

4. 5G Main Antenna Specification

Winmate Part Number: 90RF01000021

4.1. Electrical Characteristics

Frequency(MHz): 617-960 / 1710-2170 / 2300-2690 / 3300- 5000

SWR: $\leq 4.44:1$ typ. (with Enclosure)

Peak Gain:1.94 dBi typ. (with Enclosure)

Impedance: 50ohm

Polarization: Linear

4.2. Mechanical Characteristics

Cable: 50 Ω ϕ 0.81 RF cable

Connector: MHF4

PCB:FPCB /Thickness 0.2mm

4.3. Environmental Characteristics

Operating Temperature: -30°C to 80°C

4.4. Antenna Manufacturer Contact Information

Supplier:Winmate Inc.

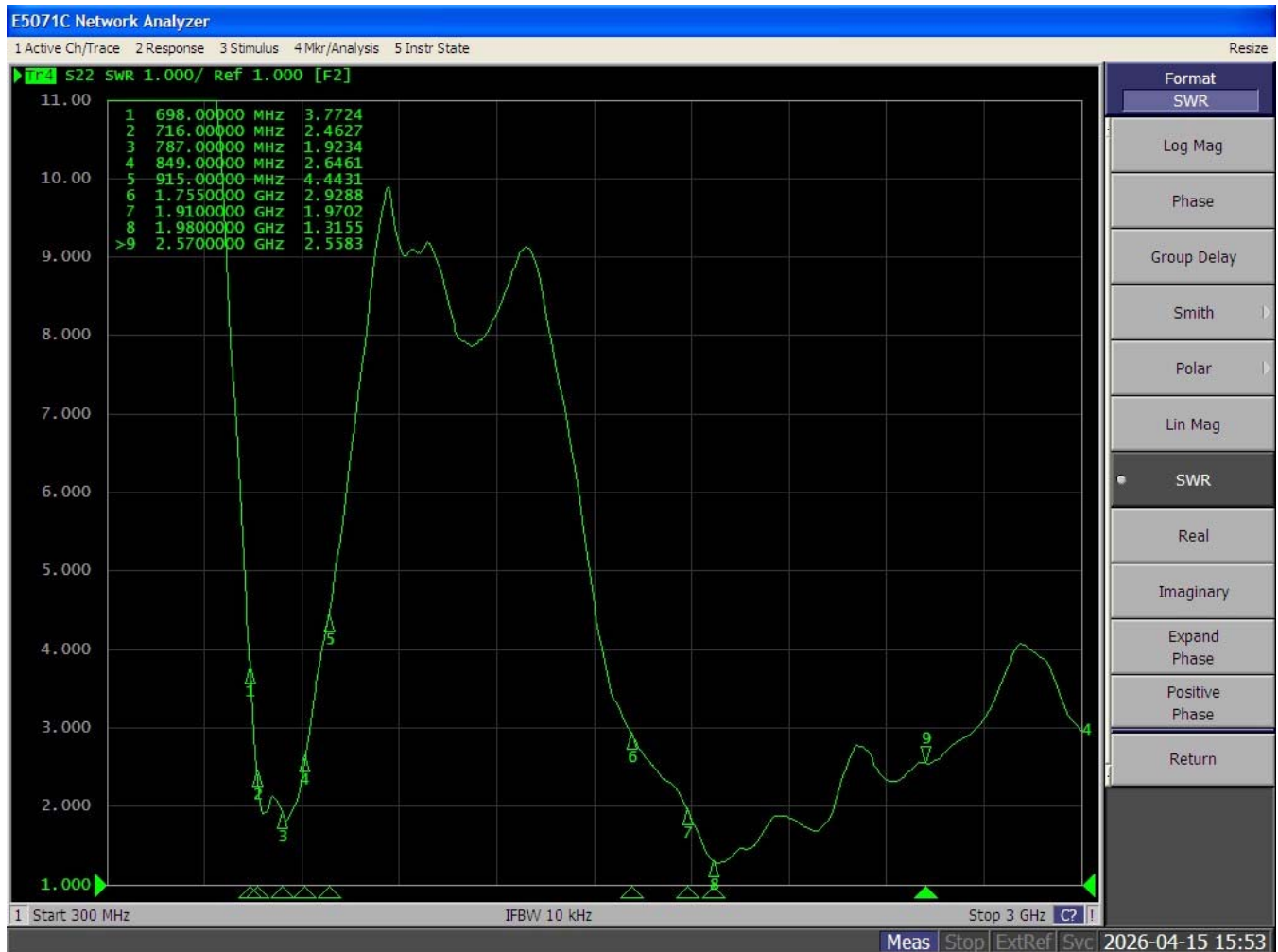
Address: No. 18, Zhongxing S. St., Sanchong Dist., New Taipei City 241017, Taiwan, R.O.C.

