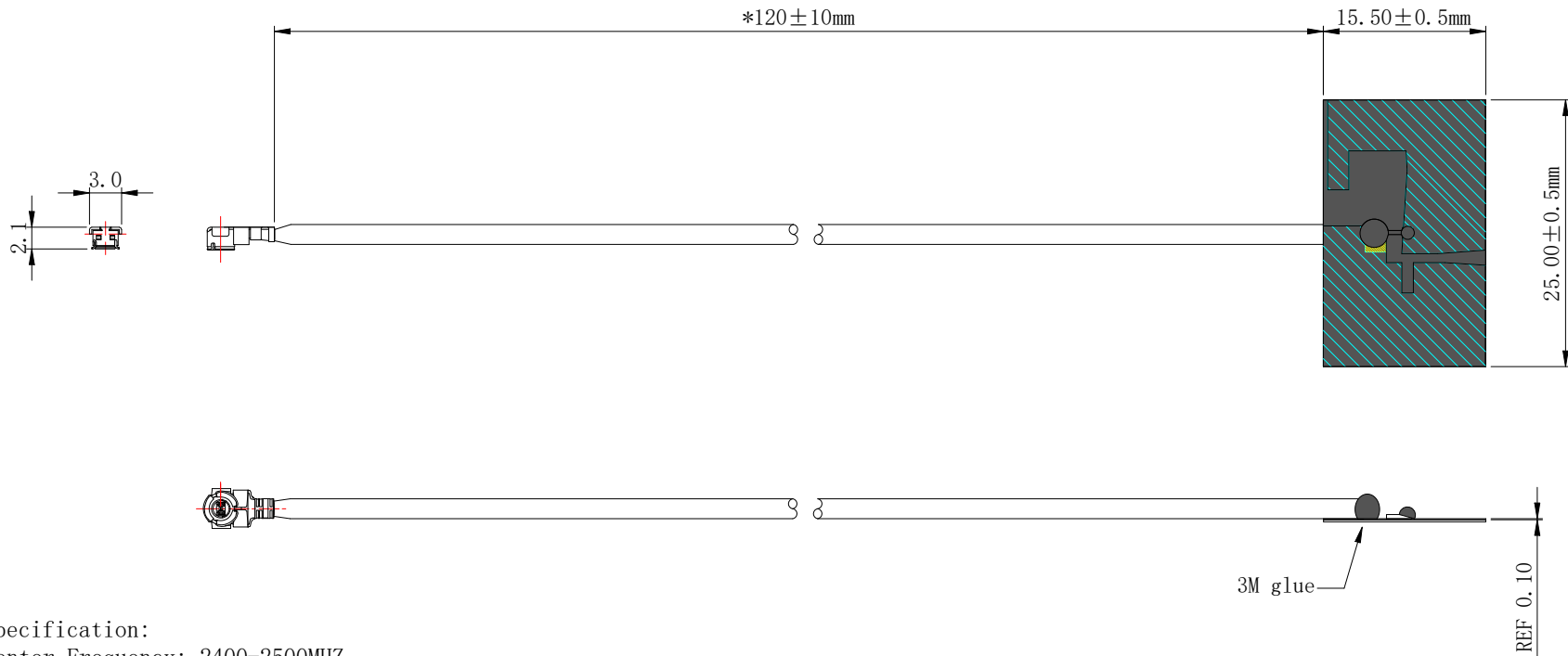




Product NO.		RHT-639-0878			
ISSUE	DESCRIPTION	DWN	DATE	APPROVEN	
R1.0	First issue	Gavin	2022/09.08	JIM. KING	
R2.0	FPC 2.4GHz Antenna	Gavin	2022/09.15	JIM. KING	
R3.0	FPC thickness 0.1MM	Gavin	2022/09.19	JIM. KING	
R4.0	Cable length changed to 120mm	Gavin	2022/09.21	JIM. KING	
R5.0	Antenna change IPEX 1 connect to RF1.13 Cable	Gavin	2022/12.07	JIM. KING	
R6.0	Add ambient temperature parameters	Gavin	2022/12.20	JIM. KING	



