



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Frequency (MHz)	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°)	2.52/2.55	2.16/1.58	1.07/0.35	-0.4/-1.28	-2.39/-3.76	-5.36/-6.69	-7.81/-7.13	-5.49/-3.99	-1.74/-0.36	0.77/1.36	1.83/2.24	2.51/2.65	2.57/2.45	2.19/1.65	1.14/0.4	-0.71/-1.9	-3.41/-5.09	-6.6/-7.8	-7.59/-6.4	-4.29/-2.74	-1.35/-0.1	0.77/0.91	1.41/1.76	2.07/2.5
Theta(7.5°)	2.68/2.4	2.07/1.61	1.01/0	-0.76/-1.71	-2.31/-3.34	-4.54/-5.61	-6.12/-6.11	-5.19/-3.75	-2.44/-1.27	-0.34/0.26	0.81/1.42	1.95/2.19	2.46/2.22	2.46/2.22	1.75/1.07	0.14/-0.97	-2.34/-4.26	-6.56/-8.11	-7.72/-5.51	-3.59/-1.8	-0.41/0.68	1.58/2.01	2.34/2.47	2.63/2.89
Theta(15°)	2.23/3.04	2.99/2.51	1.62/0.94	0.18/-0.48	-1.64/-2.84	-4.42/-6.25	-7.17/-3.75	-5.84/-4.25	-2.9/-1.44	-1.0/-0.33	0.17/0.7	1.35/2.1	2.84/3.36	3.65/3.6	3.14/2.23	0.92/-0.59	-2.12/-3.7	-5.97/-8.66	-8.96/-6.1	-3.58/-1.27	-0.02/0.59	1.14/1.98	2.62/2.85	3.13/3.43
Theta(22.5°)	2.14/2.29	2.01/1.43	0.84/0.52	0.05/-0.32	-1.09/-2.26	-3.78/-5.64	-7.16/-7.53	-5.6/-3.3	-1.53/-0.84	-0.28/0.86	1.37/1.55	2.2/4.8	2.99/3.37	3.63/5.8	3.31/2.61	1.51/0.01	-1.35/-3.39	-6.71/-10.36	-11.15/-5.83	-2.36/-0.34	0.56/0.88	1.18/1.29	1.54/1.82	2.26/2.37
Theta(30°)	0.76/0.58	0.36/0.15	-0.04/-0.04	0.11/-0.04	-0.65/-1.81	-1.77/-6.87	-7.54/-7.38	-5.84/-3.53	-1.94/-1.02	-0.28/0.54	1.32/1.76	1.8/1.6	1.52/1.8	2.32/2.65	2.82/2.62	1.98/0.93	0/2.04	-5.69/-7.45	-7.02/-5.63	-3.9/-2.01	-1.25/-0.44	0.09/-0.03	0.05/0.13	0.37/0.35
Theta(37.5°)	-0.27/-0.41	-1/-1.51	-1.93/-2.36	-2.22/-2.53	-3.66/-5.5	-8.05/-8.94	-9.5/-8.2	-5.92/-3.68	-2.51/-1.93	-1.12/-0.39	0.59/1.54	1.88/1.77	1.29/1.14	1.4/1.43	1.09/0.37	0.09/-0.04	-0.22/-2.34	-4.9/-4.88	-3.79/-3.64	-4.26/-3.27	-2.22/-0.74	0.30/5.7	0.73/0.63	-0.15/-0.71
Theta(45°)	0.30/0.5	0.1/0.1	-1.53/-1.88	-2.63/-3.74	-4.79/-5.59	-7.53/-9.92	-10.8/-8.35	-6.36/-4.52	-3.5/-2.15	-0.97/-0.18	0.66/1.6	1.73/1.22	1.27/0.23	-0.36/-0.84	-0.08/-0.63	-1.35/-3.11	-5.3/-7.87	-7.91/-4.88	-2.92/-3.2	-2.57/-0.96	0.51/0.1	1/1.08	0.86/0.24	0.78/1.35
Theta(52.5°)	0.04/-1.14	-3.09/-5.06	-4.67/-3.93	-4.02/-4.14	-4.57/-6.04	-9.65/-10.05	-9.36/-5.98	-4.14/-3.25	-2.63/-1.83	-0.56/0.81	1.05/1.73	1.75/0.84	0.98/2.05	1.76/0.52	-0.37/-1	-1.44/-1.3	-1.34/-1.9	-4.11/-6.99	-5.73/-3.6	-0.93/0.48	-0.10/1.2	0.70/0.89	1.1/1.33	1.02/0.19
Theta(60°)	-0.26/-1.1	-3.12/-3.72	-4.1/-5.3	-5.7/-9.7	-4.93/-6.25	-8.6/-10.6	-9.15/-6.21	-3.59/-2.3	-1.9/-1.76	-0.29/0.44	0.66/1.87	1.36/0.12	-0.78/-1.18	-1.78/-2.75	-2.61/-0.61	-0.27/-2.39	-4.54/-3.68	-1.78/0.6	0.70/2.5	-1.78/0.6	0.70/2.5	0.60/3.7	1.13/1.36	0.77/-0.57
Theta(67.5°)	-0.38/0.05	-0.37/0.67	-2.81/4.5	-3.98/-4.65	-7.62/-9.44	-8.9/-7.78	-7.57/-6.99	-5.19/-3.73	-3.19/-2.98	-1.86/-0.96	-0.85/-0.99	-0.51/-1.84	-0.39/-0	-0.16/-0.78	-0.68/-0.88	-0.92/-2.04	-1.85/-2.06	-2.9/-1.81	0.32/0.84	1.21/0.79	0.86/0.87	1.71/1.13	0.09/-0.86	0.77/0.86
Theta(75°)	-1.99/-2.84	-4.18/-1.21	-2.27/-4	-5.92/-6.41	-8.08/-7.77	-6.47/-6.33	-5.86/-4.65	-3.86/-3.1	-3.66/-3.05	-1.54/-2.1	-1.48/-2.4	-1.98/-0.41	-2.61/-1.36	-0.83/-1.94	-2.06/-0.92	-1.54/-0.95	-1.74/-1.82	-0.74/-1.13	-1.25/-0.41	0.51/0.12	1.87/1.44	0.52/-0.43	0.51/1.38	0.78/1.35
Theta(82.5°)	-3.85/-4.3	-6.38/-3.03	-3.27/4.78	-4.46/-6.96	-8.54/-8.75	-7.73/-6.31	-5.36/-5.57	-5.5/-5.67	-4.22/4.11	-3.18/-2.55	-1.49/-2.37	-3.5/-5.15	-5.36/-5.3	-2.76/-2.14	-0.85/-0.64	-0.66/-0.29	-1.75/-1.82	1.25/0.28	0.56/0.52	1.77/1.02	2.53/1.1	-0.26/0.93	-0.97/0.54	-1.16/4.48
Theta(90°)	-2.74/-3.08	-4.17/-2.27	-2.86/-3.2	-2.62/-4.23	-6.68/-6.04	-6.67/-6.36	-6.28/-7.09	-8.35/-9.09	-7.35/-7.54	-7.63/-4.9	-4.52/-4.52	-6.65/-5.4	-4.95/-1.01	-1.86/-4.32	-3.22/-4.98	-3.68/-0.4	-1.03/-1.04	0.23/-2.27	-2.33/0.07	0.72/1.75	1.09/0.41	0.33/-0.9	0.58/-0.56	-1.09/-2.21
Theta(97.5°)	-3.09/-4.61	-5.86/-4.53	-6.99/-8.06	-6.12/-6.47	-6.77/-5.68	-6.86/-5.51	-5.11/-5.61	-6.04/-7.43	-8.13/-7.21	-6.51/-5.88	-9.3/-9.3	-6.21/-3.96	-5.7/-3.47	-1.97/-3.38	-2.7/-1.52	-1.31/-0.27	-0.13/-3.6	-4.23/-2.62	0.82/0.57	0.82/-1.21	-2.06/-2.61	-0.72/-1.57	-2.98/-4.2	-2.98/-4.2
Theta(105°)	-4.73/-7.76	-10.09/-7.32	-6.05/-6.06	-6.43/-7.65	-6.95/-5.65	-6.6/-6.53	-7.12/-7.18	-6.43/-7.68	-9.1/-9.1	-6.7/-5.26	-6.25/-6.27	-9.9/-9.9	-6.17/-6.78	-10.84/-9.57	-6.84/-5.18	-1.24/0.18	-1.48/-1.83	-2.92/-3.2	-2.38/1.29	0.78/0.66	-6.84/-5.6	-2.38/-1.73	0.8/-1.44	-1.83/-3.22
Theta(112.5°)	-5.8/-7.62	-6.54/7.22	-7.41/-7.83	-4.51/-3.71	-5.59/-5.34	-5.9/-5.27	-4.53/-4.69	-4.16/-5.22	-7.74/-7.69	-8.4/-6.97	-5.84/-4.88	-7.39/-9.44	-5.96/-6.7	-7.83/-9.34	-5.99/-6.43	-2.19/-3.01	-4.2/-1.4	0.15/-3.32	-2.83/2.48	3/1.44	-0.12/-0.04	-2.03/-2.9	-0.5/-1.8	-5.6/-4.04
Theta(120°)	-1.65/-4.87	-3.06/-4.52	-4.92/-4.37	-5.79/-6.26	-6.8/-6.77	-6.58/-7.22	-5.96/-5.35	-4.6/-4.96	-4.25/-3.69	-5.6/-6.15	-7.15/-6.18	-3.99/-6.73	-3.23/-5.41	-6.9/-6.68	-7.06/-6.79	-2.15/-7.28	-3.96/-3.15	-0.2/-3.8	-4.71/0.93	2.02/0.8	-1.38/-1.07	-5.9/-2.54	-0.48/0.13	-2.69/-2.61
Theta(127.5°)	-3.75/-4.9	-4.69/-3.36	-4.03/-4.18	-5.7/-6.27	-5.41/-6.94	-8.06/-9.11	-9.32/-6.45	-5.41/-4.18	-2/-2.36	-4.06/-5.15	-5.65/-5.58	-5.99/-5.33	-4.87/-7.6	-7.28/-4.82	-8.72/-7.49	-3.74/-7.07	-2.66/-0.17	-0.38/-4.38	-4.41/1.11	1.23/-0.23	-2.13/-3.51	-2.91/-1.97	-1.59/-2.36	-5.08/-5.87
Theta(135°)	-2.03/-3.02	-3.93/-3.67	-3.15/-4.64	-5.23/-3.82	-2.8/-3.39	-7.19/-9.38	-8.63/-7.71	-5.05/-2.74	-2.8/-2.74	-2.82/-3.41	-3.79/-2.93	-3.45/-6.11	-7.76/-7.85	-7.6/-7.55	-7.31/-5.42	-5.53/-5.24	-2.43/-3.1	0.61/-7.42	-6.13/-1.46	-1.08/-1.52	-1.58/-4.09	-6.61/-9.46	-2.5/-2.71	-1.11/0.15
Theta(142.5°)	-2.69/-5.42	-2.94/-1.67	-2.93/-2.89	-2.93/-2.89	-6.52/-8.69	-7.73/-6.31	-5.96/-5.57	-3.68/-3.9	-4.22/4.11	-3.18/-2.55	-1.49/-2.37	-3.5/-5.15	-5.36/-5.3	-2.76/-2.14	-0.85/-0.64	-0.66/-0.29	-1.75/-1.82	1.25/0.28	0.56/0.52	1.77/1.02	2.53/1.1	-0.26/0.93	-0.97/0.54	-1.16/4.48
Theta(150°)	-5.75/-3.54	-2.93/-3.75	-4.14/-3.52	-3.37/-3.96	-4.56/-5.16	-5.08/-4.2	-4.23/-3.72	-3.44/-4.06	-4.34/-3.55	-2.89/-2.21	-1.69/-2.25	-2.72/-1.71	-2.42/-4.53	-5.21/-5.47	-7.27/-6.7	-9.39/-12.06	-6.7/-4.85	-5.74/-5.56	-5.42/-3.72	-1.6/-1.59	-3.63/-5.07	-2.72/-2.68	-3.73/-4.56	-5.69/-6.55
Theta(157.5°)	-0.5/-1.5	-3.22/-5.6	-7.43/-7.27	-6.64/-6.23	-5.96/-5.92	-6.62/-6.49	-5.42/-5.03	-4.84/-5.45	-6.17/-5.87	-4.9/-4.02	-3.12/-2.98	-2.54/-2.72	-3.15/-2.79	-1.76/-1.31	-1.61/-3.03	-6.01/-9.09	-8.23/-6.48	-5.64/-4.59	-4.86/-4.8	-3.42/-1.94	-1.8/-2.86	-3.64/-4.37	-4.62/-3.39	-1.44/-0.21
Theta(165°)	-2.98/-3.62	-4.03/-3.87	-2.97/-1.98	-1.89/-2.32	-3.15/-3.91	-5.38/-7.3	-8.95/-9.83	-10.09/-9.87	-7.84/-5.21	-3.1/-1.5	-0.62/-0.44	-0.75/-1.36	-2.07/-3.05	-3.93/-4.59	-5.44/-6.97	-8.26/-9.16	-6.96/-5.37	-5.19/-5.87	-7.29/-6.46	-3.57/-1.68	-0.93/-0.86	-0.79/-0.95	-1.07/-1.53	-2.71/-3.43
Theta(172.5°)	-2.24/-1.49	-1.49/-1.8	-2.17/-2.62	-3.44/-4.14	-4.46/-5.21	-6.63/-8.83	-11.75/-11.98	-11.46/-9.59	-8.5/-7.15	-5.67/-4.91	-4.44/-4.28	-4.67/-5.1	-5.23/-5.12	-4.91/-4.96	-4.73/-4.75	-4.85/-4.78	-4.85/-5.17	-6.16/-6.79	-6.62/-5.97	-4.82/-4.11	-4.3/-4.64	-3.9/-3.61	-4.64/-5.83	-5.16/-3.6
Theta(180°)	-4.13/-4.21	-4.61/-5.39	-7.03/-8.45	-9.21/-9.39	-9.43/-9.27	-9.21/1.0	-9.65/-7.83	-5.97/-4.61	-3.74/-3.27	-2.71/-2.39	-1.99/-1.66	-1.64/-1.65	-1.87/-1.94	-2.17/-2.68	-3.26/-4.04	-4.73/-5.32	-6.25/-7.5	-8.64/-8.11	-7.32/-7.11	-7.43/-7.51	-7.58/-7.26	-5.64/-4.42	-3.93/-4.11	-4.31/-4.41
Theta(187.5°)	5.6/Pol.	Phi	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Theta(195°)	-2.03/-3.02	-3.93/-3.67	-3.15/-4.64	-5.23/-3.82	-2.8/-3.39	-7.19/-9.38	-8.63/-7.71	-5.05/-2.74	-2.8/-2.74	-2.82/-3.41	-3.79/-2.93	-3.45/-6.11	-7.76/-7.85	-7.6/-7.55	-7.31/-5.42	-5.53/-5.24	-2.43/-3.1	0.61/-7.42	-6.13/-1.46	-1.08/-1.52	-1.58/-4.09	-6.61/-9.46	-2.5/-2.71	-1.11/0.15
Theta(202.5°)	-2.69/-5.42	-2.94/-1.67	-2.93/-2.89	-2.93/-2.89	-6.52/-8.69	-7.73/-6.31	-5.96/-5.57	-3.68/-3.9	-4.22/4.11	-3.18/-2.55	-1.49/-2.37	-3.5/-5.15	-5.36/-5.3	-2.76/-2.14	-0.85/-0.64	-0.66/-0.29	-1.75/-1.82	1.25/0.28	0.56/0.52	1.77/1.02	2.53/1.1	-0.26/0.93	-0.97/0.54	-1.16/4.48
Theta(210°)	-5.75/-3.54	-2.93/-3.75	-4.14/-3.52	-3.37/-3.96	-4.56/-5.16	-5.08/-4.2	-4.23/-3.72	-3.44/-4.06	-4.34/-3.55	-2.89/-2.21	-1.69/-2.25	-2.72/-1.71	-2.42/-4.53	-5.21/-5.47	-7.27/-6.7	-9.39/-12.06	-6.7/-4.85	-5.74/-5.56	-5.42/-3.72	-1.6/-1.59	-3.63/-5.07	-2.72/-2.68	-3.73/-4.56	-5.69/-6.55
Theta(217.5°)	-0.5/-1.5	-3.22/-5.6	-7.43/-7.27	-6.64/-6.23	-5.96/-5.92	-6.62/-6.49	-5.42/-5.03	-4.84/-5.45	-6.17/-5.87	-4.9/-4.02	-3.12/-2.98	-2.54/-2.72	-3.15/-2.79	-1.76/-1.31	-1.61/-3.03	-6.01/-9.09	-8.23/-6.48	-5.64/-4.59	-4.86/-4.8	-3.42/-1.94	-1.8/-2.86	-3.64/-4.37	-4.62/-3.39	-1.44/-0.21
Theta(225°)	-2.98/-3.62	-4.03/-3.87	-2.97/-1.98	-1.89/-2.32	-3.15/-3.91	-5.38/-7.3	-8.95/-9.83	-10.09/-9.87	-7.84/-5.21	-3.1/-1.5	-0.62/-0.44	-0.75/-1.36	-2.07/-3.05	-3.93/-4.59	-5.44/-6.97	-8.26/-9.16	-6.96/-5.37	-5.19/-5.87	-7.29/-6.46	-3.57/-1.68	-0.93/-0.86	-0.79/-0.95	-1.07/-1.53	-2.71/-3.43
Theta(232.5°)	-2.24/-1.49	-1.49/-1.8	-2.17/-2.62	-3.44/-4.14	-4.46/-5.21	-6.63/-8.83	-11.75/-11.98	-11.46/-9.59	-8.5/-7.15	-5.67/-4.91	-4.44/-4.28	-4.67/-5.1	-5.23/-5.12	-4.91/-4.96	-4.73/-4.75	-4.85/-4.78	-4.85/-5.17	-6.16/-6.79	-6.62/-5.97					



