

# WXT5B antenna report

Test Lab information:

ZHONG TIAN XUN TECHNOLOGY CO., LTD				
MANAGER CHECKED	MANAGER CHECKED	ME TESTED	RF TESTED	LISTER
		邹一麟	刘蒋军	



深圳市中天迅通信技术股份有限公司

SHENZHEN ZHONGTIAN XUN Communication Technology Co., Ltd.

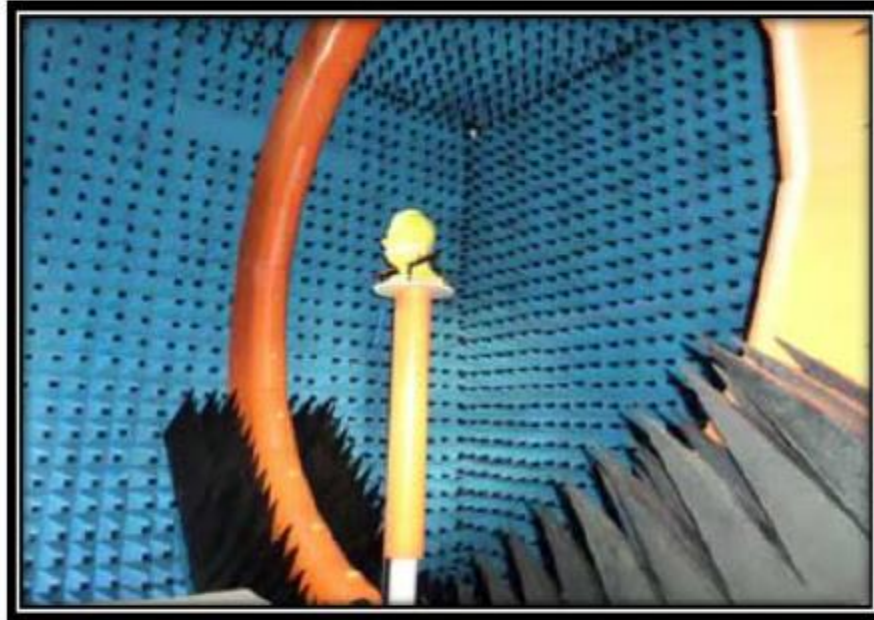
地址：深圳市宝安区石岩镇石龙大道 34 号(腾达工业园) 邮编：518000

电话：0755-27588320 传真：0755-27588045 <http://www.chinaztx.com>

Address: Tenada Industrial Park. Shilona Avenue. Shivan Town. Baoan District. Shenzhen

Test date: 2022-08-19

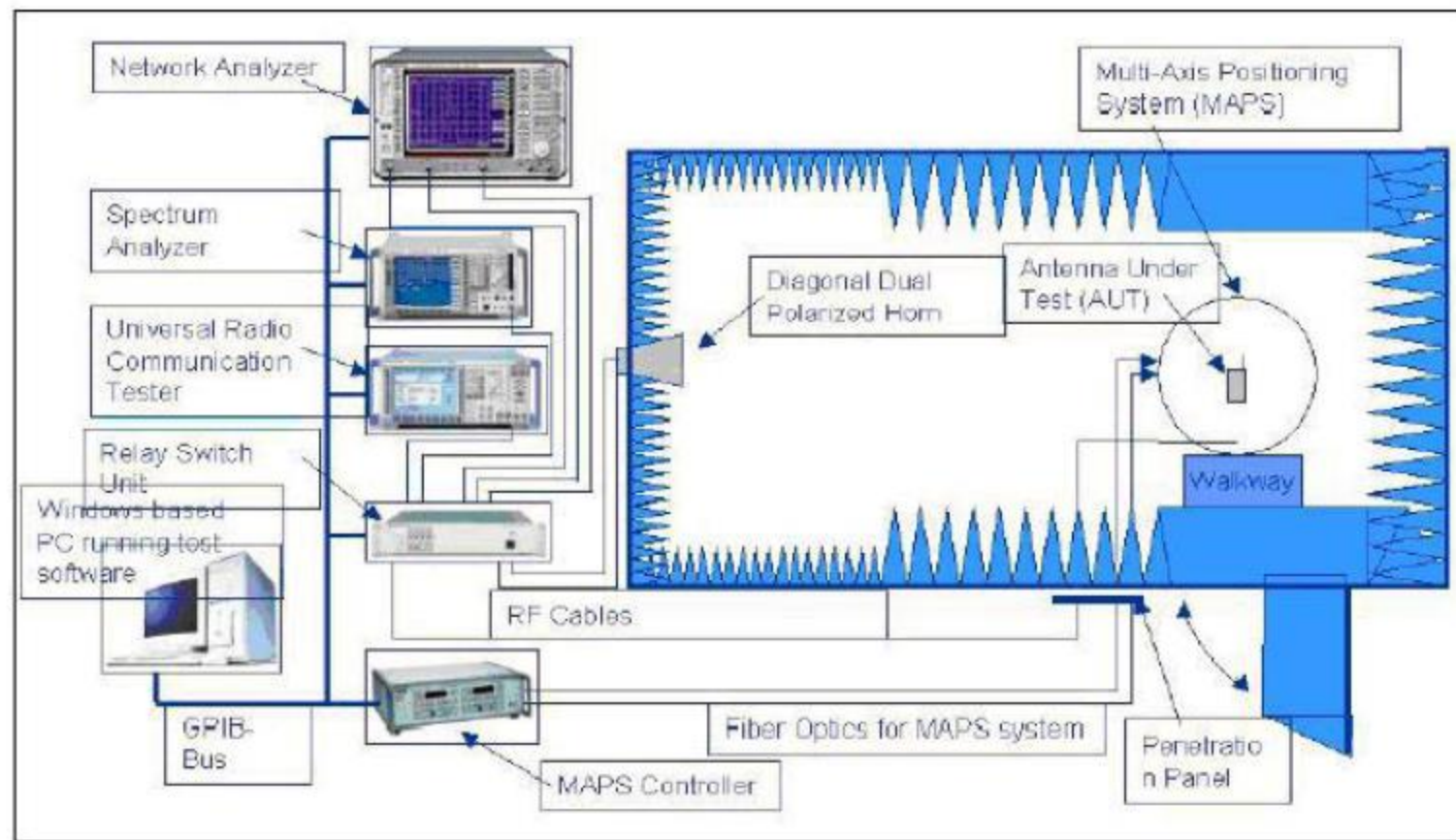
## 1. Test equipment



Owned 6 microwave dark room, equipped 2 sets world leading France Satimo SG24 OTA certification test systems (one in SHENZHEN, another one in Shanghai), ETS OTA Standard test system, Blue test reverberation test system which is High repeatability, high accuracy and high resolution. It can quickly provide accurate test reports, fully meet the CITA standards.

Testing range:

Support active, passive testing of GSM/CDMA/WCDMA/TD-SCDMA/LTE/WIFI/WLAN/WiMax/BT/GPS/MIMO/UWB within 0.4-6G.