Specification:
Center Frequency: 2400-2500MHZ
Peak Gain:3 dBi
Average Gain:1 dBi
Impedance: 50Ω
Output VSWR:≤1.92
Antenna: FPC, Black
Dipole Antenna
FPC Size:25*15.5*0.1mm
Connector:IPEX-1, Brass, Gold plated
Cable:RF1.13, Jacket: FEP Black
Operating Temperature -45℃ to +85℃
Storage Temperature -45℃ to +85℃
Relative Humidity 20% - 80%

-TOLERANCES- UNLESS OTHERWISE SPECIFIED	STEREN					
			PART DESCRIPTION: FPC 2.4GHz ntenna with IPEX-1 For RF1.13 Cable			
	Appr: JIM. KING		P/N: RHT-639-0878			
UNLESS OTHERWISE SPECIFIED TOLERANCES FOR MILLIMETERS ARE: 0.5 - 8mm ± 0.20mm 8 - 30mm ± 0.25mm 30 - 120mm ± 0.30mm	Check:		Date	Scale	Unit	Type
	Draw: Gavin		2023.02.20	Free	MM	Z
				Page	1/1	

RHT-639-0878 is a printed dipole antenna for the range of 2.4-2.5GHz by Steren.

The manufacturer provided the data sheet in pdf, test setup photographs and the tested results in the excel file as shown in the figures 1 and 2.

Figures 3 and 4 show the test setups used by the manufacturers.

The following pages show the tabs of the measurement excel file “2.4G-FPC” provided by the manufacturer

