









Antenna Pattern <6GHz U-NII5~UNII-8>

Appendix D

Theta (112.5°)	-3.45/-4.66	-7.39/-4.31	-7.18/-6.19	-4.89/-5.82	-13.24/-8.60	-8.48/-10.71	-12.95/-15.34	-13.63/-9.59	-14.21/-13.79	-11.69/-14.20	-13.39/-10.64	-10.94/-9.14	-10.79/-10.08	-8.43/-15.30	-2.93/-3.00	-0.67/1.03	-15.47/-0.91	3.92/-3.80	-5.15/-0.72	4.56/2.10	2.94/-0.82	-2.95/2.72	2.75/-0.50	-0.91/-2.81	
Theta (120°)	-5.78/-2.16	-6.84/-4.84	-7.31/-8.42	-5.47/-6.41	-10.00/-14.97	-9.94/-7.65	-10.56/-11.35	-12.94/-11.10	-8.49/-10.89	-12.57/-15.20	-15.00/-13.47	-9.98/-8.69	-15.44/-13.88	-7.58/-15.58	-1.50/-7.72	-3.41/0.47	-5.69/-9.04	4.65/-1.51	-4.02/-0.16	2.82/1.39	1.54/-7.29	-3.63/1.71	2.47/-2.83	-1.71/-1.77	
Theta (127.5°)	-7.45/-2.79	-5.44/-6.67	-6.13/-8.24	-7.37/-8.60	-9.65/-11.34	-12.12/-10.61	-10.23/-12.07	-12.42/-11.05	-10.73/-11.52	-15.03/-13.50	-9.69/-14.68	-11.79/-10.39	-9.59/-8.64	-5.35/-12.29	-2.76/-7.00	-0.79/-2.00	4.09/-0.64	-8.01/-2.21	-1.01/1.54	-2.43/-6.73	-9.89/-3.23	-0.59/-3.86	-4.01/-3.49		
Theta (135°)	-8.17/-7.54	-6.17/-9.68	-9.41/-9.25	-11.26/-13.39	-13.27/-14.14	-14.44/-14.51	-14.58/-13.72	-12.59/-15.74	-14.54/-12.88	-14.81/-15.27	-15.79/-12.12	-14.29/-10.96	-11.89/-8.66	-13.40/-10.54	-14.50/-13.82	-5.47/-7.15	-15.64/-3.69	0.40/-3.22	-6.70/-7.49	-8.43/-3.44	-4.49/-9.53	-6.15/-4.52	-2.75/-4.34	-5.92/-5.14	
Theta (142.5°)	-8.13/-8.08	-7.89/-6.94	-7.84/-8.26	-9.74/-13.35	-15.89/-15.93	-15.07/-15.73	-14.28/-16.23	-15.53/-16.32	-15.02/-15.37	-15.48/-15.60	-15.18/-12.96	-13.30/-12.02	-12.66/-12.12	-9.77/-10.15	-11.67/-9.42	-11.61/-13.21	-11.84/-6.45	-5.17/-12.35	-14.21/-9.42	-8.49/-9.38	-5.72/-9.80	-5.39/-5.75	-5.44/-4.76	-5.52/-8.67	
Theta (150°)	-8.80/-8.37	-8.43/-9.24	-10.16/-9.84	-9.39/-8.26	-8.33/-10.01	-11.02/-12.33	-14.18/-15.68	-14.99/-15.81	-15.63/-15.45	-14.51/-14.56	-14.87/-12.92	-12.93/-13.94	-15.13/-14.41	-13.64/-13.88	-15.02/-12.35	-15.66/-15.56	-9.86/-8.43	-12.94/-13.84	-12.94/-13.96	-13.32/-14.32	-10.41/-10.36	-8.91/-5.08	-5.16/-6.74	-8.79/-9.89	
Theta (157.5°)	-10.23/-9.94	-8.04/-5.91	-5.74/-6.62	-8.10/-10.63	-12.91/-14.93	-14.78/-13.78	-14.00/-15.78	-15.90/-16.07	-14.08/-13.14	-13.36/-14.48	-15.89/-14.55	-15.48/-16.14	-15.65/-15.83	-14.54/-13.62	-14.31/-14.01	-12.94/-10.14	-9.30/-9.99	-11.21/-12.43	-13.62/-14.75	-14.45/-14.96	-12.24/-10.18	-8.68/-7.57	-7.29/-9.16	-12.05/-12.56	
Theta (165°)	-10.67/-9.44	-9.51/-10.44	-11.46/-11.58	-11.50/-12.26	-13.46/-14.26	-15.82/-14.77	-15.73/-15.69	-15.13/-15.73	-15.59/-15.78	-14.72/-14.90	-15.11/-15.05	-15.16/-13.41	-13.88/-13.94	-12.14/-9.17	-7.85/-7.29	-7.85/-9.45	-12.66/-15.62	-16.02/-15.49	-14.82/-14.80	-14.13/-14.28	-14.41/-13.17	-13.05/-12.79	-13.31/-13.84	-12.63/-11.14	
Theta (172.5°)	-15.82/-15.27	-15.37/-13.86	-12.55/-11.58	-13.29/-14.46	-15.45/-15.45	-15.56/-15.23	-15.37/-15.32	-15.12/-15.98	-13.95/-13.46	-13.77/-14.00	-14.38/-15.60	-15.63/-15.25	-13.28/-13.06	-12.57/-12.41	-12.80/-13.28	-13.60/-14.11	-14.72/-14.28	-14.08/-14.43	-13.77/-13.18	-13.06/-13.22	-14.45/-14.92	-13.20/-13.91	-13.94/-15.97		
Theta (180°)	-15.87/-15.25	-15.57/-15.79	-15.75/-14.90	-16.11/-15.24	-15.40/-15.80	-14.83/-15.77	-15.02/-14.84	-14.98/-14.86	-14.74/-15.02	-14.79/-15.48	-15.64/-15.22	-15.78/-15.54	-14.82/-14.55	-14.78/-13.76	-14.25/-14.60	-14.83/-14.43	-14.50/-14.64	-16.18/-15.07	-15.69/-15.77	-15.69/-15.94	-15.15/-15.48	-15.97/-15.67	-15.27/-15.38	-15.55/-15.79	
Freq(Hz)	6.475GHz	TotalAnt. 4	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
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°)	
Theta (0°)	-15.24/-15.26	-14.87/-15.47	-14.86/-14.86	-16.15/-14.72	-15.89/-14.54	-14.85/-15.45	-15.55/-15.78	-15.00/-15.20	-15.42/-15.13	-14.65/-15.77	-14.70/-15.14	-15.42/-15.06	-14.24/-15.94	-15.54/-15.04	-15.66/-15.95	-15.34/-15.75	-15.61/-15.40	-15.57/-15.96	-15.63/-15.18	-15.65/-15.34	-15.48/-15.68	-15.82/-15.39	-15.86/-15.49	-15.41/-15.66	
Theta (7.5°)	-14.97/-15.17	-15.57/-15.91	-15.79/-14.61	-14.98/-14.88	-14.03/-14.14	-15.52/-15.86	-15.05/-14.69	-15.02/-15.90	-14.93/-14.86	-15.59/-15.70	-15.37/-15.90	-16.02/-15.10	-15.65/-15.83	-15.14/-15.67	-15.18/-15.54	-15.22/-14.87	-15.49/-15.95	-15.98/-15.20	-15.11/-15.12	-15.65/-15.97	-15.76/-15.20	-14.88/-15.53	-15.21/-15.87	-14.69/-14.75	
Theta (15°)	-13.20/-12.31	-13.81/-15.40	-14.85/-14.63	-13.43/-15.74	-15.30/-14.94	-15.06/-15.06	-15.86/-15.54	-15.11/-15.96	-14.81/-15.88	-15.59/-15.28	-14.87/-15.24	-15.24/-15.64	-15.11/-15.58	-15.65/-15.11	-15.62/-14.84	-15.27/-15.31	-14.92/-15.93	-15.30/-15.34	-15.19/-15.27	-15.16/-14.97	-14.90/-14.94	-15.35/-15.56	-14.66/-13.69	-13.73/-12.20	
Theta (22.5°)	-10.58/-10.83	-11.38/-12.79	-12.02/-10.99	-11.24/-11.57	-13.63/-14.24	-14.37/-13.83	-14.69/-14.93	-14.38/-15.24	-16.07/-16.08	-16.23/-15.21	-15.08/-14.92	-14.66/-15.03	-15.25/-15.23	-15.40/-15.48	-15.11/-15.01	-15.37/-15.77	-15.21/-15.51	-14.77/-13.43	-12.37/-11.58	-11.59/-11.91	-11.92/-12.49	-14.11/-13.32	-13.37/-13.28	-11.90/-10.69	
Theta (30°)	-9.46/-9.11	-8.68/-7.25	-8.13/-9.99	-10.60/-10.36	-11.06/-11.79	-12.57/-13.02	-14.07/-15.40	-14.86/-14.83	-15.33/-15.03	-15.24/-15.35	-15.94/-15.15	-15.42/-15.99	-15.55/-15.40	-15.06/-14.72	-13.25/-12.92	-12.78/-12.68	-10.87/-9.88	-10.11/-10.29	-8.82/-8.04	-7.55/-7.08	-6.84/-5.70	-9.17/-8.97	-7.81/-9.73	-9.09/-6.67	
