

SPECIFICATION

Unimaxcomm

Orbic Fun Pro 5G

Product approval sheet

Customer	Reliance Communications LLC	Brand	Orbic
FCC ID	2ABGH-R678L5SFP	Colour	Black

Customer check:

Reach requirement of customer: ☒OK ☐NG

Contents

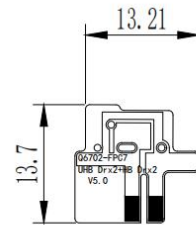
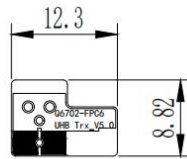
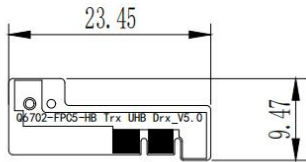
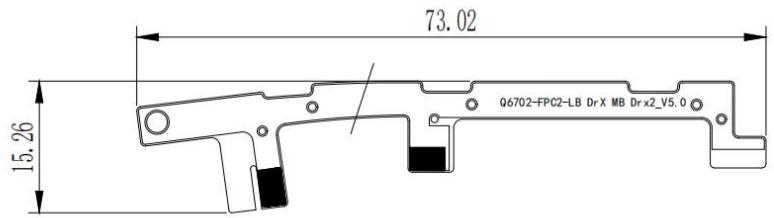
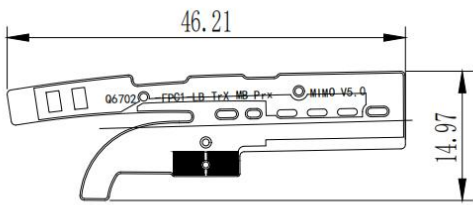
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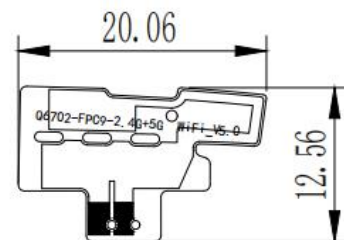
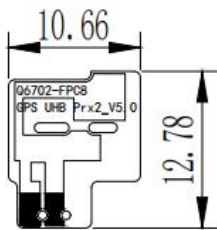
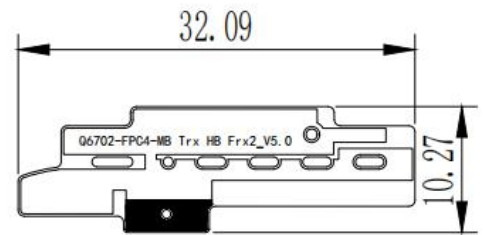
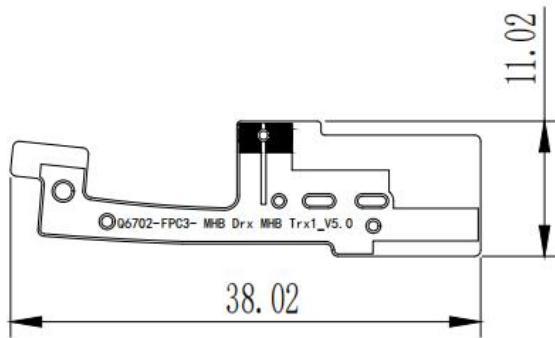
1 General description

1.1 Information of DUT

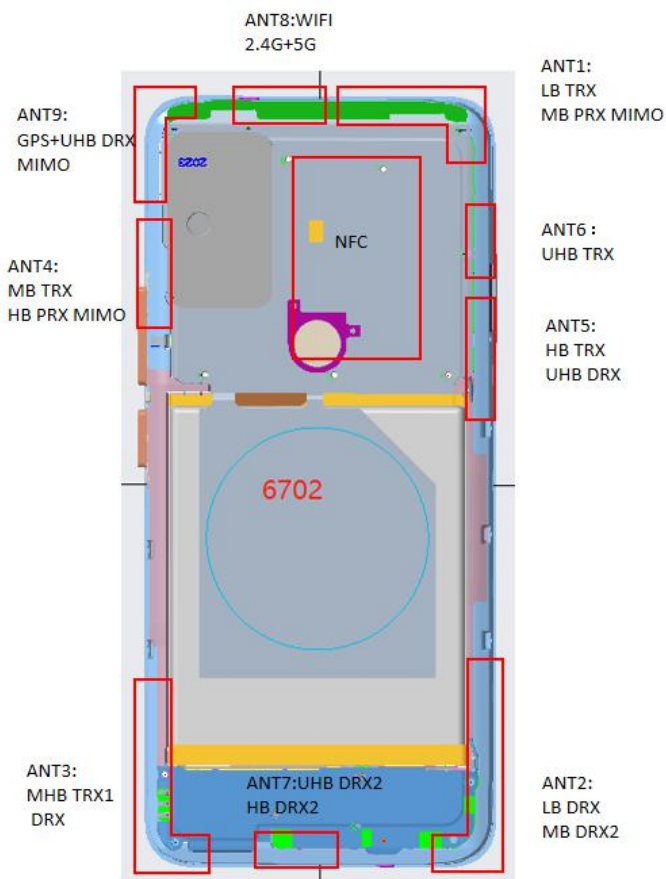
Set Type	Tablet
Dimension	
Band	2G: 850/1900 3G: B2/B4/B5 4G: B2/4/5/7/12/13/48/66 5G FR1: n2/n5/n48/n66/n77/n78
Antenna Material	FPC

1.2 Antenna appearing diagram





1.3 Antenna location



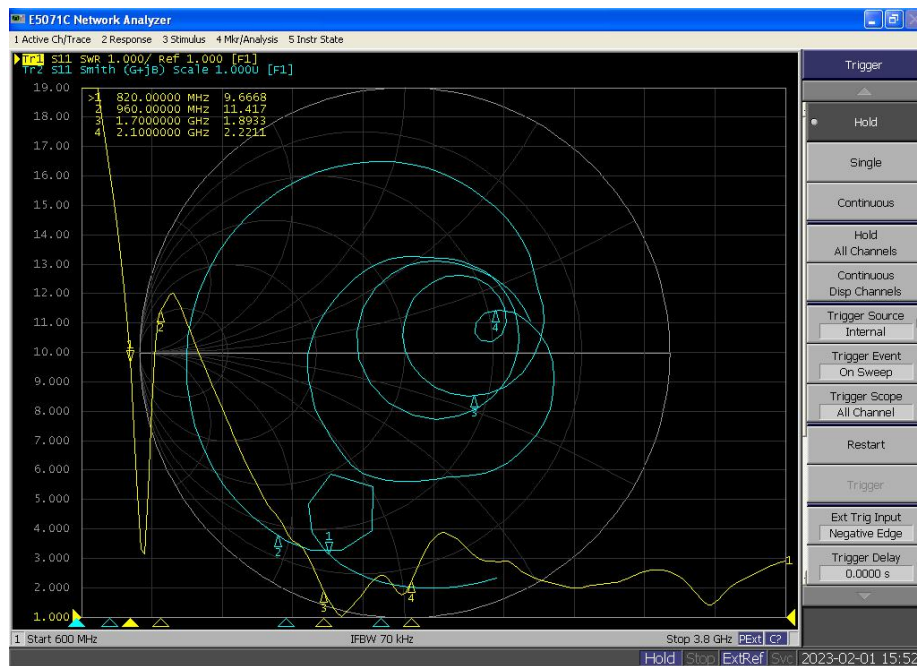
Antenna Location	Support Function	Top Side(mm)	Bottom Side(mm)	Left Side(mm)	Right Side(mm)
ANT1	LB TRX+MHB PRX MIMO	1.2	159.2	39.8	1.2
ANT2	LB DRX+MB DRX2	122.5	1.2	52.1	1.2
ANT3	MHB TRX1+DRX	140.5	1.2	1.2	64.5
ANT4	MB TRX+HB PRX MIMO	6.1	132.5	1.2	72.2
ANT5	HB TRX+UHB DRX	38.6	109.5	71.2	1.2
ANT6	UHB TRX	20.5	137.8	71.2	1.2
ANT7	UHB DRX2+HB DRX2	159.5	1.2	22.4	41.8
ANT8	WIFI 2.4G+5G	1.2	165.2	24.9	43.1
ANT9	GPS+UHB DRX MIMO	1.2	165.2	2.5	56.3

2 Electrical performance

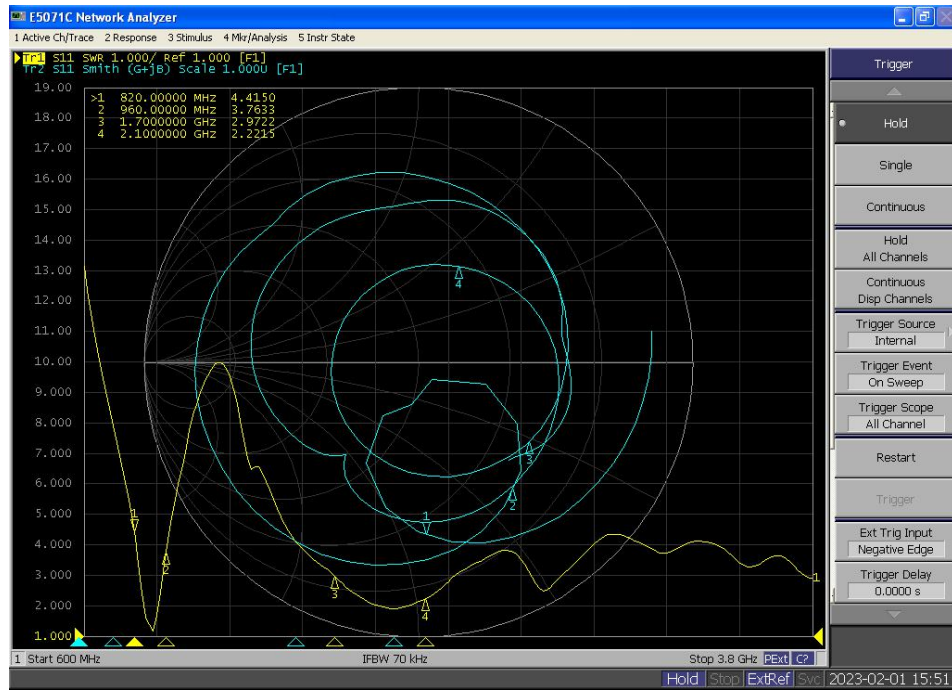
2.1 Passive result

2.11 VSWR

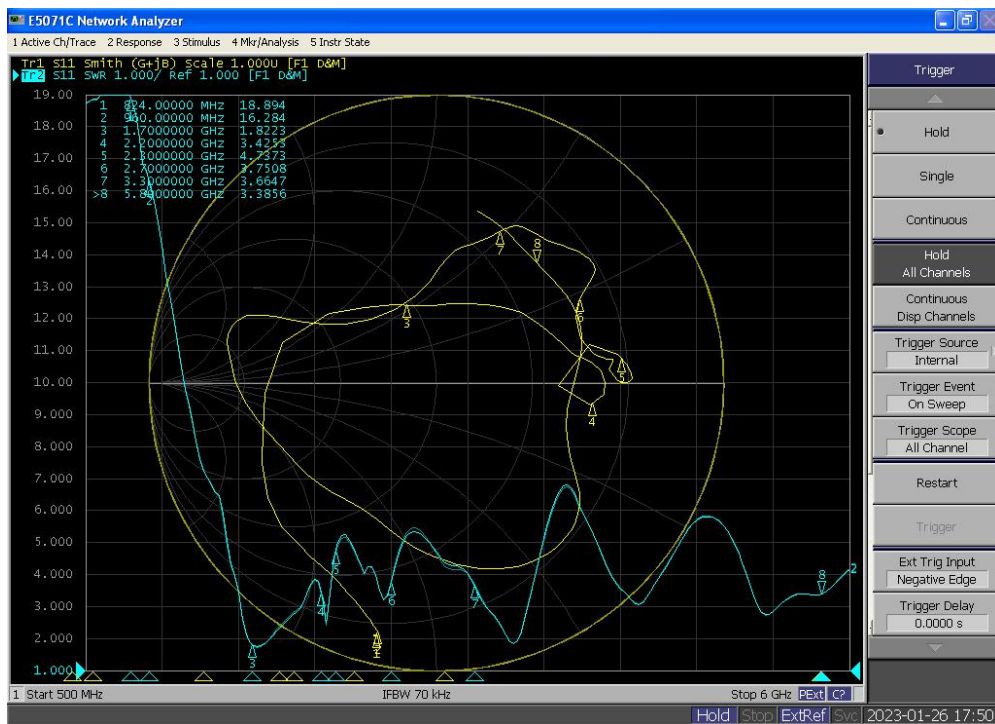
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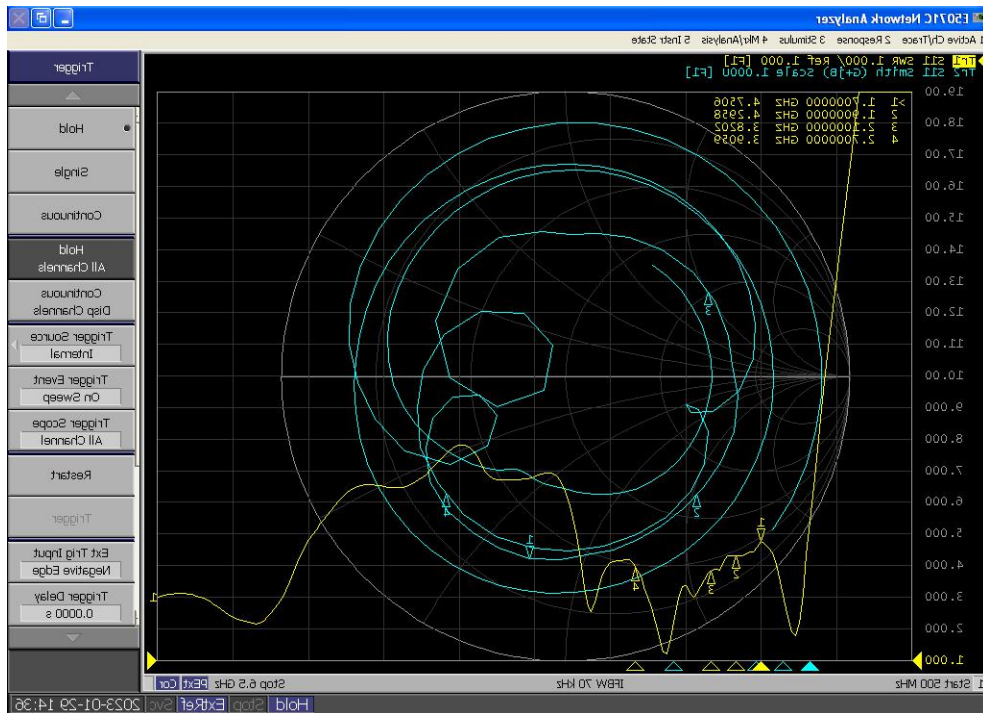
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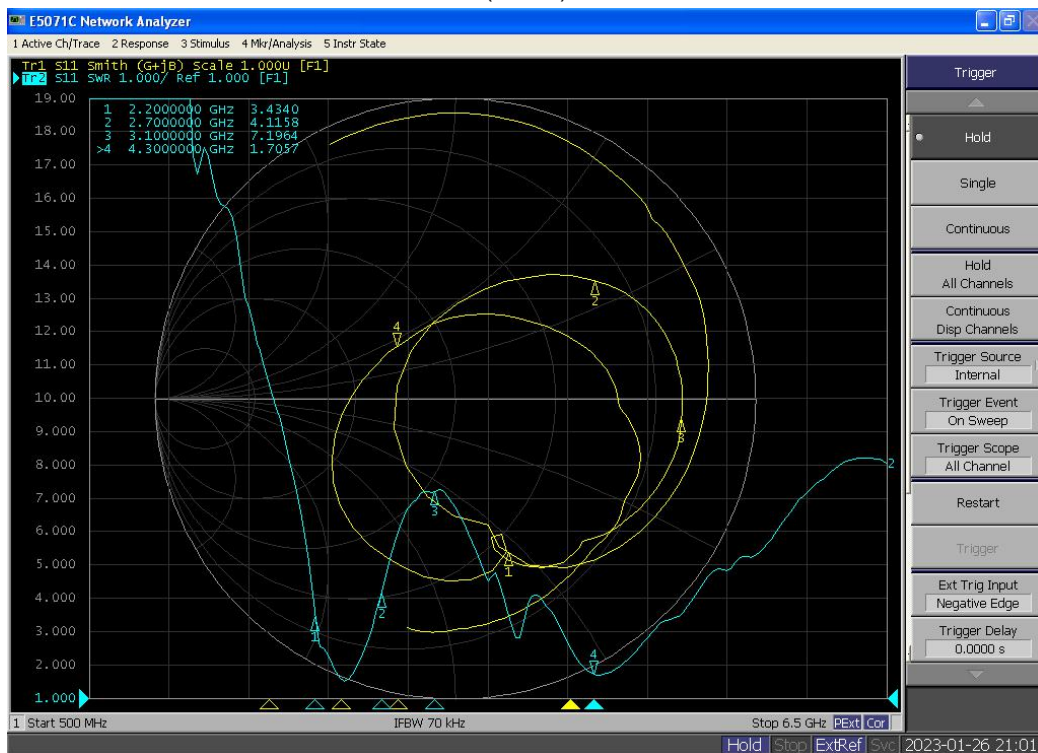
ANT3



