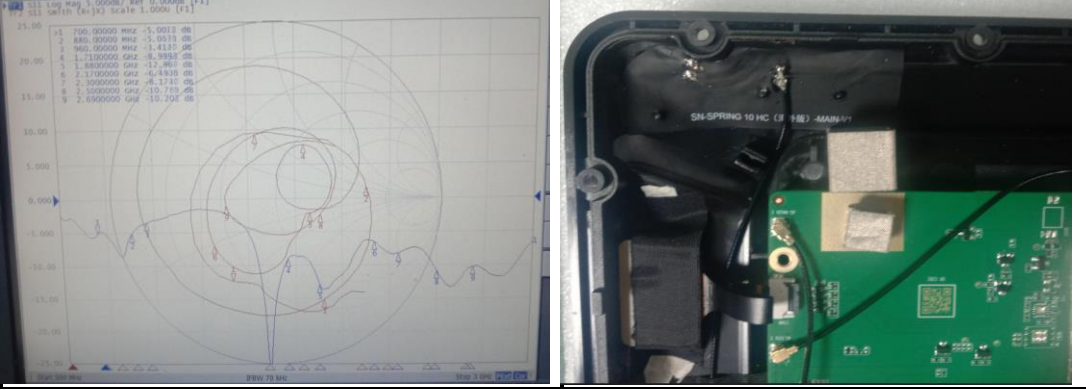
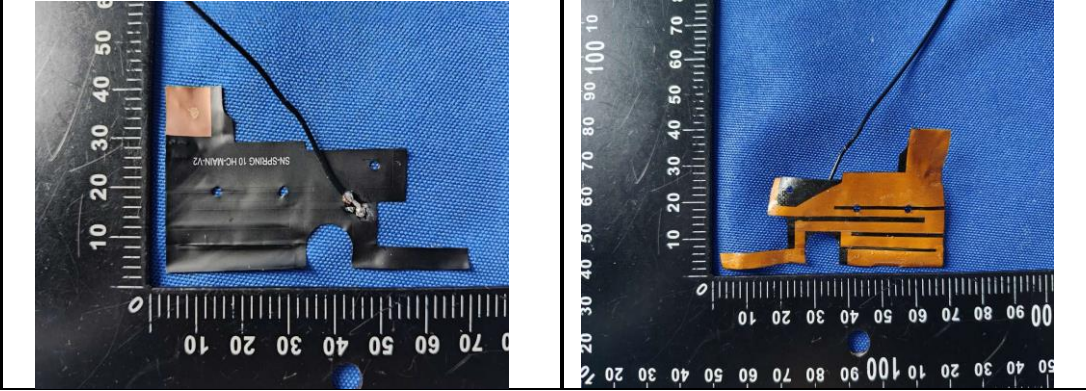


Applicant	Shanghai Huace Navigation Technology Ltd.
Address	577 Songying Road, Qingpu District, 201706 Shanghai, China

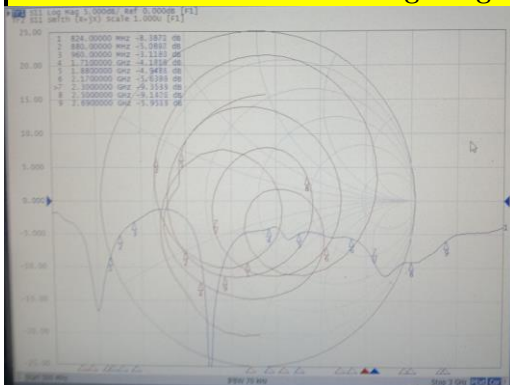
4G MAIN ANT (Smith+log mag)	4G MAIN (Smith+log mag)
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4G MAIN ANT (size)	4G MAIN (size)
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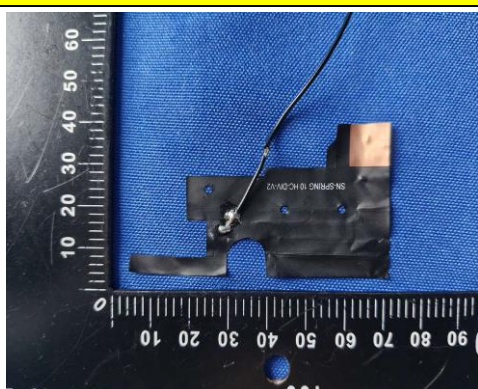
4G DIV ANT (Smith+log mag)



4G DIV ANT (Smith+log mag)



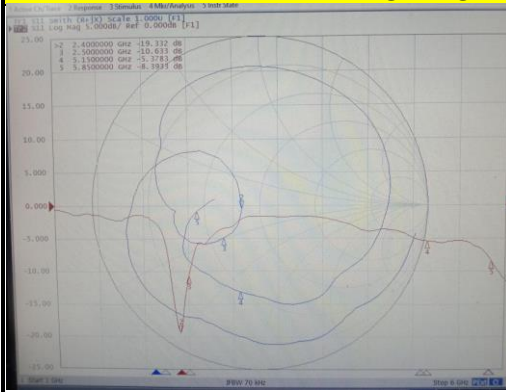
4G DIV ANT (size)



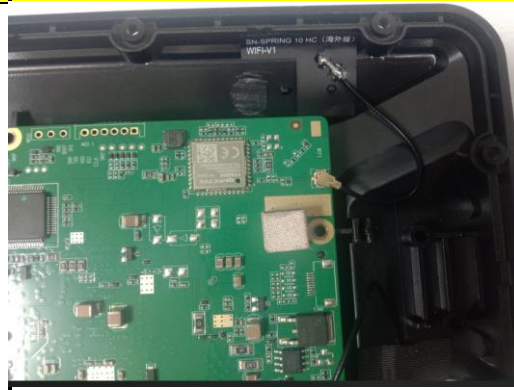
4G DIV ANT (size)



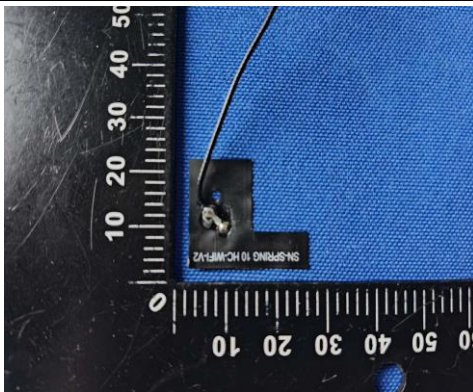
WIFI ANT (Smith+log mag)



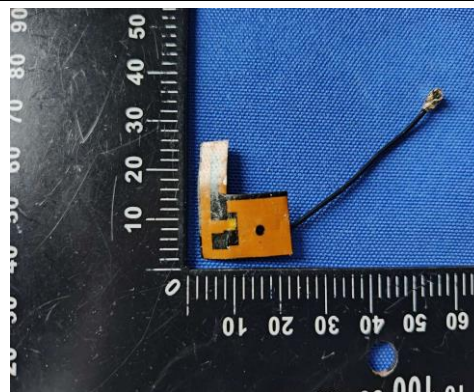
WIFI ANT (Smith+log mag)



WIFI ANT (size)



WIFI ANT (size)



Active test data

B1	18050	18.16		
	18300	18.05		
	18550	18.17	550	-96.87
B3	19250	18.62		
	19575	19.46		
	19900	19.78	1900	-92.84
B5	20450	19.68		
	20525	20.45		
	20600	19.13	2600	-92
B7	20850	20.03		
	21100	20.54		
	21350	19.65	3350	-94.03
B8	21500	18.06		
	21625	17.35		
	21750	17.51	3750	-91.01
B20	24200	20.47		
	24300	20.02		
	24400	19.33	6400	-93.66
B28	27260	20.6		
	27435	20.93		
	27610	16.72	9435	-93.53
B38	37850	18.66		
	38000	18.45		
	38150	17.92	38150	-88.75
B40	38750	18.15		
	39150	17.53		
	39550	17.96	38750	-89.28
B41	40340	18.54		
	40620	18.36		
	41490	17.56	40620	-88.29

