



Radiated Composite Gain Data

Appendix A.4

Theta	16.6°-15.49	15.65°-9.77	8.2°-0.72	5.84°-4	2.83°-2.79	-1.6°-0.83	-0.130-16	0.1°-0.61	-1.02°-1.19	-3.19°-5.25	-8.99°-10.49	-13.06°-10.05	-9.14°-12.44	-14.48°-12.58	9.07°-6.96	-4.83°-3.7	-5.87°-8.3	5.99°-1.79	0.24°-0.03	-3.63°-4	-3.96°-5.34	-6.51°-7.34	-9.68°-9.37	-13.58°-14.37
Gain	0.74°-0.63	0.41°-0.04	-1.25°-2.28	-3.09°-3.26	-4.79°-6.26	-7.5°-10.02	-13.3°-16.38	-18.1°-15.28	-11.39°-8.98	-5.29°-4.97	-3.43°-2.37	-2.27°-0.68	-1.10°-0.26	-1.10°-0.45	-0.6°-1.76	-2.63°-3.15	-3.01°-5.6	-6.97°-9.98	-15.47°-18.18	-18.81°-14.96	-10.64°-6.59	-4.83°-3.96	-1.92°-1.79	-1.04°-1.83
Theta	17.98°-19.15	15.71°-10.02	10.47°-6.31	4.84°-4.17	1.83°-0.83	-0.370°-4	1.26°-1.91	1.75°-0.63	-0.98°-1.75	-3.74°-5.21	-6.87°-10.43	-19.07°-14.6	-17.91°-12.01	-14.56°-13.92	9.22°-4.35	-3.26°-5.27	-4.26°-1.3	-1.97°-1.15	-1/1-7.8	-5.8°-6.24	-4.94°-6.6	-8.43°-8.04	-8.83°-14.4	-9.28°-15.13
Theta	16.94°-17.39	16.74°-13.14	9.49°-7.02	3.43°-3.74	-3.3°-2.34	-0.53°-0.37	1.38°-1.64	-0.46°-1.51	-2.07°-2.27	-4.98°-4.8	-5.79°-12.33	-12.98°-18.41	-17.94°-18.04	-11.99°-13.04	9.49°-5.52	-10.07°-6.24	-4.14°-3.8	-2.1°-1.15	0.34°-1.68	2.93°-1.5	-1.29°-5.24	-6.81°-8.74	-5.7°-6.64	-13.81°-18.98
Theta	18.12°-18.49	15.47°-16.43	10.84°-10.3	6.87°-4.43	5.26°-2.37	0.471°-5	2.68°-2.01	0.05°-1.44	-3.05°-6.03	8.94°-9.25	9.46°-14.09	-17.54°-10.43	-14.22°-18.66	-12.14°-13.27	6.92°-11.63	-4.39°-2.09	-5.22°-3.88	-1.24°-1.48	-1.67°-5.82	-6.85°-3.61	-6.95°-9.23	8.39°-10.17	-10.52°-13.68	-17.21°-18.84
Theta	12.12°-17.31	14.04°-17.28	15.17°-11.5	-10.01°-4.91	-3.54°-1.85	1.832°-65	3.83°-78	1.030°-7	-1.07°-5.38	-15.98°-17.78	-11.52°-13.04	-10.46°-10.43	-13.18°-18.59	-14.11°-7.29	-7.87°-5.86	-6.74°-10.52	-5.97°-6.75	-1.38°-0.31	0.340°-42	0.57°-0.55	-5.15°-6.73	-15.84°-10.04	-12.53°-19.19	-17.92°-19.02
Theta	18.49°-16.27	18.61°-19.17	12.58°-10.78	-8.37°-4.29	-3.68°-4.25	0.71°-1.92	2.841°-48	-0.05°-1.36	-3.5°-5.33	-9.35°-14.46	-10.55°-18.25	-5.35°-10.97	-19.22°-13.75	-11.81°-9.29	-7.27°-5.86	-6.68°-11.5	-6.76°-1.9	-2.47°-7.6	1.69°-0.76	-1.05°-11.23	-17.98°-18.4	-18.12°-18.94	-18.05°-11.38	-10.49°-17.12
Theta	14.18°-19.03	13.52°-12.23	16.44°-9.78	-6.06°-7.15	-4.31°-1.41	0.713°-21	3.52°-35	2.360°-09	-5.12°-7.3	-5.59°-10.33	-13.94°-14.95	-7.98°-10.41	-18.31°-14.55	-12.8°-12.36	-2.18°-6.35	-8.09°-6.37	-5.49°-9.34	-4.73°-0.38	3.487°-7	-3.69°-4.56	0.19°-7.49	-12.98°-12.19	-19.21°-9.09	-16.97°-16.08
Theta	15.68°-13.12	12.17°-12.29	10.16°-7.35	9.02°-7.38	-1.98°-2.65	0.24°-1.99	2.721°-39	1.26°-0.52	-2.98°-5.54	6.92°-10.4	-11.08°-11.31	9.43°-12.24	-8.55°-17.81	-12.05°-7.43	4.69°-7.16	-7.97°-5.99	-4.11°-2.56	-6.41°-2.83	0.960°-47	-3.27°-11.11	-10.01°-9.08	-12.41°-17.77	-18.09°-17.95	
Theta	10.34°-11.24	9.73°-8.3	9.64°-7.6	9.68°-5.75	-2.76°-2.72	0.011°-05	3.312°-67	1.53°-2.81	-6.32°-9.97	-8.5°-7.26	-8.31°-10.4	-10.86°-9.63	-7.74°-10.81	-10.36°-9.45	-2.17°-6.09	-8.06°-6.13	-2.66°-10.39	-7.08°-2.01	2.934°-84	2.1°-3.29	-4°-10.56	-15.75°-12.01	-10.17°-11.68	-12.25°-13.59
Theta	11.63°-9.67	7.21°-5.91	-8.15°-9.8	-9.38°-6.32	-5.59°-0.68	-0.421°-17	3.56°-2.89	3°-1.15	-5.56°-7.37	-4.74°-4.45	-8.52°-7.44	-13.1°-8.51	-14.65°-14.18	-12.49°-11.82	-6.57°-6.88	-4.77°-2.1	-3.53°-1.16	-6.41°-6.61	-2.49°-3.4	-3.71°-10.88	-8.77°-6.57	-5.34°-17.73	-15.59°-12.79	-19.1°-17.9
Theta	9.72°-9.78	7.88°-6.93	9.4°-7.6	9.52°-9.49	-4.820°-23	-0.691°-25	4.083°-15	2°-2.63	-7.71°-12.05	-5.6°-3.87	-8.27°-10.4	-8.78°-9.58	-12.71°-11.78	-7.66°-7.38	-6.85°-6.79	-9.940°-54	-10.42°-2.1	-2.47°-10.67	-1.81°-7	-2.37°-10.47	-15.14°-12.51	-5.7°-19.6	-18.66°-11.29	-18.01°-19.92
Theta	12.73°-18.14	-5.93°-6.41	9.11°-10.06	-10.15°-8.93	2.89°-0.65	0.110°-06	2.852°-89	2.45°-0.55	-4.74°-6.62	-6.36°-3.57	-6.95°-5.98	-10.78°-5.46	-9.77°-12.75	-8.81°-11.15	-5.66°-8.75	-5.34°-14.89	-2.42°-0.95	1.54°-2.27	0.37°-2.01	-4.1°-18.12	-18.72°-11.89	-10.26°-10.84	-17.4°-11.62	-18.11°-13.53
Theta	16.39°-15.39	-6.78°-9.21	-7.65°-8.64	-7.85°-8.06	-2.70°-2.8	0.672°-12	32°-18	2.05°-0.99	-3.62°-5.23	-4.4°-15.26	-4.71°-17.11	-4.08°-10.15	-9.27°-10.88	-3.75°-14.26	-17.91°-2.89	-13.06°-7.63	-1.520°-16	-2.99°-3.58	-3.6°-0.22	-6.57°-12.88	-14.76°-11.49	-11.36°-10.67	-15.1°-16.72	-10.73°-18.57
Theta	17.97°-19.08	9.86°-11.9	9.44°-6.76	-7.77°-6.28	-2.80°-66	0.763°-07	3.18	2.031°-17	-2.34°-4.77	-5.86°-10.22	-12.28°-10.66	-6.6°-7	-11.12°-13.33	-6.75°-9.01	-7.9°-15.53	-2.73°-5.48	-8.55°-6.28	-5.9°-9.28	-8.19°-2.93	-17.63°-6.76	-3.56°-5.28	-6.43°-5.08	-6.69°-18.72	-14.65°-18.42
Theta	16.32°-15.68	-13.56°-12.72	12.01°-8.54	-8.73°-3.66	-1.080°-03	2.062°-25	3.473°-37	3.072°-16	0.29°-3.47	-5.6°-9.08	-17.08°-7.69	-5.99°-6.44	-10.29°-11.21	-7.21°-19	-11.71°-1.72	-4.55°-3.82	-11.26°-6.21	-12.97°-10.76	-6.89°-6.87	-11.76°-2.46	-6.52°-9.75	-6.48°-11.26	-7.99°-15.6	-14.59°-16.76
Theta	11.11°-11.7	-17.98°-8.73	-7.55°-6.37	-5.46°-2.67	-1.86°-3.32	0.761°-86	3.120°-42	1.020°-45	-1.63°-4.87	-5.09°-6.73	-10.9°-5.19	-5.16°-8.13	-8.53°-10.63	-11.7°-15.75	-7.87°-4.25	-5.85°-5.38	-11.4°-18.81	-7.85°-7.46	-9.25°-12.91	-10.05°-8.59	-14.86°-5.77	-4.47°-7.19	-12.14°-10.65	-10.02°-17.52
Theta	11.79°-9	-9.48°-6.35	-4.23°-3.67	-4.77°-2.68	-1.161°-48	1.126°-66	2.130°-11	-0.32°-1.02	-2.46°-6.78	-8.04°-17.4	-4.71°-5.25	-6.37°-6.45	-9.54°-11.82	-13.46°-11.7	-9.49°-14.81	-1.74°-3.79	-13.61°-9.5	-4.12°-4.42	4.94°-10.56	-11.77°-8.79	4.97°-2.6	-4.7°-7.38	-12.92°-10.58	-13.53°-14.9
Theta	8.65°-8.66	8.81°-4.03	-5.28°-2.91	-4.05°-4.38	-0.110°-36	0.011°-29	2.92°-17	0.3°-2.42	-2.99°-5.14	-5.36°-7.71	-6.83°-9.98	-15.43°-18.13	-11.05°-11.16	-13.04°-14.41	-7.22°-19.14	-10.72°-7.36	-6.42°-9.2	-7.39°-9.75	-7.2°-2.29	-1.72°-4.53	5.14°-3.3	-3.89°-4.67	-5.81°-9.59	-13.66°-15.78
Theta	8.77°-8.37	-11.74°-6.13	-7.17°-7.78	-4.22°-4.22	-2.36°-7.6	1.55°-158	1.621°-71	1.470°-68	-0.48°-1.99	-3.44°-4.15	-8.09°-16.4	-19.11°-17.41	-15.78°-17.79	-14.09°-6.4	-7.39°-15.12	-15.78°-9.05	-7.86°-9.99	-6.73°-1.65	0.43°-0.67	-2.37°-1.81	-2.16°-3.34	-3.86°-5.14	-5.27°-8.6	-18.06°-18.82
Theta	8.75°-10.02	-18.38°-18.68	-12.03°-9.33	-6.07°-2.14	-0.77°-0.79	-1.63°-1.41	0.251°-12	0.18°-0.92	-3.04°-3.51	-5.46°-3.45	-4.75°-16.08	-18.01°-13.97	-16.26°-11.85	-8.57°-7.5	-13.39°-17.76	-14.55°-17.8	-10.91°-4.52	-3.1°-3.8	0.391°-06	1.14°-1.03	-0.02°-0.56	-2.14°-1.43	-7.22°-12.52	-15.6°-18.7
Theta	9.34°-10.51	-11.4°-9.64	-6.63°-0.57	-3.84°-2.45	-1.56°-0.3	0.510°-69	0.390°-08	0.06°-0.37	-1.19°-2.85	-5.98°-9.32	-10.33°-14.45	-18.62°-16.64	-7.68°-9.32	-11.25°-17.89	-16.8°-8.79	-11.06°-6.79	-2.91°-1.63	-0.990°-63	-0.78°-1.71	0.44°-0.15	-1.62°-3.2	-3.52°-3.93	-4.24°-6.14	-6.62°-7.72
Theta	8.7°-9.2	-7.71°-6.56	-4.94°-4.62	-3.4°-2.9	-2.24	-2.41°-2.53	-2.85°-2.22	-3.17°-3.39	-3.45°-4.89	-6.75°-9.94	-10.29°-10.11	-8.99°-10.91	-11.08°-18.18	-11.29°-11	-13.61°-10.59	-10.47°-3.56	-1.79°-1.37	-2.79°-3.74	-1.32°-2.11	-3.49°-1.58	-2.02°-2.59	-3.71°-5.15	-5.03°-7.02	-6.14°-6.96
Theta	5.6°-6.0	ThetaAnt. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Phi(0)°/Phi(7.5°)	Phi(15)°/Phi(22.5°)	Phi(30)°/Phi(37.5°)	Phi(45)°/Phi(52.5°)	Phi(60)°/Phi(67.5°)	Phi(75)°/Phi(82.5°)	Phi(90)°/Phi(97.5°)	Phi(105)°/Phi(112.5°)	Phi(120)°/Phi(127.5°)	Phi(135)°/Phi(142.5°)	Phi(150)°/Phi(157.5°)	Phi(165)°/Phi(172.5°)	Phi(180)°/Phi(187.5°)	Phi(195)°/Phi(202.5°)	Phi(210)°/Phi(217.5°)	Phi(225)°/Phi(232.5°)	Phi(240)°/Phi(247.5°)	Phi(255)°/Phi(262.5°)	Phi(270)°/Phi(277.5°)	Phi(285)°/Phi(292.5°)	Phi(300)°/Phi(307.5°)	Phi(315)°/Phi(322.5°)	Phi(330)°/Phi(337.5°)	Phi(345)°/Phi(352.5°)



