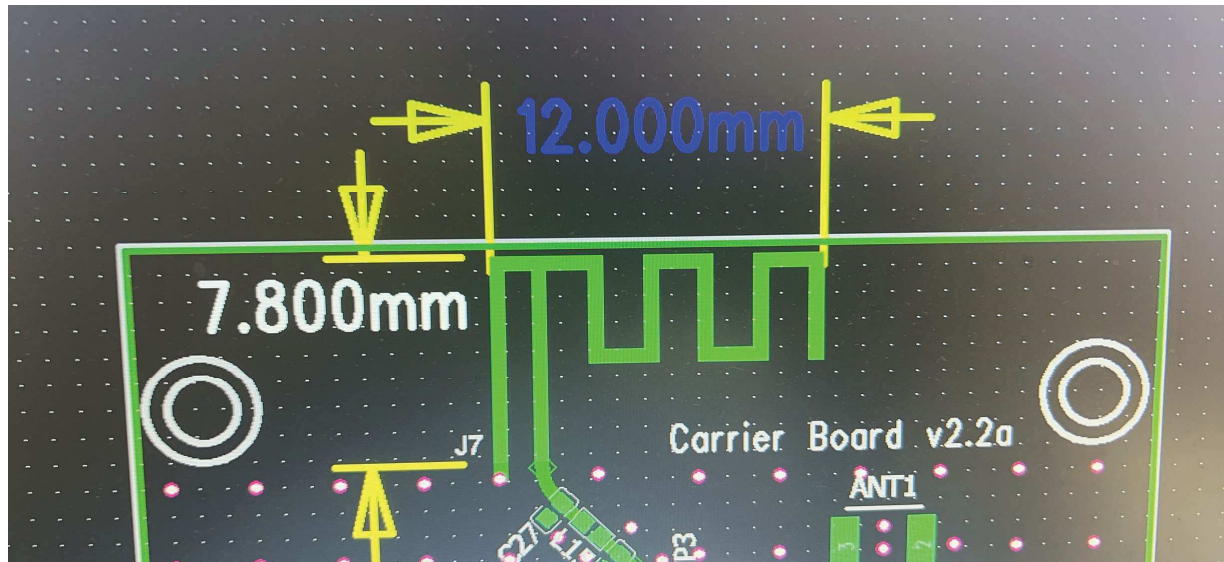


Antenna model: PCBANT-001

Manufacturer: GT-tronics HK Limited

Antenna size: 12x7.8mm



CTIA Report (RP_2440.000_tot)

Test Information:

Test Method:	Radiated Power Passive Antenna
Test Condition:	FS: Free Space
Frequency:	2440.000 MHz
Test Time:	Start: 27.11.2015 13:34:22; Stop: 27.11.2015 14:02:41
Cal Data Hor:	43.80 dB (Range Calibration RadPower Hor Eval 200 to 6000)
Cal Data Ver:	46.53 dB (Range Calibration RadPower Ver Eval 400 to 6000)

OTA Evaluation Results:

Total Radiated Power	-5.89 dBm
Peak EIRP	-0.30 dBm
Directivity	5.59 dBi
Efficiency	-5.89 dB
Efficiency	25.75 %
Peak Gain	-0.30 dBi
NHPRP 45°	-7.41 dBm
NHPRP 45° / TRP	-1.52 dB
NHPRP 45° / TRP	70.48 %
NHPRP 30°	-9.31 dBm
NHPRP 30° / TRP	-3.42 dB
NHPRP 30° / TRP	45.52 %
NHPRP 22.5°	-10.67 dBm
NHPRP 22.5° / TRP	-4.78 dB
NHPRP 22.5° / TRP	33.25 %
UHRP	-10.42 dBm
UHRP / TRP	-4.53 dB
UHRP / TRP	35.23 %
LHRP	-7.78 dBm
LHRP / TRP	-1.89 dB
LHRP / TRP	64.77 %
PGRP (0-120°)	-8.12 dBm
PGRP / TRP	-2.23 dB
PGRP / TRP	59.81 %
Front/Back Ratio	13.62
PhiBW	56.8 deg
PhiBW Up	36.9 deg
PhiBW Down	19.9 deg
ThetaBW	53.4 deg
ThetaBW Up	22.4 deg
ThetaBW Down	31.0 deg
Boresight Phi	75 deg
Boresight Theta	135 deg
Maximum Power	-0.30 dBm
Minimum Power	-17.77 dBm
Average Power	-6.18 dBm
Max/Min Ratio	17.47 dB
Max/Avg Ratio	5.88 dB
Min/Avg Ratio	-11.59 dB
Worst Single Value	-27.17 dBm
Worst Position	Azi = 315 deg; Elev = 0 deg; Pol = Hor
Best Single Value	-2.34 dBm
Best Position	Azi = 315 deg; Elev = 135 deg; Pol = Ver