Phone Number: +886-2-8511-0288

Website:www.winmate.com

4.5. RF Performance Characteristics

4.5.1. SWR



4.5.2. Return Loss



4.5.3. Gain / Efficiency

Frequency	617	652	698	703	716	748	758	782	791	803
Directivity (dBi)	4.50	4.41	4.85	4.74	4.31	5.37	5.47	5.08	4.81	4.77
Efficiency (dB)	-7.36	-5.46	-2.91	-2.80	-2.83	-2.98	-3.29	-4.14	-4.58	-5.08
Efficiency (%)	18.35	28.46	51.14	52.47	52.17	50.29	46.90	38.59	34.83	31.03
Peak Gain (dBi)	-2.87	-1.05	1.94	1.94	1.48	2.39	2.18	0.94	0.23	-0.31

Frequency	824	832	847	859	880	894	915	942	960	1710
Directivity (dBi)	4.65	4.91	4.95	4.90	4.56	4.71	4.85	4.96	5.58	7.05
Efficiency (dB)	-4.37	-4.51	-5.03	-5.68	-6.89	-7.94	-9.17	-10.18	-10.85	-3.23
Efficiency (%)	36.55	35.42	31.38	27.02	20.48	16.06	12.11	9.59	8.23	47.52
Peak Gain (dBi)	0.28	0.40	-0.09	-0.79	-2.33	-3.23	-4.32	-5.22	-5.27	3.81

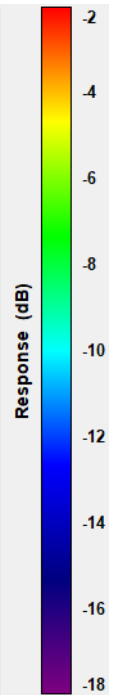
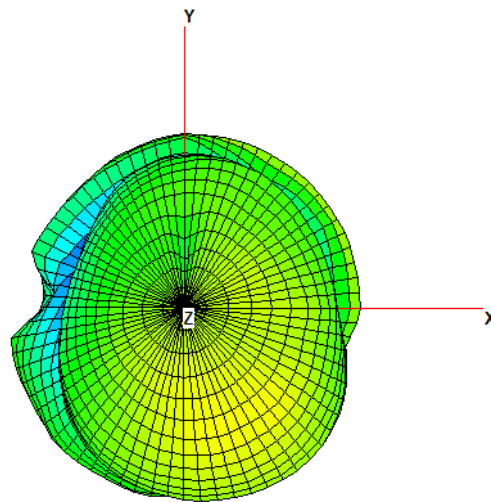
Frequency	1732	1747	1755	1785	1805	1842	1850	1880	1950	1990
Directivity (dBi)	6.24	5.26	5.39	6.06	6.26	6.33	6.29	6.22	3.77	3.69
Efficiency (dB)	-2.90	-2.81	-2.77	-2.65	-2.43	-2.20	-2.19	-2.33	-2.43	-2.37
Efficiency (%)	51.31	52.33	52.78	54.28	57.13	60.29	60.41	58.46	57.17	57.93
Peak Gain (dBi)	3.34	2.45	2.62	3.40	3.83	4.13	4.10	3.89	1.35	1.32

Frequency	2140	2170	2300	2350	2400	2496	2595	2620	2655	2690
Directivity (dBi)	4.68	4.47	5.57	5.98	6.93	5.87	4.90	4.52	4.46	4.63
Efficiency (dB)	-3.89	-3.75	-3.69	-4.67	-6.93	-7.16	-6.61	-6.27	-5.31	-5.37
Efficiency (%)	40.81	42.21	42.71	34.14	20.27	19.22	21.82	23.62	29.44	29.04
Peak Gain (dBi)	0.79	0.73	0.42	0.58	-0.01	-1.29	-1.71	-1.75	-0.85	-0.74

Frequency	3300	3550	3625	3700	3750	3800	4200	4400	4700	5000
Directivity (dBi)	5.40	5.19	5.96	5.33	5.37	5.61	5.33	6.28	7.66	6.98
Efficiency (dB)	-5.18	-3.69	-4.86	-4.19	-4.16	-3.55	-2.94	-3.58	-3.33	-4.49
Efficiency (%)	30.35	42.80	32.64	38.07	38.37	44.20	50.86	43.87	46.50	35.57
Peak Gain (dBi)	0.23	-0.51	-0.27	-0.64	1.21	2.06	2.39	2.70	4.34	2.49

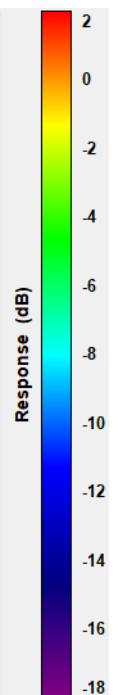
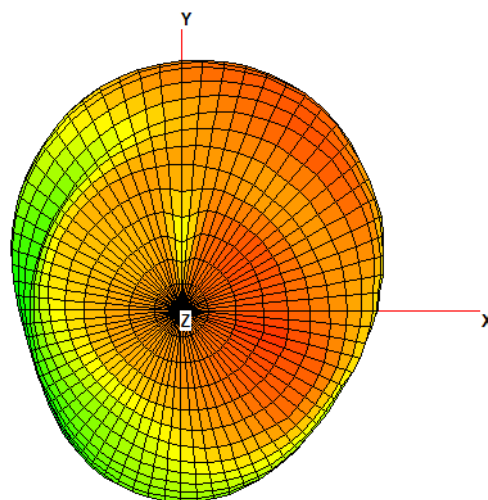
617MHz

