

Low Power Wide band Radio in 5GHz (5.8G) Antenna Test Report

Catalog

- ☐ Test laboratory information
- ☐ Test procedure
- ☐ Test setup
- ☐ Antenna distribution
- ☐ Antenna passive test data

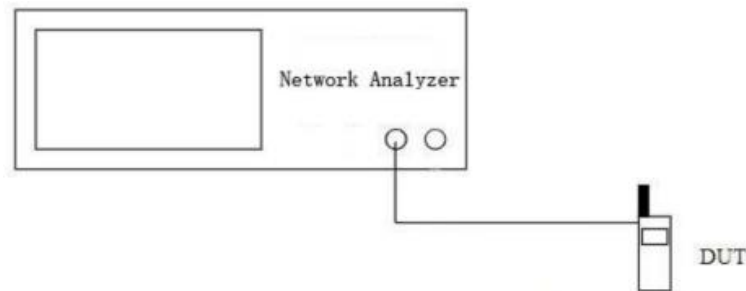
Test laboratory information



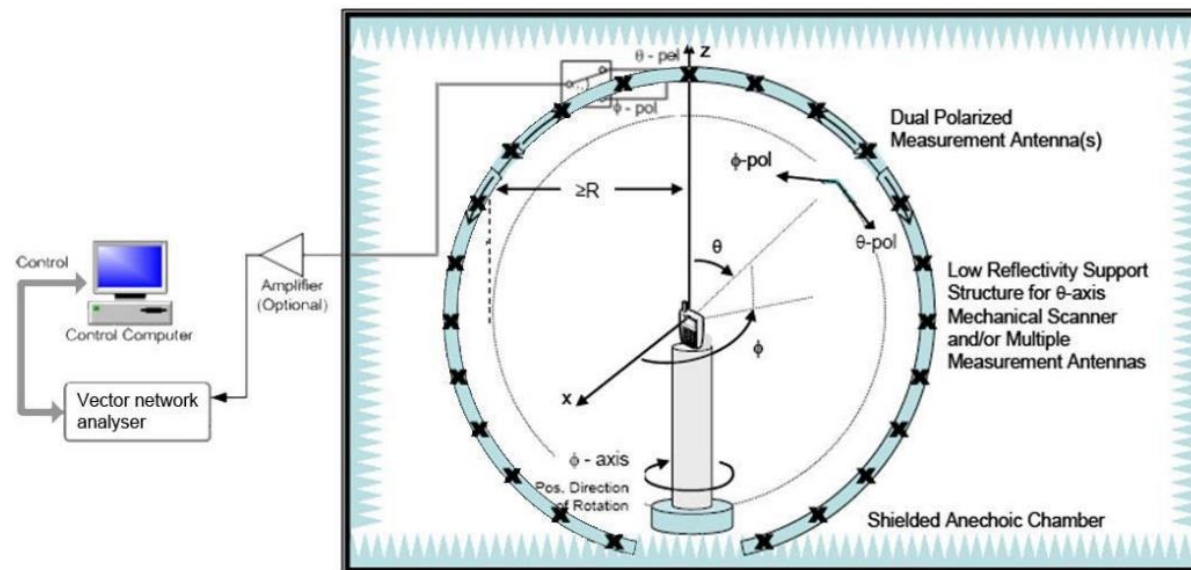
Test laboratory name	中天迅 SATIMO SG24暗室 ZTX SATIMO SG24 Chamber				
Test laboratory address	深圳市宝安区石岩街道石龙大道34号 No. 34, Shilong Avenue, Shiyan Subdistrict, Bao'an District, Shenzhen, China				
Test date	2025/04/16				
Tester name	赵烽 Zhao Feng				
Test software name	Satimo.Spm				
Test software version number	1.5.5				
Test standard	GB/T 9410-2008				
Calibration Equipment List	Test Instruments	Manufacturer	Model	Serial Number	Calibration Date
	Network Analyzer	Keysight	E5071C	MY47002902	2025. 04. 14
	Network Analyzer	Agilent	E5071C	MY46521960	2025. 04. 14
	SG24 Antenna Testing System	SATIMO	SG24		2025. 04. 14

Test procedure

Antenna S11 and S12 Parameter Testing:



Antenna Efficiency, Gain, and Radiation Pattern Testing:



Test setup

**Refer to Low Power Wide band Radio in 5GHz
(5.8G)_Appendix A**

Antenna distribution

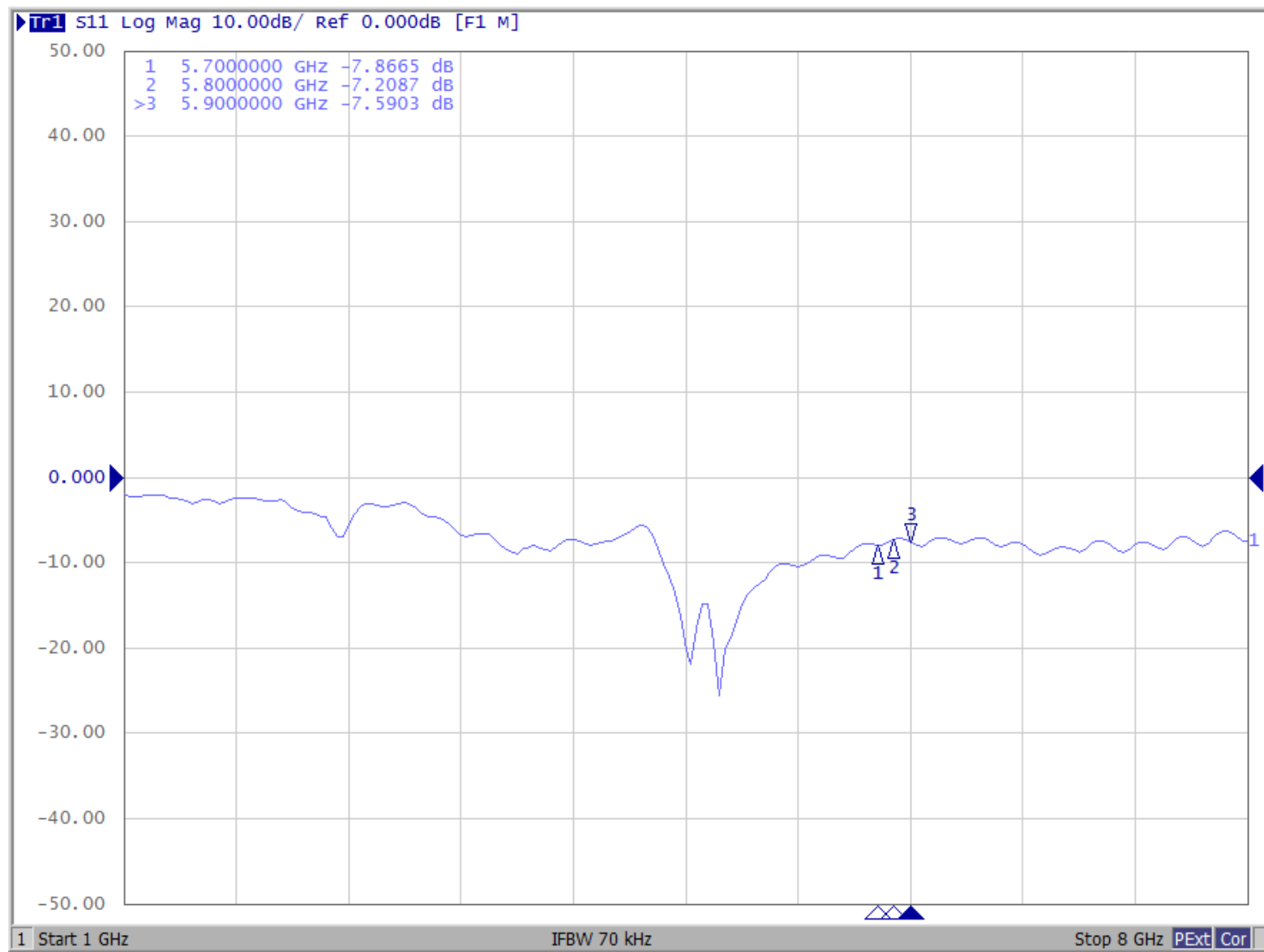
**Refer to Low Power Wide band Radio in 5GHz
(5.8G)_Appendix A**

Antenna Type



Antenna	Antenna Type
Main antenna	PCB antenna (External)
AUX Antenna	PCB antenna (External)
RX Antenna	PCB antenna (External)

Passive Test (Return loss_RX Antenna)

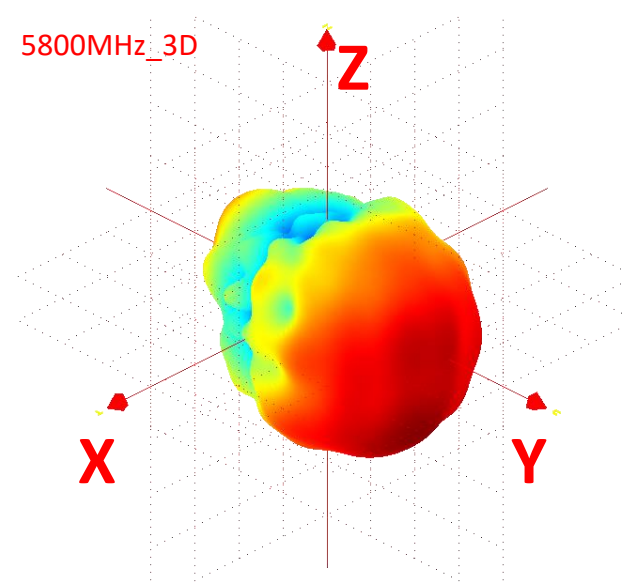
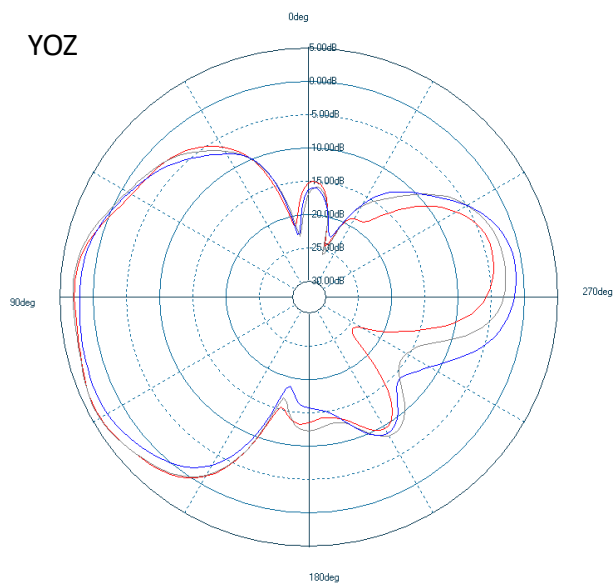
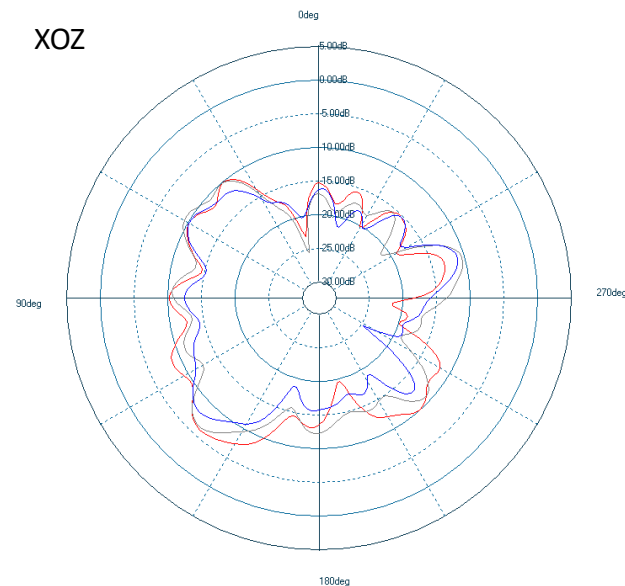
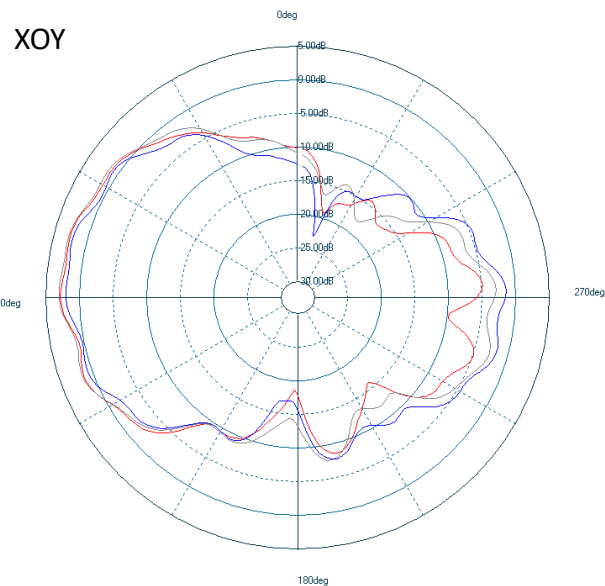


