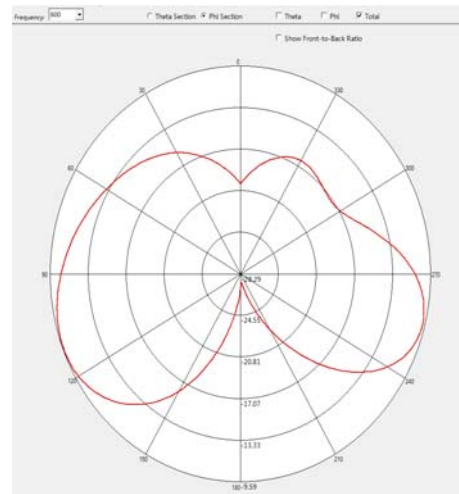
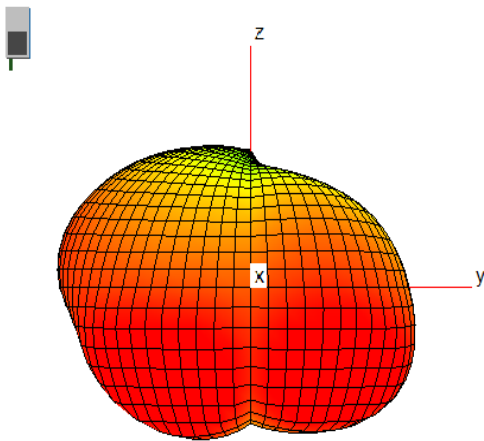


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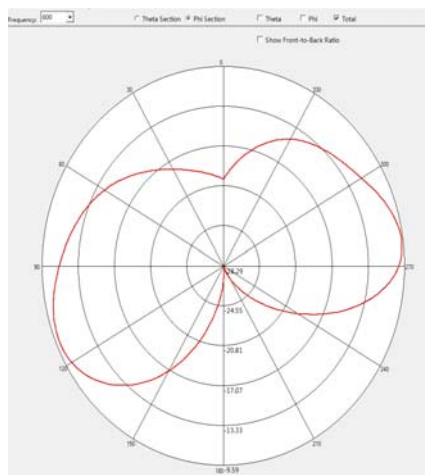


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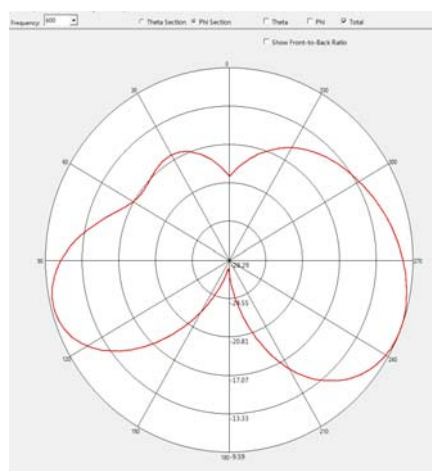
ANT0 Band71&N71



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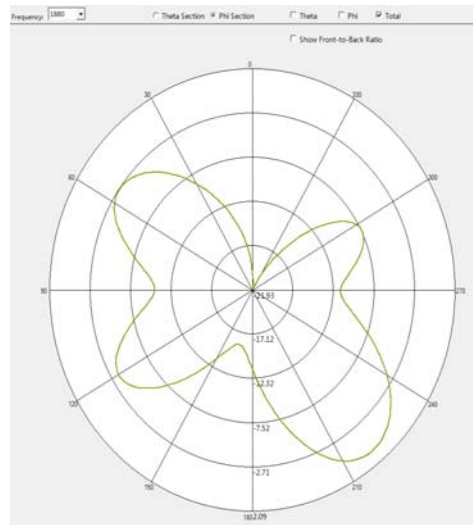
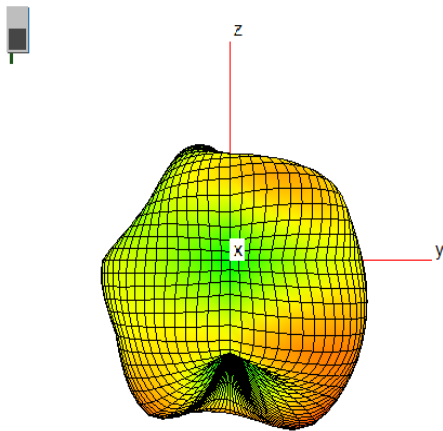


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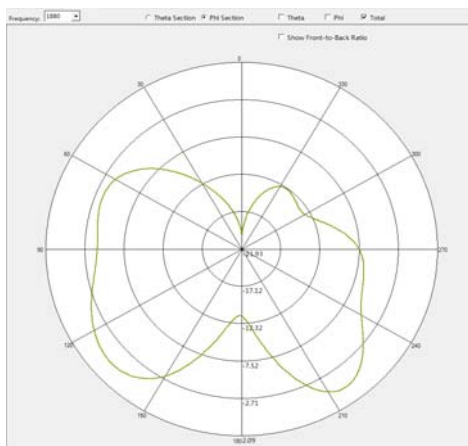


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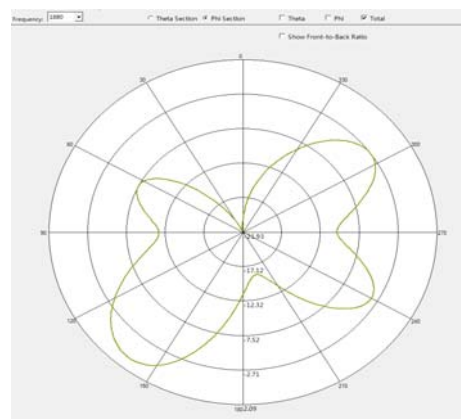
ANT1 NR N25<E Band2<E Band 25&WCDMA B2&GSM 1900



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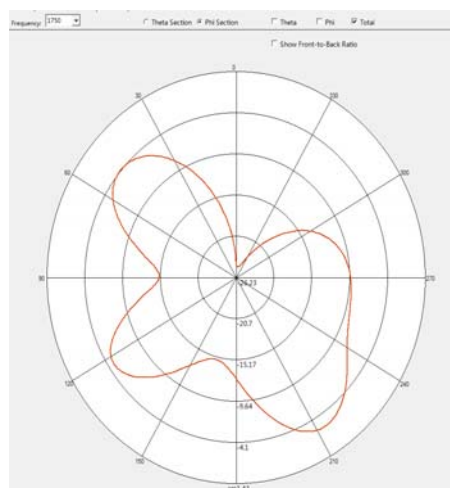
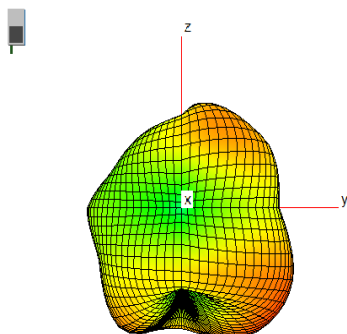


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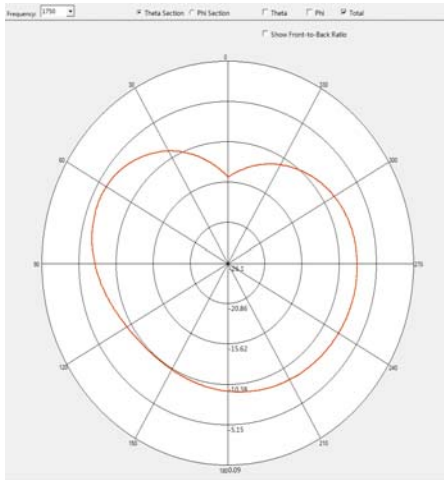


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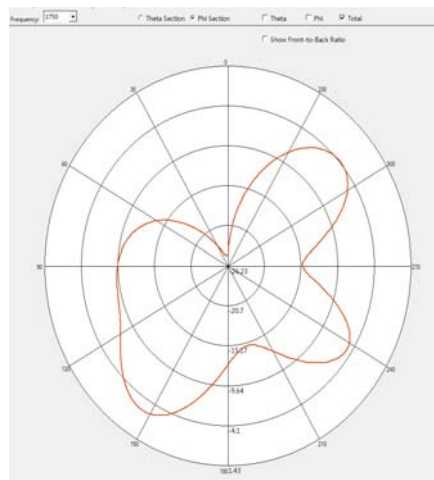
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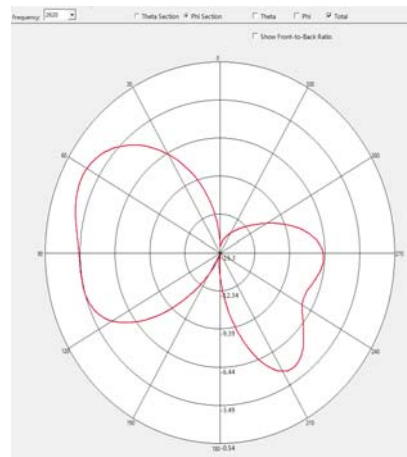
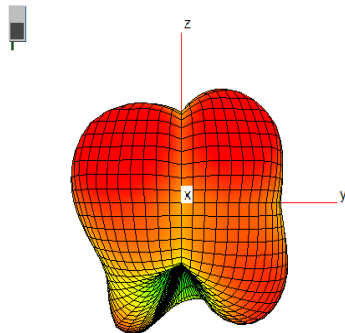


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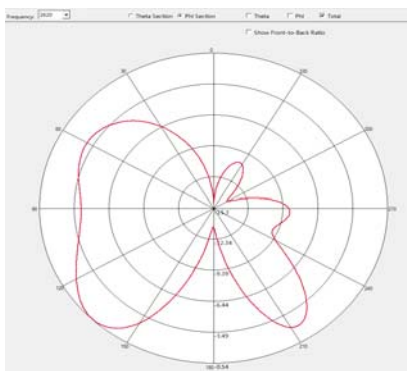


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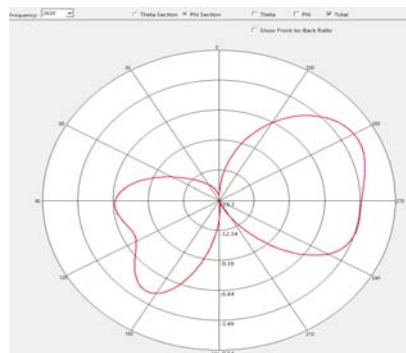
ANT1 Band7/41 &N41



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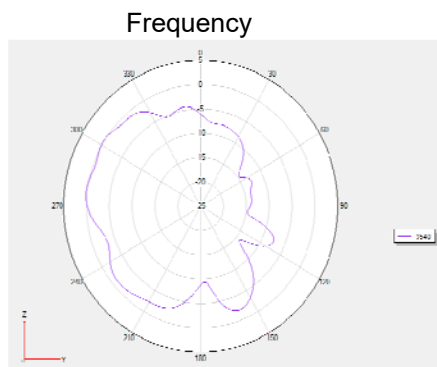
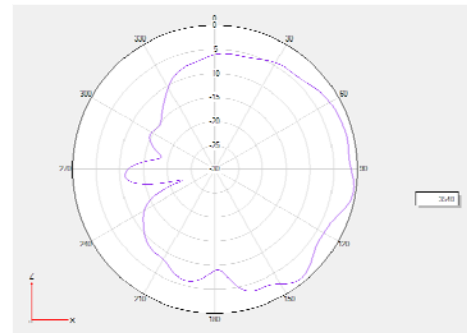
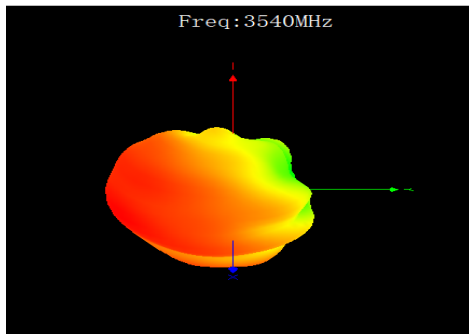


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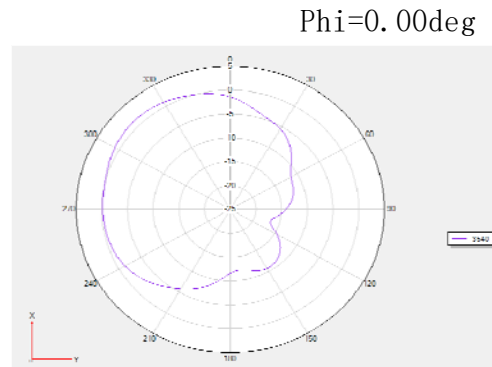


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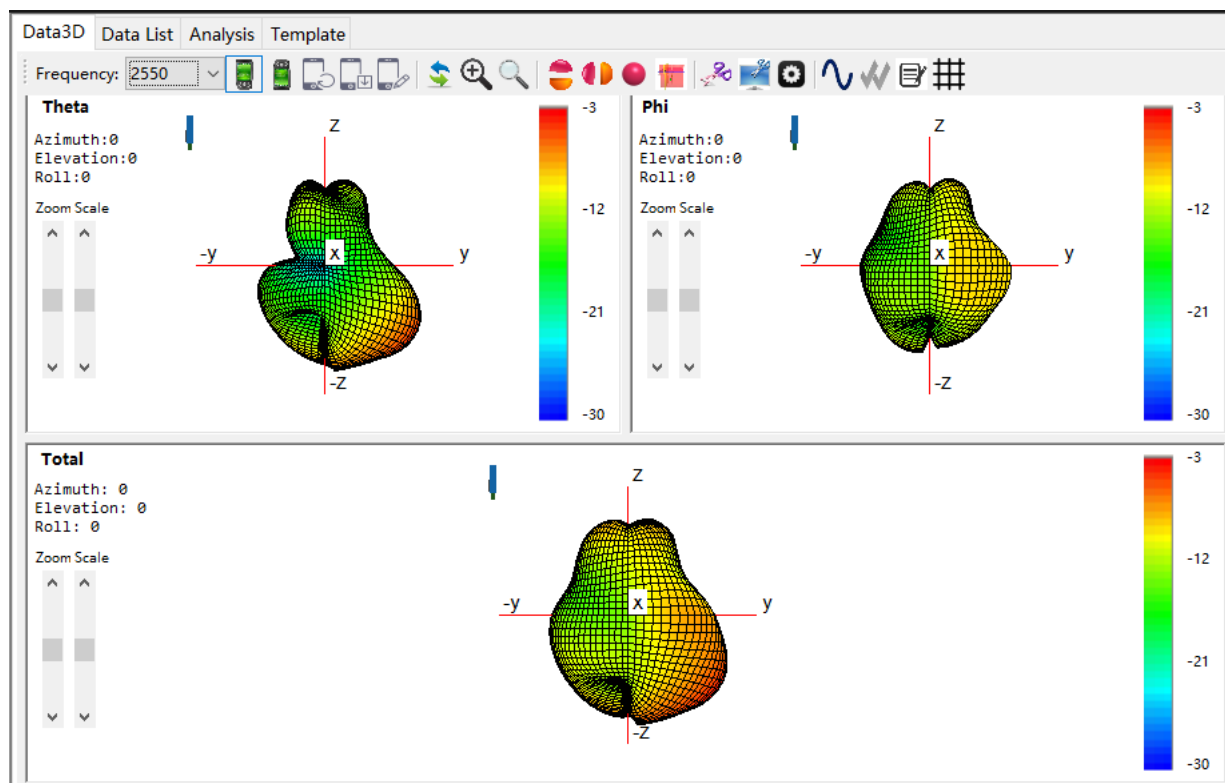


