

SPECIFICATION

深圳市三好无线通信有限公司

Chapter2

Product approval sheet

Model name	Chapter2	Band	
Project	Chapter2	Colour	Black
Encoding of bracket antenna		Antenna type	LDS+Metal border
Manufacture Company	Shenzhen 3Good Wireless Communication Co., Ltd	address	Room 501,Jinfulai Building A,No.49-1,Dabao Road,Baoan District,Shenzhen
Measurement Company	Shenzhen 3Good Wireless Communication Co., Ltd		

Customer check:

Reach requirement of customer: ☒OK ☐NG

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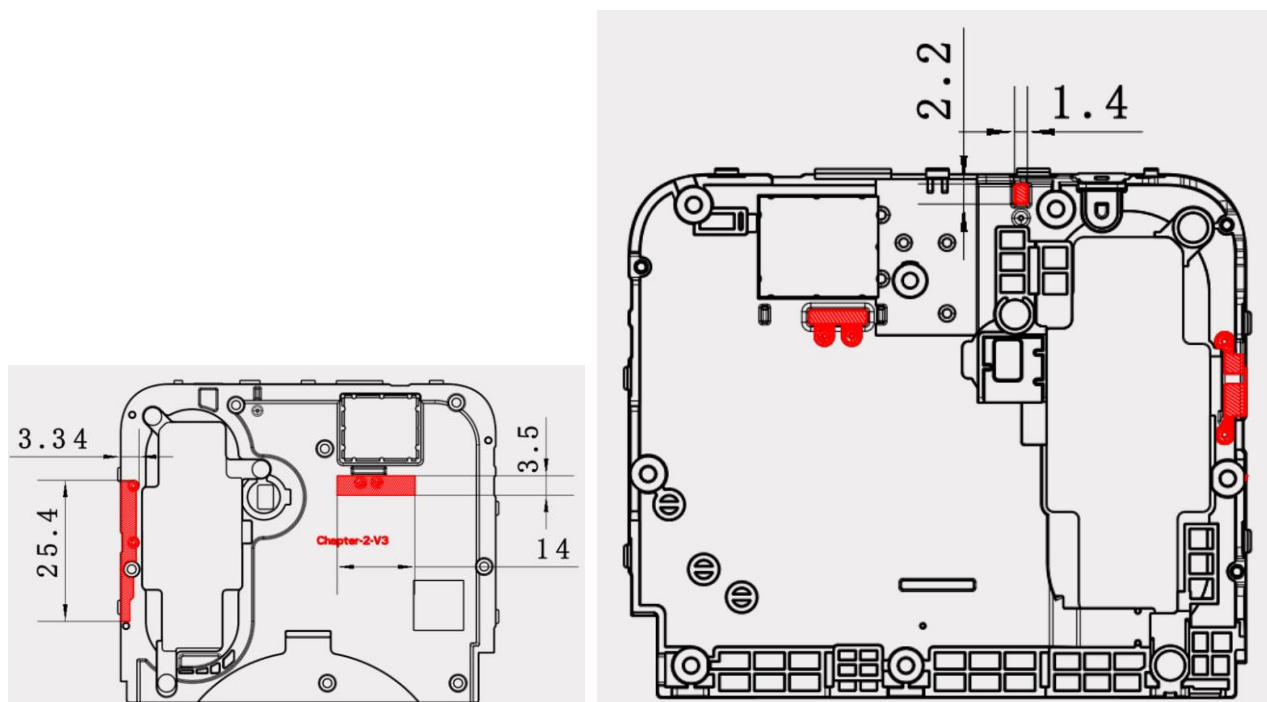
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1 General description

1.1 information of DUT

Set Type	Tablet
Dimension	
Band	2G:B2/B3/B5/B8 3G: B2/B4/B5/B8/B1 4G:B1/2/3/4/5/7/8/12/13/14/17/18/19/20/25/26/28/34/38/39/40/41/42/48/66/71 5G:N1/2/3/5/7/8/12/14/20/25/28/38/40/41/48/66/71/77/78 BT/BLE/WIFI2.4G/5G/6E
Antenna Material	LDS+ Metal Frame

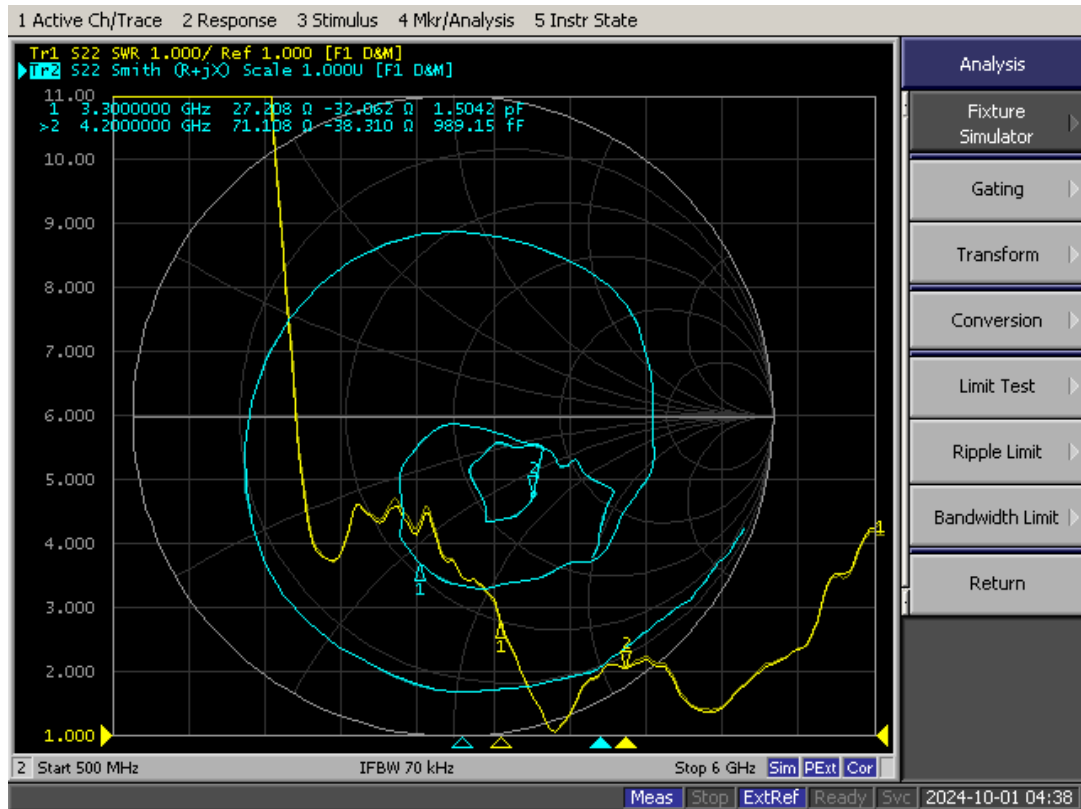
1.2Antenna appearing diagram



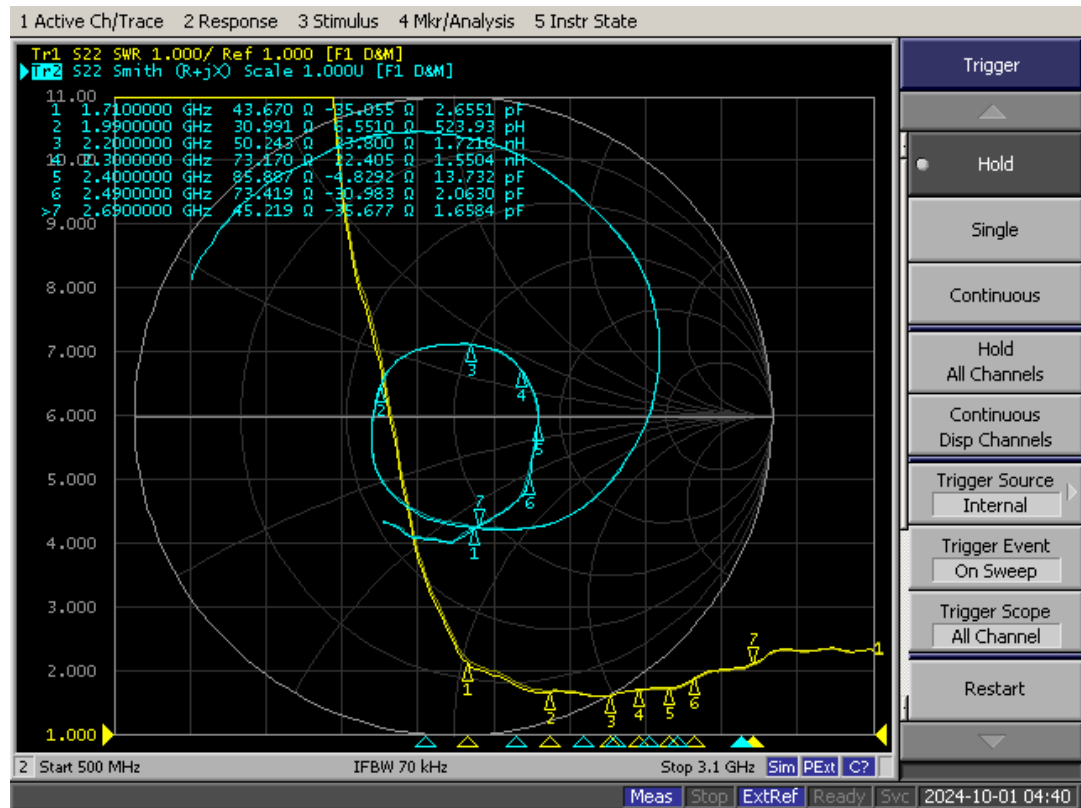
2 Electrical performance

2.1 Passive result

2.11 VSWR

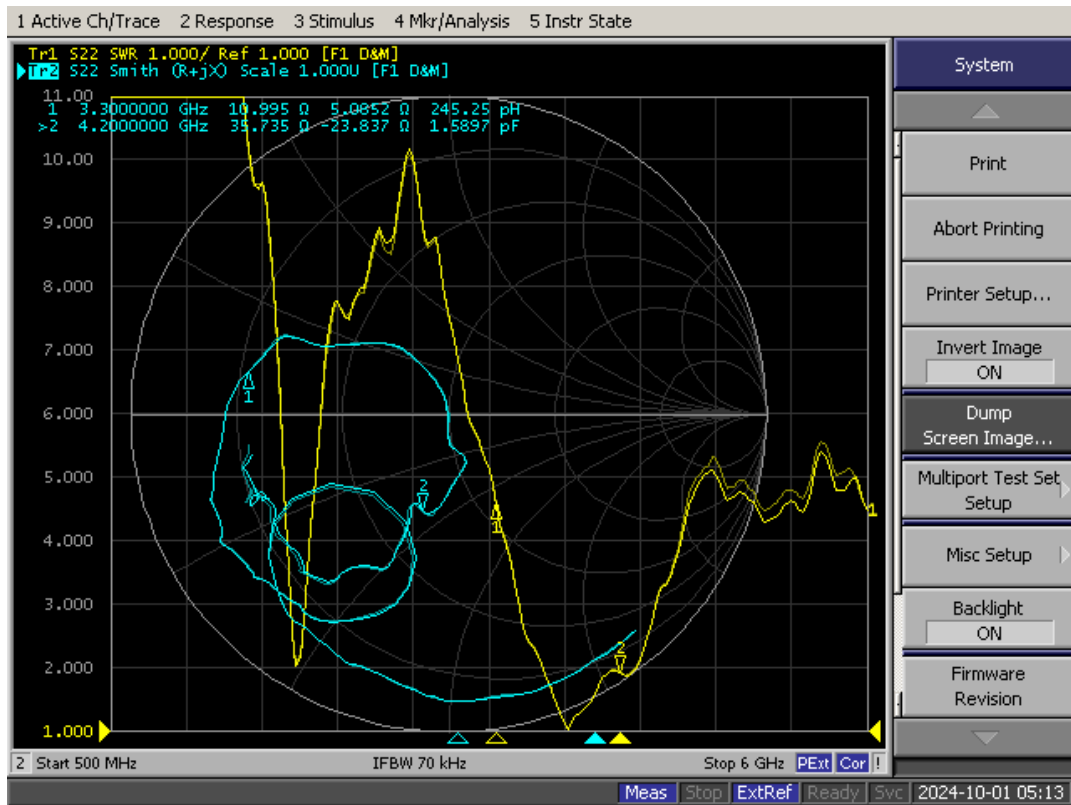


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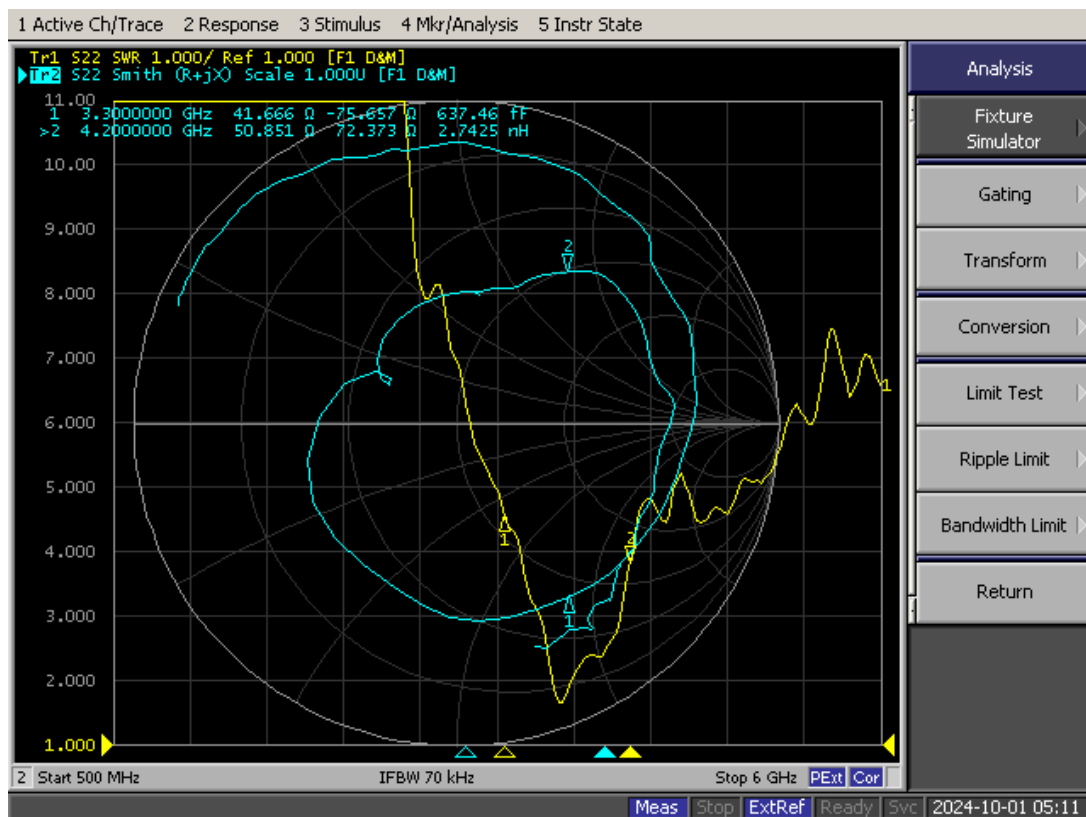


