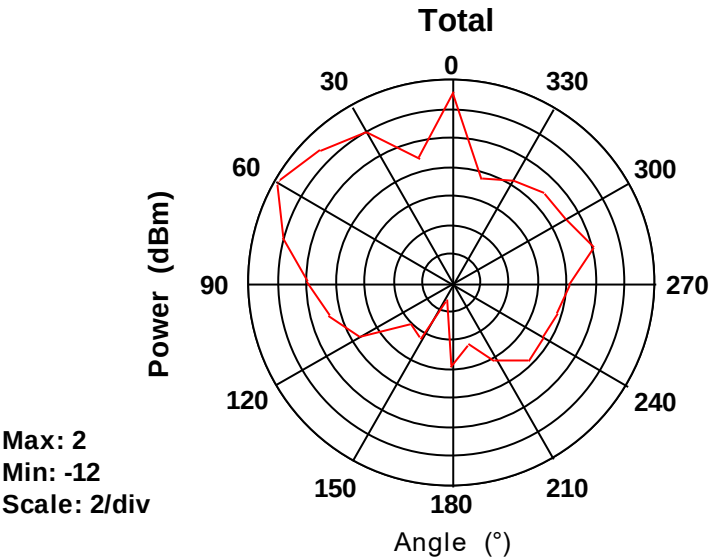
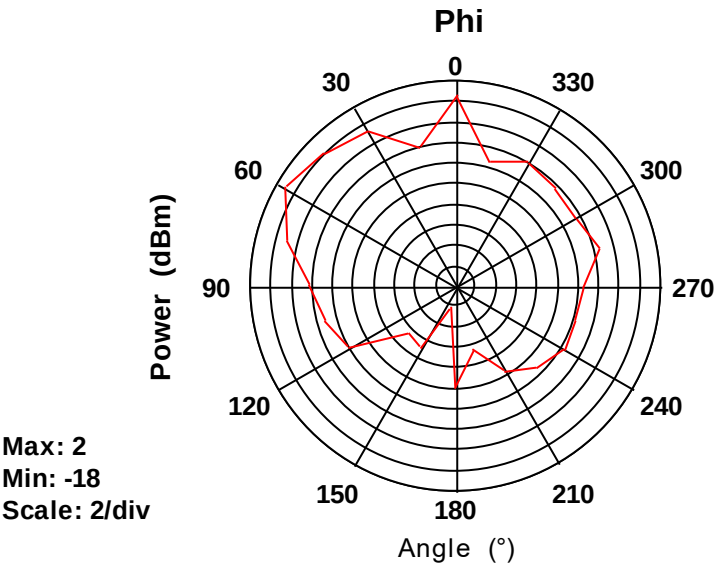
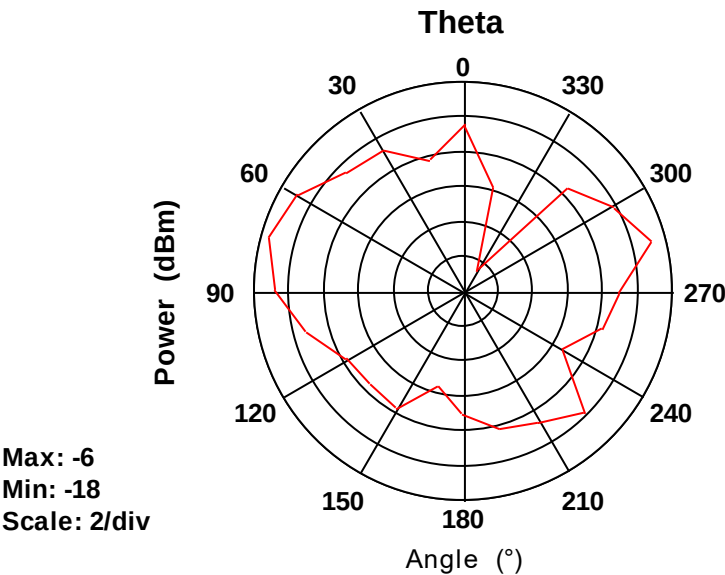
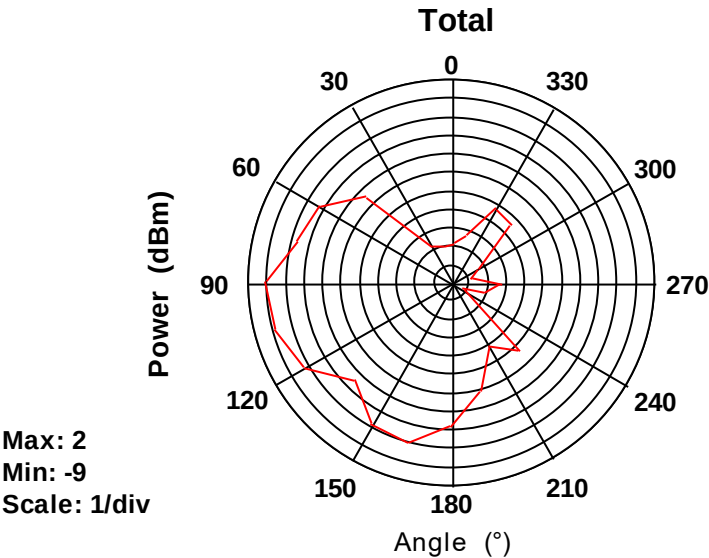
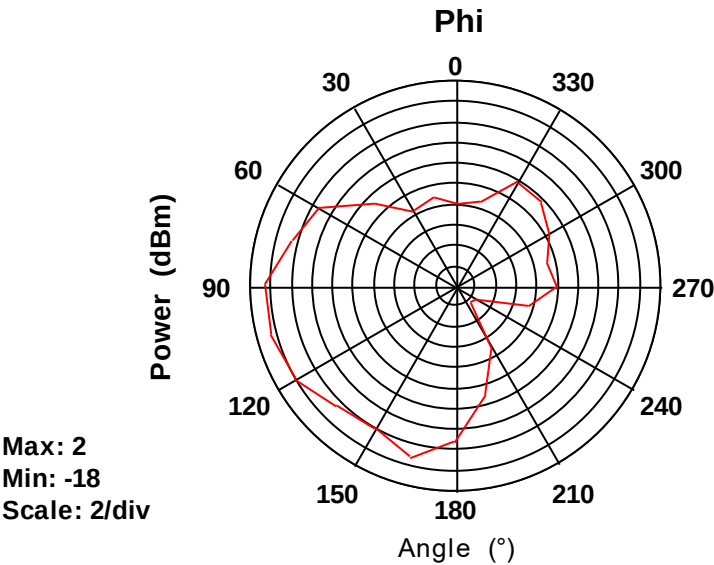
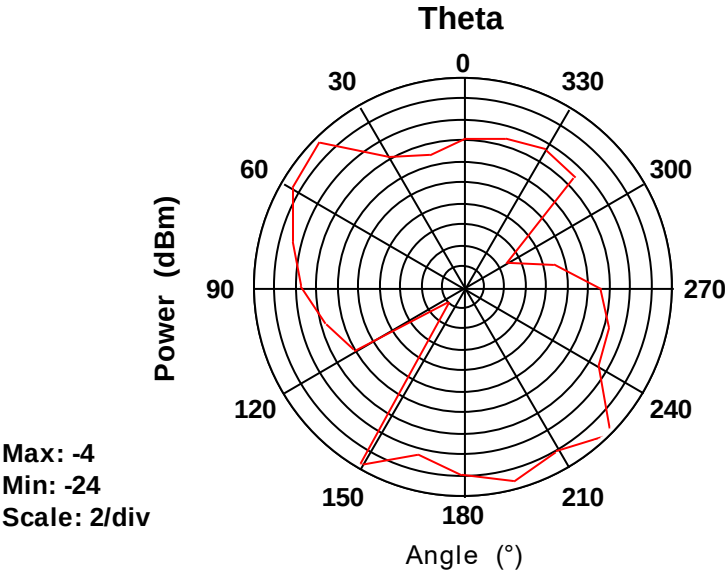


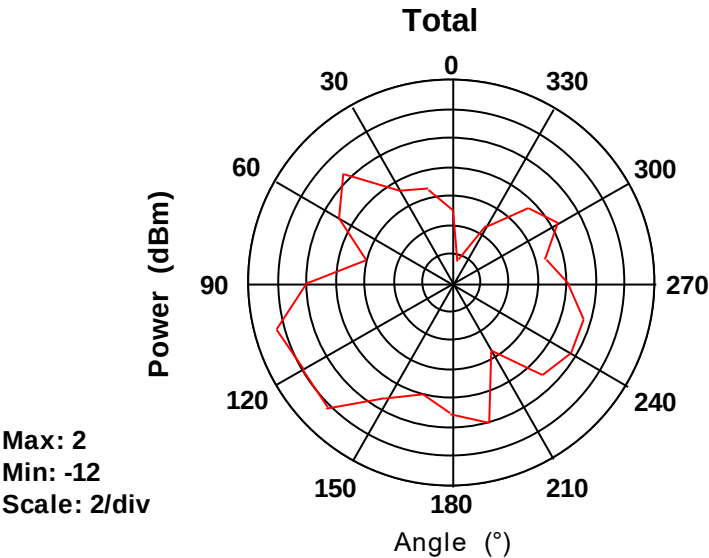
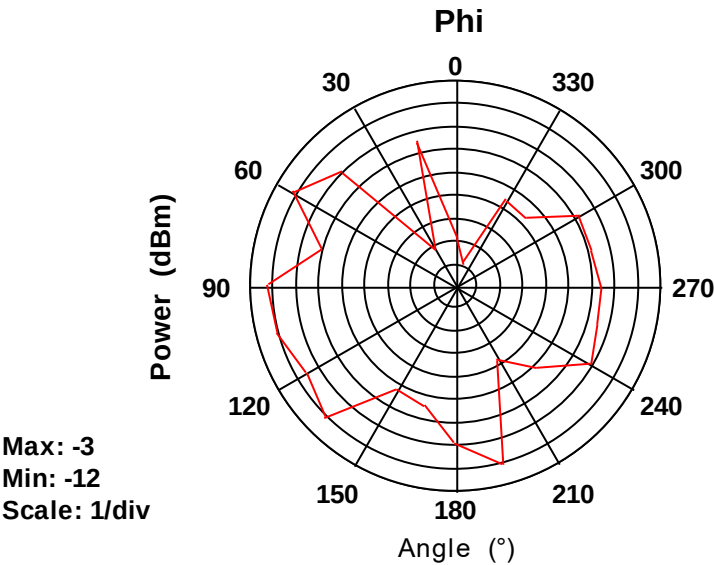
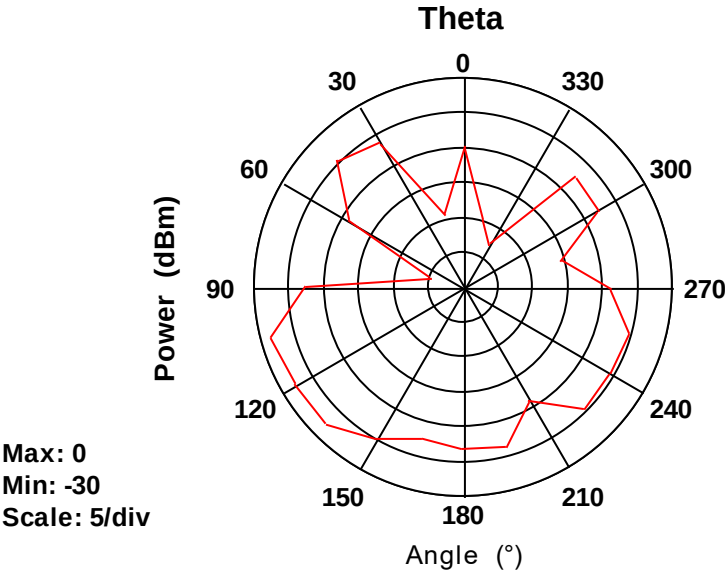
2D Pattern_BT_2402MHz_XY



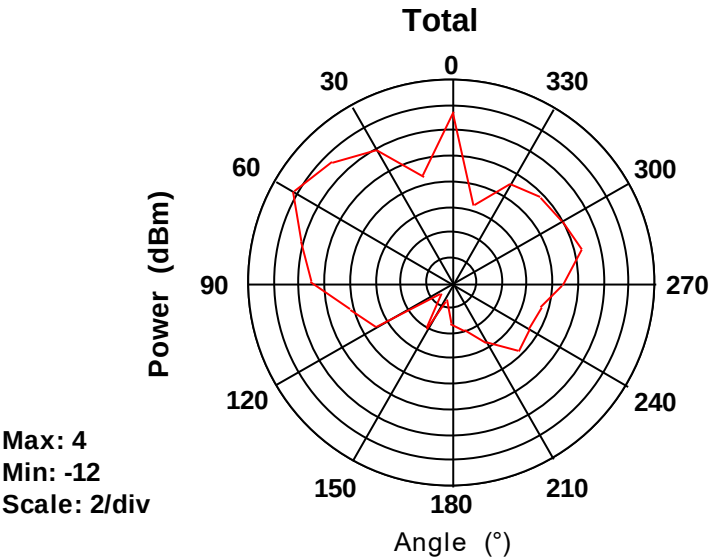
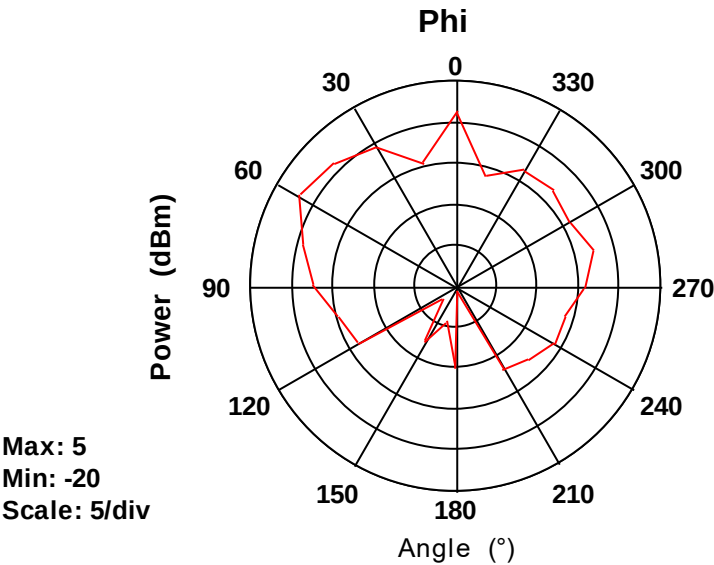
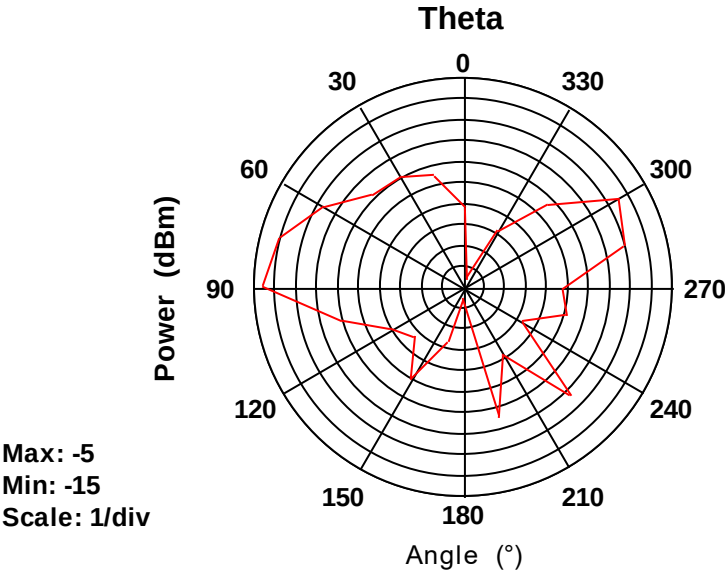
2D Pattern_BT_2402MHz_XZ