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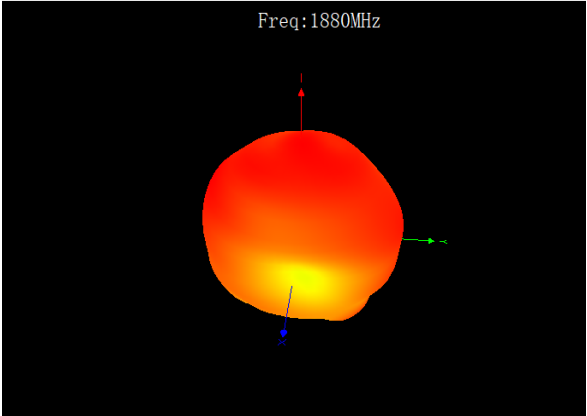


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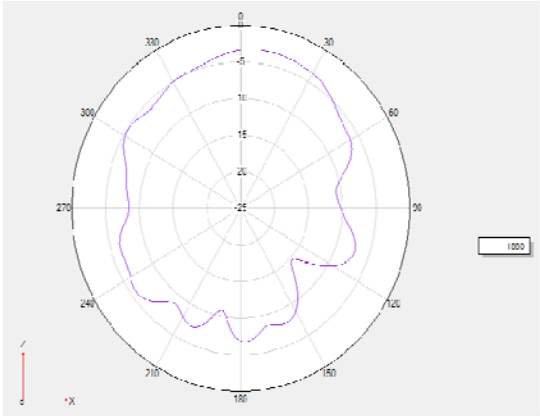
ANT2 NR41



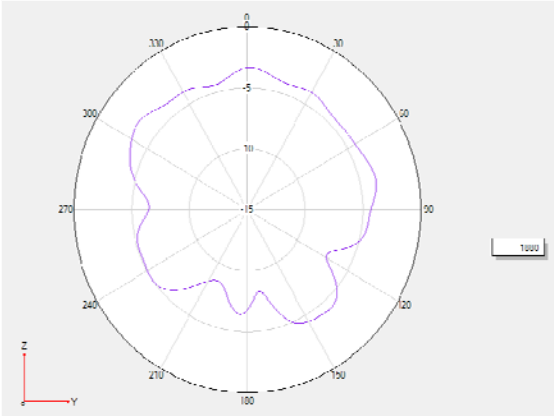
ANT3 NR N25<E Band2<E Band 25&WCDMA B2&GSM 1900



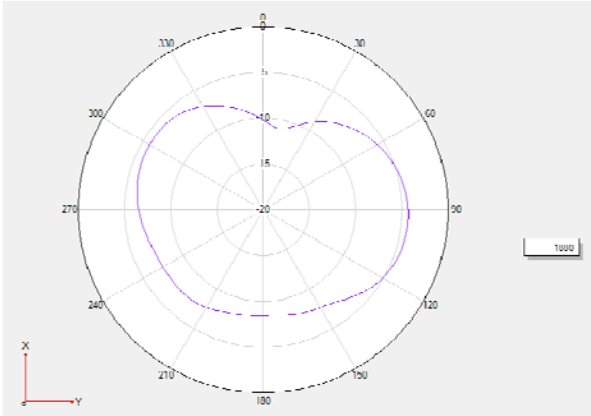
Frequency



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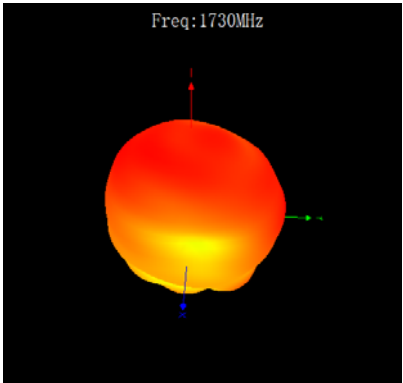


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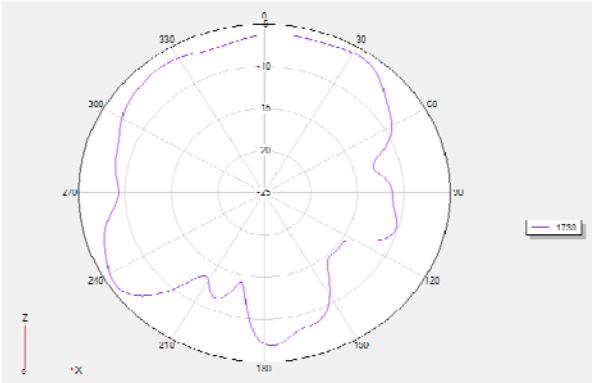


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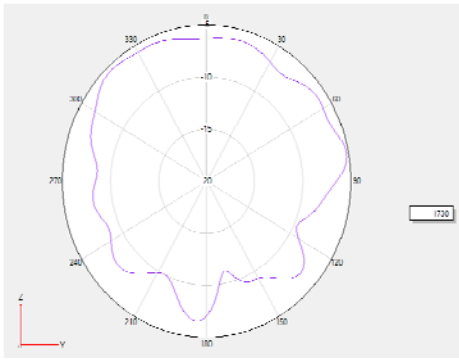
ANT3 LTE Band4/66&WCDMA B4/66



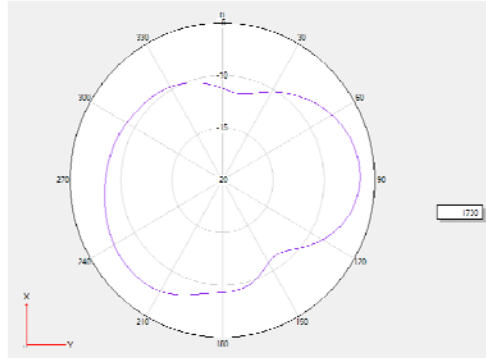
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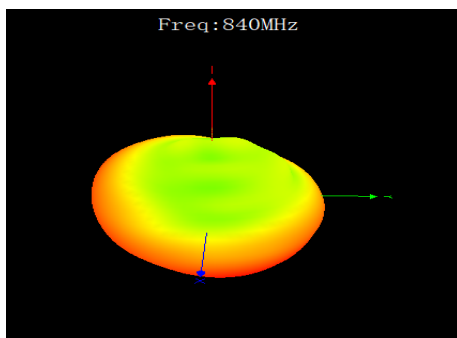


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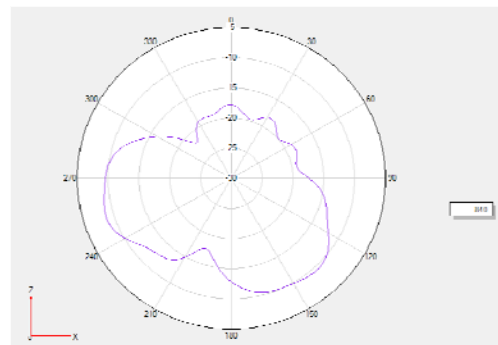


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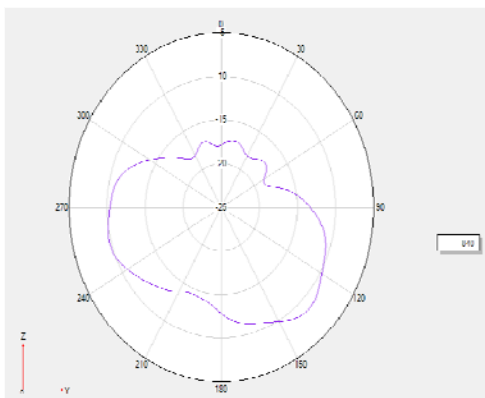
ANT3 LTE Band5/26&WCDMA B5&GSM 850



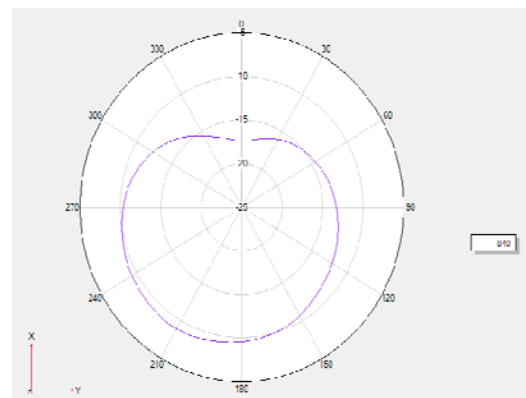
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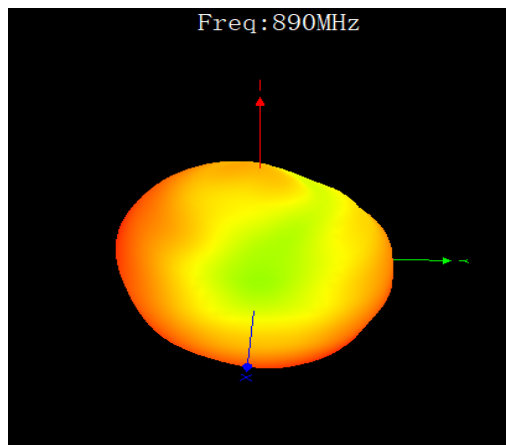


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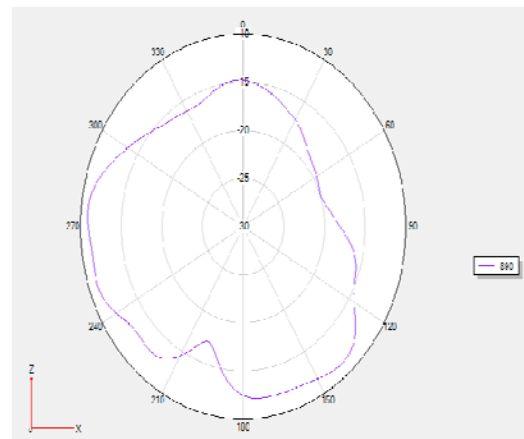


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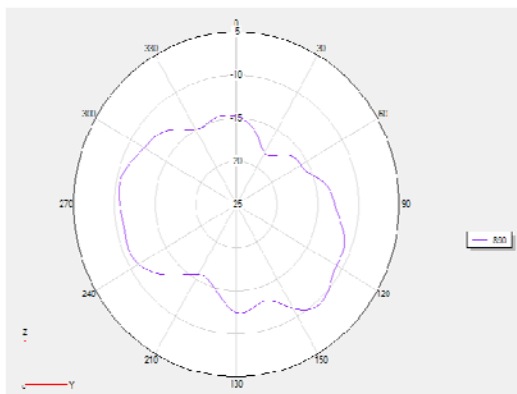
ANT3 LTE Band8&GSM900



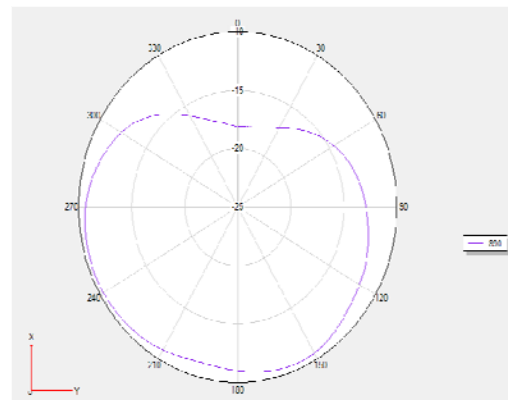
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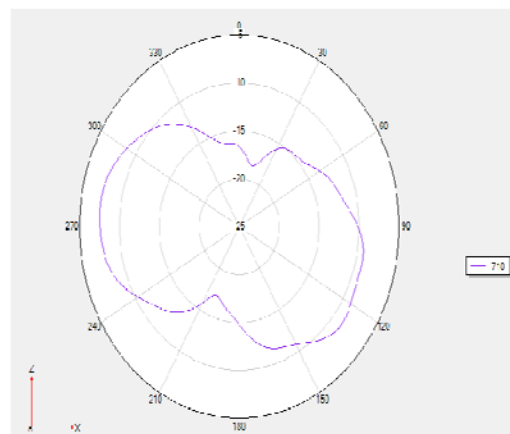
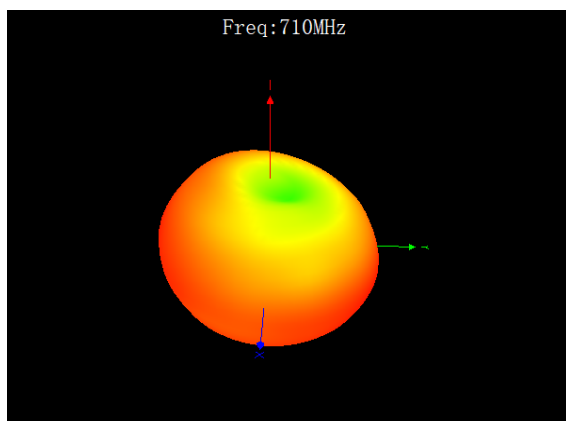


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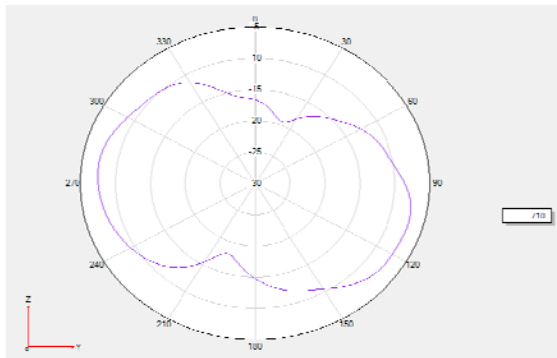


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ANT3 LTE Band12/28&N28

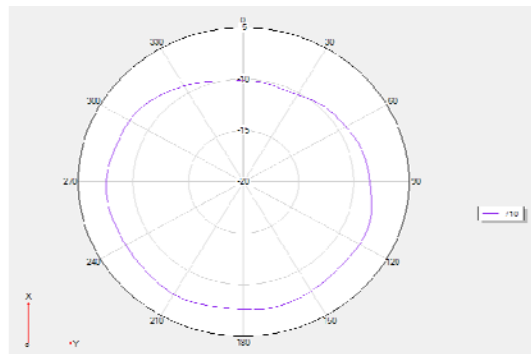


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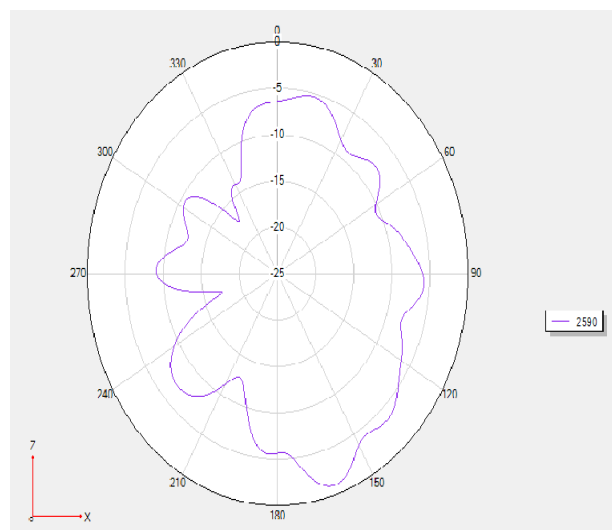
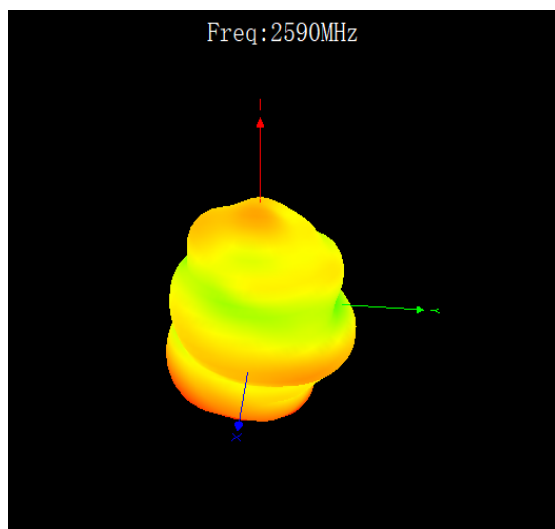
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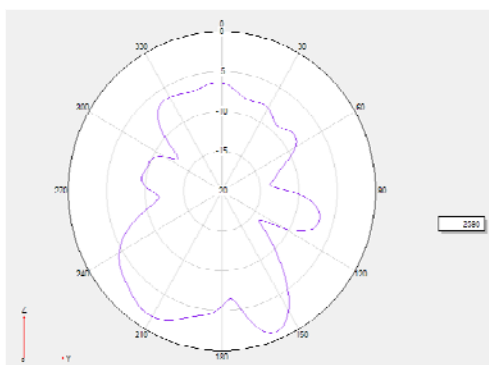