Passive test data

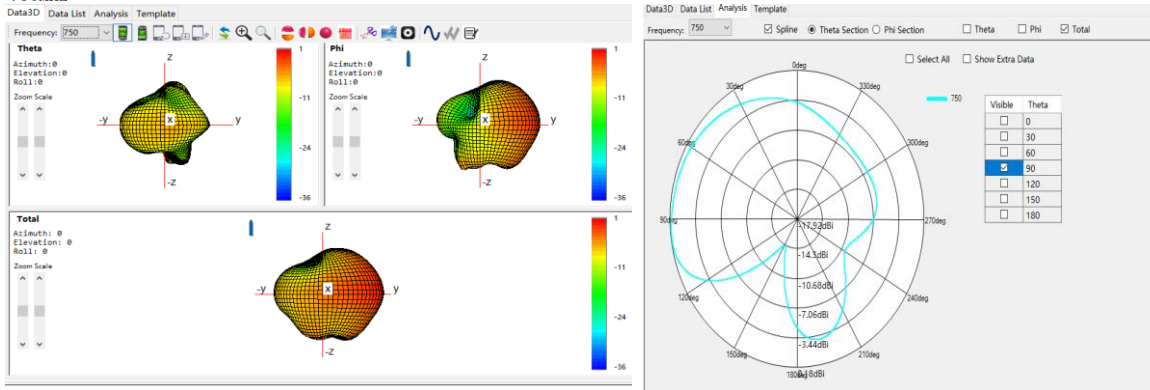
4G MAIN ANT

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	25.3	-5.97	-1.57
710	24.39	-6.13	-2.05
720	24.89	-6.04	-1.69
730	26.93	-5.7	-0.93
740	28.63	-5.43	-0.32
750	30.66	-5.13	0.08
760	32.04	-4.94	0.37
770	33.89	-4.7	0.69
780	35.3	-4.52	0.88
790	36.54	-4.37	1.03
800	38.79	-4.11	1.37
810	41.27	-3.84	1.54
820	42.42	-3.72	1.57
830	44.44	-3.52	1.64
840	45.55	-3.42	1.6
850	45.74	-3.4	1.5
860	44.39	-3.53	1.31
870	43.65	-3.6	1.08
880	43.17	-3.65	0.79
890	43.37	-3.63	1.05
900	44.72	-3.49	1.23
910	46.34	-3.34	1.38
920	46.35	-3.34	1.54
930	44.86	-3.48	1.41
940	42.4	-3.73	1.36
950	40.32	-3.94	1.35
960	38.14	-4.19	1.28

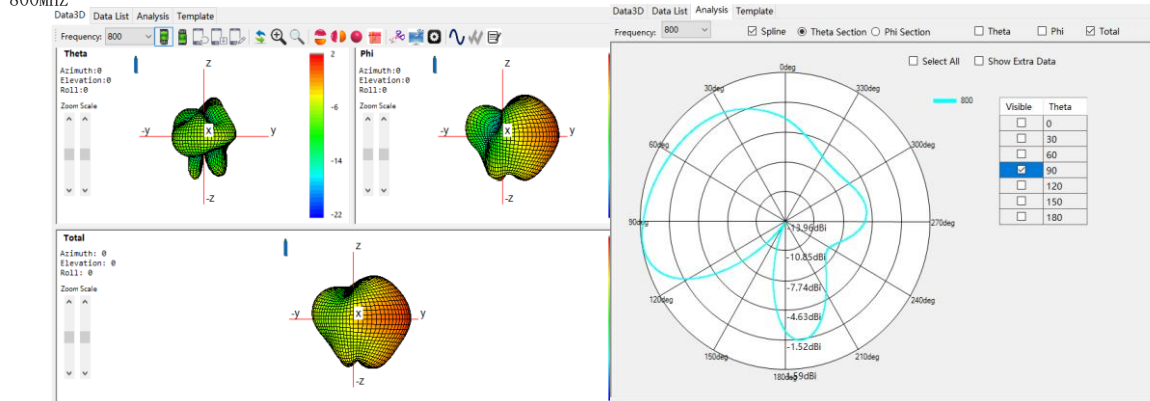
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1700	34.85	-4.58	-0.67
1720	32.99	-4.82	-0.61
1740	34.13	-4.67	-0.37
1760	33.31	-4.77	-0.41
1780	31.66	-4.99	-0.63
1800	30.97	-5.09	-1.15
1820	29.5	-5.3	-1.55
1840	27.07	-5.68	-1.94
1860	26.31	-5.8	-1.9
1880	25.3	-5.97	-1.9
1900	25.04	-6.01	-1.88
1920	26.49	-5.77	-1.44
1940	25.18	-5.99	-1.56
1960	25.9	-5.87	-1.19
1980	26.53	-5.76	-0.97
2000	27.55	-5.6	-0.58
2020	28.34	-5.48	-0.37
2040	28.45	-5.46	-0.11
2060	27.57	-5.6	-0.1
2080	28.61	-5.43	0.24
2100	27.28	-5.64	0.12
2120	26.16	-5.82	0.12
2140	25.1	-6	0.43
2160	27.09	-5.67	1.01
2400	44.75	-3.49	3.45
2420	44.54	-3.51	3.38
2440	44.77	-3.49	3.16

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2460	43.55	-3.61	2.74
2480	40.35	-3.94	2.03
2500	38.36	-4.16	1.58
2520	39.1	-4.08	1.58
2540	40.61	-3.91	1.5
2560	42.51	-3.72	1.63
2580	42.51	-3.72	1.37
2600	43.1	-3.66	1.08
2620	43.47	-3.62	0.76
2640	42.21	-3.75	0.3
2660	42.95	-3.67	0.6
2680	41.89	-3.78	0.65
2700	42.85	-3.68	0.96

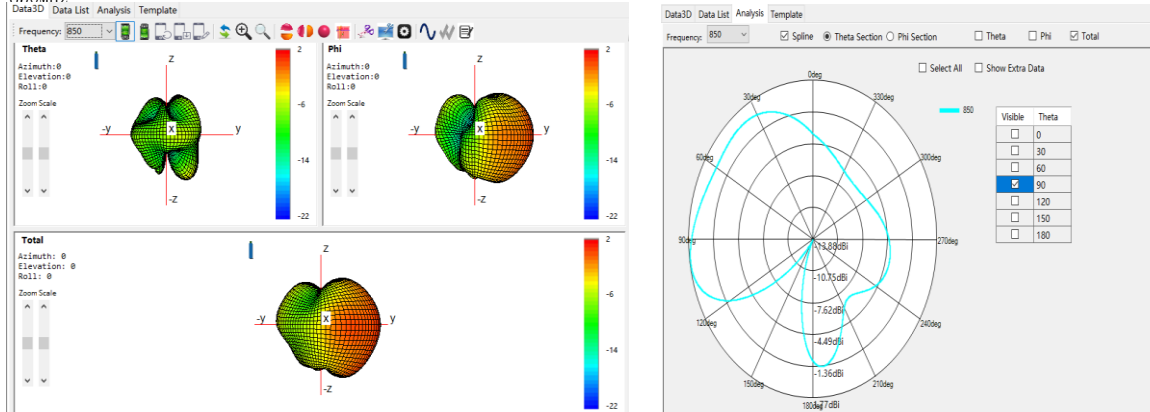
750MHZ



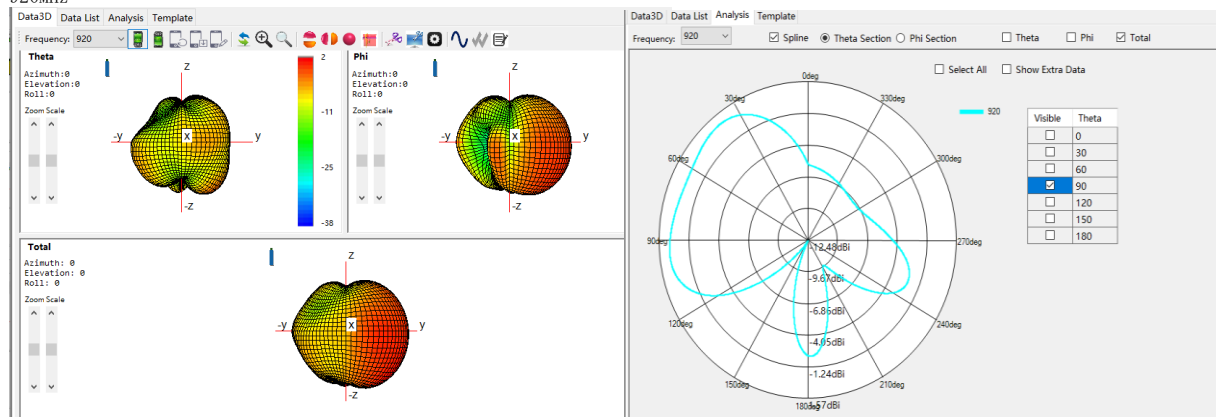
800MHZ



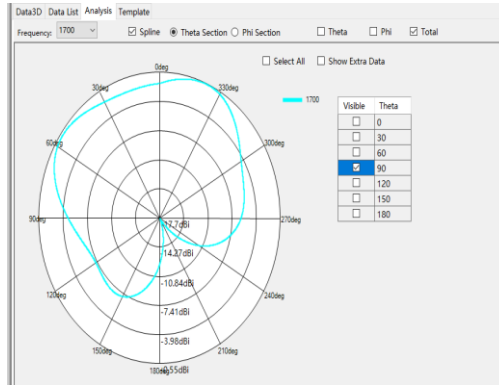
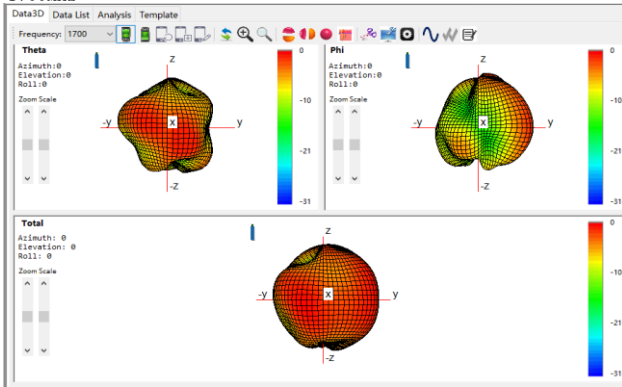
850MHz