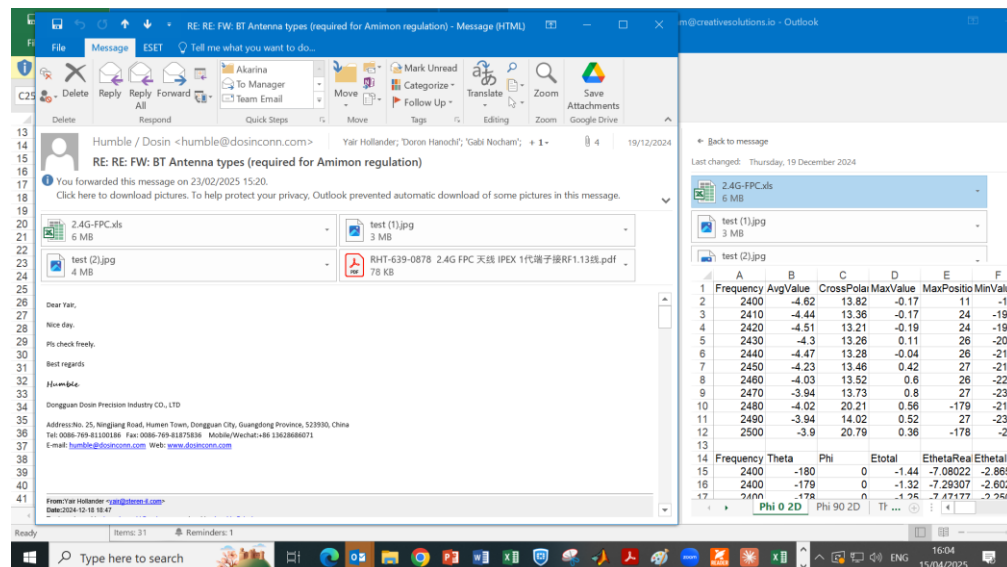


Figure 1: manufacturer email showing the content of “Phi 0 2D” tab

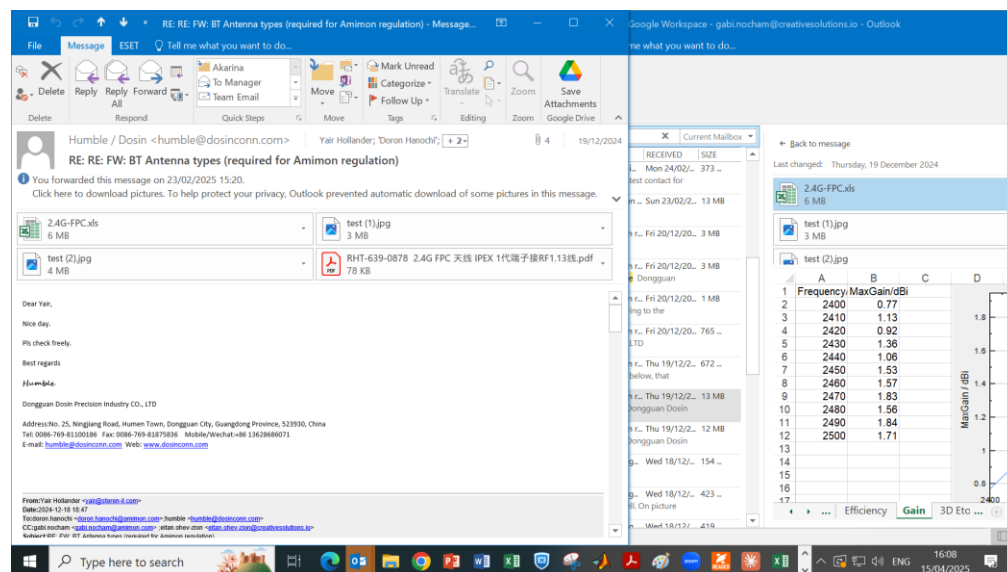


Figure 2: manufacturer email showing the content of “Gain” tab

The screenshots below show the tests setup for the antenna measurements as provided by the manufacturer.