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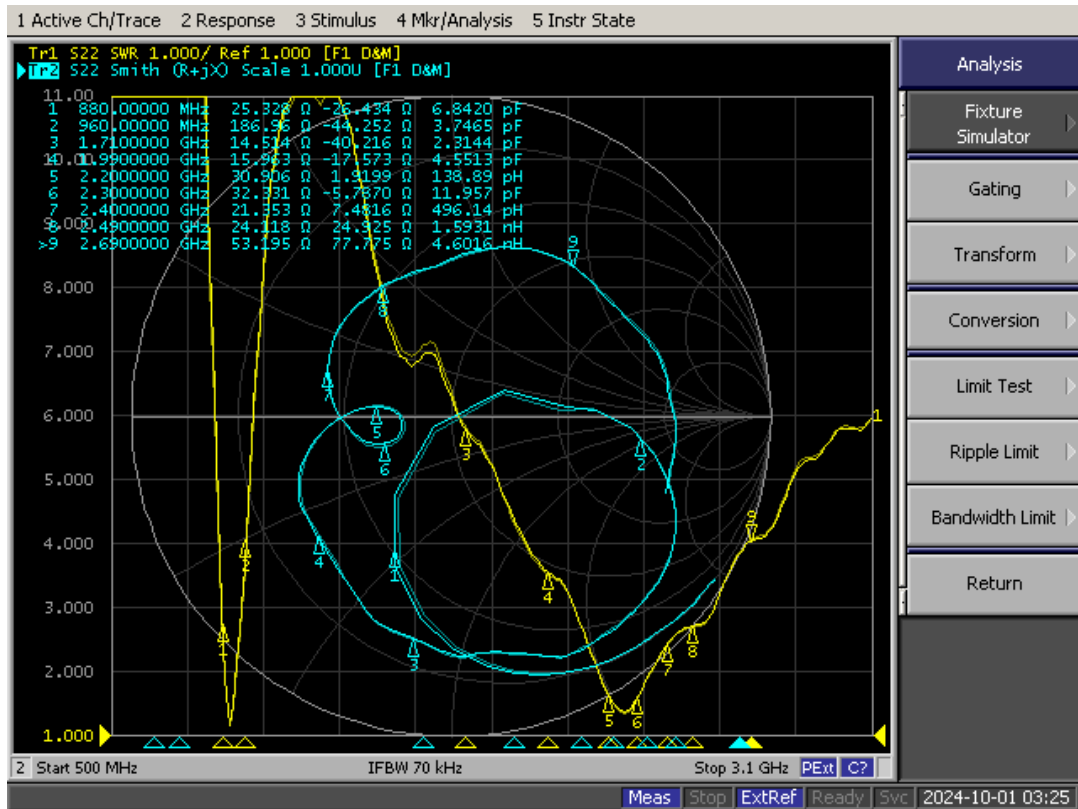
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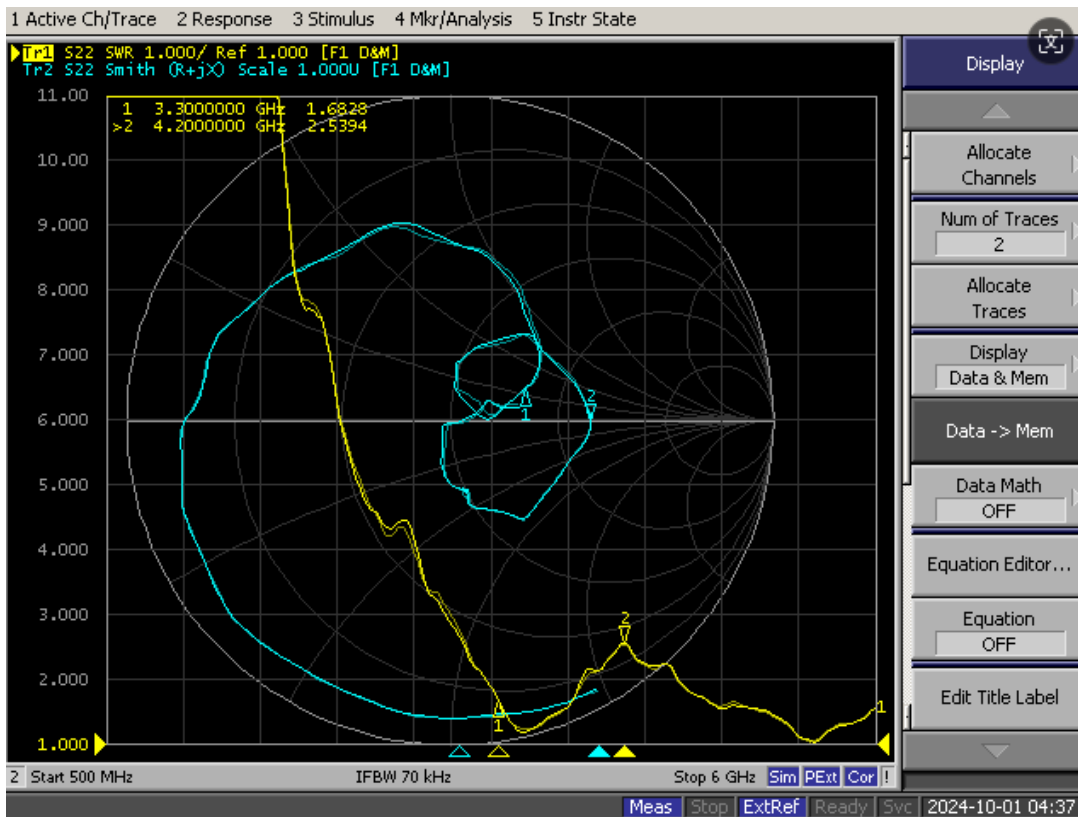
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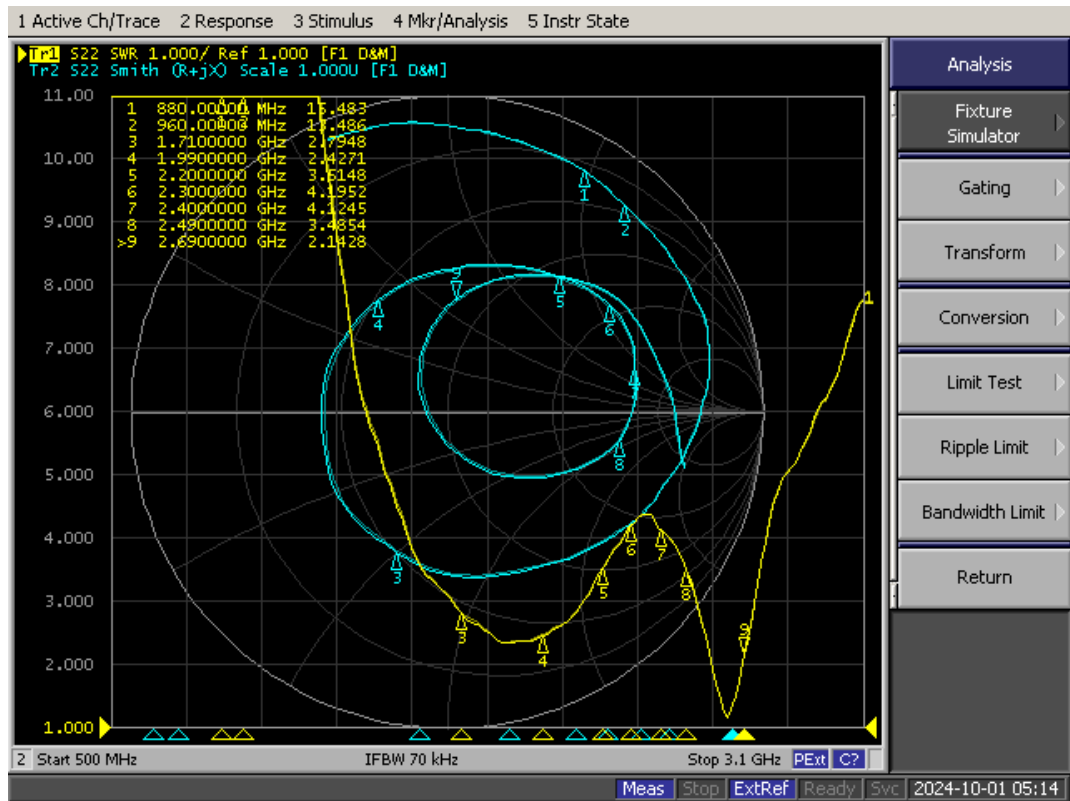


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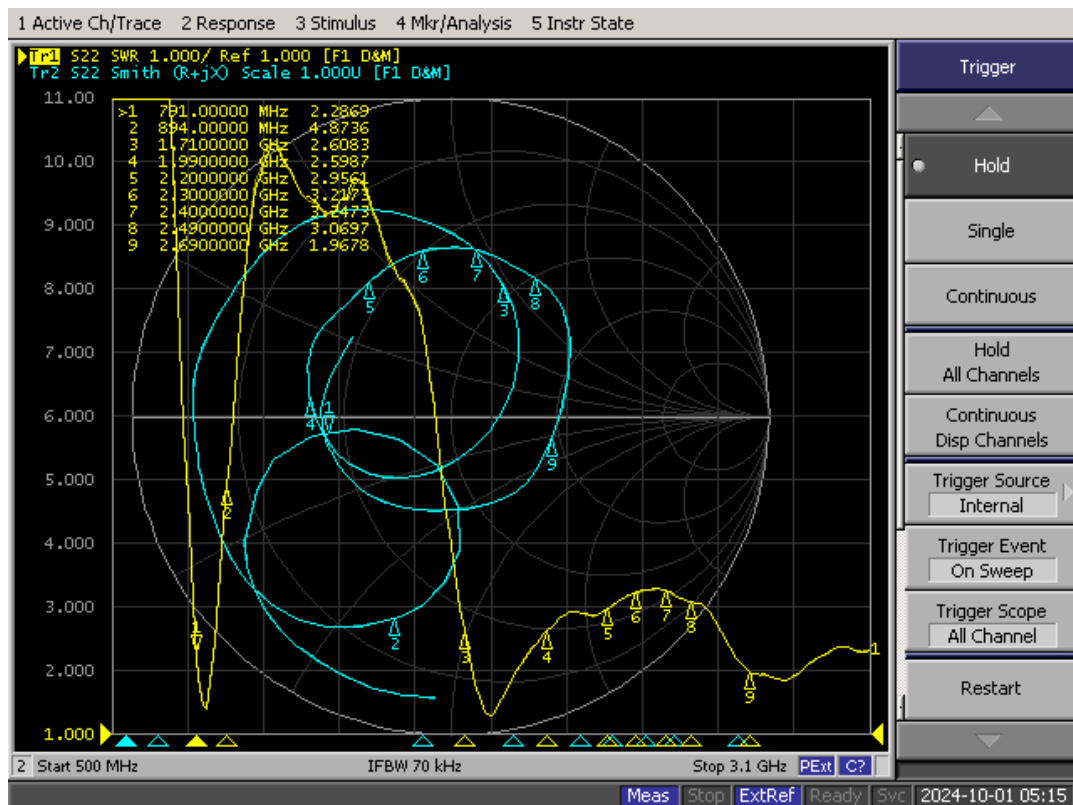


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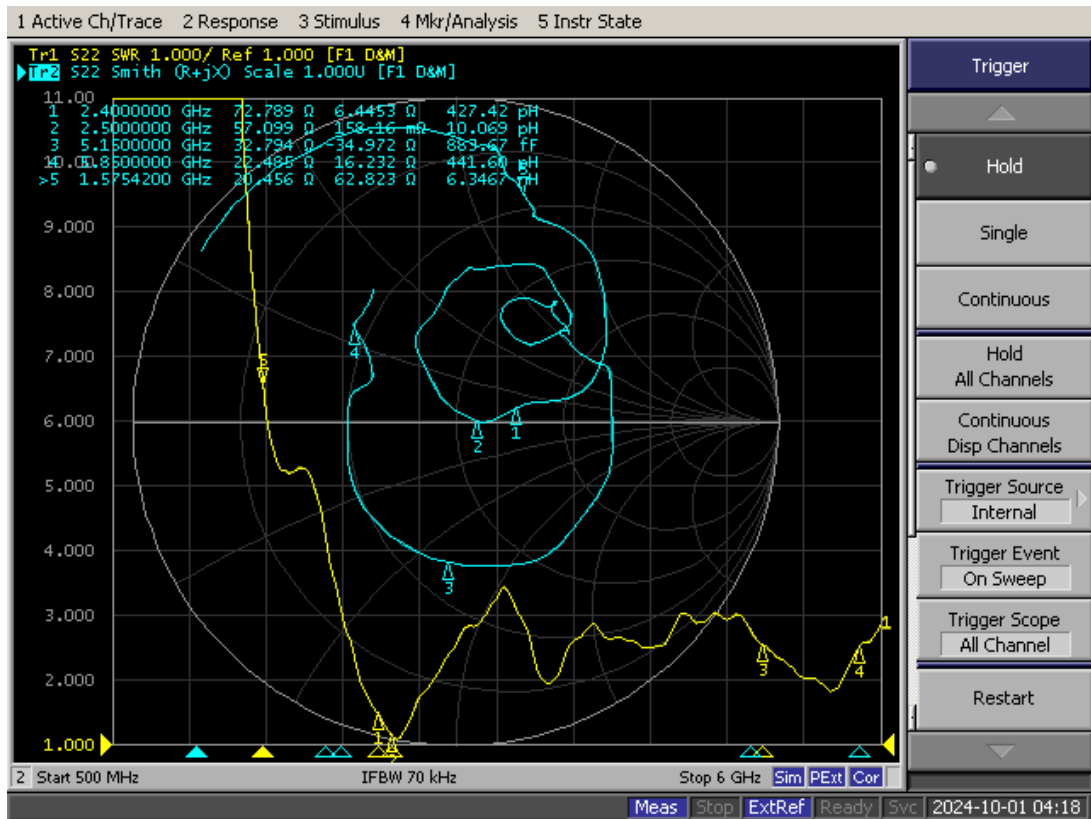


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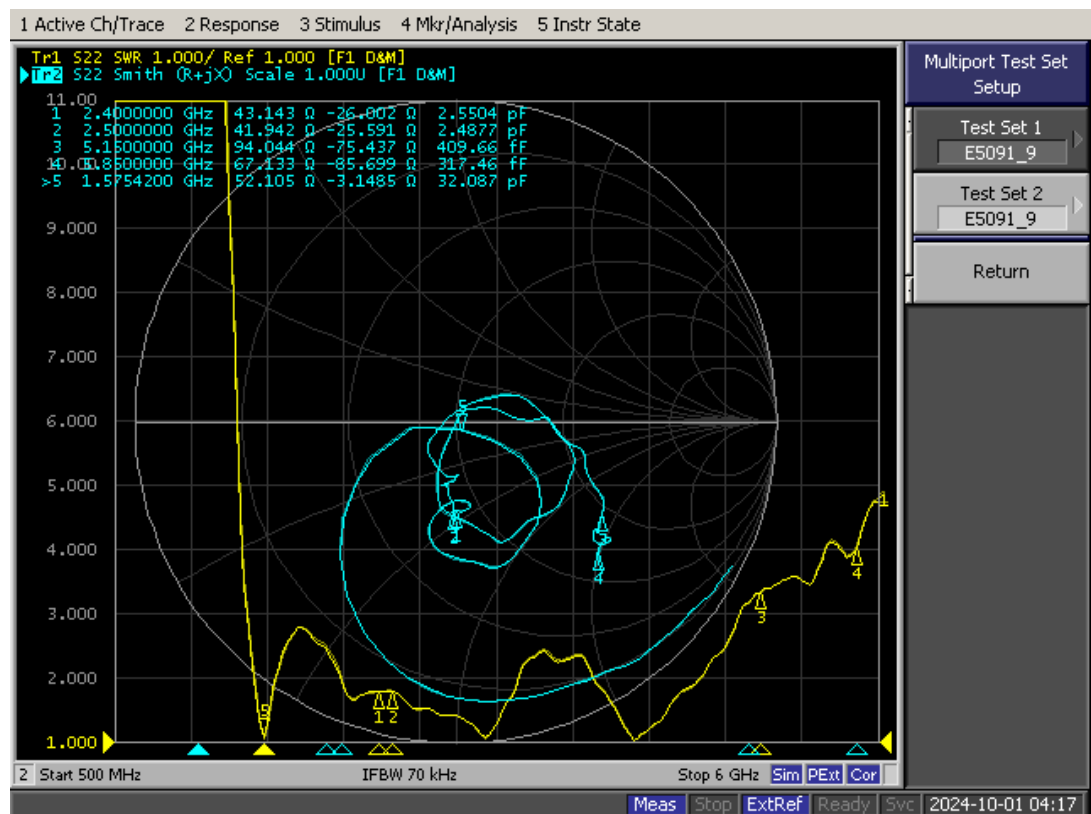


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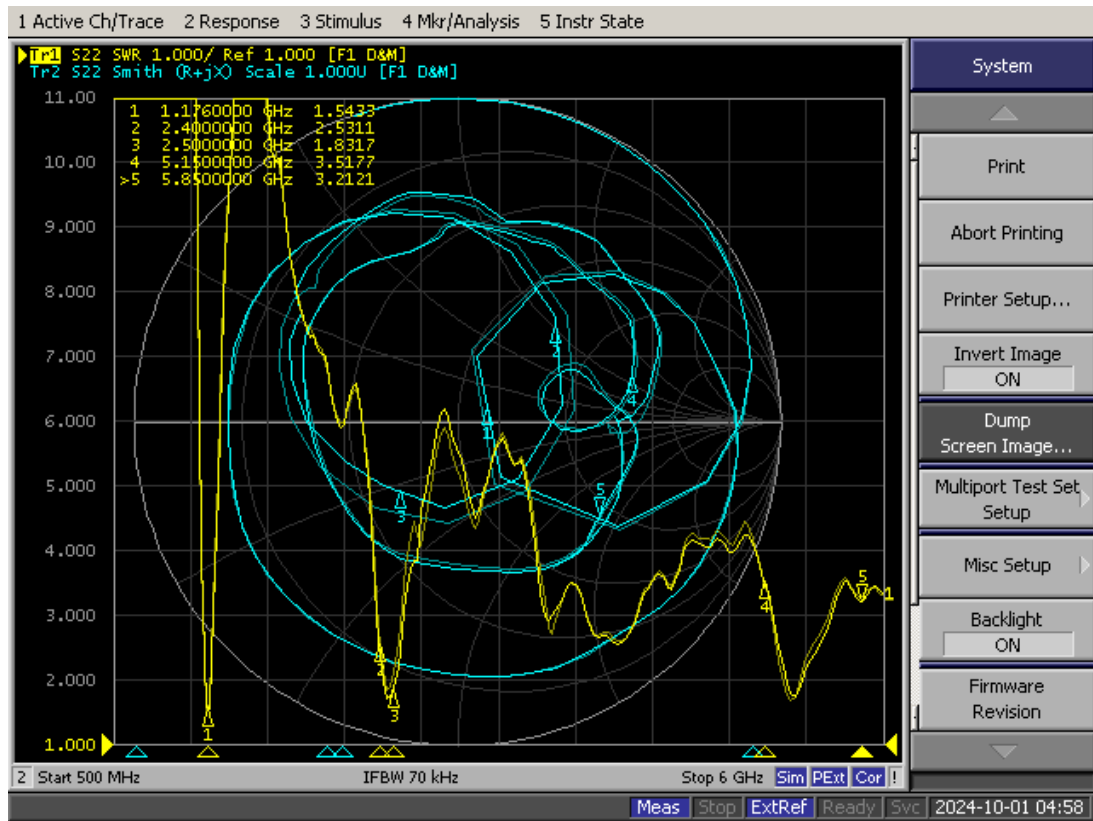
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2.12 Efficiency & Gain

ANT0

Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain
(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)
3300	31.36	-5.04	-1.55	3760	27.33	-5.63	-0.02
3320	31.93	-4.96	-1.4	3780	23.85	-6.22	-0.78
3340	30.84	-5.11	-1.59	3800	26.02	-5.85	-0.52
3360	31.2	-5.06	-1.68	3820	24.43	-6.12	-0.83
3380	29.61	-5.29	-1.93	3840	23.94	-6.21	-1.12
3400	31.53	-5.01	-1.48	3860	24	-6.2	-1.43
3420	28.51	-5.45	-1.86	3880	27.81	-5.56	-0.76
3440	31.6	-5	-0.96	3900	25.34	-5.96	-1.14
3460	28.88	-5.39	-1.18	3920	26.11	-5.83	-0.95
3480	34.32	-4.64	-0.2	3940	23.65	-6.26	-1.25
3500	31.41	-5.03	-0.44	3960	23.67	-6.26	-0.9

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3520	35.66	-4.48	-0.05	3980	23.18	-6.35	-0.8
3540	35.76	-4.47	-0.15	4000	23.04	-6.38	-0.73
3560	38.73	-4.12	0.08	4020	22.06	-6.56	-0.65
3580	36.54	-4.37	-0.31	4040	22.36	-6.51	-0.51
3600	38.76	-4.12	-0.09	4060	21.8	-6.62	-0.23
3620	33.1	-4.8	-0.79	4080	21.08	-6.76	-0.25
3640	34.89	-4.57	-0.21	4100	22.9	-6.4	0.31
3660	30.06	-5.22	-0.43	4120	19.56	-7.09	-0.2
3680	30.57	-5.15	-0.17	4140	20.72	-6.84	0.06
3700	28.57	-5.44	-0.49	4160	17.91	-7.47	-0.61
3720	27.93	-5.54	-0.34	4180	16.35	-7.87	-0.99
3740	25.3	-5.97	-0.52	4200	16.13	-7.92	-1.08

ANT1

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	20.26	-6.93	-2.58	2210	27.74	-5.57	-2.24
1720	21.48	-6.68	-2.67	2220	28.26	-5.49	-2.13
1730	22.26	-6.52	-2.58	2230	27.99	-5.53	-2.1
1740	22.3	-6.52	-2.79	2240	28.59	-5.44	-2.15
1750	22.47	-6.48	-2.8	2250	29.25	-5.34	-2.06
1760	24.16	-6.17	-2.44	2260	29.57	-5.29	-1.96
1770	24.37	-6.13	-2.34	2270	30.13	-5.21	-1.64
1780	25.35	-5.96	-2.1	2280	27.91	-5.54	-1.8
1790	24.81	-6.05	-2.1	2290	28.37	-5.47	-1.71
1800	24.28	-6.15	-2.22	2300	29.09	-5.36	-1.79
1810	24.19	-6.16	-2.2	2310	29.96	-5.23	-1.93
1820	24.12	-6.18	-2.16	2320	31.01	-5.09	-1.88
1830	23.88	-6.22	-2.29	2330	31.21	-5.06	-1.96
1840	24.36	-6.13	-2.03	2340	30.29	-5.19	-1.94
1850	25.34	-5.96	-1.59	2350	31.46	-5.02	-1.63
1860	24.97	-6.02	-1.37	2360	30.22	-5.2	-1.58
1870	24.11	-6.18	-1.2	2370	30.17	-5.2	-1.53
1880	23.82	-6.23	-1.01	2380	29.49	-5.3	-1.49