Test standard:

Antenna performance	Radiation efficiency	IEEE Standard Test Procedures for Antennas	ANSI/IEEE Std 149-2021
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Equipment list:

Equipment	Manufacturer	Model No.	Last Cal.	Due Date
Network Analyzer	Agilent	E5071C	2020.01.20	2022.01.19

test software : EMQuest

## Test Procedure

### Test Step Flow

1. Maintain the test ambient temperature of 23±2 C, the instrument is powered on and preheated for more than 30 minutes
2. Turn on the darkroom power supply, connect the test cable, and set up the sample according to the standard
3. Outline sets the test content objectives and conducts calibration tests
4. Run the EMQuest OTA software, the test is complete, export the corresponding test diagram and test data, and save to the corresponding directory

### Test Principle

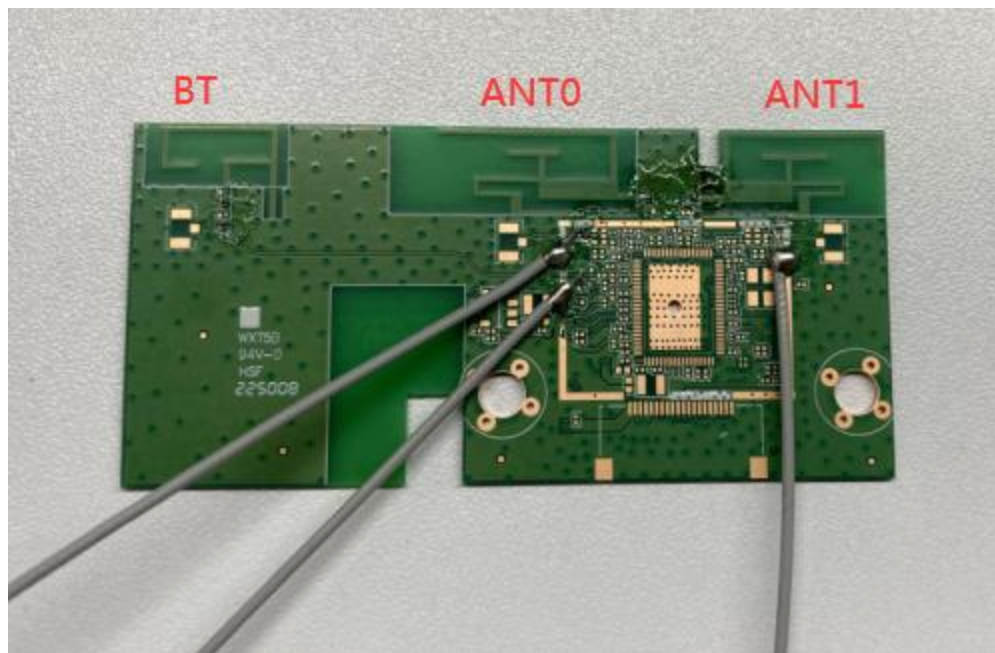
The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

### Test Conditions

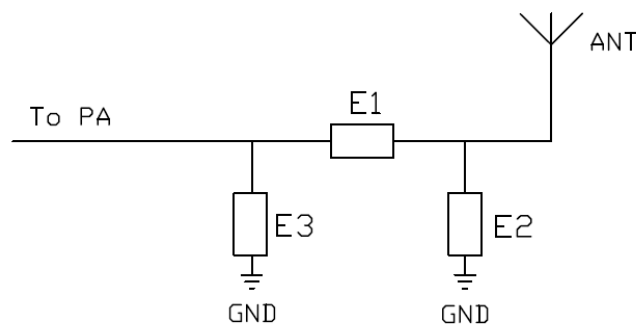
1. The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy
2. The measuring instrument should have a certificate of conformity and be within the effective calibration period
3. The analyte should be complete and undamaged, and the test environment should be kept clean

- Module diagram
- Matching specification
- Test environment
- Antenna passive test data

# Module photo



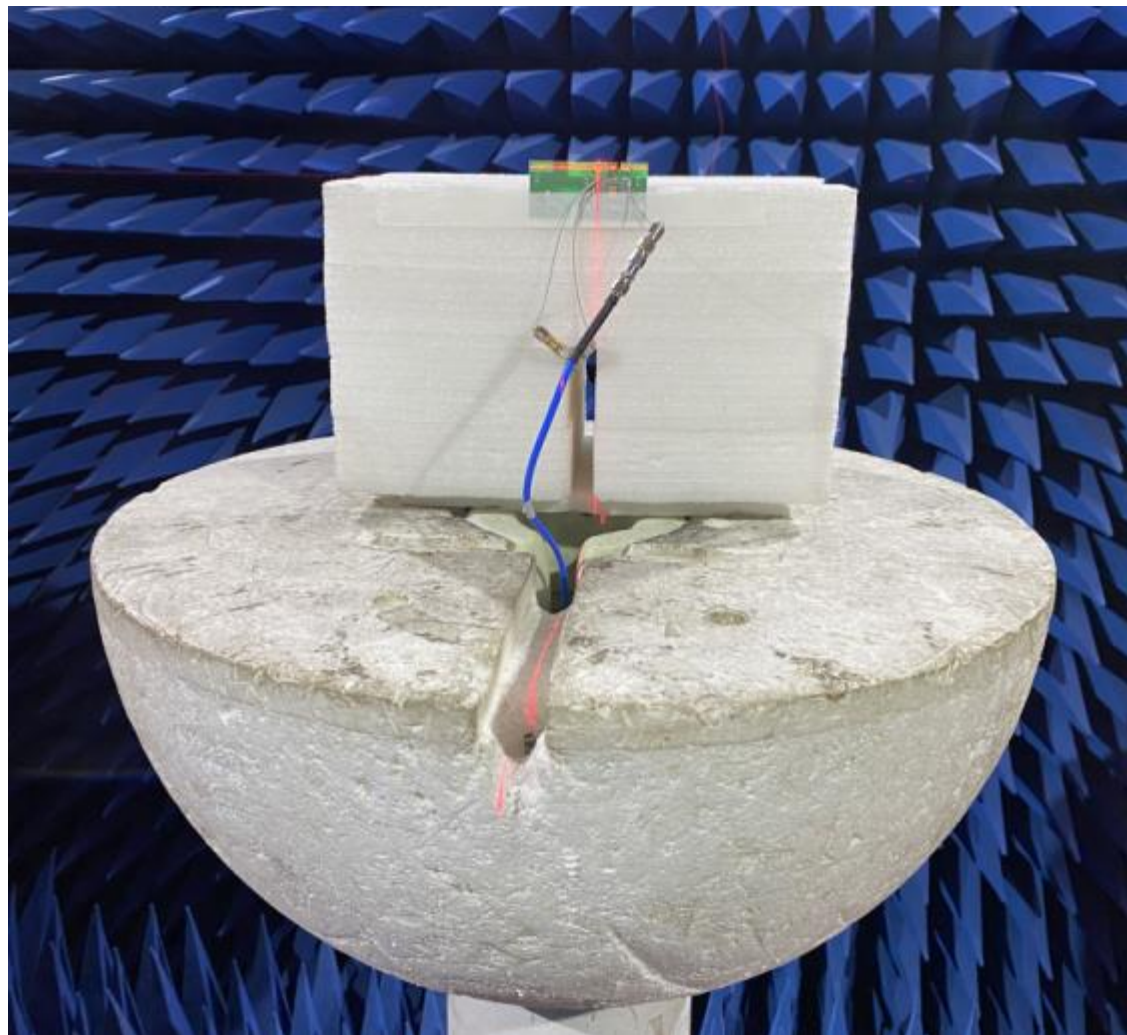
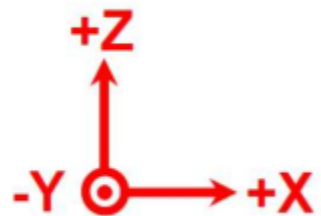
# Matching specification