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Phi(172.5°)	-8.47/-8.44	-6.99/-5.9	-5.32/-5.53	-5.96/-6.74	-7.35/-7.63	-7.72/-7.66	-7.76/-7.97	-8.36/-8.93	-10.22/-11.58	-11.69/-10.89	-10.41/-9.48	-8.19/-6.92	-5.98/-5.65	-5.44/-5.19	-4.93/-4.58	-4.34/-3.68	-3.29/-3.1	-3.02/-2.98	-3.25/-3.94	-5.19/-6.65	-7.58/-8.74	-10.75/-11.7	-10.65/-10.08	-9.68/-8.52
Phi(180°)	-9.87/-9.79	-8.41/-7.49	-5.71/-5.25	-5.22/-4.9	-4.49/-4.24	-4.05/-3.91	-4.26/-4.89	-5.47/-5.99	-6.75/-7.06	-7.52/-7.95	-8.67/-9	-9.32/-10.14	-10.6/-10.5	-10.09/-9.6	-8.91/-8.14	-7.44/-6.78	-6.52/-6.66	-6.36/-5.79	-5.74/-6.28	-6.97/-6.9	-6.9/-7.58	-8.09/-8.22	-8.25/-8.81	-9.01/-8.86
Freq(Hz)	5.785G/Pol.	Theta=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	2.84/2.2	2.57/2.22	1.65/1.03	0.44/0.2	-0.86/-1.6	-2.91/-4.59	-5.25/-5.1	-3.64/-2.37	-1.24/-0.16	0.68/1.3	1.78/2.17	2.45/2.58	2.58/2.49	2.22/1.88	1.55/1.12	0.47/-0.51	-1.56/-2.64	-3.88/-4.61	-4.96/-4.35	-3.29/-2.44	-1.26/-0.2	0.77/1.54	1.83/2.31	2.69/2.83
Theta(7.5°)	1.62/1.65	1.62/1.36	0.81/0.04	-0.77/-1.41	-2.24/-2.78	-3.84/-4.41	-5.24/-9.3	-4.13/-3.24	-2.4/-1.58	-0.69/0.16	0.92/1.73	2.29/2.72	2.92/2.67	2.21/1.54	0.76/-0.1	-1.27/-2.75	-3.94/-4.93	-4.53/-3.34	-1.85/-0.77	-0.03/0.66	-1.08/1.43	1.61/1.74	1.68/1.49	
Theta(15°)	0.3/-0.17	-0.47/-0.49	-0.46/-0.64	-0.97/-1.28	-2.01/-2.12	-2.74/-3.72	-3.47/-2.94	-2.03/-1.42	-0.78/-0.52	-0.33/-0.4	-0.42/-0.05	0.56/1.34	2.1/2.7	3.05/3.22	3.06/2.6	2/1.01	-0.27/-1.73	-3.37/-4.81	-4.96/-4.18	-2.6/-1.2	-0.48/0.21	0.35/0.39	0.37/0.72	0.79/0.6
Theta(22.5°)	2.19/1.49	0.21/-0.87	-1.07/-0.68	0.13/-0.24	-1.16/-1.47	-2.15/-2.6	-2.84/-2.8	-2.74/-1.8	-0.79/0.05	0.28/0.2	0.39/0.4	0.47/0.59	1.13/1.77	2.29/2.42	2.27/1.8	1.1/0.08	-0.62/-1.04	-2.44/-4.64	-6.33/-5.3	-3.55/-2.44	-1.2/-0.65	-0.88/-1.2	-0.63/0.22	1.59/2.2
Theta(30°)	1.58/1.38	0.15/-0.45	0.07/0.36	0.33/-0.57	-1.76/-2.75	-3.6/-4.31	-5.74/-6.92	-6.34/-4.71	-2.81/-1.09	0.31/1.07	1.34/1.37	1.44/1.39	1.49/1.75	1.95/1.77	1.2/0.69	-0.13/-0.84	-0.71/-1.37	-3.18/-3.61	-2.71/-2.18	-1.38/-1.36	-1.64/-1.4	-1.64/-2	-0.54/0.42	1.36/1.44
Theta(37.5°)	1.18/0.37	0.17/-0.09	0.2/-0.22	-1.02/-1.88	-2.65/-3.05	-3.74/-5.59	-6.64/-5.06	-2.84/-1.37	-0.76/-0.72	-0.74/-1	-0.99/0.14	1.47/1.81	1.86/2.12	2.48/2.04	1.13/0.73	-0.08/-1.4	-1.37/-1.22	-2.46/-3.26	-1.66/-1.7	-2.31/-1.39	-0.52/0.33	1.33/1.38	1.06/0.72	
Theta(45°)	0.43/1.27	1/0.34	-0.46/-0.06	-1.33/-2.61	-3.49/-5.31	-7.74/-10.52	-11.19/-9.82	-8.06/-6.89	-5.91/-5.18	-1.68/-1.06	-0.76/-0.55	-0.32/-0.46	0.16/1.93	2.94/3.31	3.02/2.2	1.23/0.73	-0.22/-0.21	-1.81/-1.94	-2.92/-2.88	-2.01/-1.76	-2.21/-0.89	0.20/0.86	1.53/1.45	0.42/-0.08
Theta(52.5°)	-0.46/0.1	-0.11/-0.21	-0.33/-0.89	-1.94/-2.16	-2.31/-3.98	-5.84/-6.81	-6.31/-6.61	-7.25/-5.65	-3.29/-1.89	-0.86/0.08	-0.35/-1.52	-0.85/-0.11	-0.45/-0.29	1.68/2.21	1.66/1.98	1.61/0.82	-0.44/-1.35	-1.49/-2.29	-2.38/-2.11	-1.61/-2.3	-2.56/-1.2	-1.57/-1.08	0.38/0.46	0.13/-0.58
Theta(60°)	1.97/1.24	0.7/0.52	-0.85/-1.97	-1.52/-1.68	-1.98/-2.71	-4.92/-7.56	-5.94/-4.13	-4.32/-5.03	-3.26/-1.89	-1.69/-0.47	-0.19/-0.87	-0.41/-0.32	-0.62/-0.28	0.54/0.8	0.01/0.33	0.55/0.41	-0.66/-0.52	-1.9/-2.07	-1.81/-2.03	0.03/0.79	-1.03/-0.36	-1.04/-0.86	0.19/0.52	0.62/0.86
Theta(67.5°)	2.82/0.69	0.4/0.14	-0.26/-0.39	-1.59/-3.84	-4.54/-5.32	-7.85/-9.5	-6.47/-4.69	-4.36/-5.89	-5.84/-3.99	-3.81/-2.94	-1.93/-3	-2.72/-2.32	-1.62/-0.69	-0.43/-0.22	-0.35/-0.68	-0.39/-0.33	-0.48/-0.15	-1.4/-1.64	-1.83/0.44	1.66/2.34	2.32/2.82	1.93/1.45	1.68/1.72	1.48/1.91
Theta(75°)	1.65/-0.61	-0.68/-0.58	-3.52/-1.89	-3.85/-7.07	-6.83/-7.66	-8.31/-7.06	-6.02/-5.95	-6.29/-5.67	-5.91/6.05	-6.07/-3.96	-2.84/-4.32	-4.92/-5.98	-4.27/-3.91	-2.54/-2.27	-1.14/-0.27	0.58/-0.39	-0.42/-1.58	-1.06/-2.11	-0.04/-0.28	2.51/2.49	2.14/2.33	2.49/1.93	2.36/2.35	1.26/-0.43
Theta(82.5°)	1.14/-1.45	-1.41/-1.95	-4.39/-3.79	-6.65/-8.39	-8.13/-9.02	-8.11/6.03	-6.2/5.58	-6.21/5.5	-5.8/6.45	-4.92/-6.41	-3.91/4.63	-6.5/6.94	-4.16/-2.93	-2.61/-3.48	-3.24/-1.38	-1.5/0.35	0.83/-0.08	-0.43/-0.37	0.72/1.45	2.92/2.22	2.43/2.23	-0.29/1.01	0.63/1.7	0.84/-2.24
Theta(90°)	0.72/-0.98	-0.65/-2.3	-5.07/-4.11	-5.42/-7.19	-9.54/-9.9	-6.37/-5.05	-6.18/-5.91	-4.58/-3.63	-5.26/-5.73	-6.86/-6.36	-7.11/8.83	-10.49/-9.84	-8.62/-6.8	-3.45/-3.88	-3.92/-2.67	-1.19/0.62	0.26/-0.29	1.96/0.58	-0.93/0.3	1.75/0.67	1.11/-0.01	-1.55/0.1	0.73/0.47	-0.95/-1.77
Theta(97.5°)	-0.56/-2.57	-2.1/-2.68	-4.62/-5.09	-6.79/-9.15	-10.44/-7.19	-4.18/-3.18	-5.57/-6.92	-6.91/-5.74	-6.05/-6.09	-6.58/-6.11	-8.56/-9.19	-7.57/-8.45	-7.89/-6.3	-5.01/-8.06	-6.15/-3.92	-1.75/0.17	-1.27/-1.26	0.7/0.03	-1.09/-1.08	1.8/1.1	0.69/1.23	-1.07/1.12	1.06/0.92	0.32/-0.58
Theta(105°)	-2.56/-2.47	-2.8/-3.19	-5.58/-9.41	-6.7/-5.53	-8.8/-10.16	-7.06/-4.64	-5.17/-9.57	-5.79/-8.05	-8.02/6.71	-5.86/-5.46	-4.32/-4.92	-4.59/-6.64	-4.36/-3.89	-2.78/-5.11	-4.29/4.06	-2.07/0.02	-1.59/0.84	2.74/-0.94	-2.96/-1.67	1.13/1.01	1.16/-1.10	-0.99/1.28	1.43/0.03	0.30/-0.58
Theta(112.5°)	-5.82/2.93	-3.65/-4.43	-6.5/-8.58	-8.65/-7.79	-8.18/-8.66	-10.52/-7.71	-4.73/-4.83	-6.4/-7.78	-5.73/-5.53	-4.66/-5.68	-3.7/-3.52	-1.66/-6.15	-6.02/-5.18	-2.49/-3.75	-3.48/-6.88	-2.92/-0.17	-1.73/0.25	0.79/4.48	-1.98/0.67	-0.13/-0.84	-1.76/-1.87	-1.41/-0.49	-0.43/-4.06	-3.1/-3.25
Theta(120°)	-6.16/-6.18	-4.7/-5.31	-5.57/-7.02	-5.75/-7.17	-6.29/-7.27	-9.69/-9.53	-7.23/-6	-6.89/-6.74	-5.62/-3.56	-4.41/4.8	-5.11/5.03	-3/5.51	-2.8/-5.02	-5.05/-5.3	-3.63/-10.05	-3.14/-2.64	-4.32/-1.42	0.39/1.42	-1.55/0.15	0.16/-0.14	-3.69/-2.64	-8.34/-3.27	-2.08/-2.71	-4.67/-4.9
Theta(127.5°)	-5.15/-5.54	-5.17/-5.71	-4.54/-5.99	-6.74/-7.22	-8.62/-9.28	-7.37/6.36	-6.17/-4.96	-5.79/4.72	-2.44/-1.34	-3.23/-4.66	-5.92/2.94	-3.35/-4.56	-4.11/-6.38	-7.82/-3.54	-5.4/5.25	-3.41/-3.84	-3.21/-1.81	0.7/1.02	-1.63/0.58	-2.74/-2.02	-2.69/3.21	-6.5/-5.68	-4.97/-4.85	-6.59/-3.24
Theta(135°)	-2.47/-3.66	-5.21/-7.78	-6.22/-5.55	-4.38/-4.06	-4.32/-5.71	-6.41/6.16	-5.7/-5.32	-4.78/-3.7	-2.16/-1.96	-3.06/-4.47	-5.74/-7.39	-7.67/-6.05	-6.72/-9.21	-4.33/-2.94	-5.7/-5.18	-6.81/-6.31	-5.02/-2.89	-3.33/-3.99	-2.62/-2.66	-5.99/-5.72	-4.32/-6.08	-4.21/-1.99	-1.75/-3.1	-1.3/-1.07
Theta(142.5°)	-5.78/-7.73	-4.48/-4.29	-3.97/-4.13	-3.34/-4.11	-4.42/-5.14	-5.51/5.98	-6.54/7.43	-6.37/-5.57	-4.31/-4.22	-5.04/-4.89	-4.69/4.57	-5.74/-5.21	-5.88/5.06	-4.27/-5.63	-6.55/7.84	-7.57/5.48	-4.62/-2.88	-3.9/-3.38	-1.66/-2.28	-2.79/-4.79	-4.26/4.26	-6.88/5.15	-2.16/-2.1	-3.23/-3.23
Theta(150°)	-3.66/-1.38	-1.46/-2.7	-3.74/-4.15	-4.68/-6.41	-9.52/-10.4	-8.73/-8.09	-7.49/-6.88	-6.73/-5.6	-4.9/-5.52	-6.96/-5.66	-3.61/3.33	-2.66/-1.59	-1.49/-2.21	-4.45/-6.8	-9.2/8.63	-7.74/-5.25	-2.74/-1.58	-2.62/-4.2	-2.81/-2.47	-2.47/-3.13	-5.69/8.24	-6.18/5.01	-3.7/-3.12	-3.72/-5.53
Theta(157.5°)	-0.31/-1.41	-3.37/-5.34	-7.08/-8.03	-9.56/-8.98	-7.97/6.15	-5.81/6.04	-6.09/6.32	-6.91/7.38	-8.56/-8.69	-8.95/-7.46	-6.1/-4.96	-1.38/-2.48	-4.35/-6.94	-7.44/5.76	-3.79/-2.57	-2.55/-4.54	-6.19/5.42	-3.78/-3.47	-2.61/-2.38	-3.03/4.25	-4.7/-3.62	-2.07/-1.58	-0.22/0.13	
Theta(165°)	-2.33/-2.74	-3.54/-4.27	-5.41/6.72	-7.52/-7.97	-9.23/10.31	-10.05/8.99	-7.98/-6.92	-6.83/-7.2	-7.6/-7.3	-6.42/6.3	-6.15/5.13	-2.9/-1.52	-1.09/-1.53	-2.74/4.61	-6.74/6.71	-6.55/6.07	-6.26/6.56	-6.12/5.02	-4.42/4.33	-4.36/-3.17	-1.58/-0.7	-1.17/-2.15	-2.22/-2.2	-2.21/2.19
Theta(172.5°)	-4.15/-4.17	-5.09/-6.27	-7.76/-8.58	-9.68/-9.93	-9.85/-10.13	-8.3/-8.19	-8.72/-8.6	-7.84/-7.77	-7.94/-7.57	-7.29/-7.4	-7.19/-6.72	-5.74/-5.41	-5.79/-6.36	-6.91/-8.05	-9.92/-11.24	-10.74/9.96	-9.47/8.41	-7.69/-7.15	-6.75/-6.1	-5.02/-3.85	-3.23/-2.49	-2.62/-4.3	-5.73/-5.86	-5.37/4.98
Phi(180°)	-5.45/-6.25	-8.14/-10.28	-11.32/-11.29	-12.05/-10.13	-9.73/-8.66	-7.99/-9.17	-10.76/-11.67	-11.93/-12.01	-10.99/-10.05	-9.65/-9.07	-8.16/-7.67	-7.1/-6.57	-6.85/-5.57	-7.75/-8.17	-8.15/-7.84	-7.65/-7.63	-8.24/-9.73	-11.32/-11.94	-10.54/-8.54	-7.55/-6.97	-7.14/-7.22	-7.73/-8.65	-8.66/-7.64	-7.19/-6.1
Freq(Hz)	5.885G/Pol.	Phi=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-4.11/-3.74	-3.36/-2.49	-1.71/0.95	0.06/1.24	2.03/2.48	2.69/2.81	2.48/2.18	1.65/1.19	0.58/0.1	-0.8/-1.48	-2.32/-2.95	-3.69/-4.82	-5.14/-4.27	-2.79/-1.4	-0.29/0.45	1.19/1.8	2.29/2.37	2.35/2.34	2.25/2.3	1.86/1.14	0.36/0.37	-1.15/-1.56	-2.06/-3.32	-4.35/-4.5
Theta(7.5°)	-4.23/-4.01	-3.03/-1.67	-1.1/0.82	-0.12/0.7	1.36/1.86	2.15/2.33	2.4/2.16	1.79/1.31	0.7/0.26	-0.76/-1.74	-2.88/-4.1	-5.72/-7.28	-8.43/-7.44	-5.76/-3.66	-1.82/-3.01	0.96/1.89	2.6/3.09	3.29/3.16	2.87/2.53	2.17/1.56	0.76/0.11	-0.97/-1.36	-1.89/-2.72	-3.81/-4.49
Theta(15°)	-5.42/-6.24	-4.83/-3.15	-2.06/-1.12	-0.94/0.03	0.69/1.09	1.42/1.46	1.67/1.67	1.82/1.8	1.61/1.29	0.6/-0.29	-1.45/-2.46	-3.57/-4.61	-5.46/-5.88	-5.46/-4.12	-2.84/-1.28	-0.02/1.04	1.85/2.53	3.06/3.16	3.09/2.68	2.07/1.2	0.16/-0.96	-1.39/-2.03	-2.99/-3.68	-4.75/-5.47
Theta(22.5°)	-3.98/-4.92	-5.28/-5.04	-3.9/-2.27	-1.02/-0.03	0.71/0.91	0.91/0.77	0.41/0.72	1.01/1.35	1.41/2.3	0.55/0.75	-2.51/3.81	-5.5/6.41	-6.85/6.34	-4.01/3.47	-4.87/5.26	1.99/2.47	3.01/3.47	3.46/2.74	1.41/0.31	-1.72/-2.75	-2.28/-2.11	-1.94/-1.9	-3.02/-3.46	
Theta(30°)	-4.46/-4.46	-3.29/2.06	-1.16/0.43	0.08/0.01	-0.06/-0.24	-0.27/0.64	1.46/1.49	1.16/1.26	0.99/0.5	-0.39/-1.71	-3.19/5.05	-7.68/-9.05	-9.14/7.											



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta (°)	Phi (°)	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°)
0(105°)	5.05/4.89	-4.27/-3.2	-2.95/-1.79	-1.56/-1.86	-2.26/-2.82	-2.71/-2.48	-2.46/-1.18	-0.23/-0.92	-1.26/0.02	1.19/0.01	-2.14/-3.58	-3.68/-4.69	-6.63/5.83	-7.39/-10.48	-9.51/-9.23	-7.22/-8.62	-8.13/-7.91	-7.12/-6.6	-6.18/-4.54	-6.51/-6.03	-6.12/-4.63	-6.54/-8.09	-9.14/-5.8	-4.6/-4.81
0(120°)	-12.48/9.12	-8.53/-5.9	-4.87/-3.33	-1.55/-1.09	-0.97/-0.25	-0.14/-0.13	-0.15/0.04	0.87/1.45	0.5/-1.14	-3.01/-3.42	-4.38/-5.18	-7.04/-9.88	-8.92/-5.94	-7.14/-9.15	-6.06/-9.93	-12.28/-6.45	-9.25/-9.55	-7.25/-9.12	-10.69/-7.11	-5.34/-6.09	-7.97/-10.01	-9.28/-7.54	-7.56/-8.49	-7.67/-8.69
0(127.5°)	-6.81/-5.3	-5.47/-4.93	-3.5/-3.06	-1.76/-1.83	-2.14/-0.98	-0.35/-0.58	-0.79/-1.32	-2.01/-2.43	-2.94/-5.22	-6.81/-7.63	-16.16/-6.46	-7.86/-8.8	-8.65/-6.45	-8.21/-7.06	-6.94/-11.51	-11.81/-5.36	-6.42/-6.74	-5/-7.43	-9.95/-8.95	-5.39/-5.75	-6.25/-6.55	-5.25/-5.98	-8.88/-8	-6.96/-5.54
0(135°)	-6.79/-4.64	-4.09/-5.09	-1.1/-4	-3.61/-1.95	-2.01/-2.02	-1.67/-1.5	-1.92/-2.04	-2.59/-3.56	-4.57/-6.23	-7.44/-9.52	-8.12/-7.73	-7.78/-7.22	-7.53/-5.48	-6.84/-6.62	-7.36/-9.77	-7.93/-5.78	-8.26/-6.72	-4.21/-5.82	-9.21/-6.53	-4.88/-5.44	-5.9/-7.71	-9.03/-7.5	-7.39/-6.43	-5.34/-6.99
0(142.5°)	-4.03/-4.34	-2.24/-1.88	-1.85/-1.18	-2.12/-2.61	-2.48/-2.71	-3.13/-2.99	-2.61/-2.93	-2.97/-2.68	-3.53/-5.33	-6.98/-7.35	-6.96/-6.29	-6.93/-6.4	-6.71/-8.29	-6.63/-5.83	-4.78/-7.84	-7.26/-5.45	-6.06/-5.67	-8.71/-6.3	-5.25/-5.77	-6.52/-7.72	-6.88/-7.05	-4.63/-5.96	-5.66/-3.82	
0(150°)	-1.85/-1.44	-1.9/-1.24	-1/-1.61	-2.52/-3.2	-3.3/-3.26	-2.51/-2.58	-2.63/-2.1	-1.68/-1.84	-2.3/-2.52	-3.31/-4.35	-5.79/-6.16	-5.28/-9.7	-6.54/-7.67	-6.59/-9.29	-11.67/-11.62	-6.6/-8.9	-8.62/-6.03	-6.31/-9.23	-9.46/-8.07	-6.83/-7.36	-7.8/-6.72	-6.41/-7.99	-6.5/-5.83	-5.28/-2.99
0(157.5°)	-0.7/-0.71	-1.47/-2.04	-2.48/-3.02	-3.3/-3.58	-3.49/-3.84	-4.18/-4.68	-5.19/-5.82	-6.52/-6.2	-5.8/-5.82	-6.04/-6.24	-6.35/-6.23	-5.87/-5.49	-5.13/-4.14	-3.81/-3.98	-4.57/-5.91	-7.28/-6.83	-5.93/-5.68	-6.11/-7.26	-7.12/-7.29	-8.2/-9.59	-9.65/-8.21	-6.75/-5.71	-4.24/-3.79	-3.05/-1.9
0(165°)	-3.96/-3.57	-2.99/-3.15	-3.09/-3.27	-4.01/-4.54	-4.62/-4.83	-5.67/-6.33	-7.15/-8.59	-9.57/-8.84	-8.01/-6.65	-5.29/-4.67	-4.33/-3.71	-2.98/-2.37	-1.93/-1.83	-2.17/-3.38	-4.27/-4.39	-4.09/-3.82	-3.83/-4.66	-6.07/-6.53	-6.82/-7.21	-7.22/-7.12	-5.97/-5.2	-4.68/-4.49	-4.7/-5.29	-5.46/-4.49
0(172.5°)	-5.35/-5.39	-5.03/-4.2	-3.88/-4.26	-4.89/-5.73	-6.19/-7.31	-8.75/-9.86	-11.34/-12.25	-12.34/-11.37	-9.8/-8.14	-7.74/-7.89	-8.14/-7.95	-7.54/-7.56	-7.68/-7.5	-7.31/-7.07	-6.54/-5.84	-6.07/-5.89	-6.32/-6.97	-7.8/-7.49	-7.48/-7.99	-8.91/-9.24	-8.78/-8.68	-8.95/-8.41	-7.96/-6.72	-5.76/-5.9
0(180°)	-9.52/-9.16	-9.44/-9.09	-9.57/-9.48	-9.72/-10.55	-11.21/-11.56	-11.56/-10.81	-9.48/-8.8	-8.15/-7.48	-7.55/-7.99	-8.45/-8.5	-8.47/-8.2	-8.67/-8.74	-8.87/-9.22	-8.6/-8.27	-8.15/-8.19	-7.81/-8.15	-8.02/-8.21	-8.48/-8.66	-8.99/-9.43	-9.04/-9.59	-9.73/-9.87	-10.04/-9.26	-8.41/-8.13	-9/-9.24
5.6G/Pol.	Theta	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi
DG(dB)	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°)
0(0°)	-2/-1.72	-1.62/-1.91	-2.17/-2.45	-2.95/-3.75	-4.47/-5.79	-7.05/-8.63	-10.29/-11.59	-12.72/-12.37	-11.99/-10.18	-8.59/-7	-5.4/-4.07	-3.2/-2.67	-2.22/-1.84	-1.56/-1.47	-1.22/-1.48	-2.12/-2.96	-4.06/-5.11	-6.71/-8.23	-10.11/-12.18	-12.5/-12.06	-12.38/-9.7	-7.78/-5.93	-5.4/-4.04	-3.25/-2.54
0(7.5°)	-2.13/-1.58	-1.29/-1.26	-1.32/-1.66	-2.1/-2.7	-3.31/-3.86	-4.46/-5.75	-6.87/-8.49	-10.27/-11.6	-11.33/-9.99	-8.27/-6.94	-5.39/-4.35	-3.43/-2.77	-2.3/-2.17	-2.04/-2.04	-2.38/-2.98	-3.84/-4.96	-6.43/-8.32	-9.92/-10.37	-11.55/-11.79	-11.71/-10.53	-9.08/-7.46	-6.16/-5.4	-4.78/-4.15	-3.6/-2.96
0(15°)	-3.59/-3.07	-2.26/-1.9	-1.52/-1.58	-1.41/-1.39	-1.34/-1.22	-2.26/-3.58	-5.08/-6.5	-7.14/-7.13	-6.69/-6.02	-5.84/-5.27	-4.65/-4.19	-4.03/-3.67	-3.71/-3.6	-3.8/-4.24	-4.25/-4.53	-5.16/-6.15	-7.1/-7.24	-7.81/-7.82	-7.56/-6.46	-5.8/-5.12	-4.75/-4.58	-4.79/-4.82	-4.76/-4.68	-4.41/-4.05
0(22.5°)	-1.91/-1.09	-0.7/-0.87	-0.8/-0.65	-0.38/0.04	-0.1/-0.14	-0.86/-1.9	-3.26/-5	-6.66/-7.31	-6.5/-4.8	-4.08/-4.19	-4.6/-4.43	-4.32/-4.33	-3.95/-4.2	-4.56/-5.12	-5.85/-6.16	-5.96/-5.27	-4.81/-4.78	-5.24/-5.8	-6.15/-5.93	-5.83/-5.82	-6.2/-5.98	-5.08/-4.86	-4.25/-2.93	
0(30°)	0.040/8.7	0.8/0.22	-0.08/0.16	0.42/0.51	0.41/0.43	0.51/0.35	0.08/0.68	-2.37/-3.67	-5.31/-6.25	-7.58/-7.29	-5.9/-5.25	-5.29/-4.87	-4.33/-3.92	-3.51/-3.47	-4.5/-4.9	-5.08/-4.51	-3.93/-3.4	-3.4/-3.6	-4.11/-4.42	-4.33/-4.38	-4.16/-3.78	-3.38/-3.22	-2.5/-1.84	-1.37/-0.76
0(37.5°)	1.41/1.78	1.66/1.6	1.07/1.1	0.47/0.5	-0.74/-0.52	0.85/0.95	0.49/-0.32	-1.12/-2.27	-3.1/-3.98	-5.32/-6.45	-5.68/-4.75	-4.55/-3.38	-2.57/-2.88	-3.34/-3.29	-3.43/-3.16	-3.49/-3.63	-4.03/-4.57	-5.56/-5.48	-3.09/-2.7	-2.01/-1.65	-1.46/-1.27	0.05/0.09	1.27/0.76	
0(45°)	3.05/3.4	3.28/2.96	2.74/2.15	1.34/0.62	-0.19/-0.08	0.12/0.28	0.17/0.51	-1.41/-2.7	-3.11/-3.29	-4.25/-5.37	-4.89/-4.08	-3.68/-2.88	-2.98/-4.43	-4.48/-3.51	-2.85/-2.13	-1.63/-2.53	-4.22/-5.73	-4.24/-2.78	-2.28/-2.22	-2.02/-2.04	-1.79/-0.55	0.6/0.89	1.8/2.12	1.74/2.38
0(52.5°)	2.42/2.32	1.99/2.69	2.92/1.8	1.09/0.59	0.41/-0.25	0.06/0.54	0.75/0.23	-0.87/-2.2	-3.55/-4.37	-5.46/-5.6	-4.75/-3.26	-2.21/-1.78	-2.67/-3.33	-2.9/-3.17	-0.53/-0.47	-0.46/-1.57	-2.65/-1.65	0.57/1.37	1.16/0.93	0.41/0.28	0.65/1.48	1.81/1.84	2.77/3.1	2.59/2.34
0(60°)	4.27/3.75	2.76/2.62	2.42/2.45	1.04/0.78	1/1/17	-0.96/0.31	-0.4/-0.89	-1.66/-2.22	-2.6/-2.87	-3.01/-4.38	-3.11/-1.9	-2.05/0.06	-0.47/-1.1	-2.08/-2.64	-2.07/-1.71	-1.13/-1.06	0.41/1	1.35/1.53	1.74/1.79	1.16/1.44	1.77/2.48	3.57/3.93	4.41/4.87	4.13/3.87
0(67.5°)	4.8/4.66	3.5/3.6	2.92/1.5	1.58/0.44	0.2/0.02	-0.43/-0.53	-0.68/0.39	-0.4/-0.86	-1.53/-1.92	-2.57/-3.2	-1.87/0.14	0.68/1.1	0.58/0.29	-1.02/-1.49	-1.08/-1.23	-2.34/-3.62	-3.05/-0.99	0.03/0.13	0.94/2.46	3.73/3.06	2.51/2.71	3.05/3.74	4.92/5.57	5.01/3.97
0(75°)	5.26/4.74	3.56/3.54	2.91/3.17	2.66/1.08	1.14/1.52	2.18/2.22	1.5/0.95	-0.45/-1.13	-2.09/-2.46	-2.67/-2.54	-0.63/0.26	0.33/0.84	1.61/1.81	1.19/0.12	-0.89/-0.13	0.25/0.57	-0.59/0.15	1.16/1.8	2.59/2.89	2.71/2.55	2.53/2.95	3.92/4.09	5.01/5.76	5.56/4.19
0(82.5°)	5.18/4.17	2.97/2.44	1.14/2.37	1.84/1.68	1.88/2.38	2.36/2.45	1.71/0.67	-0.51/-1.05	-2.55/-3.03	-1.76/-1.59	-0.05/0.51	0.49/1.72	2.39/1.41	0.10/-0.43	0.29/1.17	1.0/3.4	0.01/0.7	3.96/3.45	3.01/2.49	3.69/3.63	3.98/3.6	4.55/5.17	5.5/5.59	
0(90°)	4.063/3.8	3.4/2.29	2.01/2.1	1.6/1.15	1.14/0.87	1.71/2.41	1.28/0.46	-1.48/-2.68	-3.2/-2.85	-2.29/-2.17	0.26/1.06	1.62/1.74	2.32/1.97	1.63/0.49	0.49/0.92	0.48/1.43	0.48/1.48	3.87/3.62	2.71/1.88	2.48/3.05	3.43/4.41	4.99/5.34	5.84/6.02	5.37/4.49
0(97.5°)	3.52/3.34	3.28/2.13	1.42/1.07	1.25/1.39	0.83/0.92	1.35/1.8	1.22/0.37	-1.17/-2.31	-2.98/2.84	-3.04/-0.19	-0.51/0.5	1.09/1.1	0.74/0.67	0.24/0.22	0.22/0.35	3.16/3.27	2.41/1.9	4.19/4.6	5.14/3.96	4.34/4.54	5.67/5.53	5.67/5.53	4.84/5.5	
0(105°)	2.05/2.14	1.63/1.22	1.35/1.14	1.72/2.29	2.56/2.56	2.26/1.84	0.78/0.52	0.82/0.1	-1.92/-3	-2.73/-0.75	-0.94/0.21	0.63/-0.65	2.89/1.66	1.42/0.04	-0.05/0.55	1.39/0.98	-1.79/0.97	3.7/0.64	0.22/2.02	3/3.94	3.75/2.89	2.69/3.11	3.69/3.15	3.16/2.83
0(112.5°)	-1.25/-0.4	-0.74/0.17	0.28/0.52	0.57/0.79	0.74/1.33	1.86/1.82	0.99/0.16	0.32/0.68	-0.39/-0.13	-1.01/-0.52	-1.65/0.24	1.42/0.55	1.49/-0.52	0.66/-0.71	0.17/0.19	1.01/-0.01	-0.83/0.06	3.37/1.98	2.05/3.35	3.34/3.01	1.99/1.37	1.21/1.89	3.69/2.78	2.24/0.52
0(120°)	-1.46/0.17	0.54/-0.34	-0.46/-0.9	-2.74/-1.11	0.16/0.13	1.49/0.76	-0.38/-1.51	-0.57/0.9	0.88/0.39	-1.53/-1.32	-2.25/0.64	-0.29/-1.11	1.76/1.77	-3.34/-2.23	-1.69/-4.49	-1.66/-0.79	-3.14/-0.28	1.82/-3.04	-1.56/-1.08	-0.47/1.88	0.96/1.58	-0.35/0.76	1.77/1.82	-0.48/0.41
0(127.5°)	-0.92/-1.74	-0.73/-1.3	-2.59/-2.73	-4/-2.57	0.21/1.4	1.64/0.57	0.53/1.58	1.37/0.33	-0.75/0.81	-1.82/-2.54	-2.58/-2.23	-3.29/-1.87	-1.06/-1.71	-4.59/-1.65	-2.24/-2.5	-0.44/-0.84	1.62/0.02	2.27/-1.06	-6.56/-3.36	-0.30/1.01	0.67/-0.43	-1.5/-0.23	1.91/2.58	-0.27/0.1
0(135°)	-2.16/-2.05	-2.3/-1.88	-1.9/-1.95	-2.34/-2.24	-0.88/-0.12	0.19/0.06	-0.17/-0.28	-0.56/-0.86	-1.29/-2.14	-2.79/-3.48	-2.43/-1.54	-1.26/-2.02	-2.91/-4.61	-2.21/-0.97	-4.01/-3.75	-1.78/-3.44	-1.79/-2.69	-0.65/-3.12	-7.24/-5.05	-2.55/-1.61	-1.95/-2.65	-4.85/-4.24	-1.48/0.12	-0.44/-1.59
0(142.5°)	-4.78/-2.91	-2.33/-2.83	-3.35/-3.85	-4.17/-4.76	-4.8/-4.98	-4.5/-3.73	-3.08/-2.63	-1.62/0.35	-0.2/-0.75	-1.48/-2.3	-2.77/-3.08	-4.37/-3.91	-4.21/-3.7	-1.5/-2.15	-4.21/-5.32	-6.72/-4.72	-3.15/-2.04	-0.85/-3.81	-6.63/-6.93	-4.47/-1.95	-1.75/-3.29	-4.97/-5.04	-4.38/-2.93	-2.69/-4.41
0(150°)	-3.19/-4.07	-4.06/-4.86	-5.84/-5.6	-5.42/-5.52	-5.47/-4.92	-4.19/-3.73	-4.2/-5.36	-5.98/-5.5	-5.36/-5.96	-5.87/-4.35	-3.97/-5.2	-4.96/-3.59	-5.08/-3.73	-0.68/-0.31	-									



