

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	

**深圳市中天迅通信科技股份有限公司**

SHENZHEN ZHONGTIAN XUN Communication Technology Co., Ltd.

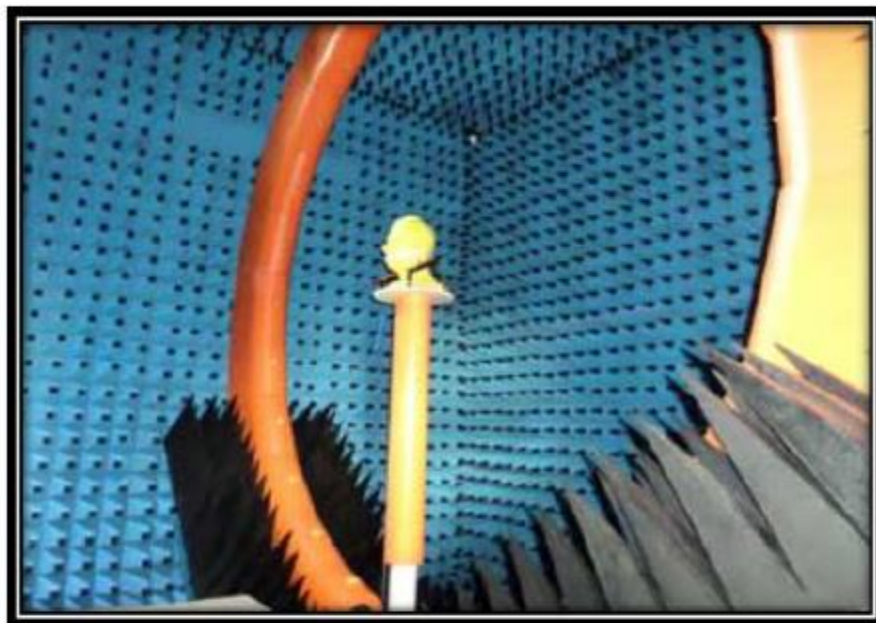
地址：深圳市宝安区石岩镇石龙大道 34 号(腾达工业园) 邮编：518000

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

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

Test date: 2022-08-19

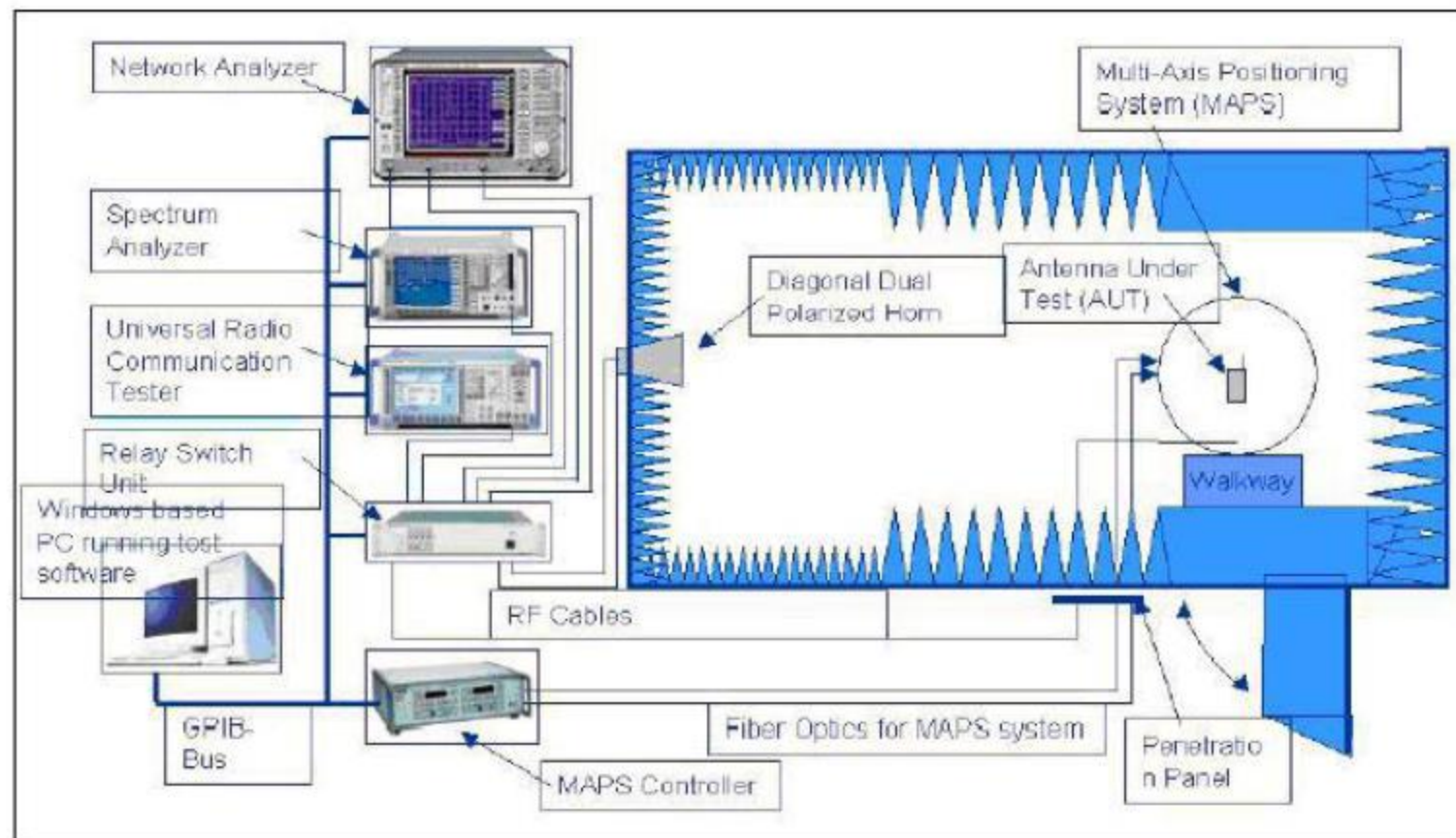
1. Test equipment



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

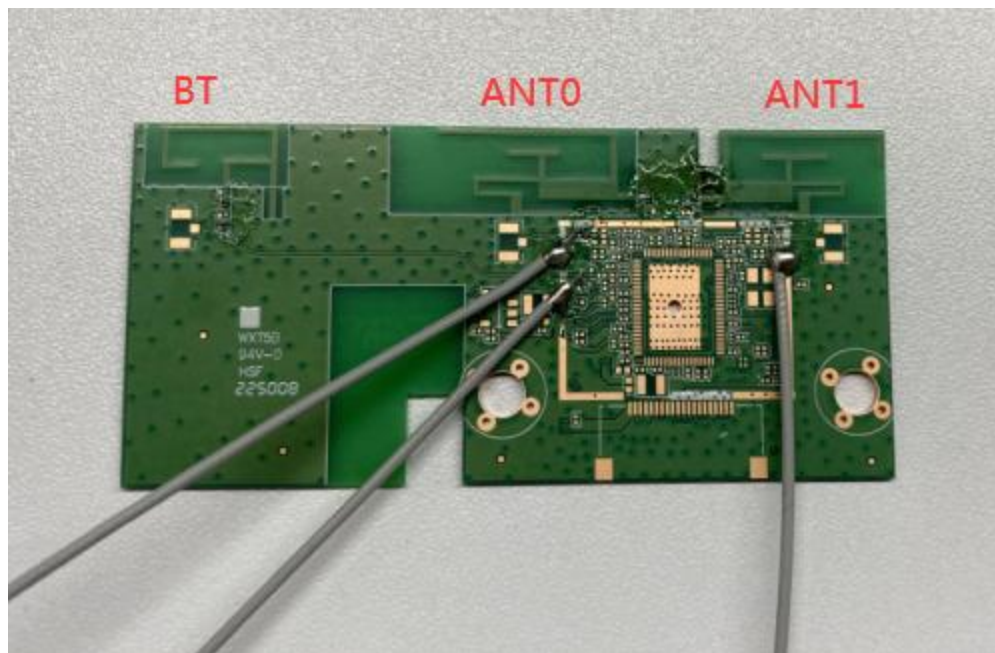
The test principle can be seen in accordance with the standard ANSI/IEEE std 149-2021