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1890	23.8	-6.23	-0.95	2390	29.11	-5.36	-1.57
1900	24.08	-6.18	-0.88	2400	30.14	-5.21	-1.45
1910	23.4	-6.31	-1	2410	31.03	-5.08	-1.36
1920	22.14	-6.55	-1.2	2420	31.16	-5.06	-1.22
1930	21.78	-6.62	-1.45	2430	31.2	-5.06	-1.15
1940	20.98	-6.78	-1.99	2440	30.17	-5.2	-1.29
1950	21.9	-6.6	-2.37	2450	30.81	-5.11	-1.38
1960	22.31	-6.52	-2.81	2460	31.15	-5.07	-1.46
1970	22.76	-6.43	-2.97	2470	30.5	-5.16	-1.77
1980	23.37	-6.31	-3.29	2480	30.76	-5.12	-1.88
1990	25.21	-5.98	-2.61	2490	31.89	-4.96	-1.95
2000	26.72	-5.73	-2.44	2500	30.75	-5.12	-2.04
2010	27.47	-5.61	-2.32	2510	29.69	-5.27	-2.04
2020	27.25	-5.65	-2.46	2520	29	-5.38	-2.09
2030	28.14	-5.51	-2.42	2530	27.82	-5.56	-2.13
2040	29.1	-5.36	-2.42	2540	26.56	-5.76	-2.28
2050	30.02	-5.23	-2.37	2550	26.04	-5.84	-2.32
2060	30.07	-5.22	-2.35	2560	25.74	-5.89	-2.36
2070	29.63	-5.28	-2.49	2570	25.54	-5.93	-2.51
2080	29.51	-5.3	-2.65	2580	23.17	-6.35	-3.09
2090	30.14	-5.21	-2.58	2590	21.77	-6.62	-3.57
2100	31.11	-5.07	-2.58	2600	22.16	-6.55	-3.3
2110	25.69	-5.9	-3.27	2610	21.52	-6.67	-3.29
2120	25	-6.02	-3.33	2620	19.71	-7.05	-3.72
2130	25.66	-5.91	-3.01	2630	18.71	-7.28	-4
2140	27.07	-5.67	-2.69	2640	18.71	-7.28	-3.82
2150	26.85	-5.71	-2.61	2650	18.65	-7.29	-3.79
2160	26.78	-5.72	-2.63	2660	19.05	-7.2	-3.74
2170	24.7	-6.07	-2.95	2670	18.97	-7.22	-3.89
2180	24.63	-6.09	-2.92	2680	19.77	-7.04	-3.76
2190	25.07	-6.01	-2.86	2690	18.66	-7.29	-4.04
2200	26.54	-5.76	-2.54	2700	18.64	-7.3	-4.03

ANT2

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3300	6.16	-12.1	-7.13	3760	29.46	-5.31	-0.93
3320	7.91	-11.02	-6.23	3780	24.48	-6.11	-1.85
3340	8.02	-10.96	-5.91	3800	25.1	-6	-1.74
3360	9.33	-10.3	-5.12	3820	24.61	-6.09	-1.62
3380	10.52	-9.78	-4.74	3840	22.29	-6.52	-2.16
3400	14.21	-8.47	-3.54	3860	21.74	-6.63	-2.26
3420	14.31	-8.44	-3.35	3880	22.66	-6.45	-2.1
3440	18.1	-7.42	-2.18	3900	22.78	-6.43	-2.05
3460	17.03	-7.69	-2.63	3920	24.5	-6.11	-1.8
3480	20.46	-6.89	-2.19	3940	26.22	-5.81	-1.71
3500	20.78	-6.82	-2.6	3960	25.58	-5.92	-1.75

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3520	23.78	-6.24	-1.86	3980	28.26	-5.49	-1.32
3540	24.78	-6.06	-1.49	4000	24.61	-6.09	-2.14
3560	25.68	-5.9	-1.2	4020	24.49	-6.11	-2.18
3580	22.56	-6.47	-1.59	4040	22.45	-6.49	-2.61
3600	25.96	-5.86	-1.11	4060	21.6	-6.66	-2.99
3620	21.92	-6.59	-1.7	4080	19.73	-7.05	-3.44
3640	24.56	-6.1	-1.23	4100	18.64	-7.3	-3.84
3660	24.34	-6.14	-1.32	4120	15.82	-8.01	-4.8
3680	23.59	-6.27	-1.57	4140	15.06	-8.22	-5.21
3700	24.89	-6.04	-1.55	4160	14.43	-8.41	-5.88
3720	28.53	-5.45	-0.96	4180	13.13	-8.82	-5.67
3740	25.08	-6.01	-1.5	4200	12.15	-9.15	-5.7

ANT3

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3300	12.8	-8.93	-3.47	3760	22.35	-6.51	-2.63
3320	15.35	-8.14	-2.77	3780	19.33	-7.14	-3.25
3340	14.78	-8.3	-3.09	3800	21.08	-6.76	-2.66
3360	17.72	-7.51	-2.47	3820	20.11	-6.97	-2.96
3380	16.66	-7.78	-2.92	3840	21.89	-6.6	-2.48
3400	18.32	-7.37	-2.56	3860	23.66	-6.26	-2.22
3420	17.87	-7.48	-2.82	3880	25.72	-5.9	-1.97
3440	19.04	-7.2	-2.4	3900	29.96	-5.23	-1.84
3460	18.95	-7.22	-2.49	3920	31.84	-4.97	-1.94
3480	21.96	-6.58	-2.3	3940	35.41	-4.51	-1.34
3500	21.42	-6.69	-2.55	3960	34.48	-4.62	-1.45
3520	25.06	-6.01	-2.29	3980	33.44	-4.76	-1.42
3540	25.88	-5.87	-2.3	4000	28.74	-5.42	-1.99
3560	27.83	-5.55	-2.11	4020	27.08	-5.67	-2.46
3580	28.2	-5.5	-1.79	4040	23.76	-6.24	-2.91
3600	29.7	-5.27	-1.27	4060	22.69	-6.44	-2.48
3620	28.01	-5.53	-1.29	4080	21.38	-6.7	-2.55
3640	31.16	-5.06	-0.99	4100	20.97	-6.78	-2.41
3660	27.58	-5.59	-1.76	4120	19.44	-7.11	-2.29
3680	26.92	-5.7	-2.14	4140	19.44	-7.11	-2.34
3700	23.59	-6.27	-2.8	4160	18.86	-7.25	-2.16
3720	23.41	-6.31	-2.74	4180	20.4	-6.9	-1.81
3740	22.74	-6.43	-2.8	4200	19.38	-7.13	-2

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
880	6.07	-12.17	-4.28	790	8.03	-10.95	-7.7
890	7.98	-10.98	-3.89	800	12.06	-9.19	-6.3
900	9.21	-10.36	-3.94	810	14.97	-8.25	-5.55

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910	11.22	-9.5	-4.08	820	15.71	-8.04	-5.24
920	13.4	-8.73	-4.21	830	15.42	-8.12	-4.98
930	14.11	-8.51	-4.15	840	15.75	-8.03	-4.35
940	13.36	-8.74	-3.76	850	16.29	-7.88	-4.03
950	12.85	-8.91	-3.54	860	17.58	-7.55	-3.62
960	10.99	-9.59	-3.53	870	16.84	-7.74	-4.03
				880	16.14	-7.92	-4.46
				890	14.16	-8.49	-5.3
				900	11.28	-9.48	-6.09

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	8.86	-10.52	-6.12	610	4.66	-13.32	-8.94
710	9.86	-10.06	-6.12	620	6.87	-11.63	-7.43
720	14.7	-8.33	-3.96	630	10.64	-9.73	-5.91
730	15.35	-8.14	-3.62	640	12.83	-8.92	-5.38
740	16.74	-7.76	-3.03	650	11.49	-9.4	-6.01
750	17.21	-7.64	-3.14	660	10.43	-9.82	-6.42
760	15.68	-8.05	-3.65	670	8.9	-10.51	-7.26
770	13.34	-8.75	-4.46	680	6.68	-11.75	-8.63
780	9.82	-10.08	-5.96	690	5.32	-12.74	-9.96
790	8.63	-10.64	-6.63	700	4.33	-13.63	-10.54

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1800	5.27	-12.78	-8.42	2260	22.01	-6.57	-1.41
1810	4.65	-13.32	-9.14	2270	22.84	-6.41	-1.29
1820	4.36	-13.61	-9.46	2280	22.58	-6.46	-1.32
1830	4.32	-13.65	-9.65	2290	21.3	-6.72	-1
1840	4.46	-13.51	-9.72	2300	22.93	-6.4	-0.64
1850	4.71	-13.27	-9.75	2310	24.78	-6.06	-0.31
1860	4.45	-13.51	-9.86	2320	26.19	-5.82	-0.17
1870	4.32	-13.64	-9.91	2330	27.89	-5.55	-0.04
1880	4.58	-13.39	-9.58	2340	30.35	-5.18	0.27
1890	4.76	-13.23	-9.27	2350	31.84	-4.97	0.46
1900	5.14	-12.89	-8.75	2360	32.8	-4.84	0.49
1910	5.37	-12.7	-8.34	2370	32.75	-4.85	0.54
1920	5.24	-12.8	-8.38	2380	32.52	-4.88	0.51
1930	5.58	-12.53	-8.19	2390	32.28	-4.91	0.63
1940	5.68	-12.45	-8.28	2400	30.71	-5.13	0.51
1950	6.2	-12.08	-8.1	2410	29.85	-5.25	0.52
1960	6.5	-11.87	-7.99	2420	28.52	-5.45	0.34
1970	6.48	-11.88	-7.94	2430	28.9	-5.39	0.44
1980	6.41	-11.93	-7.94	2440	28.62	-5.43	0.51
1990	6.64	-11.78	-7.69	2450	27.42	-5.62	0.39

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2000	6.87	-11.63	-7.57	2460	26.96	-5.69	0.27
2010	7.34	-11.34	-7.28	2470	25.58	-5.92	-0.04
2020	7.05	-11.52	-6.82	2480	25.29	-5.97	-0.27
2030	7.02	-11.54	-6.29	2490	25.43	-5.95	-0.11
2040	7.47	-11.27	-5.64	2500	25.98	-5.85	-0.24
2050	8	-10.97	-5.01	2510	25.3	-5.97	-0.56
2060	8.29	-10.81	-4.55	2520	25.2	-5.99	-0.98
2070	7.9	-11.02	-4.59	2530	24.74	-6.07	-1.23
2080	7.08	-11.5	-4.98	2540	26.93	-5.7	-1.09
2090	6.73	-11.72	-5.25	2550	26.64	-5.74	-1.06
2100	7.05	-11.52	-5.06	2560	27.61	-5.59	-0.92
2110	5.87	-12.31	-5.88	2570	28.26	-5.49	-0.79
2120	6.09	-12.15	-5.94	2580	29.85	-5.25	-0.46
2130	6.53	-11.85	-5.85	2590	29.22	-5.34	-0.47
2140	7.46	-11.27	-5.78	2600	29.26	-5.34	-0.25
2150	8.48	-10.71	-6.04	2610	27.96	-5.53	-0.48
2160	9.96	-10.02	-6.25	2620	27.8	-5.56	-0.41
2170	11.17	-9.52	-6.38	2630	25.61	-5.92	-0.81
2180	13.18	-8.8	-5.21	2640	24.27	-6.15	-0.96
2190	14.94	-8.26	-4.3	2650	23.73	-6.25	-0.96
2200	16.76	-7.76	-3.55	2660	23.06	-6.37	-1.12
2210	18.25	-7.39	-3.03	2670	21.42	-6.69	-1.44
2220	19.74	-7.05	-2.52	2680	21.02	-6.77	-1.7
2230	21.25	-6.73	-1.88	2690	20.47	-6.89	-1.93
2240	21.55	-6.67	-1.6	2700	19.83	-7.03	-2.3
2250	21.82	-6.61	-1.4				

ANT5

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3300	21.22	-6.73	-2.67	3760	18.48	-7.33	-3
3320	20.38	-6.91	-3.04	3780	19.35	-7.13	-2.91
3340	20.5	-6.88	-3	3800	17.51	-7.57	-3.44
3360	22.65	-6.45	-2.66	3820	18.84	-7.25	-3.14
3380	21.93	-6.59	-2.69	3840	17.41	-7.59	-3.28
3400	19.87	-7.02	-2.75	3860	17.11	-7.67	-3.63
3420	23.49	-6.29	-1.43	3880	16.17	-7.91	-3.63
3440	20.69	-6.84	-1.59	3900	17.66	-7.53	-3.4
3460	23.52	-6.29	-0.83	3920	16.53	-7.82	-3.71
3480	22.76	-6.43	-0.82	3940	16.56	-7.81	-3.58
3500	26.09	-5.84	-0.2	3960	14.35	-8.43	-4.48
3520	24.6	-6.09	-0.36	3980	14.63	-8.35	-4.34
3540	26.6	-5.75	-0.07	4000	13.66	-8.64	-4.87
3560	25.05	-6.01	-0.46	4020	13.61	-8.66	-4.94
3580	29.36	-5.32	0.05	4040	13.48	-8.7	-5.27
3600	26.01	-5.85	-0.54	4060	13.47	-8.71	-4.89
3620	26.33	-5.8	-0.88	4080	13.63	-8.66	-4.83
3640	22.57	-6.46	-2.2	4100	13.56	-8.68	-4.74

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3660	22.23	-6.53	-2.55	4120	14.65	-8.34	-4.42
3680	19.09	-7.19	-3.23	4140	14.47	-8.4	-4.57
3700	20.37	-6.91	-2.88	4160	15.86	-8	-4.02
3720	19.04	-7.2	-3.15	4180	14.51	-8.38	-4.74
3740	19.91	-7.01	-2.75	4200	15.11	-8.21	-3.32

ANT6

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	22.05	-6.57	-0.53	2210	26.05	-5.84	0.07
1720	24.21	-6.16	0.03	2220	24.37	-6.13	-0.29
1730	24.33	-6.14	0.16	2230	22.21	-6.53	-0.79
1740	24.4	-6.13	0.23	2240	21.78	-6.62	-0.92
1750	23.48	-6.29	0.08	2250	21.95	-6.59	-0.71
1760	24.26	-6.15	0.27	2260	20.27	-6.93	-0.84
1770	25.38	-5.95	0.58	2270	20.5	-6.88	-0.7
1780	26.05	-5.84	0.76	2280	18.48	-7.33	-1.06
1790	25.19	-5.99	0.65	2290	18.14	-7.41	-1.11
1800	24.34	-6.14	0.66	2300	18.15	-7.41	-1.07
1810	22.05	-6.57	0.45	2310	17.81	-7.49	-1.1
1820	20.62	-6.86	0.31	2320	17.17	-7.65	-1.34
1830	20.18	-6.95	0.33	2330	17.85	-7.48	-1.25
1840	20.26	-6.93	0.35	2340	17.23	-7.64	-1.06
1850	20.92	-6.79	0.61	2350	18.34	-7.37	-0.73
1860	20.67	-6.85	0.61	2360	17.25	-7.63	-0.94
1870	20.82	-6.82	0.78	2370	17.15	-7.66	-1.14
1880	22.35	-6.51	1.24	2380	17.66	-7.53	-1.15
1890	23.48	-6.29	1.48	2390	19.3	-7.14	-1.08
1900	24.86	-6.05	1.82	2400	20.49	-6.89	-0.96
1910	26.07	-5.84	2.17	2410	21.83	-6.61	-0.88
1920	26.54	-5.76	2.34	2420	20.96	-6.79	-1.29
1930	27.72	-5.57	2.43	2430	21.2	-6.74	-1.53
1940	28.57	-5.44	2.46	2440	22.91	-6.4	-1.34
1950	29.67	-5.28	2.59	2450	24.38	-6.13	-1.24
1960	29.88	-5.25	2.57	2460	24.72	-6.07	-1.32
1970	30.41	-5.17	2.47	2470	23.01	-6.38	-1.97
1980	30.54	-5.15	2.18	2480	22.74	-6.43	-2.37
1990	30.18	-5.2	1.9	2490	23.57	-6.28	-2.59
2000	30.32	-5.18	1.73	2500	24.72	-6.07	-2.37
2010	28.37	-5.47	1.35	2510	23.51	-6.29	-2.7
2020	27.23	-5.65	1.07	2520	24.24	-6.15	-2.59
2030	27.82	-5.56	1.08	2530	22.87	-6.41	-3.1
2040	27.75	-5.57	0.96	2540	23.39	-6.31	-3.01
2050	26.76	-5.72	0.79	2550	24.7	-6.07	-2.49
2060	24.57	-6.1	0.44	2560	26.82	-5.72	-1.99
2070	23.27	-6.33	0.32	2570	27.03	-5.68	-1.78

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2080	24.34	-6.14	0.59	2580	28.21	-5.5	-1.4
2090	25.52	-5.93	0.81	2590	28.65	-5.43	-1.19
2100	26.06	-5.84	0.92	2600	31.31	-5.04	-0.62
2110	22.04	-6.57	0.28	2610	32.01	-4.95	-0.42
2120	21.39	-6.7	0.14	2620	30.01	-5.23	-0.55
2130	22.94	-6.39	0.4	2630	28.83	-5.4	-0.49
2140	25.25	-5.98	0.78	2640	27.61	-5.59	-0.26
2150	25.55	-5.93	0.98	2650	25.14	-6	-0.32
2160	25.61	-5.92	1.07	2660	22.44	-6.49	-0.54
2170	23.69	-6.26	0.73	2670	19.86	-7.02	-0.85
2180	23.41	-6.31	0.42	2680	18.37	-7.36	-0.95
2190	25.53	-5.93	0.33	2690	15.89	-7.99	-1.43
2200	26.04	-5.84	0.16	2700	14.34	-8.43	-1.81

ANT7

B8

B5/20

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
880	19.72	-7.05	-2.37	790	20.81	-6.82	-3.94
890	19.51	-7.1	-2.03	800	30.57	-5.15	-2.59
900	19.58	-7.08	-2.07	810	31.07	-5.08	-2.45
910	19.8	-7.03	-1.89	820	32.86	-4.83	-2.08
920	20.58	-6.86	-1.63	830	31.17	-5.06	-2.37
930	18.61	-7.3	-1.86	840	28.11	-5.51	-2.87
940	17.78	-7.5	-1.98	850	23.32	-6.32	-3.78
950	18.16	-7.41	-2.14	860	19.64	-7.07	-4.3
960	18.07	-7.43	-2.38	870	15.97	-7.97	-4.82
				880	14.4	-8.42	-5.01
				890	12.75	-8.94	-5.38
				900	12.27	-9.11	-5.61