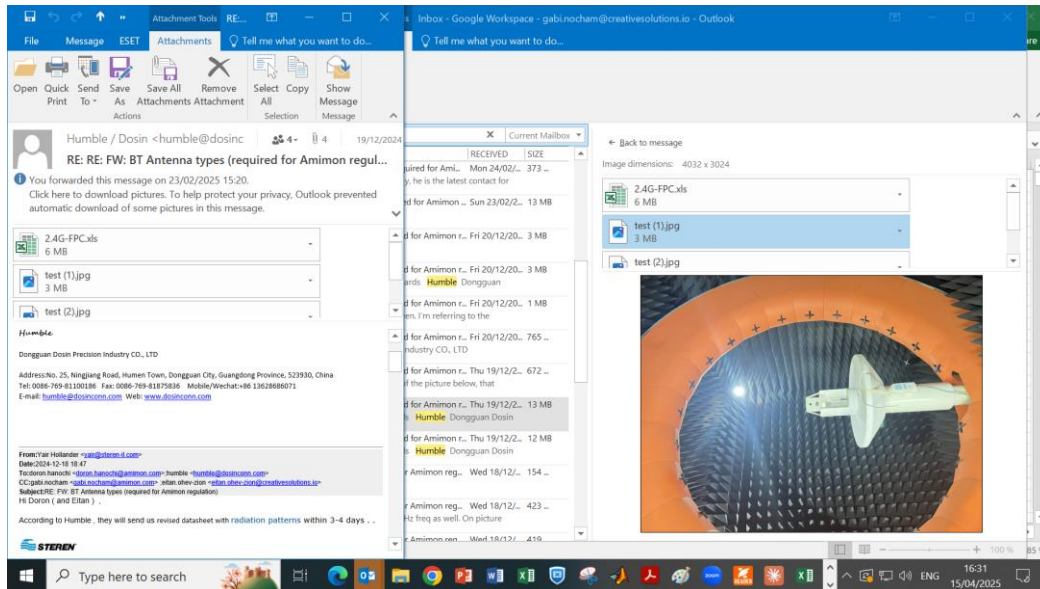


Figure 3: manufacturer email showing the content of “Test1” setup

