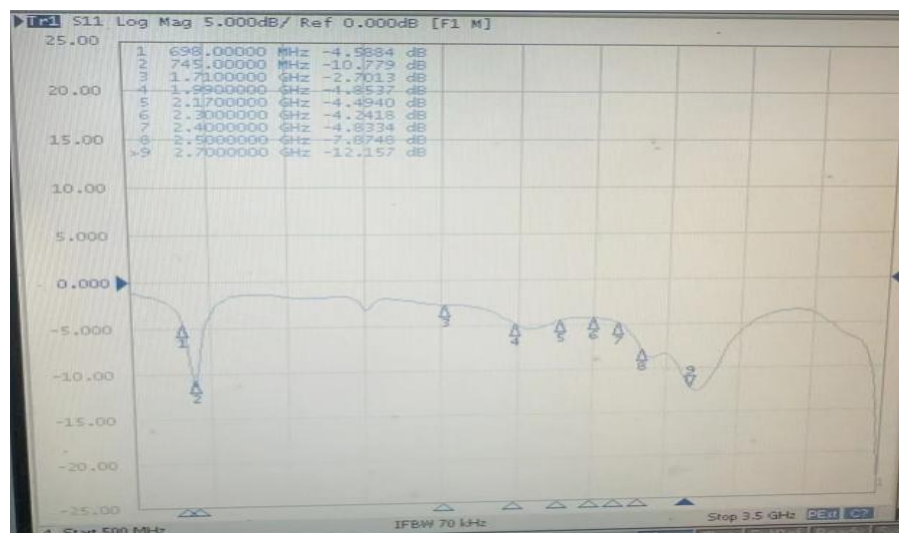


一、 Overview

This report contains the basic parameters and performance of the Kai cheng 3100 project antenna (version v0.1)

二、 low frequency antenna Test Data (ANT0)



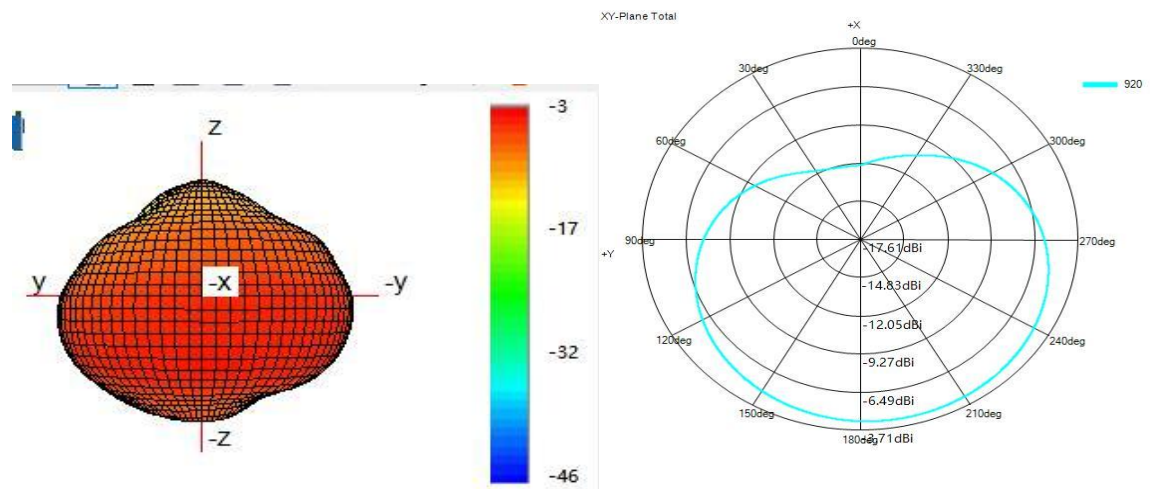


2.1 low frequency Passive Efficiency Data & Gain (ANT0)

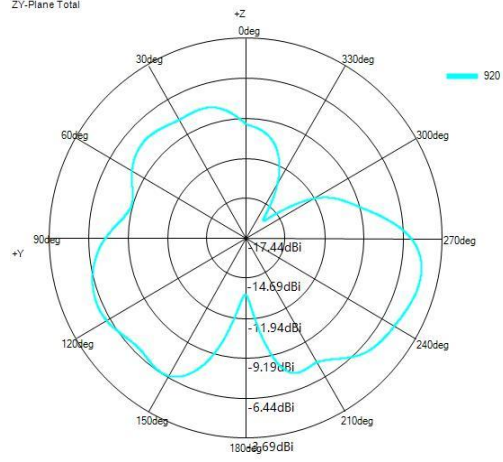
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
700	-7.15	-10.04	9.91
710	-6.4	-9.29	11.78
720	-5.57	-8.48	14.19
730	-5.04	-7.99	15.89
740	-4.61	-7.54	17.62
750	-4.35	-7.28	18.71
760	-4.44	-7.33	18.49
770	-4.78	-7.63	17.26
780	-5.28	-8.14	15.35
790	-6.03	-8.83	13.09
800	-7	-9.75	10.59

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
820	-5.76	-9.03	12.50
830	-5.2	-8.41	14.42
840	-4.42	-7.63	17.26
850	-4.01	-7.2	19.05
860	-4.08	-7.24	18.88
870	-4.37	-7.51	17.74
880	-4.96	-8.06	15.63
890	-5.67	-8.79	13.21
900	-6.57	-9.72	10.67
910	-7.33	-10.55	8.81

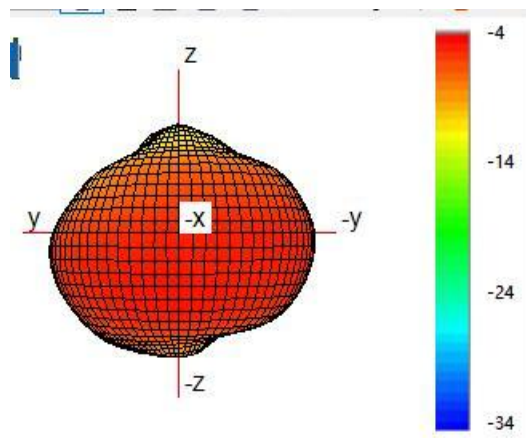
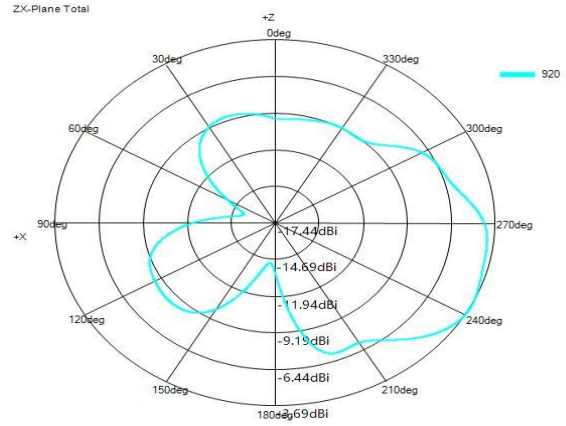
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
870	-4.47	-9.54	11.12
880	-4.43	-7.72	16.90
890	-3.76	-7.03	19.82
900	-3.23	-6.5	22.39
910	-3.23	-6.54	22.18
920	-3.71	-7.1	19.50
930	-4.36	-7.87	16.33
940	-5.48	-8.72	13.43
950	-5.26	-8.82	13.12
960	-6.31	-9.64	10.86