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	Phi	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°)
0(22.5°)	-7.82/-6.73	-6.04/-4.52	-3.56/-3.2	-2.89/-2.31	-1.09/-0.44	0.02/0.45	0.38/0.31	-0.02/-0.46	-0.81/-1.38	-1.98/-2.33	-2.65/-3.11	-3.87/-4.48	-4.58/-3.72	-2.54/-1.59	-0.86/-0.53	-0.19/0.04	0.43/0.75	0.79/0.81	0.76/0.64	0.34/-0.36	-1.16/-1.92	-2.72/-3.4	-4.27/-5.37	-6.11/-7.42
0(30°)	-4.63/-3.7	-2.93/-2.26	-1.79/-1.86	-1.22/-0.37	0.46/0.15	1.79/1.82	1.18/0.85	0.29/0.04	-0.2/-0.69	-1.41/-2.33	-3.61/-4.97	-5.8/-6.98	-7.83/-7.86	-7.44/-6.08	-4.39/-2.59	-0.94/0.09	0.40/0.51	1/1.49	1.72/1.55	0.78/-0.28	-1.67/-3.46	-4.8/-5.7	-6.41/-6.99	-6.11/-5.39
0(37.5°)	-1.74/-1.63	-1.61/-1.62	-2.35/-2.17	-1.31/-0.67	0.09/0.49	0.52/0.57	0.75/0.75	0.39/0.18	-0.21/-1.01	-1.47/-2.24	-3.67/-5.86	-6.38/-6.68	-7.62/-7.36	-6.1/-4.79	-3.06/-1.45	-0.42/-0.33	-1.01/-0.76	0.14/1.46	1.98/1.72	0.99/-0.38	-1.96/-2.98	-3.77/-4.12	-4.93/-5.57	-4.76/-3.37
0(45°)	-4.77/-3.37	-2.85/-2.73	-1.87/-0.92	-0.36/-0.5	0.54/0.03	0.36/0.45	-0.87/-0.53	0.36/0.59	0.33/-1.04	-2.24/-2.93	-3.76/-5.96	-7.43/-8.75	-8.34/-6.85	-4.6/-3.75	-3.36/-2.76	-2.33/-2.16	-2.45/-2.07	-1.01/-0.51	-0.65/-1.17	-2.52/-4.26	-4.1/-3.79	-3.2/3.1	-2.45/-3.86	-4.54/-5.1
0(52.5°)	-5.61/-4.61	-4.59/-3.69	-2.96/-2.6	-2.75/-2.61	-0.88/-0.25	-0.26/0.19	0.17/0.18	-0.19/0.01	-0.35/-2.06	-4.19/-6.57	-5.34/-5.76	-7.09/-7.58	-7.46/-6.85	-5.02/-3.66	-2.92/-2.11	-1.92/-2.37	-3.44/-3.04	-3.11/2.7	-3.18/-3.85	-3.2/1.87	-1.76/-1.81	-2.23/-3.59	-4.02/-5.2	-5.88/-7.1
0(60°)	-8.23/-7.23	-5.17/-4.13	-3.39/-2.73	-1.58/-1.13	-0.89/0.02	0.24/0.04	-1.34/-2.66	-2.88/-2.12	-2.13/-4.08	-5.6/-6.67	-5/-5.02	-5.53/-7.83	-10.92/-7.78	-5.46/-4.71	-5.03/-3.39	-1.83/-1	-0.45/-0.86	-1.15/-1.94	-1.75/-1.78	-2.52/-2.47	-2.37/-3.24	-4.21/-4.96	-5.34/-6.66	-8.9/-11
0(67.5°)	-7.86/-6.7	-5.37/-3.27	-2.17/-1.67	-1.08/-1.26	-2.76/-1.88	-0.17/0.38	-0.18/-1.1	-1.23/-1.69	-3.21/-4.82	-4.95/-5.11	-3.34/-3.19	-6/-6.48	-8.74/-6.35	-5.39/-5.12	-4.32/-4.59	-4.23/-1.77	-0.86/-0.63	-0.5/-1.22	-1.83/-2.28	-1.96/-1.77	-2.52/-3.28	-4.46/-5.21	-5.59/-5.69	-7.03/-7.76
0(75°)	-7.33/-6.13	-4.62/-4.95	-4.32/-3.2	-2.27/-1.95	-0.81/-0.2	-0.62/-1.32	-1.63/-2.77	-3.59/-5.43	-5.69/-4.01	-2.44/-2.66	-3.62/-4.11	-4.27/-4.91	-4.86/-4.56	-3.53/-4.12	-4.19/-6.07	-5.54/-3.25	-2.41/-1.67	-0.36/-0.7	-1.16/-3.45	-4.32/-3.72	-3.87/-5.07	-6.95/-7.76	-8.95/-9.6	
0(82.5°)	-6.2/-6.69	-6.59/-4.43	-3.12/-2.05	-1.7/-1.66	-1.84/-1.99	-1.89/-1.7	-2.15/-0.38	-3.74/-2.52	-1.58/-1.14	-1.44/-3.33	-5.44/-6.26	-6.42/-5.63	-4.28/-2.44	-3.64/-5.38	-5.62/-5.55	-2.18/-0.14	-0.87/-1.66	-0.84/-0.87	-0.86/0.23	0.61/-1.12	-2.9/-3.45	-3.61/-5.02	-7.27/-8.67	-8.77/-6.99
0(90°)	-3.35/-3.11	-3.81/-3.36	-2.5/-2.35	-2.38/-3.12	-3.19/-2.9	-2.48/-2.2	-1.89/-2.37	-2.51/-2.25	-1.05/-1.23	-2.6/-5.93	-8.77/-8.4	-9.72/-7.99	-4.87/-4.68	-5.43/-7.69	-6.35/-4.59	-1.89/-1.08	-1.45/-3.32	-2.27/-1.92	-1.6/-1.34	-1.55/-1.13	-0.65/-0.6	-1.72/-2.78	-3.08/-3.22	-2.58/-2.7
0(97.5°)	-4.14/-5.11	-6.64/-4.74	-4.83/-3.79	-3.94/-3.98	-4.61/-4.85	-4.35/-3.36	-3.26/-4.04	-3.52/-3.79	-4.77/-5.63	-5.01/-4.17	-3.45/-3.01	-2.28/-2.32	-3.92/-2.78	-5.5/-6.55	-6.95/-6.2	-4.63/-5.39	-3.66/-1.58	-0.98/-0.65	0.08/-0.21	0.63/0.77	-0.56/-1.67	-2.44/-1.55	-2.05/-2.1	-3.97/-5.26
0(105°)	-3.87/-3.86	-3.84/-2.23	-3.24/-2.41	-2.82/-3.26	-2.34/-2.09	-1.53/-1.94	-2.14/-2.92	-4.17/-4.63	-3.1/-1.77	-1.42/-3.12	-5.09/-3.68	-2.27/-3.36	-3.81/-2.32	-3.52/-6.41	-7.84/-6.18	-2.62/-1.6	-1.99/-1.76	-0.7/-0.81	-0.61/-0.99	-0.94/-0.98	-1.6/-2.51	-2.52/-3.23	-3.57/-3.14	-3.25/-4.1
0(112.5°)	-1.86/-0.94	-2.45/-1.76	-1.52/-0.4	-1.50/0.01	-0.11/-0.64	-1.4/-2.53	-4.31/-4.82	-4.98/-6	-5.64/-4.85	-5.77/-6.36	-5.72/-3.88	-6.95/-7.45	-5.83/-4.7	-5.35/-6.54	-6.98/-5.04	-2.98/-0.7	-1.53/-0.77	-0.23/-0.31	0.51/0.98	1.48/-3.14	1.38/1.8	0.02/-1.03	-0.61/-0.98	-1.48/-3.69
0(120°)	-6.11/-3.17	-2.16/-1.21	-0.46/-0.55	-0.68/-1.69	-2.48/-2.37	-2.15/-1.83	-1.84/-2.12	-1.71/-1.76	-2.99/-4.17	-4.66/-5.28	-6.64/-7.91	-6.15/-4.5	-4.76/-4.1	-6.63/-6.97	-6.16/-4.51	-4.27/-2.55	-3.66/-2.48	-1.69/-1.36	-1.42/0.24	0.81/0.06	-0.6/-0.94	-1.58/-1.98	-4.82/-5.67	-4.03/-4.3
0(127.5°)	-3.08/-3.72	-5.39/-5.31	-4.19/-3.69	-3.05/-1.51	-1.73/-2.48	-1.85/-1.04	-1.23/-1.6	-2.05/-3.17	-3.49/-4.42	-4.2/-5.07	-7.21/-8.73	-9.88/-8.05	-4.66/-3.77	-5.37/-7.52	-6.99/-5.63	-3.07/-3.85	-2.33/-5.12	-2.23/-2.32	-1.93/-1.84	-1.33/-1.2	-0.36/0.1	-0.56/-2.09	-1.91/-3.03	-2.6/-3.29
0(135°)	-7.29/-3.7	-3.14/-3.69	-3.14/-4.02	-5.55/-5.51	-4.69/-3.75	-4.08/-3.74	-3.68/-3.96	-4.17/-4.3	-5.49/-5.89	-6.7/-8.37	-9.81/-8.11	-9.38/-9.47	-5.28/-5.57	-6.05/-5.61	-4.3/-2.87	-3.14/-1.38	-1.33/-2.39	-1.31/-2.8	-1.76/-0.07	-0.24/-1.12	-0.44/0.05	-0.93/-2.74	-5.31/-7.01	-4.93/-6.05
0(142.5°)	-1.32/-2.75	-3.94/-3.65	-3.47/-3.51	-5.01/-5.54	-5.5/-4.13	-3.47/-3.84	-4.73/-4.42	-4.13/-4.84	-6.94/-9.7	-10.8/-9.1	-5.84/-4.25	-3.64/-3.04	-3.85/-4.09	-3.54/-3.72	-4.44/-2.67	-1.95/-0.91	-1.69/-2.58	-3.29/-4.46	-3.42/-2.14	-1.29/-1.09	-1.3/-1.53	-1.59/-3.14	-4.07/-4.45	-3.34/-2.05
0(150°)	-3.37/-3.11	-3.79/-4.04	-4.18/-5.02	-4.46/-3.8	-3.39/-3.76	-4.36/-4.95	-5.84/-5.51	-6.4/-6.32	-5.83/-5.59	-6.85/-9.02	-7.02/-6.42	-6.55/-5.44	-4.63/-6.1	-5.91/-3.96	-2.56/-1.97	-3.69/-4.98	-4.72/-4.79	-3.81/-2.64	-2.65/-3.07	-3.69/-3.43	-3.41/-2.85	-2.08/-2.1	-3.09/-3.3	
0(157.5°)	0.98/1.23	0.81/0	-0.14/0.13	0.29/0.07	-1.05/-2.45	-4.12/-4.73	-4.24/-3.39	-2.5/-2.69	-2.91/-3.7	-3.43/-2.09	-0.86/-0.1	-0.08/0.56	-0.67/-1.08	-0.56/0.11	-0.14/-0.18	-0.27/-1.67	-3.68/-4.65	-2.78/-1.26	-0.02/0.82	1.12/1.16	1.28/1.41	1.46/0.99	3.92/2.52	
0(165°)	-1.11/-1.2	-1.67/-2.74	-3.73/-4.44	-4.79/-4.95	-4.9/-4.91	-5.57/-6.5	-6.89/-7.29	-7.84/-7.99	-7.36/-5.73	-4.37/-3.56	-3.67/-4.03	-3.76/-2.47	-1.12/-0.3	-0.27/-1.14	-2.36/-3.4	-3.36/-3.36	-3.24/-3.26	-2.98/-2.55	-1.73/-1.36	-1.46/-1.52	-1.38/-0.95	-0.57/-0.61	-0.68/-0.69	-0.9/-1.12
0(172.5°)	-6.55/-5.94	-5.29/-4.49	-4.12/-3.82	-3.58/-3.43	-3.35/-3.88	-4.78/-5.79	-6.44/-6.75	-6.73/-6.67	-6.59/-6.74	-6.77/-6.97	-6.66/-5.96	-5.05/-4.21	-3.47/-2.98	-2.67/-2.37	-2.1/-1.9	-1.81/-1.79	-2.04/-2.32	-2.41/-2.65	-2.38/-2.61	-2.75/-2.7	-2.77/-2.92	-3.39/-3.74	-4.8/-5.37	-6.91/-6.93
0(180°)	-9.96/-10.7	-10.9/-10.27	-9.05/-7.74	-6.65/-5.9	-5.38/-5.02	-4.73/-4.38	-4.11/-3.32	-3.17/-2.94	-3.22/-3.67	-4.17/-4.8	-5.82/-7.14	-8.5/-9.96	-10.62/-9.57	-7.89/-6.42	-5.28/-4.38	-3.56/-3.04	-2.85/-2.97	-3.08/-3.33	-3.1/-3.12	-3.09/-3.22	-3.46/-4.01	-4.64/-5.22	-5.76/-6.48	-7.73/-9.14
Freq(Hz)	5.3G/Pol.	Theta	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
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°)
0(0°)	-0.88/-0.9	-1.04/-1.36	-1.75/-2.21	-2.67/-3.28	-4.15/-4.81	-5.59/-6.29	-6.81/-6.03	-5.22/-4.4	-3.24/-2.4	-1.57/-1.31	-1.11/-1.11	-1.08/-0.9	-0.62/-0.47	-0.47/-0.7	-0.91/-1.22	-1.96/-2.78	-3.79/-4.72	-5.58/-6.15	-5.76/-5.55	-4.78/-4.17	-3.46/-2.9	-2.27/-2.05	-1.6/-1.53	-1.46/-1.09
0(7.5°)	0.36/0.24	0.23/0.18	-0.19/-0.74	-0.87/-1.37	-1.91/-2.31	-2.98/-3.87	-4.38/-4.53	-4.54/-4.03	-3.78/-3.2	-2.74/-2.62	-2.71/-2.59	-2.34/-2.24	-2.02/-1.75	-1.73/-1.7	-1.93/-2.53	-3.08/-4.09	-5.09/-6.11	-7.33/-8.74	-7.53/-6.72	-5.71/-4.38	-3.32/-2.58	-1.51/-0.96	-0.63/-0.2	-0.01/0.26
0(15°)	1.82/1.98	2.21/1.22	1.17/1.66	1.81/1.46	0.94/0.36	-0.64/-1.82	-3/-3.88	-4.07/-4.23	-4.52/-4.56	-4.54/-4.76	-4.67/-4.64	-4.05/-3.24	-2.09/-1.21	-0.82/-0.42	-0.48/-0.88	-1.51/-2.44	-3.55/-4.99	-6.59/-8.61	-8.73/-8.05	-7.05/-5.16	-3.92/-2.68	-1.39/-0.19	0.69/1.4	1.54/1.87
0(22.5°)	2.35/2.31	1.94/1.37	1.03/1.27	1.59/1.67	1.34/0.46	-0.68/-2.34	-4.06/-5.31	-5.23/-4.43	-3.66/-3.5	-3.86/-3.98	-4.08/-4.11	-3.59/-2.48	-1.5/-1.07	-0.48/-0.13	-0.05/-0.02	-0.16/-0.76	-1.49/-2.97	-4.94/-7.11	-9.3/-7.7	-5.08/-2.71	-1.27/-0.39	0.44/0.9	1.47/1.85	1.94/2.2
0(30°)	1.61/1.39	1.37/1.03	0.95/1.41	1.98/1.97	1.35/0.24	-1.56/-3.78	-4.48/-4.68	-4.38/-3.86	-3.29/-3.16	-3.07/-3.29	-2.98/-2.19	-1.72/-1.55	-1.58/-1.72	-1.76/-1.53	-0.52/0.25	0.42/0.04	-0.1/-0.67	-2.2/-3.77	-4.72/-4.91	-3.86/-1.46	-0.2/0.3	0.51/0.58	0.86/0.83	1.03/1.17
0(37.5°)	0.98/1.23	0.81/0	-0.14/0.13	0.29/0.07	-1.05/-2.45	-4.12/-4.73	-4.24/-3.39	-2.5/-2.69	-2.91/-3.7	-3.43/-2.09	-0.86/-0.1	-0.08/0.56	-0.67/-1.08	-0.56/0.11	-0.14/-0.18	-0.27/-1.67	-3.68/-4.65	-2.78/-1.26	-0.02/0.82	1.12/1.16	1.28/1.41	1.46/0.99	3.92/2.52	
0(45°)	2.68/2.43	1.68/0.88	0.92/0.94	0.47/0.15	-0.81/-1.54	-2.97/-4.39	-4.32/-3.84	-3.18/-2.78	-3.18/-3.15	-3.28/-3.42	-2.98/-1.43	-0.2/-0.09	-0.69/-1.28	-1.71/-1.43	-0.54/-0.09	0.07/0.34	-1.9/-3.1	-4.48/-6.55	-7.2/-4.84	-1.73/-0.55	0.49/1.26	1.95/2.32	2.86/3.48	3.62/2.95
0(52.5°)	3.33/2.94	1.15/-0.39	-0.29/-0.69	-1.23/-0.9	-0.91/-1.96	-3.87/-3.9	-3.57/-3.73	-4.14/-4.17	-4.09/-3.33	-2.63/-1.61	-1.79/-1.17	-1/-1.54	-1.32/-0.34	-0.39/-1.4	-1.49/-1.28	-1.89/-3.41	-3.39/-2.61	-2.81/-2.62	-1.55/-0.04	1.39/1.92	1.92/2.65	3.29/3.55	3.98/3.36	4.09/3.39
0(60°)	3.28/2.57	0.46/-0.88	-1.55																					



