



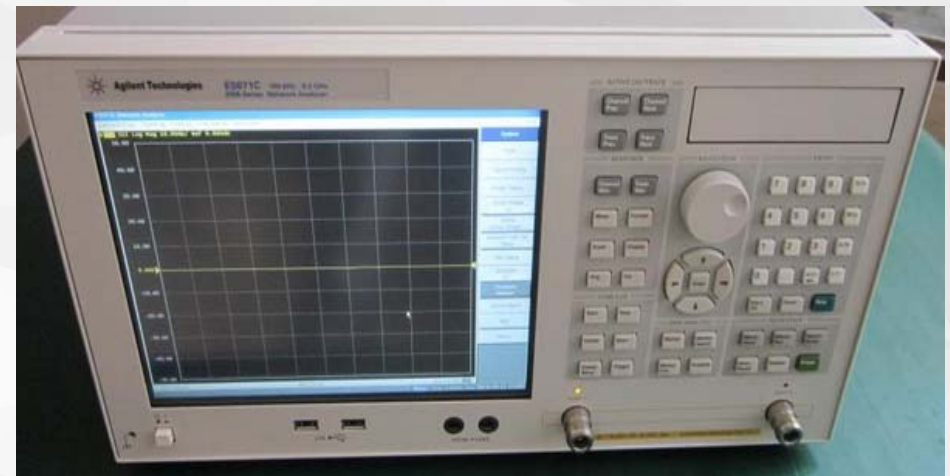
STA1020 WiFi Antenna test report

Project Information

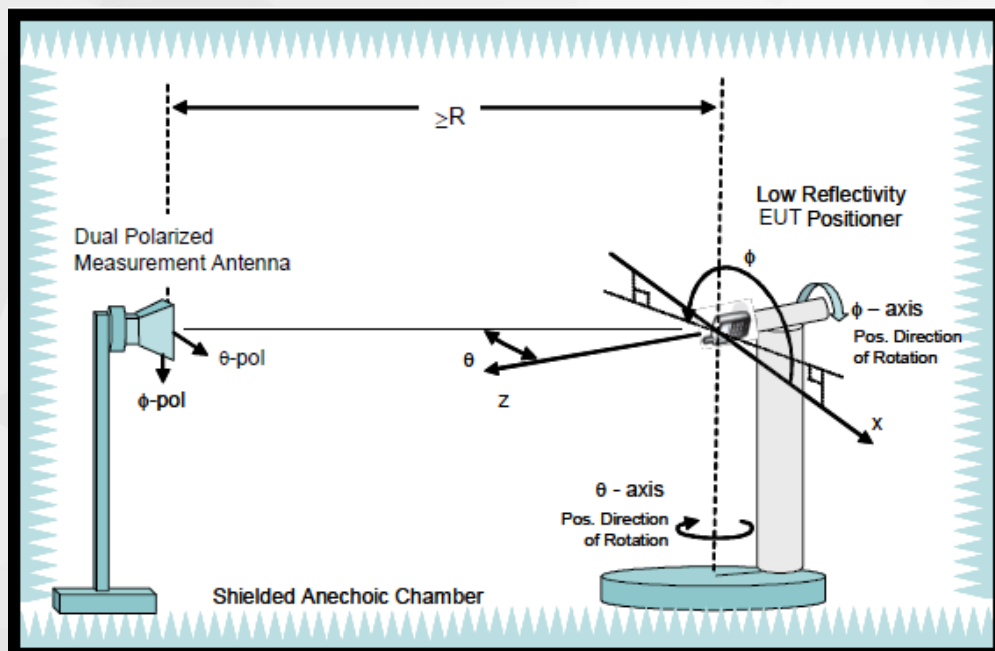
项目名称 Project Name	STA1020
工作频段 Working Band	2.4~2.5GHz/5.15~5.85GHz
规格 Description	
版本 Version	V1.0
日期 Date	2020-2-22

Debug Instrument

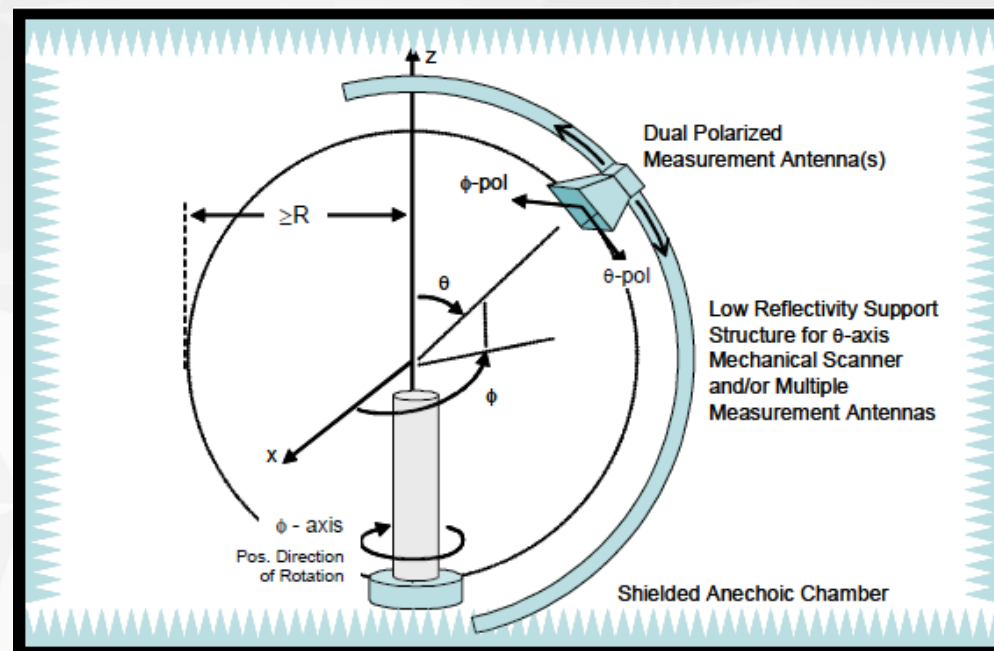
Network Analyzer	Agilent E5071C
Frequency Range	100KHz ~ 8.5GHz
Test Item	Return Loss/VSWR/Smith Chart /Isolation



