

# C015FNG Antenna debugging report

# Directory

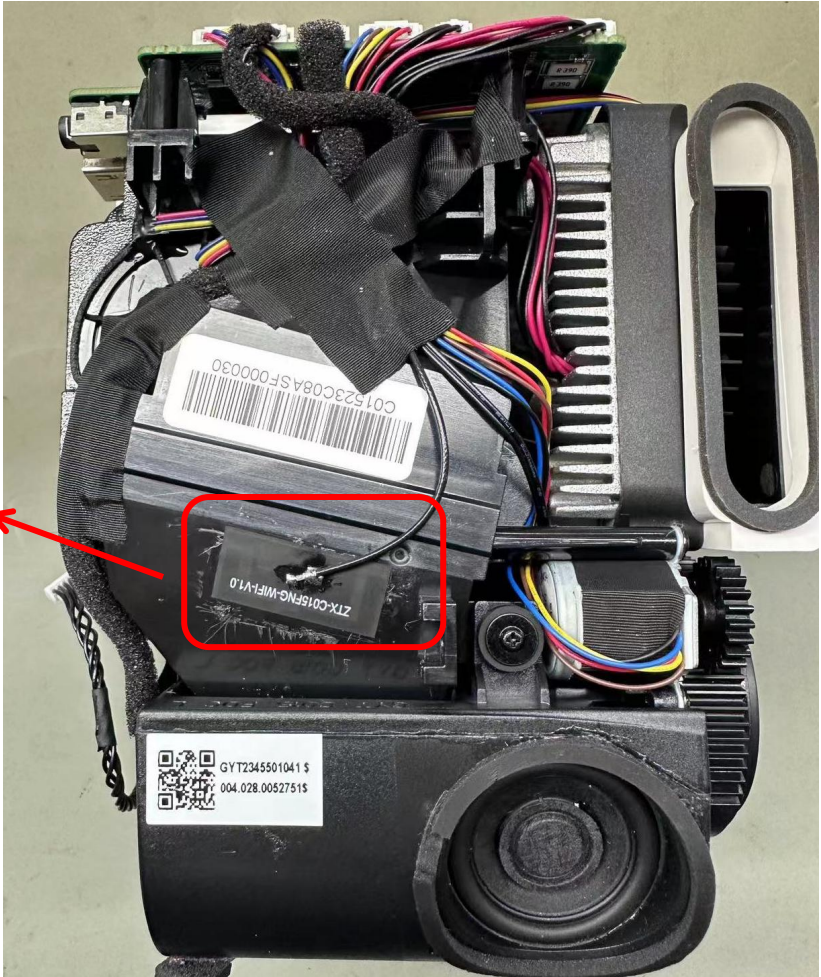
- Project Requirements Analysis
- Overall scheme design
- Passive debugging data

# Project requirements

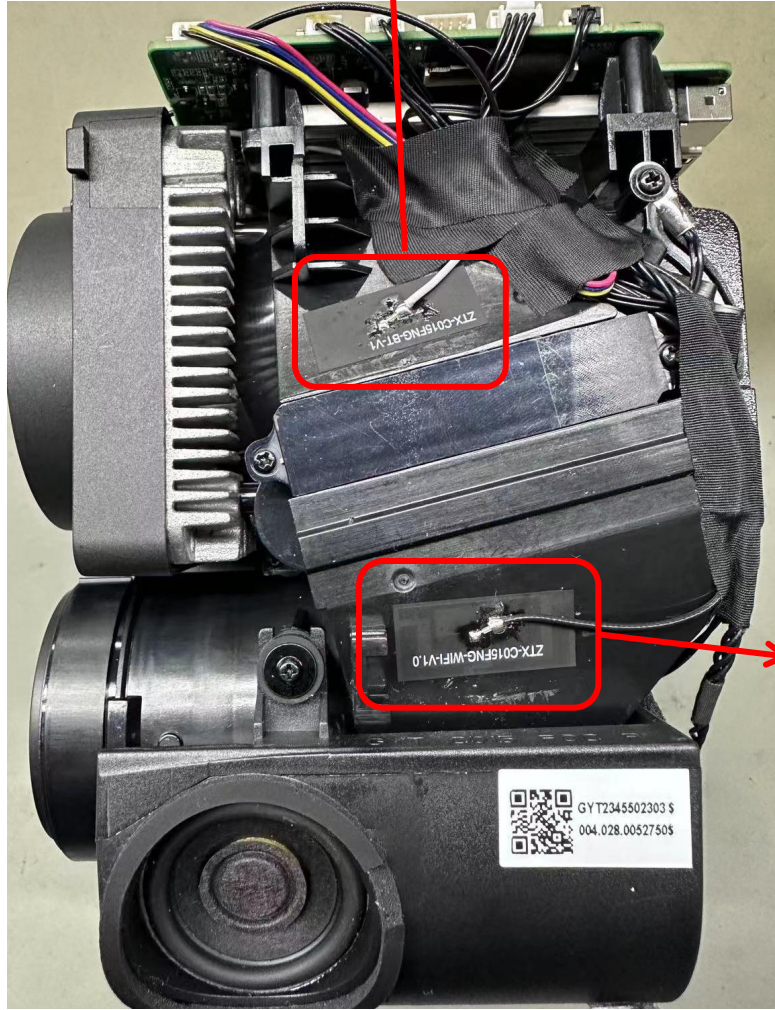
- Passive data
- S11, Efficiency, gain, directional pattern