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

DG(dB)	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°)	-9.57/-9.12	-5.83/-4.12	-1.94/-0.49	0.25/0.94	1.34/1.67	1.84/1.77	1.71/1.44	1.33/1.12	0.61/-0.21	-1.24/-2.76	-4.51/6.64	-9.41/-10.28	-10.37/8.99	-5.41/-3.4	-2.31/-1.28	-0.35/0.21	0.88/1.33	1.69/1.78	1.93/1.73	1.47/0.94	0.24/-0.74	-1.51/-2.93	-4.69/-7.23	-8.63/9.65
Θ(7.5°)	-6.71/-5.8	-4.4/-3.33	-2.56/-1.32	-0.83/-0.23	0.49/0.99	1.35/1.44	1.52/1.61	1.75/1.84	1.51/0.56	-0.55/-1.85	-3.18/-4.93	-7.31/-10.97	-12.69/-10.9	-8.68/-5.93	-3.97/-2.37	-1.08/-0.03	0.67/1.21	1.57/1.47	1.75/1.42	0.83/0.03	-0.8/-1.57	-2.16/-3.77	-6.34/-9.41	-9.69/-7.66
Θ(15°)	-6.18/-5.03	-4.33/-3.86	-3.21/-2.4	-1.64/-0.99	-0.06/0.59	1.09/1.49	1.73/1.96	1.71/1.41	0.86/0.21	-0.64/-1.53	-3.01/4.81	-6.43/-7.61	-8.03/7.61	-6.46/-4.99	-3.41/-1.97	-0.74/0.21	0.86/1.23	1.34/1.4	1.17/0.81	0.13/-0.71	-1.52/-2.24	-3.12/-3.81	-5.13/-5.74	-6.77/-6.48
Θ(22.5°)	-5.22/-1.9	-6.22/-5.01	-3.71/-2.16	-1.32/-0.66	0.01/0.64	1.13/1.56	1.95/2	2.02/1.24	1.22/0.41	-0.5/-1.21	-4.12/-6.08	-7.64/-8.25	-8.09/6.64	-5.15/-3.77	-2.61/-1.62	-0.85/0.16	0.97/1.46	1.52/1.35	0.86/0.06	-0.88/-1.58	-2.22/-3.11	-2.71/-3.11	-3.28/-3.55	-3.81/-4.72
Θ(30°)	-3.77/-3.99	-3.56/-3.16	-2.41/-2.09	-1.87/-1.27	-0.19/0.71	1.11/1.58	1.77/2.24	2.18/1.6	0.89/0.22	-0.73/-2.26	-4.77/-7.14	-7.79/-7.43	-6.99/-6.2	-5.08/-4.29	-3.37/-2.34	-1.38/-0.29	0.56/1.3	1.14/0.5	1.00/0.68	-1.23/-1.37	-1.38/-1.09	-0.92/-1.41	-1.85/-2.62	
Θ(37.5°)	-3.4/-4.51	-4.83/-3.74	-3.43/-2.51	-1.34/-0.64	-0.17/0.07	0.22/0.61	0.68/0.64	0.73/0.58	-0.17/-1.1	-2.25/-4.18	-6.96/-8.9	-10.15/-8.36	-6.89/-5.74	-4.26/-3.05	-2.23/-0.95	0.07/0.33	0.25/0.14	0.15/0.38	0.72/0.51	-0.13/-0.46	-0.5/-1.09	-1.48/-1.64	-1.95/-1.76	-1.52/-2.41
Θ(45°)	-2.81/-3.08	-3.22/-3.84	-2.99/-1.29	-0.75/-0.95	-0.69/-0.59	-0.77/-0.89	-1.13/-0.99	-0.41/-0.16	-0.32/-1.1	-2.84/-4.58	-6.98/-7.2	-5.94/-6.65	-4.62/-5.72	-4.37/-2.96	-2.03/-0.99	-0.22/0.05	-0.09/-0.44	-1.22/-1.09	-0.28/0.33	0.5/0.02	-0.64/-1.01	-1.17/-1.12	-1.44/-1.92	-2.48/-2.16
Θ(52.5°)	-1.04/-0.28	-0.81/-1.61	-1.68/-1.69	-1.58/-1.17	-0.93/-1.19	-1.31/-0.87	-0.86/-1.59	-1.85/-1.56	-1.62/-2.18	-3.48/-4.21	-4.58/-6.05	-6.8/6.39	-4.51/-4.5	-3.43/-1.97	-1.73/-1.48	-1.12/-0.65	-0.62/-1.03	-1.96/-2.55	-2.41/-1.99	-0.9/-0.94	-1.52/-2.03	-1.78/-1.02	-0.62/-0.64	-1.58/-1.75
Θ(60°)	-6.04/-5.05	-5.08/-4.33	-2.71/-1.51	-0.88/-0.82	-1.03/-1.51	-1.25/-1.01	-0.77/0.07	0.14/-0.1	-1.22/-2.31	-3.26/-3.67	-3.57/-3.59	-3.89/-4.65	-5.39/-7.29	-6.78/-6.52	-4.73/-3.06	-1.24/-1.53	-3.08/-3.34	-2.75/-3.21	-3.54/-3.05	-2.9/-2.49	-2.28/-2.35	-3.11/-2.79	-1.99/-2.63	-3.26/-4.61
Θ(67.5°)	-7.01/-5.08	-4.33/-3.13	-2.52/-2.12	-1.77/-2.11	-1.91/-1.2	0.01/0.97	1.24/0.33	-2.1/2.58	-1.79/-2.57	-4.02/-3.55	-4.61/4.04	-4.11/-4.83	-5.36/-4.93	-4.59/-5.21	-5.3/-4.09	-2.55/-2.82	-2.59/-2.74	-2.65/-3.21	-1.27/-1.3	-1.74/-1.91	-2.32/-3.12	-3.95/-5.25	-5.21/-5.2	-6.93/-7.21
Θ(75°)	-5.79/-4.17	-4.1/-3.5	-2.81/-2.45	-2.56/-3.3	-4.36/-4.05	-1.13/0.57	0.03/0.96	-2.01/2.13	-1.98/-3.89	-4.69/-2.8	-1.69/-1.41	-4.12/-2.13	-3.38/-3.23	-3.14/-4.87	-6.07/-6.62	-4.56/-2.54	-1.11/-1.64	-0.73/-0.89	-1.5/-0.93	-0.7/-0.08	-1.73/-3.23	-4.79/-6.64	-7.24/-7.32	-7.71/-6.76
Θ(82.5°)	-8.58/-7.77	-5.92/-3.96	-3.94/-5.02	-5.64/-6.14	-4.88/-3.12	-1.75/-0.95	-0.05/0.82	0.04/2.53	-4.24/-3.93	-4.28/-4.2	-4.64/-6.5	-8.29/-8.96	-8.07/-5.44	-4.27/-6.93	-7.3/-6.55	-4.28/-2.17	-1.65/-2.76	-1.05/-1.06	-1.23/-0.13	1.2/-0.33	-1.58/-2.03	-2.43/-2.88	-3.47/-4.04	-6.95/-8.91
Θ(90°)	-5.56/-6.11	-5.59/-5.37	-6.53/-6.94	-5.66/-5.33	-4.77/-4.65	-3.63/0.86	0.22/0.31	0.36/0.09	0.12/1.09	-1.91/-3.64	-6.74/-8.06	-6.17/-4.82	-4.92/-3.14	-2.88/-5.27	-5.11/-5.53	-1.82/0.6	0.52/1.32	-1.79/-2.02	-0.38/0.71	1.42/0.02	-1.1/-2.1	-3.29/-4.3	-6.28/-9.49	-12.17/-9.35
Θ(97.5°)	-7.56/-6.79	-6.24/-4.21	-3.87/-3.79	-5.17/-5.2	-4.12/-3.48	-1.58/-0.57	-0.18/-0.53	0.08/0.66	0.18/0.32	0.01/1.27	-2.47/-2.29	-5.67/-5.71	-4.7/-2.49	-4.79/-7.06	-8.1/-7.62	-2.63/0.51	-0.33/-0.08	0.77/-0.87	-0.62/0.12	0.11/-0.31	-1.22/-3.62	-5.98/-8.25	-8.83/-8.79	-7.27/-7.04
Θ(105°)	-8.05/-5.79	-4.98/-5.47	-4.85/-3.27	-2.38/-1.05	-0.41/-1.62	-2.71/-1.93	-2.04/-1.98	-1.59/-0.68	-0.74/-1.87	-2.01/-2.18	-3.14/-4.18	-5.15/-5.64	-6.23/-5.07	-4.82/-4.79	-8.13/-5.8	-2.73/-2.45	-1.96/-0.93	-0.4/-1.55	-0.36/-0.76	-0.79/-0.56	-1.37/-1.78	-4.56/-6.03	-6.69/-4.94	-4.6/-3.84
Θ(112.5°)	-5.78/-6.87	-7.78/-8.87	-6.02/-4.7	-3.38/-2.61	-1.07/0.54	-0.8/-0.92	-0.76/-1.12	-0.42/0.58	-2.02/-3.45	-4.95/-6.07	-8.74/-9.3	-7.82/-8.11	-8.83/-5.77	-4.43/-8.88	-8.15/-8.95	-6.39/-2.67	-1.74/-2.33	-1.62/-2.07	0.24/0.14	-4.16/-2.61	-3.71/-4.97	-4.96/-8.67	-6.36/-4.9	-5.74/-6.42
Θ(120°)	-7.55/-6.93	-7.95/-8.05	-8.1/-6.53	-3.56/-2.81	-1.69/-0.99	-1.24/0.08	0.28/0.52	-0.38/0.24	-1.78/-3.15	-5.66/-7.47	-8.07/-5.39	-7.73/-9.98	-10.53/-8.34	-7.03/-8.55	-6.84/-9.88	-9/-14.3	-5.55/-2.43	-2.73/-4.31	-2.19/-1.01	-2.95/-2.43	-1.03/-3.76	-5.77/-7.01	-5.43/-3.66	-3.59/-4.5
Θ(127.5°)	-9.1/-8.39	-8.25/-6.92	-3.52/-3.7	-1.6/-1.11	-1.24/-0.25	0.46/1.03	0.81/0.24	-1.28/-2.29	-2.9/-4.33	-4.86/-6.2	-5.66/-6.39	-6.25/-4.18	-4.22/-6.19	-7.76/-4.49	-4.96/-2.81	-2.82/-2.17	-4.61/-4.92	-1.99/-2.87	-2.65/-1.63	-0.95/-3.61	-5.42/-6.71	-7.43/-8.58	-5.12/-4.29	
Θ(135°)	-3.43/-4.38	-4.2/-5.46	-4.52/-3.45	-2.52/-0.32	0.3/0.35	-0.51/0.37	-0.82/1.88	-3.11/-4.11	-4.67/-4.57	-5.08/-6	-5.62/-4.19	-4.75/-6.25	-5.24/-1.47	-3.84/-9.22	-6.44/-5.44	-3.72/-2.82	-2.8/-3.87	-3.02/-3.18	-1.03/-0.05	-1.96/-5.04	-4.41/-3.92	-3.69/-5.38	-6.71/-8.25	-6.47/-3.97
Θ(142.5°)	-4.12/-4.69	-4.01/-3.7	-2.27/-1.46	-2.04/-2.18	-1.86/-1.86	-1.86/-1.9	-2.71/-3.24	-3.97/-4.25	-4.53/-3.32	-2.95/-3.84	-4.22/-3.3	-3.16/-4.09	-2.47/-2.64	-4.87/-5.89	-6.35/-3.27	-3.92/-5.21	-2.87/-2.86	-3.93/-3.87	-2.63/-1.32	-1.52/-2.98	-4.04/-3.65	-4.52/-3.32	-4.94/-5.14	-3.94/-3.49
Θ(150°)	-0.92/-0.98	-2.05/-2.44	-3.21/-3.63	-3.83/-3.88	-3.04/-2.59	-2.19/-2.23	-2.6/-2.7	-3.06/-3.9	-4.59/-4.01	-3.76/-4.17	-3.97/-3.91	-4.31/-5.62	-6.45/-5.68	-5.27/-6.64	-7.93/-6.16	-3.83/-4.57	-3.86/-3.88	-5.77/-6.3	-5.34/-4.44	-6.56/-9.53	-7.24/-6.2	-7.19/-6.55	-4.96/-4.02	-3.16/-1.9
Θ(157.5°)	-1.4/-1.17	-1.4/-1.34	-1.49/-1.22	-2.89/-3.49	-3.82/-3.76	-3.69/-3.78	-4.27/-5.04	-6.41/-8.2	-8.91/9.67	-8.9/-5.92	-3.94/-2.69	-2.08/-1.84	-1.72/-1.73	-1.85/-2.55	-4.06/-5.63	-7.1/-6.29	-1.79/-1.58	-2.61/-2.7	-6.17/-5.98	-7.2/-6.27	-6.46/-6.87	-4.85/-3.04	-1.8/-0.88	-0.44/-0.27
Θ(165°)	-4.29/-3.15	-2.92/-3.9	-4.59/-4.4	-4.24/-4.1	-3.91/-3.93	-4.01/-4.96	-6.53/-7.89	-9.69/-10	-9.63/-8.58	-7.6/-6.69	-5.94/-4.44	-3.07/-2.11	-1.79/-2.05	-2.91/-3.67	-4.17/-4.06	-3.69/-3.37	-3.59/-4.09	-4.95/-5.58	-5.88/-6.21	-6.05/-5.95	-5.31/-4.27	-4.45/-5.38	-6.72/-7.17	-7.81/-6.92
Θ(172.5°)	-6.55/-6.3	-5.37/-4.45	-3.9/-4.17	-4.27/-4.79	-5.28/-6.28	-7.41/-8.3	-9.21/-9.7	-9.23/-9.35	-8.91/-8.2	-7.88/-8.24	-8.77/-7.84	-6.3/-4.71	-3.81/-3.51	-3.46/-3.36	-2.97/-2.65	-2.52/-2.63	-3.03/-3.45	-3.73/-3.88	-4.13/-4.49	-5.34/-6.19	-6.25/-6.68	-8.37/-8.29	-7.54/-7.28	-6.78/-6.46
Θ(180°)	-6.81/-7.28	-6.23/-5.55	-4.23/-4.22	-4.27/-4.59	-4.72/-4.75	-4.78/-4.47	-4.41/-4.56	-4.83/-4.91	-5.26/-5.29	-5.53/-5.72	-6.33/-6.87	-7.75/-9.04	-9.97/9.83	-9.7/-9.53	-8.91/-8.26	-7.38/-6.83	-6.23/-6.37	-6.78/-6.89	-6.94/-7.11	-7.27/-6.98	-6.78/-7.19	-6.79/-5.7	-5.57/-5.8	-6.16/-6
Freq(Hz)	5.785G/Pol.	Theta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Θ(180°)	-7.36/-8.55	-9.9/-9.6	-10.01/-9.39	-9.23/-9.26	-8.72/-8.39	-7.88/-8.11	-8.18/-8.29	-9.35/-9.08	-8.39/-7.89	-7.47/-7.21	-6.96/-6.54	-6.06/-5.69	-5.65/-6.21	-6.74/-7.22	-7.41/-7.45	-8.06/-8.18	-8.09/-8.13	-8.08/-7.23	-6.87/-5.92	-5.13/-5.09	-5.13/-5.79	-6.5/-7.75	-8.71/-7.76	-6.88/-6.87
---------	-------------	-----------	--------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	------------	-------------	-------------

5G option15

Freq(Hz)	5.2G/Pol.	Phi-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	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°)	-5.1/-4.4	-3.61/-3.06	-2.4/-2.13	-2.02/-1.98	-1.87/-1.74	-1.63/-1.87	-1.95/-1.89	-1.82/-1.79	-1.86/-2.01	-2.38/-2.58	-3.04/-3.67	-4.62/-4.77	-4.54/-3.62	-2.81/-2.32	-2.15/-2.19	-2.42/-2.38	-2.29/-2.39	-2.23/-2.07	-1.91/-1.78	-1.7/-1.85	-2.19/-2.14	-1.95/-1.84	-1.97/-2.6	-3.73/-4.94
Θ(7.5°)	-4.11/-3.4	-2.84/-2.53	-2.05/-1.74	-1.5/-1.33	-1.45/-1.36	-1.4/-1.63	-1.49/-1.28	-1.22/-1.11	-0.99/-0.73	-0.44/-0.78	-1.33/-2.16	-2.95/-3.88	-4.25/-4.02	-3.37/-3.14	-2.86/-2.75	-2.71/-2.61	-2.47/-2.13	-2.03/-2.07	-1.89/-1.96	-2.28/-2.72	-3.15/-3.58	-3.91/-4.04	-3.75/-4.01	-4.41/-4.3
Θ(15°)	-3.48/-3.15	-3.19/-2.65	-2.02/-1.36	-0.85/-0.8	-1.05/-1.38	-1.76/-2.06	-2.29/-2.11	-1.35/-0.63	-0.19/-0.03	-0.04/-0.11	-0.26/-0.67	-1.22/-2.13	-3.08/-3.87	-4.14/-3.87	-3.51/-3.28	-3.09/-3.1	-2.85/-2.51	-2.3/-2.31	-2.44/-2.75	-3.44/-3.96	-4.42/-4.58	-4.58/-4.71	-4.97/-4.41	-3.59/-3.68
Θ(22.5°)	-5.38/-4.97	-4.68/-3.63	-2.81/-2.25	-2.21/-2.42	-2.39/-2.02	-1.62/-0.96	-0.74/-0.39	-0.24/0.1	0.18/0.07	0.17/0.19	-0.26/-0.79	-1.24/-3.24	-4.41/-5.04	-5.09/-4.76	-4.34/-3.75	-3.21/-2.97	-3.23/-4.15	-4.27/-4.14	-4/-4.03	-4.29/-4.57	-4.61/-4.94	-4.99/-5.11	-5.34/-5.04	-4.93/-5.44
Θ(30°)	-4.82/-4.09	-3.25/-2.55	-2.53/-2.54	-2.02/-1.03	0.04/0.79	1.23/1.49	1.29/0.92	0.91/1.08	1.15/0.98	0.84/0.41	-0.06/0.69	-1.55/-3.21	-5.43/-7.58	-8.99/-9.3	-8.62/-6.81	-6.47/-3.36	-3.49/-4.81	-5.25/-4.03	-3.5/-3.51	-3.43/-3.57	-3.67/-4.19	-5.03/6.07	-7.1/-8.32	-9.25/-7.4
Θ(37.5°)	-3.55/-2.57	-1.86/-1.64	-1.47/-1.07	-0.08/1.05	1.77/2.13	2.42/2.38	2.23/2.08	1.79/1.58	1.41/1.18	0.98/0.53	-0.58/-1.72	-2.36/-3.57	-6.08/-9.16	-11.96/-11.1	-10.1/-8.87	-8.13/-6.97	-6.05/-5.9	-5.6/-5.31	-3.1/-1.45	-1.12/-1.73	-2.81/-4.15	-5.15/-6.07	-7.16/-7.51	-6.14/-4.75
Θ(45°)	-4.7/-3.99	-2.84/-1.6	-1.16/-0.24	0.81/2	2.93/4.5	3.92/4.06	3.98/3.83	3.72/3.61	3.39/3.03	2.44/1.92	1.03/-0.88	-2.43/-3.72	-5.05/-6.25	-6.75/-8.21	-8.84/-9.83	-9.71/-8.49	-8.61/-8.14	-7.31/-5.8	-5.49/-6.65	-3.79/-3.51	-3.49/-4.39	-4.85/-4.57	-4.24/-3.84	-3.43/-3.45
Θ(52.5°)	-5.2/-6.24	-2.24/-1.66	-1.59/-1.2	-0.03/1.53	2.74/3.5	3.72/3.56	3.44/3.65	3.87/3.43	2.56/1.53	0.17/-0.27	-0.27/-2.22	-3.78/-4.9	-4.98/-5.66	-6.27/-8	-7.56/-7.21	-6.46/-6.77	-6.52/-5.52	-5.13/-5.91	-5.34/-4.48	-6.21/-5.95	-4.11/-3.94	-4.82/-4.66	-7.56/-8.9	-9.03/-6.84
Θ(60°)	-8.51/-5	-3.45/-1.41	-1.02/-0.54	0.25/1.09	1.98/2.45	2.42/1.78	1.63/2.44	3.28/3.38	2.61/1.04	-0.6/-1.63	-1.66/-2.26	-3.64/-5.32	-7.79/-7.51	-6.95/-6.34	-6.49/-7.54	-5.56/-4.32	-4.67/-5.31	-6.26/-7.24	-6.99/-6.98	-5.89/-4.91	-4.93/-5.2	-5.76/-5.9	-7.98/-10.08	-11.89/-10.69
Θ(67.5°)	-8.07/-7.15	-6.44/-5.27	-4.35/-2.57	-0.84/0.69	0.92/1.75	2.55/2.75	2.72/2.6	2.39/1.9	1.01/-0.1	-1.26/-2.13	-1.59/-3.03	-4.2/-6.4	-7/-5.4	-5.6/-5.46	-6.98/-8.49	-7.14/-5.56	-5.33/-6.72	-6.13/-8.96	-8.87/-8.07	-6.83/-5.14	-5.55/-5.51	-5.53/-5.62	-6.26/-7.11	-6.8/-6.51
Θ(75°)	-6.86/-5.61	-6.14/-5.38	-4.56/-2.25	0.33/2.14	3.03/3.3	2.91/2.16	1.31/0.74	0.15/0.47	0.76/0.04	-0.78/-2.15	-3.56/-4.33	-4.79/-5.78	-6.02/-6.15	-6.81/-6.5	-6.66/-7.24	-7.12/-6.89	-9.19/-11.72	-11.56/-9.62	-10.35/-9.58	-10.1/-8.16	-6.52/-7.61	-7.35/-6.99	-7.09/-7.49	-7.44/-7.29
Θ(82.5°)	-5.4/-7.1	-7.09/-5.52	-4.35/-2.08	-0.51/0.77	2.82/2.82	2.66/1.77	0.76/0.01	-0.03/0.76	1.85/1.59	-0.25/-2.09	-4.16/-6.65	-6.76/-5.22	-3.84/-2.88	-4.24/-6.53	-8.02/-7.63	-3.39/-3.12	-4.37/-6.29	-5.97/-5.2	-5.81/-8.56	-7.04/-5.73	-5.85/-5.27	-5.43/-5.85	-5.11/-4.94	-5.03/-5.34
Θ(90°)	-4.68/-3.57	-3.93/-2.49	-1.61/0.65	0.33/1.53	2.37/2.73	2.67/2.41	2.04/2.05	0.09/2.48	2.73/2.18	0.58/2.18	-5.84/-8.21	-9.58/-9.68	-9.25/-7.69	-9.77/-12.23	-11.69/-11.28	-6.14/-4.05	-4.85/-5.44	-4.86/-6.21	-9.76/-11.87	-7.9/-5.73	-6.38/-5.37	-2.68/-1.78	-1.74/-2.38	-2.98/-3.91
Θ(97.5°)	-4.99/-4.26	-4.1/-2.07	-1.35/0.21	0.97/1.55	1.26/0.82	1.07/1.52	1.78/2.31	2.79/2.5	1.82/0.89	-1.32/-3.57	-3.73/-4.05	-4.72/-5.1	-8.55/-6.45	-10.57/-8.68	-9.79/-8.77	-5.96/-6.03	-6.88/-3.16	-2.75/-6.18	-5.83/-5.49	-5.9/-4.93	-5.25/-6.08	-7.09/-4.78	-3.51/-3.79	-4.62/-5.59
Θ(105°)	-5.01/-1.47	-5.1/-4	-3.26/-1.91	-0.31/1.2	2.23/2.37	1.91/1.93	2.23/2.42	2.27/2.52	2.96/2.78	1.82/0.66	-1.33/-2.33	-3.82/-1.67	-7.01/-5.06	-6.06/-7.53	-10.44/-9.24	-3.62/-3.05	-6.11/-6.28	-2.93/-4.52	-6.9/-8.59	-4.77/-3.74	-4.29/-6.32	-10.47/-9.5	-8.46/-10.07	-6.36/-6.4
Θ(112.5°)	-3.53/-3.09	-4.69/-3.58	-2.82/-0.31	0.95/1.5	1.65/1.83	1.75/1.28	1.06/1.21	1.69/2.5	2.10/0.72	-1.34/-2.88	-3.66/-4.14	-8.39/-8.67	-7.48/-5.35	-6.75/-6.48	-4.37/-5.67	-2.97/-5.36	-6.18/-5.22	-6.43/-6.51	-4.77/-6.51	-10.4/-8.59	-5.4/-8.2	-10.03/-7.87	-4.42/-4.57	
Θ(120°)	-7.28/-3.65	-2.79/-1.73	-0.61/0.27	0.31/0.05	0.73/1.2	2.02/2.61	2.61/2.55	2.63/2.49	1.85/0.82	-0.88/-4.25	-6.39/-5.11	-4.89/-3.78	-4.39/-3.19	-6.66/-4.86	-6.7/-7.83	-7.29/-4.54	-8.88/-5.64	-3.26/-6.32	-8.63/-5.57	-4.51/-4.29	-7.28/-7.87	-5.02/-3.38	-5.04/-7.86	-5.01/-4.93
Θ(127.5°)	-3.24/-3.43	-5.04/-4.31	-2.74/-1.26	-0.9/0.65	1.22/1.58	2.41/2.96	3.03/3.17	3.05/2.2	1.12/0.39	-0.85/-2.68	-4.89/-8.28	-11.13/-7.87	-6.74/-6.61	-6.32/-6.5	-7.48/-7.49	-6.05/-8.81	-6.15/-6.24	-3.32/-6.72	-10.53/-7.97	-4.33/-2.86	-3.15/-4.17	-3.65/-2.57	-3.98/-2.76	-2.96/-3.94
Θ(135°)	-4.66/-2.36	-1.89/-3.46	-2.63/-2.45	-2.08/-1.12	0.38/1.56	2.29/3.41	4.56/4.98	4.52/3.82	2.81/1.92	0.54/-2.18	-4.95/-6.37	-7.02/-6.13	-4.46/-2.99	-2.7/-2.94	-2.46/-1.9	-5.86/-4.23	-5.37/-4.81	-3.72/-7.64	-8.25/-6.38	-5.23/-2.69	-2.51/-5.11	-6.5/-6.18	-9.28/-6.33	-3.55/-3.78
Θ(142.5°)	-5.98/-5.23	-4.25/-5.1	-5.55/-4.95	-4.49/-3.33	-2.03/-0.11	1.72/6.9	3.3/3.6	3.37/2.19	0.3/-2.05	-4.27/-3.79	-2.42/-2.65	-3.59/-4.81	-4.06/-4	-3.49/-2.06	-2.64/-4.24	-4.74/-4.88	-3.68/-4.46	-6.34/-10.2	-12.22/-10.57	-9.62/-8.32	-5.69/-5.02	-4.4/-6.09	-4.82/-3.4	-4.51/-5.12
Θ(150°)	-2.69/-2.28	-1.71/-1.56	-1.29/-1.45	-0.98/-0.38	0.37/0.99	1.58/1.82	1.86/1.98	1.83/1.56	0.68/-0.55	-2.08/-3.74	-5.3/-6.84	-6.12/-6.24	-9.12/-8.34	-6.92/-8.75	-11.56/-8.31	-5.05/-5.56	-5.99/-7.02	-7.54/-9.73	-7.6/-6.59	-6.1/-5.14	-5.2/-1.57	-4.23/-3.55	-1.6/-2.15	-1.57/-2.18
Θ(157.5°)	-1.62/-2.04	-2.24/-2.23	-2.21/-1.9	-2.01/-2.16	-2.03/-1.63	-1.17/-0.65	-0.37/-0.22	-0.28/-0.56	-1.2/-1.84	-2.81/-4	-5.63/-5.99	-5.14/-4.21	-4.31/-5.28	-7.28/-7.9	-6.53/-5.06	-4.9/-5.54	-6.54/-7.51	-8.15/-9.54	-10.06/-8.97	-7.09/-5.85	-6.12/-6.74	-6.84/-5.76	-4.15/-3.93	-3.87/-3.14
Θ(165°)	-1.25/-1.38	-1.18/-1.42	-1.8/-2.33	-3.17/-4.01	-4.34/-4.42	-4.5/-4.36	-4.28/-4.33	-6.43/-4.14	-3.92/-3.71	-4.15/-4.63	-5.05/-5.28	-5.39/-5.54	-4.98/-4.3	-3.95/-4.36	-5.57/-7	-8.17/-8.43	-8.15/-8	-7.81/-8	-7.47/-7.01	-6.9/-6.4	-5.11/-4.11	-3.27/-3.2	-2.39/-1.78	-1.64/-1.6
Θ(172.5°)	-4.47/-4.76	-4.82/-5.43	-6.31/-7.24	-8.15/-8.97	-9.06/-9.33	-9.3/-8.2	-7.94/-7.55	-7.13/-6.13	-5.45/-4.66	-4.76/-5.53	-6.44/-6.94	-6.3/-5.16	-4.48/-4.28	-4.57/-5.58	-6.73/-7.89	-7.38/-6.76	-5.78/-5.39	-5.06/-5.36	-5.62/-5.91	-5.96/-5.98	-6.08/-6.29	-6.85/-6.93	-6.24/-5.32	-4.2/-4.47
Θ(180°)	-8.17/-8.19	-8.04/-7.53	-6.42/-5.87	-5.98/-6.28	-7.09/-7.46	-7.67/-8.17	-8.17/-7.8	-7.54/-6.94	-6.55/-6.29	-5.99/-6.14	-7/-8.1	-9.23/-9.09	-9.04/-8.49	-7.95/-7.2	-6.55/-5.98	-5.4/-4.93	-4.85/-5.21	-5.69/-6.5	-7.24/-8.14	-8.42/-8.43	-9.43/-9.95	-10.48/-10.06	-8.79/-8.48	-7.91/-7.98