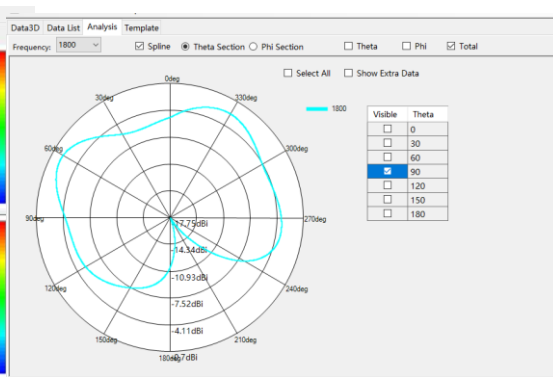
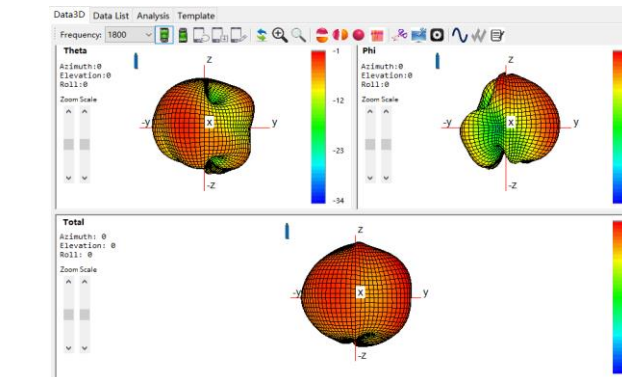
920MHz



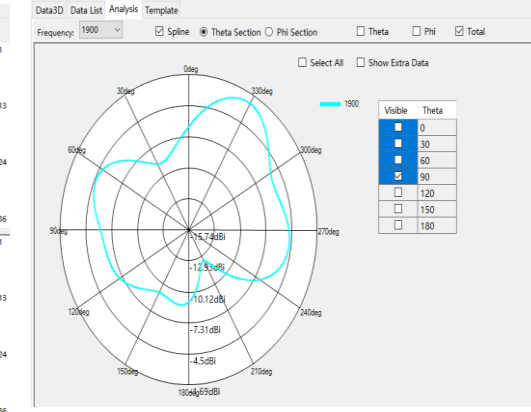
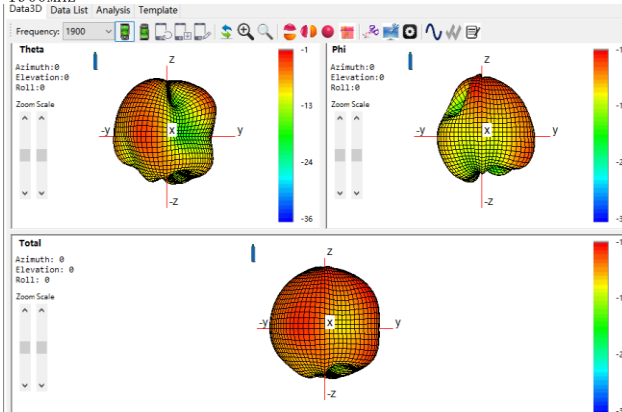
1700MHz



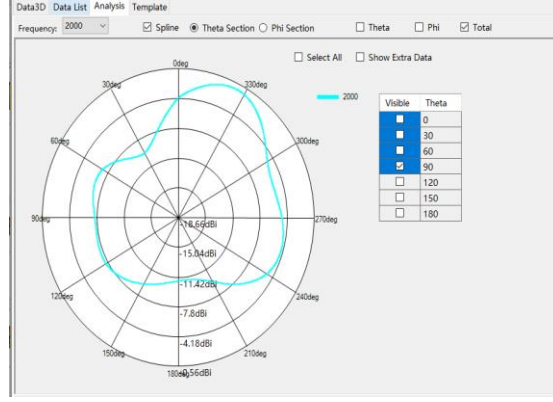
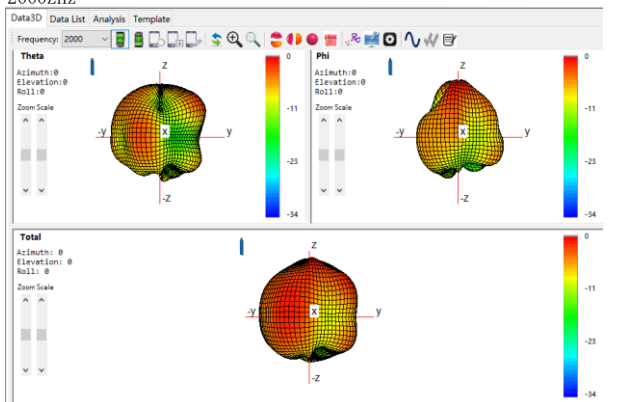
1800MHz