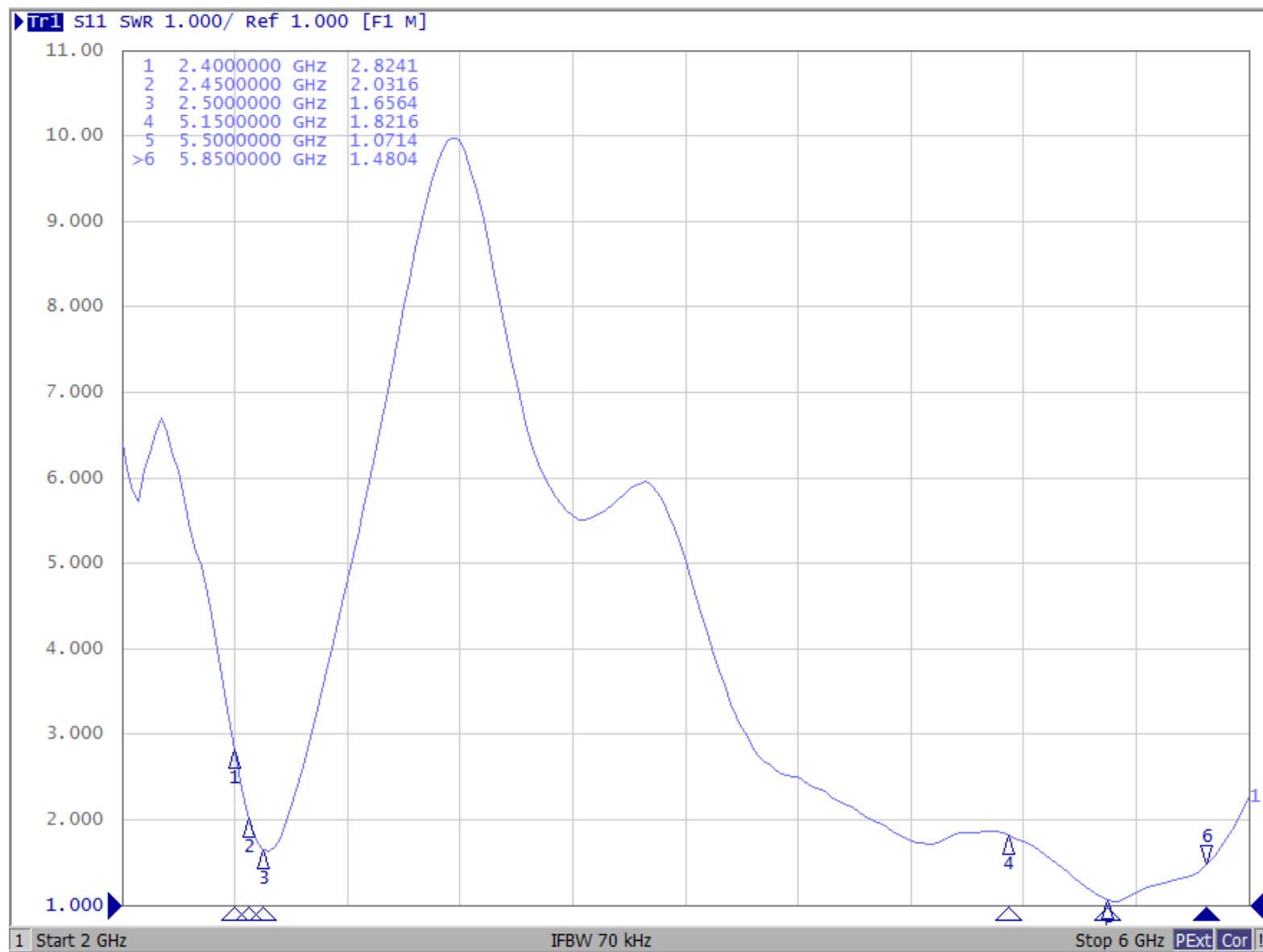
匹配说明	ANT1	ANT0	BT
E1	1nH	0欧姆	0欧姆
E2	0.3pF	NC	NC
E3	NC	NC	NC



# Test environment



# Passive data (ANT1- standing wave ratio)

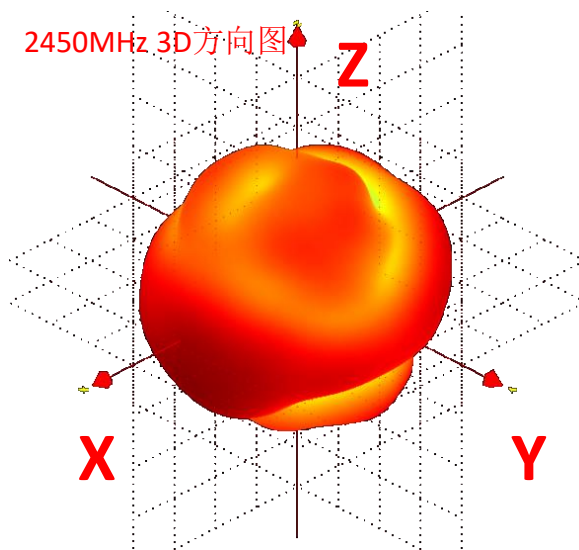
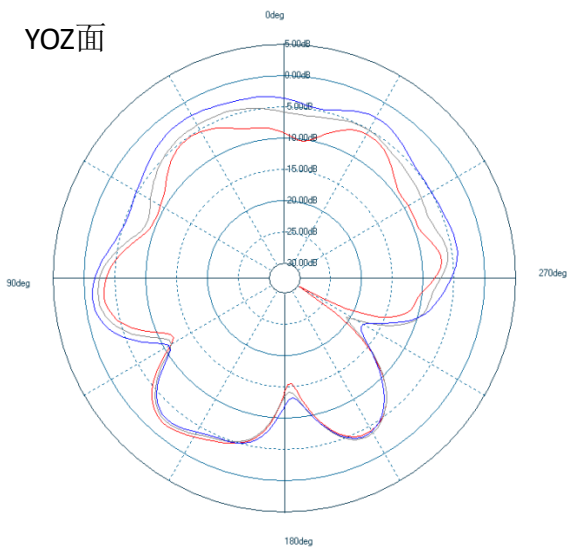
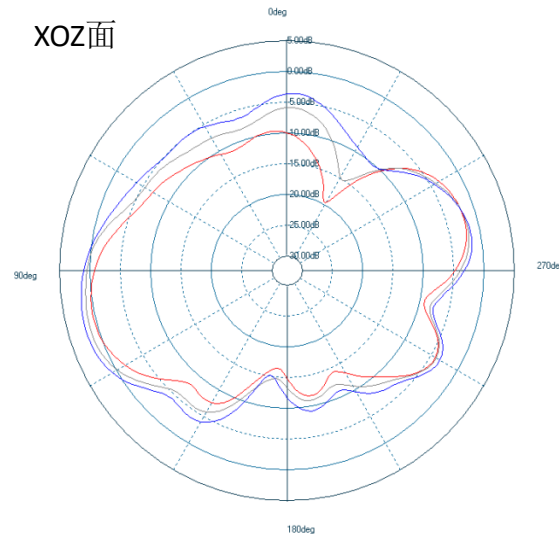
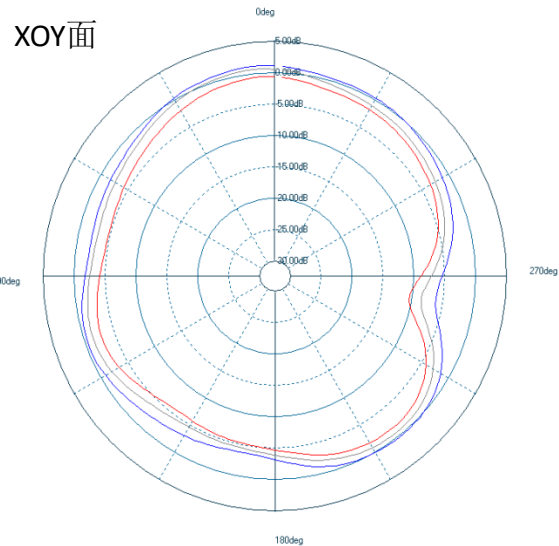