Radiated Composite Gain Data

Appendix A.4

Table with columns for frequency (MHz/GHz), gain (dBS), and various antenna configurations (Theta, Phi) for frequencies from 1850 MHz to 1850.75 MHz.



Mode 5

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.1	3.04	2.87	2.01
Ant. 2 Max Gain (dBi)	2.8	2.63	3.57	4.12
Ant. 3 Max Gain (dBi)	4.49	3.97	4.38	4.34
Ant. 4 Max Gain (dBi)	4.65	3.76	4.1	4.29
Ant. 1 Polarization/ θ (°)/ Φ (°)	Phi/120/330	Phi/120/322.5	Phi/127.5/330	Phi/127.5/30
Ant. 2 Polarization/ θ (°)/ Φ (°)	Theta/105/292.5	Theta/105/292.5	Theta/105/292.5	Theta/105/292.5
Ant. 3 Polarization/ θ (°)/ Φ (°)	Theta/90/112.5	Theta/90/67.5	Theta/90/90	Theta/90/105
Ant. 4 Polarization/ θ (°)/ Φ (°)	Theta/90/135	Theta/97.5/187.5	Theta/97.5/210	Theta/97.5/180
Max Gain (dBi)	4.65	3.97	4.38	4.34
DG [1SS] (dBi)	5.66	5.2	5.58	5.35
DG [2SS] (dBi)	4.65	3.97	4.38	4.34
DG [4SS] (dBi)	4.65	3.97	4.38	4.34



Radiated Composite Gain Data

Appendix A.5

DG 1SS Result

Freq(Hz)	6.175GPol.	PHI-	Phi(0°)Phi(7.5°)	Phi(15°)Phi(22.5°)	Phi(30°)Phi(37.5°)	Phi(45°)Phi(52.5°)	Phi(60°)Phi(67.5°)	Phi(75°)Phi(82.5°)	Phi(90°)Phi(97.5°)	Phi(105°)Phi(112.5°)	Phi(120°)Phi(127.5°)	Phi(135°)Phi(142.5°)	Phi(150°)Phi(157.5°)	Phi(165°)Phi(172.5°)	Phi(180°)Phi(187.5°)	Phi(195°)Phi(202.5°)	Phi(210°)Phi(217.5°)	Phi(225°)Phi(232.5°)	Phi(240°)Phi(247.5°)	Phi(255°)Phi(262.5°)	Phi(270°)Phi(277.5°)	Phi(285°)Phi(292.5°)	Phi(300°)Phi(307.5°)	Phi(315°)Phi(322.5°)	Phi(330°)Phi(337.5°)	Phi(345°)Phi(352.5°)	
DG(0°)	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Theta(7.5°)	-3.91/3.63	-3.38/3.48	-3.22/3.51	-3.36/3.97	-3.65/4.05	-5.01/7.03	-8.36/8.49	9.36/8.39	9.86/8.88	-7.67/5.52	-5.44/5.61	-4.17/3.9	-3.05/2.67	-3.02/1.95	-2.69/2.29	-3.73/3.34	-4.64/5.02	6.71/7.64	9.13/12.12	-12.2/11.53	-9.71/7.91	6.84/5.73	5.09/4.8	-4.47/3.96	-4.47/3.96	-4.47/3.96	-4.47/3.96



Radiated Composite Gain Data

Appendix A.5

Table with columns for frequency (MHz), antenna gain (dBi), and radiation pattern gain (dB) for various antenna configurations. Includes sub-headers for gain and antenna types.



Radiated Composite Gain Data

Appendix A.5

Theta (°)	Phi (°)	Phi (7.5°)	Phi (15°)	Phi (22.5°)	Phi (30°)	Phi (37.5°)	Phi (45°)	Phi (52.5°)	Phi (60°)	Phi (67.5°)	Phi (75°)	Phi (82.5°)	Phi (90°)	Phi (97.5°)	Phi (105°)	Phi (112.5°)	Phi (120°)	Phi (127.5°)	Phi (135°)	Phi (142.5°)	Phi (150°)	Phi (157.5°)	Phi (165°)	Phi (172.5°)	Phi (180°)	Phi (187.5°)	Phi (195°)	Phi (202.5°)	Phi (210°)	Phi (217.5°)	Phi (225°)	Phi (232.5°)	Phi (240°)	Phi (247.5°)	Phi (255°)	Phi (262.5°)	Phi (270°)	Phi (277.5°)	Phi (285°)	Phi (292.5°)	Phi (300°)	Phi (307.5°)	Phi (315°)	Phi (322.5°)	Phi (330°)	Phi (337.5°)	Phi (345°)	Phi (352.5°)
Theta (7.5°)	0.61	-2.171-3.2	-1.63-1.6	-5.43-4.1	-3.23-3.24	-7.68-5.5	-3.85-2.7	-6.79-9.1	-5.86-1.84	-2.13-0.73	-8.67-1.5	-0.75-0.83	-1.78-3.97	-0.81-3.7	-7.31-4.26	-3.89-5.88	-3.05-7.43	-8.68-6.38	-9.93-6.51	-5.48-13.66	-9.31-7.61	-12.14-10.25	-3.61-1.17	-3.61-10.73	-1.280-68	-1.05-1.67	-1.91-0.92	-0.02-4.45	-4.96-3.15	-2.85-7.5	0.34-3.8	-6.07-3.69	-3.94-2.41	-1.3-1.58	-4.93-2.67	-3.63-0.24	1.52-0.3	-3.18-2.72	-2.36-2.5	-4.24-0.58	-3.67-13.74	-2.54-5.1	-4.87-8.2	-12.08-11.65	-6.51-4.05	-3.37-0.5	-2.281-58	
Theta (7.5°)	0.61	-2.171-3.2	-1.63-1.6	-5.43-4.1	-3.23-3.24	-7.68-5.5	-3.85-2.7	-6.79-9.1	-5.86-1.84	-2.13-0.73	-8.67-1.5	-0.75-0.83	-1.78-3.97	-0.81-3.7	-7.31-4.26	-3.89-5.88	-3.05-7.43	-8.68-6.38	-9.93-6.51	-5.48-13.66	-9.31-7.61	-12.14-10.25	-3.61-1.17	-3.61-10.73	-1.280-68	-1.05-1.67	-1.91-0.92	-0.02-4.45	-4.96-3.15	-2.85-7.5	0.34-3.8	-6.07-3.69	-3.94-2.41	-1.3-1.58	-4.93-2.67	-3.63-0.24	1.52-0.3	-3.18-2.72	-2.36-2.5	-4.24-0.58	-3.67-13.74	-2.54-5.1	-4.87-8.2	-12.08-11.65	-6.51-4.05	-3.37-0.5	-2.281-58	
Theta (7.5°)	0.61	-2.171-3.2	-1.63-1.6	-5.43-4.1	-3.23-3.24	-7.68-5.5	-3.85-2.7	-6.79-9.1	-5.86-1.84	-2.13-0.73	-8.67-1.5	-0.75-0.83	-1.78-3.97	-0.81-3.7	-7.31-4.26	-3.89-5.88	-3.05-7.43	-8.68-6.38	-9.93-6.51	-5.48-13.66	-9.31-7.61	-12.14-10.25	-3.61-1.17	-3.61-10.73	-1.280-68	-1.05-1.67	-1.91-0.92	-0.02-4.45	-4.96-3.15	-2.85-7.5	0.34-3.8	-6.07-3.69	-3.94-2.41	-1.3-1.58	-4.93-2.67	-3.63-0.24	1.52-0.3	-3.18-2.72	-2.36-2.5	-4.24-0.58	-3.67-13.74	-2.54-5.1	-4.87-8.2	-12.08-11.65	-6.51-4.05	-3.37-0.5	-2.281-58	



Radiated Composite Gain Data

Appendix A.5

Table with 36 columns and 36 rows of gain data. Columns include frequency (Freq(Hz)), antenna gain (Phi(0)/Phi(7.5) to Phi(345)/Phi(352.5)), and theta angle (Theta(0) to Theta(180)). Rows represent different theta angles from 0 to 180 degrees.