Typical Setup for Test System

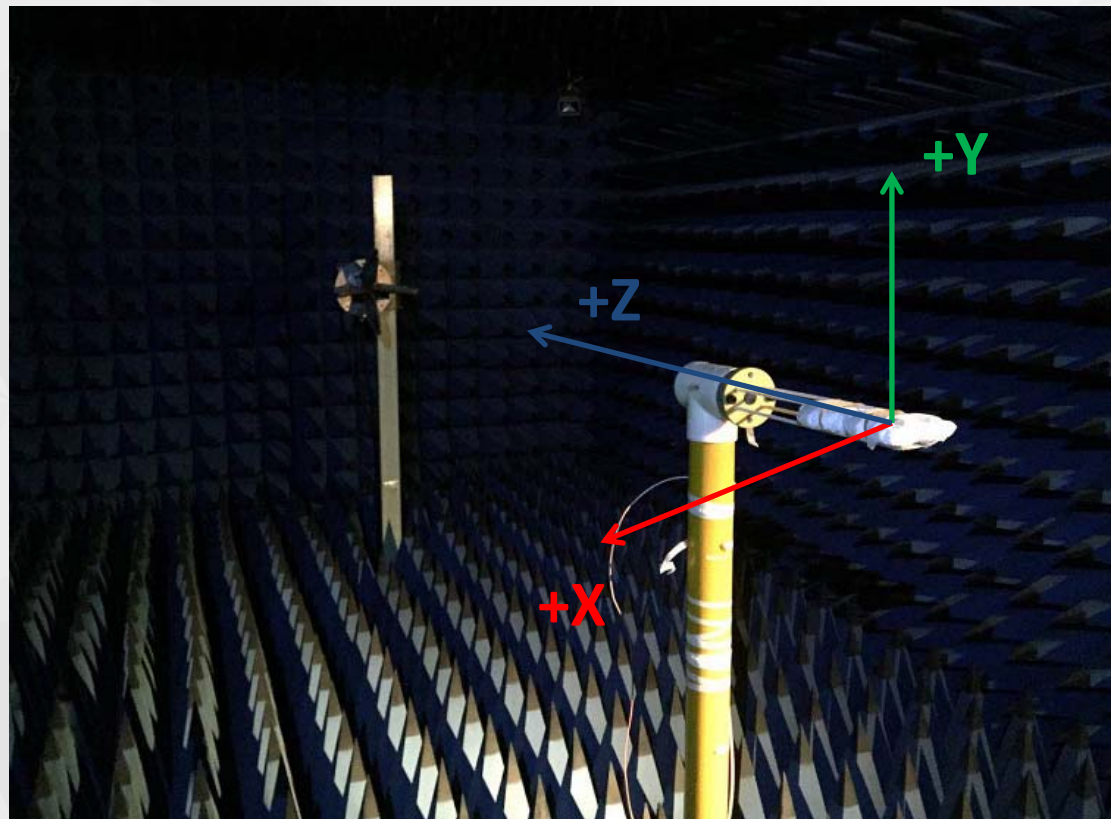


Combined-Axes System

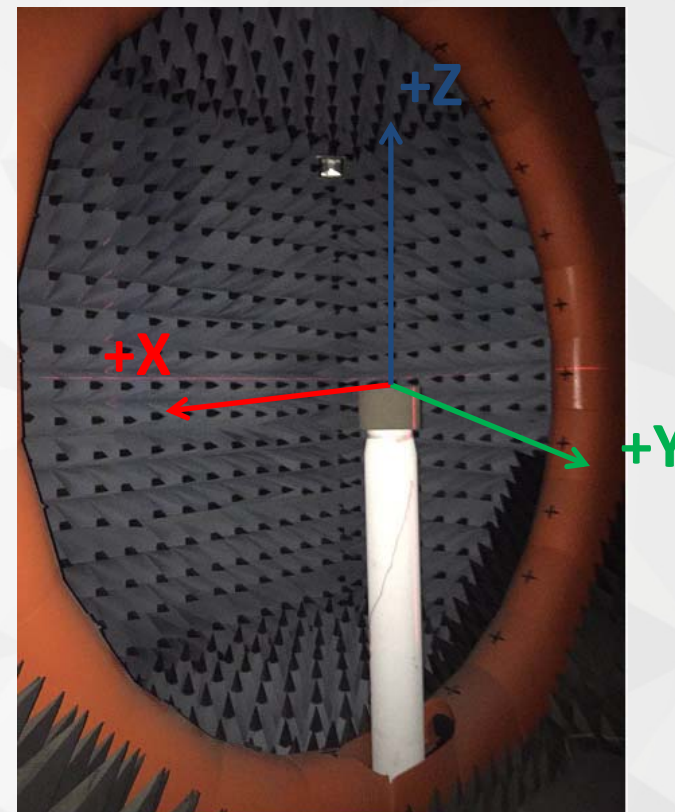


Distributed-Axes System

Anechoic Chamber



Combined-Axes System



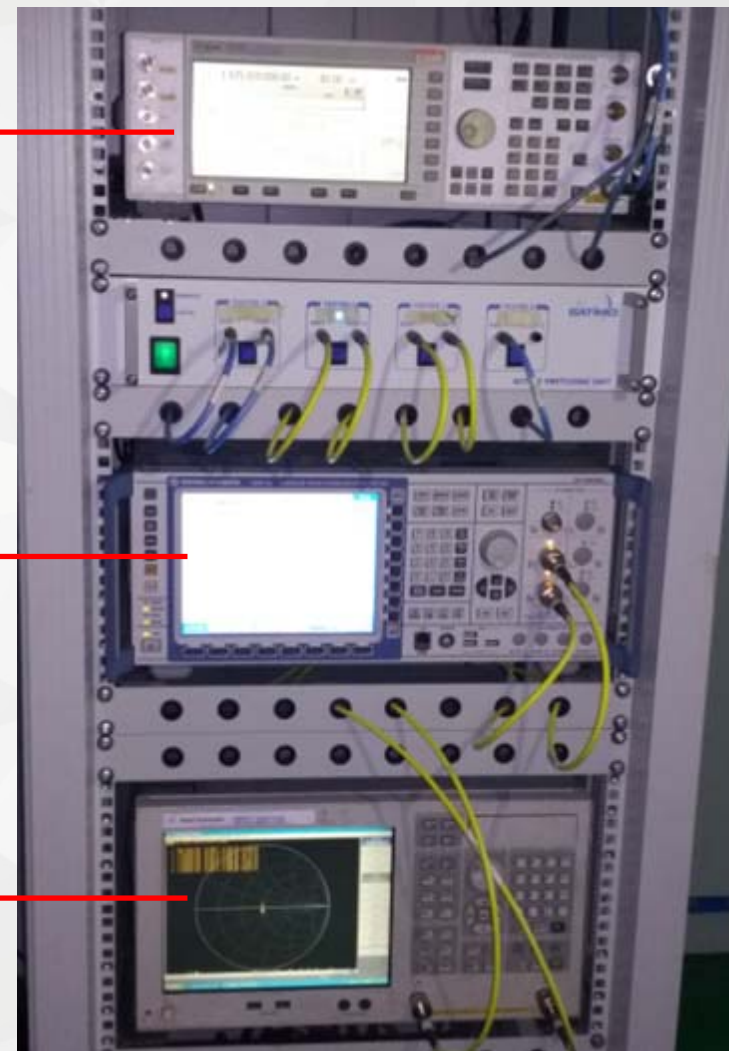
Distributed-Axes System