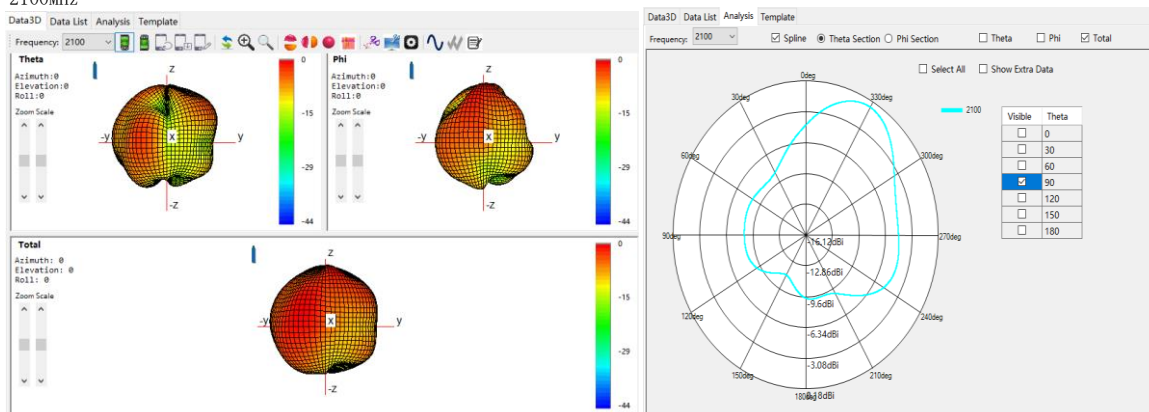
1900MHz



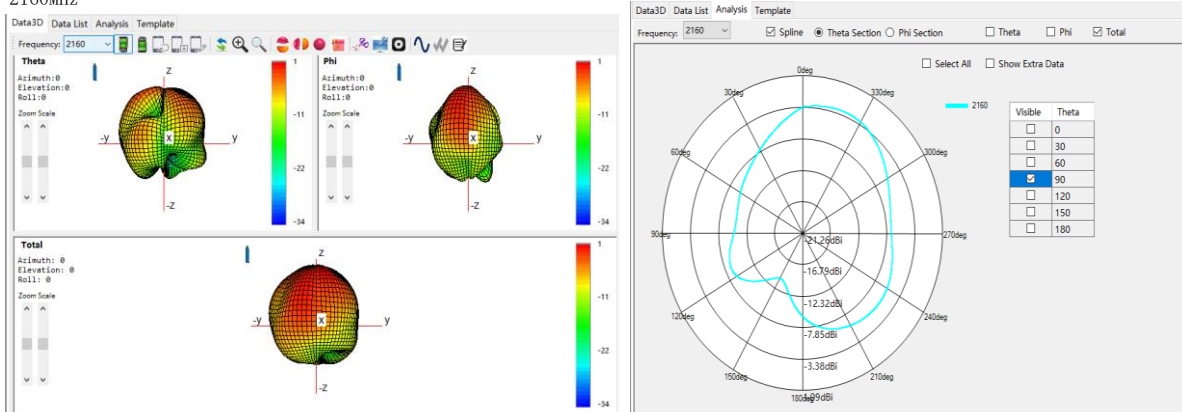
2000MHz



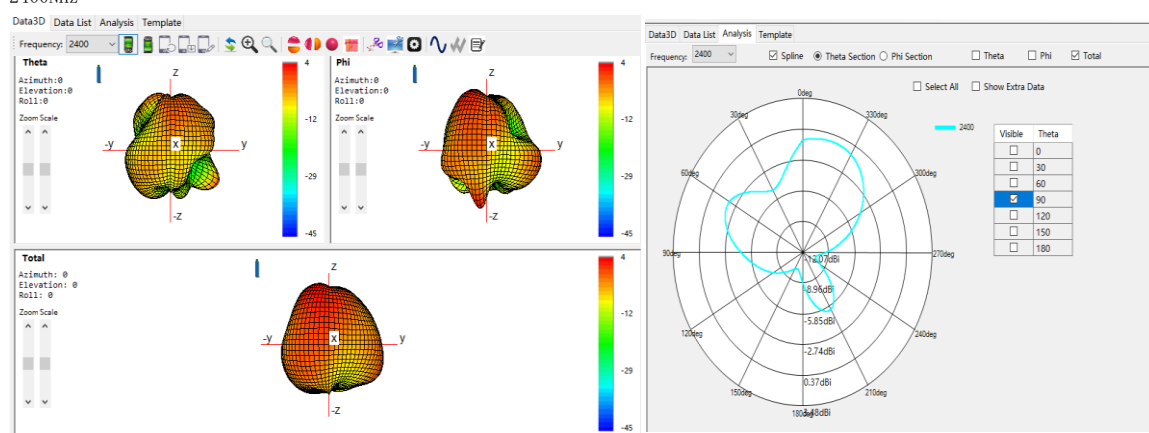
2100MHz



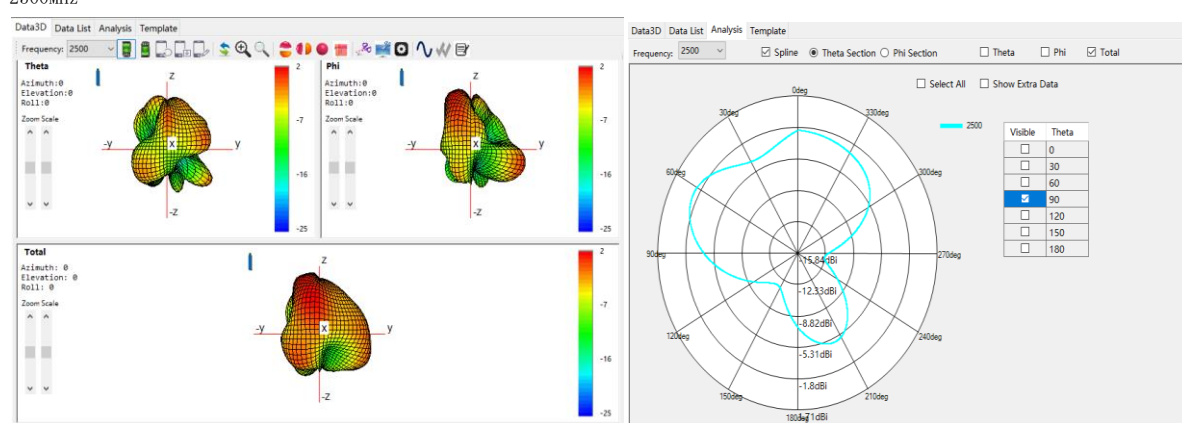
2160MHz



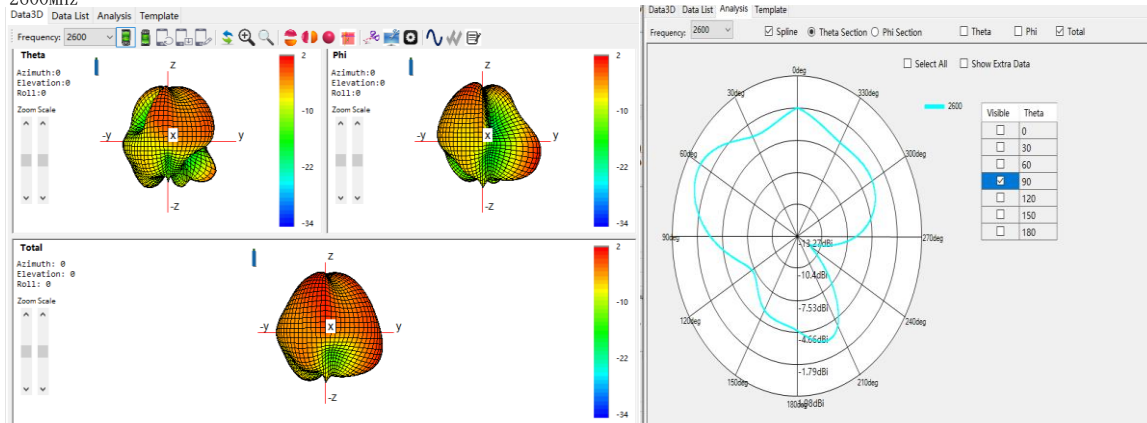
2400MHz



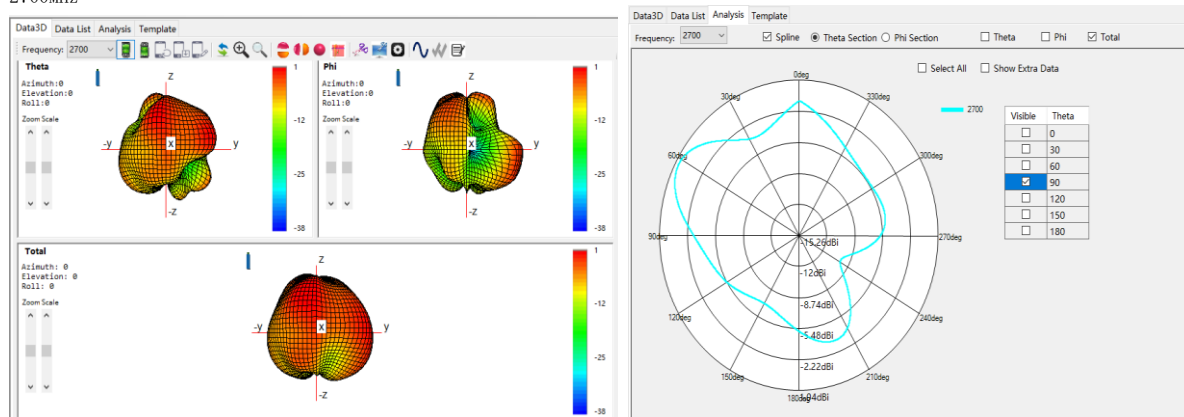
2500MHz



2600MHz



2700MHz



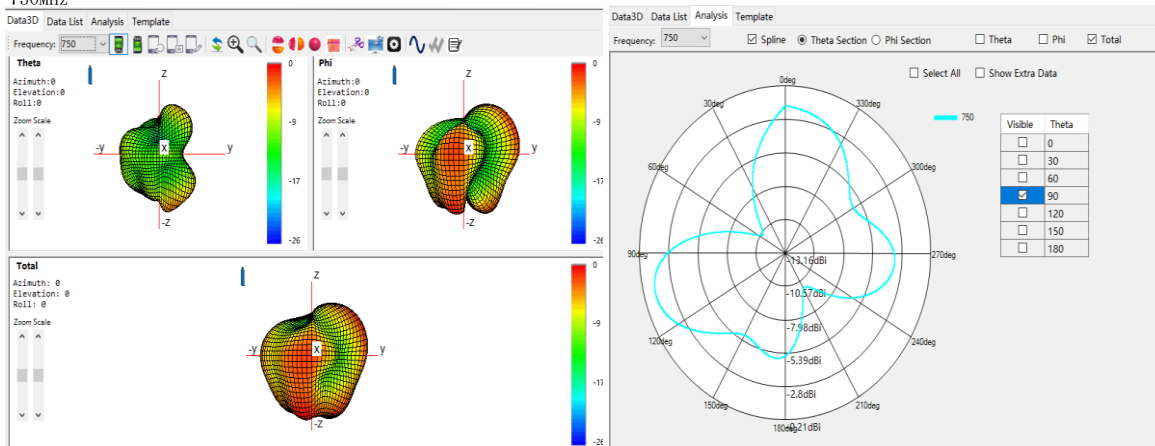
4G DIV ANT

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	22.79	-6.42	-1.96
710	25.4	-5.95	-1.45
720	27.09	-5.67	-1.15
730	28.43	-5.46	-0.96
740	30.42	-5.17	-0.72
750	33.1	-4.8	-0.37
760	34.76	-4.59	-0.33
770	36.68	-4.36	-0.45
780	38	-4.2	-0.35
790	39.58	-4.03	0.05
800	41.19	-3.85	0.41
810	42.12	-3.75	0.9
820	40.45	-3.93	1.13
830	38.19	-4.18	1.08
840	34.31	-4.65	0.53
850	30.61	-5.14	-0.39
860	28.66	-5.43	-0.92
870	28.68	-5.42	-1.11
880	27.88	-5.55	-1.39
890	25.86	-5.87	-1.75
900	23.39	-6.31	-2.13
910	21.63	-6.65	-2.2
920	19.83	-7.03	-2.06
930	17.4	-7.59	-2.11
940	15.07	-8.22	-2.47
950	12.86	-8.91	-3.13
960	11.21	-9.51	-3.84

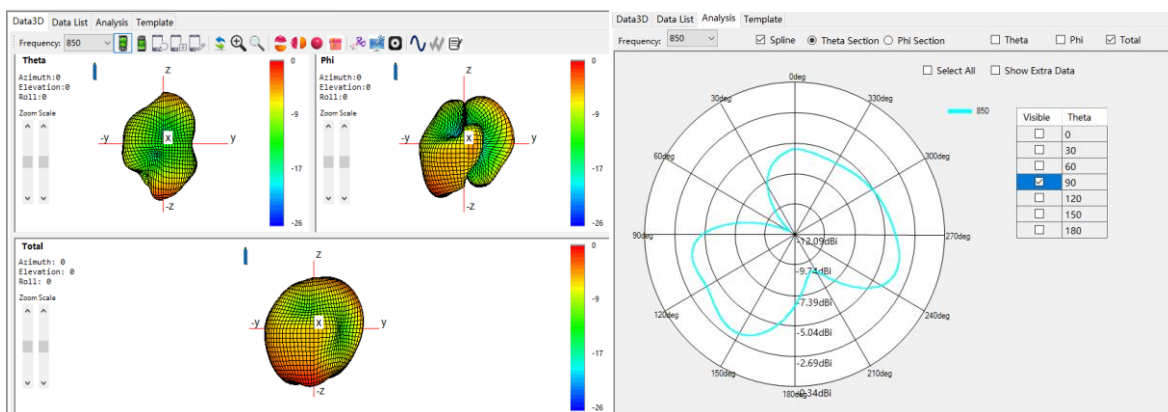