Passive Test (Efficiency/Gain_RX Antenna)

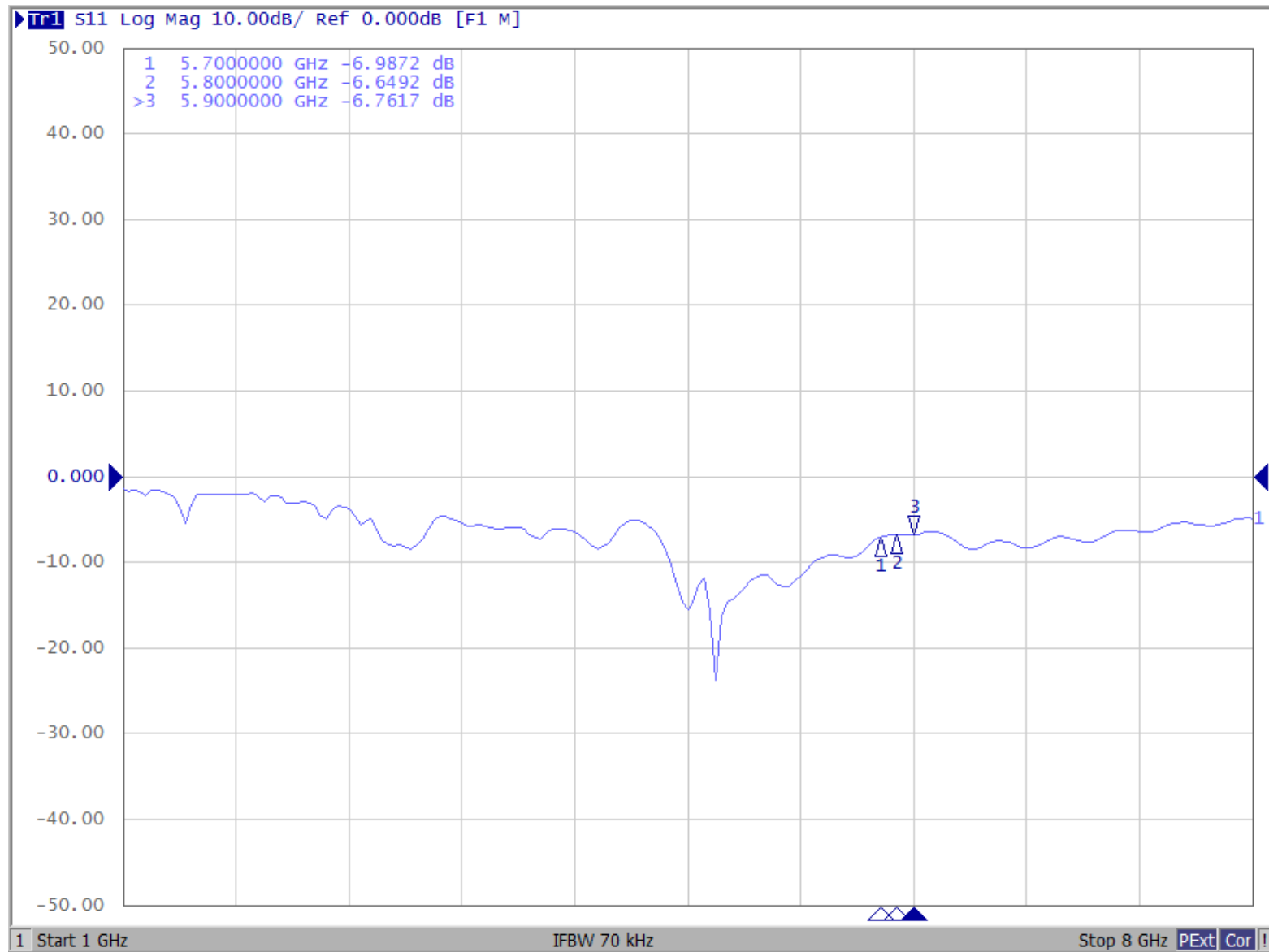


Frequency	Efficiency		Peak Gain
Mhz	%	dB	dB
5600	38.02	-4.20	5.49
5625	38.34	-4.16	5.47
5650	36.83	-4.34	5.07
5675	33.43	-4.76	4.80
5700	32.48	-4.88	4.70
5725	32.38	-4.90	4.45
5750	31.99	-4.95	4.56
5775	32.63	-4.86	4.43
5800	34.16	-4.67	4.67
5825	34.69	-4.60	4.67
5850	35.21	-4.53	4.54