Theta (37.5°)	-5.11/-5.95	-6.74/-6.88	-6.08/-6.89	-9.02/-9.60	-10.60/-10.21	-14.34/-15.90	-13.86/-14.53	-15.80/-15.71	-16.13/-15.13	-14.29/-14.00	-15.21/-15.03	-15.23/-15.94	-15.30/-15.10	-15.20/-14.80	-10.32/-10.88	-11.23/-11.02	-10.28/-9.89	-8.89/-7.99	-7.35/-6.40	-5.80/-4.77	-4.31/-4.65	-4.85/-4.91	-5.16/-6.72	-6.74/-5.50	
Theta (45°)	-3.68/-4.78	-5.08/-2.89	-4.41/-7.88	-9.56/-8.99	-8.05/-8.10	-9.96/-11.66	-14.07/-15.26	-15.22/-15.62	-15.70/-15.24	-15.60/-14.09	-14.25/-14.29	-15.75/-15.29	-15.60/-15.07	-12.14/-8.83	-8.19/-12.01	-13.23/-11.52	-11.83/-10.83	-8.49/-7.37	-7.48/-7.71	-7.43/-6.42	-4.25/-4.06	-3.42/-1.71	-1.47/-1.70	-3.07/-3.65	
Theta (52.5°)	-3.43/-3.74	-4.53/-4.31	-5.32/-6.79	-6.86/-6.54	-11.61/-12.33	-15.87/-13.34	-15.39/-15.09	-14.33/-15.28	-15.79/-15.21	-15.33/-14.66	-15.55/-14.88	-15.39/-15.61	-15.64/-14.01	-12.85/-11.62	-15.20/-14.94	-10.60/-9.85	-8.34/-8.1	-6.91/-6.84	-4.27/-2.52	-2.03/-2.69	-0.97/-0.67	-0.60/-0.71	-0.20/-0.36	-2.06/-3.02	
Theta (60°)	-2.76/-3.23	-3.80/-3.87	-3.87/-3.02	-6.11/-10.76	-10.60/-9.35	-13.73/-12.30	-11.97/-13.59	-11.97/-13.59	-15.13/-14.82	-15.13/-14.82	-15.17/-15.07	-15.74/-15.83	-15.17/-15.06	-14.92/-11.66	-14.14/-9.42	-3.08/-4.27	-2.85/-1.88	-0.28/-0.44	0.14/0.23	-0.00/0.00	-0.00/0.00	-0.00/0.00	-0.00/0.00	-0.00/0.00	
Theta (67.5°)	-1.95/-1.90	-2.47/-5.06	-4.53/-4.49	-7.28/-11.51	-11.14/-10.29	-11.62/-14.98	-14.14/-11.82	-13.16/-12.20	-14.96/-14.84	-14.71/-15.12	-15.83/-14.49	-12.76/-16.10	-10.88/-8.69	-13.60/-13.93	-12.34/-10.79	-5.80/-4.63	-3.97/-2.19	0.13/-0.16	0.18/0.81	2.69/2.19	1.96/0.88	-0.26/0.87	2.14/2.08	-0.98/-1.05	
Theta (75°)	-0.94/-2.99	-1.96/-2.53	-3.47/-6.92	-7.83/-9.91	-8.42/-10.81	-14.84/-15.84	-13.46/-14.57	-15.47/-15.79	-13.46/-15.23	-15.58/-15.34	-15.68/-15.20	-12.93/-15.71	-11.49/-10.60	-12.40/-13.58	-11.14/-7.27	-3.68/-9.38	-2.01/-1.34	-0.22/-0.09	-0.04/2.13	3.50/4.48	4.33/2.76	0.66/0.63	1.55/2.70	-0.64/0.05	
Theta (82.5°)	-0.56/-1.49	-1.27/-2.56	-1.94/-3.60	-8.10/-7.34	-6.98/-15.51	-13.30/-12.36	-9.69/-9.47	-11.29/-14.94	-12.51/-14.34	-15.44/-15.07	-14.93/-15.64	-13.77/-15.71	-11.49/-10.87	-12.38/-12.85	-9.74/-8.44	-4.13/-3.46	-0.99/-2.20	-0.39/0.39	-0.04/1.34	2.93/4.43	3.88/2.38	0.28/2.92	1.41/3.40	-0.89/-1.29	
Theta (90°)	0.04/-1.25	-1.27/-2.42	-2.48/-6.85	-8.67/-6.70	-11.33/-14.90	-10.85/-9.21	-10.90/-12.82	-12.51/-15.73	-14.41/-15.10	-14.80/-15.90	-12.34/-15.05	-10.76/-15.42	-10.62/-10.75	-10.74/-12.57	-9.64/-5.23	-4.12/-5.11	-2.48/-4.35	-2.29/-0.27	-3.30/-1.67	1.22/2.32	1.90/0.16	0.81/1.93	1.57/2.68	-0.45/0.97	
Theta (97.5°)	0.33/-2.25	-1.07/-4.49	-3.79/-5.67	-8.46/-8.96	-14.05/-14.67	-9.99/-9.52	-12.89/-14.97	-15.53/-14.47	-13.39/-15.65	-10.72/-10.47	-15.54/-13.29	-9.89/-12.03	-15.40/-8.88	-7.76/-9.21	-8.14/-7.57	-4.31/-6.24	-3.68/-4.19	-1.81/0.63	-1.98/-0.67	1.89/2.33	0.38/1.35	1.05/1.13	2.19/1.24	0.49/-1.50	
Theta (105°)	0.11/-1.17	-2.23/-2.72	-5.65/-5.58	-13.24/-8.67	-18.14/-14.14	-13.35/-13.09	-11.18/-10.12	-15.44/-15.82	-15.04/-15.93	-10.93/-14.55	-9.28/-6.74	-11.07/-15.36	-9.28/-6.74	-10.75/-9.98	-10.91/-7.77	-7.73/-7.17	-3.72/-3.17	-1.65/-3.00	1.01/0.07	2.93/4.17	1.65/0.82	1.51/1.60	1.87/2.40	0.65/-2.83	
Theta (112.5°)	-1.79/-5.35	-4.20/-5.67	-7.97/-6.25	-9.88/-12.68	-7.69/-9.87	-15.30/-14.84	-14.69/-15.41	-15.66/-14.94	-15.04/-15.62	-14.35/-15.35	-15.61/-14.69	-13.76/-14.68	-10.78/-9.99	-8.73/-15.73	-5.97/-4.37	-3.32/-1.74	-9.86/-5.14	1.26/-1.89	-8.75/-4.98	2.67/1.52	1.39/2.23	-1.70/2.70	2.42/-3.28	-0.32/-4.53	
Theta (120°)	-3.89/-3.96	-7.92/-5.14	-8.45/-6.64	-8.00/-9.33	-11.28/-9.33	-13.29/-15.12	-15.90/-14.90	-15.79/-14.69	-16.06/-14.80	-13.25/-15.16	-15.77/-14.76	-14.97/-14.14	-10.56/-11.48	-10.63/-15.75	-4.00/-3.84	-8.50/-2.24	-3.83/-3.93	3.59/-1.36	-4.45/-3.69	2.03/4.40	0.93/6.63	-6.08/2.81	1.11/-3.83	-2.01/-4.26	
Theta (127.5°)	-6.06/-4.76	-8.62/-6.26	-7.07/-9.00	-10.11/-8.55	-8.59/-10.51	-9.53/-10.51	-14.21/-15.99	-15.00/-13.66	-13.65/-14.37	-15.19/-15.61	-15.08/-15.47	-13.67/-13.06	-14.21/-11.85	-7.65/-15.21	-4.88/-10.16	-1.41/-3.46	-7.50/-2.37	2.38/1.00	-5.97/-7.42	-2.44/-1.34	-2.58/-10.56	-6.01/-0.94	-4.09/-5.40	-3.75/-4.64	
Theta (135°)	-8.60/-7.49	-9.84/-10.39	-9.18/-9.51	-11.82/-11.30	-9.11/-9.85	-11.61/-9.70	-9.91/-11.52	-11.05/-13.26	-15.07/-15.48	-15.15/-15.29	-13.77/-12.42	-14.81/-15.44	-12.16/-8.61	-10.12/-12.86	-9.98/-14.13	-6.96/-8.49	-14.90/-5.13	-0.74/-3.09	-5.28/-10.11	-7.85/-3.03	-6.97/-5.80	-8.36/-4.56	-4.79/-7.11	-7.00/-7.25	
Theta (142.5°)	-7.82/-9.68	-11.91/-14.06	-12.53/-10.88	-11.89/-13.41	-14.52/-14.53	-14.05/-14.73	-15.78/-14.02	-13.12/-15.84	-15.35/-16.64	-14.42/-15.52	-15.53/-15.72	-14.42/-13.97	-12.95/-13.65	-12.26/-11.69	-11.65/-12.59	-13.94/-14.50	-12.91/-8.35	-7.08/-10.91	-12.08/-12.03	-11.98/-9.56	-7.53/-4.72	-5.91/-5.93	-4.90/-6.49	-8.81/-9.60	
Theta (150°)	-10.03/-10.79	-12.22/-10.70	-10.95/-11.62	-12.66/-13.45	-13.34/-14.92	-15.51/-15.29	-14.97/-14.52	-15.01/-15.37	-14.71/-14.85	-15.57/-14.90	-15.32/-15.40	-15.46/-15.00	-												



