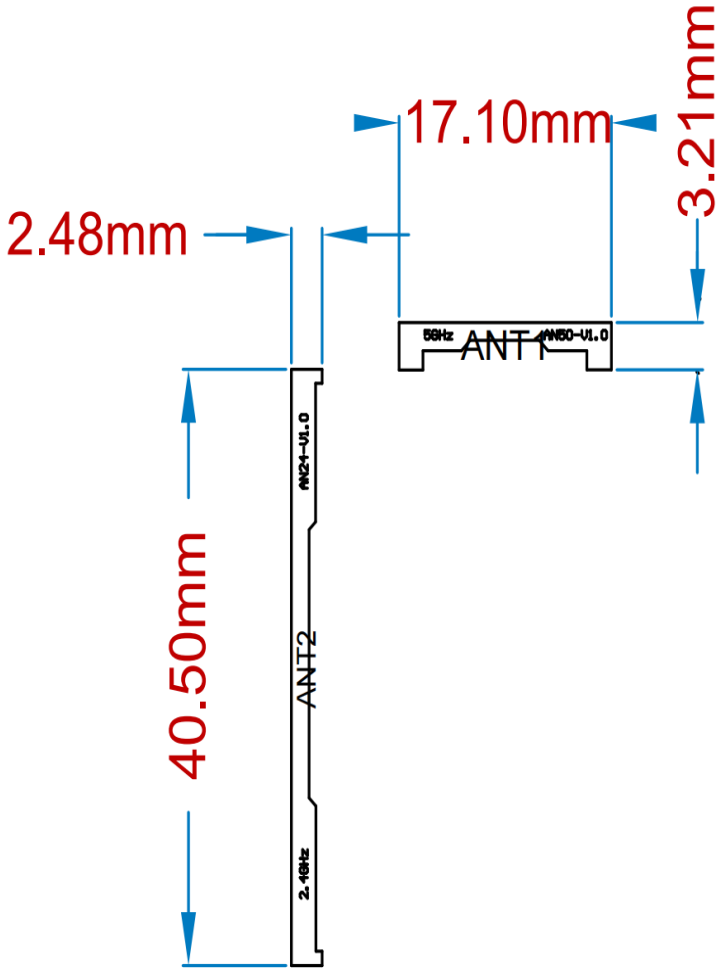
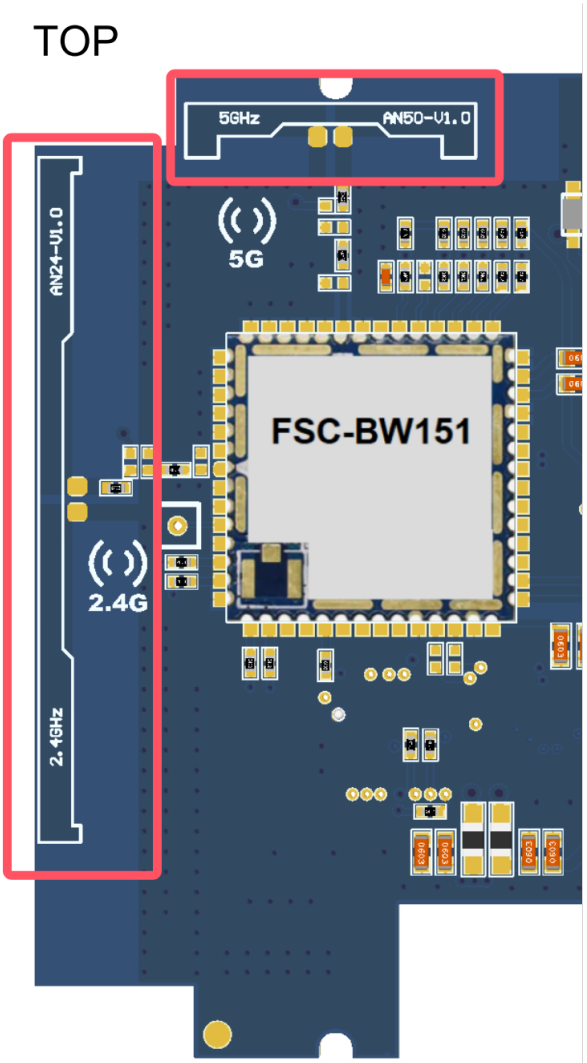
Antenna Report

