

# V12 Antenna debugging report

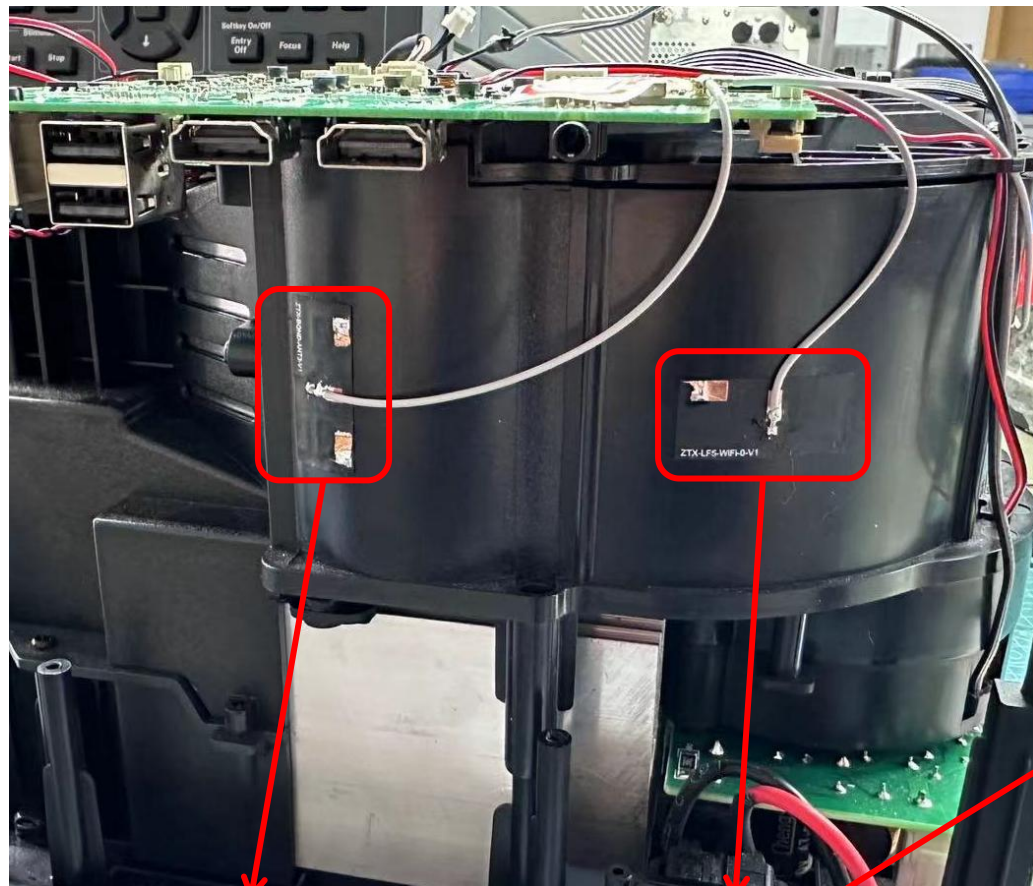
# Catalogue

- Project Requirements Analysis
- Overall scheme design
- Passive debugging data
- Conclusion

# Project requirements

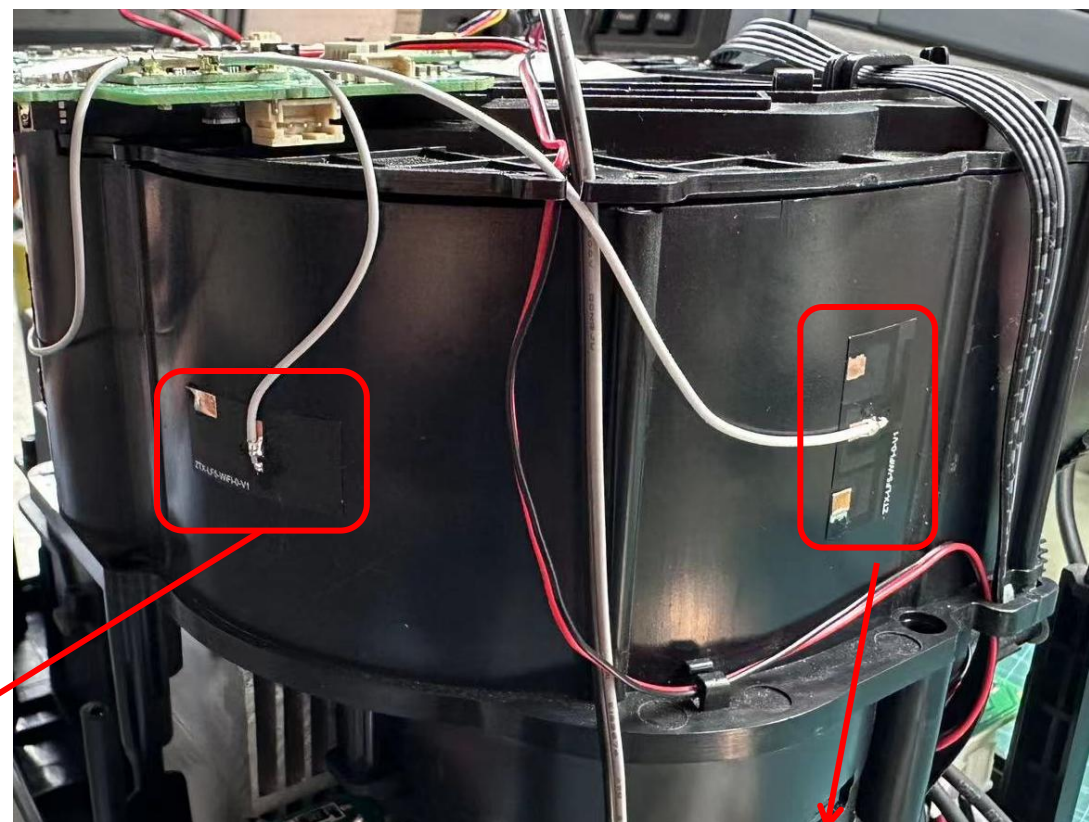
- Passive data
- S11, Efficiency, Gain, Directional pattern

# Antenna position



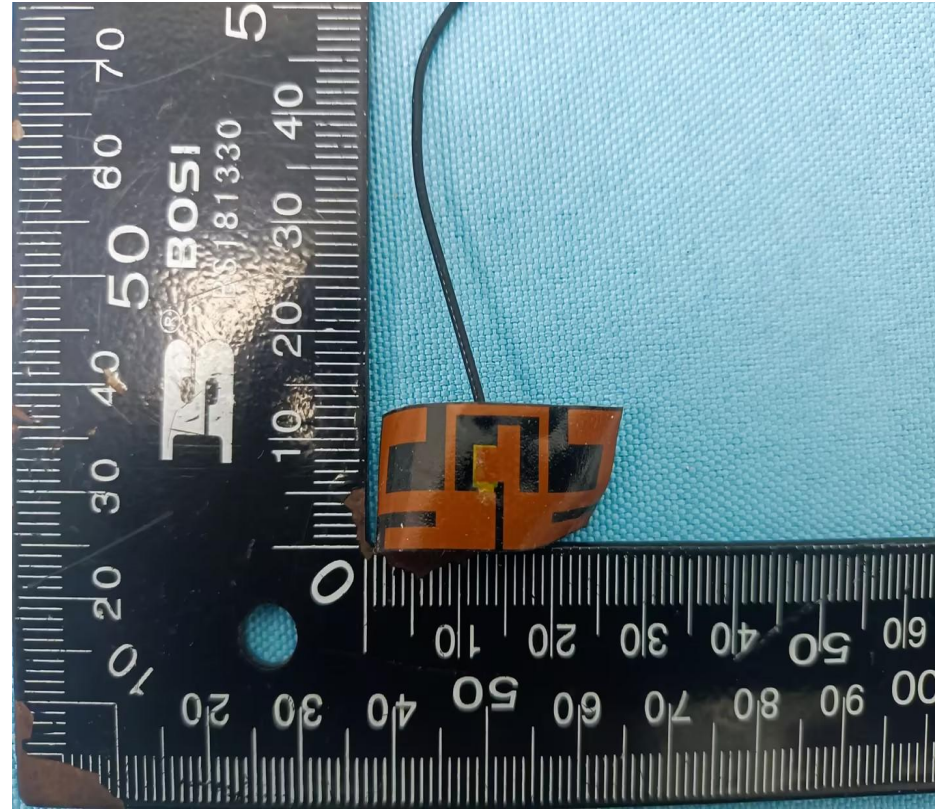
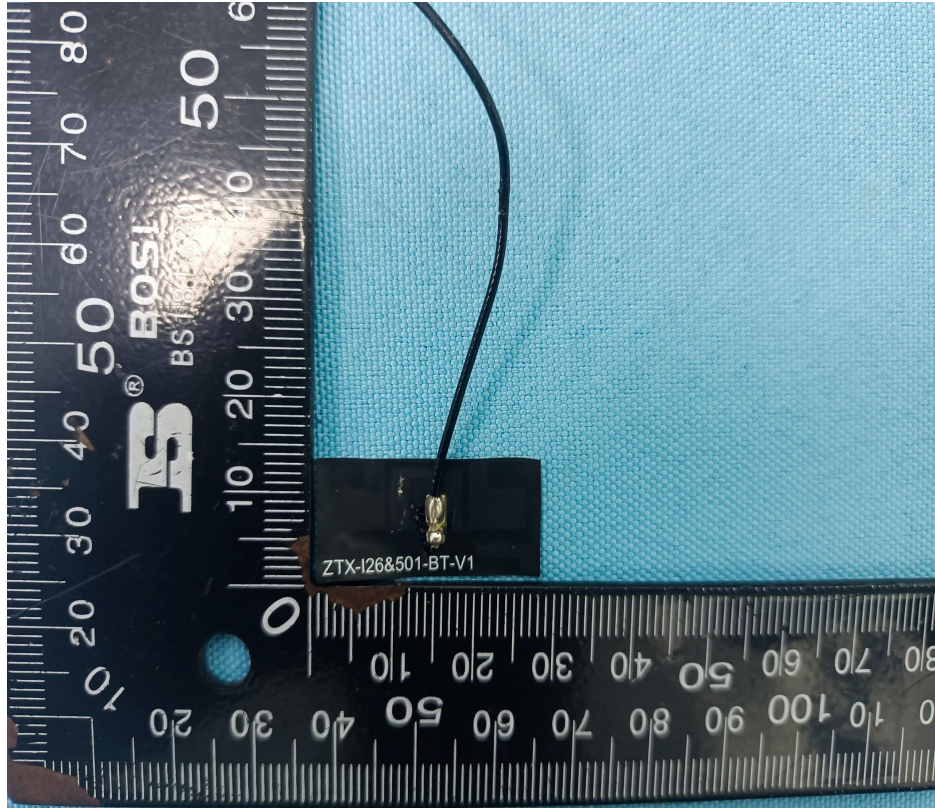
WIFI 1

