



Radiated Composite Gain of 2.4GHz and 5GHz UNII 1~3

Appendix A

Freq(Hz)	-12.97/13.7	-14.45/15.24	-15.6/17.03	-17.45/17.23	-16.04/15.51	-16.64/17.87	-17.86/18.37	-18.27/19.04	-18.59/18	-17.2/16.65	-16.8/17.9	-18.82/18.73	-18.37/19.29	-18.54/17.24	-16.3/15.56	-15.45/15.24	-15.31/15.44	-15.66/16.54	-17.69/17.44	-18.79/18.06	-18.61/17.89	-17.67/15.46	-14.8/15.02	-14.63/13.98
Gain	Φ(0°)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(0°)	-18.37/18.81	-18.86/14.41	-10.89/8.37	-6.69/5.6	-4.85/4.27	-3.75/3.26	-3.14/3.12	-3.06/3.28	-3.74/4.39	-5.3/6.31	-7.62/9.49	-11.76/14.72	-18.56/18.27	-18.91/16.37	-13.15/10.83	-8.85/7.16	-5.9/5.14	-4.46/4.02	-3.72/3.88	-3.99/4.28	-4.72/5.21	-5.97/7.12	-8.64/10.57	-12.56/16.16
Θ(7.5°)	-17.89/18.37	-17.85/18.2	-13.5/10.36	-8.32/6.82	-5.67/4.77	-4.13/3.71	-3.67/3.53	-3.51/3.68	-4.15/4.74	-5.61/6.59	-8.26/10.15	-12.56/15.62	-18.21/18.92	-16.22/12.71	-10.37/8.59	-7.12/6.29	-5.3/4.53	-3.95/3.45	-3.43/3.66	-3.71/3.87	-4.24/4.74	-5.43/6.52	-7.71/9.18	-10.71/14.9
Θ(15°)	-16.09/17.68	-18.89/17.41	-13.44/10.52	-8.41/6.94	-5.84/5.55	-4.44/4.99	-4.77/4.42	-3.94/3.67	-3.68/3.9	-4.56/5.58	-6.85/8.73	-10.89/13.88	-17.44/18.08	-14.24/10.64	-8.06/6.59	-5.63/5.08	-4.66/4.21	-3.74/3.27	-3.09/3.02	-2.92/2.95	-3.16/3.48	-3.95/4.73	-5.94/7.47	-9.71/13.27
Θ(22.5°)	-12.6/15.4	-18.2/17.85	-13.8/11.23	-9.4/7.38	-6.53/6.23	-5.66/5.63	-5.86/6.33	-6.36/6.64	-6.39/6.04	-5.87/6.39	-7.71/9.85	-12.99/15.88	-15.17/12.39	-10.3/8.9	-7.57/6.95	-6.43/5.99	-5.64/5.06	-4.46/4.21	-4.24/4.3	-4.25/4.31	-4.43/4.59	-4.89/4.59	-6.26/7.28	-8.55/11.04
Θ(30°)	-15.06/17.77	-18.86/17.78	-16.31/14.83	-12.26/8.79	-7.19/6.26	-5.81/6.01	-5.72/6.03	-6.06/6.35	-6.66/6.58	-6.23/6.13	-6.73/8.2	-11.04/10.63	-18.22/12.94	-9.91/8.39	-7.33/6.66	-5.98/5.17	-3.91/2.98	-3/3.86	-4.84/5.11	-4.58/4.1	-4.15/4.89	-5.71/6.42	-7.69/9.14	-10.74/12.94
Θ(37.5°)	-18.5/17.61	-18.53/17.15	-14.7/12.71	-11.56/10.48	-9.17/6.89	-5.45/4.14	-3.43/3.62	-4.24/4.68	-4.92/4.85	-4.45/4.43	-5.47/4.3	-10.53/17.49	-17.29/12.12	-9.56/7.4	-6.07/5.73	-5.4/4.93	-5.37/7.26	-7.89/5.75	-4.14/4.23	-5.12/5	-3.86/2.97	-3.14/4.03	-6.18/9.36	-12.19/15.51
Θ(45°)	-18.68/18.44	-18.17/15.74	-11.83/8.45	-6.23/5.08	-4.36/4.38	-2.64/1.77	-1.62/1.54	-1.77/2.49	-3.77/4.58	-5.01/6.1	-4.32/5.14	-6.79/11.23	-18.37/17.93	-10.83/8.16	-6.87/5.17	-4.04/3.87	-3.69/1.97	-1.23/1.93	-2.82/3	-2.87/2.98	-3.46/3.77	-4.12/4.89	-7.04/11.5	-16.71/15.2
Θ(52.5°)	-18.28/18.32	-15.5/10.98	-8.34/6.34	-5.94/5.03	-4.04/3.15	-2.84/1.81	-1.15/1.3	-1.84/2.71	-4.41/6.39	-7.77/7.03	-5.6/5.47	-6.71/11.92	-19.3/16.93	-10.99/8.4	-5.56/4.84	-5.16/4.25	-3.2/2.74	-1.88/1.1	-0.88/1.33	-2.4/3.6	-3.94/3.88	-4.27/5.2	-7.24/12.01	-18.05/18.55
Θ(60°)	-15.2/13.3	-11.55/9.15	-7.79/6.65	-6.26/5.75	-4.98/3.88	-2.65/1.63	-1.04/0.81	-0.89/1.76	-3.89/7.47	-10.68/13.03	-11.81/8.48	-6.66/7.44	-10.94/18.41	-5.51/3.71	-5.59/4.59	-3.52/3.53	-3.13/2.23	-1.57/1.13	-1.36/2.35	-3.58/5.89	-7.27/8.11	-7.73/8.12	-10.15/13.83	-17.04/15.78
Θ(67.5°)	-12.32/13.58	-13.56/12.02	-10.26/9.86	-9.76/9.09	-8.6/6.81	-4.64/3.22	-2.53/2.47	-3.05/3.99	-6.13/11.4	-18.88/18.1	-19.45/12	-8.46/9.16	-12.96/16.47	-10.21/8.44	-3.26/2.14	-2.92/2.82	-3.21/2.72	-2.72/2.67	-2.56/3.74	-5.11/7.06	-8.59/13.27	-6.93/7.6	-10.12/15.41	-14.92/12.72
Θ(75°)	-17.2/16.09	-15.39/12.65	-9.2/9.18	-10.98/12.28	-10.53/7.99	-6.84/5.82	-5.16/5.15	-5.48/6.09	-7.46/13.31	-17.1/16.37	-14.16/16.77	-15.72/12.73	-12.81/14.82	-10.64/6.44	-5.3/3.9	-3.44/4.9	4.09/3	-2.13/2.04	-2.13/2.14	-4.21/5.77	-7.29/9.21	-7.79/5.78	-9.2/11.22	-11.54/11.65
Θ(82.5°)	-14.58/18.41	-18.52/16.91	-12.3/10.6	-9.19/8.33	-6.29/6.6	-7.27/4.83	-4.57/5.53	-4.27/8.64	-10.39/15.31	-19.08/12.8	-11.44/14.71	-18.35/18.02	-16.86/12.73	-7.86/5.56	-5.27/6.11	-7.27/8.85	-5.41/2.34	-1.96/1.51	-2.49/5.44	-5.84/5.43	-5.75/6.57	-6.51/7.11	-9.33/11.93	-14.93/11.93
Θ(90°)	-15.88/15.91	-12.98/10.66	-8.28/8.48	-10.55/11.89	-11.34/7.55	-5.69/5.39	-5.24/5.31	-6.03/7.68	-10.14/13.12	-17.47/17.6	-13.68/12.5	-14.21/19.11	-17.66/13.85	-11.34/9.96	-12.5/10.71	-10.56/12.61	-7.3/3.77	-1.97/2.01	-3.41/3.87	-6.08/7.79	-6.23/4.38	-3.68/4.03	-5.77/6.62	-14.16/15.16
Θ(97.5°)	-17.15/14	-10.05/7.92	-8.34/11.23	-15.84/15.78	-13.84/13.56	-12.7/8.45	-7.71/8.92	-10.27/10.47	-11.95/16.63	-16.56/14.39	-15.57/17.44	-14.15/15.15	-10.72/10.5	-12.71/12.72	-12.86/16.52	-15.47/18.76	-17.49/6.77	-5.16/2.81	-4.77/5.58	-6.56/4.53	-4.85/4.54	-8.54/13.16	-16.72/17.7	-17.77/10.7
Θ(105°)	-17.41/14.53	-8.44/5.4	-5.09/8.13	-14.06/17.7	-15.52/17.42	-18.22/14.17	-14.32/16.23	-15.53/17.3	-18.76/18.16	-16.17/13.73	-15.15/11.5	-14.53/14.84	-11.75/8.4	-8.55/13.26	-18.9/18.99	-18.4/16.27	-18.73/18.41	-9.67/7.55	-13.22/10.13	-8.61/9.56	-7.08/6.34	-7.8/9.65	-9.89/13.47	-17.97/17.07
Θ(112.5°)	-18.82/12.69	-8.35/5.54	-6.52/9.03	-14.98/19.3	-14.46/13.72	-16.41/17.3	-19.44/18.74	-18.93/18.78	-13.76/10.7	-8.29/7.89	9.96/13.52	-17.31/18.11	-10.72/9.15	-15.46/13.06	-14.25/18.58	-11.64/6.35	-7.01/7.75	-13.53/16.64	-11.46/17.42	-14.31/10.43	-8.08/7.29	9.74/10.12	-14.4/18.87	-19.39/18.95
Θ(120°)	-13.95/47.9	-7.18/7.17	-7.79/14.72	-18.74/15.51	-14.77/11.95	-9.59/10.9	-11.40/10.27	-11.44/11.73	-10.43/10.29	-8.99/9	-8.12/10.85	-15.66/18.32	-16.97/10.14	-11.41/8.03	-14.05/14.13	-18.6/8.52	-6.89/3.92	-12.44/12.94	-11.38/9.13	-5.21/6.23	-5.51/11.09	-14.99/11.77	-13.61/18.97	-14.22/11.4
Θ(127.5°)	-12.24/10.14	-8.23/4.43	-7.67/7.72	-11.06/15.18	-18.74/18.93	-14.11/8.97	-7.97/9.21	-7.29/6.43	-7.72/8.48	-11.83/9.83	-9.31/10.76	-13.19/18.49	-13.44/6.77	-9.91/6.23	-9.65/17.76	-7.42/5.85	-6.57/3.77	-6.82/6.26	-8.45/7.95	-9.42/8.66	-7.89/17.96	-18.76/19.15	-17.94/17.19	-13.43/14.46
Θ(135°)	-17.23/15.47	-13.85/10.37	-9.07/7.53	-7.14/9.12	-12.95/18.77	-12.62/9.71	-7.14/5.12	-5.19/5.22	-4.3/5.2	-8.24/15.61	-18.46/12.54	-10.35/6.96	-14.9/15.94	-10.31/12.03	-10.47/9.33	-4.44/8.21	-3.46/6.21	-9.06/7.49	9.07/7.4	-5.62/9.33	-13.4/14.73	-17.88/18.05	-17.85/18.27	-14.13/17.71
Θ(142.5°)	-14.12/14.09	-14.21/12.6	-11.43/10.99	-8.34/7.85	-7.66/8.05	-4.10/7.54	-1.07/12.7	-10.68/8.62	-5.88/4.2	-4.12/5.34	-8.71/15.32	-17.32/18.59	-16.58/17.22	-18.79/18	-18.43/13.08	-6.57/8.53	-13.61/10.84	-10.04/9.84	-4.88/4.54	-5.57/6.41	-3.55/16.5	-14.98/18.67	-18.43/18.14	-11.51/11.99
Θ(150°)	-15.71/16.08	-18.9/17.59	-15.69/13.13	-10.14/6.5	-6.09/4.37	-4.4/5.57	-7.57/8.93	-3.93/5.94	-9.61/9.92	-12.23/15.71	-19.66/18.29	-18.76/18.24	-19.35/18.85	-19.27/17.86	-15.14/10.82	-9.9/13.02	-17.91/11.64	-9.05/8.99	-8.97/8.88	-9.83/12.85	-19.44/17.48	-16.29/19.12	-15.46/15.23	-18.13/18.39
Θ(157.5°)	-17.54/17.13	-16.95/16.05	-13.86/13.38	-13.31/12.33	-9.91/7.93	-6.78/6.21	-7.14/9.09	-12.75/18.47	-19.42/18.97	-17.71/18.41	-18.53/17.52	-18.88/18.55	-18.72/15.83	-13.19/10.71	-9.44/9.76	-13.05/16.78	-9.66/6.43	-6/7.64	-9.63/11.28	-11.3/10.29	-8.32/7.55	-8.8/11.08	-13.2/15.16	-16.37/15.89
Θ(165°)	-17.85/16	-14.53/14.63	-14.69/14.15	-12.43/10.74	-9.43/8.38	-8.05/8.78	-8.07/8.53	-9.08/9.58	-10.59/12.33	-15.38/17.32	-18.13/18.42	-17.99/18.6	-18.69/15.83	-14.02/13.9	-16.36/18.2	-17.42/11.78	-8.71/7.99	-7.99/9.24	-10.4/11.75	-11.99/9.32	-8.23/8.29	-9.78/12.51	-15.3/15.95	-17.1/17.78
Θ(172.5°)	-18.13/19.3	-18.79/17.93	-19.16/17.96	-18.25/18.77	-18.46/17.24	-18.45/17.58	-18.48/18.84	-18.81/19.94	-18.54/17.95	-16.34/16.84	-18.53/19.45	-18.59/18.05	-18.17/17.49	-18.27/18.35	-17.75/16.71	-15.41/16.46	-15.61/16.52	-17.8/18.17	-17.98/18.86	-17.71/15.86	-15.32/16.18	-14.83/18.29	-17.99/18.8	-18.47/19.2
Θ(180°)	-17.81/18.55	-19.19/17.65	-18.67/18.87	-17.89/15.44	-15.03/15.16	-14.45/14.56	-14.18/13.68	-13.82/14.09	-14.35/15.22	-15.65/16.79	-17.76/18.42	-17.88/18.26	-19.17/16.8	-18.71/17.2	-18.03/17.33	-17.64/18.88	-17.03/18.8	-17.78/18.82	-17.71/19.01	-17.46/19.27	-17.86/17.58	-19.25/19.28	-18.45/18.94	-18.99/18.69
Freq(Hz)	5.3GPol.	Theta/Ant. 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Gain	Φ(0°)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(0°)	-4.61/4.24	-4.2/4.3	-4.56/4.77	-5.36/5.9	-6.99/8.44	-10.01/12.5	-16.05/18.23	-19.02/19.1	-13.83/10.42	-8.18/7.77	-5.66/4.79	-4/3.42	-3.01/2.78	-2.77/2.97	-3.46/3.89	-4.51/5.55	-6.92/8.56	-10.42/12.93	-16.48/18.9	-17.24/18.94	-14.43/11.33	-9.11/7.47	-6.48/5.97	-5.37/4.94
Θ(7.5°)	-3.65/3.26	-3.35/3.57	-3.78/4.17	-5.01/5.84	-6.91/7.96	-9.11/10.99	-13.67/18.08	-18.17/18.29	-18.44/13.16	-10.11/8.06	-6.72/6.67	-4.81/4.22	-3.72/3.27	-3.22/3.35	-3.58/4.07	-4.7/5.84	-7.31/9.19	-11.68/10.57	-16.68/					