Mode 6

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.1	3.04	2.87	2.01
Ant. 2 Max Gain (dBi)	2.8	2.63	3.57	4.12
Ant. 3 Max Gain (dBi)	4.88	4.49	4.92	4.59
Ant. 4 Max Gain (dBi)	4.53	4.43	4.26	4.31
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/120/330	Phi/120/322.5	Phi/127.5/330	Phi/127.5/30
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/105/292.5	Theta/105/292.5	Theta/105/292.5	Theta/105/292.5
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/82.5/82.5	Phi/97.5/97.5	Phi/90/90	Phi/112.5/75
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/120/150	Phi/135/165	Phi/112.5/157.5	Phi/82.5/165
Max Gain (dBi)	4.88	4.49	4.92	4.59
DG [1SS] (dBi)	4.99	4.63	4.64	4.41
DG [2SS] (dBi)	4.88	4.49		
DG [4SS] (dBi)	4.88	4.49		

DG 1SS Result

Freq(Hz)	6.175GPol.	Phi(15°)Phi(22.5°)	Phi(30°)Phi(37.5°)	Phi(45°)Phi(52.5°)	Phi(60°)Phi(67.5°)	Phi(75°)Phi(82.5°)	Phi(90°)Phi(97.5°)	Phi(105°)Phi(112.5°)	Phi(120°)Phi(127.5°)	Phi(135°)Phi(142.5°)	Phi(150°)Phi(157.5°)	Phi(165°)Phi(172.5°)	Phi(180°)Phi(187.5°)	Phi(195°)Phi(202.5°)	Phi(210°)Phi(217.5°)	Phi(225°)Phi(232.5°)	Phi(240°)Phi(247.5°)	Phi(255°)Phi(262.5°)	Phi(270°)Phi(277.5°)	Phi(285°)Phi(292.5°)	Phi(300°)Phi(307.5°)	Phi(315°)Phi(322.5°)	Phi(330°)Phi(337.5°)	Phi(345°)Phi(352.5°)
DG(dB)	0.0	-0.540	-0.440	-0.420	-0.410	-0.400	-0.390	-0.380	-0.370	-0.360	-0.350	-0.340	-0.330	-0.320	-0.310	-0.300	-0.290	-0.280	-0.270	-0.260	-0.250	-0.240	-0.230	-0.220
Theta(°)	-1.07	-1.17	-1.27	-1.37	-1.47	-1.57	-1.67	-1.77	-1.87	-1.97	-2.07	-2.17	-2.27	-2.37	-2.47	-2.57	-2.67	-2.77	-2.87	-2.97	-3.07	-3.17	-3.27	-3.37
Theta(15°)	-0.99	-1.04	-1.09	-1.14	-1.19	-1.24	-1.29	-1.34	-1.39	-1.44	-1.49	-1.54	-1.59	-1.64	-1.69	-1.74	-1.79	-1.84	-1.89	-1.94	-1.99	-2.04	-2.09	-2.14
Theta(105°)	-0.77	-0.72	-0.67	-0.62	-0.57	-0.52	-0.47	-0.42	-0.37	-0.32	-0.27	-0.22	-0.17	-0.12	-0.07	-0.02	0.03	0.08	0.13	0.18	0.23	0.28	0.33	0.38
Theta(30°)	-2.49	-2.39	-2.29	-2.19	-2.09	-1.99	-1.89	-1.79	-1.69	-1.59	-1.49	-1.39	-1.29	-1.19	-1.09	-0.99	-0.89	-0.79	-0.69	-0.59	-0.49	-0.39	-0.29	-0.19
Theta(37.5°)	-2.82	-2.72	-2.62	-2.52	-2.42	-2.32	-2.22	-2.12	-2.02	-1.92	-1.82	-1.72	-1.62	-1.52	-1.42	-1.32	-1.22	-1.12	-1.02	-0.92	-0.82	-0.72	-0.62	-0.52
Theta(45°)	-3.01	-2.91	-2.81	-2.71	-2.61	-2.51	-2.41	-2.31	-2.21	-2.11	-2.01	-1.91	-1.81	-1.71	-1.61	-1.51	-1.41	-1.31	-1.21	-1.11	-1.01	-0.91	-0.81	-0.71
Theta(52.5°)	-0.43	-0.42	-0.41	-0.40	-0.39	-0.38	-0.37	-0.36	-0.35	-0.34	-0.33	-0.32	-0.31	-0.30	-0.29	-0.28	-0.27	-0.26	-0.25	-0.24	-0.23	-0.22	-0.21	-0.20
Theta(60°)	0.39	0.38	0.37	0.36	0.35	0.34	0.33	0.32	0.31	0.30	0.29	0.28	0.27	0.26	0.25	0.24	0.23	0.22	0.21	0.20	0.19	0.18	0.17	0.16
Theta(67.5°)	-1.41	-1.31	-1.21	-1.11	-1.01	-0.91	-0.81	-0.71	-0.61	-0.51	-0.41	-0.31	-0.21	-0.11	-0.01	0.09	0.19	0.29	0.39	0.49	0.59	0.69	0.79	0.89
Theta(75°)	0.84	0.74	0.64	0.54	0.44	0.34	0.24	0.14	0.04	-0.06	-0.16	-0.26	-0.36	-0.46	-0.56	-0.66	-0.76	-0.86	-0.96	-1.06	-1.16	-1.26	-1.36	-1.46
Theta(82.5°)	3.1	3.0	2.9	2.8	2.7	2.6	2.5	2.4	2.3	2.2	2.1	2.0	1.9	1.8	1.7	1.6	1.5	1.4	1.3	1.2	1.1	1.0	0.9	0.8
Theta(90°)	1.96	1.86	1.76	1.66	1.56	1.46	1.36	1.26	1.16	1.06	0.96	0.86	0.76	0.66	0.56	0.46	0.36	0.26	0.16	0.06	-0.04	-0.14	-0.24	-0.34
Theta(97.5°)	-0.85	-0.80	-0.75	-0.70	-0.65	-0.60	-0.55	-0.50	-0.45	-0.40	-0.35	-0.30	-0.25	-0.20	-0.15	-0.10	-0.05	0.00	0.05	0.10	0.15	0.20	0.25	0.30
Theta(105°)	0.09	-0.39	-1.51	-1.15	-0.91	-0.64	-0.38	-0.13	0.12	0.37	0.62	0.87	1.12	1.37	1.62	1.87	2.12	2.37	2.62	2.87	3.12	3.37	3.62	3.87
Theta(112.5°)	0.92	0.99	-2.22	-2.04	-1.85	-1.66	-1.47	-1.28	-1.09	-0.90	-0.71	-0.52	-0.33	-0.14	0.05	0.24	0.43	0.62	0.81	1.00	1.19	1.38	1.57	1.76
Theta(120°)	-1.26	-0.82	-0.47	-0.12	0.23	0.58	0.93	1.28	1.63	1.98	2.33	2.68	3.03	3.38	3.73	4.08	4.43	4.78	5.13	5.48	5.83	6.18	6.53	6.88
Theta(127.5°)	-0.63	-0.37	-0.12	0.13	0.38	0.63	0.88	1.13	1.38	1.63	1.88	2.13	2.38	2.63	2.88	3.13	3.38	3.63	3.88	4.13	4.38	4.63	4.88	5.13
Theta(135°)	0.5	-1.42	-2.04	-2.82	-3.79	-4.86	-6.03	-7.30	-8.67	-10.14	-11.71	-13.38	-15.15	-17.02	-18.99	-21.06	-23.23	-25.50	-27.87	-30.44	-33.11	-35.88	-38.75	-41.72
Theta(142.5°)	-1.14	-1.47	-2.04	-2.82	-3.79	-4.86	-6.03	-7.30	-8.67	-10.14	-11.71	-13.38	-15.15	-17.02	-18.99	-21.06	-23.23	-25.50	-27.87	-30.44	-33.11	-35.88	-38.75	-41.72
Theta(150°)	-1.830	-0.781	-2.27	-3.15	-4.21	-5.46	-6.89	-8.51	-10.32	-12.33	-14.54	-16.95	-19.56	-22.37	-25.38	-28.59	-32.00	-35.71	-40.02	-44.83	-50.14	-55.95	-62.26	-69.07
Theta(157.5°)	-0.02	-2.6	-2.71	-2.77	-2.78	-2.78	-2.77	-2.74	-2.69	-2.63	-2.56	-2.48	-2.39	-2.29	-2.18	-2.06	-1.93	-1.79	-1.64	-1.48	-1.31	-1.13	-0.94	-0.74
Theta(165°)	-0.74	-0.27	-0.13	0.12	0.37	0.62	0.87	1.12	1.37	1.62	1.87	2.12	2.37	2.62	2.87	3.12	3.37	3.62	3.87	4.12	4.37	4.62	4.87	5.12
Theta(172.5°)	-1.07	-0.66	-0.32	-0.01	0.30	0.60	0.89	1.18	1.47	1.76	2.05	2.34	2.63	2.92	3.21	3.50	3.79	4.08	4.37	4.66	4.95	5.24	5.53	5.82
Theta(180°)	0.59	0.63	0.66	0.67	0.67	0.66	0.64	0.61	0.57	0.52	0.46	0.40	0.34	0.28	0.22	0.16	0.10	0.04	-0.02	-0.08	-0.14	-0.20	-0.26	-0.32
Theta(187.5°)	-0.45	-0.40	-0.35	-0.30	-0.25	-0.20	-0.15	-0.10	-0.05	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70
Theta(195°)	1.96	1.86	1.76	1.66	1.56	1.46	1.36	1.26	1.16	1.06	0.96	0.86	0.76	0.66	0.56	0.46	0.36	0.26	0.16	0.06	-0.04	-0.14	-0.24	-0.34
Theta(202.5°)	-0.85	-0.80	-0.75	-0.70	-0.65	-0.60	-0.55	-0.50	-0.45	-0.40	-0.35	-0.30	-0.25	-0.20	-0.15	-0.10	-0.05	0.00	0.05	0.10	0.15	0.20	0.25	0.30
Theta(210°)	0.09	-0.39	-1.51	-1.15	-0.91	-0.64	-0.38	-0.13	0.12	0.37	0.62	0.87	1.12	1.37	1.62	1.87	2.12	2.37	2.62	2.87	3.12	3.37	3.62	3.87
Theta(217.5°)	0.92	0.99	-2.22	-2.04	-1.85	-1.66	-1.47	-1.28	-1.09	-0.90	-0.71	-0.52	-0.33	-0.14	0.05	0.24	0.43	0.62	0.81	1.00	1.19	1.38	1.57	1.76
Theta(225°)	-1.26	-0.82	-0.47	-0.12	0.23	0.58	0.93	1.28	1.63	1.98	2.33	2.68	3.03	3.38	3.73	4.08	4.43	4.78	5.13	5.48	5.83	6.18	6.53	6.88
Theta(232.5°)	-0.63	-0.37	-0.12	0.13	0.38	0.63	0.88	1.13	1.38	1.63	1.88	2.13	2.38	2.63	2.88	3.13	3.38	3.63	3.88	4.13	4.38	4.63	4.88	5.13
Theta(240°)	0.5	-1.42	-2.04	-2.82	-3.79	-4.86	-6.03	-7.30	-8.67	-10.14	-11.71	-13.38	-15.15	-17.02	-18.99	-21.06	-23.23	-25.50	-27.87	-30.44	-33.11	-35.88	-38.75	-41.72
Theta(247.5°)	-1.14	-1.47	-2.04	-2.82	-3.79	-4.86	-6.03	-7.30	-8.67	-10.14	-11.71	-13.38	-15.15	-17.02	-18.99	-21.06	-23.23	-25.50	-27.87	-30.44	-33.11	-35.88	-38.75	-41.72
Theta(255°)	-1.830	-0.781	-2.27	-3.15	-4.21	-5.46	-6.89	-8.51	-10.32	-12.33	-14.54	-16.95	-19.56	-22.37	-25.38	-28.59	-32.00	-35.71	-40.02	-44.83	-50.14	-55.95	-62.26	-69.07
Theta(262.5°)	-0.02	-2.6	-2.71	-2.77	-2.78	-2.78	-2.77	-2.74	-2.69	-2.63	-2.56	-2.48	-2.39	-2.29	-2.18	-2.06	-1.93	-1.79	-1.64	-1.48	-1.31	-1.13	-0.94	-0.74
Theta(270°)	-0.74	-0.27	-0.13	0.12	0.37	0.62	0.87	1.12	1.37	1.62	1.87	2.12	2.37	2.62	2.87	3.12	3.37	3.62	3.87	4.12	4.37	4.62	4.87	5.12
Theta(277.5°)	-1.07	-0.66	-0.32	-0.01	0.30	0.60	0.89	1.18	1.47	1.76	2.05	2.34	2.63	2.92	3.21	3.50	3.79	4.08	4.37	4.66	4.95	5.24	5.53	5.82
Theta(285°)	0.59	0.63	0.66	0.67	0.67	0.66	0.64	0.61	0.57	0.52	0.46	0.40	0.34	0.28	0.22	0.16	0.10	0.04	-0.02	-0.08	-0.14	-0.20	-0.26	-0.32
Theta(292.5°)	-0.45	-0.40	-0.35	-0.30	-0.25	-0.20	-0.15	-0.10	-0.05	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.55	0.60	0.65	0.70
Theta(300°)	1.96	1.86	1.76	1.66	1.56	1.46	1.36	1.26	1.16	1.06	0.96	0.86	0.76	0.66	0.56	0.46	0.36	0.26	0.16	0.06	-0.04	-0.14	-0.24	-0.34
Theta(307.5°)	-0.85	-0.80	-0.75	-0.70	-0.65	-0.60	-0.55	-0.50	-0.45	-0.40	-0.35	-0.30	-0.25	-0.20	-0.15	-0.10	-0.05	0.00	0.05	0.10	0.15	0.20	0.25	0.30
Theta(315°)	0.09	-0.39	-1.51	-1.15	-0.91	-0.64	-0.38	-0.13	0.12	0.37	0.62	0.87	1.12	1.37	1.62	1.87	2.12	2.37	2.62	2.87	3.12	3.37	3.62	3.87
Theta(322.5°)	0.92	0.99	-2.22	-2.04	-1.85	-1.66	-1.47	-1.28	-1.09	-0.90	-0.71	-0.52	-0.33	-0.14	0.05	0.24	0.43	0.62	0.81	1.00	1.19	1.38	1.57	1.76
Theta(330°)	-1.26	-0.82	-0.47	-0.12	0.23	0.58	0.93	1.28	1.63	1.98	2.33	2.68	3.03	3.38	3.73									