BT

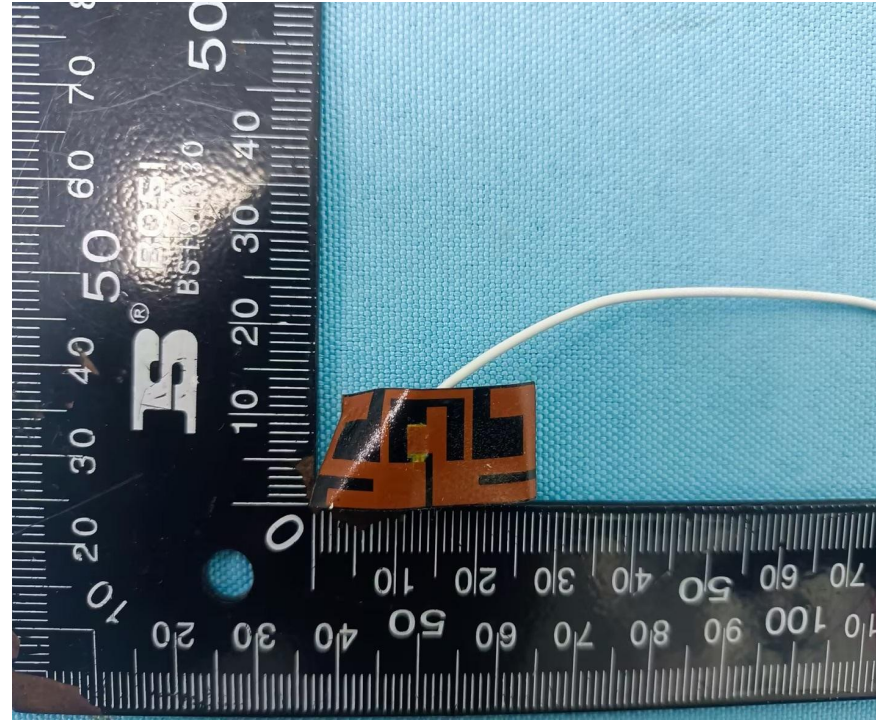
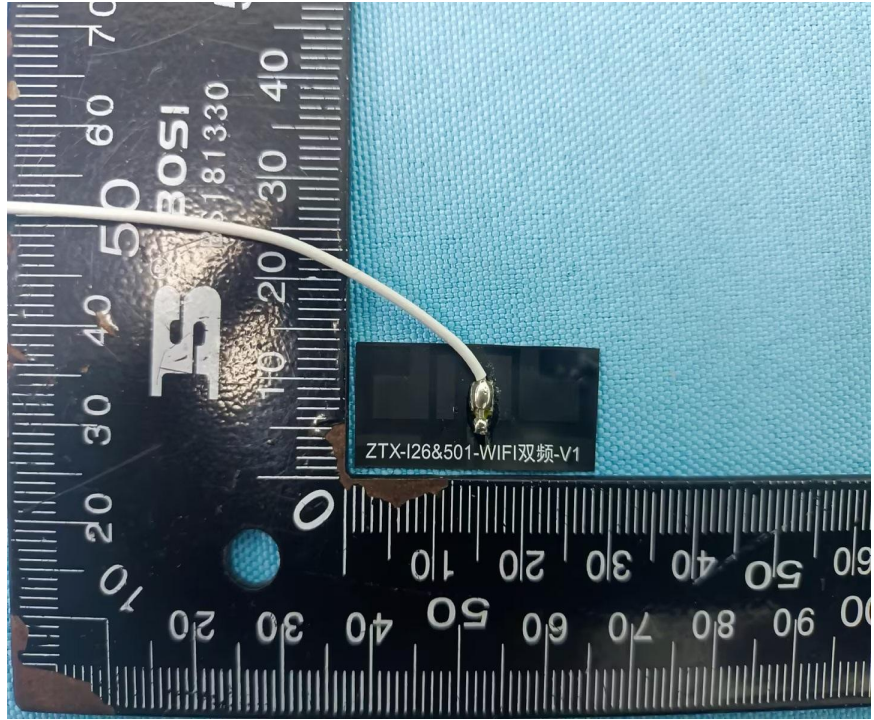


WIFI 0

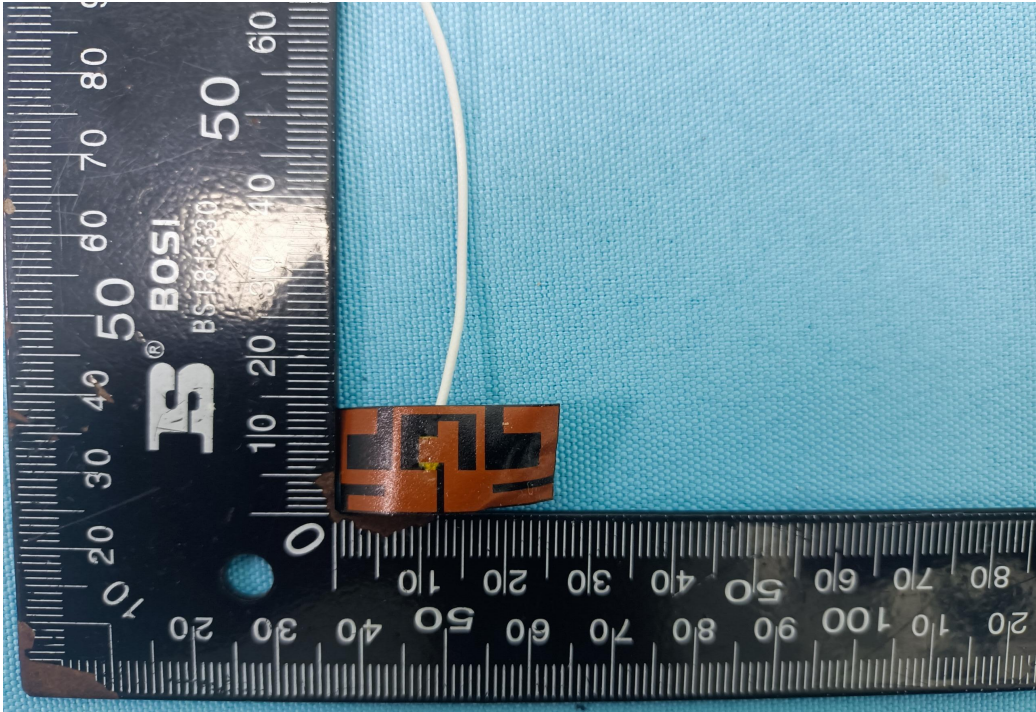
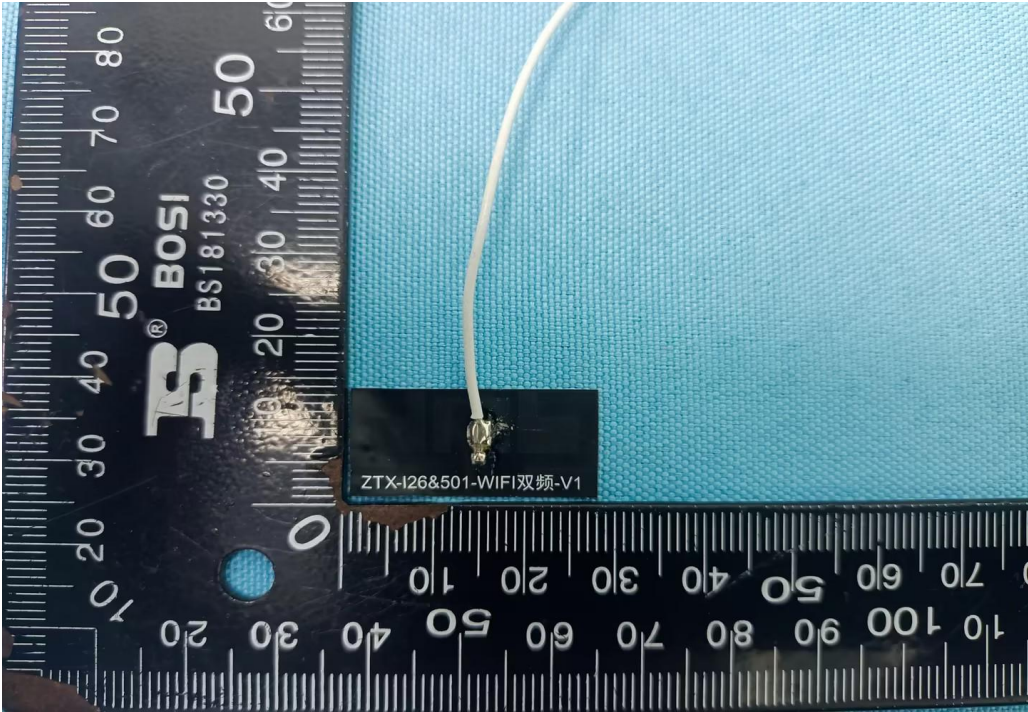
# Dimensions-BT



