

Antenna Test Results NETZ 4IN1-5G

Product description: 4x 5GNR MIMO Screw Mount Antenna, 96 x 96 x 94 mm, 3M LL195, SMA Male.
5G-1

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
617	-1.64	25.90	-5.87	1427	2.92	29.28	-5.33	1910	3.38	45.28	-3.44
640	-0.93	26.59	-5.75	1440	3.78	32.73	-4.85	1950	3.23	47.14	-3.27
660	-0.30	29.99	-5.23	1460	4.20	35.40	-4.51	1990	4.35	49.06	-3.09
680	-0.11	29.34	-5.32	1480	4.38	39.28	-4.06	2030	4.10	46.84	-3.29
700	0.64	29.92	-5.24	1500	4.59	43.28	-3.64	2070	4.21	51.80	-2.86
720	1.50	35.34	-4.52	1520	4.57	44.82	-3.48	2110	4.00	50.28	-2.99
740	1.69	39.10	-4.08	1540	3.96	42.25	-3.74	2150	4.83	61.69	-2.10
760	1.35	36.68	-4.36	1560	3.49	41.49	-3.82	2190	4.47	57.69	-2.39
780	0.06	30.49	-5.16	1580	3.50	45.68	-3.40	2230	4.77	64.30	-1.92
800	0.34	28.69	-5.42	1600	3.07	41.21	-3.85	2270	5.01	60.06	-2.21
820	0.48	30.69	-5.13	1620	2.34	37.16	-4.30	2310	4.99	64.05	-1.93
840	1.06	33.77	-4.71	1640	1.81	33.31	-4.77	2350	4.68	61.75	-2.09
860	0.55	31.28	-5.05	1660	1.40	31.66	-5.00	2400	4.37	59.64	-2.24
880	-0.88	25.15	-6.00	1710	1.81	34.22	-4.66	2500	4.58	51.85	-2.85
900	-0.35	25.99	-5.85	1750	1.84	35.78	-4.46	2520	5.15	51.58	-2.87
920	-0.24	27.21	-5.65	1790	1.39	39.75	-4.01	2540	5.15	49.92	-3.02
940	-0.67	26.11	-5.83	1830	1.93	44.27	-3.54	2560	5.10	51.73	-2.86
960	-0.51	26.88	-5.71	1870	2.52	43.29	-3.64	2580	4.68	50.27	-2.99

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
2600	4.62	49.19	-3.08	4400	3.24	42.75	-3.69
2620	4.72	45.73	-3.40	4500	2.94	38.93	-4.10
2640	5.25	47.50	-3.23	4600	1.79	33.21	-4.79
2660	5.15	46.92	-3.29	4700	2.20	36.78	-4.34
2680	5.00	46.81	-3.30	4800	1.86	36.88	-4.33
2700	5.17	45.99	-3.37	4900	3.21	43.48	-3.62
3300	3.53	37.74	-4.23	5000	3.46	43.12	-3.65
3350	3.28	36.20	-4.41	5150	3.65	42.62	-3.70
3400	3.39	38.13	-4.19	5200	2.08	34.26	-4.65
3500	3.93	43.65	-3.60	5300	1.76	34.29	-4.65
3600	5.13	50.69	-2.95	5400	2.66	41.16	-3.86
3700	4.69	47.58	-3.23	5500	3.72	46.69	-3.31
3800	4.58	47.55	-3.23	5600	4.83	48.96	-3.10
3900	4.17	46.47	-3.33	5700	4.77	44.55	-3.51
4000	3.75	46.18	-3.36	5800	5.67	43.94	-3.57
4100	3.21	43.40	-3.63	5925	5.53	41.76	-3.79
4200	3.43	40.99	-3.87				
4300	3.63	46.56	-3.32				

Antenna Test Results NETZ 4IN1-5G

Product description: 4x 5GNR MIMO Screw Mount Antenna, 96 x 96 x 94 mm, 3M LL195, SMA Male.
5G-2