Model Name	2.4G WIFI & 5G WIFI
Antenna plate	PCB On-board Antenna
Frequency	2.4~5.8GHz
Polarization	Linear, Vertical
Impedance	50 Ohm
Manufacture	Huizhou Rongyejia Electronics CO.,LTD
	Baiyun Road, TamsuiTtuhu, Huiyang District, Huizhou, China

2.4G WIFI & 5G WIFI Antenna Layout

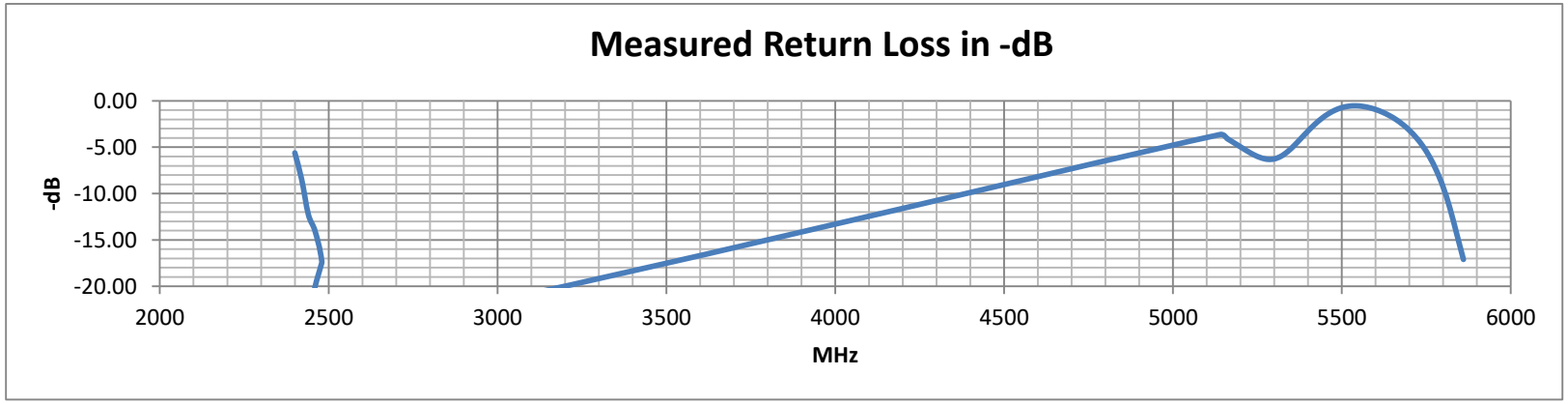


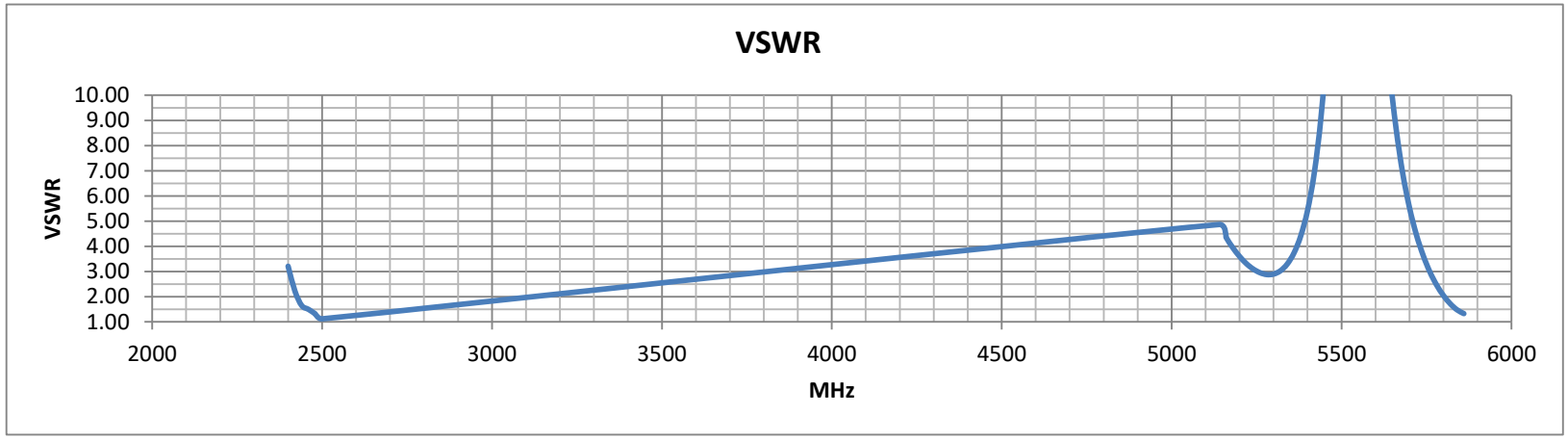
TOP



Frequency (MHz)	Measured Return Loss (dB)	VSWR
2400	-5.60	3.21
2420	-8.43	2.22
2440	-12.25	1.65
2460	-14.07	1.49
2480	-17.35	1.31
2500	-25.12	1.12
5140	-3.62	4.86
5160	-4.06	4.36
5180	-4.50	3.94
5200	-4.96	3.60