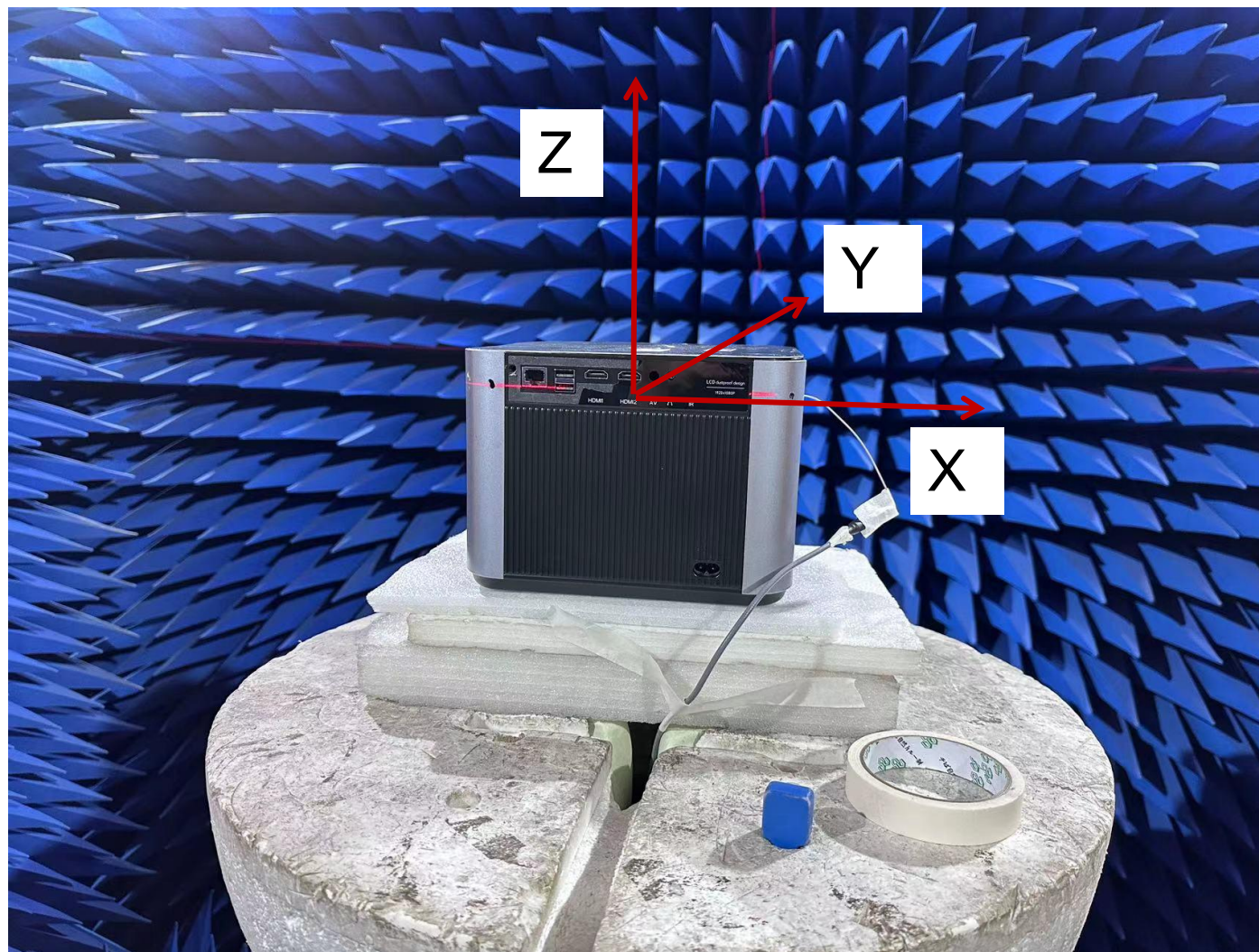
# Dimensions-WIFI-ANT0



# Dimensions-WIFI-ANT1

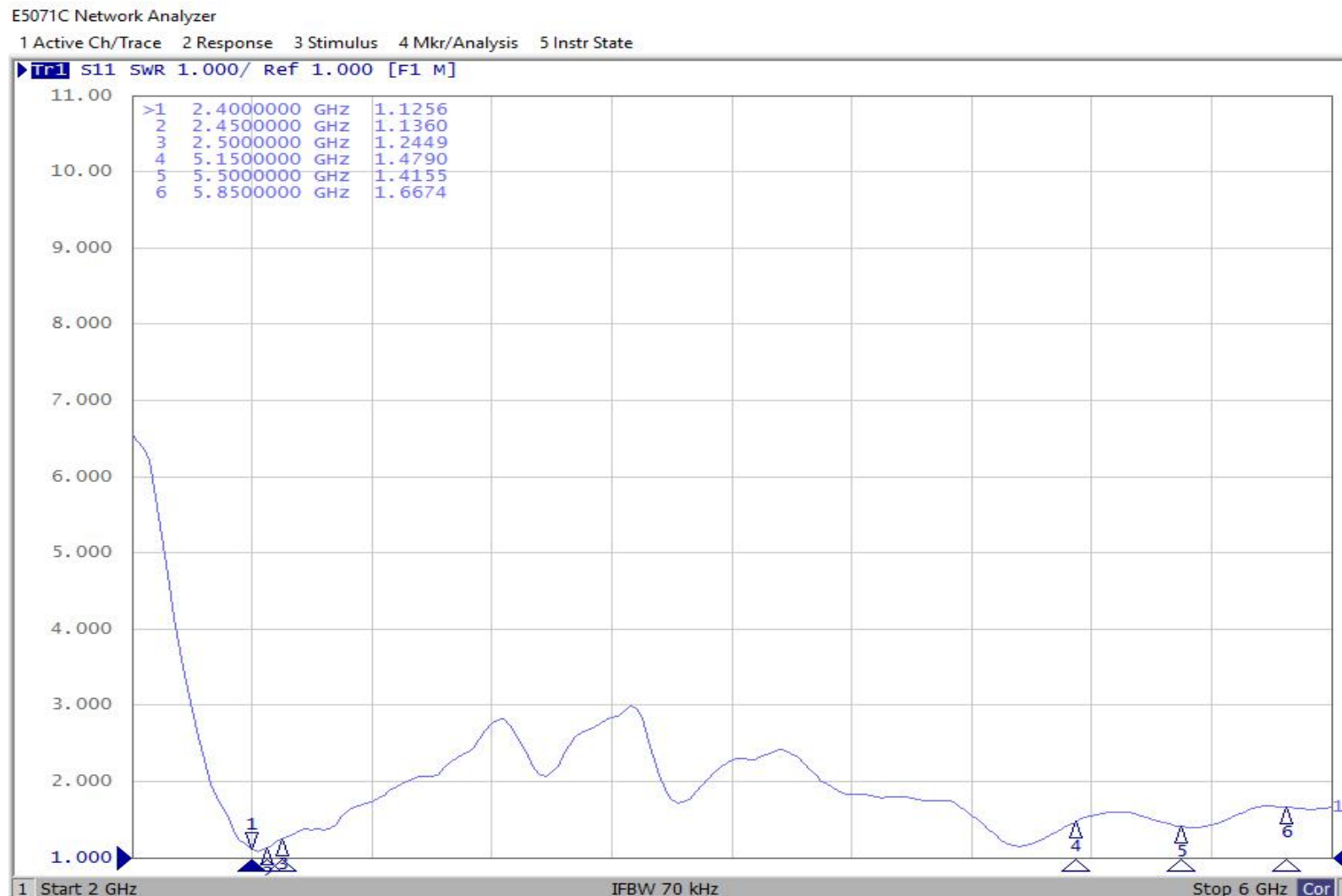


# Antenna darkroom testing





# WIFI 0 Passive debugging data: VSWR

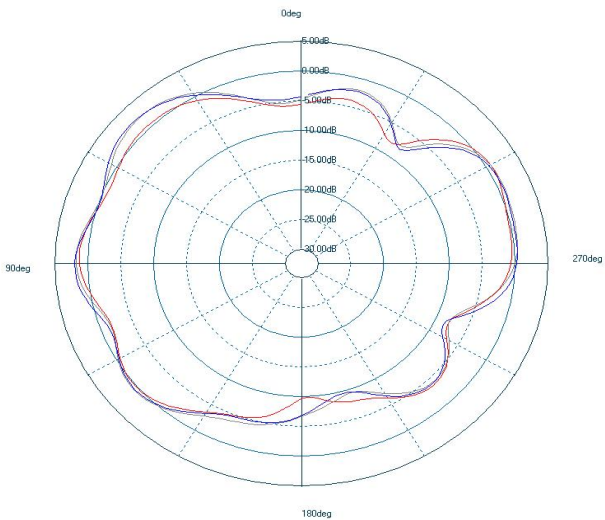


# WIFI 0 Passive debugging data:Efficiency/Gain

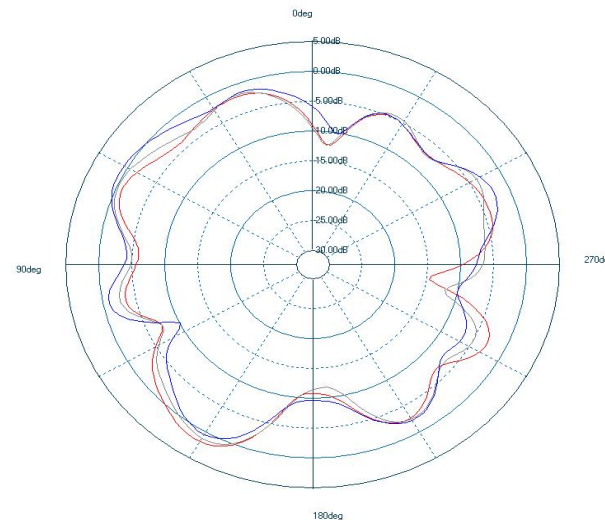
Frequency (MHz)	Efficiency	Efficiency. dB	Gain . dB
2400	62%	-2.07	2.24
2410	61%	-2.14	2.43
2420	63%	-2.03	2.40
2430	62%	-2.05	2.12
2440	64%	-1.95	2.11
2450	62%	-2.09	2.07
2460	63%	-2.03	2.10
2470	63%	-1.98	2.46
2480	61%	-2.15	2.48
2490	60%	-2.22	2.48
2500	62%	-2.06	2.56