# Passive data (ANT1- Efficiency/Gain)

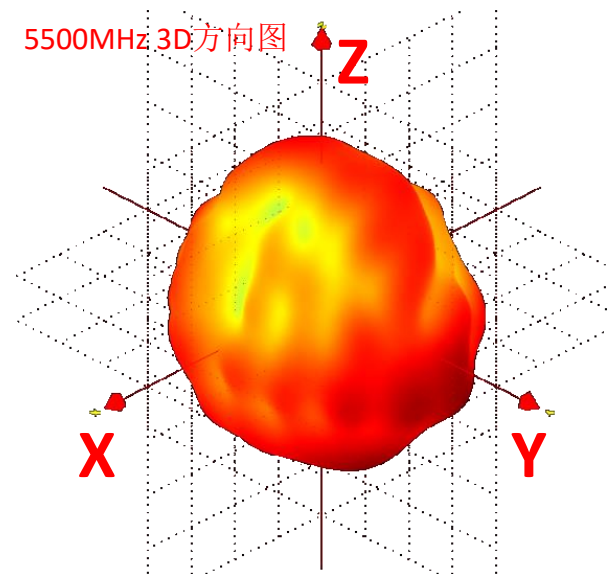
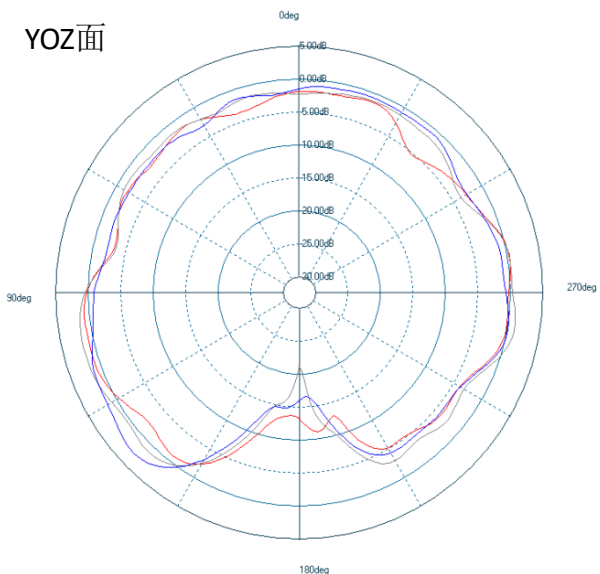
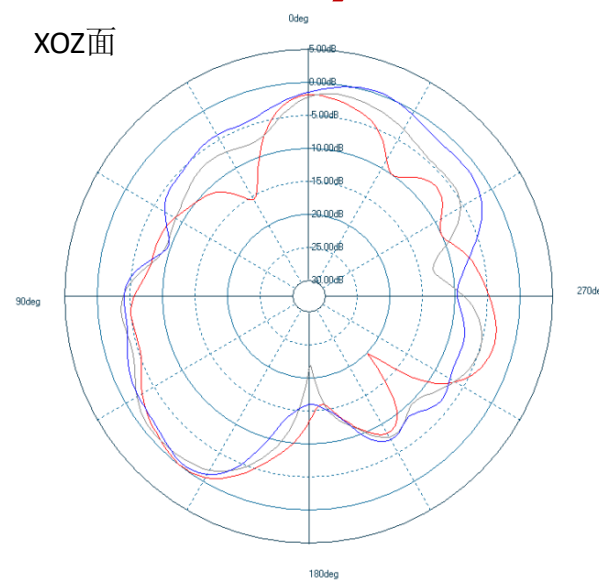
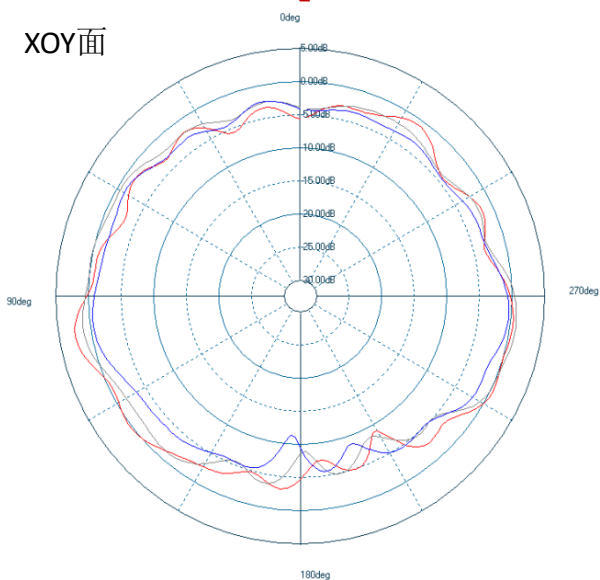
Frequency	Efficiency		Peak Gain
	Mhz	%	dB
2400	35.47	-4.50	0.55
2410	36.28	-4.40	0.86
2420	36.88	-4.33	0.88
2430	37.10	-4.31	1.28
2440	37.90	-4.21	1.39
2450	37.32	-4.28	1.32
2460	38.00	-4.20	1.43
2470	38.53	-4.14	1.50
2480	42.44	-3.72	1.78
2490	43.42	-3.62	1.77
2500	46.95	-3.28	2.08

Frequency	Efficiency		Peak Gain
	Mhz	%	dB
5150	46.76	-3.30	2.61
5200	50.04	-3.01	2.51
5250	54.91	-2.60	2.95
5300	52.76	-2.78	2.69
5350	55.85	-2.53	3.01
5400	55.47	-2.56	3.10
5450	57.67	-2.39	3.18
5500	55.05	-2.59	2.92
5550	58.93	-2.30	3.17
5600	54.19	-2.66	2.91
5650	53.57	-2.71	2.98
5700	52.32	-2.81	2.91
5750	53.60	-2.71	2.99
5800	53.63	-2.71	2.92
5850	53.87	-2.69	3.01

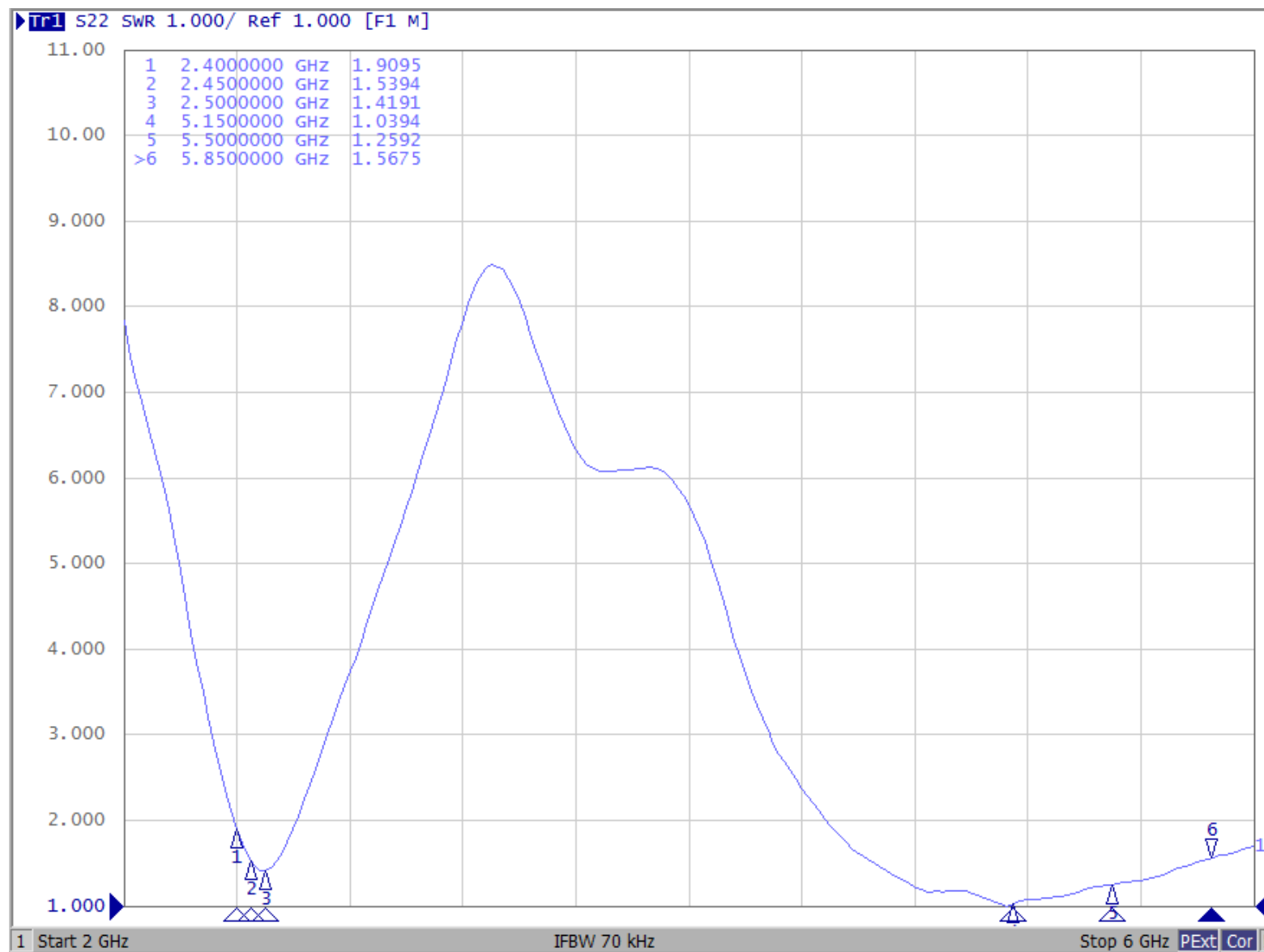
# Passive data (ANT1-2.4G direction chart)