Antenna Pattern <6GHz U-NII5~UNII-8>

Appendix D

Theta (°)	Phi (°)	Phi(7.5°)	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°)	-10.87/8.57	-9.12/11.36	-12.25/10.99	-11.03/12.33	-12.67/11.73	-11.21/10.77	-11.22/11.68	-10.36/8.57	-7.38/7.21	-7.75/8.65	-9.50/9.11	-8.15/7.41	-6.96/6.92	-6.71/6.16	-5.38/4.89	-5.21/6.76	-10.06/13.27	-14.19/12.77	-12.01/14.36	-15.80/14.25	-11.57/8.37	-6.29/5.75	-7.41/11.30	-15.45/14.90	
Theta (172.5°)	-12.75/11.19	-10.51/10.81	-10.57/10.99	-10.90/12.25	-12.80/12.12	-11.15/10.77	-10.95/11.11	-10.94/10.69	-11.33/11.31	-11.01/10.75	-10.07/9.15	-8.31/7.95	-8.00/8.24	-8.64/9.19	-9.58/11.01	-11.35/12.27	-12.54/13.27	-13.29/14.63	-14.67/13.06	-11.54/10.27	-9.03/9.32	-10.15/11.66	-13.96/12.91	-12.12/13.60	
Theta (180°)	-15.02/14.18	-14.04/13.13	-12.05/11.88	-12.20/12.74	-12.94/13.03	-12.25/11.59	-12.05/11.71	-11.42/10.87	-11.42/11.65	-11.42/12.36	-12.06/12.00	-12.06/11.90	-12.37/12.91	-13.89/14.29	-14.37/14.36	-14.12/14.23	-12.53/15.57	-15.61/16.03	-14.96/14.99	-15.33/14.15	-14.28/15.22	-15.27/13.48	-10.95/11.12	-11.45/13.60	
Phi (0°)	6.475GPol	TotalAnt 5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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°)	
Theta (0°)	-3.30/3.47	-3.79/3.99	-2.92/3.32	-3.68/3.80	-3.41/3.40	-3.29/3.44	-3.62/3.65	-3.68/3.73	-3.77/3.78	-3.53/3.63	-3.73/3.87	-3.87/3.68	-3.94/3.86	-3.52/3.38	-3.72/4.10	-4.18/4.03	-3.84/3.26	-3.07/3.03	-2.82/2.62	-2.78/2.81	-3.04/3.22	-3.04/3.22	-3.04/3.22	-3.04/3.22	
Theta (7.5°)	-5.04/4.70	-4.45/4.12	-4.29/4.02	-3.65/3.93	-3.91/3.62	-3.26/3.04	-2.62/2.45	-2.44/2.73	-2.88/2.92	-2.92/2.88	-2.91/2.73	-2.60/2.70	-2.80/3.06	-3.06/2.84	-2.78/2.56	-2.80/3.12	-3.55/4.04	-4.46/4.81	-4.48/4.56	-4.48/4.46	-4.73/4.84	-4.95/5.27	-5.38/5.58	-5.76/5.54	
Theta (15°)	-8.29/8.57	-7.71/6.99	-6.66/6.38	-5.76/5.22	-4.19/3.44	-2.70/2.18	-1.89/1.87	-2.08/2.58	-3.07/3.39	-3.64/3.81	-3.65/3.42	-2.76/2.51	-2.38/2.49	-2.80/2.95	-3.09/3.16	-3.49/3.69	-4.01/4.38	-4.82/4.54	-5.51/5.90	-6.31/6.57	-7.14/6.81	-8.04/8.69	-8.90/9.16	-9.12/7.89	
Theta (22.5°)	-6.44/6.76	-7.27/8.12	-6.88/5.24	-8.12/8.49	-8.57/8.03	-5.71/3.92	-1.98/1.48	-1.39/1.48	-2.01/2.49	-2.94/3.24	-2.92/2.65	-2.44/2.30	-2.52/2.53	-2.62/2.53	-2.73/2.90	-3.39/3.43	-3.29/3.59	-4.00/3.99	-4.33/4.46	-4.87/4.94	-5.52/5.61	-6.09/6.91	-6.82/5.16	-5.77/5.99	
Theta (30°)	-5.23/5.41	-5.05/5.43	-5.36/4.71	-4.71/5.04	-5.27/4.99	-4.03/2.78	-1.53/1.13	-1.15/1.50	-1.72/1.99	-2.21/2.47	-2.23/1.77	-1.51/1.59	-1.80/1.53	-1.32/1.41	-1.80/2.52	-3.01/2.84	-2.91/2.83	-2.89/3.41	-4.25/4.99	-4.68/4.00	-3.80/3.41	-3.46/3.96	-4.70/5.67	-5.71/4.79	
Theta (37.5°)	-3.66/3.02	-3.56/3.83	-2.83/2.89	-3.92/4.64	-4.78/3.76	-2.81/2.20	-1.84/1.57	-1.02/0.77	-1.14/2.07	-2.70/3.24	-3.24/2.79	-2.41/2.64	-2.79/2.57	-2.43/2.52	-2.84/2.79	-2.54/2.81	-3.66/3.84	-4.73/5.38	-4.95/4.21	-4.73/4.79	-4.51/4.26	-4.73/4.82	-4.49/4.52	-5.07/5.23	
Theta (45°)	-1.22/0.24	1.90/0.99	-2.83/2.89	-2.16/1.94	-1.97/2.64	-4.03/6.00	-2.04/0.99	-1.18/0.06	-0.64/2.30	-2.89/5.19	-5.49/4.83	-4.37/4.48	-4.80/5.12	-2.26/5.37	-5.57/4.00	-4.02/2.23	-2.19/3.59	-5.72/6.31	-4.56/3.17	-2.79/2.59	-2.55/3.00	-3.60/3.88	-3.92/2.94	-1.51/1.23	
Theta (52.5°)	-1.17/0.68	0.10/0.16	-0.04/0.49	-1.59/2.43	-3.08/2.76	-2.54/2.35	-2.25/2.02	-1.66/1.93	-2.86/4.26	-6.06/6.39	-4.98/3.70	-3.30/3.07	-3.41/4.74	-5.76/5.07	-3.40/2.13	-1.14/0.48	-1.34/3.41	-7.67/6.04	-4.08/3.11	-3.58/4.22	-3.34/2.69	-3.87/4.31	-2.95/3.01	-2.13/1.21	
Theta (60°)	-0.30/1.20	-2.38/2.53	-1.44/0.53	-0.40/1.09	-2.80/3.41	-3.43/2.52	-1.79/1.27	-1.55/2.45	-3.92/3.75	-9.55/6.60	-6.62/2.15	-2.17/2.70	-2.78/2.66	-2.83/2.43	-2.61/1.92	-1.43/1.81	-2.34/4.35	-6.54/3.71	-7.45/7.55	-4.43/4.74	-2.26/1.32	-1.48/2.31	-1.95/1.67	-1.95/1.67	
Theta (67.5°)	-0.67/0.91	-2.20/3.29	-2.93/3.39	-1.96/1.03	-2.52/5.03	-1.71/3.84	-1.60/1.71	-3.46/3.90	-4.95/6.92	-7.05/4.16	-1.42/0.57	-0.62/1.52	-1.78/1.90	-2.63/3.55	-2.10/2.03	-2.57/2.78	-1.92/3.70	-7.37/9.54	-5.99/4.78	-4.63/5.26	-5.66/4.71	-2.98/3.50	-4.51/3.36	-1.77/0.78	
Theta (75°)	-1.50/1.05	-2.89/3.26	-3.85/3.97	-5.40/6.89	-8.31/6.10	-5.42/5.10	-5.81/4.74	-2.47/3.50	-5.81/5.06	-3.30/3.26	-2.71/2.13	-1.78/2.27	-2.07/2.41	-2.35/2.17	-2.57/2.66	-3.05/2.13	-1.82/4.32	-4.56/6.60	-6.00/6.34	-7.33/8.71	-5.80/3.98	-5.29/6.30	-4.63/3.48	-2.37/0.90	
Theta (82.5°)	-1.58/2.14	-4.60/6.69	-6.88/5.24	-3.34/2.99	-5.17/6.06	-6.52/6.66	-6.70/5.03	-4.36/5.58	-7.95/5.26	-2.17/2.15	-2.44/2.91	-3.34/2.92	-3.32/4.23	-2.93/2.90	-2.56/2.77	-2.92/3.10	-3.59/4.06	-3.16/3.26	-3.92/4.69	-4.50/3.43	-4.11/3.61	-5.12/3.13	-1.30/0.20	-1.30/0.20	
Theta (90°)	-3.84/5.03	-7.02/12.47	-11.33/12.77	-10.69/8.85	-8.46/7.24	-10.69/8.85	-7.65/5.90	-7.24/4.66	-5.87/7.95	-5.88/4.12	-4.33/3.85	-1.82/1.96	-3.34/3.82	-4.23/4.66	-4.61/3.45	-2.86/3.84	-2.34/2.23	-5.42/4.32	-3.54/4.04	-2.95/4.17	-6.81/5.61	-3.11/4.22	-5.95/4.66	-3.63/2.25	
Theta (97.5°)	-5.28/7.02	-8.38/13.24	-14.51/12.02	-10.98/10.35	-16.03/12.95	-7.39/7.65	-7.79/7.75	-5.63/5.99	-7.67/4.43	-2.71/4.42	-5.30/5.72	-5.02/5.06	-4.98/5.86	-4.76/4.16	-5.67/5.57	-2.95/2.27	-3.63/3.21	-3.34/3.04	-1.68/1.20	-2.45/5.70	-3.26/2.61	-4.15/7.65	-10.15/8.50	-5.65/4.25	
Theta (105°)	-9.01/10.72	-9.65/11.49	-10.25/10.41	-9.47/8.66	-15.48/11.98	-8.23/1.92	-10.19/9.76	-4.43/5.43	-10.49/5.80	-2.83/3.24	-3.92/4.96	-4.29/6.03	-5.16/8.71	-4.31/2.75	-3.33/2.16	-1.75/2.07	-2.54/2.52	-2.06/3.56	-0.94/0.10	-1.59/2.83	-4.64/5.51	-7.22/7.99	-10.58/13.94	-12.00/8.19	
Theta (112.5°)	-7.29/9.93	-9.06/13.35	-13.78/13.28	-14.10/11.23	-11.95/15.49	-8.43/9.92	-6.70/6.68	-6.65/5.21	-7.40/6.61	-6.17/6.57	-7.19/5.57	-4.22/3.71	-3.71/3.60	-4.46/5.20	-2.97/3.25	-3.16/4.52	-4.49/5.37	-5.57/4.67	-1.14/1.15	-2.57/4.15	-12.26/12.02	-8.68/12.69	-14.76/15.91	-12.00/8.19	
Theta (120°)	-14.97/13.86	-13.35/12.28	-11.41/10.21	-11.45/12.60	-11.86/8.62	-7.27/6.13	-6.81/8.56	-11.98/12.63	-6.69/7.91	-11.79/7.01	-6.55/4.63	-5.80/3.57	-2.92/2.15	-1.53/2.06	-3.63/7.08	-6.79/4.76	-4.52/4.76	-9.17/7.28	-4.08/2.99	-5.27/8.97	-11.22/9.71	-9.52/11.01	-11.31/10.72	-11.37/14.31	
Theta (127.5°)	-9.86/9.28	-10.19/10.15	-9.36/10.03	-10.98/11.43	-14.64/14.40	-10.03/7.58	-7.22/10.31	-12.92/8.85	-6.63/7.21	-7.74/8.71	-6.57/7.58	-5.91/6.27	-6.17/6.55	-6.87/4.12	-4.18/6.38	-4.91/2.40	-3.65/5.51	-5.40/5.74	-7.14/2.97	-7.70/14.98	-9.69/6.07	-7.78/10.22	-13.24/12.94	-9.98/9.14	
Theta (135°)	-10.55/12.76	-7.62/8.46	-10.90/15.02	-14.76/11.37	-9.46/9.63	-10.67/11.29	-9.63/8.63	-7.48/11.79	-12.02/7.87	-6.18/6.59	-7.77/8.46	-5.92/6.62	-2.83/1.03	-3.22/7.80	-2.56/7.88	-3.31/3.12	-2.56/7.80	-15.17/6.89	-12.92/9.06	-10.48/6.37	-8.68/14.53	-15.08/10.99	-11.64/11.46	-11.64/11.46	
Theta (142.5°)	-10.35/9.84	-10.96/8.53	-8.62/7.37	-9.00/10.90	-9.84/9.41	-9.98/11.28	-12.23/11.96	-8.53/8.47	-10.61/11.53	-10.40/9.24	-9.49/9.36	-7.87/6.69	-7.19/7.68	-5.13/4.98	-8.21/11.09	-7.89/4.95	-3.88/7.54	-3.78/9.44	-14.11/5.87	-4.00/9.33	-6.97/12.47	-9.10/12.28	-8.83/9.59	-13.56/12.92	
Theta (150°)	-5.67/8.77	-11.82/13.40	-13.74/15.23	-14.25/12.15	-10.41/8.76	-9.50/12.44	-15.80/11.05	-10.53/12.06	-11.77/13.55	-14.13/12.89	-9.82/9.89	-9.89/8.01	-8.02/6.89	-3.98/3.31	-4.54/6.21	-8.41/9.11	-9.11/6.97	-6.56/10.62	-11.88/8.97	-7.96/5.90	-9.73/12.72	-12.00/14.02	-14.23/14.79	-8.98/5.33	
Theta (157.5°)	-11.85/12.49	-15.25/15.76	-15.79/15.28	-14.54/16.07	-13.11/11.47	-12.76/15.06	-15.76/15.86	-12.43/9.09	-7.65/7.98	-10.22/12.70	-11.78/10.84	-6.98/8.11	-6.82/10.70	-7.27/7.54	-10.92/9.73	-7.58/9.74	-9.95/11.41	-10.66/10.81	-13.49/15.19	-13.78/10.75	-8.37/7.96	-9.41/10.79	-12.71/12.88	-12.71/12.88	
Theta (165°)	-11.67/10.51	-12.01/12.15	-11.94/12.49	-13.36/14.35	-10.22/11.45	-15.76/15.60	-16.20/15.31	-13.95/12.46	-10.49/8.60	-6.72/7.09	-6.93/6.49	-6.37/6.59	-7.24/8.16	-8.34/7.34	-6.07/5.31	-6.04/9.22	-13.89/13.60	-11.94/12.62	-15.13/13.48	-10.59/9.43	-9.37/9.37	-11.65/14.91	-15.38/14.43	-15.38/14.43	
Theta (172.5°)	-14.97/13.69	-13.17/13.57	-13.51/13.04	-13.58/13.56	-12.90/12.27	-11.70/11.03	-12.67/14.00	-13.47/12.35	-11.54/10.55	-9.64/8.77	-8.35/8.40	-8.49/8.39	-8.41/8.49	-8.07/7.75	-8.07/8.28	-8.45/8.63	-9.34/10.73	-11.49/12.11	-11.85/13.04	-12.44/10.41	-9.77/10.68	-12.71/15.54	-15.24/15.40	-14.40/13.70	
Theta (180°)	-15.82/14.64	-14.39/14.44	-13.42/11.79	-12.06/13.29	-13.78/13.63	-12.92/13.26	-13.88/14.85	-14.65/14.46	-14.94/14.94	-14.23/13.33	-12.71/12.33	-12.26/12.21	-12.35/13.44	-13.74/14.48	-14.57/14.09	-13.12/11.46	-10.35/9.99	-10.57/11.32	-11.78/12.70	-13.55/13.71	-13.77/13.08	-12.87/13.94	-15.53/14.97	-15.53/14.97	
Phi (0°)	6.695GPol	TotalAnt 5	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Phi(0°)Phi(7.5°)	Phi(15°)Phi(22.5°)																							