ANT4

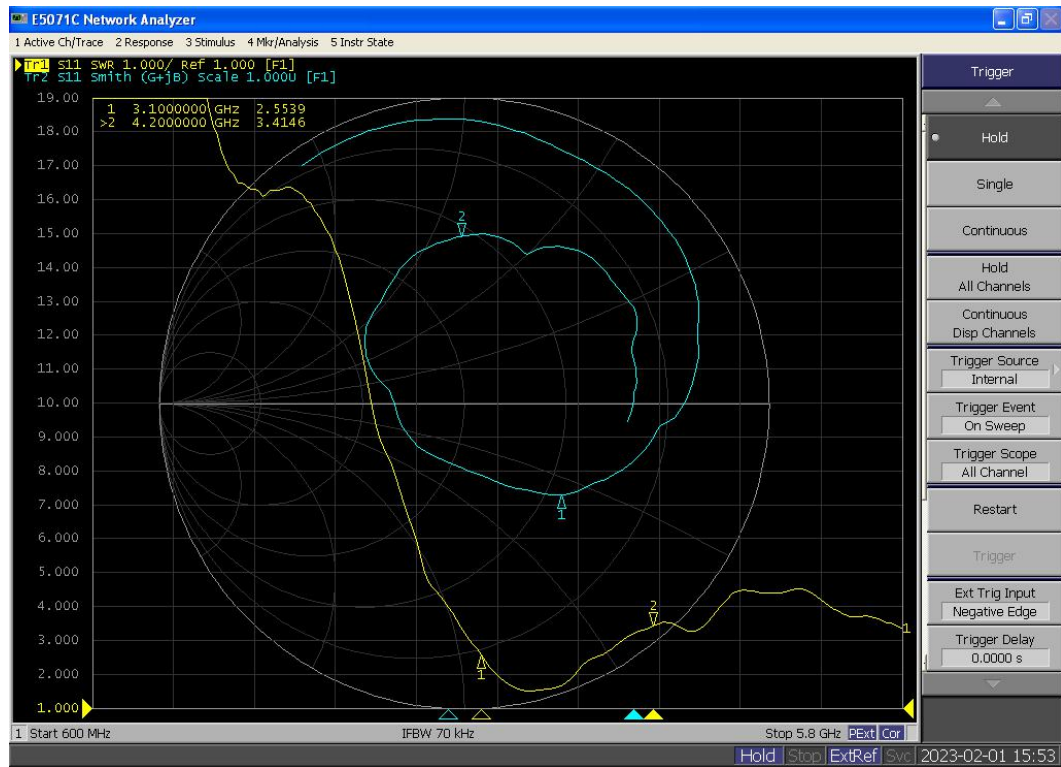


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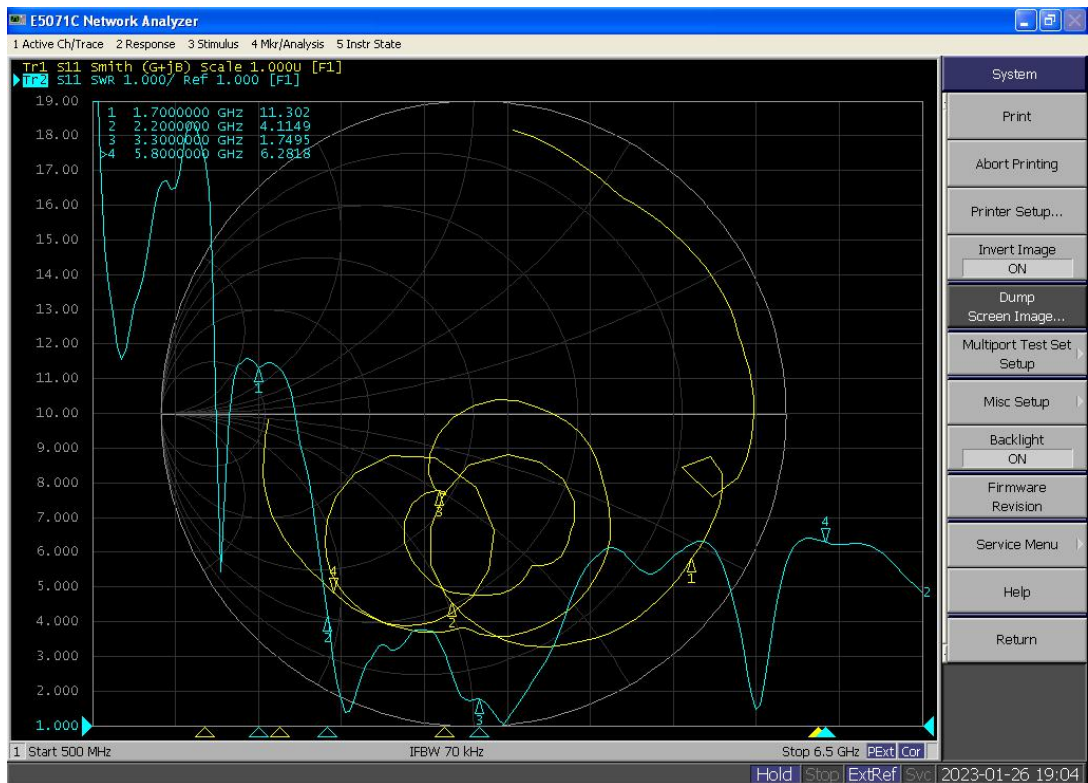


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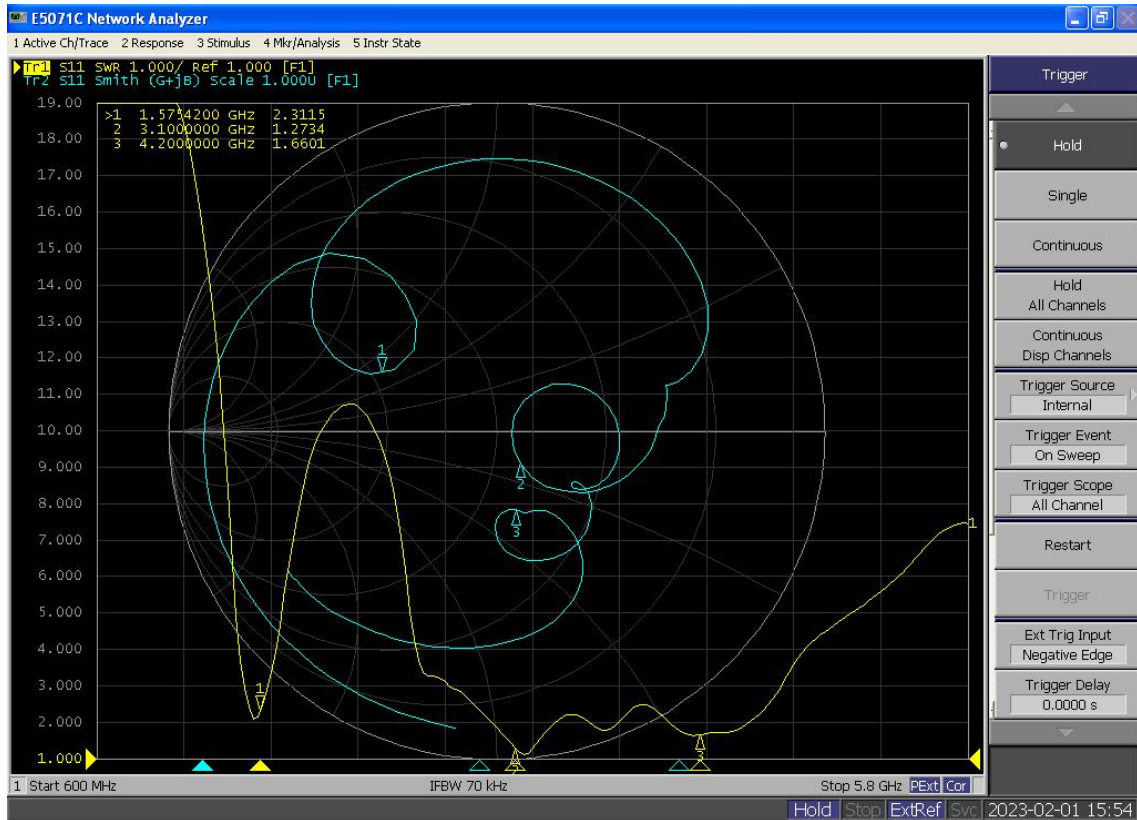
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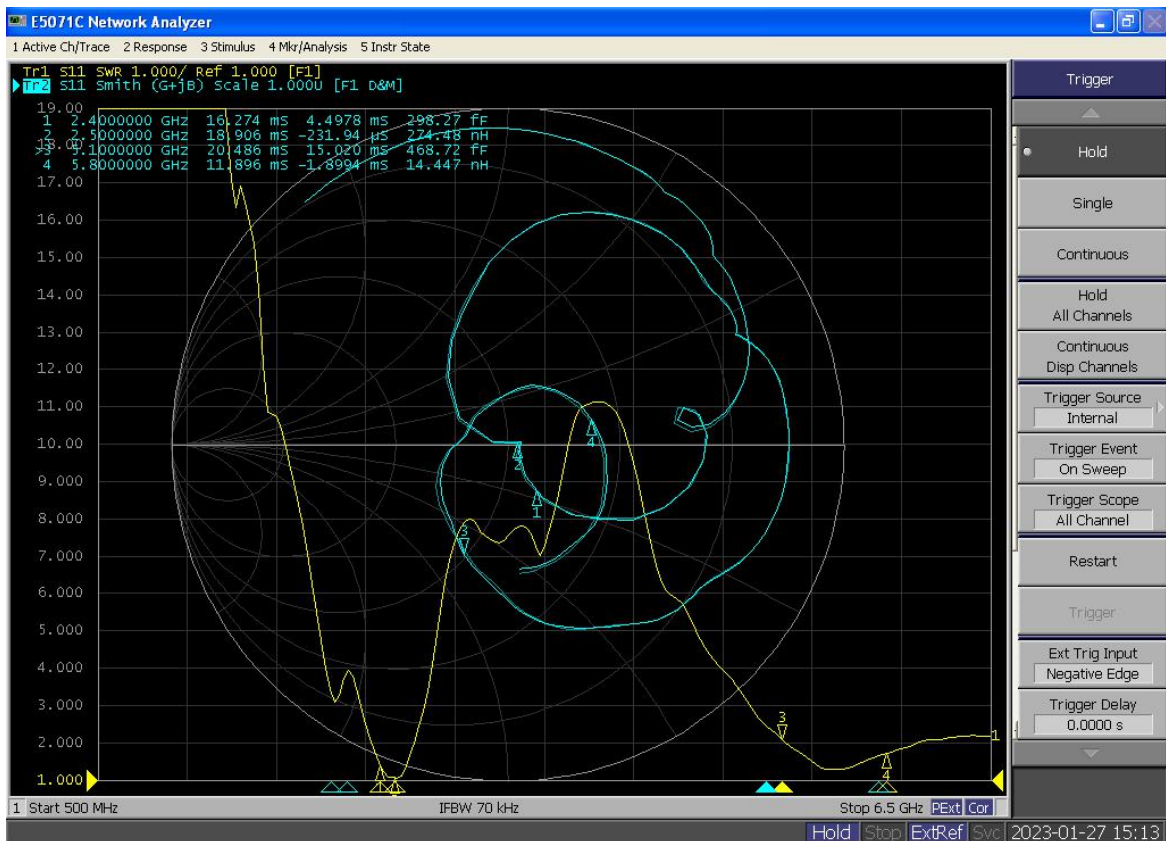
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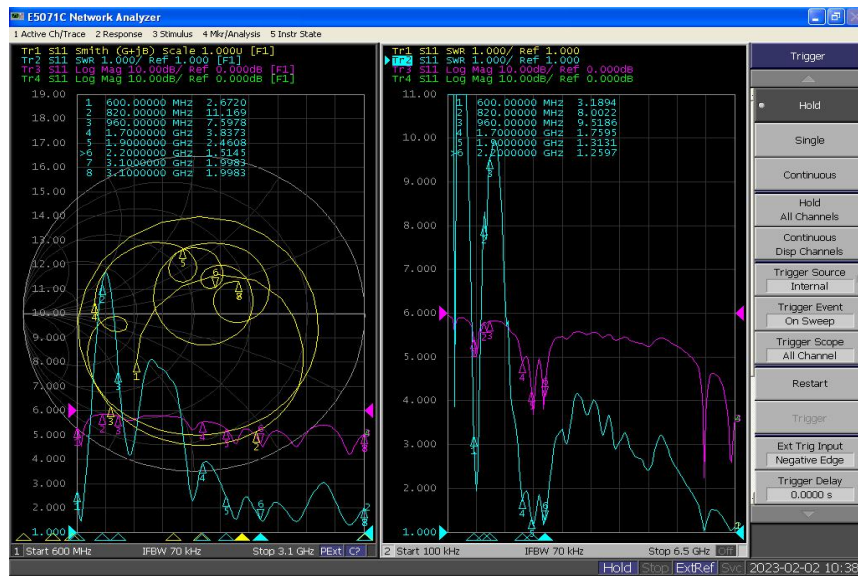
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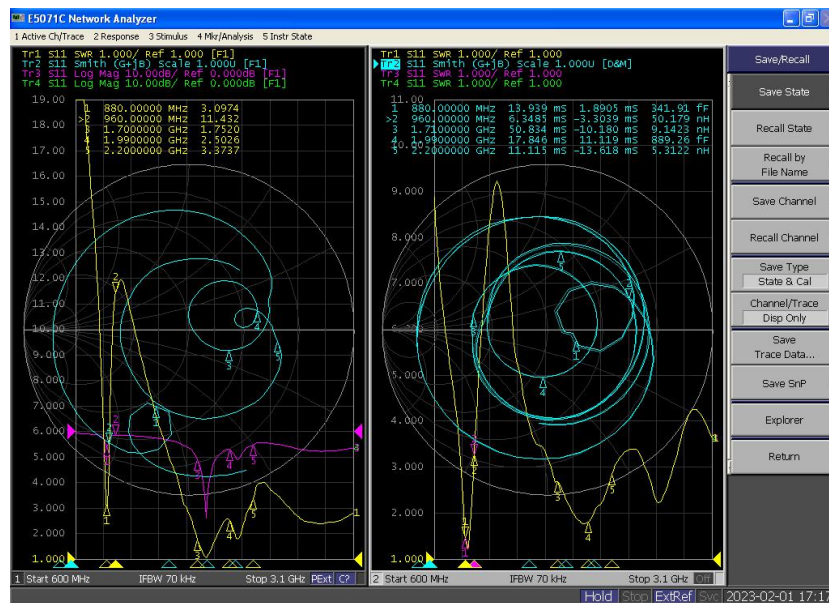
ANT9