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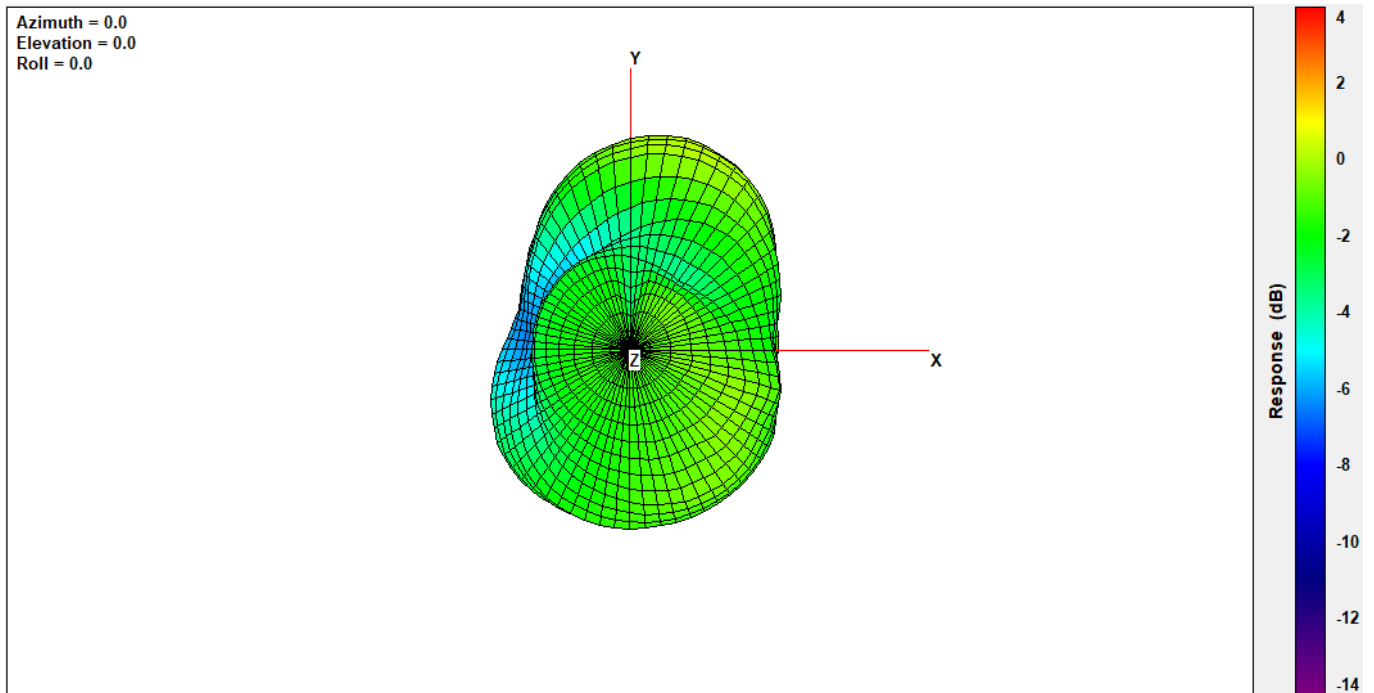


716MHz

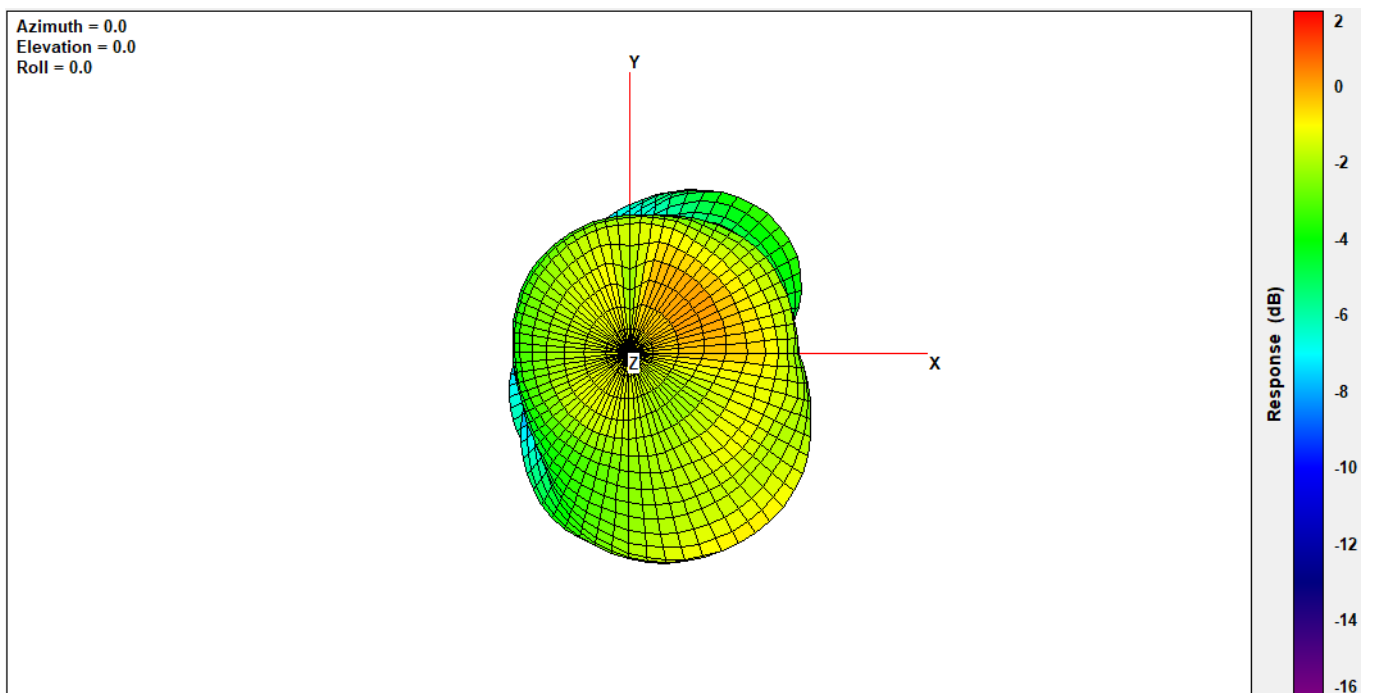
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748MHz