5150	60%	-2.19	3.66
5200	62%	-2.08	3.21
5250	60%	-2.24	3.10
5300	58%	-2.35	3.29
5350	60%	-2.21	3.94
5400	59%	-2.32	3.38
5450	62%	-2.09	3.67
5500	60%	-2.24	3.74
5550	57%	-2.47	3.79
5600	57%	-2.42	3.99
5650	59%	-2.31	3.99
5700	58%	-2.39	3.96
5750	60%	-2.22	3.73
5800	60%	-2.23	3.50
5850	61%	-2.11	3.60

# WIFI 0 Passive debugging data:2.4G Direction map/Apple map

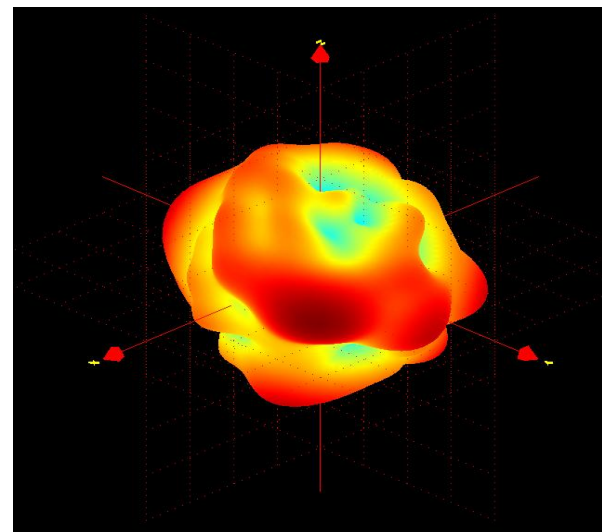
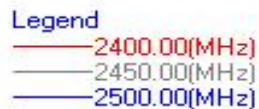
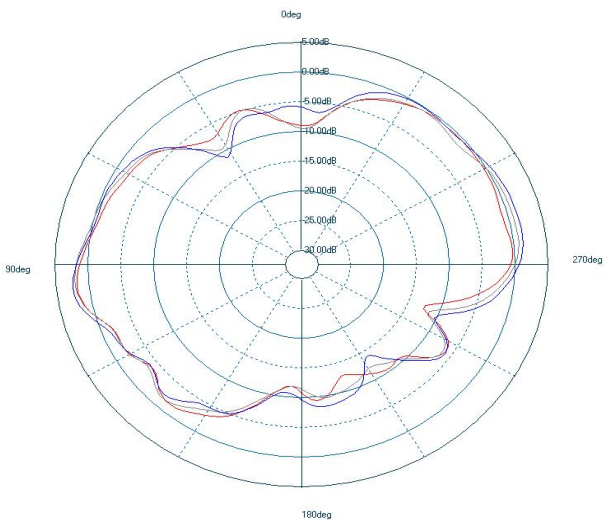
XOY



XOZ

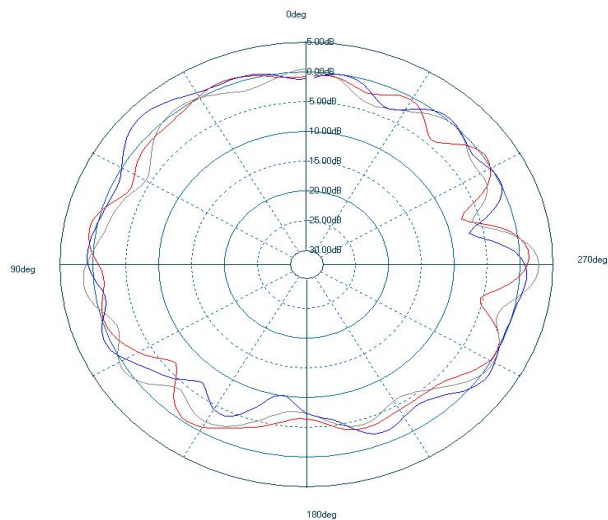


YOZ

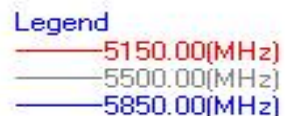
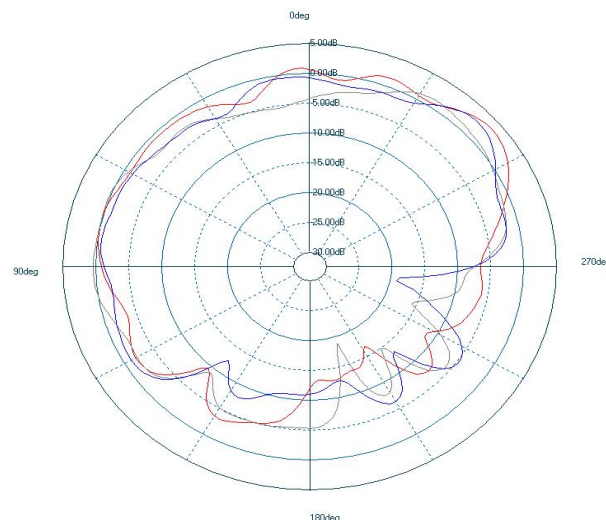