5220	-5.42	3.31
5240	-5.82	3.10
5260	-6.13	2.95
5280	-6.30	2.88
5300	-6.26	2.89
5320	-5.97	3.02
5340	-5.45	3.29
5360	-4.77	3.73
5380	-4.01	4.41
5400	-3.24	5.42
5420	-2.52	6.93
5440	-1.90	9.18
5460	-1.39	12.53
5480	-1.00	17.45
5500	-0.73	23.96
5520	-0.58	30.21
5540	-0.53	32.58
5560	-0.58	29.80
5580	-0.72	24.12
5600	-0.93	18.76
5620	-1.21	14.36
5640	-1.57	11.11
5660	-2.00	8.73
5680	-2.53	6.90
5700	-3.18	5.53

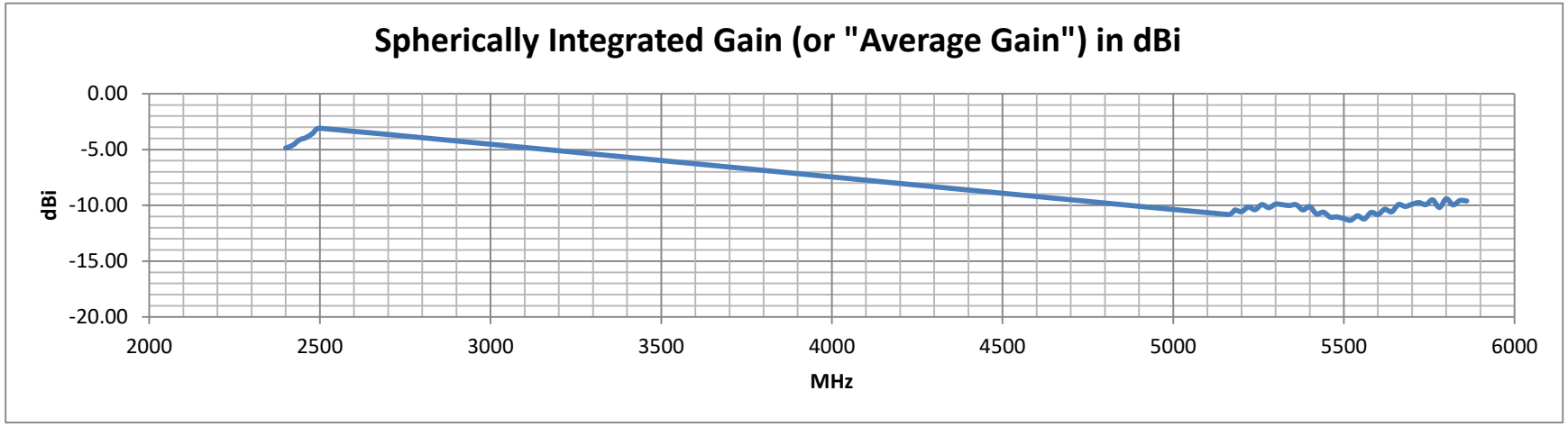
5720	-3.95	4.47
5740	-4.89	3.65
5760	-6.06	2.98
5780	-7.51	2.46
5800	-9.30	2.04
5820	-11.58	1.72
5840	-14.33	1.48
5860	-17.11	1.32