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
617	-1.48	25.42	-5.95	1427	4.29	37.60	-4.25	1910	3.33	46.38	-3.34
640	-2.06	29.52	-5.30	1440	5.12	43.12	-3.65	1950	4.04	52.68	-2.78
660	-1.21	31.93	-4.96	1460	5.38	46.39	-3.34	1990	4.43	48.43	-3.15
680	-1.35	30.29	-5.19	1480	5.18	44.84	-3.48	2030	3.79	50.45	-2.97
700	-0.83	30.38	-5.17	1500	5.08	44.95	-3.47	2070	4.20	49.62	-3.04
720	-0.03	37.33	-4.28	1520	4.89	45.18	-3.45	2110	4.04	52.95	-2.76
740	-0.09	40.36	-3.94	1540	4.21	43.56	-3.61	2150	4.30	61.68	-2.10
760	-0.43	37.49	-4.26	1560	3.99	43.15	-3.65	2190	4.09	56.76	-2.46
780	-2.03	30.82	-5.11	1580	4.12	47.96	-3.19	2230	4.92	64.74	-1.89
800	-1.68	29.30	-5.33	1600	2.85	41.21	-3.85	2270	4.95	59.98	-2.22
820	-0.51	32.33	-4.90	1620	2.08	38.53	-4.14	2310	5.27	66.03	-1.80
840	-0.56	34.72	-4.59	1640	0.12	32.34	-4.90	2350	4.55	63.46	-1.98
860	-0.91	32.67	-4.86	1660	0.66	28.58	-5.44	2400	4.54	60.36	-2.19
880	-2.20	26.69	-5.74	1710	0.56	35.15	-4.54	2500	4.89	53.27	-2.74
900	-1.89	27.69	-5.58	1750	0.31	34.39	-4.64	2520	5.15	49.20	-3.08
920	-1.74	29.66	-5.28	1790	3.19	43.06	-3.66	2540	4.93	46.63	-3.31
940	-1.72	27.81	-5.56	1830	2.68	45.42	-3.43	2560	4.68	49.10	-3.09
960	-2.17	26.18	-5.82	1870	3.57	45.82	-3.39	2580	4.44	50.45	-2.97

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
2600	4.94	49.73	-3.03	4400	3.53	45.16	-3.45
2620	4.62	42.59	-3.71	4500	2.89	43.42	-3.62
2640	4.73	43.06	-3.66	4600	1.58	34.33	-4.64
2660	5.24	47.64	-3.22	4700	2.80	40.83	-3.89
2680	5.18	48.11	-3.18	4800	3.06	40.29	-3.95
2700	4.64	42.87	-3.68	4900	3.00	39.06	-4.08
3300	0.72	28.10	-5.51	5000	3.47	43.41	-3.62
3350	1.21	31.37	-5.04	5150	3.54	37.34	-4.28
3400	0.71	27.75	-5.57	5200	4.15	41.90	-3.78
3500	1.90	37.22	-4.29	5300	3.61	38.07	-4.19
3600	3.90	43.01	-3.66	5400	2.66	35.50	-4.50
3700	4.95	49.88	-3.02	5500	3.10	40.52	-3.92
3800	4.52	48.49	-3.14	5600	3.62	45.34	-3.44
3900	4.68	48.84	-3.11	5700	3.80	43.23	-3.64
4000	4.79	49.10	-3.09	5800	3.98	45.04	-3.46
4100	3.86	41.59	-3.81	5925	4.00	42.19	-3.75
4200	2.99	42.62	-3.70				
4300	2.93	43.41	-3.62				

Antenna Test Results NETZ 4IN1-5G

Product description: 4x 5GNR MIMO Screw Mount Antenna, 96 x 96 x 94 mm, 3M LL195, SMA Male.
5G-3