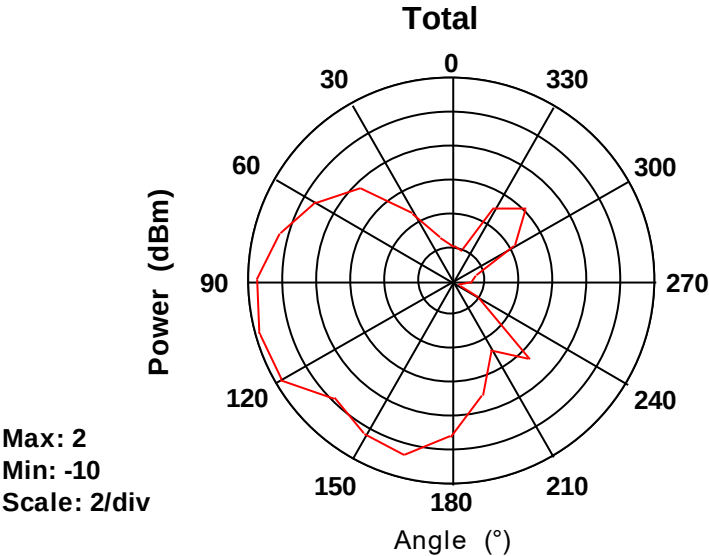
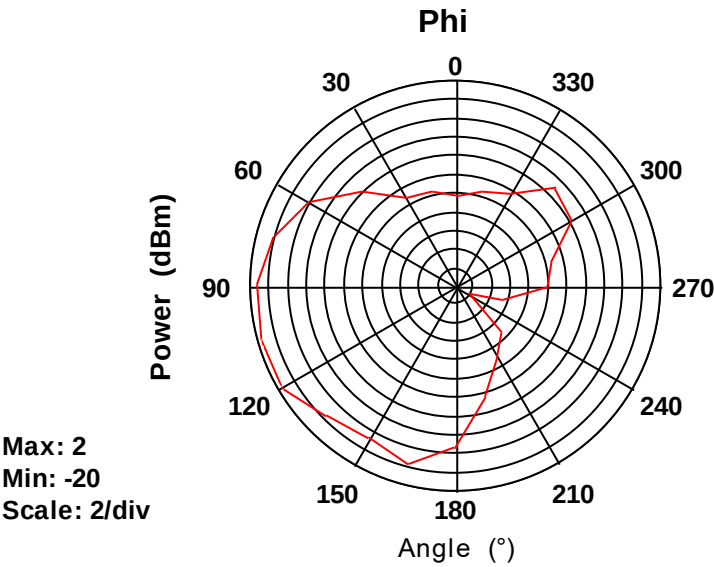
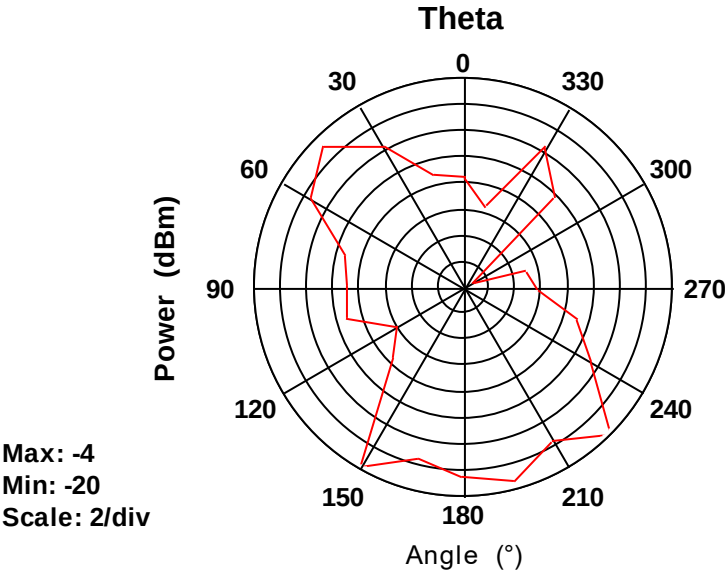
2D Pattern_BT_2402MHz_YZ



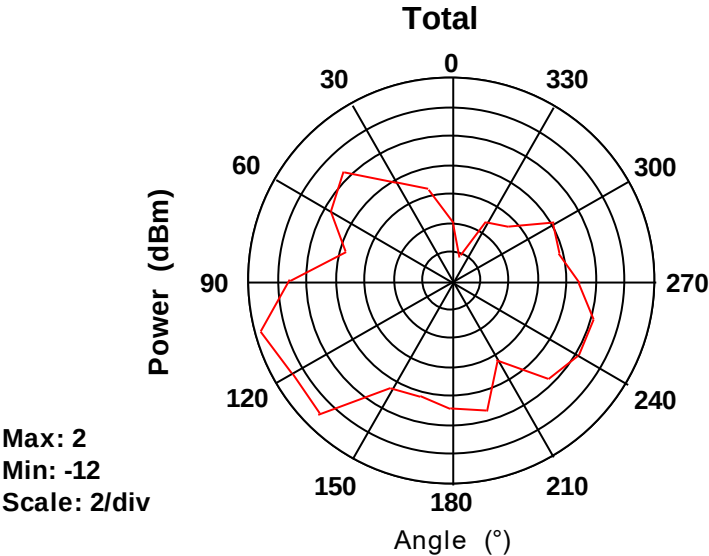
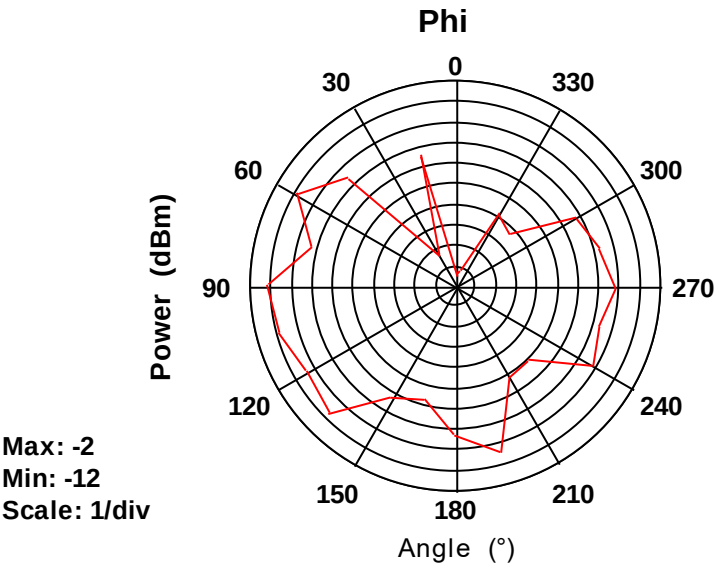
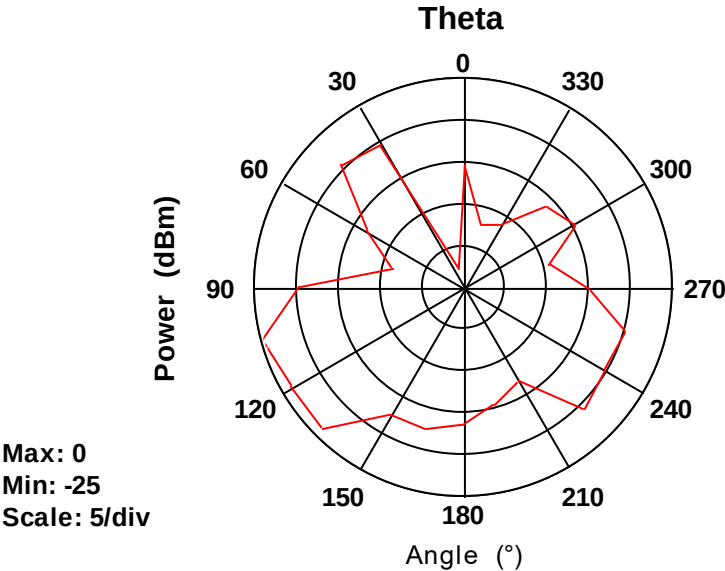
2D Pattern_BT_2441MHz_XY



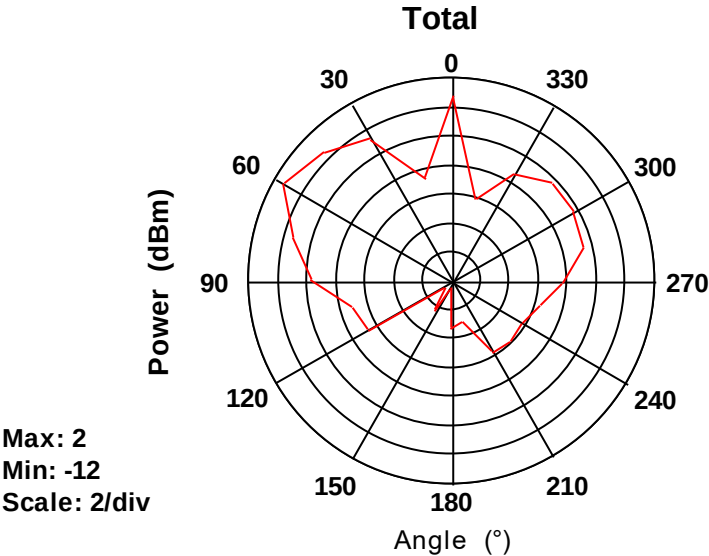
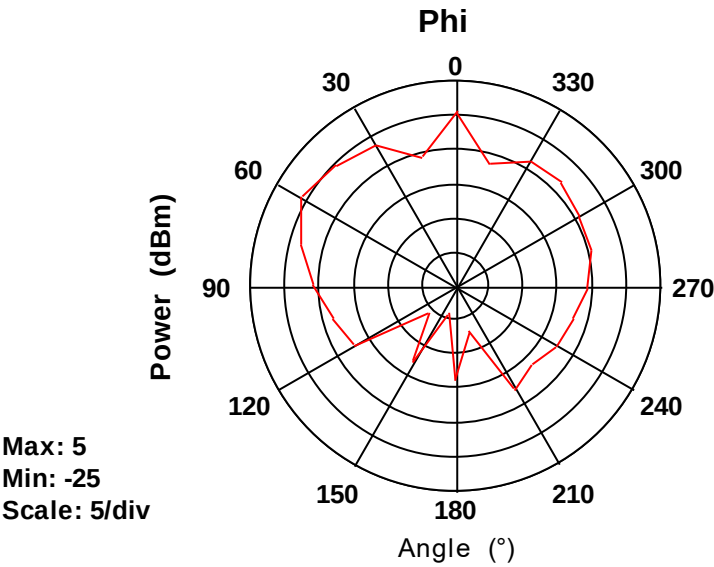
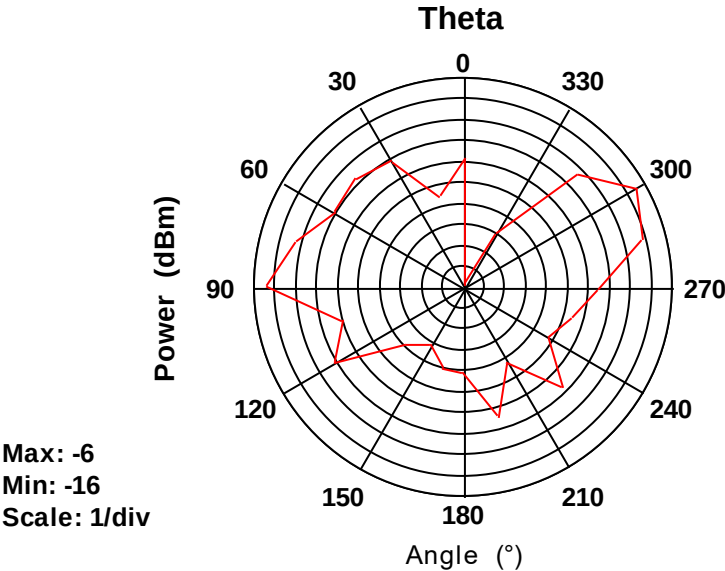
2D Pattern_BT_2441MHz_XZ



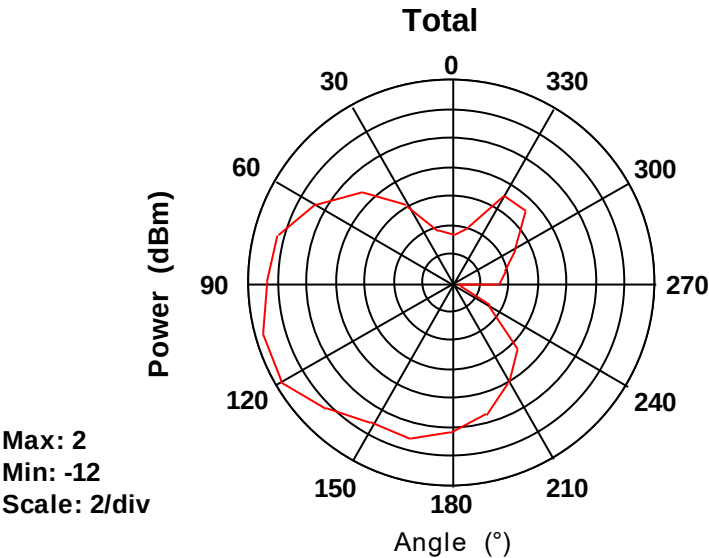
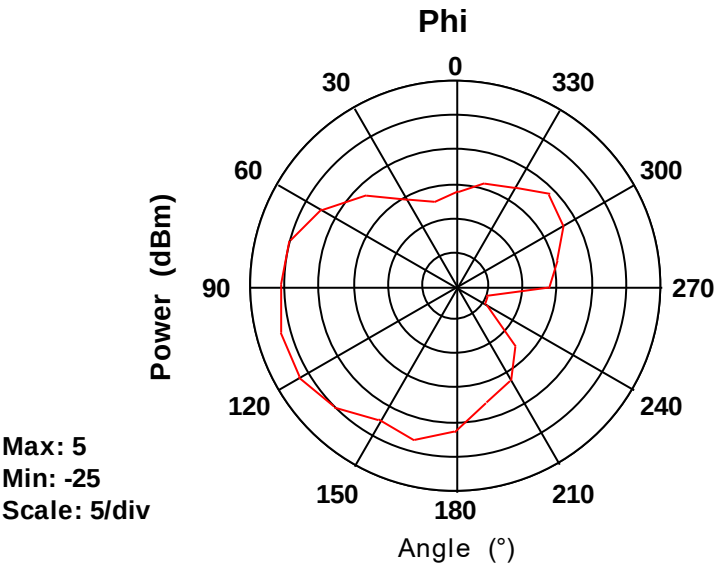
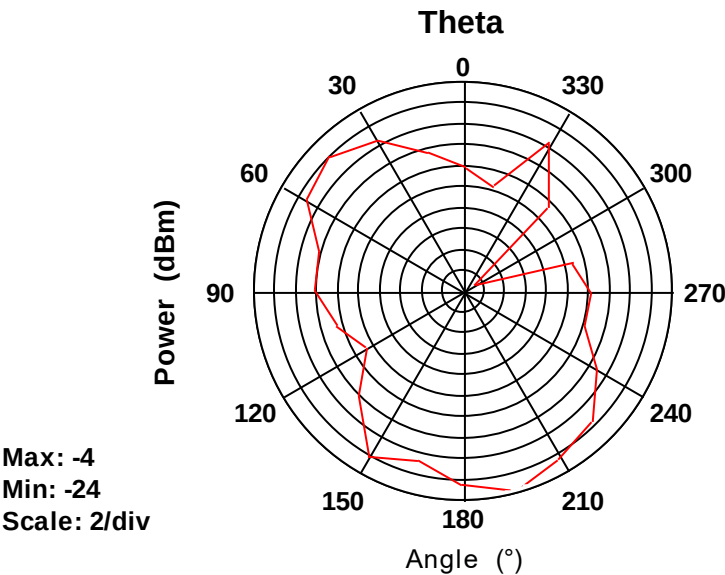
2D Pattern_BT_2441MHz_YZ