# Antenna position

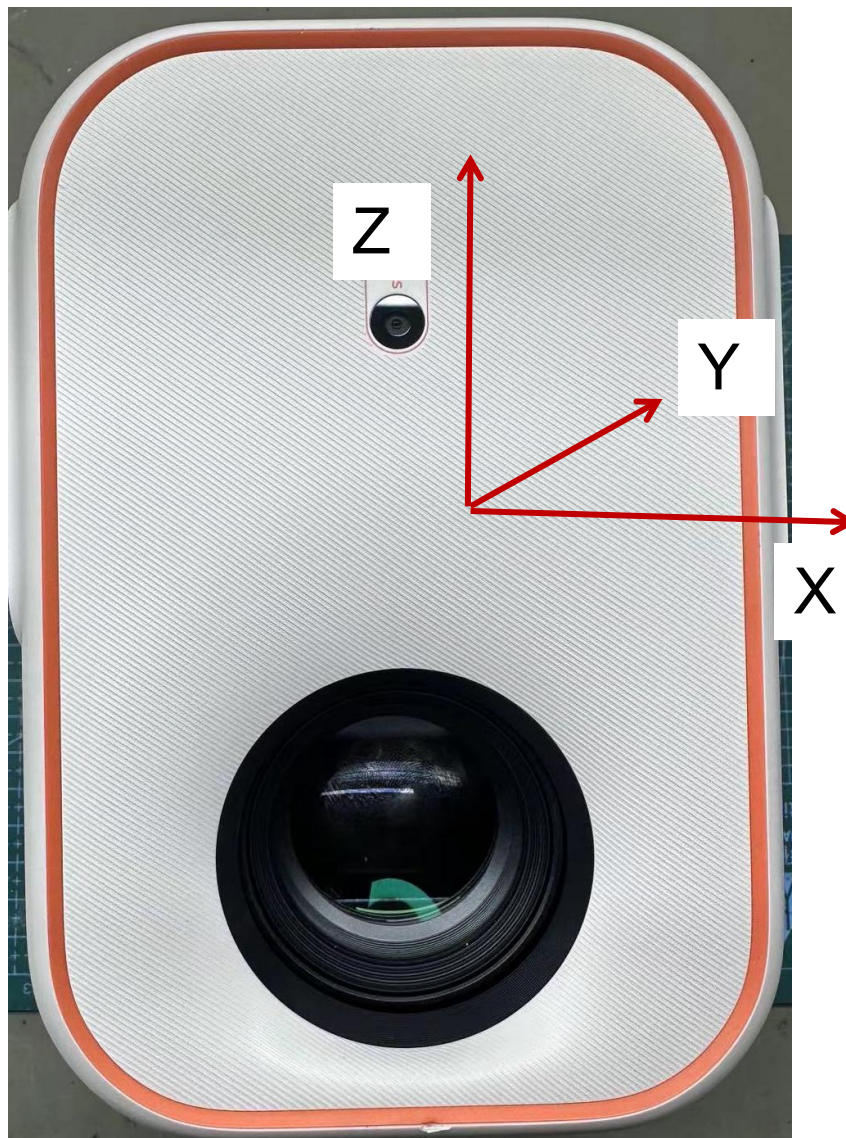
WIFI 1



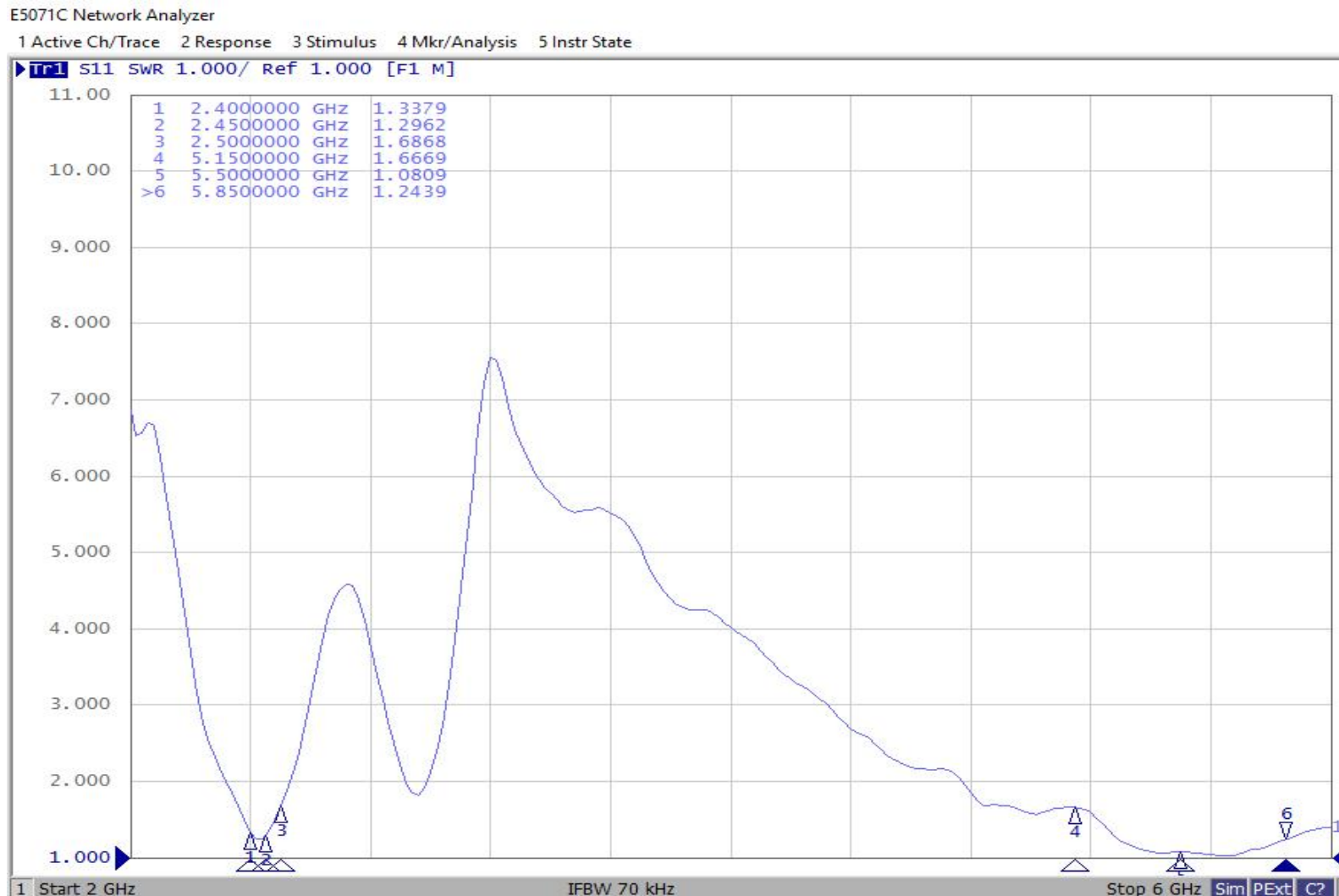
BT



# Directional map coordinates



# WIFI 1 Passive debugging data: VSWR



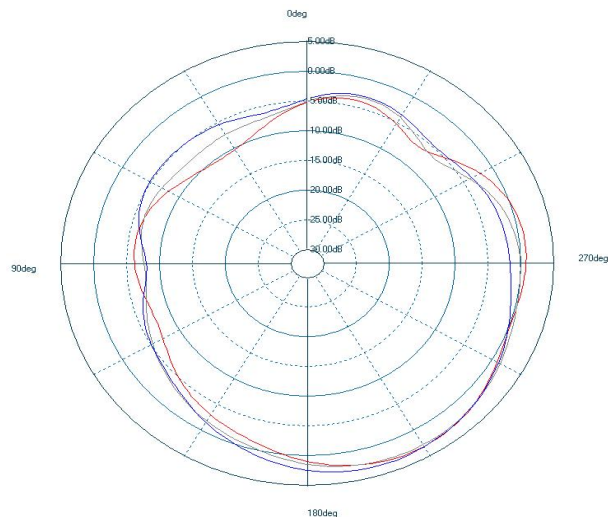
# WIFI 1 Passive debugging data:Efficiency/Gain