Radiated Composite Gain of 2.4GHz and 5GHz UNII 1~3

Appendix A

Theta	16.78/18.46	16.66/15.05	12.6/9.99	8.27/7.56	6.6/5.97	4.8/4.51	4.66/4.91	5.36/5.88	6.69/7.52	8.19/9.11	9.17/8.5	8.53/10.44	14.08/18.35	17.79/12.94	9.79/7.17	5.14/3.61	2.38/1.79	1.96/2.39	2.74/2.94	3.42/3.76	4.24/5.28	6.17/7.21	8.89/9.96	12.41/15.28
Theta(30°)	-15.92/-17.12	-15.79/-13.72	-11.47/-10.02	-7.87/-5.94	-4.48/-3.95	-3.09/-3.24	-3.48/-3.39	-3.37/-3.85	-5.15/-6.65	-7.49/-8.76	-10.57/-11.36	-12.51/-15.36	-18.53/-19.64	-13.37/-10.09	-8.22/-6.06	-4.05/-3.18	-3.65/-4.47	-4.51/-4.42	-4.84/-5.33	-5.15/-4.84	-4.22/-3.7	-4.15/-5.33	-7.35/-10.43	-13.92/-15.48
Theta(45°)	-18.72/-19.11	-17.67/-17.45	-14.53/-11.31	-8.29/-5.66	-3.92/-3.06	-2.23/-2.15	-1.84/-1.96	-2.44/-2.93	-3.54/-4.55	-5.93/-7.54	-9.93/-12.53	-12.77/-16.39	-17.94/-18.55	-13.28/-10.82	-8.36/-6.52	-6.41/-6.78	-5.59/-5.23	-6.73/-7.02	-5.97/-6.73	-8.4/-7.99	-6.28/-4.99	-4.2/-5.11	-6.93/-10.75	-13.01/-15.91
Theta(60°)	-17.53/-18.73	-17.55/-14.48	-12.16/-10.28	-7.72/-5.45	-3.92/-2.74	-1.91/-1.58	-1.53/-1.58	-1.81/-2.36	-2.81/3.4	-4.67/6.33	-8.81/12.15	-13.48/17.79	-19.21/18.96	-14.17/13.06	-9.28/8.15	-6.47/4.43	-4.27/4.3	-3.43/3.26	-3.95/4.42	-4.72/4.83	-5.02/4.78	-3.63/4.1	-5.23/7.33	-11.19/17.39
Theta(75°)	-18.83/-16.35	-15.15/-11.83	-9.05/-9.2	-9.31/-7.38	-4.74/-2.76	-1.55/-0.91	-0.84/-1.62	-2.57/3.42	-4.34/-4.69	-4.75/5.33	-7.65/10.55	-11.88/12.44	-16.25/18.69	-14.05/-11.37	-9.33/8.12	-7.68/8.93	-7.41/6.2	-4.24/3.19	-2.95/3.37	-4.66/6.51	-5.43/3.7	-2.93/2.76	-5.8/10.82	-17.31/19.15
Theta(90°)	-13.79/-11.12	-9.54/-7.54	-7.19/7.41	-8.39/8.55	-7.15/5.84	-4.2/-2.54	-1.31/0.93	-1.75/4.03	-7.31/9.88	-9.32/8.52	-11.37/13.89	-12.23/12.85	-18.21/15.2	-10.03/10.87	-7.59/9	-7.18/5.65	-5.5/4.66	-3.93/2.79	-2.57/3.55	-4.27/5.71	-5.87/4.88	-4.51/5.43	-9.05/18.49	-17.67/15.65
Theta(105°)	-8.62/7.88	-8.92/10.01	-10.18/11.88	-14.57/17.82	-15.47/11.27	-6.45/2.87	-1.67/2.08	-2.81/4.38	-8.27/14.25	-19.14/14.58	-13.97/16.43	-17.81/12.68	-17.71/18.44	-14.41/10.85	-9.23/8.23	-5.85/5.92	-5.83/6.46	-4.92/5.97	-3.65/3.92	-5.87/7.49	-10.52/9.13	-9.46/12.54	-18.4/17.65	-18.84/11.03
Theta(120°)	-9.1/10.69	-12.4/11.01	-12.22/15.49	-16.74/17.92	-11.84/6.41	-4.25/3.18	-2.21/2.1	-3.92/8.77	-16.5/18.2	-18.29/16.41	-18.15/18.47	-17.3/15.48	-18.27/17.73	-13.14/8.68	-7.28/7.22	-5/5.19	-8.31/6.24	-3.98/3	-3.08/1.94	-3.1/5.4	-7.43/10.52	-10.02/12.87	-11.05/9.89	-12.68/9.15
Theta(135°)	-10.15/12.12	-13.28/10.17	-11.04/13.15	-14.06/11.72	-8.55/5.01	-3.69/1.82	-1.14/2.64	-5.02/8.54	-14.01/14.19	-14.64/16.41	-13.93/12.76	-18.5/18.45	-17.84/19.34	-14.08/11.55	-10.05/9.93	-6.89/10.41	-12.82/6.57	-3.88/0.8	0.69/3.02	-3.34/4.15	-5.38/5.84	-4.66/5.28	-6.38/8.19	-10.98/10.76
Theta(150°)	-11.11/14.58	-9.32/6.26	-8.7/10.88	-12.6/12.84	-9.18/4.15	-3.3/2.25	-2.35/4.11	-6.46/9.1	-12.87/18.04	-15.37/13.24	-13.02/10.98	-16.72/18.98	-12.48/15.14	-10.56/10.48	-10.24/13.47	-10.38/12.87	-18.39/8.37	-2.82/1.7	-2.32/3.21	-5.73/5.2	-4.11/3.04	-3.34/5.03	-6.35/9.02	-10.16/9.7
Theta(165°)	-17.26/13.37	-5.64/4.73	-6.77/11.6	-15.69/11.82	-9.31/6.98	-7.8/6.39	-6.15/9.11	-13.98/18.67	-18.64/17.39	-17.88/13.26	-15.94/16.61	-15.67/14.64	-14.98/11.08	-15.4/13.95	-10.52/12.27	-12.48/10.5	-7.69/11.11	-5.49/2.42	-8.18/5.83	-6.67/7.24	-4.64/3.45	-5.95/7.49	-10.45/18.42	-15.84/18.47
Theta(180°)	-18.87/13.46	-9.12/5.85	-6.24/11.96	-18.56/15.96	-14.75/13.28	-12.03/13.37	-18.75/18.71	-17.44/19.1	-13.01/13.65	-14.41/12.51	-12.66/16.97	-17.15/13.2	-10.73/8.46	-14.53/12.99	-14.59/10.81	-11.08/6.05	-5.2/6.48	-7.11/8.07	-5.95/8.06	-17.24/11.03	-6.47/5.81	-9.59/9.55	-9.37/18.29	-15.23/18.41
Theta(210°)	-11.46/10.84	-7.5/7.42	-8.15/8.89	-12.83/15.71	-18.81/15.28	-12.77/10.18	-8.27/8.33	-10.25/7.94	-7.54/10.32	-12.53/10.9	-8.93/10.02	-13.45/16.58	-13.69/8.85	-11.26/9.16	-9.18/17.95	-12.04/6.77	-5.35/5	-9.98/18.68	-12.49/15.44	-11.95/8.7	-6.84/9.63	-18.78/11.11	-19.02/19.03	-16.31/16
Theta(225°)	-9.73/7.58	-7.56/9.5	-12.41/18.48	-19.24/18.33	-12.74/11.3	-8.86/6.72	-6.13/5.58	-4.49/4.84	-7.08/10.6	-13.65/9.9	-9.1/11.55	-15.77/18.9	-16.35/12.87	-15.03/13.8	-14.78/11.84	-14.93/9.86	-8.87/4.32	-8.74/5.19	-6.16/9.61	-7.09/11.05	-11.19/18.09	-18.86/19.71	-17.38/17.49	-16.42/12.57
Theta(240°)	-10.07/9.23	-7.68/8.93	-10.78/11.89	-12.25/14.55	-15.35/8.9	-6.98/6.03	-4.93/4.16	-4.65/5.73	-7.58/10.76	-13.1/12.16	-10.75/10.1	-12.41/8.66	-19.05/12.71	-13.68/10.62	-18.02/19.23	-9.46/5.78	-7.39/6.47	-7.36/6.21	-6.62/11.51	-15.59/19.12	-13.63/13.43	-14.61/18.57	-15.46/12.95	
Theta(255°)	-13.77/15.25	-16.29/18.05	-19.7/14.31	-10.05/7.4	-7.74/10.78	-11.06/8.28	-7.36/7.12	-7/7.98	-9.75/12.02	-17.69/18.41	-14.7/13.72	-14.32/18.35	-19.22/15.82	-15/18.14	-9.73/7.54	-13.87/18.76	-18.57/18.75	-9.5/7.3	-7.63/7.26	-6.31/9.29	-18.11/18.36	-15.07/17.53	-17.74/18.06	-14.62/12.44
Theta(270°)	-13.41/14.1	-15.92/18.77	-17.86/18.77	-14.23/9.22	-6.26/5.47	-6.38/7.45	-8.42/10.15	-13.43/18.02	-19.03/19.55	-18.76/17.89	-18.66/18.1	-19.08/17.52	-17.98/17.63	-18.77/18.12	-13.92/15.71	-16.74/13.94	-18.67/11.11	-7.81/8.85	-10.72/10.16	-9.32/10.82	-16.3/18.66	-18.38/18.21	-18.95/17.97	-15.27/11.68
Theta(285°)	-16.59/14.72	-11.62/9.4	-8.8/9.48	-10.94/11.11	-10.39/9.14	-9.1/10.85	-14.76/17.7	-15.93/14.61	-14.87/13.13	-11.83/11.76	-11.56/16.48	-14.85/16.48	-18.86/18.32	-17.27/18.81	-17.65/17.41	-14.39/18.98	-17.99/9.11	-7.32/8.59	-10.61/12.33	-12.55/12.79	-13.28/13.17	-13.54/13.91	-14.46/15.08	-16.08/15.9
Theta(300°)	-17.51/13.92	-10.88/8.62	-8.37/9.8	-11.55/13.23	-14.84/15.57	-15.63/15.19	-14.94/15.77	-17.5/18.36	-17.3/18.5	-19.02/16.43	-14.5/14.53	-16.55/19.23	-18.56/18.57	-17.93/16.79	-16.18/17.22	-18.37/17.95	-12.23/8.99	-7.62/8.23	-10.22/13.5	-14.85/13.21	-11.26/9.9	-10.47/12.17	-14.54/16.32	-18.27/17.69
Theta(315°)	-17.93/17.03	-14.28/18.77	-12.45/13.48	-13.97/13.98	-14.4/14.27	-13.84/15.31	-17.12/17.63	-17.78/17.36	-17.03/14.04	-12.4/12.43	-12.88/14.01	-16.56/17.61	-17.92/17.73	-17.95/18.05	-18.92/18.37	-17.57/18.2	-16.72/16.38	-17.45/19.3	-17.91/17.49	-18.87/16.32	-13.89/13.22	-14.02/15.39	-18.55/18.35	-17.96/18.56
Theta(330°)	-17.73/17.47	-17.28/17.61	-19.23/17.9	-18.76/18.52	-17.24/17.99	-18.77/18.25	-17.75/19.21	-18.71/19.06	-16.84/16.01	-15.7/16.59	-17.02/18.02	-18.68/18.25	-17.76/19.29	-18.84/18.38	-19.03/18.55	-18.22/18.92	-17.48/16.56	-16.69/16.13	-15.64/15.5	-15.45/15.39	-15.07/16.45	-17.91/18.17	-18.38/18.87	-18.62/18.44
Freq(Hz)	5.785GHz	Theta/Ant. 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°)	-2.43/2.49	-2.7/2.7	-3.01/3.53	-3.99/4.82	-6.09/7.8	-10.16/12.76	-16.22/19.04	-17.73/13.75	-11.05/8.49	-6.46/4.92	-3.86/3.05	-2.36/1.92	-1.59/1.38	-1.33/1.61	-2.15/2.73	-3.67/4.94	-6.42/8.51	-10.76/12.58	-14.48/14.48	-13.35/10.95	-8.94/7.02	-5.42/4.21	-3.26/2.6	-2.41/2.39
Theta(7.5°)	-1.94/1.85	-1.93/2.05	-2.45/2.8	-3.28/3.89	-5.17/6.89	-8.73/10.65	-12.12/13.12	-12.73/11.2	-9.39/7.84	-6.44/5.15	-4.08/3.19	-2.68/2.33	-2.21/2.11	-2.29/2.78	-3.25/3.98	-4.98/6.16	-7.91/9.97	-12.78/16.56	-18.09/17.54	-15.29/11.48	-8.79/6.56	-4.98/3.85	-2.93/2.67	-2.37/2.16
Theta(15°)	-1.72/1.61	-1.7/1.94	-2.52/2.9	-3.55/4.4	-5.89/7.07	-8.5/10.26	-11.78/11.88	-11.15/10.05	-9.11/8.47	-7.92/7	-5.73/4.57	-3.79/3.26	-3.14/3.36	-3.84/4.07	-4.19/4.46	-4.79/5.3	-6.37/7.88	-9.92/13.21	-17.67/19.59	-15.44/11.73	-8.9/7.11	-5.82/4.83	-3.88/3.3	-2.54/2.07
Theta(22.5°)	-3.04/2.59	-2.41/2.7	-2.99/3	-3.28/4.12	-5.2/6.65	-8.5/10.41	-11.97/12.94	-12.15/10.37	-8.41/6.94	-6.04/5.73	-5.25/4.4	-3.9/3.77	-3.91/3.99	-3.73/3.48	-3.28/3.18	-3.46/4.3	-5.7/7.38	-9.53/12.29	-15.06/14.08	-11.83/9.6	-7.68/5.93	-5.1/4.61	-4.27/4.17	-4.05/3.64
Theta(30°)	-3.13/2.7	-2.96/3.32	-3.19/3.1	-3.75/4.81	-5.83/7.53	-9.73/11.79	-12.96/11.58	-10.9/9.13	-8.4/6.7	-4.95/4.18	-3.63/3	-2.95/3.37	-3.57/3.53	-3.43/3.61	-3.35/2.85	-2.8/3.6	-4.89/6.65	-9/11.16	-12.32/12.81	-12.34/10.36	-8.19/6.23	-5.12/4.55	-4.3/4.28	-4.36/4.26
Theta(37.5°)	-4.74/3.43	-2.58/2.69	-2.51/3.18	-4.81/6.31	-7.23/8.42	-8.67/8.59	-8.07/7.99	-7.77/7.14	-6.82/6.28	-4.91/4.15	-3.71/3.98	-5.49/5.89	-6.21/6.82	-5.89/4.32	-3.19/2.79	-3.23/4.33	-6.87/10.08	-11.31/11.4	-11.01/10.58	-10.57/9.79	-7.56/5.25	-3.71/3.1	-3.07/3.52	-3.99/4.34
Theta(45°)	-3.69/3.76	-3.8/4.9	-7.21/11.03	-15.06/15.71	-12.66/10.55	-9.4/8.91	-8.35/7.96	-7.61/6.89	-5.81/5.07	-4.02/2.89	-1.94/1.91	-2.72/3.31	-4.24/5.44	-5.74/4.99	-3.24/2.81	-3.81/6.81	-9.52/10.14	-12.15/16.48	-17.61/15.67	-15.41/14.57	-14.7/12.28	-9.59/7.58	-6.57/5.52	-5.21/4.45
Theta(52.5°)	-5.54/5.42	-7.41/12.12	-17.88/14.8	-14.43/11.36	-10.41/10.15	-9.82/9.55	-8.93/7.9	-6.61/5.81	-5.18/4.35	-3.9/2.93	-1.99/0.95	-1.38/1.95	-3.19/5.3	-4.17/3.61	-3.32/4.31	-5.14/5.58	-7.1/10.12	-10.58/12.96	-15.31/15.12	-12.3/10.71	-11.77/13.17	-12.14/8.84	-7/5.57	-5.35/5.24
Theta(60°)	-5.22/5	-5.57/7.9	-7.54/7.56	-7.61/9.22																				



Freq(Hz)	6.175G	6.475G
Ant. 1 Max Gain (dBi)	1.72	1.94
Ant. 2 Max Gain (dBi)	1.68	1.96
Ant. 3 Max Gain (dBi)	2.77	2.37
Ant. 4 Max Gain (dBi)	2.08	1.77
Ant. 1 Polarization/ θ (°)/ ϕ (°)	Phi/82.5/187.5	Phi/97.5/157.5
Ant. 2 Polarization/ θ (°)/ ϕ (°)	Phi/165/127.5	Theta/157.5/217.5
Ant. 3 Polarization/ θ (°)/ ϕ (°)	Theta/135/262.5	Theta/135/262.5
Ant. 4 Polarization/ θ (°)/ ϕ (°)	Theta/60/172.5	Theta/37.5/180
Max Gain (dBi)	2.77	2.37
DG [1SS] (dBi)	4.13	4.12
DG [2SS] (dBi)	2.77	2.37
DG [4SS] (dBi)	2.77	2.37