Test Conditions

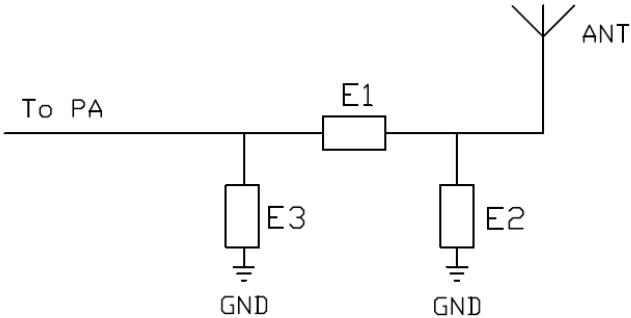
1. The analyte, the network analyzer for testing, the test equipment and the test cable connector should have good reliability, stability, dynamic range and measurement accuracy to ensure the correctness of the measurement accuracy
2. The measuring instrument should have a certificate of conformity and 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

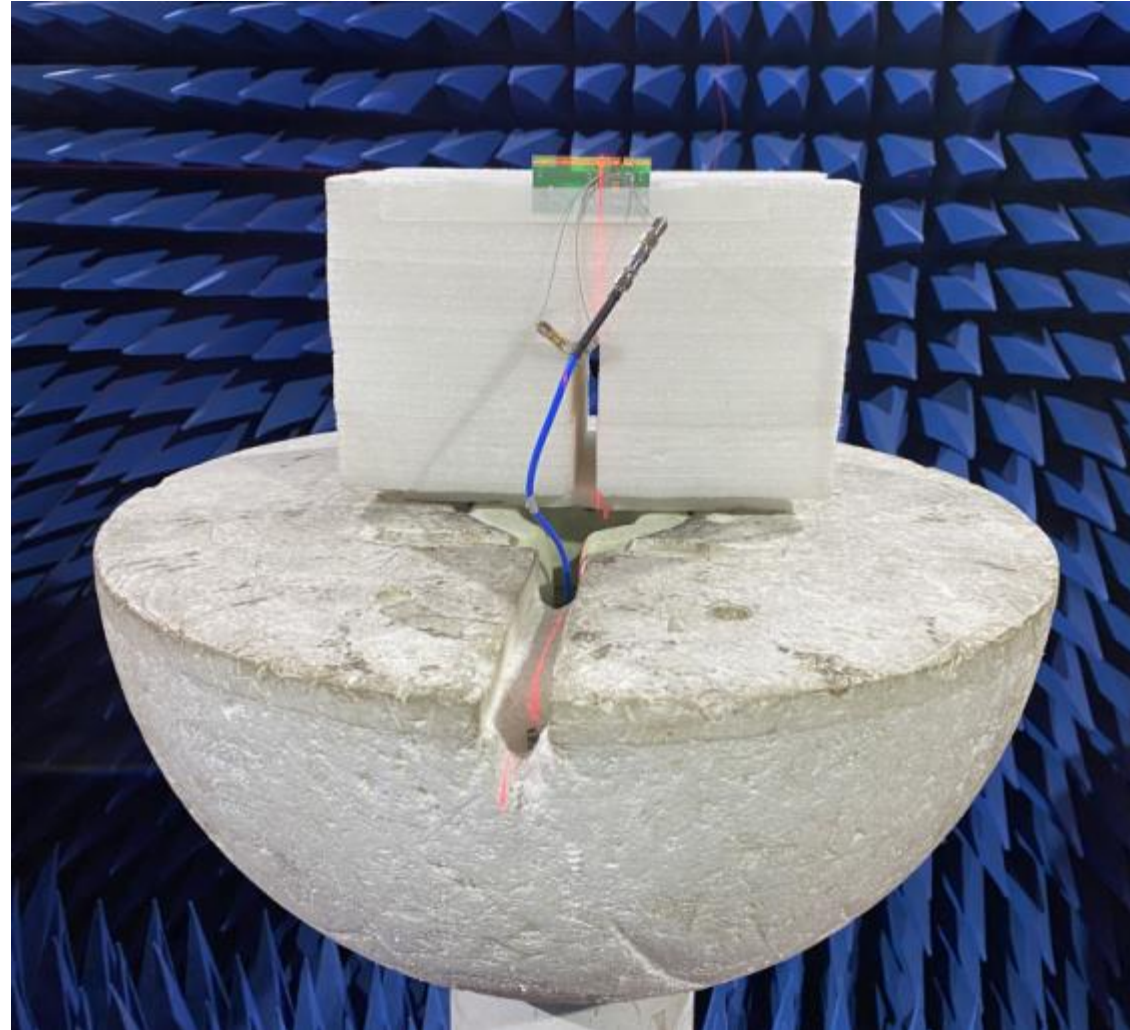
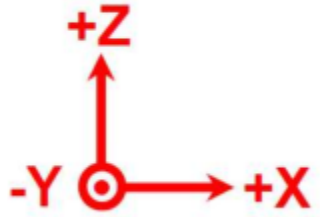