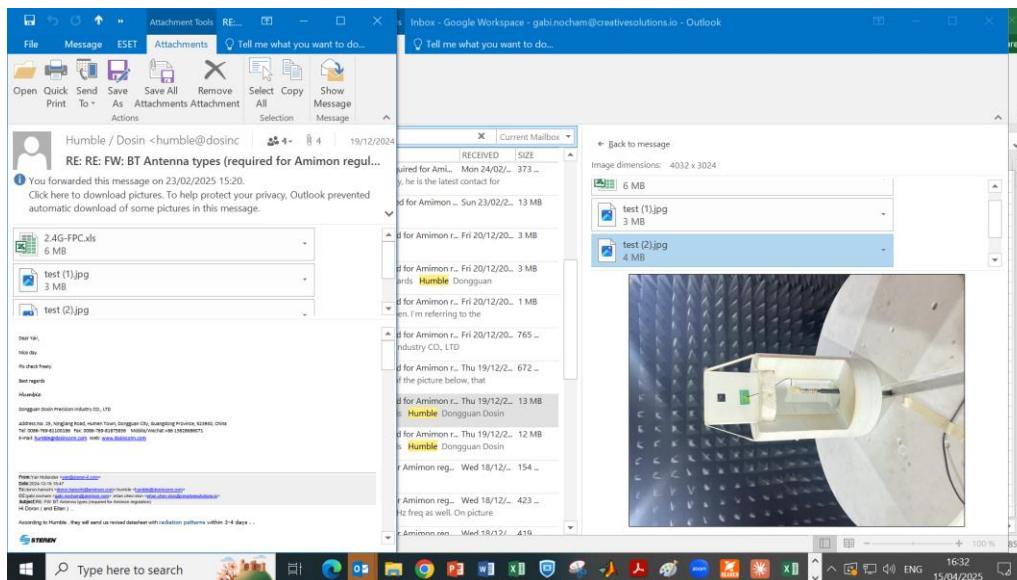
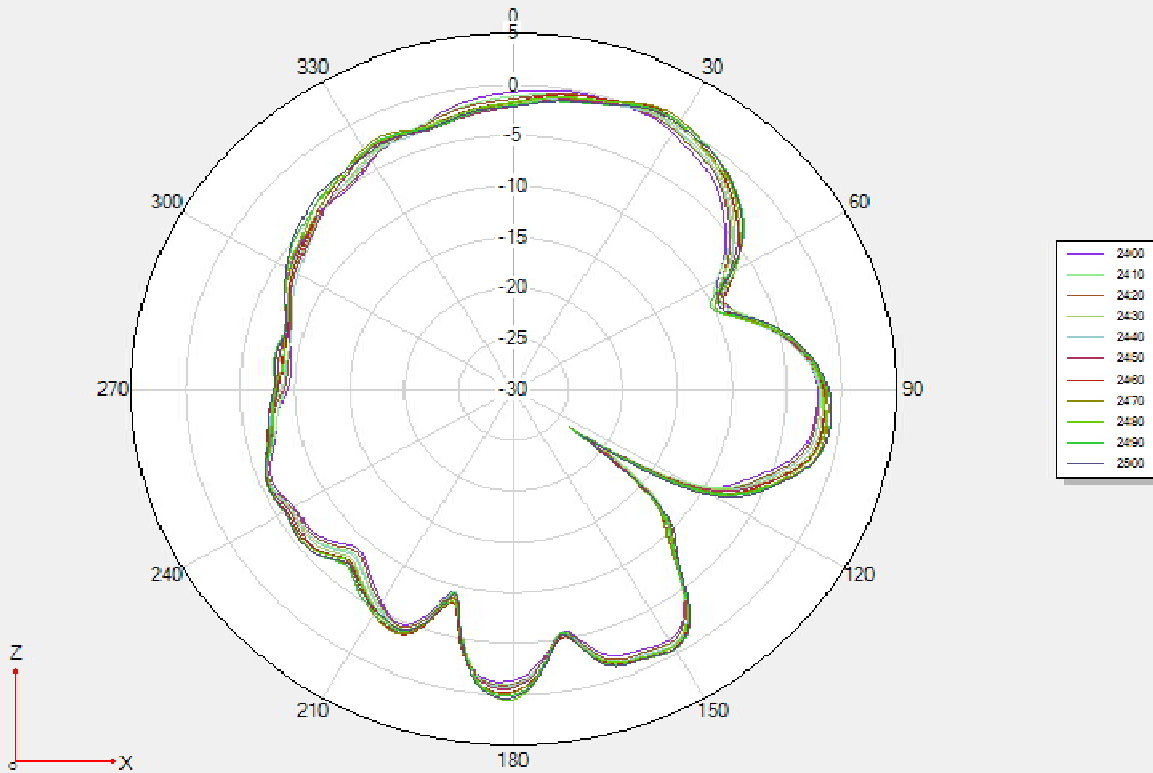
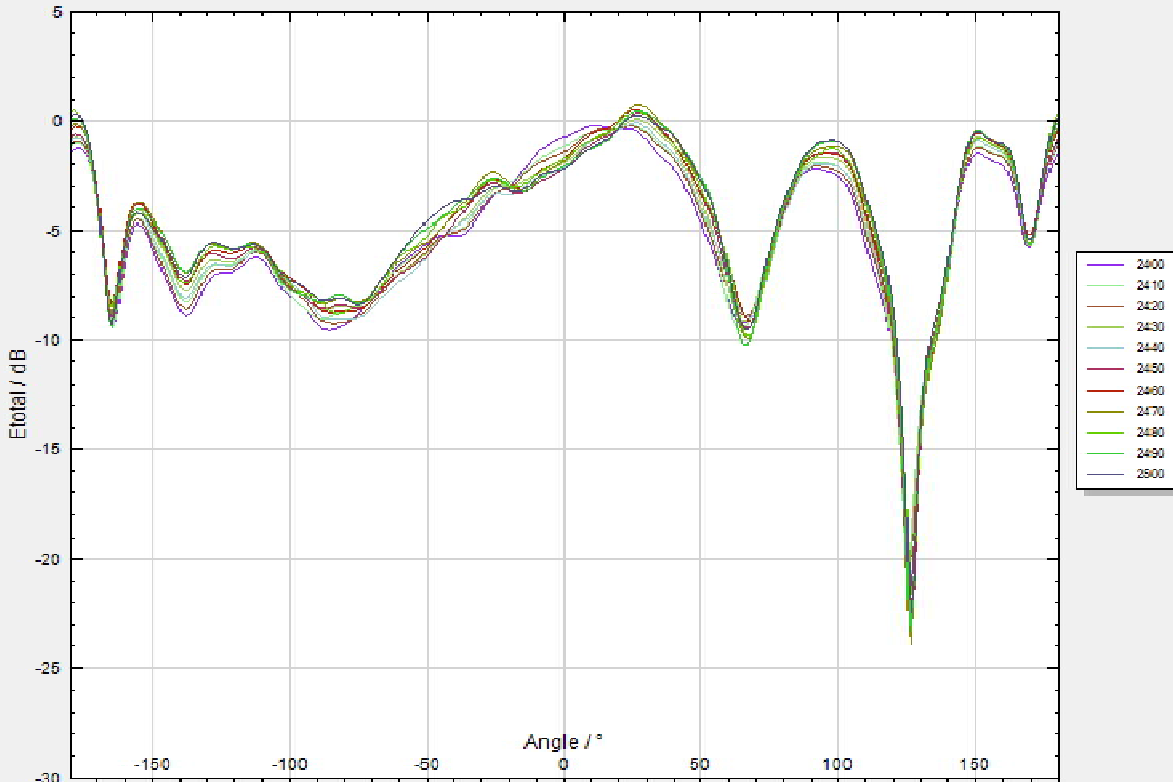


