

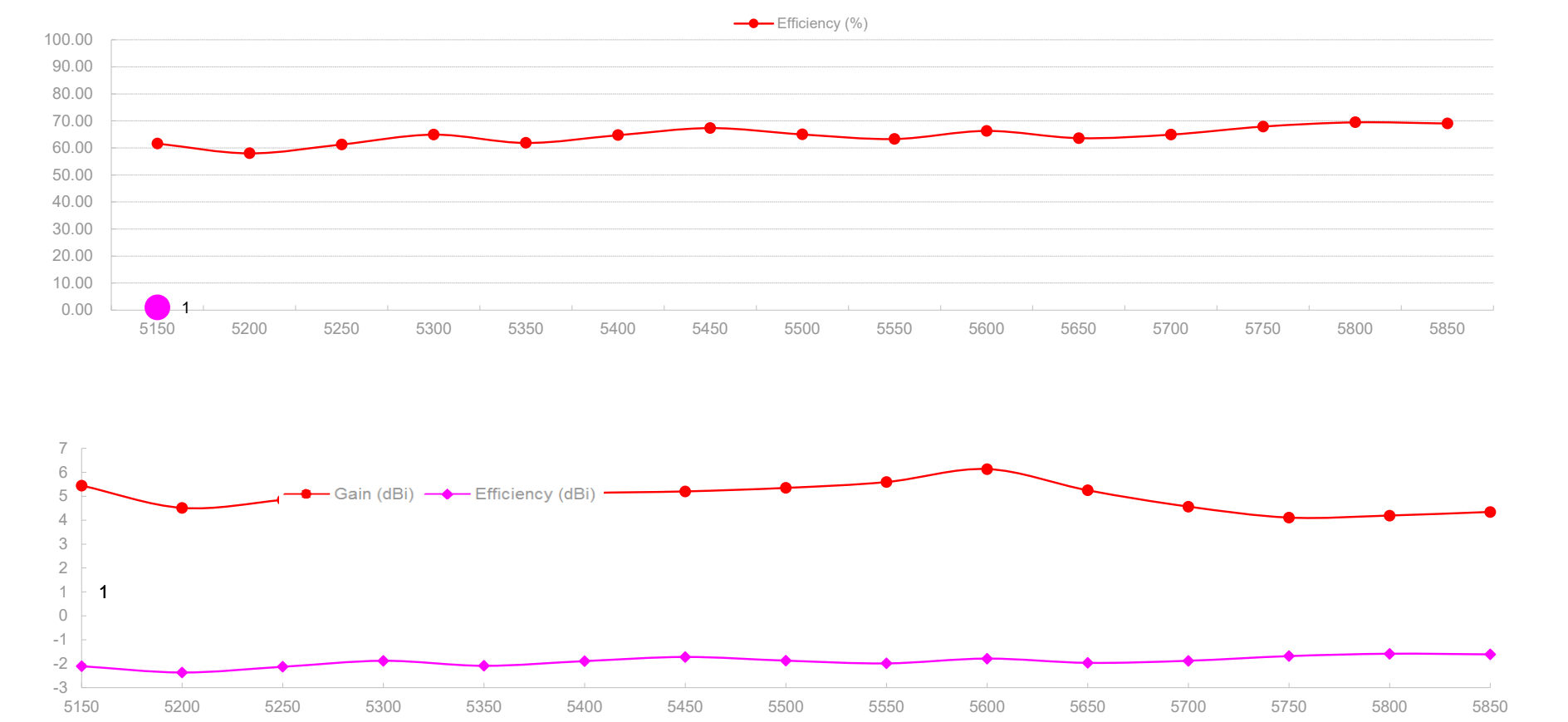


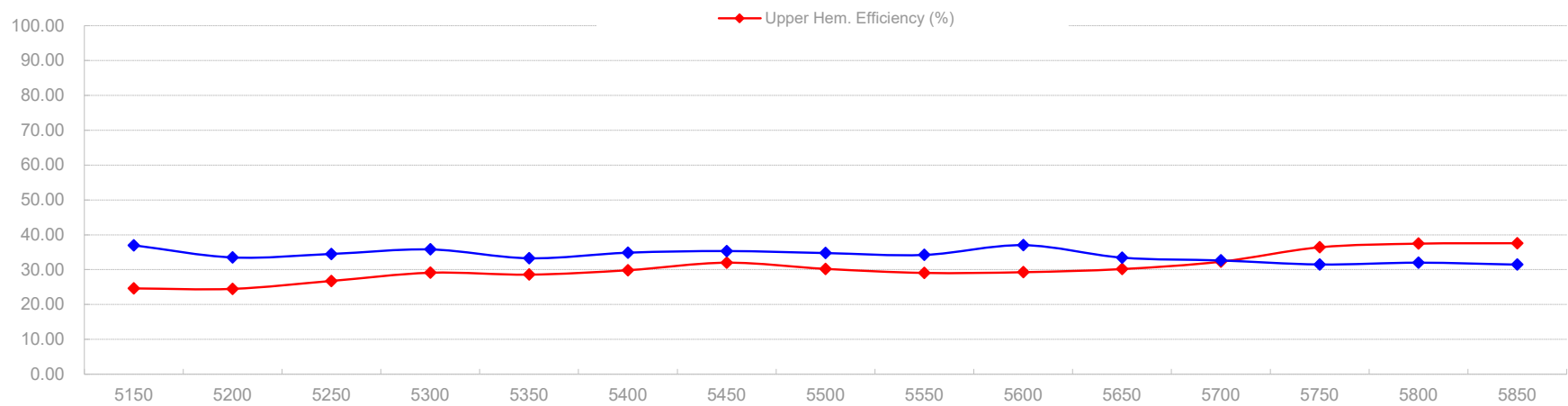
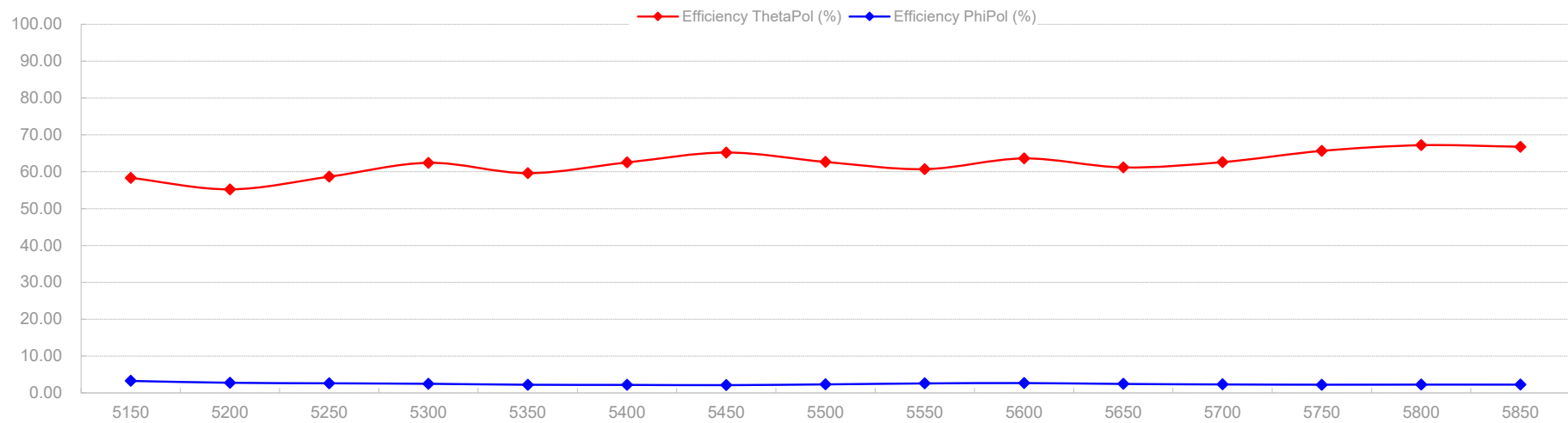
Dongguan Huangjie Communication Technology Co., Ltd.