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ANT3 LTE Band7/41&NR N41

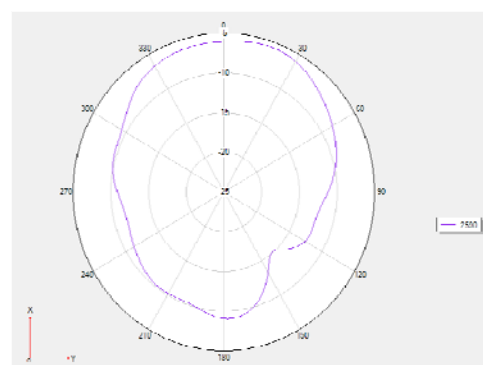


Frequency



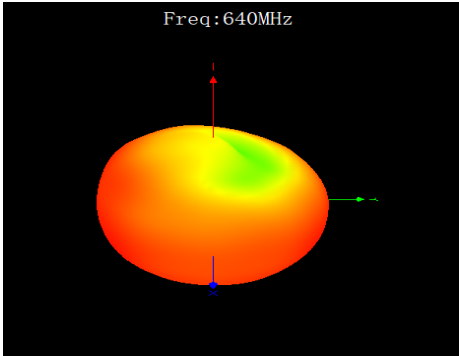
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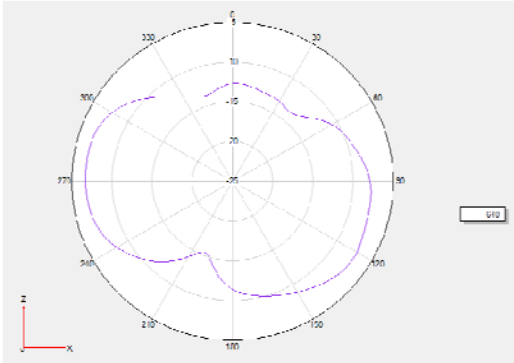


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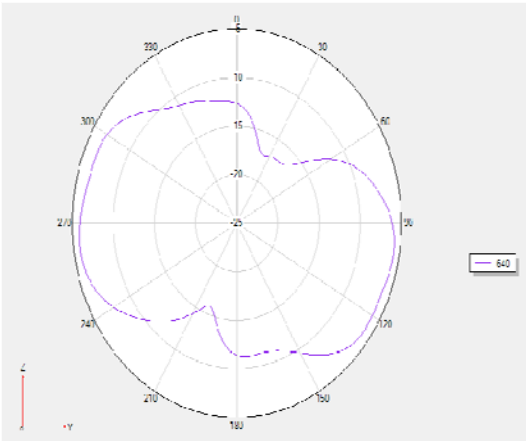
ANT3 LTE Band71&NR N71



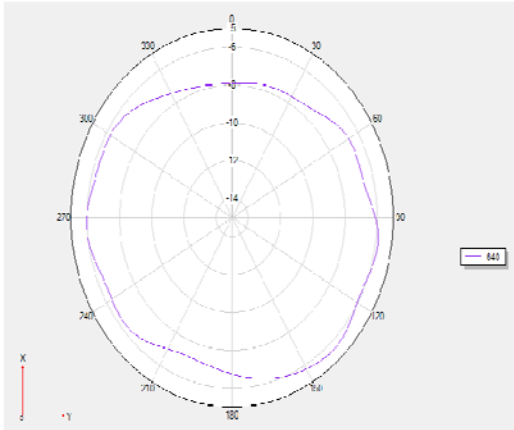
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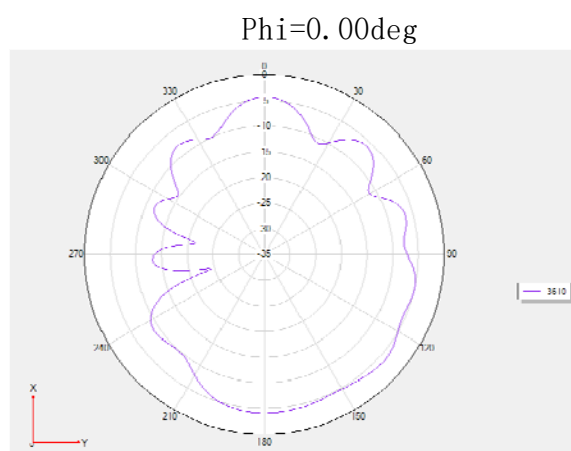
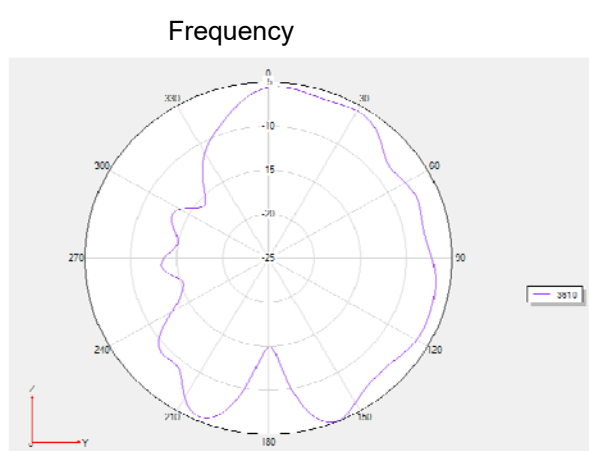
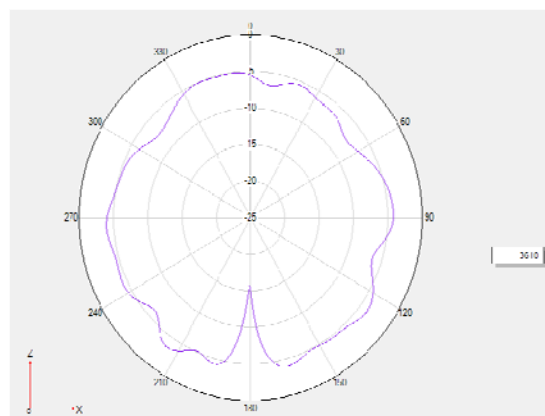
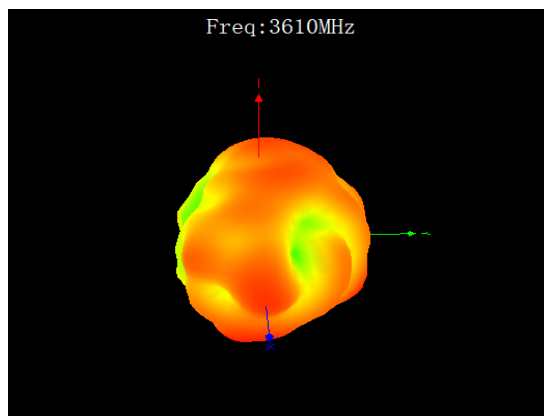


Phi=90. 00deg



Theta=90. 00deg

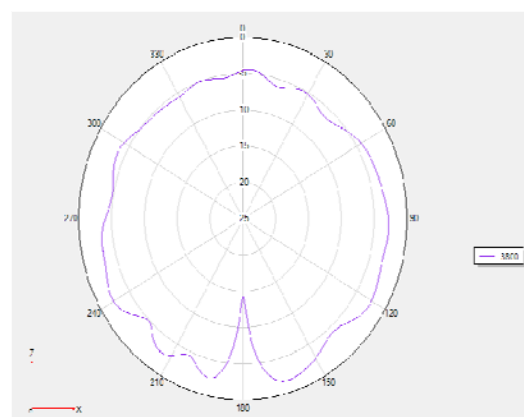
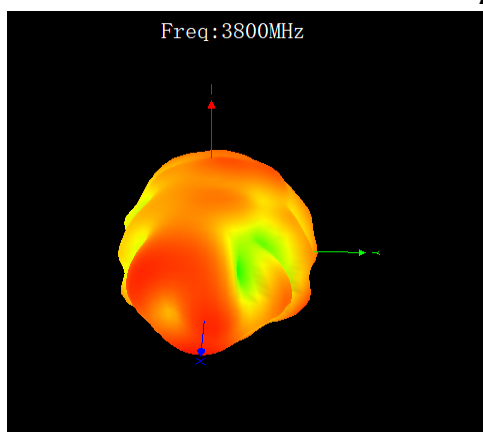
ANT4 LTE B48&NR48



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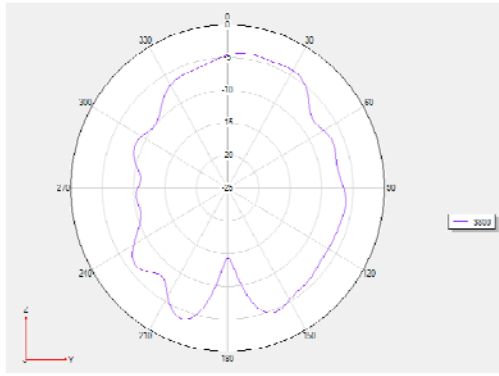
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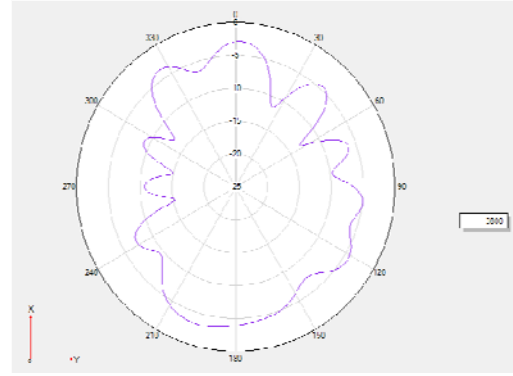


Frequency

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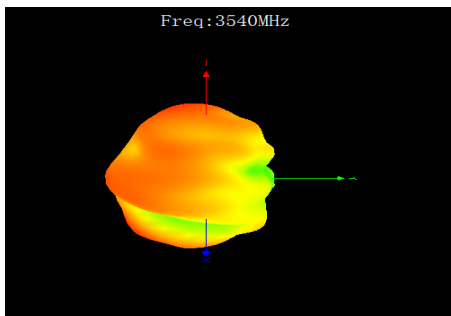


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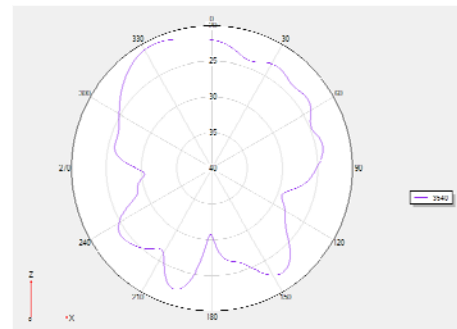


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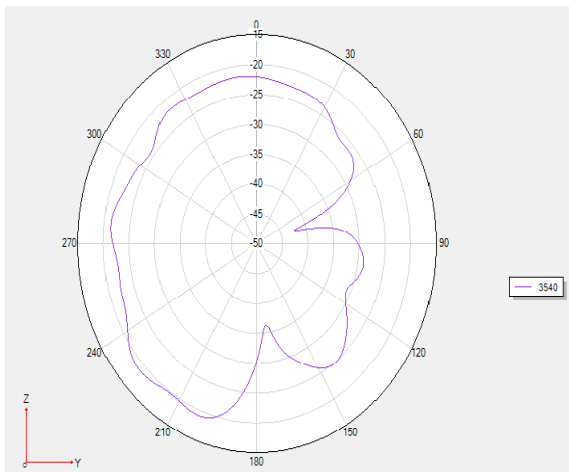
ANT6 NR N78



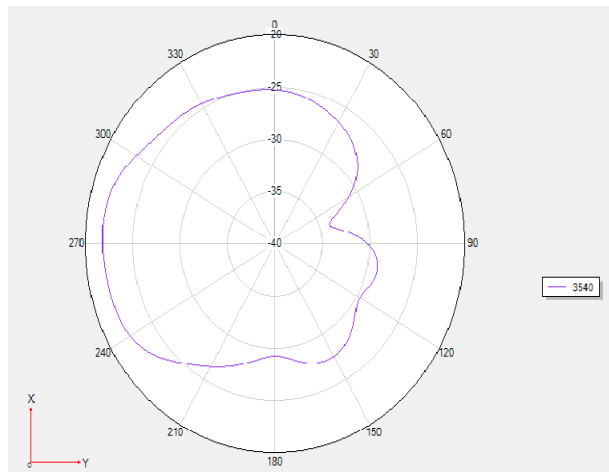
Frequency



Phi=0.00deg

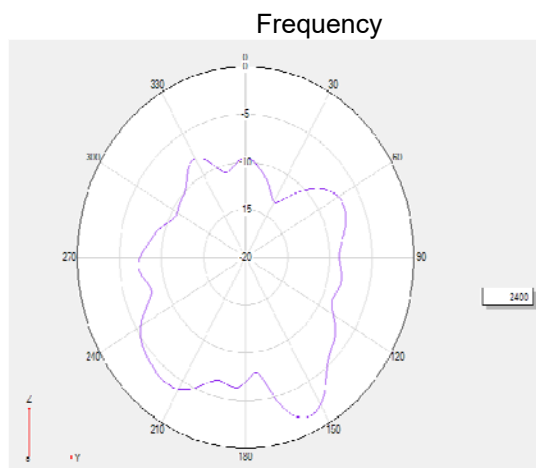
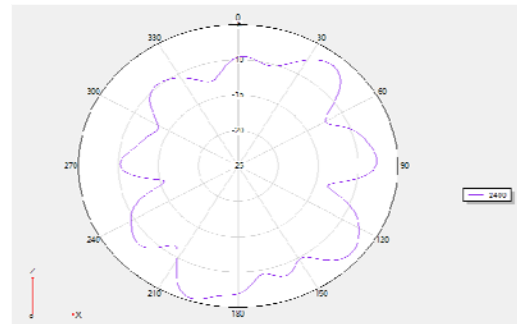
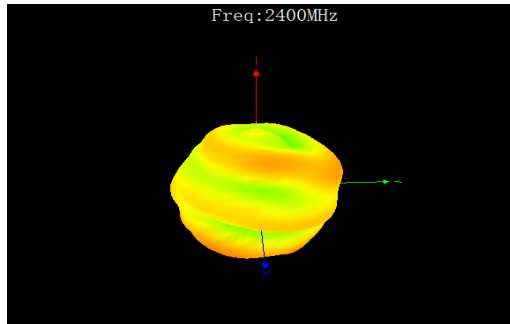


Phi=90.00deg

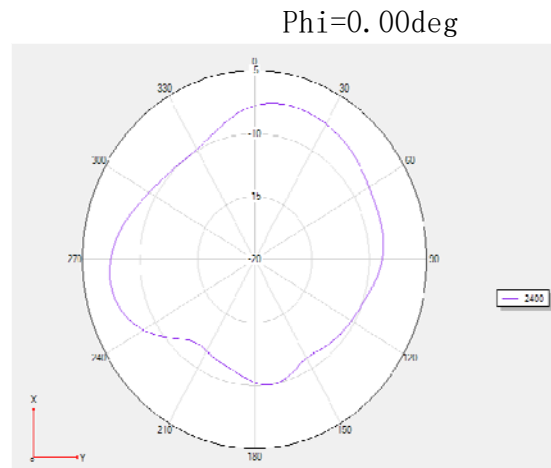


Theta=90.00deg

ANT5 WIFI 2.4G(2400MHz)&BT(2400MHz)

