

SPECIFICATION

HUI ZHOU DXDRAGON ING

Orbic TAB10R 4G Antenna

Product approval sheet

Customer	Orbic	Band	3G:W2/4/5 4G:B2/4/5/12/13/14/17/25/26/30/41 (Hpue)/66/71
Project	Orbic TAB10R 4G	Colour	Black
FCC ID	2ABGH-RC10RLT		

Customer check:

Reach requirement of customer: OK NG

Contents

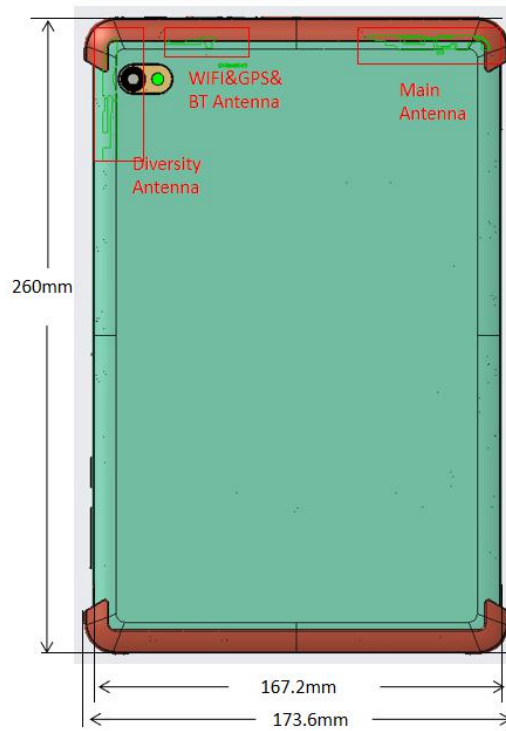
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1 General description

1.1 information of DUT

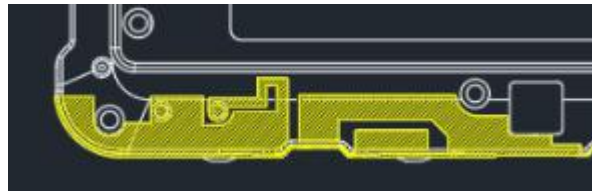
Set Type	Tablet
Dimension	260*173.6*9.6mm
Band	UMTS:W1/2/4/5/8 LTE :B1/2/4/5/12/13/14/17/25/26/28/30/41(Hpue)/66/71 WIFI 2.4G&5G BT GPS
Antenna Material	LDS