Test Instrument

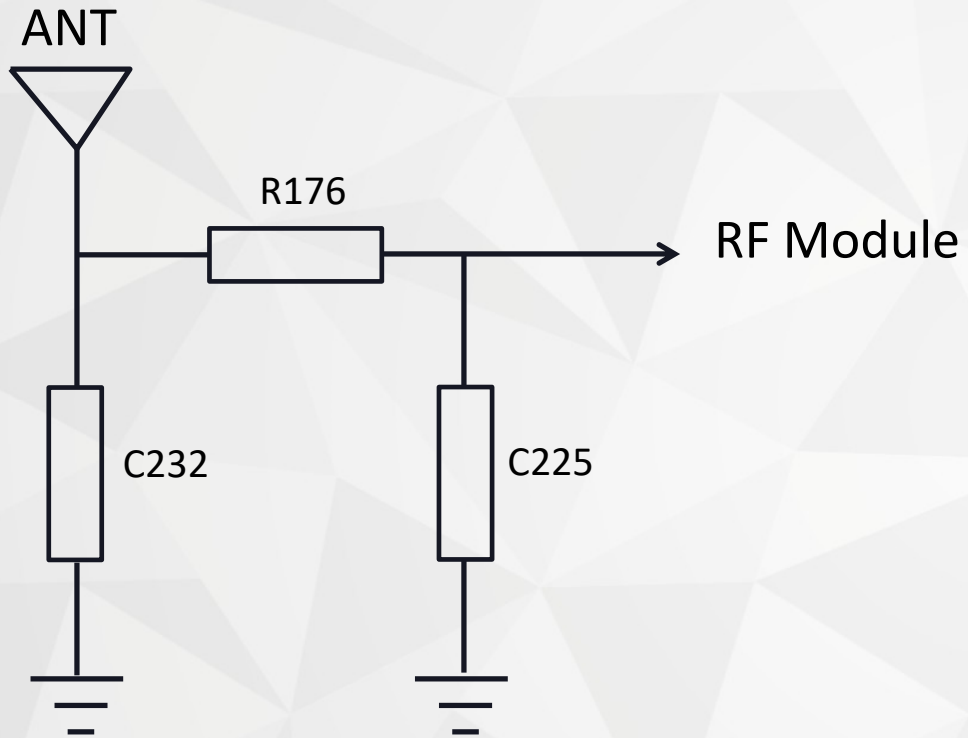
Generator	Agilent E4438C
Test Item	GPS

Radio Communication Tester	R&S CMW500
Test Item	Active Test

Network Analyzer	Agilent E5071C
Test Item	Passive Test

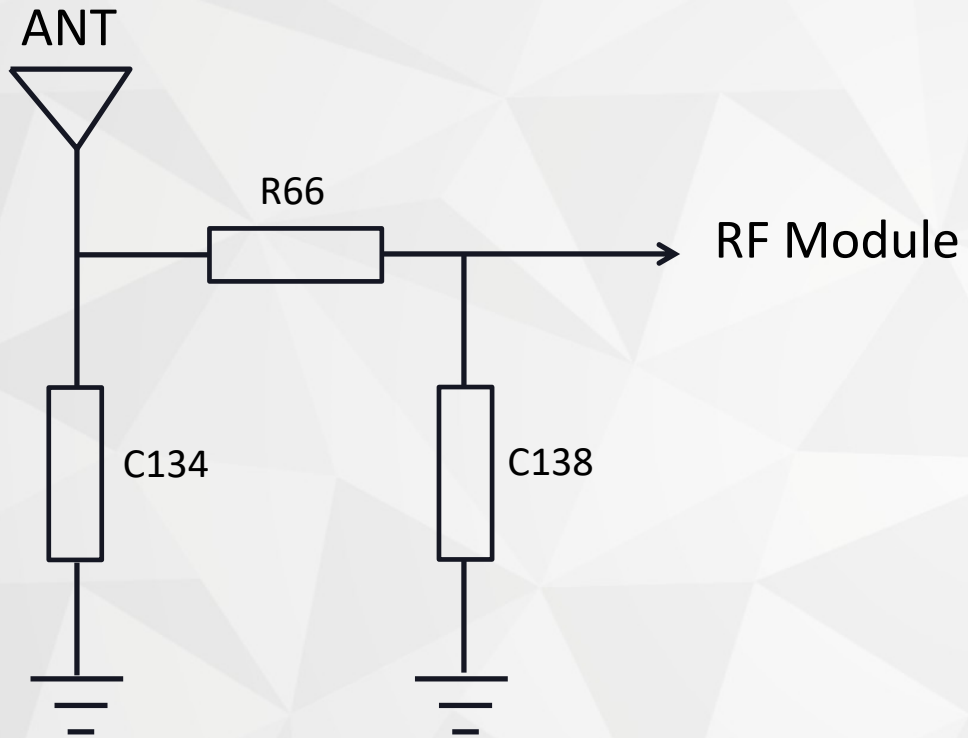


Matching Circuit (2.4G ANT0)