Radiated Composite Gain of 6GHz UNII 5~6

Appendix B

DG 1SS Result

Freq(Hz)	6.175GPol	Phi0	Phi1	Phi2	Phi3	Phi4	Phi5	Phi6	Phi7	Phi8	Phi9	Phi10	Phi11	Phi12	Phi13	Phi14	Phi15	Phi16	Phi17	Phi18	Phi19	Phi20	Phi21	Phi22	Phi23	Phi24	Phi25	Phi26	Phi27	Phi28	Phi29	Phi30	Phi31	Phi32	Phi33	Phi34	Phi35									
DG(dB)	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)	-3.41/2.86	-2.34/2.01	-1.97/2.01	-1.87/1.57	-1.43/1.15	-1.68/1.69	-1.76/1.58	-1.54/1.16	-1.56/1.68	-1.76/1.98	-3.72/3.38	-4.36/4.31	-3.55/2.93	-2.43/2.04	-1.95/1.71	-1.73/1.73	-1.89/2.08	-2.03/2	-1.96/1.62	-1.37/1.32	-1.43/1.91	-2.35/2.92	-3.72/4.14	-1.56/2.23	-2.52/3.16	-3.11/3.58	-3.12/3.36	-3.96/4.79	-5.21/4.45	-3.84/3.97	-3.58/3.63	-2.45/1.87	-1.44/1.35	-1.75/2.15	-2.41/2.39	-2.65/2.77	-2.96/2.49	-1.89/2.1	-3.97/4.64	-5.26/5.79	-6.63/8	-8.76/7.8	-6.15/4.44	-2.92/2.06	-1.61/2.23	-2.52/3.16
Theta(7.5)	-3.57/2.71	-2.41/2	-1.94/1.83	-1.91/1.98	-2.12/2.02	-1.61/1.55	-1.79/1.62	-1.29/1.22	-1.57/2.06	-2.47/2.9	-3.48/4.06	-4.41/4.46	-3.83/3.02	-2.51/94	-1.57/1.24	-1.31/1.33	-1.28/1.13	-1.45/1.74	-2.32/1.96	-1.47/1.15	-1.33/1.75	-2.44/3.31	-4.09/4.2	-3.77/3.85																						
Theta(15)	-2.94/2.76	-2.82/2.72	-3.2/3.39	-3.67/3.86	-4.03/3.68	-3.15/2.5	-1.88/1.36	-1.09/0.86	-0.63/0.77	-1.48/2.4	-2.84/2.95	-3.37/3.73	-3.67/3.19	-2.81/2.29	-1.96/1.61	-1.64/1.96	-2.34/3.25	-2.58/3.2	-4.14/4.63	-4.59/4.42	-3.51/2.99	-2.56/2.71	-3.14/3.39	-3.2/3.09																						
Theta(22.5)	-3.11/3.58	-3.12/3.36	-3.96/4.79	-5.21/4.45	-3.84/3.97	-3.58/3.63	-2.45/1.87	-1.44/1.35	-1.75/2.15	-2.41/2.39	-2.65/2.77	-2.96/2.49	-1.89/2.1	-3.97/4.64	-5.26/5.79	-6.63/8	-8.76/7.8	-6.15/4.44	-2.92/2.06	-1.61/2.23	-2.52/3.16																									
Theta(30)	-3.18/3.13	-2.92/3.21	-4.5/4.99	-3.86/3.64	-3.25/2.66	-2.23/2.09	-2.08/2.01	-1.87/1.79	-1.86/2.18	-2.59/2.62	-2.87/2.94	-2.47/1.74	-1.77/2.26	-2.63/1.93	-1.45/2.08	-2.68/3.24	-3.55/3.3	-3.4/4.1	-5.46/6.28	-6.91/6.69	-6.31/5.86	-5.05/3.22	-1.46/1.41	-1.95/2.84																						
Theta(37.5)	-3.27/3.69	-4.07/4.7	-6.07/4.78	-2.87/2.15	-1.6/1.66	-1.2/2.21	-0.11/0.12	-0.46/0.71	-1.13/2.05	-2.52/2.3	-2.49/2.66	-3.03/3.03	-3.38/3.16	-1.94/2	-3.29/4.15	-4.15/3.48	-4.08/5.96	-6.86/7.47	-7.47/6.42	-6.26/5.74	-4.45/4.47	-4.29/3.37	-1.68/0.63	-1.21/2.39																						
Theta(45)	-3.65/4.56	-5.28/5.04	-5.77/4.69	-3.52/3.37	-3.52/3.14	-1.95/1.04	-0.66/0.75	-1.02/1.76	-2.04/2.04	-2.5/2.36	-1.97/1.91	-1.59/1.29	-1.37/2.63	-2.94/3.49	-4.61/4.52	-4.7/5.25	-6.57/7.33	-6.29/7.02	-9.06/8.11	-6.6/4.74	-4.58/2.94	-3.34/2.42	-1.61/1.33	-1.24/2.15																						
Theta(52.5)	-4.15/4.21	-7.4/5.84	-5.91/4.38	-4.16/4.4	-4.28/3.4	-2.74/2.47	-2.58/2.48	-2.64/3.18	-2.97/2.81	-3.27/3.07	-1.66/0.89	-1.23/1.18	-2.01/3.68	-3.65/4.96	-5.69/5.22	-6.04/6.95	-7/6.14	-5.92/4.95	-6.81/6.82	-5.68/3.56	-2.37/2.43	-1.22/1.71	-1.84/0.86	0.74/1.86																						
Theta(60)	-3.35/4.84	-3.82/2.41	-3.1/4.29	-4.14/2.85	-2.4/1.42	-1.73/2.05	-2.6/2.81	-2.07/1.04	-0.59/0.99	-0.98/1.37	-2.89/2.21	-1.12/1.67	-1.64/2.44	-3.98/4.43	-4.87/6.7	-6.19/6.35	-3.86/2.74	-2.78/3.66	-3.44/4.84	-6.88/5.67	-4.16/4.03	-2.78/0.53	-0.63/1.68	-1.1/1.84																						
Theta(67.5)	-4.42/4.29	-3.49/3.16	-3.75/4.33	-3.92/2.98	-2.1/1.47	-1.69/2.03	-1.72/1.2	-0.69/0.17	0.43/1	0.32/0.96	-3.07/1.21	-3.2/5.44	-3.1/2.94	-4.23/3.99	-2.37/2.22	-2.96/3.38	-3.96/5.13	-4.67/2.46	-2.08/3.91	-8.1/8.56	-5.23/4.68	-2.64/0.78	-0.65/1.29	-1.63/3.35																						
Theta(75)	-3.03/1.97	-2.12/2.17	-2.48/3.21	-2.49/1.23	-0.88/1.51	-2.06/3.23	-3.36/3.2	-1.91/1.3	-1.12/0.71	0.47/0.19	-3.55/5.54	-3.31/4	-2.78/2.34	-2.15/4.11	-3.9/3.13	-3.39/3.13	-3.62/5.36	-6.12/3.73	-2.24/3.17	-9.85/7.83	-7.2/4.9	-4.53/3.45	-2.47/1.62	-1.66/2.97																						
Theta(82.5)	-2.88/1.62	-2.59/3.39	-2.38/2.04	-2.77/2.37	-1.8/2.52	-3.68/4.62	-3.68/3.62	-4.15/4.13	-3.2/2.34	-2.27/1.6	-1.49/1.01	-2.99/3.93	-4.31/2.14	-0.88/0.98	-0.91/1.85	-4.08/4.45	-6.35/4.86	-3.1/5.68	-3.83/2.85	-2.76/3.96	-5.14/6.32	-4.55/5.16	-4.02/1.66	-0.75/1.38	-4.32/3.96																					
Theta(90)	-1.43/2.32	-3.09/6.37	-3.32/2.59	-3.39/2.42	-1.99/2.22	-4.12/4.27	-2.51/2.92	-2.89/2.41	-2.67/1.69	-1.81/2.84	-2.36/2.21	-2.87/1.61	-0.54/2.84	-2/1.89	-3.76/4.83	-3.79/7.07	-5.31/3.65	-5.57/5.16	-4.04/5.11	-11/6.61	-1.74/2.49	-4.05/4.43																								
Theta(97.5)	-0.58/3.43	-4.61/6.5	-3.15/2.86	-4.44/5.18	-3.2/2.44	-4.47/5.47	-3.13/2.75	-4.68/3.4	-2.39/1.87	-2.76/3.23	-2.07/2.01	-3.75/2.75	-1.32/4.06	-2.36/1.91	-2.04/3.43	-5.23/7.85	-6.11/5.44	-7.7/6.23	-4.55/3.98	-4.42/4.31	-4.52/3.52	-2.07/1.06	-2.9/4.07	-2.98/1.95																						
Theta(105)	-0.58/2.59	-4.85/3.49	-3.87/2.93	-3.65/4.94	-2.32/1.38	-3.04/4.3	-3.07/3.02	-2.02/2.01	-2.27/1.6	-1.17/1.32	-1.97/1.35	-3.03/2.87	-3.77/6.89	-5.52/4.6	-5.31/7.05	-4.36/4.59	-6.08/2.48	-2.9/1.89	-2.85/1.52	-6.06/3.94	-1.6/2.47	-4.05/4.44	-4.05/4.44	0.77/0.34																						
Theta(112.5)	-1.88/4.15	-4.04/2.21	-3.32/2.32	-2.33/2.11	-3.78/2.25	-2.67/2.58	-2.57/2.28	-2.61/4.09	-3.43/3.28	-3.05/2.95	-2.46/5.35	-5.47/6.66	-8.24/7.29	-6.78/5.23	-4.25/0.57	-3.26/6.63	-2.5/0.87	-1.21/2.22	-3.26/5.63	-4.07/5.69	-6.71/6.84	-5.99/4.05	-5.62/0.77	1.7/0.34																						
Theta(120)	-4.08/4.43	-4.35/1.87	-1.27/2.4	-2.54/1.62	-2.32/3.06	-1.79/1.47	-1.08/2.14	-2.9/3.19	-3.43/2.66	-2.74/3.78	-5.6/4.64	-3.51/5.72	-7.28/5.31	-4.02/0.79	-2.12/0.7	-3.88/11.68	-4.84/2.49	-1.78/5.63	-6.22/4.69	-4.77/6.82	-9.09/7.02	-4.51/1.99	-0.43/0.51	-0.54/2.86																						
Theta(127.5)	-1.06/2.8	-1.97/1.18	1.06/0.11	-0.45/0.33	-0.53/1.7	-2.55/2.09	-2.03/2.37	-3.15/2.94	-3.3/3.7	-5.9/8.88	-3.3/2.2	-2.27/2.5	-2.92/3.73	-6.01/3.2	-1.13/1.57	-2.59/7.05	-4.91/2.82	-3.44/4.74	-7.1/4.61	-3.83/5.99	-5.76/5.49	-6.62/3.13	0.05/0.09	0.16/0.09																						
Theta(135)	-3.12/3.23	-1.78/1.69	-0.37/0.08	-0.32/0.87	-0.98/1.5	-1.55/2.64	-2.74/3.15	-3.25/3.08	-3.14/3.09	-1.81/1.6	-1.76/1.14	-0.6/2.54	-3.44/5.24	-7.76/7.3	5.55/7.72	-4.47/3.65	-3.97/3.23	-7.1/9.12	-5.71/4.1	-3.89/5.02	-5.27/6.61	-9.26/6.25	-2.95/1.57	-2.48/2.46																						
Theta(142.5)	-3.39/4.26	-3.93/3.01	-2.3/1.47	-2.89/3.28	-3.39/1.5	-0.6/0.88	-1.7/1.64	-3.21/3.1	-2.31/2.38	-2.89/2.37	-2.44/3.7	-5/5.12	-4.44/5.12	-5.15/4.08	-3.7/3.45	-2.34/4.12	-7.37/9.44	-10.36/8.65	-7.28/4.67	-2.95/4.18	-5.72/5.6	-5.34/3.93	-2.95/3.2	-4.28/4.9																						
Theta(150)	-4.18/3.83	-3.71/3.89	-4.11/3.47	-3.21/4.12	-4.13/4.48	-4.73/5.1	-4.27/3.29	-2.44/1.39	-0.74/0.65	-0.7/1.05	-1.89/2.64	-3.7/4.86	-3.85/2.45	-1.48/1.71	-2.33/2.23	-2.93/2.53	-2.19/3.47	-5.53/3.88	-12.15/9.47	-6.11/5.8	-4.52/4.59	-3.57/3.61	-4.55/0.76	-7.76/5.65																						
Theta(157.5)	-3.71/4.43	-5.26/5.04	-4.6/4.36	-4.81/5.51	-6.25/6.15	-5.98/5.59	-5.71/4.4	-3.48/2.75	-2.35/1.97	-2.21/2.35	-3.39/4.45	-4.87/4.6	-2.62/1.12	-1.17/2.15	-2.94/2.56	-2.2/2.65	-5.06/8.35	-9.35/10.89	-12.15/12.71	-11.01/10.2	-9.22/7.38	-5.75/5.24	-3.86/4.28	-4.02/3.21																						
Theta(165)	-6.39/6.05	-6.53/5.25	-4.96/4.24	-3.85/3.48	-3.02/2.37	-1.92/1.58	-1.31/1.04	-0.78/0.79	-0.31/0.38	-0.32/0.67	-0.94/1.54	-2.44/3.42	-3.9/3.47	-2.99/3.4	-4.55/5.74	-7.18/9.04	-5.11/9.42	-7.3/6.48	-6.21/6.06	-6.88/8.33	-6.67/8.5	-7.54/7.68	-7.88/7.28	-7.57/5.73																						
Theta(172.5)	-8.92/8.43	-8.17/7.97	-7.34/5.74	-4.17/3.21	-2.69/2.65	-2.83/2.73	-2.25/1.99	-1.78/1.81	-2.24/2.82	-3.72/4.73	-5.83/7.74	-8.86/9.13	-7.47/5.84	-5.57/6.19	-7.21/8.01	-8.07/7.54	-6.3/5.27	-4.88/4.99	-5.2/5.49	-6.45/6.93	-7.12/7.77	-8.2/8.83	-9.49/10.07	-8.91/8.96																						
Theta(180)	-11.68/10.22	-8.62/7.91	-7.14/6.31	-5.44/4.68	-3.74/3.22	-2.77/2.76	-2.54/2.37	-2.22/2.23	-2.4/2.52	-2.81/3.43	-4.38/4.59	-6.29/6.88	-7.01/6.73	-6.71/6.62	-6.45/6.47	-6.57/6.61	-6.69/6.42	-5.93/5.91	-6.4/6.56	-6.45/6.53	-7.05/7.77	-8.08/8.84	-8.89/9.49	-10.36/10.54																						
Theta(187.5)	-1.82/1.78	-1.59/1.51	-1.52/1.78	-2.26/2.87	-3.6/4.41	-5.05/4.65	-3.66/3.16	-2.65/2.37	-2.2/2.11	-2.02/1.96	-1.91/1.87	-1.92/1.76	-1.74/1.93	-2.62/3.19	-3.7/4.4	-4.23/4.29	-4.3/3.87	-3.49/3.22	-3.31/3.23	-3.28/2.8	-2.38/2.38	-2.27/1.98																								
Theta(7.5)	-2.33/2.46	-2.51/2.78	-2.94/2.92	-2.93/3.36	-4.09/4.33	-4.43/5.52	-5.34/4.49	-3.88/3.76	-3.59/3.41	-3.16/2.85	-2.74/2.48	-2.11/1.46	-1.24/0.81	-0.66/0.56	-0.73/1.09	-1.56/1.84	-2.14/2.71	-3.7/4.68	-4.57/4.16	-3.3/2.5	-1.95/1.8	-1.93/2.03	-2.35/2.27	-2.52/2.23																						
Theta(15)	-3.34/3.44	-3.76/3.81	-3.41/2.67	-2.22/2.42	-2.66/3.1	-3.32/3.43	-3.4/3.38	-2.63/2.49	-2.92/2.46	-2.18/2.21	-2.02/2.05	-2.06/1.53	-0.94/0.48	-0.23/0.08	-0.23/0.79	-1.78/3.01	-3.59/4.13	-4.97/5.66	-6.6/6.68	-6.29/5.97	-5.33/4.31	-3.8/3.37	-3.4/3.61	-3.39/3.39																						
Theta(22.5)	-3.34/4.11	-4.98/5.03	-3.96/3.29	-2.58/2.4	-1.77/1.09	-0.45/0.01	0.19/0.04	-0.23/0.64	-0.96/1.3	-1.73/1.82	-1.86/2.28	-1.72/1.32	-0.71/0.18	0.11/0.04	-0.94/2.21	-3/3.48	-3.84/4.91	-6.62/8.23	-8.38/9.03	-9.04/8.78	-8.33/7.01	-6.16/5.12	-5.36/5.06	-4.12/3.33																						
Theta(30)	-3.17/2.75	-3.58/3.73	-3.18/2.43	-1.34/0.53	-0.17/0.3	0.58/0.93	1.07/1.18	0.92/0.33	-0.48/1.28	-1.59/1.47	-1.64/1.68	-1.9/1.88	-1.57/1.06	-0.75/0.66	-1.22/2.35	-2/2.41	-3.64/5.28	-5.59/5.49	-6.37/6.37	-6.15/5.4	-5.																									