1.2 Photo of DUT

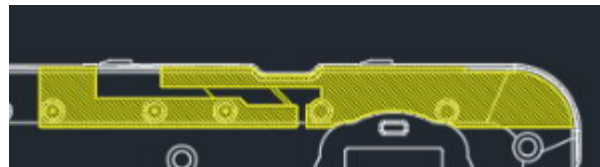


Antenna location

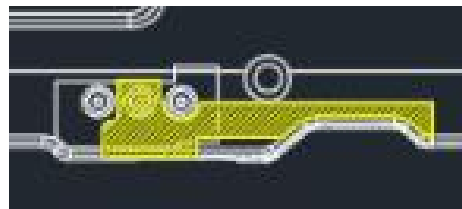
1.3 Antenna appearing diagram



Main antenna



Diversity antenna

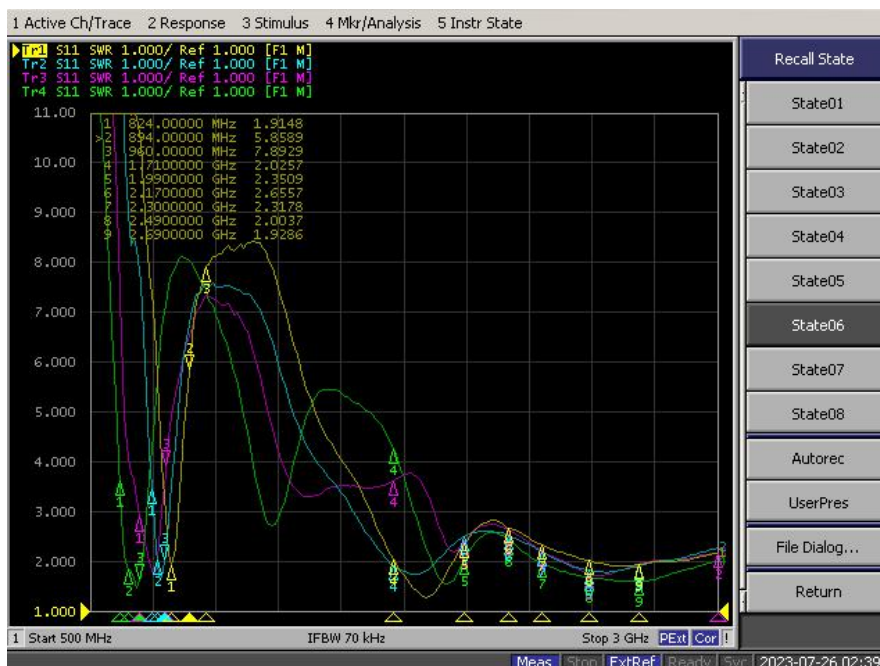


WIFI/BT/GPS antenna

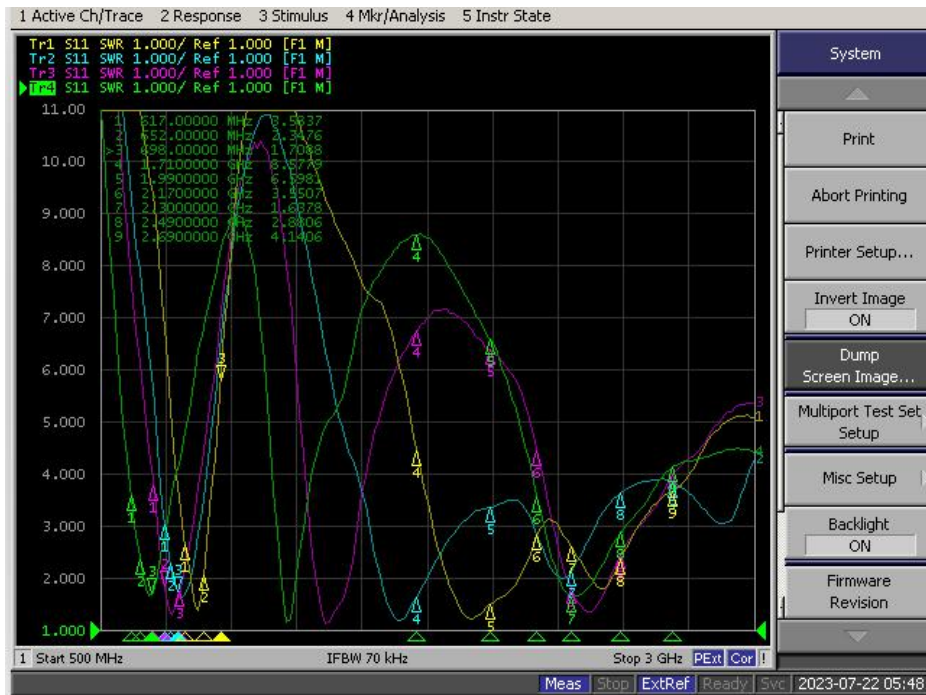
2 Electrical performance

2.1 Passive result

2.1.1 VSWR Main



2.12 VSWR Diversity



2.13 VSWR WIFI&BT&GPS



2.14 Efficiency & Gain

Main

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
600	14.31	-8.44	-3.4	690	13.57	-8.67	-4.31	740	18.19	-7.4	-2.71
610	18.32	-7.37	-2.61	700	16.55	-7.81	-3.47	750	24.46	-6.12	-1.74
620	22.82	-6.42	-1.78	710	22.82	-6.42	-1.86	760	29.94	-5.24	-1.23
630	27.6	-5.59	-1.25	720	24.73	-6.07	-1.58	770	29.87	-5.25	-1.54
640	29.35	-5.32	-0.92	730	28.07	-5.52	-1.35	780	31.95	-4.96	-1.19
650	33.46	-4.75	-0.09	740	30.27	-5.19	-1.45	790	37.16	-4.3	-0.26
660	31.83	-4.97	-0.44	750	33.08	-4.8	-1.47	800	47.03	-3.28	1.01
670	28.91	-5.39	-1.23	760	31.85	-4.97	-1.31				
680	26	-5.85	-2.16	770	24.25	-6.15	-2.1				
690	21.64	-6.65	-3.31	780	22.43	-6.49	-2.07				
700	17.68	-7.53	-4.24	790	22.62	-6.45	-2.31				

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
800	22.58	-6.46	-3.05
810	25.99	-5.85	-2.34
820	27.43	-5.62	-1.89
830	28.46	-5.46	-1.57
840	29.63	-5.28	-1.59
850	31.14	-5.07	-1.55
860	34.12	-4.67	-1.71
870	38.82	-4.11	-0.87
880	44.82	-3.49	-0.73
890	52.08	-2.83	0.05
900	54.45	-2.64	-0.07
910	54.38	-2.65	0.15
920	49.4	-3.06	-0.3
930	41.13	-3.86	-0.86
940	32.51	-4.88	-2.02
950	26.38	-5.79	-2.96
960	19.72	-7.05	-4.2

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1690	52.66	-2.78	2.9	1910	51.42	-2.89	0.74
1700	49.65	-3.04	2.78	1920	49.63	-3.04	0.77

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1710	53.07	-2.75	3.08	1930	46.72	-3.3	0.76
1720	58.19	-2.35	3.46	1940	42.14	-3.75	0.26
1730	59.6	-2.25	3.5	1950	42.19	-3.75	0.47
1740	59.18	-2.28	3.46	1960	39.85	-4	0.16
1750	61.61	-2.1	3.66	1970	38.16	-4.18	0.14
1760	63.01	-2.01	3.77	1980	38.79	-4.11	0.24
1770	65.19	-1.86	3.85	1990	39.23	-4.06	0.34
1780	65.5	-1.84	3.74	2000	39.79	-4	0.5
1790	62.49	-2.04	3.36	2010	40.39	-3.94	0.65
1800	61.1	-2.14	3.21	2020	37.29	-4.28	0.4
1810	60.03	-2.22	2.86	2030	36.65	-4.36	0.35
1820	57.45	-2.41	2.48	2040	37.53	-4.26	0.59
1830	55.89	-2.53	2.07	2050	39.29	-4.06	0.86
1840	55.16	-2.58	1.76	2060	42.89	-3.68	1.29
1850	55.78	-2.53	1.5	2070	44.18	-3.55	1.3
1860	56.94	-2.45	1.4	2080	41.38	-3.83	1.05
1870	54.82	-2.61	0.84	2090	41.39	-3.83	0.84
1880	52.62	-2.79	0.37	2100	42.75	-3.69	1.01
1890	52.11	-2.83	0.26	2110	35.38	-4.51	0.28
1900	52.99	-2.76	0.59	2120	34.99	-4.56	0.14

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2130	35.83	-4.46	0.35	2420	54.29	-2.65	1.08
2140	37.27	-4.29	0.45	2430	56.8	-2.46	1.66
2150	37.3	-4.28	0.51	2440	60.21	-2.2	1.75
2160	37.53	-4.26	0.5	2450	62.97	-2.01	2.09
2170	36.02	-4.43	0.33	2460	65.26	-1.85	2.47
2180	37.3	-4.28	0.48	2470	63.31	-1.99	2.86
2190	37.02	-4.32	0.37	2480	65.18	-1.86	2.99
2200	38.46	-4.15	0.64	2490	69.01	-1.61	3.06
2210	39.28	-4.06	0.85	2500	69.82	-1.56	3.13
2220	39.93	-3.99	0.76	2510	68.75	-1.63	2.98
2230	40.31	-3.95	0.57	2520	70.74	-1.5	3.13
2240	41.6	-3.81	0.37	2530	69.22	-1.6	2.87
2250	42.57	-3.71	0.21	2540	68.75	-1.63	2.74
2260	43.13	-3.65	0.03	2550	68.82	-1.62	2.52
2270	44.35	-3.53	0.01	2560	69.66	-1.57	2.45
2280	41.27	-3.84	-0.21	2570	68.96	-1.61	2.37
2290	43.43	-3.62	-0.36	2580	66.46	-1.77	2.15
2300	44.73	-3.49	-0.55	2590	63.33	-1.98	1.97
2310	46.11	-3.36	-0.74	2600	66.57	-1.77	2.22
2320	48.55	-3.14	-0.52	2610	64.11	-1.93	2.17
2330	49.84	-3.02	-0.19	2620	60.23	-2.2	2.04
2340	48.55	-3.14	0.12	2630	59.94	-2.22	2.1
2350	50.88	-2.93	0.11	2640	62.43	-2.05	2.31
2360	48.82	-3.11	0.51	2650	61.74	-2.09	2.3

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2370	49.3	-3.07	2.62	2660	63.41	-1.98	2.51
2380	50.42	-2.97	2.68	2670	63.53	-1.97	2.58
2390	52.36	-2.81	2.77	2680	63.08	-2	2.7
2400	52.91	-2.76	2.76	2690	60.12	-2.21	2.58
2410	54.83	-2.61	2.76				

Diversity

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
600	11.79	-9.28	-3.5	700	15.58	-8.07	-3.57	740	25.86	-5.87	-0.76
610	14.57	-8.37	-2.3	710	19.42	-7.12	-2.43	750	29.66	-5.28	-0.26
620	16.45	-7.84	-2.05	720	19.73	-7.05	-1.78	760	31.27	-5.05	0.01
630	21.05	-6.77	-1.37	730	21.09	-6.76	-1.66	770	26.2	-5.82	-0.81
640	24.78	-6.06	-1.2	740	25.6	-5.92	-1.18	780	23.52	-6.29	-1.19
650	26.55	-5.76	-1.12	750	29.15	-5.35	-0.47	790	24.6	-6.09	-1.16
660	25.62	-5.91	-1.32	760	33.2	-4.79	0.35	800	28.59	-5.44	-0.6
670	22.47	-6.48	-1.73	770	30.41	-5.17	0				
680	24.23	-6.16	-1.44	780	31.66	-5	0.34				
690	23.4	-6.31	-1.46	790	34.65	-4.6	0.69				
700	24.31	-6.14	-1.29	800	43	-3.67	1.64				