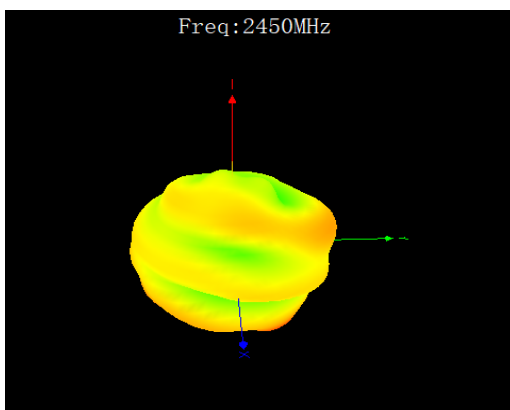


Phi=90.00deg

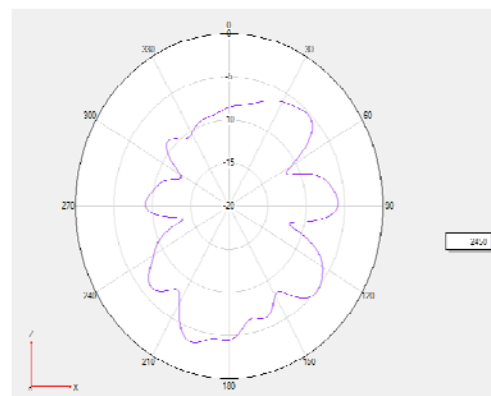


Theta=90.00deg

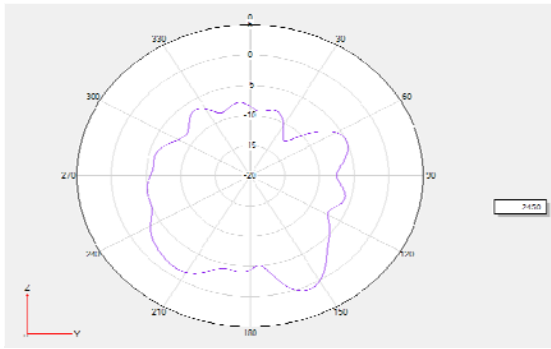
ANT5 WIFI 2.4G(2450MHz)&BT(2450MHz)



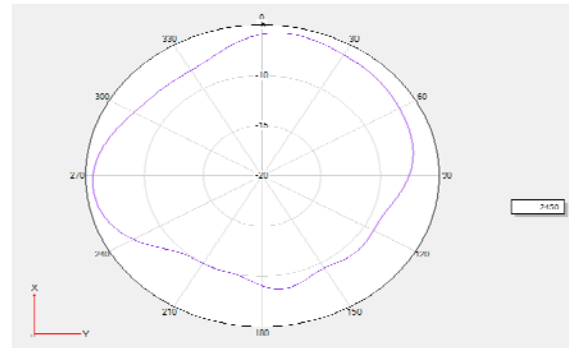
Frequency



Phi=0.00deg

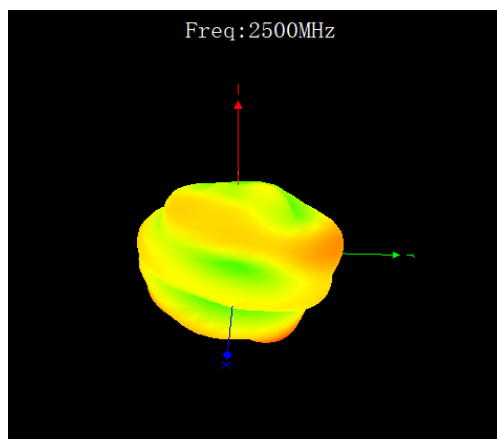


Phi=90.00deg

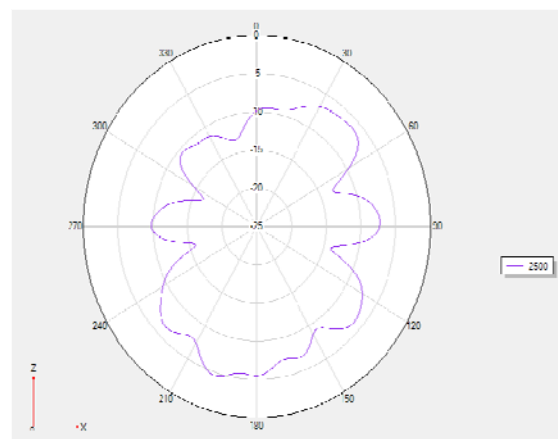


Theta=90.00deg

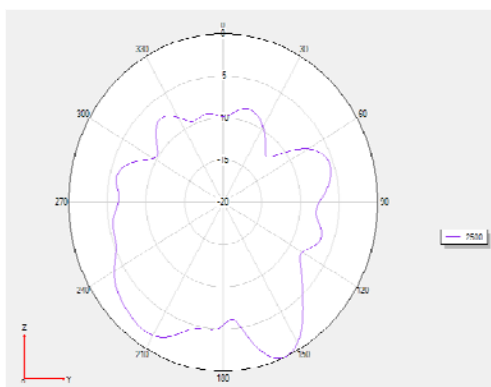
ANT5 WIFI 2.4G(2500MHz)&BT(2500MHz)



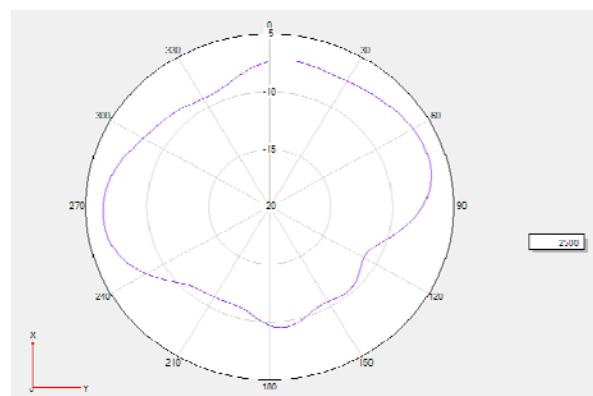
Frequency



Phi=0.00deg

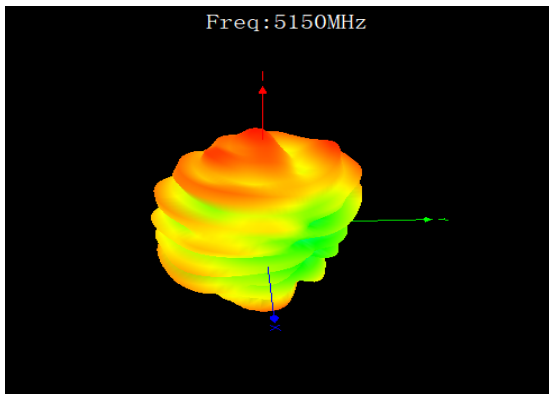


Phi=90.00deg

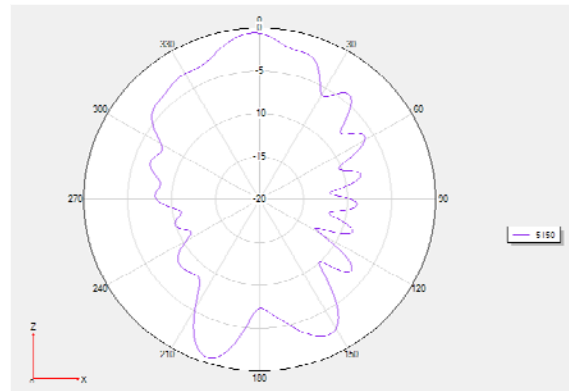


Theta=90.00deg

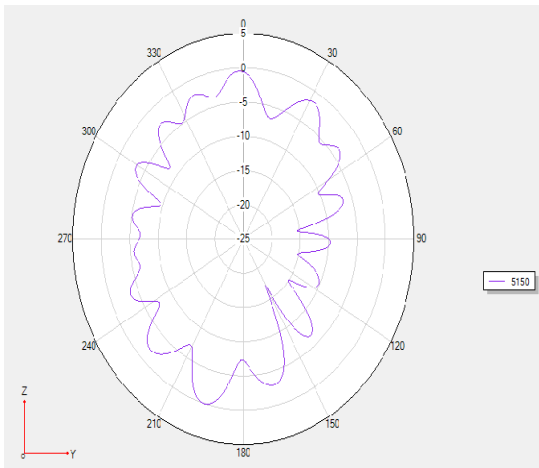
ANT5 WIFI 5G(5150MHz)



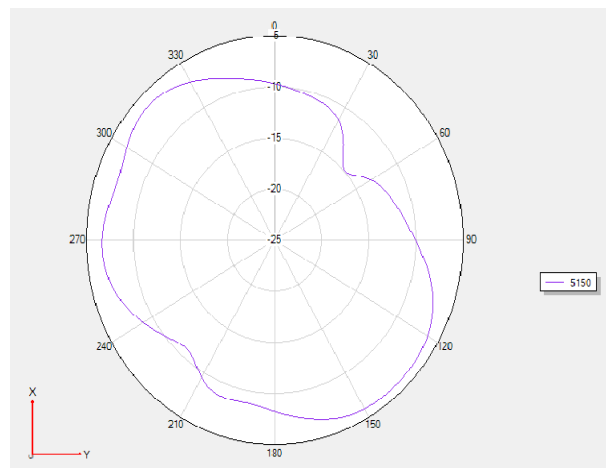
Frequency



Phi=0.00deg

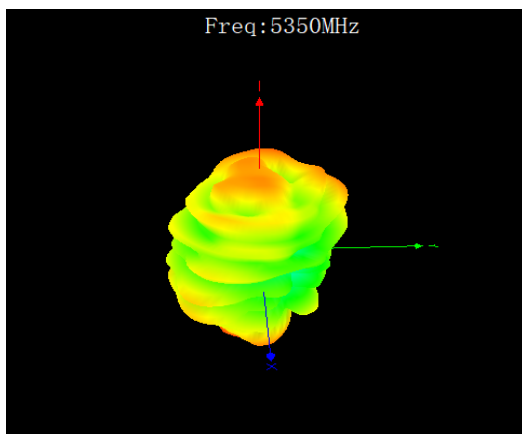


Phi=90.00deg

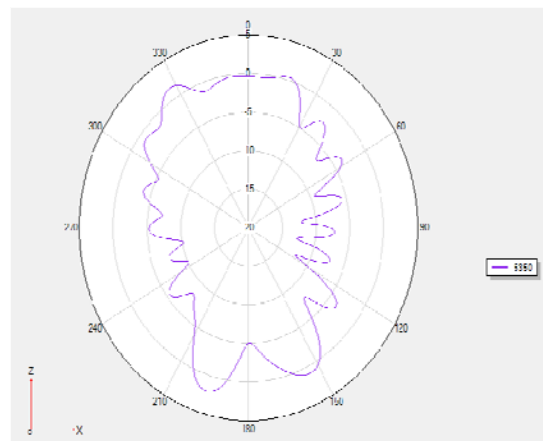


Theta=90.00deg

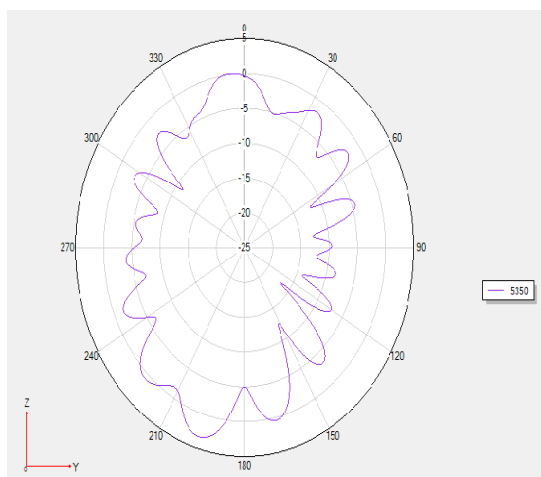
ANT5 WIFI 5G(5350MHz)



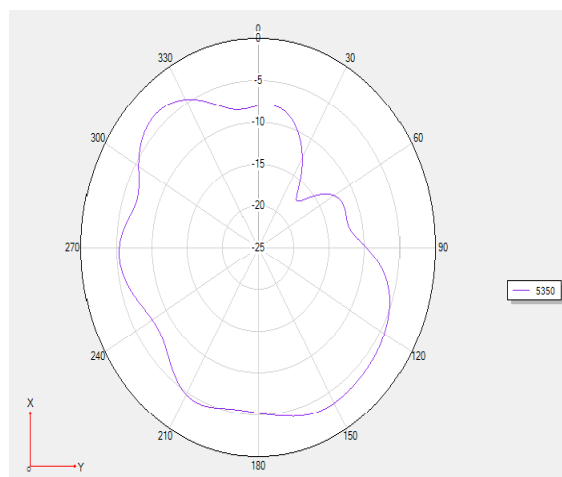
Frequency



Phi=0.00deg

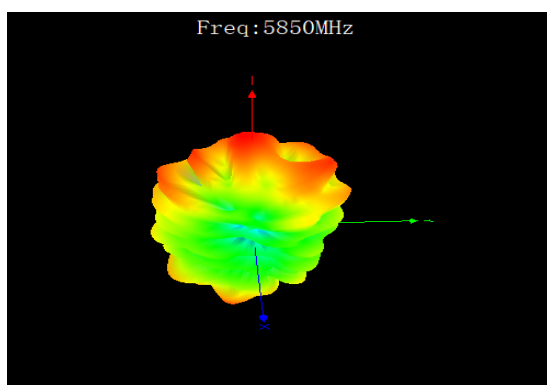


Phi=90.00deg

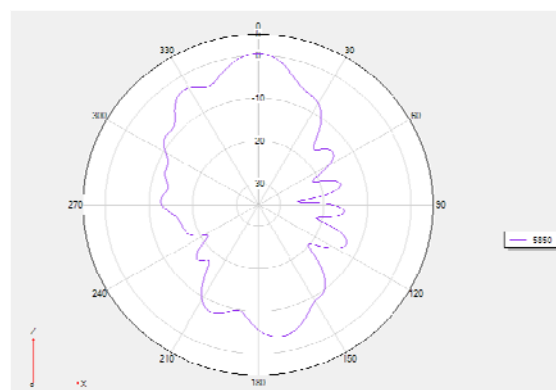


Theta=90.00deg

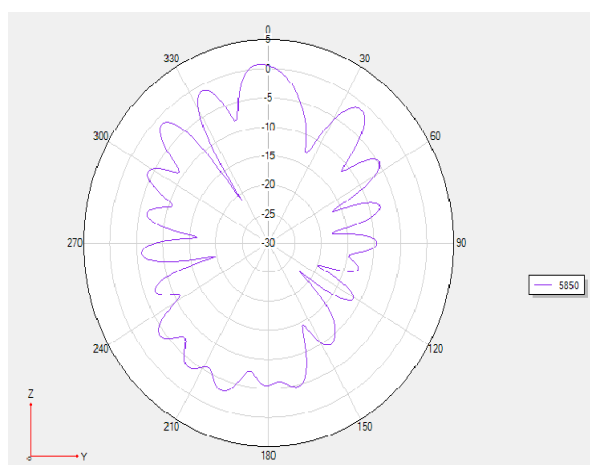
ANT5 WIFI 5G(5850MHz)