Figure 4: manufacturer email showing the content of “Test2” setup

Phi 0 2D

Frequency	AvgValue	CrossPolar	MaxValue	MaxPosition	MinValue	MinPosition	BeamWidth	FrontBack	PatternRipple
2400	-4.62	13.82	-0.17	11	-19.8	126	67.64	4.69	19.63
2410	-4.44	13.36	-0.17	24	-19.96	125	72.88	4.3	19.79
2420	-4.51	13.21	-0.19	24	-19.82	126	69.88	4.28	19.63
2430	-4.3	13.26	0.11	26	-20.34	125	64.04	4.23	20.45
2440	-4.47	13.28	-0.04	26	-21.05	126	61.7	4.27	21.01
2450	-4.23	13.46	0.42	27	-21.62	126	53.05	4.44	22.04
2460	-4.03	13.52	0.6	26	-22.27	126	56.53	4.42	22.87
2470	-3.94	13.73	0.8	27	-23.87	126	52.71	4.67	24.67
2480	-4.02	20.21	0.56	-179	-21.62	126	7.23	2.14	22.18
2490	-3.94	14.02	0.52	27	-23.32	126	56.68	4.66	23.84
2500	-3.9	20.79	0.36	-178	-22.4	126	7.99	2.32	22.76

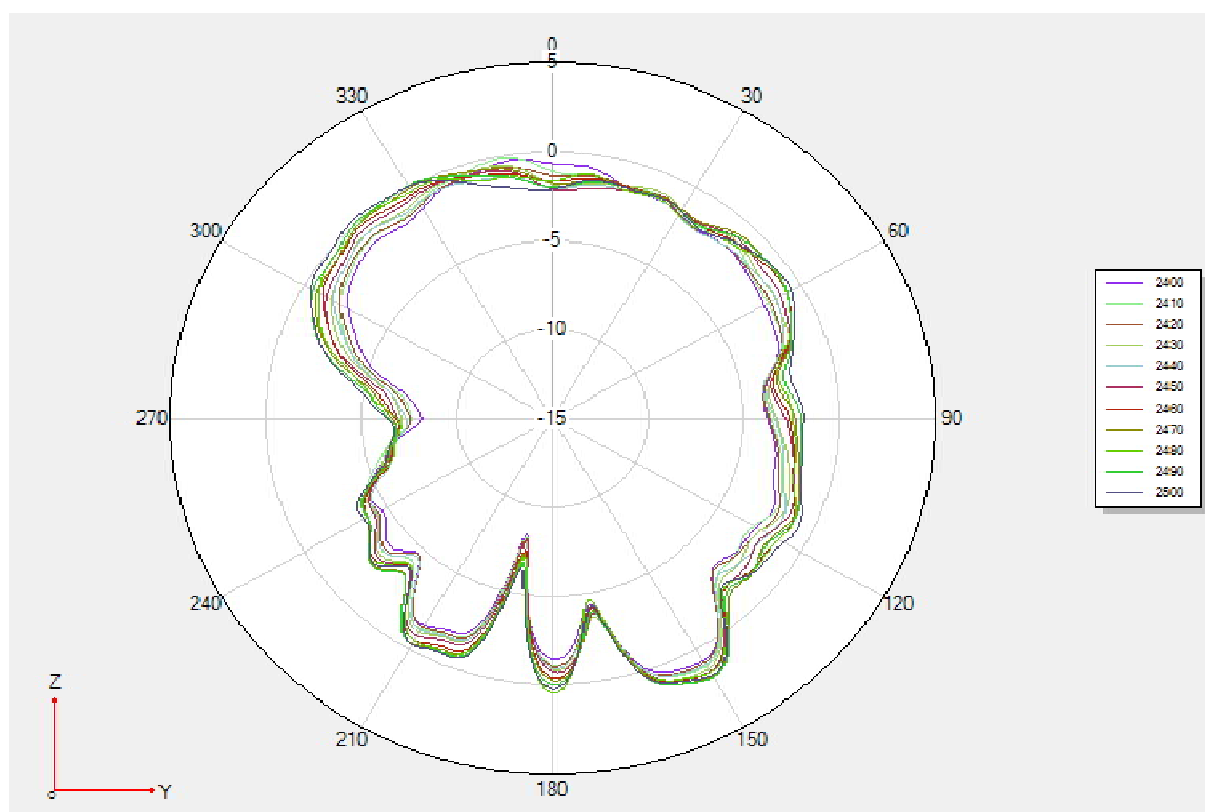
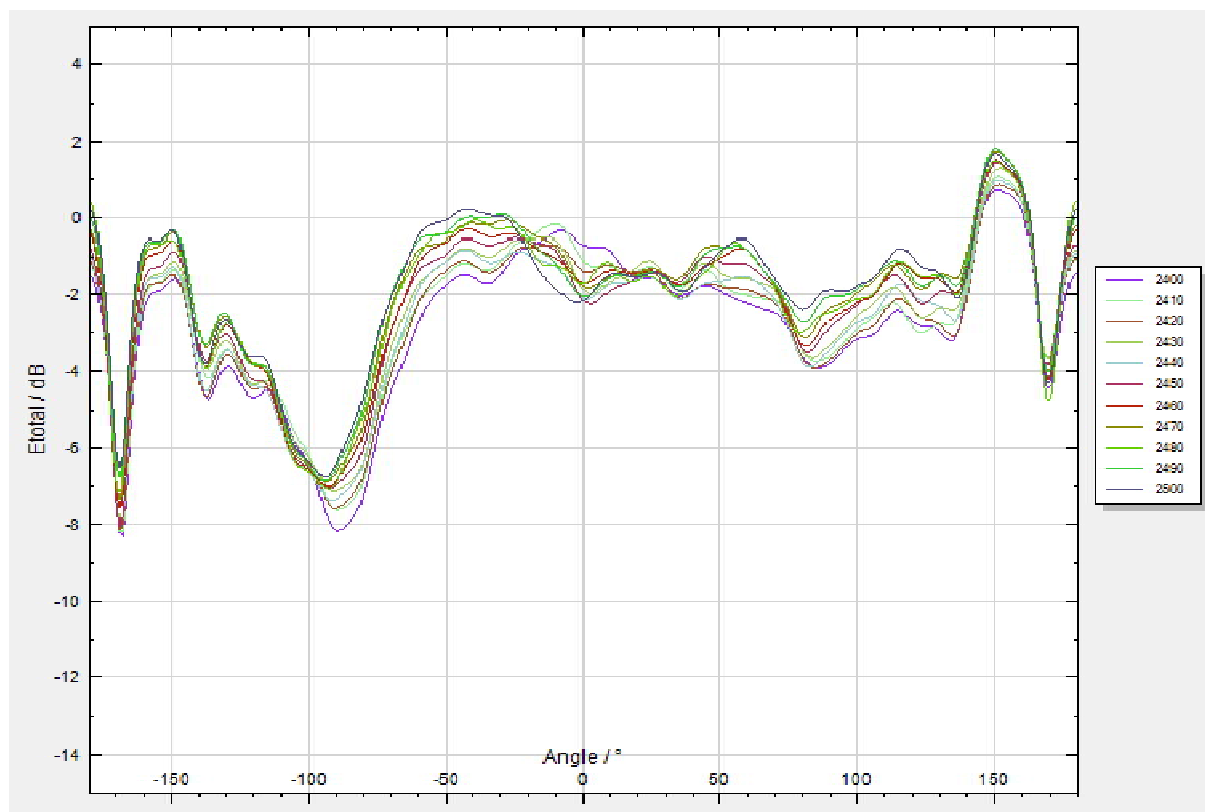
Phi 0 2D