B28

B71

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	13.68	-8.64	-5.57	600	10.75	-9.69	-6.84
710	20.8	-6.82	-3.43	610	13.33	-8.75	-5.62
720	24	-6.2	-2.89	620	14.9	-8.27	-5.03
730	24.73	-6.07	-2.43	630	18.4	-7.35	-3.46
740	25.85	-5.88	-2.64	640	19.5	-7.1	-3.18
750	25.39	-5.95	-2.4	650	18.97	-7.22	-3.23
760	23.35	-6.32	-3.14	660	19.82	-7.03	-2.68
770	16.1	-7.93	-4.51	670	16.27	-7.89	-4.02
780	12.64	-8.98	-5.91	680	14.67	-8.34	-4.68
790	11.25	-9.49	-6.41	690	11.23	-9.5	-5.8
800	11.08	-9.55	-6.96	700	8.17	-10.88	-6.95

Freq	Effi	Effi	Gain	Freq	Effi	Effi	Gain
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(MHz)	(%)	(dB)	(dBi)	(MHz)	(%)	(dB)	(dBi)
1710	12.94	-8.88	-4.53	2210	17.81	-7.49	-2.9
1720	13.68	-8.64	-4.56	2220	17.98	-7.45	-2.84
1730	14.3	-8.45	-4.71	2230	17.47	-7.58	-2.88
1740	14.55	-8.37	-4.75	2240	17.83	-7.49	-2.94
1750	15.85	-8	-4.61	2250	18.47	-7.34	-2.94
1760	17.28	-7.63	-4.32	2260	19.07	-7.2	-3.01
1770	18.07	-7.43	-4.16	2270	19.36	-7.13	-2.98
1780	19.19	-7.17	-3.97	2280	17.32	-7.62	-3.57
1790	19.39	-7.12	-4.02	2290	17.97	-7.45	-3.41
1800	19.61	-7.08	-4.06	2300	18.65	-7.29	-3.31
1810	20.68	-6.85	-3.93	2310	19.63	-7.07	-3.03
1820	21.09	-6.76	-4.03	2320	20.53	-6.88	-2.8
1830	20.72	-6.84	-4.04	2330	20.1	-6.97	-3.09
1840	20.7	-6.84	-3.97	2340	19.15	-7.18	-3.23
1850	20.93	-6.79	-3.7	2350	20.42	-6.9	-2.54
1860	20	-6.99	-3.85	2360	19.92	-7.01	-2.4
1870	18.74	-7.27	-3.89	2370	20.65	-6.85	-2.1
1880	17.98	-7.45	-3.97	2380	20.41	-6.9	-2.11
1890	17.94	-7.46	-3.94	2390	20.26	-6.93	-1.93
1900	18.52	-7.32	-3.84	2400	21.11	-6.75	-1.78
1910	18.17	-7.41	-4.11	2410	22.09	-6.56	-1.5
1920	17.22	-7.64	-4.52	2420	22.2	-6.54	-1.61
1930	17.2	-7.64	-4.3	2430	22.45	-6.49	-1.68
1940	16.36	-7.86	-4.48	2440	21.5	-6.68	-1.91
1950	17.51	-7.57	-4.19	2450	22.47	-6.48	-1.84
1960	17.92	-7.47	-4.11	2460	23.7	-6.25	-1.8
1970	18.2	-7.4	-4.02	2470	23.87	-6.22	-2.15
1980	18.62	-7.3	-3.74	2480	24.89	-6.04	-2.2
1990	19.19	-7.17	-3.45	2490	26.62	-5.75	-2.24
2000	19.78	-7.04	-3.09	2500	26.34	-5.79	-2.43
2010	20.58	-6.87	-2.8	2510	26.57	-5.76	-2.58
2020	19.73	-7.05	-2.78	2520	26.72	-5.73	-2.55
2030	19.48	-7.1	-2.64	2530	26.12	-5.83	-2.78
2040	19.95	-7	-2.46	2540	25.33	-5.96	-2.71
2050	20.77	-6.83	-2.27	2550	25.2	-5.99	-2.64
2060	21.1	-6.76	-2.26	2560	25.52	-5.93	-2.46
2070	20.55	-6.87	-2.25	2570	25.96	-5.86	-2.29
2080	19.12	-7.19	-2.54	2580	23.93	-6.21	-2.69
2090	18.67	-7.29	-2.6	2590	22.85	-6.41	-2.77
2100	18.86	-7.24	-2.69	2600	23.89	-6.22	-2.46
2110	15.16	-8.19	-3.53	2610	23.63	-6.27	-2.31
2120	14.58	-8.36	-3.62	2620	21.99	-6.58	-2.44
2130	14.86	-8.28	-3.36	2630	21.26	-6.72	-2.5
2140	15.67	-8.05	-3.06	2640	22.04	-6.57	-2.47
2150	15.91	-7.98	-3.07	2650	22.48	-6.48	-2.64

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2160	16.34	-7.87	-3.01	2660	23.61	-6.27	-2.6
2170	15.16	-8.19	-3.38	2670	24.28	-6.15	-2.34
2180	15.48	-8.1	-3.35	2680	25.9	-5.87	-2.07
2190	15.68	-8.05	-3.35	2690	24.99	-6.02	-2.37
2200	16.79	-7.75	-3.17	2700	25.35	-5.96	-2.54

ANT8

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	30.49	-5.16	1.46
2410	30.98	-5.09	1.61
2420	29.91	-5.24	1.41
2430	29.99	-5.23	1.37
2440	32.17	-4.92	1.65
2450	34.04	-4.68	1.88
2460	34.33	-4.64	1.86
2470	32.61	-4.87	1.53
2480	32.4	-4.89	1.41
2490	33.81	-4.71	1.52
2500	34.66	-4.6	1.72

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	29.85	-5.25	-0.42	5510	40.77	-3.9	0.91
5160	30.02	-5.23	-0.34	5520	40.49	-3.93	0.75
5170	28.55	-5.44	-0.39	5530	42.01	-3.77	1.04
5180	28.2	-5.5	-0.47	5540	43.54	-3.61	1.17
5190	28.04	-5.52	-0.45	5550	41.8	-3.79	0.7
5200	28.66	-5.43	-0.34	5560	40.77	-3.9	0.75
5210	30.69	-5.13	-0.11	5570	40.54	-3.92	0.72
5220	31.83	-4.97	0.29	5580	42.16	-3.75	1.13
5230	32.99	-4.82	0.44	5590	41.63	-3.81	1.16
5240	31.34	-5.04	0.11	5600	41.21	-3.85	0.92
5250	30.74	-5.12	-0.04	5610	40	-3.98	1.01
5260	32.19	-4.92	0.13	5620	40.39	-3.94	1.12
5270	32.6	-4.87	0.13	5630	41.36	-3.83	1.28
5280	33.19	-4.79	-0.03	5640	41.4	-3.83	1.5
5290	34.73	-4.59	0.05	5650	41.93	-3.77	1.54
5300	33.01	-4.81	-0.23	5660	43.74	-3.59	1.95
5310	33.05	-4.81	-0.33	5670	42.62	-3.7	1.86
5320	35.96	-4.44	-0.01	5680	42.82	-3.68	2.08
5330	35.32	-4.52	-0.28	5690	42.18	-3.75	2.14
5340	37.28	-4.29	-0.17	5700	43.48	-3.62	2.43
5350	38.26	-4.17	-0.01	5710	42.83	-3.68	2.44
5360	36.43	-4.39	-0.19	5720	41.46	-3.82	2.25
5370	36.37	-4.39	-0.31	5730	41.58	-3.81	2.71
5380	38.11	-4.19	0.25	5740	43.24	-3.64	2.82

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5390	35.13	-4.54	-0.05	5750	45.3	-3.44	2.93
5400	42	-3.77	0.78	5760	43.06	-3.66	2.8
5410	40.92	-3.88	0.76	5770	43.01	-3.66	2.78
5420	42.72	-3.69	1.09	5780	40.75	-3.9	2.56
5430	42.73	-3.69	1.07	5790	40.24	-3.95	2.1
5440	43.24	-3.64	1.21	5800	39.54	-4.03	2.26
5450	42.9	-3.68	1.28	5810	39.42	-4.04	1.92
5460	43.9	-3.58	1.14	5820	40.82	-3.89	2.04
5470	42.84	-3.68	1.15	5830	40.59	-3.92	1.66
5480	40.94	-3.88	0.93	5840	38.7	-4.12	1.3
5490	42.38	-3.73	1.08	5850	39.62	-4.02	1.51
5500	41.34	-3.84	0.91				

ANT9

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1550	35	-4.56	0.72
1555	34.69	-4.6	0.66
1560	35.35	-4.52	0.72
1565	34.52	-4.62	0.54
1570	34.5	-4.62	0.47
1575	34.19	-4.66	0.34
1580	34.52	-4.62	0.25
1585	34.03	-4.68	0.09
1590	33.81	-4.71	0.04
1595	35.27	-4.53	0.16

ANT10

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	15.45	-8.11	-3.95	1151	28.43	-5.46	-0.27
2410	15.67	-8.05	-3.75	1156	29.24	-5.34	-0.04
2420	16.78	-7.75	-3.57	1161	29.84	-5.25	0.07
2430	17.31	-7.62	-3.21	1166	31.03	-5.08	0.29
2440	18.37	-7.36	-2.96	1171	32.61	-4.87	0.45
2450	18.15	-7.41	-2.55	1176	33.44	-4.76	0.4
2460	17.61	-7.54	-2.56	1181	34.82	-4.58	0.52
2470	18.02	-7.44	-2.6	1186	34.92	-4.57	0.56
2480	18.38	-7.36	-2.96	1191	34.43	-4.63	0.55
2490	18.51	-7.33	-2.71	1196	33.3	-4.78	0.54
2500	17.52	-7.57	-2.54	1201	32.93	-4.82	0.74
Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	18.24	-7.39	-2.63	5510	23.68	-6.26	-0.4
5160	18.37	-7.36	-2.56	5520	25.3	-5.97	-0.02
5170	17.78	-7.5	-2.93	5530	25.43	-5.95	-0.09
5180	17.7	-7.52	-2.84	5540	26.12	-5.83	0.06
5190	18.18	-7.4	-2.81	5550	26.07	-5.84	0.13

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5200	19.13	-7.18	-2.57	5560	26.75	-5.73	0.37
5210	18.8	-7.26	-2.59	5570	27.9	-5.54	0.5
5220	18.04	-7.44	-2.85	5580	28.02	-5.53	0.61
5230	17.69	-7.52	-2.58	5590	28.46	-5.46	0.85
5240	17.91	-7.47	-2.61	5600	26.35	-5.79	0.32
5250	17.83	-7.49	-2.69	5610	26	-5.85	0.41
5260	17.28	-7.62	-2.57	5620	27.04	-5.68	0.46
5270	16.67	-7.78	-2.45	5630	26.25	-5.81	0.31
5280	16.88	-7.73	-2.34	5640	26.37	-5.79	0.27
5290	17.07	-7.68	-2.26	5650	26.67	-5.74	0.35
5300	17.23	-7.64	-2.14	5660	26.15	-5.82	0.25
5310	17.71	-7.52	-1.76	5670	25.88	-5.87	0.09
5320	18.43	-7.34	-1.7	5680	27.18	-5.66	0.09
5330	17.32	-7.61	-1.94	5690	25.99	-5.85	-0.24
5340	17.24	-7.63	-2	5700	25.99	-5.85	-0.2
5350	18.02	-7.44	-1.69	5710	26.53	-5.76	-0.12
5360	17.15	-7.66	-1.99	5720	25.72	-5.9	-0.18
5370	18.16	-7.41	-1.89	5730	25.74	-5.89	-0.21
5380	18.74	-7.27	-1.6	5740	25.19	-5.99	-0.43
5390	17.8	-7.5	-1.97	5750	23	-6.38	-0.58
5400	17.54	-7.56	-2.06	5760	26.24	-5.81	-0.06
5410	17.88	-7.48	-2.18	5770	26.18	-5.82	0.09
5420	17.01	-7.69	-2.33	5780	25.73	-5.9	0.14
5430	20.41	-6.9	-1.81	5790	24.89	-6.04	-0.04
5440	19.91	-7.01	-2.01	5800	24.17	-6.17	0.08
5450	19.65	-7.07	-1.93	5810	23.6	-6.27	0.12
5460	19.84	-7.03	-2.03	5820	23.88	-6.22	0.36
5470	19.78	-7.04	-1.98	5830	24.06	-6.19	0.4
5480	20.36	-6.91	-1.83	5840	22.81	-6.42	0.35
5490	20.4	-6.9	-2.06	5850	23.37	-6.31	0.23
5500	19.61	-7.08	-2.15				