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
800	24.36	-6.13	-1.11
810	25.1	-6	-0.85
820	29.3	-5.33	-0.13
830	31.92	-4.96	0.16
840	35.83	-4.46	0.34
850	39.03	-4.09	0.39
860	42.14	-3.75	0.35
870	43.25	-3.64	0.39
880	42.48	-3.72	0.46
890	40.3	-3.95	0.17
900	36.37	-4.39	-0.15
910	29.98	-5.23	-0.74
920	25.19	-5.99	-1.31
930	17.95	-7.46	-2.1
940	13.8	-8.6	-2.77
950	11.15	-9.53	-3.43
960	9.77	-10.1	-3.78

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1690	18.69	-7.28	-3.06	1910	50.61	-2.96	2.45
1700	20.65	-6.85	-2.84	1920	50.35	-2.98	2.53
1710	21.69	-6.64	-2.55	1930	49.87	-3.02	2.67
1720	21.88	-6.6	-2.39	1940	47.59	-3.23	2.54
1730	22.87	-6.41	-2.07	1950	47.23	-3.26	2.49
1740	23.58	-6.27	-1.93	1960	45.28	-3.44	2.28
1750	25.2	-5.99	-1.62	1970	44.17	-3.55	2
1760	27.22	-5.65	-1.34	1980	43.53	-3.61	1.87
1770	27.24	-5.65	-1.44	1990	41.31	-3.84	1.66
1780	29.75	-5.27	-1.12	2000	40.46	-3.93	1.52
1790	31.29	-5.05	-0.93	2010	37.94	-4.21	1.31
1800	32.59	-4.87	-0.62	2020	35.17	-4.54	0.91
1810	34.99	-4.56	-0.13	2030	34.58	-4.61	0.78
1820	36.78	-4.34	0.15	2040	33.06	-4.81	0.55
1830	38.06	-4.2	0.46	2050	32.09	-4.94	0.43
1840	41.61	-3.81	0.97	2060	31.51	-5.02	0.47
1850	45.81	-3.39	1.42	2070	29.88	-5.25	0.23
1860	47.01	-3.28	1.72	2080	28.81	-5.4	0.18
1870	47.32	-3.25	1.84	2090	27.57	-5.59	-0.09
1880	48.57	-3.14	2.01	2100	25.97	-5.85	-0.37
1890	49.68	-3.04	2.21	2110	22.11	-6.55	-1.23
1900	50.83	-2.94	2.34	2120	20.65	-6.85	-1.67

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2130	20.66	-6.85	-1.7	2420	45.9	-3.38	1.2
2140	20.77	-6.83	-1.49	2430	45.46	-3.42	1.21
2150	20.11	-6.97	-1.57	2440	47.5	-3.23	1.35
2160	19.75	-7.04	-1.51	2450	47.69	-3.22	1.36
2170	20.39	-6.91	-1.19	2460	44.95	-3.47	1.2
2180	20.28	-6.93	-1.07	2470	41.92	-3.78	0.93
2190	21.63	-6.65	-0.7	2480	39.72	-4.01	0.79
2200	21.44	-6.69	-0.75	2490	37.61	-4.25	0.62
2210	21.08	-6.76	-0.75	2500	36.83	-4.34	0.68
2220	21.38	-6.7	-0.62	2510	33.63	-4.73	0.36
2230	21.58	-6.66	-0.56	2520	31.72	-4.99	0.24
2240	20.89	-6.8	-0.79	2530	30.41	-5.17	0.1
2250	20.89	-6.8	-0.94	2540	27.86	-5.55	-0.21
2260	20.94	-6.79	-1.1	2550	27.41	-5.62	-0.24
2270	21.91	-6.59	-1.08	2560	27.11	-5.67	-0.19
2280	22.08	-6.56	-1.22	2570	26.31	-5.8	-0.33
2290	21.69	-6.64	-1.52	2580	25.69	-5.9	-0.47
2300	22.61	-6.46	-1.57	2590	24.6	-6.09	-0.75

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2310	23.21	-6.34	-1.66	2600	23.54	-6.28	-1.07
2320	24.68	-6.08	-1.66	2610	23.25	-6.34	-1.28
2330	27.67	-5.58	-1.47	2620	21.42	-6.69	-1.75
2340	30.93	-5.1	-1.13	2630	20.83	-6.81	-1.82
2350	32.98	-4.82	-0.54	2640	20.7	-6.84	-1.79
2360	35.91	-4.45	0.04	2650	19.91	-7.01	-1.91
2370	36.9	-4.33	0.27	2660	18.9	-7.23	-2.11
2380	40.39	-3.94	0.59	2670	18.23	-7.39	-2.36
2390	43.31	-3.63	0.85	2680	16.4	-7.85	-2.82
2400	44.76	-3.49	0.98	2690	15.58	-8.07	-2.99
2410	45.53	-3.42	1.13				

WIFI/BT/GPS

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1560	41.15	-3.86	0.29	2400	38.25	-4.17	1.46
1565	42.25	-3.74	0.26	2410	37.79	-4.23	1.56
1570	43	-3.67	0.31	2420	39.29	-4.06	1.77
1575	44.31	-3.54	0.51	2430	39.05	-4.08	1.88
1580	44.51	-3.51	0.67	2440	38.58	-4.14	1.49
1585	43.09	-3.66	0.62	2450	38.9	-4.1	1.64
1590	42.85	-3.68	0.57	2460	40.11	-3.97	1.68
1595	40.46	-3.93	0.43	2470	44.78	-3.49	2.38
				2480	39.7	-4.01	2.14
				2490	40.4	-3.94	2.1
				2500	40.5	-3.93	2.09

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
5150	37.32	-4.28	0.74	5510	36.28	-4.4	1.42
5160	36.37	-4.39	0.53	5520	36.83	-4.34	1.46
5170	35.61	-4.48	0.64	5530	37.25	-4.29	1.51
5180	35.15	-4.54	0.75	5540	36.55	-4.37	1.43
5190	35.09	-4.55	0.84	5550	35.5	-4.5	1.42
5200	34.81	-4.58	0.86	5560	34.8	-4.58	1.32
5210	35.87	-4.45	1	5570	35.76	-4.47	1.4
5220	35.1	-4.55	1.07	5580	35.68	-4.48	1.47
5230	36.38	-4.39	1.46	5590	34.64	-4.6	1.32
5240	35.69	-4.47	1.26	5600	35.07	-4.55	1.36
5250	35.04	-4.55	1.32	5610	35.71	-4.47	1.33
5260	35.47	-4.5	1.27	5620	35.91	-4.45	1.5
5270	34.66	-4.6	1.27	5630	35.88	-4.45	1.42
5280	34.84	-4.58	1.28	5640	35.4	-4.51	1.36
5290	36.5	-4.38	1.73	5650	36.21	-4.41	1.41
5300	34.07	-4.68	1.29	5660	37.25	-4.29	1.74
5310	34.43	-4.63	1.33	5670	36.9	-4.33	1.49