Matching specification

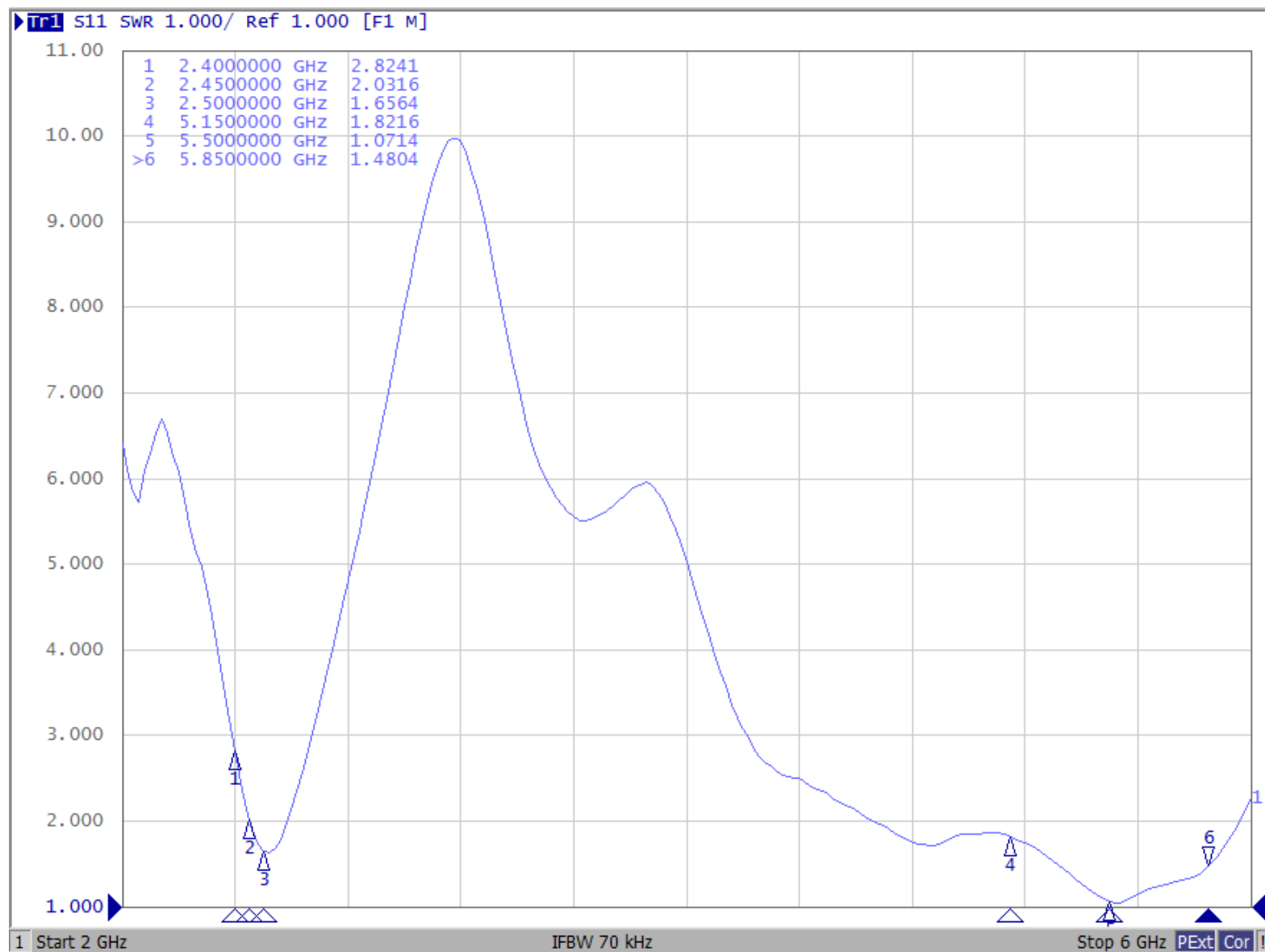


匹配说明	ANT1	ANT0	BT
E1	1nH	0欧姆	0欧姆
E2	0.3pF	NC	NC
E3	NC	NC	NC

Test environment



Passive data (ANT1- standing wave ratio)

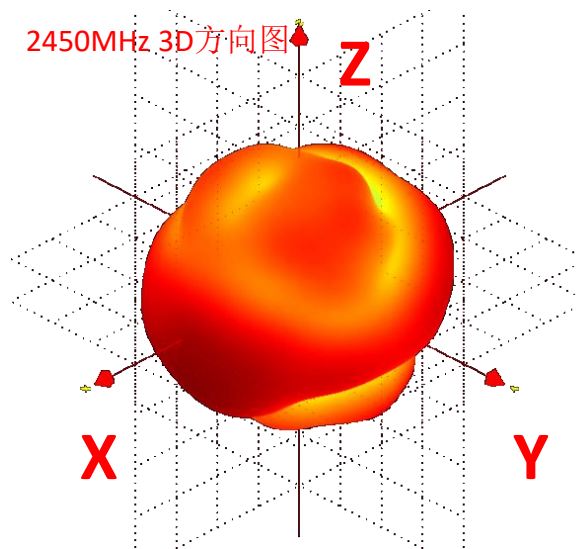
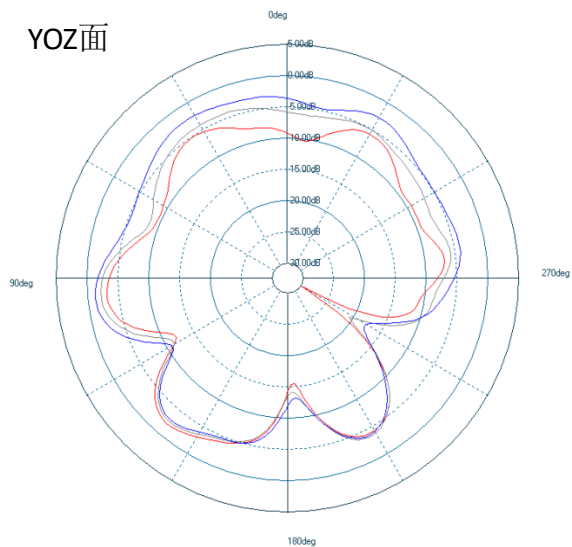
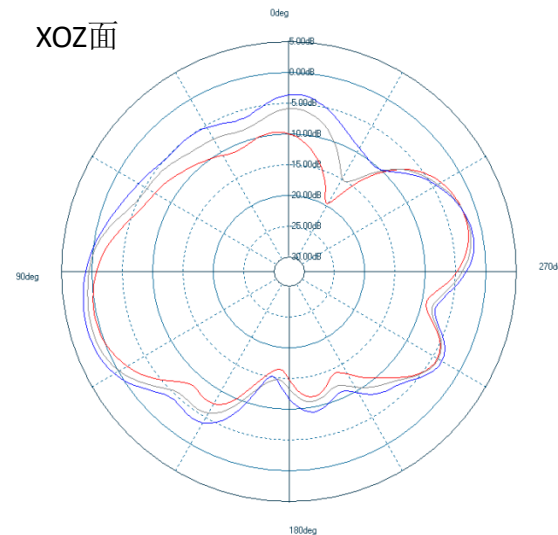
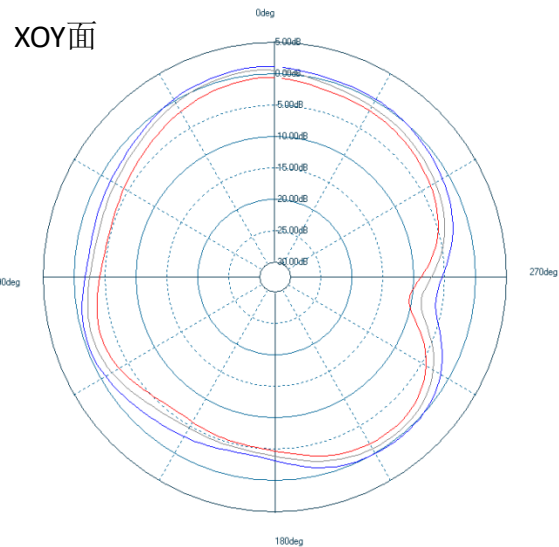


Passive data (ANT1- Efficiency/Gain)