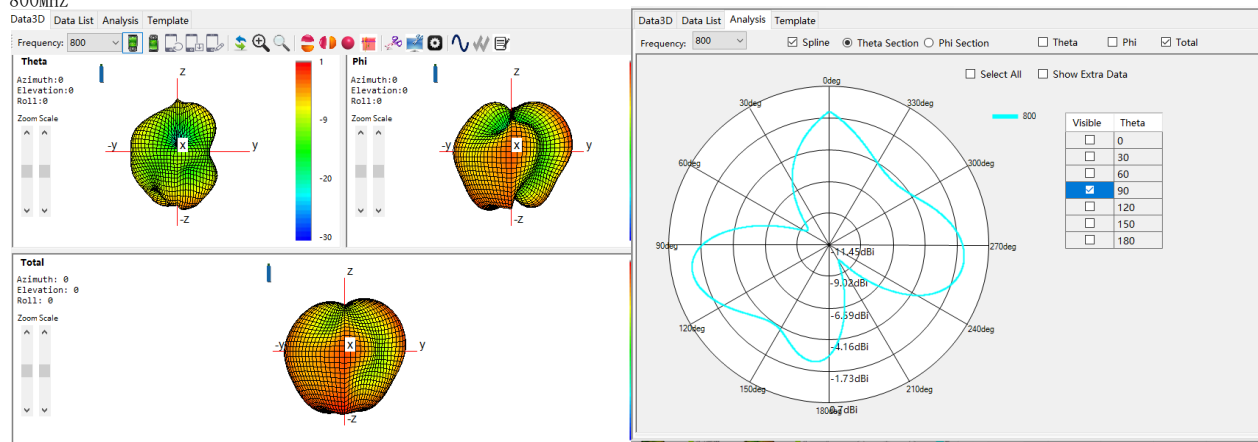
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1700	15.22	-8.18	-2.91
1720	14.65	-8.34	-3.05
1740	15.88	-7.99	-3.05
1760	16.87	-7.73	-2.54
1780	17.73	-7.51	-2.59
1800	20.35	-6.91	-2.2
1820	21.87	-6.6	-1.25
1840	23.26	-6.33	-0.66
1860	23.89	-6.22	-0.31
1880	23.57	-6.28	-0.56
1900	23.5	-6.29	-0.7
1920	24.78	-6.06	-0.93
1940	23.9	-6.22	-1.17
1960	23.32	-6.32	-0.87
1980	23.41	-6.31	-0.58
2000	23.96	-6.2	-0.25
2020	25.93	-5.86	0.42
2040	26.98	-5.69	0.86
2060	27.07	-5.68	0.91
2080	29.47	-5.31	1.35
2100	29.53	-5.3	1.35
2120	31.22	-5.06	1.44
2140	33.11	-4.8	1.43
2160	35.51	-4.5	1.57
2400	47.72	-3.21	3.07
2420	45.58	-3.41	2.53
2440	44.62	-3.51	2.69

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2460	43.34	-3.63	2.91
2480	39.25	-4.06	2.76
2500	35.44	-4.5	2.42
2520	34.69	-4.6	2.3
2540	34.89	-4.57	2.27
2560	35.47	-4.5	2.08
2580	34.15	-4.67	1.84
2600	33.78	-4.71	1.75
2620	32.79	-4.84	1.42
2640	30.9	-5.1	1.37
2660	30.47	-5.16	1.29
2680	28.89	-5.39	1.07
2700	27.63	-5.59	0.57