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
617	-1.32	26.31	-5.80	1427	4.46	36.17	-4.42	1910	2.80	45.20	-3.45
640	-0.91	28.68	-5.42	1440	4.58	43.74	-3.59	1950	3.86	50.41	-2.97
660	-0.63	31.02	-5.08	1460	4.53	43.32	-3.63	1990	3.94	52.03	-2.84
680	-0.27	31.55	-5.01	1480	4.40	36.42	-4.39	2030	3.85	50.48	-2.97
700	0.16	32.08	-4.94	1500	4.45	41.12	-3.86	2070	4.49	59.21	-2.28
720	-0.51	33.16	-4.79	1520	4.32	47.08	-3.27	2110	4.63	59.00	-2.29
740	0.33	34.47	-4.63	1540	4.32	42.49	-3.72	2150	5.21	69.21	-1.60
760	0.88	33.32	-4.77	1560	2.99	39.80	-4.00	2190	5.23	66.40	-1.78
780	-0.02	30.38	-5.17	1580	3.19	42.29	-3.74	2230	5.29	70.24	-1.53
800	0.27	30.30	-5.19	1600	0.80	26.04	-5.84	2270	5.54	66.92	-1.74
820	-1.34	26.49	-5.77	1620	1.70	33.45	-4.76	2310	5.02	66.58	-1.77
840	-0.99	28.05	-5.52	1640	0.45	27.63	-5.59	2350	3.97	60.66	-2.17
860	-1.19	27.01	-5.68	1660	0.49	26.26	-5.81	2400	4.55	57.31	-2.42
880	-1.73	26.82	-5.72	1710	0.56	30.07	-5.22	2500	4.55	52.78	-2.78
900	-1.37	25.27	-5.97	1750	1.35	36.85	-4.34	2520	4.42	49.60	-3.04
920	-1.29	25.64	-5.91	1790	2.56	40.21	-3.96	2540	3.78	44.52	-3.51
940	-1.61	25.46	-5.94	1830	2.34	42.82	-3.68	2560	3.92	45.79	-3.39
960	-1.25	25.36	-5.96	1870	2.64	45.55	-3.42	2580	4.56	49.53	-3.05

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
2600	4.90	49.63	-3.04	4400	3.91	42.71	-3.69
2620	4.43	43.43	-3.62	4500	3.88	42.46	-3.72
2640	4.78	46.28	-3.35	4600	2.63	33.26	-4.78
2660	4.90	46.89	-3.29	4700	3.12	37.22	-4.29
2680	4.86	46.05	-3.37	4800	2.84	35.22	-4.53
2700	4.68	43.85	-3.58	4900	3.22	43.37	-3.63
3300	1.69	33.03	-4.81	5000	3.71	45.93	-3.38
3350	2.82	35.80	-4.46	5150	4.20	44.27	-3.54
3400	2.14	33.38	-4.77	5200	3.58	41.05	-3.87
3500	3.32	41.31	-3.84	5300	3.75	40.04	-3.97
3600	4.85	50.11	-3.00	5400	3.41	41.81	-3.79
3700	5.19	51.91	-2.85	5500	3.45	45.46	-3.42
3800	5.05	49.86	-3.02	5600	3.49	47.08	-3.27
3900	4.66	47.70	-3.21	5700	4.32	48.77	-3.12
4000	4.72	46.32	-3.34	5800	4.57	44.55	-3.51
4100	4.39	45.99	-3.37	5925	5.15	46.92	-3.29
4200	3.14	38.33	-4.16				
4300	3.25	41.88	-3.78				

Antenna Test Results NETZ 4IN1-5G

Product description: 4x 5GNR MIMO Screw Mount Antenna, 96 x 96 x 94 mm, 3M LL195, SMA Male.
5G-4