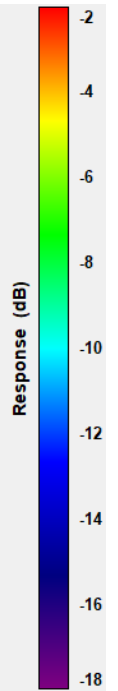
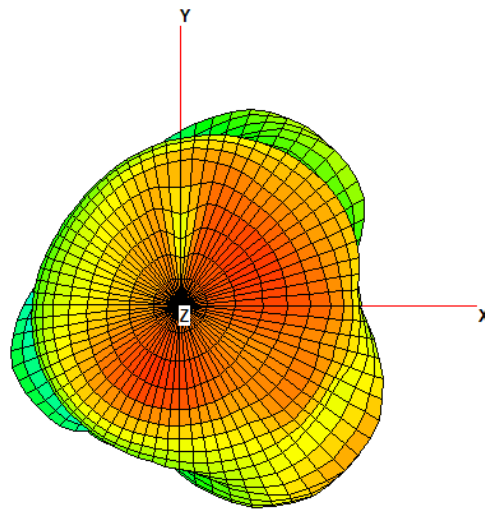


832MHz



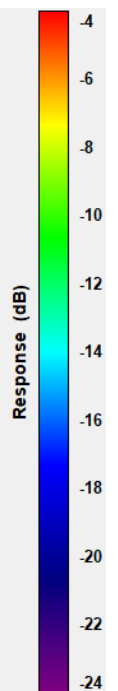
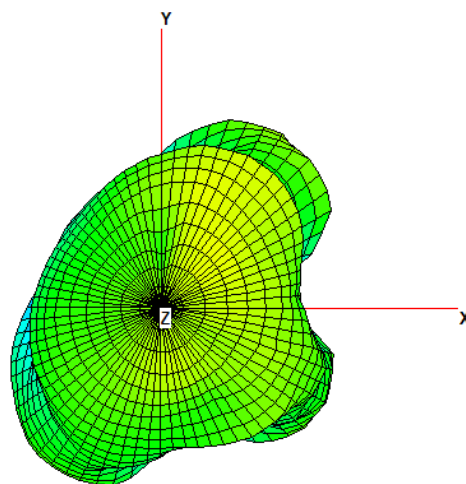
880MHz

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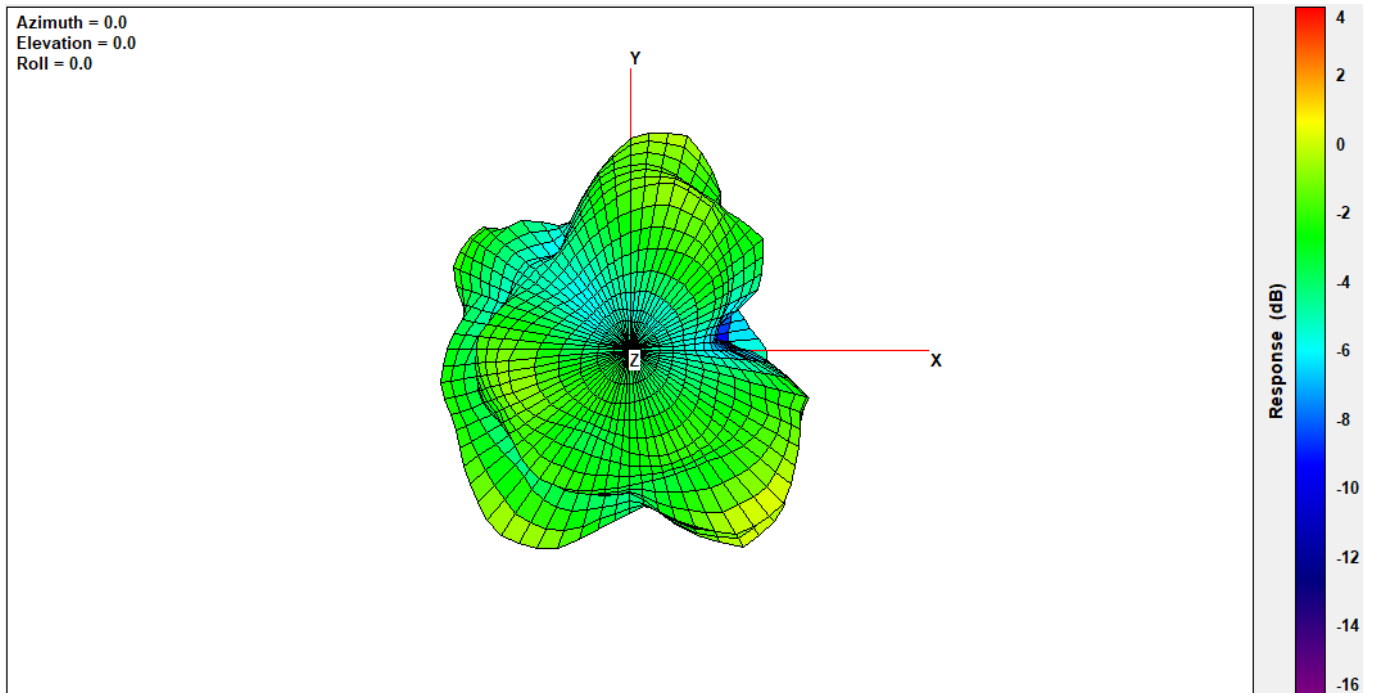