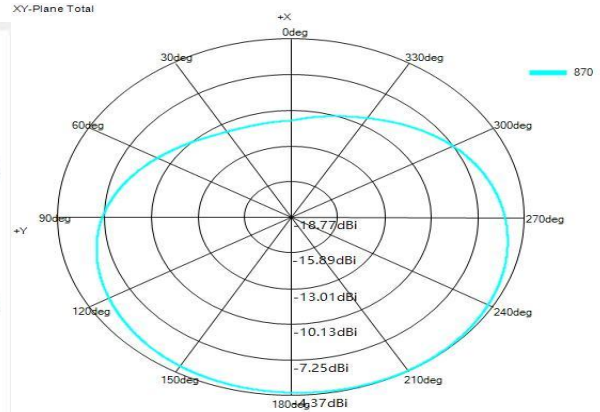
ZY-Plane Total



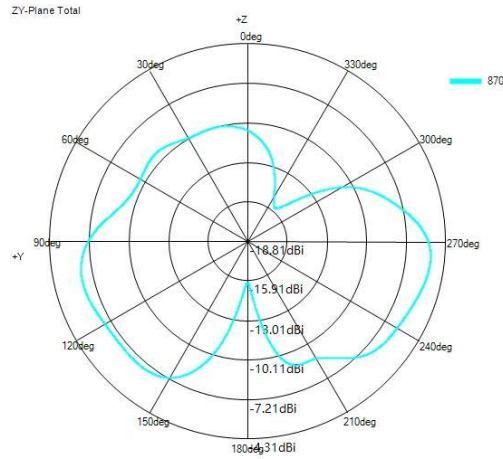
ZX-Plane Total



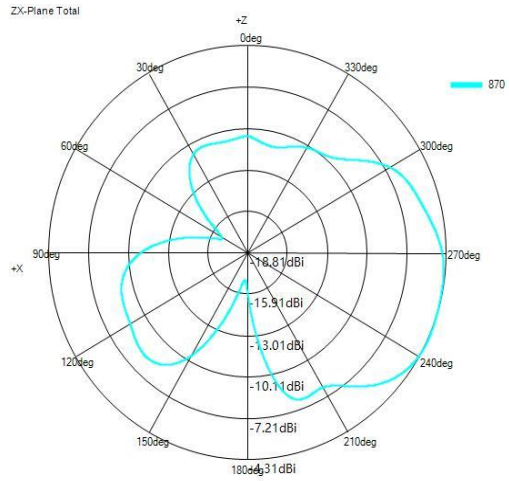
XY-Plane Total

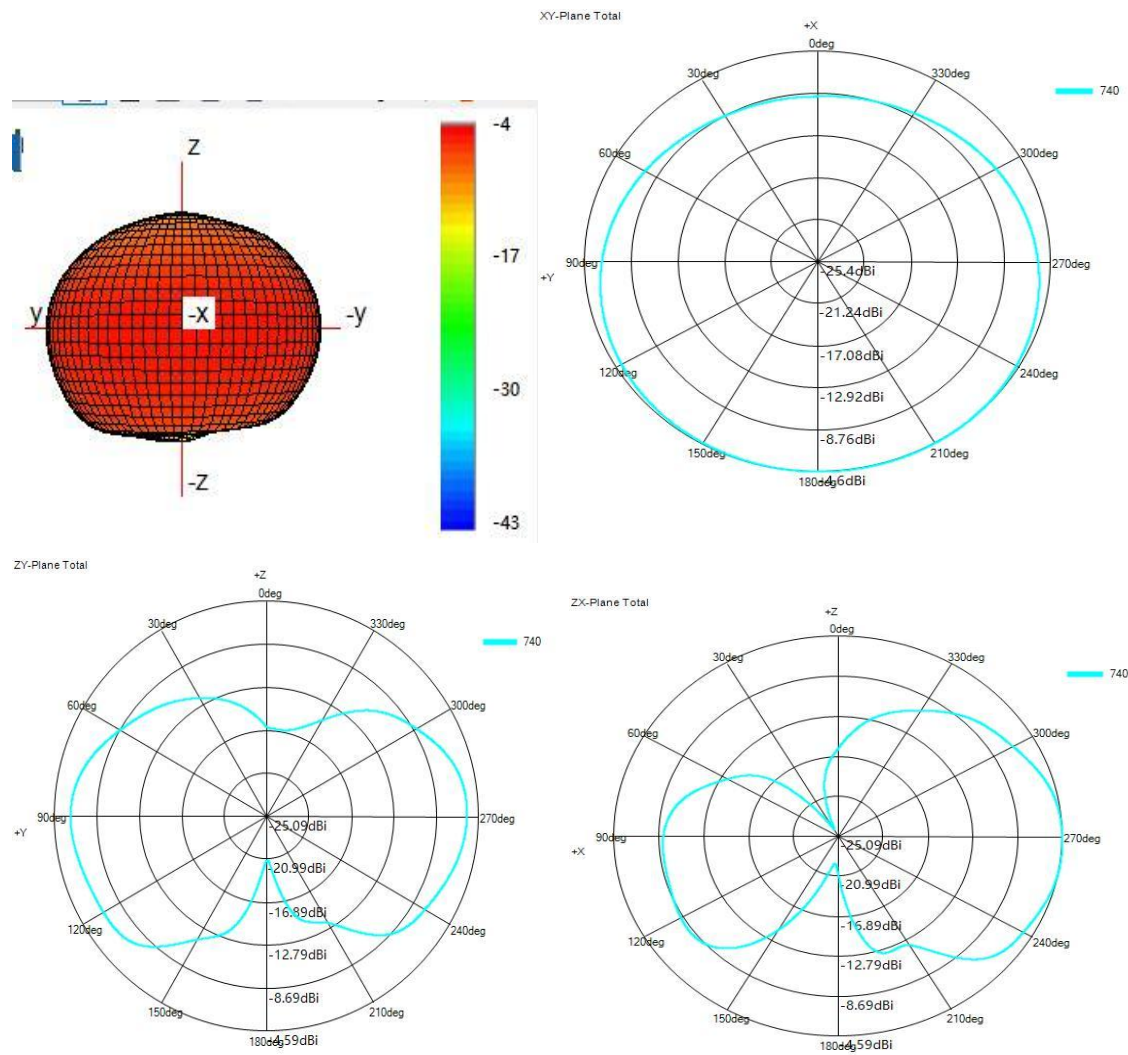


ZY-Plane Total

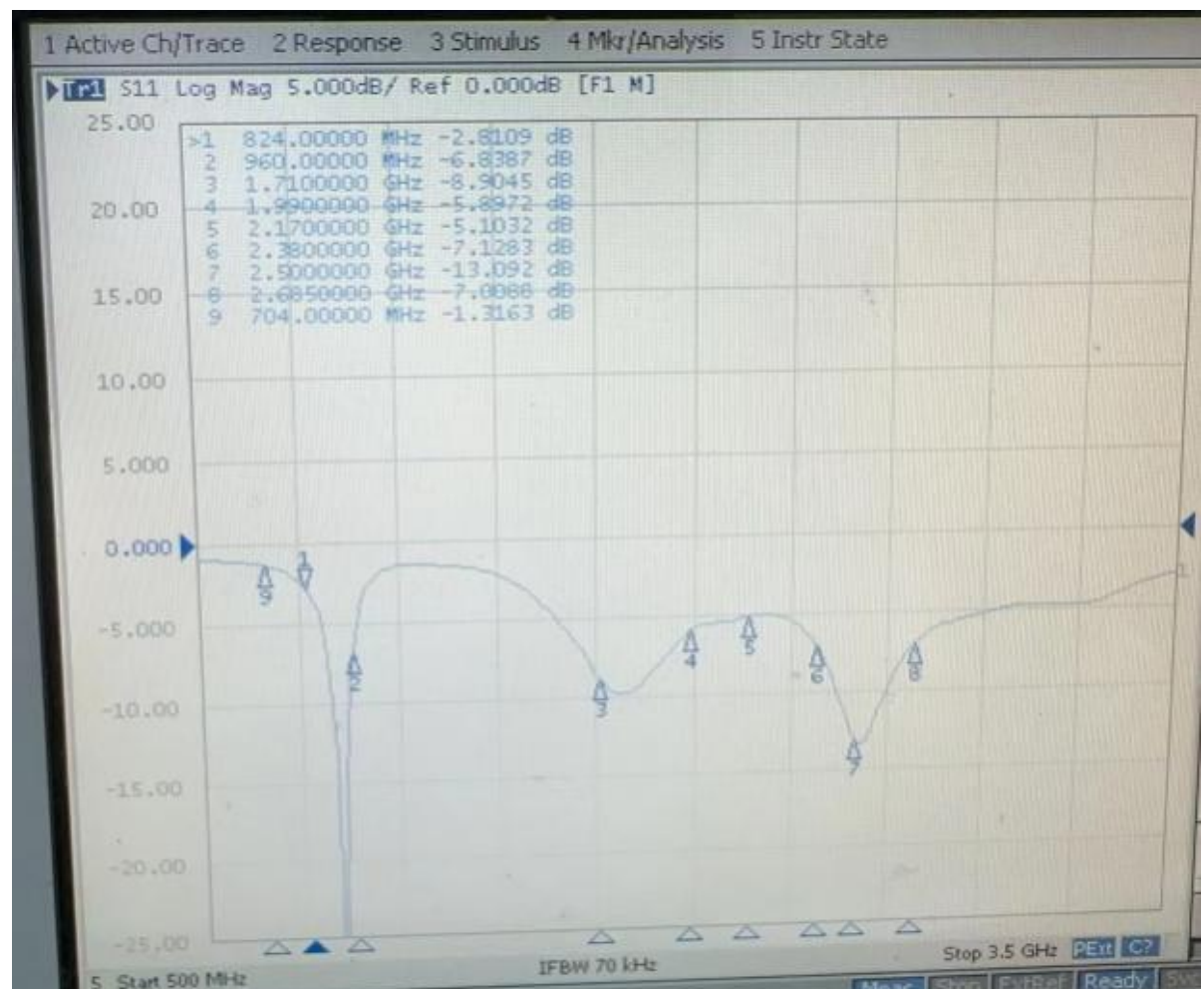


ZX-Plane Total





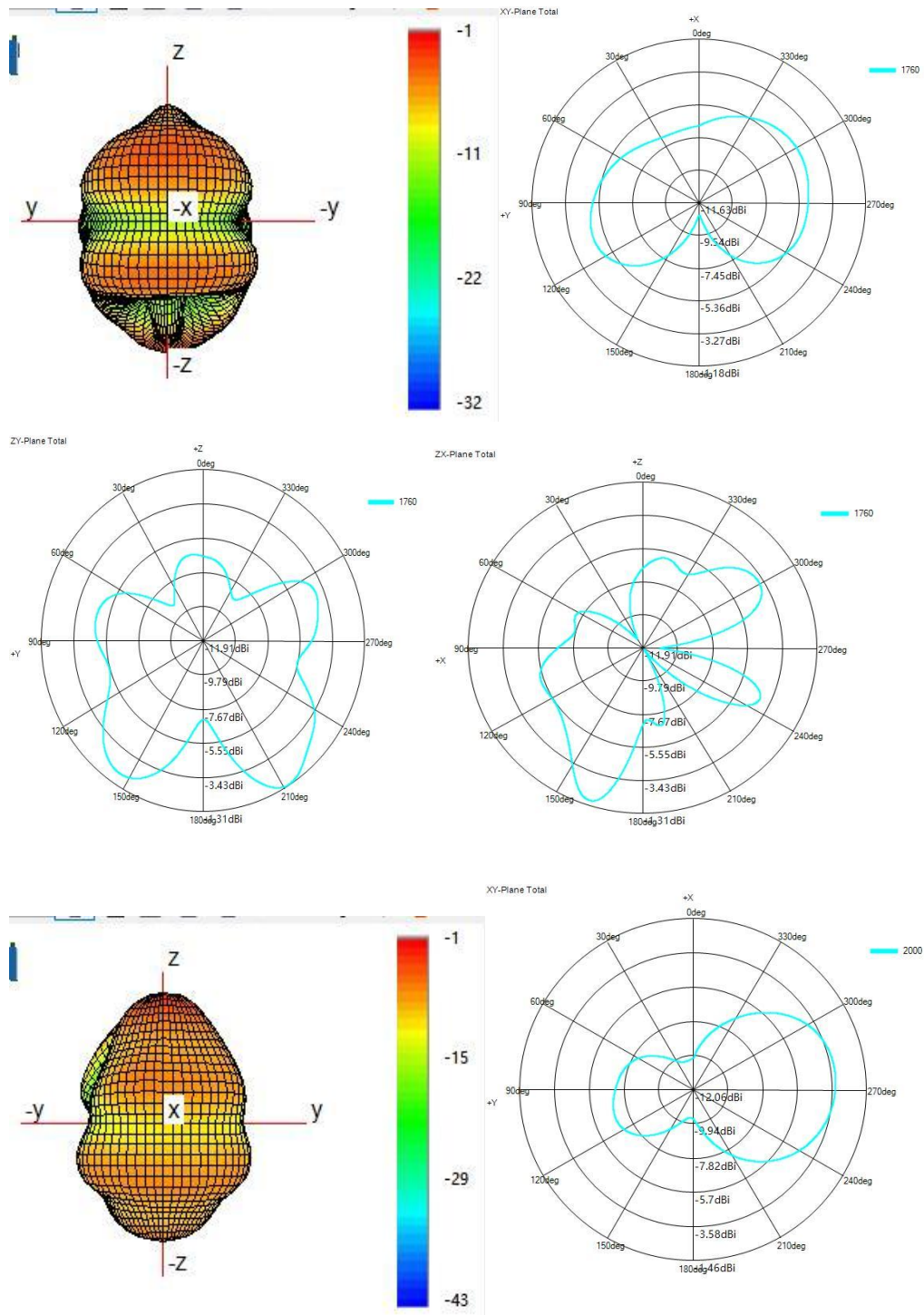
三、 Medium and high frequency antenna Test Data (ANT1)

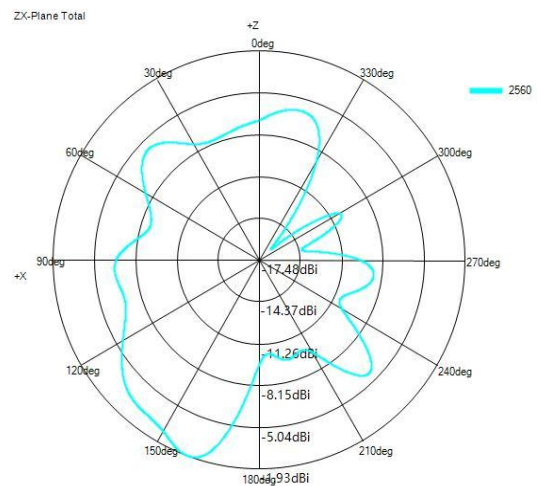
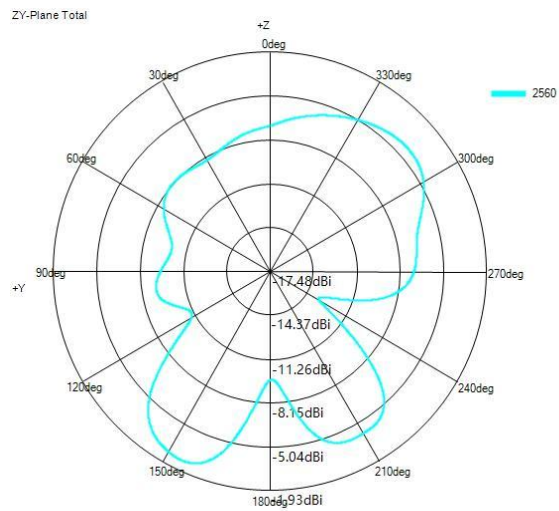
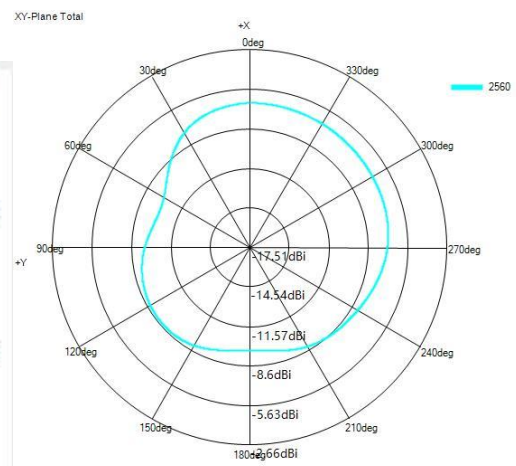
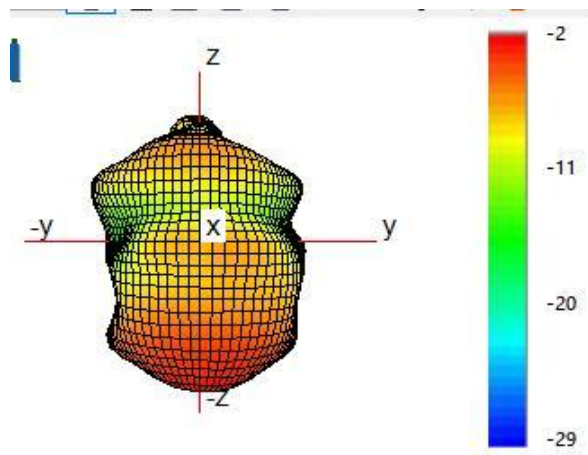
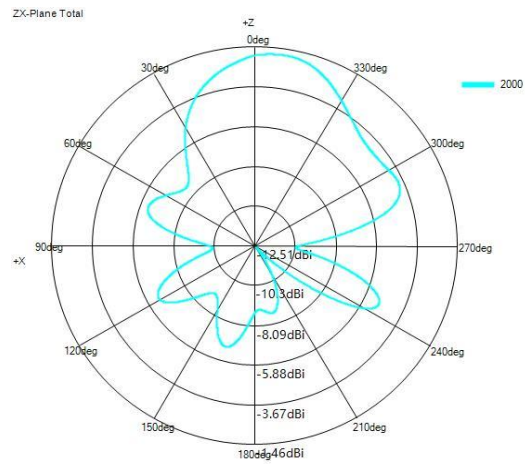
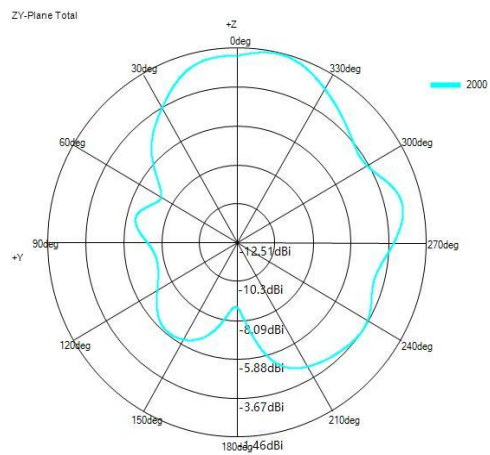


3.1 'Medium and high frequency Passive Efficiency Data & Gain (ANT1)

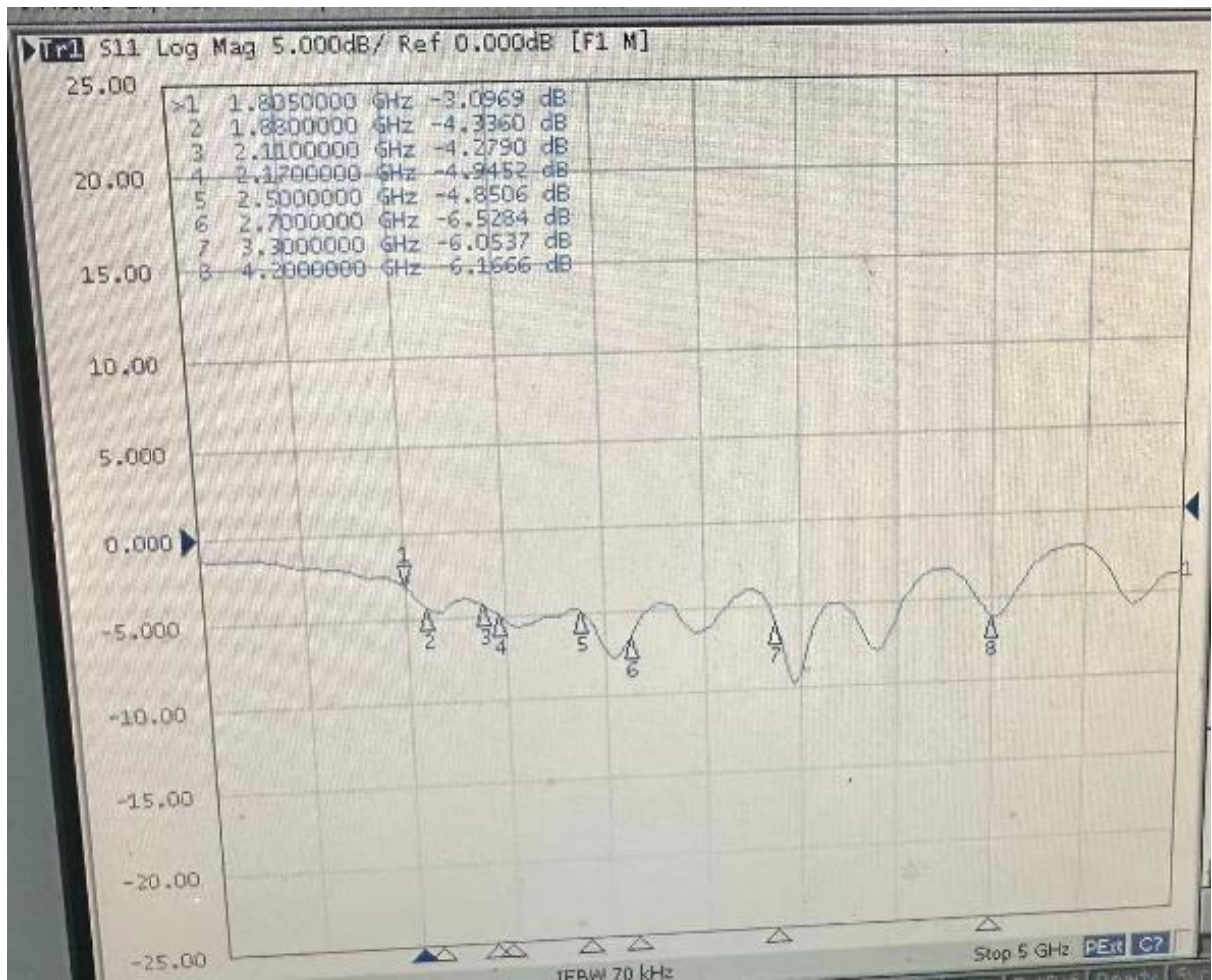
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
1700	-2.38	-6.37	23.07
1720	-2.18	-6.08	24.68
1740	-1.72	-5.62	27.39
1760	-1.31	-5.26	29.8
1780	-1.13	-4.96	31.93
1800	-1.17	-4.86	32.65
1820	-1.39	-4.99	31.7
1840	-1.56	-4.96	31.89
1860	-1.74	-4.98	31.75
1880	-1.87	-5.06	31.21
1900	-2.01	-5.01	31.52
1920	-2.3	-5.02	31.47
1940	-1.95	-5.1	30.92
1960	-1.88	-5.17	30.44
1980	-1.86	-5.38	28.96
2000	-1.49	-5.43	28.64
2020	-1.26	-5.54	27.9
2040	-1.25	-5.81	26.23
2060	-1.17	-5.92	25.56
2080	-1.04	-6.08	24.68
2100	-0.83	-6.16	24.2
2120	-0.78	-6.31	23.4
2140	-0.93	-6.52	22.29
2160	-0.95	-6.59	21.94
2180	-0.67	-6.33	23.26
2300	-1.27	-6.19	24.03
2320	-1.36	-6.25	23.72

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
2340	-1.43	-6.21	23.92
2360	-1.55	-6.32	23.31
2380	-1.47	-6.24	23.77
2400	-1.73	-6.32	23.34
2500	-2.31	-6.83	20.73
2520	-2.23	-6.85	20.67
2540	-2.44	-6.94	20.23
2560	-2.68	-7.02	19.85
2580	-2.73	-7.11	19.46
2600	-3.09	-7.34	18.44
2620	-3.12	-7.43	18.07
2640	-3.01	-7.52	17.69
2660	-3.09	-7.62	17.31
2680	-3.19	-7.54	17.63