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Θ(22.5°)	0.52/-0.02	-0.53/-0.22	0.02/-0.19	-0.84/-1.85	-2.65/-4.15	-5.57/-5.98	-6.28/-7.44	-8.35/-7.32	-4.16/-1.92	-0.44/0.58	1.19/1.5	1.65/1.74	1.88/1.83	1.63/1.38	0.96/0.51	-0.34/-1.46	-3.24/-5.93	-7.75/-8.91	-7.06/-3.86	-2.08/-0.75	0.08/0.37	0.35/0.52	0.82/1.47	1.93/1.37
Θ(30°)	1.48/1.11	0.82/0.91	1.03/0.6	-0.6/-1.52	-2.57/-3.44	-4.29/-4.97	-5.78/-6.89	-6.67/-5.93	-3.94/-1.3	0.44/0.86	0.64/-0.12	-0.7/-0.51	0.1/0.62	0.98/0.8	0.52/0.27	-0.09/-1.16	-2.45/-3.64	-4.83/-5.42	-4.02/-1.98	-0.9/0.07	0.57/0.6	0.72/0.73	0.95/1.26	1.39/1.25
Θ(37.5°)	2.05/2.67	2.16/1.43	1/0.73	-0.1/-1.06	-2.25/-3.67	-4.67/-5.22	-6.55/-6.6	-5.98/-4.99	-4.48/-2.54	-0.76/-0.22	-0.41/-0.82	-0.99/-0.64	-0.01/0.67	0.8/0.43	-0.06/-0.42	-0.91/-1.19	-1.62/-2.07	-2.3/-1.91	-1.91/-3.09	-2.53/-1.96	-1.18/0.05	0.45/1.03	0.68/-0.05	-0.56/0.73
Θ(45°)	2.88/3.07	2.11/1.73	1.63/0.73	-0.51/-1.41	-2.01/-2.8	-3.52/-4.23	-4.75/-5.84	-6.14/-6.05	-5.38/-4.11	-1.93/-0.43	-0.82/-1.46	-1.58/-0.82	-0.49/0.05	1.28/1.63	0.92/-0.15	-0.04/0.07	-0.41/-1.17	-2.78/-4.41	-4.08/-2.93	-3.02/-2.56	-0.97/0.36	0.79/1.32	2.26/2.61	2.6/2.36
Θ(52.5°)	2.47/2.46	1.74/1.15	0.85/0.76	0.02/-1.2	-2.17/-3.89	-4.81/-4.6	-3.91/-3.93	-5.22/-5.54	-3.99/-1.91	-0.59/-0.1	-0.89/-2.12	-2.02/-1.21	0.03/1.36	1.98/1.98	0.99/-0.13	-0.73/-1.18	-1.22/-1.48	-2.99/-4.04	-4.4/-3.82	-1.85/-0.7	0.21/0.9	0.7/1.12	1.75/1.93	1.56/1.92
Θ(60°)	1.09/0.98	1.22/1.44	0.8/1.17	-0.02/-1.14	-2.01/-3.44	-4.72/-4.92	-2.78/-2.09	-3.94/-5.99	-5.78/-4.5	-3.38/-2.29	-1.99/-3.02	-2.63/-2.7	-1.61/-1.39	-1.09/-0.54	-0.69/-1.28	-1/0.75	-1.06/-1.51	-1.88/-3.86	-2.91/-2.01	-0.46/0.14	-1.44/-1.29	-0.9/0.19	0.88/0.89	-0.63/-0.12
Θ(67.5°)	-0.88/-1.84	-0.09/0	-1.56/-1.01	-2.01/-2.65	-3.45/-5.34	-7.99/-8.8	-6.03/-3.51	-2.99/-4.86	-6.22/-5.27	-4.19/-2.68	-1.66/-2.29	-2.52/-3.06	-2.46/-2.64	-2.94/-2.47	-2.48/-1.59	-1.05/-1.87	-1.53/-0.65	-0.13/-0.82	-2.18/-0.22	1.49/1.76	0.38/0.29	-0.59/-0.1	1.22/1.47	-0.26/-1.97
Θ(75°)	0.3/-1.82	-1.18/-0.96	-1.88/-2.16	-4.34/-4.41	-5.51/-7.5	-9.67/-9.1	-5.48/-3.42	-2.05/-2.31	-3.68/-6.1	-6.17/-4.41	-3.62/-5.06	-5.47/-6.73	-4.52/-3	-2.92/-3.27	-3.31/-1.62	-0.94/-0.83	-0.06/-0.75	-0.24/-0.26	-0.55/1.28	2.42/3.23	2.7/2.65	1.49/0.36	1.34/2.06	1.2/-0.43
Θ(82.5°)	0.57/-2.17	-0.87/-0.17	-1.17/-1.31	-5.8/-5.56	-6.76/-6.4	-4.84/-5.92	-6.22/-4.39	-2.34/-1.76	-3.69/-5.73	-6.48/-5.15	-5/5.36	-7.38/-7.68	-5.35/-4.2	-3.44/-4.26	-3.55/-0.92	-0.66/0.17	1.21/0.14	-0.09/-0.29	-0.04/0.32	1.39/1.06	1.96/1.71	0.8/-0.73	-0.24/1.28	0.12/-0.93
Θ(90°)	0.87/-2.33	-1.13/-0.68	-2.12/-3.09	-7.61/-7.22	-7.08/-6.13	-5.92/-5.85	-5.52/-4.79	-3.92/-3.51	-5.09/-6.29	-7.86/-6.68	-5.69/-6.61	-8.34/-8.81	-7.89/-5.12	-2.99/-3.91	-4.31/-1.83	-0.92/0.95	0.52/0.07	1.88/1.04	-0.67/0.77	1.04/1.84	1.38/0.47	0.46/0.99	1.28/1.48	1.01/-0.25
Θ(97.5°)	0.07/-2.12	-1.43/-1.03	-1.94/-3.61	-6.63/-7.89	-5.42/-3.25	-2.43/-3.41	-4.95/-5.29	-4.46/-4.71	-4.76/-4.91	-6.26/-6.43	-8/-7.8	-6.87/-8.16	-6.22/-4.69	-3.53/-5.11	-5.55/-2.94	-1.61/0.68	-0.29/-0.51	2.31/1.66	-0.42/-0.34	1.53/1.68	0.9/-0.85	-1.06/1.61	2.05/1.16	0.88/-0.21
Θ(105°)	-2.9/-3.32	-4.12/-2.75	-1.38/-1.61	-3.07/-4.59	-4.68/-4.69	-3.14/-1.26	-2.57/-3.9	-5.65/-7.8	-9.62/-6.39	-4.76/-5.66	-5.25/-5.68	-5.04/-7.39	-4.24/-4.13	-1.31/-3.76	-3.47/-3.82	-1.36/0.92	-1.32/0.82	3.15/-1.45	-4.01/-2.36	1.49/0.32	0.45/0.19	-0.27/1.46	1.47/0.35	-1.67/-1.78
Θ(112.5°)	-4.94/-4.46	-4.74/-3.14	-2.82/-2.93	-3.69/-4.62	-6.96/-6.04	-3.86/-2.2	-2.41/-2.54	-3.01/-5.94	-6.1/-5.87	-4.32/-6.12	-4.62/-4.18	-2.07/-4.18	-4.58/-3.41	-2.53/-5.72	-3.9/-5.71	-1.41/-0.26	-1.66/0.18	2.08/-3.52	-2.38/-0.39	0.64/0.08	-1.22/-3.13	-4.34/-3.04	-1.26/-2.96	-3.06/-4.32
Θ(120°)	-7.2/-3.68	-3.9/-3.09	-2.03/-2.28	-1.68/-3.54	-3.61/-2.8	-3.04/-2.53	-0.91/-1.78	-2.01/-2.16	-2.14/-1.59	-2.53/-2.65	-3.89/-4.55	-2.75/-5.86	-4.9/-4.65	-5.24/-5.71	-3.66/-11.85	-2.65/-2.51	-5.98/-1.52	1.22/-1.85	-1.89/0.96	-1/0.94	-4.13/-4.7	-5.94/-2.97	-0.94/-3.54	-4.45/-3.77
Θ(127.5°)	-6.2/-5.4	-5.39/-6.3	-3.75/-2.8	-2.07/-1.14	-1.27/-1.05	-1.16/-1.47	-2.46/-2.4	-2.99/-3.06	-2.06/-1.09	-2.68/-3.72	-5.08/-5.15	-5.95/-7.97	-5.54/-5.55	-10.36/-3.27	-3.42/-5.33	-1.97/-2.85	-3.01/-1.9	1.16/-1.82	-3.36/-3.91	-3.87/-0.35	-3.25/-4.73	-8.49/-6.18	-3.76/-4.04	-3.76/-2.36
Θ(135°)	-9.43/-8.96	-6.69/-8.41	-6.8/-5.34	-2.97/-1.01	0.01/0.09	-0.21/0.83	-0.98/-1.7	-2.46/-2.15	-1.31/-1.26	-3.07/-5.55	-7.15/-8.41	-7.66/-6.64	-3.37/-3.93	-2.54/-0.84	-3.34/-4.05	-5.18/-3.83	-3.63/-1.81	-2.09/-5.82	-4.76/-5.56	-8.24/-4.79	-1.95/-5.17	-5.8/-3.67	-3.8/-4.13	-4.53/-6.44
Θ(142.5°)	-4.65/-6.14	-2.96/-1.69	-1.68/-1.4	-1/0.91	-1.2/-1.67	-1.79/-3.23	-4.58/-5.37	-5.97/-5.97	-5.11/-4.58	-5.24/-5.47	-4.49/-3.55	-4.87/-4.61	-5.76/-7.48	-6.2/-5.94	-6.69/-8.04	-6.58/-4.58	-2.35/-1.94	-2.32/-5.98	-5.81/-2.05	-1.31/-5.5	-4.06/-4.67	-6.76/-4.48	-2.49/-3.23	-4.39/-3.83
Θ(150°)	-1.88/-0.35	-0.13/-0.14	-0.11/0.06	-0.6/-2.33	-4.49/-6.07	-5.45/-4.6	-4.25/-5.03	-5.93/-4.96	-4.46/-5.56	-7.02/-6.07	-4.13/-3.68	-3.8/-2.46	-2.19/-2.79	-3.7/-3.62	-3.33/-3.6	-5.1/-5.83	-4.85/-3.91	-4.72/-6.72	-6.65/-5.95	-5.45/-6.85	-9.08/-7.27	-3.81/-2.18	-1.76/-1.65	-2.7/-3.39
Θ(157.5°)	1.85/1.56	0.63/-0.8	-2.48/-3.24	-4.69/-5.66	-5.42/-4.22	-3.27/-2.74	-2.82/-3.72	-5.24/-6.8	-7.45/-8.04	-8.11/-7.09	-5.26/-4.97	-4.03/-2.4	-1.65/-1.9	-3.64/-4.34	-4.62/-4.73	-4.06/-3.43	-3.78/-5.94	-7.58/-6.57	-6.28/-5.99	-6.46/-6.57	-7.28/-7.67	-4.55/-1.48	-0.12/0.63	1.25/1.73
Θ(165°)	-1.97/-2.26	-1.95/-2.32	-2.96/-3.73	-3.93/-4.14	-4.63/-5.25	-5.14/-4.24	-3.15/-2.94	-3.24/-4.36	-5.21/-5.25	-5.38/-5.78	-5.77/-4.75	-3.4/-2.29	-1.58/-1.35	-1.89/-3.03	-3.76/-4.19	-3.79/-3.91	-4.86/-6.47	-7.04/-6.73	-5.68/-5.16	-4.98/-4.45	-3.51/-3.25	-3.24/-2.72	-2.06/-1.81	-1.92/-1.93
Θ(172.5°)	-2.97/-2.77	-3.37/-3.81	-4.71/-5.22	-5.47/-5.99	-6.94/-7.37	-6.35/-5.87	-5.09/-4.55	-4.94/-5.67	-6.23/-6.56	-6.8/-6.94	-6.76/-5.93	-5.6/-5.81	-6.19/-6.98	-8.12/-9.26	-10.17/-11.66	-11.55/-10.98	-10.16/-8.63	-7.45/-6.47	-5.71/-5.28	-4.81/-4.07	-3.73/-4.42	-4.62/-4.63	-4.48/-4.37	-4.21/-3.68
Θ(180°)	-7.66/-8.56	-9.6/-9.59	-9.94/-9.67	-9.16/-9.41	-8.81/-8.52	-8.3/-8.9	-9.62/-9.82	-11.47/-11.37	-10.49/-9.59	-9.19/-8.72	-8.37/-7.47	-6.77/-6.08	-5.89/-6.37	-6.77/-7.05	-7.29/-7.46	-7.83/-8.08	-8.41/-8.67	-8.63/-8.15	-7.59/-6.78	-6.24/-6.4	-6.43/-6.98	-7.71/-8.65	-9.32/-8.6	-7.55/-7.51



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

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°)	-13.56/-12.62	-11.55/-9.56	-8.47/-8.1	-8.09/-8.06	-7.93/-8.1	-8.3/-8.25	-8.35/-8.68	-9.4/-10.22	-10.98/-11.77	-12.87/-14.52	-16.78/-19.31	-18.18/-18.54	-19.09/-16.75	-13.95/-12.15	-10.9/-10.04	-9.57/-9.18	-8.71/-8.62	-8.7/-9	-9.19/-9.92	-11.04/-11.85	-13.2/-14.93	-17.27/-18.9	-18.76/-18.07	-17.22/-15.2
Θ(7.5°)	-17.67/-18.84	-19.19/-16.1	-14.05/-12.54	-11.98/-11.87	-11.61/-11.62	-11.09/-10.97	-10.67/-11.42	-12.14/-12.81	-13.35/-14.32	-14.79/-15.41	-15/-14.31	-13.7/-12.57	-11.54/-10.14	-9.39/-8.87	-8.75/-8.91	-9.05/-9.28	-9.12/-9.16	-9.23/-9.65	-10.12/-11.06	-11.58/-12.02	-12.66/-14.2	-15.97/-17.35	-18.5/-18.02	-17.7/-17.41
Θ(15°)	-17.34/-18.8	-18.98/-17.61	-18.82/-18	-17.82/-19.07	-17.22/-14.69	-13.6/-12.18	-11.11/-10.73	-10.58/-10.65	-10.91/-10.4	-9.91/-9.38	-8.79/-8.18	-7.51/-6.91	-6.48/-6.14	-6.04/-6.17	-6.41/-6.79	-6.99/-7.31	-7.92/-8.99	-10.05/-11.66	-12.81/-13.42	-14/-13.47	-14.61/-15.48	-16.36/-16.31	-16.28/-17.26	-18.22/-17.8
Θ(22.5°)	-18.99/-18.95	-17.73/-18.68	-18.41/-17.76	-17.13/-14.33	-12.41/-10.62	-9.35/-8.7	-8.19/-7.96	-8.04/-7.78	-7.48/-6.82	-6.21/-5.69	-5.29/-4.89	-4.61/-4.19	-3.83/-3.69	-3.99/-4.63	-5.32/-5.76	-6.01/-6.36	-7.1/-7.62	-7.43/-6.65	-6.16/-6.27	-7.07/-7.82	-8.23/-9.03	-10.27/-11.81	-12.79/-14.51	-18.03/-18.24
Θ(30°)	-10.74/-11.94	-12.28/-11.71	-8.99/-8.28	-8.26/-8.31	-8.16/-7.78	-8/-8.01	-7.43/-7.25	-6.48/-5.77	-5.37/-5.07	-4.49/-3.88	-3.72/-3.86	-3.75/-3.25	-2.88/-2.91	-3.18/-3.34	-3.4/-3.46	-4.02/-4.72	-5.19/-4.82	-4.3/-3.86	-3.59/-3.97	-4.76/-6.6	-8.56/-10.07	-10.68/-12.23	-12.54/-11.9	-11.62/-10.76
Θ(37.5°)	-8.2/-7.31	-7.34/-6.98	-5.55/-4.94	-5.38/-5.6	-5.59/-5.68	-6.1/-6.54	-6.59/-6.35	-5.6/-4.61	-4.07/-4.27	-4.23/-3.62	-3.66/-3.69	-2.95/-2.56	-3.03/-3.63	-3.41/-3.17	-3.02/-3.39	-3.52/-3.21	-2.52/-2.06	-2.24/-2.44	-2.96/-3.27	-3.35/-3.32	-3.98/-5.72	-7.83/-9.23	-9.9/-10.47	-10.64/-9.74
Θ(45°)	-6.35/-5.38	-5.72/-6.51	-5.19/-3.98	-3.75/-3.42	-3.03/-3.35	-3.63/-4.01	-4.4/-4.78	-5.14/-4.83	-4.53/-4.64	-4.04/-3.3	-3.88/-4.31	-3.94/-3.92	-4.45/-3.91	-3.43/-3.29	-3.73/-4.44	-4.45/-4.44	-4.64/-4.51	-3.89/-3.43	-3.07/-2.59	-2.74/-4.22	-5.51/-5.76	-6.11/-6.94	-6.49/-5.37	-5.09/-5.72
Θ(52.5°)	-4.48/-4.1	-4.22/-5.52	-5.77/-4.83	-4.27/-2.76	-1.47/-0.98	-1.04/-1.48	-2.51/-3.12	-3.41/-3.52	-3.33/-3.12	-2.96/-2.34	-2/-1.86	-1.45/-1.23	-1.14/-1.05	-1.28/-2.19	-3.51/-4.45	-4.99/-4.85	-4.13/-3.59	-2.81/-1.72	-1.07/-1.73	-2.9/-3.62	-4.74/-6.83	-7.79/-7.85	-7.52/-6.15	-5.14/-7.2
Θ(60°)	-2.15/-2.21	-2/-2.44	-2.89/-3.19	-3.75/-3.19	-2.11/-1.18	-0.53/-0.24	-0.39/-1.3	-2.41/-3.54	-3.67/-3.1	-3.02/-2.49	-1.4/-0.95	-0.28/-0.35	-0.37/-0.53	-1.25/-1.96	-2.72/-3.02	-2.4/-2.13	-1.51/-0.8	-0.34/-0.07	-0.11/-0.62	-1.95/-4.08	-7.24/-9.36	-7.74/-6.83	-6.41/-4.8	-3.14/-2.61
Θ(67.5°)	-2.07/-1.78	-1.56/-1.6	-1.64/-1.25	-1.2/-0.59	-0.41/-0.22	-0.02/-0.27	-0.63/-1.2	-1.95/-2.96	-3.55/-2.69	-2.61/-1.17	0.12/0.86	1.76/1.63	1.36/1.04	0.11/-1.07	-2.55/-3.94	-4.12/-3.72	-2.59/-2.38	-2.9/-3.23	-5.66/-10.67	-11.86/-11.88	-12.84/-8.82	-7.22/-5.8	-3.78/-2.57	
Θ(75°)	-2.06/-2.34	-2.62/-3.19	-3.3/-3.13	-1.73/-0.19	0.47/0.57	0.36/-0.22	-0.67/-1.61	-2.28/-3.77	-3.36/-2.52	-2.23/-0.58	0.69/1.72	2.41/2.46	2.92/2.59	2.15/1.96	-0.37/-1.05	-1.12/-1.61	-2.04/-1.67	-1.93/-4.01	-7.47/-12.06	15.08/-10.87	-12.12/-12.93	-9.72/-7.49	-4.37/-2.82	
Θ(82.5°)	-1.24/-1.56	-1.62/-2.21	-2.67/-3.86	-4.2/-2.76	-1.78/-0.4	0.67/0.77	0.62/0.09	-0.6/-2.01	-2.54/-1.87	-1.98/-1.11	-0.07/0.72	3.51/1.76	2.01/2.29	2.09/1.52	0.66/-0.22	-2.17/-3.27	-4.31/-6.07	-5.53/-5.9	-6.73/-7.76	-9.97/-13.02	-14.98/-10.43	-8.77/-6.85	-4.86/-3.43	-3.8/-2.52
Θ(90°)	-3.05/-3.72	-2.55/-2.31	-2.57/-1.96	-2.33/-1.06	-1.22/-1.12	-1.17/0.88	-0.9/-0.89	-1.34/-1.64	-1.67/-1.44	-1.78/-0.88	-1.9/0.07	1.09/0.66	2.1/2.36	1.05/1.56	0.13/-1.14	-0.92/0.56	-0.43/-2.88	-6.42/-5.86	-5.42/-6.84	-6.18/-7.5	-9.01/-8.04	-9.18/-15.36	-8.82/-7.99	-7.25/-6.91
Θ(97.5°)	-8.03/-5.72	-6.48/-3.47	-3.3/-1.02	-1.59/0.32	-0.07/0.73	-1.82/-2.87	-3.33/-3.27	-2.88/-2.32	-1.19/0.34	-0.18/1.27	0.58/1.45	1.12/1.65	1.91/0.54	1.87/1.08	-0.46/-0.41	1.12/1.42	0.38/-3.03	-8.38/-9.78	-7.1/-6.15	-7.63/-10.73	-8.46/-5.92	-5.03/-6.66	-8.78/-7.91	-7.82/-10.95
Θ(105°)	-4.27/-3.18	-5.97/-3.92	-5.89/-2.7	-2.68/-0.81	-0.55/-0.96	-1.55/-2.99	-4.23/-5.37	-4.58/-4.42	-2.48/-0.38	-0.65/1.04	0.22/1.59	1.36/0.56	1.54/0.48	0.01/0.38	1/1.07	0.24/-2	-5.03/-8.51	-7.01/-6.83	-8.78/-11.21	-7.66/-3.94	-4.01/-4.44	-6.09/-4.04	-3.88/-5.1	
Θ(112.5°)	-8.79/-5.68	-8.33/-6.53	-9.05/-5.49	-7.77/-3.19	-1.42/-2.31	-3.09/-4.99	-6.86/-6.47	-5.29/-3.05	-1.02/-0.02	-0.89/0.56	-0.26/1.42	0.48/0.11	1.05/0.73	-1.25/-2.1	-1.58/0.4	-1.33/-2.99	-10.9/-18.95	-11.99/-13.74	-11.52/-10.27	-7.46/-3.28	-2.88/-6.32	-5.89/-7.04	-6.07/-9.1	
Θ(120°)	-11.09/-7.42	-9.28/-6.7	-6.04/-5.84	-4.01/-4.9	-3.3/-3.62	-4.35/-4.01	-3.49/-3.23	-3.48/-2.24	-1.34/-2.02	-0.12/-0.45	-0.27/0.55	-0.76/-0.18	-0.86/-2	-1.21/-0.22	-1.28/-2.8	-1.94/-0.65	-0.37/-1.37	-6.7/-12.16	-9.25/-14.67	-13.02/-12.38	-4.71/-5.51	-3.8/-5.77	-7.33/-4.91	-5.09/-9.18
Θ(127.5°)	-13.97/-11.9	-15.14/-12.9	-10.07/-8.16	-5/-4.64	-3.92/-2.97	-3.15/-3.43	-3.73/-3.02	-1.27/-0.18	-0.25/0.68	0.97/0.16	0.05/-0.85	-1.3/-1.37	-1.58/-3.23	-1.29/0.36	-0.42/-4.02	-4.51/-3.45	-2.06/-3.63	-6.48/-11.53	-8.45/-15.35	-18.23/-18.37	-9.83/-9.61	-7.55/-9.73	-9.46/-5.79	-6.72/-9.77
Θ(135°)	-18.48/-14.52	-13.72/-10.23	-8.42/-7.42	-5.63/-4.73	-5.15/-5.24	-4.15/-2.88	-1.87/-1.26	-1.03/-0.87	-0.56/-0.58	-0.55/-1.19	-1.52/-1.33	-3.29/-1.58	-1.52/-4.78	-0.55/1.14	-2.35/-7.19	-7.21/-2.57	-1.27/-3.15	-5.17/-15.22	-10.95/-19.17	-11.19/-17.71	-10.17/-6.88	-11.01/-7.77	-11.36/-13.6	-8.86/-12.12
Θ(142.5°)	-15.81/-11.5	-11.73/-10.5	-10.05/-10.65	-10.58/-11.03	-10.73/-10.47	-10.76/-10.62	-8.63/-6.88	-5.36/-4.74	-4.04/-3.78	-4.95/-6.33	-5.92/-8.24	-7.1/-5.15	-9.87/-7.11	-3.66/-5.45	-9.59/-13	-4.16/-0.87	-2.08/-3.13	-4.96/-18.1	-17.21/-18.1	-9.43/-10.51	-17.46/-8.3	-11.55/-14.63	-9.2/-11.19	-11.64/-15.22
Θ(150°)	-18.81/-18.79	-18.75/-17.57	-13.56/-10.74	-9.44/-8.1	-7.06/-6.26	-5.87/-6.15	-5.81/-4.88	-3.79/-3.17	-3.35/-4.15	-4.56/-4.44	-5.34/-6.36	-4.59/-4.22	-6.6/-8.65	-6.43/-5.69	-8.42/-14.29	-9.47/-8.91	-7.96/-5.57	-6.36/-12.46	-14.36/-9.56	-6.09/-5.96	-11.97/-12.98	-8.2/-10.81	-14.26/-10.8	-11.14/-15.17
Θ(157.5°)	-13.24/-12.47	-14.49/-18.29	-19.69/-17.93	-18.89/-18.77	-17.81/-17.93	-15.27/-12.64	-11.86/-11.2	-10.83/-10.61	-10.5/-9.85	-9.61/-10.35	-10.53/-8.48	-7.53/-9.92	-18.73/-14.43	-7.51/-5.34	-5.09/-5.88	-7.28/-8.15	-7.32/-7.24	-9.84/-14.22	-15.56/-17.82	-17.89/-18.24	-14.6/-13.14	-13.76/-15.66	-17.7/-17.08	-18.48/-16.85
Θ(165°)	-17.6/-19.23	-18.71/-17.69	-18.25/-18.82	-16.63/-15.41	-15.08/-16.14	-18.73/-17.63	-15.49/-14.72	-13.9/-13.78	-14.01/-14.75	-16.4/-17.75	-16.78/-15.11	-14.66/-17.31	-19.02/-17.54	-11.28/-7.93	-5.99/-4.74	-4/-3.58	-3.77/-4.44	-6.01/-8.1	-10.32/-11.84	-13.49/-14	-15.16/-16.85	-17.6/-19.23	-18.92/-18.78	-19.38/-18.05
Θ(172.5°)	-16.13/-15.34	-14.68/-13.87	-11.95/-11.47	-11.6/-12.15	-13.22/-14.51	-14.89/-16.08	-18.39/-19.26	-18.47/-17.76	-18.78/-18.52	-16.87/-16.72	-17.94/-17.99	-19.29/-18.24	-14.36/-11.39	-9.18/-7.64	-6.66/-6.2	-6.38/-6.69	-7.6/-8.77	-10.18/-12.07	-14.01/-15.01	-15.66/-15.86	-16.36/-17	-16.02/-14.38	-14.97/-17.83	-18.78/-17.55
Θ(180°)	-14.53/-13.97	-12.96/-12.26	-10.95/-9.44	-9.06/-9.09	-9.24/-9.89	-10/-10.38	-11.51/-11.86	-11.81/-11.84	-12.13/-12.19	-12.37/-12.63	-12.97/-13.2	-13.04/-12.93	-12.77/-12.65	-12.69/-12.64	-12.49/-12.72	-13.06/-13.37	-13.77/-13.96	-14.28/-14.91	-14.87/-14.38	-14.43/-14.27	-15.27/-16.56	-15.59/-15.64	-16.98/-17.73	-17.2/-15.23
Freq(Hz)	5.3G/Pol.	Phi/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-11.76/-11.52	-12.98/-15.32	-18.18/-18.13	-17.54/-17.77	-19.05/-18.88	-15.58/-14.39	-13.55/-12.64	-11.79/-10.86	-10.22/-9.43	-9.06/-8.99	-8.77/-9.14	-9.48/-9.29	-9.77/-10.3	-10.99/-12.41	-14.15/-16.27	-17.67/-17.91	-17.17/-17.41	-17.47/-15.48	-13.8/-12.47	-10.7/-10	-9.71/-10.04	-10.25/-10.31	-10.13/-9.25	-9.12/-9.38
Θ(7.5°)	-10.98/-10.13	-10.91/-13.26	-15.65/-17.61	-17.88/-19.08	-17.99/-18.75	-18.72/-17.11	-15.06/-14.11	-13.1/-12.32	-11.25/-10.65	-9.72/-9.15	-9.14/-9.32	-9.57/-9.62	-10.11/-10.77	-12.28/-14.08	-16.15/-18.87	-18.38/-18.39	-17.96/-18.05	-17.84/-15.31	-14.01/-12.41	-10.57/-10.14	-9.67/-9.25	-8.9/-8.98	-8.95/-9.71	-9.96/-9.78
Θ(15°)	-12.47/-12.14	-12.4/-13.46	-14.39/-16.43	-16.99/-17.63	-18.06/-18.72	-18.82/-18.13	-17.69/-19.02	-16.35/-14.57	-13.32/-12.22	-11.16/-10.48	-9.88/-9.77	-9.72/-9.68	-10.11/-10.98	-11.99/-13.17	-14.41/-15.35	-16.06/-16.05	-15.4/-14.65	-13.98/-13.1	-12.71/-11.93	-10.98/-10.94	-10.81/-10.66	-10.86/-11.23	-11.85/-12.76	-12.55/-11.84
Θ(22.5°)	-12.74/-15.75	-17.07/-16.93	-17.69/-18.19	-17.67/-17.72	-19.19/-18.8	-18.01/-17.45	-18.62/-17.26	-15.1																