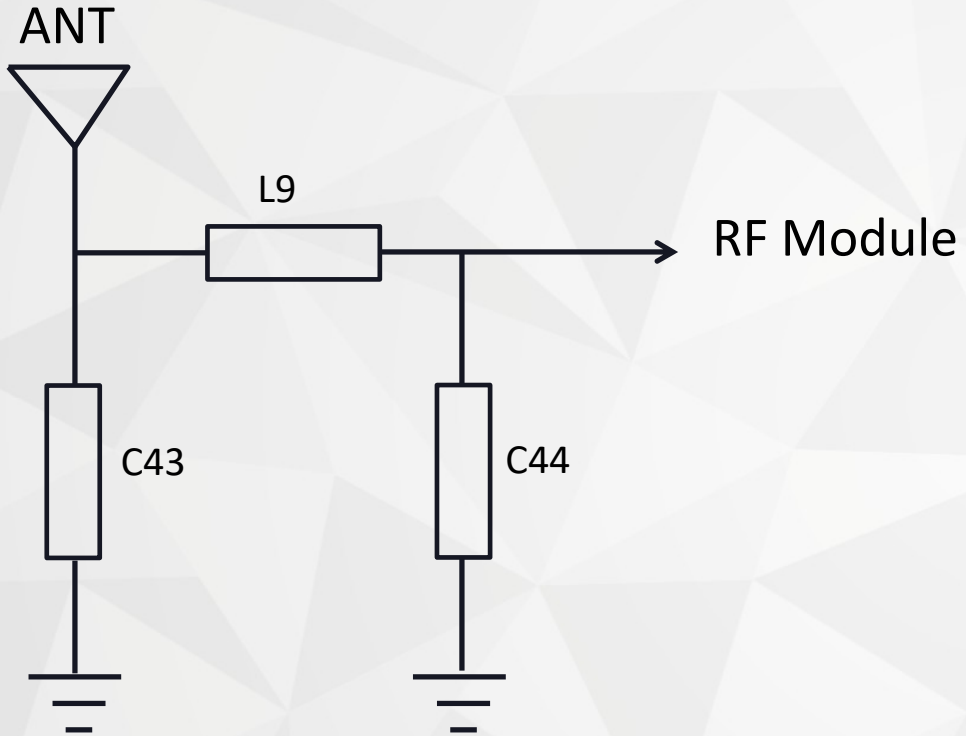
C232	/
R176	1PF
C225	/

Matching Circuit (2.4G ANT1)



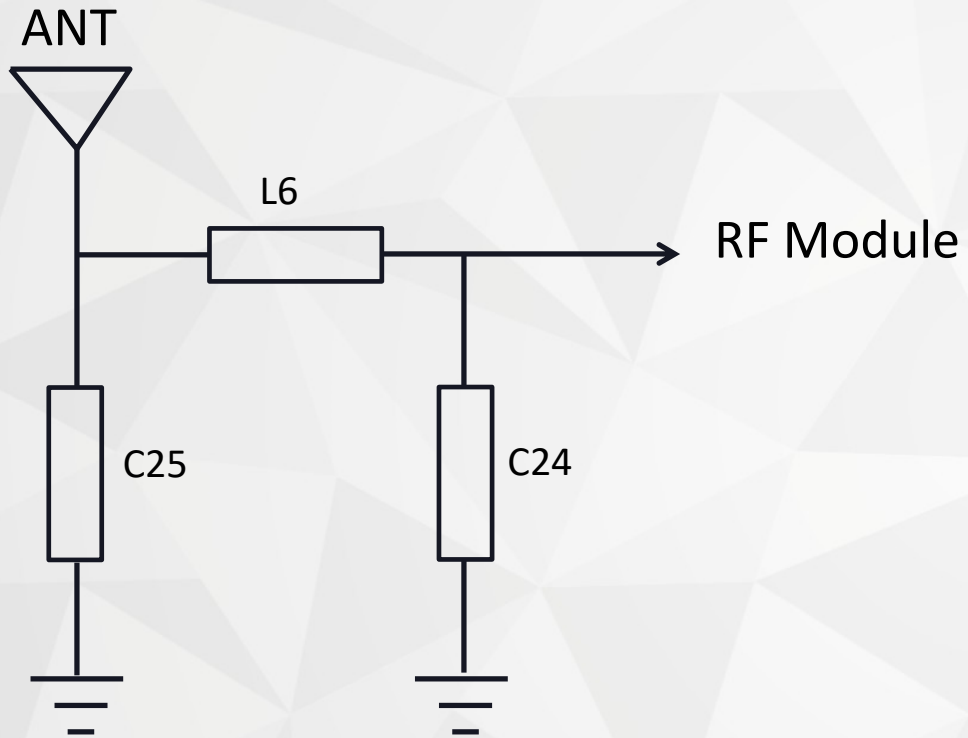
C134	0.5PF
R66	3NH
C138	/

Matching Circuit (5G ANT0)