RF OF

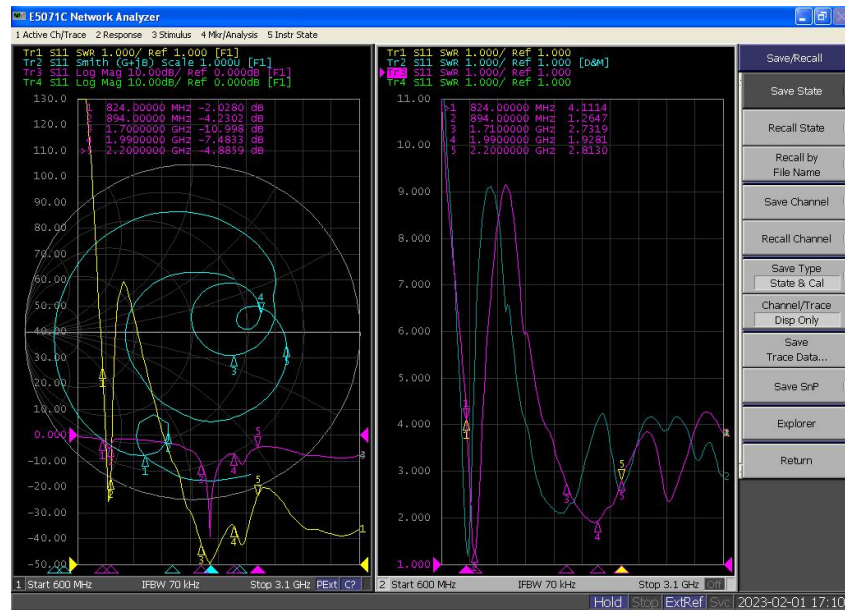


RF1

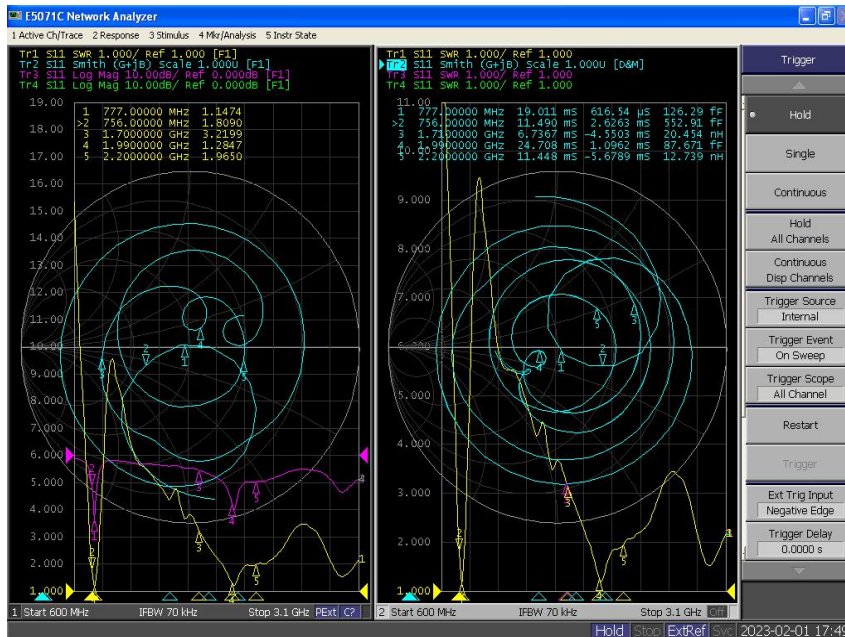


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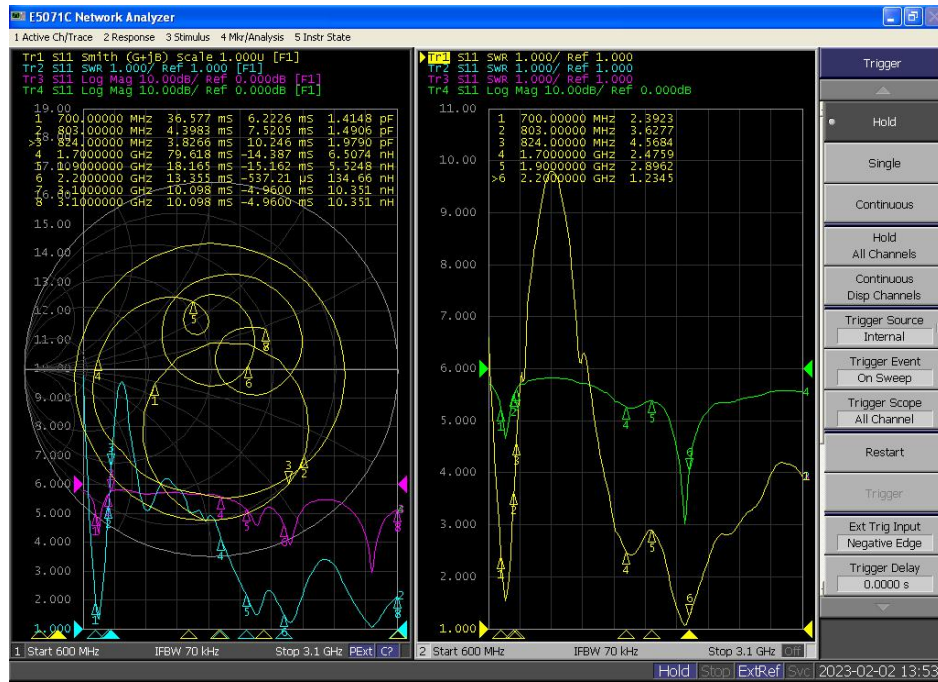
Confidential Information



RF3



RF4



2.12 Efficiency & Gain

ANT1

OF

RF1

RF2

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
610	11.68	-9.32	-9.47	880	16.26	-7.89	-2.56	820	21.66	-6.64	-8.26
620	12.42	-9.06	-8.69	890	18.42	-7.35	-2.76	830	20.34	-6.92	-8.22
630	12.5	-9.03	-7.54	900	21.57	-6.66	-4	840	20.57	-6.87	-8.88
640	10.76	-9.68	-7.24	910	23.55	-6.28	-5.12	850	20.96	-6.79	-7.69
650	11.68	-9.32	-7.45	920	24.22	-6.16	-6.76	860	22.75	-6.43	-6.21
660	14.84	-8.29	-7.39	930	23.83	-6.23	-8.27	870	23.34	-6.32	-4.56
670	20.79	-6.82	-7.91	940	22.1	-6.56	-9.86	880	23.36	-6.31	-3.92
680	18.85	-7.25	-8.7	950	21.39	-6.7	-9.81	890	22.23	-6.53	-3.18
690	17.63	-7.54	-8.87	960	18.86	-7.24	-9.22	900	18.57	-7.31	-4.46
700	15.85	-8	-8.21								

RF3

RF4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	12	-9.21	-12.7	700	11.26	-9.48	-7.01
710	10.25	-9.89	-11.23	710	15.15	-8.2	-5.42
720	13.28	-8.77	-10.09	720	15.47	-8.1	-5.81
730	15.5	-8.1	-8.12	730	15.46	-8.11	-5.28
740	15.31	-8.15	-7.55	740	18	-7.45	-5.62
750	19.59	-7.08	-8.11	750	23.09	-6.37	-5.34

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760	21.31	-6.71	-8.26	760	27.27	-5.64	-5.1
770	19.07	-7.2	-7.39	770	25.46	-5.94	-5.54
780	16.25	-7.89	-6.48	780	23.15	-6.35	-5.63
				790	22.19	-6.54	-5.74
				800	21.78	-6.62	-5.36

RF1

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	18.43	-7.34	-2.89	1940	31.4	-5.03	-1.52
1720	20.25	-6.94	-2.6	1950	31.97	-4.95	-1.29
1730	20.76	-6.83	-2.8	1960	32.59	-4.87	-1.15
1740	21.21	-6.74	-3.08	1970	34.91	-4.57	-0.86
1750	23.87	-6.22	-2.89	1980	37.06	-4.31	-0.72
1760	24.71	-6.07	-2.81	1990	37.56	-4.25	-0.83
1770	25.56	-5.92	-2.65	2000	39.79	-4	-0.82
1780	25.03	-6.02	-2.7	2010	39.34	-4.05	-0.93
1790	24.21	-6.16	-2.82	2020	40.27	-3.95	-0.67
1800	24.59	-6.09	-2.86	2030	42.69	-3.7	-0.2
1810	26.22	-5.81	-2.78	2040	43.38	-3.63	0.01
1820	25.76	-5.89	-3.22	2050	43.87	-3.58	0.12
1830	26.66	-5.74	-3.11	2060	43.53	-3.61	0.21
1840	26.33	-5.8	-3.27	2070	42.62	-3.7	0.08
1850	26.95	-5.69	-3.04	2080	43.53	-3.61	0.29
1860	28.4	-5.47	-2.59	2090	44.32	-3.53	0.38
1870	28.38	-5.47	-2.38	2100	44.82	-3.49	0.63
1880	27.96	-5.53	-2.19	2110	38.11	-4.19	-0.07
1890	27.94	-5.54	-2.14	2120	36.71	-4.35	-0.12
1900	28.12	-5.51	-2.09	2130	37.09	-4.31	-0.1
1910	29.09	-5.36	-1.93	2140	37.98	-4.2	0.11
1920	30.86	-5.11	-1.71	2150	36.06	-4.43	-0.07
1930	31.22	-5.06	-1.51	2160	34.14	-4.67	-0.16
				2170	31.67	-4.99	-0.46