960MHz

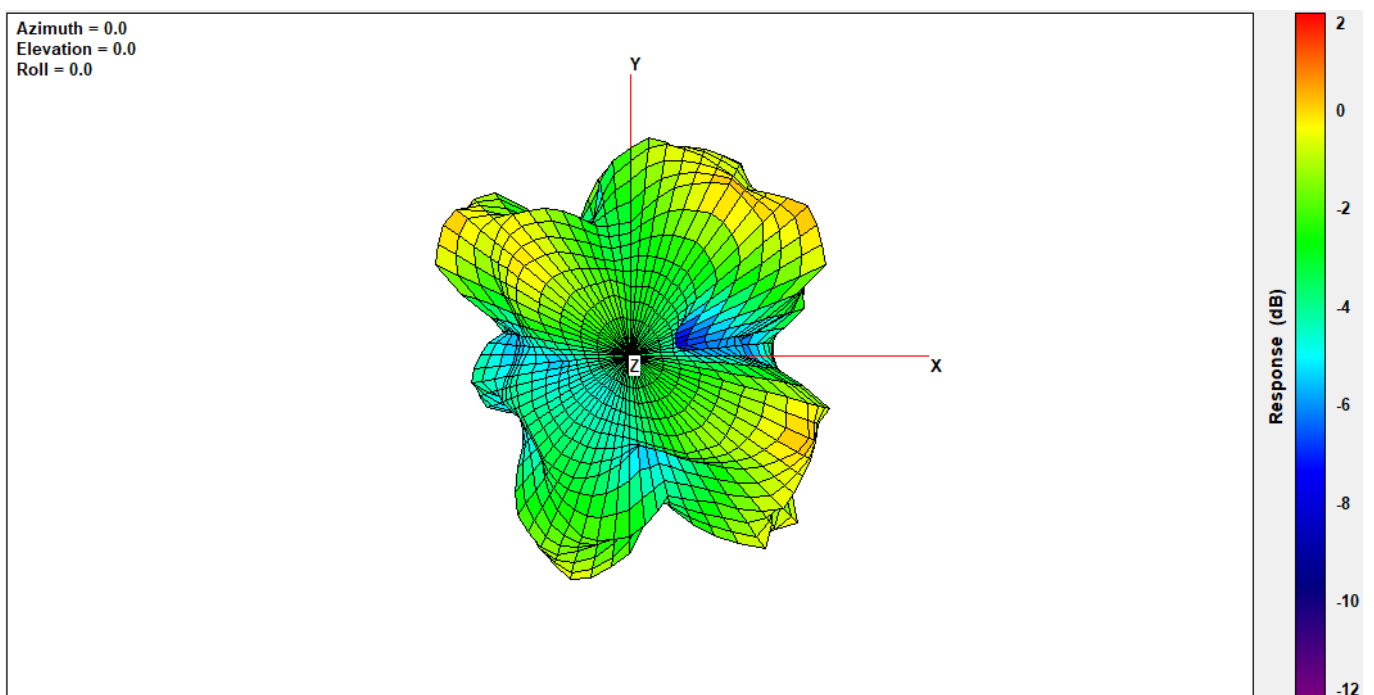
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1710MHz

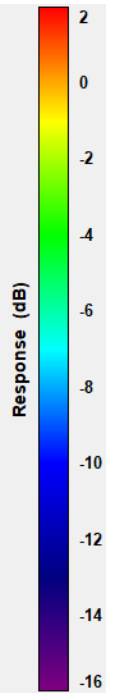
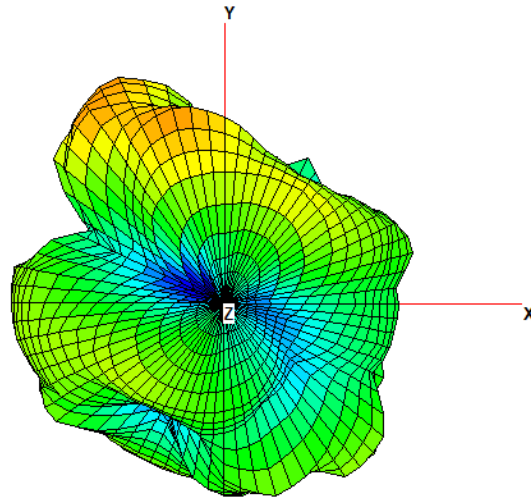