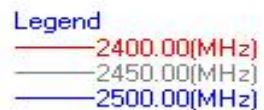
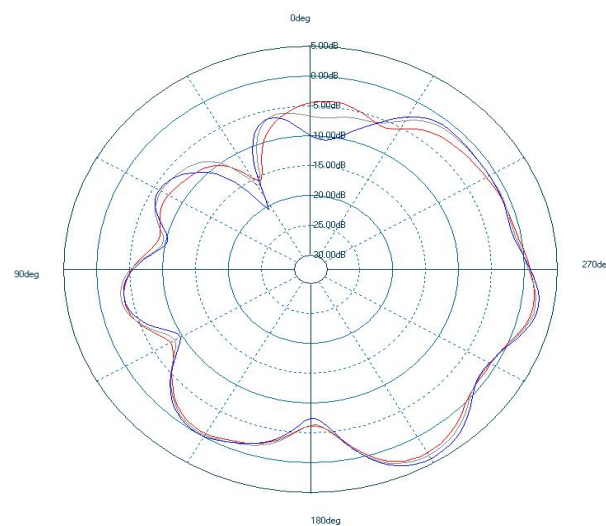
Frequency (MHz)	Efficiency	Efficiency. dB	Gain . dB
2400	57%	-2.42	2.02
2410	55%	-2.57	2.02
2420	56%	-2.50	2.05
2430	58%	-2.40	1.80
2440	59%	-2.29	2.12
2450	61%	-2.16	2.08
2460	61%	-2.15	1.92
2470	58%	-2.37	1.70
2480	59%	-2.27	1.91
2490	58%	-2.39	2.11
2500	58%	-2.36	2.09
5150	52%	-2.83	4.27
5200	51%	-2.90	4.97
5250	51%	-2.93	4.36
5300	52%	-2.84	3.72
5350	53%	-2.79	4.08
5400	53%	-2.77	4.21
5450	55%	-2.64	4.22
5500	53%	-2.72	3.78
5550	51%	-2.97	3.86
5600	54%	-2.71	4.18
5650	53%	-2.78	4.30
5700	53%	-2.75	4.41
5750	54%	-2.64	4.22
5800	53%	-2.76	4.57
5850	53%	-2.77	4.68

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

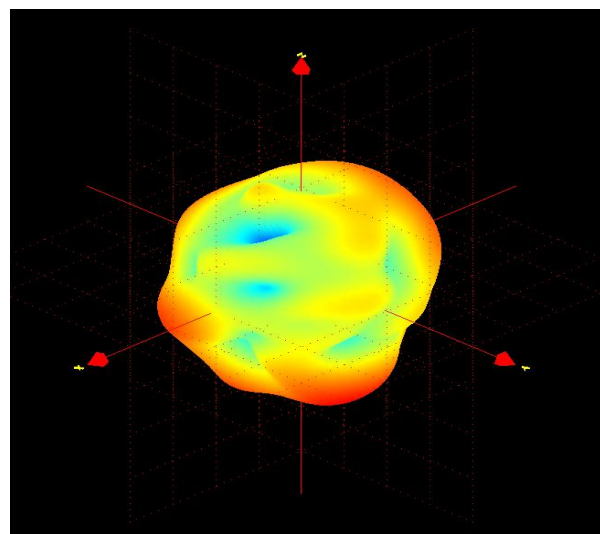
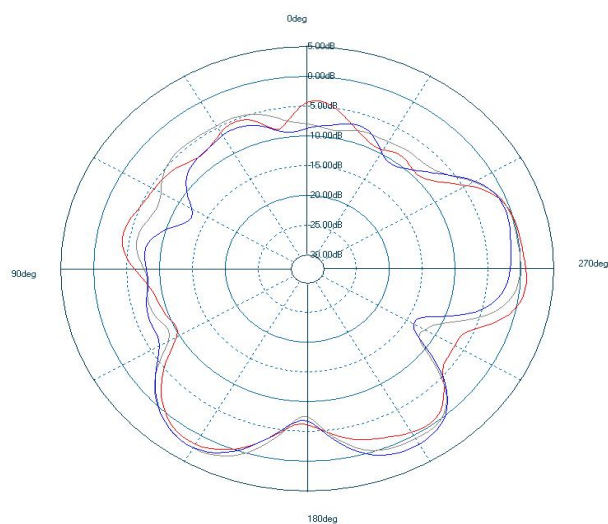
## XOY



## XOZ



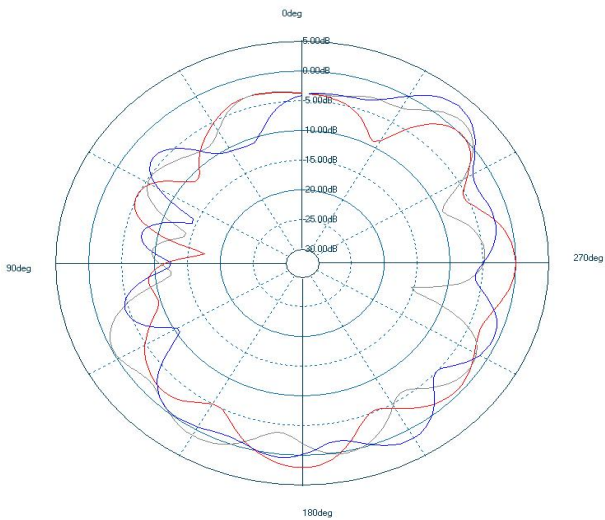
## YOZ



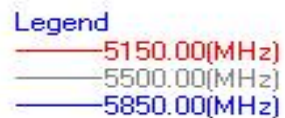
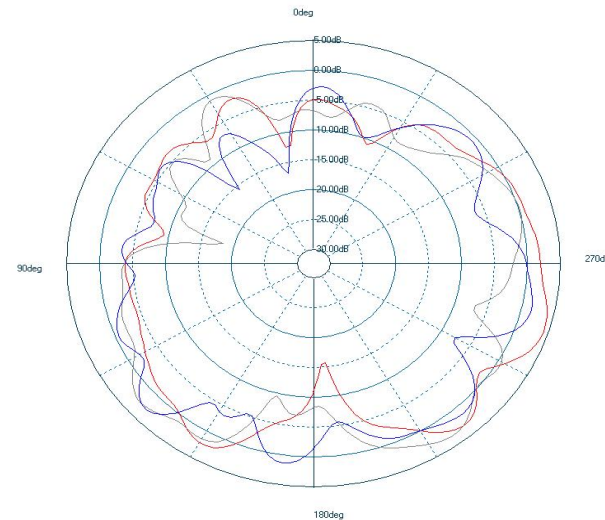