RP 2440.000 tot

Azimuth (deg)	Elevation 0 deg (dB)	Elevation 15 deg (dB)	Elevation 30 deg (dB)	Elevation 45 deg (dB)	Elevation 60 deg (dB)	Elevation 75 deg (dB)	Elevation 90 deg (dB)	Elevation 105 deg (dB)
0.00	-9.63	-8.25	-6.27	-4.75	-4.67	-6.37	-8.03	-6.22
15.00	-10.62	-8.42	-6.93	-4.70	-4.72	-5.63	-8.77	-7.17
30.00	-11.27	-9.39	-7.07	-4.99	-4.55	-5.09	-8.41	-7.60
45.00	-11.80	-10.73	-7.07	-5.14	-4.24	-4.82	-7.01	-6.96
60.00	-11.74	-11.70	-7.26	-5.67	-4.15	-4.33	-4.97	-4.78
75.00	-11.45	-11.57	-7.60	-6.49	-4.83	-3.84	-4.77	-3.20
90.00	-11.53	-11.58	-8.22	-7.32	-5.96	-4.83	-8.27	-3.87
105.00	-12.15	-12.81	-9.57	-7.99	-7.46	-7.42	-11.57	-7.75
120.00	-12.37	-14.85	-10.81	-9.53	-8.34	-7.51	-6.98	-9.59
135.00	-12.64	-15.04	-11.07	-10.88	-8.81	-6.14	-5.52	-6.50
150.00	-13.06	-13.11	-11.01	-11.05	-9.52	-6.40	-6.69	-6.50
165.00	-13.40	-11.31	-11.44	-11.84	-11.10	-7.88	-9.23	-9.48
180.00	-13.18	-10.45	-12.55	-14.06	-12.11	-8.87	-10.64	-12.80
195.00	-13.09	-10.74	-13.78	-16.05	-11.43	-8.55	-9.75	-13.40
210.00	-12.91	-11.41	-14.83	-15.67	-10.63	-8.05	-8.79	-13.21
225.00	-12.00	-11.45	-16.32	-15.47	-10.13	-7.99	-8.31	-13.75
240.00	-11.00	-11.45	-17.77	-15.48	-10.19	-8.70	-9.07	-15.24
255.00	-10.64	-12.37	-15.51	-13.92	-11.31	-9.28	-11.34	-12.09
270.00	-10.05	-12.64	-11.25	-12.09	-12.39	-8.60	-8.18	-6.03
285.00	-9.38	-11.37	-8.70	-11.60	-9.29	-6.72	-5.67	-4.20
300.00	-8.65	-9.99	-7.33	-10.48	-6.72	-5.25	-4.60	-3.82
315.00	-8.27	-8.85	-6.25	-7.89	-5.37	-4.14	-4.63	-3.70
330.00	-8.03	-7.81	-5.42	-5.82	-5.52	-4.46	-5.98	-4.20
345.00	-7.96	-7.75	-4.89	-5.19	-5.55	-5.67	-6.81	-4.98
360.00	-9.63	-8.25	-6.27	-4.75	-4.67	-6.37	-8.03	-6.22

(continuation of the "RP_2440.000_tot" table from column 9 ...)