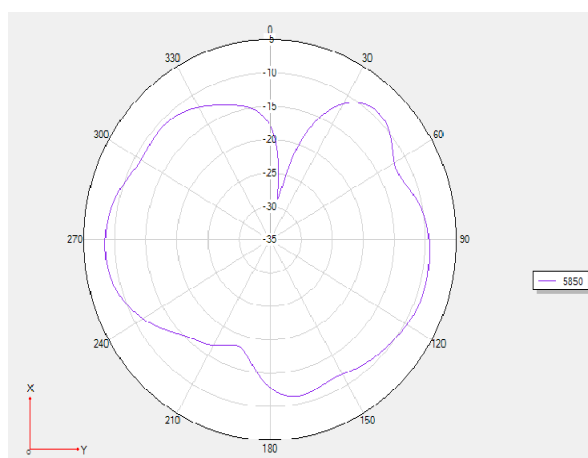
Frequency



Phi=0.00deg



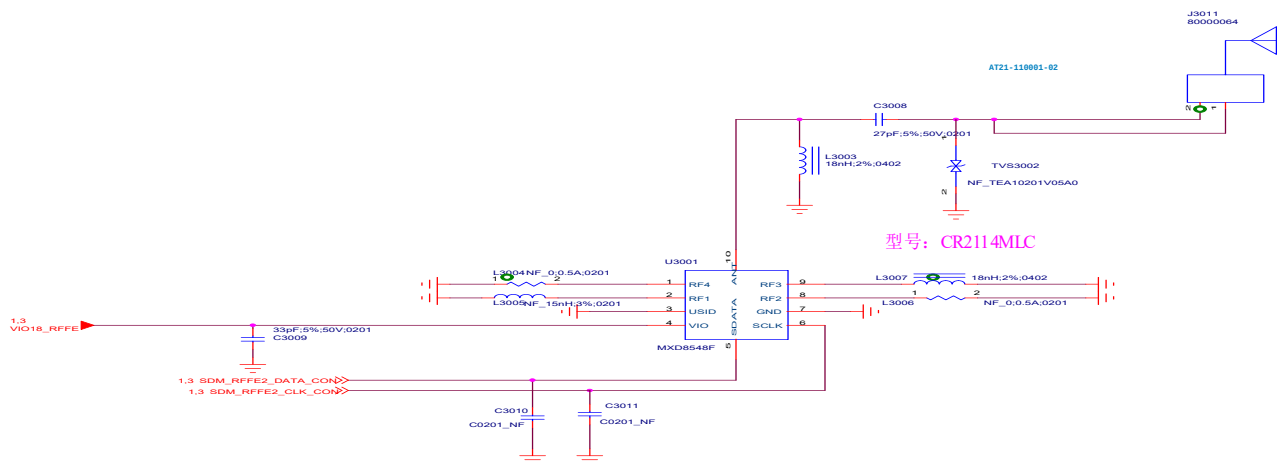
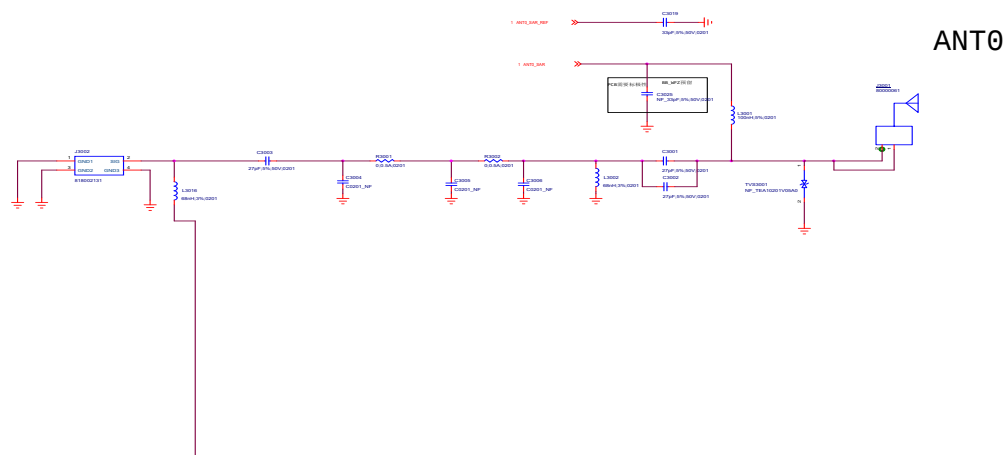
Phi=90.00deg



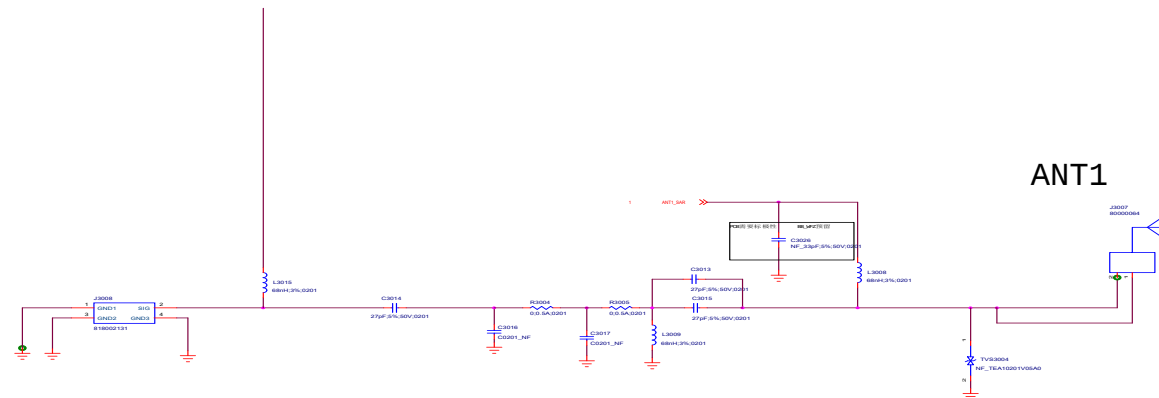
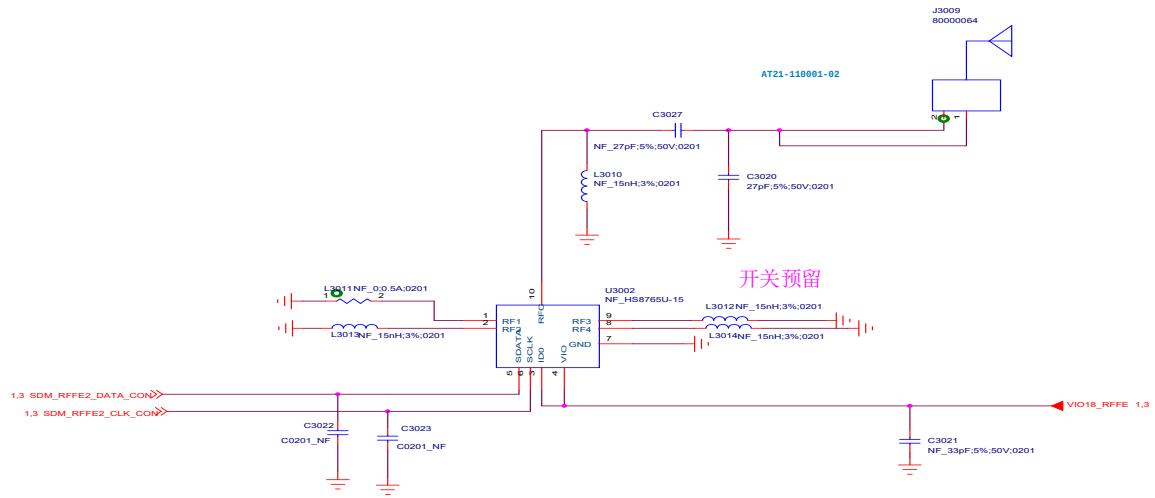
Theta=90.00deg

5. Matching circuit

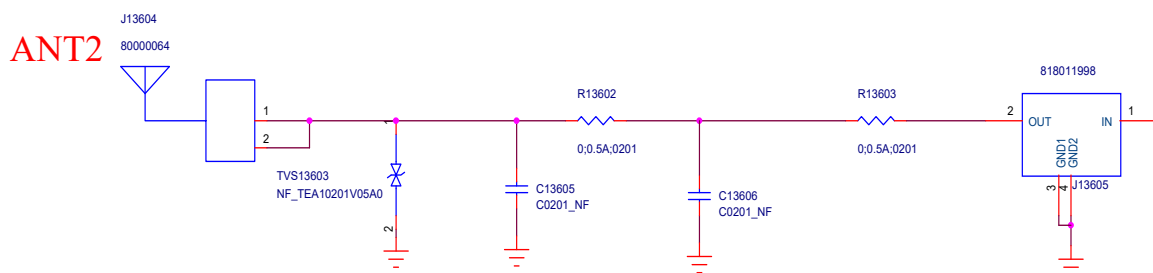
5.1 ANTO

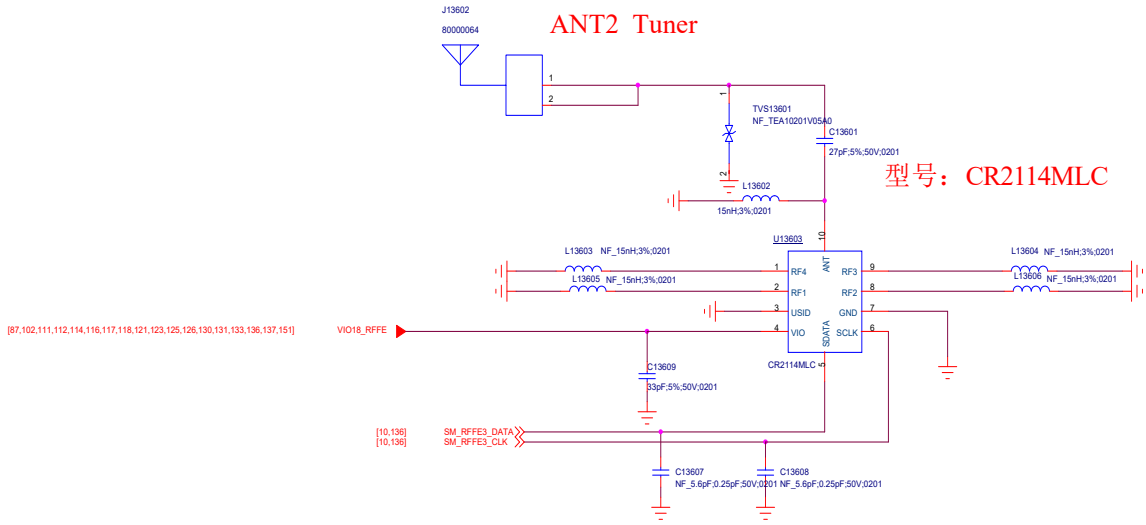


5.2 ANT1



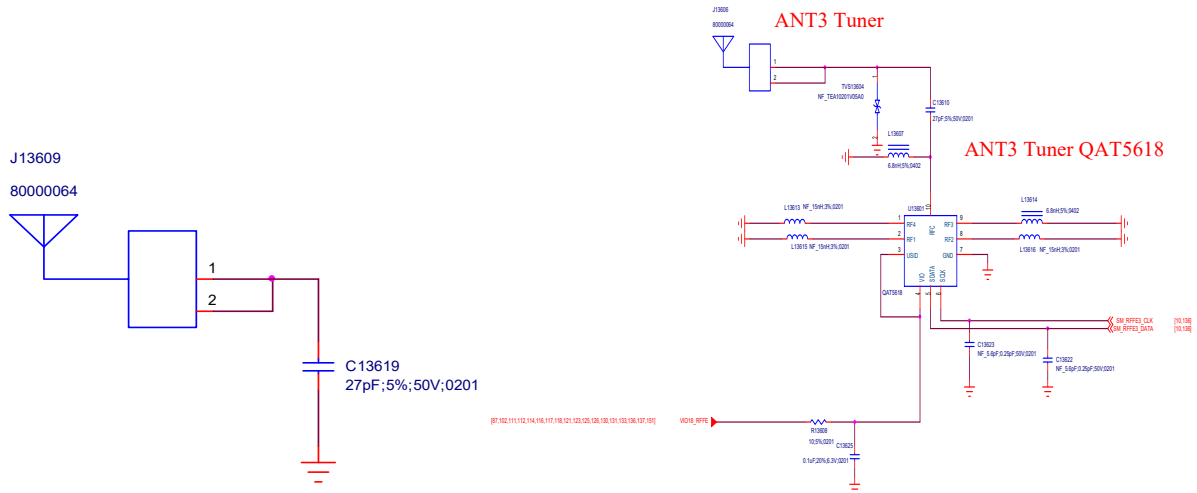
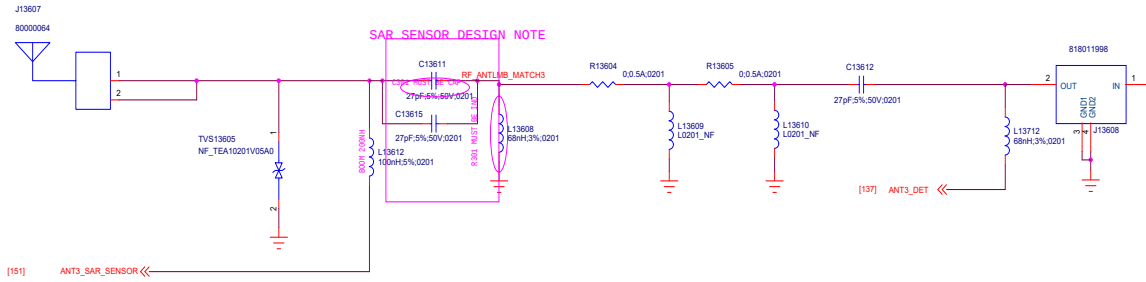
5.3 ANT2