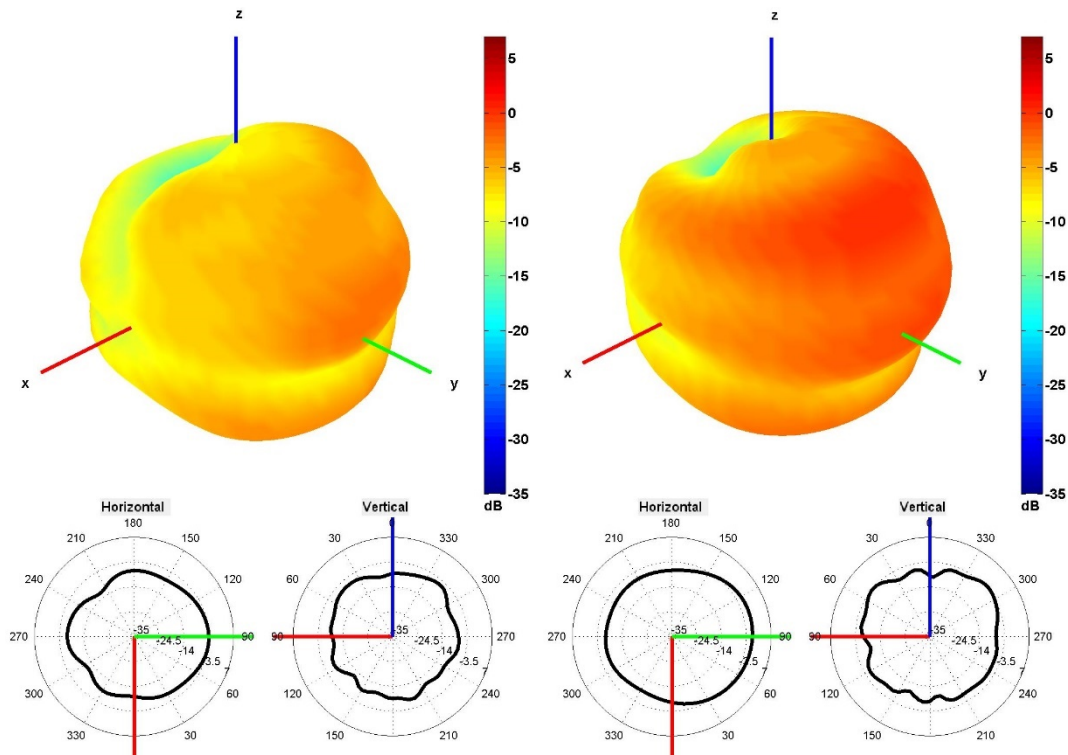
MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
617	-2.01	26.47	-5.77	1427	3.84	37.73	-4.23	1910	3.29	46.52	-3.32
640	-1.76	28.63	-5.43	1440	5.01	45.85	-3.39	1950	3.93	50.18	-2.99
660	-1.20	31.64	-5.00	1460	5.10	44.47	-3.52	1990	3.48	51.29	-2.90
680	-0.47	32.25	-4.92	1480	3.92	36.31	-4.40	2030	3.49	48.57	-3.14
700	0.16	35.17	-4.54	1500	4.24	41.10	-3.86	2070	4.40	54.92	-2.60
720	0.30	36.91	-4.33	1520	4.75	47.76	-3.21	2110	4.24	53.71	-2.70
740	-0.35	37.15	-4.30	1540	3.90	44.27	-3.54	2150	4.64	61.72	-2.10
760	-0.71	35.31	-4.52	1560	2.84	41.70	-3.80	2190	4.05	58.11	-2.36
780	-0.49	32.27	-4.91	1580	3.01	43.48	-3.62	2230	4.15	63.22	-1.99
800	-0.84	30.00	-5.23	1600	1.15	29.56	-5.29	2270	4.79	60.63	-2.17
820	-1.12	29.90	-5.24	1620	1.62	34.15	-4.67	2310	4.63	64.13	-1.93
840	-0.76	31.42	-5.03	1640	-0.13	31.62	-5.00	2350	4.34	60.48	-2.18
860	-0.98	29.95	-5.24	1660	0.31	33.89	-4.70	2400	3.99	58.23	-2.35
880	-0.82	27.00	-5.69	1710	0.22	31.23	-5.05	2500	4.53	51.18	-2.91
900	-0.62	27.62	-5.59	1750	1.29	35.39	-4.51	2520	4.24	48.00	-3.19
920	-0.85	27.60	-5.59	1790	1.80	40.81	-3.89	2540	3.87	45.14	-3.45
940	-1.45	25.68	-5.90	1830	1.79	42.53	-3.71	2560	4.14	46.84	-3.29
960	-1.35	26.29	-5.80	1870	2.27	45.03	-3.46	2580	4.71	48.76	-3.12

MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)	MHz	Peak Gain (dBi)	Eff (%)	Avg Gain (dB)
2600	5.11	47.95	-3.19	4400	3.83	46.01	-3.37
2620	4.75	41.82	-3.79	4500	3.07	41.21	-3.85
2640	4.91	44.15	-3.55	4600	1.63	33.21	-4.79
2660	5.00	45.24	-3.44	4700	2.93	39.95	-3.98
2680	5.00	45.42	-3.43	4800	3.38	37.78	-4.23
2700	4.86	42.63	-3.70	4900	3.86	44.13	-3.55
3300	2.24	34.15	-4.67	5000	4.61	45.30	-3.44
3350	2.02	35.54	-4.49	5150	4.37	42.45	-3.72
3400	1.71	32.06	-4.94	5200	2.97	36.74	-4.35
3500	2.29	37.76	-4.23	5300	3.44	36.79	-4.34
3600	3.57	46.23	-3.35	5400	3.94	40.14	-3.96
3700	4.71	50.33	-2.98	5500	4.10	44.92	-3.48
3800	5.07	51.00	-2.92	5600	4.30	47.33	-3.25
3900	5.00	48.36	-3.16	5700	4.78	45.27	-3.44
4000	3.94	43.75	-3.59	5800	5.19	41.77	-3.79
4100	3.20	44.51	-3.52	5925	5.84	43.87	-3.58
4200	2.80	41.34	-3.84				
4300	3.07	48.05	-3.18				