Radiated Composite Gain of 6GHz UNII 5~6

Appendix B

Theta (°)	-12.94-15.89	-16.04-16.05	-16.98-17.44	-16.03-12.23	-9.33-7.66	-6.89-6.71	-6.66-6.74	-6.72-7.25	-8.11-9.4	-11.89-14.32	-13.34-13.17	-8.43-7.73	-8.38-11.38	-19.81-18.93	-11.41-8.22	-7.17-7.44	-8.14-8.68	-9.02-8.38	-7.71-7.85	-8.49-9.25	-9.27-7.53	-6.72-6.57	-6.67-7.12	8.71-10.84
Theta (30°)	-13.19-14.47	-13.56-14.08	-17.02-15.48	-10.43-7.76	-6.82-7.62	-6.94-6.94	-7.72-8.36	-8.72-8.79	-8.52-8.88	-9.44-10.29	-12.98-13.17	-9.87-7.51	-7.25-10.62	-18.55-15.23	-8.9-7.3	-7.58-8.84	-8.47-10.77	-6.54-7.09	-8.13-8.28	-10.42-10.22	-9.1-9.88	-11.28-10.86	-9.92-9.23	-9.38-11.1
Theta (37.5°)	-12.31-11.87	-10.38-11.26	-16.16-11.27	-6.98-7.59	-5.21-5.28	-5.25-5.4	-5.71-5.76	-5.49-5.81	-7.48-7.7	-11.32-11.57	-11.13-10.05	-16.68-19.05	-13.81-10.86	-9.66-11.5	-14.34-11	-9.74-10.07	-10.37-10.65	-10.08-8.75	-7.77-7.42	-8.74-11.06	-12.71-17.38	-12.47-9.88	-10.64-11.9	
Theta (45°)	-13.53-13.99	-12.81-13.15	-15.32-14.13	-8.75-7.26	-6.98-6.94	-6.43-6.21	-6.04-6.31	-6.35-6.48	-6.19-5.8	-6.71-7.59	-8.21-10.68	-15.54-18.9	-17.26-15.88	-18.01-13.99	-12.3-9.32	-8.18-8.99	-8.82-9.2	-8.81-9.31	-11.45-10.66	-7.33-7.69	-10.03-9.13	-11.65-15.77	-18.05-12.4	-11.07-13.57
Theta (52.5°)	-19.21-18.02	-16.37-13.53	-16.17-14.27	-10.38-9.04	-8.34-7.45	-7.24-7.77	-7.99-7.71	-8.9-8.42	-8.32-7.24	-7.73-8.26	-8.88-10.63	-13.86-18.07	-17.57-14.79	-13.31-15.75	-12.25-9.5	-10.57-8.04	-8.81-10.77	-19.22-17.76	-17.04-19.41	-18.12-18	-13.79-11.08	-7.96-9.26	-17.83-18.7	-10.98-12.45
Theta (60°)	-17.96-16.8	-10.53-10	-10.29-9.63	-8.08-6.58	-6.5-6.53	-5.76-6.16	-7.00-7.97	-9.07-9.75	-8.92-11.15	-13.22-12.64	-11.46-9.13	-9.44-16.92	-18.11-14.17	-13.62-18.61	-13.47-11.32	-9.84-9.43	-7.66-7.53	-8.74-9.85	-8.49-9.17	-12.57-16.07	-14.98-15.54	-10.88-12.06	-15.88-17.82	-13.98-14.93
Theta (67.5°)	-16.44-19.05	-16.19-16.16	-12.54-10.49	-10.27-8.41	-6.92-6.02	-4.73-4.11	-3.84-4.24	-5.03-5.81	-5.73-5.43	-7.51-12.51	-13.62-7.9	-9.94-19.38	-13.71-12.34	-15.25-16.36	-7.88-7.78	-8.97-8.5	-7.2-9.52	-11.92-12.61	-10.29-13.46	-16.48-12.42	-13.32-15.14	-19.67-12.24	-14.51-17.5	-14.59-14.33
Theta (75°)	-15.38-18.61	-14.55-11.25	-9.75-9.19	-3.99-6.37	-4.63-4.49	-3.68-4.18	-3.82-3.48	-3.3-3.55	-4.93-5.95	-3.92-5.31	-12.41-13.43	-11.1-11.8	-12.67-12.12	-10.44-14.5	-10.85-8.36	-8.41-7.88	-6.64-9.84	-13.43-10.14	-8.67-11.07	-16.48-16.5	-14.13-10.85	-15.47-17.81	-16.21-18.58	-12.62-11.45
Theta (82.5°)	-15.76-17.62	-18.61-16.85	-10.54-8.55	-11.11-6.39	-4.7-5.48	-7.02-6.02	-4.31-4.48	-5.59-5.08	5-5.7	-6.39-10.52	-14.76-11.71	-16.67-13.25	-9.95-17.28	-14.13-10.79	-11.71-11.97	-14.88-7.77	-7.72-13.67	-8.11-5.15	-5.3-5.72	-8.65-14.03	-14.24-10.16	-10.51-8.33	-15.18-17.77	-11.29-13.02
Theta (90°)	-9.92-15.44	-10.93-18.14	-10.54-8.15	-12.39-7.3	-6.22-6.26	-8.61-6.66	-4.86-5.4	-7.06-6.74	-7.18-5.71	-7.26-8.71	-9.61-14.22	-18.98-12.15	-8.92-14.55	-14.29-9	-14.46-14.71	-18.16-9.22	-6.52-10.16	-9.51-6.35	-5.25-5.53	-7.17-11.39	-17.93-11.42	-8.86-8.01	-17.44-16.96	9.61-8.18
Theta (97.5°)	-13.72-16.35	-11.23-18.23	-13.84-8.85	-11.38-10.19	-7.18-7.14	-11.46-11.01	-8.147-6.6	-13.35-9.38	-9.87-11.2	-11.15-13.4	-18.36-18.03	-19.3-13.42	-11.94-18.24	-18.62-17.32	-14.15-11.78	-14.34-8.64	-6.02-7.58	-12.11-8.58	-9.47-7.11	-13.68-13.46	-18.45-11.18	-7.64-6.61	-13.08-18.73	-15.56-13.65
Theta (105°)	-10.61-11.85	-9.83-9.97	-9.64-7.23	-6.75-8.19	-5.96-4.79	-5.08-2.65	-6.49-8.3	-7.34-8.7	-7.21-8.2	-8.187-5.7	-11.12-14.75	-11.44-12.1	-13.59-19.34	-18.65-17.2	-17.44-12.16	-16.87-6.32	-13.77-11.69	-9.27-9.41	-11.48-18.4	-13.64-12.43	-15.73-5.17	-8.29-12.37	-6.76-11.97	
Theta (112.5°)	-12.11-12.84	-9.77-7.85	-15.66-8.97	-5.59-5.7	-5.75-5.15	-4.33-4.51	-4.98-6	-6.7-7.1	-6.77-6.66	-7.5-8.64	-11.23-16.76	-14.13-17.54	-18.15-17.47	-16.01-15.35	-14.73-6.94	-6.12-11.43	-4.25-2.07	-4.74-9.49	-7.32-18.03	-9.74-9.54	-9.94-10.43	-5.77-5.28	-11.55-9.13	-6.52-13.62
Theta (120°)	-10.53-8.68	-12.08-14	-11.59-15.99	-7.65-6.19	-5.77-6.33	-3.48-2.95	-1.96-2.09	-3.09-3.27	-6.12-6.43	-6.89-9.97	-15.3-13.45	-11.51-8.85	-17.99-17.77	-14.51-7.13	-13.11-8.72	-10.31-18.74	-8.69-4.43	-5.41-10.91	-17.48-13.33	-18.28-10.38	-18.47-17.8	-6.04-7.27	-8.57-8.01	-7.2-13.03
Theta (127.5°)	-7-13.12	-11.25-6.44	-5.87-3.1	-8.03-4.3	-3.62-3.79	-4.22-4.07	-3.63-2.53	-2.77-3.87	-4.69-5.97	-10.53-12.78	-11.48-12.15	-16.42-18.73	-12.14-12.94	-18.61-12.29	-8.13-5.82	-7.57-9.93	-9.87-10.72	-19.19-12.3	-15.17-13.12	-16.87-9.42	-15.81-8.77	-12.57-8.5	-6.67-15	-6.83-6.45
Theta (135°)	-8.67-8.49	-8.41-8.84	-8.61-7.37	-6.45-6.61	-4.94-4.73	-4.19-4.18	-4.39-5.2	-5.48-6.42	-7.32-8.82	-9.1-12.85	-15.29-9.18	-9.08-15.76	-17.03-10.52	-18.51-14.67	-11.51-9.07	-11.24-8.94	-6.51-6.53	-13.97-16.11	-18.8-15.13	-11.77-15.27	-13.05-12.55	-14.75-17.98	-10.28-11.11	-9.37-8.81
Theta (142.5°)	-10.04-12.34	-11.33-9.83	-8.46-7.82	-7.31-6.22	-5.71-4.31	-3.95-4.46	-5.28-6.28	-7.52-10.03	-14.59-14.13	-17.29-18.08	-18.89-16.38	-17.87-19.39	-18.84-17.42	-18.45-11.2	-8.88-11.9	-12.88-18.22	-18.98-13.88	-15.37-13.53	-11.89-11.45	-12.17-13.12	-13.89-13.81	-12.47-12.33	-11.45-9.98	
Theta (150°)	-8.03-8.12	-7.33-8.17	-8.58-5.88	-8.17-7.06	-6.02-6.51	-6.96-7.75	-8.54-9.98	-9.43-10.62	-5.58-5.76	-5.69-6.01	-6.59-10.16	-18.77-18.74	-13.71-13.51	-15.57-12.86	-16.82-19.6	-18.27-11.23	-15.85-8.26	-8.23-11.58	-17.88-17.33	-12.12-12.15	-14.31-15.33	-18.28-8.26	-7.67-11.26	-11.29-10.89
Theta (157.5°)	-8.67-10.07	-12.84-11.91	-8.35-7.44	-8.01-9.57	-10.4-8.7	-7.79-6.81	-6.07-6.4	-3.53-2.97	-3.45-4.09	-3.43-2.94	-5.06-9.65	-12.84-14.77	-12.37-10.48	-13.22-17.95	-18.52-12.69	-9.03-7.39	-8.24-10	-10.96-14.61	-19.16-18.27	-18.18-18.58	-18.42-18.06	-18.16-17.54	-14.49-16.67	-13.51-9.28
Theta (165°)	-13.01-10.68	-9.76-7.79	-5.78-4.25	-3.88-3.47	-2.84-2.02	-1.32-1.01	-0.96-0.91	-0.92-1.1	0.051-6.8	0.51-1.17	-2.58-4.51	-7.15-11.34	-17.1-18.76	-16.48-16.23	-17.39-15.66	-15.46-17.76	-18.77-13.54	-11.81-6.18	-11.58-10.79	-10.42-11	-12.23-11.08	-10.52-12.62	-18.19-17.67	-17.57-16.25
Theta (172.5°)	-16.16-12.8	-10.2-8.3	-6.62-5.34	-3.92-2.93	-2.18-1.9	-1.61-1.52	-1.63-1.69	-1.57-1.52	-1.9-2.81	-4.15-4.95	-6.99-9.56	-13.33-16.59	-14.98-13.02	-15.78-14.48	-14.96-12.45	-10.77-10.11	-10.44-11.43	-11.87-10.98	-9.68-9.37	-9.45-9.69	-9.98-11.42	-14.16-18.05	-19.02-18.71	
Theta (180°)	-15.24-12.61	-10.37-8.73	-7.27-6.17	-5.11-4.03	-3.24-2.89	-2.81-2.77	-2.66-2.54	-2.46-2.67	-3.01-3.48	-4.29-5.65	-7.59-9.91	-12.48-14.5	-16.11-16.17	-15.41-14.12	-13.08-12.95	-12.56-11.44	-9.71-8.27	-7.52-7.03	-6.92-7.01	-7.11-7.98	-9.02-10.43	-11.28-12	-13.04-16.38	-17.01-15.45
Freq(Hz)	6175GPol.	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°)
Theta (0°)	-9.98-8.77	-7.79-7.82	-8.51-8.86	-9.51-9.85	-10.24-11.16	-13.05-15.61	-17.16-18.63	-18.13-18.2	-14.83-12.15	-9.83-8.84	-8.22-7.62	-7.06-6.53	-6.35-6.32	-6.77-7.79	-8.83-9.78	-11.07-12.18	-13.34-14.94	-16.12-17.6	-19.15-18.28	-18.88-18.92	-18.5-18.19	-19.71-15.39	-13.12-12.45	-11.57-10.72
Theta (7.5°)	-7.35-7.63	-8.15-9.36	-10.91-11.87	-13.04-14.42	-14.99-15.46	-16.23-19.1	-18.14-17.83	-18.09-18.86	-18.86-13.37	-17.05-15.86	-14.84-12.52	-10.09-8.25	-6.99-6.49	-6.56-6.54	-7.16-8.19	-9.71-10.57	-13.13-12.37	-14.76-10.95	-17.51-18.21	-17.41-13.35	-10.88-9.63	-9.17-8.76	-8.25-8.73	-7.27-7.35
Theta (15°)	-7.14-7.84	-8.88-9.4	-11.96-16.7	-6.93-7.18	-8.08-8.71	-9.31-9.16	-10.42-12.12	-15.1-16.54	-10.97-14.99	-16.92-17.15	-15.16-12.92	-14.91-14.24	-15.96-12.92	-9.71-8.99	-7.59-7.88	-9.10-9.11	-13.93-18.45	-18.98-16.24	-13.73-12.53	-11.37-10.61	-9.98-8.89	-8.33-7.59	-7.04-6.48	-6.31-6.83
Theta (22.5°)	-6.21-6.64	-7.03-6.48	-4.65-3.87	-3.8-3.95	-4.64-5.4	-6.74-7.62	-8.47-8.97	-11.62-11.89	-11.89-13.76	-17.47-16.44	-14.94-15.86	-15.62-14.33	-12.41-10.45	-9.35-10.19	-12.76-17.29	-18.76-18.77	-17.41-15.77	-14.63-14.98	-14.97-14.1	-13.72-13.82	-12.33-9.17	-7.69-7.68	-7.73-6.74	-6.11-6.59
Theta (30°)	-5.65-3.91	-3.65-3.35	-3.29-3.79	-4.05-4.08	-4.89-6.41	-7.38-8.39	-8.6-8.14	-8.92-10.54	-12.61-13.82	-16.33-17.61	-18.79-15.71	-17.95-19.1	-18.18-12.54	-10.62-10.82	-13.57-19.17	-18.97-17.76	-18.72-16.95	-13.39-11.91	-11.15-10.19	-9.05-7.6	-6.27-6.07	-6.22-6.07	-5.32-3.96	-4.28-6.73
Theta (37.5°)	-5/4-0.2	-1.89-1.92	-2.96-3.29	-3.25-4.61	-6.03-6.47	-7.48-8.11	-8.04-8.45	-9.43-10.93	-12.21-14.54	-18.51-18.24	-17.23-15.26	-14.48-14.91	-13.99-12.66	-12.86-12.47	-13.33-15.72	-16.86-18.46	-13.74-16.41	-13.81-11.12	-8.97-8.09	-7/6-2.8	-5.91-5.95	-5.63-5.12	-4.38-3.75	-3.85-5.48
Theta (45°)	-7.49-4.77	-1.75-2.22	-3.05-4.16	-4.49-5.47	-6.04-7.37	-8.59-9.3	-9.57-9.75	-11.75-15.33	-18.17-19.2	-18.92-17.52	-16.41-15.44	-16.41-16.87	-17.12-16.35	-18.18-16.9	-17.64-19.03	-13.76-11.48	-9.6-9.5	-11.11-13.5	-11.56-10.21	-7.81-5.6	-5.11-4.41	-4.32-2.54	-1.92-4	
Theta (52.5°)	-3.4-5.05	-2.8-2.74	-1.8-0.87	-0.69-1.39	-2.75-																			