Antenna Pattern <6GHz U-NII5~UNII-8>

Appendix D

θ (7.5°)	-12.15/-12.86	-11.85/-11.13	-11.78/-12.31	-12.72/-13.25	-13.59/-14.32	-13.96/-13.71	-13.14/-12.46	-12.44/-12.24	-11.68/-12.26	-12.88/-13.01	-12.29/-11.68	-11.72/-12.18	-13.05/-12.98	-12.63/-12.18	-11.58/-11.52	-11.23/-10.60	-9.95/-9.56	-9.43/-9.14	-8.93/-8.51	-8.48/-9.15	-8.93/-10.92	-11.95/-12.40	-12.62/-12.22	-11.91/-11.67	
Gain	Φ(7.5°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)	
θ (7.5°)	-13.14/-12.76	-12.74/-13.05	-12.50/-12.56	-12.65/-11.84	-11.49/-11.51	-11.58/-11.81	-11.88/-11.64	-11.32/-11.45	-9.79/-9.73	-9.73/-10.25	-11.48/-11.54	-11.49/-11.32	-11.46/-11.19	-11.46/-11.19	-10.52/-10.73	-10.52/-10.73	-11.38/-11.62	-11.85/-11.56	-11.59/-11.48	-10.85/-11.28	-12.44/-12.98	-12.75/-12.56	-12.29/-11.61	-12.06/-12.32	
θ (15°)	-8.69/-7.51	-8.51/-9.31	-8.68/-9.53	-9.97/-10.11	-11.04/-11.62	-13.17/-13.56	-14.17/-14.77	-15.18/-15.31	-15.12/-14.57	-13.84/-13.77	-14.13/-16.29	-15.14/-15.15	-15.32/-15.13	-15.32/-15.13	-14.71/-14.87	-15.32/-15.13	-15.44/-15.25	-15.12/-13.94	-13.30/-12.41	-11.79/-10.98	-11.07/-11.15	-10.76/-10.32	-10.94/-9.78	-9.36/-9.25	
θ (30°)	-5.52/-5.37	-6.81/-6.40	-6.62/-7.75	-8.11/-9.04	-9.53/-9.75	-10.45/-10.85	-10.97/-10.87	-10.96/-11.86	-12.94/-14.89	-13.93/-12.01	-10.73/-10.08	-10.62/-11.52	-11.74/-11.83	-10.96/-10.23	-9.80/-9.50	-9.18/-8.84	-8.62/-8.24	-7.94/-7.87	-8.27/-7.94	-7.85/-7.73	-8.17/-8.09	-7.56/-7.24	-7.60/-7.50	-7.70/-6.45	
θ (45°)	-3.09/-3.67	-4.52/-5.58	-6.58/-6.89	-6.74/-7.13	-7.88/-8.06	-8.03/-7.10	-6.24/-6.23	-6.65/-7.22	-8.23/-8.87	-8.79/-8.08	-6.86/-5.98	-5.97/-5.66	-5.70/-5.73	-5.74/-5.78	-5.96/-5.67	-6.88/-6.77	-7.34/-7.21	-3.01/-4.23	-4.53/-4.60	-5.05/-4.45	-4.95/-6.04	-6.39/-7.15	-8.46/-8.19	-6.09/-4.56	-4.09/-3.55
θ (60°)	-2.57/-3.09	-2.91/-2.28	-2.64/-3.06	-3.32/-3.95	-5.28/-5.84	-5.53/-5.17	-5.19/-4.62	-4.59/-5.02	-5.56/-6.64	-4.84/-3.77	-3.30/-3.81	-4.34/-4.17	-4.40/-5.21	-5.77/-5.86	-6.66/-5.72	-6.16/-6.46	-6.46/-6.40	-6.81/-7.28	-7.90/-8.01	-7.70/-7.02	-5.17/-3.91	-3.47/-2.78	-2.14/-2.06		
θ (75°)	-1.78/-1.71	-1.88/-2.50	-3.17/-3.66	-4.10/-4.77	-5.01/-4.50	-3.73/-3.06	-2.50/-2.27	-2.43/-3.11	-3.72/-3.35	-2.67/-2.27	-2.20/-1.97	-2.80/-3.62	-3.26/-3.05	-3.48/-3.47	-3.13/-3.55	-4.57/-5.62	-6.52/-7.03	-7.50/-7.82	-8.07/-7.89	-7.36/-6.08	-4.98/-4.61	-4.67/-4.20	-4.59/-4.24	-2.91/-1.82	
θ (90°)	-2.42/-2.96	-2.60/-1.77	-2.45/-2.79	-3.04/-3.71	-4.29/-4.45	-3.78/-2.88	-2.35/-2.04	-1.96/-1.56	-1.44/-2.25	-3.00/-4.29	-5.00/-4.51	-4.52/-3.79	-3.52/-4.48	-3.97/-2.71	-3.01/-4.23	-4.53/-4.60	-5.05/-4.45	-4.95/-6.04	-6.39/-7.15	-8.46/-8.19	-6.09/-4.56	-4.09/-3.55	-2.87/-2.81	-3.24/-3.05	
θ (105°)	-1.99/-1.99	-2.20/-1.57	-1.51/-1.93	-1.62/-1.76	-2.90/-2.48	-1.77/-1.14	-0.70/-1.01	-0.35/-1.09	-1.25/-2.74	-1.77/-1.14	-1.36/-1.57	-6.75/-7.07	-5.61/-4.13	-4.66/-4.13	-4.00/-4.68	-4.65/-4.65	-4.54/-4.97	-5.93/-5.08	-4.85/-5.19	-4.97/-3.95	-4.10/-3.23	-2.34/-1.52	-1.62/-2.11		
θ (120°)	-1.15/-0.87	-1.52/-2.00	-2.40/-2.83	-2.39/-1.80	-1.05/-1.00	-0.89/-1.72	-1.31/-0.66	-0.11/-0.25	-0.67/-4.29	-3.78/-4.73	-4.09/-4.08	-4.72/-7.69	-7.13/-7.56	-8.41/-6.36	-6.13/-5.75	-5.93/-5.39	-2.68/-1.65	-1.74/-2.25	-4.18/-4.82	-3.96/-3.81	-4.25/-3.34	-2.18/-2.35	-1.91/-1.50	-0.94/-1.17	
θ (135°)	-3.10/-2.31	-2.37/-3.01	-2.99/-3.12	-2.09/-1.21	-0.95/-1.45	-2.44/-2.63	-2.08/-1.63	-1.30/-1.89	-2.79/-3.23	-3.04/-3.61	-3.61/-3.19	-3.32/-3.55	-7.37/-7.16	-6.70/-5.30	-4.90/-4.85	-6.05/-6.69	-4.72/-4.68	-3.72/-3.42	-5.32/-5.89	-6.93/-5.89	-5.12/-3.79	-2.56/-1.90	-2.29/-2.47	-3.22/-3.23	
θ (150°)	-2.91/-2.88	-2.28/-2.16	-1.72/-2.17	-1.17/-1.77	-0.59/-0.47	-2.11/-2.66	-2.53/-2.38	-1.80/-0.83	-0.82/-1.06	-1.26/-1.75	-2.60/-2.24	-3.14/-4.00	-1.70/-1.89	-10.69/-7.48	-8.14/-8.68	-7.50/-6.14	-2.21/-2.67	-3.10/-5.39	-5.61/-5.58	-3.95/-4.38	-2.66/-2.09	-1.60/-2.39	-0.60/-2.65		
θ (165°)	-1.35/-1.56	-1.77/-2.59	-2.00/-1.43	-0.20/-1.12	0.10/0.16	2.25/-3.97	-4.16/-3.80	-3.38/-1.96	-0.88/-0.59	0.05/-1.96	-4.37/-4.03	-3.66/-4.11	-4.95/-5.66	-5.16/-6.62	-6.13/-7.27	-9.87/-9.16	-8.88/-5.72	-5.02/-4.23	-3.67/-4.23	-2.36/-3.08	-1.31/-3.03	-2.02/-1.69	-1.07/-2.05	-2.28/-2.17	
θ (180°)	-2.14/-3.91	-4.62/-3.43	-1.55/-1.43	-0.56/-0.51	0.63/0.43	-0.51/-0.59	-1.40/-3.33	-5.33/-6.17	-5.59/-6.41	-3.36/-3.25	-2.17/-3.15	-5.16/-6.11	-6.02/-6.62	-6.44/-9.37	-7.03/-6.73	-5.71/-3.74	-5.64/-4.02	-2.40/-1.99	-0.43/-1.04	-1.60/-1.26	-2.45/-1.22	-2.53/-1.97	-2.00/-2.80	-1.38/-2.54	
θ (195°)	-1.97/-1.90	-4.24/-3.08	-1.30/-3.41	-2.49/-2.10	0.34/0.72	-1.70/-1.89	-1.90/-3.68	-6.64/-6.59	-6.17/-6.81	-5.31/-3.90	-5.90/-4.87	-6.34/-3.90	-4.50/-4.87	-6.59/-5.39	-6.34/-4.16	-5.94/-4.27	-3.50/-2.07	-1.06/-0.75	-2.51/-2.07	-1.54/-1.27	-3.20/-4.09	-2.05/-2.10	-2.59/-1.80		
θ (210°)	-5.81/9.10	-8.35/9.99	-3.64/4.02	-3.58/4.42	-2.70/1.49	-4.32/5.19	-5.29/5.91	-10.95/6.46	-6.45/5.54	-6.23/7.51	-10.08/8.09	-7.80/4.33	-7.39/7.95	-10.51/10.49	-8.12/5.23	-2.62/2.94	-2.67/3.03	-0.97/0.21	0.08/0.36	-0.32/0.00	-0.30/0.17	-1.75/-4.64	-4.08/-2.73	-4.22/-6.56	
θ (225°)	-7.48/-6.30	-4.99/-3.12	-2.75/-3.42	-5.48/-6.56	-6.16/-2.48	-3.81/4.15	-7.89/-9.92	-9.01/-6.46	-13.20/-9.67	-7.96/-7.47	-9.21/-9.48	-12.10/-9.48	-9.95/-7.25	-8.41/-5.29	-4.51/-9.29	-6.89/-4.29	-3.72/-1.27	-0.45/0.17	-0.16/-0.22	-1.29/0.54	-1.67/-1.13	-2.82/-4.98	-5.89/-7.46	-5.24/-1.59	
θ (240°)	-6.47/-4.82	-5.61/-5.37	-4.40/-2.77	-5.16/-3.60	-1.82/1.54	-1.17/1.58	-6.22/6.25	-9.77/10.38	-13.62/10.87	-15.46/13.07	-12.21/13.62	-15.46/15.65	-12.21/13.62	-8.01/-8.47	-12.91/-11.31	-5.52/6.60	-6.07/3.40	-3.26/1.20	-1.58/4.11	-5.42/4.11	-2.42/3.32	-3.42/5.93	-1.52/4.08	-5.76/-6.46	
θ (255°)	-6.44/-5.80	-5.92/5.18	-4.86/4.72	-3.28/3.75	-2.66/5.36	-7.48/-5.19	-4.37/7.22	-9.32/9.49	-9.69/15.56	-13.66/13.29	-12.04/10.15	-9.87/11.71	-12.26/13.31	-13.06/14.57	-13.58/11.16	6.14/6.36	-4.49/7.66	-6.67/3.31	-11.13/10.66	-5.98/-1.86	-1.24/1.55	-5.12/5.52	-4.44/4.71	-8.24/7.02	
θ (270°)	-5.32/5.15	-4.50/-3.87	-4.08/4.71	-9.31/6.35	-6.19/4.93	-4.51/6.60	-8.04/7.69	-8.50/9.4	-11.91/15.22	-13.29/15.55	-11.98/12.50	-12.01/16.08	-14.62/11.23	-13.79/15.74	-10.40/9.82	-7.54/5.76	-6.41/5.74	-7.34/5.35	-10.34/12.06	-5.18/-4.57	-3.58/3.93	-7.76/6.51	-2.06/-1.63	-4.58/-6.78	
θ (285°)	-4.54/4.40	-5.27/-5.57	-5.12/5.33	-8.45/10.72	-12.28/8.96	-7.44/6.04	-6.11/7.01	-7.24/7.82	-8.25/11.44	-14.91/12.67	-15.56/11.55	-15.26/11.55	-14.91/12.67	-15.56/11.55	-15.32/13.22	-15.36/10.16	-6.46/6.29	-4.93/3.54	-4.77/8.94	-4.93/3.54	-3.14/3.82	-5.14/3.98	-6.35/7.48	-3.54/6.01	
θ (300°)	-8.40/7.71	-9.06/8.12	-8.25/9.38	-9.65/9.62	-10.35/8.79	-8.76/9.58	-11.77/15.11	-15.06/11.36	-8.09/6.38	-7.20/11.77	-15.13/14.89	-14.57/14.27	-9.83/9.86	-14.94/15.30	-15.04/15.42	-12.92/9.01	-14.50/7.13	-3.72/5.45	-9.37/8.82	-7.51/8.05	-10.15/9.51	-9.84/9.26	-6.70/5.02	-5.72/5.88	
θ (315°)	-10.31/9.12	-10.69/13.88	-13.12/11.36	-13.43/14.34	-14.69/14.14	-12.30/10.52	-10.32/10.61	-9.67/8.40	-7.64/8.21	-9.36/10.73	-10.06/7.09	-5.29/5.20	-8.58/15.42	-10.20/10.52	-11.58/9.99	-9.89/11.18	-11.56/12.13	-12.45/12.13	-10.79/9.60	-9.64/3.97	-8.24/6.30	-5.50/5.96	-7.00/7.34	-8.01/9.49	
θ (330°)	-5.66/6.29	-6.78/7.12	-7.11/6.69	-8.61/7.41	-8.01/9.21	-11.42/14.75	-15.01/14.86	-14.80/15.28	-15.24/15.05	-11.42/14.75	-11.98/9.86	-8.27/7.69	-6.12/5.65	-3.33/2.21	-1.42/1.58	-10.02/10.53	-10.43/11.58	-12.02/10.21	-10.89/10.59	-7.98/9.07	-9.41/8.51	-7.00/7.27	-8.16/7.94	-6.71/5.69	
θ (345°)	-9.24/10.06	-11.33/12.30	-12.32/13.70	-13.90/14.48	-15.08/15.95	-15.17/15.01	-13.33/12.39	-11.08/9.83	-8.12/8.49	-8.04/8.35	-9.19/9.39	-8.60/7.40	-6.42/5.82	-4.98/3.98	-3.35/3.21	-2.67/4.70	-5.94/7.04	-7.82/8.52	-8.84/9.17	-9.70/9.71	-9.40/9.20	-6.69/8.25	-7.13/6.45	-6.90/8.01	
θ (352.5°)	-7.62/9.99	-6.48/5.80	-5.73/6.76	-7.30/7.33	-7.04/7.80	-7.85/7.62	-8.40/18.18	-8.94/8.47	-8.60/8.60	-8.98/9.27	-8.76/8.89	-9.33/9.46	-9.63/9.40	-9.27/9.51	-9.46/9.66	-8.81/9.88	-10.11/10.39	-10.09/9.89	-9.04/9.22	-8.84/9.28	-9.87/10.56	-10.70/11.51	-10.87/11.35	-11.67/9.48	
Gain	Φ(7.5°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)	
θ (7.5°)	-9.17/9.13	-9.32/9.74	-9.49/10.41	-11.40/11.63	-11.92/13.10	-12.22/11.62	-11.28/10.16	-10.00/12.41	-10.54/11.05	-11.33/10.19	-10.59/10.12	-10.02/10.37	-10.28/10.39	-10.09/10.43	-9.79/9.84	-9.54/9.22	-9.52/10.04	-10.48/11.01	-11.21/11.28	-10.77/10.11	-10.09/10.47	-11.40/11.71	-11.70/10.22	-9.61/9.40	
θ (15°)	-8.25/7.90	-8.86/8.87	-10.03/10.92	-11.58/11.72	-11.01/11.10	-11.21/11.49	-11.67/11.65	-10.73/10.49	-9.27/10.14	-11.22/12.12	-11.22/12.12	-11.66/12.06	-13.69/14.95	-14.71/14.64	-15.10/14.93	-15.20/15.68	-14.72/14.63	-15.17/16.09	-14.92/14.45	-12.92/11.68	-10.72/10.21	-11.00/10.11	-10.22/9.01	-8.80/8.87	
θ (30°)	-4.45/4.96	-5.72/5.65	-6.87/7.69	-8.17/7.88	-7.32/7.17	-7.88/8.10	-8.64/9.96	-10.00/9.70	-9.45/9.67	-10.05/10.38	-10.22/9.09	-8.13/7.71	-7.65/8.01	-8.87/9.75	-10.10/10.50	-10.94/11.27	-11.00/1								