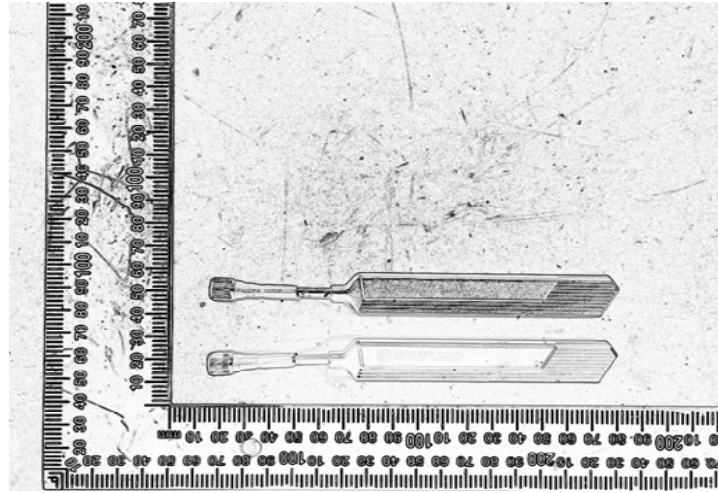
Add:Dashandi Industrial Zone, Quantang Village, Liaobu Town, Dongguan City,China

Frequency ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Frequency (MHz)	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Efficiency (dBi)	(2.10)	(2.37)	(2.13)	(1.88)	(2.09)	(1.89)	(1.72)	(1.87)	(1.99)	(1.79)	(1.96)	(1.88)	(1.68)	(1.58)	(1.61)
Gain (dBi)	5.45	4.51	4.85	5.31	4.94	5.13	5.20	5.35	5.59	6.14	5.25	4.57	4.11	4.19	4.34
Efficiency (%)	61.60	57.99	61.27	64.91	61.84	64.70	67.33	64.98	63.29	66.29	63.61	64.91	67.90	69.46	69.03
Directivity (dB)	7.55	6.88	6.98	7.18	7.03	7.02	6.92	7.22	7.58	7.92	7.21	6.44	5.79	5.78	5.95
Peak Gain Position (Theta)	152.00	91.00	90.00	90.00	89.00	89.00	88.00	152.00	152.00	152.00	152.00	152.00	72.00	71.00	71.00
Peak Gain Position (Phi)	56.00	117.00	117.00	116.00	115.00	114.00	113.00	132.00	132.00	132.00	131.00	131.00	115.00	114.00	113.00
Efficiency ThetaPol (%)	58.35	55.24	58.66	62.43	59.62	62.53	65.22	62.67	60.71	63.62	61.18	62.62	65.67	67.21	66.79
Efficiency PhiPol (%)	3.25	2.75	2.61	2.47	2.21	2.17	2.11	2.31	2.57	2.67	2.43	2.30	2.22	2.25	2.24
Upper Hem. Efficiency (%)	24.61	24.48	26.76	29.11	28.57	29.83	31.99	30.22	29.06	29.27	30.17	32.28	36.41	37.46	37.59
Lower Hem. Efficiency (%)	36.99	33.50	34.51	35.80	33.27	34.87	35.34	34.76	34.23	37.02	33.45	32.63	31.49	32.00	31.44
T90(H) roundness	5.51	5.47	5.54	5.79	5.86	6.03	6.31	7.03	7.82	8.31	8.60	9.70	11.22	11.84	12.78
Gain 15deg (dBi)															
E1(XZ) lobe width	26.53	25.82	25.01	24.52	23.22	22.96	22.73	22.95	23.67	24.72	26.53	27.51	28.87	30.38	24.78
E1(XZ) front to back ratio	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.89
E2(YZ) lobe width	25.20	24.91	24.07	22.99	23.47	22.93	23.17	24.53	26.36	15.35	15.56	27.56	24.33	23.03	21.88
E2 (YZ) front to rear ratio	0.26	1.28	1.74	2.30	2.03	1.76	1.63	0.86	0.34	0.00	0.00	0.08	1.12	1.67	2.86
Axis ratio at maximum gain (P)	12.88	29.91	43.94	39.18	35.86	42.77	34.81	17.28	16.29	15.65	13.98	13.39	56.09	34.55	31.05
Axis ratio (P) at the vertex (Theta=0)	32.91	36.79	26.18	34.31	24.00	18.73	9.55	5.24	10.92	9.49	14.50	23.88	27.60	34.69	26.24
Worst (largest) axis ratio (P) at an elevation angle of 10 degrees	63.08	74.16	61.09	65.96	63.22	63.52	79.17	75.11	62.45	67.49	68.20	62.76	57.55	57.68	57.35
Hc(XY) lobe width	171.09	160.44	155.55	132.93	131.80	121.88	120.01	111.54	96.03	86.72	104.29	105.43	100.91	99.45	98.81
Hc(XY) front-to-back ratio	4.97	4.69	4.60	4.42	4.52	4.20	4.35	3.71	3.03	1.32	0.00	0.00	0.00	0.00	0.00
Left-hand circular polarization efficiency (%)	30.18	28.04	30.11	31.58	30.03	30.78	31.95	30.31	28.96	29.74	28.71	28.85	30.37	30.42	30.04
Right-hand circular polarization efficiency (%)	31.42	29.95	31.16	33.32	31.80	33.92	35.38	34.67	34.33	36.55	34.90	36.06	37.52	39.04	38.99
Cross-pole ratio at maximum gain (+/-45 polarization)	3.18	0.64	0.65	0.36	0.55	0.44	0.38	1.76	1.61	1.30	1.23	1.32	0.51	0.71	0.52
Cross-pole ratio at maximum gain (horizontal to vertical polarization)	10.35	26.22	28.44	32.60	29.03	31.58	30.96	15.27	14.82	14.76	13.38	12.78	30.58	26.98	27.73
T60 degree Phi worst cross- pole ratio (+/-45 polarization)	0.00	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.02	0.02	0.03	0.00	0.00
Worst cross-polarity ratio of T60 degrees Phi circle (horizontal and vertical polarization)	0.65	0.02	0.05	0.02	4.19	9.80	10.16	10.63	10.06	10.52	9.78	8.16	9.09	8.68	10.29