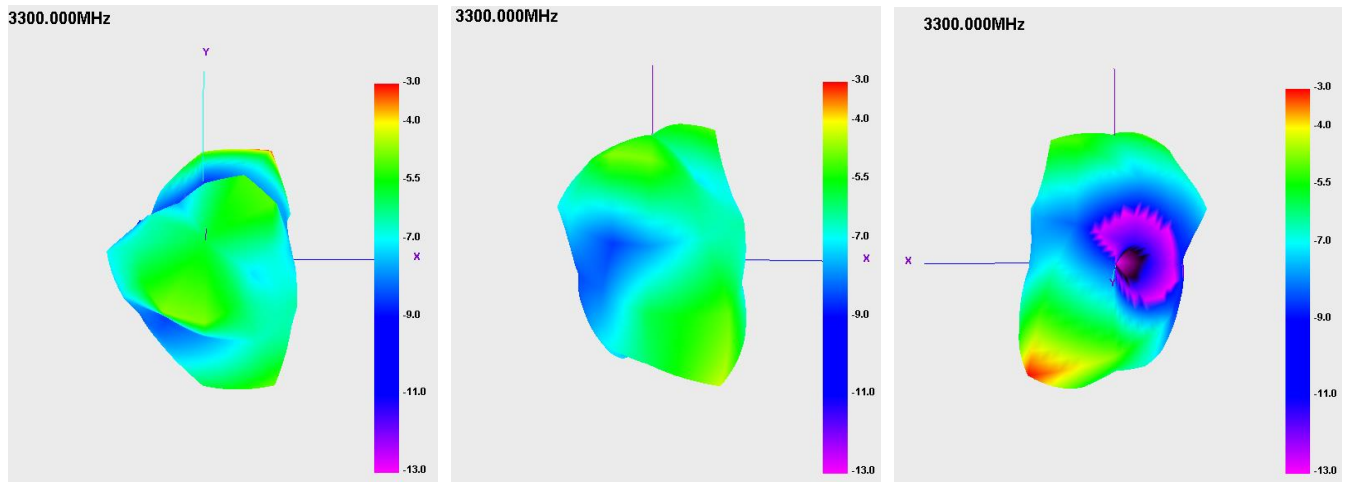
2.2 3D Pattern

ANTO

H plane

E1 plane

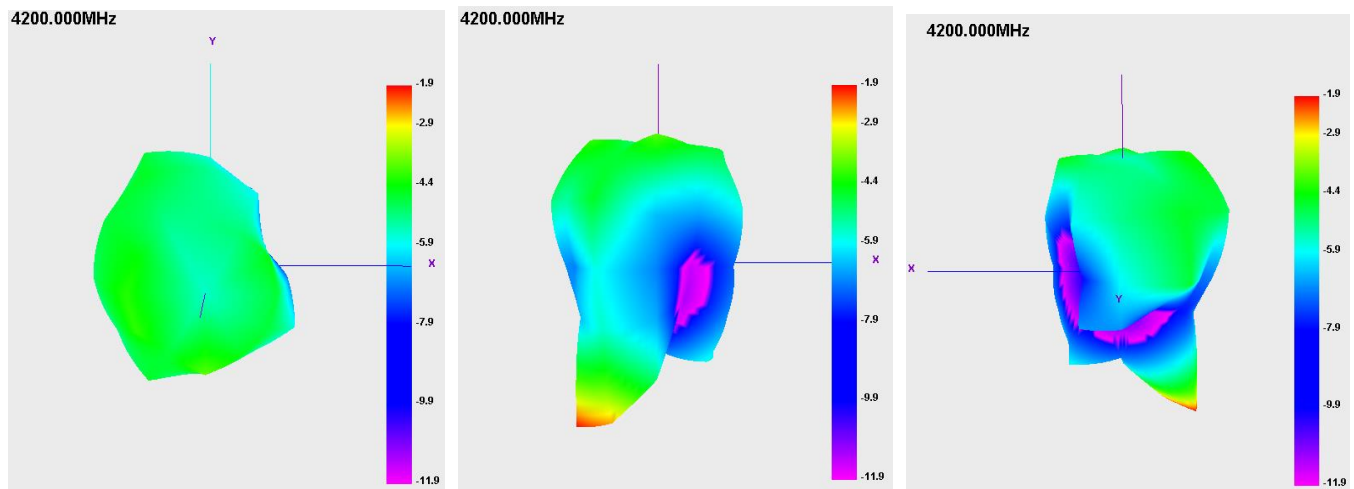
E2 plan



H plane

E1 plane

E2 plan

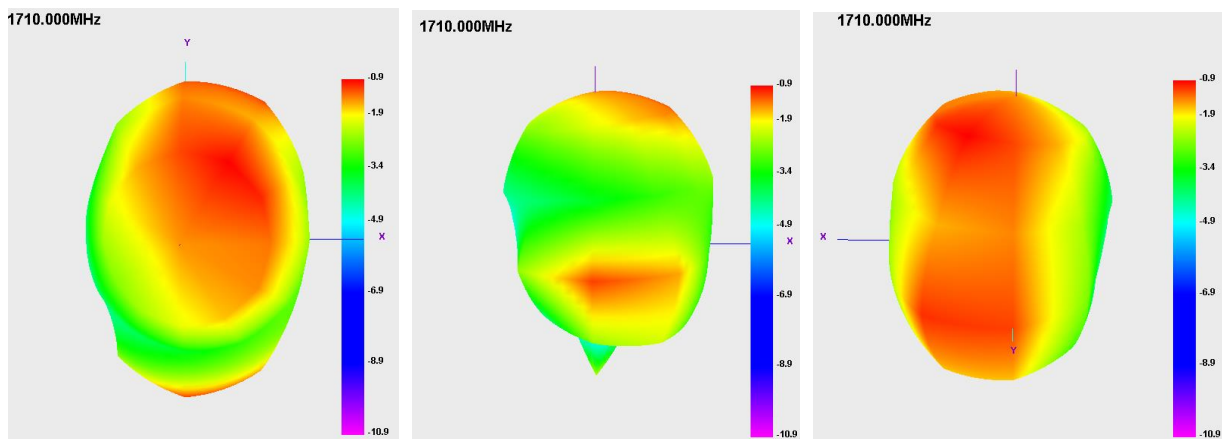


ANT1

H plane

E1 plane

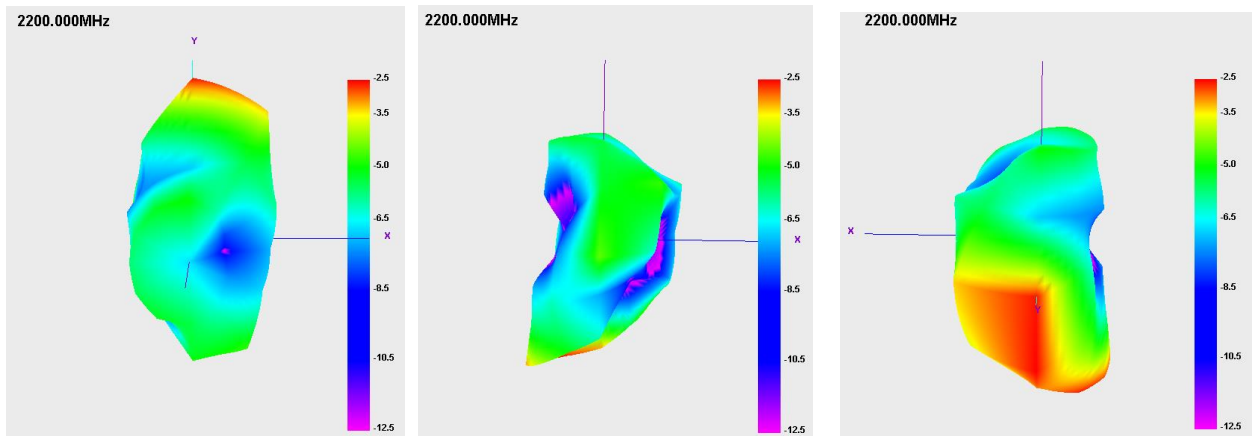
E2 plan



H plane

E1 plane

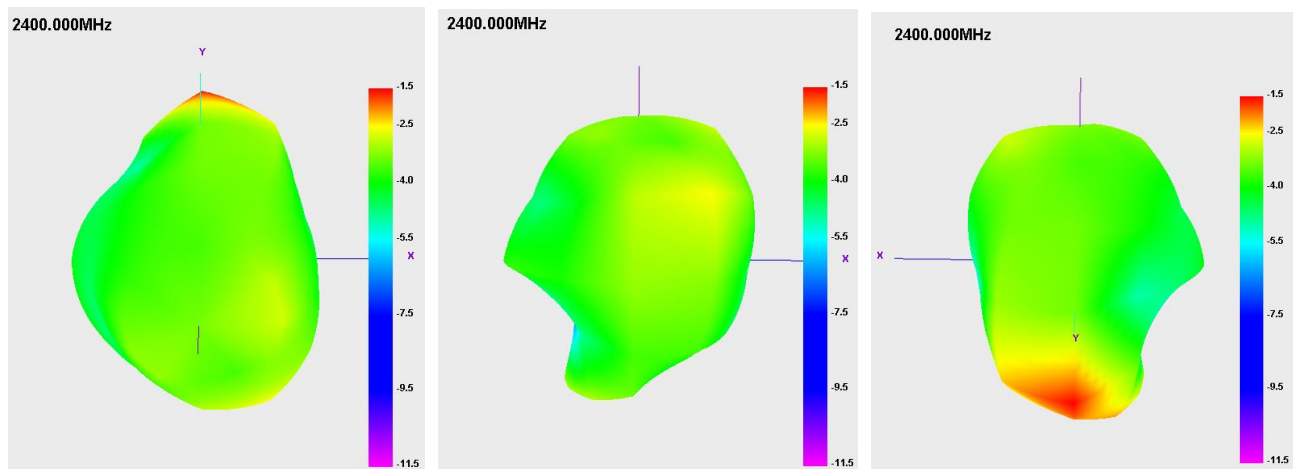
E2 plan



H plane

E1 plane

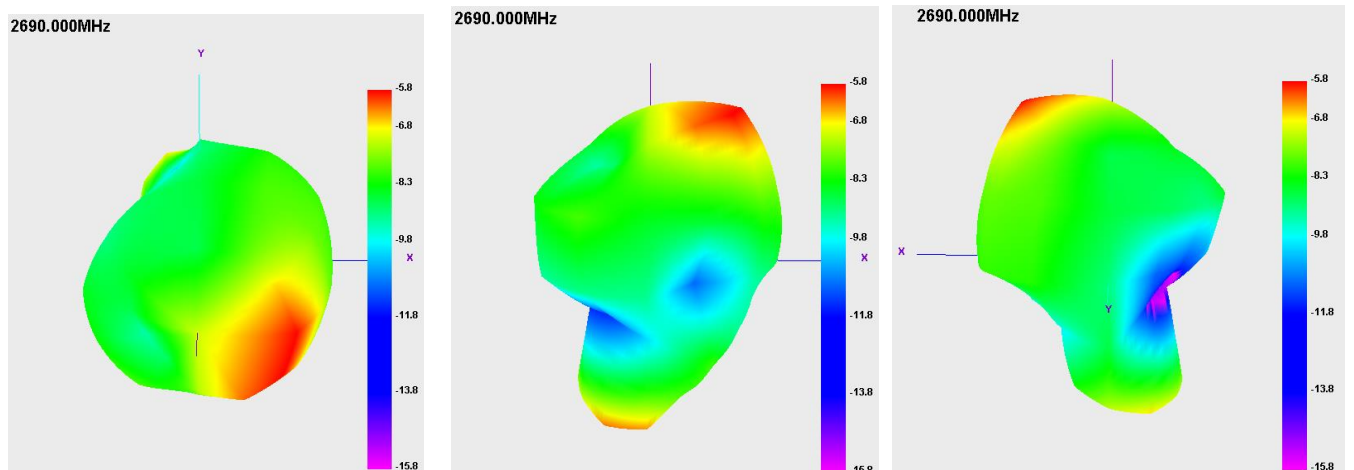
E2 plane



H plane

E1 plane

E2 plane

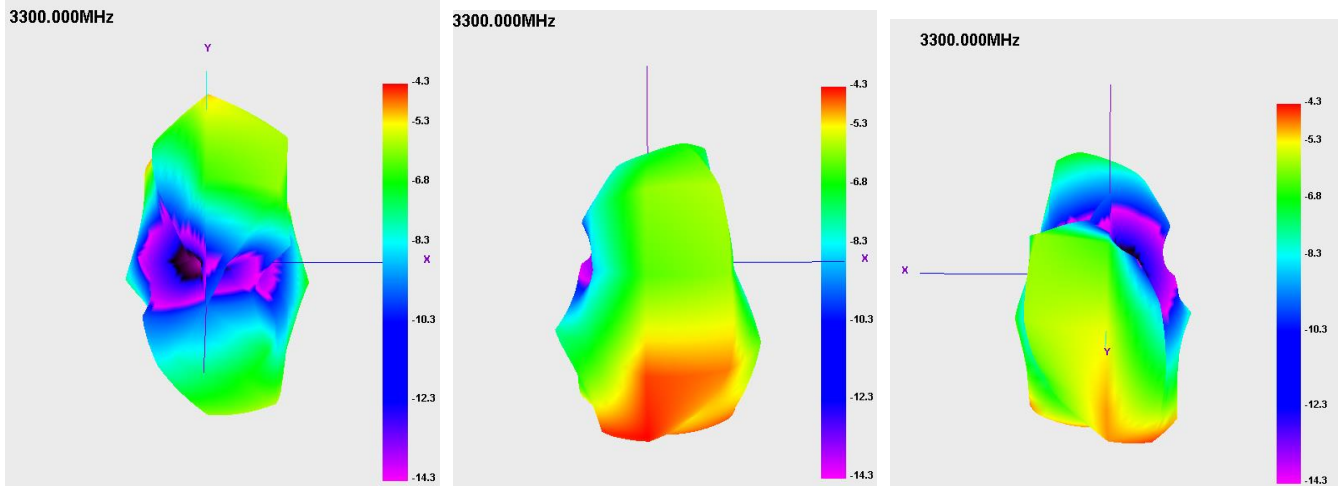


ANT2

H plane

E1 plane

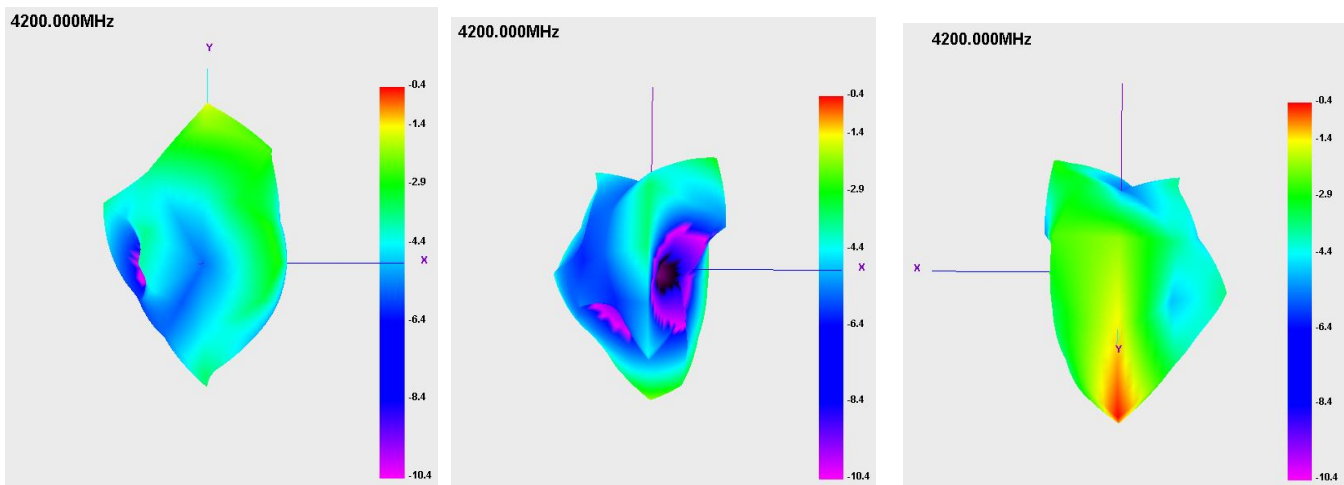
E2 plan



H plane

E1 plane

E2 plane

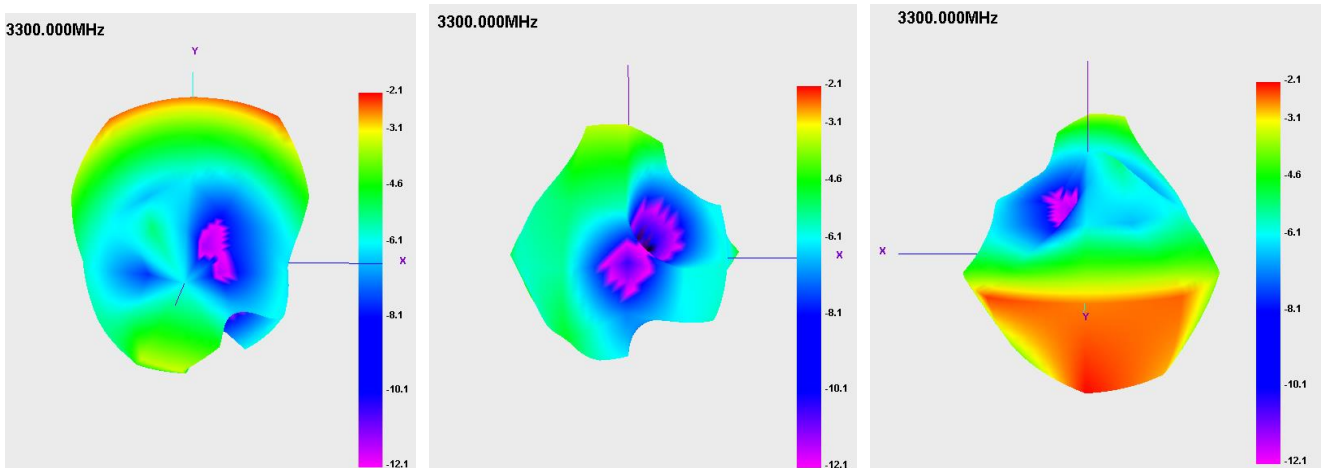


ANT3

H plane

E1 plane

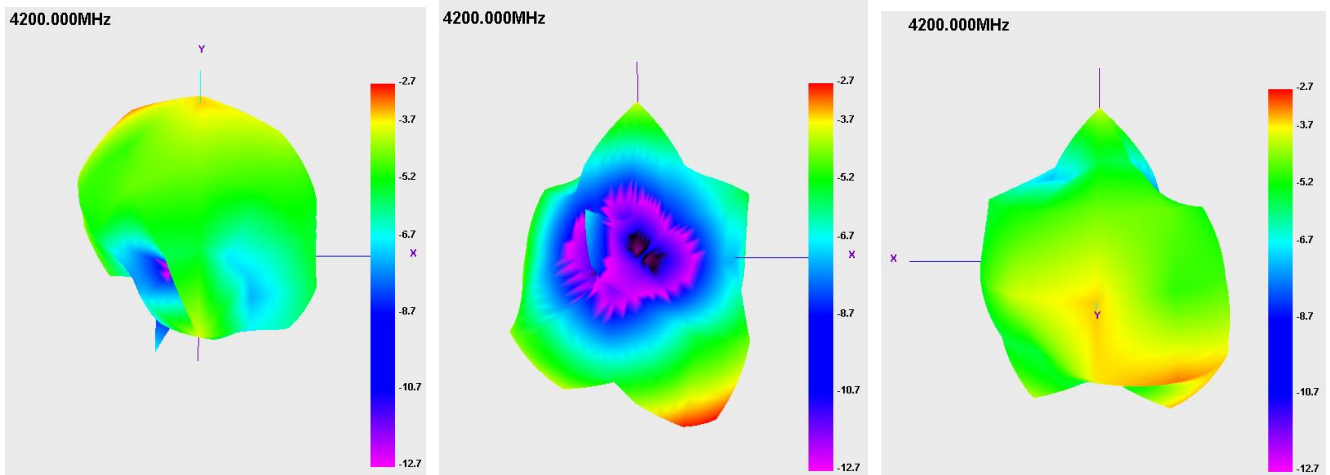
E2 plan



H plane

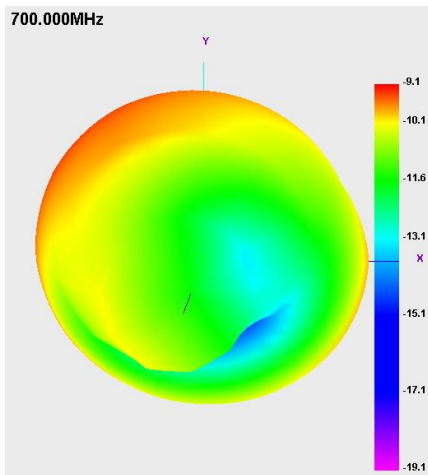