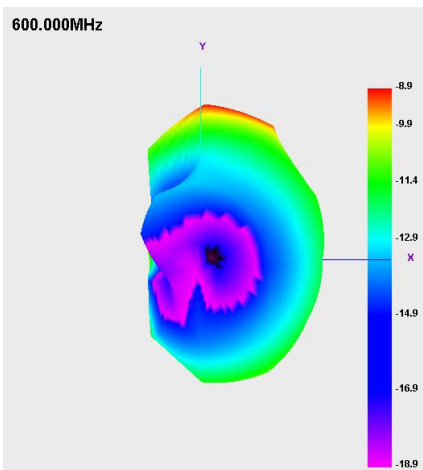
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5320	35.72	-4.47	1.45	5680	37.59	-4.25	1.75
5330	35.02	-4.56	1.54	5690	39.27	-4.06	1.86
5340	36.39	-4.39	1.66	5700	39.14	-4.07	1.7
5350	37.95	-4.21	1.67	5710	38.4	-4.16	1.58
5360	36.6	-4.37	1.67	5720	37.93	-4.21	1.72
5370	36.23	-4.41	1.58	5730	39.25	-4.06	1.71
5380	36.63	-4.36	1.56	5740	39.81	-4	1.74
5390	34.33	-4.64	1.19	5750	39.8	-4	1.79
5400	40.77	-3.9	1.93	5760	37.5	-4.26	1.49
5410	40.16	-3.96	1.8	5770	37.46	-4.26	1.51
5420	38.98	-4.09	1.59	5780	36.54	-4.37	1.19
5430	38.54	-4.14	1.67	5790	36.15	-4.42	1.06
5440	38.27	-4.17	1.52	5800	34.49	-4.62	0.97
5450	38.05	-4.2	1.48	5810	33.75	-4.72	0.9
5460	38.37	-4.16	1.47	5820	33.39	-4.76	0.78
5470	37.16	-4.3	1.38	5830	32.89	-4.83	0.88
5480	36.34	-4.4	1.37	5840	32.46	-4.89	0.85
5490	36.03	-4.43	1.27	5850	33.52	-4.75	1.11
5500	35.78	-4.46	1.32				

2.2 3D Pattern

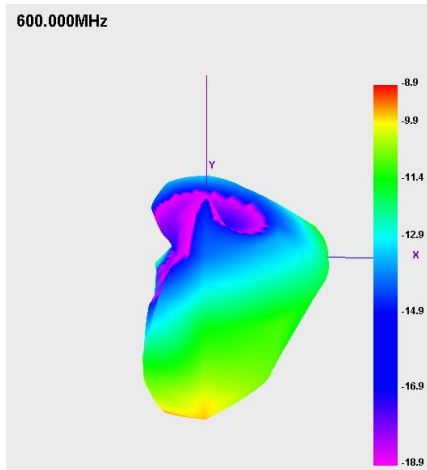
Main

H plane



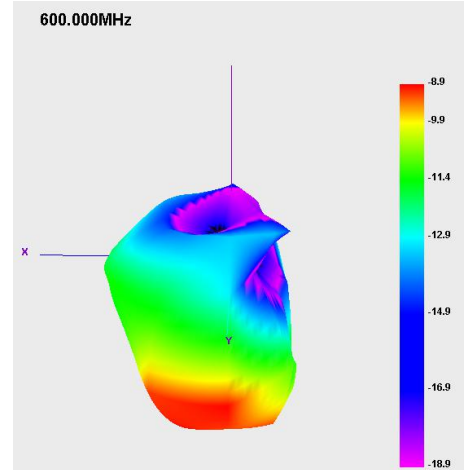
H plane

E1 plane

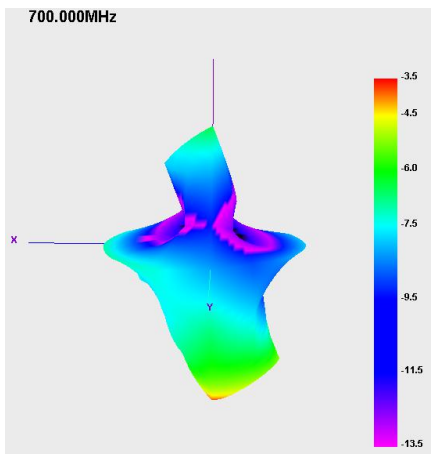
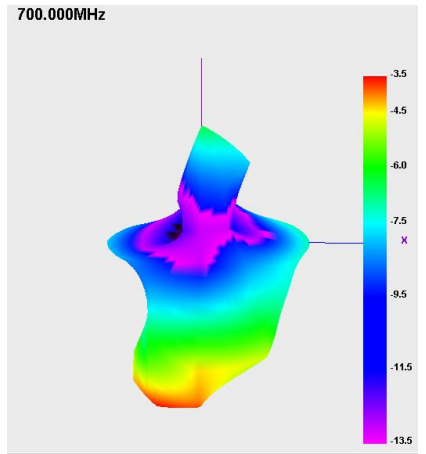
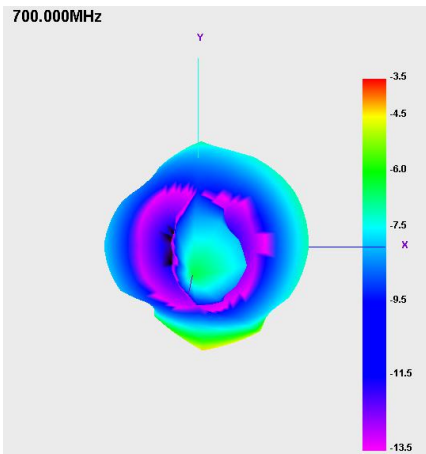