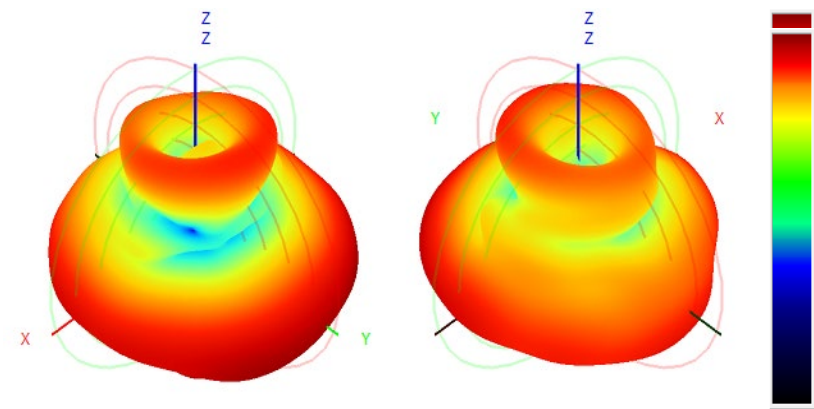
T90 degree (H) Phi worst cross-pole ratio (+/-45 polarization)	0.00	0.01	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.01	0.03	0.00	0.04	0.01	0.01
T90 degree (H) Phi worst cross-polarity ratio (horizontal and vertical polarization)	13.40	14.02	14.62	15.36	15.63	15.55	15.40	14.48	12.98	11.60	12.41	12.57	11.01	9.26	7.58
Axisymmetric antenna main lobe downtilt angle (average value)	(56.88)	(47.05)	(43.70)	(43.44)	(47.63)	(51.39)	(52.21)	(55.80)	(60.07)	(63.51)	(59.12)	(46.92)	(31.40)	(25.69)	(4.78)
Axial (Z+) horizontal vertical polarization isolation	17.74	17.59	19.53	19.58	23.35	17.32	5.91	2.71	5.35	8.40	13.59	20.40	17.05	14.35	12.95
Theta85.0's biggest gain in a week	3.71	3.83	4.29	4.78	4.59	4.83	5.08	4.51	4.04	3.36	2.41	2.68	2.88	2.67	2.42
Theta85.0 roundness (the difference between the maximum and minimum gain values, not the +/- value)	5.74	6.17	6.49	6.36	6.91	6.90	7.28	7.88	9.51	9.48	8.36	8.17	8.44	8.18	8.35