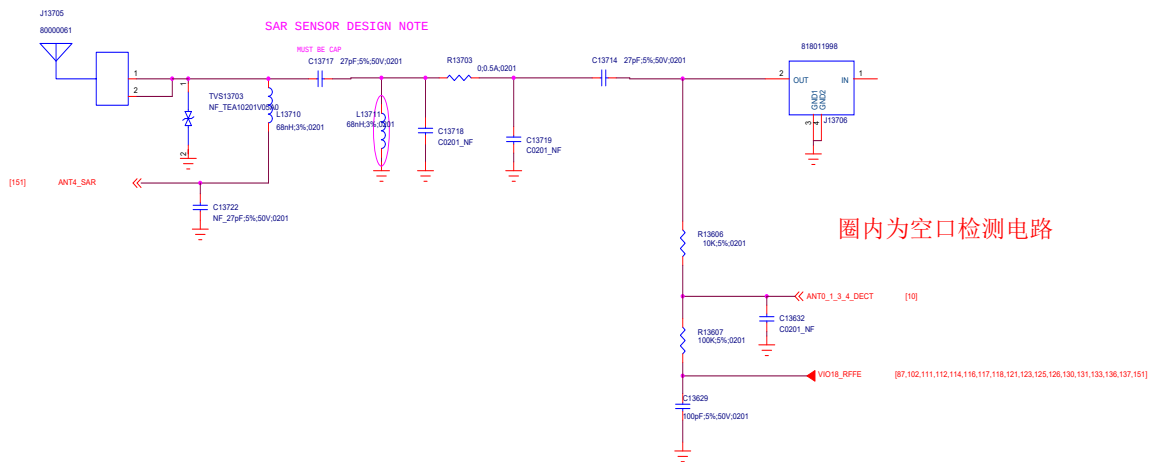
5.4 ANT3

ANT3

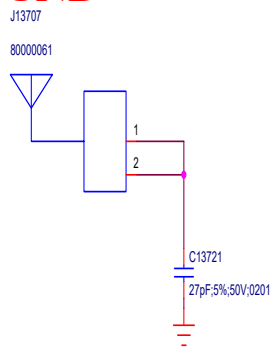


5.5 ANT4

ANT4 FEED

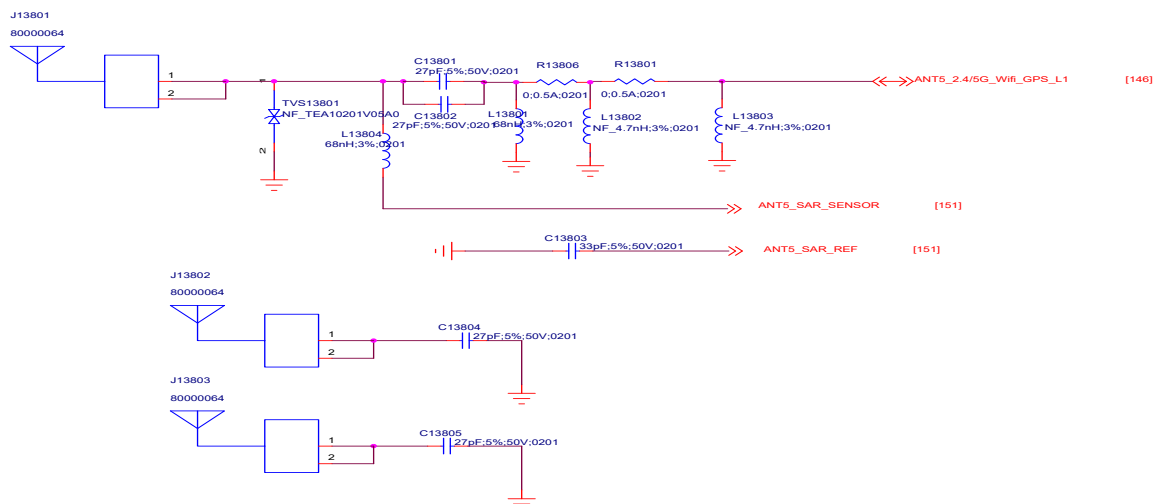


ANT4 GND



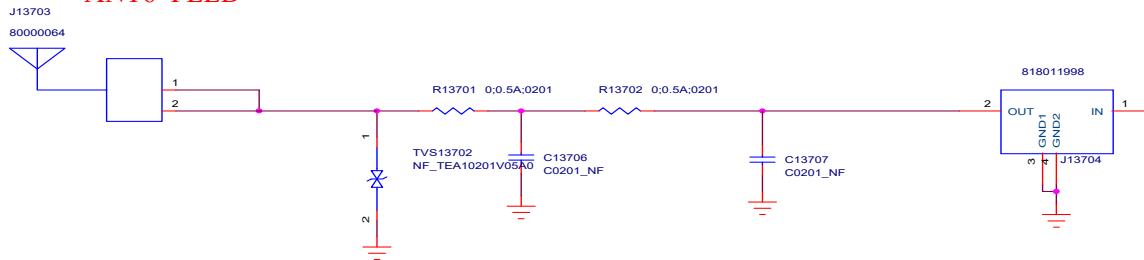
5.6 ANT5

ANT5 WIFI&GPS L1



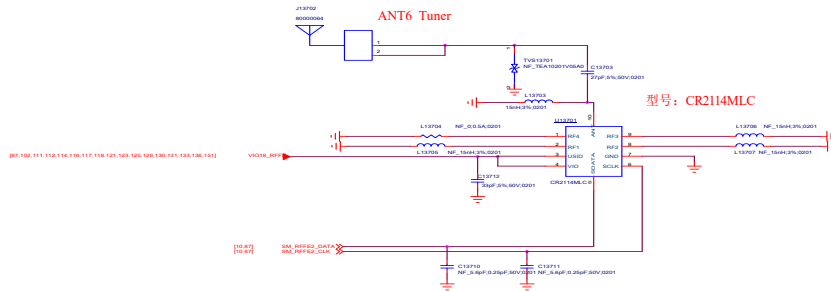
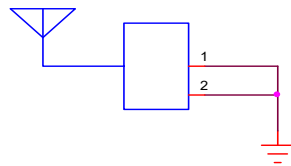
5.7 ANT6

ANT6 FEED



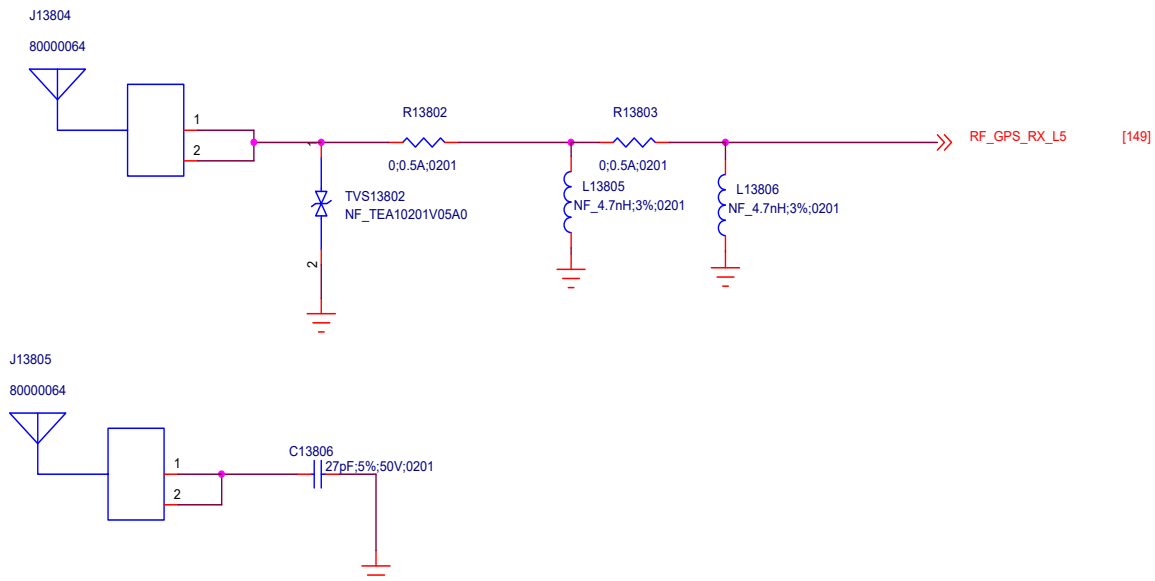
ANT6 GND

J13701
80000061



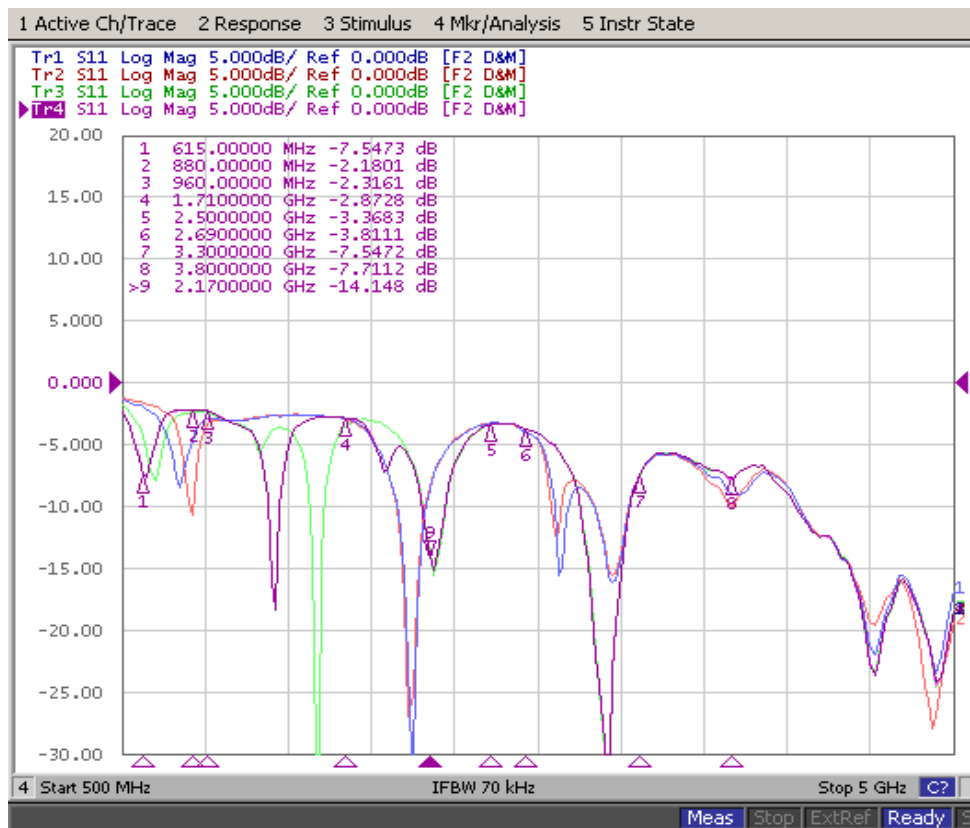
5.7 ANT7

ANT7 GPS L5(TMO)&ENDC LTE B20_N28 DRX(DT)