E1 plane

E2 plane

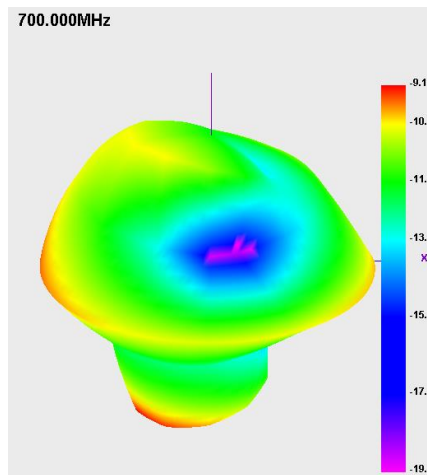


ANT4

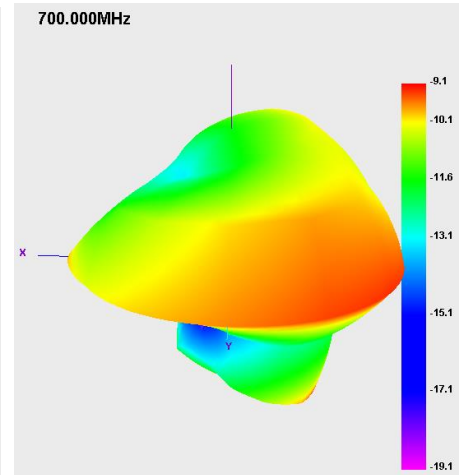
H plane



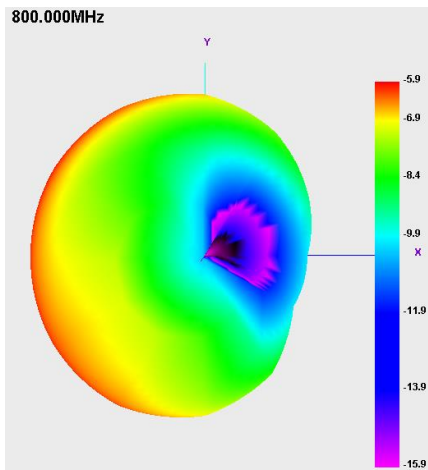
E1 plane



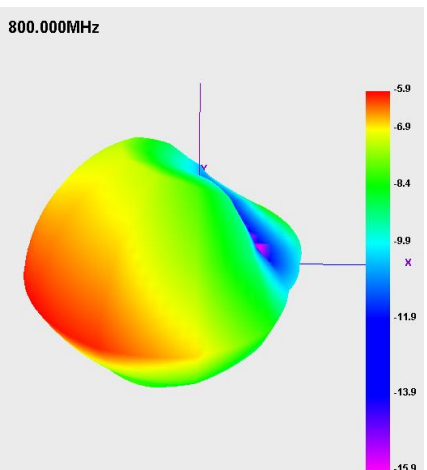
E2 plan



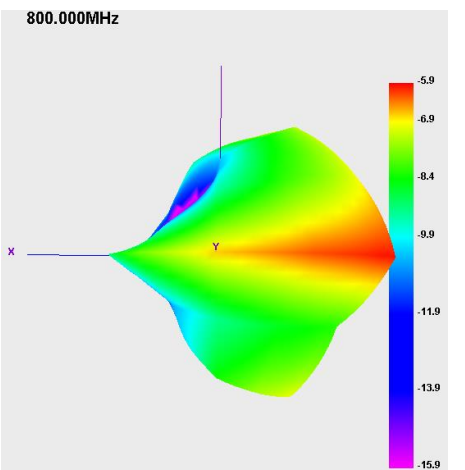
H plane



E1 plane



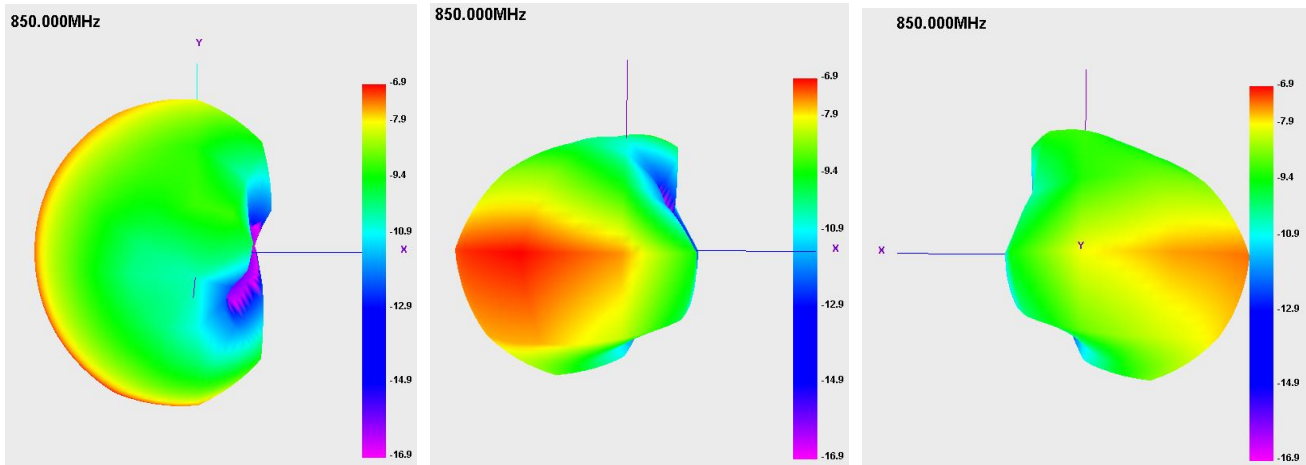
E2 plan



H plane

E1 plane

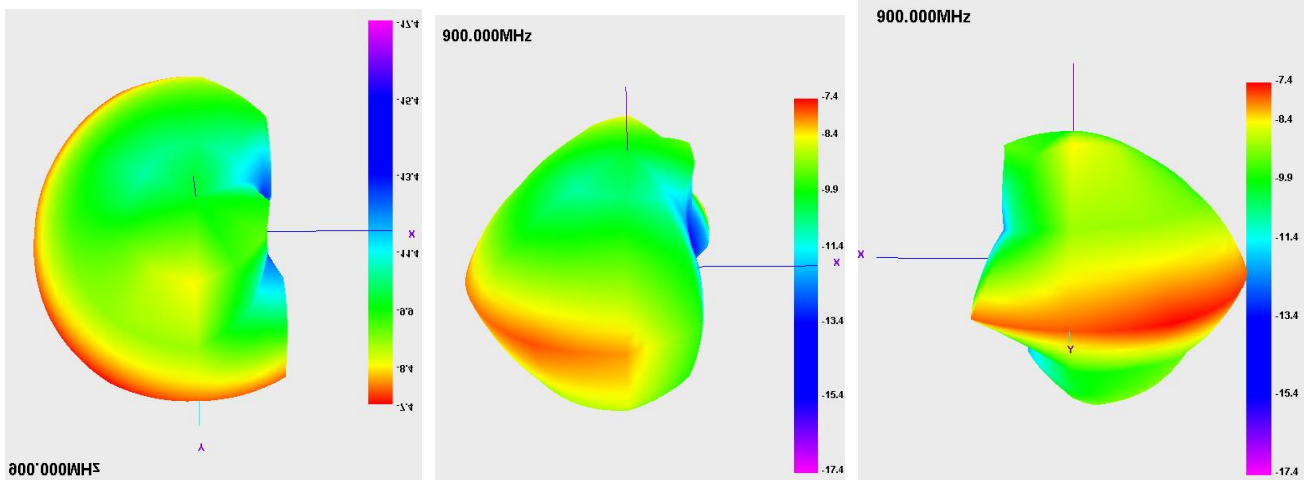
E2 plan



H plane

E1 plane

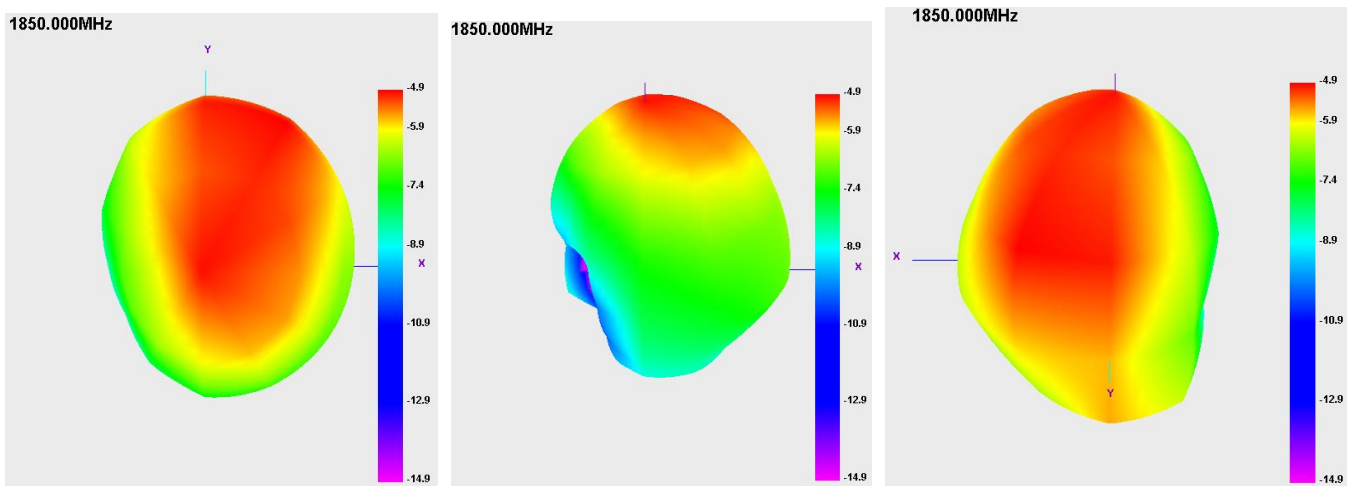
E2 plan



H plane

E1 plane

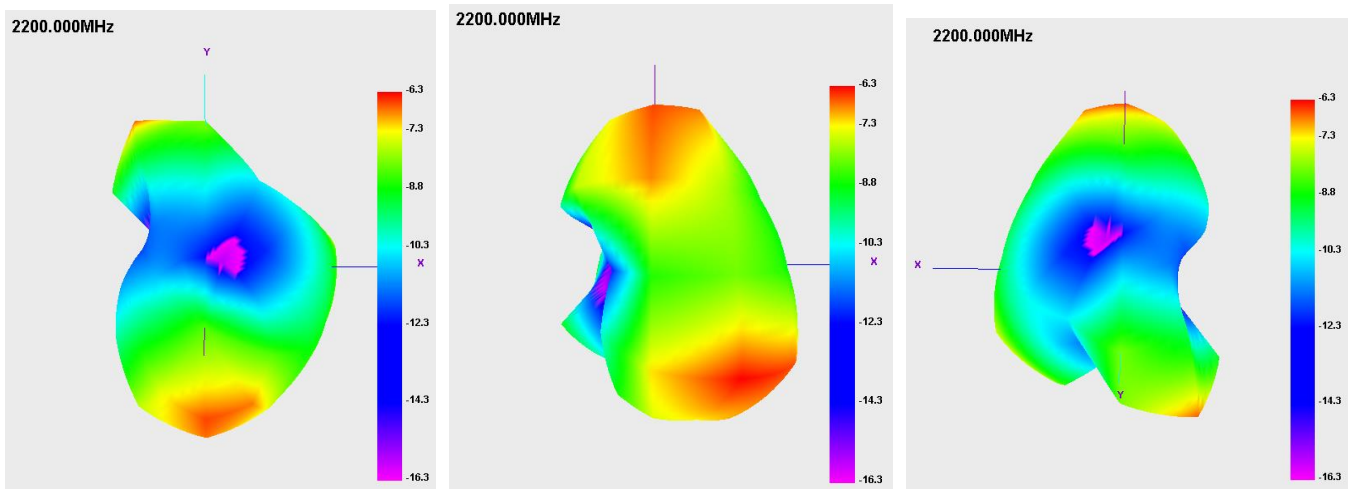
E2 plan



H plane

E1 plane

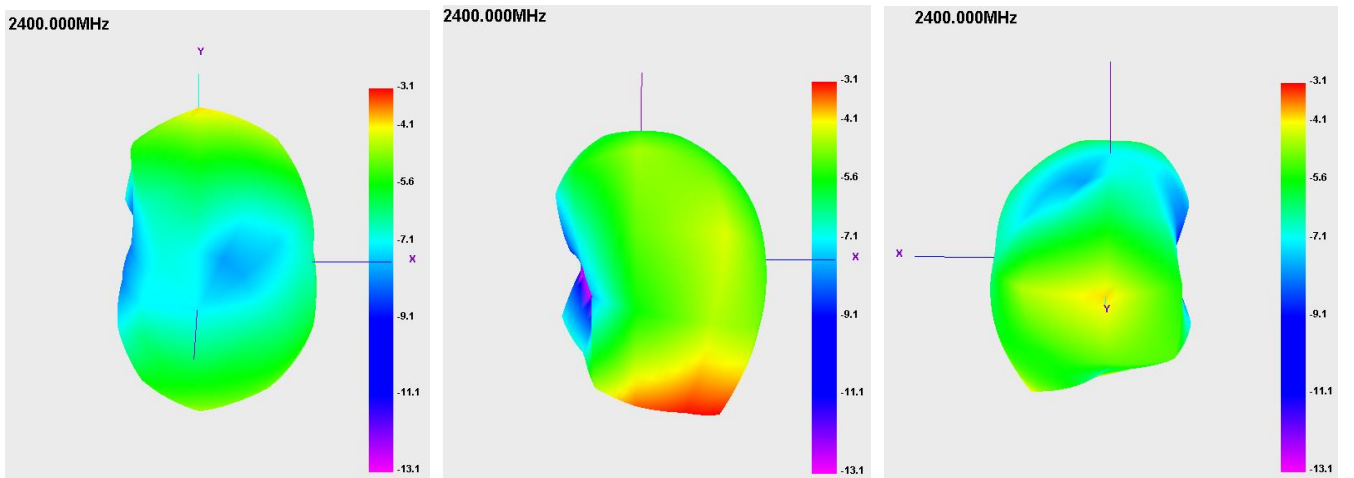
E2 plane



H plane

E1 plane

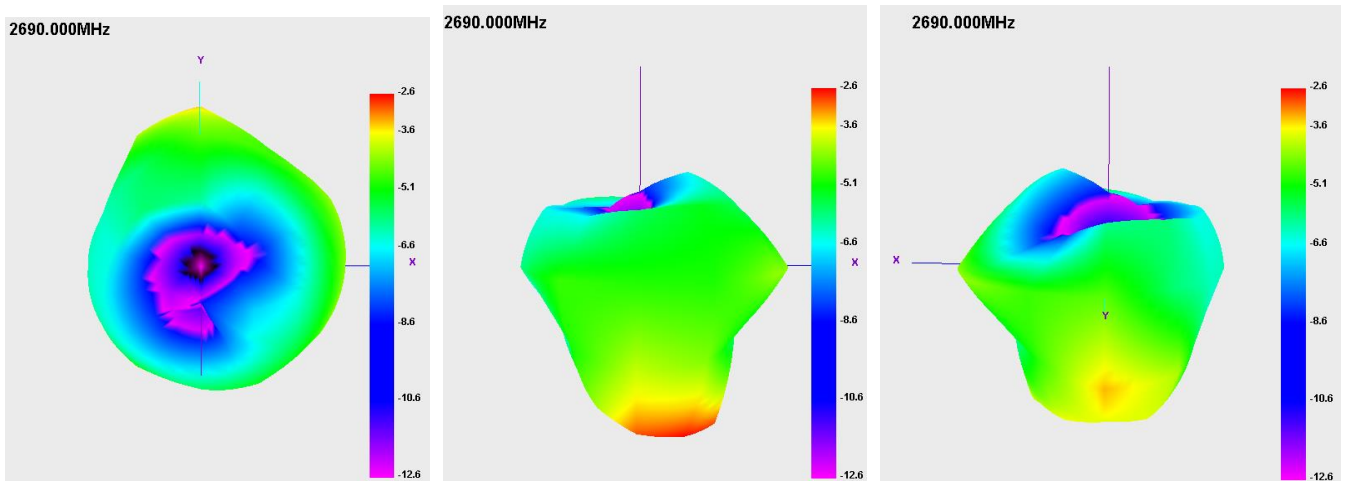
E2 plane



H plane

E1 plane

E2 plane

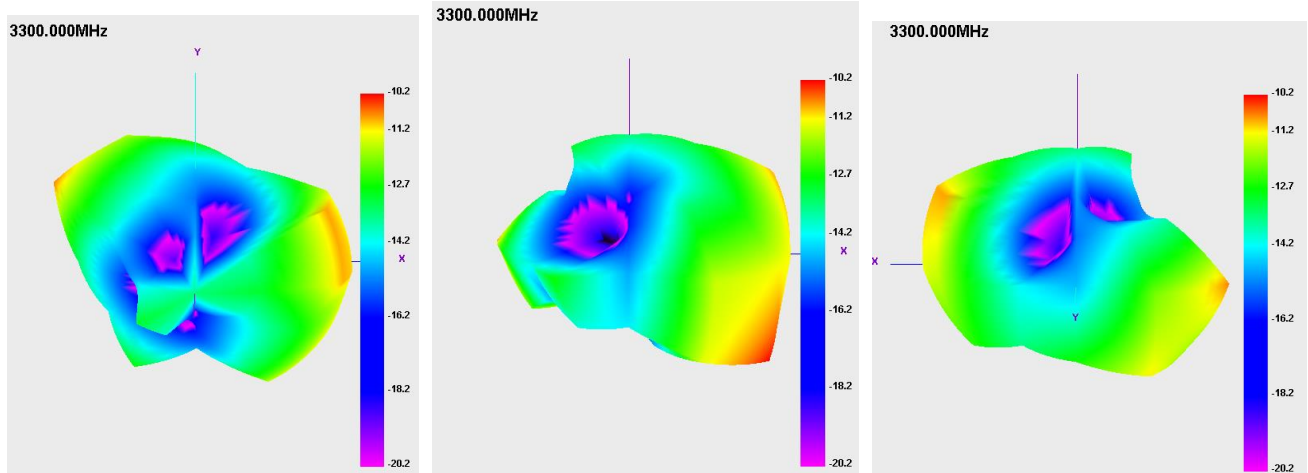