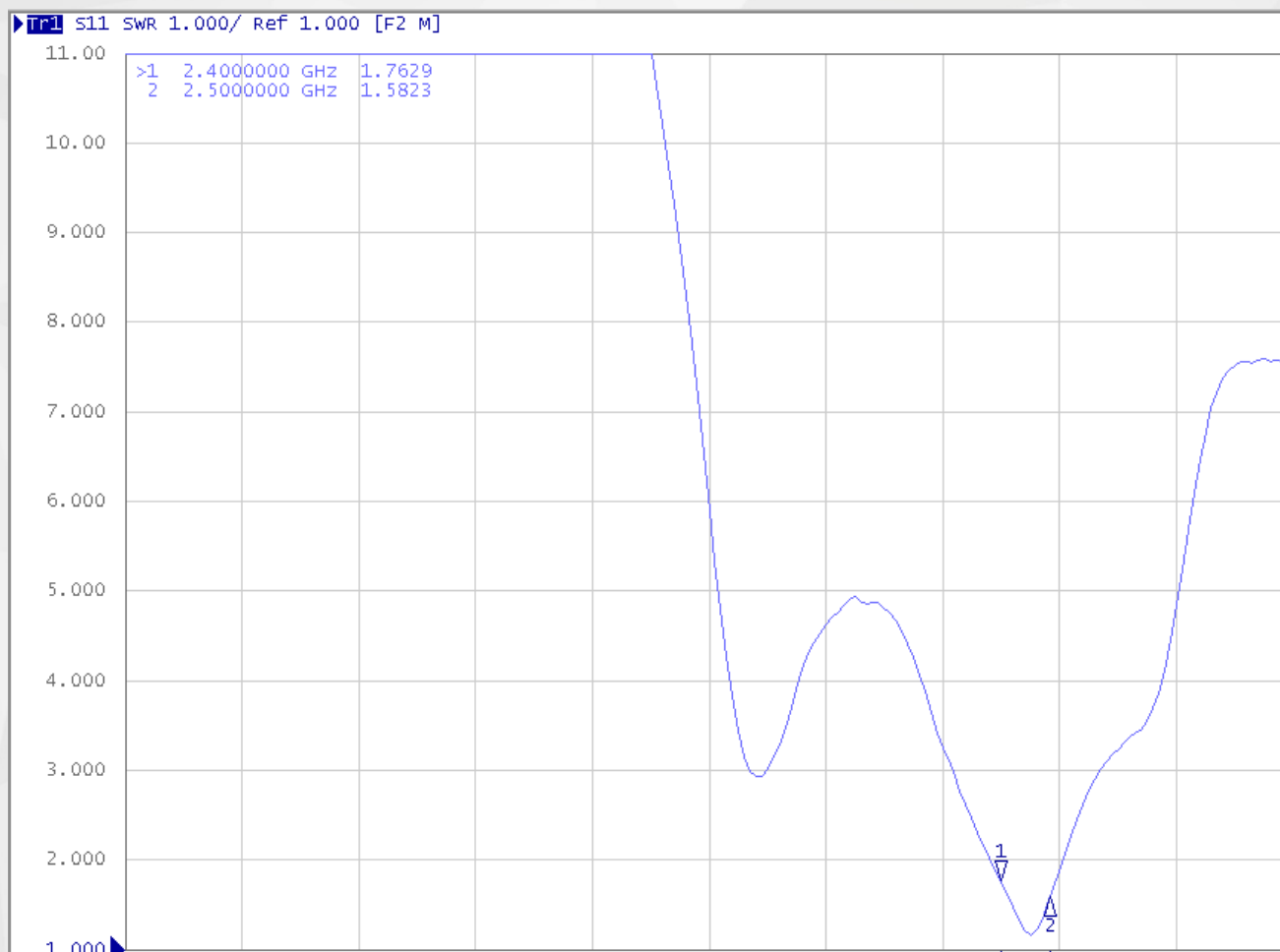
C43	/
L9	0ohm
C44	/

Matching Circuit (5G ANT1)