# WiFi 1 Passive debugging data:5G Direction map/Apple map

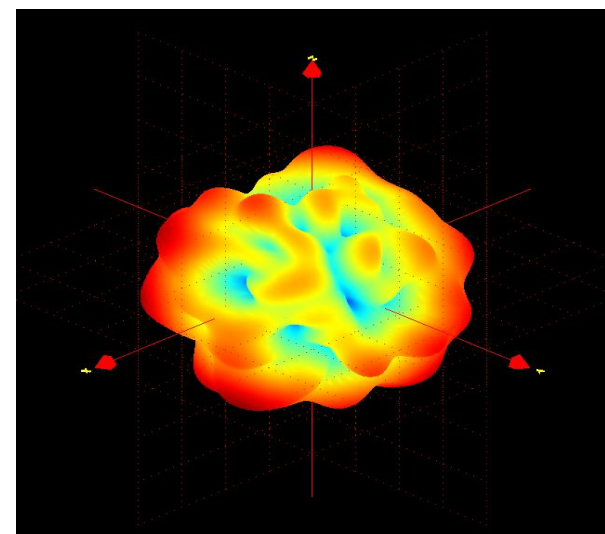
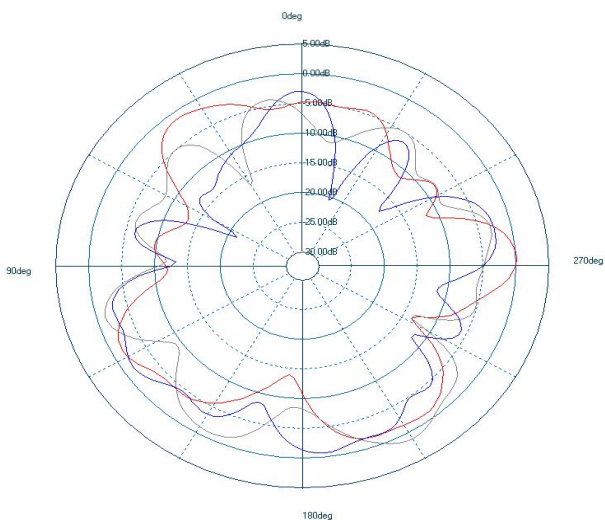
XOY



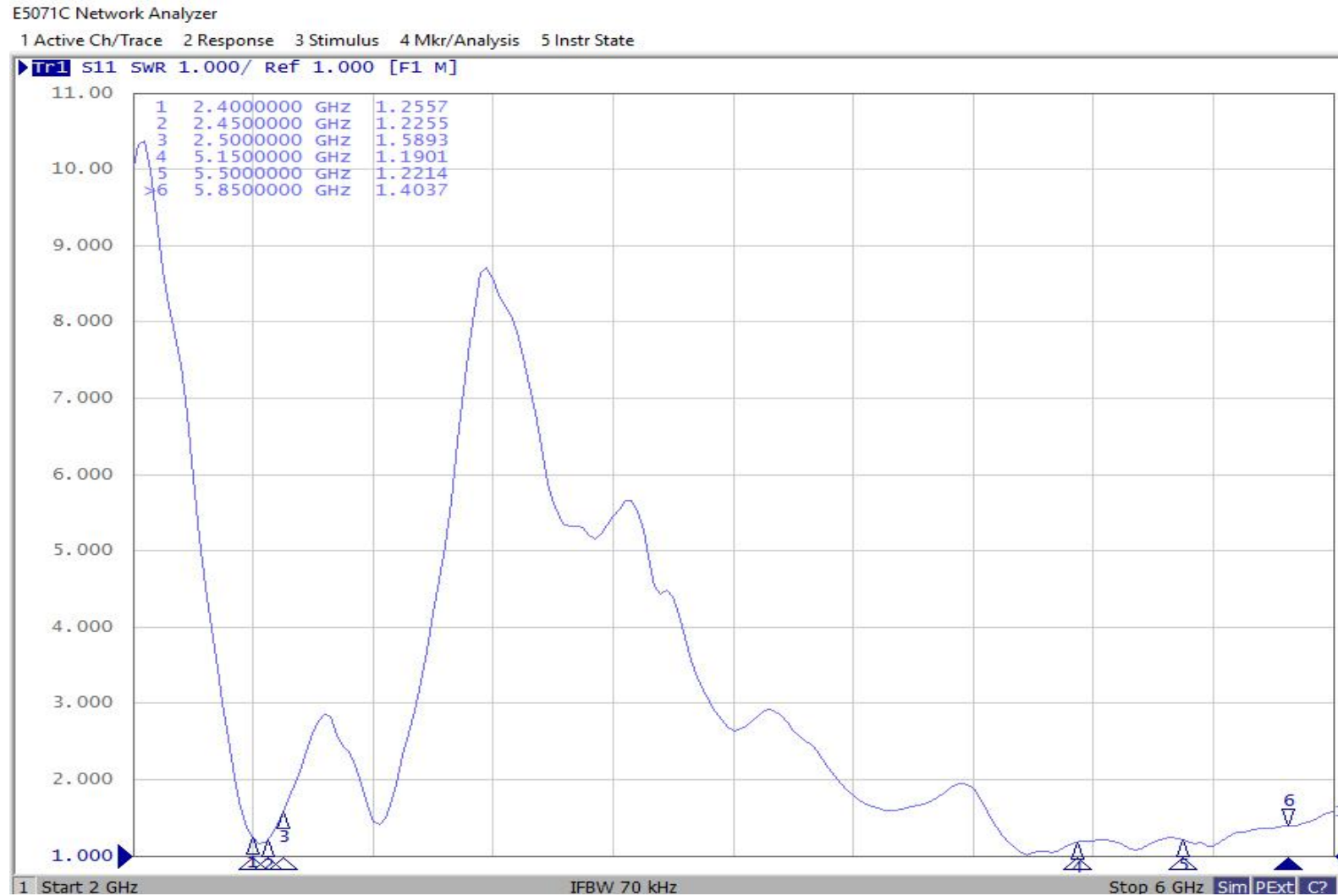
XOZ



YOZ



# WIFI 2 Passive debugging data: VSWR



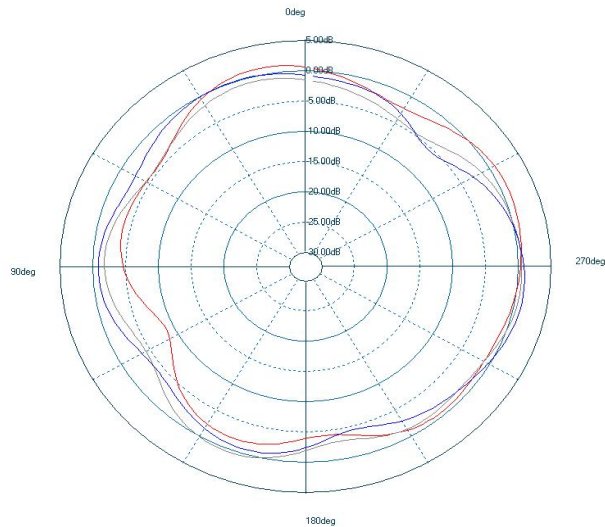
# WIFI 2 Passive debugging data:Efficiency/Gain