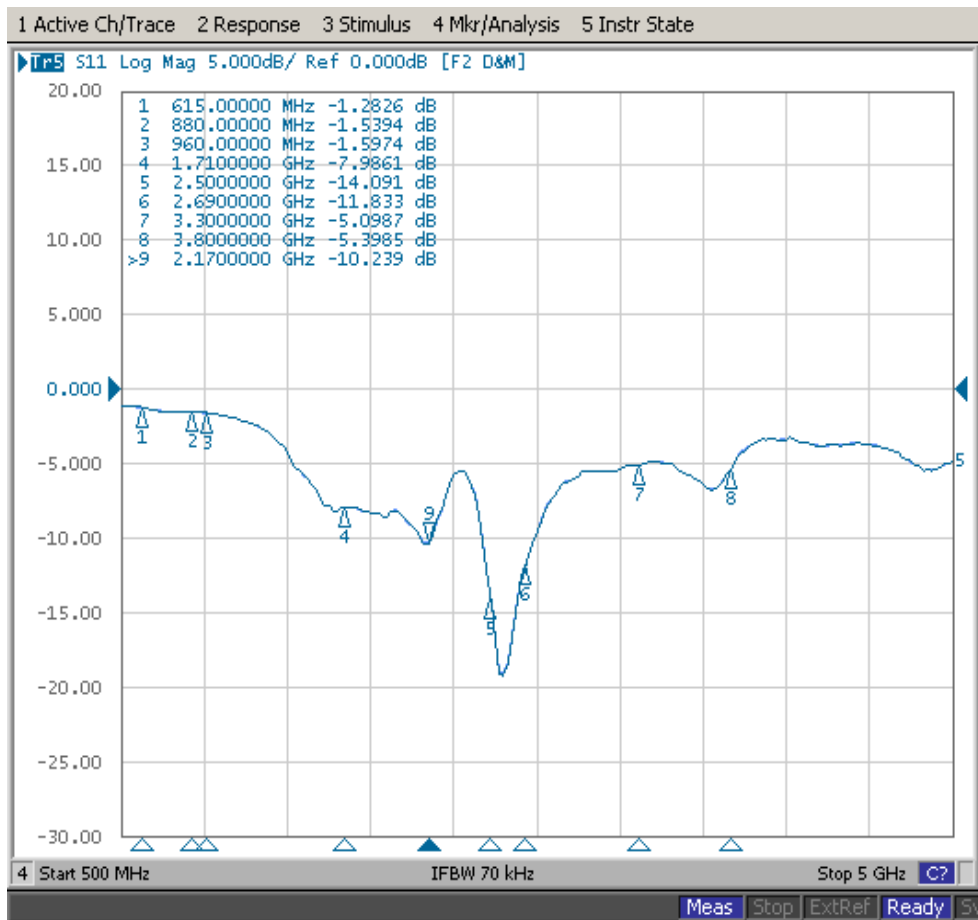


6. ElectricalGraph(Returnloss)

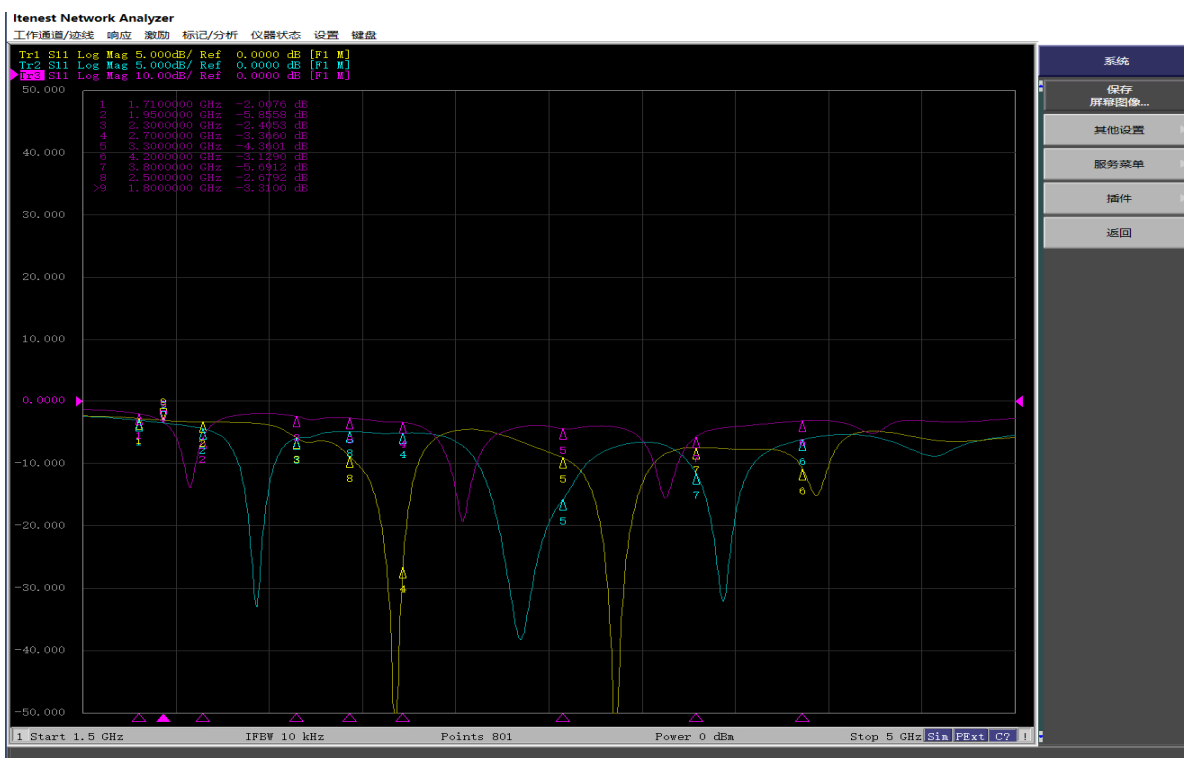
6.1 ANT0 Return loss



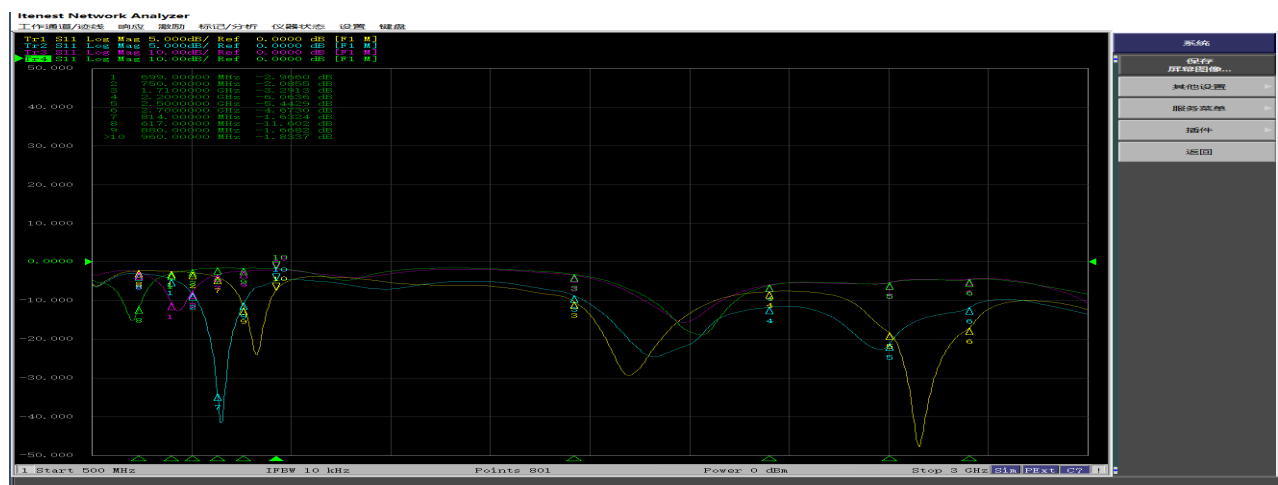
6.2 ANT1 Return loss



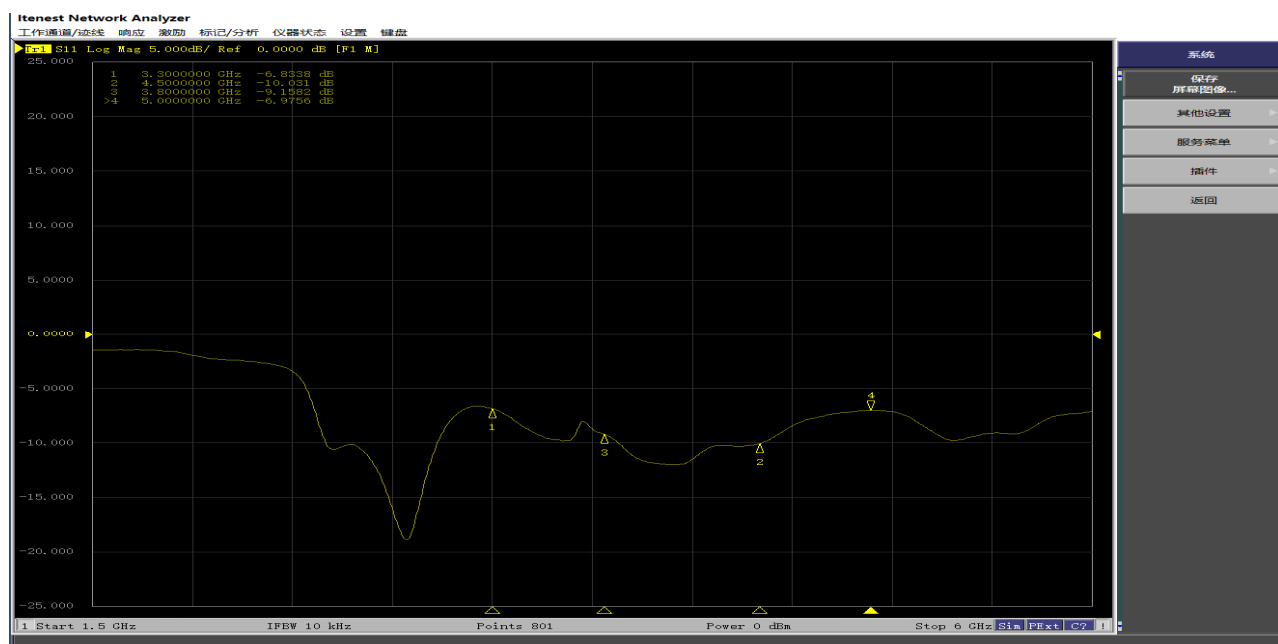
6.3 ANT2 Return loss



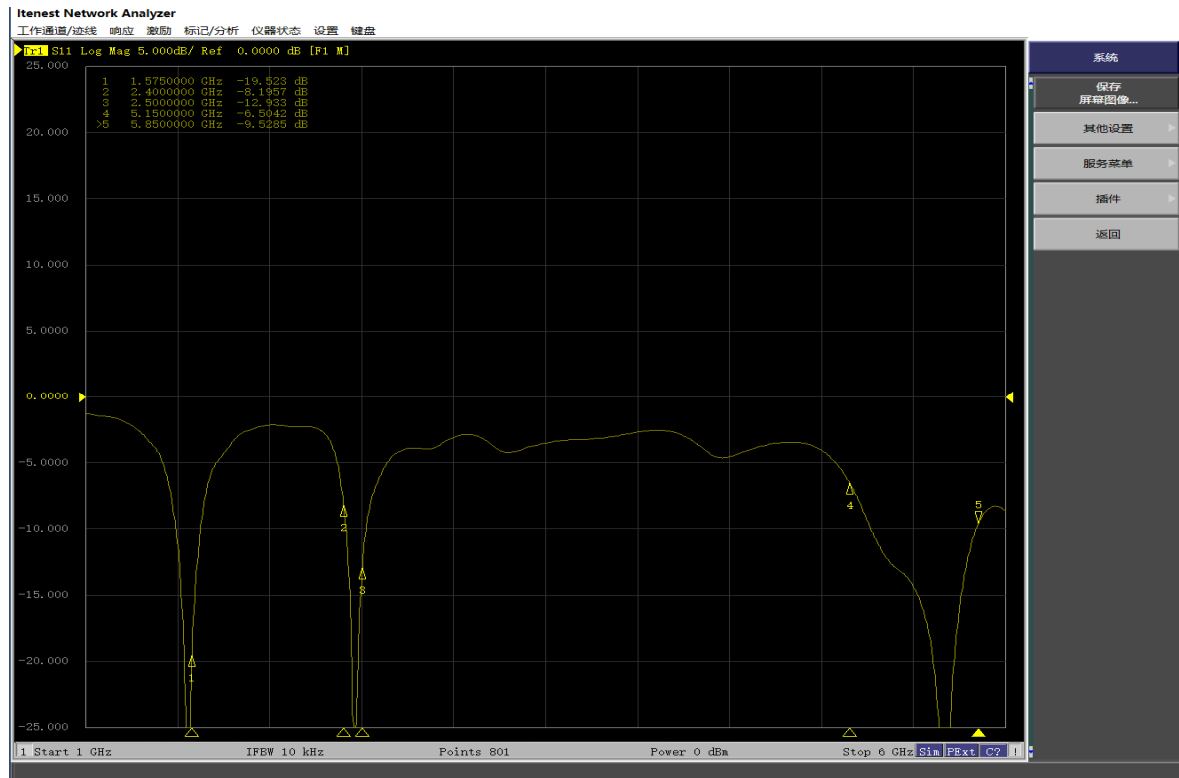
6.4 ANT3 Return loss



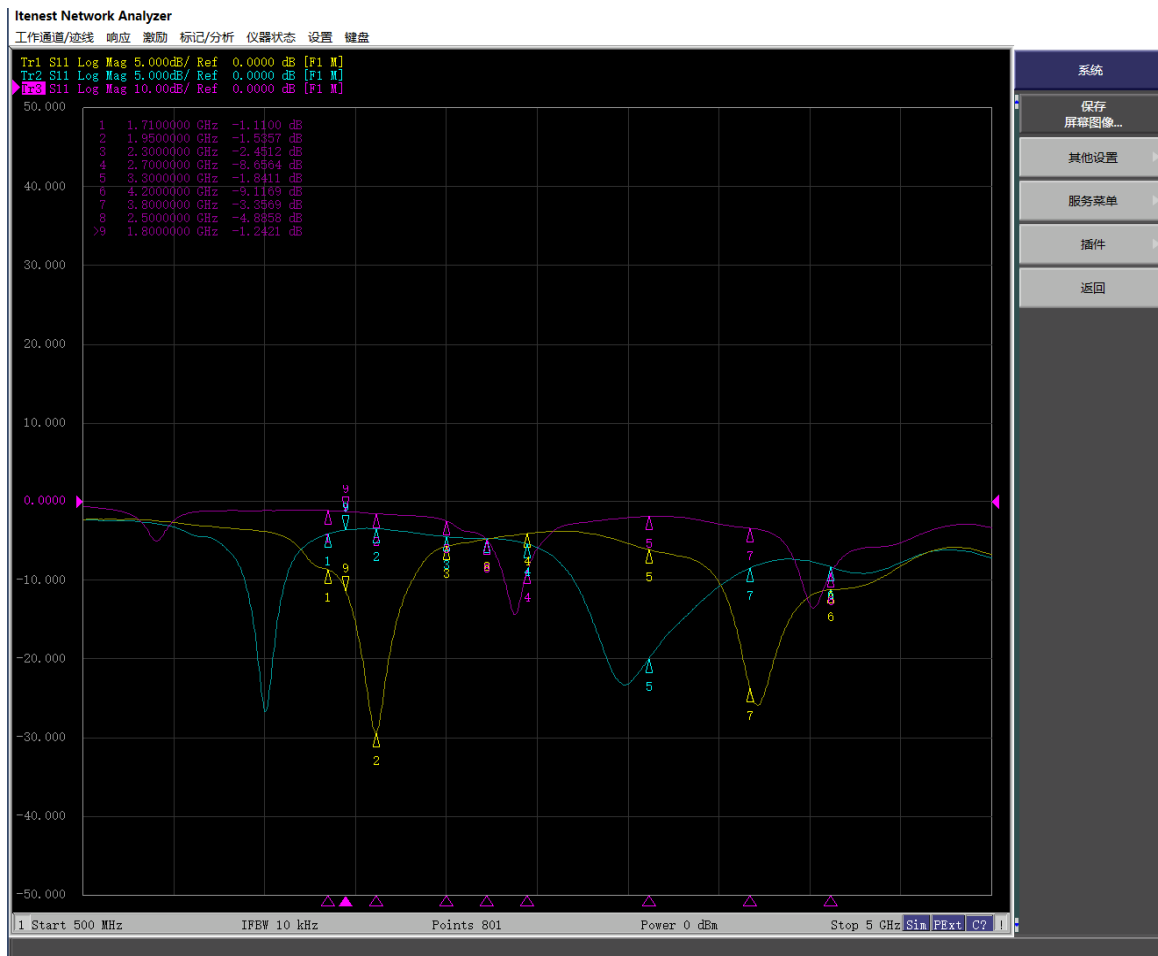
6.5 ANT4 Return loss



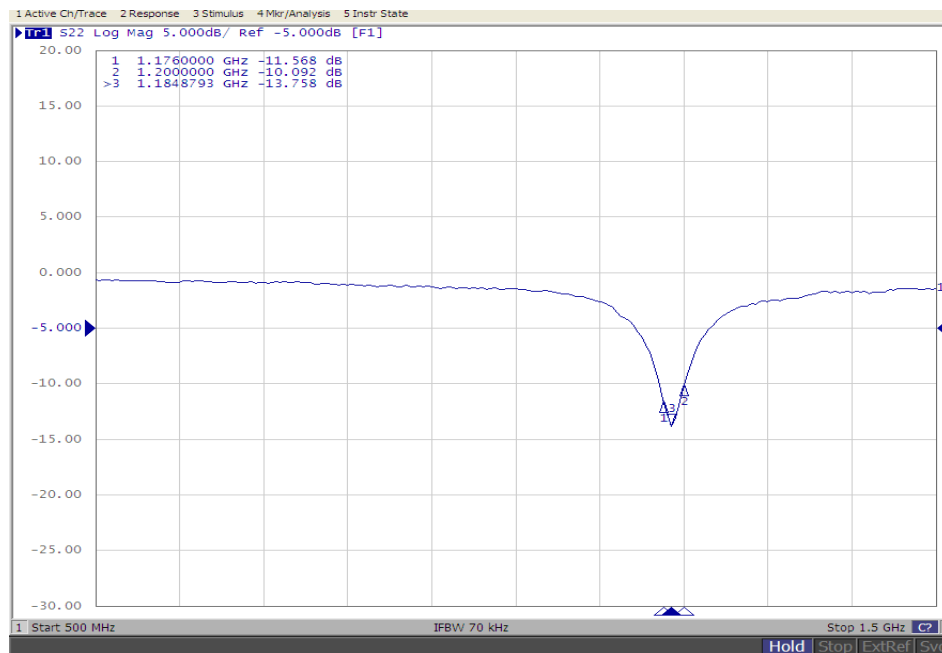
6.6 ANT5 Return loss



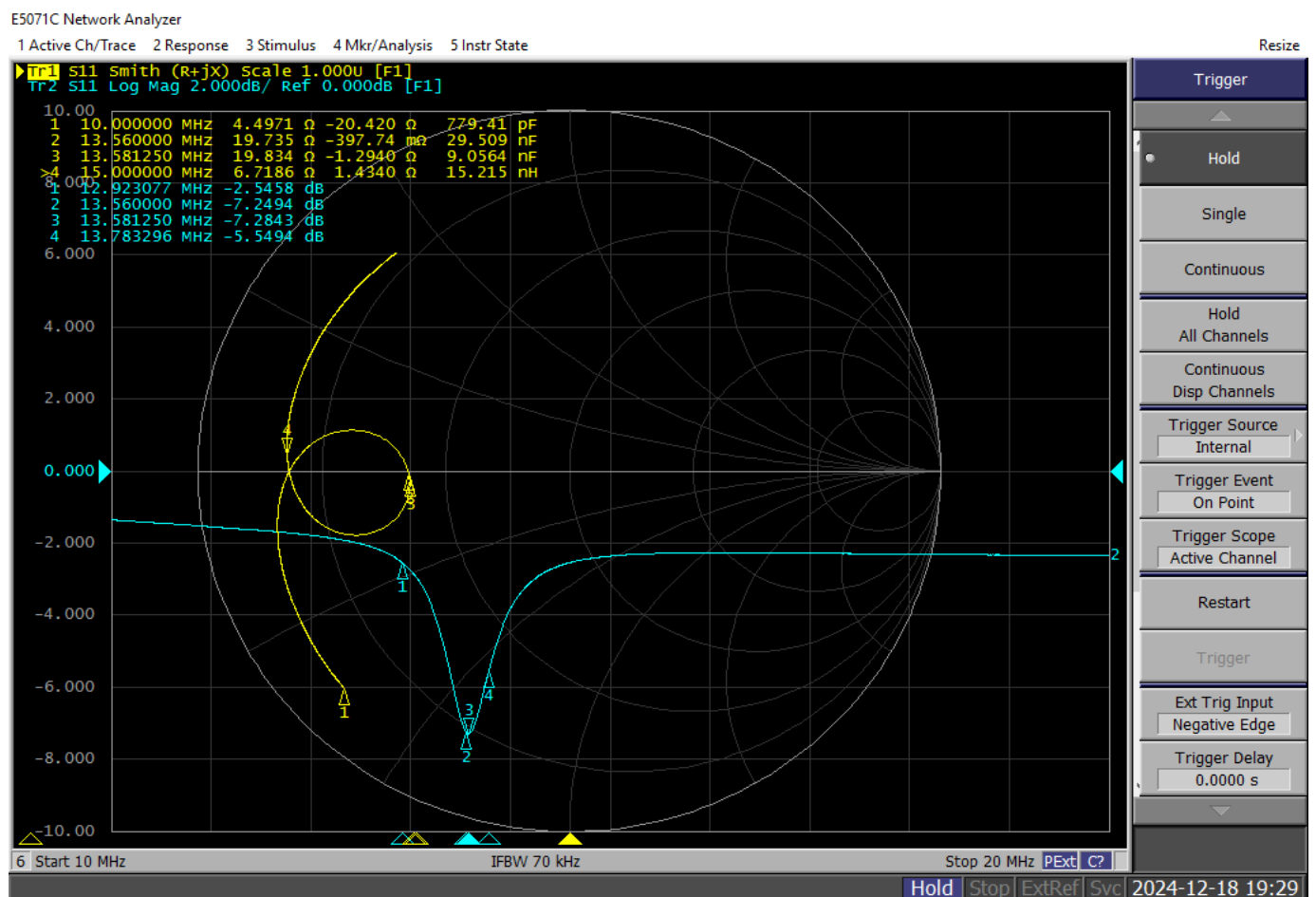
6.7 ANT6 Return loss



6.8 ANT7 Return loss

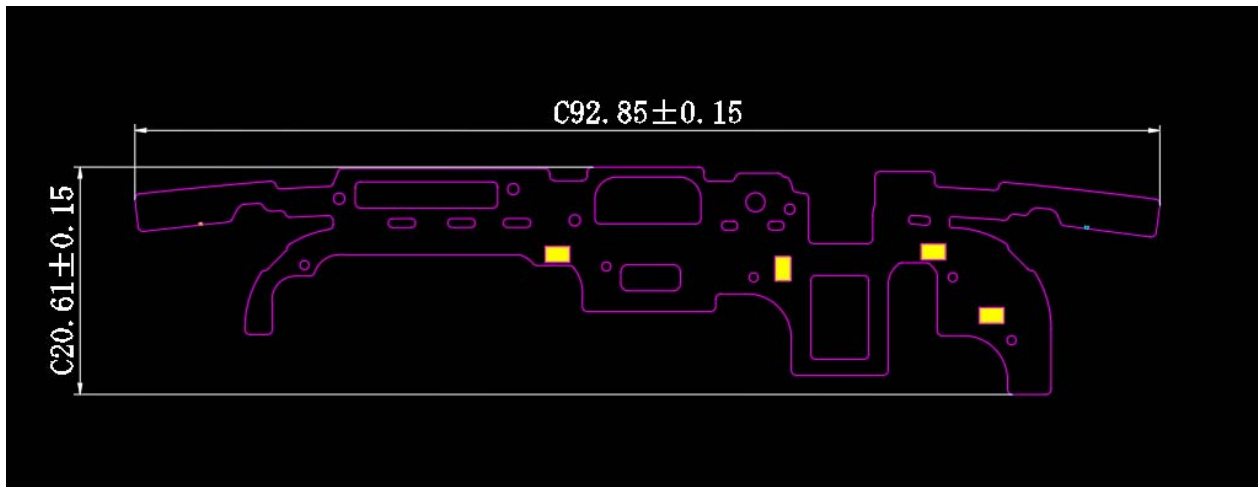