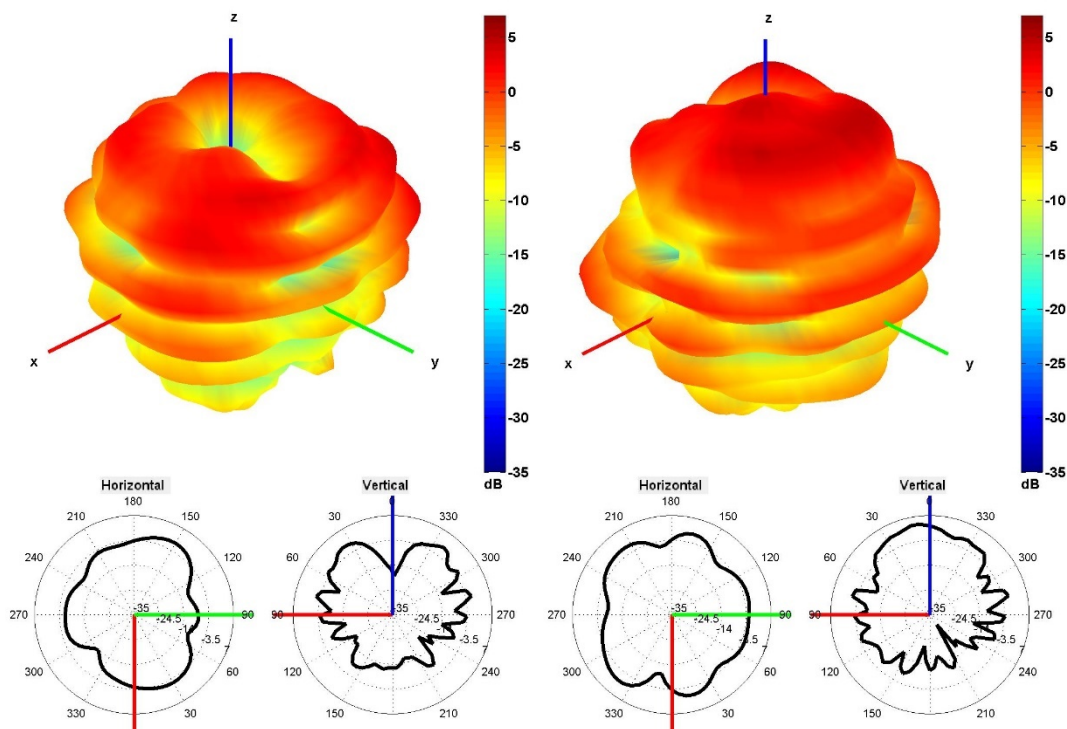
NETZ 4IN1-5G Radiation Pattern



5G-1

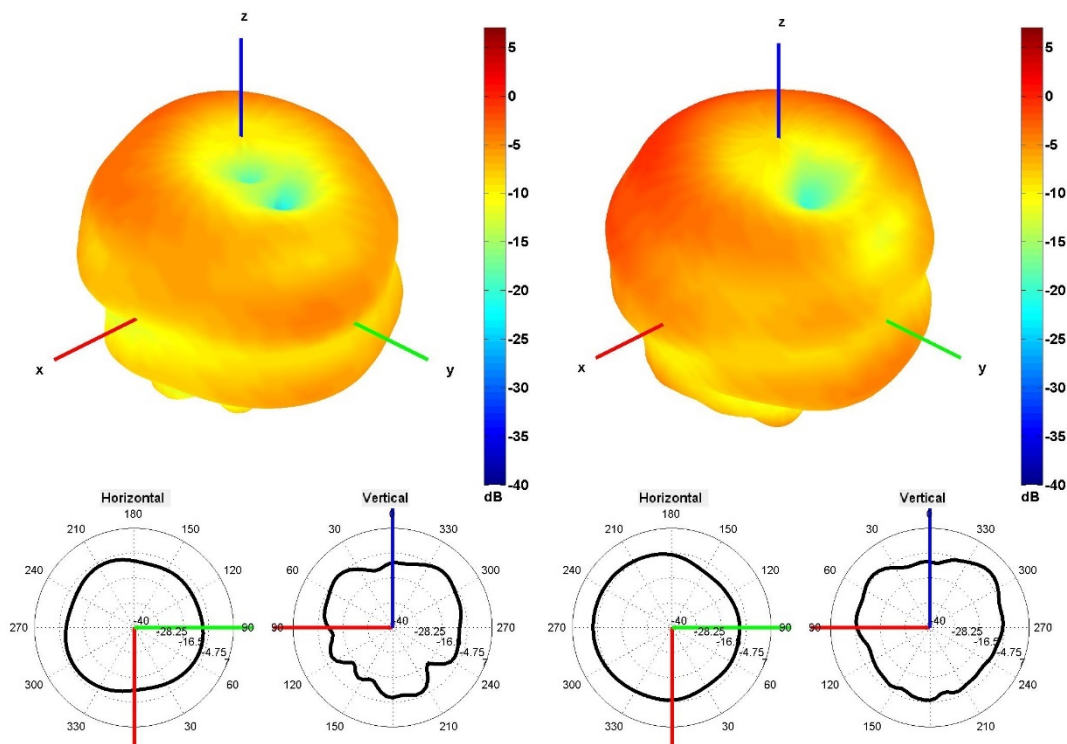


750 AND 2500 MHz Radiation Patterns

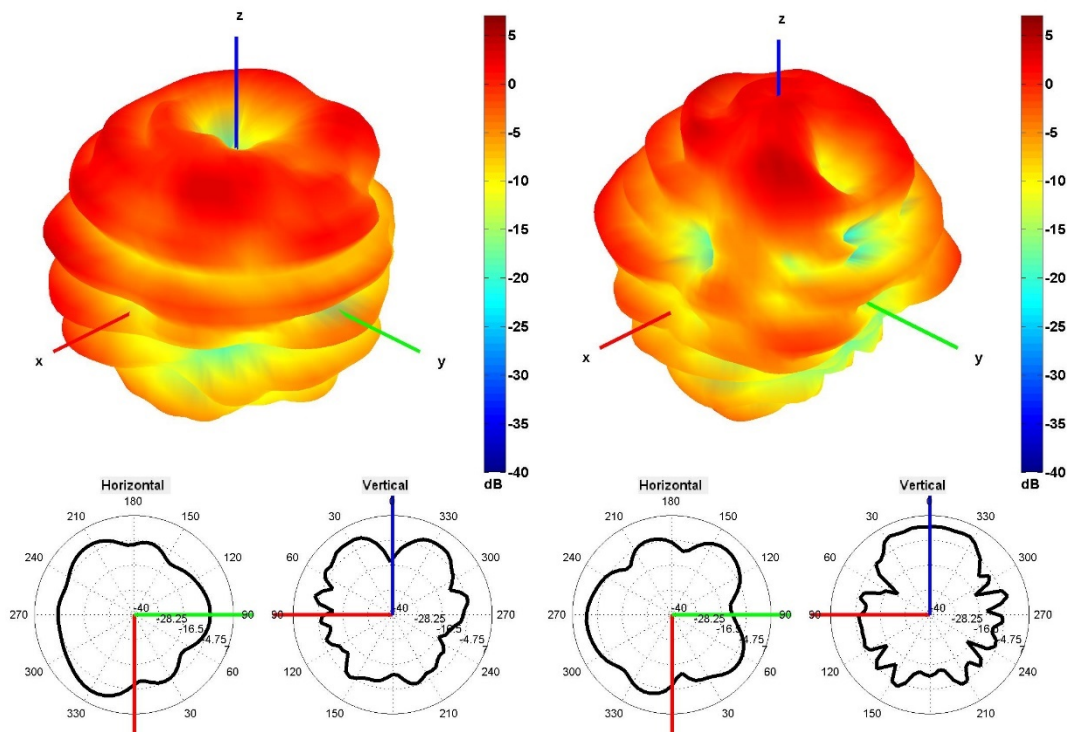