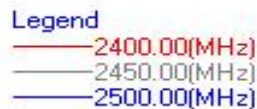
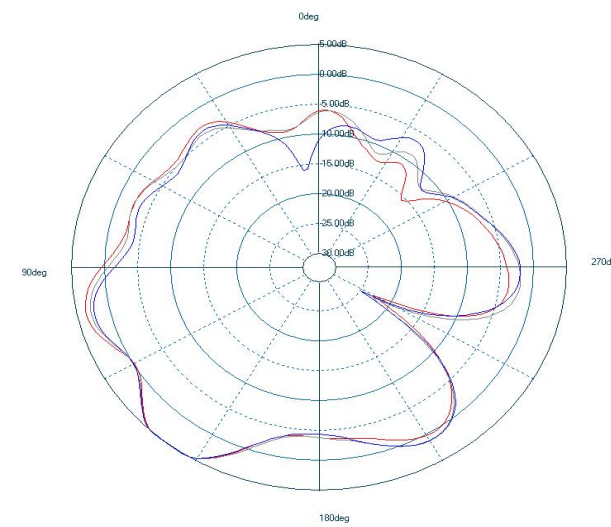
Frequency (MHz)	Efficiency	Efficiency. dB	Gain . dB
2400	60%	-2.21	1.95
2410	59%	-2.26	1.93
2420	61%	-2.18	1.96
2430	61%	-2.15	2.09
2440	58%	-2.39	2.00
2450	58%	-2.40	2.02
2460	56%	-2.54	1.87
2470	58%	-2.36	2.10
2480	57%	-2.40	1.86
2490	57%	-2.47	2.00
2500	55%	-2.56	1.93
5150	55%	-2.62	4.58
5200	55%	-2.57	4.77
5250	51%	-2.93	4.45
5300	52%	-2.87	4.24
5350	50%	-2.97	4.33
5400	53%	-2.74	4.89
5450	54%	-2.70	4.62
5500	53%	-2.72	4.21
5550	50%	-3.00	4.31
5600	53%	-2.74	4.51
5650	53%	-2.75	3.95
5700	54%	-2.66	4.03
5750	55%	-2.62	4.39
5800	53%	-2.77	4.38
5850	53%	-2.77	4.73

# WIFI 2 Passive debugging data:2.4G Direction map/Apple map

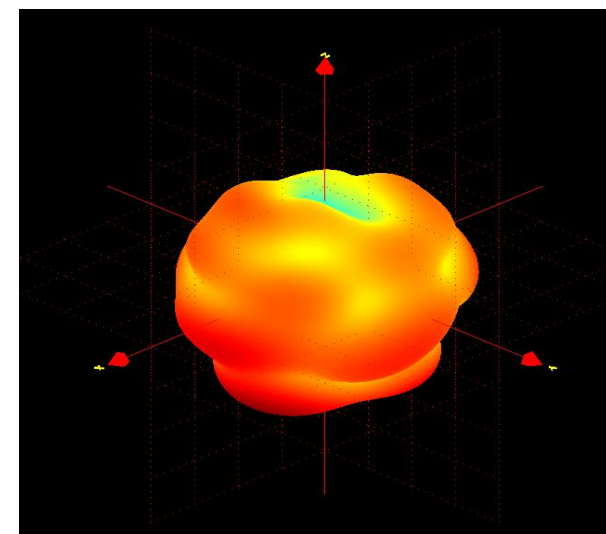
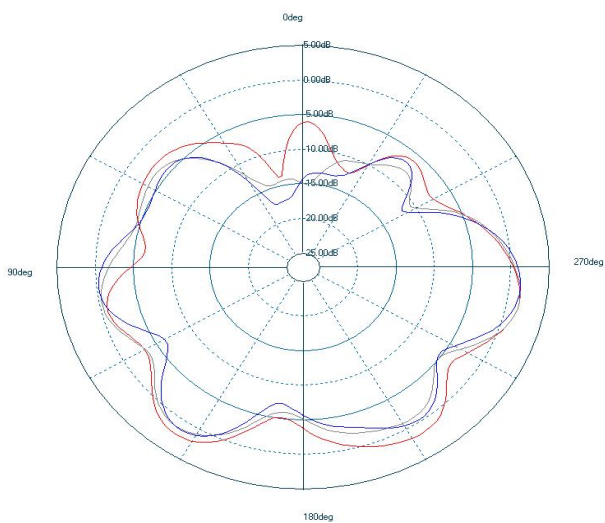
## XOY



## XOZ

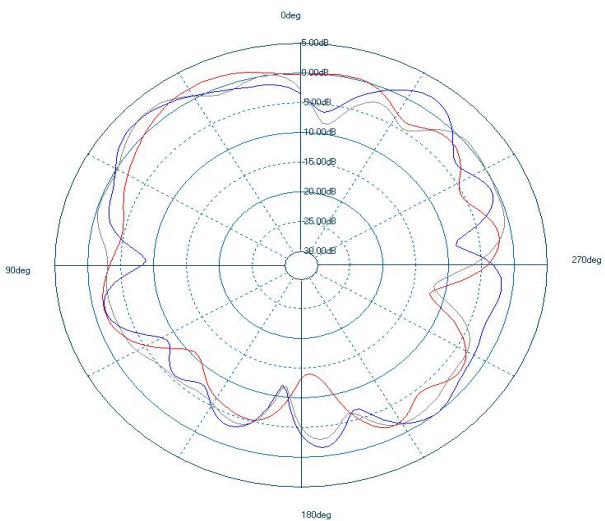


## YOZ

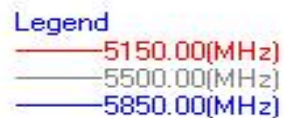
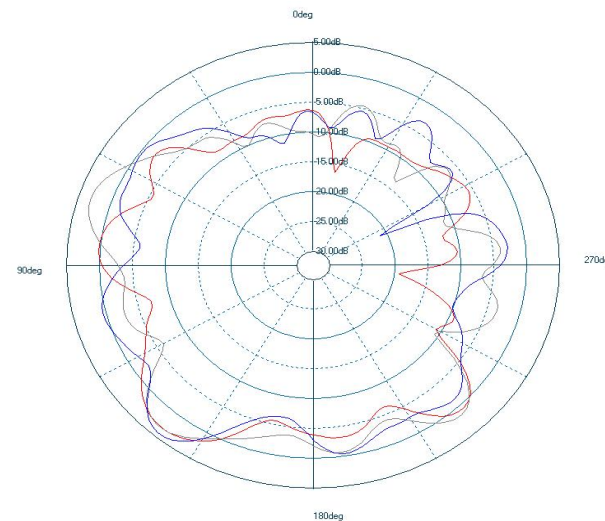


# WiFi 2 Passive debugging data:5G Direction map/Apple map

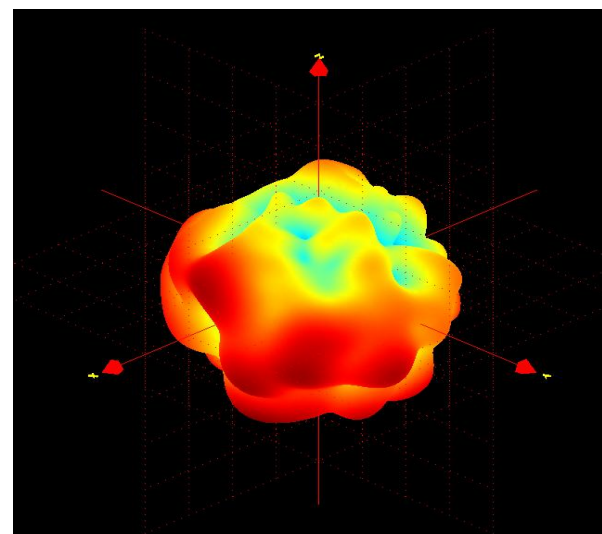
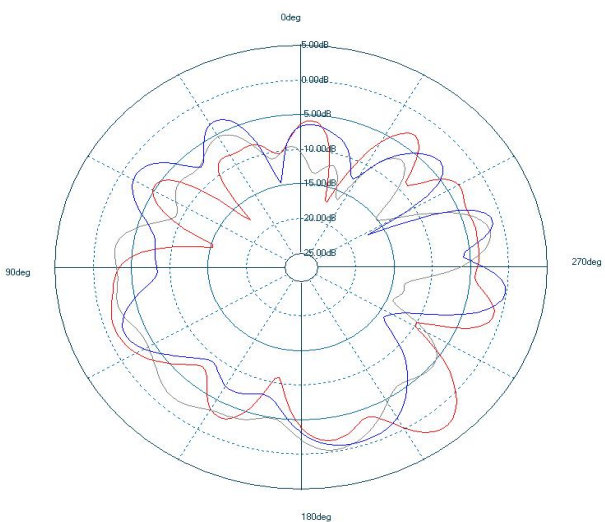
## XOY