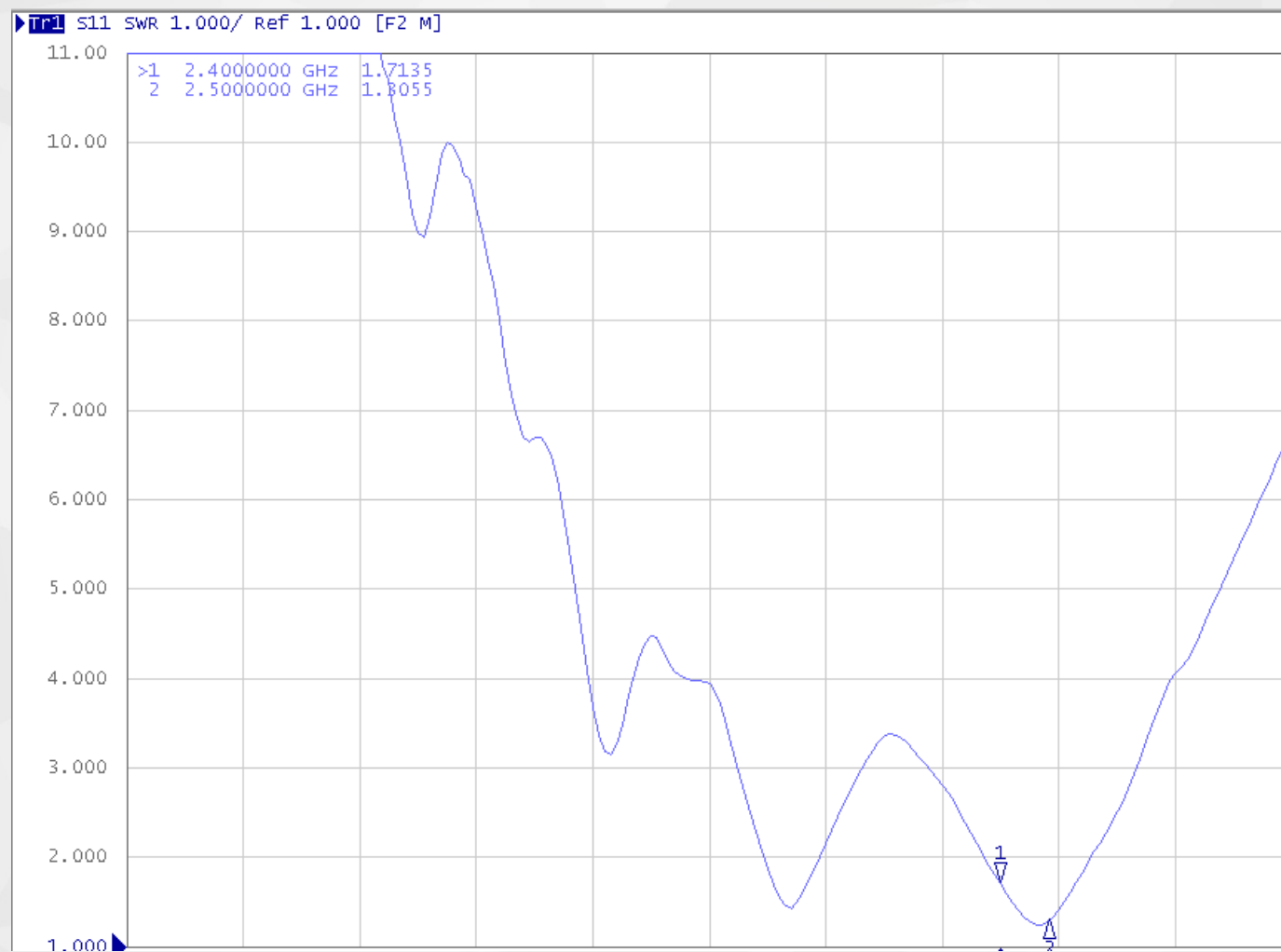


C25	/
L6	0.5PF
C24	1.8NH

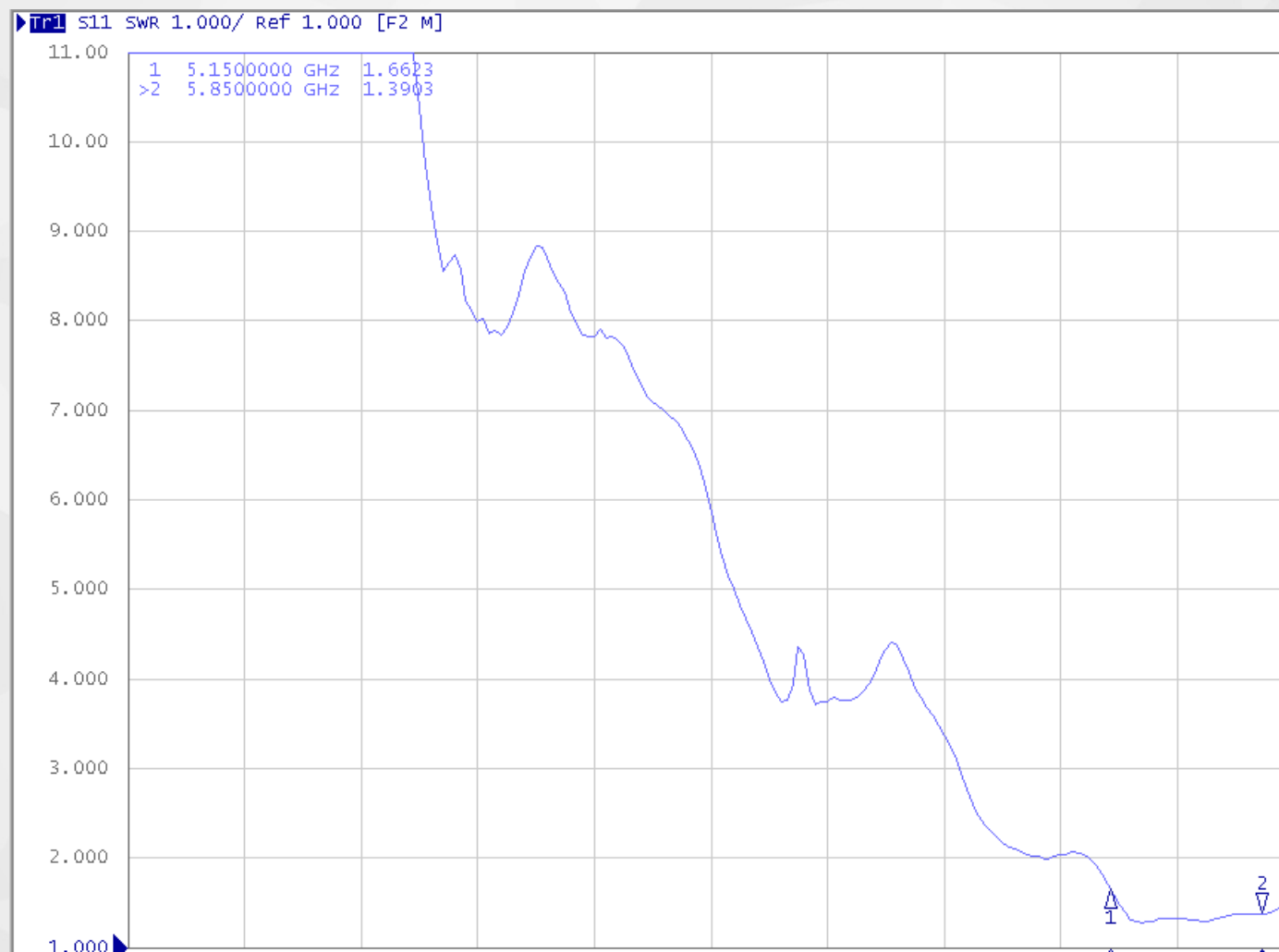
VSWR (2.4G ANT0)