Azimuth (deg)	Elevation 120 deg (dB)	Elevation 135 deg (dB)	Elevation 150 deg (dB)	Elevation 165 deg (dB)	Elevation 180 deg (dB)
0.00	-3.82	-7.82	-8.91	-4.87	-6.70
15.00	-5.26	-9.96	-11.08	-5.63	-7.19
30.00	-6.27	-10.71	-8.35	-5.49	-6.76
45.00	-5.17	-6.00	-5.05	-4.91	-6.04
60.00	-2.52	-1.99	-2.87	-4.51	-5.34
75.00	-1.00	-0.30	-1.98	-4.67	-4.65
90.00	-1.62	-0.38	-2.08	-5.27	-4.00
105.00	-4.18	-2.05	-3.21	-6.39	-3.66
120.00	-5.85	-4.79	-5.09	-8.75	-3.74
135.00	-5.41	-5.92	-6.66	-12.54	-4.36
150.00	-4.91	-4.42	-6.66	-14.19	-4.91
165.00	-5.92	-3.52	-5.49	-12.62	-5.27
180.00	-7.05	-3.75	-4.76	-10.93	-5.24
195.00	-6.97	-3.99	-4.41	-9.65	-4.79
210.00	-7.21	-4.13	-4.09	-8.87	-4.40
225.00	-7.99	-4.14	-3.74	-8.19	-4.29
240.00	-7.59	-3.70	-3.36	-7.20	-4.39
255.00	-4.87	-2.49	-2.72	-6.27	-4.91
270.00	-2.99	-1.21	-2.00	-5.50	-5.60
285.00	-1.93	-0.56	-1.60	-4.79	-6.38
300.00	-1.66	-0.42	-1.72	-4.59	-7.37
315.00	-1.92	-1.03	-2.76	-4.27	-8.08
330.00	-2.34	-2.11	-4.55	-4.04	-7.87
345.00	-2.43	-3.52	-6.34	-4.33	-7.35
360.00	-3.82	-7.82	-8.91	-4.87	-6.70

RP 2440.000 hor

Azimuth (deg)	Elevation 0 deg (dB)	Elevation 15 deg (dB)	Elevation 30 deg (dB)	Elevation 45 deg (dB)	Elevation 60 deg (dB)	Elevation 75 deg (dB)	Elevation 90 deg (dB)	Elevation 105 deg (dB)
0.0	-13.35	-11.02	-7.84	-5.18	-5.46	-6.66	-8.99	-7.39
15.0	-12.30	-9.72	-7.29	-4.96	-5.00	-5.88	-9.43	-7.63
30.0	-12.31	-9.75	-7.16	-5.09	-4.78	-5.31	-9.78	-8.40
45.0	-12.65	-11.14	-7.33	-5.54	-4.81	-5.56	-10.60	-8.87

Azimuth (deg)	Elevation 0 deg (dB)	Elevation 15 deg (dB)	Elevation 30 deg (dB)	Elevation 45 deg (dB)	Elevation 60 deg (dB)	Elevation 75 deg (dB)	Elevation 90 deg (dB)	Elevation 105 deg (dB)
60.0	-13.33	-13.59	-7.97	-6.39	-5.12	-6.32	-12.47	-8.91
75.0	-14.66	-16.97	-9.17	-7.31	-5.66	-6.35	-14.04	-9.55
90.0	-16.98	-21.80	-10.91	-8.73	-6.25	-6.11	-12.97	-9.15
105.0	-20.54	-26.46	-13.18	-10.69	-8.23	-7.68	-12.93	-9.19
120.0	-24.45	-26.31	-15.62	-13.58	-10.65	-9.97	-12.87	-12.00
135.0	-24.99	-20.25	-19.23	-18.76	-11.40	-9.48	-12.23	-13.52
150.0	-20.22	-15.62	-21.61	-23.54	-11.50	-8.65	-11.84	-13.23
165.0	-16.69	-12.39	-17.31	-18.33	-12.22	-8.98	-11.50	-13.83
180.0	-14.41	-10.86	-14.52	-16.62	-12.50	-9.33	-11.31	-13.98
195.0	-13.59	-10.93	-14.40	-16.73	-11.84	-9.05	-10.93	-14.02
210.0	-13.34	-12.02	-16.41	-17.82	-11.41	-8.66	-10.19	-16.50
225.0	-12.66	-12.73	-18.60	-20.14	-11.33	-8.68	-9.52	-24.80
240.0	-12.38	-12.87	-19.15	-22.10	-11.84	-9.50	-9.95	-19.05
255.0	-13.17	-13.15	-20.06	-21.11	-12.89	-9.74	-11.73	-15.02
270.0	-14.80	-14.13	-21.37	-19.33	-12.82	-9.18	-14.44	-15.27
285.0	-17.75	-16.31	-23.00	-19.44	-13.03	-10.15	-17.27	-13.75
300.0	-21.22	-18.59	-23.99	-19.47	-15.14	-12.95	-24.06	-11.60
315.0	-27.17	-17.57	-17.91	-14.68	-14.61	-11.65	-20.87	-9.78
330.0	-21.79	-15.04	-12.98	-9.78	-10.58	-8.95	-13.94	-8.20
345.0	-17.54	-14.20	-9.83	-7.59	-7.65	-7.56	-10.74	-7.68
360.0	-13.35	-11.02	-7.84	-5.18	-5.46	-6.66	-8.99	-7.39

(continuation of the "RP_2440.000_hor" table from column 9 ...)