Phi 90 2D

Frequency	AvgValue	CrossPolar	MaxValue	MaxPositic	MinValue	MinPositio	BeamWidth	FrontBack	PatternRip
2400	-2.59	18.78	0.75	150	-8.29	-168	26.47	2.16	9.04
2410	-2.35	17.96	1.1	151	-8.18	-169	26.01	2.08	9.28
2420	-2.46	19.39	0.89	151	-8.13	-169	25.9	2.01	9.02
2430	-2.19	18.66	1.31	151	-7.99	-169	25.76	2.06	9.3
2440	-2.4	19.07	1.01	151	-8.04	-169	25.75	2.01	9.05
2450	-2.06	17.78	1.47	151	-8.07	-169	25.78	2.04	9.54
2460	-1.9	18.38	1.52	150	-7.55	-169	25.67	1.94	9.07
2470	-1.73	17.11	1.77	150	-7.32	-169	25.79	1.83	9.09
2480	-1.83	17.44	1.51	150	-7.12	-169	25.33	1.78	8.63
2490	-1.66	17.37	1.83	150	-6.84	-94	25.12	1.73	8.67
2500	-1.65	18.45	1.71	150	-6.74	-94	24.71	1.66	8.45

Phi 90 2D



Theta 90 2D

Frequency	AvgValue	CrossPolar	MaxValue	MaxPositic	MinValue	MinPositio	BeamWidt	FrontBack	PatternRip
2400	-4.78	13.62	-2.03	39	-9.36	177	130.5	4.01	7.33
2410	-4.5	13.77	-1.84	4	-9.01	178	134.33	6.85	7.17
2420	-4.59	13.97	-1.84	37	-9.05	176	130.67	4.12	7.21
2430	-4.22	14.66	-1.57	34	-8.54	178	135.8	4.34	6.97
2440	-4.43	14.61	-1.61	34	-8.75	178	133.17	4.59	7.14
2450	-4	15.11	-1.29	34	-8.49	180	140.4	4.59	7.2
2460	-3.9	14.71	-1.15	32	-8.46	179	138.83	4.76	7.31
2470	-3.71	14.57	-1.15	33	-8.3	179	146.2	4.48	7.15
2480	-3.89	13.85	-1.31	32	-8.16	177	143.5	4.38	6.85
2490	-3.57	13.38	-1.01	31	-8.23	178	144.86	4.67	7.22
2500	-3.47	12.89	-0.88	28	-8.19	177	143.5	4.9	7.31