# Passive data (ANT1-5G direction chart)



# Passive data (ANT0- standing wave ratio)

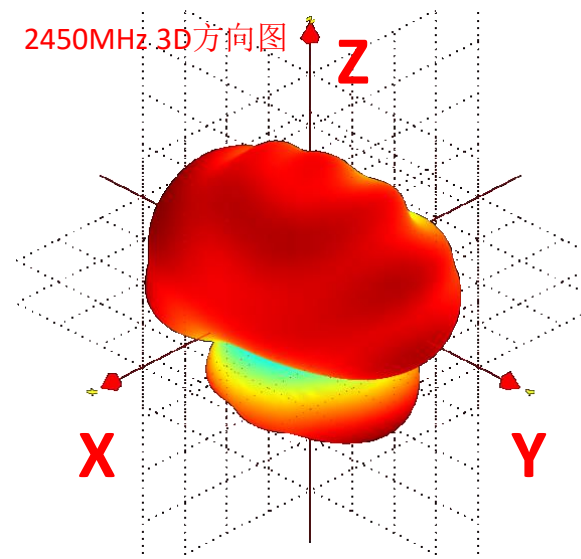
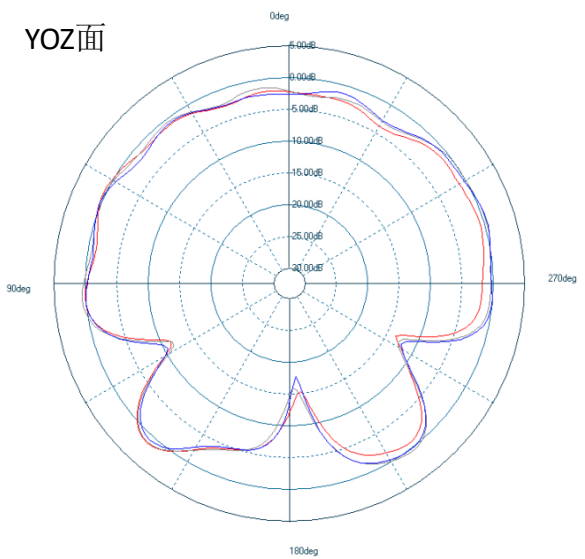
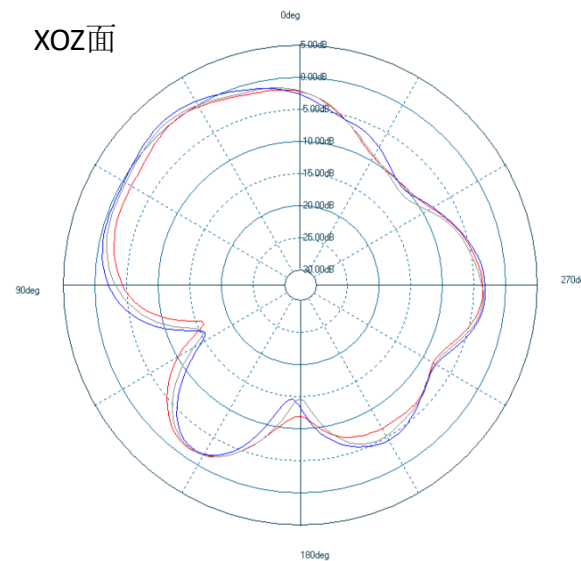
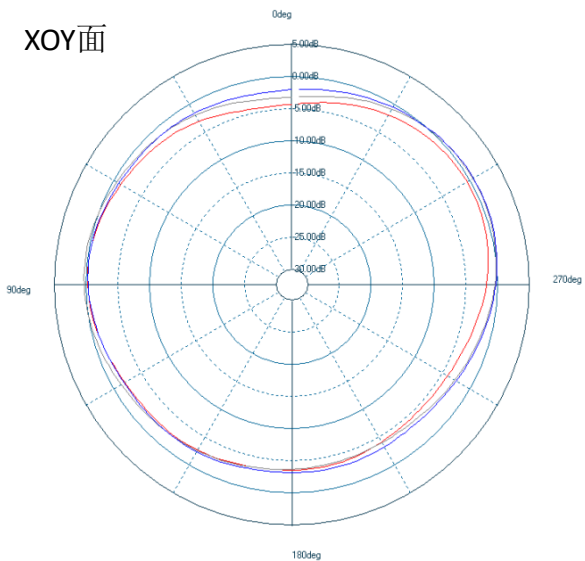


# Passive data (ANT0- Efficiency/Gain)

Frequency	Efficiency		Peak Gain
	Mhz	%	
2400	47.74	-3.21	1.35
2410	50.91	-2.93	1.33
2420	52.32	-2.81	1.26
2430	55.02	-2.59	1.55
2440	55.84	-2.53	1.53
2450	55.24	-2.58	1.45
2460	53.52	-2.72	1.16
2470	51.69	-2.87	0.91
2480	55.20	-2.58	1.41
2490	55.19	-2.58	1.67
2500	56.30	-2.50	1.66