5875	32.47	-4.89	4.14
5900	29.28	-5.33	3.77
5925	28.59	-5.44	3.44
5950	27.35	-5.63	3.03
5975	26.90	-5.70	3.13
6000	29.41	-5.32	3.31

Passive Test (Radiation pattern_RX Antenna)



Passive Test (Return loss_AUX Antenna)

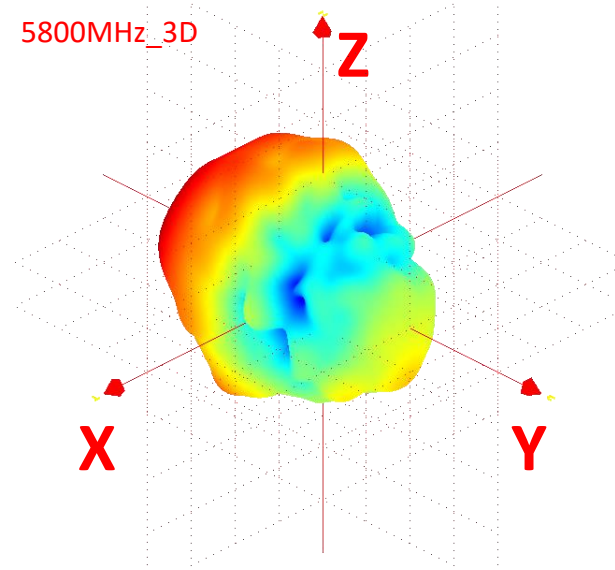
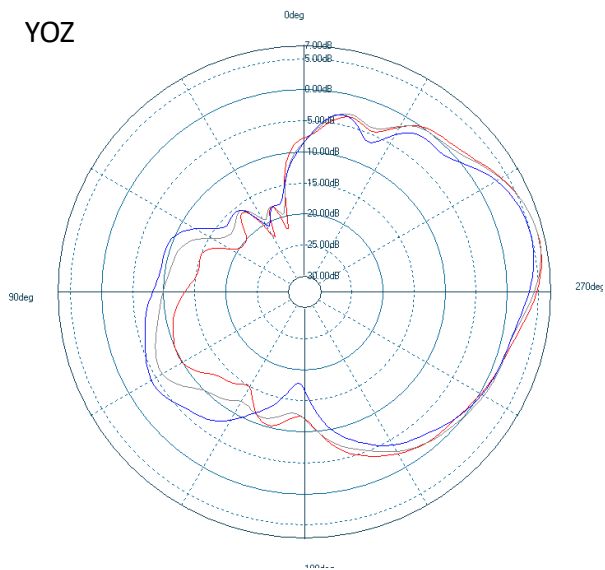
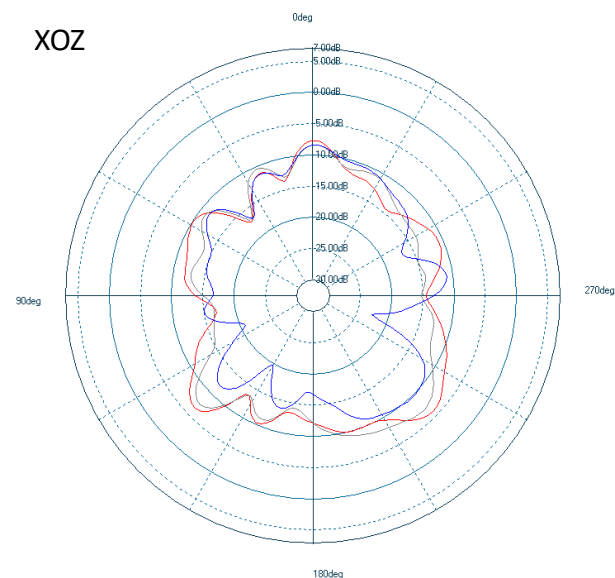
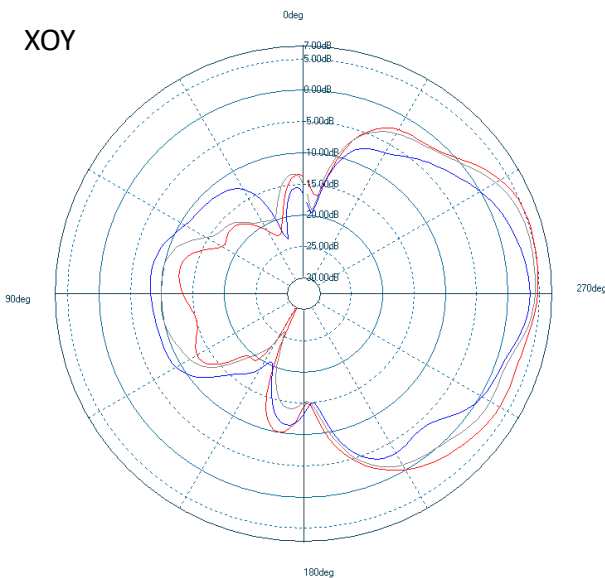