ANT2

OF

RF1

RF2

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
610	10.4	-9.83	-6.29	880	12.92	-8.89	-4.47	820	17.91	-7.47	-4.74
620	13.35	-8.75	-4.03	890	17.53	-7.56	-2.96	830	17.85	-7.48	-4.63
630	15.98	-7.96	-2.36	900	21.62	-6.65	-2.08	840	17.12	-7.66	-4.72
640	16.75	-7.76	-2.24	910	24.54	-6.1	-1.33	850	17.05	-7.68	-4.78
650	17.87	-7.48	-2.54	920	24.64	-6.08	-1.1	860	17.14	-7.66	-3.99
660	16.15	-7.92	-3.31	930	22.54	-6.47	-1.22	870	17.26	-7.63	-3.31
670	18.46	-7.34	-3.01	940	19.35	-7.13	-1.6	880	16.22	-7.9	-3.06

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680	14.86	-8.28	-3.8	950	16.55	-7.81	-2.01	890	18.57	-7.31	-2.81
700	12.05	-9.19	-4.16	960	12.5	-9.03	-2.93	900	23.01	-6.38	-2.31

RF3

RF4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
700	8.01	-10.96	-7.08	700	17.3	-7.62	-3.22
710	11.15	-9.53	-5.37	710	23.17	-6.35	-1.69
720	10.63	-9.73	-5.91	720	21.48	-6.68	-2.25
730	12.18	-9.14	-5.09	730	23.7	-6.25	-1.61
740	13.73	-8.62	-5.21	740	24.52	-6.1	-2.03
750	16.83	-7.74	-4.44	750	25.4	-5.95	-1.75
760	18.66	-7.29	-4.38	760	23.9	-6.22	-2.5
770	16.08	-7.94	-4.87	770	18.59	-7.31	-3.37
780	16.33	-7.87	-4.59	780	16.77	-7.75	-4
790	17.4	-7.6	-4.51	790	15.57	-8.08	-4.15
800	20.54	-6.87	-3.62	800	16.7	-7.77	-3.87

RF1

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	22.7	-6.44	-2	1940	32.62	-4.87	-2.74
1720	22.08	-6.56	-2.33	1950	33.51	-4.75	-2.52
1730	20.87	-6.8	-2.76	1960	32.95	-4.82	-2.6
1740	19.07	-7.2	-2.91	1970	32.36	-4.9	-2.66
1750	17.76	-7.51	-3.23	1980	32.63	-4.86	-2.63
1760	16.86	-7.73	-3.33	1990	30.78	-5.12	-2.89
1770	15.26	-8.16	-3.73	2000	29.9	-5.24	-2.98
1780	14.76	-8.31	-3.95	2010	27.06	-5.68	-3.4
1790	13.85	-8.59	-4.37	2020	24.3	-6.14	-3.85
1800	13.37	-8.74	-4.83	2030	23.18	-6.35	-3.92
1810	13.54	-8.68	-4.93	2040	21.83	-6.61	-3.9
1820	14.49	-8.39	-5.02	2050	21.49	-6.68	-3.84
1830	15.29	-8.16	-4.69	2060	22.38	-6.5	-3.39
1840	17.42	-7.59	-4.14	2070	23.24	-6.34	-3.1
1850	20.07	-6.97	-3.42	2080	24.73	-6.07	-2.67
1860	21.22	-6.73	-3.34	2090	26.27	-5.81	-2.29
1870	22.68	-6.44	-3.08	2100	27.06	-5.68	-2.28
1880	24.6	-6.09	-2.94	2110	24.28	-6.15	-2.74
1890	27.23	-5.65	-2.57	2120	23.81	-6.23	-2.73
1900	30.04	-5.22	-2.26	2130	24.9	-6.04	-2.5
1910	31.04	-5.08	-2.3	2140	26.52	-5.77	-2.05
1920	32.03	-4.94	-2.34	2150	27.02	-5.68	-1.87
1930	33.13	-4.8	-2.47	2160	27.94	-5.54	-1.76
				2170	29.26	-5.34	-1.7

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ANT3

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	37.15	-4.3	1.34	2130	27.39	-5.62	-1.95	2430	23.22	-6.34	-2.24
1720	39.41	-4.04	1.34	2140	27.42	-5.62	-1.97	2440	23.8	-6.23	-2.23
1730	39.39	-4.05	1.08	2150	25.7	-5.9	-2.26	2460	23.53	-6.28	-2.54
1740	37.95	-4.21	0.77	2160	24.27	-6.15	-2.51	2470	21.24	-6.73	-3.3
1750	37.83	-4.22	0.74	2170	23.19	-6.35	-2.84	2480	20.38	-6.91	-3.43
1760	36.47	-4.38	0.67	2180	21.76	-6.62	-3.35	2490	20.21	-6.94	-3.57
1770	35.25	-4.53	0.76	2190	23.1	-6.36	-3.18	2500	20	-6.99	-3.61
1780	34.04	-4.68	0.92	2200	21.91	-6.59	-3.03	2510	19.15	-7.18	-3.94
1790	32.43	-4.89	0.94	2210	20.61	-6.86	-3.09	2520	20.73	-6.83	-3.79
1800	32.39	-4.9	1.03	2220	19.43	-7.11	-3.4	2530	19.89	-7.01	-4.14
1810	33.92	-4.69	1.32	2230	17.95	-7.46	-3.97	2540	20.47	-6.89	-4.25
1820	33.79	-4.71	1.48	2240	17.81	-7.49	-3.89	2550	20.75	-6.83	-4.22
1830	34.85	-4.58	1.75	2250	18.7	-7.28	-3.5	2560	22	-6.58	-4.06
1840	35.7	-4.47	1.97	2260	18.63	-7.3	-3.04	2570	22.28	-6.52	-3.93
1850	37.94	-4.21	2.22	2270	20.66	-6.85	-2.15	2580	22.15	-6.55	-3.88
1860	40.99	-3.87	2.45	2280	20.8	-6.82	-1.76	2590	21.42	-6.69	-3.99
1870	42.21	-3.75	2.47	2290	20.54	-6.87	-1.64	2600	23.75	-6.24	-3.48
1880	42.08	-3.76	2.36	2170	23.19	-6.35	-2.84	2610	23.39	-6.31	-3.45
1890	43.46	-3.62	2.32	2180	21.76	-6.62	-3.35	2620	22.55	-6.47	-3.42
1900	44.52	-3.51	2.29	2190	23.1	-6.36	-3.18	2630	22.83	-6.41	-3.18
1910	44.56	-3.51	2.1	2200	21.91	-6.59	-3.03	2640	24.05	-6.19	-2.77
1920	45.26	-3.44	2.05	2210	20.61	-6.86	-3.09	2650	24.14	-6.17	-2.6
1930	42.33	-3.73	1.47	2220	19.43	-7.11	-3.4	2660	25.11	-6	-2.32
1940	38.37	-4.16	0.99	2230	17.95	-7.46	-3.97	2670	25.93	-5.86	-2.22
1950	37.1	-4.31	0.74	2240	17.81	-7.49	-3.89	2680	29.42	-5.31	-1.72
1960	35.83	-4.46	0.61	2250	18.7	-7.28	-3.5	2690	30.07	-5.22	-1.67
1970	37.15	-4.3	0.56	2260	18.63	-7.3	-3.04	2700	32.4	-4.89	-1.32
1980	39.56	-4.03	0.7	2270	20.66	-6.85	-2.15				
1990	39.02	-4.09	0.47	2280	20.8	-6.82	-1.76				
2000	39.77	-4	0.41	2300	21.17	-6.74	-1.32				
2010	37.16	-4.3	0.01	2310	21.63	-6.65	-1.19				
2020	35.17	-4.54	-0.38	2320	21.85	-6.6	-1.27				
2030	35.56	-4.49	-0.46	2330	23.57	-6.28	-1.01				
2040	34.29	-4.65	-0.73	2340	22.67	-6.44	-1.18				
2050	33.57	-4.74	-1.04	2350	23.8	-6.23	-0.91				
2060	33.1	-4.8	-1.11	2360	22.73	-6.43	-1.07				
2070	32.11	-4.93	-0.93	2370	22.53	-6.47	-1.14				
2080	32.89	-4.83	-0.74	2380	23.16	-6.35	-1.19				
2090	33.7	-4.72	-0.58	2390	24.33	-6.14	-1.05				
2100	32.94	-4.82	-0.76	2400	24.22	-6.16	-1.49				
2110	29.13	-5.36	-1.41	2410	24.86	-6.05	-1.65				
2120	27.18	-5.66	-1.85	2420	23.52	-6.28	-2.14				

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ANT4

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1710	38.25	-4.17	2.51	2130	28.42	-5.46	-1.45	2450	24.73	-6.07	-1.31
1720	39.26	-4.06	2.68	2140	30.89	-5.1	-1.23	2460	26.31	-5.8	-1.63
1730	37.81	-4.22	2.62	2150	31.36	-5.04	-1.29	2470	25.22	-5.98	-1.75
1740	35.29	-4.52	2.54	2160	32.3	-4.91	-1.31	2480	25.62	-5.91	-2.02
1750	35.03	-4.56	2.62	2170	32.68	-4.86	-1.42	2490	27.19	-5.66	-1.92
1760	34.33	-4.64	2.57	2180	33.27	-4.78	-1.58	2500	29.48	-5.3	-1.08
1770	33.86	-4.7	2.36	2190	35.77	-4.46	-1.33	2510	29.73	-5.27	-1.21
1780	33.34	-4.77	2.12	2200	35.06	-4.55	-1.45	2520	29.32	-5.33	-1.29
1790	32.02	-4.95	1.76	2210	32.51	-4.88	-1.61	2530	27.72	-5.57	-1.54
1800	32.02	-4.95	1.49	2220	27.89	-5.55	-1.92	2540	26.26	-5.81	-1.8
1810	32.82	-4.84	1.44	2230	21.63	-6.65	-2.71	2550	24.74	-6.07	-2.27
1820	32.04	-4.94	1.12	2240	18.26	-7.38	-2.72	2560	23.99	-6.2	-2.58
1830	31.64	-5	1.09	2250	17.03	-7.69	-2.82	2570	23.41	-6.31	-2.74
1840	30.53	-5.15	1.05	2260	17.22	-7.64	-2.91	2580	20.9	-6.8	-3.12
1850	30.21	-5.2	1.25	2270	18.85	-7.25	-2.89	2590	19.36	-7.13	-3.45
1860	31.08	-5.07	1.4	2280	18.15	-7.41	-3.07	2600	19.44	-7.11	-3.29
1870	30.9	-5.1	1.31	2290	18.62	-7.3	-2.92	2610	18.23	-7.39	-3.47
1880	30.3	-5.19	1.01	2300	18.92	-7.23	-2.92	2620	16.75	-7.76	-3.67
1890	30.8	-5.11	0.83	2310	19.59	-7.08	-2.84	2630	15.97	-7.97	-3.74
1900	31.7	-4.99	0.74	2320	20.32	-6.92	-2.69	2640	16.21	-7.9	-3.55
1910	32.94	-4.82	0.64	2330	22.09	-6.56	-2.33	2650	16.3	-7.88	-3.47
1920	35.36	-4.52	0.79	2340	21.23	-6.73	-2.5	2660	16.05	-7.95	-3.38
1930	34.82	-4.58	0.47	2350	23.3	-6.33	-2.03	2670	16	-7.96	-3.25
1940	34.3	-4.65	0.15	2360	22.2	-6.54	-2.11	2680	17.12	-7.67	-2.88
1950	35.13	-4.54	0.07	2270	18.85	-7.25	-2.89	2690	16.36	-7.86	-2.9
1960	35.65	-4.48	-0.23	2280	18.15	-7.41	-3.07	2700	16.73	-7.76	-2.54
1970	37.11	-4.31	-0.05	2290	18.62	-7.3	-2.92				
1980	39.2	-4.07	0.17	2300	18.92	-7.23	-2.92				
1990	38.18	-4.18	0.27	2310	19.59	-7.08	-2.84				
2000	38.79	-4.11	0.54	2320	20.32	-6.92	-2.69				
2010	36.3	-4.4	0.53	2330	22.09	-6.56	-2.33				
2020	34.93	-4.57	0.49	2340	21.23	-6.73	-2.5				
2030	35.24	-4.53	0.65	2350	23.3	-6.33	-2.03				
2040	33.94	-4.69	0.56	2360	22.2	-6.54	-2.11				
2050	32.34	-4.9	0.32	2370	23.03	-6.38	-1.85				
2060	30.18	-5.2	0.03	2380	23.55	-6.28	-1.43				
2070	28.14	-5.51	-0.29	2390	23.16	-6.35	-0.96				
2080	28.44	-5.46	-0.36	2400	23.69	-6.25	-1.43				
2090	28.75	-5.41	-0.46	2410	23.51	-6.29	-1.33				
2100	28.96	-5.38	-0.59	2420	23.43	-6.3	-1.74				
2110	26.03	-5.84	-1.25	2430	24.4	-6.13	-1.32				

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2120	26.09	-5.83	-1.57	2440	24.09	-6.18	-1				
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3580	38.94	-4.1	-0.14	4240	35.39	-4.51	1.87
3600	41.49	-3.82	0.34	4260	35.21	-4.53	1.84
3620	35.48	-4.5	-0.05	4280	36.26	-4.41	2.04
3640	37.82	-4.22	0.51	4300	39.73	-4.01	2.4
3660	34.7	-4.6	0.23	4000	33.37	-4.77	0.6
3680	34.02	-4.68	0.13	4020	40.14	-3.96	1.54
3700	33.34	-4.77	0.17	4040	41.3	-3.84	1.77
3720	33.56	-4.74	0.22	4060	40.17	-3.96	1.62
3740	30.38	-5.17	-0.2	4080	43.68	-3.6	2.14
3760	31.51	-5.02	0.02	4100	39.3	-4.06	1.68
3780	25.49	-5.94	-0.96	4120	34.66	-4.6	1.26
3800	27	-5.69	-0.71	4140	37.65	-4.24	1.74
3820	25.19	-5.99	-0.69	4160	30.53	-5.15	0.82
3840	23.39	-6.31	-0.83	4180	32.16	-4.93	1.16
3860	23.52	-6.29	-0.67	4200	33.05	-4.81	1.4
3880	24.68	-6.08	-0.4	4220	33.94	-4.69	1.62
3900	26.07	-5.84	-0.26	4240	35.39	-4.51	1.87
3920	28.99	-5.38	0.14	4260	35.21	-4.53	1.84
3940	29.82	-5.26	0.19	4300	39.73	-4.01	2.4