6.9 ANT9 Return loss



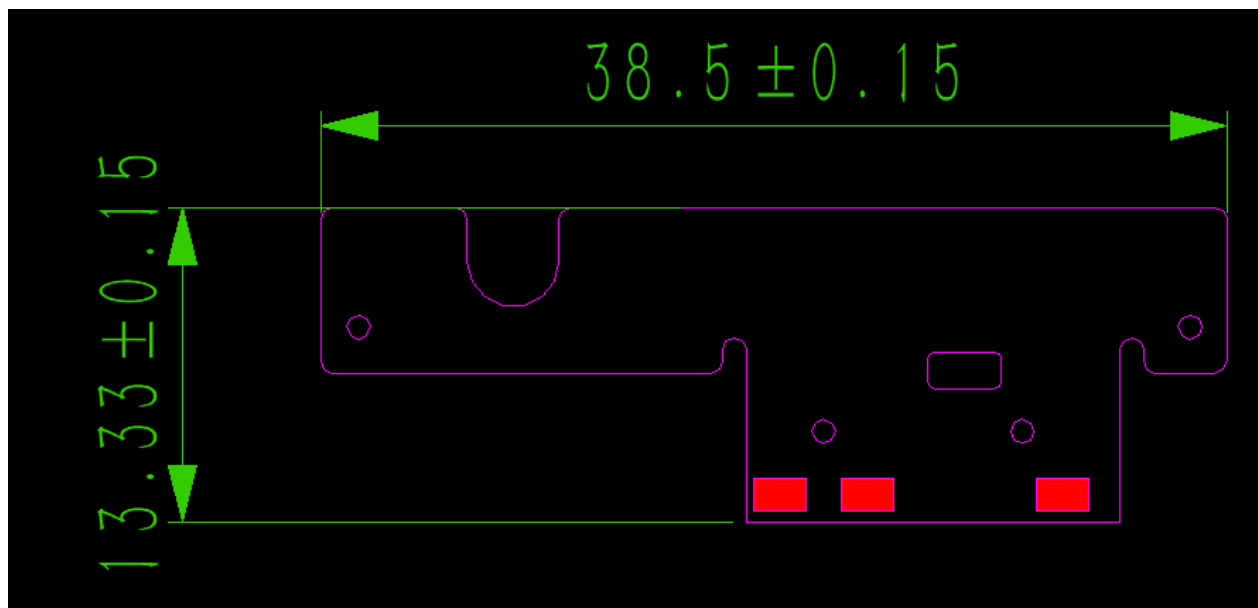
7. External Drawing

7.1 ANT0&1



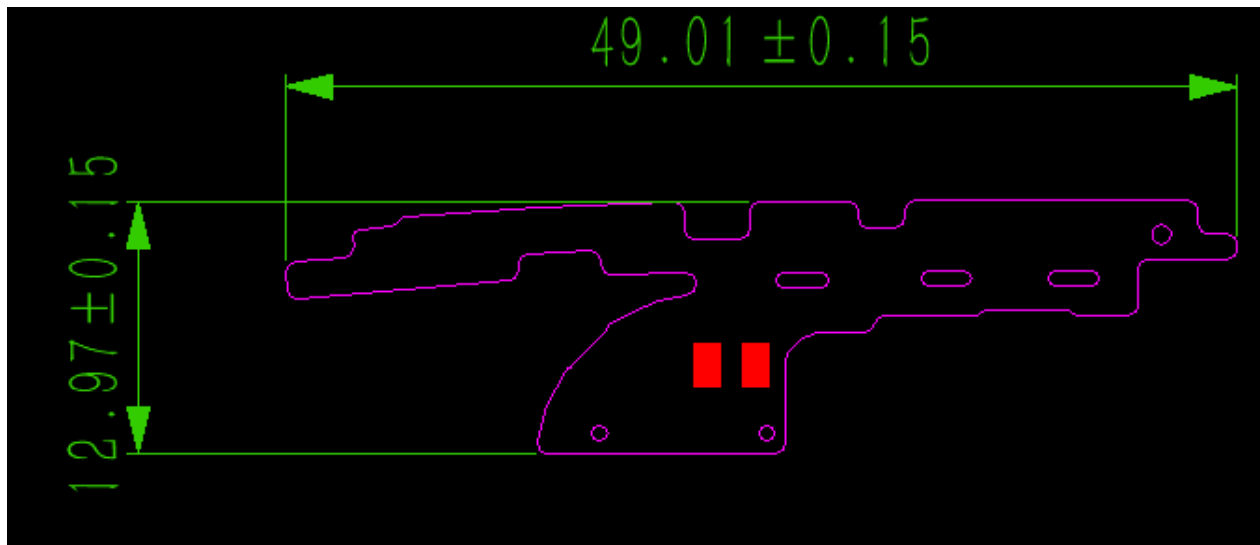
Length: 92.85 mm
Width: 20.61mm

7.2 ANT2



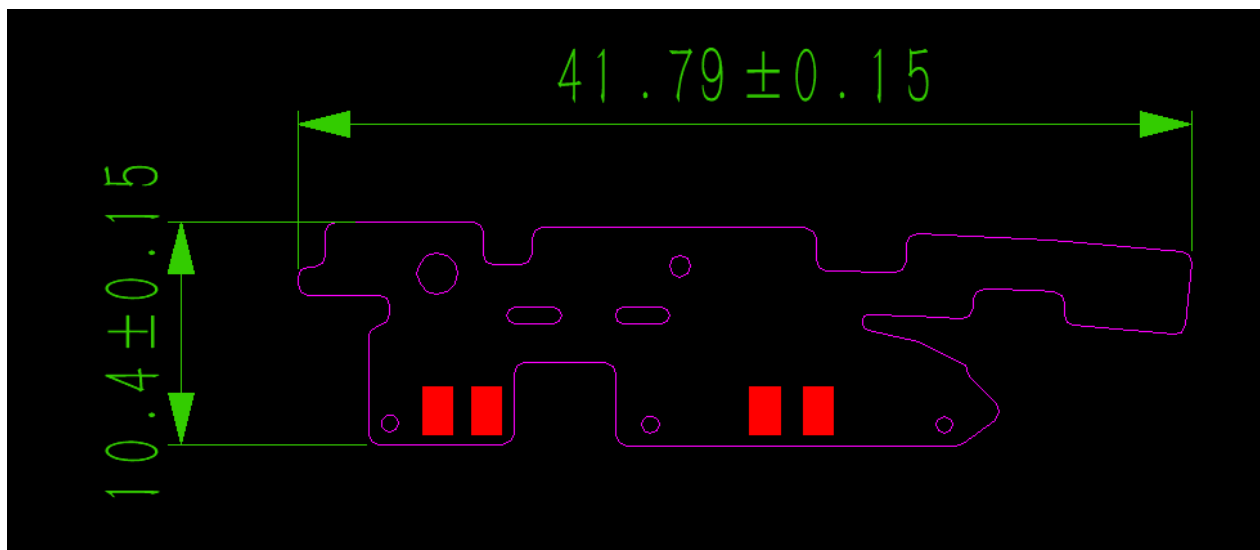
Length: 38.5mm
Width: 13.33mm

7.3 ANT3



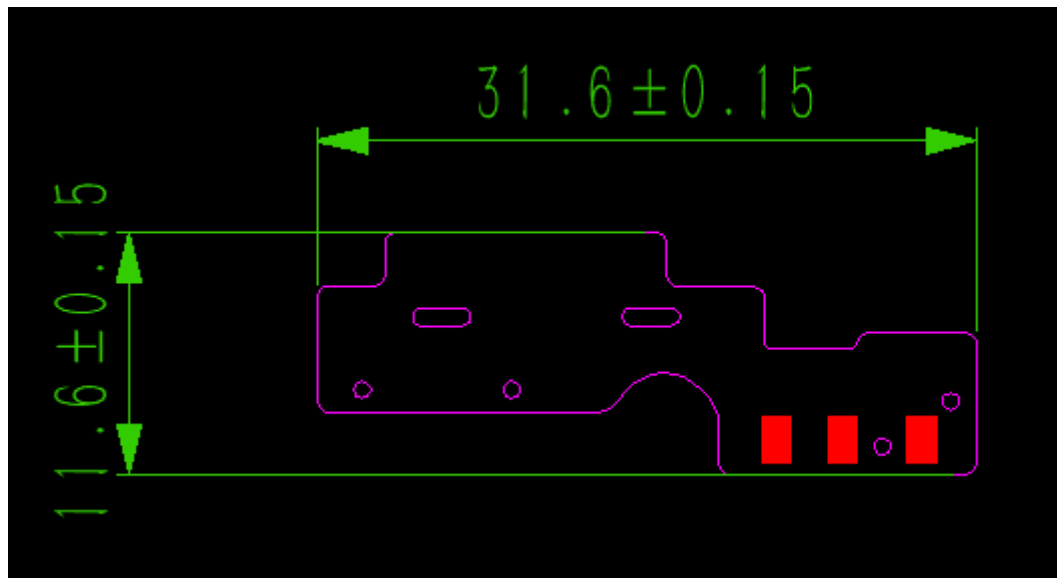
Length: 49.01mm
Width: 12.97mm

7.4 ANT4&ANT5



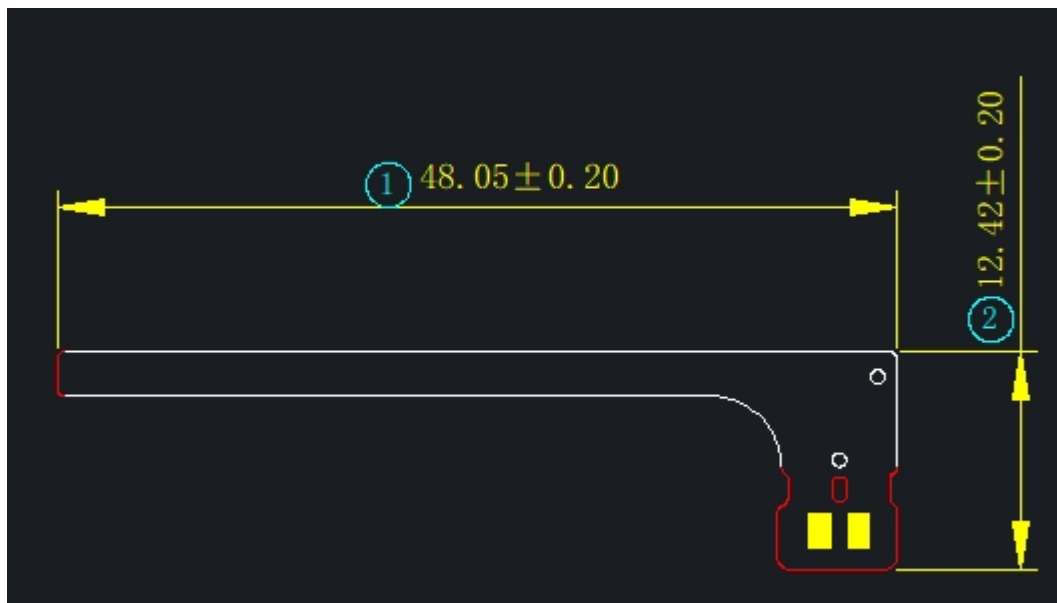
Length: 41.79mm
Width: 10.4mm

7.6 ANT6



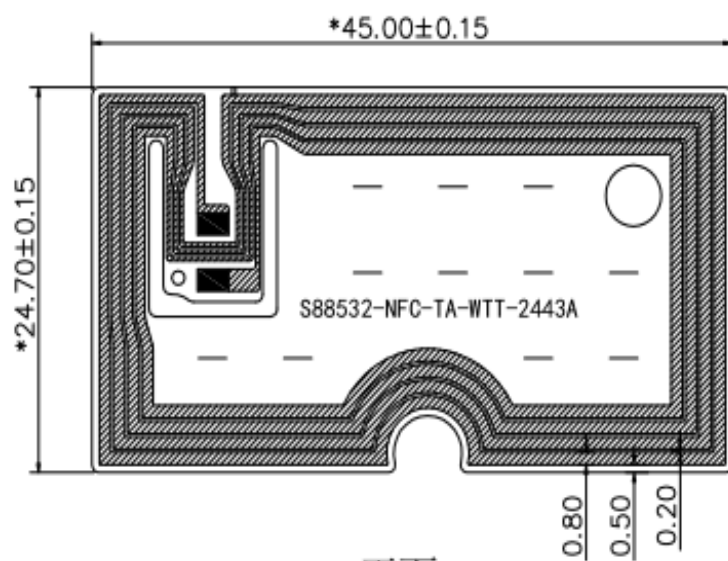
Length: 31.61mm
Width: 11.6mm

7.7 ANT7



Length: 48.05mm
Width: 12.42mm

7.8 ANT9



正面

Length: 45mm
Width: 24.70mm