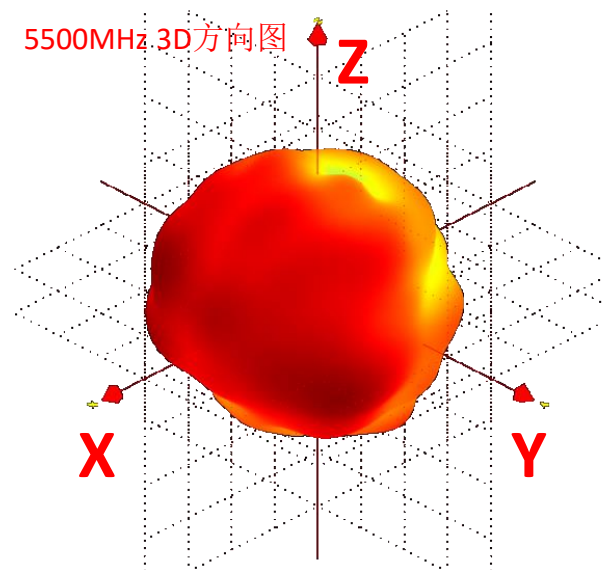
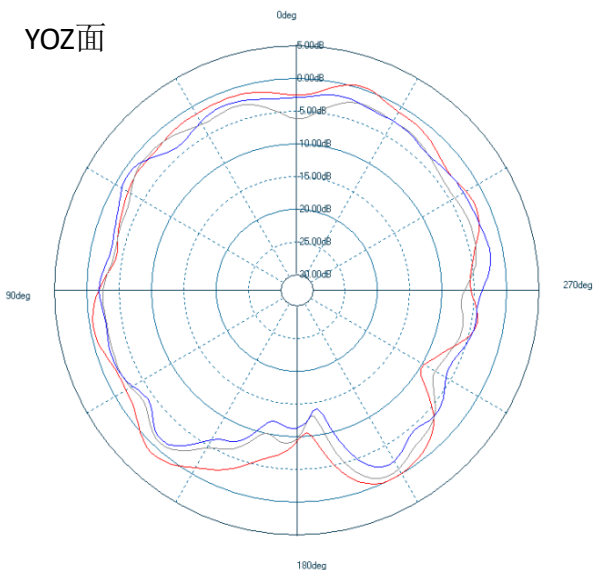
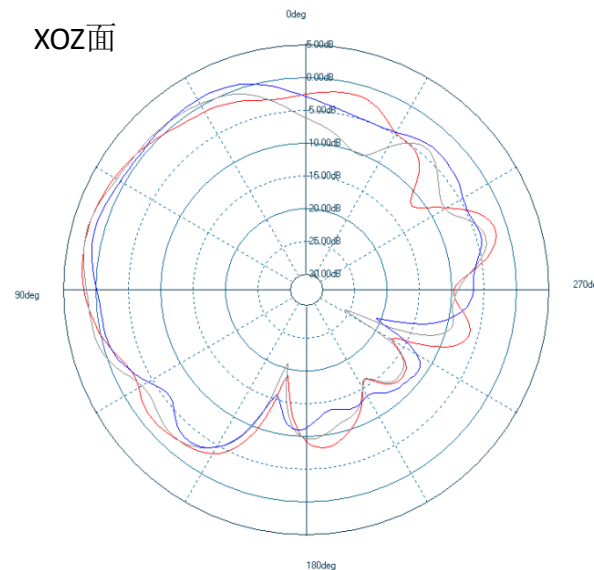
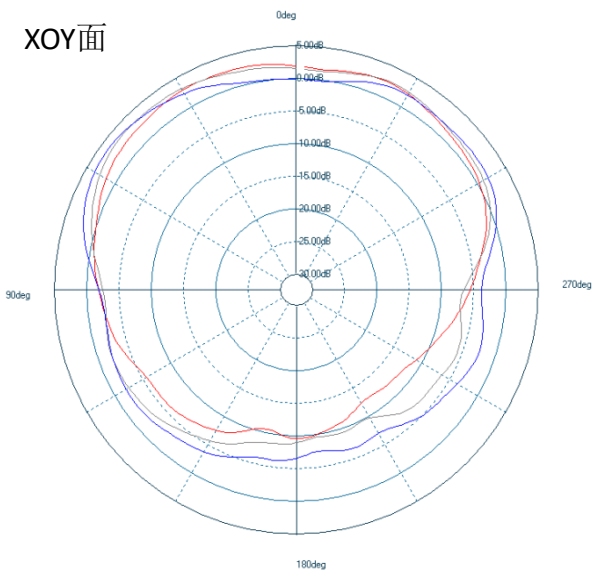
Frequency	Efficiency		Peak Gain
	Mhz	%	
5150	60.19	-2.20	3.16
5200	61.73	-2.10	3.57
5250	64.61	-1.90	3.59
5300	61.11	-2.14	3.52
5350	63.54	-1.97	3.92
5400	61.41	-2.12	3.84
5450	62.59	-2.03	3.92
5500	62.31	-2.05	3.99
5550	69.37	-1.59	4.46
5600	66.31	-1.78	4.35
5650	65.10	-1.86	4.13
5700	59.74	-2.24	4.11
5750	62.05	-2.07	4.14
5800	64.93	-1.88	4.22
5850	66.87	-1.75	4.34