Azimuth (deg)	Elevation 120 deg (dB)	Elevation 135 deg (dB)	Elevation 150 deg (dB)	Elevation 165 deg (dB)	Elevation 180 deg (dB)
0.0	-4.89	-12.16	-21.77	-6.74	-9.00
15.0	-5.50	-12.70	-21.49	-7.10	-10.09
30.0	-6.40	-12.30	-23.99	-8.16	-10.11
45.0	-6.45	-8.99	-17.05	-10.34	-10.08
60.0	-4.91	-4.87	-10.32	-13.98	-10.29
75.0	-3.57	-2.77	-6.72	-19.68	-10.67
90.0	-3.93	-2.63	-5.16	-23.24	-10.52
105.0	-5.11	-4.03	-4.85	-19.11	-9.79
120.0	-6.27	-6.04	-5.76	-17.23	-8.84
135.0	-7.40	-6.48	-7.46	-17.30	-8.19
150.0	-7.42	-4.90	-8.47	-19.46	-7.78
165.0	-7.14	-3.88	-7.09	-24.20	-7.56
180.0	-7.21	-3.90	-5.44	-25.88	-7.50
195.0	-7.75	-4.10	-4.73	-20.77	-7.63
210.0	-8.86	-4.21	-4.83	-15.59	-8.37
225.0	-9.09	-4.35	-5.18	-12.41	-10.14
240.0	-8.27	-4.32	-5.31	-10.46	-12.56
255.0	-7.51	-3.64	-5.00	-9.54	-14.24
270.0	-6.76	-2.99	-4.64	-9.23	-13.55
285.0	-5.76	-3.11	-4.74	-9.02	-11.74
300.0	-5.84	-4.31	-5.37	-8.72	-10.98
315.0	-6.46	-6.85	-7.37	-8.18	-10.38
330.0	-6.41	-9.78	-10.98	-7.38	-9.98
345.0	-5.57	-9.89	-15.96	-7.44	-9.90
360.0	-4.89	-12.16	-21.77	-6.74	-9.00

RP_2440.000_ver

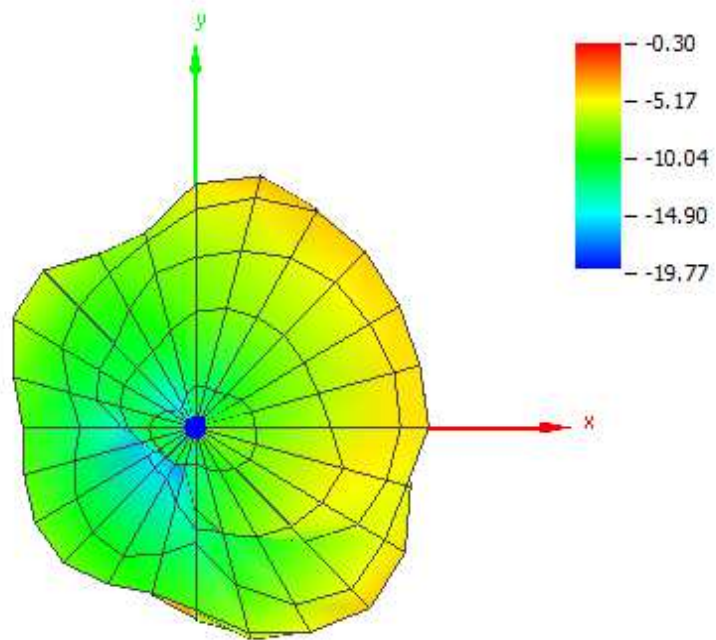
Azimuth (deg)	Elevation 0 deg (dB)	Elevation 15 deg (dB)	Elevation 30 deg (dB)	Elevation 45 deg (dB)	Elevation 60 deg (dB)	Elevation 75 deg (dB)	Elevation 90 deg (dB)	Elevation 105 deg (dB)
0.0	-12.02	-11.50	-11.43	-15.06	-12.49	-18.27	-15.05	-12.47
15.0	-15.55	-14.30	-17.94	-17.02	-16.71	-18.18	-17.28	-17.09
30.0	-17.99	-20.48	-23.91	-21.23	-17.36	-18.16	-14.09	-15.34
45.0	-19.31	-21.18	-19.46	-15.69	-13.41	-12.88	-9.51	-11.46
60.0	-16.87	-16.22	-15.49	-13.87	-11.13	-8.67	-5.81	-6.91
75.0	-14.27	-13.04	-12.80	-14.10	-12.42	-7.42	-5.31	-4.35
90.0	-12.99	-12.01	-11.57	-12.88	-17.86	-10.76	-10.07	-5.40
105.0	-12.83	-13.00	-12.07	-11.35	-15.40	-19.79	-17.27	-13.25
120.0	-12.64	-15.18	-12.56	-11.70	-12.17	-11.14	-8.28	-13.31
135.0	-12.90	-16.60	-11.79	-11.66	-12.27	-8.84	-6.56	-7.46