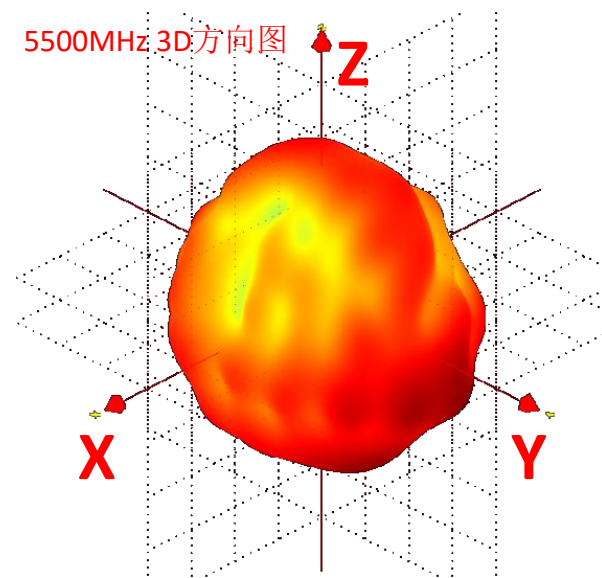
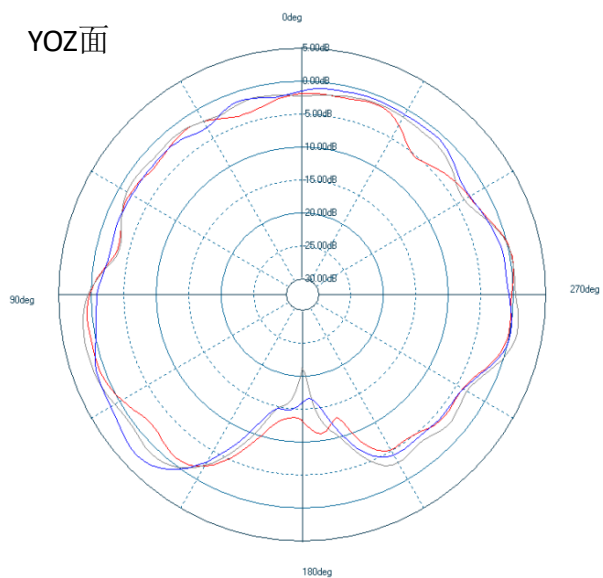
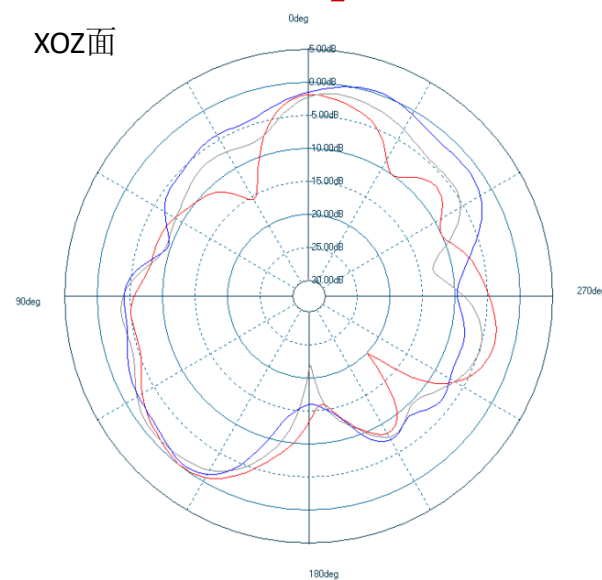
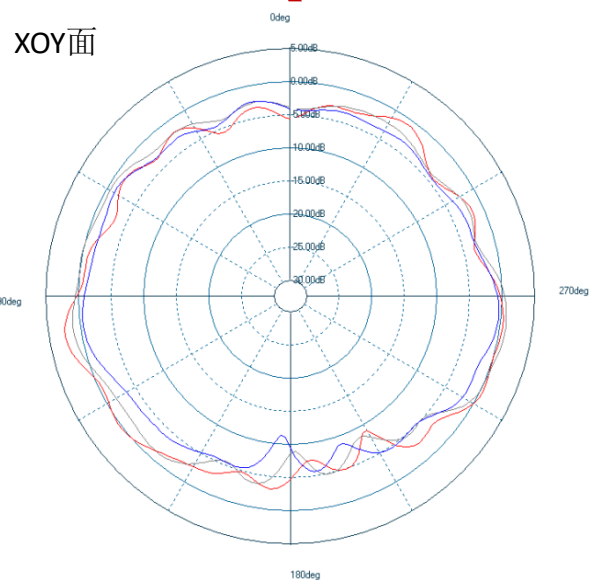
Frequency	Efficiency		Peak Gain
	Mhz	%	dB
2400		35.47	-4.50
2410		36.28	-4.40
2420		36.88	-4.33
2430		37.10	-4.31
2440		37.90	-4.21
2450		37.32	-4.28
2460		38.00	-4.20
2470		38.53	-4.14
2480		42.44	-3.72
2490		43.42	-3.62
2500		46.95	-3.28

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

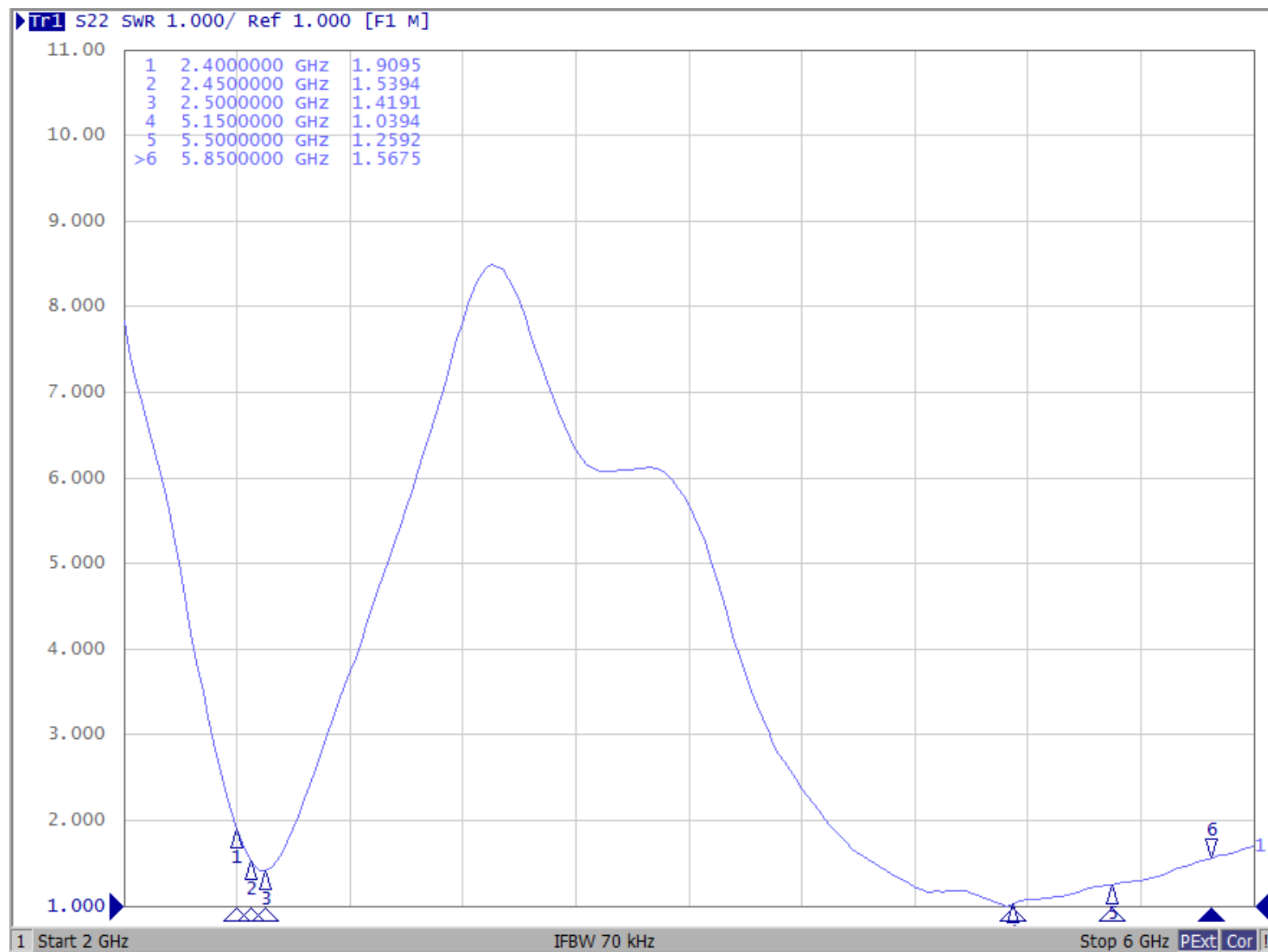
Passive data (ANT1-2.4G direction chart)