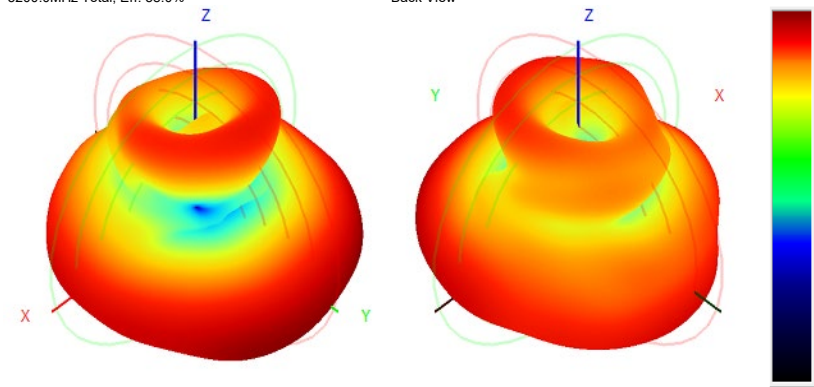




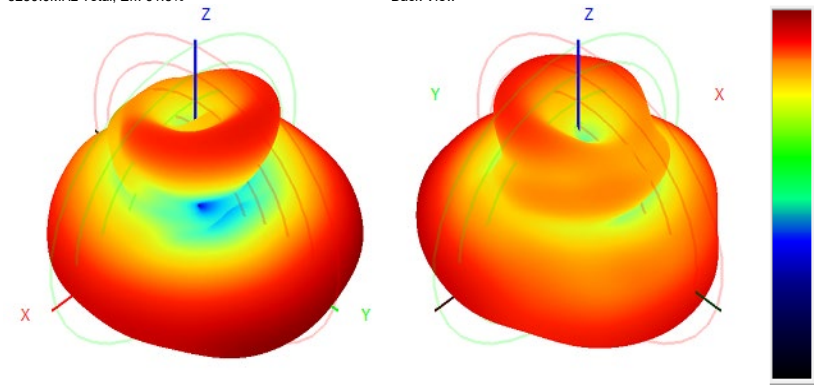
2D/3D Pattern



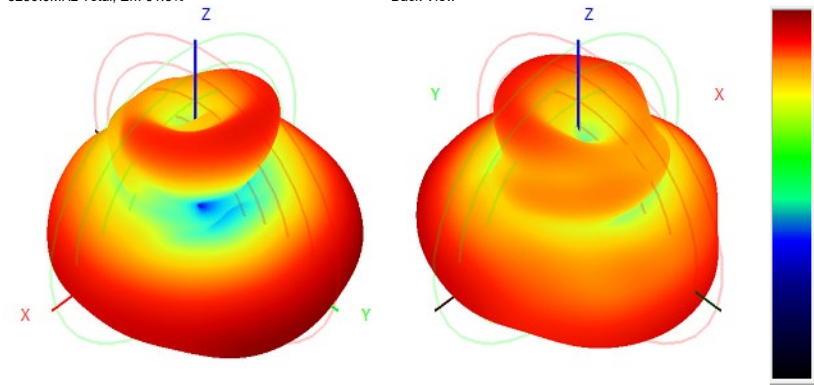
5200.0MHz Total, Eff: 58.0%



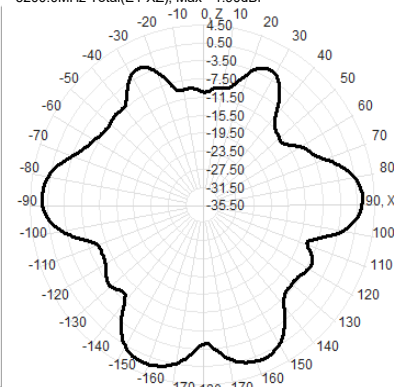
5250.0MHz Total, Eff: 61.3%



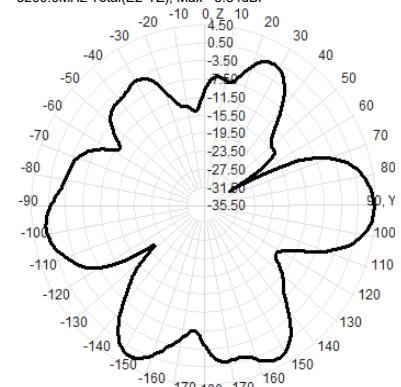
5250.0MHz Total, Eff: 61.3%



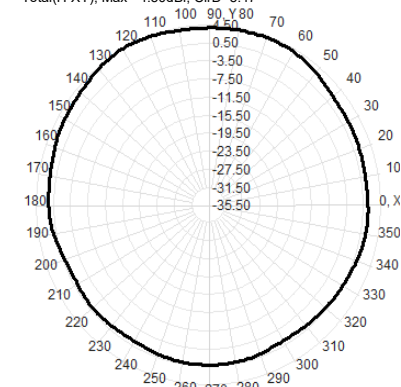
5200.0MHz Total(E1-XZ), Max= 1.90dBi



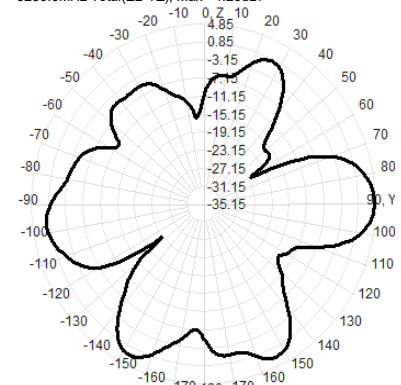
5200.0MHz Total(E2-YZ), Max= 3.84dBi



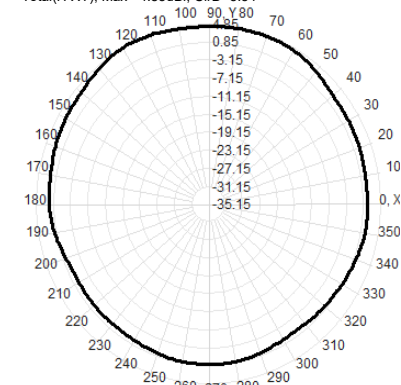
Total(H-XY), Max= 4.50dBi, CirD=5.47



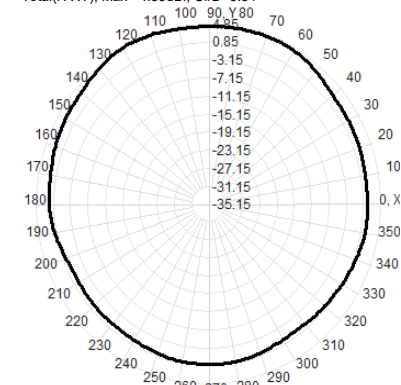
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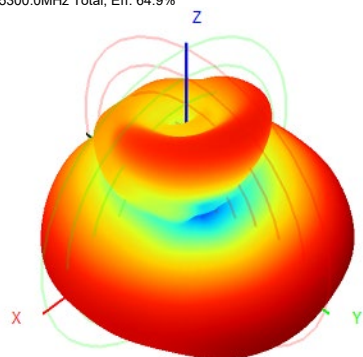
5250.0MHz Total(E2-YZ), Max= 4.26dBi



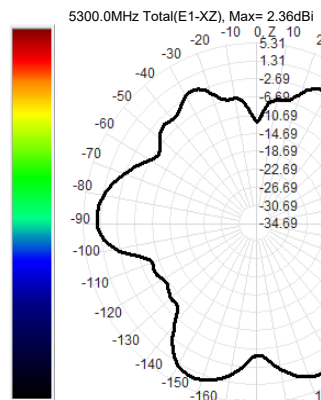
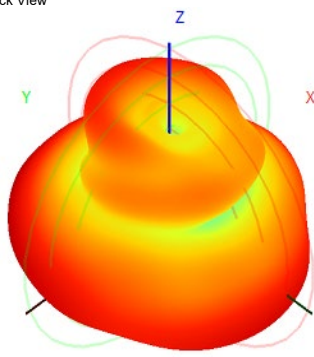
Total(H-XY), Max= 4.85dBi, CirD=5.54



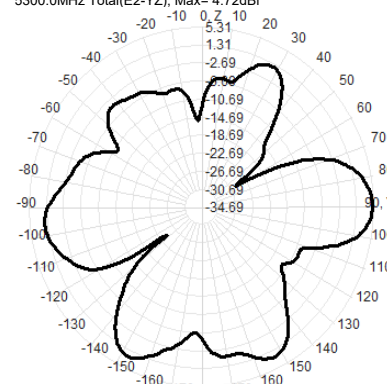
5300.0MHz Total, Eff: 64.9%



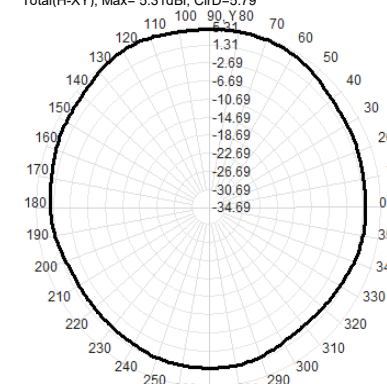
Back View



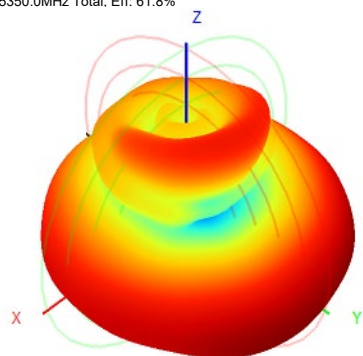
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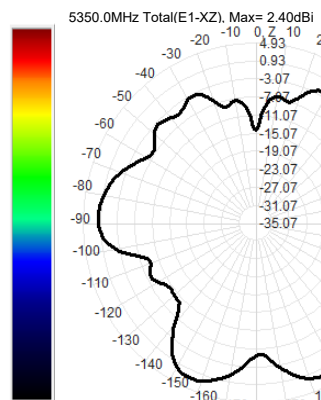
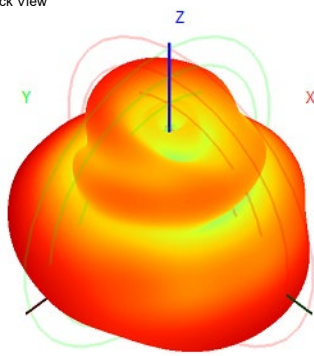
Total(H-XY), Max= 5.31dBi, CirD=5.79