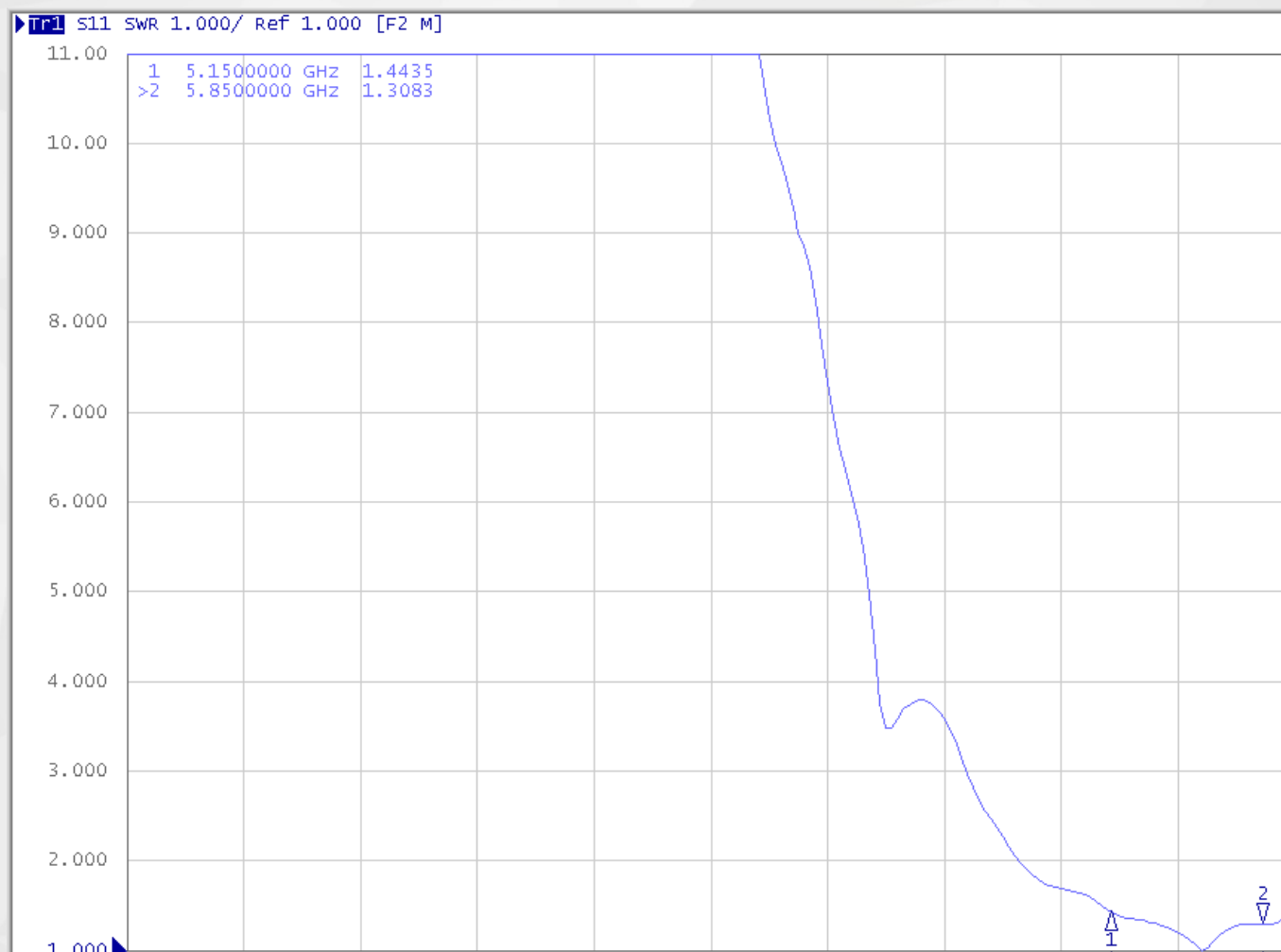
VSWR (2.4G ANT1)



VSWR (5G ANT0)



VSWR (5G ANT1)



Test Result – Gain/Efficiency

2.4G ANT0

Freq.(MHz)	Gain(dBi)	Efficiency
2400	2.21	57.2%
2410	2.27	57.7%
2420	2.13	56.5%
2430	2.01	54.4%
2440	2.01	53.8%
2450	1.89	52.6%
2460	1.69	51.4%
2470	1.37	50.5%
2480	0.73	50.5%
2490	0.31	48.8%
2500	0.04	47.8%

2.4G ANT1

Freq.(MHz)	Gain(dBi)	Efficiency
2400	1.82	54.0%
2410	1.71	52.8%
2420	1.20	52.7%
2430	1.32	54.2%
2440	1.43	53.7%
2450	1.23	53.5%
2460	1.52	54.9%
2470	1.77	56.0%
2480	1.20	52.8%
2490	1.14	52.0%
2500	1.24	52.3%

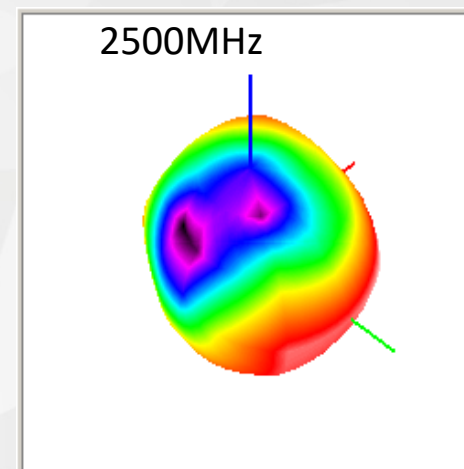
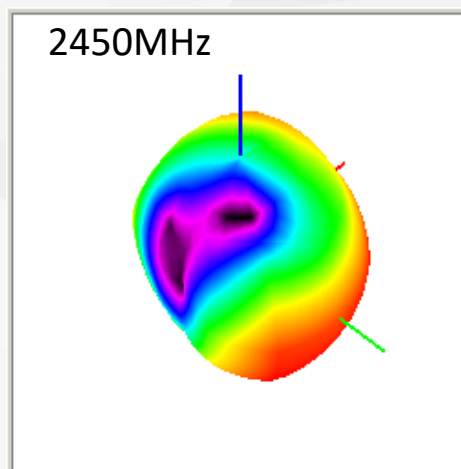
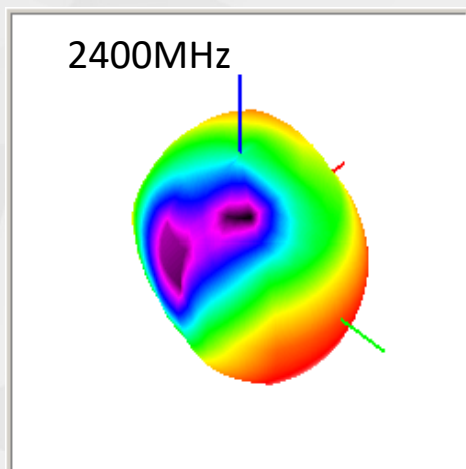
Test Result – Gain/Efficiency