Passive data (ANT1-5G direction chart)



Passive data (ANT0- standing wave ratio)

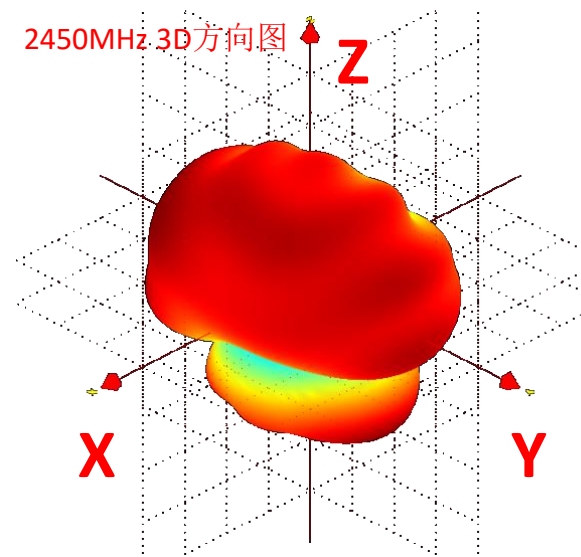
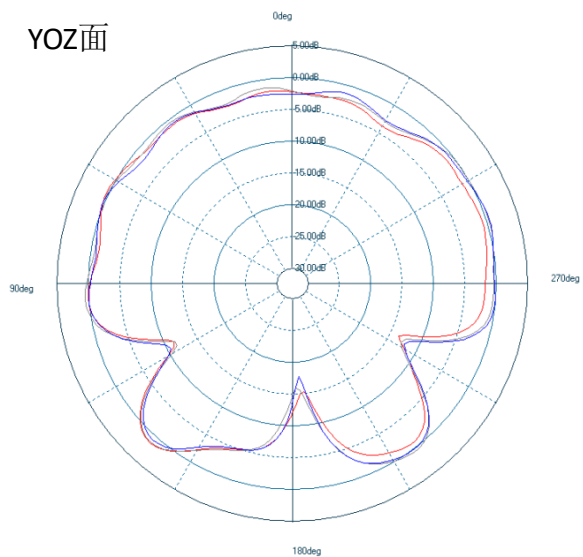
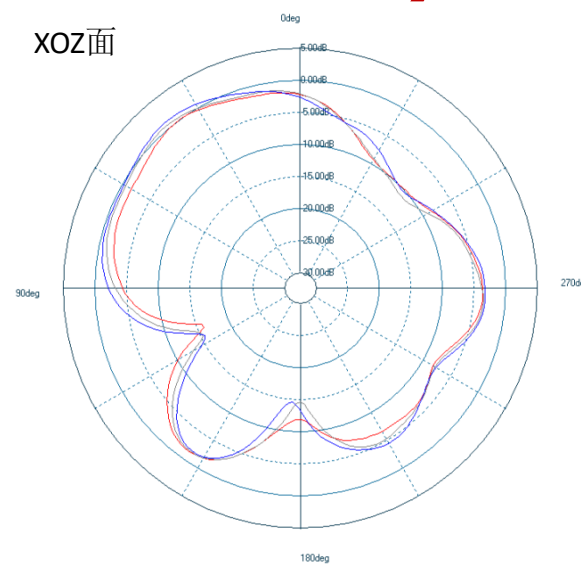
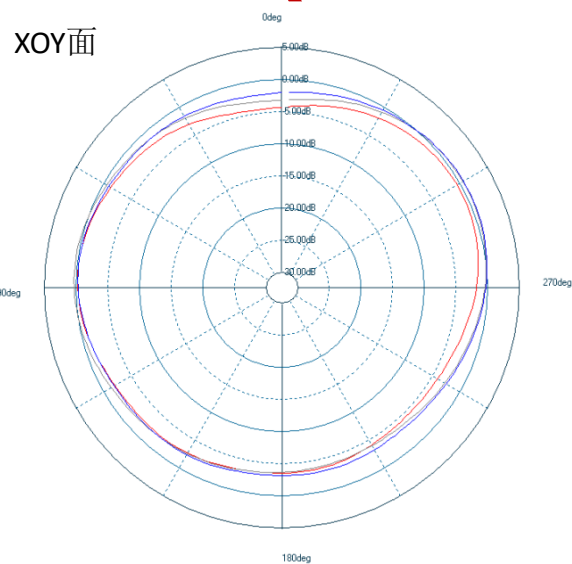


Passive data (ANT0- Efficiency/Gain)

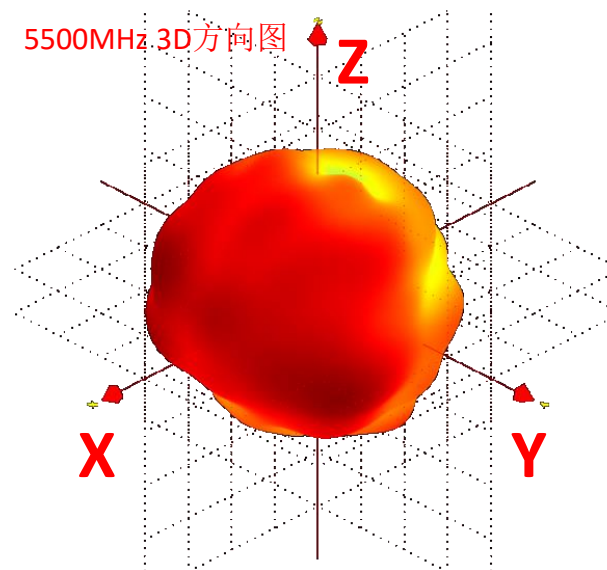
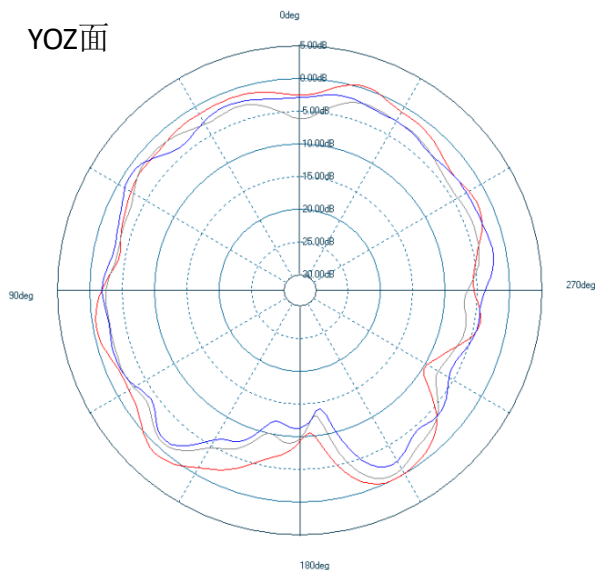
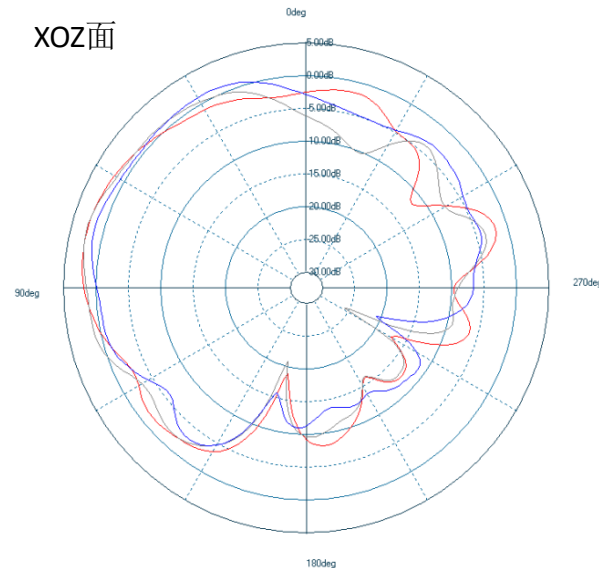
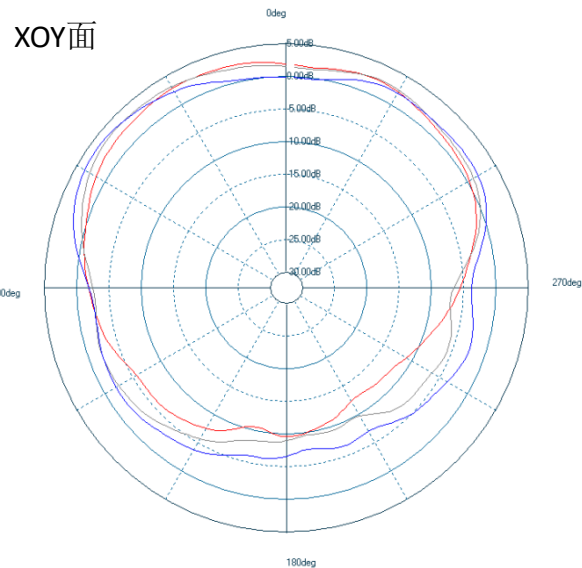
Frequency	Efficiency		Peak Gain
	Mhz	%	dB
2400	47.74	-3.21	1.35
2410	50.91	-2.93	1.33
2420	52.32	-2.81	1.26
2430	55.02	-2.59	1.55
2440	55.84	-2.53	1.53
2450	55.24	-2.58	1.45
2460	53.52	-2.72	1.16
2470	51.69	-2.87	0.91
2480	55.20	-2.58	1.41
2490	55.19	-2.58	1.67
2500	56.30	-2.50	1.66