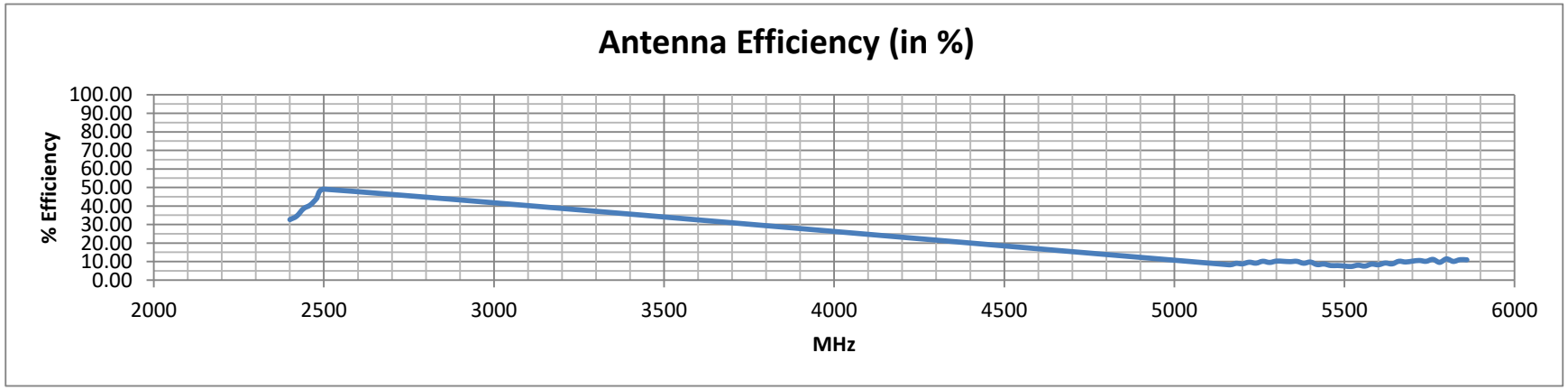




Frequency (MHz)	Integrated Spherical Total Isotropic Gain (dBi)	Radiation Efficiency (%)
2400	-4.86	32.66
2420	-4.62	34.51
2440	-4.14	38.55
2460	-3.92	40.55
2480	-3.53	44.36
2500	-3.09	49.09
5160	-10.82	8.28
5180	-10.42	9.08
5200	-10.57	8.77
5220	-10.15	9.66
5240	-10.39	9.14
5260	-9.93	10.16
5280	-10.21	9.53
5300	-9.89	10.26
5320	-9.94	10.14
5340	-10.02	9.95
5360	-9.94	10.14
5380	-10.41	9.10
5400	-10.11	9.75
5420	-10.78	8.36
5440	-10.61	8.69
5460	-11.05	7.85
5480	-11.04	7.87
5500	-11.19	7.60
5520	-11.33	7.36
5540	-10.94	8.05
5560	-11.22	7.55
5580	-10.63	8.65
5600	-10.82	8.28
5620	-10.35	9.23
5640	-10.58	8.75
5660	-9.93	10.16
5680	-10.10	9.77
5700	-9.90	10.23