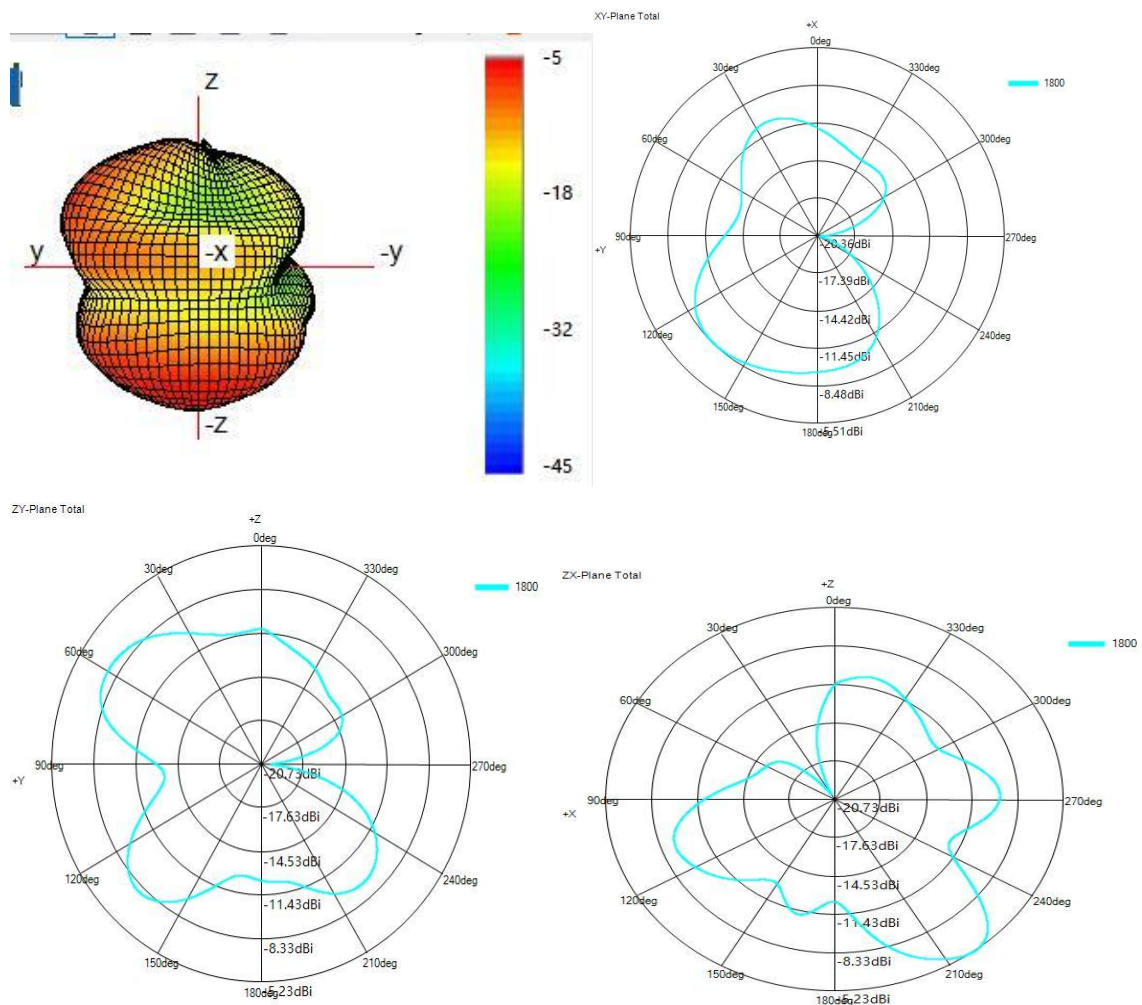
四、ANT2 antenna Test Data

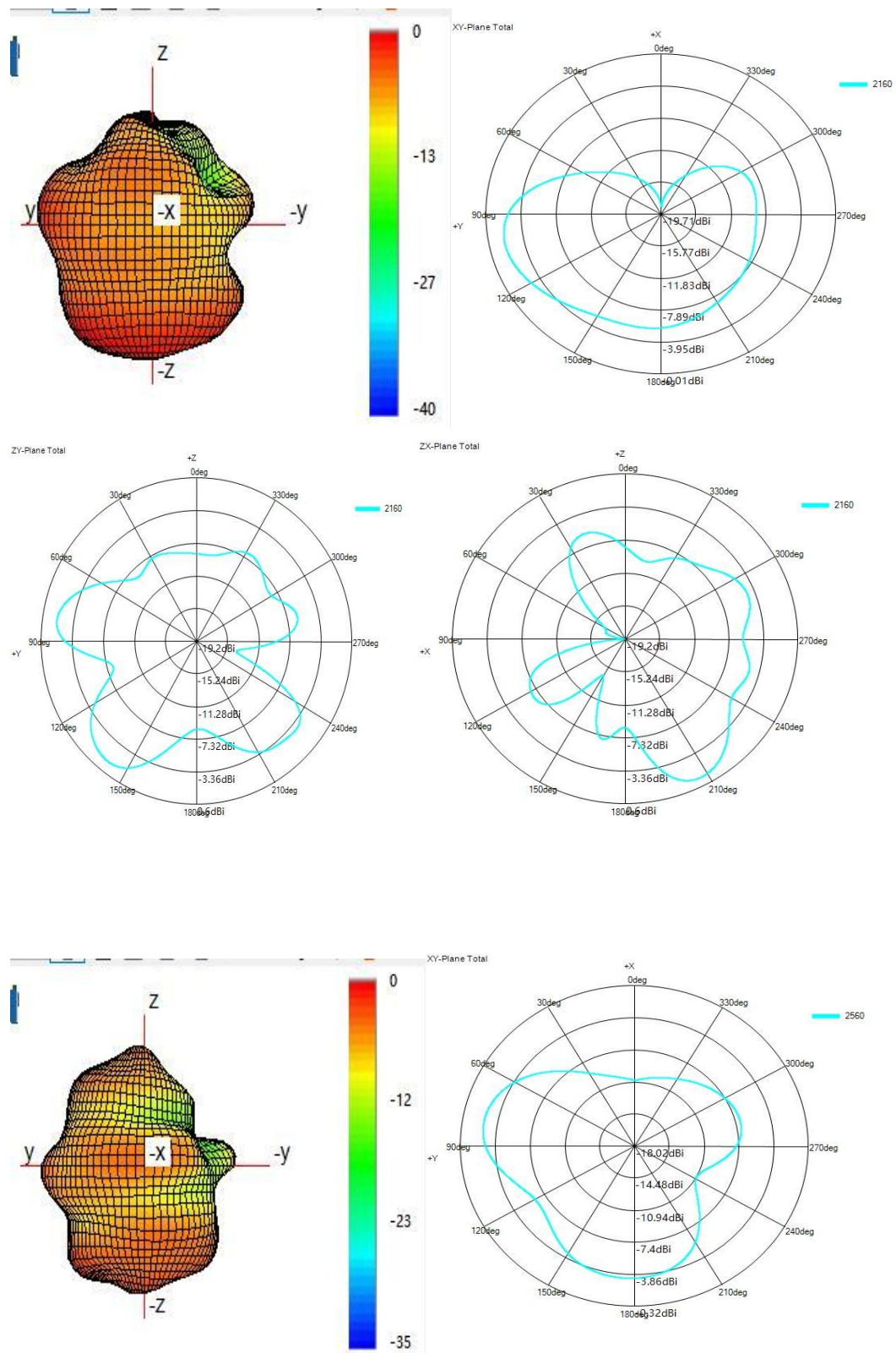


4.1 ANT2Passive Efficiency Data & Gain

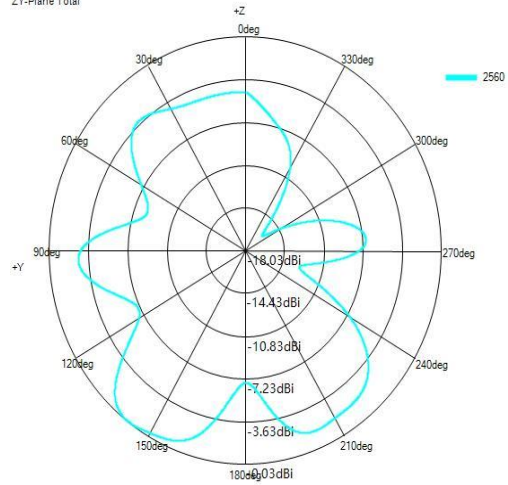
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
1800	-5.78	-10.77	8.38
1820	-5.49	-9.93	10.16
1840	-4.84	-9.16	12.13
1860	-4.03	-8.55	13.96
1880	-3.83	-7.79	16.63
1900	-3.54	-6.92	20.32
1920	-3.49	-6.21	23.93
1940	-3.12	-5.83	26.12
1960	-2.57	-5.53	27.99
1980	-2.18	-5.53	27.99
2000	-1.44	-5.74	26.67
2020	-0.94	-6.14	24.32
2040	-0.51	-6.59	21.93
2060	-0.16	-7.09	19.54
2080	-0.02	-7.45	17.99
2100	0.47	-7.95	16.03
2120	0.52	-8.18	15.21
2140	0.39	-8.35	14.62
2160	-0.01	-8.68	13.55
2180	0.23	-8.37	14.55
2300	-0.83	-7.34	18.45
2320	-1.09	-7.28	18.71
2340	-1.4	-7.25	18.84
2360	-1.58	-7.2	19.05
2380	-1.42	-6.9	20.42
2400	-1.39	-6.61	21.83
2500	-0.97	-6.49	22.44
2520	-0.68	-6.51	22.34
2540	-0.35	-6.71	21.33
2560	-0.33	-6.97	20.09
2580	-0.44	-7.32	18.54
2600	-0.74	-7.82	16.52
2620	-0.97	-7.98	15.92
2640	-1.17	-8.06	15.63
2660	-1.58	-8.14	15.35
2680	-1.64	-7.78	16.67

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
3300	-3.96	-6.67	21.53
3350	-4.26	-6.74	21.18
3400	-6.48	-8.7	13.49
3450	-7.86	-8.82	13.12
3500	-6.68	-8.37	14.55
3550	-5.98	-7.76	16.75
3600	-5.3	-7.47	17.91
3650	-3.86	-6.31	23.39
3700	-3.18	-5.83	26.12
3750	-3.84	-6.36	23.12
3800	-4.49	-6.97	20.09
3850	-4.91	-7.88	16.29
3900	-5.06	-8.21	15.10
3950	-4.45	-7.86	16.37
4000	-3.26	-7.06	19.68
4050	-3.72	-7.34	18.45
4100	-4.18	-7.43	18.07
4150	-4.1	-7.57	17.50
4200	-3.92	-8.01	15.81

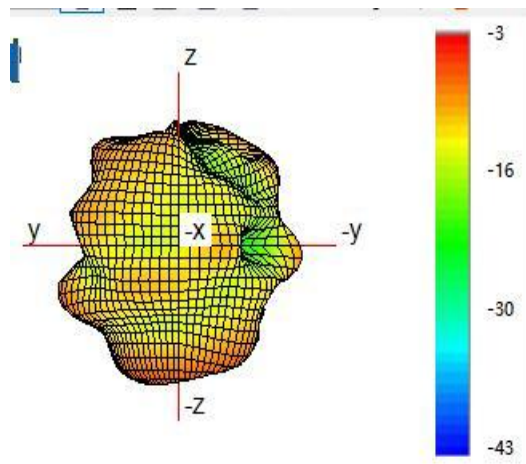
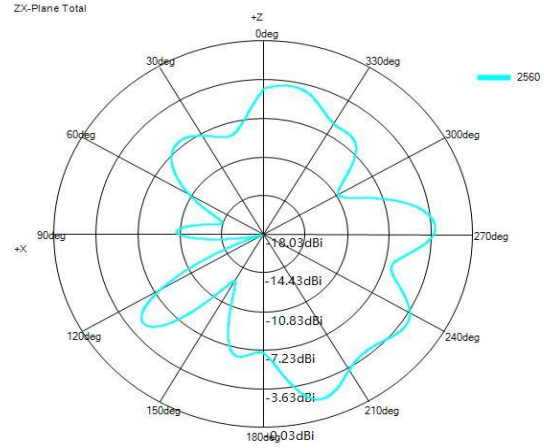




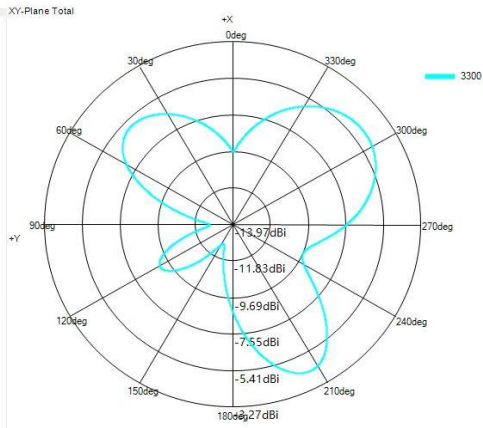
ZY-Plane Total



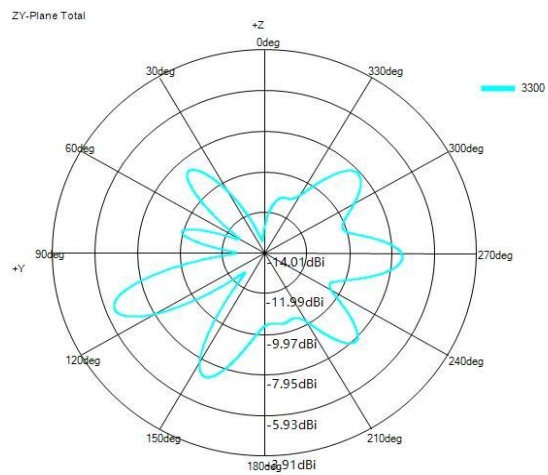
ZX-Plane Total



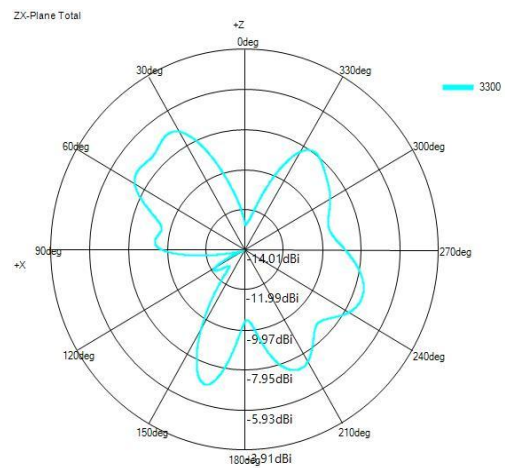
XY-Plane Total

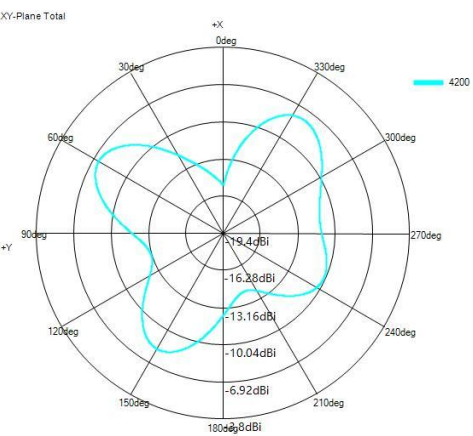
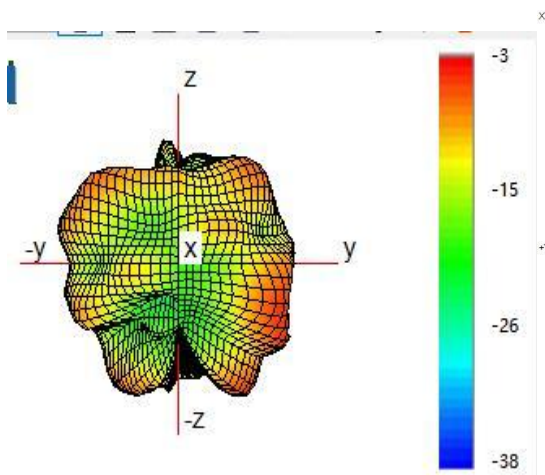
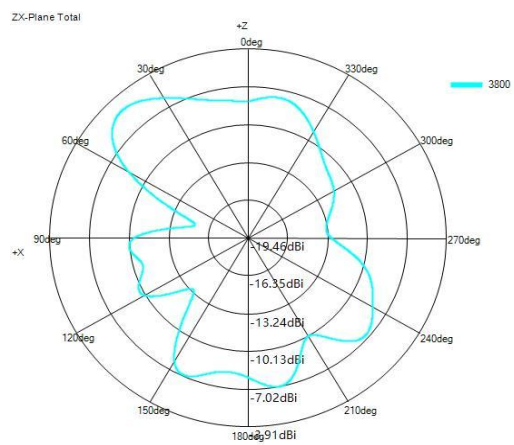
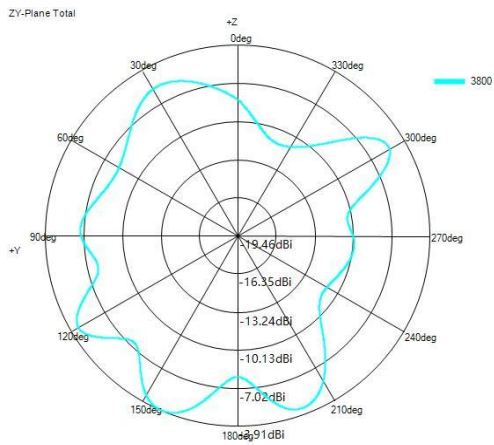
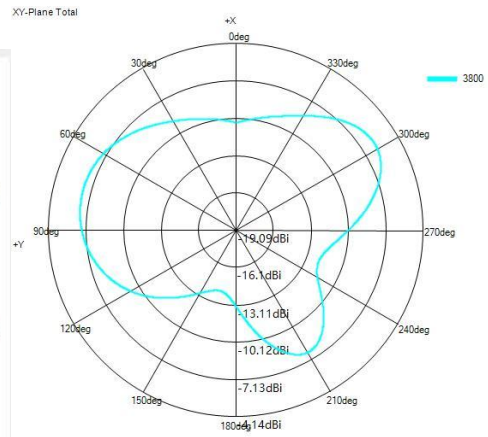
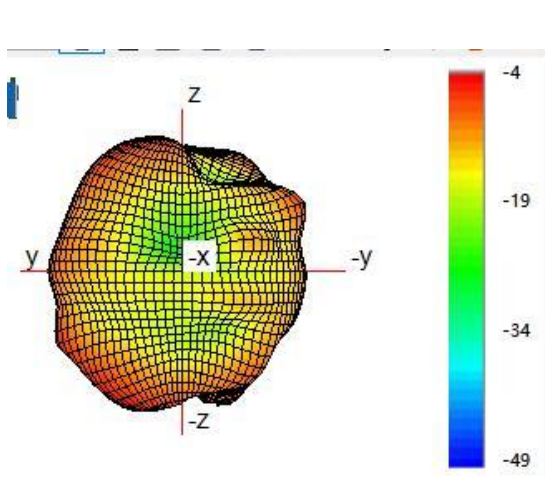


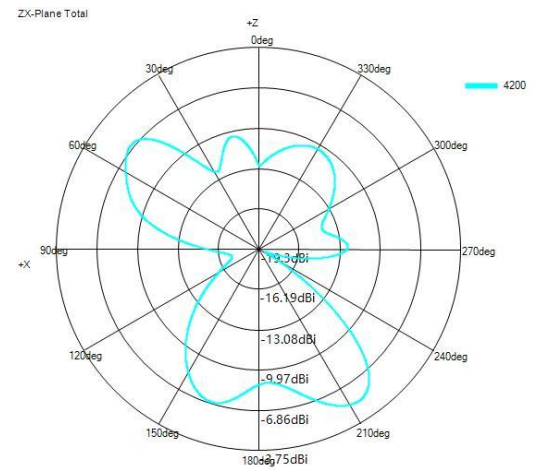
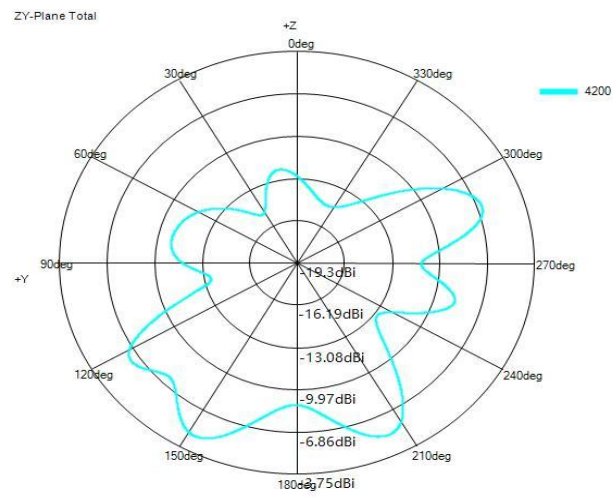
ZY-Plane Total