Passive Test (Efficiency/Gain_AUX Antenna)

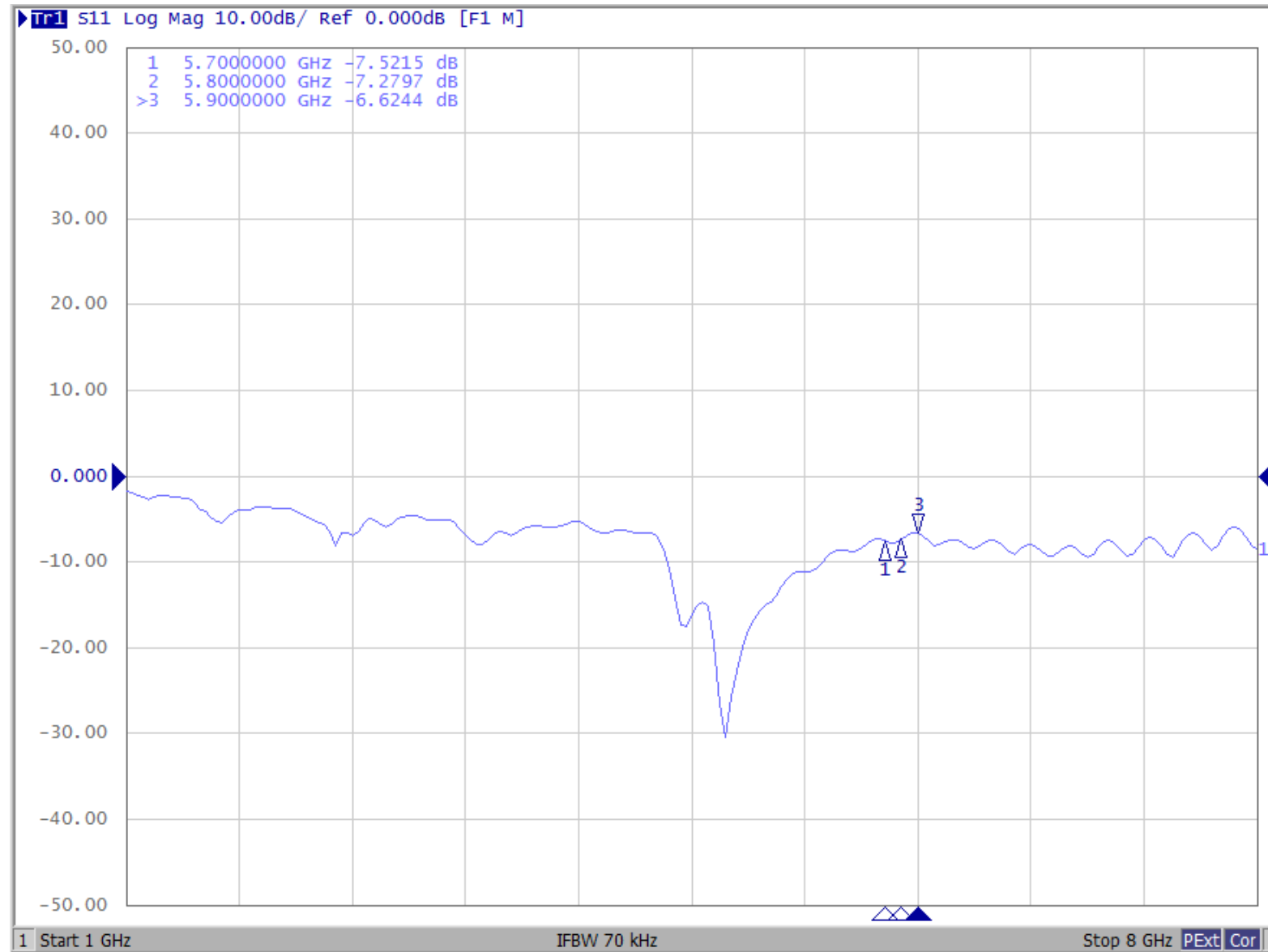


Frequency	Efficiency		Peak Gain
Mhz	%	dB	dB
5600	47.16	-3.26	6.19
5625	47.90	-3.20	6.62
5650	48.41	-3.15	7.01
5675	45.41	-3.43	6.37
5700	45.10	-3.46	6.34
5725	46.70	-3.31	6.66
5750	44.31	-3.53	6.14
5775	45.66	-3.41	6.39
5800	42.96	-3.67	6.25
5825	40.02	-3.98	5.96
5850	38.80	-4.11	5.87
5875	36.89	-4.33	5.74
5900	33.85	-4.70	5.26
5925	34.94	-4.57	5.53
5950	33.90	-4.70	5.19
5975	33.32	-4.77	4.75
6000	36.26	-4.41	5.07

Passive Test (Radiation pattern_AUX Antenna)



Passive Test (Return loss_Main Antenna)