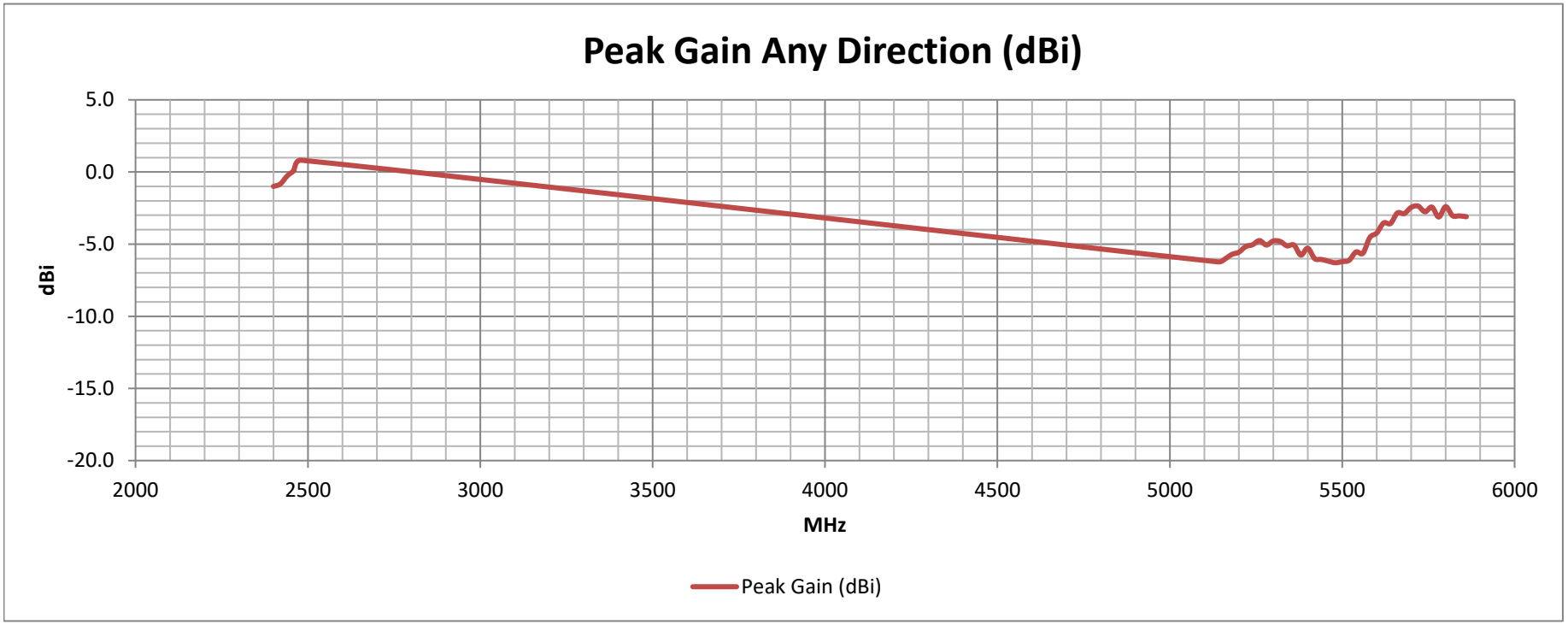
5720	-9.75	10.59
5740	-9.94	10.14
5760	-9.51	11.19
5780	-10.19	9.57
5800	-9.41	11.46
5820	-9.96	10.09
5840	-9.57	11.04
5860	-9.61	10.94





Frequency (MHz)	Peak Gain (dBi)
2400	-1.0
2420	-0.8
2440	-0.3
2460	0.1
2480	0.8
5140	-6.2
5160	-6.0
5180	-5.7
5200	-5.6
5220	-5.2
5240	-5.0
5260	-4.8
5280	-5.1
5300	-4.8
5320	-4.8
5340	-5.1
5360	-5.1
5380	-5.8
5400	-5.3
5420	-6.0
5440	-6.1
5460	-6.2
5480	-6.3
5500	-6.2
5520	-6.1
5540	-5.5
5560	-5.6
5580	-4.5
5600	-4.2
5620	-3.5
5640	-3.6
5660	-2.8
5680	-2.9
5700	-2.5

5720	-2.4
5740	-2.8
5760	-2.4
5780	-3.1
5800	-2.4
5820	-3.0
5840	-3.0
5860	-3.1



From IEEE Std 149 (1979) "IEEE Standard Test Procedures for Antennas"