# WiFi 0 Passive debugging data:5G Direction map/Apple map

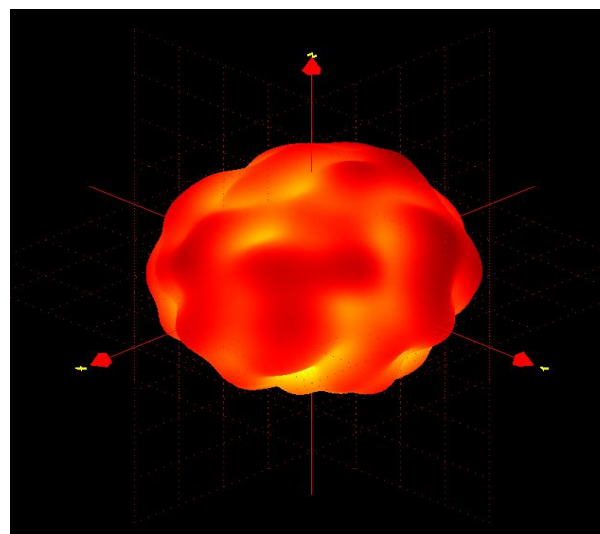
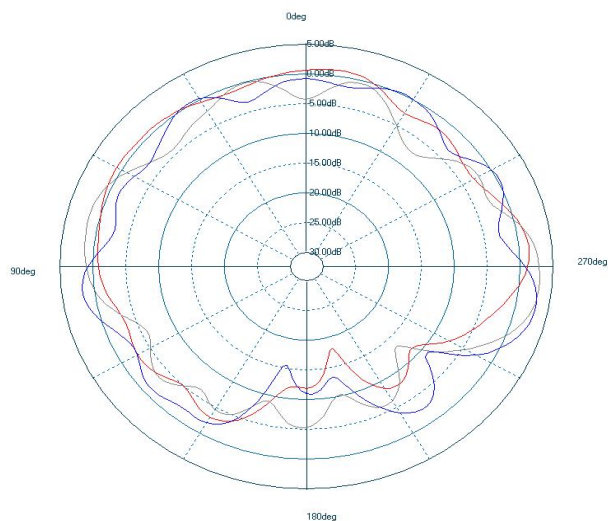
XOY



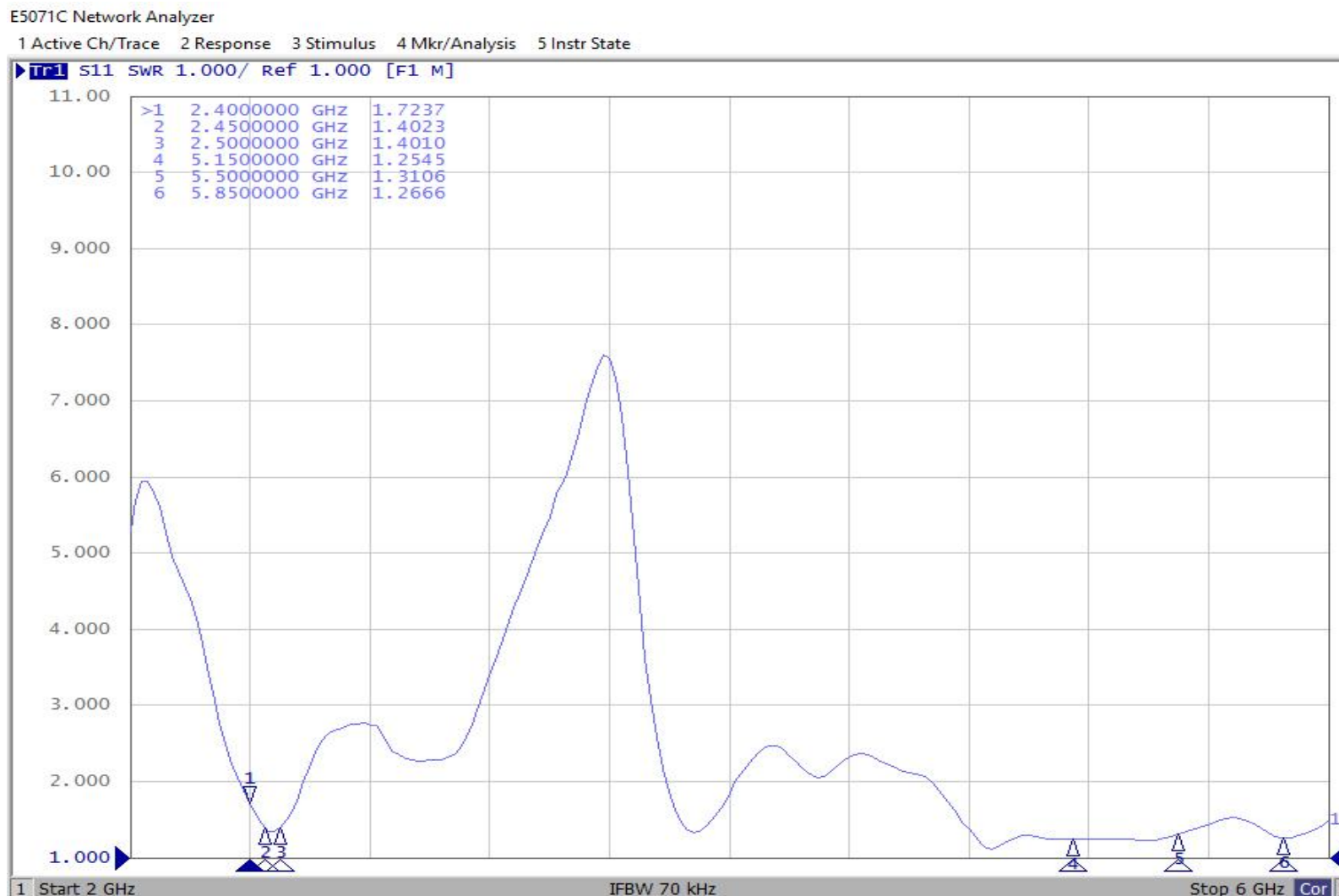
XOZ



YOZ



# WIFI 1 Passive debugging data: VSWR

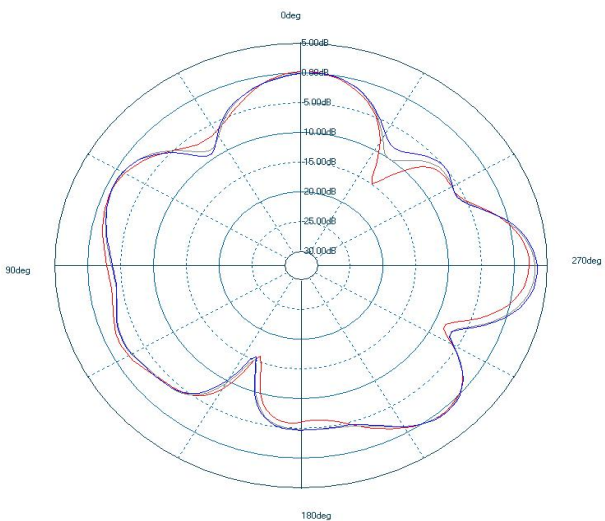


# WIFI 1 Passive debugging data:Efficiency/Gain

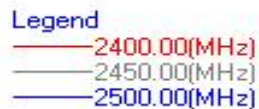
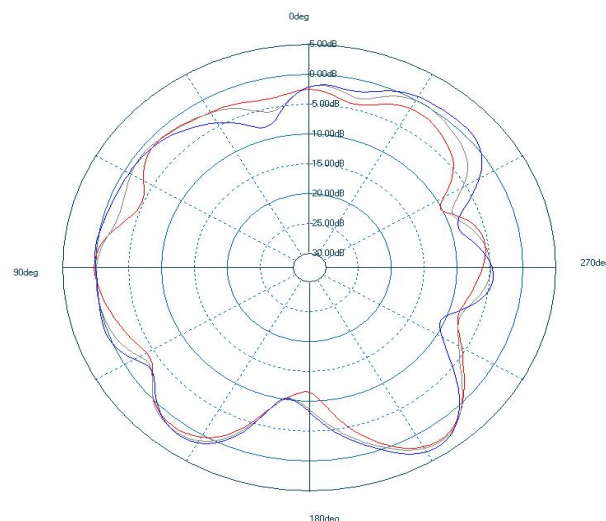
Frequency (MHz)	Efficiency	Efficiency. dB	Gain . dB
2400	55%	-2.63	2.10
2410	54%	-2.65	2.10
2420	57%	-2.45	2.31
2430	58%	-2.38	2.55
2440	60%	-2.25	3.12
2450	60%	-2.19	2.35
2460	60%	-2.25	2.48
2470	61%	-2.16	2.28
2480	60%	-2.21	2.30
2490	61%	-2.16	2.25
2500	59%	-2.27	2.53
5150	61%	-2.16	3.75
5200	61%	-2.18	3.94
5250	61%	-2.17	3.80
5300	59%	-2.27	3.73
5350	61%	-2.16	4.00
5400	58%	-2.38	4.24
5450	60%	-2.23	4.44
5500	59%	-2.27	4.38
5550	57%	-2.43	3.82
5600	58%	-2.39	3.28
5650	59%	-2.27	3.36
5700	58%	-2.37	3.18
5750	58%	-2.33	3.61
5800	59%	-2.28	3.67
5850	61%	-2.13	3.75