ANT5

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2300	34.31	-4.65	1.29	3440	23.23	-6.34	-1.5
2310	35.06	-4.55	1.18	3460	20.95	-6.79	-2.05
2320	36.75	-4.35	1.08	3480	22.74	-6.43	-1.91
2330	41.32	-3.84	1.52	3500	22.01	-6.57	-2.4
2340	44.54	-3.51	1.65	3520	24.58	-6.09	-2.14
2350	47.33	-3.25	1.88	3540	23.99	-6.2	-2.24
2360	48.52	-3.14	1.81	3560	26.39	-5.79	-1.79
2370	48.52	-3.14	1.83	3580	21.39	-6.7	-2.72
2380	49.84	-3.02	1.8	3600	24.04	-6.19	-2.5
2390	50.41	-2.97	1.84	3620	21.09	-6.76	-3.1
2400	51.81	-2.86	1.83	3640	22.16	-6.55	-3.18
2410	50.2	-2.99	1.68	3660	22.56	-6.47	-3.17
2420	50.52	-2.97	1.58	3680	20.76	-6.83	-3.23
2430	48.75	-3.12	1.45	3700	20.02	-6.99	-3.32

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2440	48	-3.19	1.57	3720	25.18	-5.99	-2.03
2450	48.57	-3.14	1.7	3740	21.86	-6.6	-2.75
2460	46.94	-3.28	1.57	3760	25.38	-5.96	-2.29
2470	45.36	-3.43	1.55	3780	25.48	-5.94	-2.53
2480	45.53	-3.42	1.71	3800	26.1	-5.83	-2.56
2490	46.99	-3.28	2.16	3820	31.89	-4.96	-1.5
2500	47.77	-3.21	2.28	3840	32.07	-4.94	-1.39
2510	47	-3.28	2.52	3860	31	-5.09	-1.54
2520	46.38	-3.34	2.5	3880	35.2	-4.53	-0.89
2530	48.01	-3.19	2.84	3900	32.36	-4.9	-1.18
2540	47.46	-3.24	2.8	3920	34.21	-4.66	-0.73
2550	48.77	-3.12	3	3940	38.9	-4.1	-0.06
2560	49.96	-3.01	3.1	3960	31.27	-5.05	-0.94
2570	51.54	-2.88	3.22	3980	38.96	-4.09	0.36
2580	49.37	-3.07	3.06	4000	34.59	-4.61	-0.2
2590	49.74	-3.03	3.12	4020	35.3	-4.52	0.11
2600	49.71	-3.04	3.14	4040	42.91	-3.67	1.19
2610	50.34	-2.98	3.21	4060	45.25	-3.44	1.61
2620	46.82	-3.3	2.87	4080	49.57	-3.05	2.16
2630	44.74	-3.49	2.65	4100	55.85	-2.53	2.65
2640	44.88	-3.48	2.52	4120	50.09	-3	2.07
2650	44.52	-3.51	2.45	4140	59.25	-2.27	2.61
2660	42.1	-3.76	2.05	4160	54.72	-2.62	1.95
2670	40.21	-3.96	1.9	4180	52.03	-2.84	1.36
2680	37.95	-4.21	1.57	4200	56.58	-2.47	1.51
2690	36.07	-4.43	1.34	4220	58.64	-2.32	1.54
2700	35.49	-4.5	1.3	4240	56.37	-2.49	1.32
3120	11.35	-9.45	-4.37	4260	59.53	-2.25	1.54
3140	11.05	-9.57	-4.13	4280	58.03	-2.36	1.47
3160	11.43	-9.42	-3.99	4300	57.99	-2.37	1.48
3180	12.47	-9.04	-3.72				
3200	12.49	-9.03	-3.7				
3220	11.9	-9.24	-3.97				
3240	14.65	-8.34	-2.9				
3260	13.3	-8.76	-3.27				
3280	15.57	-8.08	-2.64				
3300	15.06	-8.22	-2.74				
3320	17.11	-7.67	-2.24				
3340	15.94	-7.98	-2.67				
3360	17.82	-7.49	-2.1				
3380	18.08	-7.43	-2.15				
3400	22.87	-6.41	-1.1				
3420	20.7	-6.84	-1.65				

ANT6

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Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
3300	42.19	-3.75	-0.58	3780	25.49	-5.94	-1.73
3320	49.1	-3.09	-0.17	3800	27	-5.69	-1.48
3340	46.56	-3.32	-0.81	3820	25.19	-5.99	-1.46
3360	52.56	-2.79	-0.61	3840	23.39	-6.31	-1.6
3380	52.14	-2.83	-0.79	3860	23.52	-6.29	-1.44
3400	58.82	-2.3	-0.38	3880	24.68	-6.08	-1.17
3420	53.93	-2.68	-0.81	3900	26.07	-5.84	-1.03
3440	57.51	-2.4	-0.5	3920	28.99	-5.38	-0.63
3460	48.36	-3.15	-1.12	3940	29.82	-5.26	-0.58
3480	50.06	-3	-0.67	3960	31.37	-5.03	-0.43
3500	43.85	-3.58	-0.91	3980	37.75	-4.23	0.27
3520	45.28	-3.44	-0.69	4000	33.37	-4.77	-0.17
3540	43.58	-3.61	-0.74	4020	40.14	-3.96	0.77
3560	42.74	-3.69	-0.71	4040	41.3	-3.84	1
3580	38.94	-4.1	-0.91	4060	40.17	-3.96	0.85
3600	41.49	-3.82	-0.43	4080	43.68	-3.6	1.37
3620	35.48	-4.5	-0.82	4100	39.3	-4.06	0.91
3640	37.82	-4.22	-0.26	4120	34.66	-4.6	0.49
3660	34.7	-4.6	-0.54	4140	37.65	-4.24	0.97
3680	34.02	-4.68	-0.64	4160	30.53	-5.15	0.05
3700	33.34	-4.77	-0.6	4180	32.16	-4.93	0.39
3720	33.56	-4.74	-0.55	4200	33.05	-4.81	0.63
3740	30.38	-5.17	-0.97				
3760	31.51	-5.02	-0.75				

ANT7

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2300	28.73	-5.42	0.04	3120	3.89	-14.1	-10.92	3940	19.64	-7.07	-2.04
2310	29.49	-5.3	0.08	3140	2.69	-15.7	-12.17	3960	18.73	-7.27	-2.27
2320	30.75	-5.12	0.18	3160	2.01	-16.97	-12.99	3980	19.21	-7.17	-1.72
2330	32.2	-4.92	0.36	3180	1.79	-17.47	-13.59	4000	16.95	-7.71	-1.91
2340	32.35	-4.9	0.5	3200	1.99	-17.01	-12.18	4020	16.44	-7.84	-2.22
2350	34.52	-4.62	0.2	3220	2.55	-15.93	-9.71	4040	14.96	-8.25	-2.6
2360	34.12	-4.67	0.08	3240	3.85	-14.14	-7.2	4060	14.49	-8.39	-3.11
2370	34.77	-4.59	-0.06	3260	4.45	-13.51	-6.29	4080	13.93	-8.56	-3.5
2380	35.62	-4.48	-0.16	3280	6.08	-12.16	-5.56	4100	13.8	-8.6	-3.53
2390	36.28	-4.4	-0.09	3300	6.51	-11.86	-5.92	4120	12.28	-9.11	-4.11
2400	36.07	-4.43	0.03	3320	8.56	-10.68	-5.47	4140	12.5	-9.03	-3.45
2410	36.33	-4.4	0.11	3340	8.41	-10.75	-5.68	4160	12.45	-9.05	-3.05

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2420	35.5	-4.5	0.08	3360	10.67	-9.72	-4.58	4180	13.12	-8.82	-2.45
2430	36.4	-4.39	0.15	3380	11.51	-9.39	-4.58	4200	12.27	-9.11	-2.6
2440	36.95	-4.32	0.07	3400	13.12	-8.82	-4.45	4220	14.65	-8.34	-1.83
2450	38.02	-4.2	0.02	3420	14.04	-8.53	-4.5	4240	14.06	-8.52	-2
2460	38.34	-4.16	-0.12	3440	16.8	-7.75	-3.67	4260	14.2	-8.48	-1.9
2470	36.55	-4.37	-0.44	3460	15.84	-8	-3.85	4280	15.27	-8.16	-1.5
2480	36.7	-4.35	-0.4	3480	19.08	-7.2	-3.11	4300	13.59	-8.67	-2.14
2490	37.66	-4.24	-0.37	3500	18.05	-7.44	-3.22				
2500	36.85	-4.34	-0.41	3520	19.95	-7	-2.42				
2510	35.81	-4.46	-0.56	3540	19.24	-7.16	-2.58				
2520	35.14	-4.54	-0.54	3560	19.79	-7.04	-2.51				
2530	35.52	-4.5	-0.37	3580	18.23	-7.39	-2.82				
2540	34.44	-4.63	-0.52	3600	18.63	-7.3	-2.61				
2550	34.95	-4.57	-0.49	3620	18.17	-7.41	-2.25				
2560	34.87	-4.57	-0.57	3640	21.34	-6.71	-1.56				
2570	35.48	-4.5	-0.59	3660	21.98	-6.58	-1.62				
2580	33.62	-4.73	-0.85	3680	25.06	-6.01	-1.02				
2590	32.96	-4.82	-1.07	3700	24.49	-6.11	-1.24				
2600	31.59	-5	-1.22	3720	25.69	-5.9	-1.03				
2610	31.1	-5.07	-1.47	3740	24.01	-6.2	-1.34				
2620	28.1	-5.51	-1.96	3760	24.28	-6.15	-1.41				
2630	26.8	-5.72	-1.95	3780	21.06	-6.77	-1.96				
2640	26.21	-5.82	-1.75	3800	20.56	-6.87	-1.93				
2650	25.28	-5.97	-1.39	3820	19.17	-7.17	-1.98				
2660	23.76	-6.24	-1.5	3840	18.98	-7.22	-2.08				
2670	22.78	-6.42	-1.82	3860	17.88	-7.48	-2.26				
2680	21.3	-6.72	-2.04	3880	17.72	-7.52	-2.22				
2690	20.15	-6.96	-2.46	3900	18.53	-7.32	-1.89				
2700	19.31	-7.14	-2.48	3920	17.53	-7.56	-2.22				

ANT9

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
1550	34.48	-4.62	0.13	3720	37.81	-4.22	-0.05
1555	35.65	-4.48	0.23	3740	35.19	-4.54	-0.14
1560	35	-4.56	0.08	3760	36.69	-4.36	0.39
1565	35.09	-4.55	0.06	3780	33.38	-4.76	-0.05
1570	36.35	-4.39	0.08	3800	32.64	-4.86	-0.21
1575	36.13	-4.42	0	3820	32.61	-4.87	-0.1
1580	36.66	-4.36	0.05	3840	32.48	-4.88	-0.17
1585	35.6	-4.49	-0.17	3860	31.46	-5.02	-0.34
1590	37.06	-4.31	-0.12	3880	32.83	-4.84	0.09
1595	37.12	-4.3	-0.17	3900	31.2	-5.06	-0.31
1600	35.16	-4.54	-0.41	3920	29.95	-5.24	-0.26
3120	45.72	-3.4	1.9	3940	33.62	-4.73	0.28

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3140	44.68	-3.5	1.59	3960	26.77	-5.72	-0.77
3160	44.56	-3.51	1.43	3980	29.15	-5.35	-0.5
3180	47.59	-3.22	1.56	4000	24.9	-6.04	-1.39
3200	47.12	-3.27	1.34	4020	23.05	-6.37	-1.73
3220	43.49	-3.62	0.93	4040	25.23	-5.98	-1.42
3240	52.18	-2.83	1.68	4060	26.1	-5.83	-1.27
3260	46.57	-3.32	1.17	4080	26.84	-5.71	-1.24
3280	52.05	-2.84	1.69	4100	30.77	-5.12	-0.5
3300	49.24	-3.08	1.43	4120	28.75	-5.41	-0.98
3320	53.24	-2.74	1.53	4140	33.32	-4.77	-0.45
3340	49.83	-3.03	0.73	4160	33.02	-4.81	-0.48
3360	52.75	-2.78	0.39	4180	32.26	-4.91	-0.58
3380	48.09	-3.18	-0.14	4200	34.59	-4.61	-0.05
3400	57.84	-2.38	0.99	4220	38.65	-4.13	0.54
3420	49.99	-3.01	0.51	4240	36.98	-4.32	0.57
3440	51.85	-2.85	0.85	4260	38.82	-4.11	0.64
3460	46.21	-3.35	0.41	4280	38.83	-4.11	0.64
3480	45.95	-3.38	0.34	4300	35.87	-4.45	0.28
3500	40.15	-3.96	-0.12				
3520	41.53	-3.82	-0.19				
3540	38.24	-4.18	-0.42				
3560	39.61	-4.02	0				
3580	33.06	-4.81	-0.69				
3600	35.19	-4.54	-0.42				
3620	31.2	-5.06	-0.94				
3640	33.45	-4.76	-0.72				
3660	33.25	-4.78	-0.89				
3680	32.86	-4.83	-1.08				
3700	31.95	-4.95	-1.06				