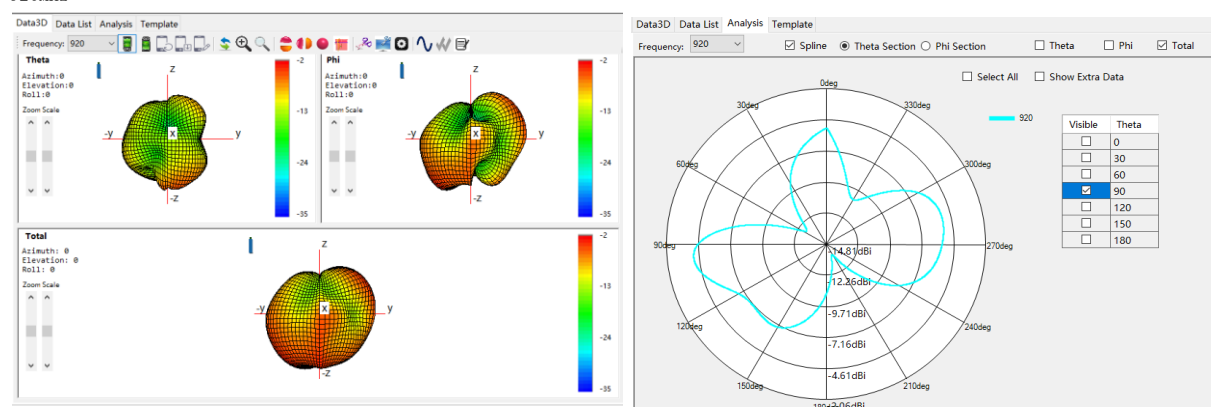
750MHz



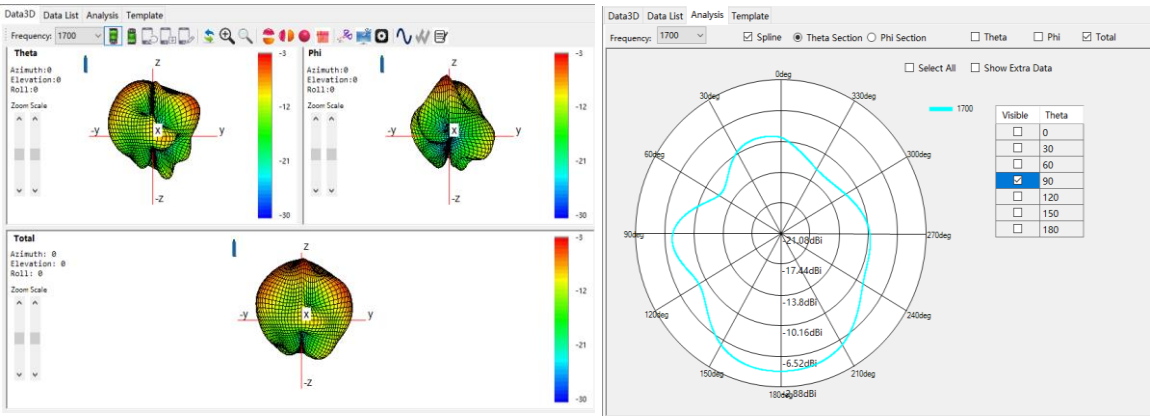
800MHz



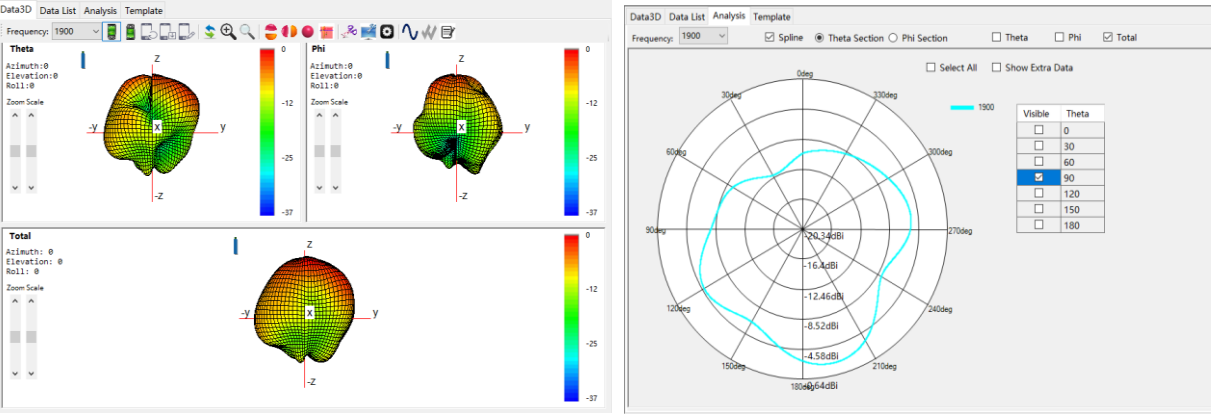
920MHz



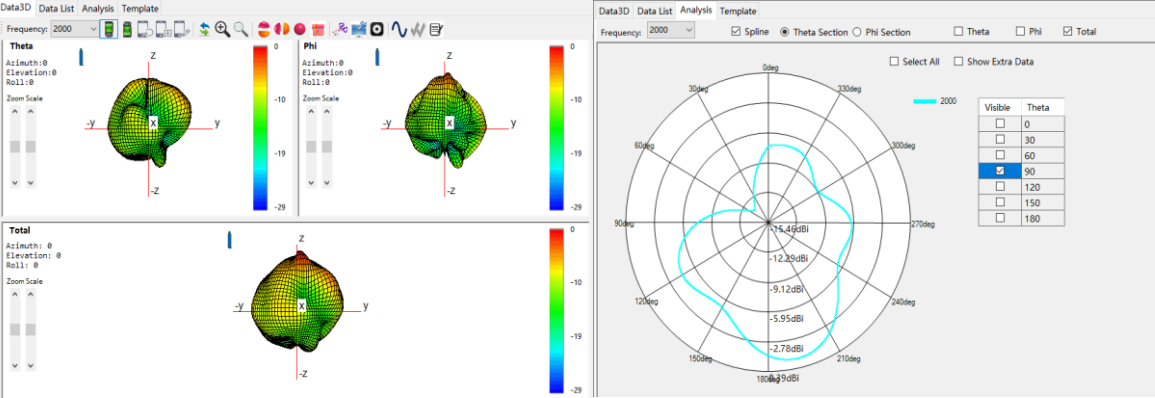
1700MHz



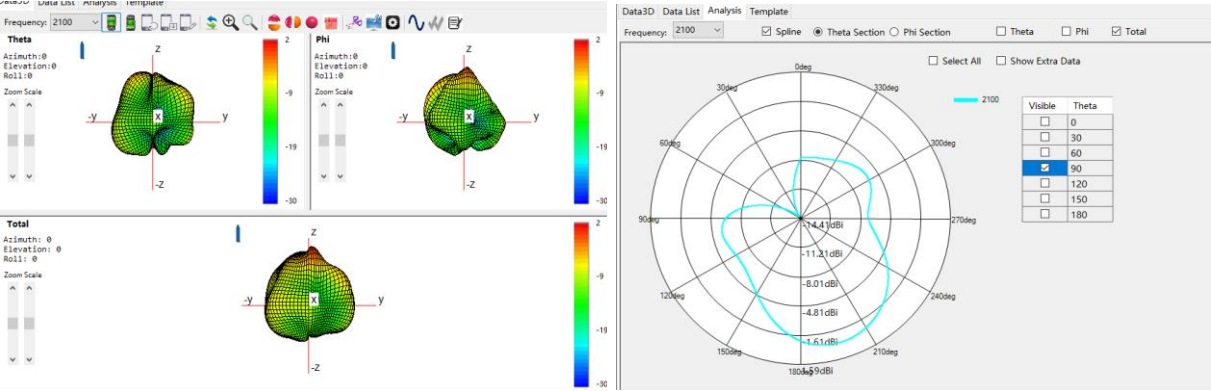
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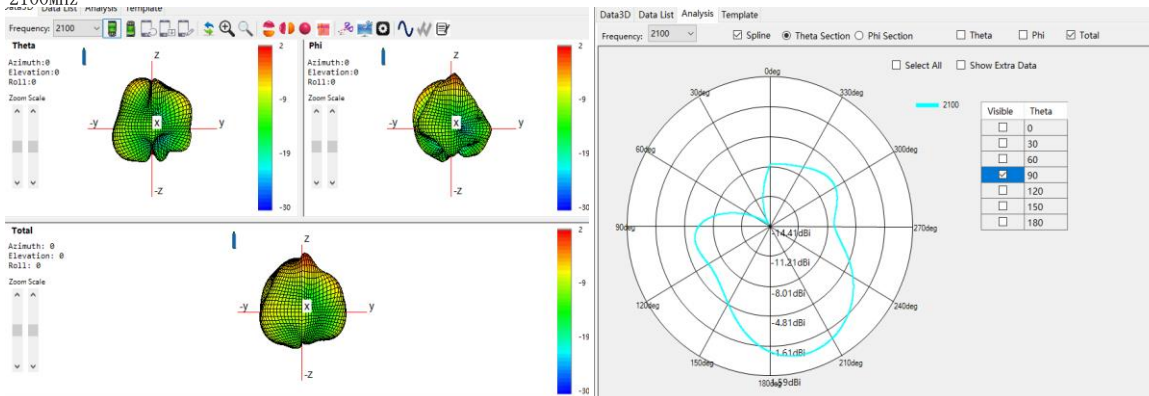
2000MHz