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	17.25/18.72	17.95/17.55	19.1/17.74	17.53/15.39	13.2/11.64	10.33/9.33	8.83/8.21	7.95/7.84	7.95/8.15	8.15/8.3	8.63/9.16	9.91/11.12	12.97/15.53	18.04/19.27	17.45/17.77	17.21/15.24	13.9/12.3	11.32/11.16	12.32/13.33	14.52/16.81	18.56/19.59	18.43/18.18	18.24/17.61	18.2/18.74
Theta(22.5)	-12.74/13.77	-15.94/16.48	-18.84/18.15	-18.96/18.52	-17.26/13.98	-12.06/11.19	-10.57/9.45	-8.61/7.9	-7.59/7.6	-8.09/8.42	-8.66/9.42	-11.72/14.76	-18.97/18.03	-18.48/17.6	-15.73/14.66	-13.72/13.25	-13.17/13.75	-14.48/15.66	-15.28/13.1	-11.93/12.07	-12.95/14.46	-17.82/17.75	-17.99/18.59	-15.11/13.69
Theta(30)	-15.75/16.8	-16.77/16.28	-16.23/17.01	-18.85/18.16	-18.91/17.17	-14.7/12.83	-11.1/9.83	-9.08/8.84	-8.53/8.99	-9.81/10.48	-11.29/13.06	-16.05/18.97	-17.65/19.32	-18.01/17.79	-18.9/19.47	-17.9/15.86	-14.7/14.95	-16.55/15.4	-15.11/15.91	-16.84/13.05	-10.85/11.54	-14.94/17.19	-17.54/18.66	-18.5/16.66
Theta(37.5)	-10.14/11.03	-12.31/13.61	-14.9/16.38	-18.83/17.84	-17.81/16.27	-12.9/11.54	-11.64/12.2	-12.15/11	-9.87/9.35	-9.55/10.31	-11.63/12.77	-14.08/16.14	-17.73/17.97	-18.3/17.19	-19.1/19.44	-18.85/19.26	-19.08/19.32	-17.56/18.64	-19.12/11.86	-8.97/9.47	-11.55/13.27	-14.65/19.47	-19.68/15.25	-13.22/11.55
Theta(45)	-7.76/8.51	-9.98/10.66	-11.75/13.98	-18.41/18.72	-17.36/17.54	-13.51/11.21	-10.83/11.17	-11.18/10.35	-9.34/8.6	-8.69/9.61	-11.16/13.27	-13.7/13.82	-15.76/18.13	-18.26/18.3	-17.87/18.28	-17.96/18.43	-18.07/18.92	-18.76/14.75	-11.2/10.15	-9.5/7.84	-7.32/8.8	-13.09/17.08	-18.04/13.78	-9.22/8.56
Theta(52.5)	-14.34/12.67	-13.17/15.79	-18.75/17.47	-19.16/18.75	-18.62/18.28	-16.22/15.8	-16.13/14.75	-12.73/10.72	-9.1/7.88	-7.08/7.51	-9.5/11.16	-12.32/14.35	-14.36/13.23	-14.48/15.65	-16.15/16.32	-15.68/15.57	-14.03/13.35	-12.53/12.74	-12.62/9.85	-6.9/5.66	-6.43/8.22	-10.8/18.08	-14.23/12.62	-13.96/14.74
Theta(60)	-18.53/18.34	-17.83/17.77	-17.49/18.02	-16.34/15.78	-14.95/15.68	-18.2/17.47	-17.94/16.87	-14.66/11.84	-8.45/6.51	-6.35/8.24	-11.44/17.16	-17.71/18.05	-17.94/18.08	-18.59/18.46	-15.8/14.82	-15.54/16.5	-15.06/14.34	-11.71/10.31	-9.24/7.44	-6.16/6.1	-7.4/10.79	-17.06/18.42	-18.68/19.13	-18.85/18.61
Theta(67.5)	-17.93/17.39	-18.67/15.67	-12.33/10.3	-9.98/10.45	-11.54/14.29	-19.18/19.19	-13.19/10.97	-14.19/18.58	-13.27/8.71	-7.72/9.74	-15.25/18.76	-17.09/13.12	-14.54/16.54	-19.37/17.7	-17.94/14.78	-11.23/8.8	-7.36/6.78	-7.28/9.29	-10.55/10.28	-10.19/12.08	-14.6/14.14	-11.12/9.59	-10.5/12.9	-18.23/18.48
Theta(75)	-18.33/18.6	-17.96/17.77	-17.85/12.58	-10.84/9.05	-8.16/8.26	-11.64/18.56	-13.53/11.08	-11.58/17.76	-18.93/11.48	-11.1/15.27	-18.31/15.86	-10.94/9.06	-8.81/9.91	-11.34/13.29	-16.23/15.31	-13.59/11.36	-10.67/9.87	-11.25/14.17	-18.61/17.35	-18.1/14.75	-8.1/5.85	-5.09/5.74	-7.14/9.27	-12.68/18.63
Theta(82.5)	-9.44/9.19	-9.03/9.81	-11.18/17.47	-18.42/13.85	-10.12/9.27	-10.48/15.28	-17.95/10.35	-9.26/15.27	-17.84/10.03	-7.75/9.26	-15.01/19.13	-18.82/17.18	-17.74/18.04	-19.15/16.65	-15.39/14.33	-12.3/10.24	-9.33/10.4	-10.68/10.5	-13.84/18.47	-12.63/10.76	-9.24/8.54	-9.47/10.63	-12.72/13.78	-12.87/10.76
Theta(90)	-8.99/8.19	-7.98/8.18	-8.41/9	-11.33/16.53	-18.06/14.45	-12.45/14.02	-18.39/17.95	-13.17/14.66	-19.51/11.79	-8.91/10.65	-12.18/13.5	-13.43/11.94	-12.54/12.61	-12.54/13.48	-12.98/11.41	-12.33/12.5	-13.16/11.84	-12.27/12.52	-16.94/17.66	-18.35/17.51	-10.06/7.37	-6.39/7.8	-10.08/11.59	-13.32/13.05
Theta(97.5)	-15.29/14.81	-12.24/10.75	-12.38/12.71	-14.05/17.69	-17.09/12.35	-9.48/10.2	-15.19/16.7	-12.56/13.59	-12.06/9.03	-8.66/13.81	-18.14/11.52	-9.04/8.16	-10.59/12.88	-18.44/18.89	-18.24/18.67	-16.27/11.39	-9.16/8.33	-11.33/15.82	-18.7/16.76	-18.11/18.53	-11.71/9.18	-9.2/12.74	-17.06/16.28	-15.33/18.32
Theta(105)	-16.74/14.4	-12.2/10.64	-11.68/9.89	-9.95/9.24	-11.77/13.03	-10.42/9.37	-13.17/10.96	-7.91/9.04	-11.32/7.86	-6.03/7.84	-13.97/18.35	-13.7/11.87	-12.48/13.16	-13.86/17.3	-14.1/14.22	-17.56/18.41	-13.96/13.67	-18.28/13.45	-11.79/11.58	-17.14/18.85	-14.16/11.85	-13.65/14.8	-17.38/14.74	-17.9/18.42
Theta(112.5)	-14.64/12.84	-11.98/10.85	-9.13/7.35	-6.98/9.93	-11.95/16.18	-12.88/12.94	-12.21/10.46	-9.02/9.31	-9.93/7.36	-6.62/6.54	-8.7/9.1	-12.11/13.36	-14.41/17.66	-15.7/15.24	-13.34/14.36	-17.41/19.19	-12.96/13.99	-18.76/18.09	-15.45/10.37	-11.66/16.9	-17.84/15.12	-14.13/13.37	-11.77/12.13	-10.54/13.38
Theta(120)	-18.36/14.8	-14.19/10.32	-9.12/9.24	-7.23/7.39	-8.86/10.76	-12.5/12.26	-12.22/11.55	-7.83/5.44	-4.57/5.4	-7.49/6.87	-8.9/10.48	-13.07/16.25	-18.52/18.44	-19.2/18.76	-15.1/16.5	-18.36/17.95	-14.07/17.69	-11.81/18.25	-18.48/19.06	-16.35/11.34	-14.37/15.17	-18.65/18.88	-18.49/17.52	-12.17/16.98
Theta(127.5)	-12.84/11.3	-10.54/9.38	-7.74/7.58	-8.11/9.59	-11.43/13.26	-13.61/16.92	-18.09/14.61	-12.05/10.56	-9.14/10.42	-9.65/11.21	-12.45/11.52	-14.46/14.39	-12.48/10.68	-12.65/12.53	-11.97/18.62	-18.87/12.37	-9.47/8.33	-9.94/19.2	-18.12/18.83	-11.02/7.07	-12/14.5	-11.89/16.15	-19.11/16.1	-12.57/8.81
Theta(135)	-9.23/6.41	-5.96/7.59	-7.81/9.55	-12.01/13.84	-16.98/19.2	-17.63/17.84	-18.68/10.92	-8.04/8.85	-10.94/14.23	-17.42/19.31	-12.95/11.9	-14.49/12.85	-11.55/10.98	-9.66/8.81	-12.94/12.65	-18.45/12.57	-12.87/6.03	-4.74/7.48	-14.58/14.67	-14.35/14.17	-11.45/18.69	-16.22/9.12	-14.33/12.21	-7.48/7.97
Theta(142.5)	-14.5/17.6	-10.07/9.91	-9.37/9.25	-11.94/15.83	-17.65/17.81	-18.81/17.69	-12.9/10.26	-8.3/6.72	-7.71/11.51	-14.99/17.22	-18.85/17.32	-18.82/17.11	-19.07/16.18	-14.75/14.98	-9.44/10.45	-9.45/8.17	-8.49/6.55	-8.49/12.27	-17.8/15.25	-11.58/12.62	-11.74/10.76	-11.79/13.44	-8.55/10.87	-12.11/10.24
Theta(150)	-11.39/14.8	-19.32/19.13	-18.85/17.78	-17.94/18.55	-18.62/18.18	-16.51/13.81	-9.5/6.28	-4.98/5.78	-7.56/8.93	-10.53/12.36	-14.67/18.88	-18.61/17.38	-17.5/18.34	-17.83/19.09	-17.43/17.72	-13.67/14.28	-14.85/10.93	-10.71/14.99	-18.61/18.37	-12.8/12.34	-13.72/14.36	-14.65/17.98	-13.12/11.74	-12.32/11.24
Theta(157.5)	-10.73/10.5	-12.22/14.24	-16.99/17.97	-18.24/17.42	-17.43/18.27	-17.81/16.99	-14.11/12.16	-11.29/10.22	-9.3/9.27	-10.13/11.35	-12.62/14.03	-14/11.72	-8.9/6.64	-5.68/5.85	-7.1/9.2	-11.19/10.67	-8.34/7.26	-7.34/8.5	-10.07/11.31	-11.12/12.25	-12.98/12.96	-12.96/12	-12.87/19.13	-15.46/11.71
Theta(165)	-12.79/13.07	-13.13/13.81	-14.74/15.54	-18.43/18.07	-17.62/18.02	-18.16/16.71	-15.27/13.7	-12.37/11.7	-11.62/12.17	-12.86/13.94	-14.43/13.22	-10.96/8.79	-7.58/6.96	-7.26/8.49	-10.09/11.27	-10.62/9.37	-8.73/8.94	-9.87/10.84	-11.18/10.7	-11.08/11.88	-11.11/10.5	-10.16/10.13	-10.31/11.98	-13.34/13.1
Theta(172.5)	-13.97/13.64	-14.2/15.03	-15.98/17.46	-18.6/18.07	-18.45/17.99	-17.77/17.94	-19.3/18.78	-18.63/18.37	-19.56/17.61	-18.89/18.34	-17.18/15.57	-13.94/12.98	-12.8/13.15	-14.23/16.56	-18.08/17.53	-18.99/15.52	-13.18/11.62	-10.58/9.73	-9.46/9.89	-11.3/12.11	-12.84/14.1	-15.8/18.28	-19.19/17.69	-16.63/15.61
Theta(180)	-18.19/19.06	-19.15/17.54	-19.02/19.16	-17.65/18.41	-18.65/18.13	-18.58/17.57	-17.41/17.37	-17.22/16.9	-17.34/17.75	-18.18/18.7	-18.84/17.77	-18.86/18.06	-17.18/19.34	-18.65/17.81	-15.86/14.51	-13.78/13.75	-13.19/12.31	-11.69/11.61	-12.71/14.03	-14.51/15.91	-16.69/17.15	-16.68/15.47	-14.57/13.42	-14.21/16.77
Freq(Hz)	5.6G/Pol.	Theta/Ant. 1	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
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)	-8.67/8.51	-8.19/7.98	-8.07/8.76	-9.87/11.3	-12.41/13.73	-15.36/17.9	-17.95/18.54	-18.53/17.8	-17.45/15.06	-13.22/12.18	-11.3/10.76	-10.53/10.12	-9.54/9.32	-8.97/9.14	-9.28/9.73	-10.36/11.58	-12.95/14.04	-16.45/17.86	-19.94/18.85	-17.49/18.05	-18.57/15.52	-12.72/11.46	-10.67/9.68	-9.34/9.21
Theta(7.5)	-10.93/10.57	-9.93/9.55	-9.53/10.15	-11.06/11.83	-12.43/13.89	-15.79/18.76	-19.07/17.93	-17.76/19.02	-15.26/12.83	-10.33/8.84	-7.73/7.03	-6.65/6.14	-5.86/5.61	-5.71/6.01	-6.49/7.17	-8.33/9.83	-11.3/12.78	-14.07/14.75	-16.37/17.27	-16.32/15.53	-14.65/13.51	-12.76/12.3	-11.55/11.34	-11.38/11.41
Theta(15)	-11.1/10.6	-10.21/9.72	-9.5/9.89	-10.39/10.69	-11.63/13.46	-15.21/16.71	-18.12/18.63	-16.26/14.77	-13.16/11.22	-9.09/7.63	-6.51/5.69	-5.16/4.78	-4.53/4.34	-4.2/4.18	-4.18/4.42	-5.18/5.93	-6.8/7.67	-8.37/9.69	-11.37/12.26	-12.9/13.18	-13.03/12.98	-13.43/13	-12.87/12.78	-12.48/11.32
Theta(22.5)	-11.87/10.5	-10.12/9.82	-9.16/8.29	-7.9/8.2	-9.36/11.21	-12.05/12.63	-12.32/13.01	-13.73/14.22	-14.28/13.08	-10.71/8.71	-7.06/5.88	-5.45/5.18	-4.81/4.05	-3.42/3.11	-3.02/3.37	-4.05/5.01	-6.08/6.61	-8.87/9.69	-12.78/8.21	-10.66/13.37	-15.18/16.6	-18.27/19.08	-18.21/18.94	-16.28/13.53
Theta(30)	-14.07/12.17	-10.39/9.57	-8.72/7.97	-6.73/6.71	-7.2/7.51	-7.8/8.39	-8.87/9.29	-9.45/9.45	-9.24/10.09	-9.08/8.44	-6.94/5.76	-5.23/5.1	-4.85/4.24	-3.5/3.13	-3.32/3.87	-4.65/5.25	-5.55/5.91	-6.35/6.61	-6.65/6.52	-6.77/8.48	-11.19/14.09	-16.6/18.79	-18.2/18.52	-17.25/15.32
Theta(37.5)	-6.26/6.05	-6.24/6.34	-6.82/7.96	-7.81/8.7	-10.26/9.76	-8.52/7.91	-7.3																	