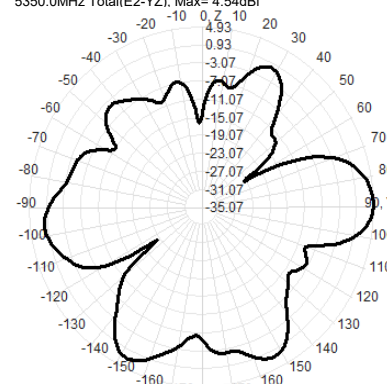
5350.0MHz Total, Eff: 61.8%



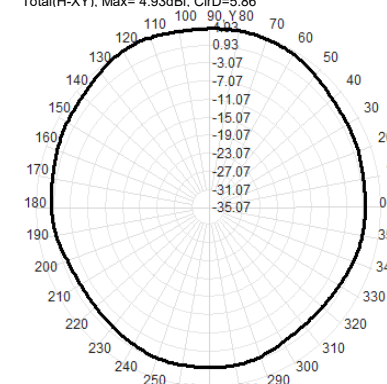
Back View



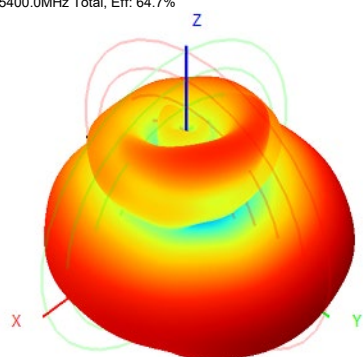
5350.0MHz Total(E2-YZ), Max= 4.54dBi



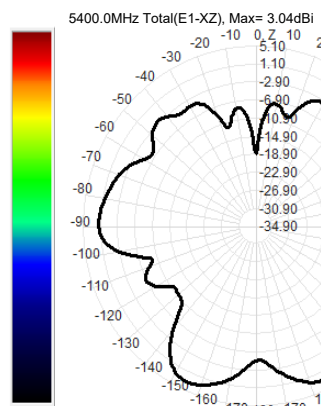
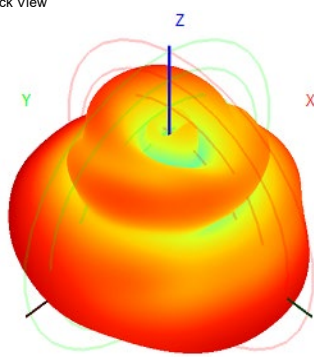
Total(H-XY), Max= 4.93dBi, CirD=5.86



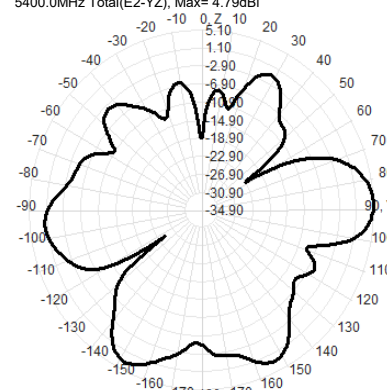
5400.0MHz Total, Eff: 64.7%



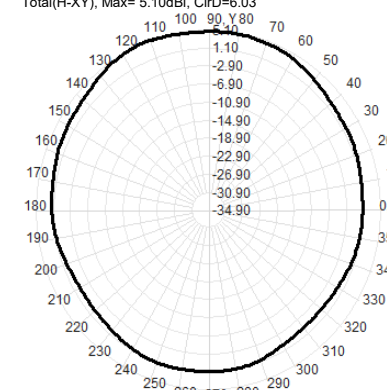
Back View



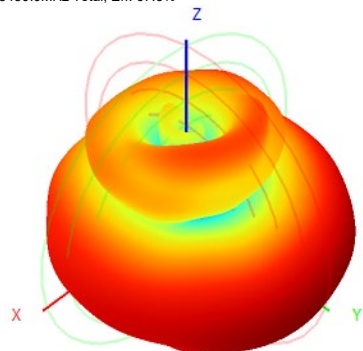
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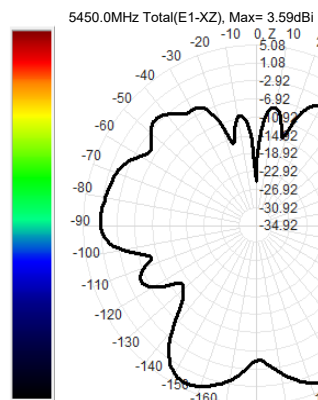
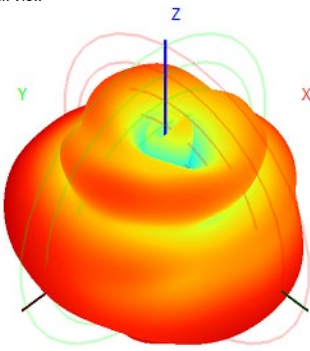
Total(H-XY), Max= 5.10dBi, CirD=6.03