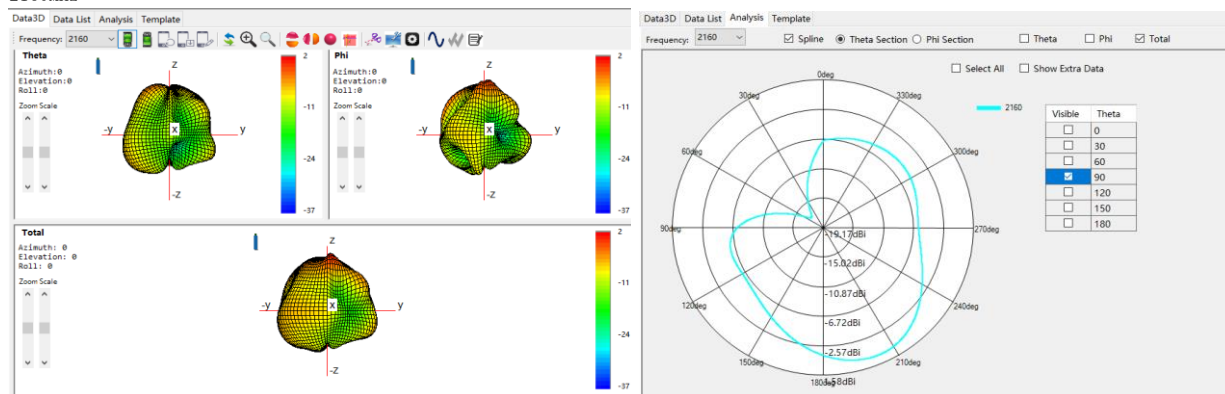
2100MHz



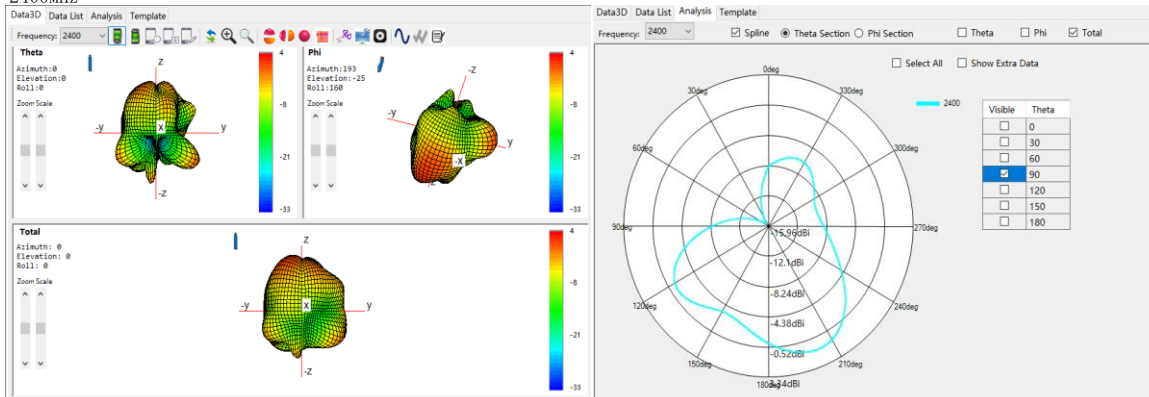
2100MHz



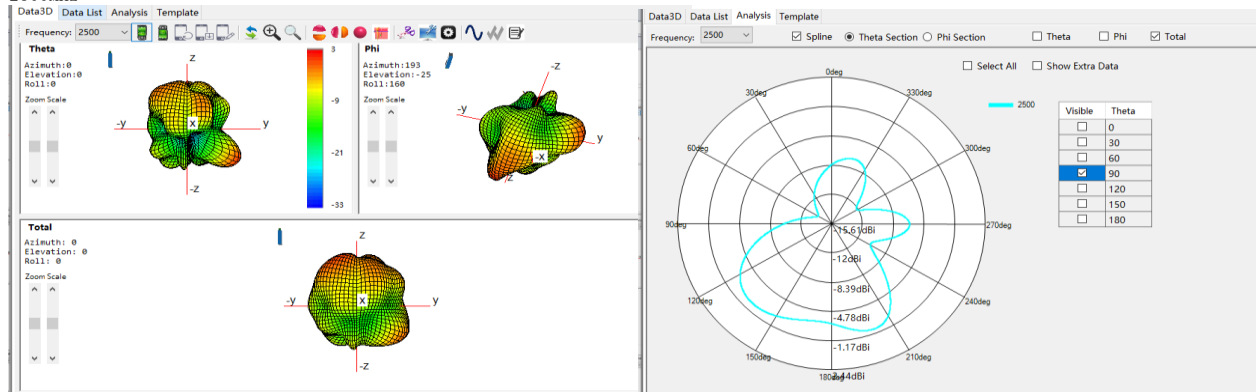
2160MHz



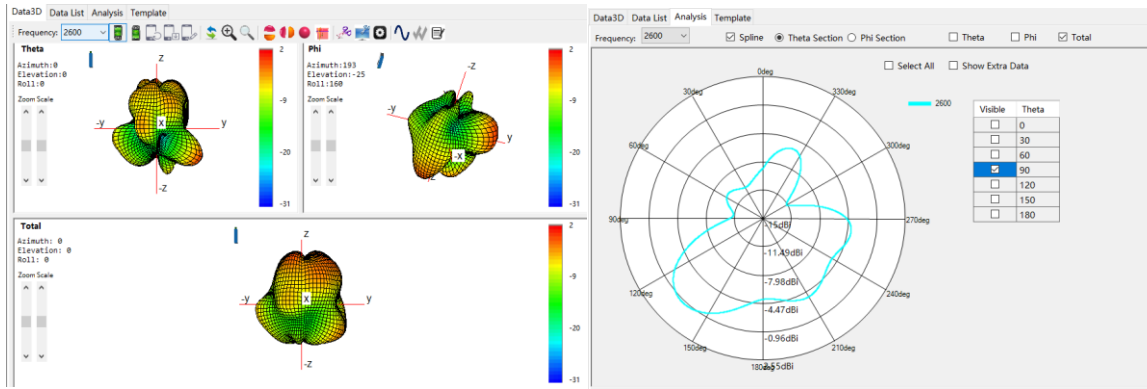
2400MHz



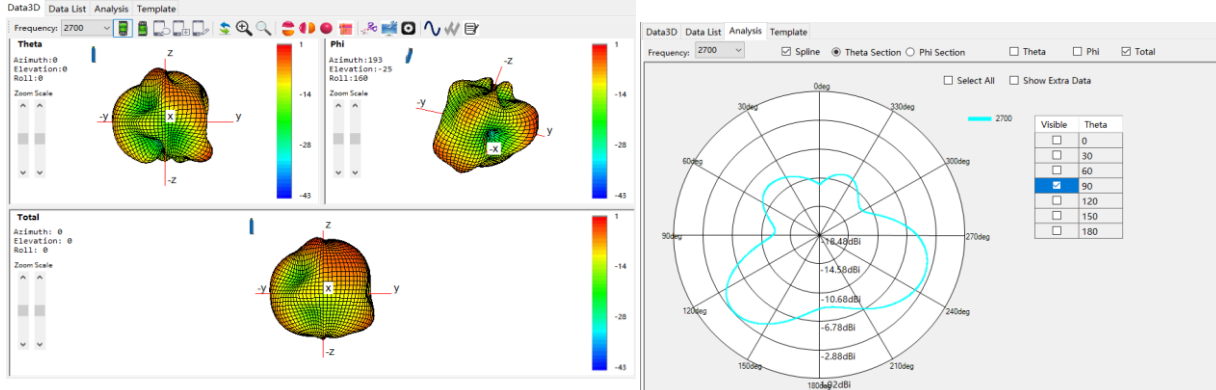
2500MHz



2600MHz



2700MHz

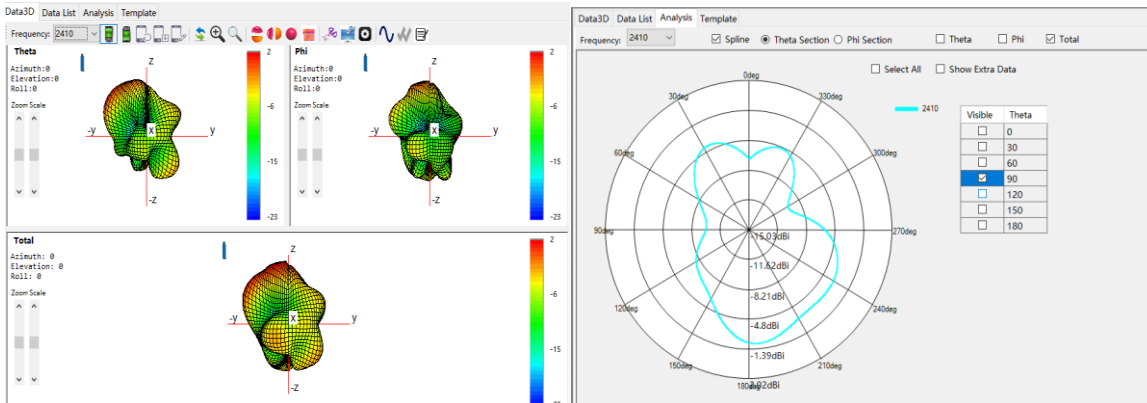


WIFI ANT

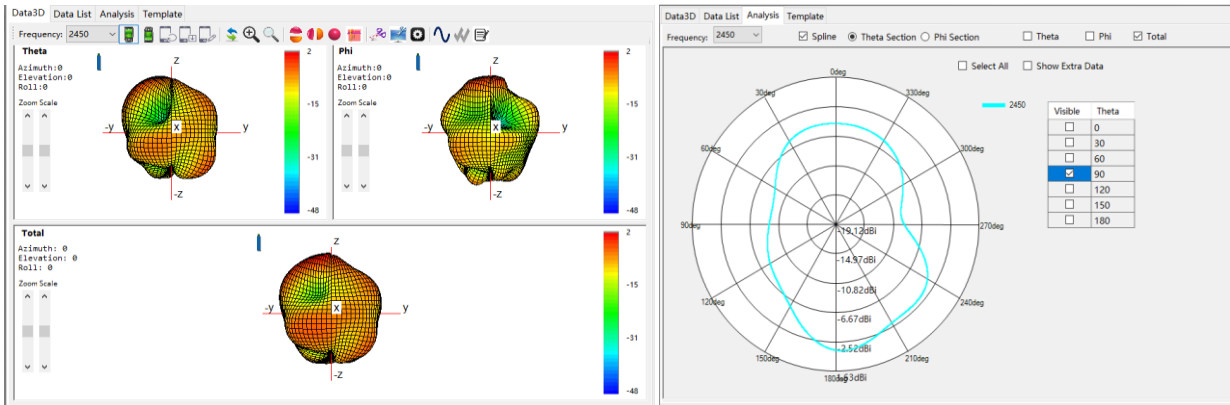
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	38.27	-4.17	1.74
2410	38.79	-4.11	1.75
2420	37.14	-4.3	1.5
2430	36.52	-4.37	1.5
2440	36.13	-4.42	1.51
2450	36.12	-4.42	1.47
2460	34.52	-4.62	1.26
2470	32.86	-4.83	0.96
2480	31.58	-5.01	0.71
2490	30.54	-5.15	0.71
2500	30.26	-5.19	0.73