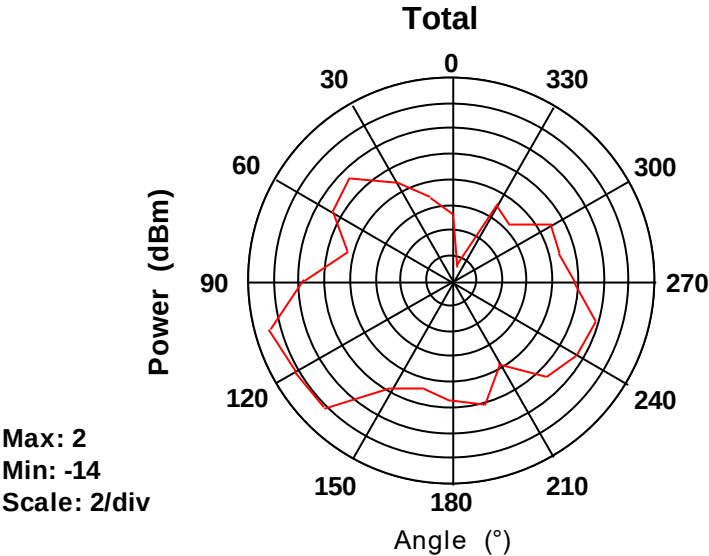
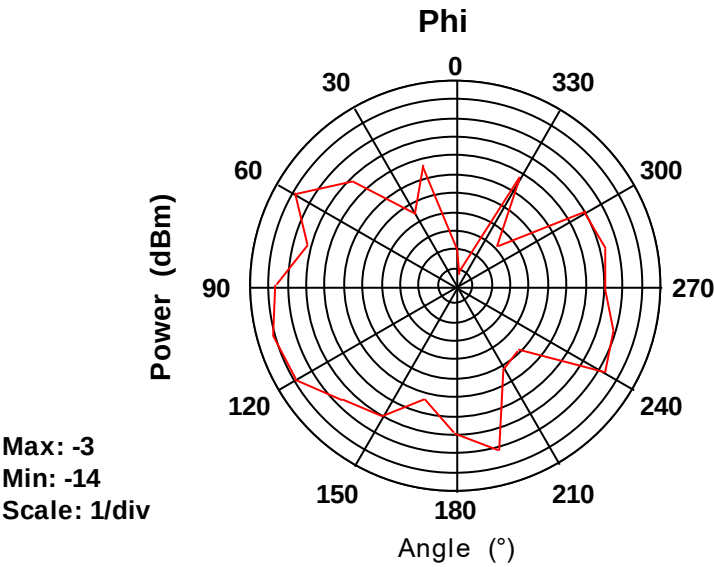
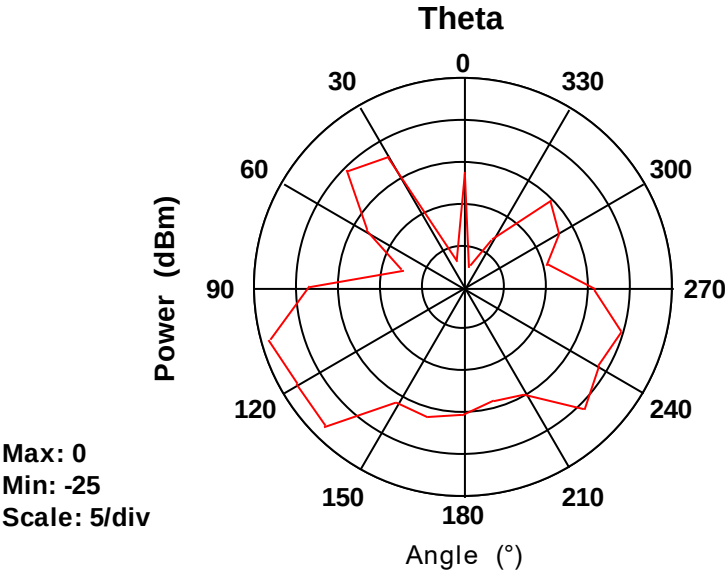
2D Pattern_BT_2480MHz_XY



2D Pattern_BT_2480MHz_XZ

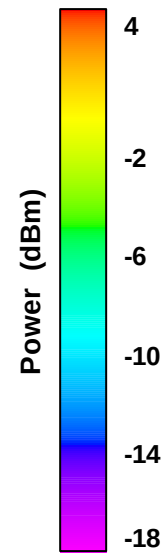
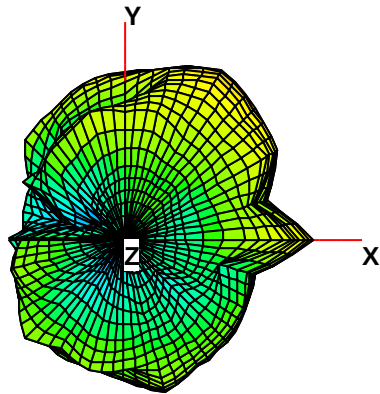


2D Pattern_BT_2480MHz_YZ

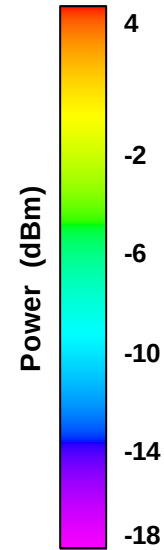
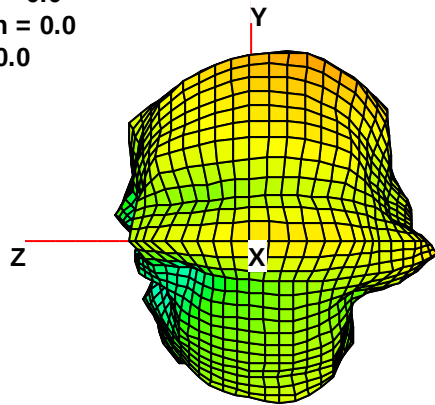


3D Pattern_BT_2402MHz

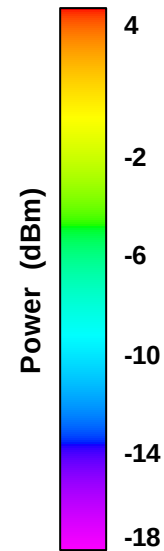
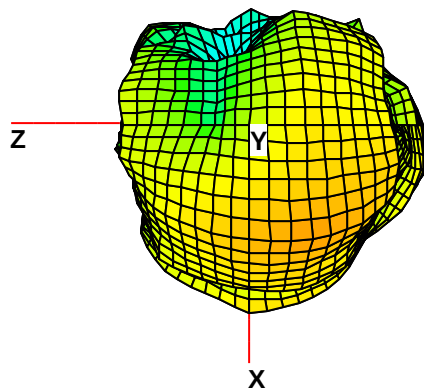
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Elevation = 0.0
Roll = 0.0



Azimuth = 0.0
Elevation = 0.0
Roll = -90.0

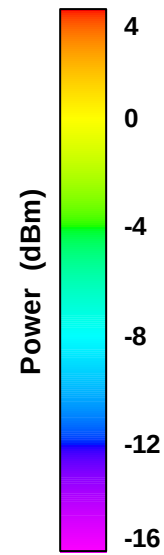
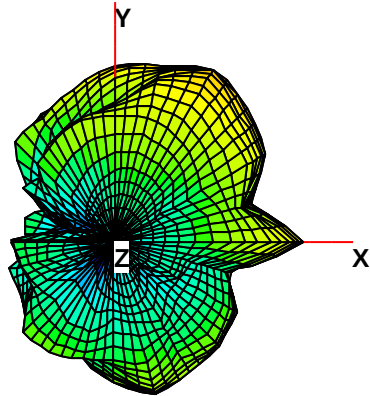


Azimuth = 0.0
Elevation = -90.0
Roll = -90.0

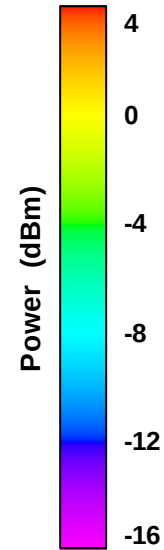
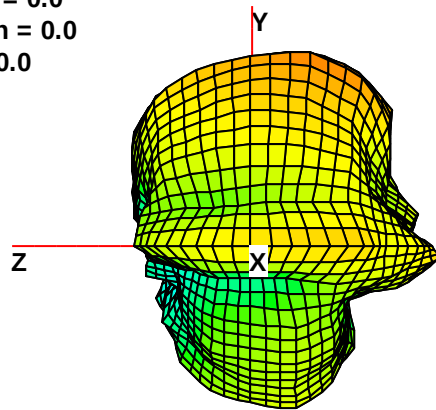


3D Pattern_BT_2441MHz

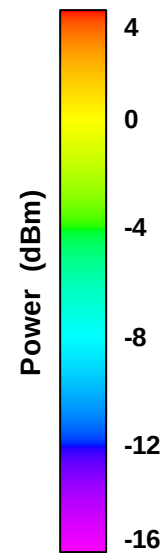
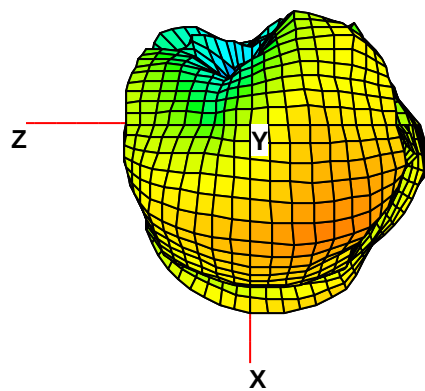
Azimuth = 0.0
Elevation = 0.0
Roll = 0.0



Azimuth = 0.0
Elevation = 0.0
Roll = -90.0

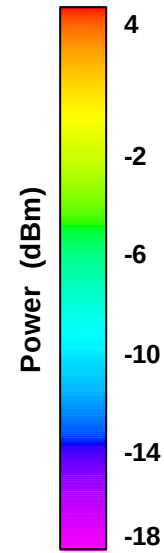
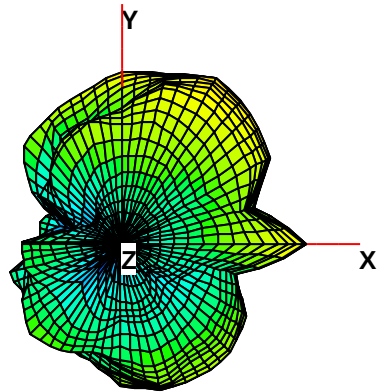


Azimuth = 0.0
Elevation = -90.0
Roll = -90.0

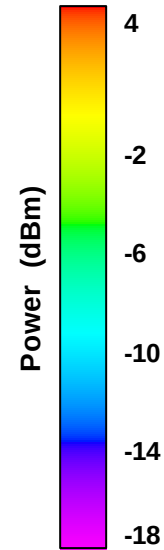
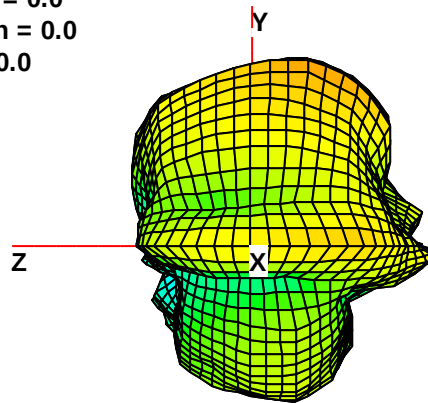


3D Pattern_BT_2480MHz

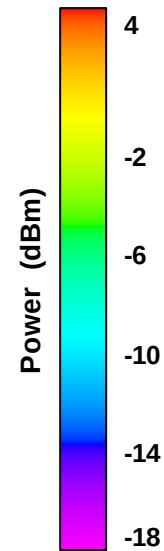
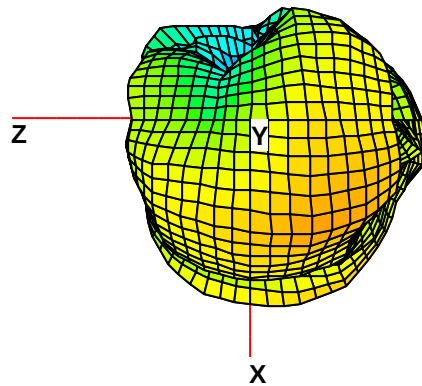
Azimuth = 0.0
Elevation = 0.0
Roll = 0.0



Azimuth = 0.0
Elevation = 0.0
Roll = -90.0



Azimuth = 0.0
Elevation = -90.0
Roll = -90.0



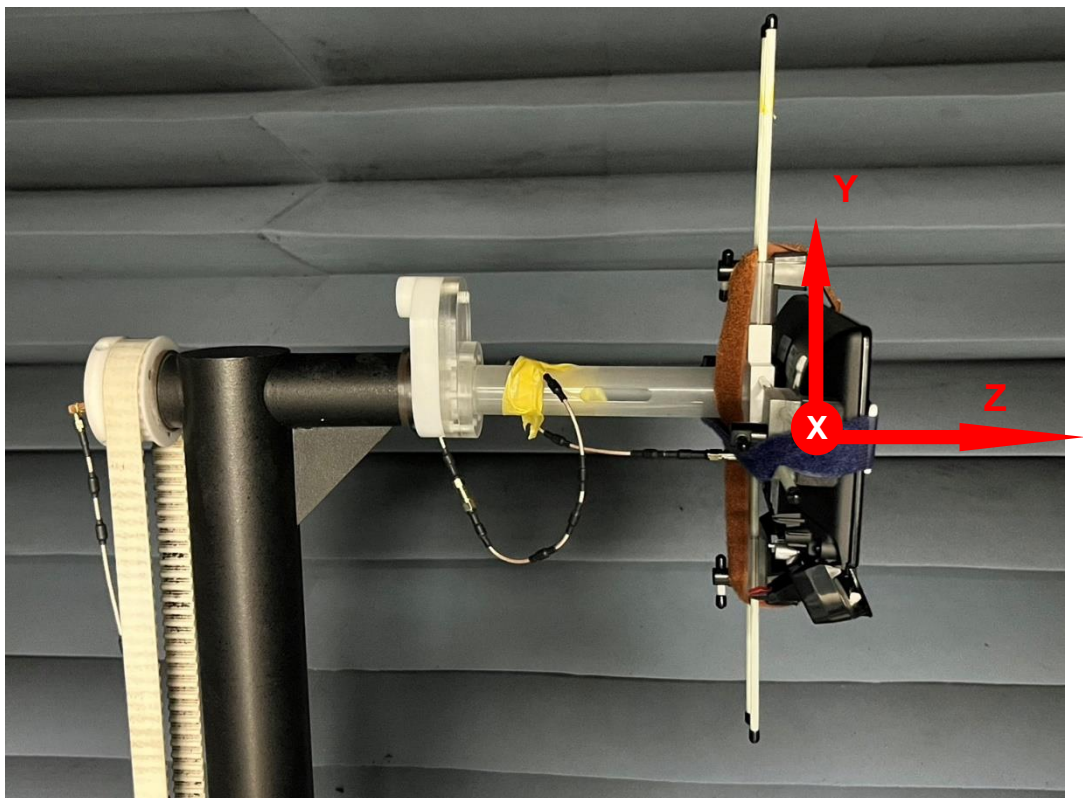
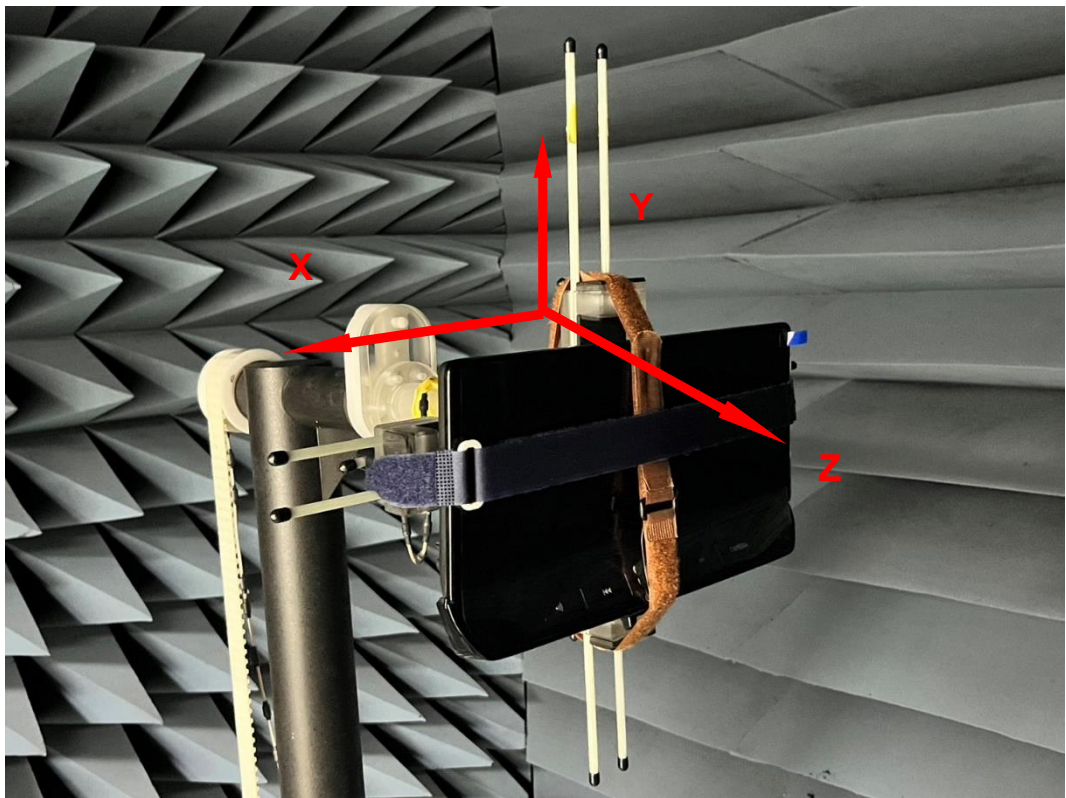
BT	
Frequency (MHz)	Max Antenna Gain (dBi)
2402	1.60
2441	1.91
2480	1.65