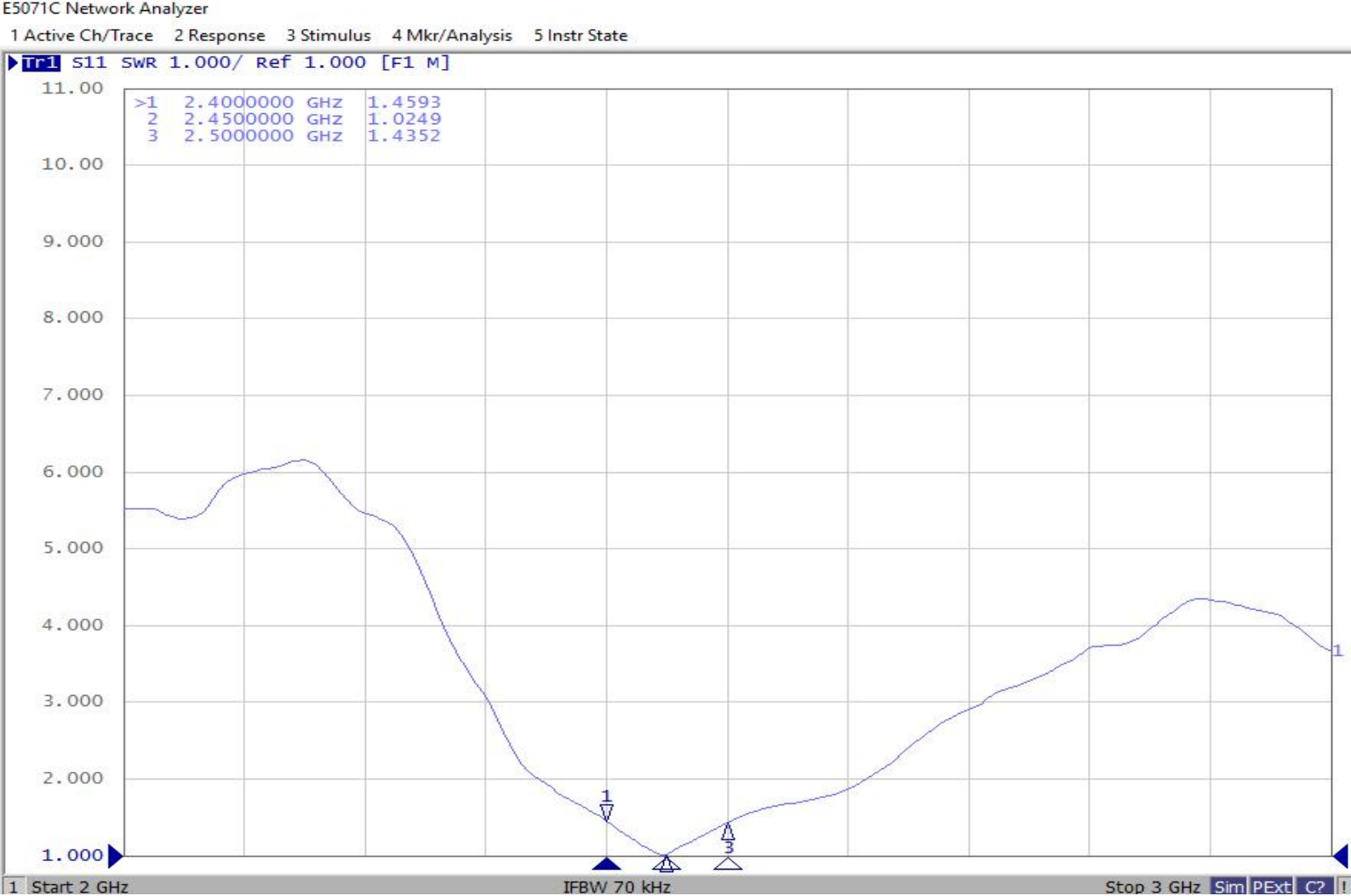
## XOZ



## YOZ



# BT Passive debugging data: VSWR



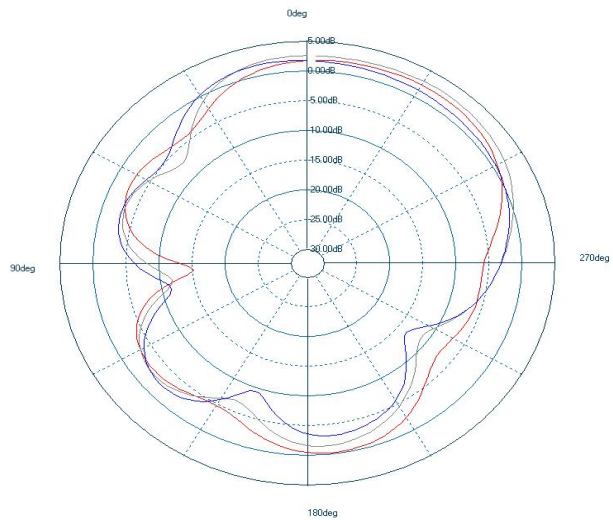
# BT Passive debugging data:Efficiency/Gain



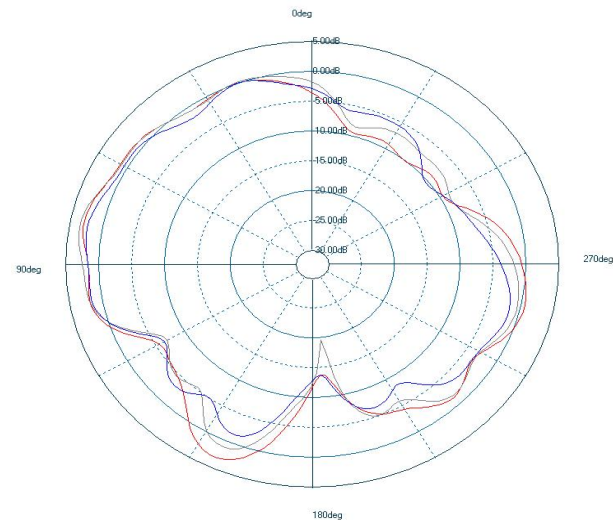
Frequency (MHz)	Efficiency	Efficiency. dB	Gain . dB
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2430	60%	-2.19	2.26
2440	60%	-2.20	2.16
2450	61%	-2.17	2.32
2460	60%	-2.24	2.18
2470	58%	-2.37	1.91
2480	57%	-2.44	1.82
2490	55%	-2.60	1.84
2500	55%	-2.62	1.82