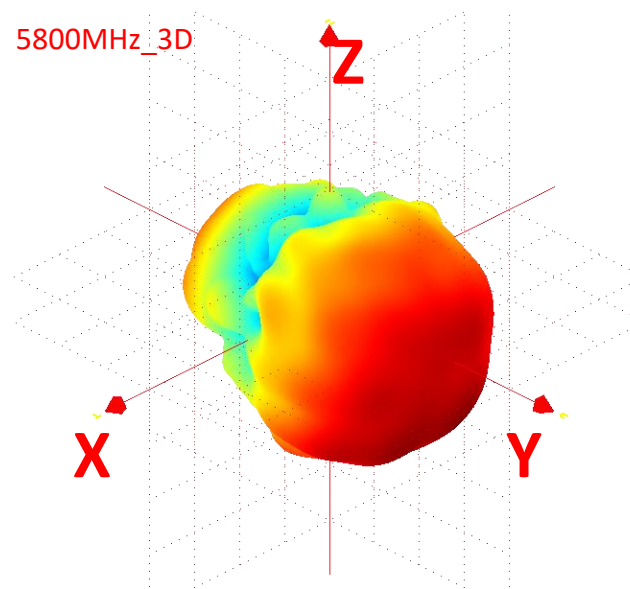
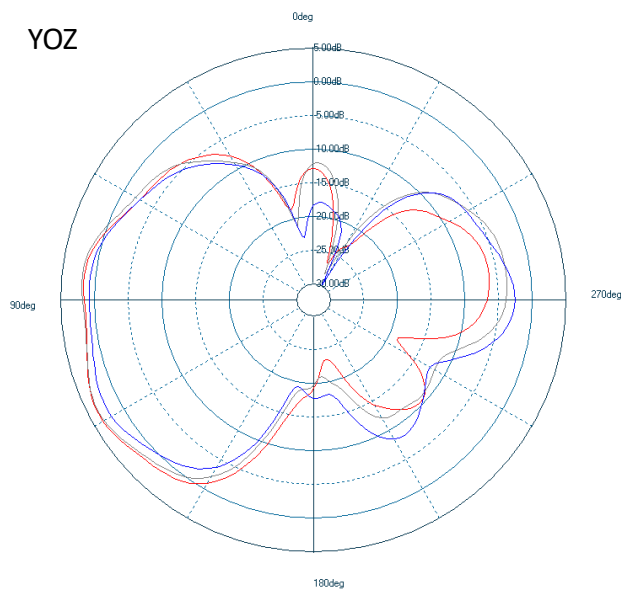
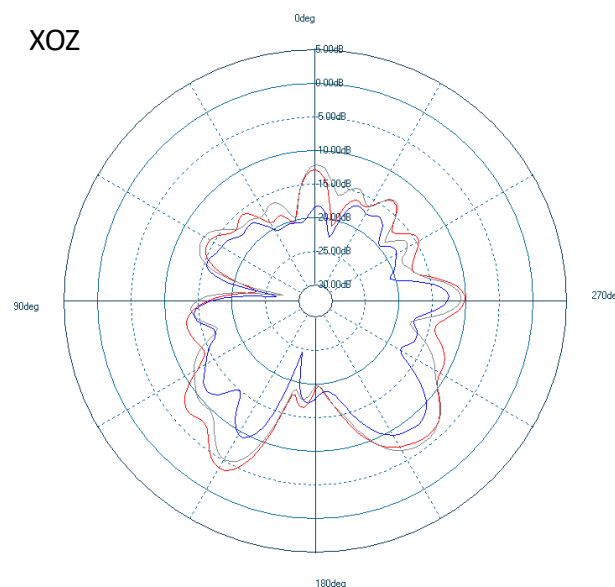
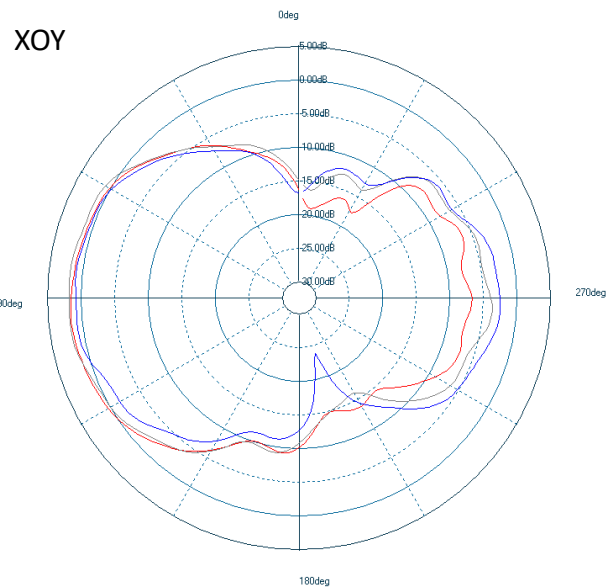


Passive Test (Efficiency/Gain_Main Antenna)