Azimuth (deg)	Elevation 0 deg (dB)	Elevation 15 deg (dB)	Elevation 30 deg (dB)	Elevation 45 deg (dB)	Elevation 60 deg (dB)	Elevation 75 deg (dB)	Elevation 90 deg (dB)	Elevation 105 deg (dB)
150.0	-13.99	-16.69	-11.41	-11.30	-13.88	-10.34	-8.27	-7.53
165.0	-16.14	-17.85	-12.74	-12.95	-17.51	-14.38	-13.13	-11.46
180.0	-19.24	-20.95	-16.93	-17.57	-22.73	-18.84	-19.06	-19.01
195.0	-22.72	-24.56	-22.51	-24.47	-21.90	-18.22	-16.00	-22.13
210.0	-23.15	-20.18	-19.99	-19.77	-18.46	-16.89	-14.39	-15.95
225.0	-20.51	-17.39	-20.22	-17.28	-16.29	-16.31	-14.43	-14.11
240.0	-16.64	-17.01	-23.42	-16.54	-15.20	-16.47	-16.42	-17.57
255.0	-14.20	-20.25	-17.38	-14.84	-16.47	-19.28	-21.99	-15.18
270.0	-11.82	-18.00	-11.70	-13.00	-22.66	-17.69	-9.36	-6.58
285.0	-10.06	-13.05	-8.86	-12.38	-11.67	-9.34	-5.98	-4.71
300.0	-8.90	-10.63	-7.43	-11.06	-7.40	-6.06	-4.65	-4.62
315.0	-8.33	-9.48	-6.55	-8.91	-5.92	-4.98	-4.74	-4.93
330.0	-8.21	-8.72	-6.26	-8.06	-7.15	-6.37	-6.74	-6.40
345.0	-8.47	-8.87	-6.57	-8.91	-9.71	-10.20	-9.06	-8.34
360.0	-12.02	-11.50	-11.43	-15.06	-12.49	-18.27	-15.05	-12.47

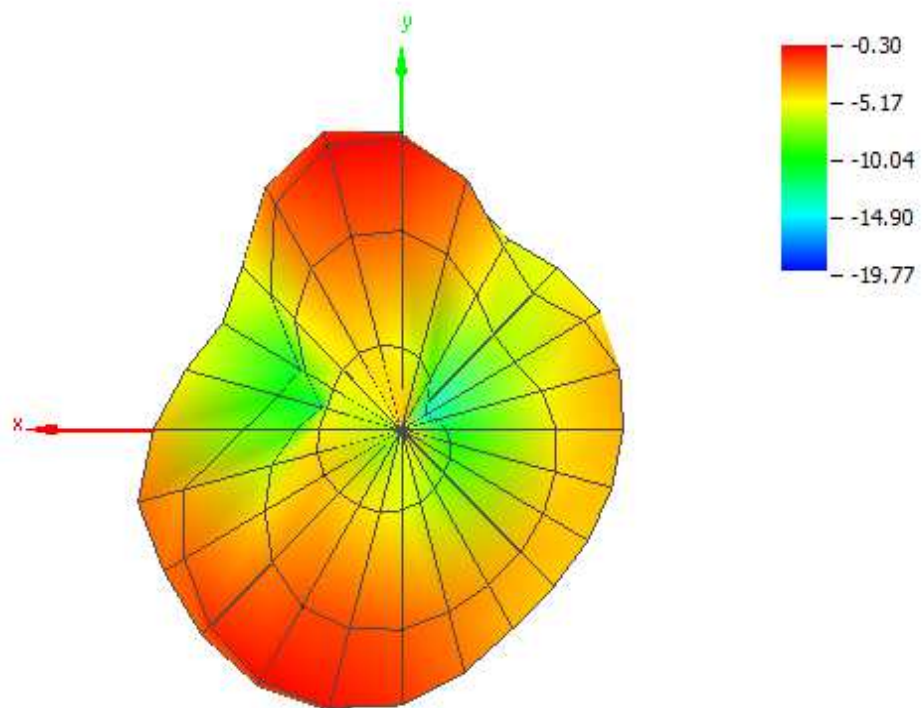
(continuation of the "RP_2440.000_ver" table from column 9 ...)