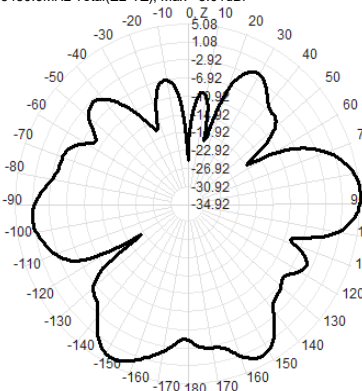
5450.0MHz Total, Eff: 67.3%



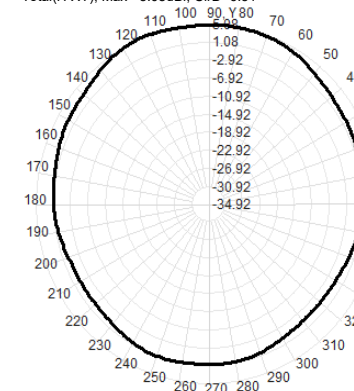
Back View



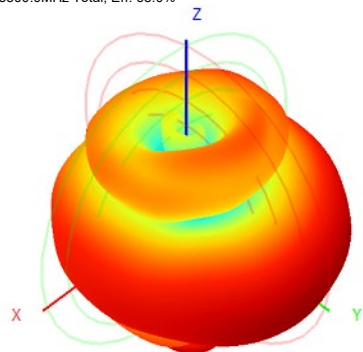
5450.0MHz Total(E2-YZ), Max= 5.01dBi



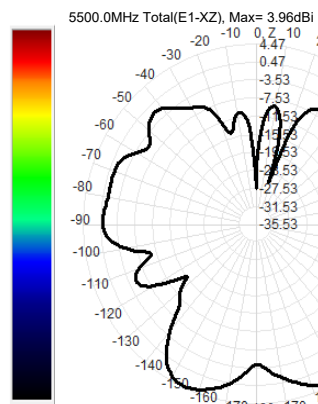
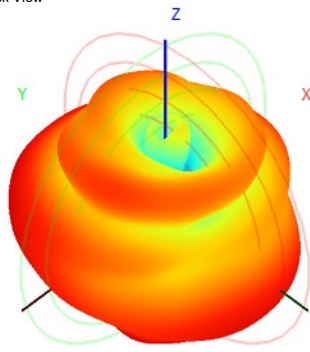
Total(H-XY), Max= 5.08dBi, CirD=6.31



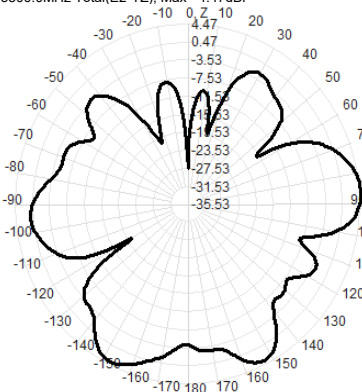
5500.0MHz Total, Eff: 65.0%



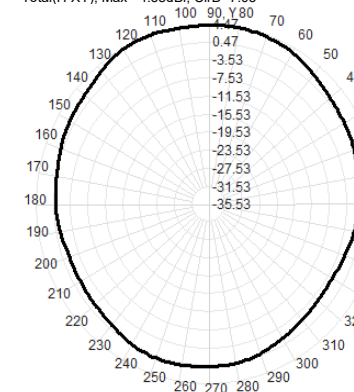
Back View



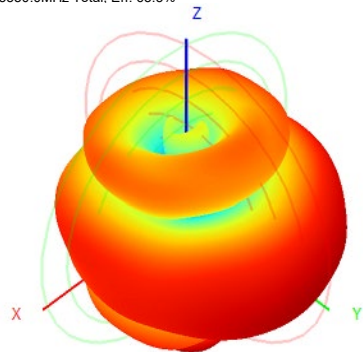
5500.0MHz Total(E2-YZ), Max= 4.47dBi



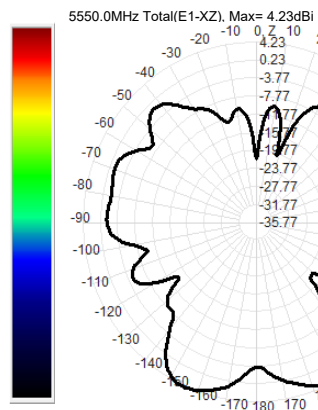
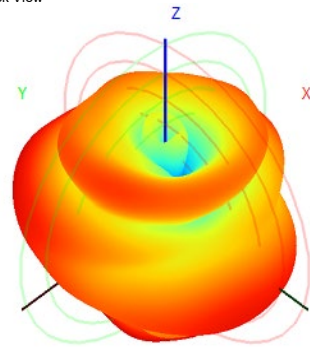
Total(H-XY), Max= 4.35dBi, CirD=7.03



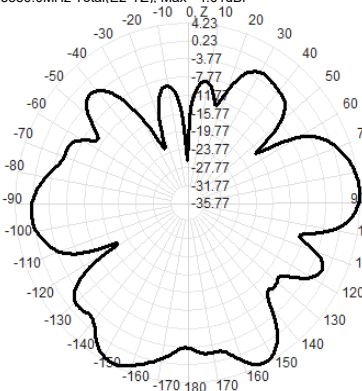
5550.0MHz Total, Eff: 63.3%



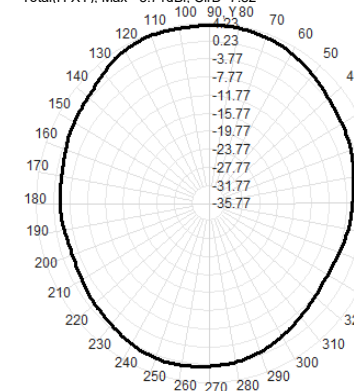
Back View



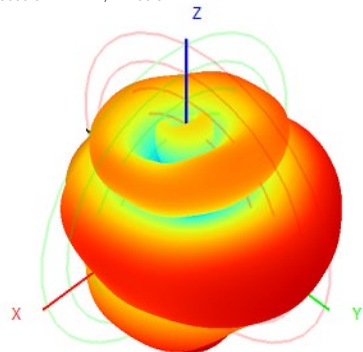
5550.0MHz Total(E2-YZ), Max= 4.01dBi



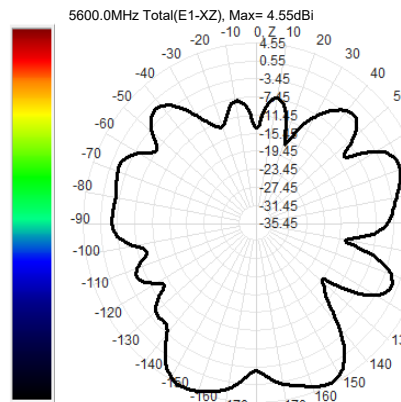
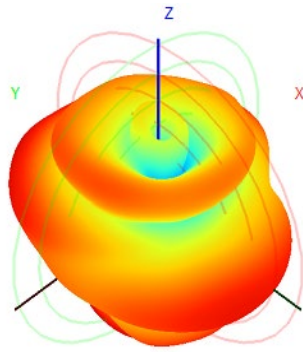
Total(H-XY), Max= 3.71dBi, CirD=7.82