E1 plane

E2 plane



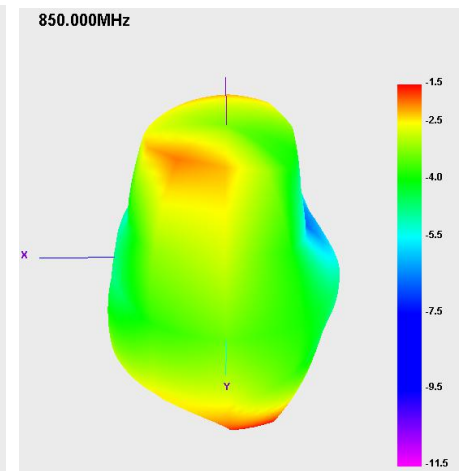
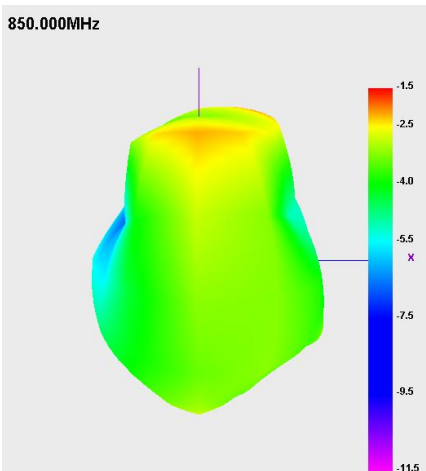
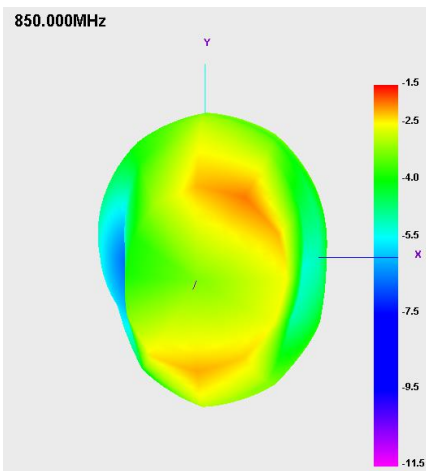
E2 plane



H plane

E1 plane

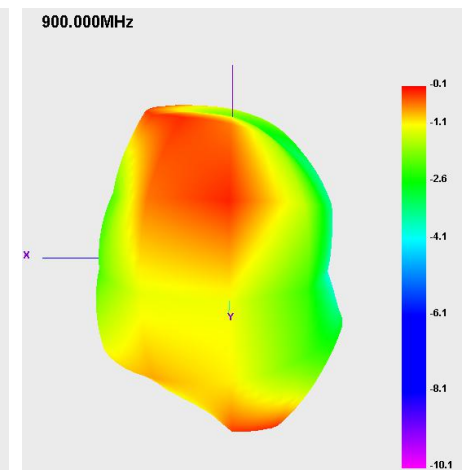
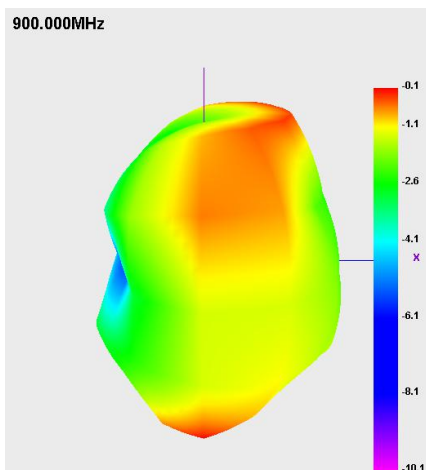
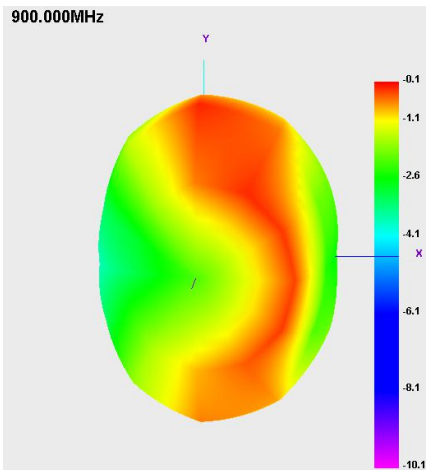
E2 plane