ANT5

H plane

E1 plane

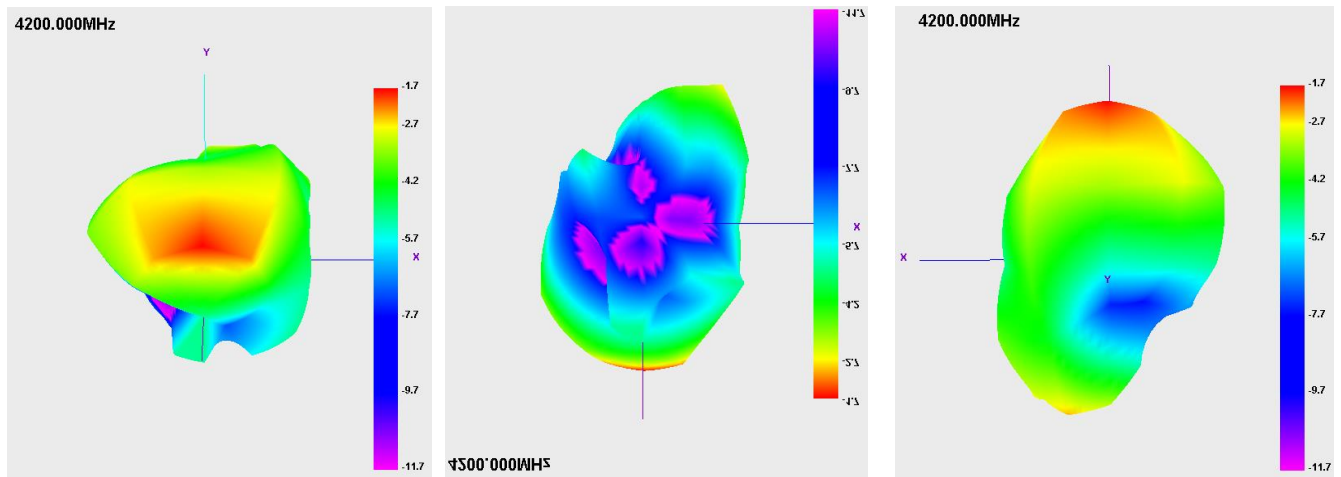
E2 plane



H plane

E1 plane

E2 plane

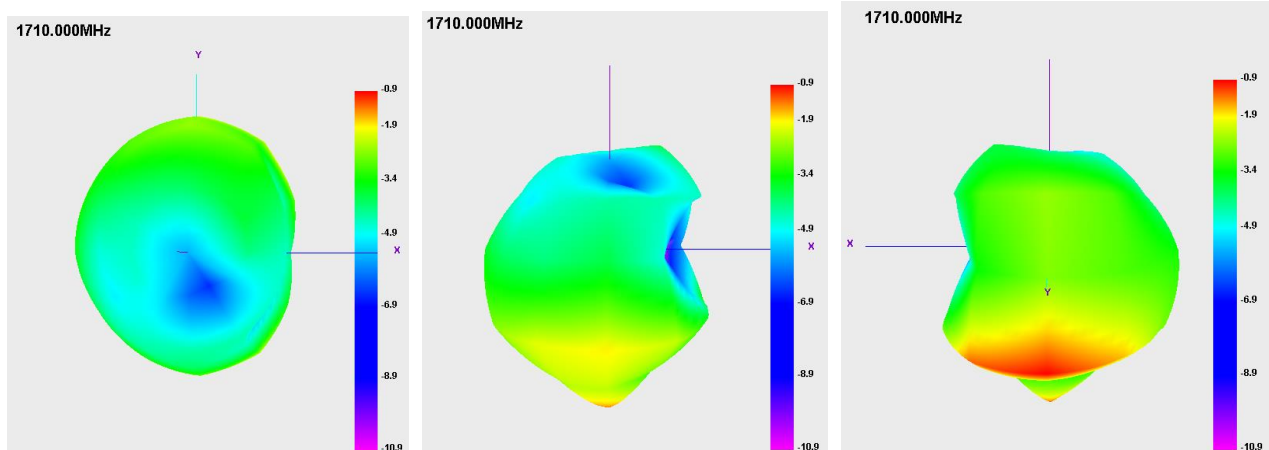


ANT6

H plane

E1 plane

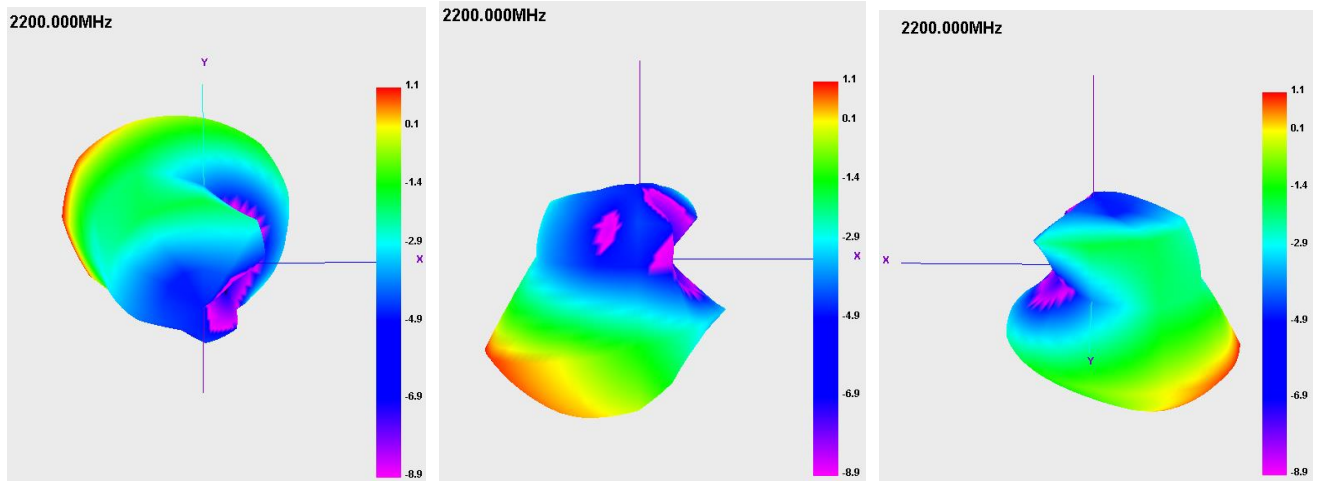
E2 plane



H plane

E1 plane

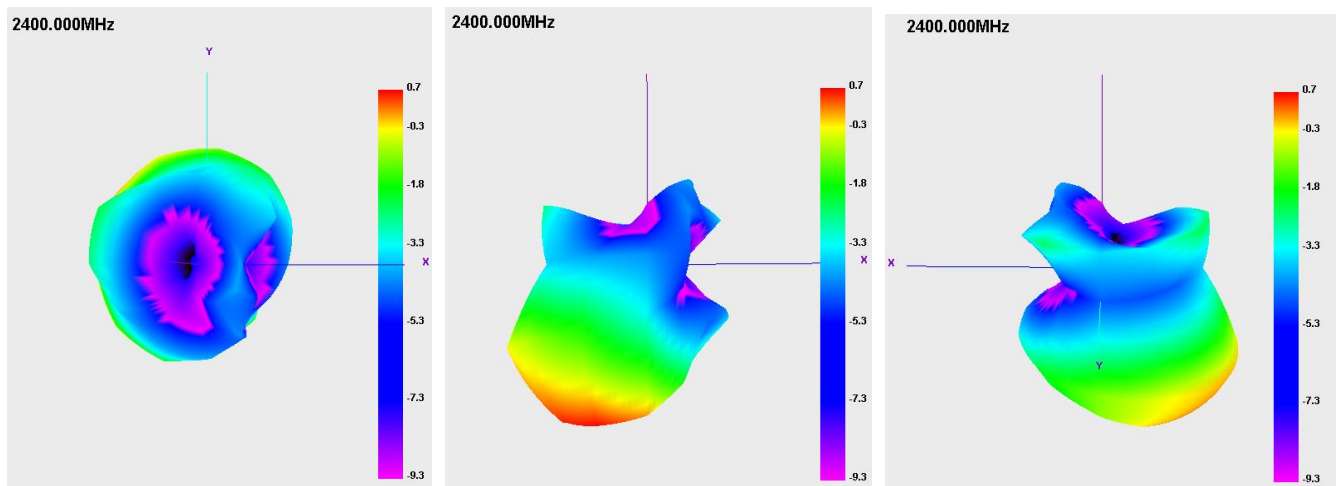
E2 plane



H plane

E1 plane

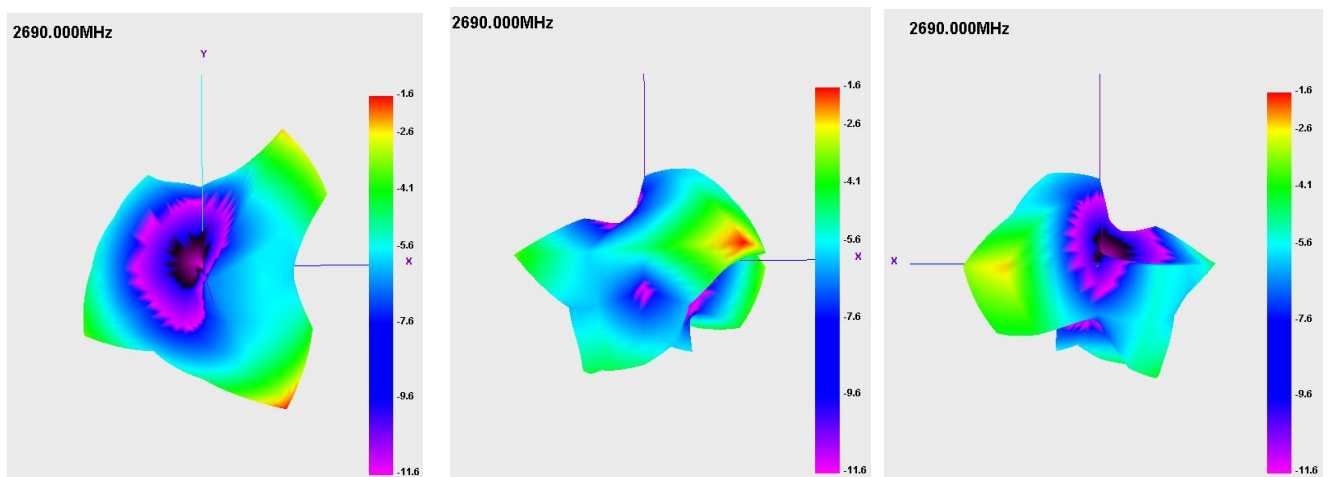
E2 plane



H plane

E1 plane

E2 plane

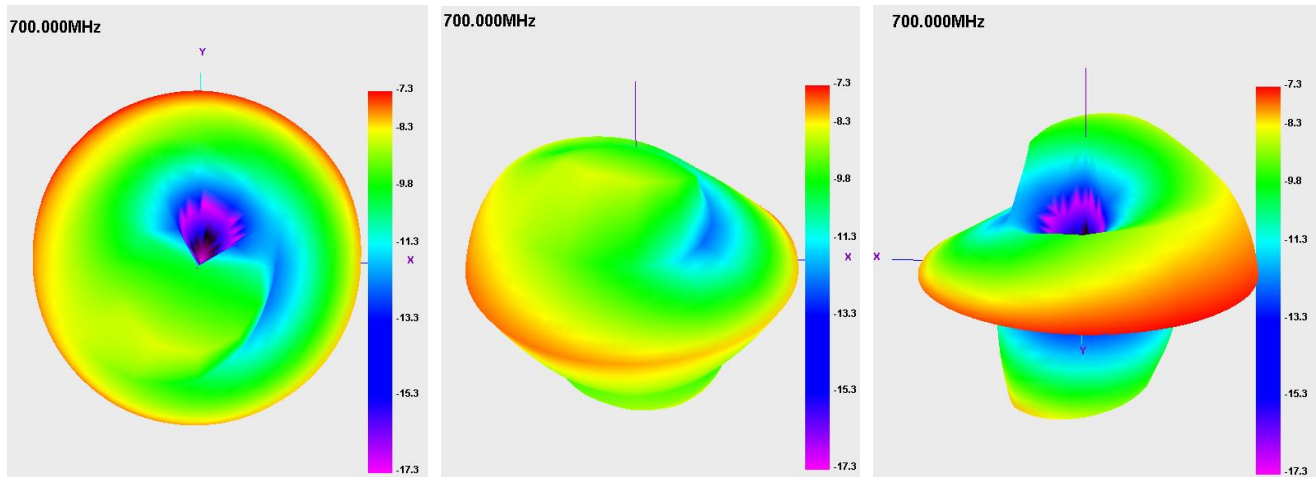


ANT7

H plane

E1 plane

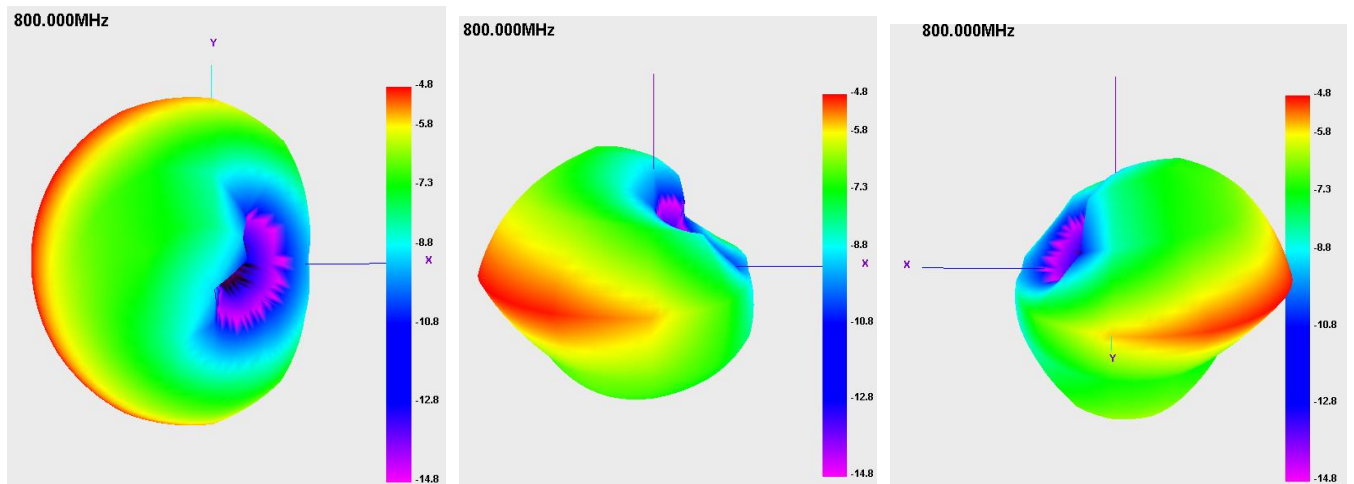
E2 plane



H plane

E1 plane

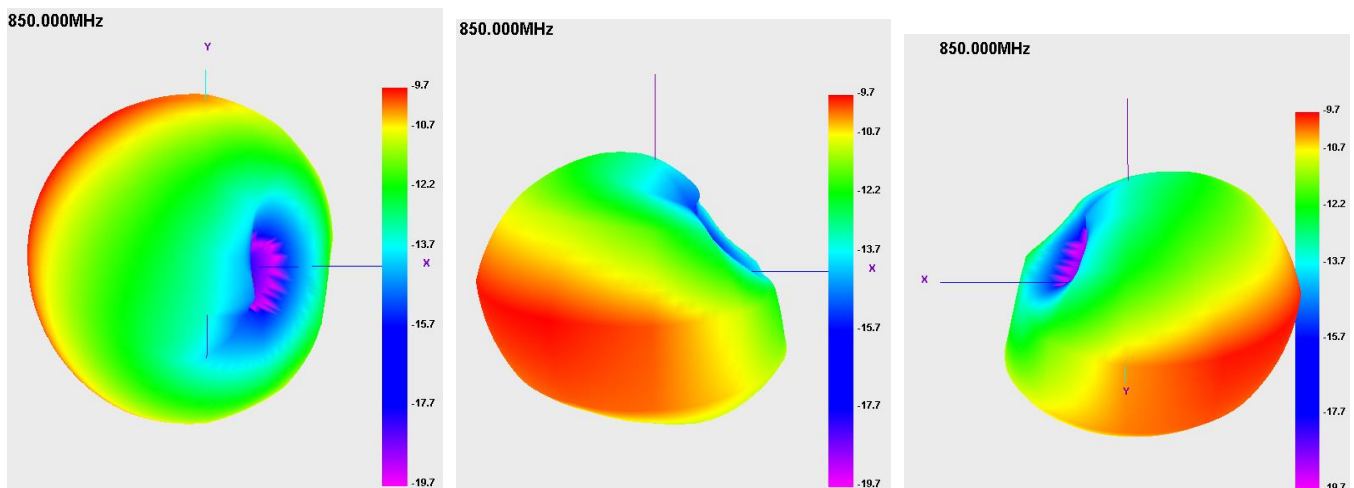
E2 plane



H plane

E1 plane

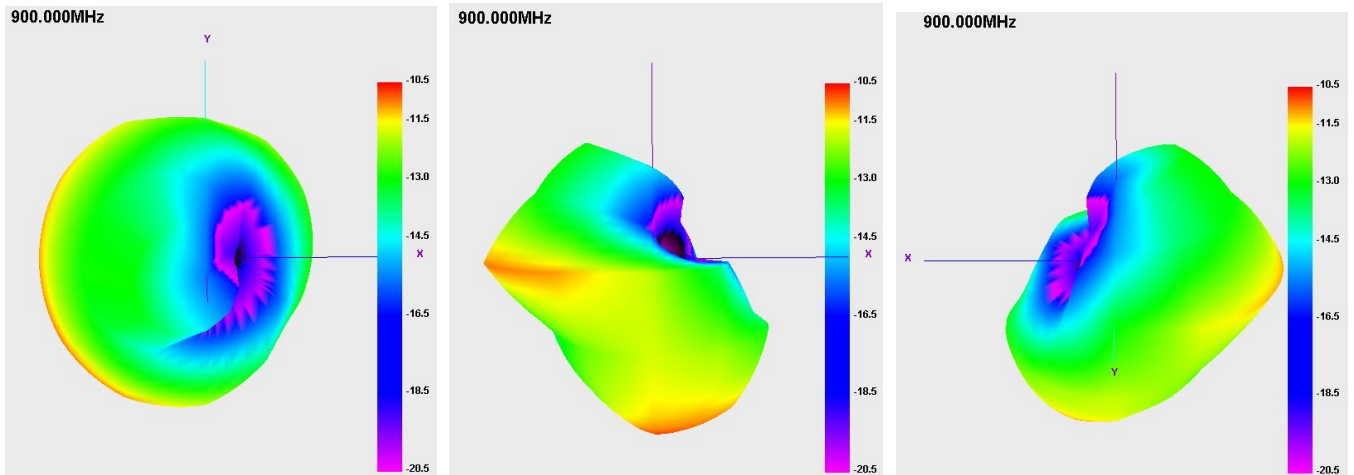
E2 plane



H plane

E1 plane

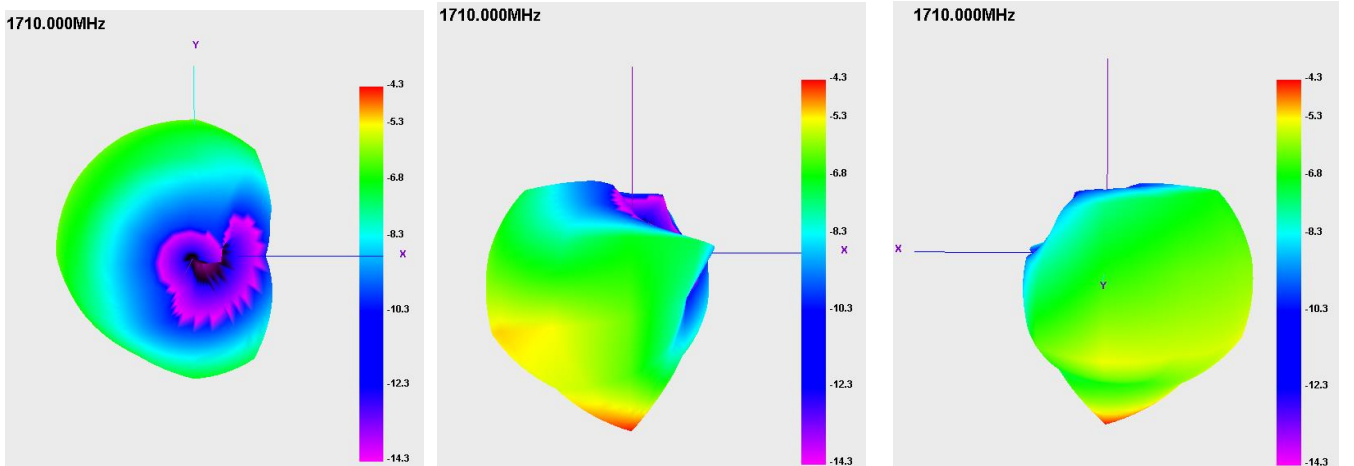
E2 plane



H plane

E1 plane