# WIFI 1 Passive debugging data:2.4G Direction map/Apple map

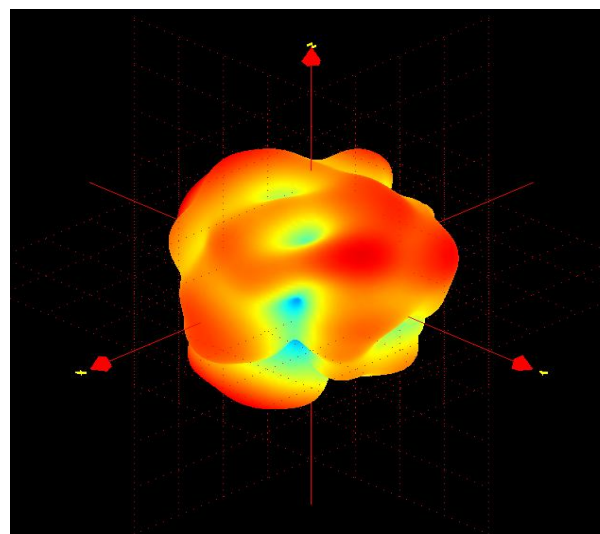
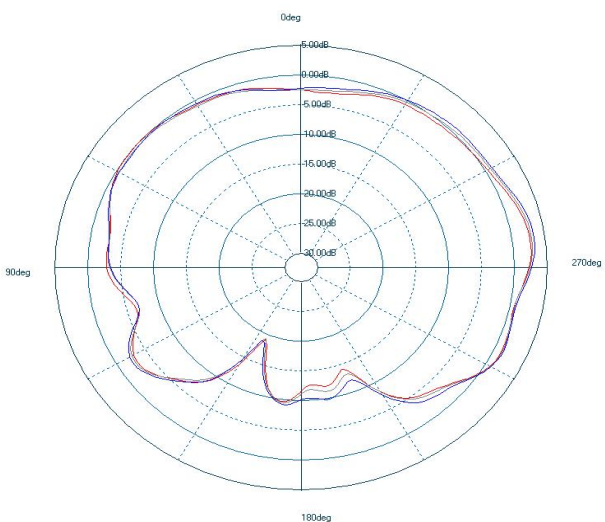
## XOY



## XOZ

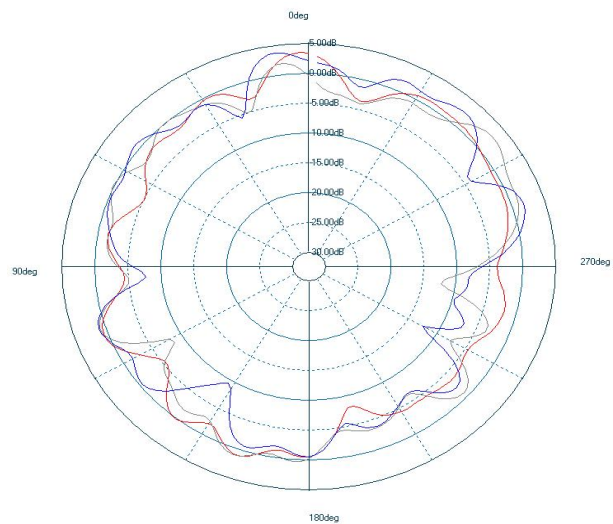


## YOZ

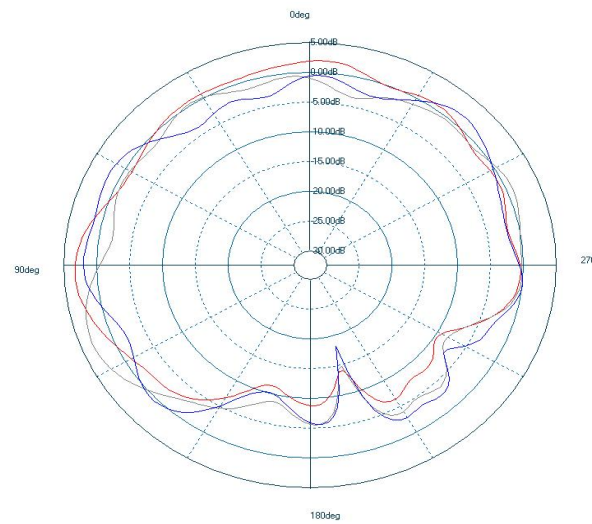


# WiFi 1 Passive debugging data:5G Direction map/Apple map

XOY

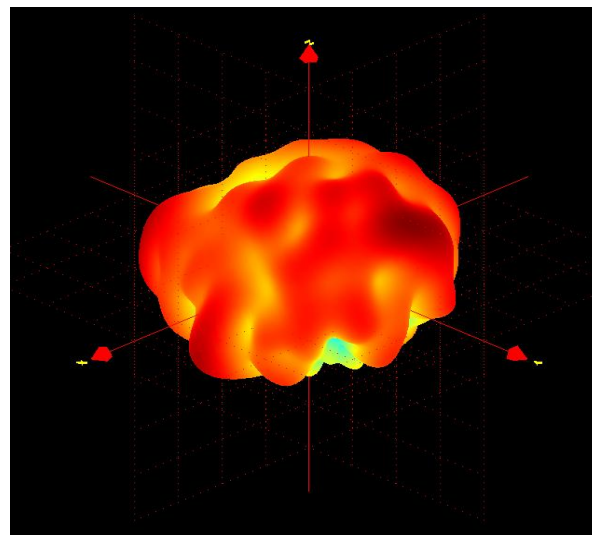
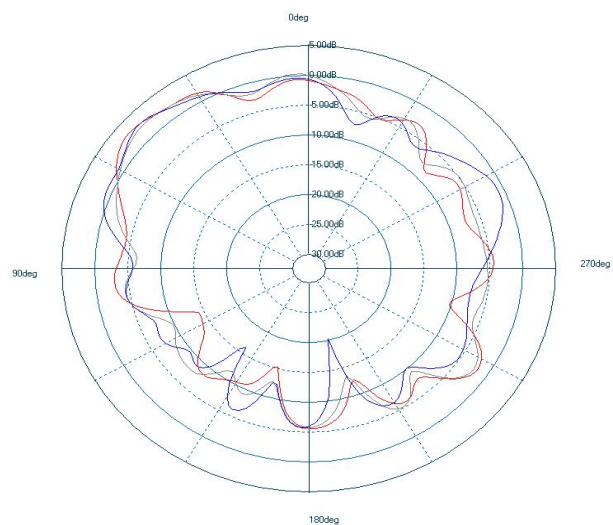


XOZ



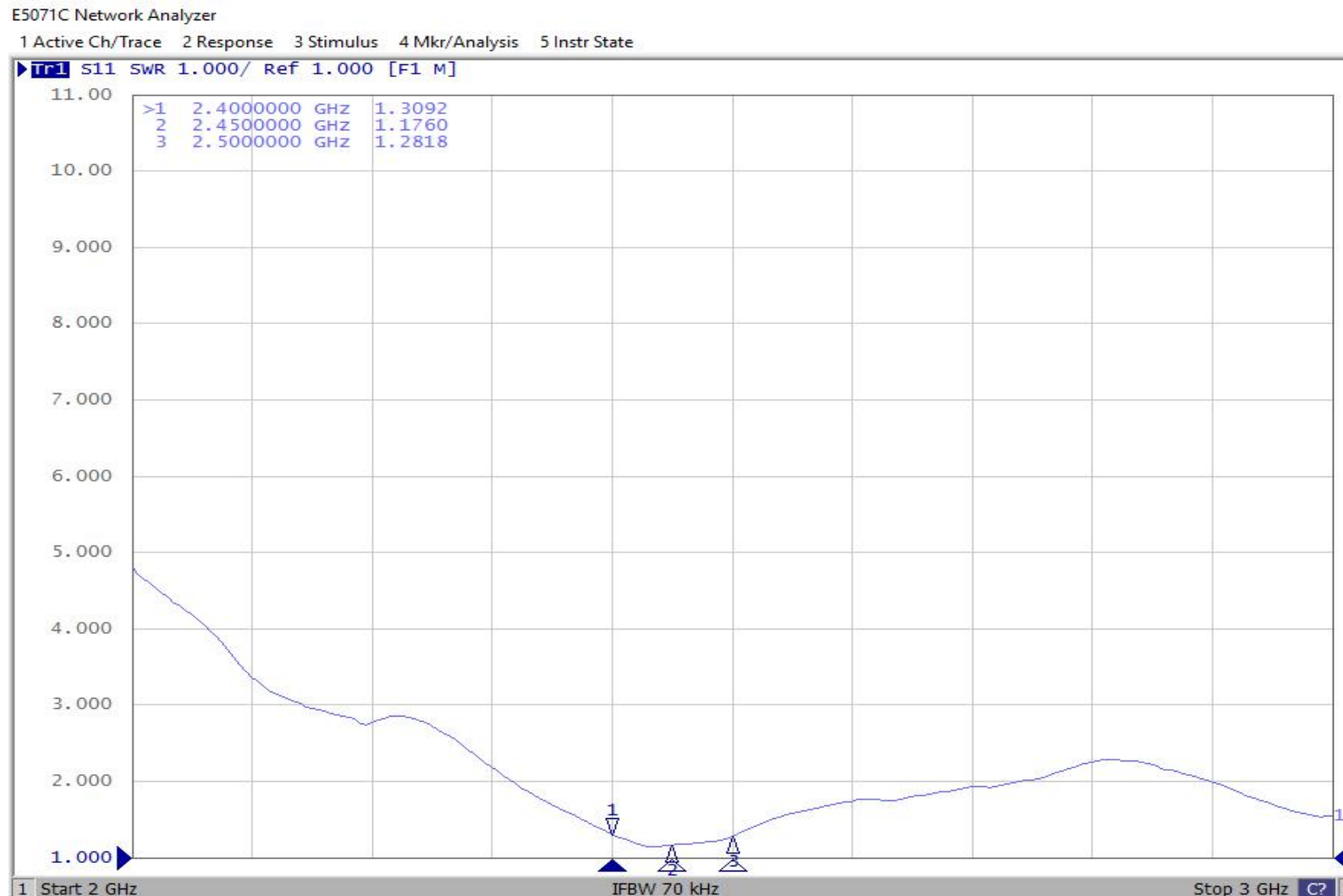
Legend  
— 5150.00(MHz)  
— 5500.00(MHz)  
— 5850.00(MHz)