Antenna Specification

Product Name	Display Assy-AV
Supplier	Visteon
Display Type P/N	28090W040P
Antenna Manufacture	INPAQ Technology Co., Ltd.
Part No.	ACM3-5036-A1-CC-S
Antenna Type	Chip
WLAN cable	(1) 259B5 7JA0A (long) (2) LVDS+WiFi (short)
Specification Version	V.1.1

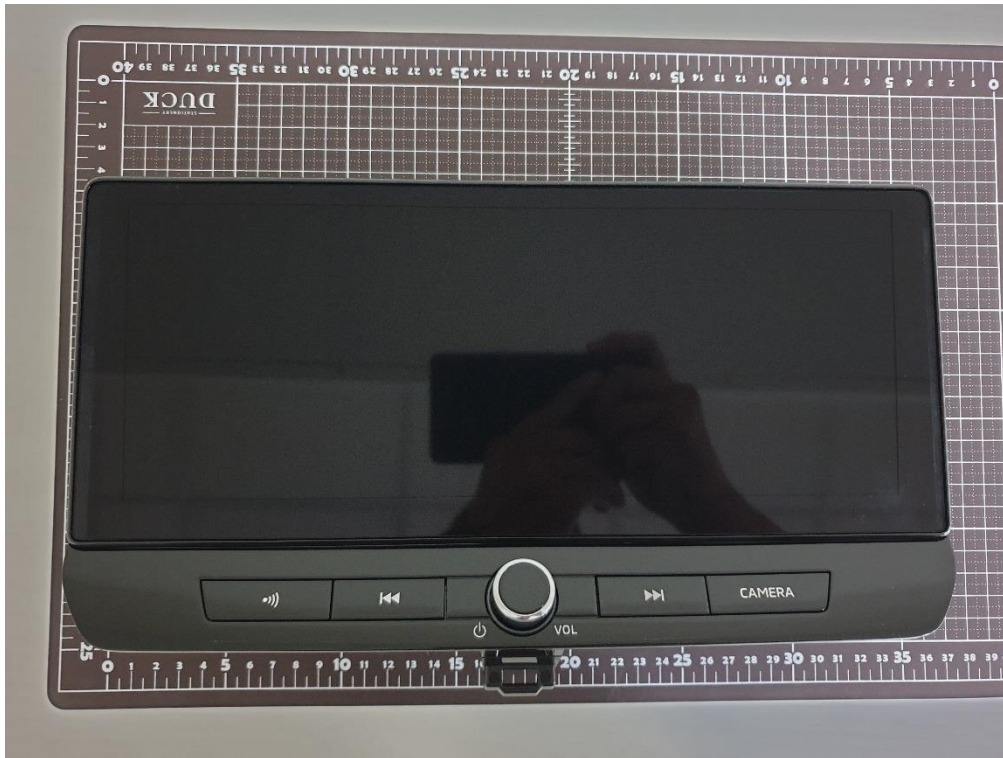
1. Test Setup

(1) XYZ Plance

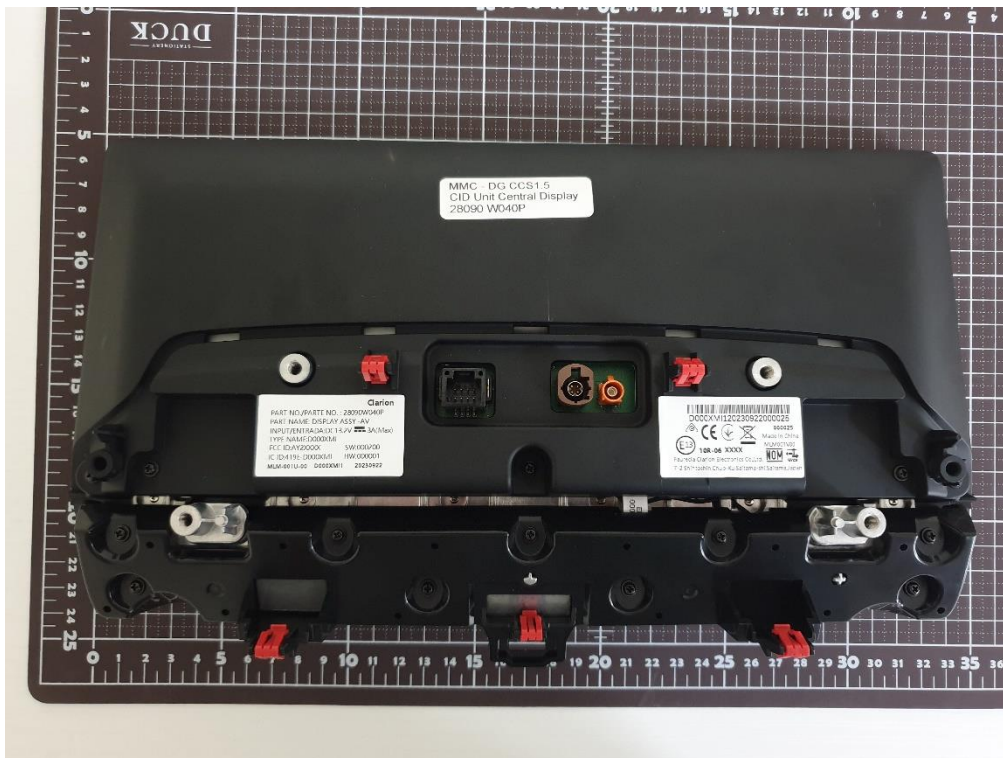


2. Dimensioned Photo

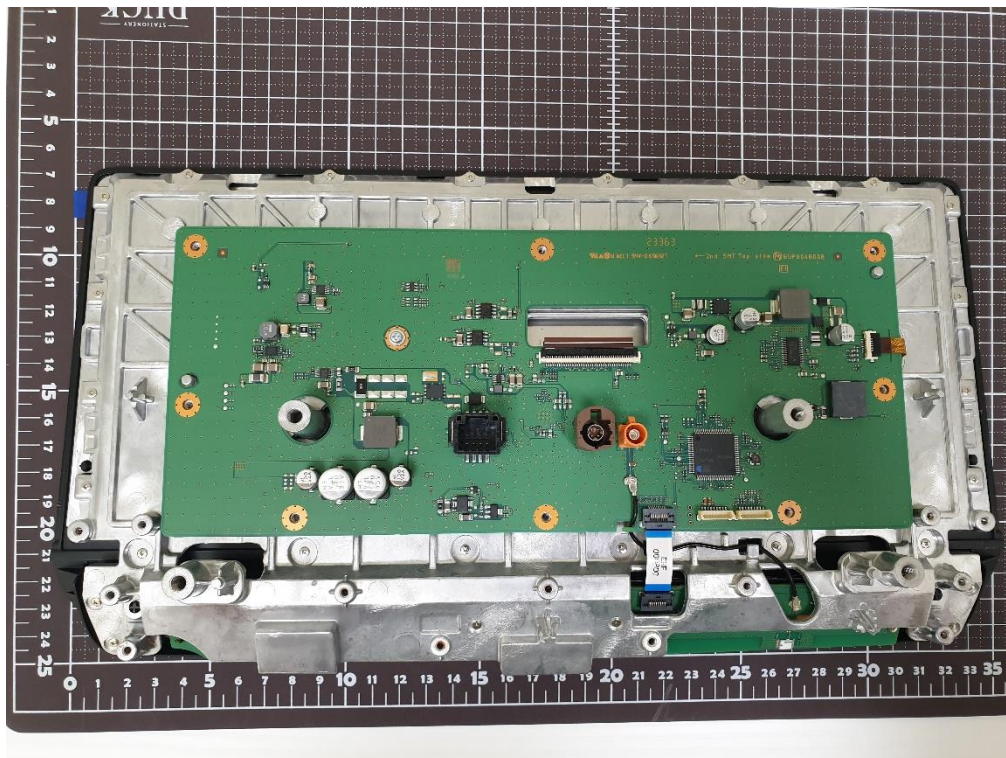
(1) Front Photo



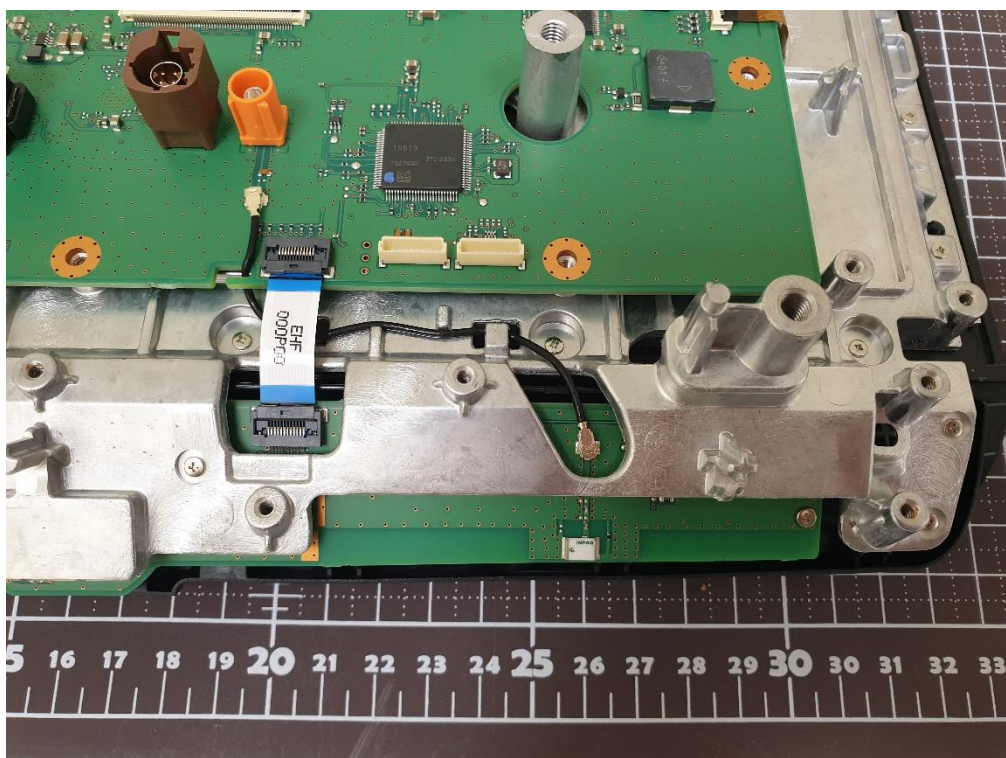
(2) Front Photo



(3) Front Photo



(4) Front Photo



(5) Front Photo



(6) 259B5 7JA0A (Long WLNA cable)

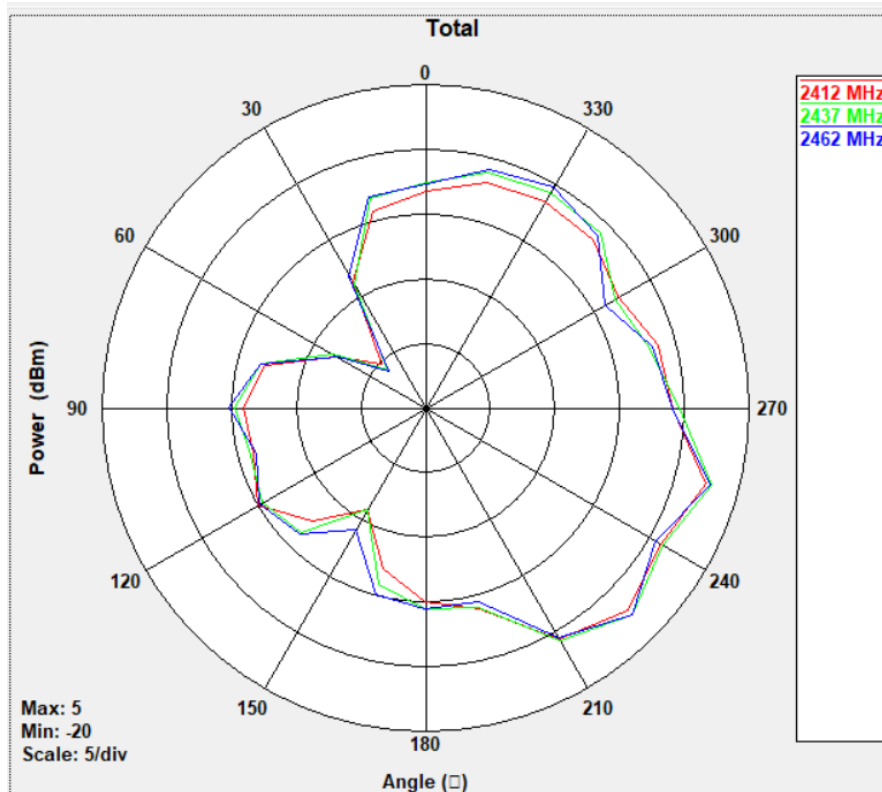


(7) LVDS+WIFI (Short WLAN cable)