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	14.9/14.44	16.4/18.53	18.1/17.63	12.46/9.98	7.4/5.19	4.52/4.89	6.26/7.97	9.32/8.84	8.31/7.88	8.05/8.67	10.77/13.92	16.83/17.08	15.34/13.1	10.5/8.82	8.28/9.06	11.46/14.01	15.97/16.24	14.75/13.05	12.69/13.3	15.34/15.93	16.75/18.53	18.34/17.25	16.1/15.55	15.59/15.78
Theta(30°)	-14.98/14.63	-15.02/15.74	-18.36/18.25	-18.38/13.83	-11.4/10.2	-10.19/9.43	-11.34/12.79	-11.86/10.15	-9.14/9.4	-10.14/10.92	-12.85/18.69	-19.16/14.57	-10.88/8.67	-7.35/6.9	-7.18/8.32	-9.63/11.82	-15.87/17.18	-18.77/16.85	-16.52/14.68	-13.02/11.8	-11.13/10.71	-11.1/10.93	-11.86/15.36	-19.03/18.17
Theta(45°)	-16.57/12.77	-12.54/13.96	-14.37/14.44	-17.62/15.74	-13.01/10.8	-11.66/14.89	-17.9/17.75	-12.47/10.06	-10.71/13.87	-16.27/14.71	-15.03/19.14	-18.9/16.02	-11.84/9.68	-7.36/5.69	-4.74/5.02	-6.47/9.14	-13.36/18.04	-18.01/18.46	-18.26/17.73	-15.8/14.14	-12.28/10.62	-11.63/13.07	-12.94/16.03	-18.88/19
Theta(52.5°)	-14.67/14.21	-17.5/17.32	-18.99/18.1	-18.19/17.6	-16.19/18.67	-18.96/13.08	-9.1/8.58	-10.05/14.03	-18.94/18.71	-17.65/19.38	-16.93/12.37	-13.13/14.64	-16.1/18.09	-15.84/12.39	-10.76/10.26	-10.25/12.71	-18.77/17.76	-18.7/18.22	-15.97/13.67	-12.46/12.17	-12.69/12.25	-12.63/16.13	-19.28/19.14	-18.08/16.19
Theta(60°)	-17.71/15.85	-17.3/17.78	-18.68/18.07	-18.99/18.87	-18.26/14.92	-15.34/15.81	-18.43/17.75	-18.36/14.84	-13.21/13.29	-14.78/14.47	-11.49/11.11	-11.2/11.87	-13.3/14.19	-19.15/18.18	-19.08/13.79	-12.23/12.16	-12.05/18.67	-18.62/18.54	-13.93/12.61	-14.28/16.74	-16.95/15.33	-13.98/12.1	-12.72/15.1	-17.53/17.52
Theta(67.5°)	-18.04/17.64	-16.52/14.11	-13.87/14.06	-13.14/12.94	-13.09/13.4	-13.57/12.67	-12.25/12.32	-13.74/18.67	-18.22/17.92	-13.05/11.22	-9.69/9.7	-11.47/15.92	-19.01/19.04	-19.22/18.5	-18.04/17.55	-17.49/14.88	-13.76/13.78	-13.16/14.46	-15.61/18.88	-18.5/15.5	-15.3/14.53	-14.51/12.65	-12.27/12.55	-16.66/18.1
Theta(75°)	-19.26/18.27	-18.41/17.97	-16.38/13.43	-12.54/12.31	-11.53/11.16	-12.85/16.45	-14.45/12.78	-11.79/13.67	-18.11/14.61	-9.7/9.32	-10.68/11.32	-10.05/10.42	-10.62/14.41	-18.58/18.45	-18.17/18.78	-18.8/17.88	-17.92/17.3	-17.6/18.83	-18.33/17.69	-18.16/16.27	-12.62/10.46	-9.62/8.91	-9.82/10.86	-12.53/18.34
Theta(82.5°)	-19.1/17.25	-19.39/18.1	-17.54/17.84	-18.79/18.43	-18.61/19.09	-18.08/18.74	-14.51/11.72	-11.51/12.69	-14.67/11.98	-9.75/9.11	-10.89/12.84	-14.41/13.98	-14/15.9	-13.6/15.62	-17.07/18.35	-19.23/18.79	-15.67/17.15	-18.13/17.45	-17.61/17.2	-12.6/10.39	-11.27/13.13	-14.93/12.74	-13.04/14.76	-18.41/19.04
Theta(90°)	-18.88/19.49	-17.27/19.07	-18.2/18.24	-17.47/17.47	-18.86/18.33	-18.37/12.1	-8.7/9.63	-13.4/15.44	-10.36/9.43	-10.51/14.53	-19.01/18.88	-17.01/12.87	-10.25/10.41	-8.92/11.43	-12.61/13.72	-11.74/14.62	-16.01/18.47	-19.02/19.37	-18.68/18	-17.57/12.6	-10.78/11.63	-11.6/12.85	-13.41/13.43	-12.03/15.23
Theta(97.5°)	-17.74/18.42	-17.68/18.98	-18.86/17.91	-19.04/18.45	-18.35/17.82	-16.79/16.76	-13.67/12.32	-12.9/15.07	-18.06/17.82	-15.23/13.94	-13.41/13.97	-12.45/13.32	-16.92/13.59	-19.57/18	-18.13/18.21	-14.21/17.04	-17.82/19.17	-18.59/18.51	-18.74/14.38	-11.52/11.03	-10.66/8.79	-9.12/9.08	-11.46/10.29	-11.4/16.52
Theta(105°)	-17.66/19.66	-17.8/15.48	-18.95/13.56	-15.27/14.65	-17.17/17.81	-14.83/12.97	-13.29/15.56	-18.54/17.32	-12.51/14.08	-14.66/18.62	-18.06/14	-10.28/12.29	-13.25/14.8	-16.69/17.67	-18.93/16.82	-18.9/16.06	-17.68/15.64	-18.91/17.35	-16.31/13.97	-11.23/8.05	-7.95/8.78	-10.54/10.18	-8.68/7.82	-9.89/13.81
Theta(112.5°)	-14.62/19.07	-18.76/18.41	-19.03/18.83	-18.91/18.71	-18.46/18.24	-18.74/15.97	-16/16.21	-15.27/17.72	-17.92/14.55	-16.9/19.24	-18.15/18.6	-17.62/16.9	-14.15/12.92	-11.5/10.93	-11.39/12.19	-16.42/13.62	-16.74/11.23	-14.89/12.9	-16.65/14.14	-12.23/10.25	-7.44/6.38	-7.21/9.98	-9.95/9.68	-11.6/17.51
Theta(120°)	-17.43/19.12	-18.41/17.68	-14.34/12.82	-18.45/18.42	-18.35/19.04	-19.06/18.23	-16.43/16.34	-16.42/14.08	-15.78/18.54	-18.16/17.01	-18.68/18.82	-17.84/18.32	-18.56/18.87	-19.04/15.2	-16.8/13.47	-19.46/18.65	-17.3/15.52	-15.07/10.19	-16.57/9.45	-5.39/7.16	-7.85/7.48	-6.16/5.19	-5.96/7.34	-8.69/13.09
Theta(127.5°)	-10.89/12.82	-15.22/17.13	-17.73/18.78	-16.41/15.9	-13.78/16.35	-19.01/18.25	-17.8/17.62	-17.44/18.06	-14.62/14.57	-14.86/14.74	-16.73/18.24	-17.55/18.58	-12.48/12.32	-16.8/18.99	-14.62/18.4	-12.01/17.36	-12.75/18.99	-13.98/16.85	-17.97/11.3	-6.09/5.48	-4.48/6.69	-9.36/12.31	-7.07/5.61	-7.55/10.23
Theta(135°)	-11.77/9.82	-11.35/11.62	-13.71/18.55	-18.48/19.06	-16.14/16.59	-16.3/12.92	-12.6/15.33	-14.4/13.05	-14.03/14.88	-16.36/17.83	-17.25/14.91	-13.95/15.79	-18.11/18.66	-17.61/13.07	-13.56/18.46	-11.49/17.29	-11.78/12.69	-8.29/12.52	-12.68/6.81	-3.13/3.82	-4.49/4.93	-8.64/7.15	-7.41/6.86	-8.68/12.71
Theta(142.5°)	-11.27/14.05	-18.09/13.3	-15.14/18.2	-15.17/13.35	-14.27/13	-12.77/14.72	-18.31/18.27	-19.32/17.65	-19.36/18.64	-18/18.09	-18.44/10.23	-7.43/8.66	-12.83/12.6	-9.26/11.11	-18.54/12.34	-16.2/16.17	-9.8/7.53	-8.09/15.32	-13.33/7.4	-3.25/2.38	-3.51/3.75	-6.9/9.62	-7.21/8.43	-11.26/12.68
Theta(150°)	-10.79/11.3	-17.37/19.04	-17.21/13.28	-9.23/8.79	-9.91/12.9	-18.66/18.46	-17.92/18.34	-15.42/12.25	-9.01/6.94	-7.47/11.34	-17.39/17.65	-12.28/13.31	-16.71/15.7	-12.36/14.77	-18.14/18.26	-17.03/9.97	-9.84/9.88	-9.8/14.09	-13.48/10.72	-7.66/6.5	-7.76/7.23	-6.43/6.65	-6.17/6.21	-9.18/12.61
Theta(157.5°)	-10.25/10.3	-11.33/12.79	-12.43/10.8	-10.03/10.97	-12.46/13.77	-13.99/14.43	-14.74/15.74	-16.5/13.59	-10.71/9.08	-9.1/9.93	-11.53/14.17	-16.46/15.95	-14.87/14.02	-14.45/18.28	-18.56/17.86	-16.69/10.34	-7.74/6.84	-7.4/8.59	-8.56/7.62	-7.01/7.32	-8.84/10.87	-11.12/11.01	-11.27/12	-12.26/11.43
Theta(165°)	-14.88/14.88	-15.8/17.83	-17.32/15.77	-14.5/13.46	-12.82/12.73	-13.97/18.17	-18.71/17.48	-18.05/19.17	-16.73/13.01	-11.21/10.59	-11.45/12.43	-12.29/11.04	-9.38/8.38	-8.4/9.28	-10.85/12.07	-11.79/10.48	-9/7.88	-7.01/6.28	-5.65/5.35	-5.21/5.1	-5.46/6.26	-7.15/8.63	-9.63/10.64	-11.54/13.43
Theta(172.5°)	-18.38/17.82	-18.51/14.5	-12.1/10.76	-9.66/9.4	-9.68/10.63	-12.22/16	-18.73/19.1	-18.64/19.39	-18.87/17.89	-14.37/12.37	-11.81/12.1	-12.6/12.36	-12.04/12.4	-12.92/12.76	-11.51/9.86	-8.37/7.24	-6.75/6.52	-6.32/6.41	-6.49/6.89	-7.31/8.34	-9.68/11.49	-13.03/14.94	-18.6/17.67	-18.48/18.81
Theta(180°)	-12.67/14.12	-15.6/16.62	-17.05/18.54	-18.05/17.79	-18.96/18.51	-19/18.47	-17.76/13.55	-11.39/10.17	-10/10.08	-10.19/10.46	-10.58/10.83	-11.15/11.99	-13.06/14.2	-15.52/15.78	-15.38/14.12	-13.2/12.18	-12.31/12.62	-12.93/12.82	-11.94/11.01	-10.54/10.54	-10.72/11.07	-10.69/10.35	-10.42/10.11	-10.38/11.46
Freq(Hz)	5.3G/Pol.	Theta/Ant. 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°)	-13.27/12.83	-13.61/14.19	-15.52/15.66	-15.12/15.83	-17.17/16.99	-17.19/18.88	-18.01/18.32	-18.67/19.07	-18.02/19.08	-18.8/17.26	-14.98/13.39	-12.85/12.78	-12.76/12.66	-12.4/11.77	-11.71/11.96	-12.6/13.49	-14.68/15.95	-17.1/18.19	-17.89/17.55	-17.66/18.59	-17.68/17.96	-17.93/16.35	-14.97/14.66	-14.74/14.73
Theta(7.5°)	-8.9/8.81	-8.44/7.87	-7.9/7.85	-7.47/8.34	-9.57/9.56	-9.4/10.14	-11.24/13.1	-16.87/18.12	-18.43/17.59	-18.93/17.97	-18.78/19	-17.74/18.44	-19.17/18.67	-18.98/18.07	-17.75/18.95	-17.11/18.87	-18.63/17.28	-18.93/18.97	-18.21/19.22	-18.07/18.97	-19.1/18.79	-15.09/12.87	-11.44/10.52	-10.13/9.56
Theta(15°)	-5.43/4.94	-4.02/3.69	-3.44/3.07	-2.57/3.12	-3.56/3.77	-4.61/5.4	-6.79/8.19	-9.77/11.47	-14.7/17.81	-19.07/18.85	-18.3/17.96	-18.77/18.2	-18.06/18.2	-19.08/17.85	-17.25/16.12	-15.65/16.02	-16.55/17.63	-17.19/18.76	-19.02/17.77	-18.44/19.4	-18.82/15.36	-11.71/9.64	-8.21/7.14	-6.56/5.87
Theta(22.5°)	-2.68/2.28	-2.25/2.32	-2.19/1.82	-1/0.64	-0.78/1.1	-2.35/3.53	-5.06/6.57	-8.37/10.11	-12.48/15.62	-19.07/18.62	-18.34/17.29	-19.29/17.99	-18.15/17.07	-14.49/11.68	-9.93/8.38	-7.57/7.42	-8.37/12.04	-13.08/14.59	-16.47/18.65	-18.18/15.64	-12.87/11.21	-9.21/7.49	-5.75/4.65	-3.96/3.14
Theta(30°)	-2.93/2.88	-2.46/1.92	-1.2/3.02	0.62/0.96	0.76/0.28	-0.76/2.41	-4.65/7.16	-9.37/9.87	-8.8/7.74	-10.32/14.11	-18.25/18.37	-17.6/18.26	-17.59/16.38	-14.88/11.33	-8/5.54	-4.25/4.15	-5.18/6.15	-6.35/7.18	-9.69/13.34	-14.16/11.33	-9.62/8.1	-7.1/6.01	-4.66/3.87	-3.22/2.87
Theta(37.5°)	-1.14/1.17	-1.64/1.97	-1.32/0.62	-0.13/0.12	-0.18/0.81	-1.96/3	-3.88/4.84	-6.01/6.97	-8.22/9.56	-11.31/13.44	-14.96/13.79	-11.17/10.02	-10.2/10.72	-9.8/7.78	-5.94/4.39	-3.33/2.92	-3.03/3.59	-5.32/7.95	-9.7/9.51	-8.77/7.08	-5.04/3.51	-3.02/3.06	-3.08/2.78	-1.78/1.3
Theta(45°)	-0.84/1.64	-2.63/2.55	-1.88/0.86	-0.05/0.29	0.01/0.5	-1.74/3.43	-5.1/6.45	-7.58/8.92	-11.76/15.39	-19.21/17.35	-13.79/10.31	-7.23/6.91	-9.06/11.72	-12/7.85	-4.78/2.73	-1.71/1.78	-2.85/4.39	-6.62/7.94	-7.72/6.59	-5.09/4.48	-3.84/2.95	-2.23/1.95	-1.39/1.25	-1.22/1.1
Theta(52.5°)	0.95/0.63	-0.5/1.3	-1.23/1.12	-0.84/0.06	0.23/0.56	-2.11/3.72																		



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	1.24/1.23	0.17/0.18	0.09/0.07	-1.34/-0.95	-0.94/-0.99	-0.65/-1.09	-3.01/-5.41	-7.84/-9.82	-12.17/13.01	-14.95/-10.04	-6.72/-5.07	-3.56/-3.1	-2.06/-2.52	-3.69/-6.82	-8.46/-5.22	-3.57/-4.61	-5.94/-4.77	-2.41/-1.35	-1.76/-3.57	-6.08/-5.32	-4.21/-1.04	0.84/0.83	1.75/2.28	2.36/1.64
Theta(75°)	1.85/1.5	0.33/0.29	0.29/0.89	-0.54/-0.14	-0.6/-0.81	-0.7/-1.02	-2.72/-5.37	-9.65/-13.61	-18.52/-14.37	-13.87/-8.72	-6.93/-3.56	-1.84/-0.59	-0.05/-1.61	-2.19/-5.34	-6.81/-3.98	-3.99/-5.21	-4.13/-2.27	-2.08/-1.73	-1.58/-2.72	-3.08/-1.11	-0.74/-0.45	10.62	1.39/2.34	2.42/1.64
Theta(90°)	-0.56/0.74	-1.03/-1.91	-1.03/-1.87	-1.56/-2.81	-3.19/-1.21	-0.33/-1.06	-3.53/-7.41	-10.34/-12.61	-16.87/-17.29	-17.76/-9.1	-6.84/-5.56	-3.49/-2.58	-0.3/-1.43	-3.32/-6.26	-5.29/-3.64	-3.66/-3.01	-3.48/-1.39	0.03/0.72	0.21/-2.36	-2.82/-0.67	1.28/1.5	2.22/1.69	0.76/1.83	2.34/0.57
Theta(97.5°)	-1.60/5.3	-0.34/-1.65	-1.45/-4.61	-5.57/-4.15	-3.41/-0.9	0.15/-1.07	-4.26/-8.2	-11.13/-11.29	-13.83/-12.71	-16.85/-7.44	-9.38/-6.22	-3.82/-1.55	0.12/-1	-2.77/-5.29	-5.68/-6.4	-5.8/-4.34	-3.36/-1.32	-0.66/0.82	-0.19/-2.47	-0.03/2	3.39/2.84	2.56/1.31	0.65/1.49	1.76/-0.46
Theta(105°)	-1.54/-0.04	-0.83/-3.23	-1.74/-3.24	-3.81/-2.6	-1.49/0.08	0.82/-1.06	-5.37/-7.09	-5.69/-5.44	-8.47/-10.61	-15.38/-6.24	-6.83/-3.61	-4.9/-5.11	-0.73/-1.06	-3.84/-5.55	-5.73/-6.78	-4.63/-5.28	-5.15/-1.4	-0.5/-0.53	-1.13/-1.42	-1.86/0.63	0.48/0.85	0.88/0.31	-0.77/-0.36	0.72/0.51
Theta(112.5°)	-3.16/-2.5	-2.16/-2.81	-2.29/-5.83	-12.07/-7.76	-3.06/-1.63	-1/-2.93	-7.2/-9.27	-9.19/-9.51	-11.43/-12.27	-11.51/-7.28	-11.19/-4.71	-4.03/-2.74	-3.31/-7.47	-9.11/-8.09	-8.85/-8	-7.77/-8.76	-3.92/-2.13	-0.79/2.07	0.3/-1.92	-0.72/0.64	1.24/-0.48	-0.33/-1.3	0.04/1.41	1.09/-1.82
Theta(120°)	-6.02/-4.48	-4.58/-6.32	-5.79/-5.95	-8.68/-8.52	-6.22/-4.38	-4.46/-6.86	-12.04/-15.96	-11.13/-11.12	-13.01/-18.25	-19.17/-13.27	-10.74/-5.72	-5.41/-3.8	-3.07/-5.78	-9.16/-10.13	-9.66/-18.19	-18.2/-12.66	-9.08/-10.9	-6.89/-3.07	-6.05/-8.84	-4.87/-2.89	-1.7/-2.23	-2.35/-3.53	-3.05/-0.96	-1.56/-4.31
Theta(127.5°)	-3.92/-3.41	-4.17/-5.54	-7.04/-9.61	-14.32/-11.57	-6.85/-4.77	-5.68/-8.5	-8.9/-5.95	-5.18/-7.97	-17.95/-17.95	-18.76/-18.77	-9.68/-6.53	-5.59/-3.95	-5.02/-8.23	-12.18/-11.56	-10.83/-17.52	-19.13/-7.58	-7.3/-8.56	-3.53/-2.37	-8.56/-11.39	-5.43/-3.71	-3.56/-2.07	-1.87/-2.25	-1.25/0.64	0.21/-2.46
Theta(135°)	-6.92/-6.54	-6.15/-6.28	-6.63/-10.09	-16.25/-15.69	-9.71/-7.81	-7.39/-7.82	-8.2/-8.83	-9.39/-10.09	-12.48/-17.15	-18.5/-16.75	-8.73/-7.34	-5.66/-5.19	-10.3/-12.91	-8.66/-11.39	-19.81/-16.69	-10.41/-9.06	-15.68/-10.18	-4.21/-4.12	-10.43/-8.97	-6.51/-3.42	-4.71/-5.15	-8.45/-11.64	-5.21/-1.63	-0.71/-3.59
Theta(142.5°)	-11.34/-9.34	-7.97/-10.13	-12.95/-17.52	-17.41/-12.21	-9.88/-8.36	-8.7/-10.28	-11.81/-10.02	-8.12/-8.86	-11.16/-11.26	-15.18/-11.26	-11.35/-12.85	-8.99/-7.47	-8.19/-12.92	-12.3/-11.25	-12.21/-13.92	-15.3/-15.46	-10.58/-8.28	-5.35/-6.15	-13.92/-11.87	-7.26/-3.58	-4.21/-7.2	-7.77/-14.73	-11.42/-5.93	-5.52/-7.47
Theta(150°)	-10.73/-13.24	-10.7/-13.46	-19.18/-16.03	-13.31/-10.76	-9.8/-10.12	-10.8/-12.28	-12.51/-11.63	-10.6/-10.79	-12.34/-15.78	-18.6/-17.17	-16.94/-14.6	-12.26/-10.86	-12.62/-16.27	-17.66/-18.72	-13.07/-9.1	-9.18/-12.15	-13.45/-11.52	-5.87/-5.33	-7.27/-8.24	-7.84/-5.09	-3.77/-5.5	-8.14/-6.87	-5.08/-3.87	-3.5/-5.31
Theta(157.5°)	-8.45/-13.2	-11.73/-11.76	-12.54/-16.21	-18.52/-16.04	-14.35/-14.86	-15.11/-15.01	-13.74/-12.69	-12.54/-12.89	-15.2/-17.31	-17.41/-17.72	-18.31/-17.52	-15.52/-14.63	-15.34/-15.87	-15.32/-12.62	-10.37/-9.78	-13.33/-17.9	-13.05/-12.48	-9.79/-8.33	-9.79/-13.25	-16.25/-18.21	-14.01/-10.64	-9.03/-8.08	-6.7/-5.06	-5.13/-6.13
Theta(165°)	-6.84/-8.2	-10.4/-11.91	-14.47/-16.18	-15.06/-16.93	-19.01/-18.59	-18.7/-18.56	-18.62/-19.11	-18.95/-18.83	-19.33/-15.18	-12.57/-10.95	-10.33/-10.55	-10.76/-11.04	-11.94/-14.86	-18.65/-18.69	-18.18/-18.11	-18.74/-18.3	-17.93/-17.48	-12.89/-10.14	-8.68/-8.77	-9.32/-10.35	-10.42/-9.19	-8.12/-7.2	-6.67/-6.53	-5.97/-6.04
Theta(172.5°)	-12.59/-15.14	-18.58/-18.97	-18.48/-18	-18.28/-18.05	-17.32/-18.95	-17.62/-18.18	-17.51/-18.38	-19.01/-18.13	-17.62/-18.48	-19.14/-17.91	-19.21/-18.01	-18.65/-19.15	-18.9/-17.11	-15.53/-14.82	-15.51/-18.13	-19.05/-17.44	-17.25/-14.68	-13.4/-13.18	-12.29/-11.84	-11.42/-11.23	-11/-10.2	-10.28/-9.57	-8.56/-8.81	-9.15/-10.59
Theta(180°)	-14.57/-13.9	-13.32/-10.86	-11.17/-13.22	-15.52/-15.49	-14.77/-13.94	-14.31/-14.7	-14.68/-14.17	-13.59/-13.64	-13.64/-13.32	-13.29/-13.07	-12.95/-13.21	-13.36/-13.9	-14.53/-15.33	-16.14/-16.24	-16.17/-15.76	-14.81/-14.22	-13.99/-14.41	-14.08/-13.81	-13.28/-12.95	-12.68/-11.58	-11.53/-11.34	-12.55/-14.06	-14.99/-16.06	-18.59/-18.2
Freq(Hz)	5.785G/Pol.	Phi/Ant. 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°)	-14.79/-13.92	-10.93/-9.01	-7.72/-6.56	-5.43/-4.34	-3.88/-3.52	-3.48/-4.07	-4.55/-5.29	-5.29/-5.22	-5.13/-5.89	-6.99/-9.01	-10.92/-12.46	-13.8/-15.1	-14.87/-12.86	-10.92/-9.05	-7.93/-6.82	-5.71/-5.11	-4.84/-4.61	-4.37/-4.06	-3.37/-3.13	-3.44/-4.27	-5.63/-6.98	-7.47/-7.68	-8.67/-11.42	-15.42/-17.42
Theta(7.5°)	-12.87/-12.35	-11.19/-9.56	-8.87/-7.43	-6.24/-5.22	-4.5/-4.09	-3.89/-4.17	-4.44/-4.65	-4.54/-4.09	-3.82/-4.34	-5.34/-7.07	-8.65/-10.11	-12.44/-16.54	-17.71/-18.18	-15.38/-12.4	-10.33/-8.4	-7.01/-6.27	-5.89/-5.6	-5.2/-4.84	-4.68/-4.94	-6.04/-7.15	-8.51/-9.22	-9.5/-10.84	-13.42/-17	-17.71/-14.01
Theta(15°)	-17.93/-17.55	-15.91/-14.96	-13.04/-10.86	-9.8/-8.18	-7.39/-6.84	-5.91/-5.2	-5.24/-5.14	-5.6/-5.9	-6.06/-6.23	-6.51/-7.37	-9.48/-12.77	-16.37/-18.77	-18.22/-18.3	-15.46/-12.8	-10.56/-8.68	-7.41/-6.63	-6.29/-6.26	-6.51/-6.67	-7.24/-7.59	-8.5/-10.12	-11.67/-13.46	-15.5/-16.35	-19.07/-18.42	-18.77/-19.45
Theta(22.5°)	-18.12/-17.96	-18.82/-17.93	-14.94/-11.97	-11.04/-9.56	-8.54/-7.89	-6.84/-5.7	-5.14/-5.12	-5.8/-6.84	-7.3/-7.2	-6.88/-7.95	-10.6/-13.48	-15.17/-16.17	-15.62/-13.37	-10.9/-9.33	-8.95/-9.1	-8.97/-8.63	-8.32/-8.07	-7.91/-7.97	-8.67/-9.98	-11.19/-11.71	-11.76/-12.1	-13.47/-14.47	-14.51/-15.34	-16.93/-18.89
Theta(30°)	-14.54/-18.18	-18.31/-18.07	-15.75/-13.74	-12.06/-10.3	-7.71/-5.73	-4.24/-3.32	-2.94/-3.2	-4.11/-5.73	-7.66/-8.34	-8.19/-9.46	-13.65/-16.56	-13/-10.88	-10.04/-9.56	-7.81/-6.28	-6.04/-6.95	-8.54/-9.7	-10.55/-11.21	-11.77/-13.11	-13.82/-13.44	-13.41/-13	-11.59/-10.13	-9.15/-8.68	-8.37/-8.91	-8.79/-10.48
Theta(37.5°)	-17.97/-18.2	-18.75/-18.55	-19.26/-14.91	-11.6/-10.46	-8.68/-7.58	-6.5/-5.81	-5.65/-6.36	-7.11/-7.7	-8.64/-9.22	-9.14/-9.07	-10.48/-12.93	-12.61/-11.23	-10.4/-9.34	-7.28/-5.66	-5.23/-5.82	-7.13/-9.54	-13.62/-17.62	-18.99/-17.69	-17.16/-15.76	-11.64/-9.77	-9.92/-10.65	-10.23/-9.3	-9.04/-9.28	-11.78/-16.3
Theta(45°)	-15.59/-17.37	-17.95/-18.27	-17.21/-15.36	-14.26/-14.17	-11.72/-9.38	-8.52/-9.71	-11.12/-10.06	-7.79/-6.86	-6.65/-7.18	-8.32/-8.71	-7.89/-7.46	-8.03/-9.76	-12.26/-12.48	-10.52/-8.09	-6.17/-5.26	-5.42/-6.51	-8.16/-10.65	-16.02/-18.79	-16.46/-12.46	-10.47/-8.89	-8.05/-8.92	-9.62/-9.14	-9.4/-11.19	-13.13/-12.81
Theta(52.5°)	-18.08/-15.68	-14.06/-14.07	-14.43/-13.9	-15.72/-16.9	-15.46/-14.49	-13.35/-11.39	-9.32/-8.01	-7.03/-7.45	-9.66/-12.77	-12.91/-10.48	-8.77/-7.8	-6.84/-6.86	-9.55/-13.54	-14.75/-11.21	-8.07/-6.02	-7.03/-9.29	-10.58/-11.99	-16.47/-19.2	-19.04/-17.12	-12.79/-11.3	-11.37/-11.92	-13.09/-12.77	-12.52/-13.35	-17.75/-17.79
Theta(60°)	-18.82/-16.43	-13.76/-15.52	-18.05/-19	-18.31/-17.48	-18.06/-16.91	-14.54/-11.66	-8.42/-6.64	-6.95/-8.95	-12.27/-15.87	-15.08/-10.38	-7.44/-5.55	-4.12/-5.02	-6.46/-9.03	-14.05/-16.24	-13.1/-10.45	-9.11/-8.87	-10.27/-11.65	-13.27/-17.53	-17.46/-17.93	-18.88/-14.54	-10.61/-11.17	-12.2/-12.14	-13.55/-16.67	-18.47/-18.37
Theta(67.5°)	-18.33/-12.62	-11.6/-12.93	-16.06/-18.91	-17.59/-18.19	-18.5/-15.75	-11.71/-10.24	-11.23/-12.41	-13.14/-12.63	-13.08/-16.33	-13.35/-9.98	-6.73/-4.44	-4.51/-5.28	-7.02/-7.72	-9.83/-17.93	-19.2/-12.74	-9.54/-11.06	-12.31/-14.21	-17.68/-18.08	-18.26/-19.48	-16.63/-13.52	-12.44/-12.54	-13.62/-15.02	-16.55/-16	-19.1/-18.85
Theta(75°)	-13.89/-12.59	-10.47/-10.95	-12.41/-18.52	-18.27/-18.85	-18.2/-17.95	-13.27/-11.24	-12.01/-13.42	-13.85/-12.97	-16.44/-18.57	-15.57/-11.14	-8.45/-7.8	-7.64/-9.19	-11.07/-12.16	-13.66/-16.11	-17.31/-18.9	-16.37/-12.32	-11.4/-14.76	-18.42/-18.61	-18.44/-18.47	-17.72/-12.22	-11.02/-8.75	-10.19/-12.9	-16.17/-18.67	-18.63/-17.52
Theta(82.5°)	-13.32/-13.1	-11.09/-9.97	-12.01/-16.63	-18.88/-18.32	-11.66/-9.37	-10.96/-14.89	-17.38/-13.12	-11.6/-13.62	-17.79/-16.75	-11.57/-10.38	-8.91/-8.79	-8.28/-9.57	-12.16/-18.14	-18.35/-16.64	-12.69/-11.55	-12.62/-18.82	-14.18/-10.38	-9.89/-12.76	-15.09/-15.81	-10.23/-9.31	-10.48/-8.24	-8.88/-9.55	-11.38/-17.65	-18.14/-18.85
Theta(90°)	-14.42/-14.71	-17.23/-15.52	-16.63/-19.18	-18.86/-18.89	-17.89/-18.83	-17.15/-15.29	-13.79/-13.67	-12.64/-14.64	-18.33/-18.66	-18.33/-18.3	-18.35/-18.92	-16.5/-10.88	-8.74/-9.72	-11.73/-12.36	-12.01/-9.96	-7.39/-9.16	-14.88/-18.44	-14.94/-17.49	-17.61/-17.55	-8.61/-7.03	-8.88/-13.95	-15.96/-14.99	-12.79/-17.56	-17.3/-13.74
Theta(97.5°)	-15.74/-17.62	-18.66/-18.9	-18.71/-17.55	-16.45/-18.01	-18.54/-18.21	-17.74/-17.27	-14.98/-12.91	-13.42/-15.79	-18.67/-18.07	-19.09/-16.19	-13.69/-12.85	-14.64/-14.11	-9.88/-11.69	-9.72/-11.11	-16.6/-13.06	-8.39/-7.54	-9.73/-17.51	-13.98/-11.69	-12.39/-14.89	-19.23/-14.78	-13.41/-18.17	-18.38/-18.52	-18.44	