Radiated Composite Gain Data

Appendix A.6

Gain Result

Table with columns for Frequency (Freq/Hz), Polarization (Pol), and various antenna gain coefficients (Phi) across multiple frequencies and polarizations. The table is divided into four main frequency bands: 6.175G, 6.475G, 6.695G, and 6.850G.



Radiated Composite Gain Data

Appendix A.6

Θ (deg)	5.98/-6.84	-8.99/-13.09	-16.51/-15.49	-11.53/-17.95	-9.11/-9.4	-10.38/-12.24	-9.83/-8.95	-9.96/-8.53	-4.73/-2.61	-1.51/-1.36	-1.34/-0.42	0.46/0.74	1.28/0.21	-1.12/0.23	-1.89/-2.53	-4.2/-7.19	-6.37/-9.4	-13.18/18.71	-17.71/9.4	-4.78/-3.1	-2.6/-1.78	-1.73/-2.33	-3.14/-3.97	-3.45/-4.13
Θ (30°)	-6.74/-6.86	-6.86/-5.93	-9.76/-12.43	-12.27/-8.88	-9.01/-8.4	-9.86/-8.57	-9.37/-12.34	-12.47/-15.21	-13.66/-11.84	-7.86/-2.97	-0.81/0.06	0.06/0.12	0.41/-0.11	-0.83/-1.68	-2.07/-3.59	-4.77/-7.85	-9.43/-10.3	-18.93/-17.9	-18.47/-16.58	-10.19/-5.05	-2.93/-1.85	-1.13/-0.29	-1.28/-3.31	-5.12/-5.45
Θ (35°)	-6.92/-4.92	-3.79/-4.43	-5.48/-6.36	-6.69/-6.74	-9.77/-9.92	-10.77/-9.91	-15.22/-12.8	-14.17/-12.57	-13.69/-13.22	-7.46/-4.25	-1.68/0.3	-0.51/-1.82	-1.36/0.45	-0.58/-1.17	-1.98/-4.03	-6.65/-9.99	-13.58/-11.5	-13.45/-17.44	-18.15/-14.78	-13.14/-9.3	-7.33/-6.55	-3.77/-2.52	-2.69/-4.61	-8.78/-8.3
Θ (45°)	-6.71/2.21	-2.32/2.24	-4.31/-4.37	-5.38/7.08	-15.46/-10.02	-9.35/-10.1	-9.03/8.33	-7.98/12.95	-7.41/6.57	-4.16/4.35	-2.65/0.98	-0.77/-1.72	-1.65/-1.45	-1.08/-1.78	-2.65/4.17	-7.83/6.96	-5.81/8.45	-12.21/15.13	-15.92/11.81	8/-4.49	-3.02/-4.27	-4.14/4.1	-4.87/5.56	-8.16/-11.49
Θ (50°)	-5.33/-3.13	-2.13/-3.87	-4.08/-3.5	-4.17/6.6	-12/-11.1	-5.63/9.57	-7.62/9.06	-9.72/-7.26	-7.44/-9.4	-4.27/4.58	-2.63/-0.76	-2.02/-3.1	-5.31/8.63	-13.33/-12.27	-11.79/3.1	-14.44/-19.14	-18/-13.56	-13.79/-8.46	-6.05/-3.39	-1.29/-1.91	-6.46/-12.44	-10.68/-10.18	-10.68/-10.18	
Θ (60°)	-6.58/-3.9	-2.73/-3.83	-5.82/0.92	-2.64/-4.27	-7.68/-7.45	-6.83/-12.64	-9.23/-10	-6.39/-10.07	-11.02/-9.74	-5.64/-7.82	-9.82/-6.98	-4.31/-3.55	-4.05/-3.3	-3.24/-4.75	-7.04/-11.47	-18.27/-11.62	-14.38/-12.26	-14.34/-15.29	-12.48/-13.56	-6.46/-3.03	-7.25/-0.59	-3.43/-1.65	-3.6/-9.97	-15.1/-10.18
Θ (75°)	-7.46/4.52	-3.24/2.93	-5.09/0	-1.77/-2.62	-4.32/5.78	-10.42/-13.46	-10.42/-12.05	-7.76/-10.92	-14.49/6.57	-6.28/-3.45	-5.74/-6.47	-13.69/-14.81	-9.67/5.59	-5.01/6.35	-6.33/-10.04	-13/-18.72	-10.77/-10.55	-8.84/-11.65	-11.35/-11.98	-9.81/6.86	-5.77/-3.62	-2.89/-0.77	-1.83/-10.62	-12.06/-7.37
Θ (90°)	-5.8/-2.86	-1.2/-3.93	-3.54/0.42	-3/-3.54	-2.44/-7.04	-13.12/9.98	-13.49/16.6	-8.65/-14.06	-17.39/-10.96	-4.49/5.39	-3.24/6.61	-6.16/-12.85	-7.95/-8.67	-8.84/-10.72	-10.57/-13.78	-11.2/-15.68	-14.71/-17.78	-11.71/-15.1	-9.89/-12.04	-7.95/-5.29	-7.83/-7.97	-6.44/-9.09	0.18/-4.12	-8.75/-5.77
Θ (120°)	-9.45/-2.82	0.49/-2.71	-2.71/0.43	-2.77/2.83	-3.02/-5.62	-15.31/6.06	-4.37/-4.29	-5.88/-17.86	-13.85/9.62	-8.26/-9.82	-6.33/-18.16	-6.49/-10.7	-17.86/-16.47	-18.66/-10.68	-13.26/-13.11	-16.33/-11.44	-14.24/13.73	-10.98/19.66	-15.26/-7.92	-6.91/6.19	-2.07/2.93	-3.4/-1.52	-0.88/-2.9	-4.62/-5.99
Θ (150°)	-7.14/-2.07	1.72/-1.76	-1.18/0.74	-2.93/2.15	-2.66/-3.57	-7.79/-1.69	-1.98/2.85	-3.89/10.3	-7.91/18.81	-10.95/8.09	-7.66/-19.33	-12.8/-12.58	-10.13/-10.94	-18.43/-19.37	-13.04/-12.58	-18.35/-11.62	-18.92/13.62	-17.71/-19.05	-13.65/-8.88	-6.74/-7.09	-2.67/-4.31	-1.420/4.7	1.06/-1.41	-5.55/5.92
Θ (180°)	-5.07/-3.75	1.11/0.18	0.97/0.35	-2.33/-2.56	-2.57/-3.38	-6.66/-2.98	-2.43/-4.46	-4.52/-8.6	-6.65/-18.18	-12.04/8.82	-13.76/-19.58	-18.22/-14.75	-14.55/-9.85	-19.26/-18.83	-15/-17.91	-18.93/-12.92	-11.19/17.75	-18.71/-12.64	-13.85/-4.89	-4/-2.02	-2.14/-2.93	-2.12/0.54	1.12/0.04	-3.19/-9.28
Θ (225°)	-7.73/-3.21	0.95/0.96	-1.38/2.13	-1.68/-1.25	-3.69/-3.46	-5.06/-7.21	-8.83/-4.42	-6.43/8.46	-9.17/16.31	-16.91/-11.14	-17.16/-10.42	-18.88/-17.78	-14.62/-19.02	-15.1/19.25	-12.17/-17.58	-18.37/15.89	-18.83/19.85	-9.51/7.33	-5.5/7.03	-0.14/3.28	-0.40/5.54	1.42/0.54	1.18/0.08	-1.06/-6
Θ (270°)	-5.4/-3.8	0.56/1.03	-0.55/1.39	1.19/1.41	-4.05/-2.41	-4.8/-13.18	-10.93/-18.17	-6.69/-11.94	-13.71/12.22	-16.17/10.39	-12.42/-15.06	-19.21/18.43	-18.49/-17.47	-16.81/16.41	-18.18/19.49	-17.65/-14.9	-12.59/18.19	-14.59/14.31	-11.29/8.44	-5.96/-1.46	-0.99/-2.3	0.51/1.38	2.77/0.7	-2.89/-6.06
Θ (315°)	-3.62/-1.89	0.06/0.76	0.95/0.71	1.4/-1.17	-4.71/-4.28	-5.66/-18.41	-9.8/-12.07	-8.9/-15.09	-15.56/-17.7	-17.75/18.69	-13.56/-13.48	-11.04/-11.06	-17.88/-18.02	-16.06/17.49	-18.74/18.19	-13.22/14.99	-17.43/18.74	-16.86/14.81	-11.06/-15.77	-10.51/2.23	-3.21/1.93	0.53/1.96	2.25/1.59	-1.32/-5.1
Θ (360°)	-0.52/-1.37	-0.91/0.48	-0.87/1.68	-0.04/3.88	-3.31/-10.17	-8.04/-17.49	-16.82/-19.11	-19.11/15.5	-19.23/-15.53	-17.54/-15.7	-13.38/-7.53	-11.77/18.08	-17.88/-18.25	-14.22/10.19	-11.31/15.48	-11.89/19.85	-18.88/19.98	-18.26/17.23	-12.56/15.56	-14.92/12.25	-9.85/-7.24	0.74/0.55	2.87/1.34	-0.55/-1.75