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5100	31.42	-5.03	1.83
5150	30.59	-5.14	1.51
5200	31.54	-5.01	1.52
5250	34.59	-4.61	1.81
5300	31.75	-4.98	1.53
5350	32.82	-4.84	1.6
5400	34.86	-4.58	1.71
5450	36.3	-4.4	1.74
5500	34.49	-4.62	1.41
5550	35.29	-4.52	1.74
5600	37.56	-4.25	2.19
5650	38.76	-4.12	2.22
5700	34.56	-4.61	2.17
5750	32.25	-4.91	2.11
5800	32.54	-4.88	2.29
5850	34.38	-4.64	2.71

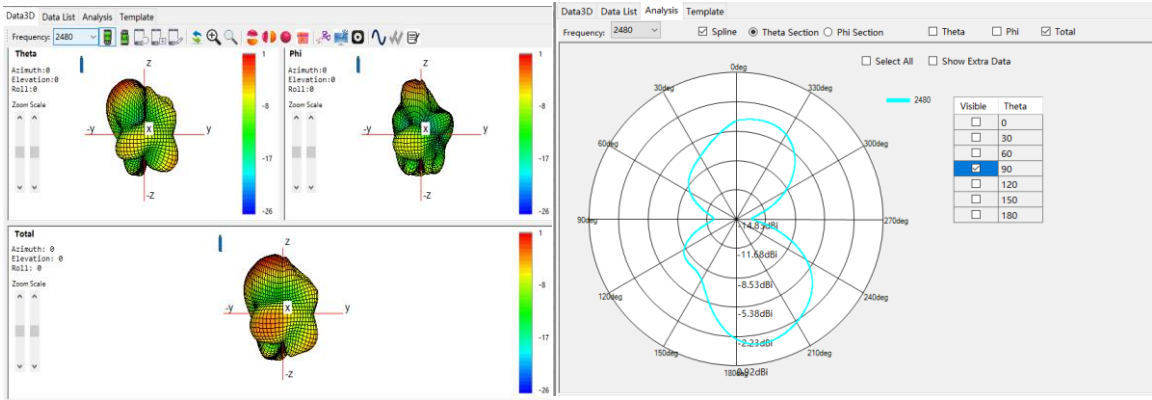
2400MHz



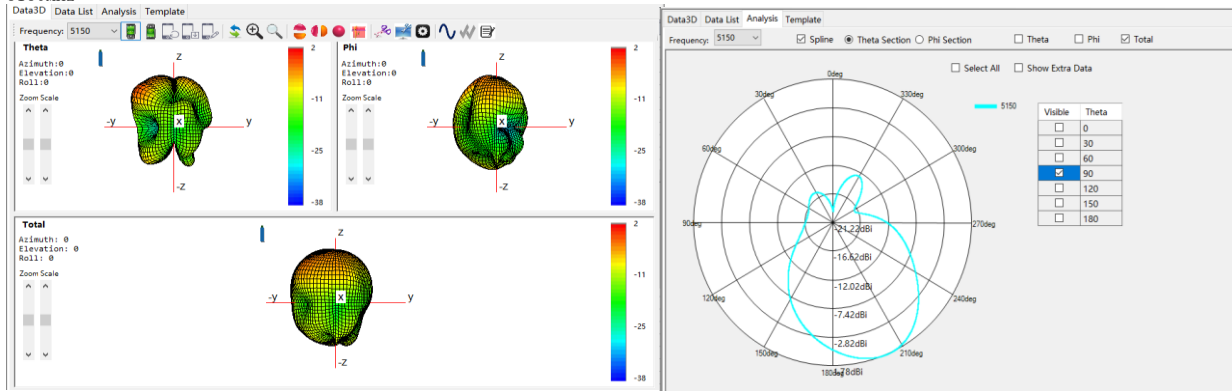
2450MHz



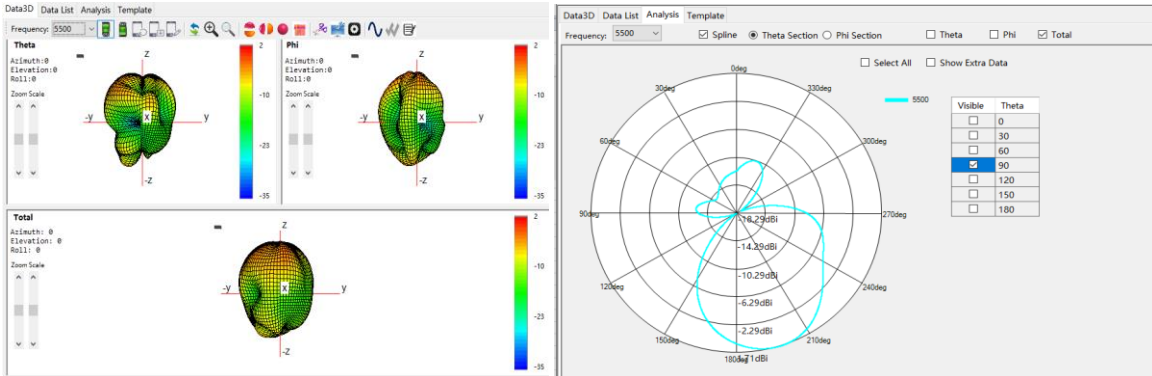
2480MHz



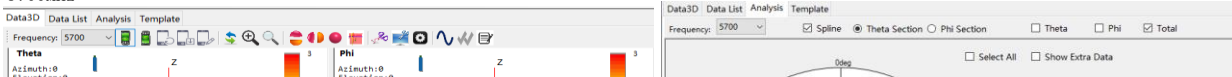
5150MHz

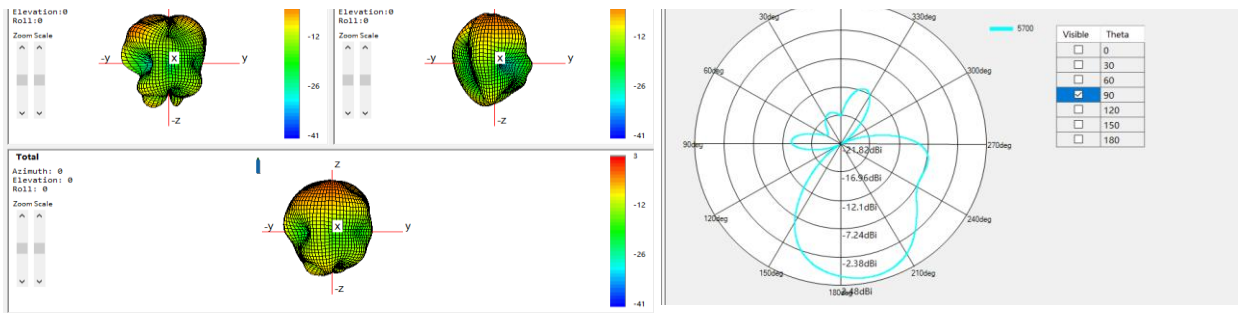


5500MHz



5700MHz





5800MHz