Frequency	Efficiency		Peak Gain
	Mhz	%	dB
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

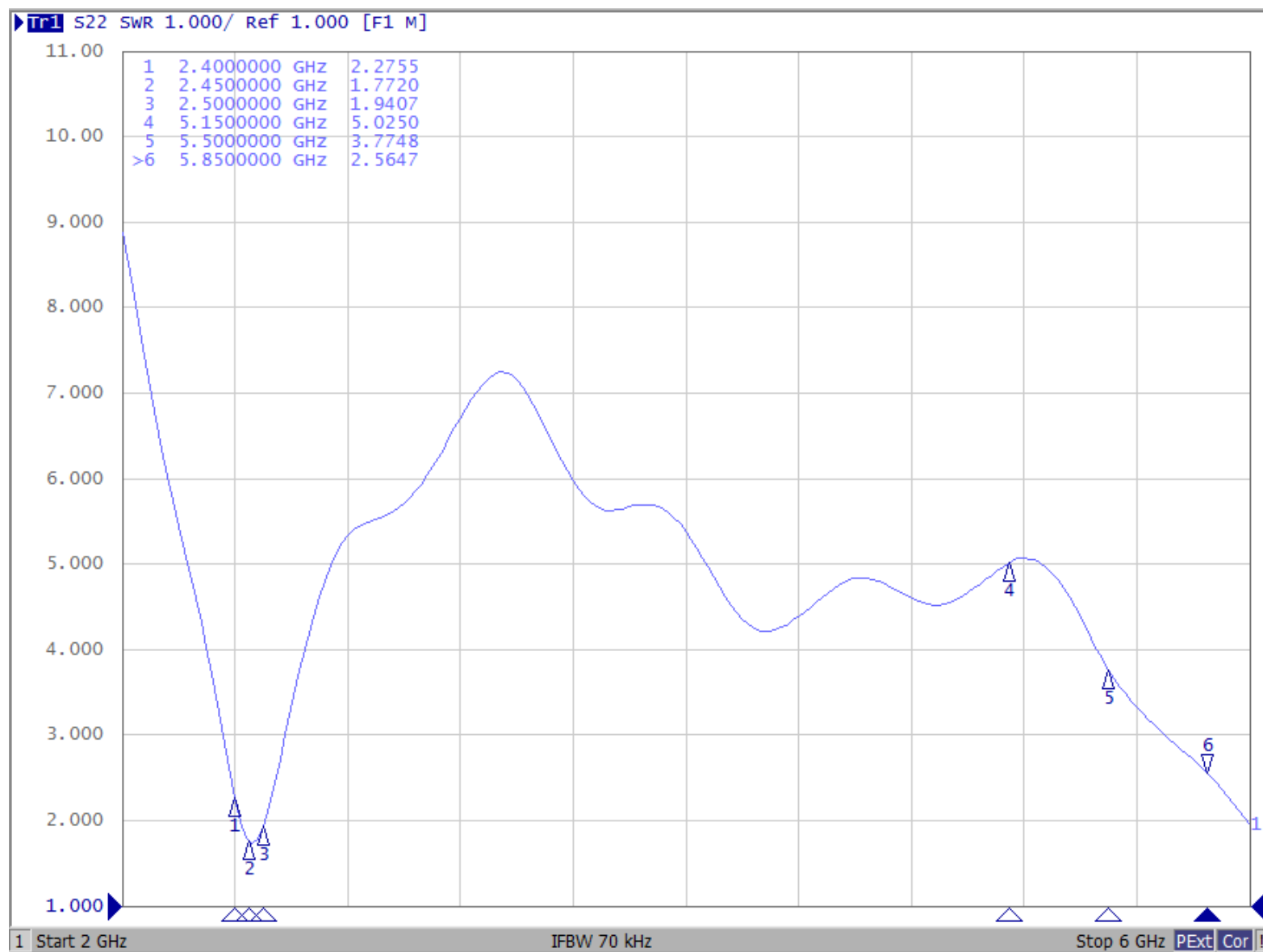
Passive data (ANT0-2.4G direction chart)



Passive data (ANT0-5G direction chart)