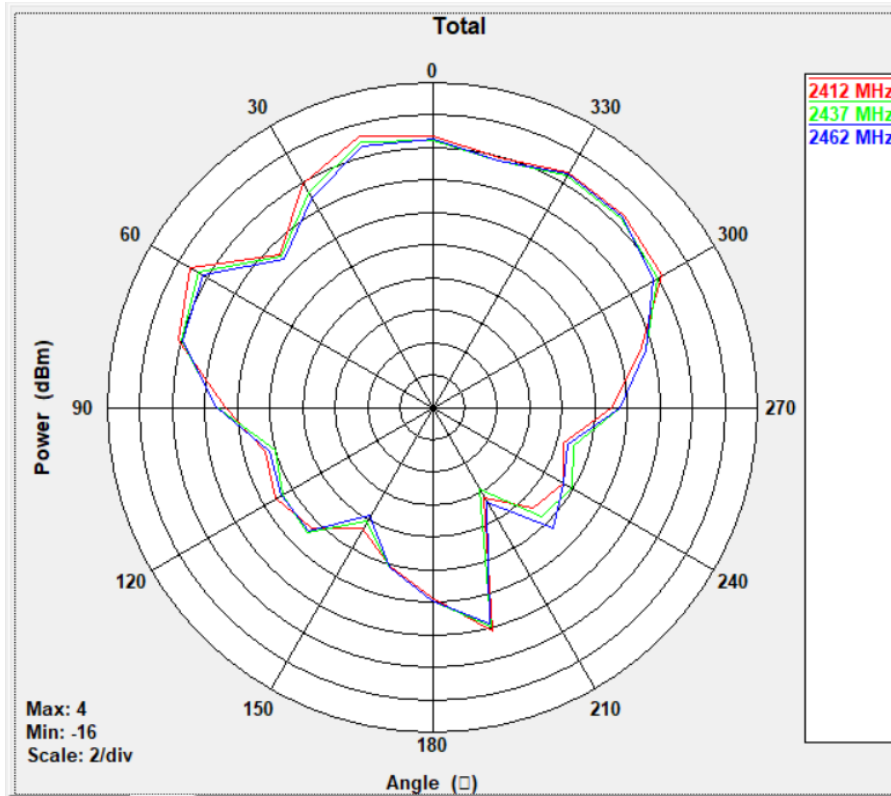


3. 2D Antenna Pattern

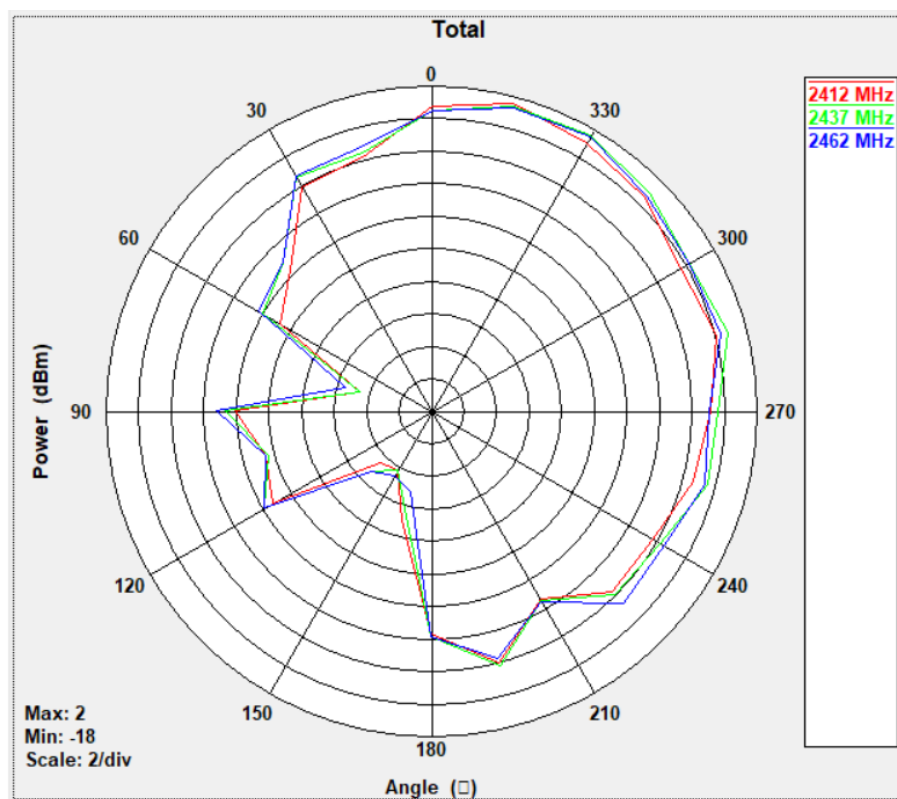
(1) X-Y : 2412MHz, 2437MHz, 2462MHz



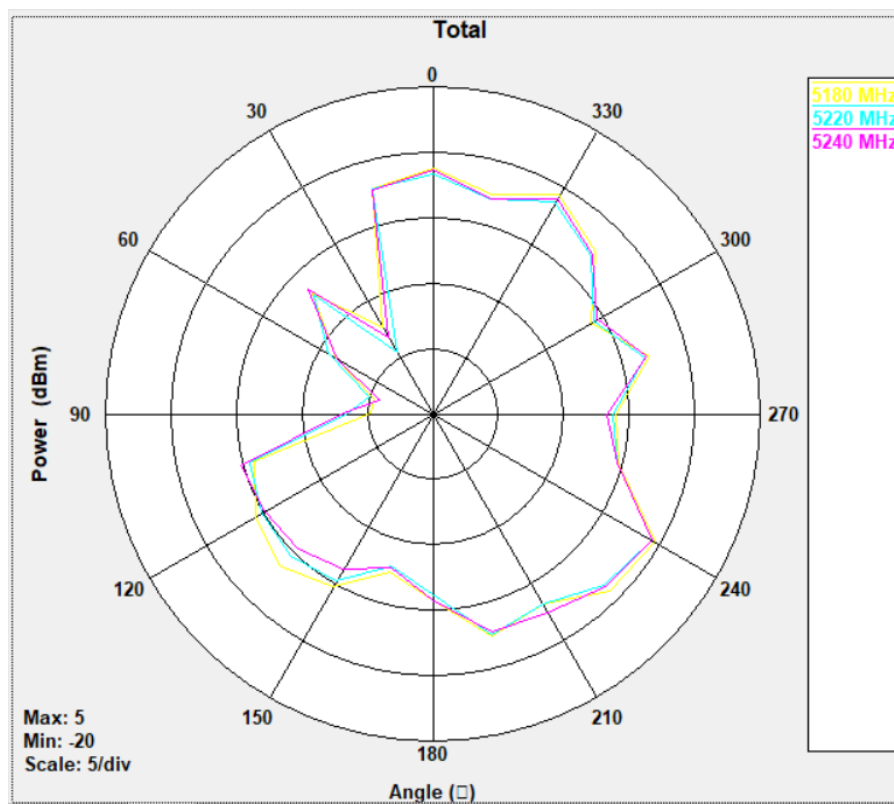
(2) X-Z : 2412MHz, 2437MHz, 2462MHz



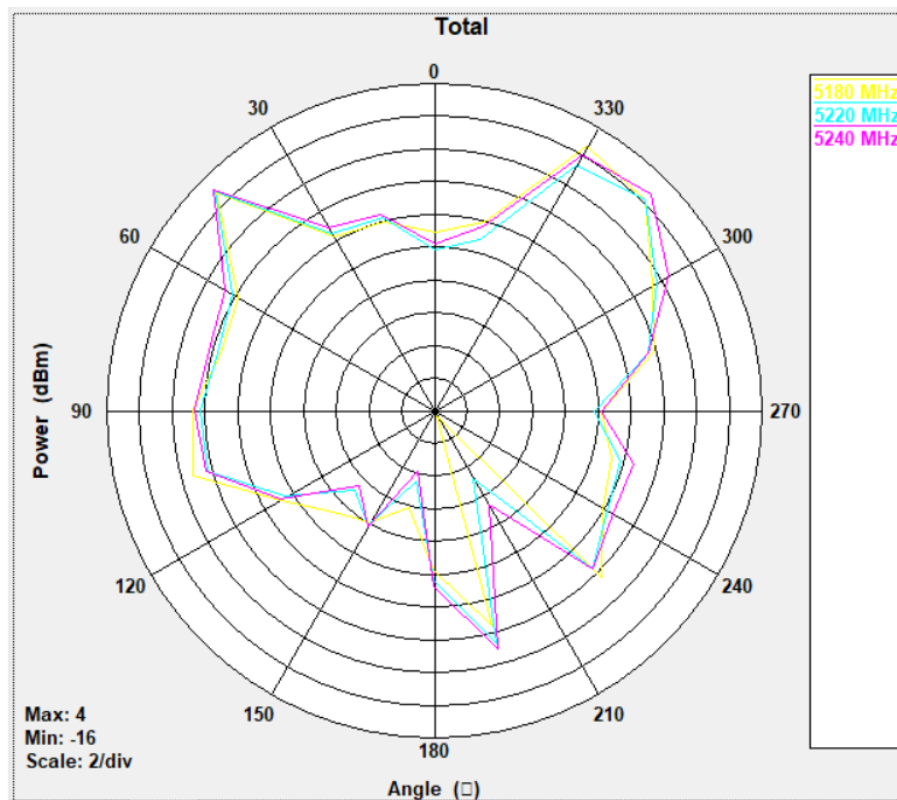
(3) Y-Z : 2412MHz, 2437MHz, 2462MHz



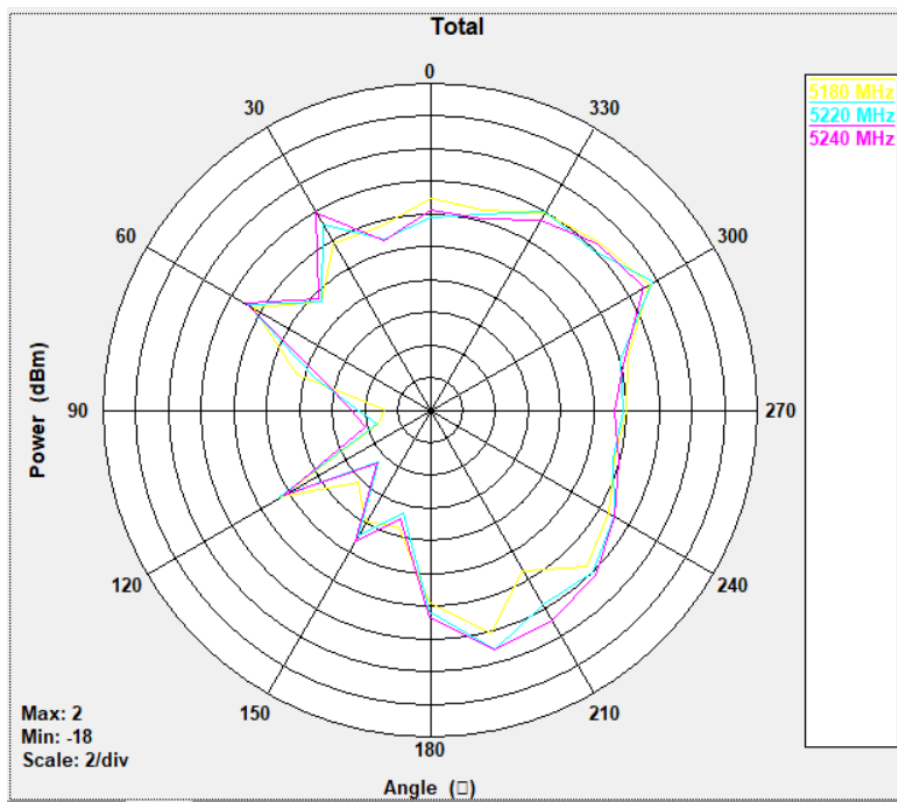
(4) X-Y : 5180MHz, 5220MHz, 5240MHz



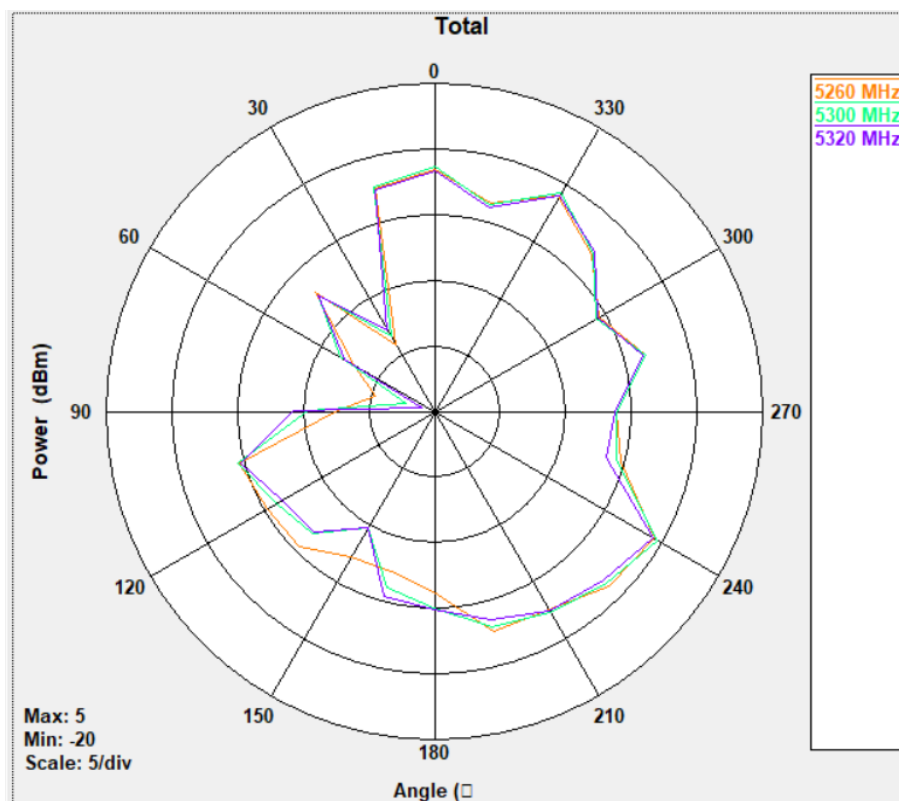