Antenna Pattern <6GHz U-NII5~UNII-8>

Appendix D

Theta	Phi	Gain	Phi(7.5)	Phi(22.5)	Phi(37.5)	Phi(52.5)	Phi(67.5)	Phi(82.5)	Phi(97.5)	Phi(112.5)	Phi(127.5)	Phi(142.5)	Phi(157.5)	Phi(172.5)	Phi(187.5)	Phi(202.5)	Phi(217.5)	Phi(232.5)	Phi(247.5)	Phi(262.5)	Phi(277.5)	Phi(292.5)	Phi(307.5)	Phi(322.5)	Phi(337.5)	Phi(352.5)
Theta(0°)	Phi(0°)	-7.86/-12.72	-9.99/-11.30	-8.98/-12.42	-11.55/-9.64	-9.36/-10.83	-15.72/-14.21	-9.62/-8.37	-11.51/-14.00	-10.63/-7.60	-6.45/-6.19	-5.68/-4.70	-7.39/-3.20	-3.66/-4.27	-0.49/-0.79	0.18/0.36	0.12/0.82	-0.35/-1.35	-0.20/-1.90	-6.32/-6.19	-2.75/-9.56	-7.28/-3.08	-5.24/-9.79	-15.43/-13.41	-8.58/-6.39	
Theta(7.5°)	Phi(7.5°)	-11.87/-12.11	-11.09/-12.54	-12.84/-9.48	-9.72/-8.23	-9.63/-11.21	-8.03/-9.37	-14.06/-9.15	-4.08/-7.39	-11.59/-7.52	-4.47/-1.92	-2.52/-2.67	-2.71/-3.81	-1.63/-0.45	0.75/-0.28	1.24/0.73	-2.32/-13.19	1.24/0.73	-2.32/-13.19	-8.72/-6.05	-4.03/-10.43	-7.10/-6.56	-7.84/-9.14	-9.55/-8.77	-6.80/-6.85	
Theta(15°)	Phi(15°)	-8.51/-9.82	-13.40/-9.28	-8.76/-10.04	-10.39/-6.68	-5.19/-7.58	-11.34/-10.85	-9.02/-12.86	-4.04/-7.66	-2.69/-1.63	-1.69/-1.68	-2.02/-12.17	-1.50/-1.14	1.82/0.29	1.79/0.20	0.79/0.72	-1.57/-1.84	-1.57/-1.84	-2.31/-1.89	-2.31/-1.89	-2.31/-1.89	-2.31/-1.89	-2.31/-1.89	-2.31/-1.89	-2.31/-1.89	-2.31/-1.89
Theta(22.5°)	Phi(22.5°)	-10.40/-14.94	-15.24/-13.69	-12.90/-14.97	-14.15/-12.99	-7.10/-7.88	-13.32/-9.31	-7.77/-9.43	-11.12/-8.33	-4.81/-5.68	-6.32/-7.23	-2.67/-2.35	-2.31/-2.39	-0.47/-1.80	-0.41/-0.13	0.83/0.21	-3.66/-2.03	0.09/0.93	-1.05/-11.38	-4.70/-1.45	-2.35/-6.62	-5.74/-6.67	-5.85/-10.40	-8.48/-13.25	-10.99/-9.08	
Theta(30°)	Phi(30°)	-11.70/-14.10	-15.06/-11.32	-15.16/-10.21	-8.95/-7.28	-13.60/-13.77	-13.21/-11.71	-10.23/-9.12	-10.07/-14.07	-4.50/-5.05	-5.51/-1.58	-1.17/-1.73	-1.32/-1.80	0.58/0.18	1.88/0.28	1.68/1.47	-5.19/-2.36	0.32/0.11	0.49/-6.58	-6.34/-2.14	-1.20/-9.57	-6.05/-6.65	-9.89/-4.78	-13.81/-9.14	-7.27/-6.99	
Theta(37.5°)	Phi(37.5°)	-14.16/-8.43	-11.38/-8.48	-16.13/-15.24	-14.55/-15.70	-12.63/-12.77	-13.18/-10.65	-10.84/-9.09	-10.80/-10.26	-4.83/-6.14	-2.05/-2.05	-1.71/-1.64	0.27/0.68	1.85/0.22	1.22/-1.26	1.02/0.12	-5.25/-3.74	-0.31/-6.08	-2.37/-1.89	-2.37/-1.89	-2.37/-1.89	-2.37/-1.89	-2.37/-1.89	-2.37/-1.89	-2.37/-1.89	-2.37/-1.89
Theta(45°)	Phi(45°)	-14.29/-10.34	-11.11/-11.76	-12.93/-12.59	-13.22/-9.82	-10.33/-11.83	-13.57/-15.45	-8.13/-10.32	-9.25/-9.71	-6.23/-3.71	-3.05/-2.88	-3.87/-2.27	-0.61/-0.96	-0.61/-3.33	-1.83/-3.49	-1.12/-1.94	-6.02/-5.47	-2.85/-2.16	-7.38/-9.01	-1.51/0.74	-6.78/-6.31	-3.61/-13.04	-10.58/-4.29	-5.02/-11.32	-12.17/-12.34	
Theta(52.5°)	Phi(52.5°)	-14.90/-13.19	-11.75/-15.43	-15.00/-12.38	-10.50/-13.14	-15.80/-15.51	-11.88/-8.77	-7.70/-12.45	-9.26/-6.82	-6.41/-6.84	-5.35/-6.05	-7.19/-5.22	-4.26/-3.43	-1.55/-1.89	-0.41/-0.84	-0.12/-1.97	-7.85/-5.13	-2.01/-0.51	-4.73/-6.10	-1.95/-0.48	-5.24/-6.38	-2.97/-10.04	-11.23/-11.55	-12.46/-9.13	-10.63/-14.00	
Theta(60°)	Phi(60°)	-14.51/-13.72	-14.05/-13.32	-11.85/-14.64	-15.98/-15.98	-13.02/-10.14	-8.82/-10.06	-13.60/-10.18	-10.60/-9.89	-9.73/-10.88	-11.13/-10.84	-9.30/-7.65	-8.77/-6.74	-5.93/-3.22	-1.24/-0.88	0.64/0.25	-1.32/-1.89	-3.47/-5.75	-7.63/-12.29	-4.98/-14.15	-4.95/-10.08	-14.88/-11.30	-11.80/-9.57	-9.39/-13.30		
Theta(67.5°)	Phi(67.5°)	-10.37/-13.69	-14.36/-14.87	-15.51/-10.88	-11.51/-12.48	-13.99/-13.62	-13.87/-15.17	-15.70/-10.07	-10.49/-15.09	-14.30/-8.83	-5.31/-4.98	-4.26/-3.24	-3.75/-3.69	-4.90/-2.67	-1.80/-1.10	-0.65/-1.09	-2.46/-2.86	-3.21/-4.64	-10.81/-7.44	-4.49/-1.26	-3.89/-10.39	-3.75/-5.41	-15.71/-10.43	-5.84/-9.09	-7.69/-10.16	
Theta(75°)	Phi(75°)	-11.27/-14.83	-13.70/-11.56	-14.26/-14.94	-15.47/-12.77	-12.09/-11.34	-10.05/-11.88	-12.47/-11.72	-8.16/-7.08	-5.22/-3.52	-2.75/-1.97	-1.06/-0.84	-0.82/-1.96	-1.41/-3.21	-1.48/-0.79	0.01/0.66	-1.41/-3.55	-7.50/-11.17	-11.88/-2.57	-4.09/-1.10	-2.72/-3.37	-11.73/-11.73	-11.26/-5.25	-5.95/-9.91	-9.43/-9.44	
Theta(82.5°)	Phi(82.5°)	-12.23/-11.62	-13.38/-15.05	-14.73/-15.39	-15.38/-12.59	-7.86/-7.90	-12.10/-11.29	-9.47/-11.73	-4.91/-3.13	-2.30/-1.70	-1.15/-0.63	-0.55/-0.21	-0.88/-3.69	-2.41/-1.29	-0.72/-1.54	-2.90/-1.75	-3.49/-2.36	-3.09/-5.98	-3.95/-3.05	-3.49/-2.36	-3.09/-5.98	-11.10/-11.20	-7.68/-9.99	-10.17/-10.48	-10.23/-10.49	
Theta(90°)	Phi(90°)	-11.05/-10.31	-9.10/-7.71	-7.76/-10.06	-13.02/-10.63	-9.33/-9.22	-8.33/-7.86	-7.50/-7.31	-7.31/-6.67	-4.93/-2.76	-1.29/-0.88	-1.36/-1.67	-1.87/-2.50	-3.26/-3.76	-3.87/-3.86	-4.60/-5.98	-7.94/-11.48	-13.98/-8.70	-4.13/-2.11	-1.73/-1.11	-0.40/-1.64	-4.75/-8.82	-10.08/-7.20	-5.25/-6.47	-8.49/-9.98	
Theta(97.5°)	Phi(97.5°)	-13.23/-14.04	-11.61/-11.14	-10.13/-9.71	-6.24/-6.83	-7.50/-7.09	-6.10/-6.71	-6.97/-7.52	-8.70/-9.15	-6.77/-6.12	-1.75/-0.94	-0.84/-1.24	-2.30/-4.39	-6.84/-7.64	-6.81/-5.84	-5.92/-6.15	-7.79/-11.12	-11.23/-10.53	-8.39/-5.62	-2.58/-1.69	-11.13/-14.79	-15.13/-13.40	-11.45/-11.12	-12.44/-15.11		