Azimuth (deg)	Elevation 120 deg (dB)	Elevation 135 deg (dB)	Elevation 150 deg (dB)	Elevation 165 deg (dB)	Elevation 180 deg (dB)
0.0	-10.43	-9.81	-9.14	-9.44	-10.55
15.0	-17.96	-13.25	-11.49	-11.07	-10.30
30.0	-21.64	-15.82	-8.47	-8.87	-9.46
45.0	-11.10	-9.03	-5.33	-6.37	-8.23
60.0	-6.25	-5.13	-3.73	-5.03	-7.01
75.0	-4.49	-3.94	-3.75	-4.81	-5.90
90.0	-5.46	-4.31	-5.03	-5.34	-5.10
105.0	-11.32	-6.43	-8.21	-6.63	-4.88
120.0	-16.22	-10.81	-13.55	-9.41	-5.34
135.0	-9.75	-15.07	-14.36	-14.32	-6.68
150.0	-8.49	-14.20	-11.33	-15.72	-8.08
165.0	-12.03	-14.55	-10.59	-12.94	-9.15
180.0	-21.39	-18.70	-13.15	-11.07	-9.16
195.0	-14.85	-19.88	-15.86	-10.00	-7.98
210.0	-12.22	-21.40	-12.17	-9.91	-6.63
225.0	-14.49	-17.32	-9.24	-10.25	-5.60
240.0	-15.99	-12.49	-7.78	-9.98	-5.10
255.0	-8.28	-8.83	-6.60	-9.04	-5.45
270.0	-5.34	-5.94	-5.41	-7.90	-6.36
285.0	-4.25	-4.10	-4.48	-6.85	-7.87
300.0	-3.75	-2.71	-4.16	-6.71	-9.86
315.0	-3.81	-2.34	-4.61	-6.53	-11.93
330.0	-4.50	-2.93	-5.67	-6.75	-12.01
345.0	-5.32	-4.65	-6.85	-7.24	-10.89
360.0	-10.43	-9.81	-9.14	-9.44	-10.55