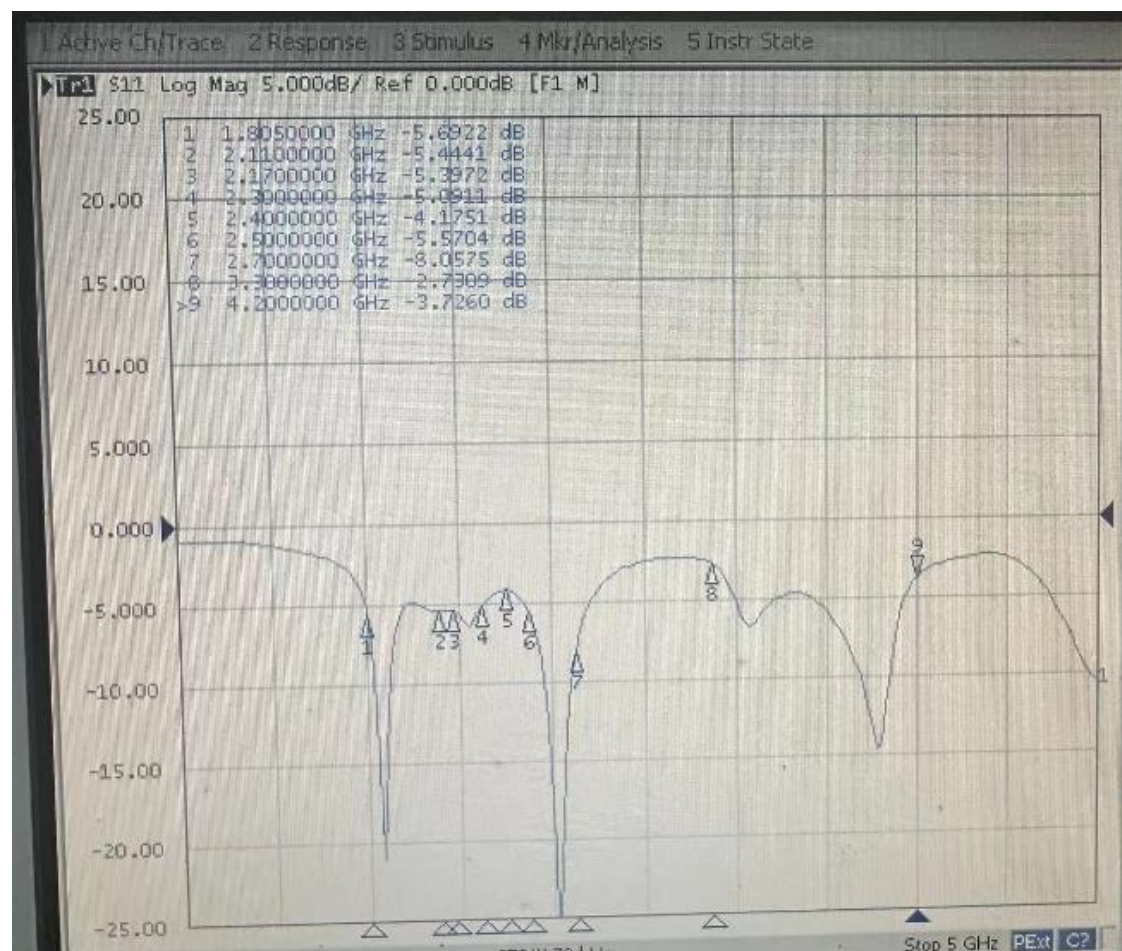
ZX-Plane Total







五、ANT3 antenna Test Data

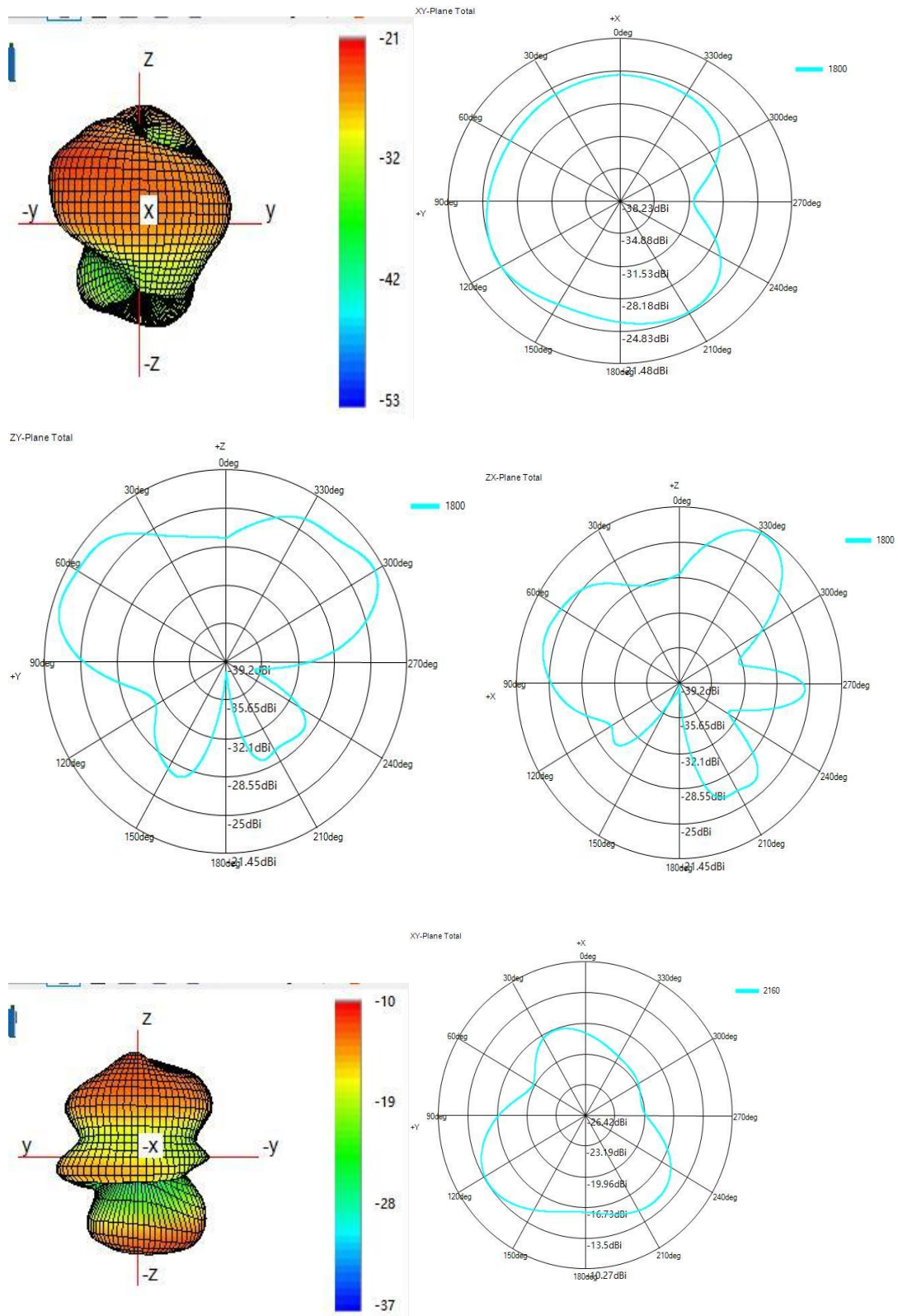


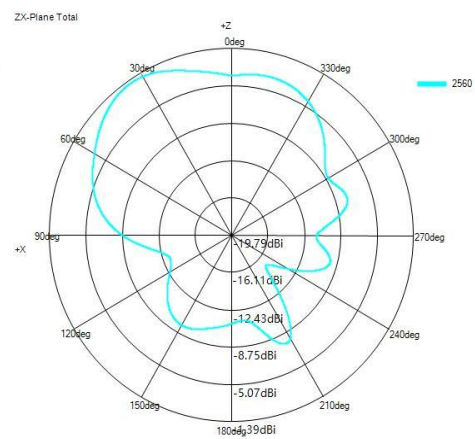
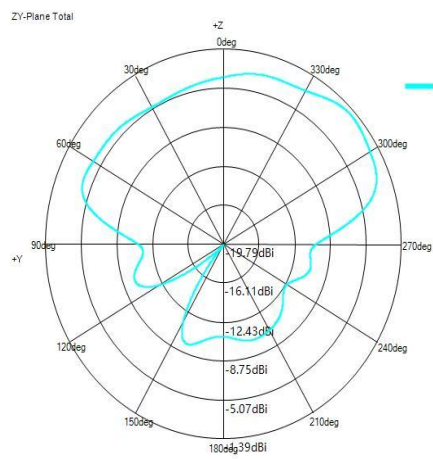
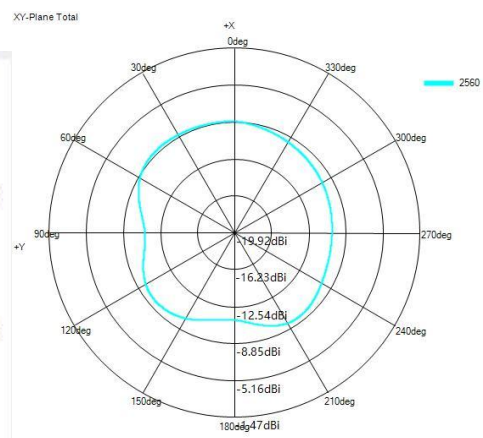
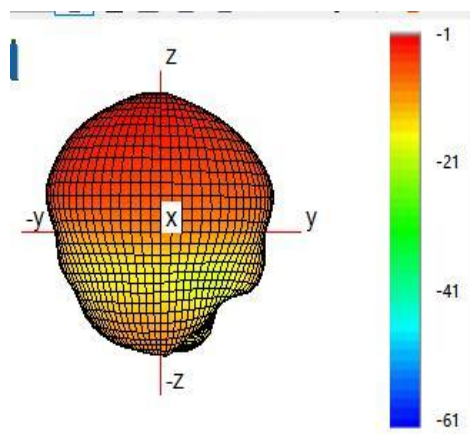
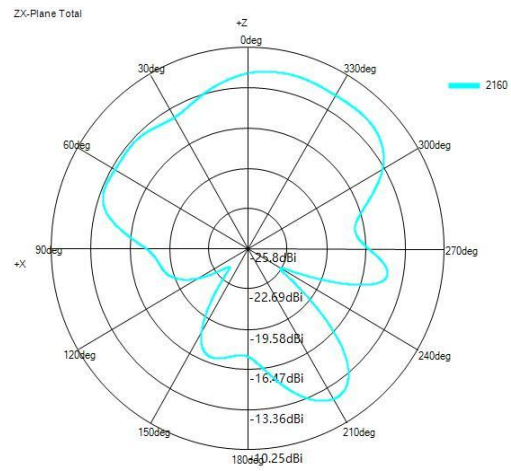
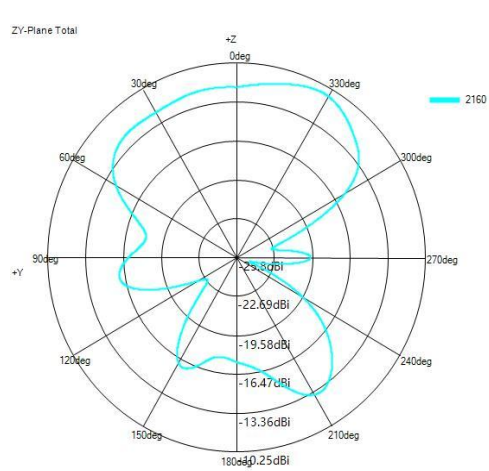
5.1 ANT3Passive Efficiency Data & Gain

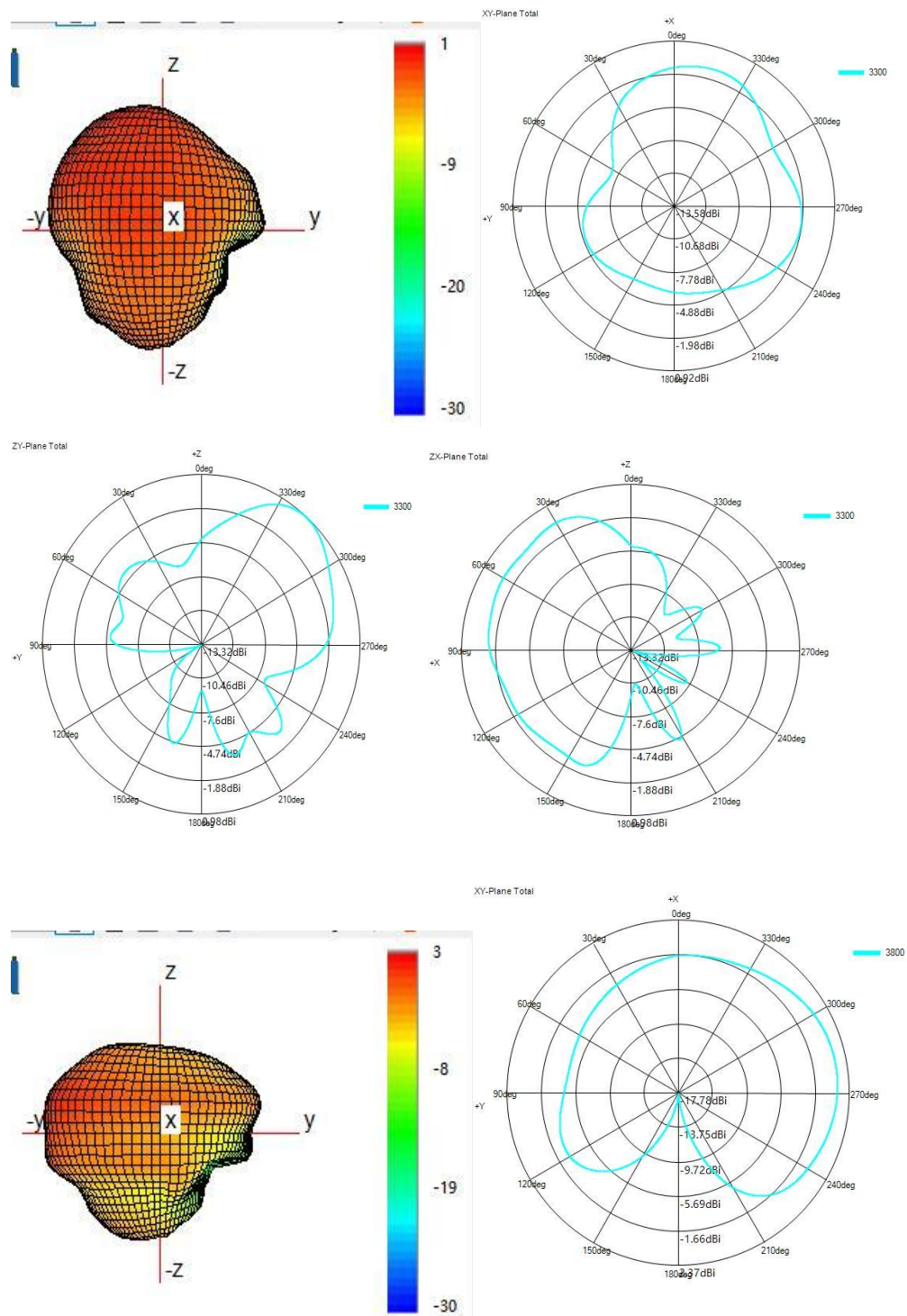
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
1700	-26.38	-28.36	0.15
1720	-25.13	-27.43	0.18
1740	-23.87	-26.21	0.24
1760	-22.75	-25.46	0.28
1780	-22.02	-25.34	0.29
1800	-21.5	-25.41	0.29
1820	-20.39	-24.66	0.34
1840	-19.45	-23.82	0.41
1860	-19.81	-23.34	0.46
1880	-18.74	-22.33	0.58
1900	-17.27	-21.44	0.72
1920	-16.01	-20.57	0.88
1940	-14.59	-19.61	1.09
1960	-14.09	-18.96	1.27
1980	-14.5	-18.76	1.33
2000	-14.66	-18.49	1.42
2020	-14.26	-18.02	1.58
2040	-13.61	-17.33	1.85
2060	-13.09	-16.95	2.02
2080	-12.69	-16.53	2.22
2100	-12.2	-16.03	2.49
2120	-11.45	-15.36	2.91
2140	-10.78	-14.86	3.27
2160	-10.28	-14.49	3.56
2180	-9.61	-13.83	4.14
2300	-8.14	-11.65	6.84
2320	-7.52	-11.58	6.95
2340	-6.34	-10.76	8.39
2360	-5.86	-10.16	9.64
2380	-5.77	-9.85	10.35
2400	-5.53	-9.33	11.67