H plane

E1 plane

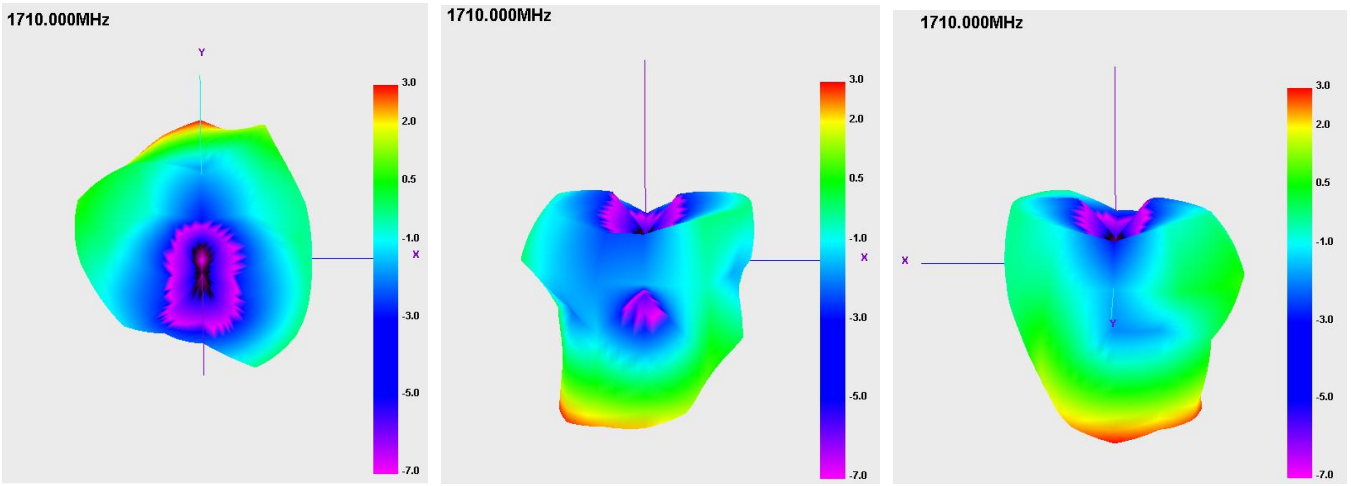
E2 plane



H plane

E1 plane

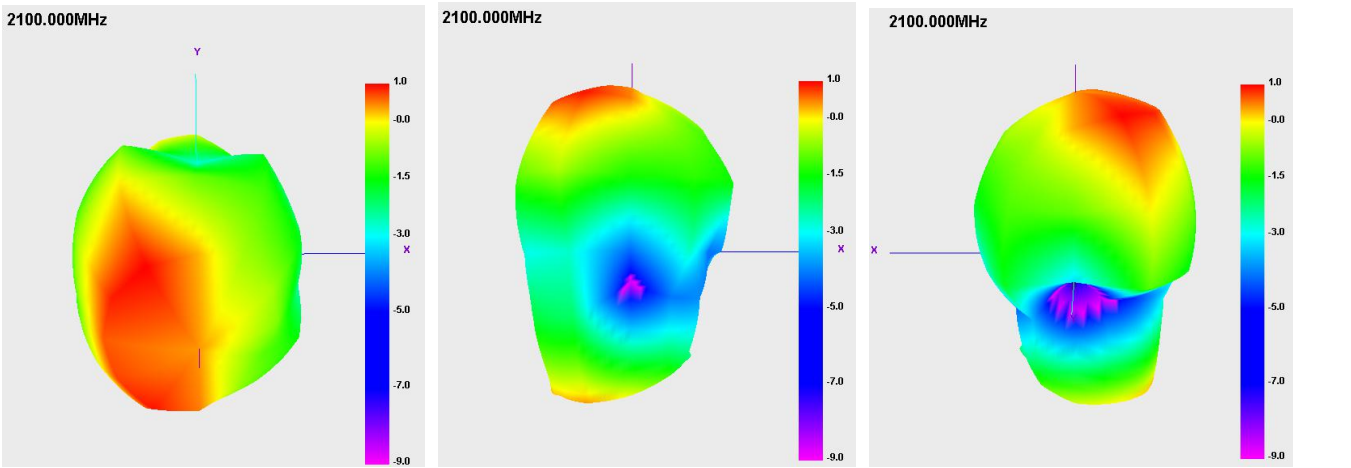
E2 plane



H plane

E1 plane

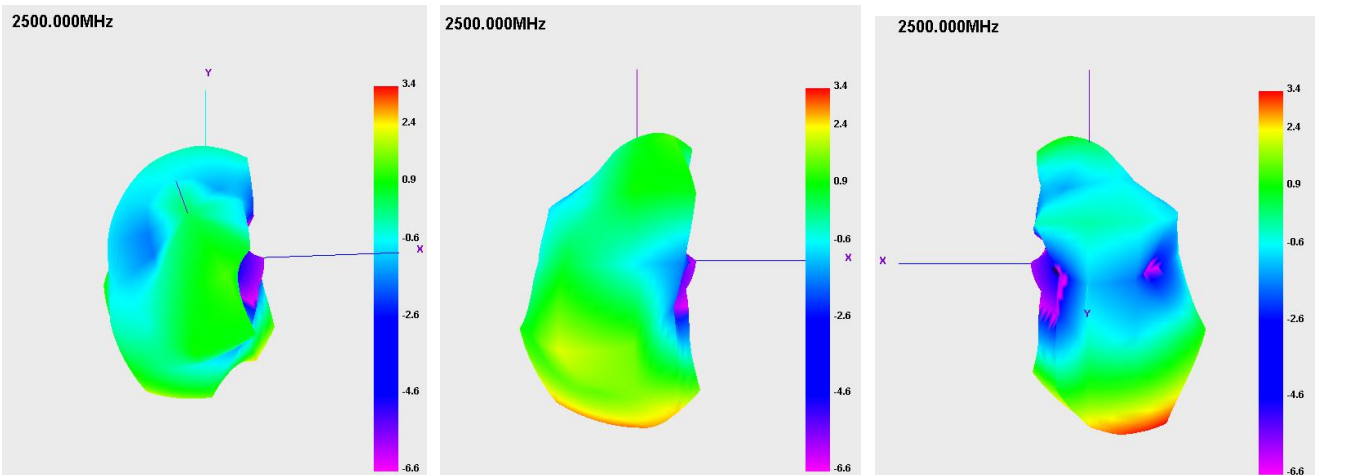
E2 plane



H plane

E1 plane

E2 plane

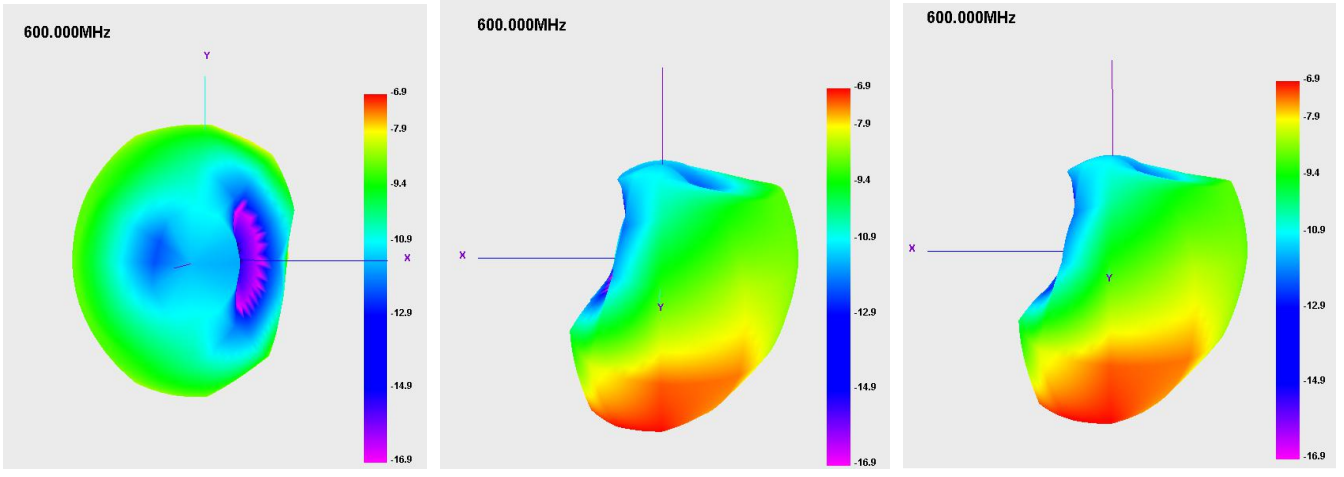


Diversity

H plane

E1 plane