ANT8

Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)	Freq (MHz)	Effi (%)	Effi (dB)	Gain (dBi)
2400	38.99	-4.09	-0.34	5450	39.92	-3.99	0.39
2410	39.85	-4	-0.2	5460	40.83	-3.89	0.39
2420	40.15	-3.96	-0.27	5470	40.99	-3.87	0.51
2430	40.2	-3.96	-0.31	5480	39	-4.09	0.35
2440	40.57	-3.92	-0.48	5490	39.83	-4	0.4
2450	41.04	-3.87	-0.69	5500	38.57	-4.14	0.38
2460	39.85	-4	-0.75	5510	37.54	-4.25	0.37
2470	37.9	-4.21	-0.93	5520	37.25	-4.29	0.3
2480	37.42	-4.27	-0.89	5530	39.26	-4.06	0.68
2490	38.02	-4.2	-0.85	5540	40.64	-3.91	0.85

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2500	37.54	-4.26	-0.87	5550	39.27	-4.06	0.69
5150	30.56	-5.15	-1.45	5560	37.86	-4.22	0.66
5160	30.85	-5.11	-1.29	5570	37.87	-4.22	0.61
5170	30.49	-5.16	-1.36	5580	38.64	-4.13	0.66
5180	29.95	-5.24	-1.28	5590	38.74	-4.12	0.59
5190	29.58	-5.29	-1.38	5600	38.74	-4.12	0.71
5200	29.84	-5.25	-1.4	5610	37.32	-4.28	0.5
5210	31.61	-5	-1.01	5620	37.45	-4.27	0.37
5220	31.94	-4.96	-0.73	5630	38.1	-4.19	0.16
5230	32.15	-4.93	-0.77	5640	37.47	-4.26	0.12
5240	30.34	-5.18	-0.87	5650	38.28	-4.17	0.1
5250	29.55	-5.3	-0.87	5660	39.97	-3.98	0.33
5260	30.23	-5.2	-0.79	5670	38.59	-4.13	0.2
5270	30.17	-5.2	-0.74	5680	39.23	-4.06	0.38
5280	30.12	-5.21	-0.52	5690	38.65	-4.13	0.14
5290	31.61	-5	-0.17	5700	39.19	-4.07	0.27
5300	29.79	-5.26	-0.44	5710	37.8	-4.22	0.02
5310	29.84	-5.25	-0.16	5720	36.38	-4.39	-0.33
5320	31.5	-5.02	0.24	5730	36.92	-4.33	-0.15
5330	30.92	-5.1	0.15	5740	37.77	-4.23	-0.2
5340	32.73	-4.85	0.33	5750	38.68	-4.12	-0.02
5350	34.13	-4.67	0.43	5760	35.91	-4.45	-0.49
5360	33.01	-4.81	0.1	5770	35.97	-4.44	-0.37
5370	33.68	-4.73	-1.45	5780	34.28	-4.65	-0.69
5380	35.63	-4.48	-1.29	5790	33.75	-4.72	-0.52
5390	33.38	-4.77	-1.36	5800	32.77	-4.85	-0.55
5400	39.82	-4	-1.28	5810	33.24	-4.78	-0.53
5410	39.6	-4.02	-1.38	5820	34.73	-4.59	-0.42
5420	40.36	-3.94	-1.4	5830	34.24	-4.66	-0.42
5430	40.05	-3.97	-1.01	5840	33.3	-4.78	-0.48
5440	40.05	-3.97	-0.73	5850	34.73	-4.59	-0.18

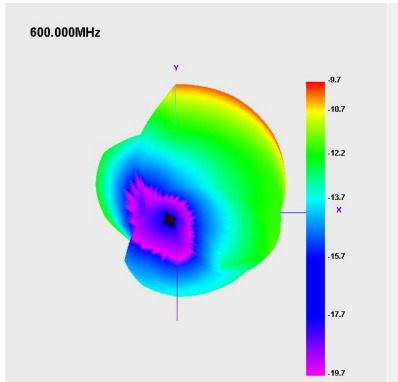
2.2 3D Pattern

ANT1

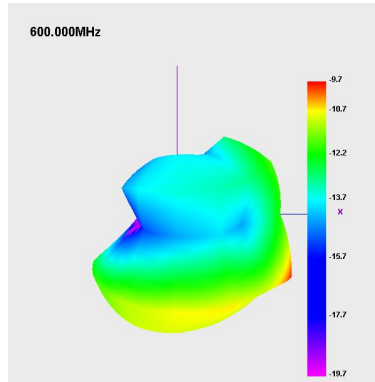
H plane

E1 plane

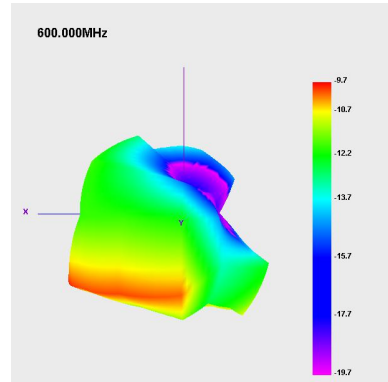
E2 plane



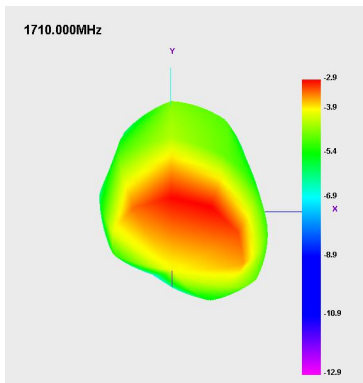
H plane



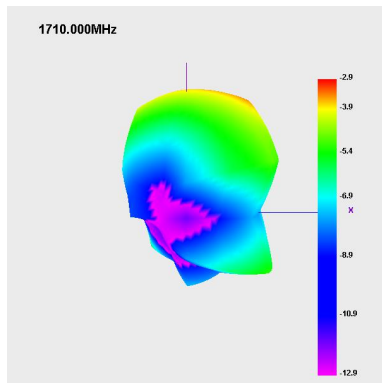
E1 plane



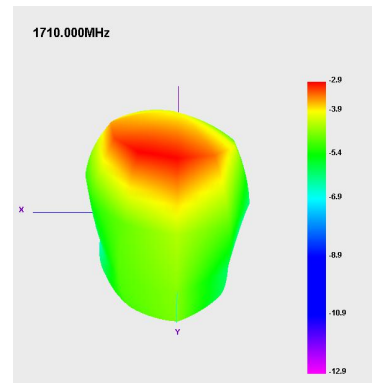
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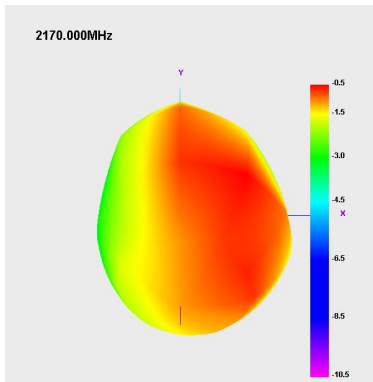
H plane



E1 plane

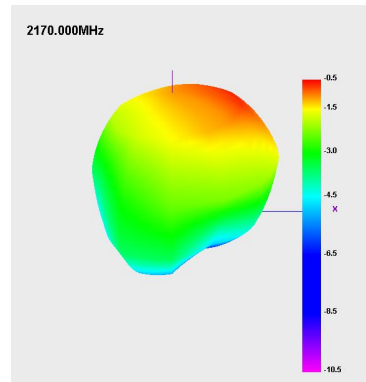


E2 plane

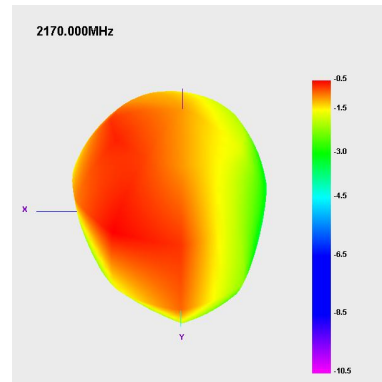


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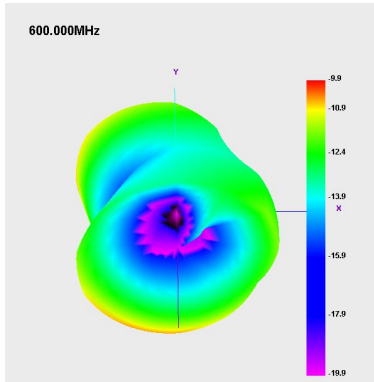
H plane



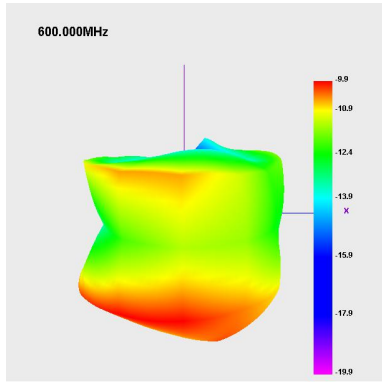
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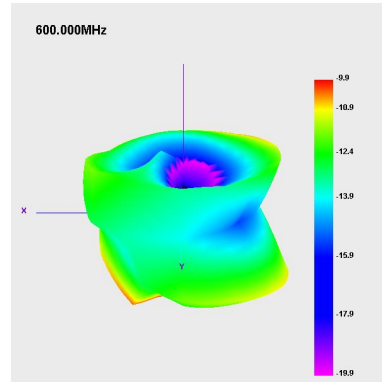
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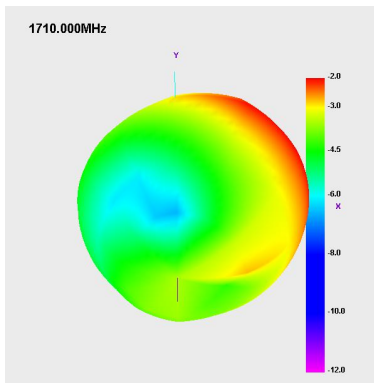
H plane



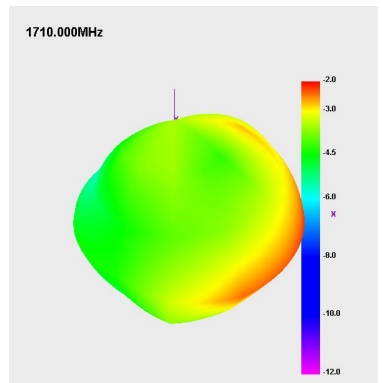
E1 plane



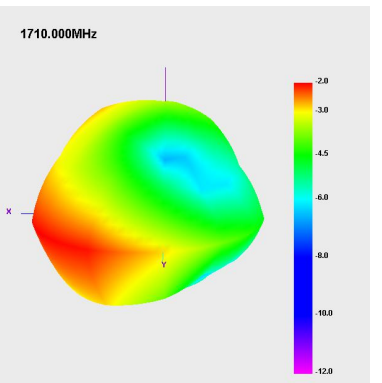
E2 plane



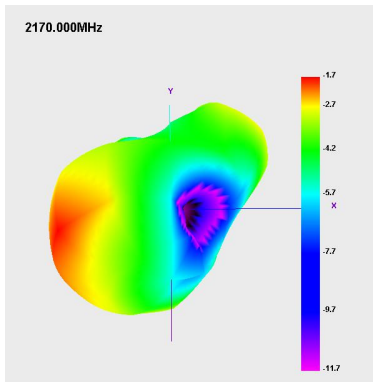
H plane



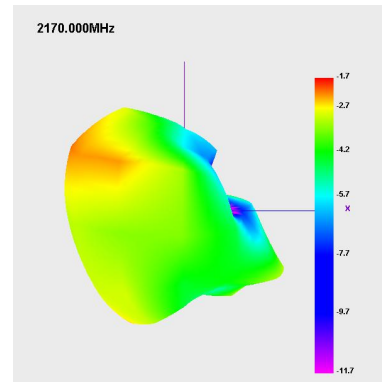
E1 plane



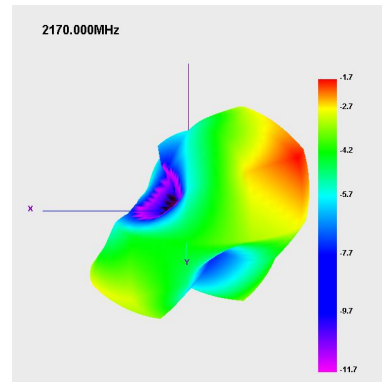
E2 plane



ANT3

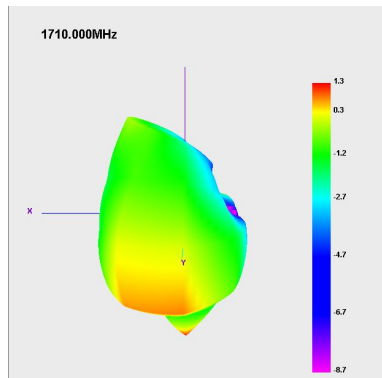
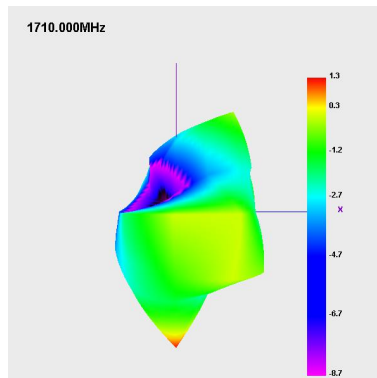
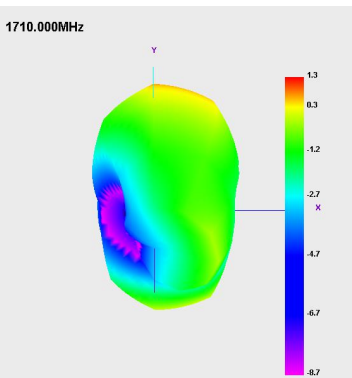