Radiated Composite Gain of 6GHz UNII 5~6

Appendix B

Theta	-16.66/-18.02	-12.06/-7.67	-3.34/-1.59	-2.54/-4.36	-6.24/-5.37	-4.83/-4.23	-5.14/-6.92	-7.79/-7.99	-7.54/-6.86	-7.6/-10.72	-14.93/-17.49	-17.04/-12.41	-14.43/-14.26	-12.79/-10.04	-9.31/-11.51	-15.94/-14.2	-18.14/-16.62	-9.46/-10.06	-13.75/-10.94	-14.24/-19.04	-17.88/-12.29	-10.43/-9.37	-9.64/-8.71	-7.98/-10.53
Phi(135°)	-13.41/-13.97	-12.88/-9.13	-6.12/-3.9	-2.79/-3.8	-5.41/-7.42	-6.79/-5.93	-5.07/-4.74	-4.77/-4.98	-5.89/-6.48	-5.87/-5.68	-7.74/-12.5	-13.12/-9.44	-9.28/-13.11	-13.31/-12.58	-9.1/-7.29	-6.81/-11.93	-13.88/-15.01	-16.46/-18.09	-12.21/-11.29	-18.28/-15.43	-16.08/-11.69	-14.22/-13.47	-11.01/-9.57	-9.53/-10.37
Phi(142.5°)	-13.04/-12.35	-10.11/-8.65	-6.76/-6.01	-5.58/-4.8	-4.29/-3.72	-2.83/-2.05	-1.98/-2.12	-2.02/-2.15	-3.21/-4.96	-6.6/-7.36	-7.03/-7.86	-8.96/-13.1	-12.21/-10.49	-12.85/-17.95	-16.51/-10.67	-10.95/-12.98	-15.26/-18.78	-16.39/-15.16	-13.59/-10.58	-10.41/-17.77	-17.71/-16.59	-11.45/-11.12	-9.99/-10.38	-13.33/-18.28
Phi(150°)	-17.64/-19.08	-16.21/-14.57	-11.83/-8.55	-7.48/-7.23	-6.8/-6.58	-6.67/-6.6	-5.55/-4.11	-3.22/-3.02	-2.8/-2.92	-3.73/-5.77	-8.15/-9.35	-11.25/-17.11	-17.92/-13.85	-12.11/-16.01	-17.26/-18.59	-18.59/-18.65	-18.81/-11.38	-12.86/-17.34	-18.44/-11.98	-10.33/-13.13	-11.31/-8.73	-8.5/-8.99	-9.36/-11.75	-16.55/-19.08
Phi(157.5°)	-18.73/-17.79	-18.61/-18.66	-18.04/-12.62	-9.32/-8.28	-8.31/-8.51	-8.87/-9.05	-8.58/-8.04	-7.47/-7.27	-7.39/-7.66	-8.56/-9.66	-10.19/-10.55	-12.61/-16.82	-13.56/-12.39	-15.4/-18.17	-18.77/-18.17	-17.72/-17.56	-14.55/-13.48	-15.49/-17.91	-17.57/-18.69	-14.89/-14.37	-11.79/-8.45	-7.77/-8.74	-11.26/-14.84	-18.74/-18.4
Phi(165°)	-17.78/-18.83	-17.72/-19.63	-15.83/-12.52	-10.85/-9.19	-7.68/-6.61	-6.22/-6.13	-6.09/-5.8	-5.45/-5.22	-5.24/-5.79	-6.55/-7.06	-7.64/-9.24	-11.87/-15.44	-18.6/-19.34	-19.18/-55	-17.96/-18.65	-18.36/-17.08	-18.29/-16.91	-14.47/-14.26	-14.53/-13.97	-12.89/-12.78	-11.82/-11.86	-12.86/-13.79	-15.05/-17.37	-18.32/-17.91
Phi(172.5°)	-17.86/-18.11	-17.77/-17.44	-17.79/-14.99	-12.12/-9.65	-8.91/-8.98	-8.93/-7.94	-6.44/-5.44	-5.48/-6.05	-6.58/-6.84	-7.23/-7.95	-9.47/-12.14	-15.7/-18.24	-18.17/-17.35	-18.29/-18.67	-18.16/-19.16	-19.13/-16.69	-12.89/-10.56	-9.48/-8.9	-8.04/-8.06	-9.21/-10.63	-11.92/-13.63	-15.68/-17.19	-18.17/-18.5	-17.29/-17.61
Phi(180°)	-19.21/-18.04	-19.06/-18.21	-16.86/-14.51	-12.6/-10.59	-8.65/-7.36	-6.49/-5.97	-5.83/-5.62	-5.89/-6.44	-7.47/-8.67	-10.22/-12.39	-14.83/-17.52	-18.29/-18.47	-18.4/-17.66	-18.77/-18.08	-16.35/-14.06	-12.83/-13.27	-14.41/-14.81	-13.45/-12.29	-12.11/-12.41	-12.21/-11.84	-11.81/-11.99	-12.56/-13.44	-14.18/-15.58	-17.02/-18.16
Freq(Hz)	6.175GPol.	ThetaAnt. 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°)	-0.15/-0.7	-1.53/-2.62	-3.35/-4.07	-5.02/-6.31	-8.71/-12.09	-15.74/-18.89	-18.17/-12.91	-9.27/-7.21	-5.88/-4.89	-4.15/-3.59	-3.12/-2.79	-2.49/-2.46	-2.61/-3.02	-3.64/-4.2	-4.82/-6.5	-8.91/-12.18	-17.45/-19.18	-18.09/-13.79	-10.25/-7.66	-5.49/-3.74	-2.67/-1.93	-1.28/-0.8	-0.48/-0.05	0.22/0.14
Theta(7.5°)	-2.39/-3.08	-4.14/-5.68	-6.6/-7.65	-8.82/-10.93	-15.02/-18.07	-18.18/-94	-12.66/-8.45	-6.23/-4.85	-3.59/-2.42	-1.43/-0.74	-0.34/-0.19	-0.12/-0.12	-0.36/-0.71	-1.18/-1.74	-2.63/-3.86	-5.2/-6.73	-8.46/-11.22	-15.31/-17.92	-17.49/-13.61	-9.57/-7.16	-5.78/-4.94	-4.23/-3.57	-3.27/-2.67	-2.32/-2.24
Theta(15°)	-6.99/-7.54	-9.46/-11.73	-13.37/-15.05	-16.55/-18.83	-18.69/-18.73	-18.75/-16.28	-13.36/-10.84	-8.61/-6.6	-4.6/-2.97	-1.89/-1.12	-0.45/-0.12	0.05/0.1	0.04/0.17	0.19/0.09	-0.41/-1.49	-3.18/-5.45	-7.85/-11.23	-12.21/-14.7	-18.76/-18.63	-17.54/-12.82	-10.07/-8.72	-7.98/-7.34	-6.71/-6.45	
Theta(22.5°)	-11.71/-15.93	-19.23/-17.98	-17.37/-18.94	-18.49/-18.58	-16.78/-13.96	-12.38/-11.32	-9.9/-8.25	-6.7/-5.54	-4.46/-3.43	-2.79/-2.37	-1.59/-0.9	-0.36/0.13	0.7/0.8	0.38/0.39	-1.58/-3.03	-4.61/-5.67	-6.53/-8.26	-10.66/-11.64	-11.24/-12.13	-13.31/-15.14	-16.26/-17.36	-16.13/-14.25	-13.53/-12.81	-11.71/-10.22
Theta(30°)	-12.31/-15.3	-18.49/-17.23	-16.02/-12.45	-12.69/-13.83	-13.85/-14.56	-14.27/-11.19	-8.61/-6.68	-5.19/-4.1	-3.41/-3.4	-3.08/-2.5	-1.82/-1.07	-0.79/-0.14	0.29/0.07	0.48/-1.18	-2.14/-3.34	-4.11/-4.77	-6.65/-8.42	-8.74/-7.87	-8.54/-10.58	-12.19/-12.07	-13.22/-17.87	-18.11/-17.3	-17.51/-18.21	-15.96/-12.49
Theta(37.5°)	-13.55/-16.69	-18.88/-18.09	-18.57/-15.04	-15.03/-16.03	-17.68/-17.67	-15.37/-11.44	-9.44/-7.22	-5.18/-4.3	-3.58/-2.78	-1.89/-1.08	-1.31/-1.45	-1.14/-0.52	-0.4/-0.96	-1.48/-2.23	-2.44/-3.71	-4.12/-5.23	-6.93/-8.52	-9.6/-9.89	-9.95/-10.45	-13.57/-18.9	-18.87/-18.56	-18.45/-13.5	-12.36/-11.51	-14.39/-14.11
Theta(45°)	-9.11/-9.72	-11.57/-14.59	-16.39/-18.16	-18.89/-16.03	-13.37/-12	-10.07/-7.38	-5.62/-4.8	-4.54/-3.53	-2.45/-1.93	-1.93/-1.97	-1.65/-1.98	-1.13/-0.6	-0.79/-2.13	-2.64/-3.13	-3.72/-3.91	-4.22/-6.09	-8.29/-9.08	-7.66/-6.21	-6.98/-8.92	-9.35/-10.76	-12.34/-11.16	-10.29/-7.37	-9.47/-11.3	-12.44/-10.59
Theta(52.5°)	-9.02/-10.9	-11.37/-17.03	-14.64/-9.99	-8.6/-8.73	-9.27/-9.43	-9.14/-8.74	-7.86/-7.5	-5.44/-4.1	-3.05/-2.8	-2.8/-2.62	-2.09/-1.69	0.3/0.83	-1.83/-3.36	-3.01/-3.36	-3.9/-5.02	-6.75/-7.62	-5.05/-6.22	-6.41/-8.76	-11.17/-12.92	-13.27/-10.99	-9.35/-8.66	-10.81/-10.48	-12.46/-11.16	
Theta(60°)	-9.49/-9.78	-8.21/-9.08	-8.24/-6.79	-5.41/-6.37	-8.11/-10.38	-12.04/-11.4	-10.81/-10.49	-8.13/-5.59	-4.18/-3.14	-2.57/-1.41	-1.16/-1.48	0.16/2.08	0.43/-1.18	-2.14/-2.98	-4.25/-6.11	-8.44/-11.51	-9.92/-5.81	-5.03/-4.58	-6.49/-11.62	-14.83/-12.85	-10.46/-8.35	-8.2/-10.8	-16.44/-11.91	-7.59/-9.21
Theta(67.5°)	-7.79/-6.89	-14.14/-7.08	-4.65/-6.04	-6/-2.5	-5.91/-8.22	-10.91/-14.03	-15.36/-12.34	-9.31/-6.15	-3.45/-2.52	-1.92/-0.7	-0.57/-0.42	0.09/0.05	-1.68/-2.84	-2.97/-2.73	-3.9/-6.79	-8.46/-13.09	-10.02/-7.19	-5.75/-7.6	-11.39/-17.48	-18.08/-13.99	-11.62/-7.6	-6.36/-6.14	-8.8/-11.43	-7.08/-10.03
Theta(75°)	-4.36/-5.7	-7.37/-5.78	-4.52/-3.85	-4.39/-4.38	-5.14/-7.28	-9.43/-13.49	-15.51/-13.18	-9.07/-7.22	-4.53/-5.34	-2.81/-1.81	-1.19/-1.3	-2.38/-1.82	-3.77/-6.46	-5.15/-5.31	-6.34/-6.58	-8.73/-11.78	-6.5/-4.1	-4.55/-6.17	-9.56/-15.33	-18.73/-17.47	-13.22/-8.55	-6.11/-9.4	-5.33/-4.78	-7.03/-5.36
Theta(82.5°)	-3.21/7.84	-7.99/-6.51	-5.98/-3.14	-2.41/-3.7	-4.76/-6.04	-6.81/-6.55	-7.18/-7.26	-7.42/-5.74	-6.29/-6.44	-5.91/-4.02	-2.32/-3.57	-4.57/-4.84	-5.98/-6.25	-8.12/-10.7	-9.55/-8.42	-9.9/-10.19	-6.41/-3.94	-3.06/-2.68	-9.83/-18.43	-11.73/-7.48	-10.41/-7.02	-3.74/-4.46	-5.53/-5.81	-9.56/-4.09
Theta(90°)	-5.41/-8.68	-13.41/-12.05	-9.26/-9.28	-8.01/-6.27	-7.38/-7.06	-6.81/-5.9	-5.05/-4.19	-6.4/-8.8	-7.34/-7.26	-8.37/-7.15	-4.41/-3.47	-3.76/-5.96	-6.44/-4.27	-6.71/-10.75	-12.26/-10.18	-13.27/-15.88	-8.78/-4.54	-3.51/-3.94	-6.85/-10.32	-14.01/-8.05	-7.99/-11.44	-5.23/-4.93	-5.82/-7.66	-12.27/-6.28
Theta(97.5°)	-9.62/-9.97	-8.97/-12.87	-10.32/-10.53	-9.05/-7.61	-6.22/-4.44	-5.47/-3.61	-4.05/-4.71	-7.3/-3.72	-9.29/-10.41	-9.35/-5.15	-2.95/-3.55	-3.01/-4.27	-4.02/-3.14	-6.83/-5.52	-5.48/-10.97	-1.74/-13.65	-11.52/-7.53	-12.34/-7.55	-16.32/-19	-9.67/-5.25	-10.91/-11.89	-5.51/-8.52	-7.08/-9.32	-10.19/-9.4
Theta(105°)	-10.18/-9.43	-8.26/-9.41	-9.26/-7.57	-5.79/-5.37	-4.52/-4.45	-4.5/-6.02	-5.85/-6.94	-9.62/-8.77	-8.27/-7.37	-8.46/-6.11	-3.82/-4.31	-2.24/-3.33	-3.63/-2.69	-7.55/-7.28	-3.95/-5.33	-12.21/-14.72	-14.03/-9.82	-17.05/-16.42	-18.62/-15.33	-11.44/-10.28	-8.66/-11.3	-6.11/-5.52	-10.16/-9.91	-7.39/-8.53
Theta(112.5°)	-9.07/-6.47	-6.26/-7.04	-6.88/-7.77	-8.19/-8.15	-5.92/-5.7	-6.17/-3.7	-6.85/-6.35	-7.02/-7.52	-8.04/-7.84	-6.61/-5.76	-4.21/-4.31	-5.54/-4.11	-6.85/-6.44	-10.33/-7	-7.85/-6.86	-8.81/-11.68	-9.91/-9.8	-11.87/-14.73	-12.99/-8.17	-11.87/-16.73	-12.44/-14.99	-12.82/-10.12	-10.71/-8.87	-6.89/-9.13
Theta(120°)	-8.66/-4.32	-2.62/-3.19	-4.23/-3.31	-8.46/-8.73	-8.17/-6.88	-5.88/-5.1	-6.07/-6.49	-6.53/-6.79	-6.6/-6.24	-8.01/-8.37	-7.38/-9.6	-10.11/-6.63	-7.35/-8.66	-11.21/-18.29	-10.13/-6.39	-5.74/-15.46	-14.31/-13.94	-11.87/-9.16	-17.64/-15.78	-18.78/-8.09	-10.09/-18.7	-11.29/-8.14	-10.37/-7.84	-4.71/-7.78
Theta(127.5°)	-6.65/-4.5	-3.2/-3.07	-3.3/-3.98	-5.4/-6.83	-7.49/-6.5	-5.59/-5.01	-4/-3.47	-3.86/-4.89	-7.02/-11.51	-11.89/-7.34	-8.71/-10.36	-7.19/-7.57	-7.6/-12.14	-16.21/-14.49	-12.09/-18.44	-17.96/-18	-14.65/-13	-10.63/-7.36	-16.92/-18.61	-17.59/-15.74	-15.22/-17.23	-13.42/-12.7	-15.82/-12.62	-6.95/-6.65
Theta(135°)	-6.88/-5.31	-4.99/-3.38	-3.19/-4.16	-5.61/-5.23	-4.52/-4.69	-4.67/-5.19	-4.97/-5.75	-6.44/-6.96	-8.81/-12.41	-13.97/-8.84	-11.71/-13.76	-18.71/-10.54	-12.47/-11.94	-10.85/-11.39	-19.14/-17.47	-13.43/-10.19	-9.35/-15.96	-14.25/-16.75	-15.62/-17.48	-18.88/-17.73	-18.02/-10.82	-8.76/-11.99	-13.19/-14.68	-14.84/-10.45
Theta(142.5°)	-6.74/-4	-2.24/-2.51	-1.75/-1.72	-3.5/-6.69	-7.03/-7.37	-8.3/-8.88	-8.82/-7.84	-7.71/-8.8	-10.68/-13.87	-15.29/-18.64	-19.34/-18.08	-17.95/-14.77	-18.68/-17.83	-19.71/-19.64	-18.62/-16.13	-17.71/-12.33	-11.66/-16.34	-10.74/-9.58	-13.63/-18	-14.19/-19.07	-19.28/-9.26	-7.96/-9.24	-15.58/-9.79	-9.59/-14.56
Theta(150°)	-6.99/-4.35	-2.29/-1.92	-2.58/-3.44	-4.3/-6.25	-8.79/-11.06	-11.34/-10.88	-11.2/-12.48	-12.8/-13.24	-13.67/-14.11	-16.22/-18.02	-17.64/-17.63	-17.85/-18.45	-18.27/-12.72	-11.4/-13.65	-17.83/-18.28	-18.65/-13.47	-15.91/-8.01	-16.56/-19.34	-18.91/-19.24	-18.47/-18.92	-13.71/-9.26	-8.45/-7.31	-8.9/-7.8	-9.77/-11.12
Theta(157.5°)	-8.13/-6.8	-5.84/-3.52	-3.14/-4.02	-5.18/-6.28	-6.74/-6.76	-7.55/-8.97	-10.44/-11.49	-12.51/-14.34	-19.01															



Freq(Hz)	6.695G	6.995G
Ant. 1 Max Gain (dBi)	2.27	1.82
Ant. 2 Max Gain (dBi)	1.52	1.7
Ant. 3 Max Gain (dBi)	3.71	3.4
Ant. 4 Max Gain (dBi)	2.11	2.23
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/75/180	Theta/112.5/217.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/345	Theta/97.5/270
Ant. 3 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/135/262.5	Theta/135/262.5
Ant. 4 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/37.5/157.5	Theta/37.5/172.5
Max Gain (dBi)	3.71	3.4
DG [1SS] (dBi)	4.23	4.84
DG [2SS] (dBi)	3.71	3.4
DG [4SS] (dBi)	3.71	3.4