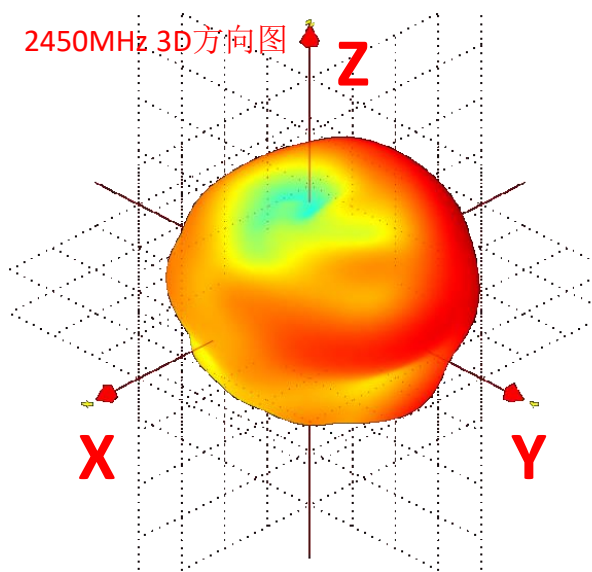
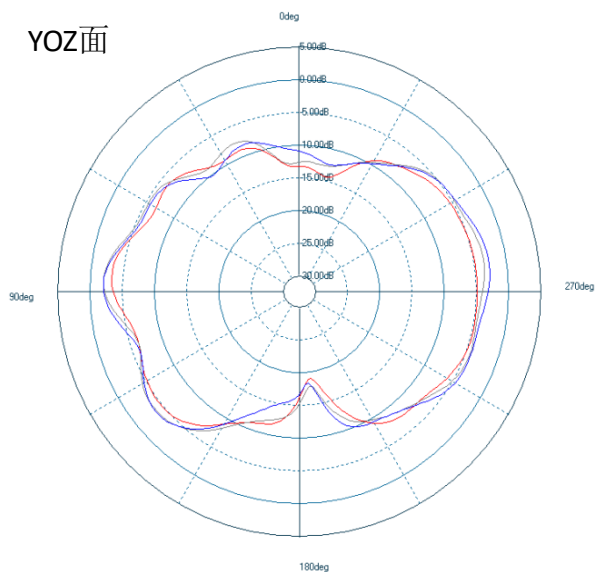
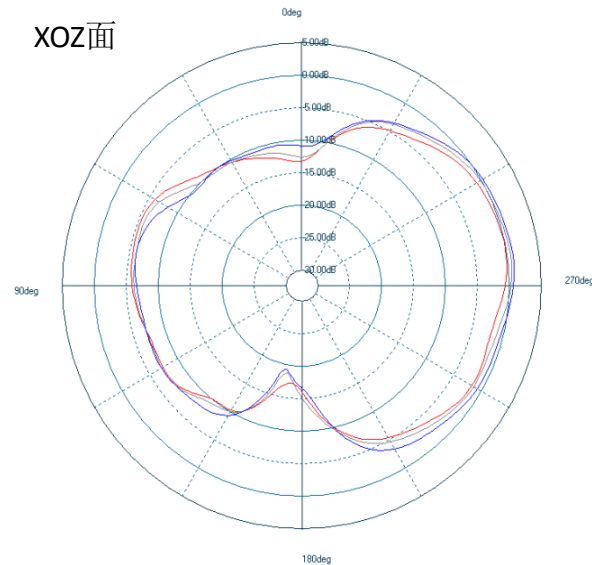
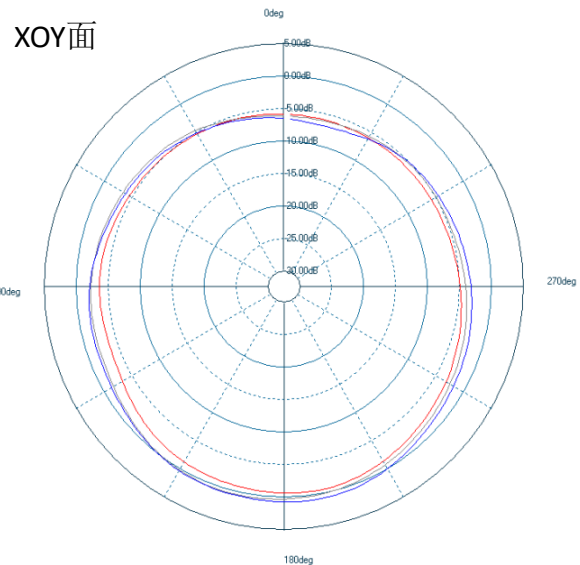
Passive data (BT- standing wave ratio)



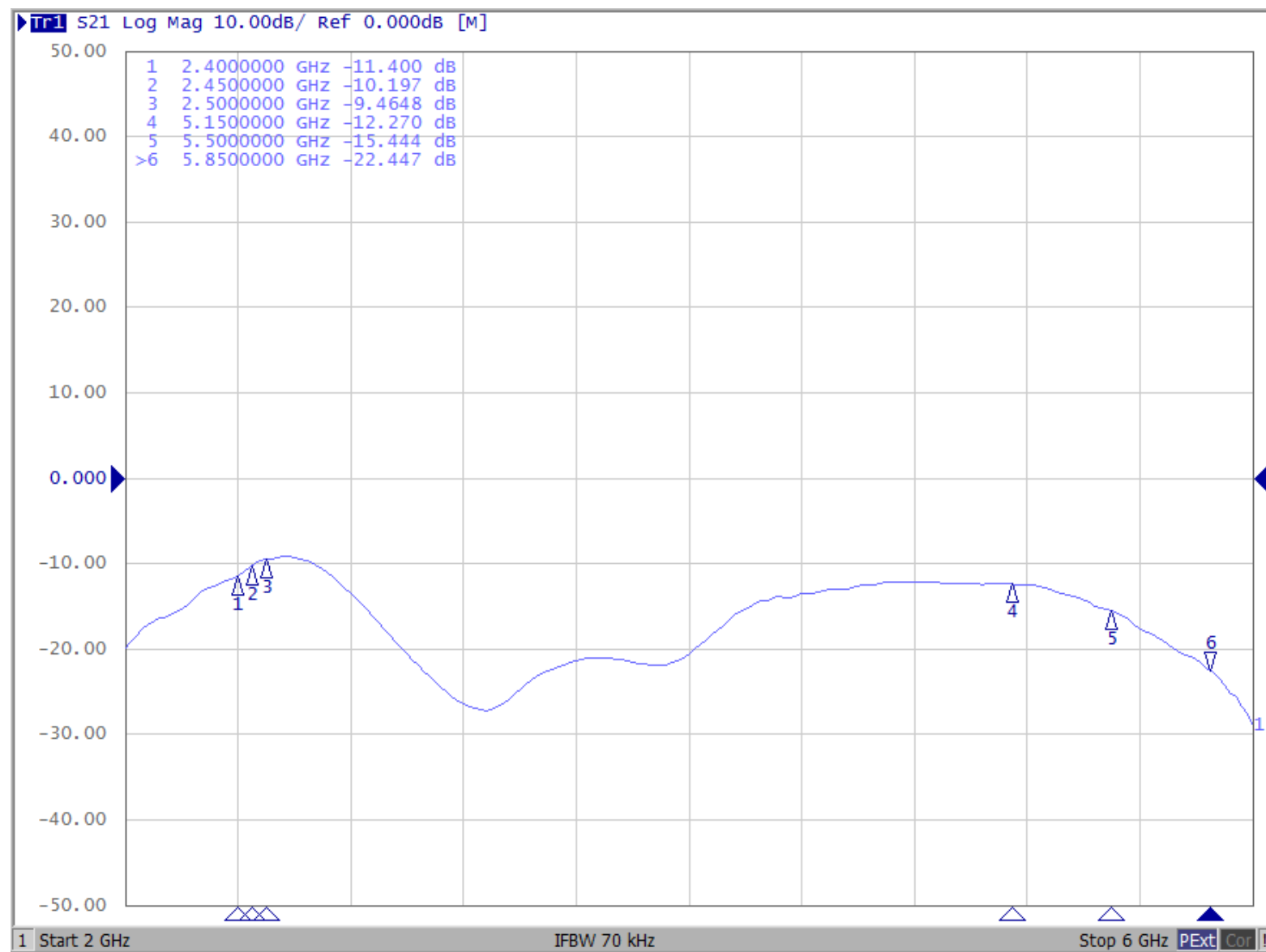
Passive data (BT- Efficiency/Gain)