E1 plane

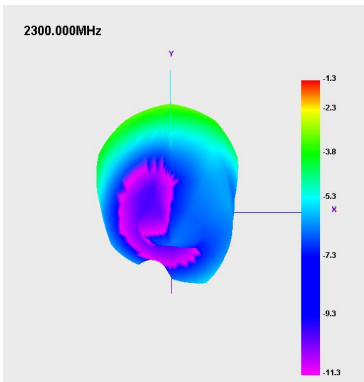


E2 plane

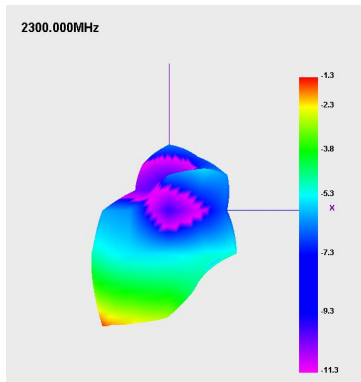
H plane



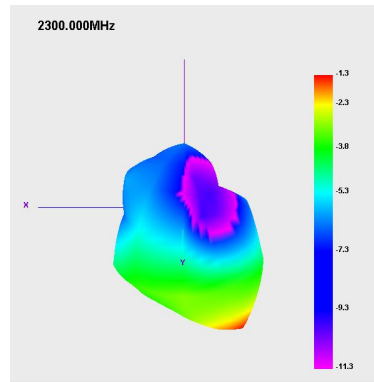
H plane



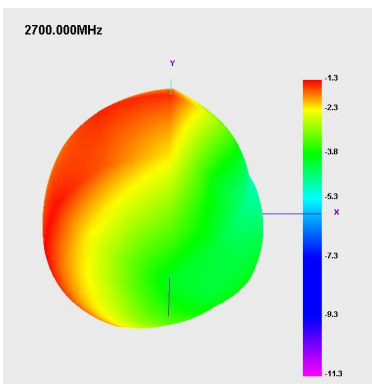
E1 plane



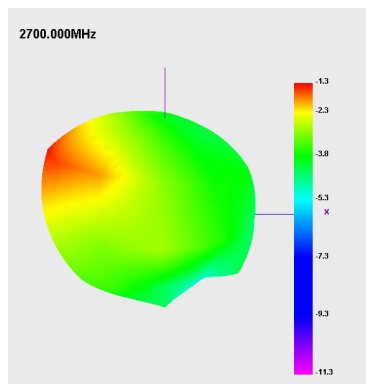
E2 plane



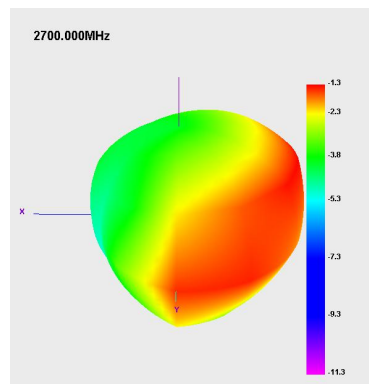
H plane



E1 plane

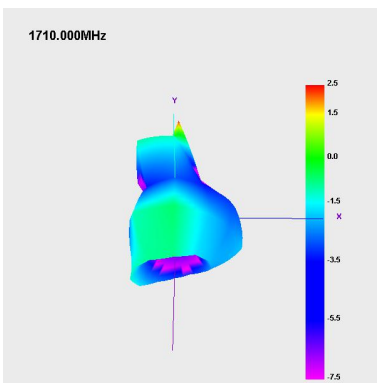


E2 plane

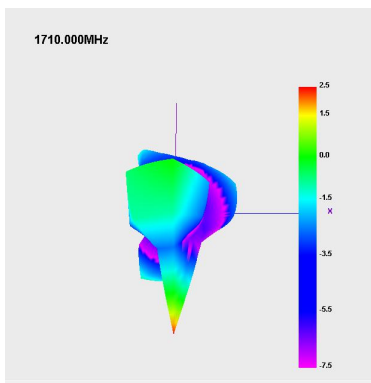


ANT4

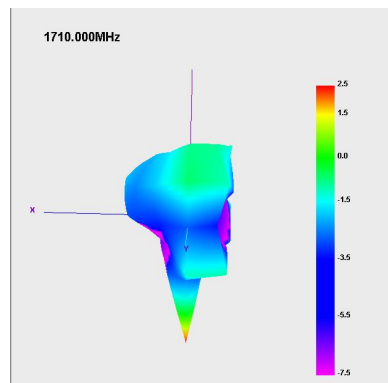
H plane



E1 plane



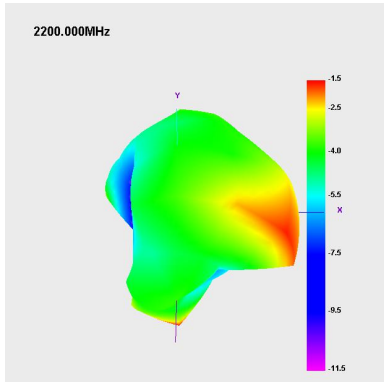
E2 plane



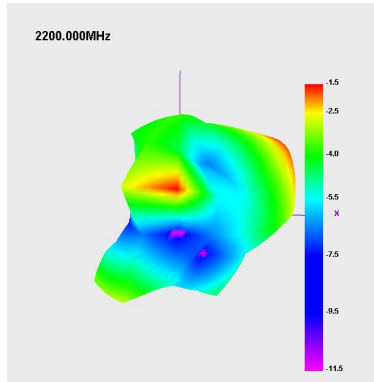
H plane

E1 plane

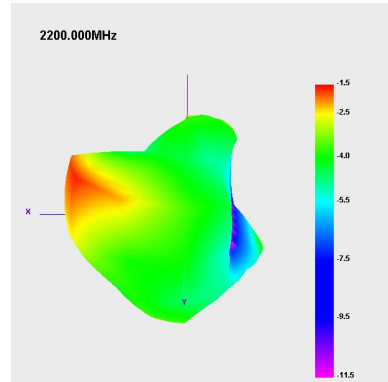
E2 plane



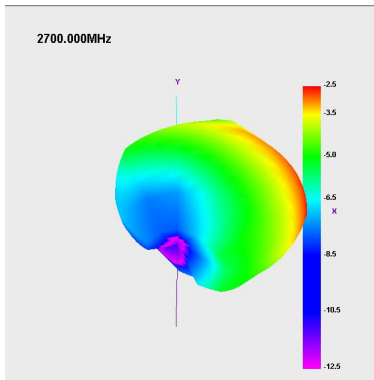
H plane



E1 plane

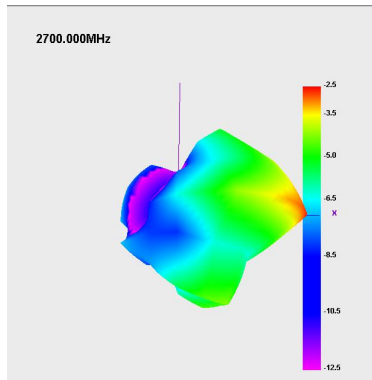


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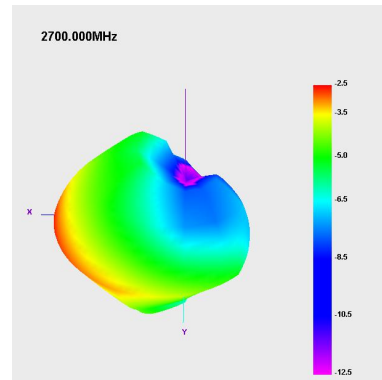


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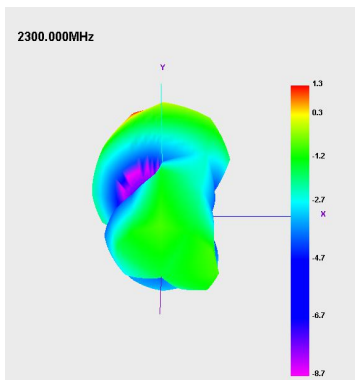
H plane



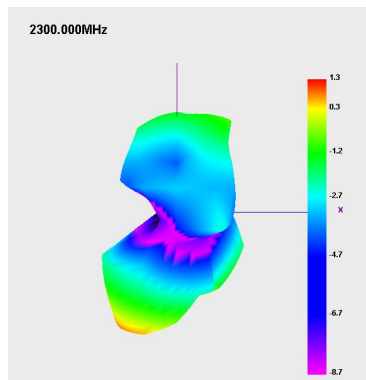
E1 plane



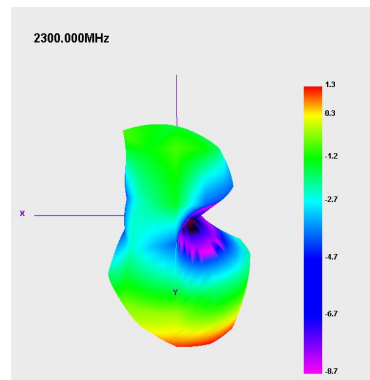
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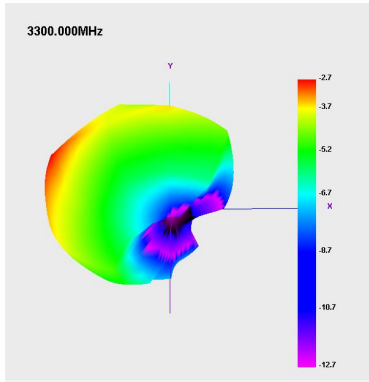
H plane



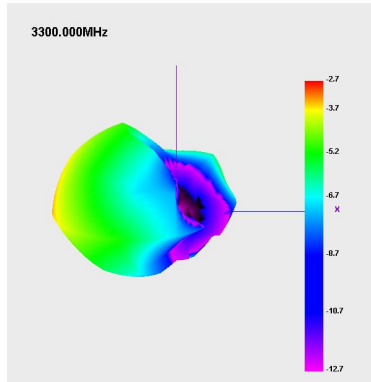
E1 plane



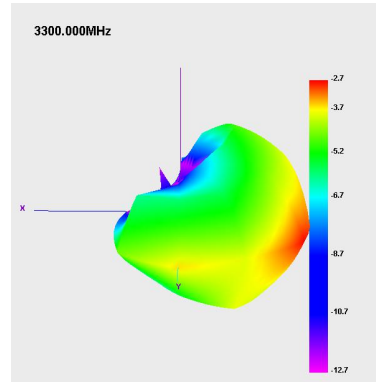
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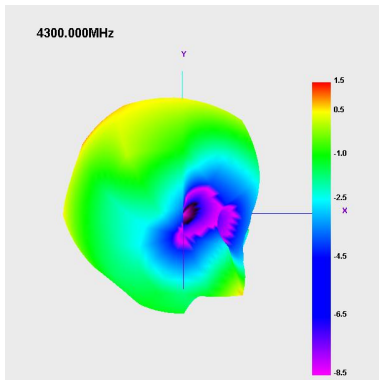
H plane



E1 plane

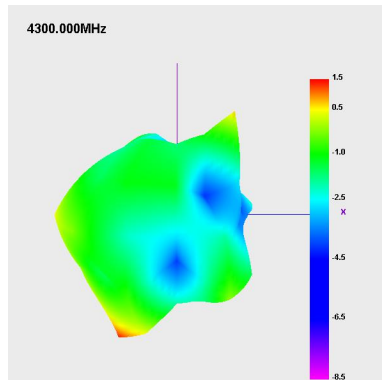


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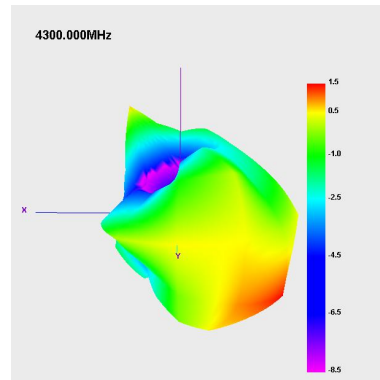


ANT6

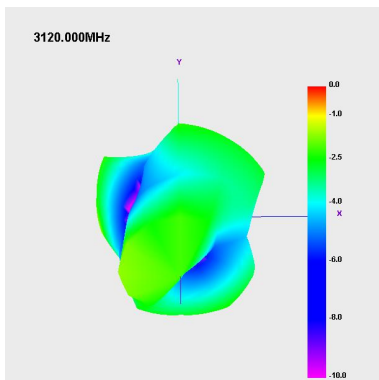
H plane



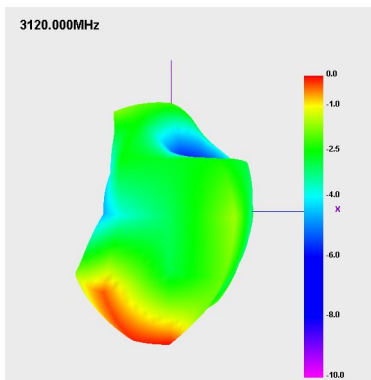
E1 plane



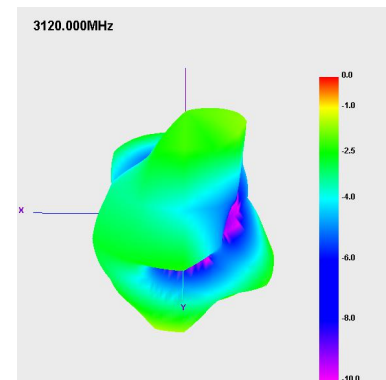
E2 plane



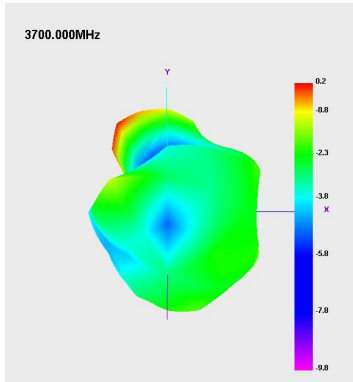
H plane



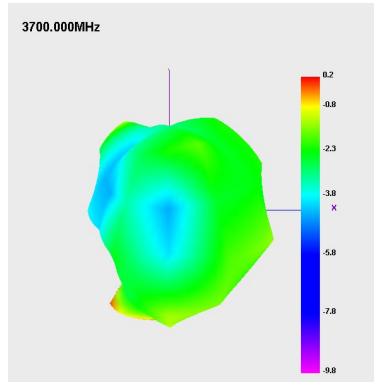
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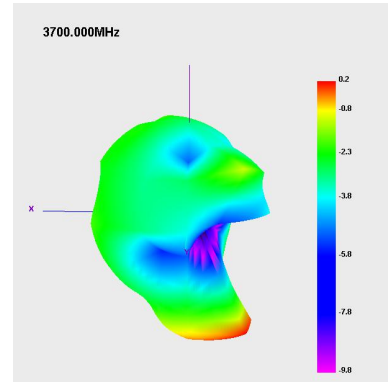
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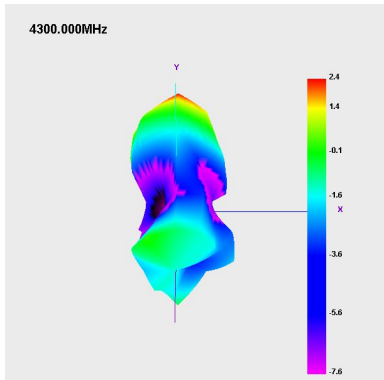
H plane