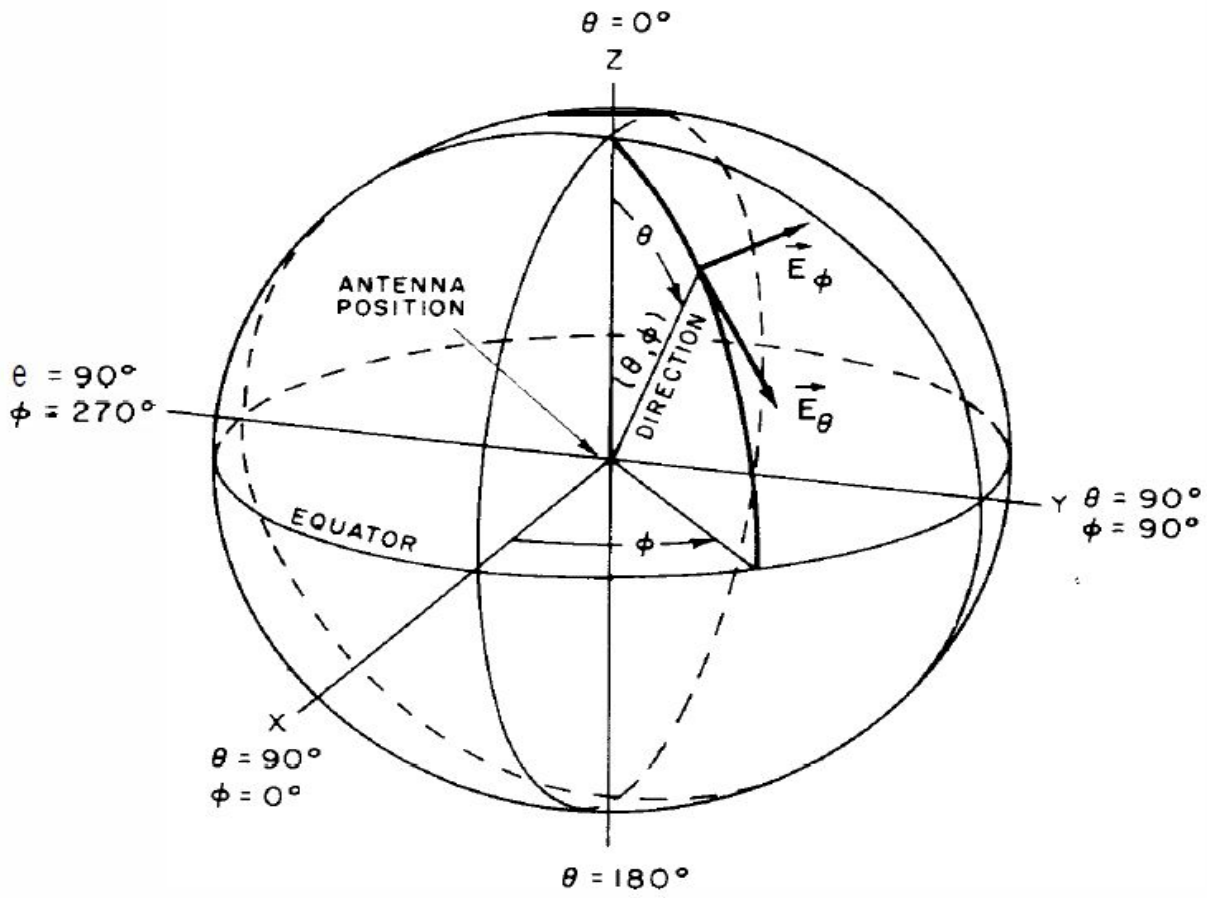
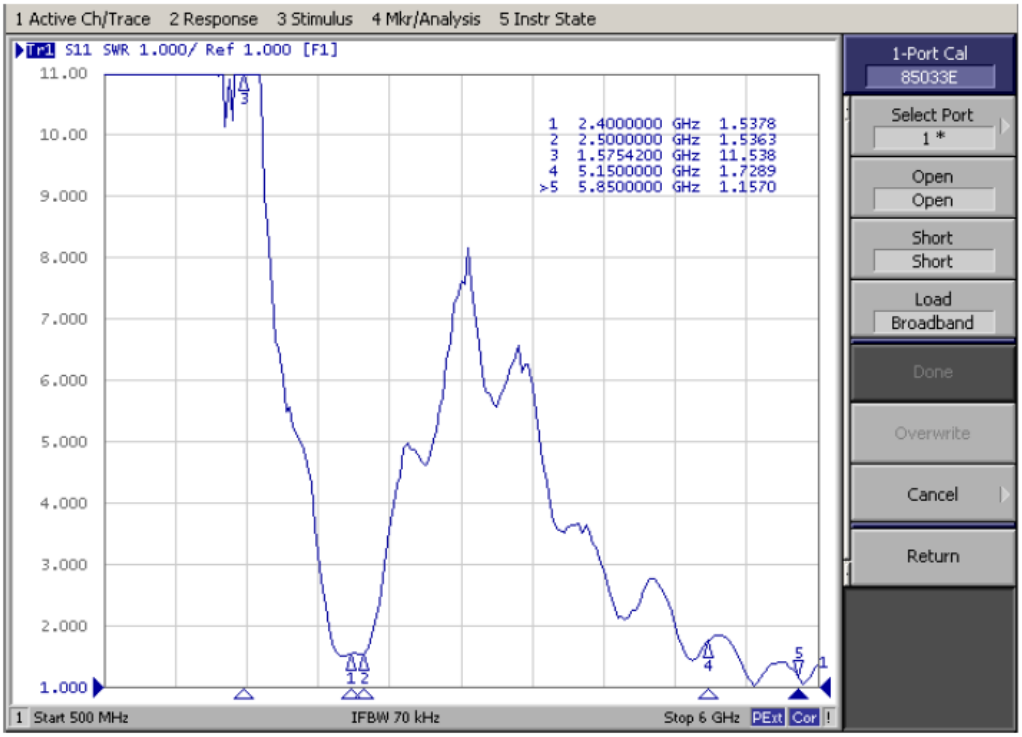