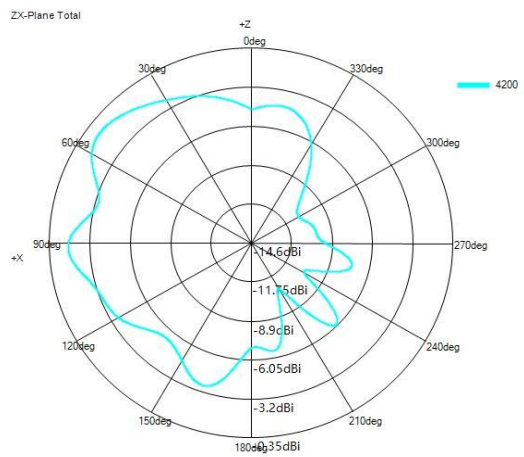
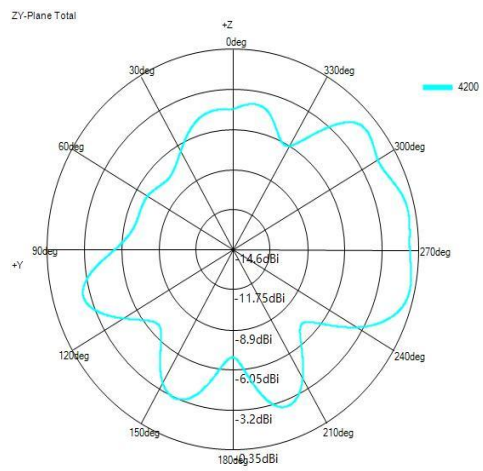
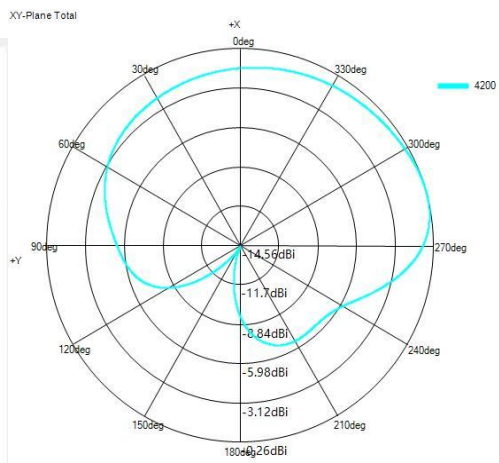
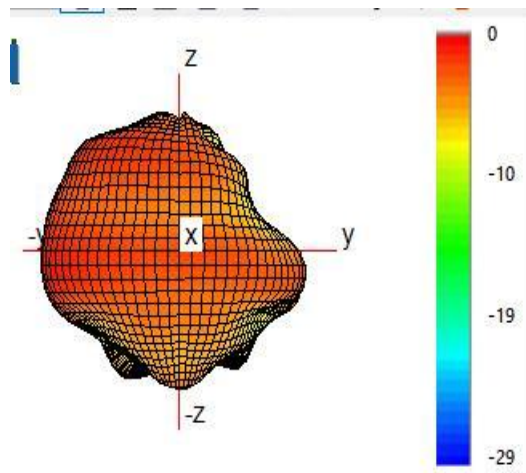
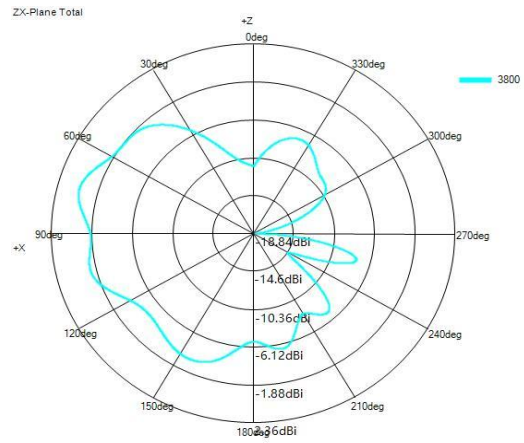
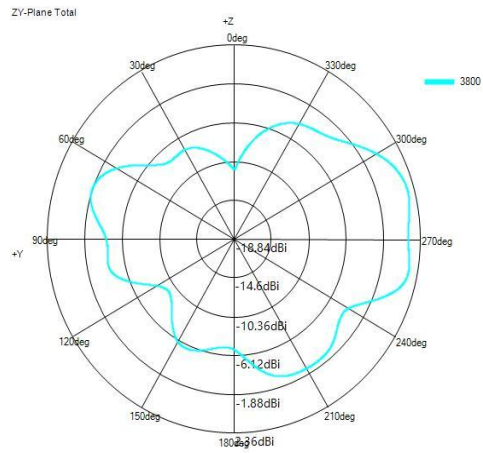
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
2500	-2.01	-6.97	20.09
2520	-1.36	-6.48	22.49
2540	-1.4	-6.17	24.15
2560	-1.53	-5.88	25.82
2580	-1.44	-5.68	27.04
2600	-1.52	-5.74	26.67
2620	-1.29	-5.69	26.98
2640	-0.89	-5.62	27.42
2660	-0.63	-5.55	27.86
2680	0.05	-5.12	30.76
3300	0.91	-4.75	33.50
3320	1.16	-4.7	33.88
3340	1.41	-4.48	35.65
3360	1.33	-4.58	34.83
3380	1.19	-4.63	34.43
3400	0.99	-4.65	34.28
3420	0.82	-4.52	35.32
3440	0.55	-4.5	35.48
3460	0.38	-4.23	37.76
3480	-0.16	-4.28	37.33
3500	0.46	-4.2	38.02
3520	0.92	-4.3	37.15
3540	1.04	-4.49	35.56
3560	1.18	-4.58	34.83
3580	1	-4.87	32.58
3600	1	-5.1	30.90
3620	1.3	-5.06	31.19
3640	1.61	-4.93	32.14
3660	2.09	-4.55	35.08
3680	2.41	-4.31	37.07
3700	2.3	-4.42	36.14

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
3720	2.42	-4.31	37.07
3740	2.29	-4.34	36.81
3760	2.3	-4.26	37.50
3780	2.45	-4.04	39.45
3800	2.36	-4.05	39.36
3820	2.31	-4.07	39.17
3840	2.22	-4.03	39.54
3860	1.89	-4.25	37.58
3880	1.99	-4	39.81
3900	1.62	-4.3	37.15
3920	1.58	-4.27	37.41
3940	1.59	-4.21	37.93
3960	1.44	-4.42	36.14
3980	1.46	-4.42	36.14
4000	1.25	-4.6	34.67
4020	1.1	-5.03	31.41
4040	1.45	-4.82	32.96
4060	1.31	-5.01	31.55
4080	1.43	-4.91	32.28
4100	1.4	-4.64	34.36
4120	0.88	-4.8	33.11
4140	0.63	-4.55	35.08
4160	0.11	-4.58	34.83
4180	-0.41	-4.8	33.11
4200	-0.49	-4.77	33.34

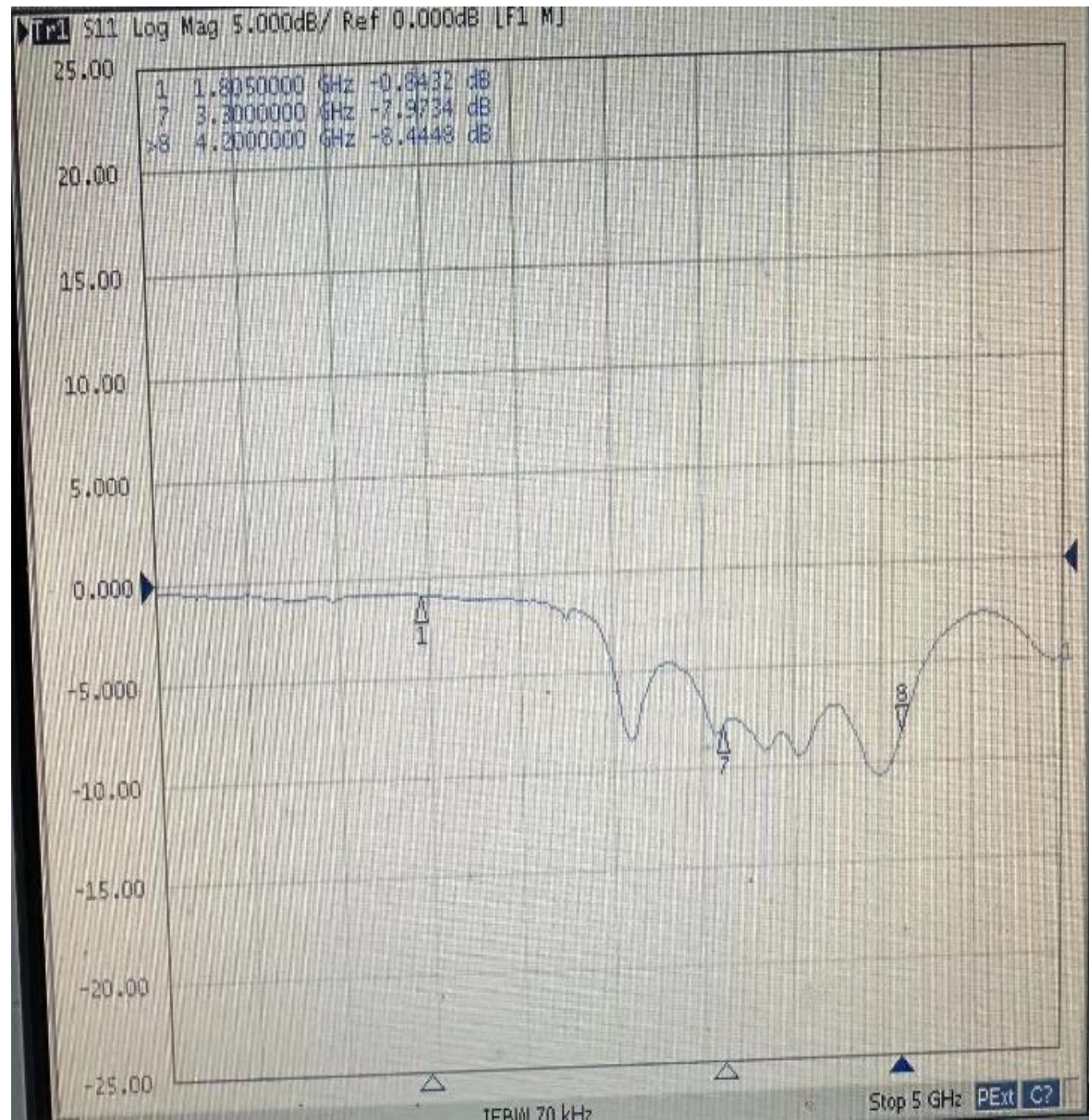








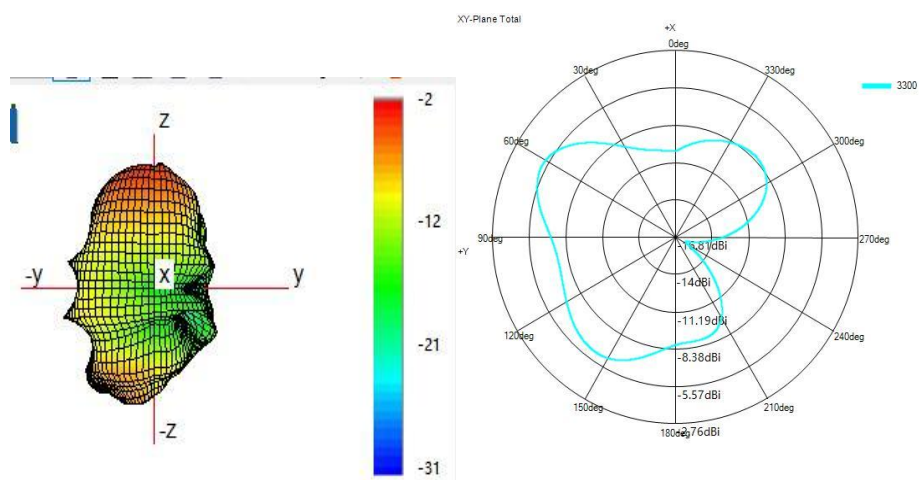
六、ANT4 antenna Test Data

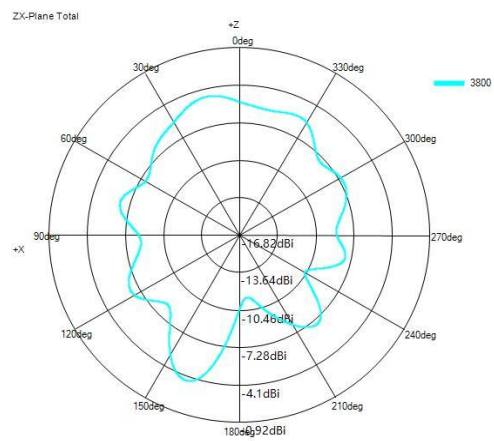
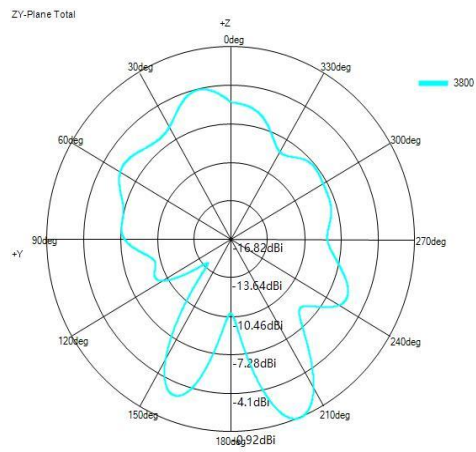
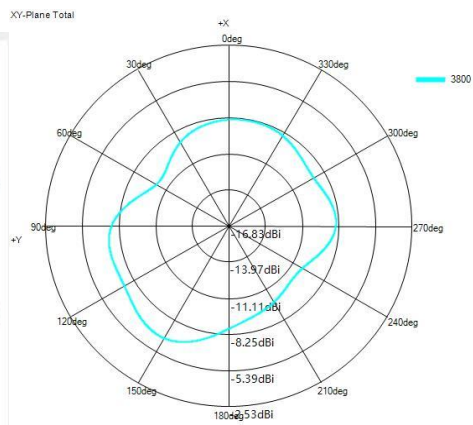
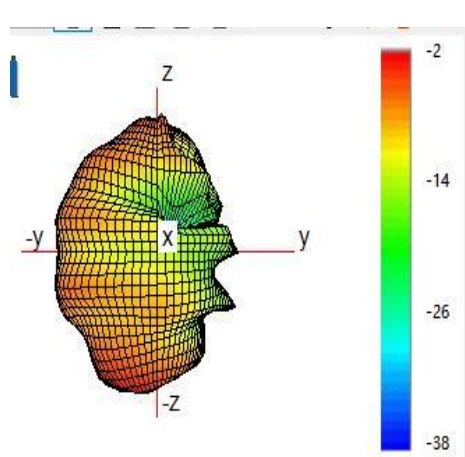
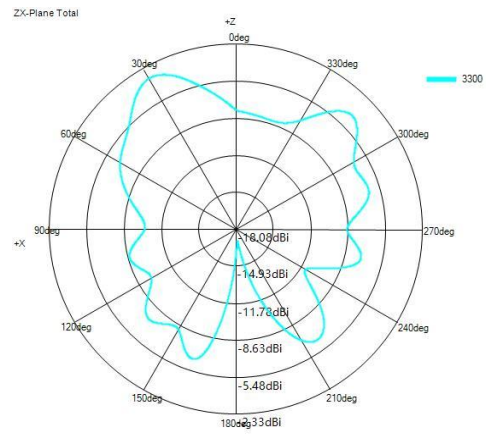
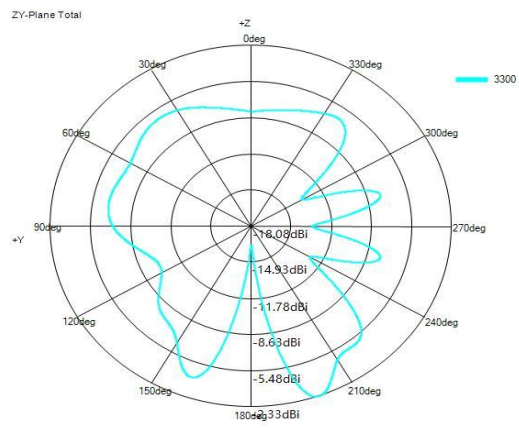


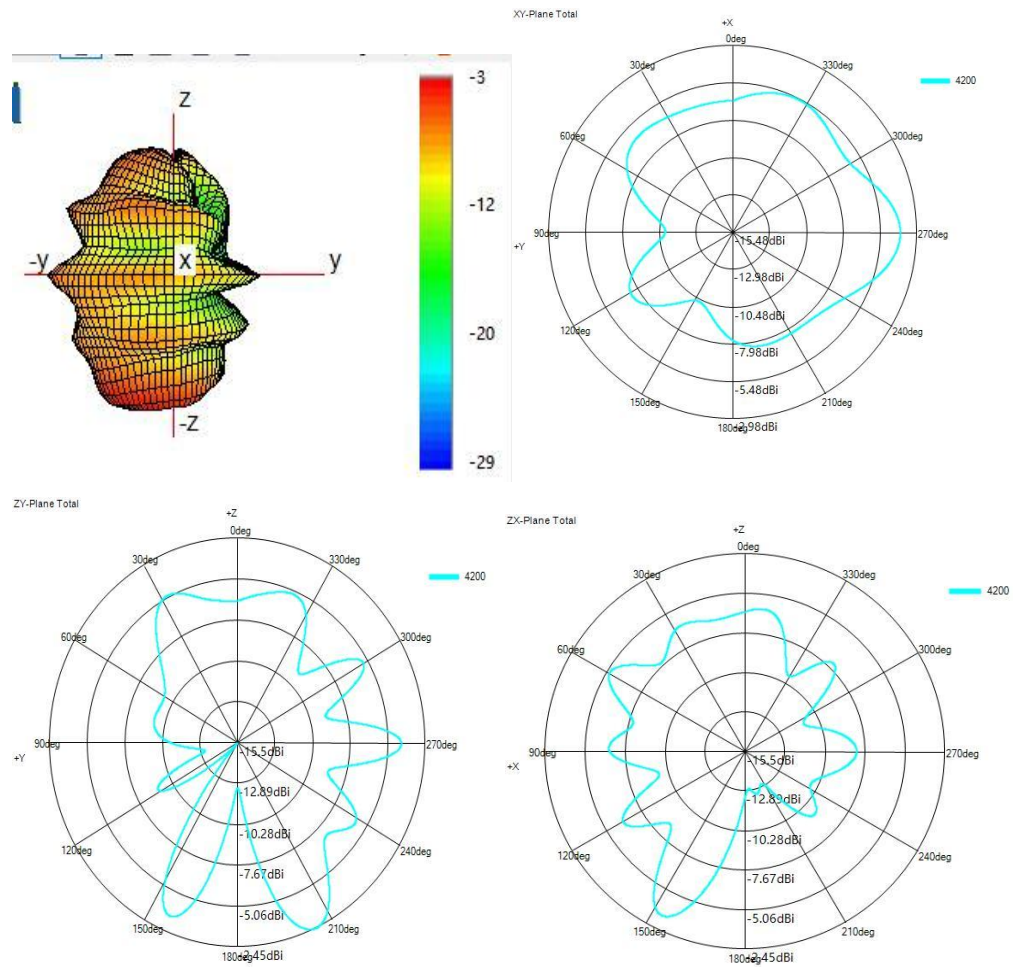
6.1 ANT4Passive Efficiency Data & Gain

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
3300	-3.07	-5.49	28.25
3320	-2.89	-5.26	29.79
3340	-2.64	-4.96	31.92
3360	-2.72	-4.94	32.06
3380	-2.84	-4.96	31.92
3400	-2.89	-4.97	31.84
3420	-2.77	-4.81	33.04
3440	-2.85	-4.91	32.28
3460	-2.34	-4.57	34.91
3480	-2.1	-4.57	34.91
3500	-1.74	-4.54	35.16
3520	-1.53	-4.57	34.91
3540	-1.74	-4.87	32.58
3560	-1.63	-4.98	31.77
3580	-1.96	-5.29	29.58
3600	-2.27	-5.64	27.29
3620	-2.19	-5.58	27.67
3640	-2.26	-5.57	27.73
3660	-2.08	-5.43	28.64
3680	-2.06	-5.34	29.24
3700	-2.45	-5.63	27.35
3720	-2.44	-5.67	27.10
3740	-2.36	-5.8	26.30