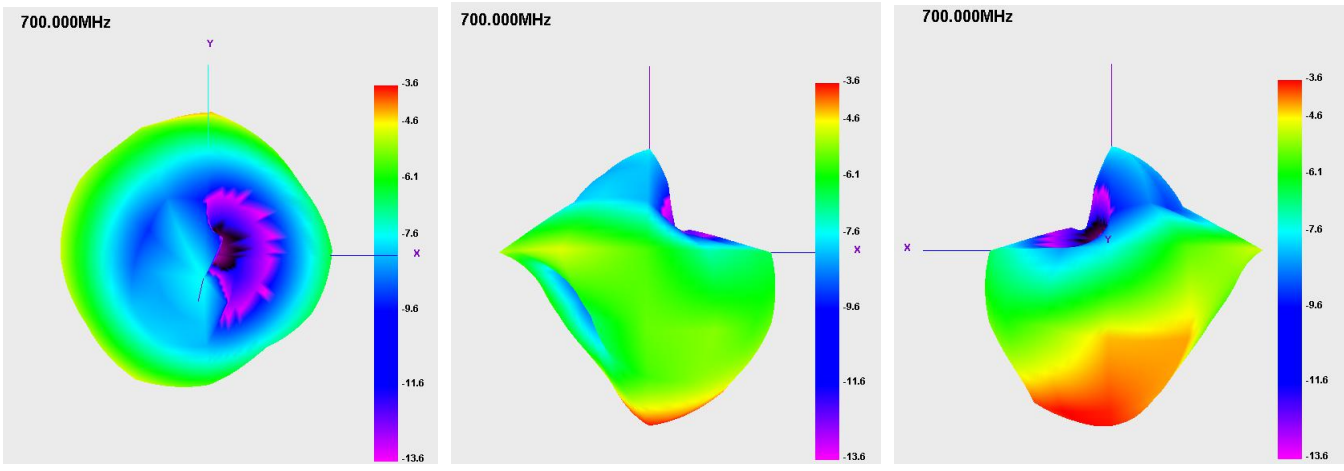
E2 plane



H plane

E1 plane

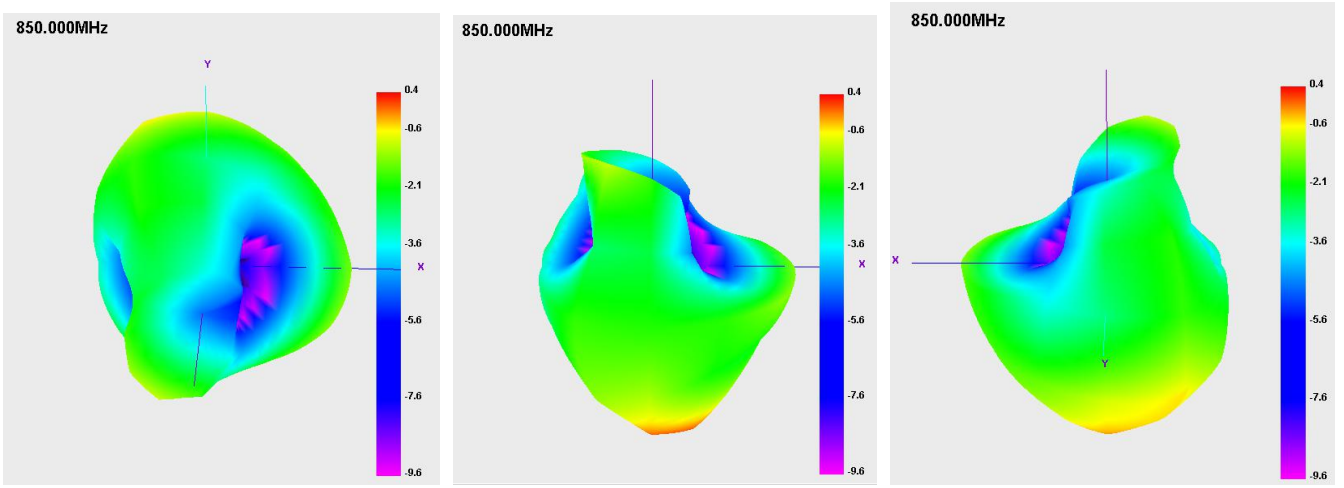
E2 plane



H plane

E1 plane

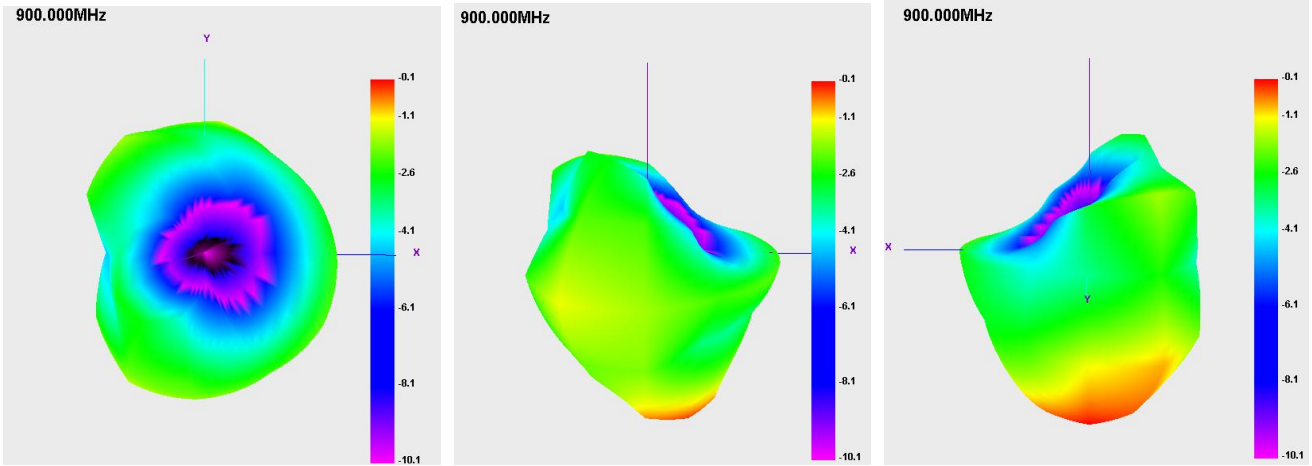
E2 plane



H plane

E1 plane

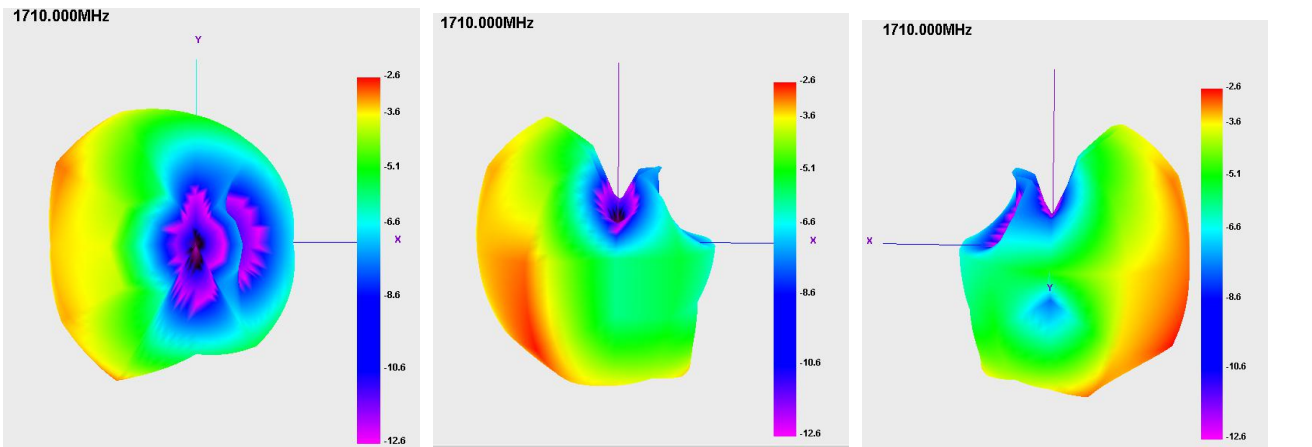
E2 plane



H plane

E1 plane

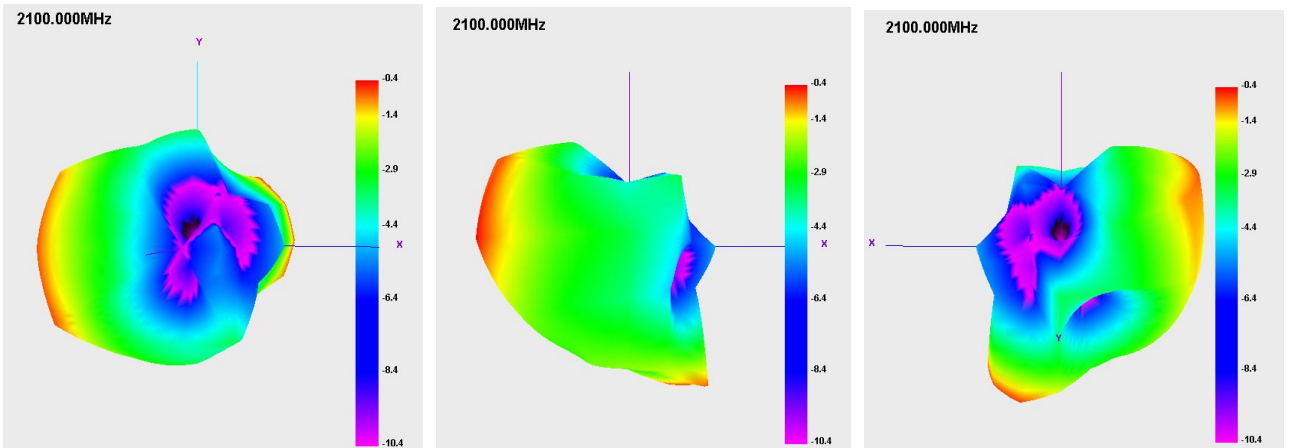