Radiated Composite Gain of 6GHz UNII 7~8

Appendix C

DG 1SS Result

Freq(Hz)	6.695GPol	Phi0	Phi1	Phi2	Phi3	Phi4	Phi5	Phi6	Phi7	Phi8	Phi9	Phi10	Phi11	Phi12	Phi13	Phi14	Phi15	Phi16	Phi17	Phi18	Phi19	Phi20	Phi21	Phi22	Phi23	Phi24	Phi25	Phi26	Phi27	Phi28	Phi29	Phi30	Phi31	Phi32	Phi33	Phi34	Phi35
DG(dB)	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(7.5)	-4.54/3.79	-3.46/2.77	-2.32/2.27	-2.67/3.54	-4.07/4.44	-4.79/4.98	-5.04/5.44	-5.35/4.35	-3.9/3.88	-4.51/4.57	-4.17/3.81	-3.66/3.14	-2.6/2.37	-2.33/2.4	-2.71/2.55	-2.78/3.24	-3.44/3.27	-3.19/3.77	-4.22/3.61	-3.7/3.78	-4.19/4.44	-4.88/5.33	-6.13/4.98	-5.36/5.61													
Theta(15)	-4.57/4.11	-5.01/4.47	-4.49/3.84	-4.11/4.44	-4.2/4.16	-4.26/4.63	-4.59/5.01	-5.36/4.82	-4.47/4.78	-4.91/4.43	-3.95/3.52	-3.06/1.69	-0.78/0.36	-0.47/0.92	-1.39/1.51	-1.94/2.47	-3.27/3.64	-4.19/4.51	-4.59/4.74	-4.31/3.39	-2.74/2.42	-2.08/2.84	-4.6/5.26	-5.66/6.08													
Theta(22.5)	-3.89/4.82	-5.96/5.91	-5.19/4.09	-2.79/2.12	-2.24/2.67	-3.2/3.19	-2.98/2.84	-3.57/4.11	-3.91/4.57	-5.15/4.24	-3.41/2.59	-2.52/1.54	-0.29/0.3	0.31/0.65	-1.79/2.89	-4.03/5.01	-5.87/6.46	-6.97/5.62	-4.07/2.34	-1.59/1.39	-1.73/1.88	-2.94/3.28	-3.08/3.38														
Theta(30)	-2.09/3.6	-6.16/5.59	-4.16/2.98	-1.85/2.39	-3.13/2.91	-2.52/2.29	-1.88/1.89	-1.83/1.65	-1.95/2.24	-2.83/2.93	-3.05/3.99	-3.35/1.92	-0.59/0.9	0.09/0.97	-2.73/3.53	-3.49/3.77	-4.6/5.23	-6.16/6.58	-5.11/3.92	-2.28/1.12	-0.86/1.1	-0.81/1.6	-3.02/4.02	-2.93/2.77													
Theta(37.5)	-4.89/7.06	-8.13/7.35	-3.98/2.05	-0.87/0.92	-1.52/2.44	-4.08/5	-4.3/2.9	-1.94/1.14	-0.7/0.15	-0.33/1.42	-2.06/2.84	-2.66/2.02	-0.38/1.02	-1.5/2.22	-1.59/0.86	-2.5/4.45	-5.3/5.24	-4.52/3.66	-3.48/3.9	-5.05/5.5	-3.83/1.72	-0.66/0.19	-1.22/2.08	-2.3/3.56													
Theta(45)	-3.95/5.93	-6.01/5.39	-3.67/2.56	-1.65/1.37	-2.35/3.97	-5.78/7.21	-6.01/3.66	-2.17/1.65	-1.13/0.03	0.32/0.71	-1.53/2.03	-2.71/1.91	-1.17/2.16	-2.08/1	-0.6/2.8	-5.79/6.68	-6.68/7.69	-7.48/6.53	-5.63/4.17	-3.01/2.28	-2.32/1.31	-0.81/1.77	-1.18/2.22	-2.65/2.7													
Theta(52.5)	-3.89/4.54	-4.8/3.8	-2.02/0.73	-0.42/0.92	-1.23/2.82	-5.39/6.15	-6.92/5.84	-3.28/1.79	-1.93/1.87	-0.94/0.96	-2.81/2.61	-1.86/2.06	-2.68/3.54	-2.59/1.31	-1.98/4.42	-6.84/7.37	-6.65/5.13	-4.64/5.94	-5.35/5.03	-2.91/2.75	-2.92/2.36	-1.63/1.17	-3.23/1.96	-2.87/3.25													
Theta(60)	-3.08/5.55	-4.67/3.23	-2.94/1.94	-2.59/2.31	-2.31/3.23	-5.62/7.86	-8.99/8.29	-5.82/3.96	-2.89/1.9	-1.63/1.01	-1.6/2.33	-1.57/2.6	-2.24/2.44	-1.99/1.95	-3.56/4.84	-6.06/4.2	-2.55/1.83	-2.58/3.43	-3.86/4.28	-6.16/4.64	-2.82/2.45	-1.2/2.15	-2.81/1.26	-1.32/2.77													
Theta(67.5)	-3.07/3.74	-2.44/1.52	-1.07/0.86	-0.94/0.95	-0.75/0.67	-1.52/2.57	-3.23/3.27	-4.47/3.09	-2.22/2.36	-0.82/0.33	-1.36/2.52	-0.65/0.93	-1.47/2.02	-2.01/4.53	-5.9/6.75	-1.72/1.54	-1.06/2.03	-2.73/5.24	-8.29/6.53	-5.68/4.11	-2.52/2.24	-2.88/1.9	-1.91/2.22	-1.41/1.66													
Theta(75)	-4.06/3.89	-2.5/0.98	-1.65/3.19	-2.16/0.35	0.1/0.46	-0.5/1.63	-2.7/2.85	-1.73/3.24	-2.12/1.01	-1.72/1.77	-1.86/3.12	-1.51/0.88	-1.23/1.42	-1.87/1.82	-2.6/3.31	-5.12/5.89	-3.69/2.81	-2.6/2.71	-1.9/3.29	-4.5/6.05	-4.78/5.4	-4.53/2.48	-1.36/2.32	-2.83/2.79													
Theta(82.5)	-4.64/4.88	-2.78/0.7	-1.67/1.71	-0.70/0.84	-0.01/0.58	-0.18/2.65	-2.52/3.34	-2.97/1.23	-0.55/1.33	-1.87/3.29	-3.64/3.33	-1.77/1.98	-1.84/1.93	-3.07/1.7	-0.81/1.39	-3.72/4.71	-3.23/3.4	-2.65/0.91	-1.58/2.5	-3.09/3.09	-5.01/2.45	-2.91/4.23	-4.14/1.42	-2.03/3.66													
Theta(90)	-5.91/4.14	-3.94/3.01	-3.04/2.79	-0.91/0.26	-0.67/0.12	-0.73/2.67	-1.6/1.52	-3.88/2.78	-2.02/1.7	-1.8/2.23	-2.7/3.03	-1.96/0.89	-0.91/1.38	-3.37/4.37	-2.83/1.7	-3.52/6.79	-3.9/4.34	-7.08/3.46	-2.19/2.96	-3.05/4.33	-3.95/1.92	-5.59/5.18	-5.39/3.83	-6.46/5.29													
Theta(97.5)	-2.14/0.92	-4.15/5.61	-2.29/1.78	-2.45/3.15	-1.75/0.34	-0.04/1.4	-0.9/1.21	-1.03/0.57	-2.12/1.76	-1.34/1.39	-1.57/0.14	-1.15/1.5	-2.05/2.41	-3.87/3.03	-3.15/3.08	-4.4/6.56	-5.13/4.98	-8.71/4.23	-1.92/1.83	-5.35/8.76	-5.78/3.14	-2.37/2.68	-3.07/1.93	-2.16/2.15													
Theta(105)	-2.39/3.4	-5.15/0.87	-1.38/0.48	-2.97/1.4	-2.7/1.09	-0.92/1.6	-0.83/1.4	-0.42/0.37	-3.06/2.52	-2.97/2.36	0.01/0.23	-1.07/1.49	-3.85/5.7	-4.02/4.02	-3.88/9.11	-7.85/4.43	-3.01/1.1	-4.56/3.75	-3.16/4.32	-4.55/3.98	-5.36/7.81	-2/2.88	-2.49/1.73	-3.09/3.86													
Theta(112.5)	-2.84/3.01	-3.72/4.53	-2.15/0.3	-0.49/1.84	-0.67/0.78	-0.47/0.77	-0.73/1.02	-1.11/3.64	-1.71/2.4	-2.23/1.45	-3.3/1.67	-4.6/4.24	-9.11/10.26	-5.35/4.79	-8.17/2.92	-1.58/4.43	-3.22/3.04	-1.5/6.65	-6.98/8.83	-5/4.32	-4.82/5.82	-2.72/1.56	-1.97/0.52	-0.49/3.14													
Theta(120)	-3.57/5.72	-3.38/4.36	-4.67/2.62	-1.85/4.45	-2.94/1.24	-0.45/1.49	-1.69/2.79	-3.19/1.77	-2.19/2.18	-1.85/1.61	-2.6/3.75	-4.85/3.81	-4.72/4.77	-3.64/1.54	-1.9/0	-1.37/1.97	-6.51/3.68	-3.88/6.6	-5.59/3.83	-6.63/5.97	-6.64/9.03	-5.24/1.87	-0.09/0.43	-1.66/2.8													
Theta(127.5)	-2.61/0.98	-10.38	0.79/0.04	-0.42/2.2	-3.77/2.21	-1.17/1.48	-2.02/2.02	-2.18/1.34	-2.24/2.25	-1.88/1.3	-1.89/3.7	-3.25/4.14	-4.62/4.22	-0.99/1.55	-4.42/3.21	-3.96/4	-2.93/3.34	-3.93/3.77	-6.71/3.39	-6.49/4.23	-4.3/1.9	-8.11/2.06	-0.43/1.22	-0.11/0.6													
Theta(135)	-1.43/0.56	-0.120/0.94	1.97/0.64	0.43/0.2	-1.06/0.4	0.23/0.3	1.11/1.62	0.73/0.39	0.02/0.19	-0.66/2.92	4/2.34	-1.11/3.22	-1.79/1.59	8.54/3.49	-2.38/2.47	-0.49/2.21	5.3/4.71	-3.59/5.35	-4.96/6.12	-2.61/1.88	-1.71/1.71																
Theta(142.5)	-3.36/1.85	0.36/0.4	0.57/1.86	-1.88/1.42	-1.92/2.32	-2.3/2.3	-1.92/2.13	-2.43/2.76	-2.68/1.24	-0.67/1.48	-2.51/2.15	-2.53/4.58	-7.9/1.77	-4.21/2.88	-4.47/3.54	-3.42/2.77	-2.72/3.98	-4.08/4.23	-5.58/3.72	-3.77/7.47	-8.52/4.42	-3.79/2.33	-2.07/3.7	-3.62/4.25													
Theta(150)	-3.01/1.2	-1.71/2.43	-3.44/3.97	-4.71/4.86	-5.03/4.53	-5.95/6.46	-6.17/5.76	-6.09/5.62	-4.68/3.22	-2.84/2.92	-3.45/3.33	-6.21/5.76	-6.83/6.65	-6.19/3.62	-1.19/1.08	-1.44/1.1	-1.27/2.38	-3.81/3.43	-5.97/6.92	-4.82/6.02	-8/4.77	-1.01/1.08	-2.01/4.82	-4.72/4.02													
Theta(157.5)	-2.02/1.66	-1.7/2.61	-3.28/3.32	-3.78/4.51	-3.96/2.58	-2.04/2.08	-1.83/1.35	-1.07/1.15	-1.42/1.65	-1.84/2.27	-2.05/1.56	-3.56/4.36	-4.57/3.27	-2.05/1.52	-3.73/2.34	-2.79/4.45	-5.07/6.19	-8.18/10.28	-10.81/9.79	-6.22/5.66	-4.3/4.28	-4.94/3.06	-0.9/1.37														
Theta(165)	-4.89/4.42	-3.92/4.14	-4.31/4.31	-3.76/3.5	-3.86/4.31	-4.37/4.52	-5.47/4.3	-3.78/3.08	-2.65/2.42	-3.83/3.56	-3.85/3.88	-4.37/4.67	-4.92/4.88	-5.2/5.76	-5.92/4.54	-8.98/4.16	-4.98/5.03	-8.8/5.52	-6.41/7.44	-9.53/10.08	-7.37/7.27	-8.59/10.23	-8.27/5.94	-5.58/5.94													
Theta(172.5)	-9.04/7.92	-7.25/6.25	-5.36/3.8	-3.12/2.28	-1.49/1.01	-0.88/0.68	-0.46/0.7	-1.24/1.91	-1.93/2.19	-2.76/3.41	-3.91/4.73	-6.18/6.72	-8.03/8.13	-7.45/7.28	-7.32/7.42	-7.19/7.08	-6.69/6.88	-7.21/7.83	-8.06/7.84	-7.32/6.67	-6.37/6.98	-7.73/7.64	-8.16/8.44	9.71/9.94													
Theta(180)	-11.26/10.58	-10.15/8.68	-8.56/6.83	-5.42/4.67	-4.37/4.12	-3.99/3.6	-3.26/2.96	-2.59/2.7	-3.04/3.4	-4.05/4.89	-5.47/6.25	-7.48/8.15	-7.98/7.85	-7.54/7.19	-6.78/6.61	-5.98/5.02	-4.44/3.91	-3.32/3.83	-3.11/2.97	-3.37/3.42	-3.66/3.92	-3.93/4.25	-4.69/5.83	-7.85/10.27													
Theta(187.5)	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00	0.00/0.00													
Theta(195)	-4.92/4.77	-4.85/4.98	-4.64/4.43	-4.87/4.85	-4.68/4.45	-4.3/4.17	-3.91/4.03	-4.14/4.19	-5.09/4.99	-5.29/5.11	-4.91/5.13	-5.14/5.07	-4.84/4.69	-4.31/4.49	-4.07/4.17	-3.79/3.74	-3.65/3.52	-3.22/2.94	-3.06/3.1	-3.03/2.75	-2.67/3.2	-3.67/3.72	-4.15/4.51														
Theta(202.5)	-5.24/5.15	-4.91/4.79	-4.1/3.88	-3.43/3.04	-3.15/3.29	-2.97/2.46	-2.18/2.31	-2.35/2.29	-2.14/2.05	-2.12/2.11	-2.51/3.45	-4.32/4.61	-4.77/4.99	-4.29/4.25	-4.24/4.52	-4.77/4.94	-4.9/4.4	-3.85/3.85	-3.99/4.09	-4.28/4.67	-5.13/5.78	-5.98/5.09	-4.99/5.61														
Theta(210)	-5.06/4.95	-4.54/4.49	-2.52/2.14	-1.58/1.52	-1.58/1.38	-1.73/1.87	-1.85/1.93	-1.49/1.26	-0.88/0.35	0.08/0.02	-0.67/1.65	-2.58/3.06	-3.57/4.15	-4.42/4.92	-5.67/6.19	-6.45/5.6	-4.96/4.54	-3.71/3.35	-3.44/3.72	-3.7/3.16	-2.42/2.12	-2.15/2.57	-2.99/2.93	-3.68/3.47													
Theta(217.5)	-3.49/3.63	-2.96/2.21	-1.97/2.02	-2.02/2.24	-2.02/2.27	-2.61/2.59	-2.84/2.33	-1.98/1.97	-2.12/1.49	-0.54/0.03	-0.1/0.8	-1.14/1.43	-2.05/3.1	-3.89/4.63	-5.8/5.54	-4.65/3.83	-2.8/2.04	-1.6/1.48	-1.85/2.8	-3.99/4.66	-4.77/5.01	-4.89/3.75	-2.99/2.23	-2.34/2.66													
Theta(225)	-3.69/3.97	-2.57/1.48	-1.37/1.87	-2.27/2.33	-1.76/1.04	-0.2/0.12	-0.71/1.73	-1.91/1.89	-2.38/2.15	-1.2/0.25	0.66/0.98	0.79/0.11	-1.04/1.3	-1.61/2.67	-4.31/5.13	-5.02/3.94	-3.23/2.7	-2.05/2.04	-3.26/4.85	-5.95/6.48	-7.97/8.75	-6.21/5.86	-4.83/3.82	-3.32/3.21													
Theta(232.5)	-2.49/3.18	-2.66/2.42	-2.22/1.85	-1.42/0.8	0.12/0.52	0.24/0	-0.21/0.22	-0.21/0.5	-1.03/1.65	-1.29/0.07	1.13/1.07	0.35/0.55	-0.41/0.66	-1.01/3	-5.26/4.29	-1.93/1.68	-2																				