1950MHz



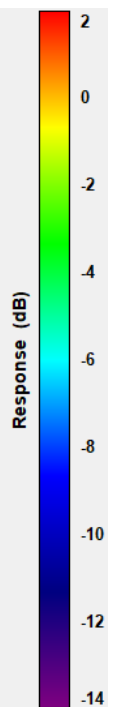
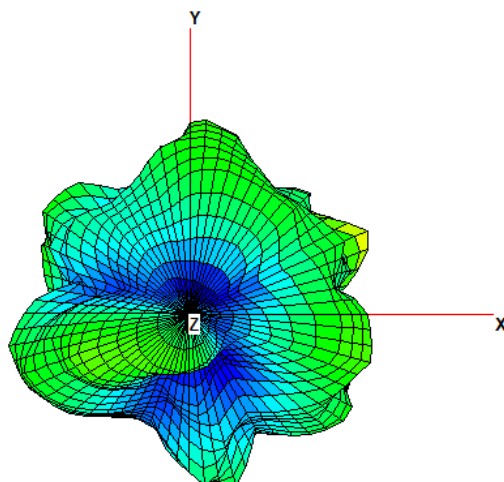
2170MHz

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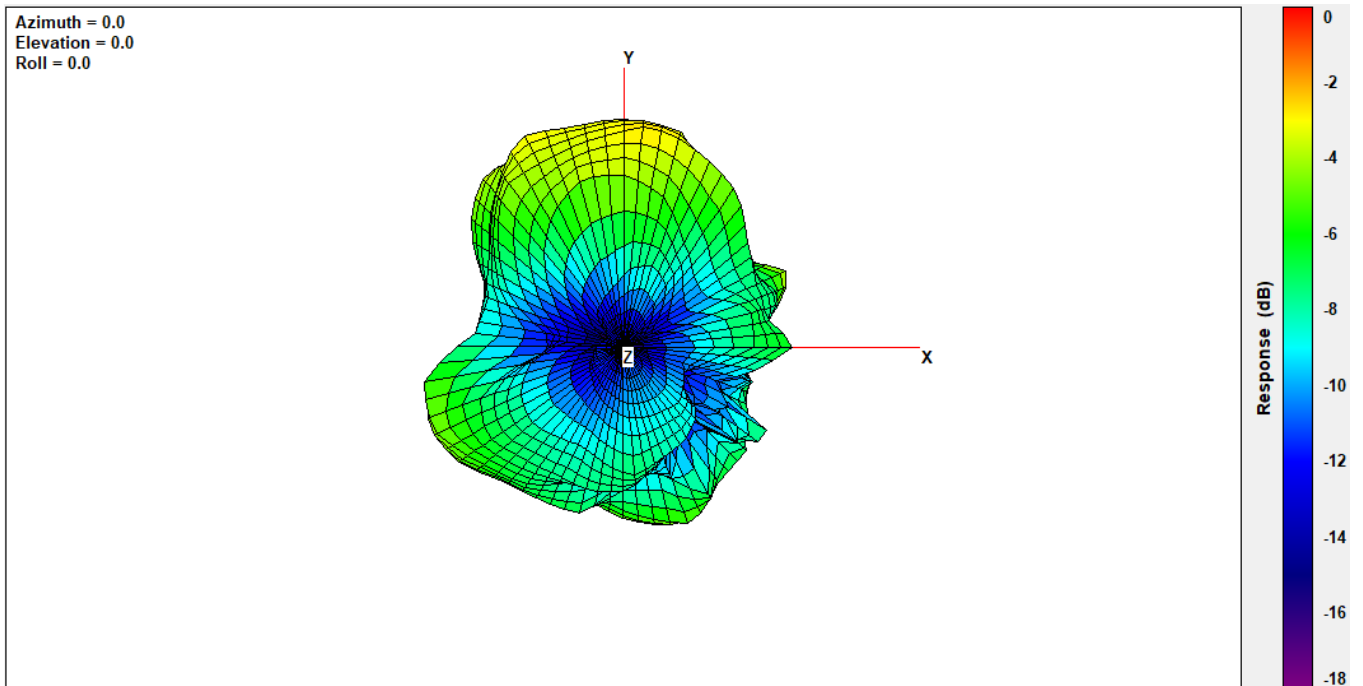