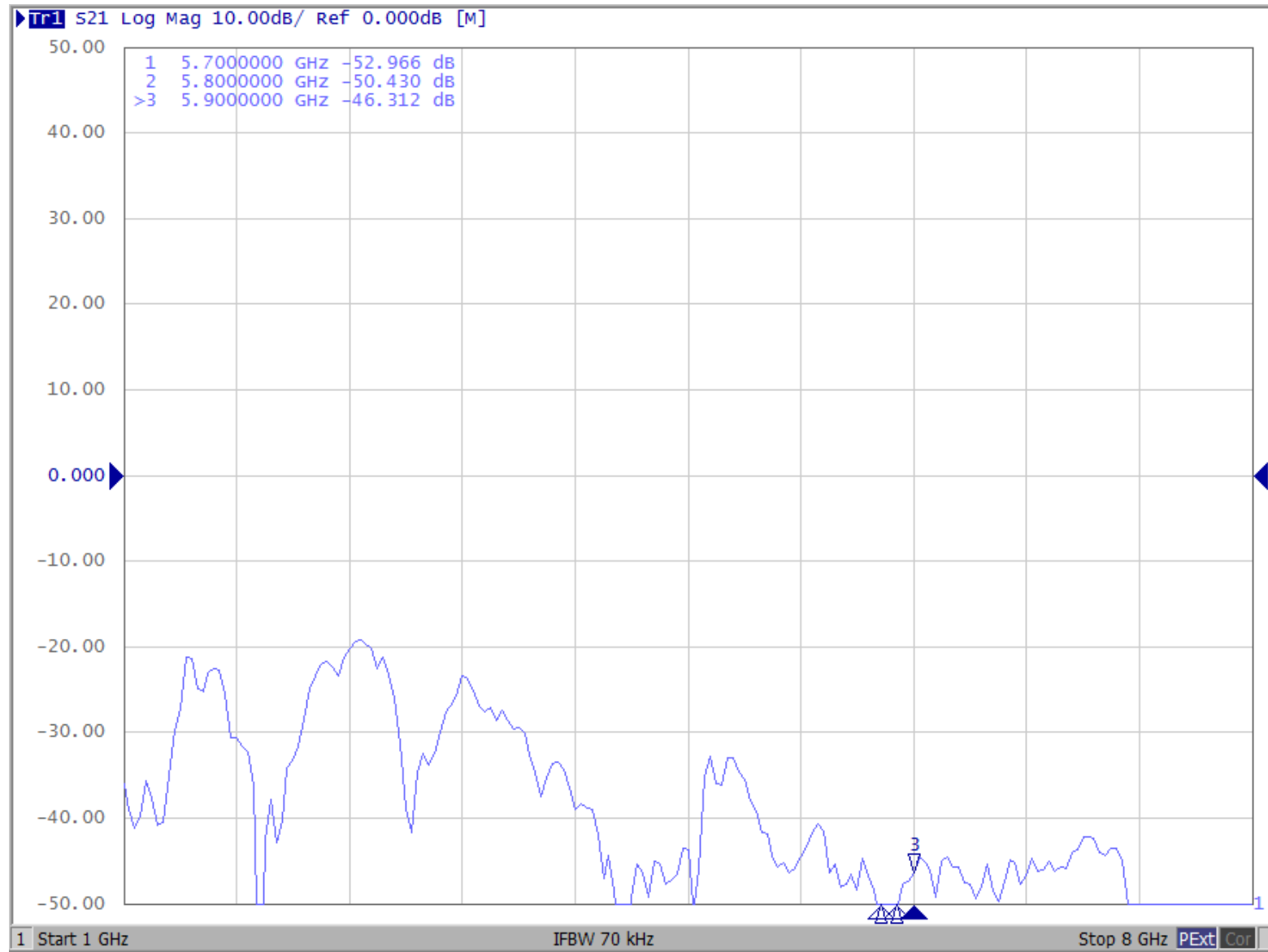


Frequency	Efficiency		Peak Gain
Mhz	%	dB	dB
5600	36.54	-4.37	5.02
5625	37.02	-4.32	5.50
5650	35.45	-4.50	4.75
5675	32.38	-4.90	4.48
5700	31.54	-5.01	3.95
5725	31.61	-5.00	3.75
5750	31.22	-5.06	3.76
5775	31.50	-5.02	3.78
5800	32.54	-4.88	3.96
5825	31.91	-4.96	3.77
5850	31.57	-5.01	3.56
5875	28.31	-5.48	2.96
5900	25.43	-5.95	2.49
5925	24.75	-6.07	2.08
5950	24.22	-6.16	1.63
5975	24.38	-6.13	1.66
6000	27.15	-5.66	1.82

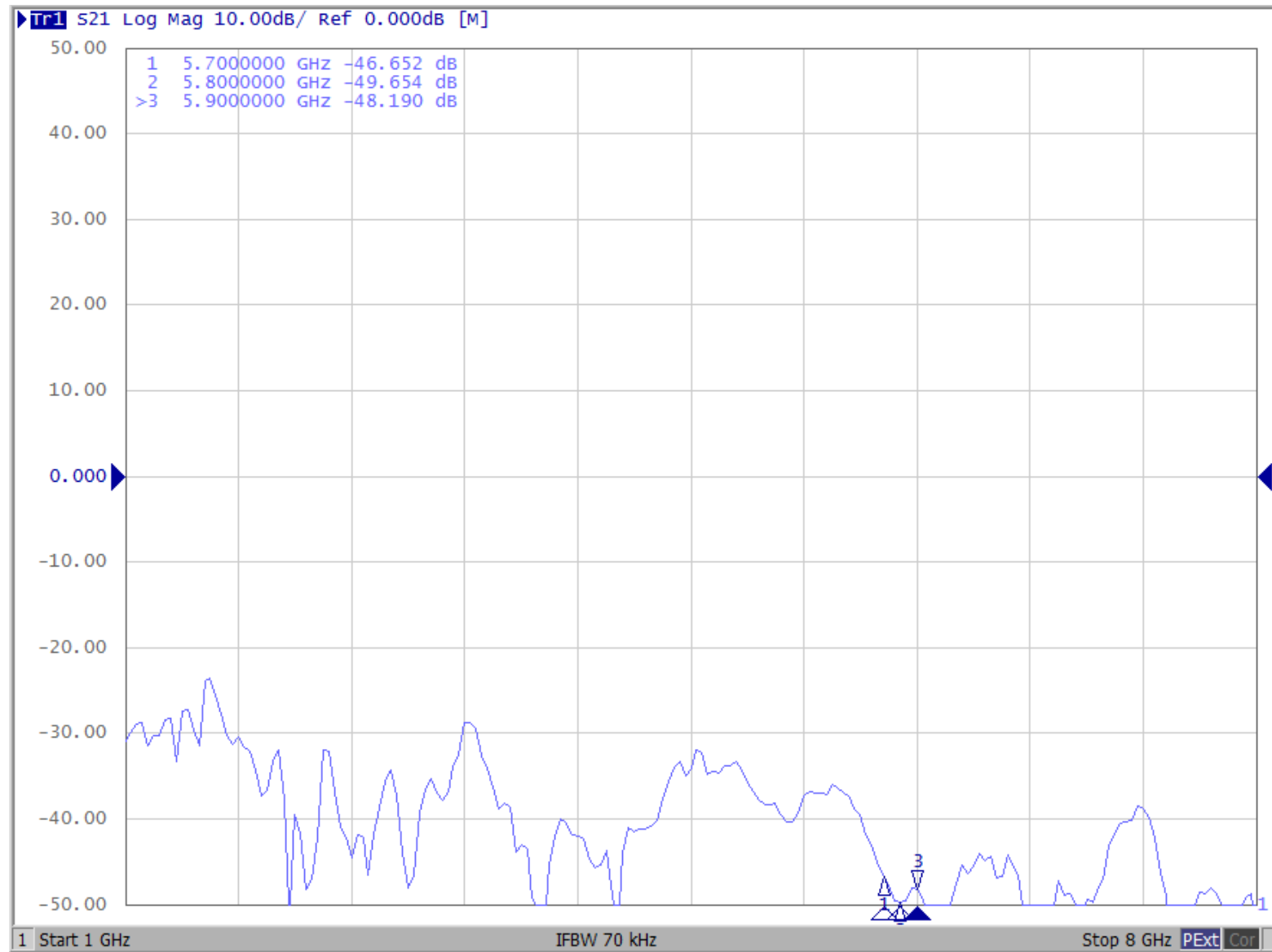
Passive Test (Radiation pattern_Main Antenna)