Theta(105°)	Phi(105°)	-14.33/-11.96	-11.09/-10.20	-10.17/-10.20	-7.94/-5.56	-4.45/-4.25	-5.35/-4.62	-7.23/-8.33	-10.41/-11.05	-10.39/-9.45	-8.01/-7.32	-6.33/-6.05	-6.19/-7.08	-6.84/-11.22	-12.39/-11.06	-9.97/-9.76	-10.76/-11.68	-10.65/-7.67	-4.75/-4.39	-6.68/-9.11	-10.36/-12.56	-12.42/-12.27	-13.47/-13.93	-14.18/-14.33		
Theta(112.5°)	Phi(112.5°)	-11.34/-12.79	-13.15/-12.03	-11.73/-9.38	-8.16/-7.58	-7.70/-8.29	-8.89/-9.39	-9.43/-9.32	-8.93/-8.57	-8.54/-8.42	-8.34/-8.37	-8.60/-9.09	-9.55/-10.18	-10.69/-11.41	-10.90/-10.77	-9.24/-9.71	-9.98/-9.67	-7.80/-6.87	-7.20/-8.12	-9.34/-10.47	-9.15/-9.62	-10.88/-12.76	-12.62/-10.67	-9.69/-8.63	-9.26/-10.19	
Theta(120°)	Phi(120°)	-8.29/-7.24	-6.06/-6.12	-5.95/-6.98	-7.17/-7.48	-7.31/-7.02	-6.72/-6.57	-7.05/-7.97	-8.13/-8.28	-8.36/-7.88	-9.42/-9.94	-9.97/-9.69	-9.24/-8.34	-7.82/-7.96	-7.95/-7.81	-7.58/-7.63	-7.99/-7.26	-7.23/-7.03	-7.60/-8.17	-8.52/-8.85	-8.96/-11.90	-13.08/-13.13	-12.68/-13.19	-13.38/-12.91	-11.73/-9.54	
Theta(127.5°)	Phi(127.5°)	Gain	Phi(7.5°)	Phi(22.5°)	Phi(37.5°)	Phi(52.5°)	Phi(67.5°)	Phi(82.5°)	Phi(97.5°)	Phi(112.5°)	Phi(127.5°)	Phi(142.5°)	Phi(157.5°)	Phi(172.5°)	Phi(187.5°)	Phi(202.5°)	Phi(217.5°)	Phi(232.5°)	Phi(247.5°)	Phi(262.5°)	Phi(277.5°)	Phi(292.5°)	Phi(307.5°)	Phi(322.5°)	Phi(337.5°)	Phi(352.5°)
Theta(135°)	Phi(135°)	-12.67/-14.86	-13.51/-14.75	-14.25/-14.34	-14.72/-14.60	-14.45/-14.88	-15.25/-14.18	-14.17/-13.12	-12.58/-12.39	-11.82/-11.41	-11.50/-11.99	-13.40/-13.13	-14.44/-14.19	-14.27/-14.06	-14.94/-15.38	-15.60/-15.69	-15.73/-15.43	-14.86/-14.78	-15.02/-15.05	-15.94/-15.38	-15.46/-14.96	-15.47/-15.64	-13.71/-15.13	-12.79/-13.11	-12.87/-12.32	
Theta(142.5°)	Phi(142.5°)	-10.46/-10.87	-10.95/-11.43	-11.30/-10.68	-10.67/-11.16	-11.13/-11.76	-12.23/-13.11	-13.25/-13.42	-14.29/-14.30	-14.90/-14.42	-13.25/-13.86	-14.94/-15.85	-14.53/-12.44	-11.94/-10.38	-11.12/-11.37	-11.35/-10.78	-10.64/-10.72	-11.33/-11.47	-10.92/-9.91	-10.92/-9.91	-10.92/-9.91	-10.92/-9.91	-10.92/-9.91	-10.92/-9.91	-10.92/-9.91	-10.92/-9.91
Theta(150°)	Phi(150°)	-10.66/-10.07	-10.61/-11.33	-11.19/-11.12	-10.27/-9.76	-9.76/-9.40	-8.96/-8.86	-9.42/-9.89	-9.86/-9.74	-9.45/-9.82	-8.98/-9.28	-10.08/-10.70	-11.43/-11.05	-10.32/-9.90	-9.06/-9.02	-9.03/-9.52	-9.09/-8.86	-8.51/-9.33	-10.25/-9.97	-10.13/-9.90	-9.03/-8.85	-7.35/-6.86	-8.01/-7.81	-7.45/-8.09	-8.71/-10.39	
Theta(157.5°)	Phi(157.5°)	-6.43/-7.33	-9.21/-10.33	-11.87/-11.55	-11.87/-11.01	-10.03/-9.68	-10.60/-11.29	-10.81/-9.81	-8.78/-8.47	-8.65/-9.64	-10.97/-13.46	-11.97/-14.91	-14.39/-12.49	-11.27/-10.75	-1.35/-0.82	-3.77/-5.21	-7.55/-7.21	-9.14/-11.15	-10.34/-9.40	-9.09/-10.06	-12.85/-5.32	-10.85/-11.31	-10.48/-10.50	-5.13/-5.57		
Theta(165°)	Phi(165°)	-8.32/-8.84	-8.82/-12.24	-12.05/-8.45	-7.47/-8.89	-8.89/-10.22	-10.23/-11.11	-12.46/-12.96	-11.93/-10.42	-10.70/-12.48	-14.09/-15.81	-13.03/-11.77	-10.32/-9.66	-7.35/-7.79	-10.05/-6.85	-8.06/-6.84	-8.10/-8.82	-11.64/-13.03	-11.20/-9.13	-11.64/-13.03	-11.20/-9.13	-11.64/-13.03	-11.20/-9.13	-11.64/-13.03	-11.20/-9.13	-11.64/-13.03
Theta(172.5°)	Phi(172.5°)	-11.60/-14.62	-11.69/-9.65	-8.39/-8.26	-10.91/-15.22	-10.79/-8.92	-9.42/-11.60	-11.65/-12.01	-12.29/-10.91	-9.14/-11.11	-11.83/-8.37	-6.43/-6.44	-4.65/-4.15	-6.21/-7.32	-5.49/-4.53	-4.71/-3.98	-4.31/-5.85	-6.93/-7.41	-7.31/-5.73	-4.27/-5.31	-9.03/-9.03	-11.17/-10.91	-15.70/-10.62	-7.75/-6.03	-5.65/-9.68	
Theta(180°)	Phi(180°)	-15.37/-12.96	-8.62/-9.97	-9.27/-13.43	-15.95/-10.24	-10.38/-14.66	-15.04/-15.26	-11.60/-11.77	-6.29/-8.49	-8.56/-9.18	-10.74/-8.73	-5.35/-3.32	-5.33/-3.11	-1.02/-1.43	-2.63/-2.79	-4.12/-1.16	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79	-2.63/-2.79
Theta(187.5°)	Phi(187.5°)	-7.86/-6.61	-7.01/-5.94	-5.99/-7.78	-12.60/-15.46	-10.94/-11.13	-10.50/-10.40	-8.78/-11.77	-12.72/-7.30	-6.03/-4.70	-15.70/-17.33	-9.62/-6.62	-2.04/0.74	-1.03/0.61	-1.63/0.51	-1.20/1.74	-1.63/0.51	-1.20/1.74	-1.63/0.51	-1.20/1.74	-1.63/0.51	-1.20/1.74	-1.63/0.51	-1.20/1.74	-1.63/0.51	-1.20/1.74
Theta(195°)	Phi(195°)	-8.89/-12.20	-13.55/-9.95	-8.52/-7.85	-8.11/-8.39	-10.45/-11.44	-10.32/-8.69	-6.55/-6.69	-7.87/-11.85	-9.57/-8.68	-7.11/-11.09	-4.39/-2.01	-4.58/-2.24	-2.34/-4.70	-0.13/-1.25	0.89/0.77	-0.79/-1.95	2.78/-0.27	-0.75/-2.15	-1.81/-1.09	-2.53/-5.85	-8.23/-1.53	-2.40/-6.55	-13.51/-14.50	-11.34/-8.24	
Theta(202.5°)	Phi(202.5°)	-10.10/-13.30	-11.25/-10.48	-10.37/-13.1	-11.28/-10.89	-9.41/-9.28	-9.44/-14.94	-11.18/-12.36	-5.89/-4.45	-6.60/-9.19	-5.31/-3.76	-4.99/-4.64	-6.45/-8.49	-3.17/-3.10	0.10/2.20	0.22/0.76	0.81/0.65	-0.34/-3.65	-3.60/-6.05	-4.56/-12.51	-4.87/-3.21	-4.21/-9.14	-10.06/-7.62	-5.89/-9.48	-8.00/-9.90	
Theta(210°)	Phi(210°)	-10.14/-8.79	-13.72/-11.34	-9.84/-8.53	-12.12/-10.29	-6.70/-11.31	-11.73/-11.91	-6.40/-8.79	-7.90/-5.45	-6.46/-8.79	-4.76/-2.41	-1.07/-0.28	-0.69/-1.43	-2.59/-2.61	-0.66/1.33	3.23/1.39	0.52/1.38	1.80/1.95	-0.30/-9.08	-6.79/-3.17	-2.72/-11.54	-11.72/-4.97	-5.34/-7.23	-12.27/-15.89	-10	