Θ (45°)	1/0.94	-1.51/0.15	-1.19/-2.52	-3.12/-2.29	-3.71/7.96	-18.28/-17.78	-14.63/18.08	-16.22/-11.08	-15.23/-12.34	-14/-11.87	-10.09/-12.64	-18.46/-19.34	-18.88/-15.97	-13.39/13.26	-13.92/-17.9	-18.73/18.79	-12/-11.64	-14.54/-16	-12.52/-12.52	-13.05/-16.61	-8.03/-4.56	-8.02/1.4	2.61/1.43	-0.37/0.6
Θ (90°)	0.73/0.77	-1.34/-0.94	-2.75/-3.53	-7.19/-3.97	-4.82/-3.7	-18.25/-18.25	-11.32/9.84	-15.45/-18.81	-13.33/9.31	-10.44/-17.17	-13.21/11.55	-12.54/-9.22	-10.48/-11.73	-16.73/17.97	-13.48/-12.62	-18.63/-18.13	-18.66/16.04	-13.77/-11.5	-6.68/-4.83	-9.43/-7.98	-7.02/-6.48	-2.27/-1.1	-0.53/0.16	0.93/1.64
Θ (135°)	-0.53/0.91	-0.5/0.68	-2.41/3.68	-3.93/3.9	-7.05/6.83	-12.31/14.22	-15.11/9.91	-9.99/18.81	-11.23/13.17	-14.11/16.69	-17.31/11.49	-13.07/13.17	-17.48/19.72	-18.96/18.28	-18.55/18.2	-14.71/19.24	-18.16/16.4	-12.09/8.23	-6.46/7.28	-6.91/4.52	-4.67/4.84	-4.41/5.7	-4.63/3.2	-0.96/0.3
Θ (180°)	-1.13/-1.27	-1.72/-2.02	-1.7/-2.45	-4.75/-5.1	-5.71/6.65	-8.78/-11.56	-10.81/10.21	-7.47/8.22	-12.69/-15.4	-15.97/16.94	-18.51/18.58	-17.26/-14.98	-12.92/-14.15	-17.16/-18.64	-18.17/19.2	-18.72/18.98	-14.87/10.9	-9.43/9.41	-7.87/6.35	-6.64/8	-6.54/5.02	-3.64/-2.86	-1.9/-1.35	
Θ (225°)	-3.72/-2.93	-1.79/-1.59	-1.76/-2.85	-4.91/6.45	-6.76/-6.68	-8/-7.6	-6.28/-0.76	-7.72/-7.84	-8.42/-9.75	-15/-16.4	-18.14/18.28	-18.88/-18.26	-19.11/16.21	-13.61/-15.7	-15.95/-16.3	-19.09/19.43	-18.78/19.71	-16.94/13.72	-17.97/13.38	-10.44/8.56	-7.97/8.04	-6.98/-4.94	-4.77/-3.92	-3.29/3.74
Θ (315°)	-4.73/-2.82	-4.03/-3.77	-3.22/4.08	-4.82/6.78	-10.96/-18.22	-15.57/-13.14	-11.04/12.87	-15.79/18.03	-11.51/8.69	-8.89/9.07	-8.78/6.66	-7.42/-7.84	-8.79/8.34	-9.66/9.75	-10.65/13.53	-16.22/18.12	-18.42/18.37	-18.96/18.91	-18.42/17.6	-16.11/13.09	-11.54/9.97	-8.87/7.78	-7.12/6.97	-6.49/5.43
Θ (360°)	-8.97/-8.63	-8.13/-8.35	-7.83/9.22	-8.93/9.87	-9.58/8.86	-12.17/-12.28	-11.41/12.57	-17.23/18.95	-18.11/18.1	-18.01/13.67	-10.09/9.33	-9.08/9.96	-6.54/-7.82	-7.53/-6.74	-7/-7.33	-7.39/8.63	-9.15/9.73	-9.79/10.01	-10.08/9.86	-10.49/10.23	-9.98/10.25	-9.53/9.46	-8.89/8.19	-7.71/8.29
Freq(Hz)	6.995GPol. Theta/Ant. 1																							
Gain	Θ(0°)Φ(75°)	Θ(15°)Φ(22.5°)	Θ(30°)Φ(37.5°)	Θ(45°)Φ(52.5°)	Θ(60°)Φ(67.5°)	Θ(75°)Φ(82.5°)	Θ(90°)Φ(97.5°)	Θ(105°)Φ(112.5°)	Θ(120°)Φ(127.5°)	Θ(135°)Φ(142.5°)	Θ(150°)Φ(157.5°)	Θ(165°)Φ(172.5°)	Θ(180°)Φ(187.5°)	Θ(195°)Φ(202.5°)	Θ(210°)Φ(217.5°)	Θ(225°)Φ(232.5°)	Θ(240°)Φ(247.5°)	Θ(255°)Φ(262.5°)	Θ(270°)Φ(277.5°)	Θ(285°)Φ(292.5°)	Θ(300°)Φ(307.5°)	Θ(315°)Φ(322.5°)	Θ(330°)Φ(337.5°)	Θ(345°)Φ(352.5°)
Θ(0°)	-4.56/-7.19	-7.6/-7.81	-10.21/9.68	-9.49/10.43	-9.05/-7.35	-6.39/5.65	-6.06/-6.4	-5.14/-4.98	-4.47/4.4	-4.62/5.4	-6.35/6.51	-5.82/6.42	-7.99/8.01	-9.73/10.06	-11.28/11.04	-10.31/9.15	-9.71/9.64	-7.73/7.52	-6.83/5.55	-5.35/4.77	-5.05/4.88	-4.86/5.02	-5.49/5.86	-5.74/6.2
Θ(5°)	-9.9/-10.97	-10.73/-13.51	-12.32/12.86	-9.9/-6.3	-5.14/-6.29	-6.01/4.15	-5.03/5.64	-4.81/4.62	-4.69/-4.62	-4.77/4.97	-6.24/6.39	-6.73/6.59	-7.72/7.74	-7.85/7.77	-7.41/7.86	-7.59/3	-5.02/4.77	-4.52/4.02	-3.29/2.8	-3.09/3.34	-3.65/3.58	-3.65/3.68	-4.17/5.87	-6.86/8.33
Θ(10°)	-12.71/-15.34	-18.74/-19.71	-12.46/10.88	-10.94/10.31	-10.04/-5.35	-7.74/5.42	-3.81/5.4	-5.04/4.08	-3.62/3.24	-4.38/5.13	-5.93/6.46	-8.45/-8.35	-9/8.67	-7.54/6.53	-5.42/5.17	-4.85/4.56	-3.55/3.1	-2.54/2.15	-2.62/3.01	-3.64/3.75	-4.12/4.34	-4.27/3.83	-4.64/5.65	-7.15/9.68
Θ(15°)	-18.29/-19.27	-17.91/-19	-17.31/18.65	-17.79/8.85	-4.7/-3.39	-3.85/-3.22	-1.58/-1.75	-2.28/-1.28	-1.11/1.61	-2.09/-2.47	-3.66/5.48	-10.74/17.18	-18.65/-12.08	-9.21/9.64	-6.29/5.64	-5.62/7.7	-4.83/3.96	-3.77/3.36	-2.56/2.52	-3.57/5.4	-6.91/9.92	-14/-14.55	-14.11/15.55	-19.41/17.96
Θ(20°)	-14.27/-15.06	-18.66/-18.82	-18.03/14.41	-7.64/-5.61	-2.17/-1.72	-1.96/2.72	-1.75/3.65	-1.41/2.07	0.6/0.16	-1.09/-2.97	-4.53/5.71	-7.42/9.95	-13.53/-18.91	-12.41/8.5	-6.27/7.55	-7.4/4.71	-3.86/5.74	-7.73/7.3	-4.25/3.52	-3.73/3.64	-5.16/6.46	-11.82/18.96	-15.11/12.21	-15.51/18.68
Θ(25°)	-13.44/14.6	-14.71/17.88	-18.54/7.38	4.54/3.1	-1.74/-2.64	-3.69/3.53	-3.82/3.67	-1.5/0.86	-1.04/0.63	-0.51/1.78	-2.95/4.5	-7.42/10.19	-12.87/18.01	-12.02/8.14	8.02/5.25	-4.05/2.27	-4.59/7.12	5.49/4.73	-3.14/2.06	-1.84/1.42	-1.71/2.37	-5.12/9.66	-14.28/12.15	9.3/12.08
Θ(30°)	-8.53/-13.65	-17.51/-17.67	-10.44/6.62	4.71/3.6	-2.08/-2.67	-6.05/-7.9	-7.82/5.33	-5.42/3.2	-2.76/-3.45	-4.25/-2.88	-3.77/-6.57	-7.5/6.57	-12.84/17.7	-16.15/-10.59	-9.11/8.79	-4.73/2.74	-3.83/3.92	-6.87/8.52	-4.76/4.61	-6.74/4.72	-3.07/5.72	-4.61/3.81	-7.23/17.99	-9.89/8.12
Θ(35°)	-6.88/-7.88	-13.98/-13.04	-8.82/-6.23	-5.37/3.67	-3.35/4.37	-4.49/5.54	-4.82/5.1	-4.4/2.45	-2.99/3.42	-3.71/4.93	-4.78/8.39	-15.08/17.87	-9.68/-11.92	-14.61/13.77	-16.9/13.5	-6.22/5.53	-6.98/8.71	-6.43/7.21	-7.08/4.68	-6.77/10.58	-15.65/9.5	-8.73/13.53	-19.1/15.1	
Θ(40°)	-16.93/9.12																							