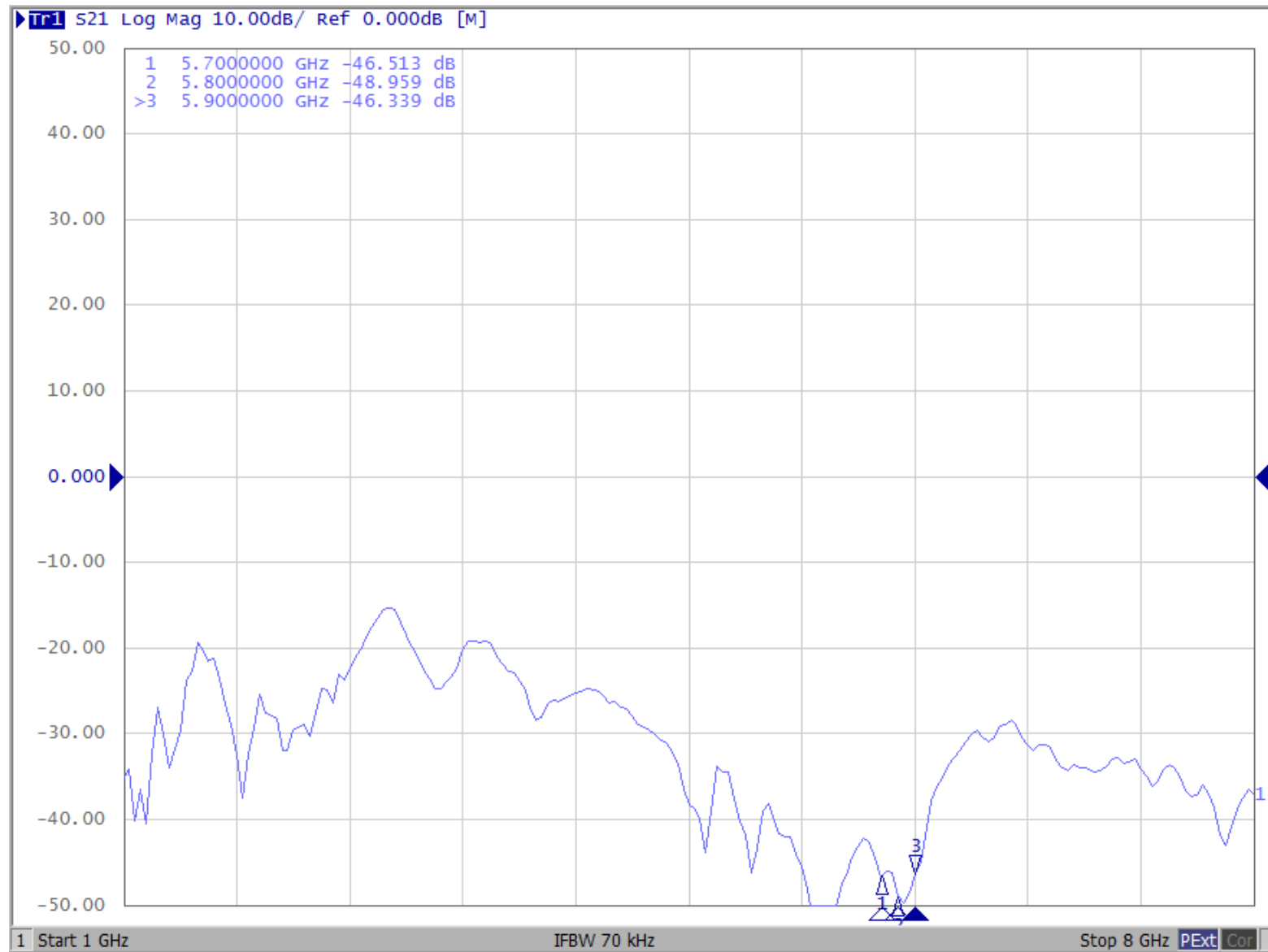
Passive Test (RX Antenna&AUX Antenna Isolation)



Passive Test (RX Antenna&Main Antenna Isolation)



Passive Test (Main Antenna&AUX Antenna Isolation)



Thank You