Antenna Pattern <6GHz U-NII5~UNII-8>

Appendix D

Theta (112.5°)	-0.90/-2.79	-2.71/-2.80	-4.58/-5.21	-4.19/-4.40	-3.97/-5.81	-7.79/-8.89	-8.48/-8.47	-8.19/-9.78	-9.21/-7.35	-8.45/-13.39	-13.55/-15.03	-9.44/-6.24	-8.18/-13.05	-8.57/-6.99	-5.99/-4.21	-8.12/-4.27	-4.06/-6.77	-0.770/0.74	-4.01/-6.50	-3.82/-2.80	0.13/-4.27	-10.13/-2.47	-1.02/-1.10	-0.16/-1.47	
Phi (120°)	-3.81/-5.61	-7.84/-6.11	-6.54/-8.93	-9.17/-7.76	-6.20/-5.80	-6.89/-5.83	-7.47/-11.86	-11.87/-9.24	-12.85/-15.62	-15.67/-15.53	-10.10/-6.72	-8.78/-14.58	-11.59/-6.62	-6.02/-7.58	-8.12/-1.94	-4.04/-1.19	-4.92/-3.43	-0.50/-0.07	-1.81/-13.17	-2.95/-1.85	1.61/-1.11	-1.44/-1.47	-0.60/-1.89	-1.10/-2.95	
Phi (127.5°)	-4.26/-3.82	-4.73/-4.95	-4.35/-4.21	-4.29/-6.24	-8.37/-10.02	-8.77/-9.93	-10.19/-9.62	-7.41/-9.58	-16.00/-13.73	-8.16/-8.61	-9.97/-10.92	-10.14/-12.24	-12.66/-9.94	-5.35/-7.52	-9.53/-7.43	-8.35/-3.96	-1.71/-5.19	1.61/2.53	-1.95/-9.08	-3.14/-0.99	2.25/1.66	1.37/0.92	0.40/-1.35	-1.72/-2.60	
Phi (135°)	-2.46/-2.24	-1.84/-2.29	-1.15/-1.05	-1.82/-2.88	-3.49/-4.75	-6.04/-7.32	-7.79/-7.77	-7.41/-5.98	-7.97/-11.47	-9.90/9.35	-9.22/-8.19	-10.53/-14.03	-12.45/-7.41	-5.85/-7.62	-6.38/-7.43	-7.94/-1.97	-1.68/-1.76	0.20/1.01	0.06/-7.39	-7.46/-3.31	-1.26/-1.11	2.58/3.24	3.08/1.72	0.82/0.45	
Phi (142.5°)	-2.09/-1.19	0.37/1.17	1.32/0.19	-0.74/-0.07	-0.62/-3.68	-5.85/-7.00	-5.99/-4.79	-4.69/-5.34	-5.61/-6.10	-9.64/-11.64	-10.93/-13.38	-15.56/-14.69	-14.38/-14.03	-13.42/-8.21	-3.68/-4.30	-5.32/-2.87	-4.16/-3.39	-1.94/1.93	2.33/-1.59	-3.77/-4.53	-4.20/-0.90	1.20/1.59	1.31/0.59	0.15/-0.78	
Phi (150°)	-2.24/-1.01	0.16/0.08	-0.11/-0.13	-0.23/-1.80	-4.57/-6.83	-9.50/-12.62	-13.29/-11.66	-11.47/-14.43	-14.30/-11.71	-10.28/-12.05	-12.37/-11.94	-13.54/-13.22	-9.75/-7.03	-5.26/-4.09	-2.87/-3.25	-4.56/-5.73	-4.26/-2.31	-0.37/1.84	1.36/-1.65	-4.58/-7.84	-11.63/-6.72	-3.53/-3.08	-2.86/-1.57	-1.76/-2.17	
Phi (157.5°)	-3.91/-4.17	-3.67/-3.03	-3.66/-5.46	-8.91/-13.00	-12.76/-10.99	-11.10/-10.91	-9.27/-8.82	-9.06/-9.47	-9.36/-8.52	-9.15/-10.61	-12.76/-15.33	-14.75/-10.24	-7.28/-4.69	-3.98/-4.21	-5.00/-6.32	-7.58/-6.42	-4.15/-2.64	-0.95/0.49	0.26/-0.90	-2.22/-5.12	-9.93/-9.74	-6.47/-4.20	-3.69/-3.30	-3.16/-4.16	
Phi (165°)	-9.97/-12.06	-12.68/-14.87	-15.37/-14.25	-12.38/-11.08	-11.87/-13.00	-13.40/-12.79	-11.88/-10.68	-12.11/-14.96	-14.10/-9.71	-8.84/-9.94	-10.17/-9.78	-10.30/-11.35	-13.08/-12.84	-10.10/-8.86	-8.44/-7.98	-6.39/-5.09	-3.91/-2.70	-1.50/-0.60	-0.35/-0.78	-1.68/-3.20	-5.02/-6.80	-6.99/-6.33	-6.61/-8.43	-8.74/-10.06	
Phi (172.5°)	-7.96/-7.50	-7.59/-7.99	-8.67/-9.39	-10.94/-13.36	-15.64/-15.08	-14.71/-12.16	-11.37/-11.71	-10.97/-8.93	-7.01/-6.31	-7.21/-9.06	-11.23/-13.52	-13.47/-13.45	-12.50/-11.16	-9.89/-8.90	-7.66/-6.12	-5.07/-4.24	-3.84/-3.30	-2.94/-2.85	-2.77/-2.71	-2.78/-2.84	-3.42/-4.59	-5.88/-6.45	-6.18/-6.47	-6.25/-6.37	
Phi (180°)	-6.37/-7.10	-8.36/-10.47	-11.43/-13.84	-13.45/-10.42	-8.72/-8.11	-8.70/-10.40	-9.78/-9.01	-7.40/-6.39	-5.96/-5.74	-6.78/-7.29	-7.06/-6.64	-6.26/-6.03	-5.80/-5.75	-5.78/-6.11	-6.36/-6.31	-6.34/-6.17	-5.82/-5.65	-5.24/-5.14	-4.89/-4.61	-4.62/-5.08	-5.48/-5.53	-5.40/-5.84	-5.80/-6.40	-6.64/-7.24	
Freq (Hz)	6.695GPol.	Total Ant. 8																							
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°)	
Theta (0°)	-8.70/-7.69	-7.49/-8.49	-6.65/-6.36	-6.93/-7.49	-9.68/-10.35	-11.42/-11.06	-11.80/-10.26	-9.70/-10.06	-9.51/-9.26	-9.70/-10.59	-11.00/-11.08	-11.07/-11.52	-11.86/-11.40	-10.52/-10.27	-10.29/-10.45	-10.78/-11.16	-11.17/-11.37	-11.35/-10.98	-10.76/-10.31	-10.14/-9.72	-10.27/-10.65	-11.55/-11.41	-10.88/-10.41	-11.18/-9.91	
Theta (7.5°)	-12.86/-13.33	-12.95/-12.72	-9.93/-9.25	-7.78/-7.27	-7.97/-8.34	-8.73/-9.11	-8.46/-8.10	-7.82/-7.89	-8.27/-8.91	-9.41/-10.04	-10.14/-11.03	-11.65/-11.15	-9.93/-8.64	-7.57/-6.51	-6.15/-6.13	-6.12/-6.26	-6.03/-5.81	-5.98/-6.25	-6.80/-6.69	-6.59/-6.50	-6.91/-7.98	-8.75/-9.33	-10.44/-12.59	-15.02/-13.02	
Theta (15°)	-11.70/-11.48	-10.53/-11.72	-10.75/-7.85	-6.03/-6.33	-6.93/-6.97	-8.33/-9.94	-12.33/-12.87	-13.82/-13.20	-10.65/-9.13	-8.21/-9.03	-10.37/-11.34	-11.16/-10.65	-9.39/-7.61	-5.38/-3.45	-2.47/-2.15	-2.11/-2.19	-2.51/-3.31	-4.17/-4.61	-4.45/-4.09	-4.05/-3.65	-4.43/-5.05	-5.46/-6.05	-6.72/-8.38	-9.77/-11.74	
Theta (22.5°)	-6.70/-6.39	-8.81/-9.76	-10.02/-11.46	-15.94/-12.18	-10.34/-9.35	-8.83/-7.65	-7.87/-9.11	-11.81/-14.58	-16.05/-15.46	-13.30/-9.41	-7.20/-6.53	-5.96/-4.54	-3.64/-2.69	-2.07/-1.82	-1.69/-1.80	-2.68/-4.25	-5.75/-5.52	-4.07/-3.07	-2.57/-2.79	-2.44/-2.46	-2.58/-2.37	-1.99/-2.05	-2.81/-4.34	-6.64/-6.57	
Theta (30°)	-3.00/-2.95	-4.22/-5.18	-4.23/-5.15	-5.60/-6.82	-9.99/-12.19	-14.23/-15.14	-15.31/-14.03	-11.32/-11.30	-11.51/-12.56	-11.70/-9.39	-5.71/-6.81	-5.68/-3.25	-2.42/-1.63	-0.86/-0.70	-1.47/-3.33	-5.17/-7.04	-6.37/-5.29	-4.64/-4.12	-3.76/-4.43	-4.53/-4.19	-3.74/-2.89	-1.56/-0.78	-1.57/-2.99	-4.71/-2.46	
Theta (37.5°)	-3.11/-2.44	-3.72/-4.44	-4.25/-3.71	-4.32/-5.77	-5.75/-7.25	-8.86/-7.03	-6.92/-8.95	-13.73/-12.74	-11.25/-9.97	-10.98/-7.71	-6.92/-8.58	-8.35/-13.47	-13.08/-8.23	-3.68/-2.42	-3.13/-3.44	-2.23/-3.55	-2.96/-3.49	-2.96/-3.49	-1.44/-1.54	-1.44/-1.54	-1.44/-1.54	-1.44/-1.54	-1.44/-1.54	-2.40/-2.80	