5G ANT0		
Freq.(MHz)	Gain(dBi)	Efficiency
5150	2.52	71.0%
5200	2.50	71.7%
5250	2.18	74.4%
5300	2.11	77.4%
5350	1.95	79.9%
5400	2.01	76.5%
5450	2.25	73.8%
5500	2.50	74.8%
5550	3.50	75.7%
5600	3.12	77.0%
5650	2.72	70.3%
5700	2.37	62.3%
5750	2.47	70.0%
5800	2.49	69.1%
5850	2.47	74.2%

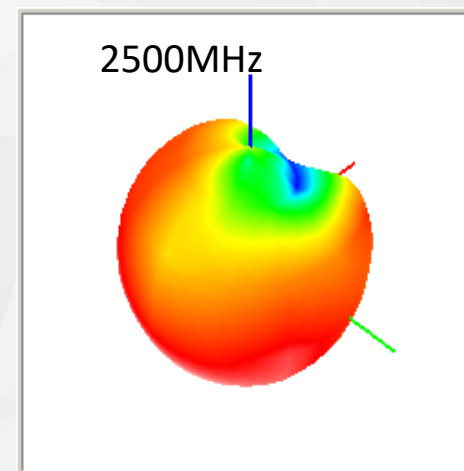
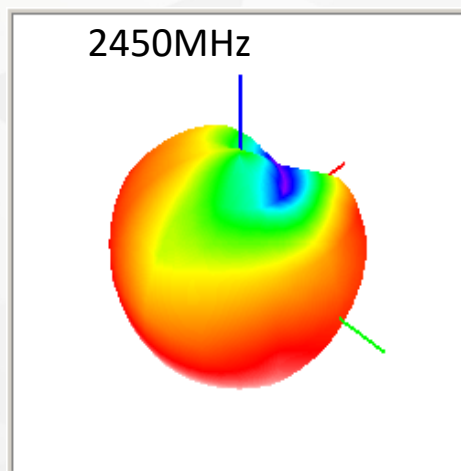
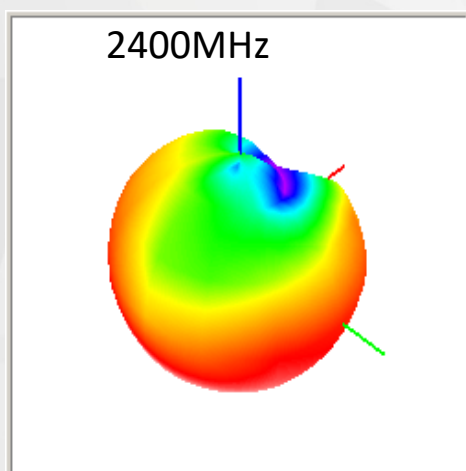
5G ANT1		
Freq.(MHz)	Gain(dBi)	Efficiency
5150	2.21	67.6%
5200	2.86	75.0%
5250	3.14	78.6%
5300	2.97	79.0%
5350	1.97	63.7%
5400	2.42	64.2%
5450	2.62	67.8%
5500	2.74	68.2%
5550	3.30	67.3%
5600	2.92	67.5%
5650	2.94	63.8%
5700	2.59	61.1%
5750	2.73	69.1%
5800	2.38	66.6%
5850	2.84	69.5%

3D Radiation Pattern – typical frequency point

2.4G ANT0

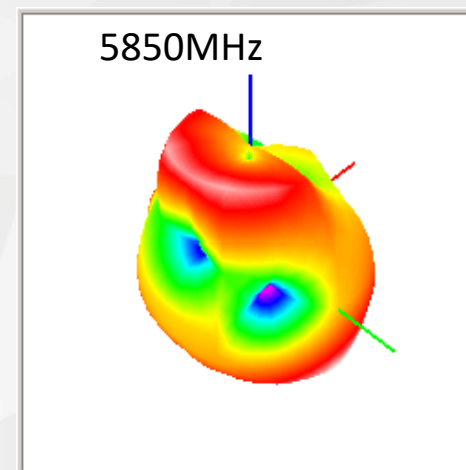
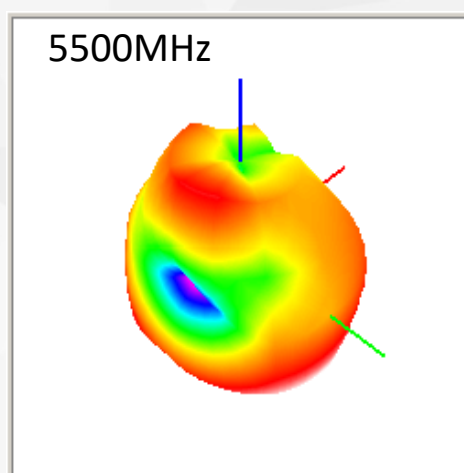
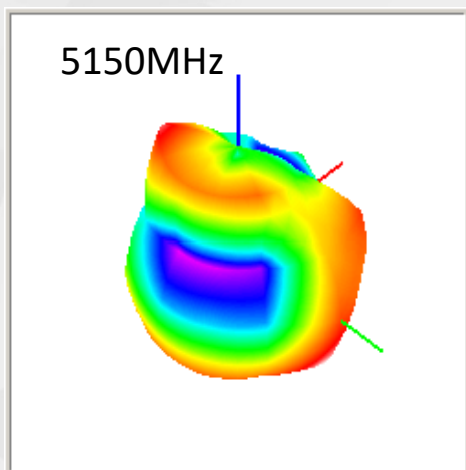


2.4G ANT1



3D Radiation Pattern – typical frequency point

5G ANT0



5G ANT1