Radiated Composite Gain Data

Appendix A.6

Theta	Phi	Gain	Phi(15)	Phi(30)	Phi(45)	Phi(60)	Phi(75)	Phi(90)	Phi(105)	Phi(120)	Phi(135)	Phi(150)	Phi(165)	Phi(180)	Phi(195)	Phi(210)	Phi(225)	Phi(240)	Phi(255)	Phi(270)	Phi(285)	Phi(300)	Phi(315)	Phi(330)	Phi(345)
Theta(165°)	-18.07/13.3	-8.85/6.31	-3.94/3.23	-1.81/0.73	-0.33/1.28	-0.97/2.84	1.50/4.1	-0.61/2.18	-3.8/4.11	-18.19/18.56	-11.02/9.15	-19.6/18.96	-17.85/16.67	-15.25/17.85	-5.32/4.5	-3.51/2.41	-1.55/0.58	-0.12/0.13	0.03/1.37	-2.23/2.35	-4.22/7.76	-10.21/8.07	-6.96/7.76	-9.5/13.03	
Theta(172.5°)	-16.29/13.19	-9.65/6.61	-4.48/4.23	-1.10/0.8	1.02/1.02	-1.41/1.02	2.18/2.7	0.19/1.32	-3.02/3.91	-8.32/17.73	-18.65/16.64	-17.12/18.31	-13.34/11.34	-10.84/11.76	-9.38/7.78	-5.78/4.79	-3.93/3.85	-2.99/2.89	-3.92/4.21	-4.88/4.97	-7.13/7.24	-8.46/9.6	-12.86/19.32	-18.63/17.88	
Theta(180°)	-15.74/12.74	-9.38/6.82	-5.46/4.34	-3.02/2.25	-1.09/0.2	0.39/1.67	-2.42/1.05	-1.94/2.78	-0.7/2.66	-6.95/7.46	-10.08/12.11	-12.27/16.87	-17.66/18.39	-16.05/11.51	-10.01/6.78	-6.67/4.42	-3.73/3.39	-2.82/2.24	-1.77/1.91	-1.31/1.32	-1.74/2.59	-3.31/4.38	-6.51/8.35	-11.98/14.3	
Theta(187.5°)	-14.23/11.23	-7.46/5.46	-4.14/3.23	-2.14/1.23	-0.74/0.23	0.14/0.73	-1.14/1.23	-0.44/1.73	-1.74/2.23	-5.23/6.73	-8.73/10.23	-11.23/12.73	-13.73/15.23	-16.23/17.73	-18.73/20.23	-21.23/22.73	-23.73/25.23	-26.23/27.73	-28.73/30.23	-31.23/32.73	-33.73/35.23	-36.23/37.73	-38.73/40.23	-41.23/42.73	-43.73/45.23
Theta(195°)	-12.73/9.73	-6.73/4.73	-3.73/2.73	-1.73/0.73	-0.23/0.23	0.27/0.73	-0.73/1.23	-1.23/1.73	-1.73/2.23	-2.23/2.73	-2.73/3.23	-3.23/3.73	-3.73/4.23	-4.23/4.73	-4.73/5.23	-5.23/5.73	-5.73/6.23	-6.23/6.73	-6.73/7.23	-7.23/7.73	-7.73/8.23	-8.23/8.73	-8.73/9.23	-9.23/9.73	-9.73/10.23
Theta(202.5°)	-11.23/6.73	-5.23/3.23	-2.23/1.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(210°)	-10.23/5.23	-4.23/2.23	-1.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(217.5°)	-9.23/4.23	-3.23/1.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(225°)	-8.23/3.23	-2.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(232.5°)	-7.23/2.23	-1.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(240°)	-6.23/1.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(247.5°)	-5.23/0.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(255°)	-4.23/0.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(262.5°)	-3.23/0.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(270°)	-2.23/0.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(277.5°)	-1.23/0.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(285°)	-0.23/0.23	-0.23/0.23	-0.23/0.23	-0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(292.5°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(300°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(307.5°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(315°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(322.5°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(330°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(337.5°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(345°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23
Theta(352.5°)	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23	0.23/0.23



Radiated Composite Gain Data

Appendix A.6

Theta (deg)	-3.44/3.78	-5.09/5.61	-5.92/8.03	-7.51/10.15	-10.51/13.89	-17.92/18.41	-18.83/17.48	-10.61/9.72	-6.16/3.34	-5.33/4.76	-3.71/4.63	-3.48/0.99	-2.44/1.51	-2.17/2.57	-2.1/2.9	-3.54/5.63	-6.39/8.29	-11.36/17.21	-18.41/18.42	-16.54/12.85	-9.33/6.76	-4.79/3.57	-3.04/2.71	-2.67/2.17
Theta (15°)	-3.57/3.77	-5.31/4.53	-5.19/4.02	-4.99/5.9	-6.74/9.9	-13.8/17.1	-18.19/18.52	-19.19/10.34	-11.03/6.66	-6.11/4.66	-3.5/5.31	-5.3/4.36	-3.66/5.34	-3.48/4.45	-4.38/5.23	-6/5.63	-8.7/9.27	-11.69/14.21	-18.83/18.76	-18.9/15.66	-12.82/12.68	-8.23/5.86	-5.49/4.08	-2.58/2.59
Theta (30°)	-12.12/7.09	-6.33/7.98	-4.57/4.88	-2.83/3.96	-5.86/6.98	-10.03/15.18	-15.67/17.59	-14.85/10.93	-7.47/6.45	-9.49/11.4	-4.9/5.14	-5.47/5.38	-7.03/9.27	-5.17/5.54	-7.27/8.71	-11.53/10.93	-12.24/13.24	-12.61/15.31	-15.92/18.24	-17.28/11.48	-18.19/10.34	-8.13/5.29	-7.01/5.16	-5.87/7.59
Theta (45°)	-6.25/5.98	-6.3/9.27	-7.69/8.24	-10.15/10.45	-8.79/12.45	-15.82/19.21	-17.24/18.88	-15.35/12.45	-8.06/5.81	-15.69/7.13	-5.5/4.4	-8.17/12.53	-17.46/11.03	-6.41/8.6	-15.53/14.51	-10.76/8.66	-11.14/12.47	-16.46/17.56	-18.96/18.93	-11.31/13.81	-12.92/16.65	-9.76/5.79	-6.52/9.28	-8.37/10.89
Theta (60°)	-3.96/7.11	-11.75/7.64	-10.06/7.26	-6.54/8.06	-11.46/12.51	-18.01/14.78	-19.23/18.35	-11.03/16.75	-5.58/6.14	-13.68/18.49	-7.4/10.38	-7.49/11.16	-17.63/12.63	-6.66/7.27	-10.36/10.48	-14.22/11.26	-10.86/13.68	-18.16/18.27	-15.15/12.05	-17.81/13.61	-11.43/14.07	-13.33/4.09	-4.93/3.13	-6.35/6.51
Theta (75°)	-3.62/11.58	-8.77/12.06	9.69/11.45	-10.29/9.22	-12.15/16.59	-15.33/17.71	-18.06/18.76	-18.1/14.09	-11.41/10.71	-12.42/8.01	-17.23/11.95	-8.98/11.6	-16.4/18.12	-8.81/6.35	-7.21/13	-14.56/12.46	-10.56/11.69	-14.58/17.06	-15.48/18.43	-12.07/16.28	-12.33/18.16	-15.99/5.15	-6.29/8.51	-6.9/4.39
Theta (90°)	-8.82/11.41	-10.35/9.2	9.9/9.68	-12.63/11.77	-8.81/11.95	-12.69/17.86	-18.41/13.92	-14.07/14.3	-12.46/18.26	-13.72/17.49	-12.01/11.99	-10.12/12.66	-16.49/18.61	-14.85/8.78	-6.24/9.85	-14.84/18.38	-14.72/10.28	-10.18/11.71	-13.66/19.21	-14.31/9.84	-14.39/14.04	-13.9/7.04	-5.05/6.69	-8.75/6.43
Theta (105°)	-11.89/9.38	-11.36/11.43	-8.82/10.75	-8.96/9.85	-11.92/13.53	-12.59/19.19	-18.66/15.45	-14.13/12.55	-8.57/17.73	-10.45/10.81	-11.18/9.03	-11.93/18.96	-18.31/17.94	-18.31/19.92	-18.71/19.11	-16.81/18.56	-18.91/14.88	-19.22/14.7	-18.58/15.99	-18.28/9.43	-13.6/17.62	-12.12/8.84	-8.84/11.2	-8.94/5
Theta (120°)	-18.74/10	-11.85/8.23	9.53/15.28	-8.3/9.1	-12/17.82	-12.21/18.97	-18.97/13.35	-11.48/14.41	9.5/11.11	-17.63/8.29	-11.45/11.92	-14.75/16.7	-12.64/13.99	-12.85/18.66	-15.04/13.87	-18.52/18.82	-17.72/19.09	-16.31/14.44	-14.54/18.2	-13.45/19.07	-14.63/17.42	-13.35/7.43	-12.27/13.21	-10.77/7.44
Theta (135°)	-16.72/10.59	-11.81/13.22	-12.54/17.87	-12.06/19.08	-17.18/8.81	-17.88/14.97	-19.28/13.67	-15.43/13.2	-9.06/18.74	-14.32/14.74	-13.96/17.85	-13.5/14.43	-16.25/7.35	-13.68/17.28	-17.28/12.38	-17.53/17.67	-18.79/10.56	-7.95/13.18	-18.74/18.56	-18.43/15.46	-15.97/17.97	-18.62/10.11	-16.99/11.91	-18.1/10.4
Theta (150°)	-12.92/15.59	-18.24/12.1	-18.8/19.77	-18.89/17.52	-17.69/18.64	-17.91/19.02	-17.63/15.35	-17.52/17.53	-9.45/17.59	-16.46/18.07	-14/15.14	-18.36/12.45	-15.08/18.35	-13.99/19.19	-18.34/18.36	-18.85/11.12	-17.38/18.98	-18.91/18.22	-17.87/17.52	-17.53/18.05	-18.04/18.63	-18.7/16.07	-17.8/13.96	-18.83/18.64
Theta (165°)	-15.45/18.19	-18.33/17.23	-18.62/13.44	-17.35/14.25	-18.45/15.68	-18.37/18.16	-17.85/17.22	-18.44/19.15	-18.49/11.02	-12.37/13.94	-19/13.14	-16.11/17.84	-18.02/15.7	-17.94/18.99	-18.07/18.84	-18.28/18.39	-16.41/18	-17.43/18.36	-17.6/19.2	-18.54/10.66	-18.57/16.06	-17.89/16.58	-17.34/18.7	-16.12/14.77
Theta (180°)	-13.79/17.68	-16.49/18.45	-15.36/10.65	-14.89/12.28	-17.93/14.43	-17.99/18.63	-17.87/19.14	-13.47/19.36	-17.48/15.2	-11.66/8.96	-16.61/15.1	-18.77/19.01	-13.49/17.47	-16.72/18.17	-17.28/12.38	-18.79/10.56	-17.11/18.56	-18.52/17.13	-17.13/18.06	-14.31/17.61	-18.41/18.32	-11.02/13.13	-18.72/16.98	-14.62/16.7
Theta (195°)	-10.01/14.98	-12.04/14.14	-13.31/16.14	-14.89/16.13	-13.34/11.52	-18.53/17.45	-17.85/17.8	-11.13/16.52	-18.68/10.57	-12.71/7.25	-18.71/13.2	-17.44/18.62	-11.65/11.68	-13.03/18.6	-19.09/15.71	-17.45/17.43	-17.21/18.82	-17.56/16.95	-15.8/16.09	-10.42/19.29	-17.39/18.55	-12.43/15.71	-18.55/11.03	-13.26/11.98
Theta (210°)	-7.05/12.73	-11.38/8.82	-18.33/17.71	-17.73/12.67	-8.05/11.57	-15.91/14.18	-18.45/16.27	-11.53/11.28	-18.71/13.22	-13.01/10.79	-10.04/11.4	-9.25/16.35	-17.01/14.13	-18.83/19.44	-14.62/17.85	-18.44/18.58	-17.92/16.71	-18.6/17.3	-18.64/18.34	-12.13/8.86	-18.45/10.18	-7.85/13.82	-15.91/11.5	-9.5/11.79
Theta (225°)	9.65/9.1	-10.57/7.5	-10.02/11.23	-7.86/6.08	-9.67/12.48	-12.25/13.94	-19.27/15.75	-10.58/11.45	-12.75/17.97	-18.25/8.09	-12.59/10.61	-8.28/11.56	-12.9/8.68	-10.11/10.25	-16.52/19.82	-18.52/18.93	-18.2/13.62	-18.67/17.75	-10.64/18.74	-17.12/10.43	-10.61/7.19	-8.07/19.19	-9.2/13.65	-7.38/12.4
Theta (240°)	9.11/8.56	9.93/7.25	-5.14/6.62	-7.46/7.17	-10.58/13.04	-17.33/14.5	-13.53/13.48	-14.75/9.96	-13.43/10.18	-13.73/18.6	-16.83/10.61	-8.35/16.48	-16.6/18.49	-12.47/17.61	-15.11/18.94	-18.77/18.91	-15.7/18.01	-18.03/14.01	-17.29/18.6	6.4/6.08	-8.07/18.14	8.32/12.7	-7.23/4.55	
Theta (255°)	-6.96/3.95	-7.69/8.55	-6.3/4.65	-5.27/8.29	-10.9/11.17	-10.4/18.18	-15.52/16.7	-12.6/10.57	-7.89/9.64	-9.69/8.03	-12.86/12.43	-18.28/12.91	-10.47/9.78	-8.03/13.9	-18.21/18.91	-12.45/11.78	-11.94/13.16	-17.51/10.62	-18.75/8.3	-2.92/7.41	-8.96/10.52	-8.97/8.83	-8.91/4.14	
Theta (270°)	-4.34/2.82	-2.88/5.12	-6.29/5.61	-6.52/7.27	-8.1/6.75	-12.1/18.96	-17.29/17.72	-9.65/8.13	-9.86/3.82	-4.76/9.43	-3.56/10.93	-17.84/8.83	-7.8/8.51	-6.64/8.67	-11.4/16.99	-15.41/15.1	-14.77/18.46	-18.03/15.35	-15.28/18.82	-11.43/15.42	-6.41/10.54	-4.84/4.44	-4.72/6.66	-4.44/5.41
Theta (285°)	-3.15/3.97	-2.8/3.01	-2.7/4.58	-4.46/5.53	-6.79/12.41	-18.65/18.36	-18.79/16.16	-9.08/7.2	-7.66/5.38	-7.93/4.19	-10.72/7.13	-5.89/10.91	-13.17/17.59	-16.92/9.87	-7.09/17.10	-16.88/18.38	-15.86/14.17	-15.64/19.21	-16.25/11.31	-11.88/13.33	-8.11/6.47	-4.83/4.49	-4/5.24	-5.48/2.73
Theta (300°)	-4.21/2.94	-4.3/3.22	-2.5/2.96	-4.59/5.68	-7.4/9.81	-14.99/18.95	-15.38/14.15	-10.05/7.15	-11.22/10.4	-4.82/9.52	-8.99/2.99	-4.77/9.88	-9.48/4.75	-6.75/12.14	-12.22/10.8	-11.51/6.83	-9.02/11.9	-15.2/19.08	-19.28/14.38	-11.84/9.31	-4.63/3.76	-4.46/3.02	-2.16/2.57	-2.3/3.15
Theta (315°)	-1.18/0.56	-1.61/2.07	-4.01/5.01	-7.69/10.63	-14.06/18.65	-18.7/14.79	-13.07/16	-11.8/12.07	-8.83/3.6	-4.89/17	-5.26/6.71	-18.21/9.73	-5.13/5.13	-5.69/3.24	-4.48/7.82	-10.12/10.86	-10.51/14.49	-13.02/17.99	-9.69/8.22	-6.99/6.89	-5.37/4.2	-3.63/2.88	-2.24/2.01	-2.77/2.31
Theta (330°)	-2.66/2.76	-3.66/4.55	-5.97/6.88	-8.21/10.34	-11.66/16.03	-18.26/18.13	-12.83/9.25	-8.77/8.45	-4.79/4.83	-13.31/2.2	-2.45/6.13	-2.35/2.32	-3.01/2.84	-5.41/5.58	-5.53/5.55	-7.77/9.76	-12.03/14.64	-19.17/17.2	-13.67/10.59	-8.07/6.33	-5.37/4.25	-3.63/2.64	-1.82/1.8	-1.97/1.74
Gain	Phi(0°)/Phi(7.5°)	Phi(15°)/Phi(22.5°)	Phi(30°)/Phi(37.5°)	Phi(45°)/Phi(52.5°)	Phi(60°)/Phi(67.5°)	Phi(75°)/Phi(82.5°)	Phi(90°)/Phi(97.5°)	Phi(105°)/Phi(112.5°)	Phi(120°)/Phi(127.5°)	Phi(135°)/Phi(142.5°)	Phi(150°)/Phi(157.5°)	Phi(165°)/Phi(172.5°)	Phi(180°)/Phi(187.5°)	Phi(195°)/Phi(202.5°)	Phi(210°)/Phi(217.5°)	Phi(225°)/Phi(232.5°)	Phi(240°)/Phi(247.5°)	Phi(255°)/Phi(262.5°)	Phi(270°)/Phi(277.5°)	Phi(285°)/Phi(292.5°)	Phi(300°)/Phi(307.5°)	Phi(315°)/Phi(322.5°)	Phi(330°)/Phi(337.5°)	Phi(345°)/Phi(352.5°)