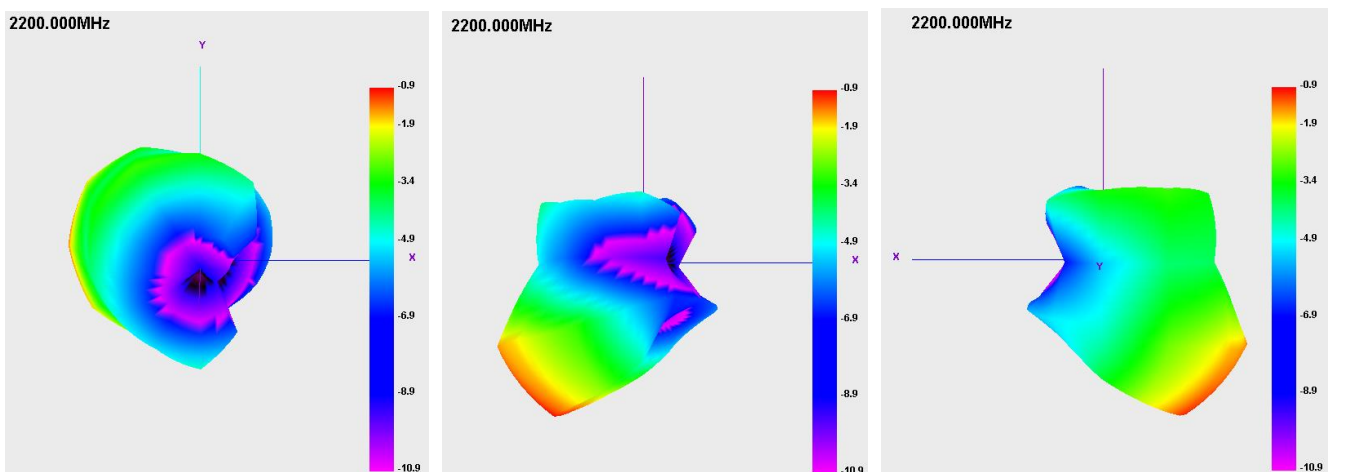
E2 plane



H plane

E1 plane

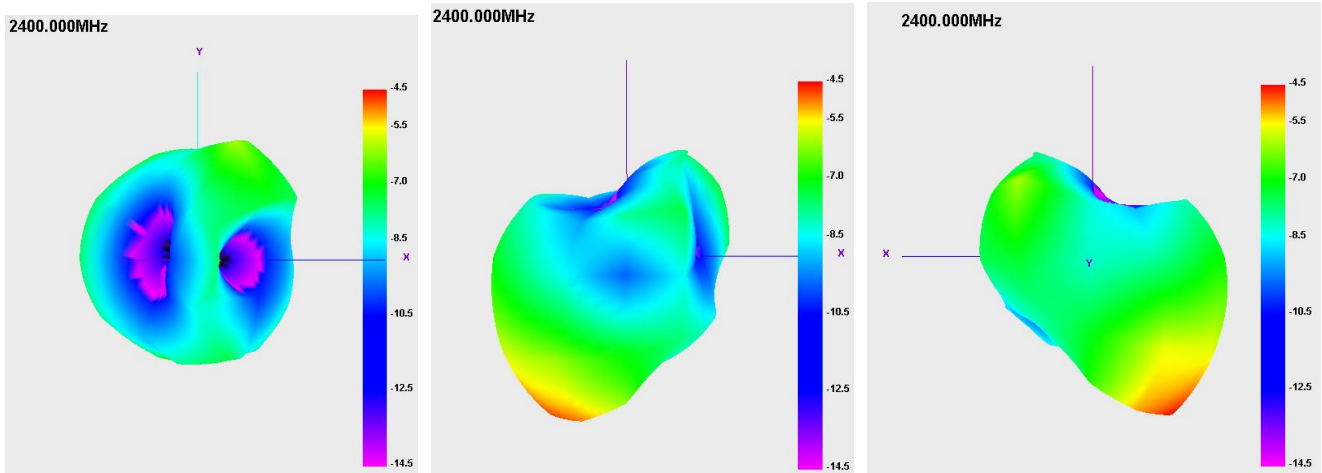
E2 plane



H plane

E1 plane

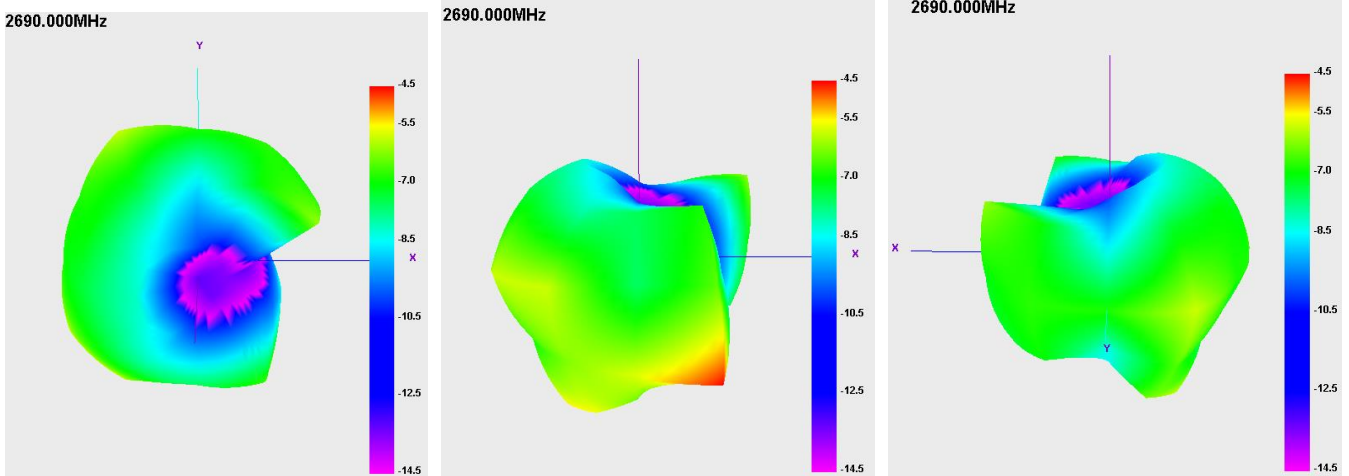
E2 plane



H plane

E1 plane

E2 plane

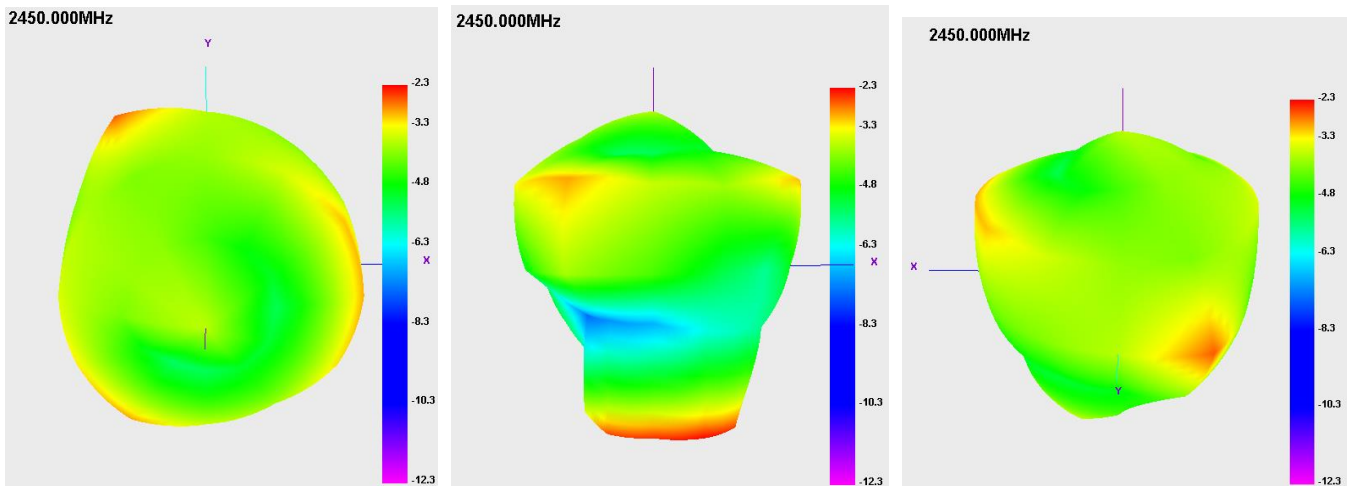


ANT8

H plane

E1 plane

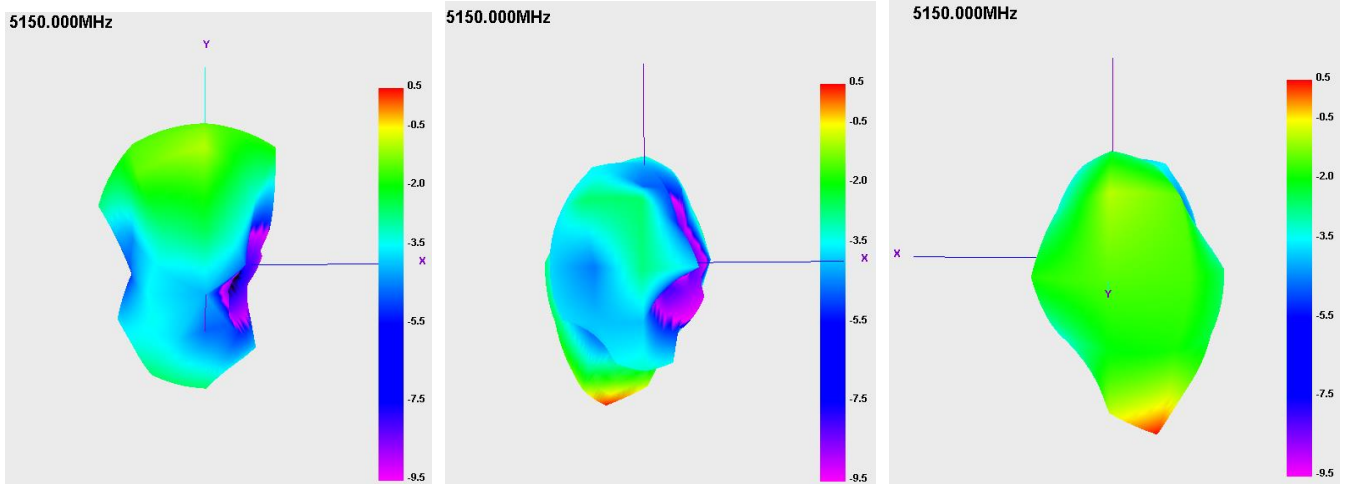
E2 plane



H plane

E1 plane

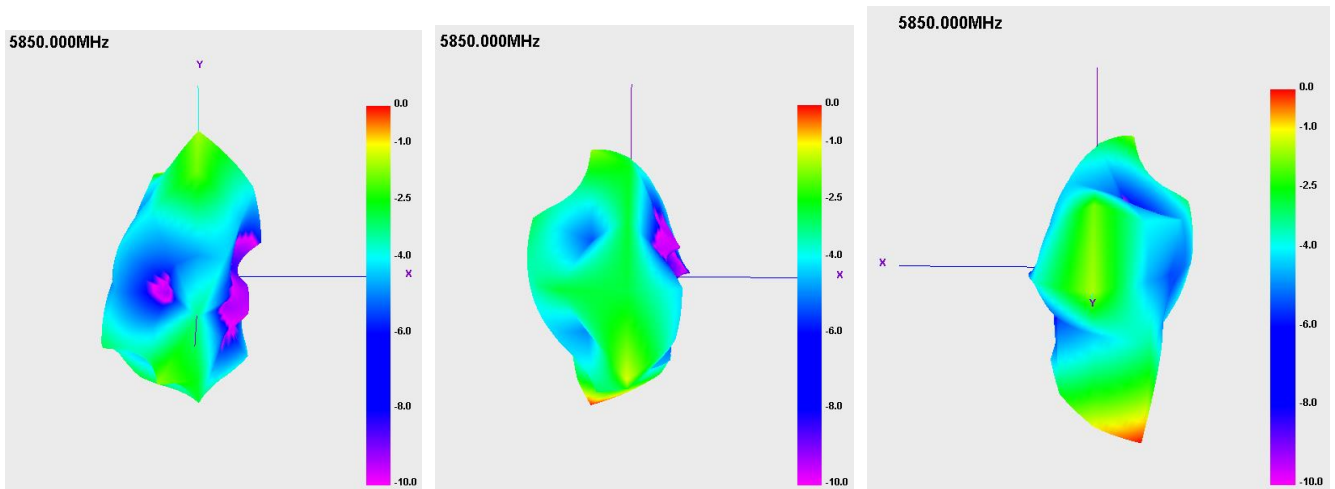
E2 plane



H plane

E1 plane

E2 plane

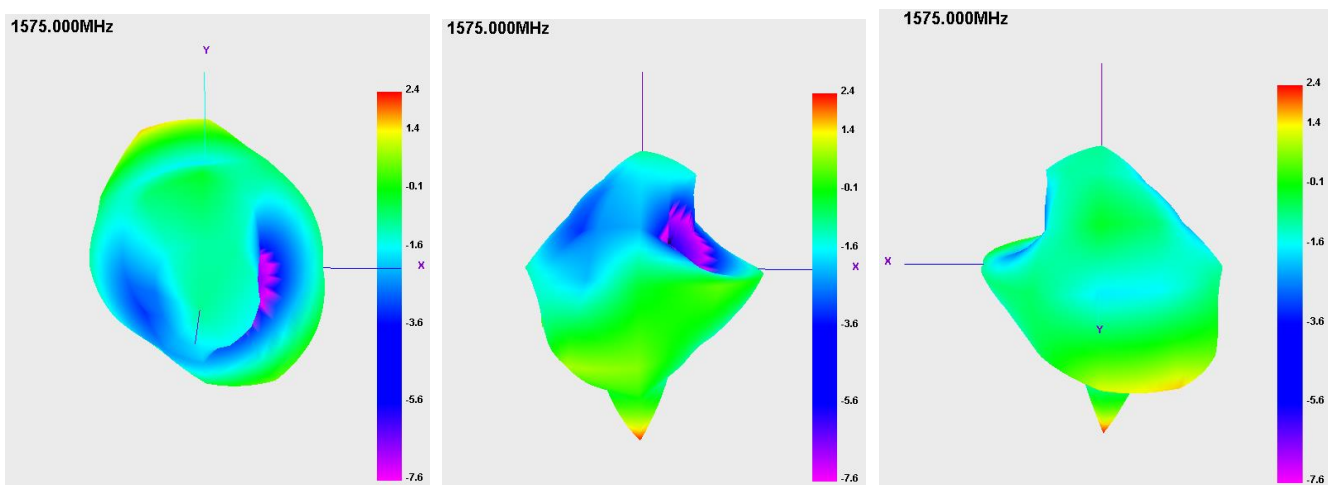


ANT9

H plane

E1 plane

E2 plane

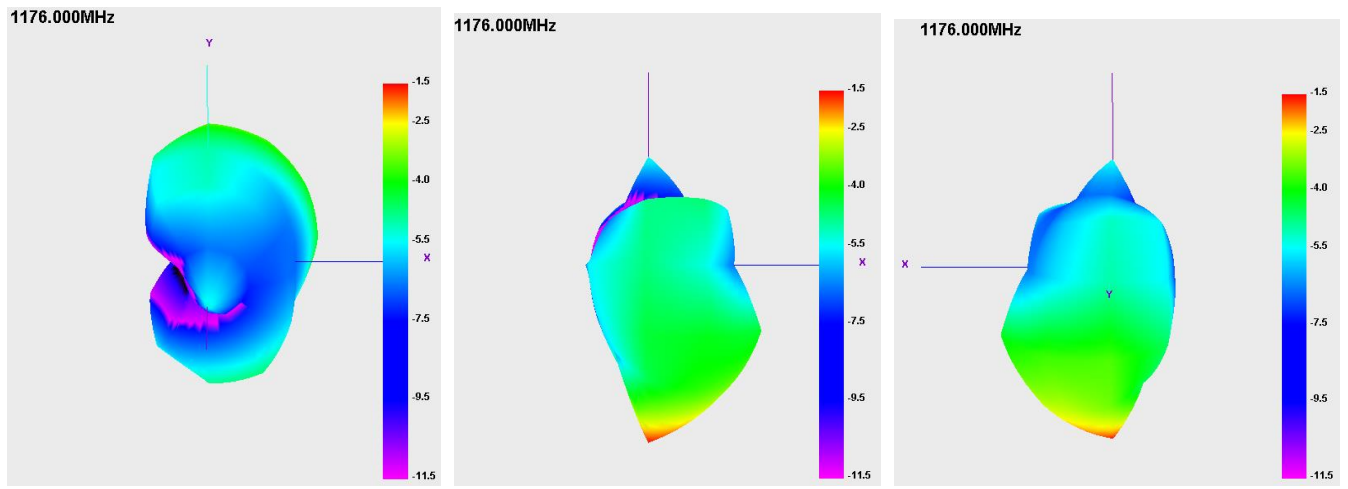


ANT10

H plane

E1 plane

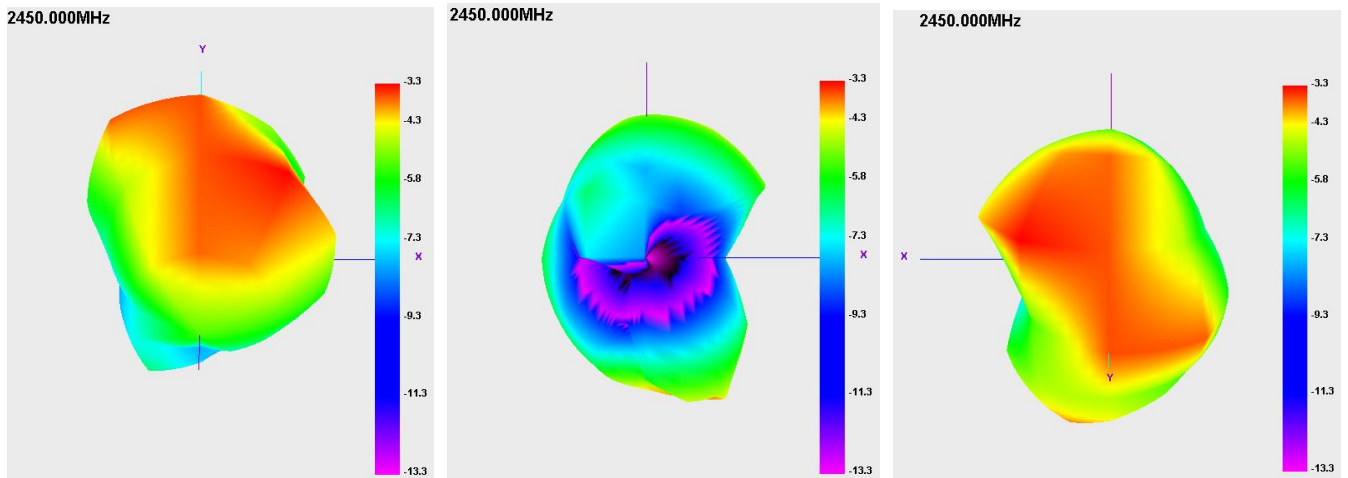
E2 plane



H plane

E1 plane

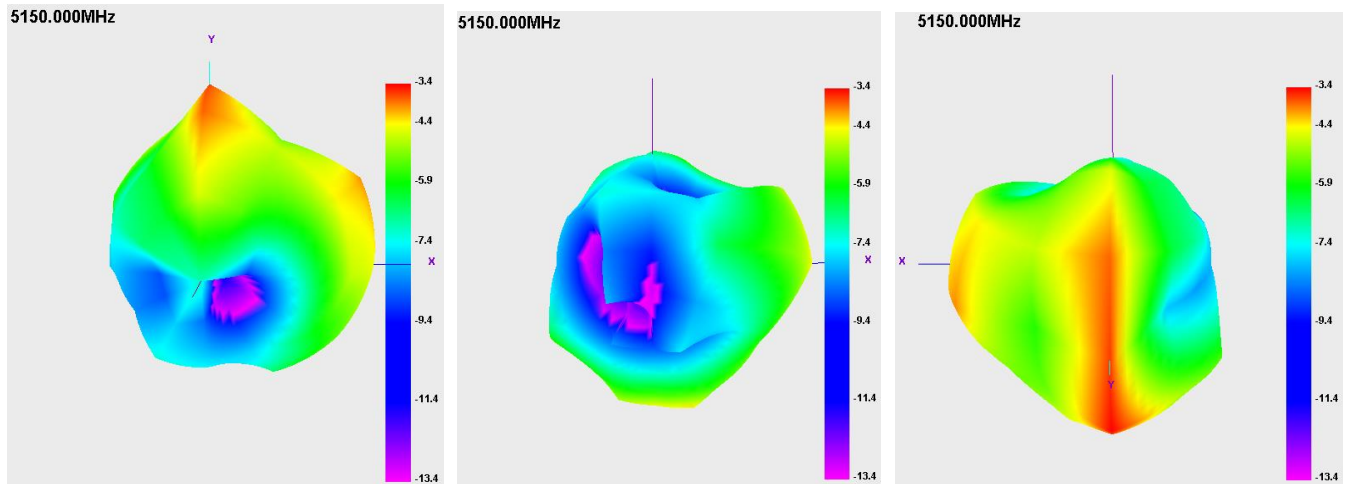
E2 plane



H plane

E1 plane

E2 plane



H plane

E1 plane

E2 plane