E2 plane



H plane

E1 plane

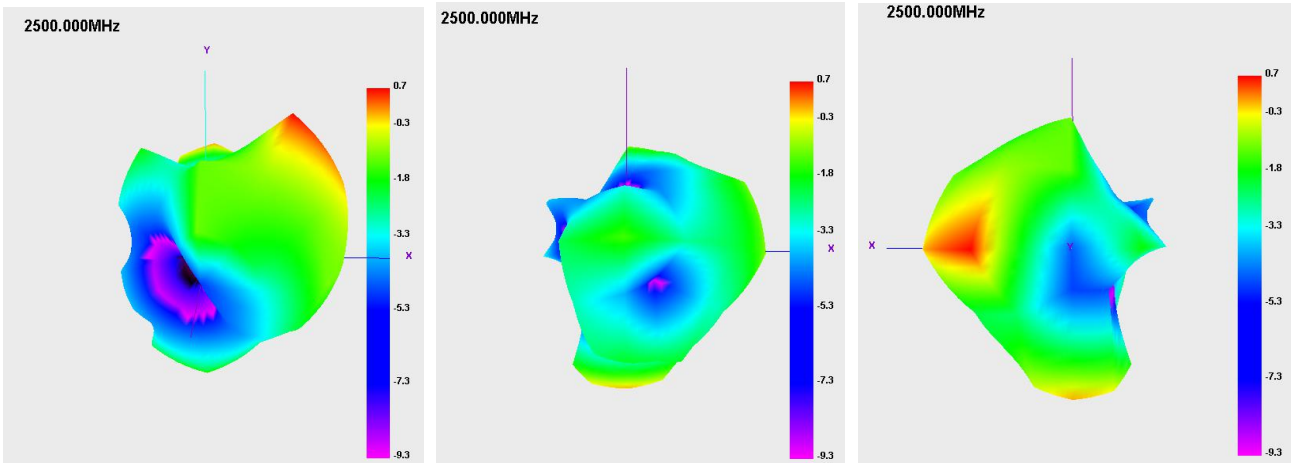
E2 plane



H plane

E1 plane

E2 plane

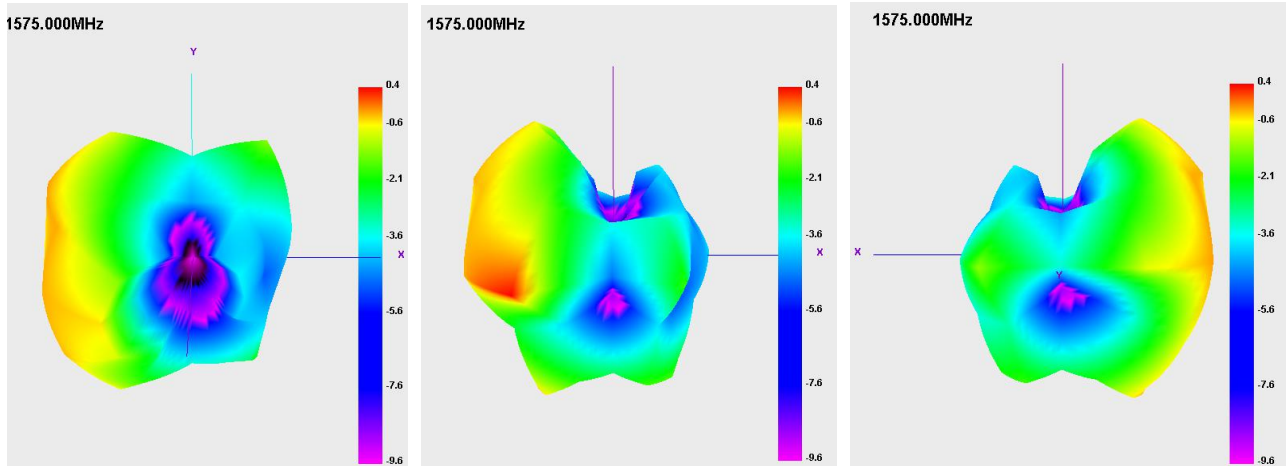


WIFI/BT/GPS

H plane

E1 plane

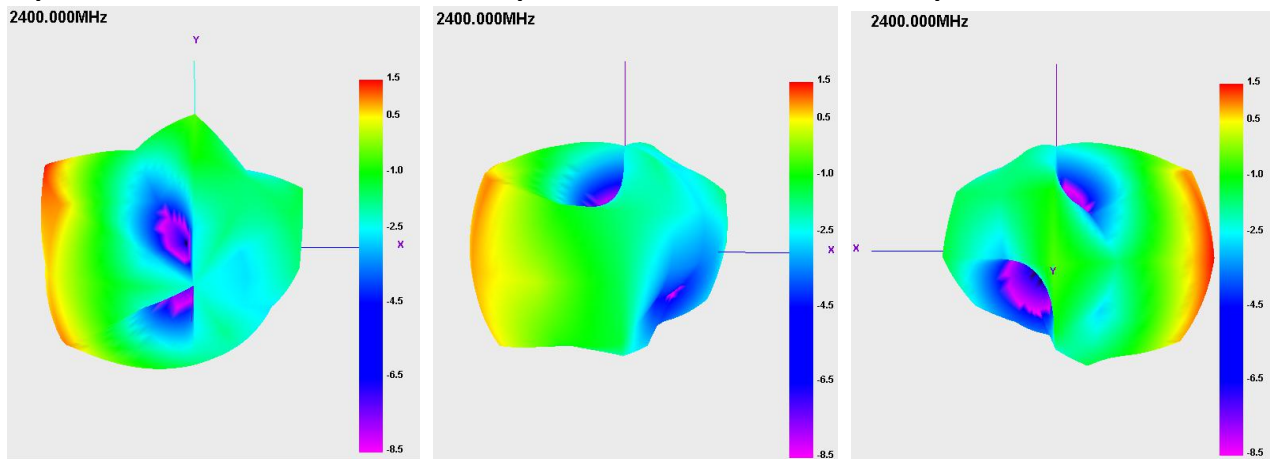
E2 plane



H plane

E1 plane

E2 plane



H plane

E1 plane

E2 plane