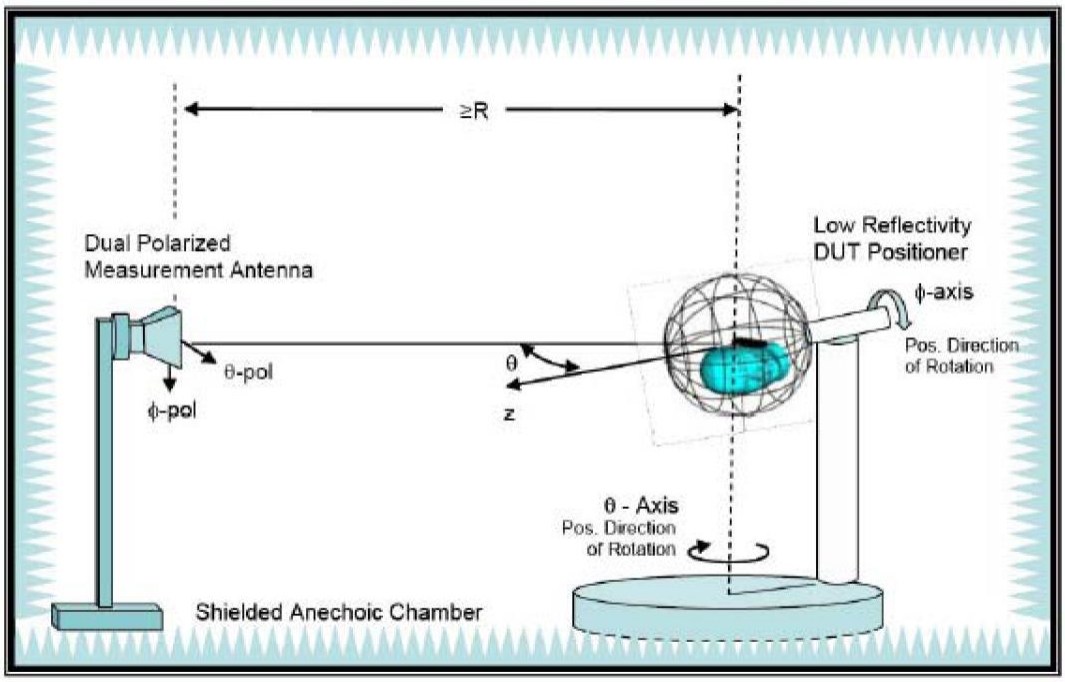
Fig 2
Standard Spherical Coordinate System Used in Antenna Measurements

S ParameterTest

Agilent E5071C Network Analyzer	

WiFi Antenna (NO.1)