2350MHz

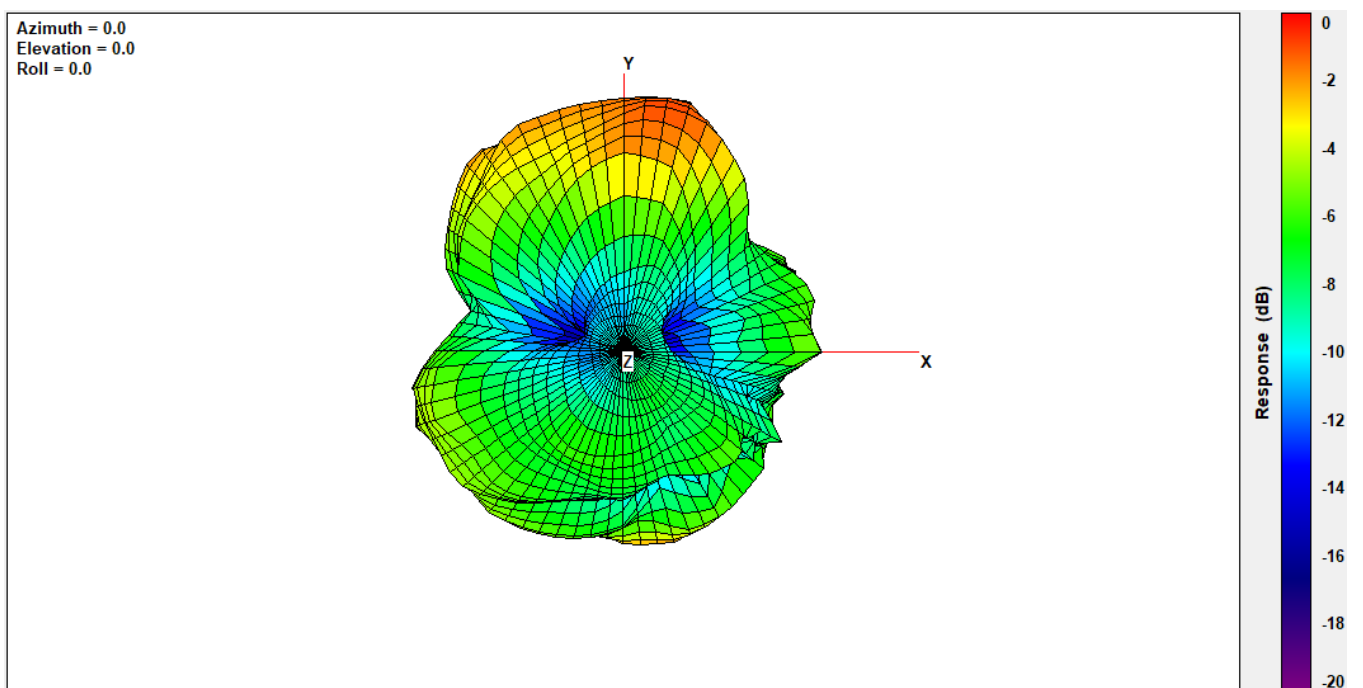
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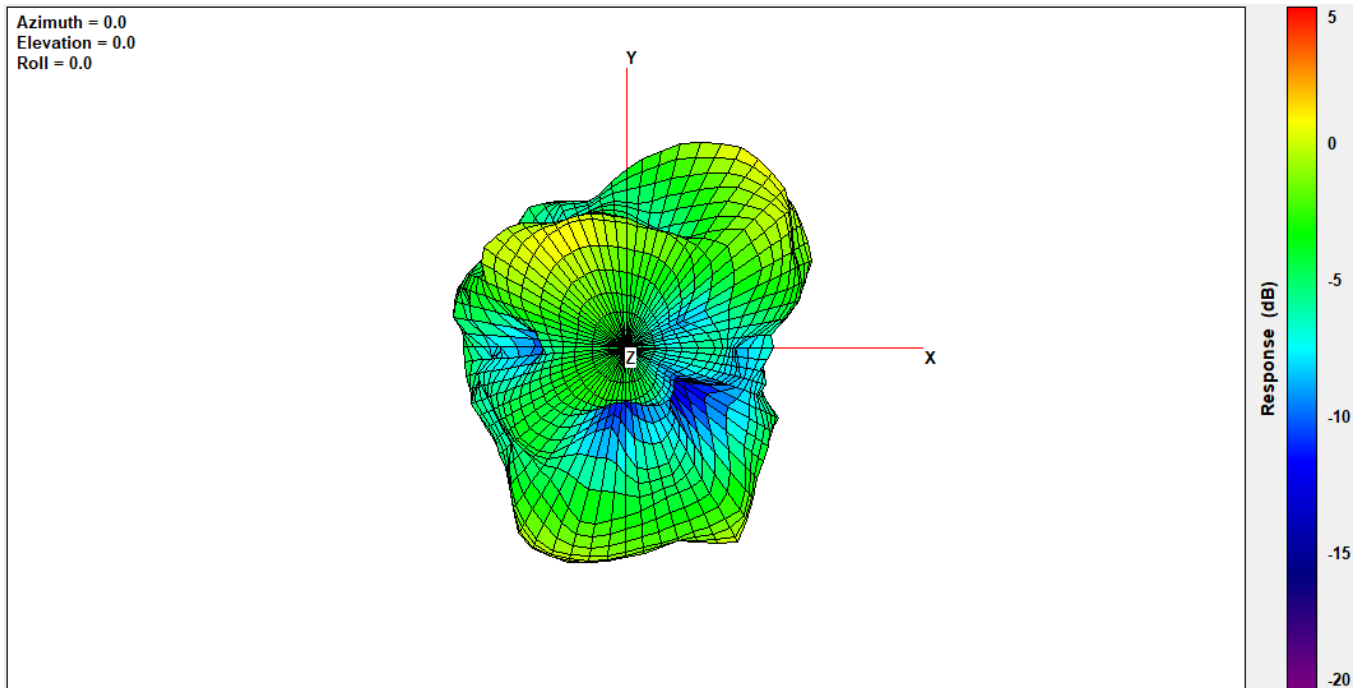
2595MHz