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
3760	-2.3	-5.9	25.70
3780	-1.93	-5.67	27.10
3800	-1.77	-5.68	27.04
3820	-1.94	-5.77	26.49
3840	-2.01	-5.64	27.29
3860	-2.55	-5.89	25.76
3880	-2.37	-5.62	27.42
3900	-2.87	-5.82	26.18
3920	-2.7	-5.7	26.92
3940	-2.21	-5.33	29.31
3960	-2.11	-5.17	30.41
3980	-1.76	-4.74	33.57
4000	-1.62	-4.43	36.06
4020	-1.94	-4.61	34.59
4040	-1.64	-4.48	35.65
4060	-1.38	-4.77	33.34
4080	-0.88	-4.75	33.50
4100	-0.42	-4.6	34.67
4120	-0.33	-4.84	32.81
4140	0.1	-4.64	34.36
4160	0.41	-4.52	35.32
4180	0.33	-4.69	33.96
4200	0.45	-4.71	33.81





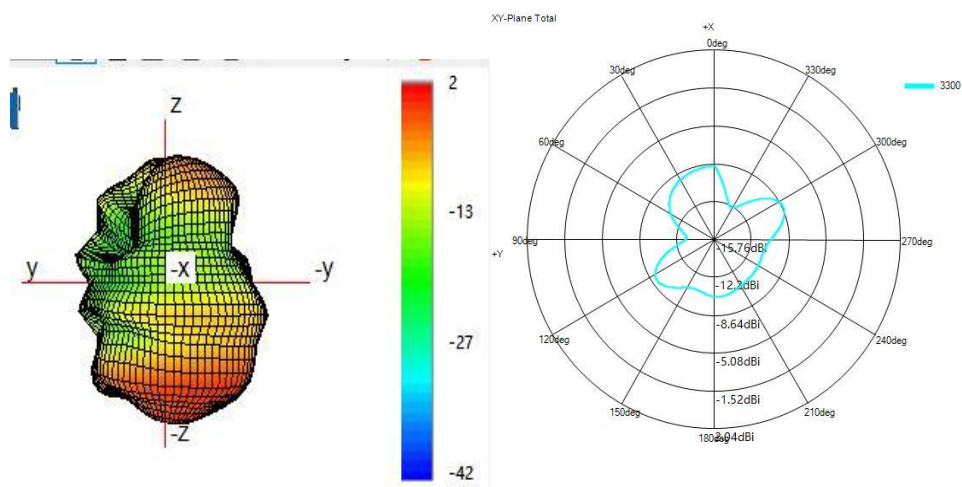


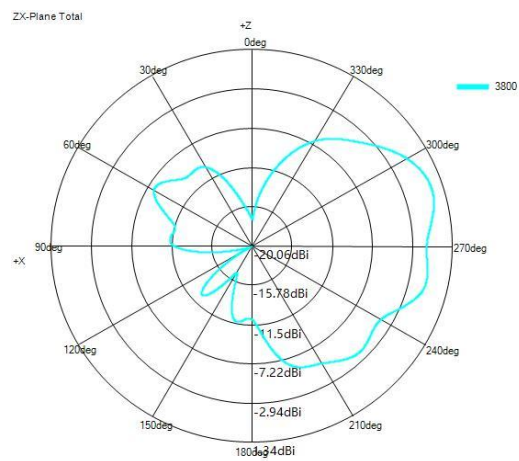
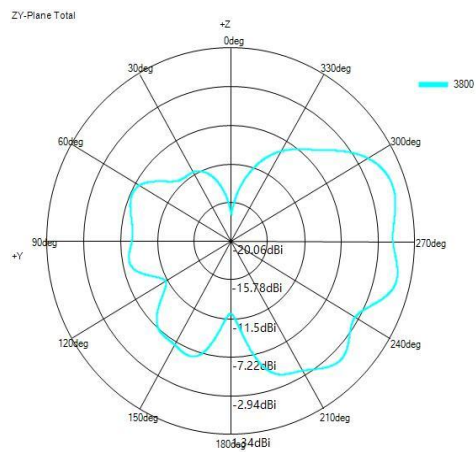
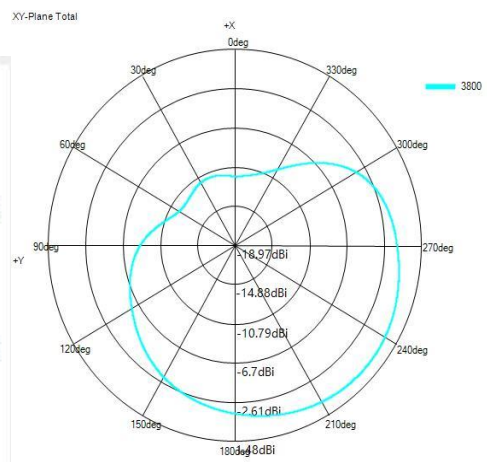
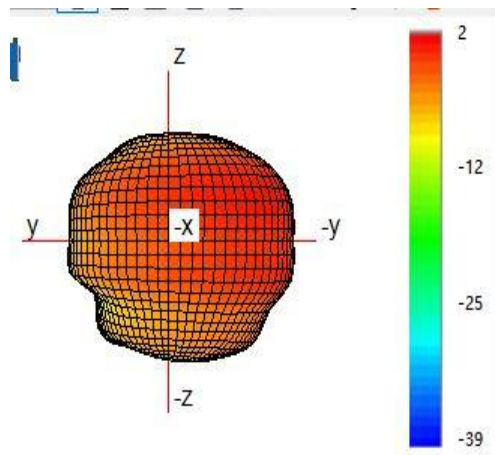
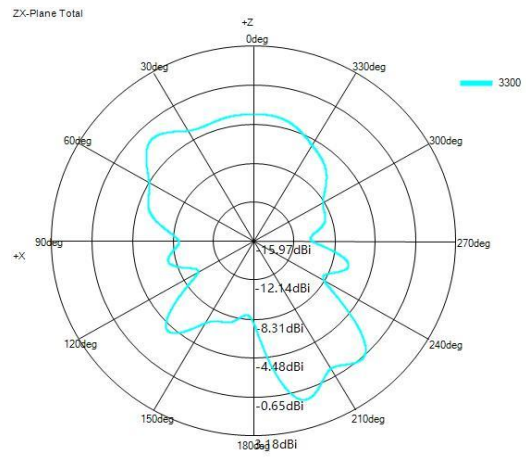
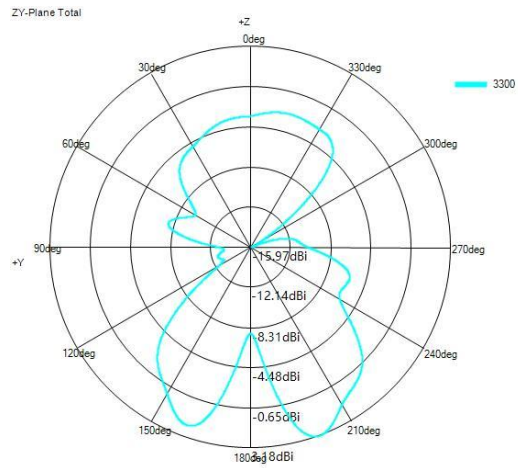
七、ANT5 antenna Test Data

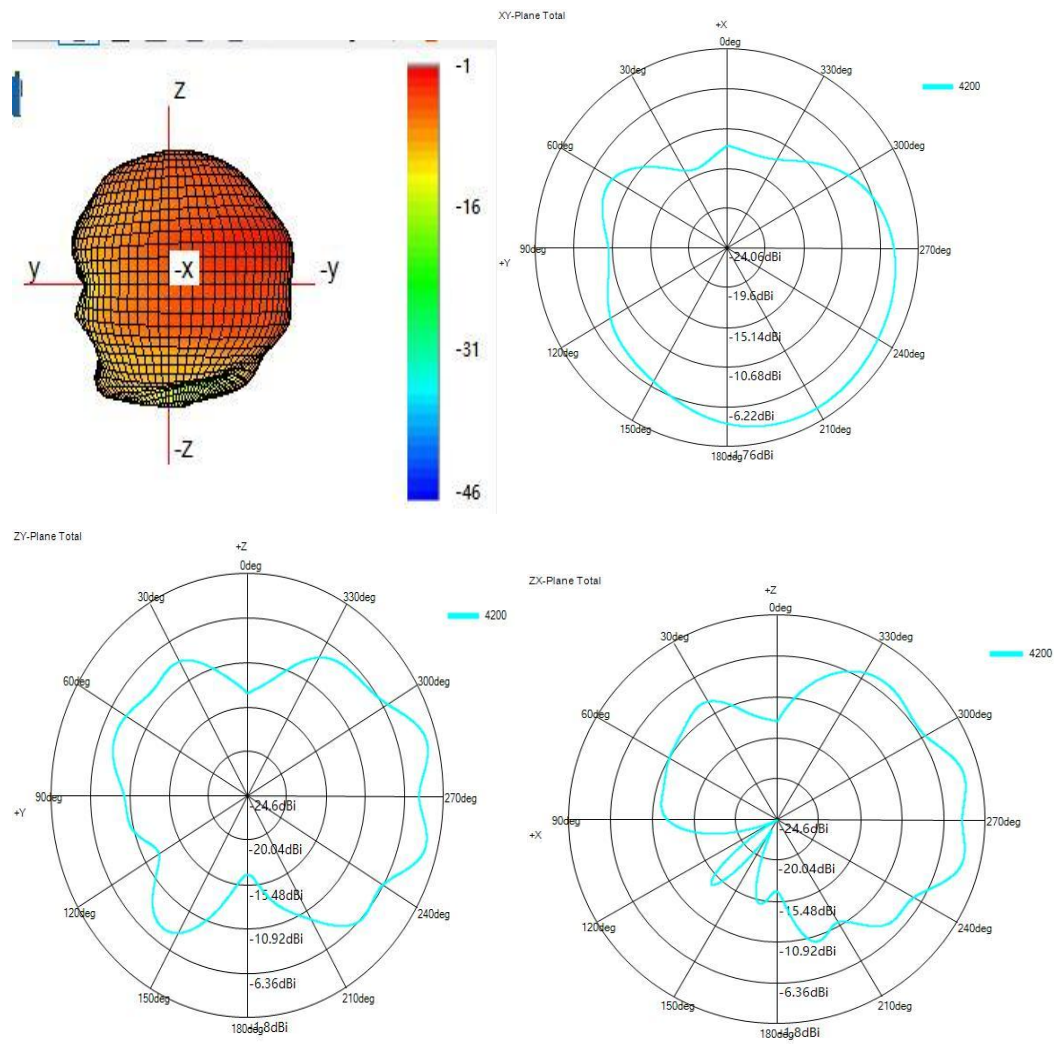
7.1 ANT5 Passive Efficiency Data & Gain

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
3300	2	-4.93	32.17
3320	2.26	-4.7	33.86
3340	2.66	-4.31	37.1
3360	2.6	-4.28	37.33
3380	2.56	-4.21	37.97
3400	2.6	-4.05	39.37
3420	2.8	-3.75	42.16
3440	2.81	-3.54	44.31
3460	3	-3.07	49.32
3480	2.84	-2.96	50.54
3500	2.7	-2.74	53.23
3520	2.32	-2.78	52.75
3540	1.92	-2.9	51.33
3560	1.84	-2.96	50.55
3580	1.74	-3.34	46.31
3600	1.6	-3.67	42.92
3620	1.74	-3.7	42.68
3640	1.87	-3.72	42.49
3660	2.2	-3.52	44.49
3680	2.34	-3.5	44.67
3700	2.06	-3.83	41.41
3720	2.01	-3.94	40.41
3740	1.79	-4.23	37.77

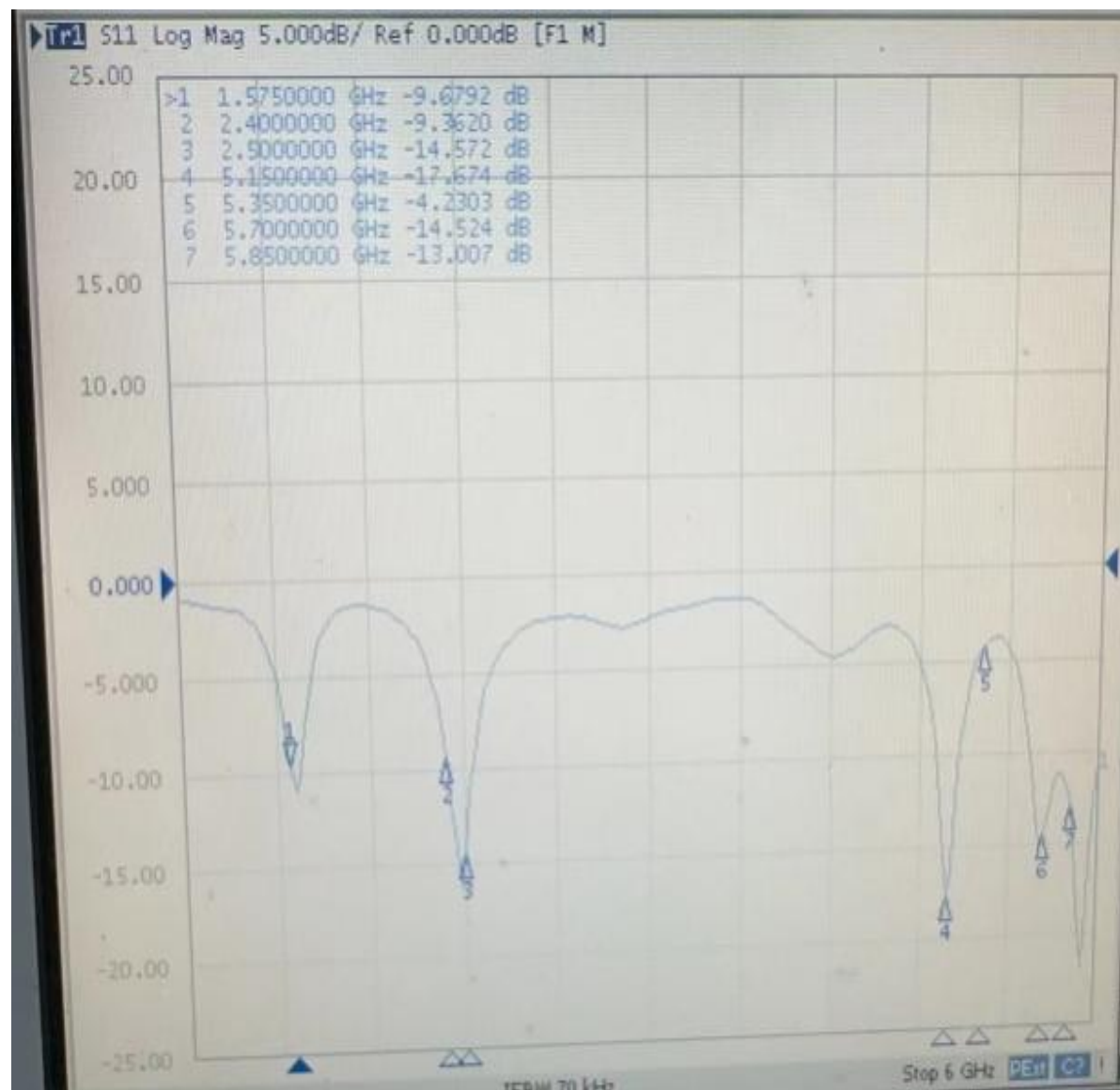
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
3760	1.72	-4.33	36.87
3780	1.69	-4.33	36.91
3800	1.28	-4.67	34.14
3820	1.03	-4.86	32.66
3840	0.89	-4.9	32.37
3860	0.45	-5.24	29.93
3880	0.26	-5.23	30.02
3900	-0.49	-5.74	26.68
3920	-0.7	-5.7	26.89
3940	-0.84	-5.58	27.66
3960	-0.95	-5.77	26.48
3980	-0.48	-5.61	27.46
4000	-0.1	-5.62	27.44
4020	-0.54	-6.11	24.46
4040	-0.68	-6.26	23.65
4060	-1.36	-6.81	20.86
4080	-1.49	-6.95	20.19
4100	-1.52	-7.05	19.71
4120	-1.93	-7.49	17.84
4140	-1.61	-7.23	18.92
4160	-1.53	-7.14	19.3
4180	-1.82	-7.43	18.07
4200	-1.8	-7.42	18.1