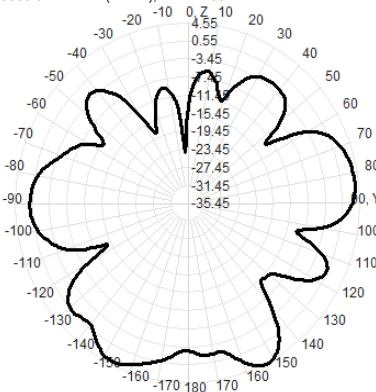
5600.0MHz Total, Eff: 66.3%



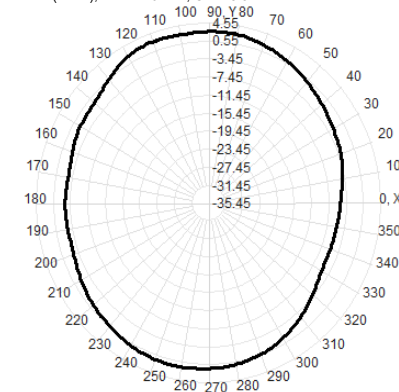
Back View



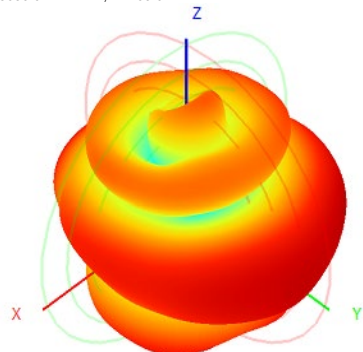
5600.0MHz Total(E2-YZ), Max= 4.50dBi



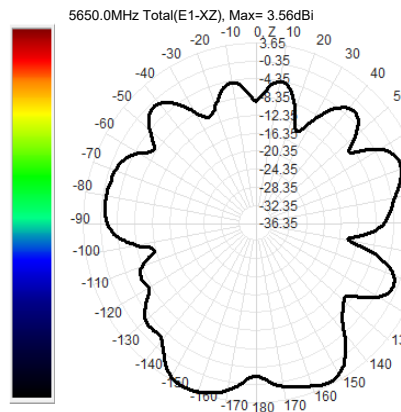
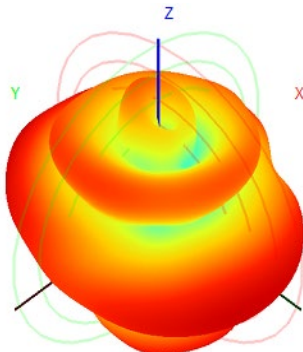
Total(H-XY), Max= 2.64dBi, CirD=8.31



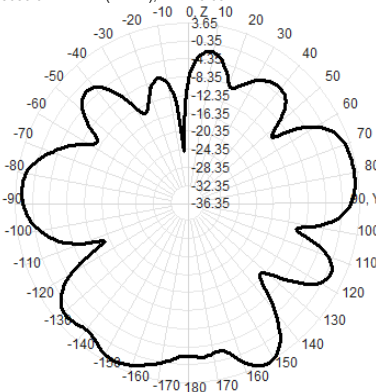
5650.0MHz Total, Eff: 63.6%



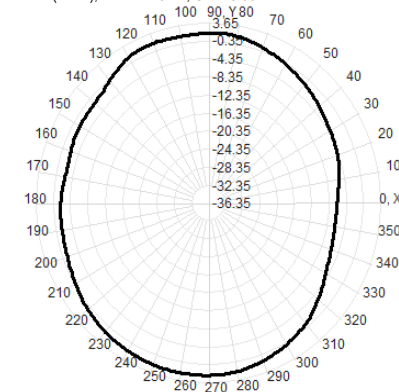
Back View



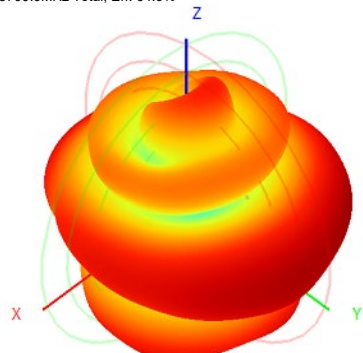
5650.0MHz Total(E2-YZ), Max= 3.65dBi



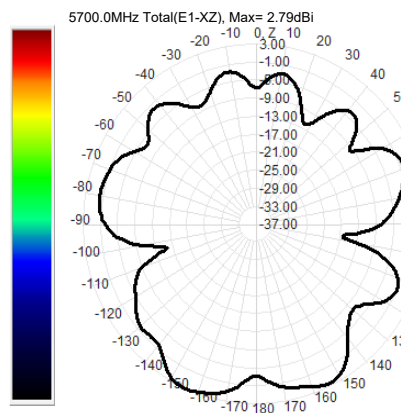
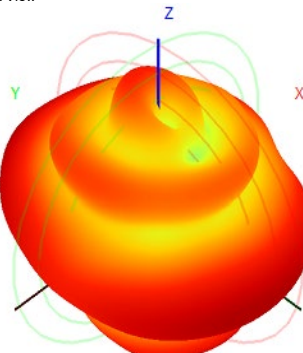
Total(H-XY), Max= 1.73dBi, CirD=8.60



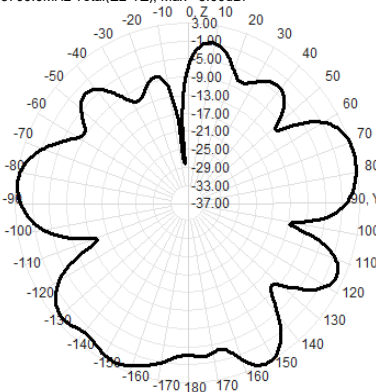
5700.0MHz Total, Eff: 64.9%



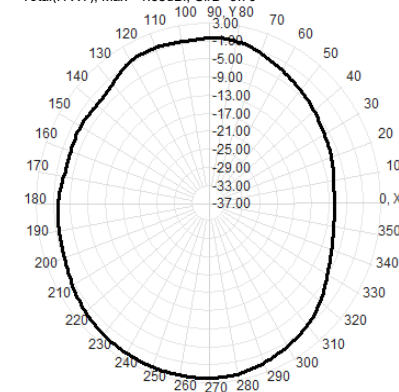
Back View



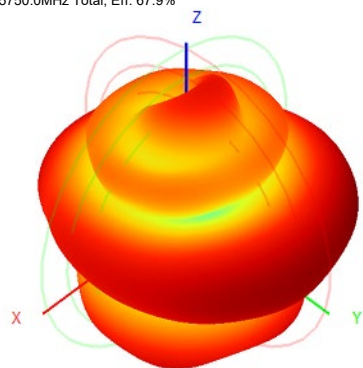
5700.0MHz Total(E2-YZ), Max= 3.00dBi



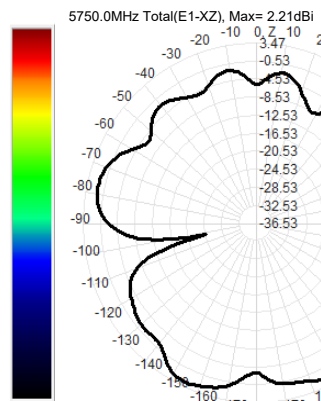
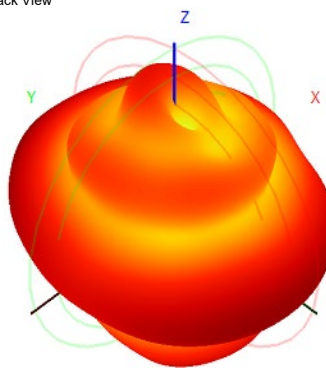
Total(H-XY), Max= 1.68dBi, CirD=9.70