Gain	$\Phi(0^{\circ})/\Phi(7.5^{\circ})$	$\Phi(15^{\circ})/\Phi(22.5^{\circ})$	$\Phi(30^{\circ})/\Phi(37.5^{\circ})$	$\Phi(45^{\circ})/\Phi(52.5^{\circ})$	$\Phi(60^{\circ})/\Phi(67.5^{\circ})$	$\Phi(75^{\circ})/\Phi(82.5^{\circ})$	$\Phi(90^{\circ})/\Phi(97.5^{\circ})$	$\Phi(105^{\circ})/\Phi(112.5^{\circ})$	$\Phi(120^{\circ})/\Phi(127.5^{\circ})$	$\Phi(135^{\circ})/\Phi(142.5^{\circ})$	$\Phi(150^{\circ})/\Phi(157.5^{\circ})$	$\Phi(165^{\circ})/\Phi(172.5^{\circ})$	$\Phi(180^{\circ})/\Phi(187.5^{\circ})$	$\Phi(195^{\circ})/\Phi(202.5^{\circ})$	$\Phi(210^{\circ})/\Phi(217.5^{\circ})$	$\Phi(225^{\circ})/\Phi(232.5^{\circ})$	$\Phi(240^{\circ})/\Phi(247.5^{\circ})$	$\Phi(255^{\circ})/\Phi(262.5^{\circ})$	$\Phi(270^{\circ})/\Phi(277.5^{\circ})$	$\Phi(285^{\circ})/\Phi(292.5^{\circ})$	$\Phi(300^{\circ})/\Phi(307.5^{\circ})$	$\Phi(315^{\circ})/\Phi(322.5^{\circ})$	$\Phi(330^{\circ})/\Phi(337.5^{\circ})$	$\Phi(345^{\circ})/\Phi(352.5^{\circ})$	
$\Theta(0^{\circ})$	-1.46/2.88	-5.24/3.84	4.5/5.64	-6.42/7.86	-8.73/11.38	-15.31/18.89	-16.71/13.08	-7.11/5.87	-5.49/4.88	-4.57/4.48	-4.45/4.4	-3.95/4.54	-4.53/4.3	-6.09/6.54	-7.55/9.16	-10.66/14.95	-16.12/15.26	-11.59/12.44	-12.3/10.54	-7.72/6.65	-4.55/3.94	-3.64/3.4	-4.96/2.85		
$\Theta(7.5^{\circ})$	-8.78/6.97	-8.2/11.25	-13.38/10.95	-12.92/12.83	-15.62/17.2	-18.71/15.79	-13.25/11.3	-11.26/10.82	-8.81/6.88	-5.39/4.03	-3.81/2.65	-2.67/3.17	-3.09/3.22	-3.88/4.32	-5.49/5.88	-8.15/8.45	-9.99/13.4	-18.14/18.17	-17.76/14.74	-12.9/10.5	-7.42/6.26	-6.11/5.68	-5.18/6.12	-4.51/5.04	
$\Theta(15^{\circ})$	-3.73/4.75	-7.25/8.59	9.98/12.86	-13.15/15.72	-18.3/18.84	-18.48/15.06	-13.79/10.46	-8.97/8.45	-7.57/5.8	-6.14/4.99	-3.74/3.07	-2.56/3.25	-3.81/4.43	-6.63/8.65	-9.52/10.29	-11.86/17.14	-18.94/18.37	-18.56/18.4	-14.19/10.94	-11.76/10.68	-7.37/6.21	-4.72/5.09	-3.52/3.16	-5.79/6.03	
$\Theta(22.5^{\circ})$	-10.37/10.98	-7.21/8.46	9.03/4.55	-10.47/11.22	-14.3/17.16	-18.39/17.65	-17.88/14.97	-10.72/8.02	-6.54/5.23	-3.58/2.47	-2.17/3.16	-2.84/1.64	-0.9/-1.6	-2.63/3.19	-2.33/4.78	-5.86/8.26	-12.09/17.41	-15.16/15.64	-9.24/11.51	-8.5/8.2	-6.98/4.23	-1.3/1.56	-3.3/5.15	-6.09/5.7	
$\Theta(30^{\circ})$	-11.86/10.3	-9.23/8.53	-15.39/14.16	-11.81/17.34	-16.71/15.58	-18.04/13.67	-11.73/13	-13.71/9.18	-5.96/5.5	-3.71/2.3	-1.91/1.28	-1.41/1.07	-1.57/2.3	-1.95/2.9	-4.71/5.95	-17.73/13.09	-18.33/11.85	-15.62/8.08	-9.45/9.84	-7.72/8.1	-6.99/3.69	-1.89/1.72	-2.45/4.22		
$\Theta(37.5^{\circ})$	-9.57/8.15	-7.79/8.54	-10.88/10.14	-11.22/17.68	-18.45/18.4	-18.2/16.07	-17.73/11.6	-8.96/8.32	-6.19/3.28	-3.11/2.11	-1.07/0.73	-0.78/1.5	-1.56/2.91	-5.18/6.31	-8.02/8.23	-12.35/12.67	-13.29/18.84	-14.18/12.78	-17.31/16.36	-12.91/6.47	-8.32/2.8	-2.12/2.19	-1.17/0.38	-0.8/4.15	
$\Theta(45^{\circ})$	-3.94/10.13	-3.46/12.95	-5.88/8.01	-12.24/11.31	-18.42/18.85	-18.61/16.93	-14.06/14.48	-10.04/4.72	-7.12/2.98	-1.3/1.19	-0.2/0.02	1.180/4.7	-1.42/2.7	-2.47/3.2	-5.45/5.83	-8.27/12.16	-13.93/15.58	-17.96/16.24	-13.09/8.18	-2.88/4.29	-2.16/1.39	-5.17/5.31	-5.55/2.64	-2.76/1.82	
$\Theta(52.5^{\circ})$	-5.04/9.62	-7.58/8.65	-6.63/18.21	-5.34/9.97	-19.01/18	-18.4/14.51	-18.21/14.9	-9.45/8.29	-5.62/3.24	-1.72/0.84	0.65/1.73	1.30/1.5	-2.24/1.11	-2.97/4.6	-7.15/7.98	-10.72/2.22	-11.58/17.85	-17.05/14.6	-10.32/13.27	-6.91/3.03	-3.12/0.3	0.62/2	-5.79/6.92	-1.67/0.08	
$\Theta(60^{\circ})$	0.1/11.91	-4.47/13.24	-10.48/10.25	-7.84/13.63	-9.55/18.8	-17.02/16.85	-17.94/18.58	-15.08/7.78	-5.26/4.09	-0.36/0.39	2.49/2.11	1.560/4	-0.98/2.25	-2.86/2.72	-3.64/6.46	-6.94/10.5	-15.09/12.86	-15.55/17.91	-7.86/18.36	-7.01/3.98	-1.37/1.34	-0.39/1.23	1.1/2.19	-4.72/0.08	
$\Theta(67.5^{\circ})$	-4.49/7.28	-9.31/9.52	-18.43/5.83	-13.49/14.13	-12.22/17.93	-14.3/17.03	-13.85/12.44	-11.2/9.42	-5.03/2.72	0.03/0.3	1.69/0.57	-0.01/1.81	-4.45/4.82	-2.33/2.46	-2.89/7.83	-6.87/12.76	-12.04/14.12	-14.28/14.12	-13.53/4.07	-3.09/3.09	-1.54/0.05	-0.22/0.07	-1.59/0.07		
$\Theta(75^{\circ})$	-6.37/10.78	-6.86/12.78	-17.31/18.81	-17.63/16.98	-12.3/12.81	-18.08/17.42	-8.57/8.84	-12.96/8.66	-4.43/2.42	0.36/1.86	2.51/9.2	3.47/2.9	3.17/2.3	0.06/1.68	-3.71/2.46	-4.72/1.95	-9.92/18.23	-7.01/9.35	-13.19/12.71	9/4.63	-1.99/0.66	-4.72/2.37	-1.98/4.8	-9.5/1.99	
$\Theta(82.5^{\circ})$	-2.28/4.31	-8.57/9.13	-15.14/9.48	-14.65/11.27	-15.75/17.15	-13.9/7.92	-7.99/8.75	-10.25/12.33	-4.65/2.1	-0.53/1.05	3.343/0.9	4.312/9.5	1.20/38	-0.38/0.38	-3.62/3.74	-6.23/3.55	-11.17/18.65	-7.81/4.74	-12.95/16.38	-10.41/11.4	-1.53/2.15	-5.65/1.22	3.33/1.95	-3.67/1.19	
$\Theta(90^{\circ})$	-0.5/6.32	-15.97/18.88	-18.42/11.78	-16.03/8.31	-16.73/17.99	-12.18/6.21	-7.67/8.55	-7.55/12.11	-5.04/0.19	-2.2/2.1	3.264/2.3	2.580/7.4	-0.75/4.52	-2.56/1.01	-0.87/5	-5.89/8.76	-5.52/10.73	-7.36/9.73	-7.07/8.5	-3.98/0.51	-0.88/0.86	-5.79/3.55	3.02/1.61	-17.37/2.72	
$\Theta(97.5^{\circ})$	-6.1/18.51	-10.28/13.61	-16.75/13.66	-11.06/17.83	-18.85/18.18	-13.95/6.23	-7.1/7.03	-7.64/10.81	-6.19/0.53	-1.57/2.29	3.514/19	1.951/5.6	0.26/2.86	2.17/0.88	-0.96/3.08	-5.99/8.28	-9.51/17.06	-7.04/5.02	-10.24/17.57	-5.28/1.4	-4.92/1.63	-10.76/0.69	3.46/1.92	-9.25/4.02	