E1 plane

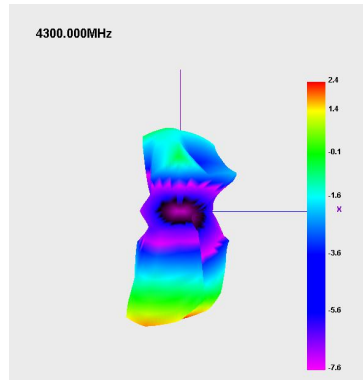


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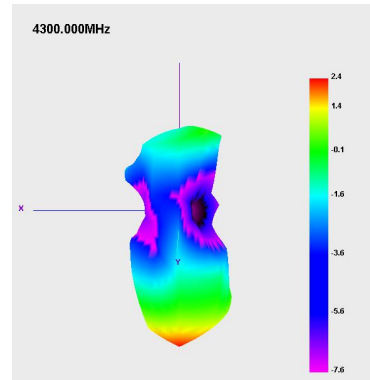


ANT7

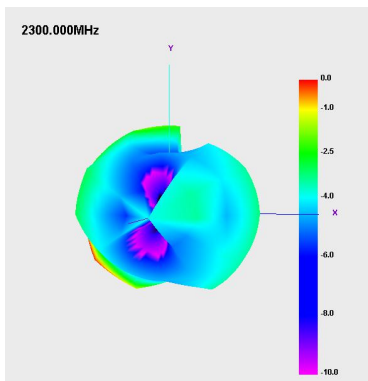
H plane



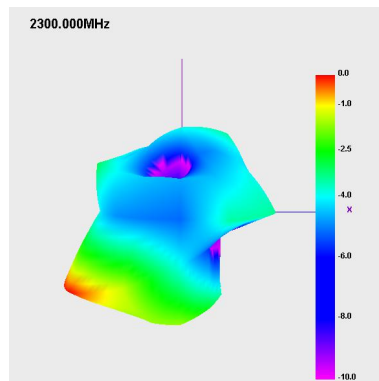
E1 plane



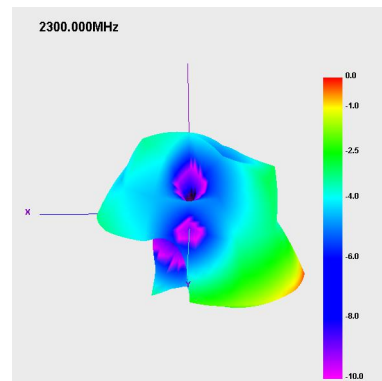
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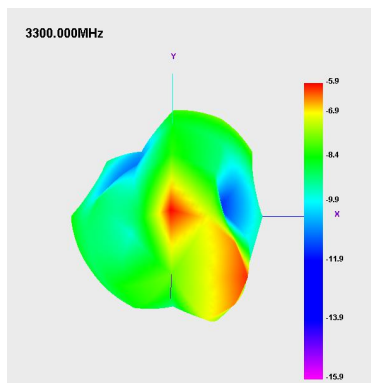
H plane



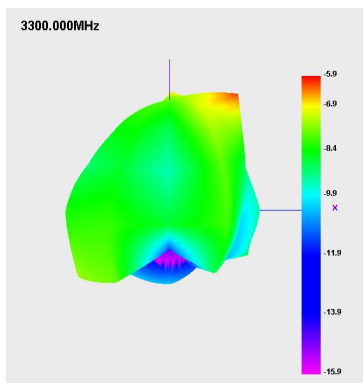
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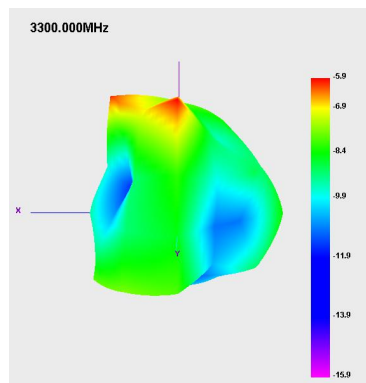
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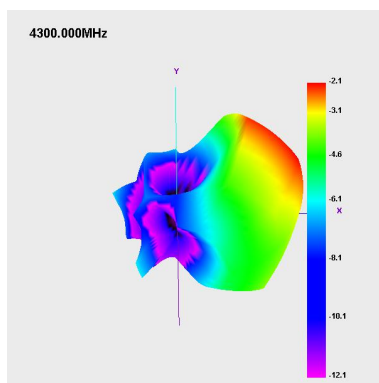
H plane



E1 plane

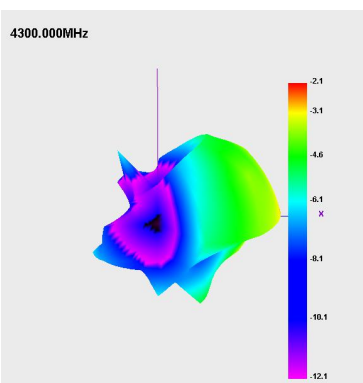


E2 plane

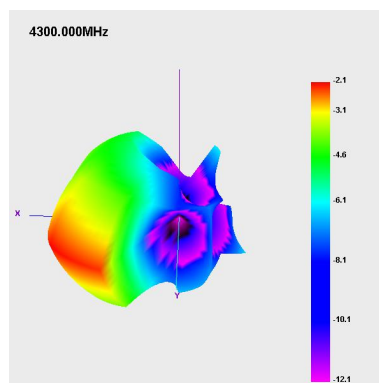


ANT9

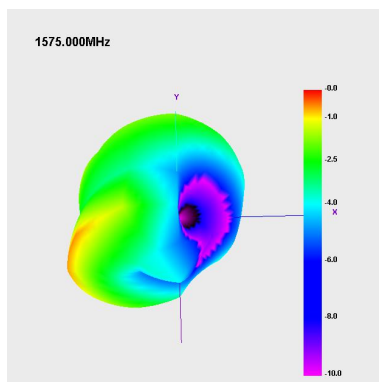
H plane



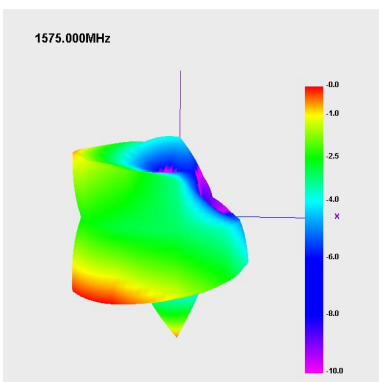
E1 plane



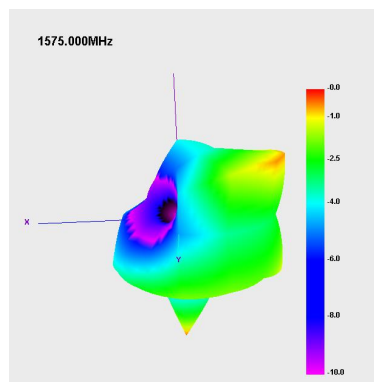
E2 plane



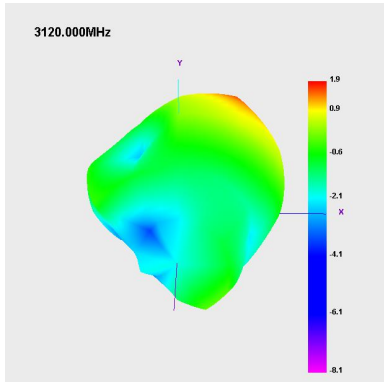
H plane



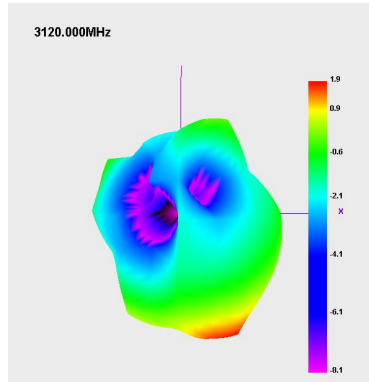
E1 plane



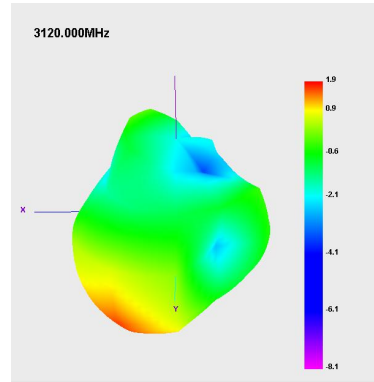
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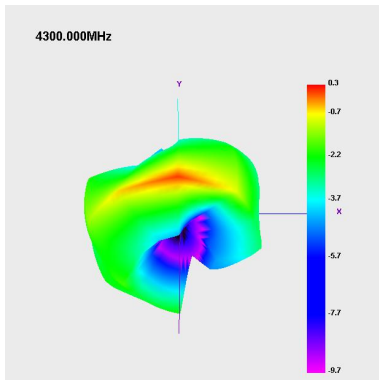
H plane



E1 plane

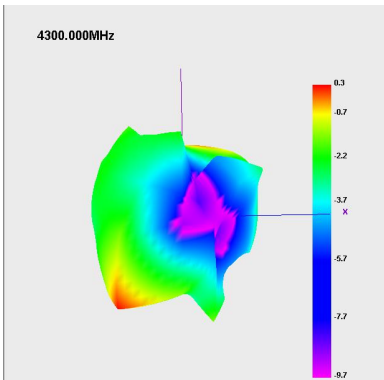


E2 plane

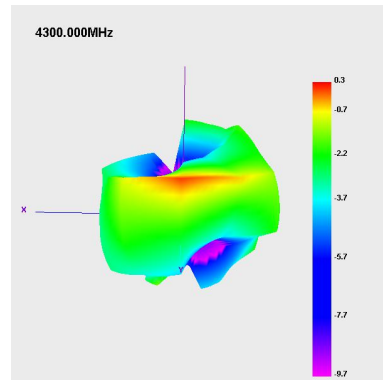


ANT8

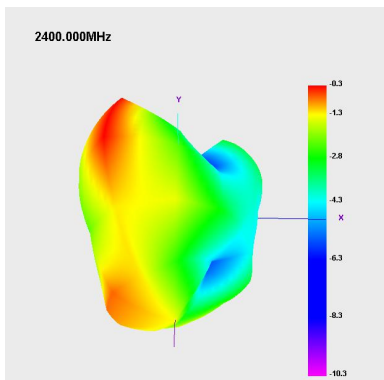
H plane



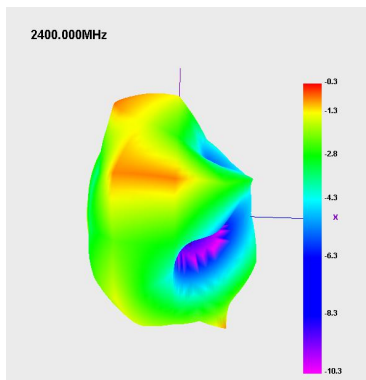
E1 plane



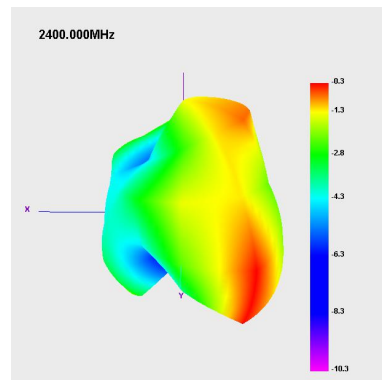
E2 plane



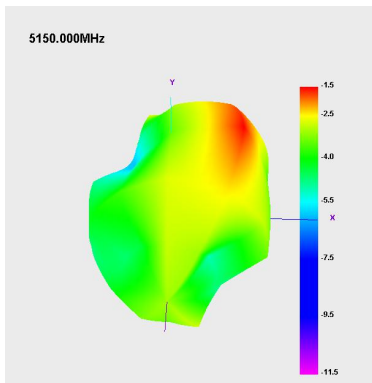
H plane



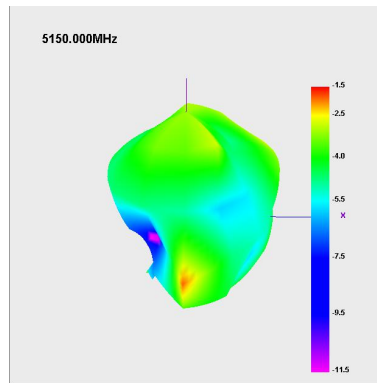
E1 plane



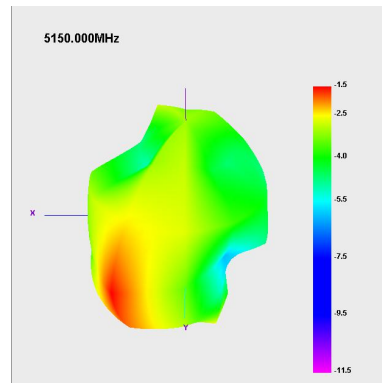
E2 plane



H plane



E1 plane



E2 plane