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

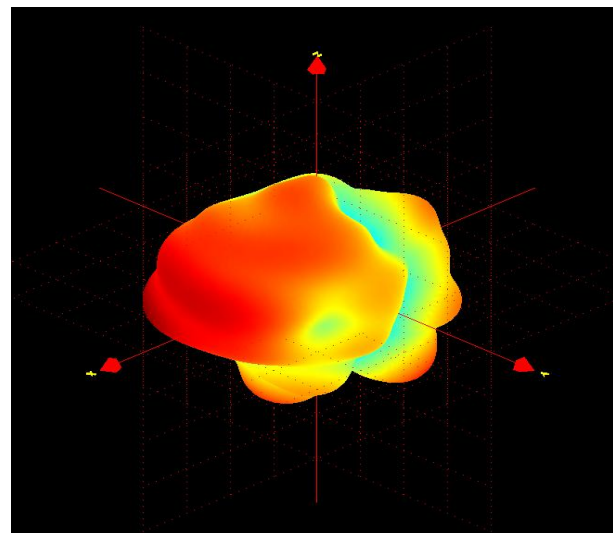
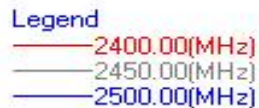
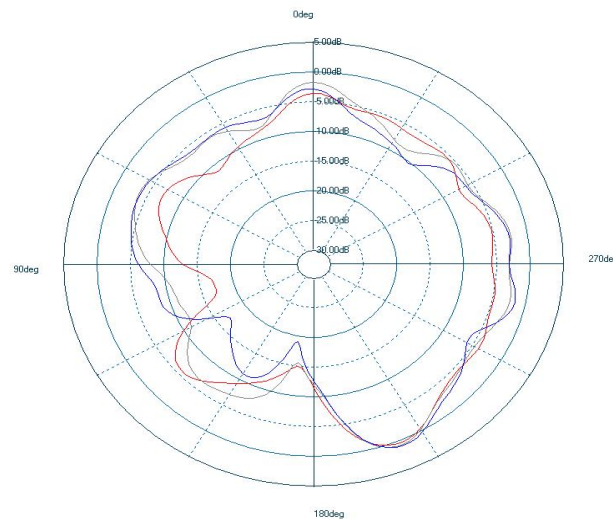
XOY