Radiated Composite Gain of 6GHz UNII 7~8

Appendix C

Theta (°)	-17.75/-16.44	-19.23/-18.65	-13.47/-10.12	-7.13/-6.08	-6.22/-6.66	-6.6/5.7	-4.54/-4.7	-6.26/-7.63	-6.83/-7.14	-9.23/-9.1	-9.25/-13.25	-18.22/-14.49	-10.41/-8.62	-7.49/-8.71	-11.16/-12.16	-12.11/-10.65	-10.01/-10.99	-12.73/-12.56	-11.34/-9.58	-9.99/-11.37	-11.94/-11.59	-12.29/-11.23	-12.35/-13.32	-14.8/-16.7
Theta (30°)	-16.14/-14.38	-18.19/-17.79	-11.79/-8.07	-5.92/-6.16	-6.86/-7.04	-6.24/-5.71	-5.94/-7.2	-8.38/-9.98	-12.12/-11.32	-10.28/-9.18	-10.28/-16.65	-18.24/-15.28	-11.69/-11.43	-13.13/-13	-18.05/-13.84	-9.02/-7.99	-7.88/-7.94	-7.05/-6.75	-7.22/-7.98	-6.05/-4.5	-5.75/-6.85	-9.19/-9.99	-11.22/-14.08	-15.71/-19.52
Theta (37.5°)	-14.61/-18.03	-18.75/-19.86	-13.39/-9.15	-6.85/-6.67	-7.02/-7.91	-9.35/-10.4	-10.38/-11.74	-15.03/-17.68	-17.75/-14.77	-13.41/-11.68	-10.82/-14.2	-18.02/-17.87	-13.17/-12.34	-15.52/-17.99	-10.26/-6.09	-7.88/-9.25	-10.32/-8.66	-8.34/-8.25	-7.61/-8.15	-12.42/-16.09	-11.61/-8.05	-7.42/-7.23	-6.81/-5.82	-5.64/-9.09
Theta (45°)	-18.28/-17.59	-19.04/-18.99	-12.58/-9.85	-7.27/-6.24	-7.14/-7.37	-8.59/-10.19	-9.18/-10.65	-7.98/-11.19	-15.38/-17.89	-15.54/-16	-13.81/-13.73	-18.85/-12.22	-9.75/-11.87	-17.21/-18.1	-9.51/-10.88	-9.38/-8.59	-7.41/-7.33	-6.11/-5.93	-6.61/-8.17	-7.84/-6.74	-7.97/-10.51	-13.25/-18.33	-9.36/-7.16	-9.65/-15.07
Theta (52.5°)	-18.33/-16.32	-14.31/-15.17	-10.42/-6.75	-4.94/-4.04	-3.85/-5.32	-7.59/-8.06	-7.68/-6.04	-4.85/-4.58	-8.23/-10.24	-8.99/-10.37	-19.17/-13.29	-11.28/-14.8	-18.93/-18.16	-12.64/-9.18	-14.35/-19.05	-11.32/-9.77	-8.14/-6.72	-5.82/-7.11	-9.07/-9.78	-8.34/-10.45	-12.31/-11.49	-16.91/-18.54	-19.25/-11.42	-14.71/-18.61
Theta (60°)	-15.93/-19.22	-12.89/-12.03	-10.26/-11.64	-8.91/-7.33	-6.17/-6.22	-9.33/-11.83	-10.46/-8.3	-5.55/-5.67	-6.65/-7.88	-10.99/-9.97	-13.78/-18.87	-15.71/-18.97	-15.52/-18.06	-10.07/-10.6	-15.13/-16.7	-11.37/-10.79	-6.91/-5.38	-4.97/-5.4	-8.35/-9.69	-12.88/-17.53	-14.51/-12.98	-9.99/-10.48	-18.34/-9.03	-11.32/-17.04
Theta (67.5°)	-14.45/-10.7	-10.64/-8.97	-10.97/-7.9	-3.37/-2.44	-3.47/-4.25	-5.48/-6.35	-6.41/-6.09	-5.98/-5.51	-6.49/-8.04	-7.55/-8.47	-16.19/-18.47	-16.17/-18.82	-16.13/-19.43	-15.99/-16.16	-12.93/-8.4	-6.03/-8.93	-8.78/-6.86	-7.43/-10.22	-11.39/-12.05	-16.52/-18.1	-16.51/-15.59	-10.23/-14.3	-17.28/-11.76	-10.64/-19.11
Theta (75°)	-18.68/-18.94	-13.24/-8.82	-12.89/-13.9	-5.25/-4.06	-5.86/-5.12	-3.71	-4.35/-3.54	-4.83/-6.03	-6.8/-7.24	-7.9/-9.92	-14.14/-19.11	-15.28/-14.83	-18.18/-17.74	-18.42/-10.63	-11.39/-9.8	-8.77/-11.7	-8.48/-5.52	-14.93/-18.49	-7.39/-8.2	-48.5/-15.33	-9.85/-17.81	-13.9/-8.4	-15.39/-16.98	-16.86/-15.04
Theta (82.5°)	-9.98/-17.11	-13.86/-6.31	-7.29/-16.59	-6.99/-3.85	-5.89/-4.66	-3.32/-5.19	-4.78/-4.31	-3.43/-1.98	-3.51/-6.1	-5.59/-9.97	-11.09/-13.4	-14.19/-14.88	-15.22/-14.34	-14.38/-12.73	-15.57/-10.87	-10.25/-14.61	-5.66/-9.62	-14.42/-7.74	-5.66/-4.36	-8.47/-10.17	-8.77/-9.13	-14.69/-18.02	-15.91/-9.64	-9.55/-9.05
Theta (90°)	-15.81/-16.31	-15.54/-6.51	-6.99/-12.77	-7.97/-5.2	-5.3/-3	-2.12/-2.66	-2.29/-3.1	-5.26/-4.13	-5.85/-5.34	-6.45/-10.82	-13.65/-16.97	-17.15/-17.85	-12.42/-11.67	-14.79/-11	-18.8/-9.83	-8.01/-12.29	-4.67/-7.23	-8.68/-3.58	-2.81/-3.36	-9.13/-18.66	-9.41/-5.15	-10.21/-15.34	-18.71/-14.3	-15.48/-11.25
Theta (97.5°)	-8.28/-6.19	-11.17/-16.43	-10.64/-12.62	-9.37/-8.41	-6.54/-4.07	-3.59/-3.36	-2.64/-2.79	-3.23/-3	-7.99/-6.98	-11.37/-11.73	-15.76/-12.34	-17.24/-13.04	-10.16/-12.85	-14.89/-9.41	-17.74/-11.76	-6.36/-11.9	-6.29/-6.3	-12.97/-8.28	-5.51/-4.74	-13.99/-16.6	-8.47/-10.19	-14.9/-9.72	-10.02/-7.51	
Theta (105°)	-9.79/-9.78	-11.02/-18.96	-10.34/-10.21	-13.61/-9.79	-9.72/-7.17	-5.46/-3.78	-3.46/-6.5	-12.52/-8.4	-10.59/-10.2	-9.12/-15.01	-9.25/-12.14	-17.54/-7.57	-10.22/-18.59	-18.36/-12.22	-11.22/-18.61	-8.48/-14.06	-9.88/-3.34	-6.91/-11.49	-6.67/-11.7	-7.54/-13.02	-11.81/-18.37	-9.82/-8.89	-11.59/-10.82	-17.71/-9.3
Theta (112.5°)	-7.64/-7.31	-8.29/-12.95	-11.71/-7.17	-5.75/-5.16	-3.99/-2	-2.55/-3.07	-2.63/-4.16	-7.66/-9.72	-6.74/-5.54	-7.84/-7.59	-4.41/-7.81	-18.63/-6.47	-10.33/-18.47	-12.82/-16.75	-16.06/-9.37	-5.18/-8.15	-5.94/-4.17	-3.97/-10.78	-7.54/-16.59	-8.91/-7.46	-5.71/-11.3	-7.71/-4.65	-6.23/-5.32	-8.15/-10.68
Theta (120°)	-11.59/-17.98	-8.08/-9.51	-17.33/-9.25	-7.49/-7.9	-5.41/-4.23	-3.35/-5.19	-5.66/-8.35	-5.57/-8.47	-7.85/-9.94	-8.84/-10.56	-9.24/-12.86	-18.2/-7.53	-13.33/-14.2	-11.18/-17.15	-9.84/-5.49	-5.12/-18.38	-7.4/-2.76	-4.39/-7.69	-5.95/-4.31	-18.77/-18.99	-9.71/-16.59	-8.29/-3.41	-5.54/-7.69	-9.99/-8.08
Theta (127.5°)	-10.59/-13.3	-10.59/-13.3	-8.26/-6.14	-6.89/-8.42	-5.15/-6.85	-7.77/-5.43	-4.31/-4.12	-3.67/-2.38	-4.53/-2.85	-4.31/-4.19	-10.44/-18.25	-11.53/-12.02	-9.32/-8.87	-6.68/-13.34	-19.41/-6.37	-8.92/-11.36	-6.3/-5.12	-7.67/-11.89	-8.22/-3.85	-17.47/-12	-11.46/-12.79	-16.38/-9.75	-12.82/-6.58	-4.66/-6.63
Theta (135°)	-6.4/-6.44	-10.52/-8.41	-6.11/-4.73	-6.25/-2.97	-2.65/-3.16	-2.87/-2.79	-3.23/-2.2	-1.74/-2.94	-2.15/-2.35	-1.71/-3.63	-9.15/-18.29	-10.33/-8.87	-14.37/-8.11	-4.39/-15.92	-15.39/-9.83	-7.8/-11.37	-9.19/-5.82	-7.33/-11.54	-18.42/-10.75	-12.02/-10.54	-14.04/-17.55	-12.12/-11.58	-7.25/-6.23	-8.71/-9.54
Theta (142.5°)	-13.14/-8.32	-5.14/-6.59	-7.39/-6.63	-5.86/-6.66	-4.52/-3.41	-4.19/-5.19	-6.68/-8.68	-10.84/-10.57	-9.15/-6.25	-6.58/-7.92	-11.04/-13.23	-18.04/-19.16	-17.88/-13.48	-11.78/-12.34	-17.08/-19.97	-15.66/-11.29	-8.72/-5.72	-13.31/-10.04	-9.15/-12.15	-18.22/-17.53	-9.88/-6.42	-9.09/-10.36	-5.22/-4.43	-9.31/-8.03
Theta (150°)	-9.15/-10.31	-11.69/-8.8	-7.86/-6.61	-6.83/-7.39	-8.77/-10.48	-10.39/-7.99	-9.85/-10.24	-10.03/-14.11	-15.65/-12.68	-10.84/-9.77	-9.45/-8.85	-9.49/-12.31	-12.58/-11.67	-11.53/-10.56	-6.69/-5.4	-6.13/-8.89	-14.62/-18.92	-14.64/-11.67	-18.22/-11.6	-7.58/-11.56	-9.94/-5.7	-15.86/-16.36	-9.86/-7.39	
Theta (157.5°)	-17.11/-14.84	-8.01/-6.14	-6.86/-6.94	-6.37/-5.84	-4.67/-3.4	-2.67/-2.74	-2.95/-2.83	-2.49/-2.33	-2.87/-3.9	-4.02/-5.05	-6.97/-8.66	-12.89/-16.43	-18.39/-13	-7.29/-6.53	-9.79/-17.14	-13.01/-6.24	-5.14/-6.24	-7.85/-10.82	-15.18/-13.5	-15.33/-17.91	-17.95/-19.12	-19.06/-14.47	-13.33/-10.18	-7.81/-9.94
Theta (165°)	-15.29/-11.35	-8.53/-6.97	-5.71/-3.43	-3.79/-3.65	-3.83/-4.27	-4.54/-6.44	-4.11/-3.53	-2.97/-2.6	-2.32/-2.55	-3.78/-5.52	-6.27/-7.3	-10.37/-14.49	-19.19/-18.3	-19.16/-19.72	-12.46/-10.77	-11.38/-12.37	-16.71/-18.43	-14.21/-13.15	-13.22/-14.48	-19.47/-18.89	-11.45/-6.88	-10.88/-14.34	-17.11/-17.79	-17.51/-16.25
Theta (172.5°)	-13.38/-11.75	-9.84/-7.87	-5.69/-4.11	-3.41/-2.48	-1.58/-0.91	-0.67/-0.54	0.41/-0.78	-1.28/-1.79	-2.15/-2.63	-2.91/-3.25	-4.01/-5.7	-8.51/-11.94	-14.71/-17.49	-16.49/-15.22	-16.97/-18.99	-19.08/-16.24	-13.96/-12.88	-12.49/-12.71	-11.22/-9.41	-8.65/-8.08	-8.35/-9.43	-11.73/-14.08	-19.51/-19.32	-18.31/-16.19
Theta (180°)	-15.41/-12.7	-10.87/-10.26	-9.48/-8.17	-6.83/-5.95	-5.53/-4.96	-4.54/-4.43	-4.67/-5.46	-4.03/-4.07	-4.71/-5.76	-7.25/-8.46	-9.89/-12.12	-15.68/-18.15	-14.47/-18.62	-19.12/-16.35	-14.04/-12.81	-11.73/-10.84	-9.52/-7.7	-5.72/-4.69	-4.69/-4.45	-4.64/-7.3	-5.25/-5.63	-6.25/-7.01	-8.35/-11.28	-16.17/-18.37
Freq(Hz)	6.995GPol.	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°)
Theta (0°)	-13.61/-13.84	-14.03/-14.04	-13.49/-15.09	-17.44/-16.4	-14.53/-13.21	-12.78/-13.79	-14.77/-13.55	-13.11/-14.11	-15.42/-14.34	-13.51/-12.97	-12.69/-12.28	-11.58/-11.08	-10.41/-9.66	-9.23/-8.88	-9.56/-10.73	-11.65/-12.72	-13.77/-15.13	-16.72/-18.37	-18.04/-16.03	-15.51/-14.3	-12.79/-11.7	-10.95/-10.81	-10.85/-10.18	-10.52/-13.05
Theta (7.5°)	-11.10/-5	-9.78/-9.5	-8.68/-8.72	-8.96/-10.11	-11.47/-13.24	-14.05/-13.92	-14.63/-14.98	-14.66/-13.55	-12.78/-11.98	-11.45/-10.73	-10.36/-10.36	-13.43/-13.53	-12.56/-11.49	-11.13/-11.1	-10.89/-11.1	-11.72/-13.12	-13.28/-12.62	-12.55/-12.63	-12.37/-11.14	-10.41/-10.94	-12.72/-11.47	-12.01/-10.75	-10.71/-14.4	
Theta (15°)	-9.54/-8.22	-6.16/-5.28	-5.65/-5.65	-5.98/-6.69	-8.19/-6.7	-11.85/-13.27	-13.77/-13.79	-12.77/-10.86	-9.58/-9.98	-9.14/-9.6	-10.21/-10.16	-13.71/-13.26	-12.45/-12.61	-10.58/-10.93	-12.47/-14.98	-17.71/-18.64	-17.47/-18.54	-17.17/-18.56	-18.18/-14.81	-11.72/-11.09	-9.89/-8.29	-7.85/-6.78	-11.78/-8.78	
Theta (22.5°)	-5.69/-5.64	-4.29/-3.95	-4.4/-4.86	-5.33/-6.56	-8.11/-10.24	-13.04/-15.39	-16.21/-15.46	-14.97/-14.09	-13.58/-11.42	-9.99/-9.9	-11.14/-12.6	-12.06/-10.67	-10.89/-13.04	-14.91/-14.45	-15.1/-18.67	-18.72/-17.05	-12.13/-9.14	-7.59/-7.1	-7.04/-7.96	-8.74/-8.94	-8.26/-8.9	-11.36/-10	-8.32/-6.55	-5.73/-4.81
Theta (30°)	-5.84/-5.75	-4.28/-3.73	-3.98/-4.77	-5.21/-5.93	-6.71/-7.45	-7.45/-8.22	-10.56/-13.06	-12.44/-12.49	-14.56/-15.26	-12.57/-11.75	-10.58/-9.1	-9.16/-11.15	-14.89/-18.19	-17.14/-15.14	-16.84/-18.33	-19.02/-16.39	-12.10/-13.7	-10.16/-11.81	-15.28/-16.86	-15.16/-12.08	-10.39/-9.65	-9.35/-10.04	-12.08/-10.4	-6.34/-9
Theta (37.5°)	-6.34/-8.7	-4.61/-3.71	-2.83/-2.57	-2.78/-3.59	-4.38/-5.58	-8.15/-11.67	-14.82/-16.26	-15.07/-13.24	-13.42/-17.98	-15.38/-12.29	-11.38/-14.01	-17.48/-18.01	-12.81/-13.12	-16.05/-14.82	-18.52/-18.59	-14.26/-11.1	-10.66/-14.43	-13.8/-12.17	-10.77/-5.88	-6.13/-6.78	-8.6/-8.4	-6.31/-5.88	-5.64/-8.88	-11.71/-7.46
Theta (45°)	-4.65/-3.32	-4.75/-3.49	-0.88/-0.51	-1.15/-1.91	-2.92/-4.71	-7.63/-9.38	-10.85/-13.29	-17.25/-18.02	-18.55/-18.5	-19.34/-18.55	-18.22/-14.93	-18.98/-17.85	-15.76/-15.08	-12.18/-18.8	-13.93/-14.05	-16.71/-16.15	-14.54/-14.53	-13.11/-8.55	-6.37/-6.77	-5.93/-4.79	-5.45/-4.5	-4.81/-3.25	-2.68/-1.27	-3.7/-8.4
Theta (52.5°)	-4.99																							