4500 AND 5500 MHz Radiation Patterns

5G-2

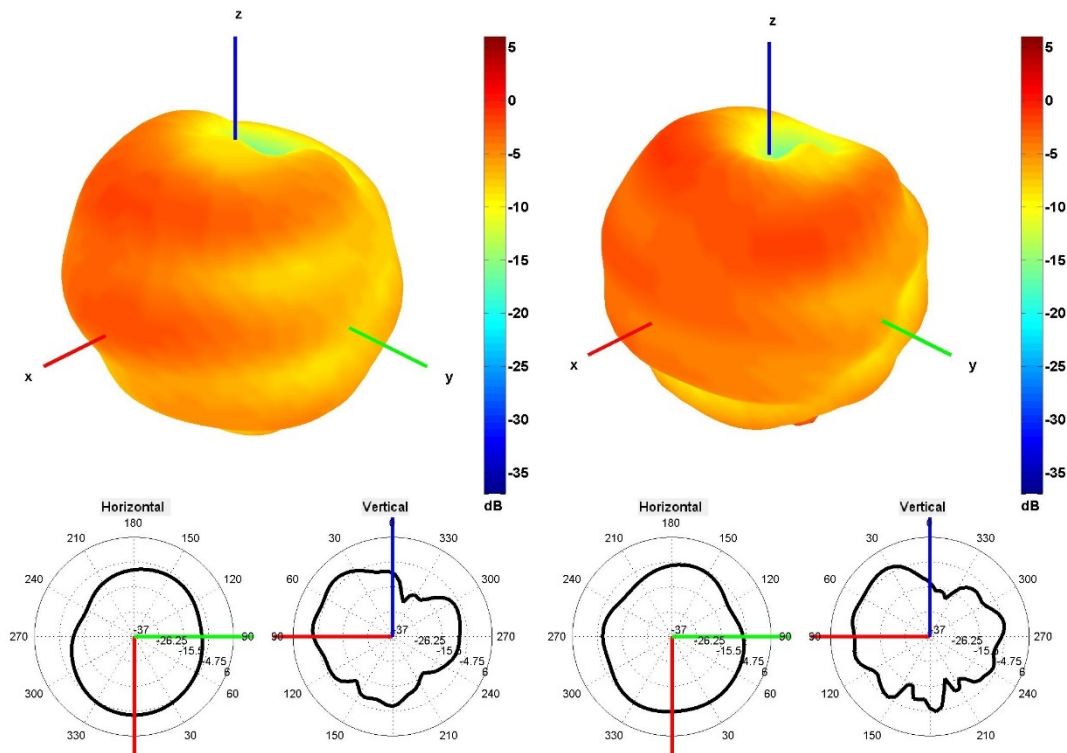


750 AND 2500MHz Radiation Patterns



4500 AND 5500 MHz Radiation Patterns

5G-3



750 AND 2500 MHz Radiation Patterns