(5) X-Z : 5180MHz, 5220MHz, 5240MHz



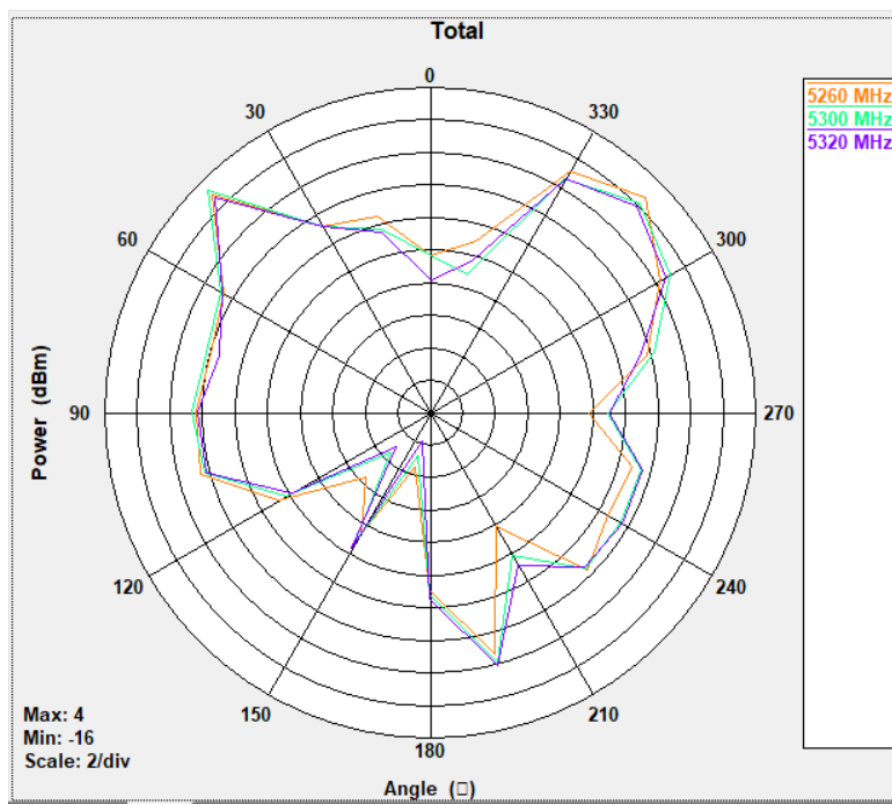
(6) Y-Z : 5180MHz, 5220MHz, 5240MHz



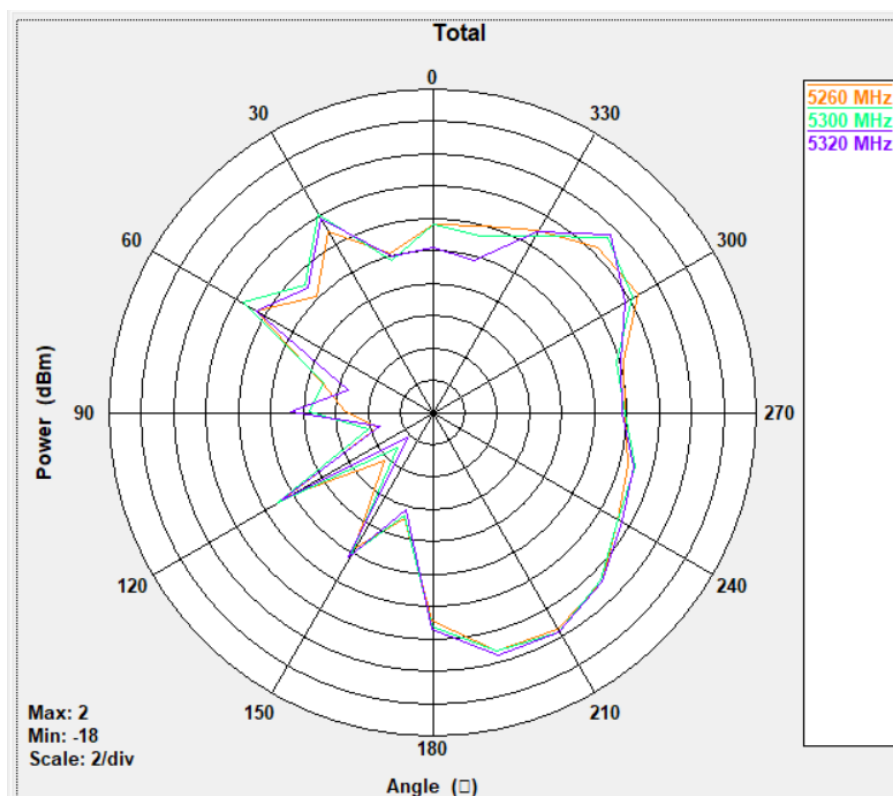
(7) X-Y : 5260MHz, 5300MHz,5320MHz



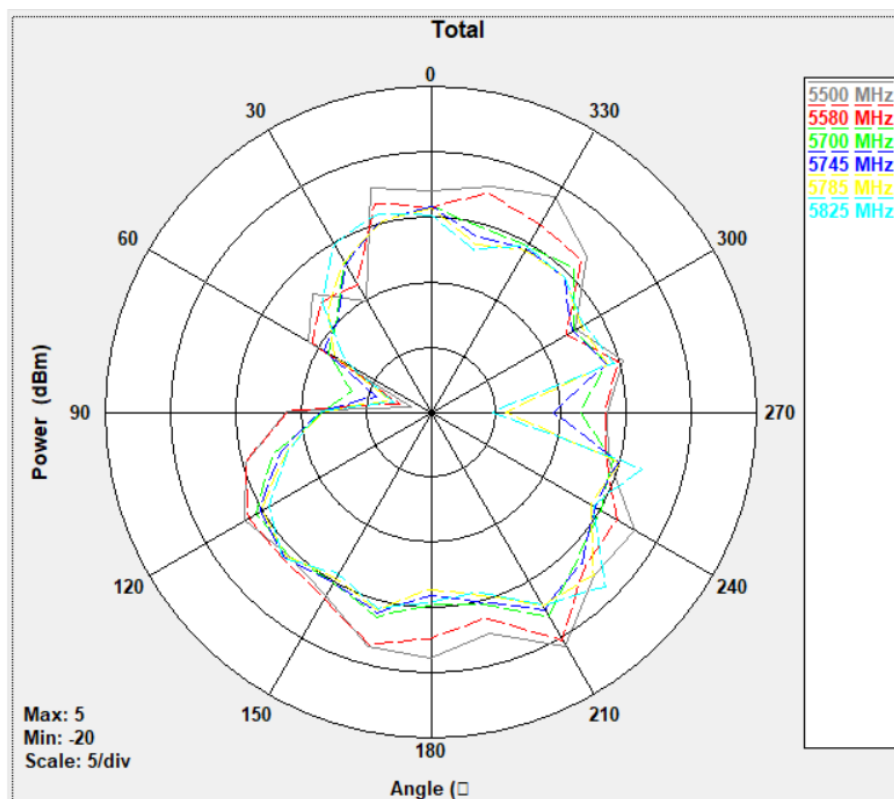
(8) X-Z : 5260MHz, 5300MHz,5320MHz



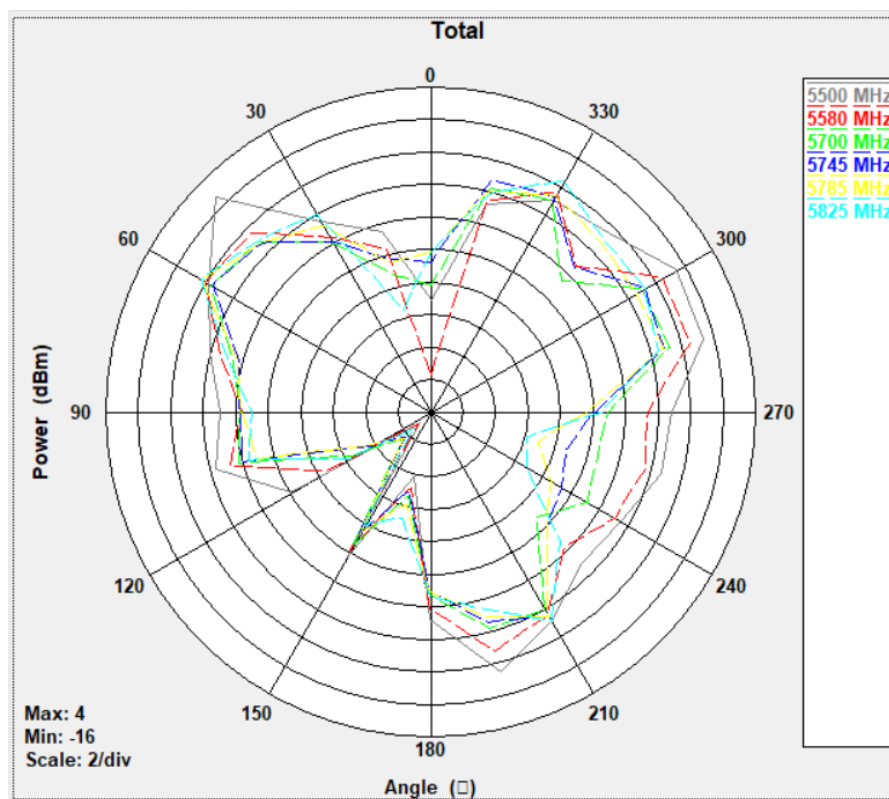
(9) Y-Z : 5260MHz, 5300MHz,5320MHz



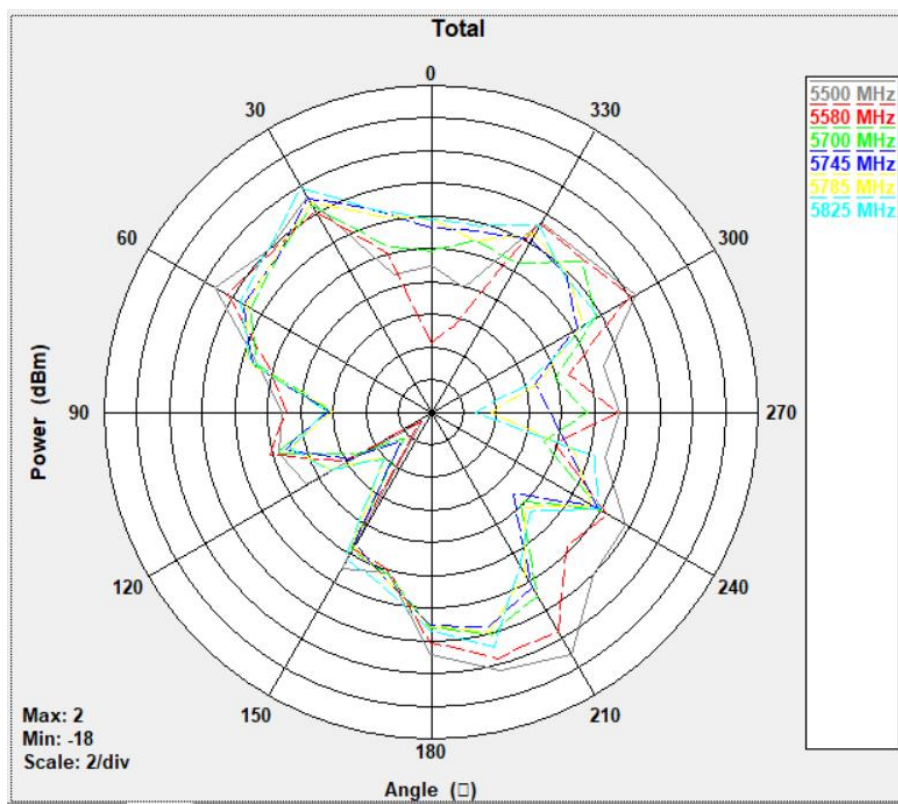
(10) X-Y: 5500MHz, 5580MHz, 5700MHz, 5745MHz, 5785MHz, 5825MHz