# Passive data (ANT0-2.4G direction chart)

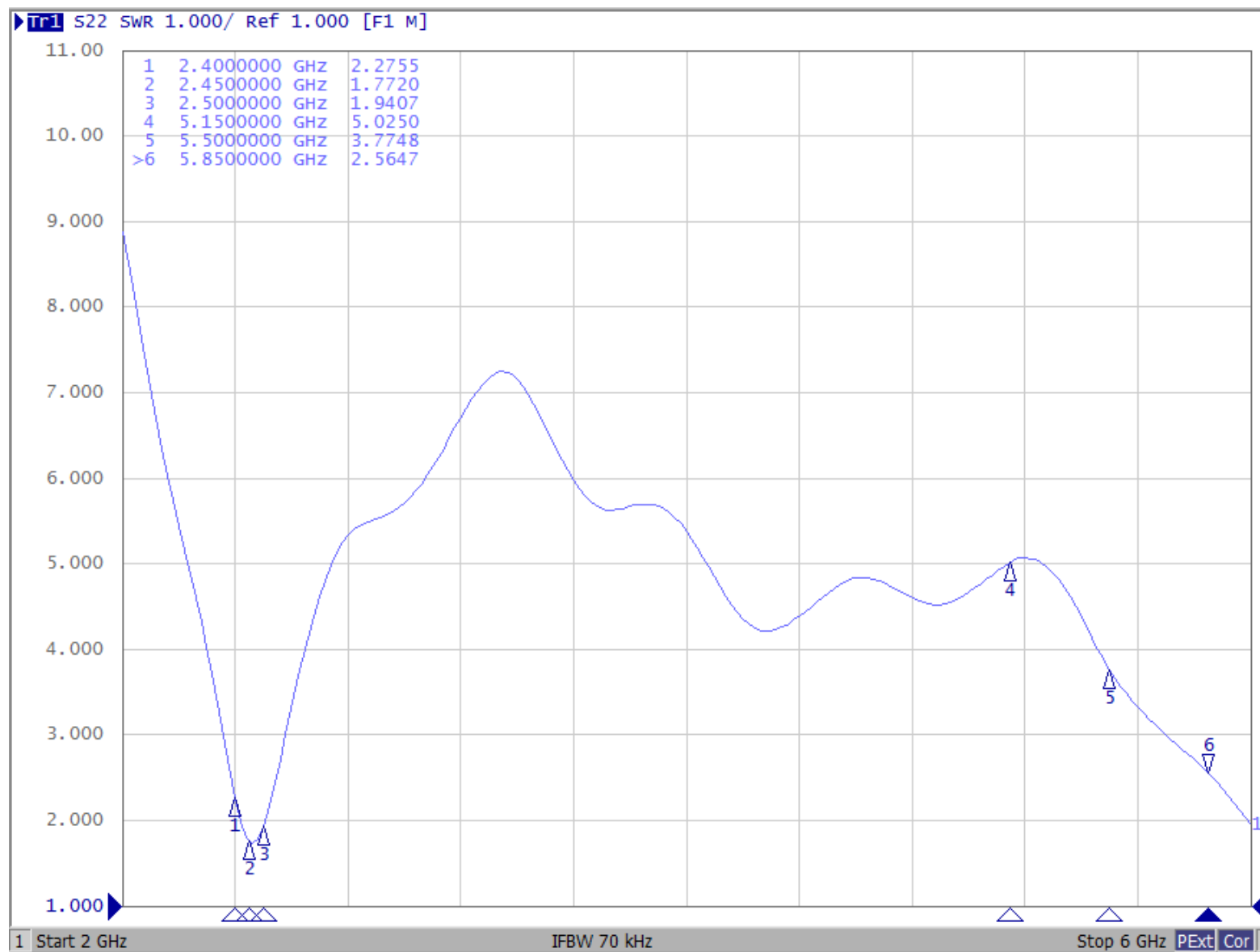




# Passive data (ANT0-5G direction chart)



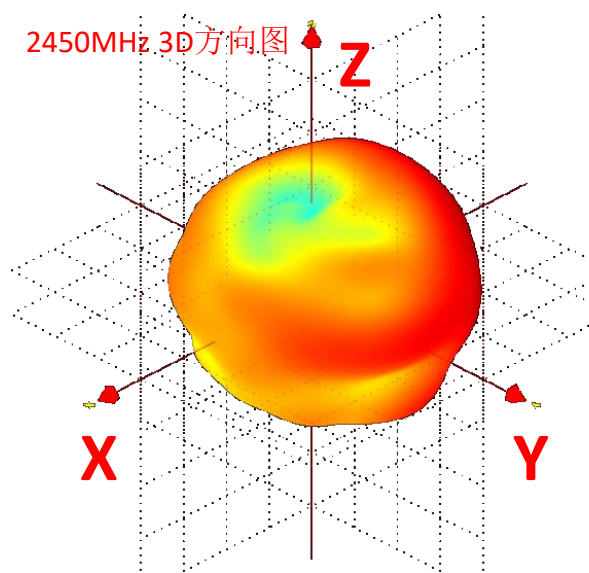
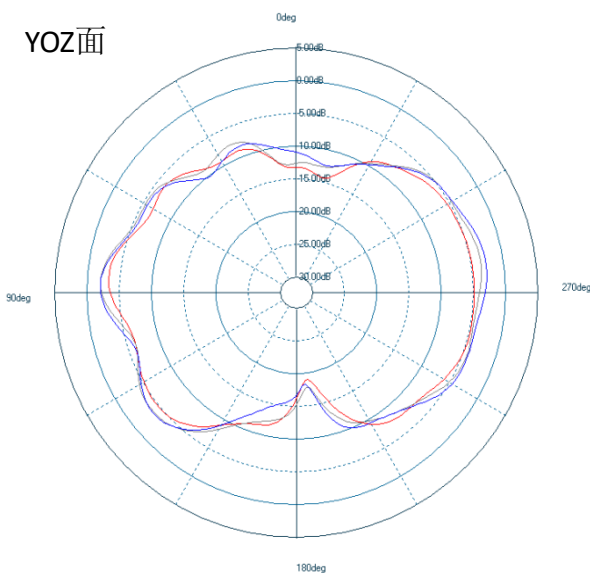
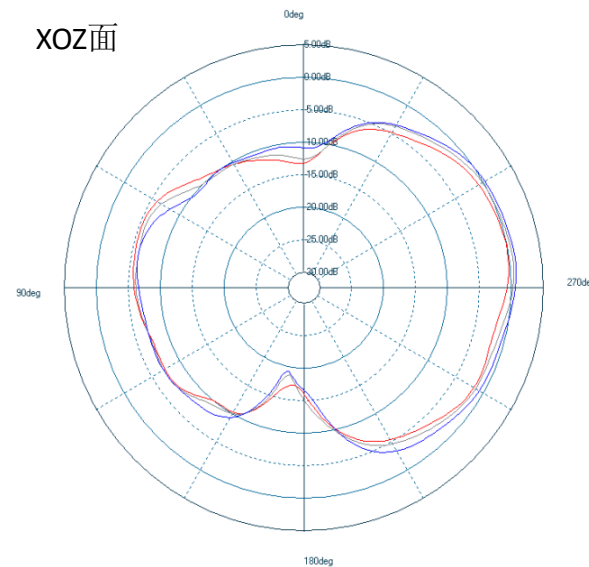
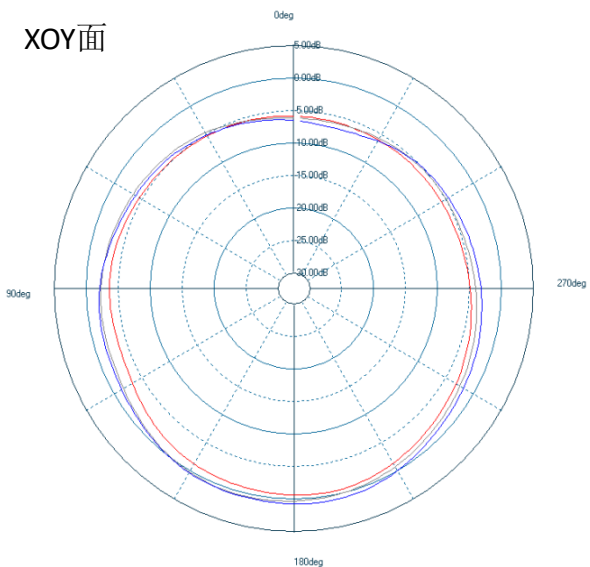
# Passive data (BT- standing wave ratio)



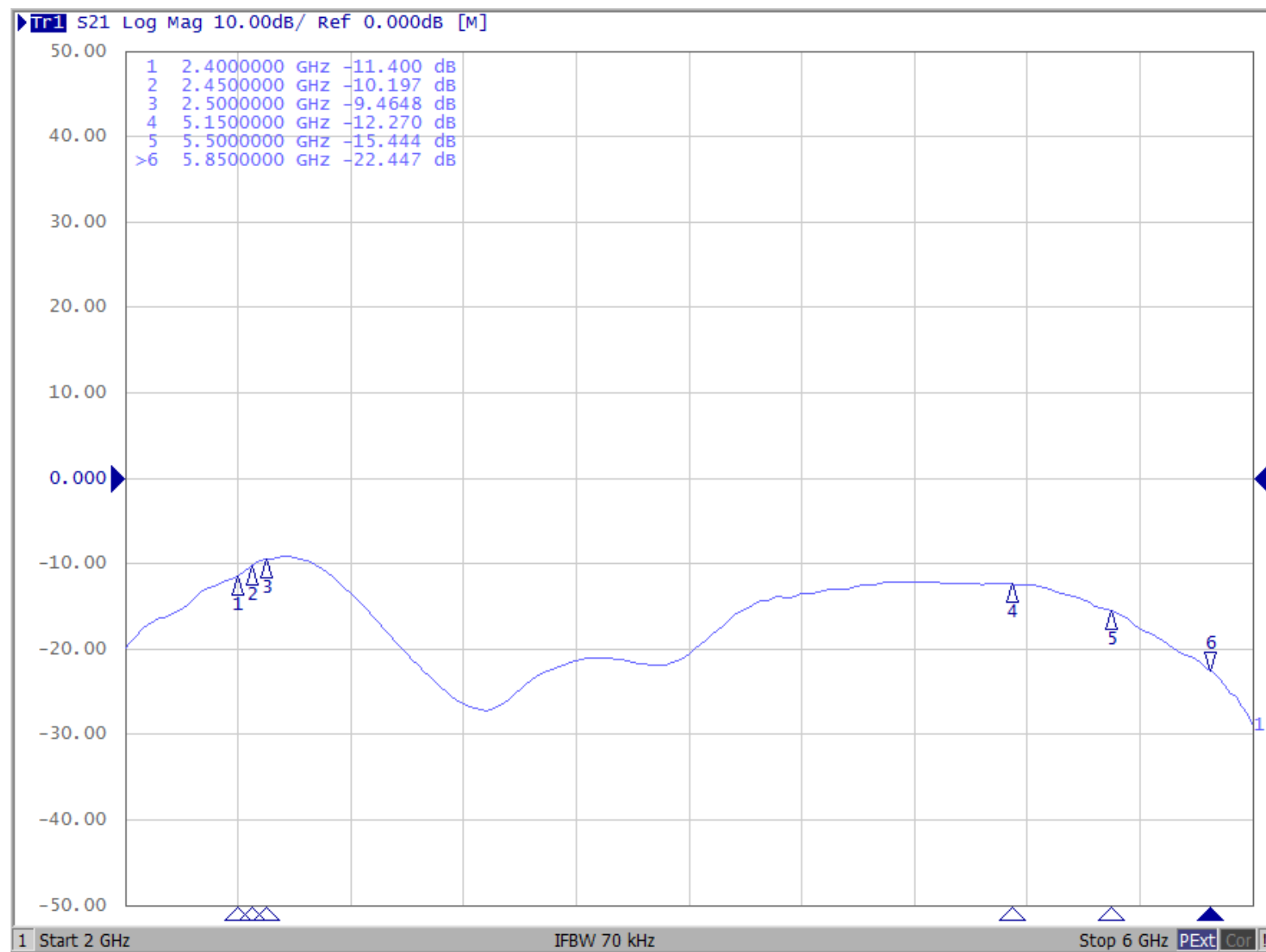
# Passive data (BT- Efficiency/Gain)

Frequency	Efficiency		Peak Gain
	Mhz	%	dB
2400	32.05	-4.94	0.05
2410	32.53	-4.88	0.04
2420	35.13	-4.54	0.25
2430	36.51	-4.38	0.35
2440	38.87	-4.10	0.63
2450	37.67	-4.24	0.56
2460	38.39	-4.16	0.81
2470	37.49	-4.26	0.81
2480	38.04	-4.20	0.90
2490	37.59	-4.25	0.80
2500	39.84	-4.00	1.14