YOZ





# BT Passive debugging data: VSWR

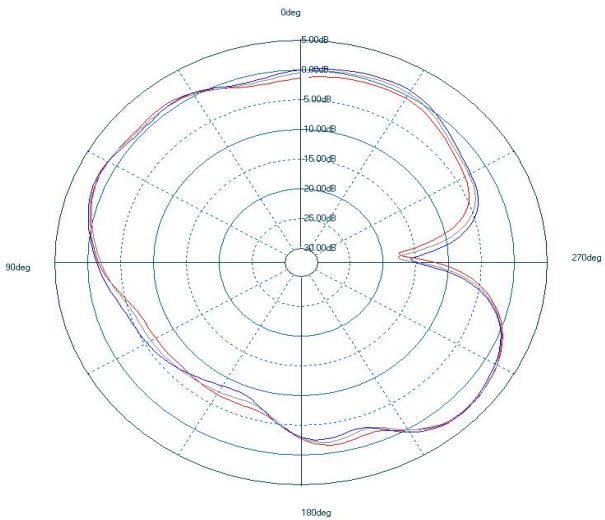


# BT Passive debugging data:Efficiency/Gain

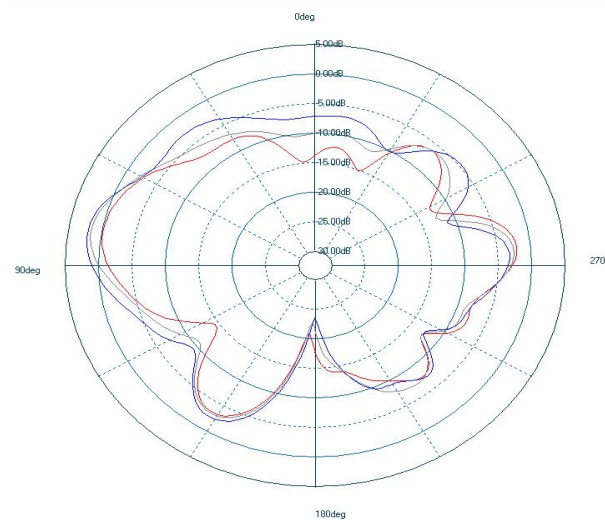
Frequency (MHz)	Efficiency	Efficiency. dB	Gain . dB
2400	60%	-2.24	2.06
2410	59%	-2.29	2.09
2420	60%	-2.19	2.03
2430	63%	-2.04	2.19
2440	63%	-1.99	2.08
2450	63%	-2.03	1.97
2460	62%	-2.08	2.15
2470	61%	-2.13	2.22
2480	62%	-2.08	2.29
2490	60%	-2.21	2.18
2500	61%	-2.15	2.16

# BT Passive debugging data:2.4G Direction map/Apple map

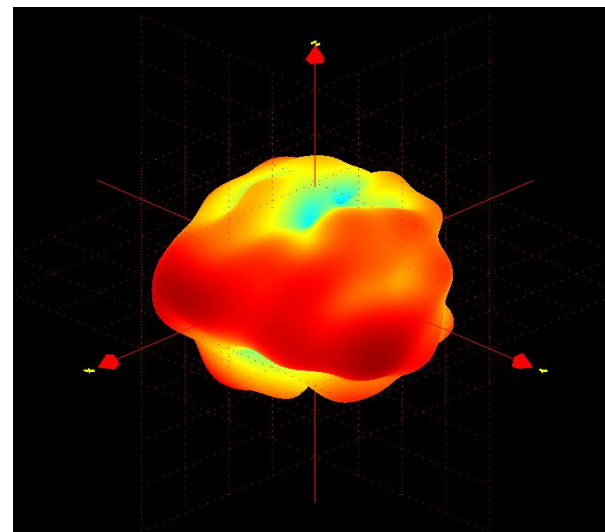
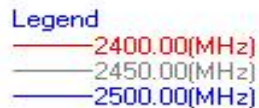
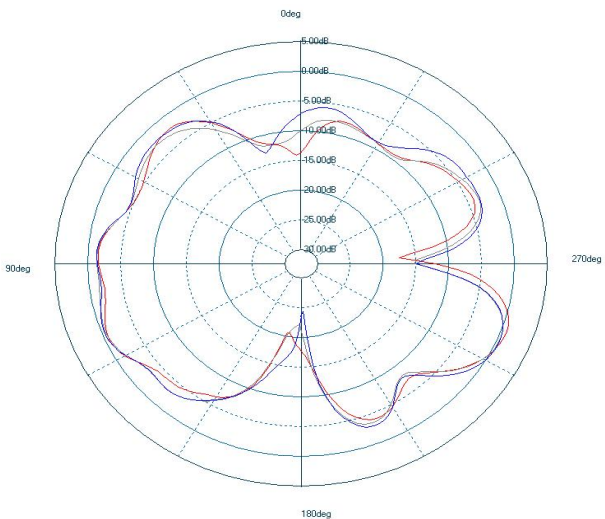
XOY