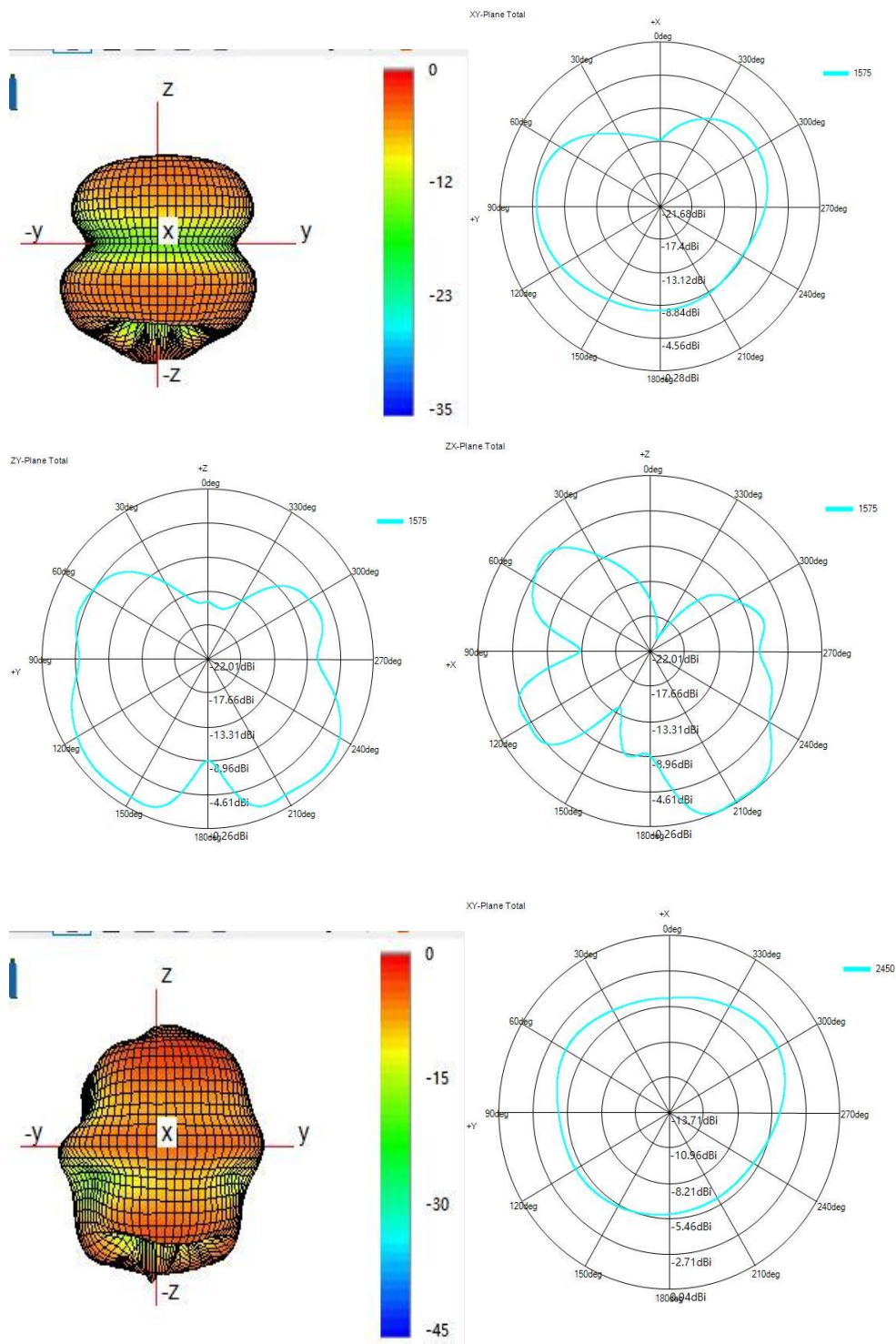


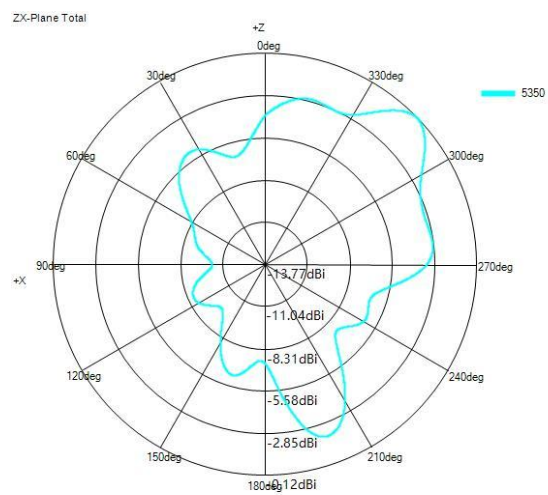
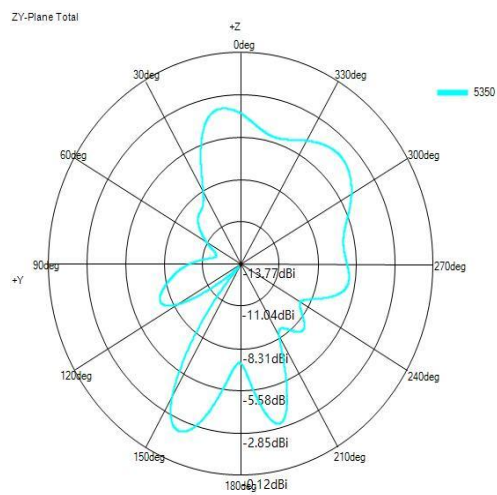
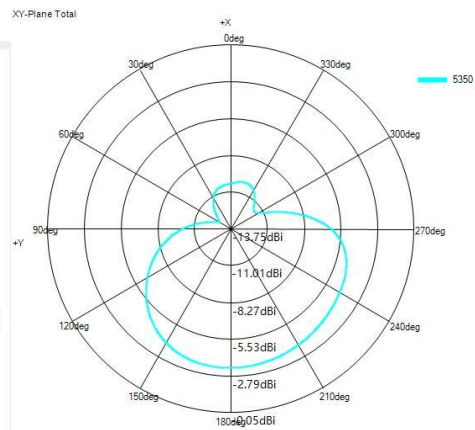
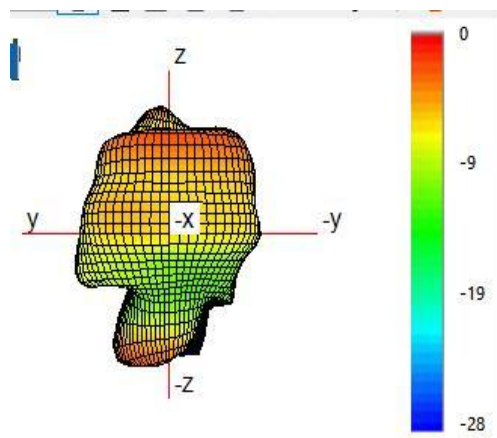
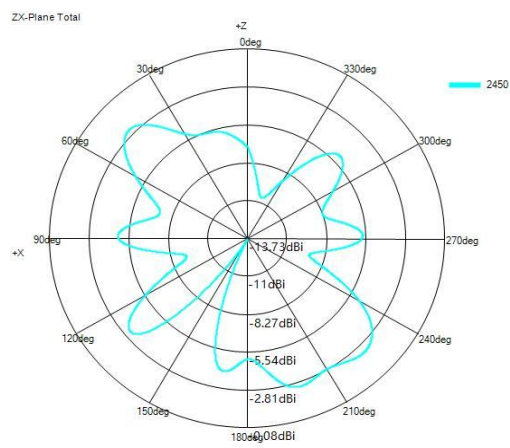
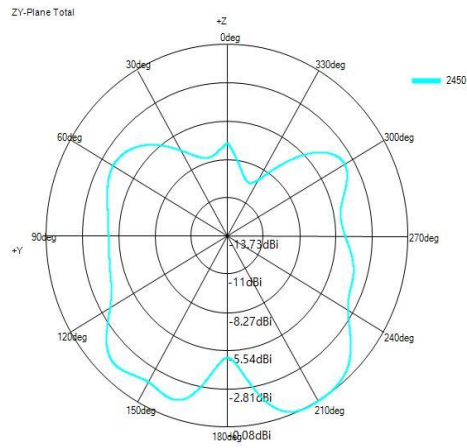
八、 ANT6 antenna Test Data

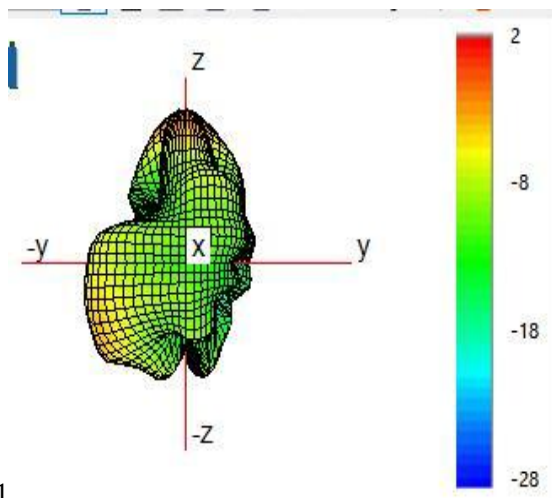


8.1 ANT6 Passive Efficiency Data & Gain

Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
1550	-0.84	-4.07	39.17
1555	-0.83	-4.09	38.99
1560	-0.72	-4.1	38.90
1565	-0.55	-4.05	39.36
1570	-0.45	-4	39.81
1575	-0.39	-4.04	39.45
1580	-0.44	-4.16	38.37
1585	-0.57	-4.24	37.67
1590	-0.58	-4.23	37.76
1595	-0.52	-4.21	37.93
1600	-0.59	-4.25	37.58
2400	-0.3	-4.92	32.18
2410	-0.25	-4.83	32.85
2420	-0.24	-4.64	34.35
2430	-0.02	-4.53	35.21
2440	-0.08	-4.59	34.79
2450	-0.1	-4.59	34.73
2460	-0.14	-4.49	35.58
2470	0.17	-4.32	36.94
2480	0.05	-4.43	36.04
2490	0.23	-4.31	37.04
2500	0.54	-4.29	37.22
5000	1.3	-4.45	35.89
5050	1.29	-4.25	37.58
5100	1.74	-3.65	43.15
5150	1.67	-3.54	44.26
5200	1.57	-3.49	44.77
5250	1.01	-4.07	39.17
5300	0.22	-4.86	32.66
5350	-0.13	-5.51	28.12
5400	-0.25	-5.86	25.94
5450	-1.26	-6.61	21.83
5500	-2.11	-6.94	20.23
5550	-1.85	-6.64	21.68
5600	-1.61	-5.92	25.59
5650	-1.97	-5.44	28.58
5700	-1.01	-4.63	34.43
5750	0.37	-4.32	37.01
5800	1.22	-3.75	42.12
5850	1.7	-3.27	47.04