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

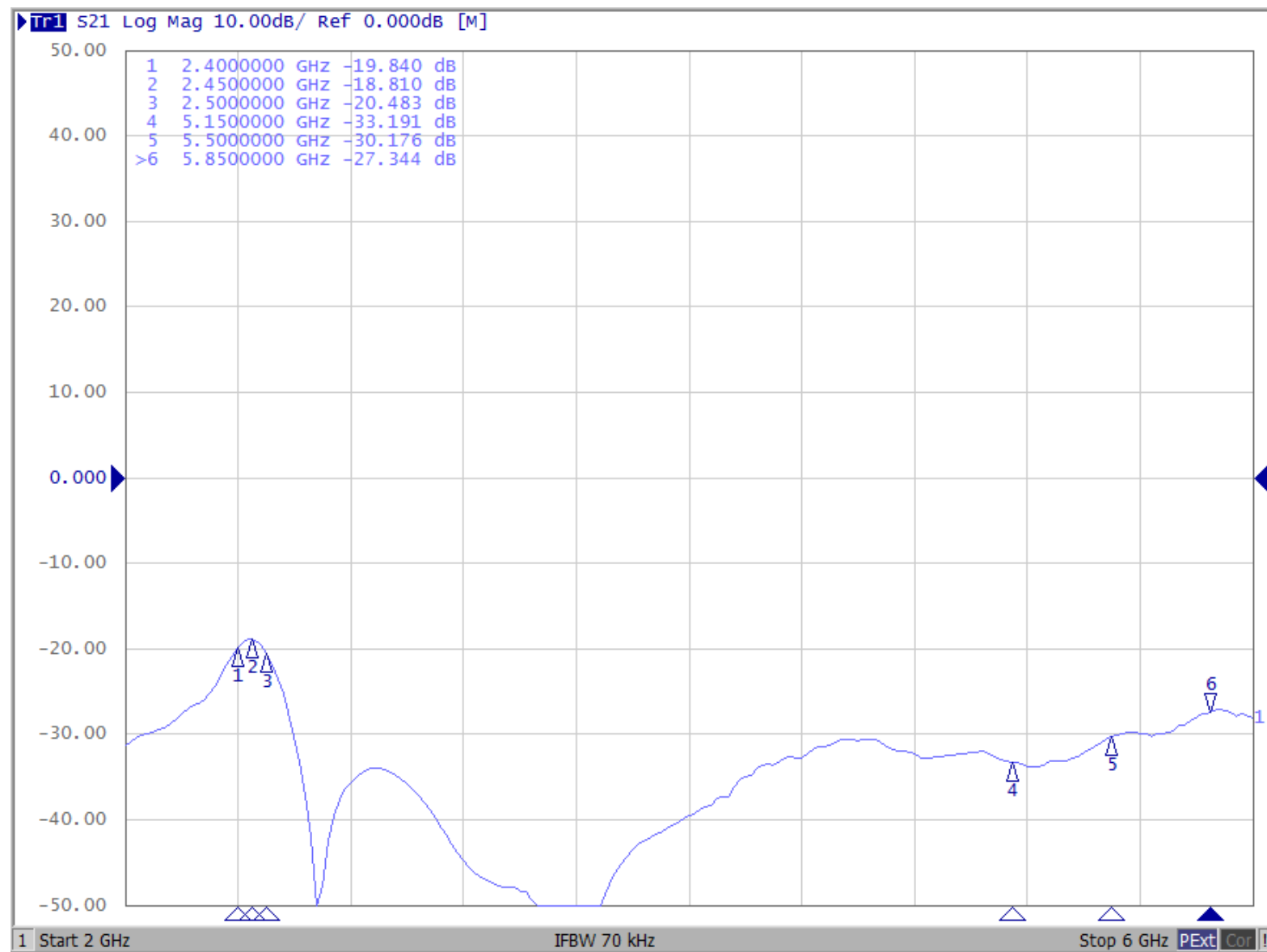
Passive data (BT-2.4G direction chart)



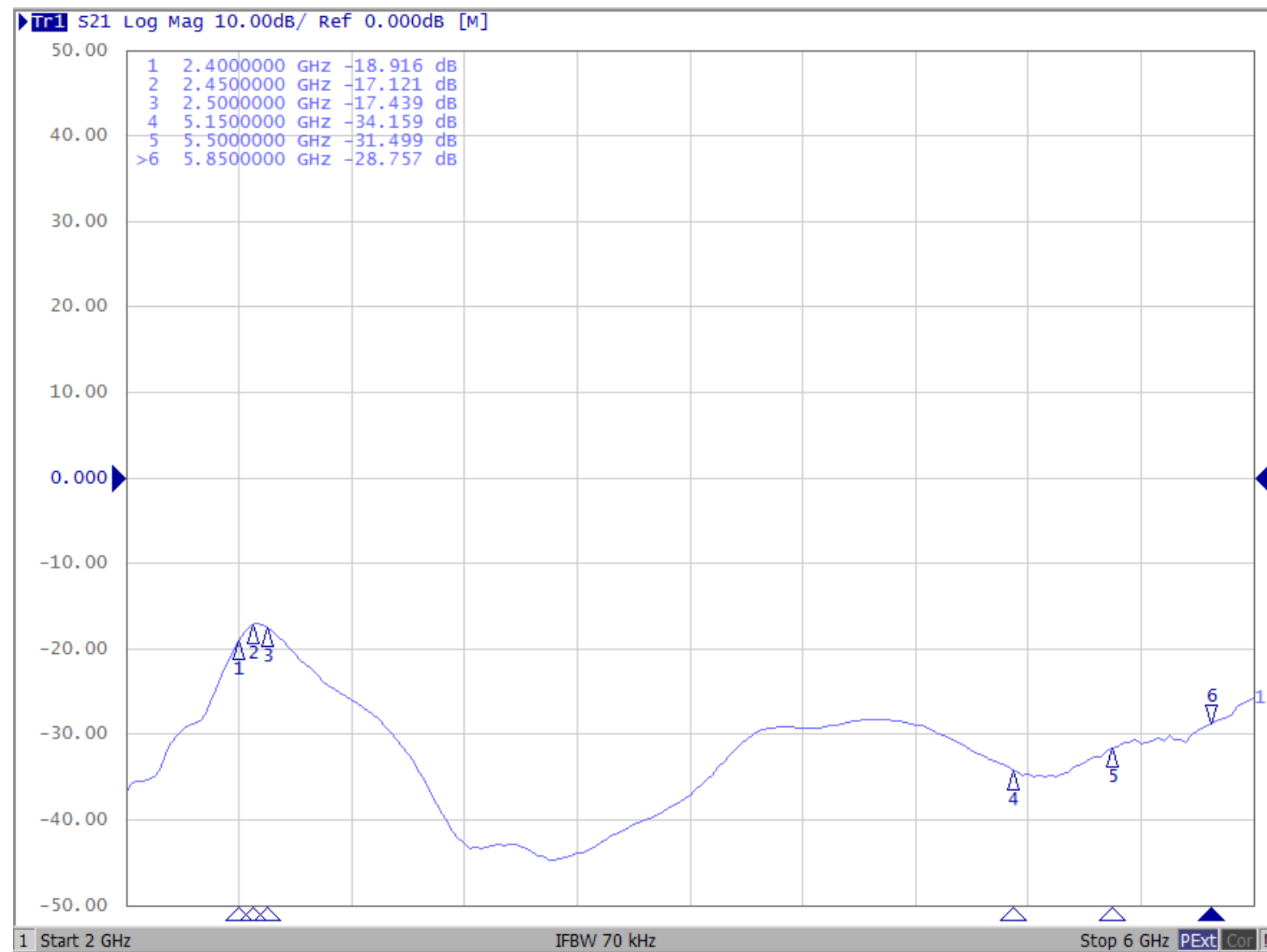
Passive data (ANT1&ANT0 antenna isolation)



Passive data (AN I&B I antenna isolation)



Passive data (AN T0&B1 antenna isolation degree)



Thank You