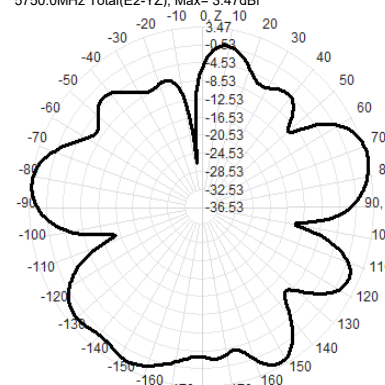
5750.0MHz Total, Eff: 67.9%



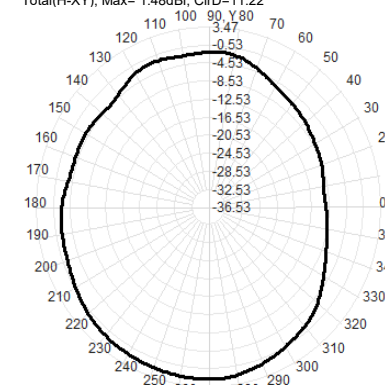
Back View



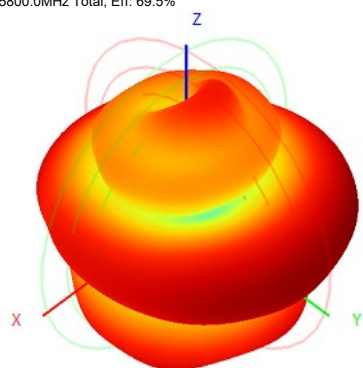
5750.0MHz Total(E2-YZ), Max= 3.47dBi



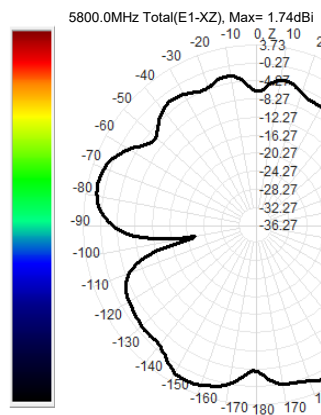
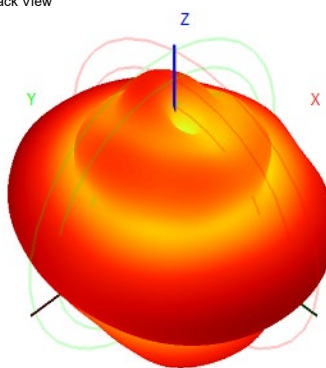
Total(H-XY), Max= 1.48dBi, CtrD=11.22



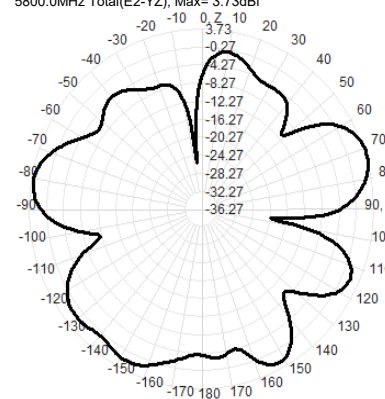
5800.0MHz Total, Eff: 69.5%



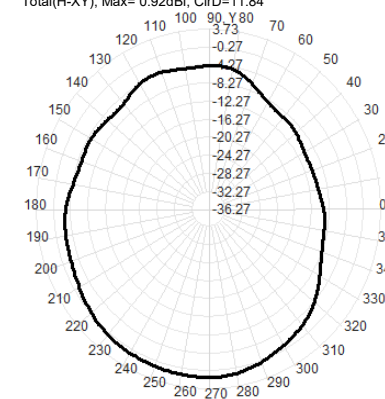
Back View



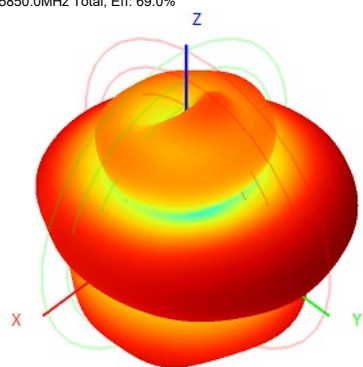
5800.0MHz Total(E2-YZ), Max= 3.73dBi



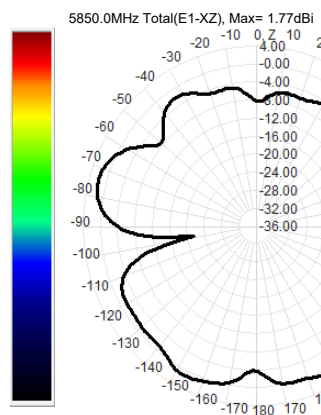
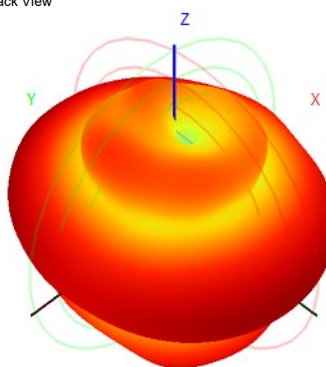
Total(H-XY), Max= 0.92dBi, CtrD=11.84



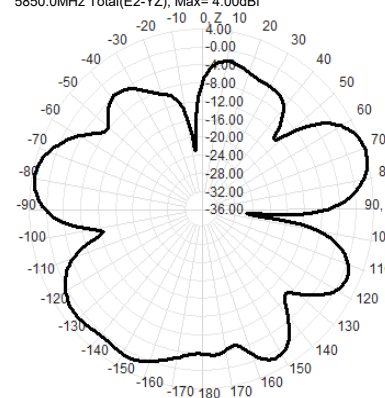
5850.0MHz Total, Eff: 69.0%



Back View



5850.0MHz Total(E2-YZ), Max= 4.00dBi



Total(H-XY), Max= 0.26dBi, CtrD=12.78