(11) X-Z: 5500MHz, 5580MHz, 5700MHz, 5745MHz, 5785MHz, 5825MHz

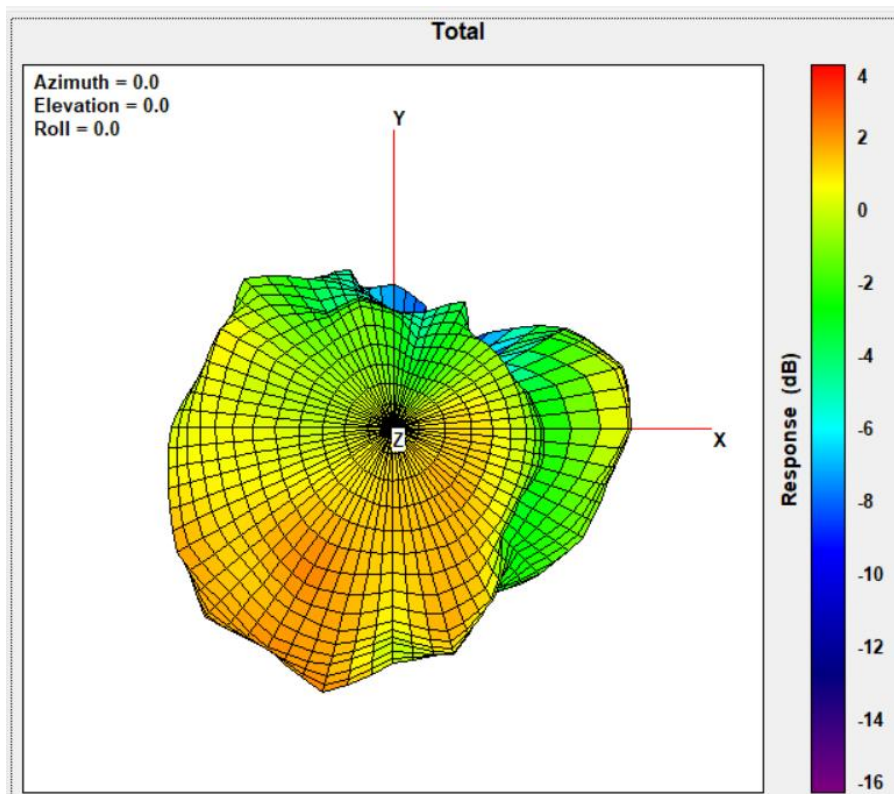


(12) Y-Z: 5500MHz, 5580MHz, 5700MHz, 5745MHz, 5785MHz, 5825MHz

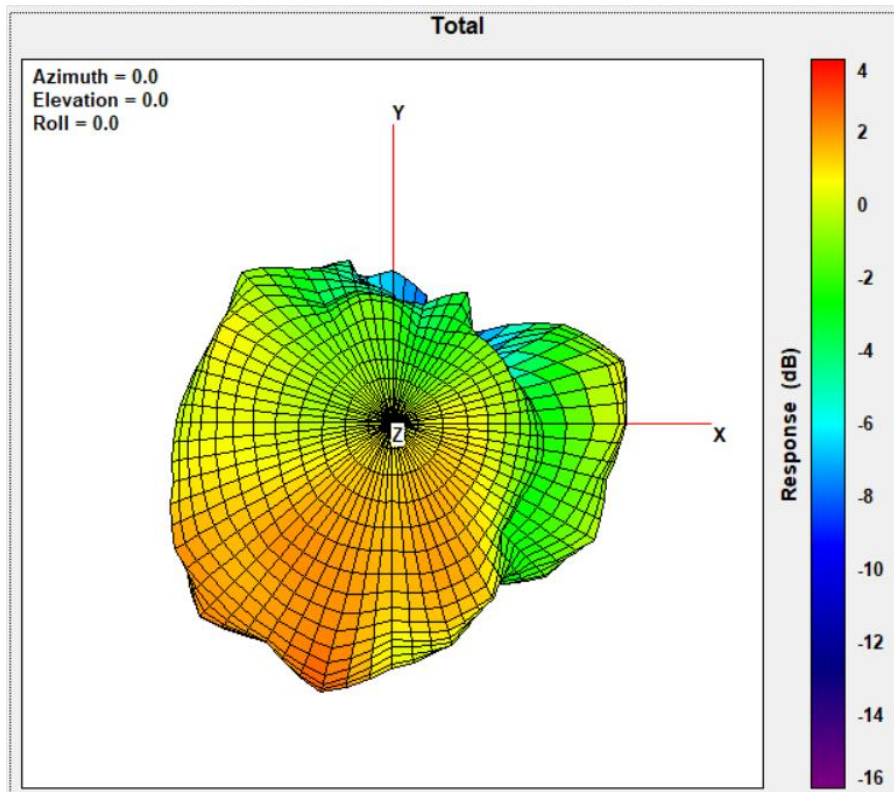


4. 3D Antenna Pattern

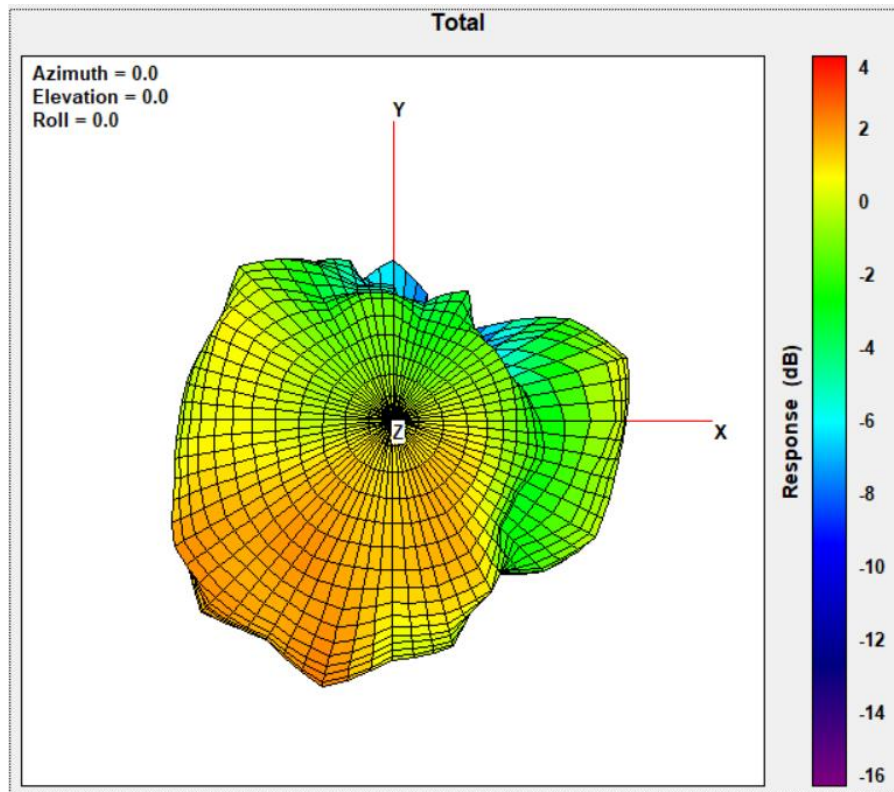
(1) 2412MHz



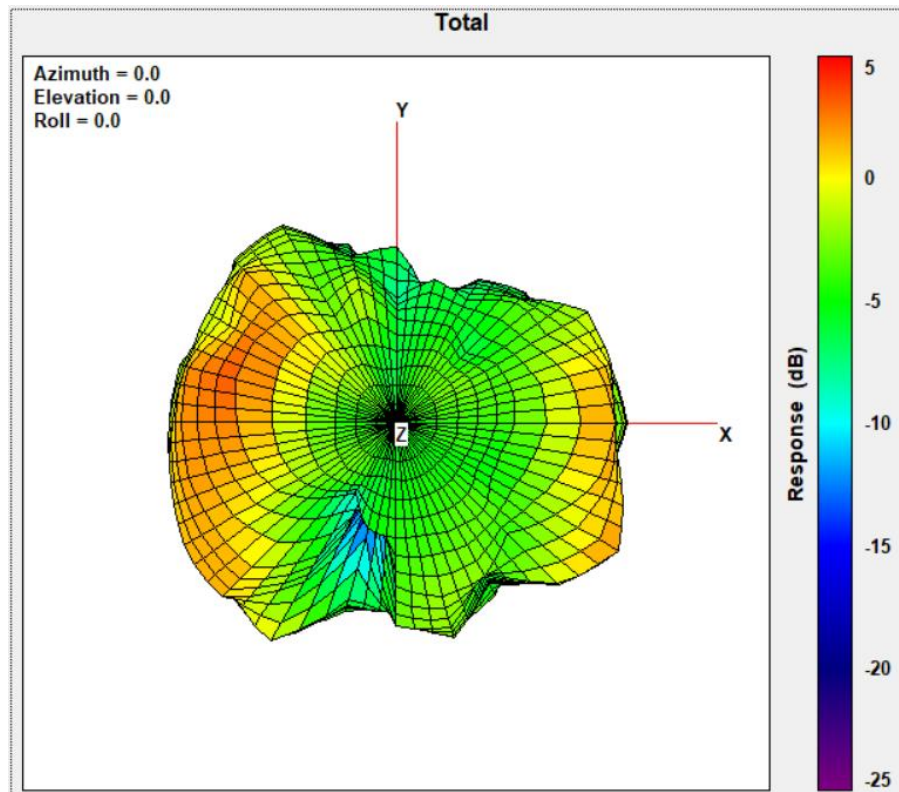
(2) 2437MHz



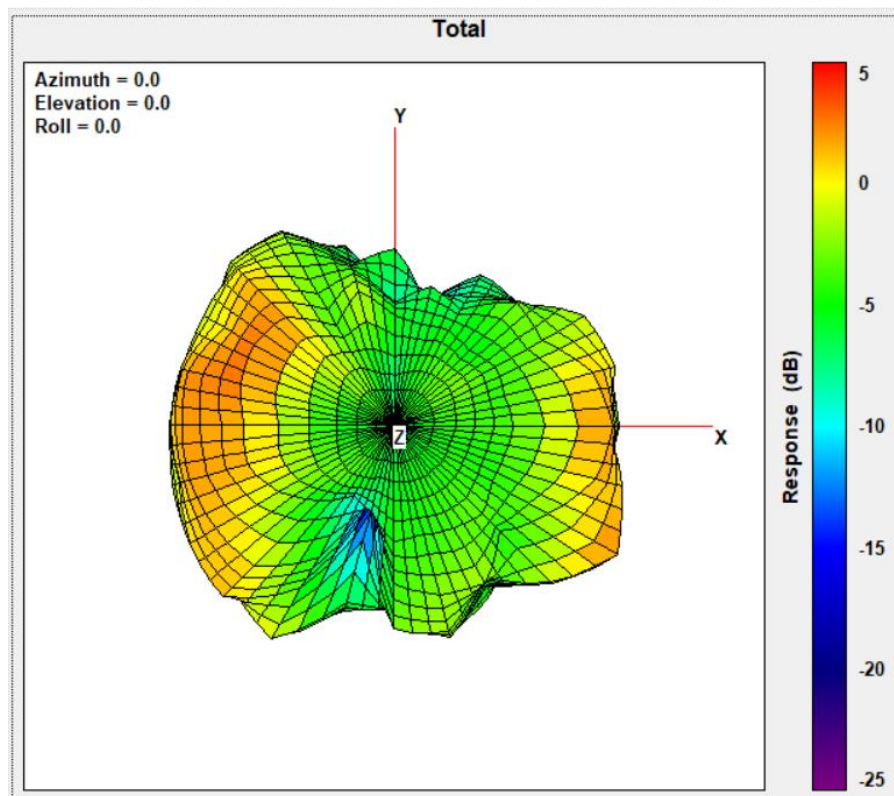
(3) 2462MHz



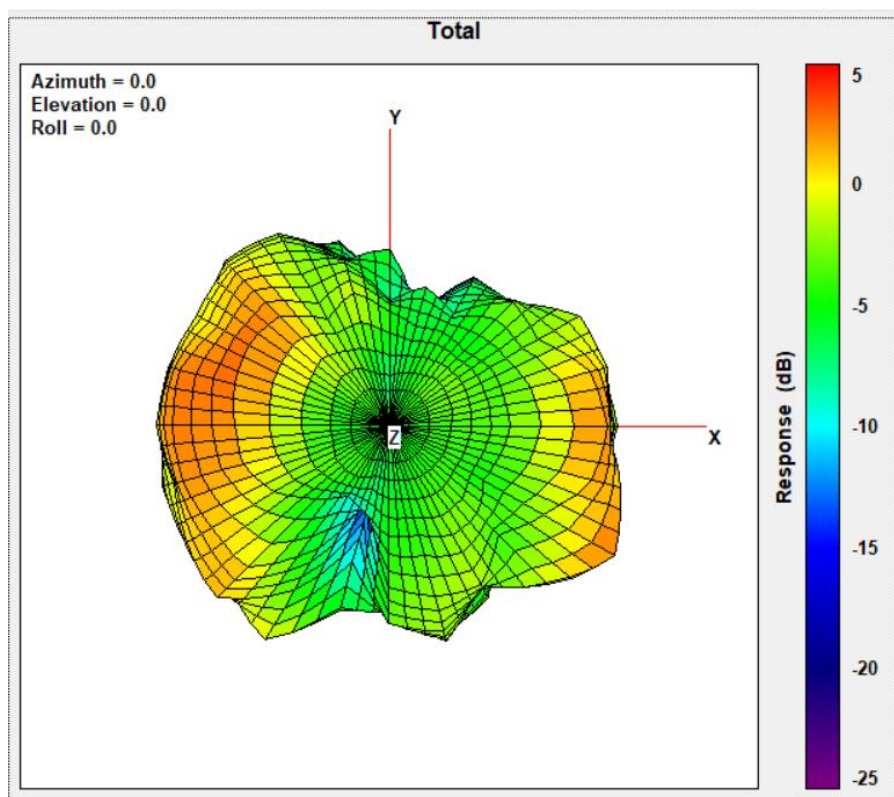
(4) 5180MHz



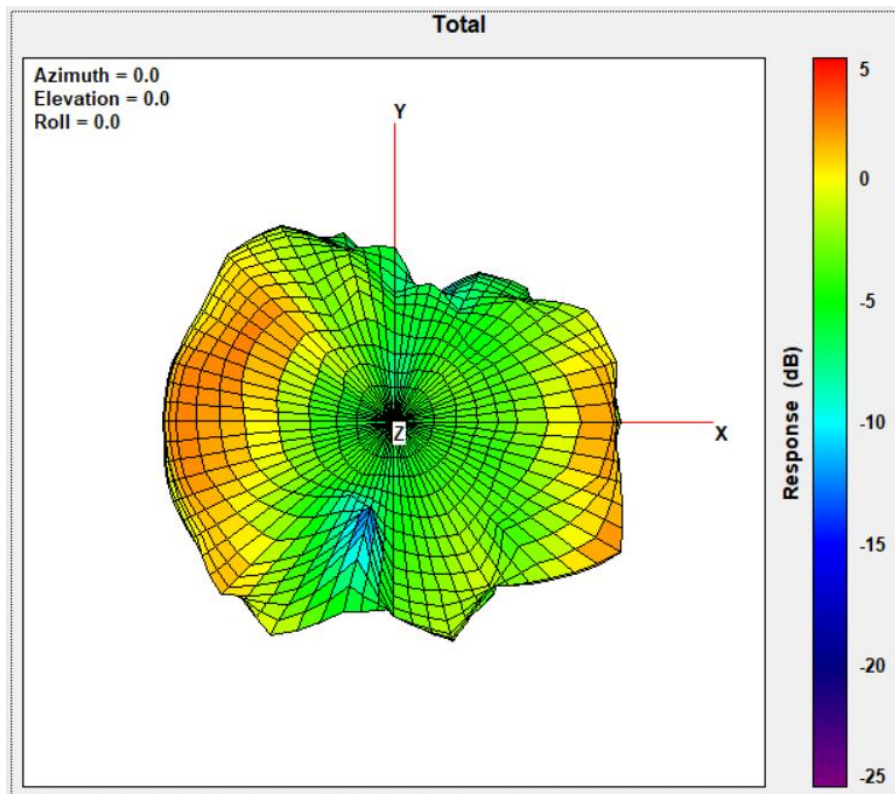
(5) 5220MHz



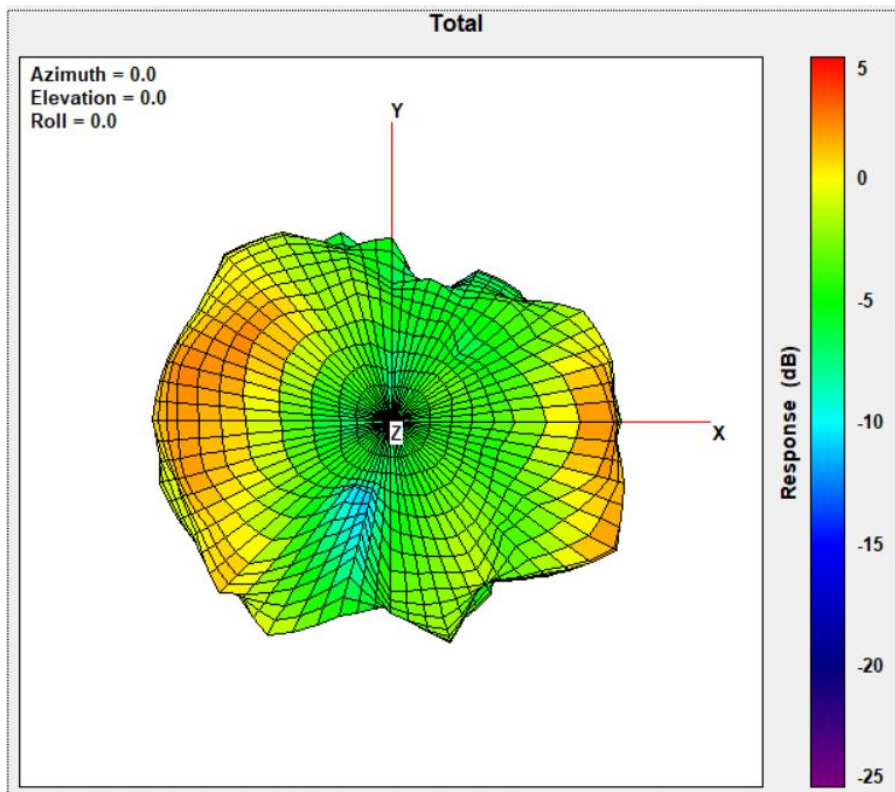
(6) 5240MHz



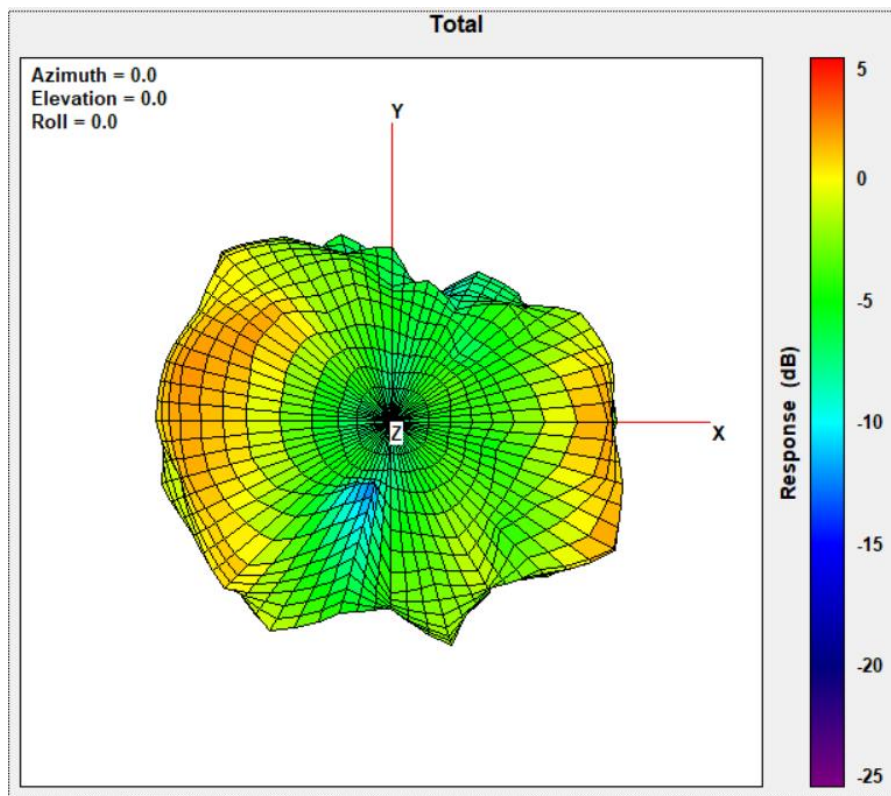
(7) 5260MHz



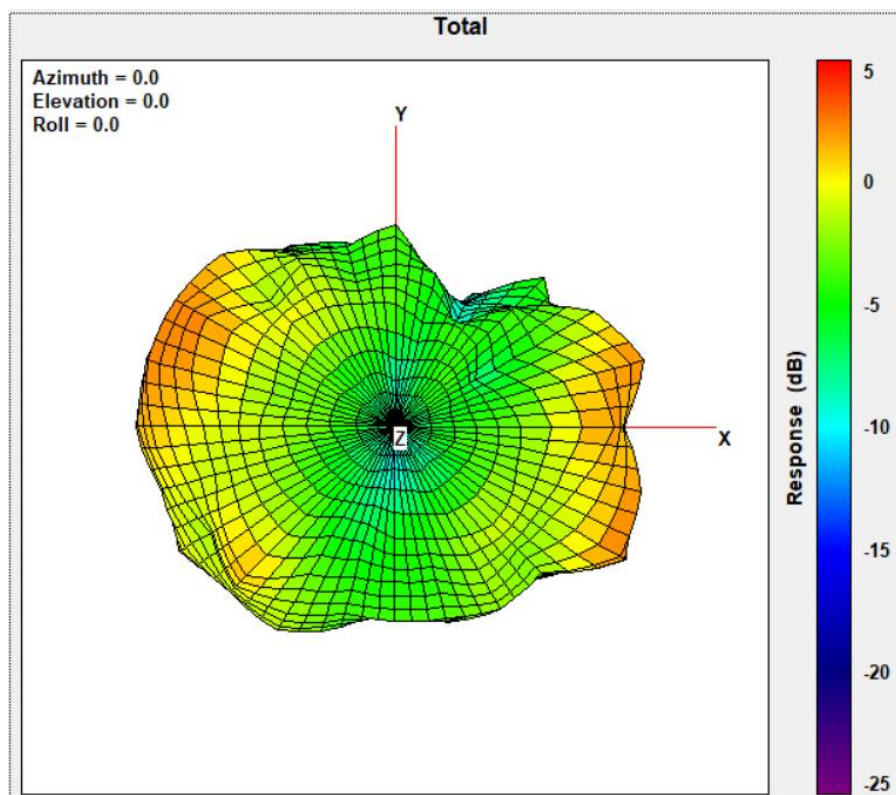
(8) 5300MHz



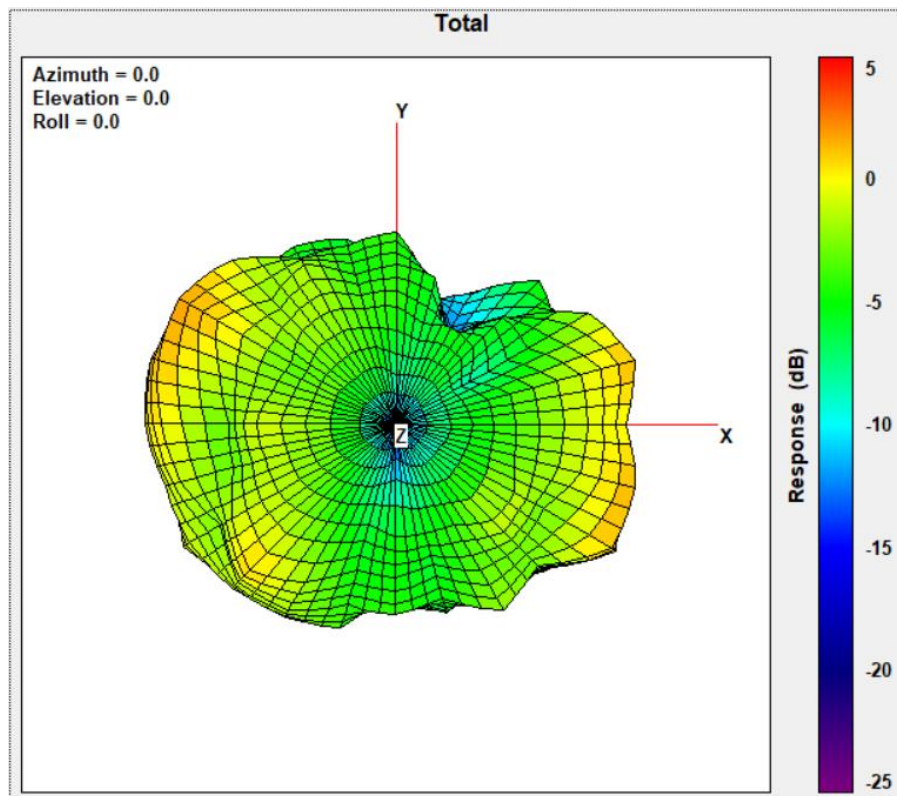
(9) 5320MHz



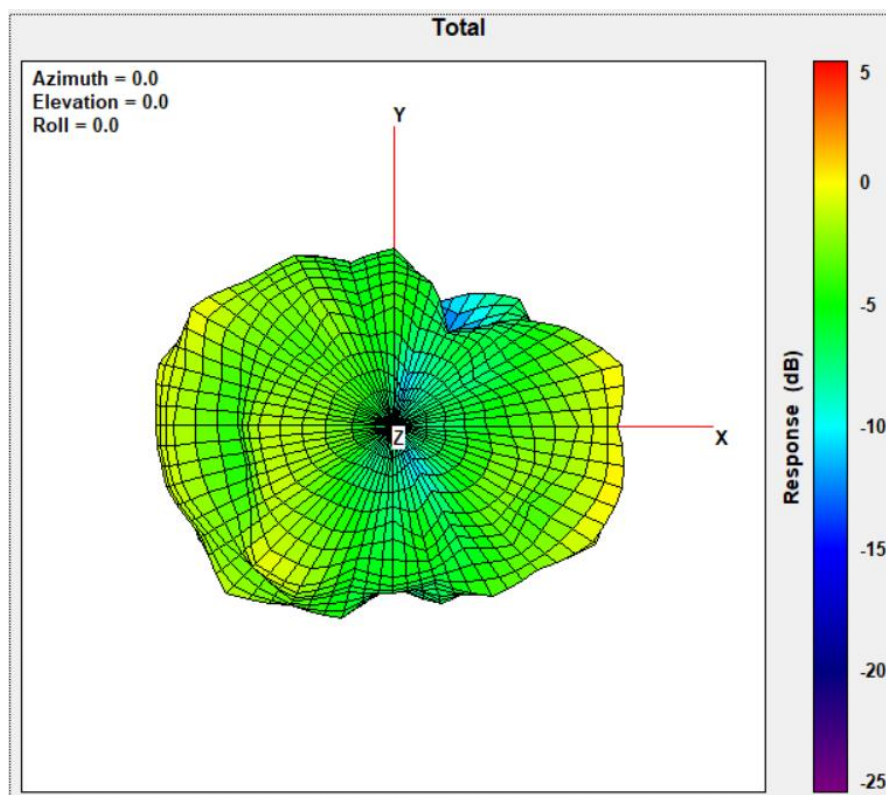
(10) 5500MHz



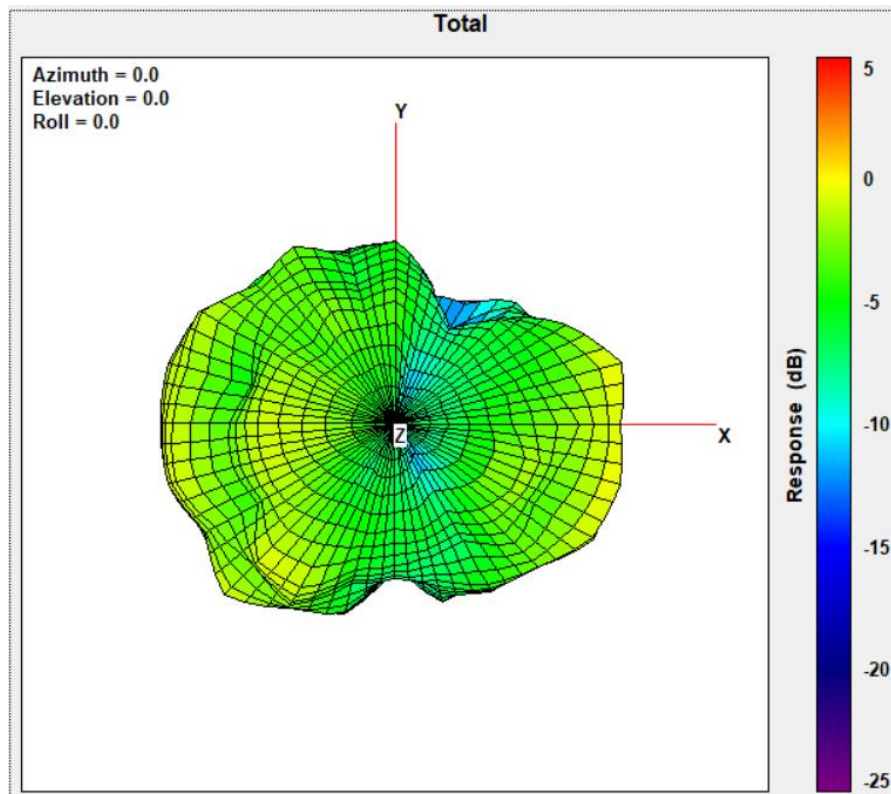
(11) 5580MHz



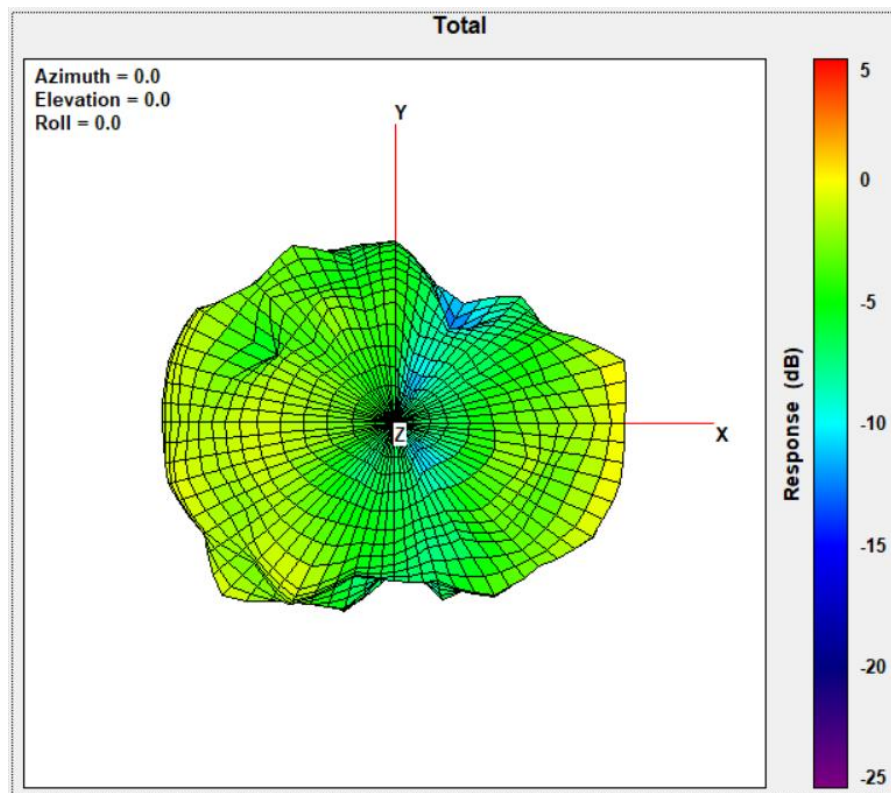
(12) 5700MHz



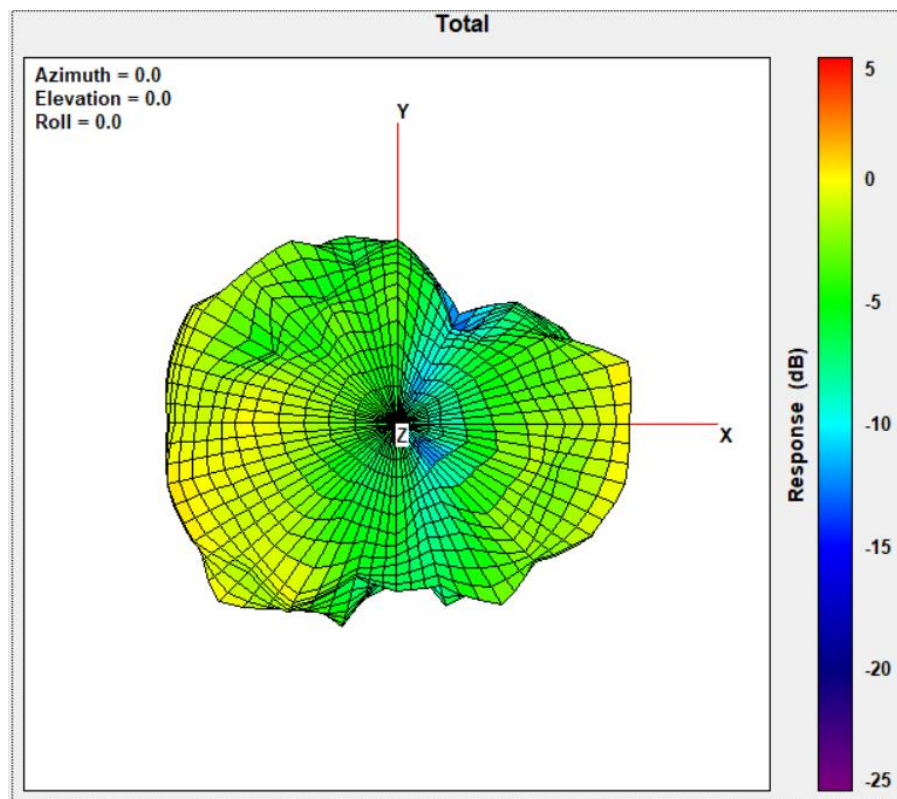
(13) 5745MHz



(14) 5785MHz



(15) 5825MHz



5. Test result

Without WLAN Cable

(1) 2.4GHz band

Frequency (MHz)	2412	2437	2462
Efficiency (%)	58.85	61.57	61.04
Peak Gain (dBi)	2.58	2.90	2.72

(2) 5GHz band

Frequency (MHz)	5180	5220	5240	5260	5300	5320
Efficiency (%)	47.13	46.27	48.67	48.56	47.93	46.30
Peak Gain (dBi)	3.45	3.07	3.30	3.26	3.23	2.78

Frequency (MHz)	5500	5580	5700	5745	5785	5825