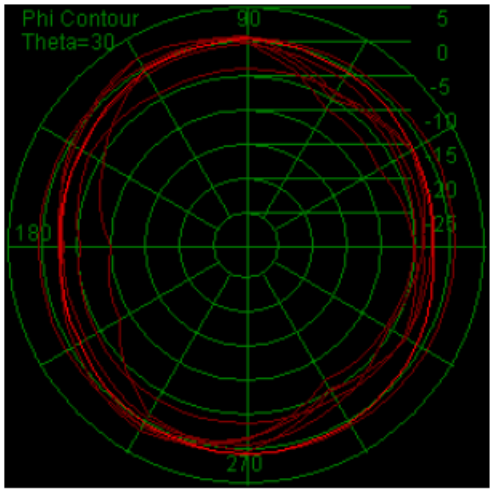
Configuration of 3D Chamber

2.4G

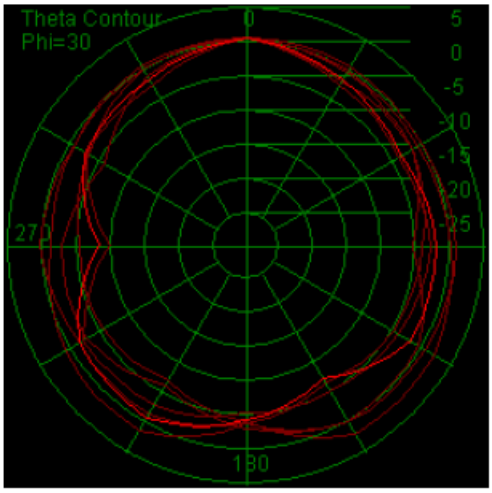
Patten

1.3 2D Radiation patterns test results (Passive Antenna)

XZ Plane

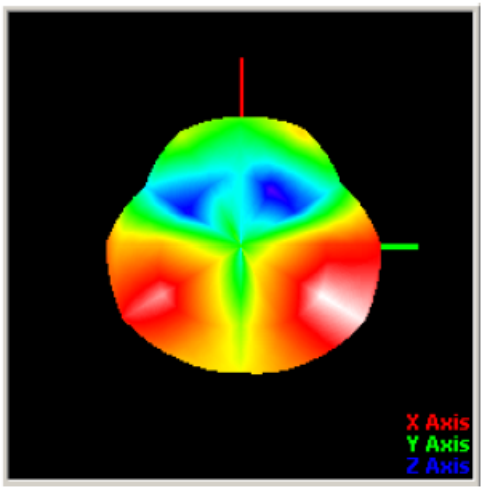


YZ Plane



1.5 3D Radiation patterns test results (Passive Antenna)

3D

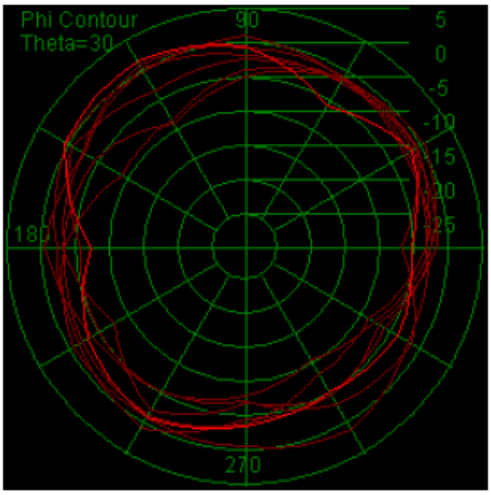


5G

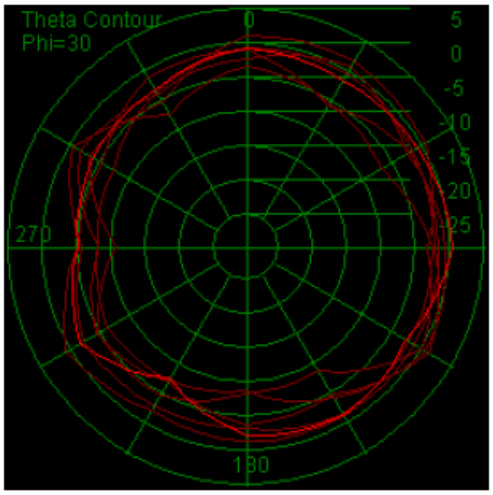
Patten

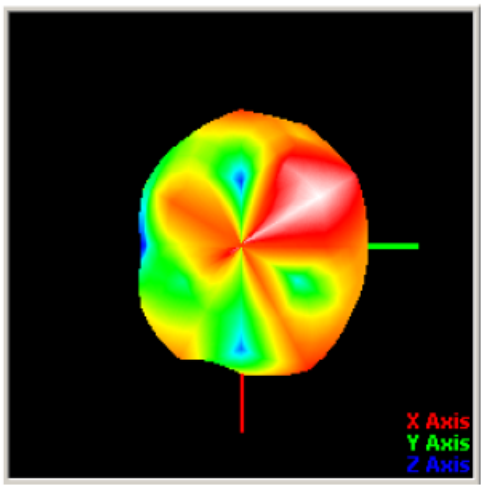
1.3 2D Radiation patterns test results (Passive Antenna)

XZ Plane



YZ Plane



1.5 3D Radiation patterns test results (Passive Antenna)

3D