Radiated Composite Gain of 6GHz UNII 7~8

Appendix C

Theta	Phi	Gain	Phi(0°)	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(105°)	Phi(15°)	-13.51/-15.62	-18.91/-10.34	-6.17/-5.97	-10.28/-10.71	-4.78/-3.88	-1.99/-3.72	-4.08/-4.13	-3.53/-2.55	-3.26/-4.5	-7.04/-6.68	-7.16/-6.78	-10.52/-18.87	-18.13/-15.88	-12.83/-10.85	-11.62/-12.12	-14.62/-13.34	-8.1/-9.38	-8.03/-5.37	-5.65/-7.68	-18.48/-8.02	-7.5/-18.07	-7.46/-7.05	-6.04/-9.18	-12/-17.93			
Theta(112.5°)	Phi(15°)	-13.2/-14.52	-15.41/-13.57	-8.92/-8.8	-8.45/-6.91	-5.64/-2.6	-3.42/-3.87	-5.65/-4.83	-2.69/-3.91	-3.52/-4.36	-5.38/-6.09	-7.26/-9.07	-12.77/-17.5	-17.97/-11.56	-6.98/-8.04	-11.47/-8.88	-9.38/-12.1	-15.63/-17.36	-5.72/-7.44	-12.61/-15.54	-10.92/-7.22	-13.41/-11.19	-5.56/-6.49	-8.76/-10.6	-10.71/-15.96			
Theta(120°)	Phi(15°)	-8.84/-8.75	-11.3/-13.94	-11.71/-9.71	-10.61/-12.15	-10.12/-7.67	-4.59/-3.22	-2.65/-3.72	-4.75/-5.17	-3.91/-5.18	-6.78/-6.06	-9.77/-14.33	-17.91/-16.16	-13.75/-15.52	-9.31/-8.3	-11.03/-12.37	-17.47/-18.82	-16.68/-11.72	-11.32/-7.04	-8.16/-12.78	-18.31/-19.19	-14.32/-7.81	-5.18/-6.03	-11.83/-14.3				
Theta(127.5°)	Phi(15°)	-10.09/-10.73	-9.12/-6.49	-5.49/-4.44	-4.51/-7.58	-8.71/-4.76	-4.15/-4.04	-4.03/-4.47	-4.91/-6.22	-9.69/-8.12	-5.79/-7.38	-11.28/-18.65	-16.61/-11.75	-11.15/-10.64	-10.21/-10.13	-12.62/-16.01	-18.99/-17.47	-17.81/-9.93	-9.42/-11.48	-14.37/-13.3	-15.65/-13.13	-10.78/-11.54	-8.37/-6.89	-4.69/-5.38	-10.36/-10.99			
Theta(135°)	Phi(15°)	-10.71/-9.12	-6.07/-3.4	-2.11/-2.5	-4.06/-4.44	-6.2/-6.06	-3.93/-2.36	-1.85/-2.04	-3.04/-4.03	-4.93/-5.53	-5.88/-6.42	-6.61/-11.69	-18.77/-11.74	-9.06/-9.2	-8.57/-8.53	-11.89/-9.91	-7.49/-12.48	-13.65/-18.4	-18.6/-14.88	-18.62/-14.9	-18.72/-13.6	-10.23/-8.73	-8.28/-7.97	-8.42/-12.49	-16.39/-12.21			
Theta(142.5°)	Phi(15°)	-9.02/-6.61	-5.57/-4.64	-5.25/-5.28	-5.67/-6.87	-9.51/-9.26	-7.29/-5.76	-4.33/-2.65	-1.34/-1.8	-3.06/-3.52	-3.91/-5.82	-8.59/-10.6	-12.28/-13.53	-10.55/-14.53	-16.9/-10.01	-10.84/-10.83	-11.66/-14.34	-10.5/-8.5	-11.24/-12.45	-14.21/-18.76	-17.35/-11.04	-17.31/-6.67	-10.32/-15.17	-13.02/-10.78				
Theta(150°)	Phi(15°)	-10.58/-6.82	-5.6/-5.84	-7.07/-8.33	-8.43/-8.45	-9.09/-10.05	-11.16/-9.85	-8.15/-8.08	-9.03/-7.57	-5.1/-4.52	-4.96/-4.92	-5.61/-7.65	-12.77/-14.35	-13.15/-17.63	-16.55/-11.96	-13.77/-18.02	-17.84/-13.21	-17.33/-18.82	-18.38/-19.15	-19.2/-12.81	-9.02/-12.02	-10.77/-7.23	-5.31/-5.72	-7.85/-8.5	-8.99/-9.5			
Theta(157.5°)	Phi(15°)	-8.58/-9	-10.97/-13.81	-14.3/-12.44	-10.69/-9.81	-6.89/-5.17	-4.38/-4.25	-3.89/-3.82	-4.13/-4.6	-5.39/-6.58	-8.62/-9.33	-7.64/-7.53	-8.54/-11.09	-14.88/-17.55	-19.12/-17.22	-17.95/-18.57	-18.68/-14.92	-14.6/-18.03	-17.72/-18.96	-19.21/-17.93	-16.6/-14.7	-8.46/-6.53	-5.55/-7.79	-11.11/-10.1	-7.57/-7.65			
Theta(165°)	Phi(15°)	-11.03/-13.25	-16.64/-18.51	-16.45/-11.93	-9.32/-8.46	-8.66/-9.02	-9.32/-9.42	-10.07/-10.48	-9.92/-7.98	-6.47/-6.24	-6.66/-7.43	-7.96/-8.52	-9.5/-11.37	-14.23/-17.73	-17.99/-17.35	-14.39/-10.98	-8.41/-8	-8.94/-9.54	-9.74/-10.76	-12.84/-14.1	-15.04/-16.23	-14.5/-13.04	-13.32/-14.44	-12.94/-10.87	-10.46/-11.26			
Theta(172.5°)	Phi(15°)	-18.58/-18.9	-18.86/-14.94	-10.98/-8.54	-6.75/-5.2	-4.15/-3.94	-3.81/-3.53	-3.12/-3.29	4.14/-4.87	-4.79/-5.11	-6.27/-7.38	8.34/-9.96	-12.28/-16.03	-17.49/-18.43	-17.71/-17.95	-17.47/-17.91	-17.42/-19.04	-17.31/-18.16	-18.01/-18.23	-18.75/-17.43	-17.79/-15.37	-12.83/-12.69	-12.96/-13.04	-13.71/-14	-15.83/-18.51			
Theta(180°)	Phi(15°)	-17.35/-18.35	-19.03/-18.32	-18.16/-13.85	-10.41/-8.91	-8.21/-7.61	-7.26/-6.35	-5.45/-4.92	-5.11/-5.22	-5.34/-6.11	-7.26/-8.66	-10.34/-11.96	-13.71/-15.2	-15.93/-15.19	-14.28/-13.93	-13.09/-11.61	-9.36/-7.59	-6.49/-6.28	-5.82/-4.87	-4.52/-4.91	-5.91/-6.55	-7.04/-7.41	-7.95/-8.86	-10.03/-11.39	-13.03/-15.51			
Freq(Hz)	Theta/Phi	6.995GPol.	Theta/Phi	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Phi(0°)	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(0°)	Phi(0°)	-5.47/-5.48	-5.81/-6.44	-7.88/-8.6	-9.58/-10.06	-10.71/-11.45	-11.85/-11.71	-11.3/-12.01	-12.47/-11.75	-10.26/-9.45	-8.99/-8.24	-7.69/-7.61	-7.9/-8.14	-8.19/-8.61	-9.35/-10	-11.6/-12.89	-14.43/-18.29	-18.22/-13.27	-17.44/-16.03	-13.93/-12.19	-11.11/-9.51	-8.13/-7.05	-6.6/-6.39	-5.56/-5.2	-5.07/-4.94			
Theta(7.5°)	Phi(0°)	-4.44/-9.78	-11.19/-12.2	-15.49/-17.59	-18.61/-17.34	-18.99/-18.8	-16.93/-14.98	-13.31/-12.69	-10.97/-9.81	-8.44/-7.18	-6.14/-5.18	-4.79/-4.77	-4.65/-4.57	-5.62/-6.29	-6.73/-7.29	-8.31/-9.94	-11.06/-12.37	-12.48/-11.2	-10.34/-10.59	-11.41/-11.6	-9.94/-9.22	-7.91/-9.58	-8.83/-8.37	-8.61/-9.12				
Theta(15°)	Phi(0°)	-14.51/-16.69	-19.26/-18.32	-15.05/-13.04	-12.06/-12.14	-12.27/-12.1	-12.5/-12.3	-11.75/-10.4	-8.91/-7.87	-7.06/-5.62	-4.28/-3.78	-3.59/-3.53	-3.14/-2.54	-2.67/-3.52	-4.43/-5.89	-7.82/-10.19	-12.24/-13.48	-14.5/-17.48	-17.6/-15.71	-15.96/-17.66	-16.12/-13.97	-12.84/-11.7	-12.77/-13.94	-12.74/-12.78	-14.48/-15.48			
Theta(22.5°)	Phi(0°)	-18.42/-17.98	-17.18/-13.52	-10.5/-9.85	-10.24/-11.99	-12.81/-16.15	-18.31/-19.31	-18.56/-13.72	-9.67/-7.92	-7.14/-6.02	-4.59/-3.1	-2.1/-4.4	-0.91/-7.4	-1.06/-1.36	-1.62/-2.61	-4.51/-6.16	-7.42/-8.51	-10.02/-10.21	-9.18/-9.19	-7.73/-9.04	-11.6/-16.54	-18.28/-18.7	-15.73/-14.41	-14.87/-14.81	-15.31/-16.33			
Theta(30°)	Phi(0°)	-14.66/-18.04	-12.84/-9.24	-8.81/-10.54	-12.44/-13.36	-13.61/-14.27	-13.65/-13.48	-15.44/-17.9	-15.68/-11.6	-8.91/-5.68	-4.24/-5	-0.77/-3.5	1.071/3.9	1.461/4.3	1.130/2.6	-2.09/3.54	-5.74/-7.95	-10.02/-11.06	-9.25/-7.39	-6.59/-6.98	-8.27/-11.05	-18.15/-18.84	-13.94/-12.17	-9.6/-8.78	-9.35/-10.53			
Theta(37.5°)	Phi(0°)	-11.88/-18.13	-15.6/-13.03	-15.98/-19.19	-17.78/-18.58	-17.72/-18.74	-18.08/-15.83	-12.49/-9.8	-7.87/-6.5	-5.56/-4.57	-2.99/-7.7	1.192/2.11	2.011/1.6	0.981/1.3	1.01/0.84	-2.75/5.03	-6.14/9.27	-11.61/13.49	-12.55/10.7	-8.98/9.04	-11.53/-14.45	-17.31/-18.33	-11.01/-11.14	-11.86/-10.65	-8.86/-8.11			
Theta(45°)	Phi(0°)	-14.53/-12.24	-18.72/-18.08	-15.57/-15.78	-18.44/-18.88	-17.72/-18.21	-17.68/-15.64	-10.26/-6.5	-3.86/-2.45	-2.05/-2.55	-3.08/2.19	-0.21/-3.7	1.571/3.5	1.441/4.9	0.692/7.9	-6.77/7.53	-5.79/5.45	-6.77/7.48	-8.61/8.51	-7.31/8.92	-11.88/-16.35	-19.66/-14.26	-14.1/-13.2	-17.91/-9	-16.17/-15.44			
Theta(52.5°)	Phi(0°)	-8.54/-10.58	-10.19/-10.02	-11.67/-11.76	-11.27/-9.37	-9.10/2.6	-14.99/-18.06	-10.61/-6.9	-3.89/-1.22	0.21/0.4	-1.49/2.54	0.090/6.8	-0.47/0.87	0.18/0.16	-3.12/2.55	-8.39/5.96	-4.76/5.19	-3.62/5.43	-7.47/9.17	-11.44/-13.05	-13.94/-12.17	-11.01/8.41	-7.76/6.53	-6.69/6.42	-18.95/-16.37			
Theta(60°)	Phi(0°)	-14.54/-15.24	-14.95/-14.52	-18.71/-13.02	-8.16/-8.39	-9.24/10.61	-11.71/-15.39	-18.68/-12.16	-5.61/-2.61	-1.29/0.93	-2.16/4.58	-2.58/0.94	-0.91/2.8	-1.72/3.23	-5.8/6.62	-8.57/6.38	-6.77/5.58	-3.71/2.08	-2.41/3.44	-8.09/14.97	-13.68/-10.03	-9.09/9.87	-12.66/17.83	-18.32/-10.77	-14.61/18.66			
Theta(67.5°)	Phi(0°)	-13.18/-15.99	-10.74/-11.93	-18.21/-15.41	-8.08/-6.69	-7.86/-9.86	-10.05/-10.4	-13.23/-14.33	-11.99/-7.05	-3.94/-3.12	-4.67/5.86	-1.69/1.06	-1.69/1.06	-2.82/4.4	-4.83/4.44	-6.17/6.15	-5.41/-4.36	-5.99/4.29	-9.02/18.24	-11.88/-16.35	-19.66/14.26	-14.1/-13.2	-17.91/-9	-15.82/-12.65	-16.13/10.97			
Theta(75°)	Phi(0°)	-14.55/-17.2	-8.37/-8.68	-16.51/8.87	-4.78/-4.49	-6.45/-7.45	-5.19/-4.82	-5.69/-8.88	-4.78/-4.34	-5.15/-4.77	-4.55/4.84	-2.84/1.32	-1.92/-1.9	-2.93/-4.7	-6.73/3.94	-4.17/2.86	-2.43/5.14	-7.07/3.86	-2.76/4.13	-10.16/18.18	-11.01/8.41	-7.76/6.53	-6.69/6.42	-18.95/-16.77	-13.55/10.24			
Theta(82.5°)	Phi(0°)	-9.77/-12.06	-7.46/-6.04	-8.11/6.17	-2.68/2.85	-4.18/5.15	-4.56/5.05	4.67/4.5	-6.38/4.37	-4.19/4.47	-7.91/7.15	-4.07/4.78	-3.92/3.67	-5.86/6.83	-7.71/5.7	-4.77/3	-4.58/4.84	-4.85/1.6	-1.07/3.68	-11.65/17.76	-8.9/5.71	-7.92/7.81	-7.85/7.74	-10.23/-13.05	-7.18/5.99			
Theta(90°)	Phi(0°)	-7.55/5.1	-4.83/5.45	-3.16/-3.1	-4.54/5.4	-5.81/6.66	-5.64/4.31	2.01/-1.57	-4.26/2.54	-5.36/6.87	-7.01/5.72	-5.19/7.05	-4.15/2.73	-5.76/8.09	-8.93/8.54	-5.14/5.7	-7.32/6.81	-6.19/2.66	-0.67/2.6	-10.27/17.89	-4.44/2.54	-11.56/14	-3.72/3.59	-7.63/7.86	-4.41/4.88			
Theta(97.5°)	Phi(0°)	-4.23/-6.84	-3.29/6.45	-3.26/3.76	-4.71/7.07	-7.71/9.22	-7.79/5.81	-3.18/5.15	-3.86/3.61	-5.72/7.27	-9.24/9.09	-3.17/3.23	-3.32/3.38	-6.11/8.53	-8.91/6.8	-9.39/10.61	-6.38/10	-18.68/19.32	-5.08/9.24	-18.73/8.24	-10.93/8.26	-18.98/26	-18.98/26	-18.98/26	-18.98/26			
Theta(105°)	Phi(0°)	-3.29/5.89	-3.54/2.76	-3.46/2.74	-2.83/4.87	-5.4/8.79	-6.85/5.7	-3.24/2.72	4.38/5.59	-8.77/11.59	-10.76/6.95	-5.52/3.76	-3.46/2.97	-3.27/3.68	-2.72/6.41	-5.33/5.81	-10.61/17.99	-15.4/18.33	-18.57/9.7	-17.5/18.51	-12.25/8.95	-10.4/8.83	-5.96/9.49	-7.07/6.77	-5.81/4.32			
Theta(112.5°)	Phi(0°)	-4/3.8	-2.09/-1.91	-0.25/0.99	-2.07/2.62	-7.18/9.86	-9.58/8.36	-4.69/3.1	-4.52/5.74	-6.16/2.22	-7.77/8.19	-7.52/4.35	-7.19/6.53	-8.71/8.4	-5.41/16.63	-12.61/3.31	-18.38/18.89	-11.54/9.16	-11.97/11.96	-12.86/13.88	-12.66/11.1	-10.37/10.5	-7.66/7.7	-5.18/6.21	-4.22/2.29			
Theta(120°)	Phi(0°)	-1.11/2.81	-0.44/0.72	-0.27/0.6	-0.45/2.93	-6.33/9.53	-9.77/9.35	-7.38/5.5</																				