XOZ

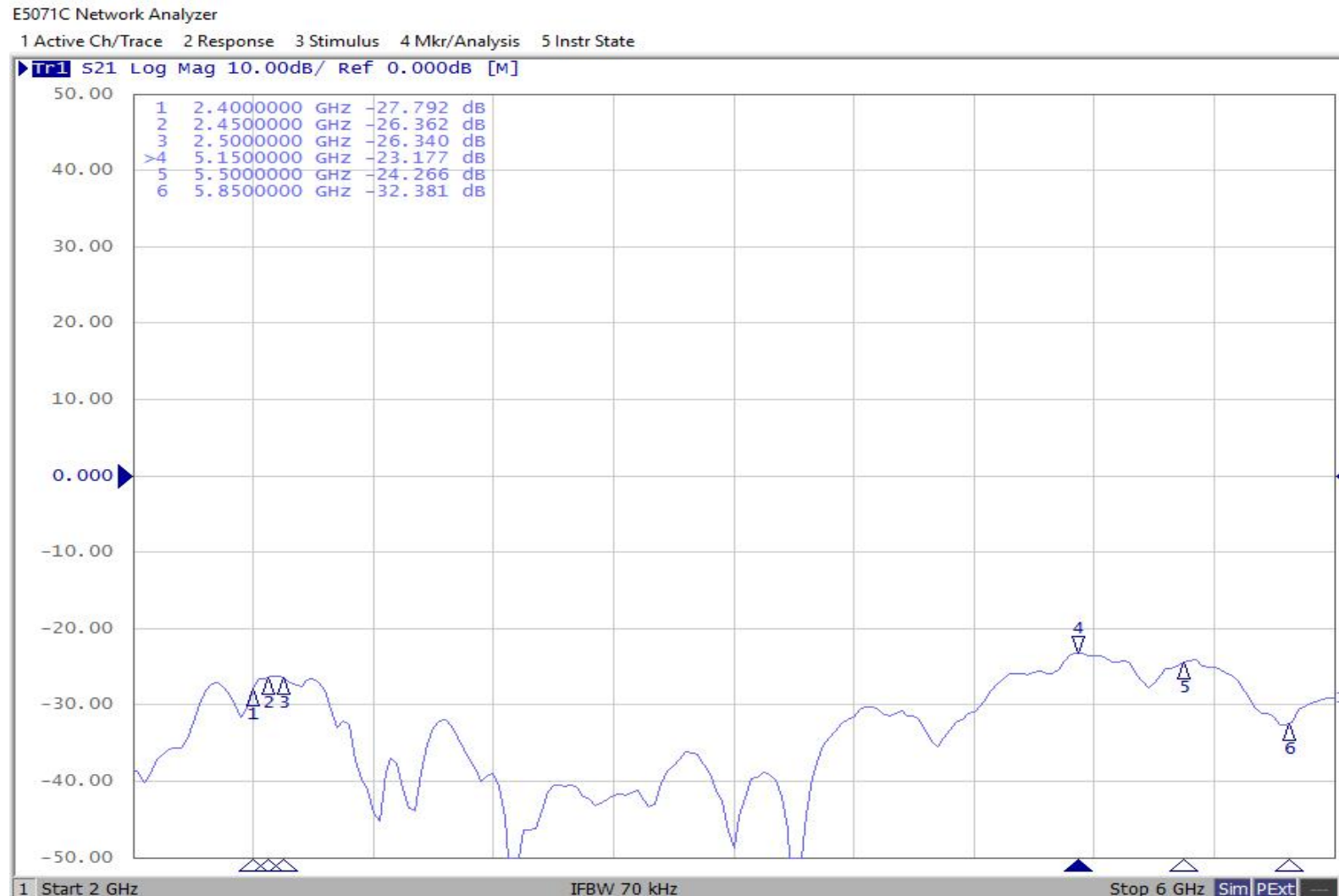


YOZ

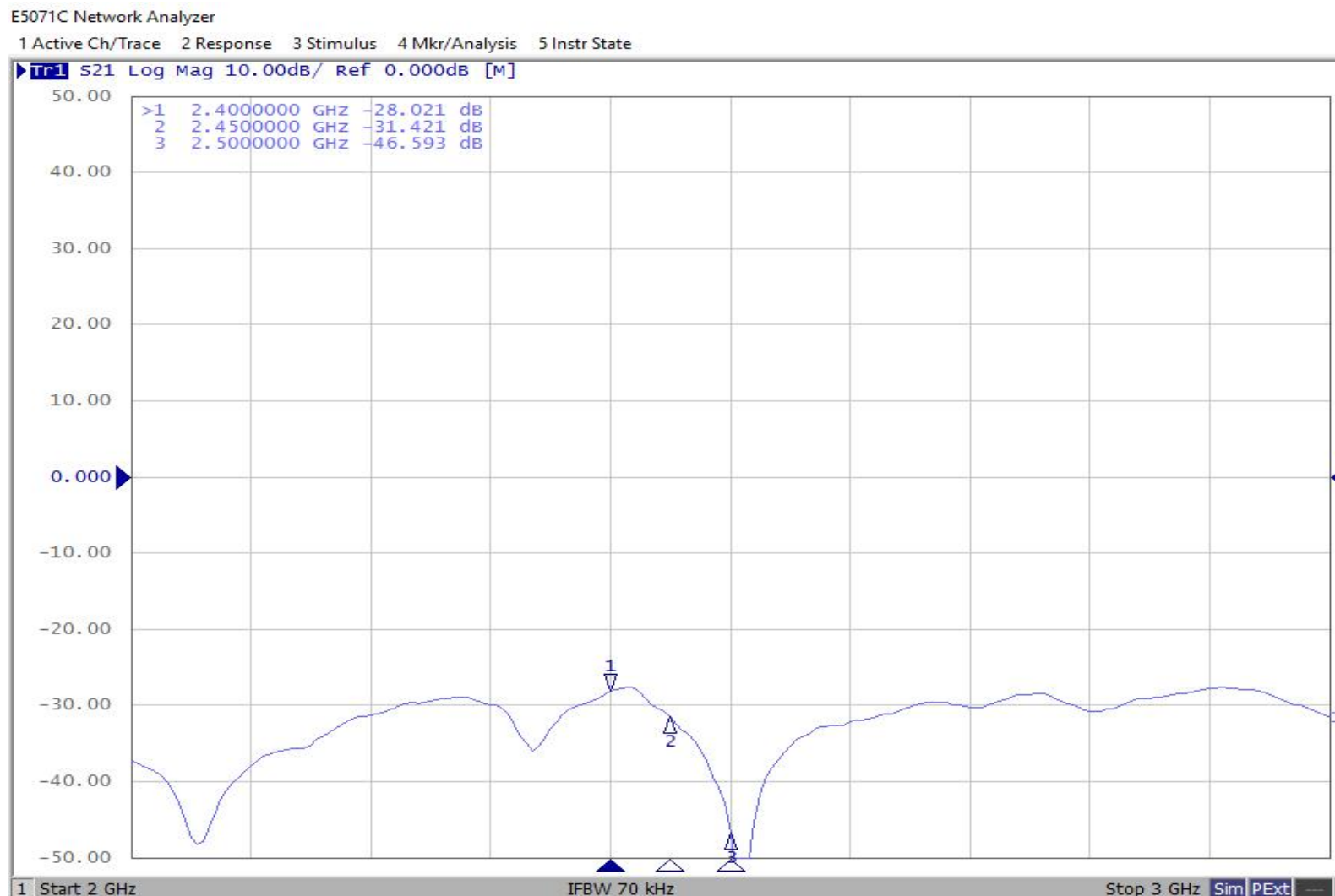




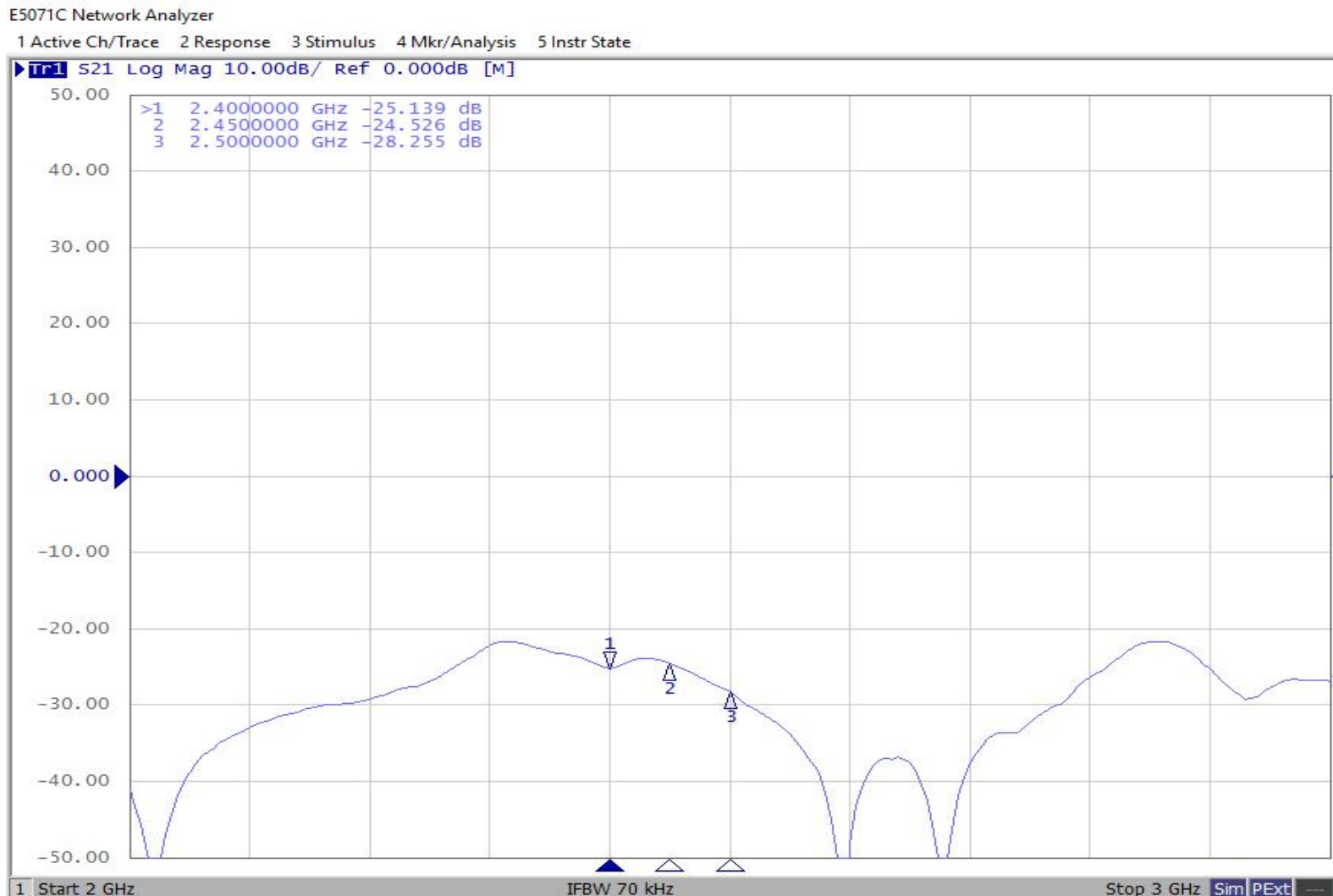
# Passive debugging data:WIFI 1&WIFI 2 Isolation degree



# Passive debugging data:WIFI 1&BT Isolation degree



# Passive debugging data:WIFI 2&BT Isolation degree



# Thank You