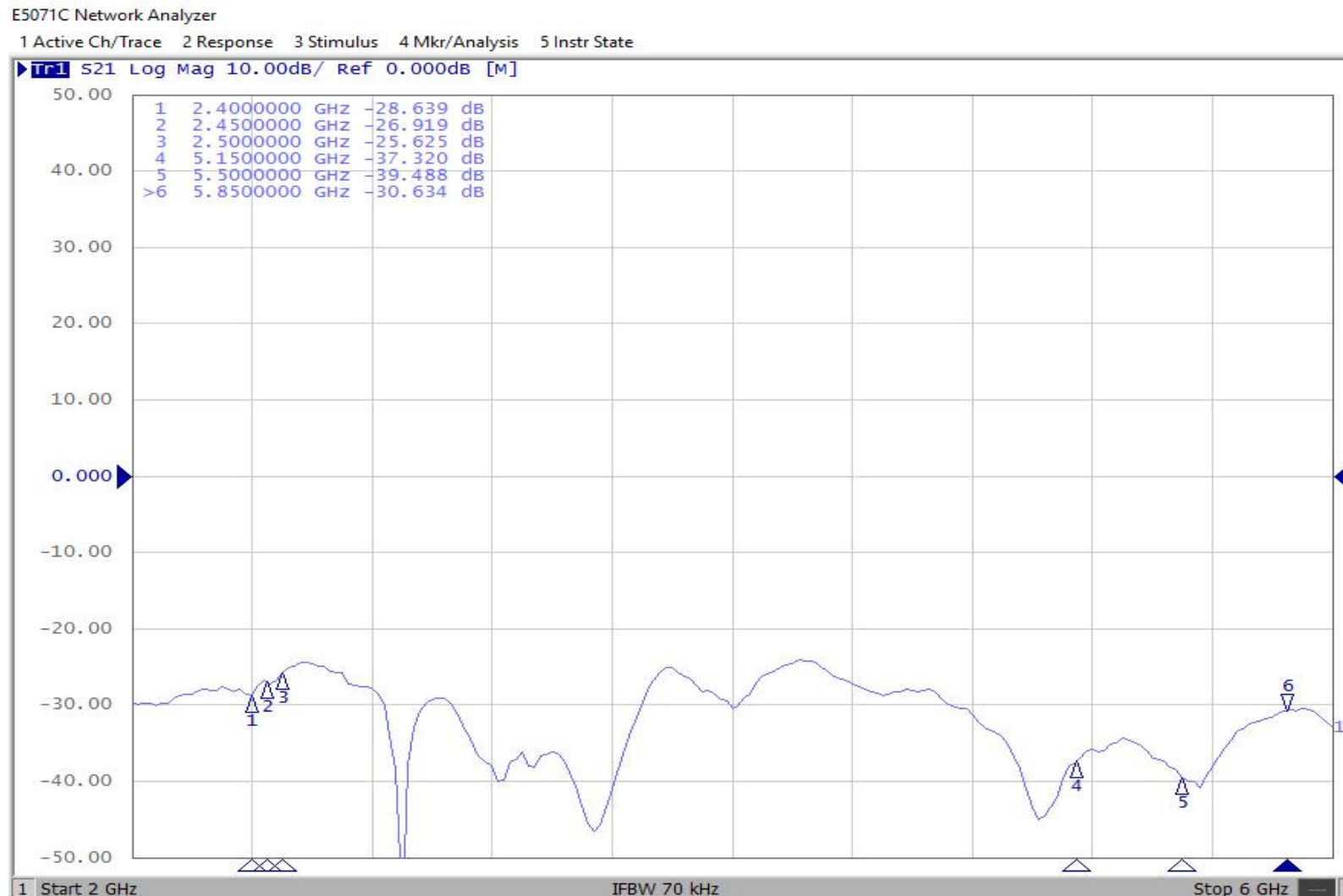
XOZ



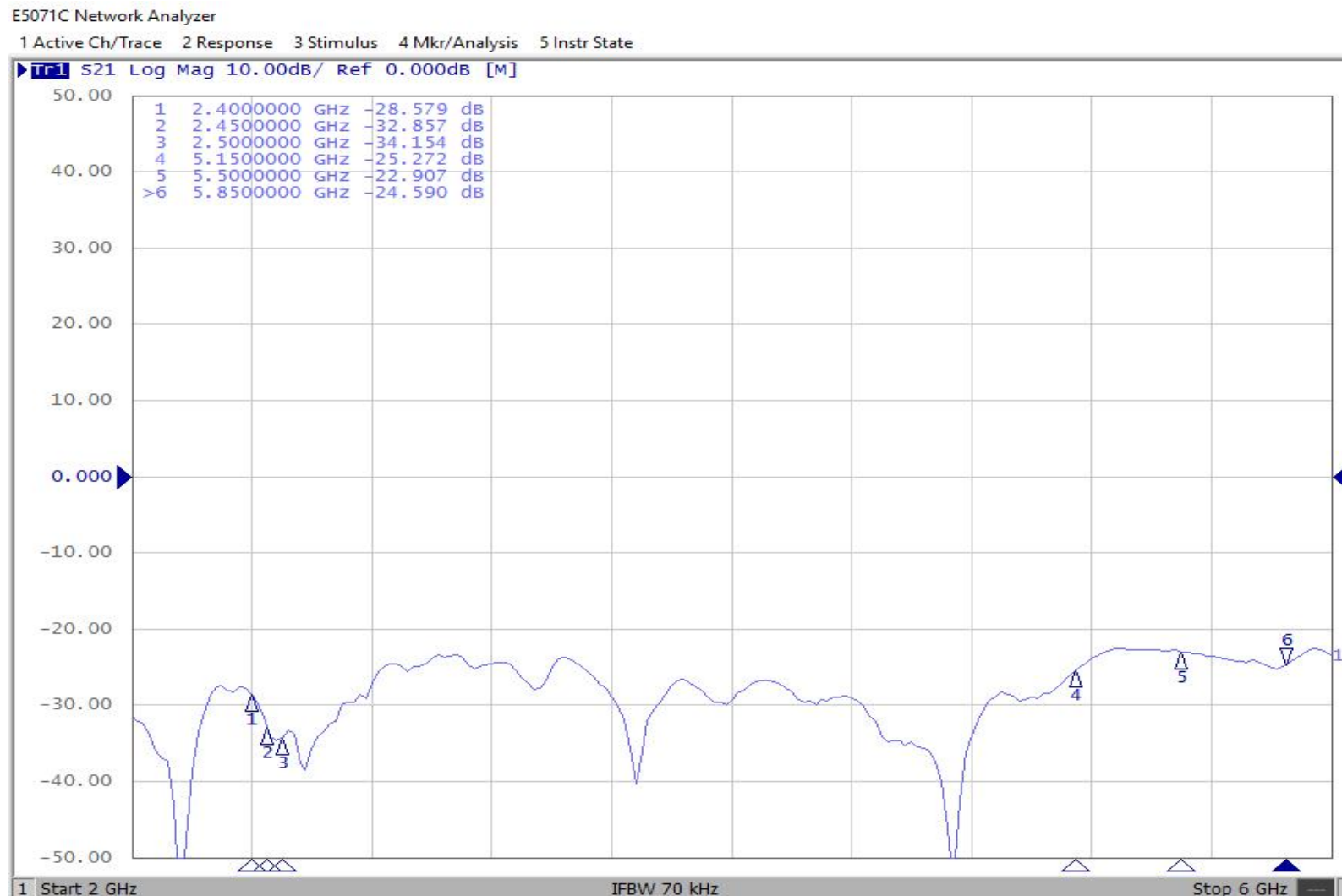
YOZ



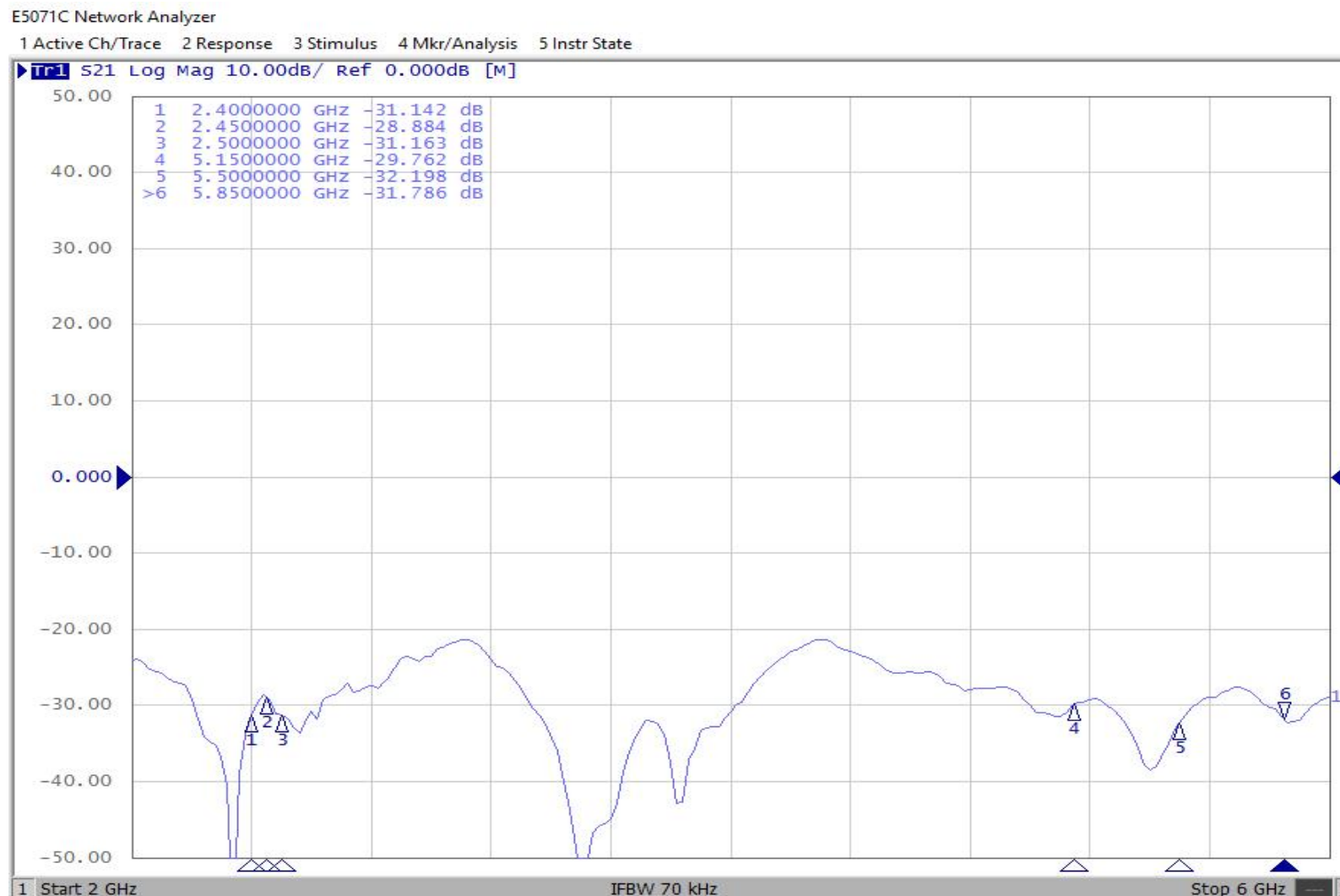
# Passive debugging data:WIFI 0&WIFI 1 Isolation degree



# Passive debugging data:WIFI 0&BT Isolation degree



# Passive debugging data:WIFI 1&BT Isolation degree



# Thank You