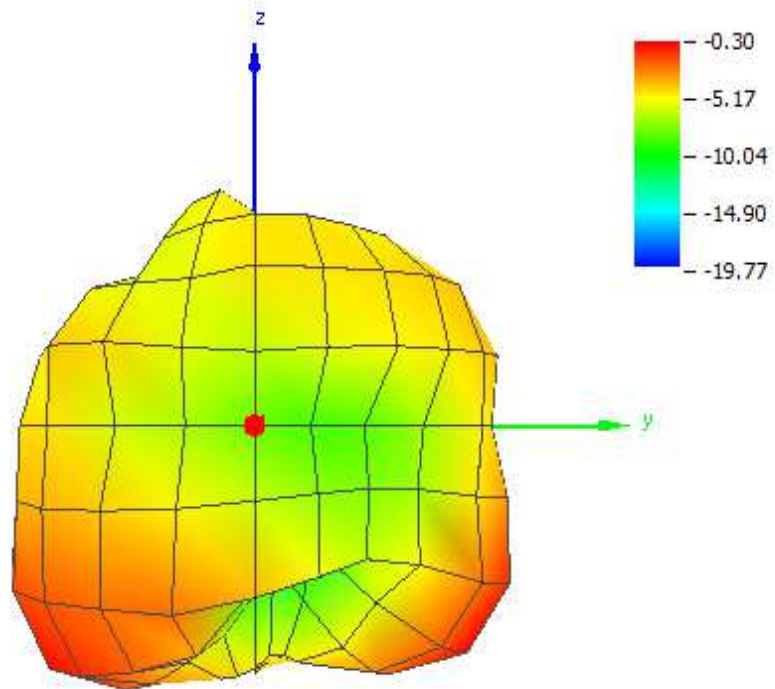
Theta = 0, Phi = 0



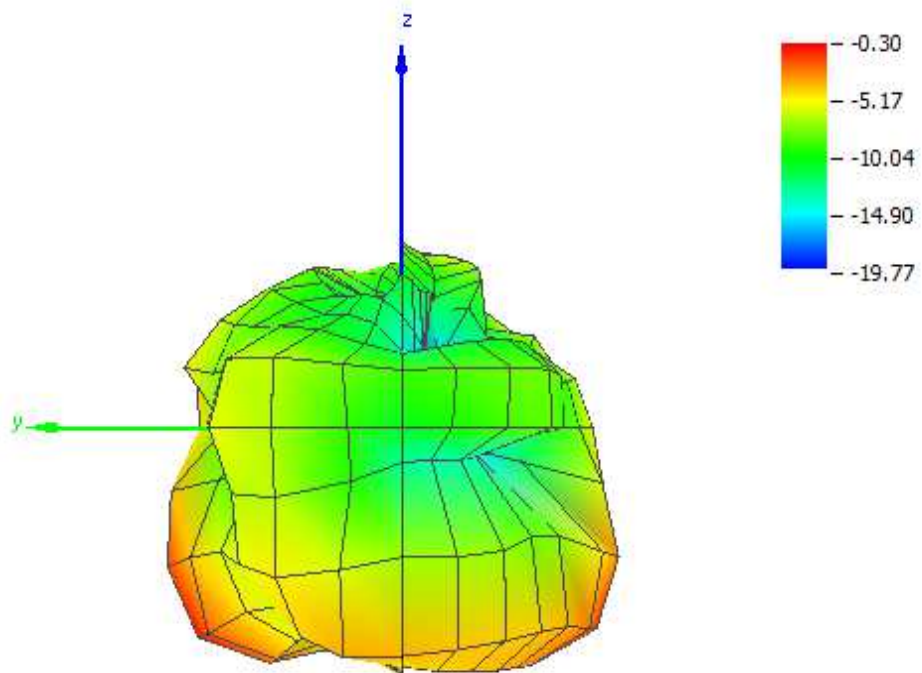
Theta = 180, Phi = 0



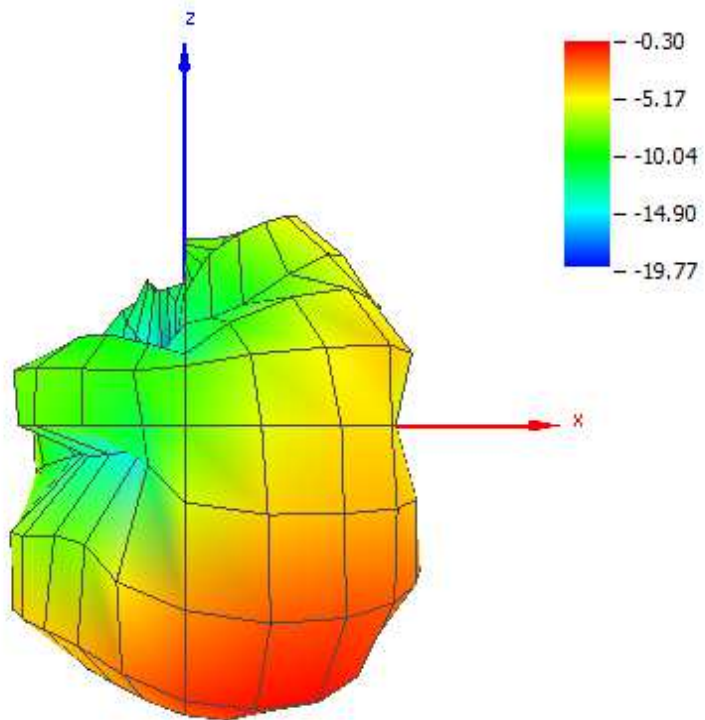
Theta = 90, Phi = 0



Theta = 90, Phi = 180



Theta = 90, Phi = 270



Theta = 90, Phi = 90