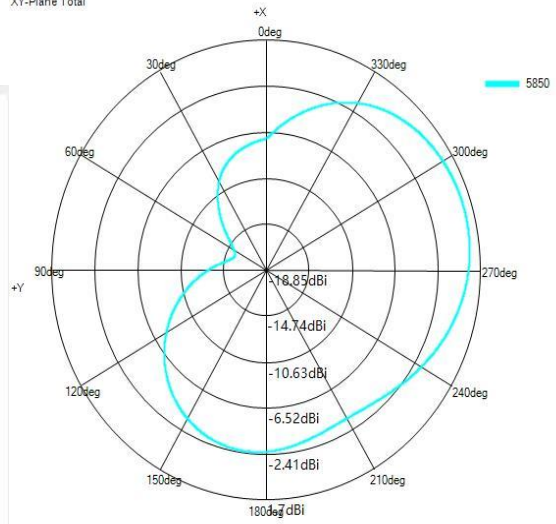




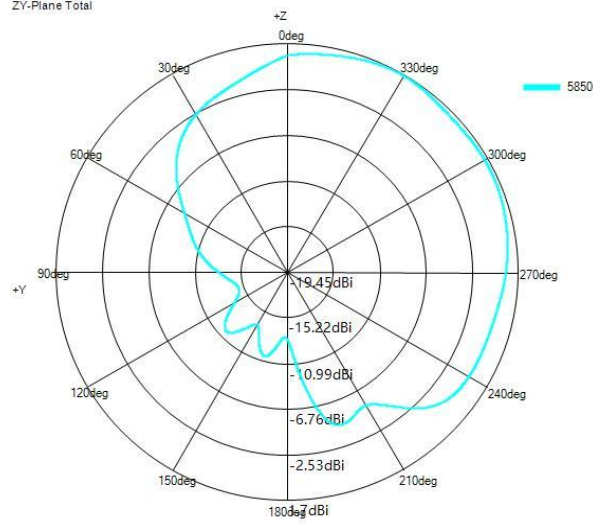


1

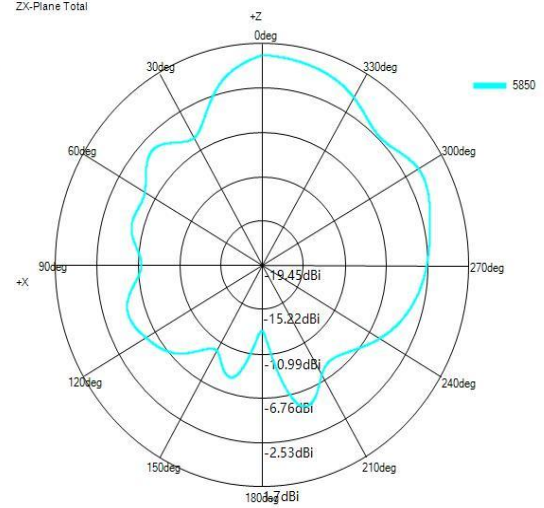
XY-Plane Total



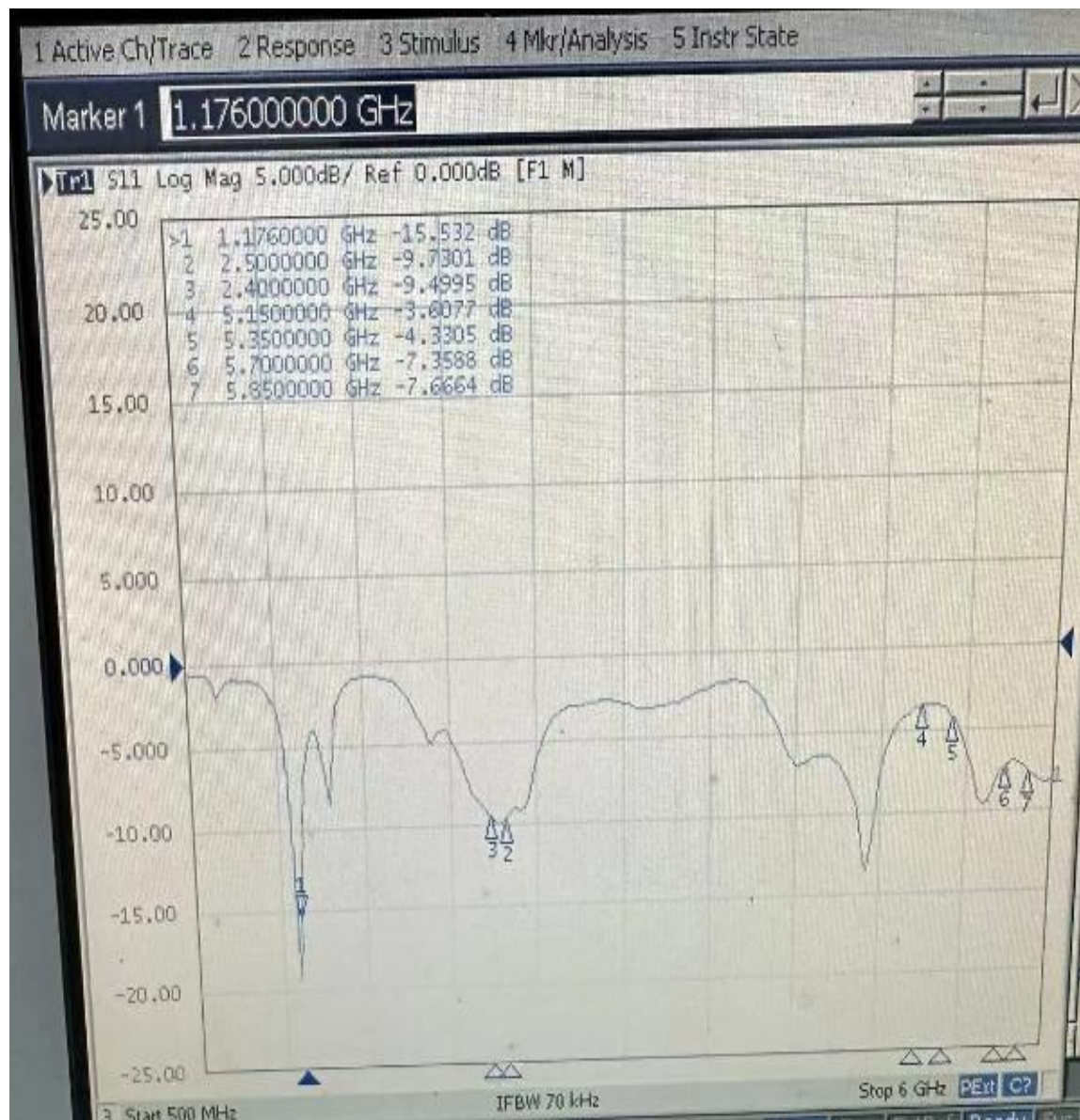
ZY-Plane Total



ZX-Plane Total

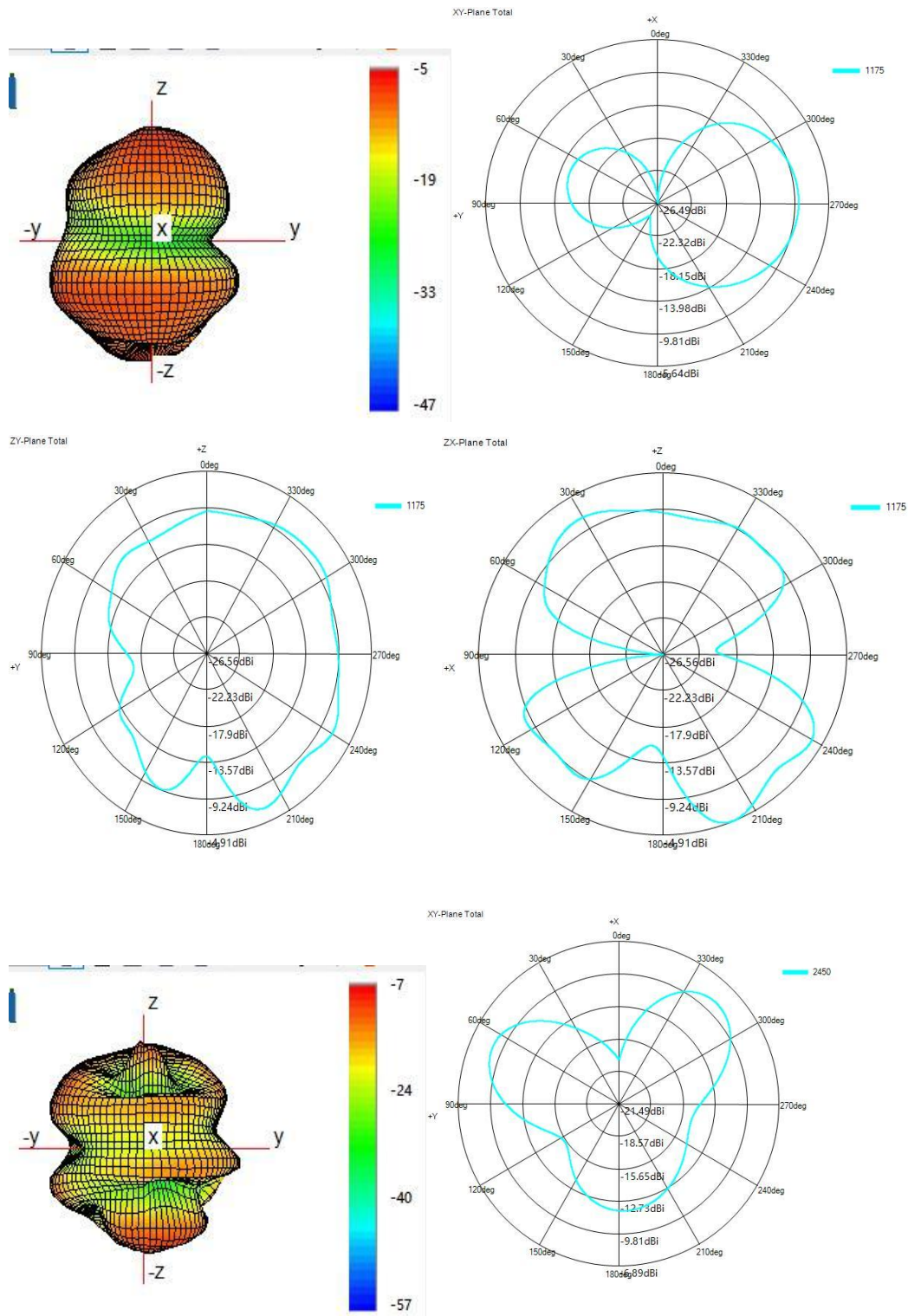


九、 ANT7 antenna Test Data

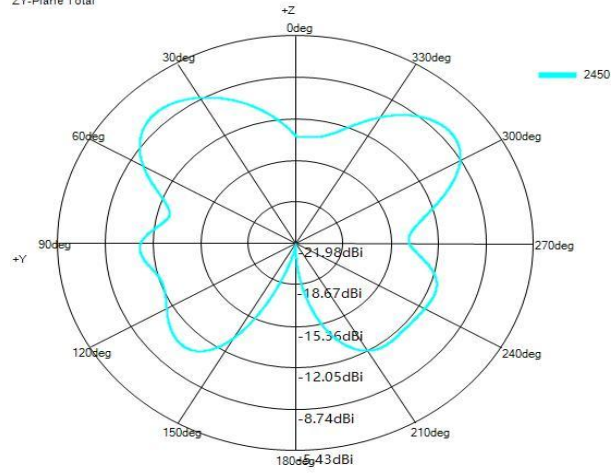


9.1 ANT7 Passive Efficiency Data & Gain

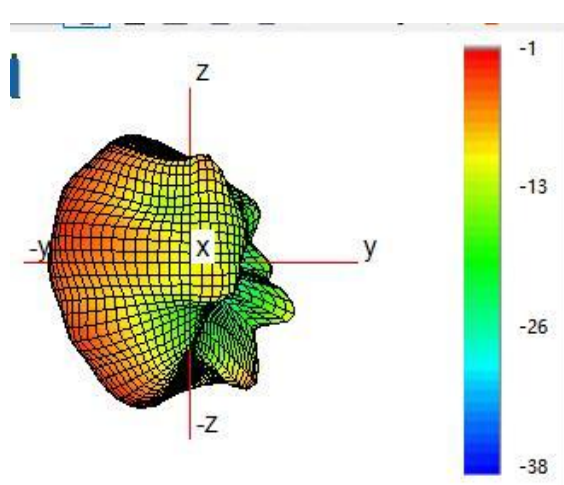
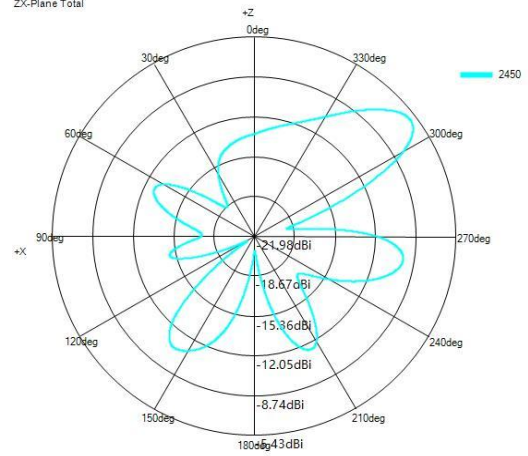
Freq(MHz)	Gain(dBi)	Efficiency (dBi)	Efficiency (%)
1150	-1.81	-6.25	23.71
1155	-2.44	-6.38	23.01
1160	-3.11	-6.5	22.39
1165	-3.03	-6.52	22.28
1170	-2.38	-6.46	22.59
1175	-1.78	-6.38	23.01
1180	-1.39	-6.37	23.07
1185	-1.29	-6.46	22.59
1190	-1.47	-6.72	21.28
1195	-1.95	-7.16	19.23
1200	-2.53	-7.75	16.79
2400	-3.6	-5.2	30.20
2410	-3.11	-5.01	31.55
2420	-2.81	-4.53	35.24
2430	-3.06	-4.71	33.81
2440	-3.22	-5.02	31.48
2450	-2.5	-4.67	34.12
2460	-2.73	-4.7	33.88
2470	-2.9	-4.86	32.66
2480	-2.7	-4.77	33.34
2490	-2.67	-4.77	33.34
2500	-3.44	-5.28	29.65
5000	-3.01	-6.22	23.88
5050	-2.68	-6.32	23.33
5100	-2.21	-6.09	24.60
5150	-2.04	-6.1	24.55
5200	-2.12	-6.2	23.99
5250	-2.63	-6.36	23.12
5300	-2.41	-6	25.12
5350	-0.93	-6.2	23.99
5400	0.42	-5.3	29.52
5450	0.91	-5.08	31.02
5500	1.29	-4.87	32.6
5550	1.63	-4.41	36.23
5600	1.9	-3.96	40.17
5650	1.74	-4.07	39.19
5700	1.62	-4.07	39.14
5750	1.72	-4.12	38.71
5800	1.7	-4.28	37.35
5850	1.46	-4.36	36.61



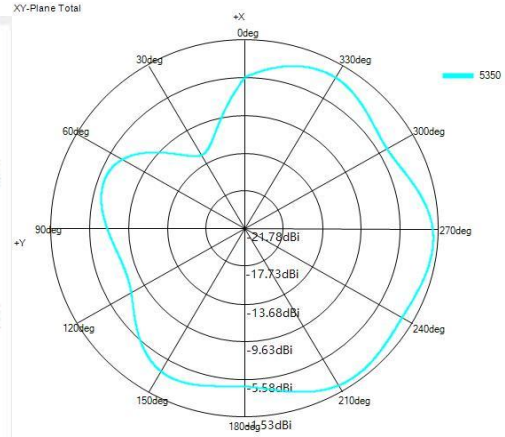
ZY-Plane Total



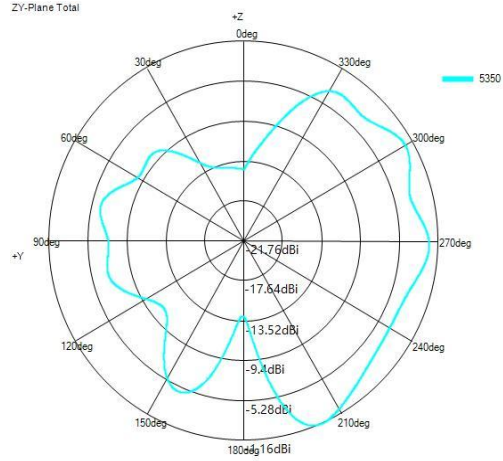
ZX-Plane Total



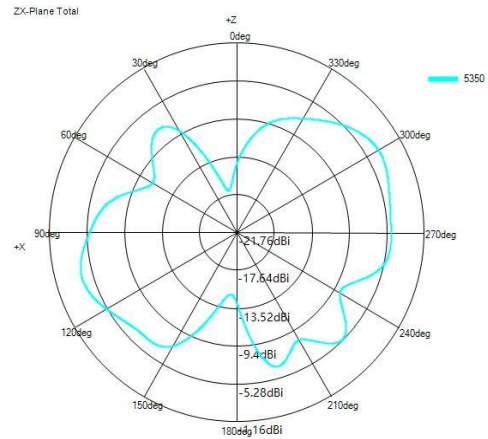
XY-Plane Total

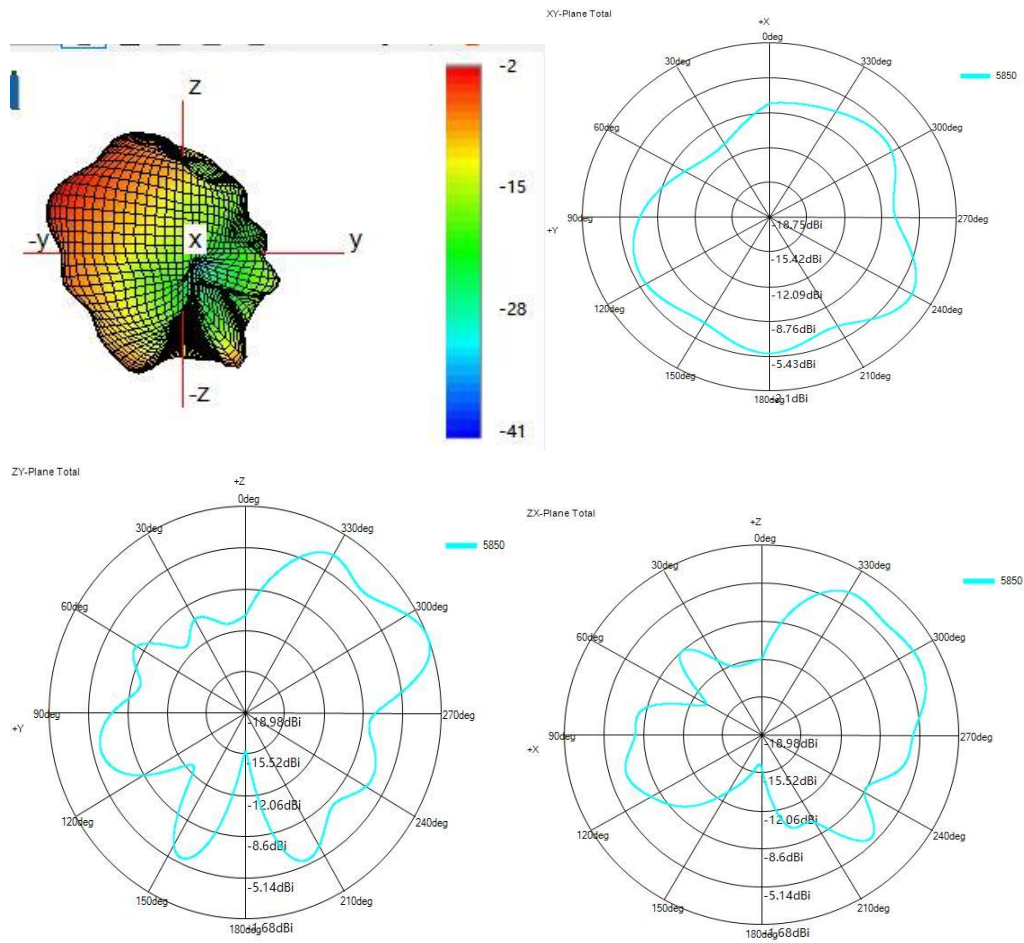


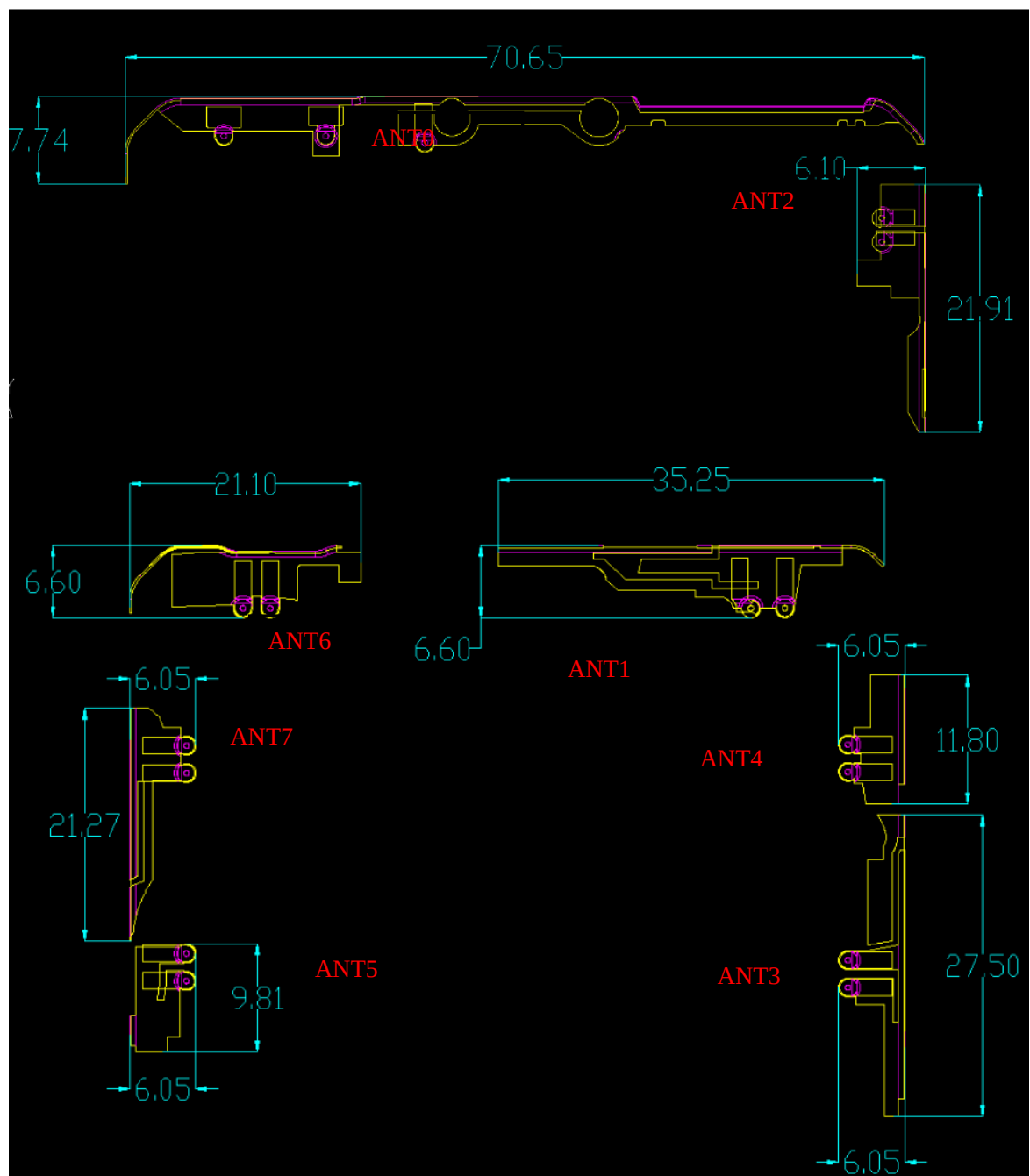
ZY-Plane Total



ZX-Plane Total







5 Antenna distribution map