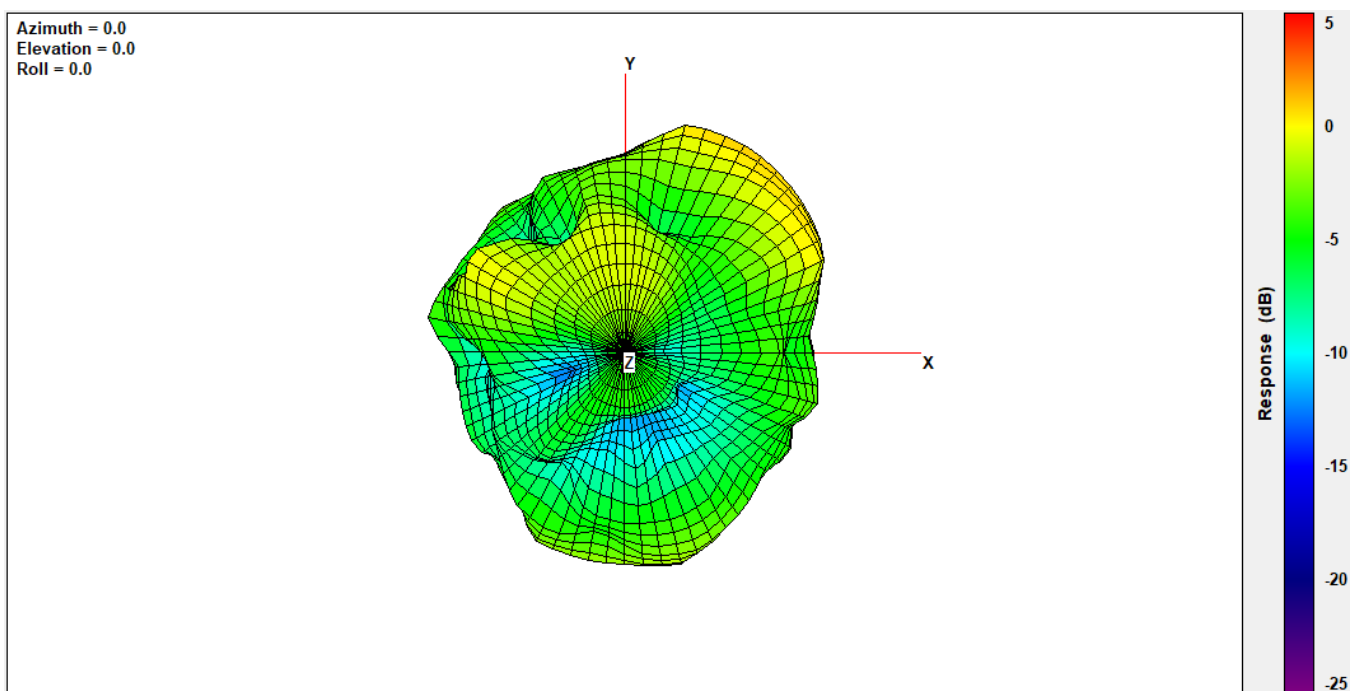
2690MHz



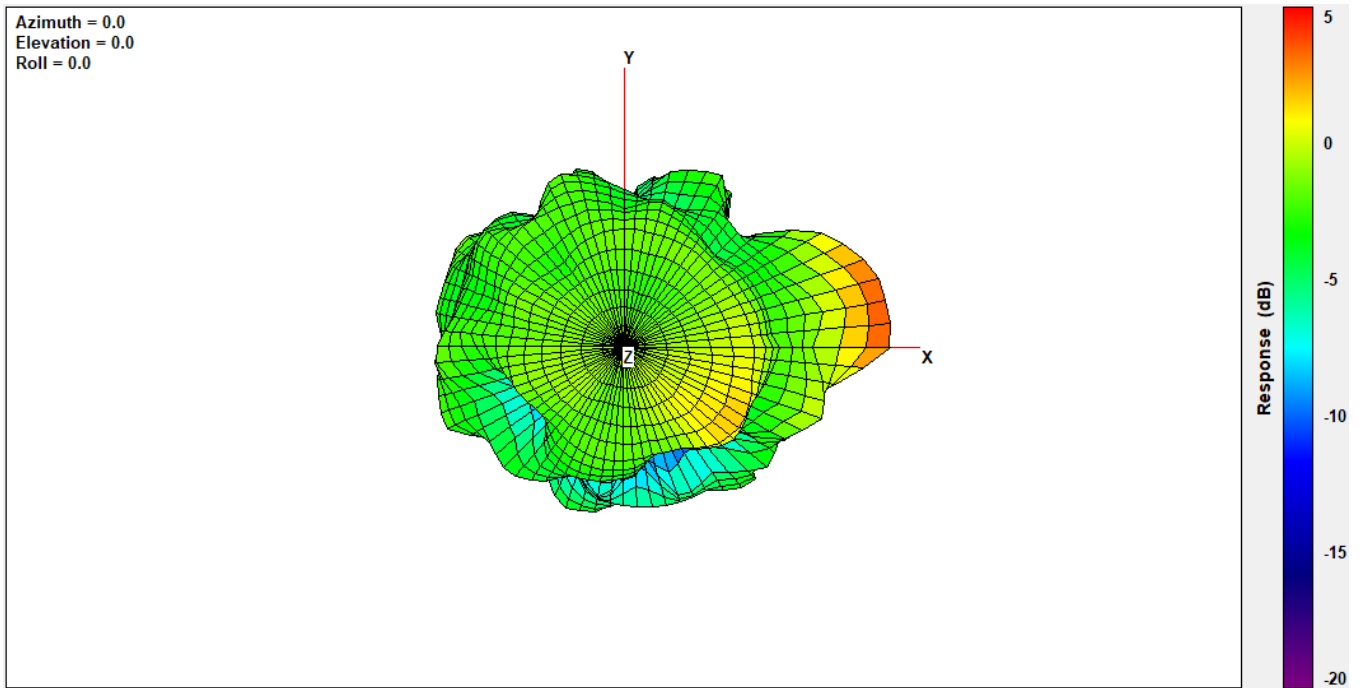
3550MHz



3750MHz



4700MHz



5000MHz