Theta (45°)	-2.53/-1.94	-4.05/-4.90	-3.84/-4.06	-3.60/-2.81	-4.71/-8.06	-7.28/-3.85	-4.44/-6.48	-9.83/-9.50	-7.44/-9.15	-12.45/-14.51	-10.20/-8.73	-7.43/-8.48	-8.74/-7.44	-9.56/-8.68	-4.41/-3.65	-7.11/-4.91	-3.56/0.38	2.63/1.76	0.33/0.53	1.93/2.00	0.01/-1.56	-0.61/-0.84	0.03/0.15	-1.13/-2.92	
Theta (52.5°)	-1.67/-1.92	-2.94/-3.42	-3.38/-6.33	-5.44/-6.31	-5.11/-5.38	-7.95/-11.19	-6.55/-3.31	-3.97/-5.04	-6.04/-8.48	-7.11/-5.13	-5.48/-8.96	-7.68/-6.75	-6.58/-6.02	-9.85/-6.60	-1.82/-8.22	-8.01/-5.60	-2.68/-1.43	-0.11/-1.63	2.30/4.53	3.27/1.10	-1.05/-2.16	-2.18/0.02	1.67/1.15	-0.50/-0.78	
Theta (60°)	-0.22/-0.18	-1.24/-2.30	-5.21/-5.33	-4.60/-4.37	-6.20/-6.41	-4.85/-2.21	-4.60/-6.05	-10.53/-10.83	-8.99/-9.63	-9.63/-7.54	-8.83/-10.69	-9.90/-7.41	-4.78/-7.24	-1.74/-5.53	-3.68/-7.38	-6.30/-3.72	-1.82/-1.71	-1.88/-0.03	1.05/-1.09	-0.15/-1.05	-1.43/-1.00	0.30/0.31	-0.55/-1.62		
Theta (67.5°)	1.24/1.20	0.09/-0.69	-2.13/-3.27	-4.62/-7.11	-8.54/-5.03	-4.98/-6.22	-5.68/-5.72	-6.80/-11.84	-8.57/-10.42	-15.00/-7.97	-8.72/-8.30	-12.40/-12.39	-6.16/-6.76	-5.89/-10.22	-12.12/-12.48	-10.38/-11.36	-12.18/-9.76	-5.94/-5.55	-7.36/-5.97	-2.73/-4.93	-7.59/-5.07	-1.83/-1.07	0.85/2.33	1.29/2.33	
Theta (75°)	-0.96/-1.09	-1.72/-1.72	-3.30/-3.09	-6.48/-8.47	-10.26/-6.80	-7.74/-10.81	-14.83/-15.15	-8.48/-7.12	-9.87/-10.50	-6.34/-7.77	-15.44/-7.92	-8.23/-11.06	-14.34/-12.31	-14.46/-9.48	-7.78/-7.82	-12.63/-7.68	-7.34/-6.11	-4.24/-12.39	-6.81/-7.93	-6.99/-4.09	-3.83/-2.60	-2.59/-1.57	0.49/0.67	-0.11/-0.43	
Theta (82.5°)	0.61/-1.00	-1.46/-3.64	-2.91/-2.75	-4.03/-3.13	-1.71/-6.24	-7.05/-7.07	-12.89/-14.76	-13.52/-9.23	-5.27/-7.11	-7.53/-10.95	-11.62/-9.30	-8.77/-12.24	-10.64/-12.86	-12.30/-9.72	-7.90/-9.77	-6.86/-6.17	-6.51/-8.45	-4.27/-7.78	-1.12/-0.66	-9.31/-12.04	-7.06/-6.05	-2.63/-2.11	-2.23/-1.25	0.14/-0.43	1.28/1.08
Theta (90°)	-0.52/-3.47	-2.94/-6.29	-4.37/-3.97	-8.06/-10.33	-14.17/-15.35	-7.36/-9.14	-8.81/-10.65	-14.11/-10.80	-8.76/-9.08	-10.83/-7.25	-9.49/-14.73	-11.98/-10.24	-7.75/-8.01	-8.47/-8.65	-13.46/-5.99	-6.75/-5.64	-6.50/-7.37	-2.49/-8.11	-11.04/-5.62	-5.95/-4.19	-1.00/-2.26	-4.23/0.22	-0.20/-1.16	-0.48/-1.92	
Theta (97.5°)	-0.26/-1.97	-1.82/-2.80	-1.87/-3.18	-5.71/-8.41	-14.75/-15.32	-9.27/-10.38	-12.81/-12.28	-15.72/-10.38	-7.92/-15.06	-10.05/-8.41	-8.49/-15.60	-12.62/-14.21	-9.76/-11.68	-11.42/-9.49	-13.61/-7.31	-5.90/-12.34	-2.40/-3.97	0.37/-5.49	-8.95/-15.06	-2.30/-2.05	-2.49/-4.99	-5.28/-3.33	-0.26/-0.93	0.29/1.10	
Theta (105°)	1.57/-0.00	0.02/-2.23	-3.31/-4.44	-10.46/-6.06	-2.97/-7.42	-12.89/-14.76	-13.52/-9.23	-5.27/-7.11	-7.53/-10.95	-11.62/-9.30	-8.77/-12.24	-10.64/-12.86	-12.30/-9.72	-7.90/-9.77	-6.86/-6.17	-6.51/-8.45	-4.27/-7.78	-1.12/-0.66	-9.31/-12.04	-7.06/-6.05	-2.63/-2.11	-2.23/-1.25	0.14/-0.43	1.28/1.08	
Theta (112.5°)	-0.57/-2.52	-2.07/-1.78	-3.28/-7.20	-7.27/-5.56	-3.31/-5.70	-10.61/-7.95	-6.91/-7.25	-7.72/-10.80	-14.70/-10.88	-8.24/-11.49	-14.73/-15.50	-11.07/-11.60	-9.58/-15.59	-6.86/-6.47	-4.32/-4.89	-5.87/-5.57	-1.05/-4.62	2.11/0.50	-7.83/-10.26	-4.07/-2.25	-2.06/-3.65	-3.04/-1.35	0.13/-0.48	0.57/-0.85	
Theta (120°)	-0.63/-3.27	-0.68/-5.46	-7.30/-6.47	-8.25/-11.1	-5.73/-4.96	-5.32/-5.55	-7.56/-9.38	-12.02/-12.21	-10.41/-14.63	-15.15/-12.37	-9.90/-4.44	-10.39/-10.67	-8.05/-6.05	-6.72/-6.26	-8.18/-4.01	-6.95/-3.06	-3.40/-5.98	0.34/1.14	-7.14/-9.67	-1.39/0.01	2.00/0.90	1.43/2.83	3.46/2.40	1.71/-0.04	
Theta (127.5°)	-0.57/-1.52	-4.88/-4.61	-3.27/-4.27	-2.38/-6.29	-13.74/-13.05	-12.00/-6.84	-7.14/-8.43	-10.25/-10.18	-12.87/-9.61	-6.07/-6.39	-9.84/-13.28	-13.55/-14.81	-15.14/-10.85	-11.56/-13.79	-15.52/-8.13	-4.28/-2.15	-0.88/-5.90	1.26/1.92	-6.25/-6.74	-4.58/-0.46	2.07/0.26	1.68/3.39	2.75/1.06	0.96/0.79	
Theta (135°)	-2.94/-2.43	-1.49/-0.90	-1.25/-1.34	0.38/0.46	-1.43/-4.30	-5.79/-5.15	-4.86/-5.16	-8.20/-6.98	-6.67/-6.97	-10.85/-15.20	-14.71/-11.38	-14.67/-13.40	-11.15/-10.10	-10.21/-12.45	-12.15/-5.83	-3.48/-3.22	-2.94/-4.43	-1.22/1.90	0.45/-4.39	-4.60/-2.18	-0.66/-2.29	1.80/2.42	1.96/1.34	0.42/-0.92	
Theta (142.5°)	-2.47/-3.05	-2.66/-0.92	0.30/0.19	-0.66/-6.93	-1.64/-4.13	-6.55/-7.98	-6.38/-4.57	-5.77/-9.21	-8.68/-5.37	-4.60/-7.54	-11.95/-14.55	-15.13/-12.20	-11.90/-12.33	-10.78/-6.37	-4.21/-2.95	-1.10/-0.95	-0.99/0.80	2.07/2.78	0.76/-2.46	-2.25/-2.92	-0.90/0.97	0.73/1.14	0.53/0.24	-0.57/-2.02	
Theta (150°)	-3.22/-1.70	-0.17/0.24	-0.01/-0.78	-1.35/-1.49	-2.97/-5.65	-7.84/-10.21	-10.38/-8.78	-8.58/-11.44	-15.88/-15.69	-6.62/-7.25	-10.42/-11.17	-8.71/-5.65	-3.70/-2.54	-2.05/-2.26	-3.52/-4.66	-3.26/-1.43	0.79/2.05	1.31/0.04	-1.76/-5.24	-5.97/-3.91	-3.20/-2.91	-2.04/-1.31	-1.46/-2.73		
Theta (157.5°)	-5.57/-4.67	-4.16/-3.57	-3.90/-3.73	-5.38/-8.27	-12.05/-13.76	-10.11/-9.31	-9.15/-8.60	-9.27/-11.83	-10.71/-9.11	-10.70/-11.34	-10.62/-9.59	-8.35/-6.54	-5.11/-4.00	-4.25/-5.62	-6.84/-8.92	-9.68/-8.07	-6.68/-1								

E1(XY plane) – $\Theta(90)\Phi(0-360)$
 E2(XZ plane) – $\Theta(0-180)\Phi(0)$ and $\Theta(0-180)\Phi(180)$
 E3(YZ plane) – $\Theta(0-180)\Phi(90)$ and $\Theta(0-180)\Phi(270)$