$\Theta(105^{\circ})$	-11.36/17.97	-12.76/17.62	-15.4/11.51	-7.44/6.86	-18.82/17.48	-13.91/8.58	-8.17/7.74	-6.81/0.87	-1.57/2.84	3.153/5.1	3.042/5.4	-0.59/1.73	-2.06/0.98	-2.2/3.86	-5.67/5.46	-11.41/9.67	-11.38/10.68	-7.42/16.65	-9.37/3.81	-2.79/0.54	-6.57/11.38	-2.91/3.31	-7.75/4.2		
$\Theta(112.5^{\circ})$	-7.86/8.02	-16.35/17.66	-18.13/6.8	-6.82/7.47	-18.68/10.66	-12.57/6.82	-7/10.2	-8.16/9.42	-4.94/8.02	0.2/7.2	2.815/8.5	2.873/5.8	-1.17/0.48	0.28/0.82	-2.17/4.17	-6.12/4.23	-9.96/4.24	-13.36/10.73	-8.76/14.25	-5.7/2.32	-3.15/5.01	-5.32/1.29	-0.05/0.69	-0.84/2.26	
$\Theta(120^{\circ})$	-17.91/7.6	-7.25/9.56	-7.51/6.17	-4.69/12.57	-10.26/14.53	-15.38/12.16	-11.88/7.59	-9.28/6.48	-3.97/1.52	-0.33/2.93	2.652/5.2	2.064/23	-0.14/1.22	0.09/2.25	-1.81/0.4	-4.43/4.34	-10.96/9.63	-18.71/10.22	-7.82/17.27	-6.49/6.25	-5.23/1.33	-1.89/3.52	-1.75/4.23	-0.09/4.4	
$\Theta(127.5^{\circ})$	-14.54/12.28	-18.34/9.28	-6.06/4.88	-5.41/14.88	-15.01/16.68	-10.81/10.83	-11.78/14.69	-9.36/6.45	-1.66/2.47	0.582/6.6	2.812/5.1	0.513/13	-0.19/2.62	4.19/3.47	-1.11/3.58	-8.84/8.14	-5.96/6.22	-19.22/6.77	-11.58/9.24	-6.08/9.39	-2.63/1.88	-7.23/0.35	-2.11/4.67	-5.27/0.74	
$\Theta(135^{\circ})$	-13.4/14.19	-10.76/17.67	-18.12/18.88	-10.83/15.42	-17.83/18.62	-15.1/19.12	-12.51/3.99	-9.98/0.65	-2.46/2.57	1.440/9.7	1.693/0.9	1.621/8.4	2.27/0.5	-3.64/3.89	-4.74/6.18	-3.37/11.77	-13.17/10.05	-15.61/12.96	-8.15/18.15	-19.47/3.33	-5.53/8.06	-7.01/2.89	-5.83/6.61	-6.49/5.39	
$\Theta(142.5^{\circ})$	-18.18/13.24	-11.67/8.26	-19.11/17.81	-18.33/16.83	-18.37/18.83	-16.73/10.67	-5.5/6.96	-11.47/2.91	-3.37/1.4	1.96/0.91	0.392/1.7	1.4/0.92	-1.04/0.66	4.14/8.01	-7.5/4.12	-5.15/6.43	-10.83/10.94	-10.84/11.02	-9.79/8.41	-16.04/4.98	-11.8/17.73	-6.02/7	-16.78/13.13	-12.11/13.49	
$\Theta(150^{\circ})$	-11.81/18.56	-15.6/10.23	-12.33/11.97	-12.51/12.49	-11/15.19	-15.95/9.12	-11.75/8.43	-11.08/10.85	-4.92/4.91	-5.81/1.01	2.12/0.48	0.64/1.11	0.84/0.33	-1.68/2.42	-1.98/1.91	-5.83/6.02	-8.94/8.78	-9.05/16.58	-11.8/7.31	-4.82/9.39	-7.24/4.87	-8.36/14.68	-8.92/6.29	-8.71/0.87	-15.61/17.48
$\Theta(157.5^{\circ})$	-5.05/7.06	-10.08/10.05	-14.26/16.16	-18.58/18.72	-16.39/16.23	-17.76/14.23	-10.38/5.96	-5.74/5.14	-3.12/1.87	-1.87/0.73	0.917/6.6	1.160/9.1	1.520/5.5	-3.05/4.66	-5.2/5.84	-9.58/13.26	-16.98/19.25	-12.24/10.63	-8.49/7.02	-5.93/5.13	-8.54/11.26	-12.9/12.76	-14.03/10.31	-10.27/7.83	
$\Theta(165^{\circ})$	-9.53/10.4	-10.57/9.92	-8.86/9.98	-11.3/11.45	-14.24/18.08	-18.53/17.83	-12.63/14.49	-4.84/4.13	-3.36/2.84	-3.22/5.2	-5.36/3.48	-2.15/2.29	-1.94/1.53	-2.19/4.23	-8.8/9.82	-10.99/15.2	-19.37/16.21	-12.03/8.75	-8.77/5.89	-6.24/11.1	-17.98/11.58	-8.6/3.66	-6.25/7.27	-7.28/9.4	
$\Theta(172.5^{\circ})$	-3.15/3.33	-4.87/7.19	-8.31/10.77	-19.35/15.94	-10.82/8.25	-6.54/5.23	-4.53/3.59	-2.97/2.58	-2.57/3.03	-2.06/1.94	-2.61/3.78	-5.93/14.8	-8.12/10.06	-9.9/11.2	-9.38/8.35	-8.82/10.41	-12.36/18.61	-11.81/9.32	-11.44/11.36	-9.45/4.23	-5.11/4.01	-6.68/4.81	-5.61/3.03		
$\Theta(180^{\circ})$	0.3/0.88	-1.14/1.85	2.7/3.63	-4.31/7.46	-8.41/11.91	-13.3/12.6	-9.76/7.52	-5.45/3.49	-2.3/1.22	-0.43/0.29	0.66/0.52	0.740/5.7	0.19/0.19	-0.49/2.01	-3.44/5.12	-6.38/9.42	-15.34/18.36	-17.75/10.37	-8.5/9.92	-15.61/17.8	-13.67/6.33	-3.02/1.05	-0.35/0.26	1.58/1.26	
Freq(Hz)	6.995G/Pol.	ThetaAnt. 4																							
Gain	$\Phi(0^{\circ})/\Phi(7.5^{\circ})$	$\Phi(15^{\circ})/\Phi(22.5^{\circ})$	$\Phi(30^{\circ})/\Phi(37.5^{\circ})$	$\Phi(45^{\circ})/\Phi(52.5^{\circ})$	$\Phi(60^{\circ})/\Phi(67.5^{\circ})$	$\Phi(75^{\circ})/\Phi(82.5^{\circ})$	$\Phi(90^{\circ})/\Phi(97.5^{\circ})$	$\Phi(105^{\circ})/\Phi(112.5^{\circ})$	$\Phi(120^{\circ})/\Phi(127.5^{\circ})$	$\Phi(135^{\circ})/\Phi(142.5^{\circ})$	$\Phi(150^{\circ})/\Phi(157.5^{\circ})$	$\Phi(165^{\circ})/\Phi(172.5^{\circ})$	$\Phi(180^{\circ})/\Phi(187.5^{\circ})$	$\Phi(195^{\circ})/\Phi(202.5^{\circ})$	$\Phi(210^{\circ})/\Phi(217.5^{\circ})$	$\Phi(225^{\circ})/\Phi(232.5^{\circ})$	$\Phi(240^{\circ})/\Phi(247.5^{\circ})$	$\Phi(255^{\circ})/\Phi(262.5^{\circ})$	$\Phi(270^{\circ})/\Phi(277.5^{\circ})$	$\Phi(285^{\circ})/\Phi(292.5^{\circ})$	$\Phi(300^{\circ})/\Phi(307.5^{\circ})$	$\Phi(315^{\circ})/\Phi(322.5^{\circ})$	$\Phi(330^{\circ})/\Phi(337.5^{\circ})$	$\Phi(345^{\circ})/\Phi(352.5^{\circ})$	
$\Theta(0^{\circ})$	-16.47/11.93	-11.13/11.88	-7.42/7.68	-5.56/3.78	-3.04/3.35	-3.84/2.73	-3.46/4.45	-4.08/4.74	-6.39/7.26	-8.58/10.02	-12.11/14.82	-17.88/18.16	-16.97/13.22	-11.24/8.96	-7.97/6.37	-5.56/4.32	-4.35/3.69	-5.29/3.54	-1.34/2.78	-4.43/4.14	-4.23/4.42	-7.63/9.55	-9.84/10.44	-12.08/17.43	
$\Theta(7.5^{\circ})$	-13.88/15.46	-13.14/9.74	-9.11/9.13	-8.2/6.48	-4.17/5.4	-4.93/5.02	-6.89/6.91	-6.37/7.17	-6.33/6.02	-7/8.15	-10.53/12.94	-15.79/19.61	-19.03/17.96	-12.4/10.06	-7.9/4.63	-4.88/5.4	-3.19/2.78	-3.97/5.02	-2.85/1.99	-2.67/3.95	-4.76/5.6	-7.4			