Efficiency (%)	51.12	42.25	32.57	31.24	31.64	33.87
Peak Gain (dBi)	3.05	2.04	0.88	0.63	1.06	1.03

With WLAN Cable

1. 259B5 7JA0A (long)

(1) 2.4GHz band

Frequency (MHz)	2412	2437	2462
Cable loss (dB)	-2.2	-2.2	-2.2
Antenna Gain (dBi)	2.58	2.90	2.72
Peak Gain with cable loss (dBi)	0.38	0.7	0.52

(2) 5GHz band

Frequency (MHz)	5180	5220	5240	5260	5300	5320
Cable loss (dB)	-3.71	-3.71	-3.77	-3.6	-3.85	-3.69
Antenna Gain (dBi)	3.45	3.07	3.30	3.26	3.23	2.78
Peak Gain with cable loss (dBi)	-0.26	-0.64	-0.47	-0.34	-0.62	-0.91

Frequency (MHz)	5500	5580	5700	5745	5785	5825
Cable loss (dB)	-3.89	-3.84	-3.97	-3.8	-3.92	-3.96
Antenna Gain (dBi)	3.05	2.04	0.88	0.63	1.06	1.03
Peak Gain with cable loss (dBi)	-0.84	-1.8	-3.09	-3.17	-2.86	-2.93

2. LVDS+WiFi (short)

(1) 2.4GHz band

Frequency (MHz)	2412	2437	2462
Cable loss (dB)	-1.1	-1.1	-1.1
Antenna Gain (dBi)	2.58	2.90	2.72
Peak Gain with cable loss (dBi)	1.48	1.8	1.62

(2) 5GHz band

Frequency (MHz)	5180	5220	5240	5260	5300	5320
Cable loss (dB)	-3.3	-2.67	-2.49	-2.45	-2.81	-3.14
Antenna Gain (dBi)	3.45	3.07	3.30	3.26	3.23	2.78
Peak Gain with cable loss (dBi)	0.15	0.4	0.81	0.81	0.42	-0.36

Frequency (MHz)	5500	5580	5700	5745	5785	5825
Cable loss (dB)	-3.73	-2.58	-3.78	-4.19	-4.25	-3.92
Antenna Gain (dBi)	3.05	2.04	0.88	0.63	1.06	1.03
Peak Gain with cable loss (dBi)	-0.68	-0.54	-2.9	-3.56	-3.19	-2.89