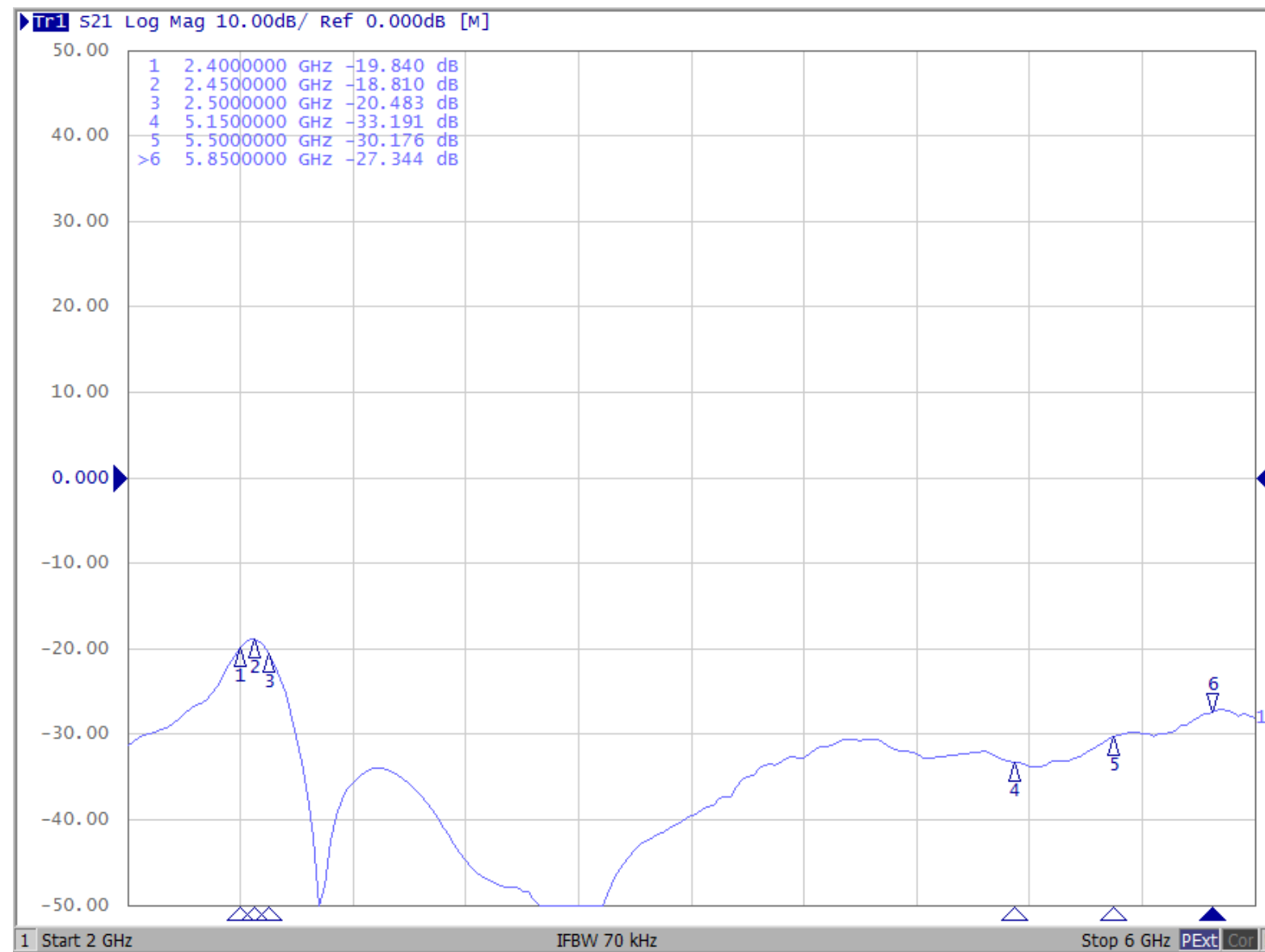
# Passive data (BT-2.4G direction chart)



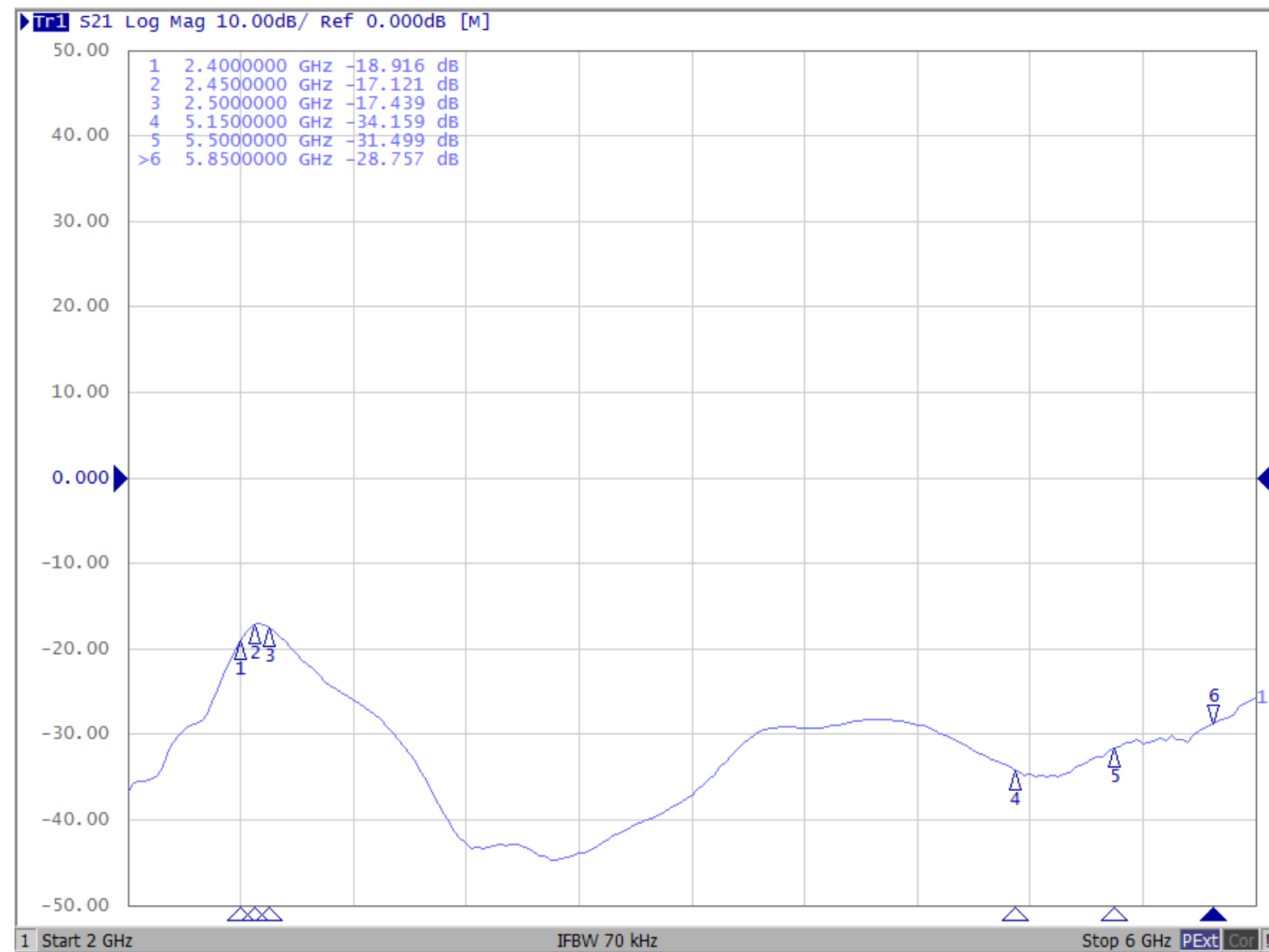
# Passive data (AN11&AN10 antenna isolation)



# Passive data (AN I&B I antenna isolation)



# Passive data (AN U&B I antenna isolation degree )



# Thank You