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

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°)			
0(45°)	-3.6/-3.54	-2.89/-3.56	-5.6/-7.52	-7.85/-8.06	-9.62/-12.07	-15.69/-18.13	-18.22/-16.18	-14.41/-11.82	-7.7/-4.93	-4.82/-5.82	-5.74/-4.43	-4.05/-4.17	-3.66/-2.49	-1.86/-1.59	-1.17/-1.37	-2.19/-3.09	-4.97/-6.92	-8.3/-11.92	-16.87/-14.53	-7.44/-3.99	-2.64/-2.27	-2.02/-2.11	-2.1/-2.11	-2.58/-3.26					
0(52.5°)	-3.07/-4.12	-5.98/-8.05	-9.54/-10.66	-10.24/-9.25	-10.84/-14.16	-19.05/-17.9	-18.91/-14.39	-11.96/-10.33	-8.42/-5.65	-3.96/-3.91	-4.32/-4.09	-3.68/-3.67	-3.1/-1.98	-1.82/-2.33	-2.88/-3.49	-4.52/-6.36	-7.25/-7.59	-10.16/-18.63	-19.21/-9.54	-5.17/-2.57	-1.49/-1.98	-2.95/-3.47	-3.79/-3.2	-3.79/-3.2	-2.88/-3.08				
0(60°)	-5.27/-5.6	-8.08/-12.2	-14.84/-15.5	-15.13/-17.8	-17.74/-18.78	-17.74/-19.15	-18.67/-12.77	-10.54/-9.84	-10.19/-9.08	-6.13/-5.25	-6.42/-5.53	-4.6/-5.51	-4.93/-2.46	-2.07/-3.17	-3.3/-3.13	-4.65/-5.76	-7.19/-9.3	-10.24/-12.91	-15.52/-12.28	-8.76/-6.3	-5.25/-5.12	-5.43/-6.11	-6.15/-5.25	-5.03/-6.09					
0(67.5°)	-14.83/-11.84	-9.28/-10.03	-12.54/-10.77	-10.2/-12.45	-16.59/-18.33	-18.12/-14.76	-13.98/-14.41	-11.6/-9.24	-10.22/-9.94	-6.3/-5.16	-6.2/-5.54	-5.17/-6.15	-6.12/-5.15	-4.37/-4.28	-3.29/-2.17	-2.99/-5.25	-7.68/-11.89	-17.48/-17.9	-17.34/-11.83	-8.1/-8.22	-7.76/-6.38	-6.45/-6.47	-6.54/-8.14	-11.34/-13.75					
0(75°)	-13.61/-13.34	-11.09/-8.4	-8.89/-9.46	-10.53/-15.27	-19.62/-16.87	-16.04/-14.53	-13.4/-12.39	-12.17/-12.34	-14.57/-15.93	-11.95/-9.24	-8.9/-6.97	-6.1/-8.77	-9.05/-5.52	-4.42/-5.45	-4.71/-4.35	-6.65/-5.86	-6.64/-6.95	-8.65/-14.59	-17.75/-15.74	-12.79/-9.47	-7.4/-6.58	-6.48/-7.53	-6.21/-5.74	-8.15/-11.9					
0(82.5°)	-12.98/-15.73	-18.49/-14.17	-12.77/-12.61	-14.23/-18.57	-16.71/-18.66	-18.74/-14.47	-11.36/-11.74	-15.36/-14.26	-12.19/-12.41	-10.96/-9.06	-10.55/-10.31	-10.71/-11.68	-11.37/-10.06	-8.9/-7.89	-5.65/-5.36	-4.03/-3.83	-5.13/-8.59	-11.59/-10.92	-12.53/-16.14	-11.98/-11.79	-8.98/-10.52	-13.82/-14.49	-12.94/-9.84	-9.63/-11.37					
0(90°)	-15.35/-17.82	-13.6/-10.51	-8.88/-8.34	-8.84/-11.02	-14.34/-13.48	-13.06/-13.65	-15.33/-17.92	-17.91/-17.3	-17.87/-18.66	-14.2/-9.09	-10.61/-10.84	-12.9/-14.78	-10.36/-6.32	-9.51/-13.35	-10.41/-8.24	-5.19/-4.96	-6.12/-7.56	-10.2/-13.93	-10.11/-10.98	-11.31/-9.79	-11.72/-9.17	-8.93/-12.25	-9.72/-11.2	-10.75/-11.44					
0(97.5°)	-14.98/-18.04	-18.71/-15.59	-15.12/-15.12	-11.31/-12.12	-16.96/-18.18	-17.8/-15.64	-14.46/-13.8	-13.84/-16.82	-18.06/-13.6	-12.45/-12.54	-17.34/-16.35	-19.04/-18.03	-15.01/-11.51	-10.71/-7.95	-6.77/-6.15	-5.37/-5.86	-6.78/-8.63	-12.73/-11.37	-13.35/-13.03	-8.03/-9.74	-6.3/-10.73	-10.62/-17.35	-19.18/-8.53	-17.44/-18.3					
0(105°)	-12.44/-15.32	-18.23/-17.8	-11.13/-9.26	-9.1/-11.7	-11.52/-11.77	-13.54/-15.97	-16.23/-16.72	-18.48/-18.66	-17.82/-17.7	-18.72/-15.55	-16.62/-14.43	-17.31/-18.03	-18.5/-18.84	-16.42/-18.83	-18.07/-12.75	-6.62/-3.62	-3.04/-4.78	-9.17/-11.37	-7.46/-8.15	-10.76/-7.1	-11.28/-12.26	-18.5/-13.68	-8.18/-8.4	-7.1/-8.27					
0(112.5°)	-13.59/-19.14	-18.71/-18.25	-16.11/-13.33	-6.28/-7.02	-11.67/-14.17	-18.1/-18.05	-15.58/-13.64	-13.6/-18.16	-19.13/-17.29	-19.27/-15.87	-14.61/-16.69	-18.54/-17.25	-18.99/-17.16	-17.43/-18.38	-15.81/-16.94	-11.69/-14.28	-14.02/-12.37	-12.07/-9.07	-6.87/-6.55	-7.22/-9.66	-12.03/-11.49	-10.39/-11.6	-12.97/-10.88	-9.8/-8.41					
0(120°)	-10.62/-17.87	-13.62/-18.01	-16.38/-18.57	-18.17/-17.05	-19.11/-19.02	-18.03/-17.95	-12.6/-11.01	-13.53/-17.14	-17.94/-18.51	-15.54/-13.32	-18.13/-16.51	-15.1/-18.97	-14.51/-16.18	-18.61/-15.69	-13.92/-14.83	-13.63/-8.38	-7.38/-8.99	-10.58/-9.47	-8.61/-14.41	-15.61/-11.12	-16.3/-19.37	-18.32/-17.86	-18.03/-17.92	-13.34/-7.74					
0(127.5°)	-9.23/-11.87	-12.06/-10.17	-15.57/-17.75	-16.33/-16.41	-14.36/-15.67	-17.61/-17.28	-16.18/-14.77	-18.06/-17.53	-12.02/-12.31	-17.48/-18.12	-15.88/-11.18	-14.24/-11.99	-12.92/-17.81	-18.75/-14.11	-14.12/-17.83	-11.5/-9.62	-8.44/-10.16	-14.36/-12.14	-8.14/-7.7	-15.66/-15.74	-11.77/-12.5	-12.56/-12.25	-17.68/-15.22	-14.51/-12.32					
0(135°)	-17.42/-11.04	-13.09/-12.73	-7.92/-11.26	-14.55/-10.89	-8.12/-9.65	-16.6/-13.84	-12.99/-15.51	-12.22/-10.27	-15.35/-17.88	-18.17/-17.52	-13.9/-9.86	-9.84/-13.86	-18.98/-16.4	-13.02/-17.34	-18.95/-17.7	-15.01/-9.49	-10.95/-7.69	-6.93/-9.97	-8.3/-6.7	-11.22/-14.72	-7.27/-8.9	-17.91/-12.6	-12.07/-14.22	-5.04/-6.2					
0(142.5°)	-6.32/-18.7	-5.77/-3.39	-7.05/-6.77	-6.17/-8.44	-11.98/-18.26	-17.32/-17.93	-18.72/-18.38	-15.72/-15.94	-19.36/-18.95	-16.15/-15.61	-18.36/-13.55	-13.92/-18.15	-11.09/-7.66	-8.88/-10.27	-10.61/-16.2	-18.42/-17.83	-11.52/-6.02	-6.9/-9.71	-7.61/-3.78	-3.58/-9.78	-18.67/-8.51	-5.99/-8.82	-12.05/-7.7	-6.92/-4.86					
0(150°)	-7.78/-5.06	-4.69/-6.88	-8.68/-7.56	-7.49/-9.22	-12.76/-18.53	-18.33/-14.03	-12.17/-9	-6.28/-6.14	-8.27/-10.31	-12.41/-16.65	-18.69/-17.95	-17.43/-10.86	-8.81/-10.11	-12.51/-12.79	-14.1/-12.96	-13.1/-17.73	-16.57/-11.25	-9.11/-8.15	-8.82/-8.06	-8.06/-9.61	-12.97/-16.04	-7.51/-7.45	-14.38/-18.66	-15.74/-10.35					
0(157.5°)	0.73/-1.06	-3.92/-8.69	-14.14/-15.16	-17.52/-18.46	-18.8/-17.67	-18.58/-17.05	-15.11/-14.82	-11.63/-11.44	-13.38/-14.54	-14.59/-14.35	-12.23/-10.17	-9.04/-8.39	-8.08/-8.3	-8.73/-9.86	-12.63/-16.83	-18.09/-17.76	-14.96/-13.29	-11.6/-10.45	-8.62/-7.67	-7.89/-9.44	-11.7/-15.07	-11.29/-7.05	-4.3/-2.45	-0.70/-6.2					
0(165°)	-9.37/-9.66	-10.11/-10.82	-11.26/-11.92	-13.95/-15.03	-17.34/-17.8	-17.27/-17.9	-17.22/-17.63	-17.7/-19.22	-18.44/-14.91	-10.64/-7.54	-5.62/-5.01	-5.09/-5.46	-6.15/-7.95	-11.03/-14.94	-17.48/-17.73	-17.28/-18.66	-16.02/-13.38	-12.64/-13.75	-18.4/-15.66	-8.7/-6.02	-5.01/-4.49	-3.77/-3.09	-2.86/-3.62	-5.82/-8.65					
0(172.5°)	-3.24/-1.97	-1.8/-2.43	-3.84/-5.41	-7.19/-9.02	-10.85/-12.96	-15.94/-18.83	-19.21/-18.38	-16.17/-12.96	-11.05/-8.86	-6.8/-5.29	-4.4/-3.96	-4/-3.95	-3.89/-4.13	-4.62/-5.47	-6.38/-7.52	-8.9/-10.34	-11.87/-12.98	-13.48/-11.81	-9.5/-7.25	-5.48/-4.69	-4.57/-4.71	-5.58/-7.05	-12.34/-14.47	-8.71/-5.3					
0(180°)	-5.26/-5.81	-7.41/-9.56	-13.31/-15.29	-15.1/-17.1	-18.97/-18.42	-17.8/-19.13	-18.88/-13.95	-10.07/-7.92	-6.46/-5.08	-3.66/-2.83	-2.26/-1.98	-1.96/-1.96	-2.07/-2.16	-2.38/-2.97	-3.94/-5.27	-6.94/-8.7	-11.01/-14.15	-16.97/-14.32	-11.06/-10.21	-10.47/-10.16	-9.6/-9.4	-10.01/-10.67	-8.73/-6.74	-5.64/-5.37					
Freq(Hz)	5.6G/Pol.	Phi/Ant. 3	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
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°)					
0(0°)	-13.6/-11.56	-9.23/-7.48	-6.07/-4.78	-3.33/-2.13	-1.38/-0.84	-0.86/-1.23	-1.44/-1.5	-1.85/-2.58	-3.44/-4.4	-5.38/-6.56	-8.71/-12.13	-18.08/-18.76	-18.41/-12.81	-9.35/-7.02	-5.29/-4.09	-3.36/-2.79	-2.28/-1.84	-1.52/-1.48	-1.67/-1.95	-2.59/-3.74	-4.61/-5.57	-8.23/-10.14	-12.68/-15.4	-18.76/-18.34					
0(7.5°)	-12.99/-11.38	-8.61/-6.81	-6.01/-5.25	-4.36/-3.4	-2.59/-2.03	-1.76/-1.94	-2.53/-2.84	-3.29/-3.88	-4.9/-5.8	-7.34/-8.89	-11.65/-17.04	-17.55/-17.05	-11.14/-7.77	-5.53/-3.86	-2.73/-1.89	-1.16/-0.56	0.022	0.470/4	0.27/-0.03	-0.33/-1.27	-2.46/-3.7	-5.74/-7.42	-9.86/-15.34	-17.92/-15.68					
0(15°)	-15.7/-10.79	-6.46/-6.64	-3.29/-2.68	-2.26/-1.86	-1.48/-1.78	-1.71/-1.42	-1.53/-2.06	-2.57/-3.21	-4.05/-4.93	-6.85/-9.41	-13.08/-19.39	-17.34/-13.44	-8.96/-5.87	-3.77/-2.36	-1.25/-0.51	0.070/56	0.84/-0.9	1.120/96	0.85/-0.62	0.22/-0.28	-0.92/-1.7	-2.62/-3.94	-6.32/-10.9	-16.65/-17.83					
0(22.5°)	-13.25/-10.64	-9.81/-7.83	-6.28/-6.37	-5.87/-4.73	-3.42/-3.49	-3.35/-3.29	-3.09/-3.15	-3.3/-3.61	-4.28/-5.09	-6.46/-8.89	-12.92/-18.07	-18.87/-18.12	-13.26/-9.36	-6.76/-4.6	-2.95/-1.7	-0.70/05	0.66/15	1.42/57	1.61/55	1.230/67	0.09/-1.07	-2.61/-3.87	-5.48/-9.35	-15.67/-15.45					
0(30°)	-13.55/-18.32	-12.56/-7.98	-5.88/-3.99	-3.36/-3.44	-3.47/-4.21	-4.69/-4.99	-5.55/-5.16	-4.66/-4.6	-4.99/-5.63	-6.65/-8.16	-10.52/-13.69	-16.87/-17.76	-15.07/-11.33	-8.58/-6.56	-4.57/-2.59	-0.93/019	1.04/173	2.14/25	2.55/238	1.570/86	0.15/-0.84	-1.88/-2.96	-4.31/-5.37	-6.49/-9.08					
0(37.5°)	-17.18/-14.4	-9.48/-8	-7.18/-6.39	-6.53/-6.44	-6.47/-6.19	-6.46/-6.54	-7/-6.19	-5.67/-5.3	-5.59/-6.38	-8.29/-11.99	-14.95/-14.68	-15.48/-17.41	-17.55/-18.83	-13.1/-9.21	-5.73/-2.58	-0.39/112	2.15/288	3.15/31	3.02/32	3.23/299	1.80/63	-0.92/-3.01	-5.9/-10.46	-18.23/-18.96					
0(45°)	-18.23/-12.26	-6.41/-5.4	-5.3/-5.62	-7.46/-11.41	-15.23/-12.6	-11.27/-10.33	-11.53/-12	-10.64/-9.02	-7.59/-6.36	-5.9/-6.72	-8.45/-13.39	-19.1/-19.18	-19.07/-19.13	-9.76/-5.59	-3.88/-2.07	-0.66/002	0.820/94	0.871/49	2.25/272	2.15/0.9	-0.1/-1.48	-2.89/-3.99	-5.35/-7.43	-13.31/-18.14					
0(52.5°)	-10.74/-15.03	-17.93/-10.4	-8.23/-7.23	-7.71/-9.63	-10.23/-9.08	-9.22/-8.85	-6.34/-4.33	-4.32/-5.72	-7.03/-8.08	-8.35/-7.42	-6.89/-8.92	-10.78/-11.33	-16.01/-18.68	-18.55/-13.33	-7.16/-3.29	-2.53/-2.61	-2.36/-1.87	-0.1/0.9	1.05/0.9	0.61/-0.96	-3.								



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	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°)				
0(75°)	-10.06/-12.57	-16.66/-19.57	-19.17/-14.81	-13.53/-15.4	-18.13/-14.07	-8.89/-8.3	-11.86/-12.99	-13.91/-13.14	-10.69/-12.18	-18.66/-10.04	-5.93/-4.2	-5.38/-6.66	-8.33/-9.2	-8.4/-8.93	-8.11/-5	-3.51/-3.03	-0.10/0.55	0.27/0.02	-0.38/-0.41	-0.38/-0.74	-3.47/-5.28	-5.7/-8.97	-7.58/-6.89	-8.13/-9.42																	
0(82.5°)	-15.23/-17.08	-17.12/-18.4	-17.56/-18.13	-15.63/-12.6	-10.86/-8.59	-6.94/-7.24	-7.98/-6.77	-7.51/-15.09	-17.8/-13.79	-16.47/-18.25	-13.85/-11.76	-16.67/-18.36	-12.35/-7.57	-6.78/-10.84	-12.48/-6.99	-5.56/-2.58	-0.45/-1.88	-1.91/-1.86	-1.18/-0.39	-0.14/-1.36	-3.53/-4.93	-3.57/-5.07	-5.15/-5.16	-8.96/-11.57																	
0(90°)	-8.6/-12.25	-12.95/-12.32	-16.51/-16.41	-18.02/-19.03	-18.7/-14.37	-8.66/-5.99	-5.89/-7.29	-10.4/-13.41	-18.92/-15.29	-11.54/-15.72	-18.54/-11.28	-9.57/-11.39	-16.67/-11.79	-8.61/-13.32	-9.83/-3.97	-2.46/-1.51	2.69/-1.84	-0.68/-0.6	1.42/-1.87	0.76/-0.97	-2.59/-1.86	-1.11/-3.48	-7.41/-10.33	-18.94/-14.19																	
0(97.5°)	-18.71/-18.38	-18.09/-13.41	-16.17/-14.38	-16.81/-18.32	-18.61/-18.78	-9.91/-7.94	-8.51/-15.25	-11.53/-18.93	-11.86/-9.74	-8.22/-12.63	-18.5/-10.55	-16.23/-18.71	-10.21/-9.39	-15.69/-11.13	-11.82/-11.08	-3.86/0.53	1.71/-1.81	1.36/-1.46	1.83/-2.12	0.48/0.2	0.55/-0.78	-4.5/-10.03	-12.56/-16.04	-13.36/-16.67																	
0(105°)	-8.88/-13.04	-11.46/-18.92	-17.47/-18.46	-17.98/-13.11	-7.05/-7.47	-13.55/-11.53	-13.09/-18.7	-18.27/-12.32	-13.84/-19	-18.13/-9.27	-10.33/-11.22	-18.31/-15.62	-9.73/-8.3	-5.68/-7.28	-10.01/-7.68	-4.12/-1.92	-0.33/-1.56	-1.96/-1.48	-0.03/-0.92	-1.46/0.21	0.25/-1.01	-5.85/-12.96	-13.43/-12.17	-9.88/-6.56																	
0(112.5°)	-11.01/-11.36	-10.46/-14.53	-18.29/-18.9	-18.52/-15.26	-17.07/-16.89	-18.88/-15.89	-15.15/-17.68	-12.34/-12.98	-18.52/-18.33	-12.18/-11.06	-15.92/-15.08	-17.06/-17.96	-14.51/-4.6	-5.45/-17.3	-17.63/-15.38	-6.19/-2.71	0.28/-1.36	-1.41/-1.5	1.78/-1.1	-3.39/-1.28	-1.69/-4.23	-5.44/-11.97	-11.17/-8.85	-9.3/-11.18																	
0(120°)	-18.29/-18.16	-18.26/-18.06	-18.3/-18.47	-18.13/-18.71	-18.93/-16.51	-16.05/-13.19	-12.28/-15.72	-14.14/-14.28	-13.05/-12.11	-14.07/-18.72	-18.37/-9.33	-9.51/-13.62	-14.8/-13.01	-10.56/-11.01	-11.83/-14.51	-9.56/-3.82	-3.25/-1.12	-0.3/-2.25	0.63/0.08	-3.48/-0.77	0.89/-1.01	-4.05/-7.14	-7.57/-8.41	-5.77/-9.39																	
0(127.5°)	-10.71/-14.82	-18.54/-15.81	-10.75/-10.52	-9.75/-11.32	-11.67/-13.2	-14.07/-11.84	-11.11/-13.64	-14.74/-16.04	-17.78/-18.17	-18.43/-18.93	-13.07/-10.74	-10.3/-10.83	-7.84/-4.8	-5.32/-10.11	-11.26/-5.2	-3.33/-2.04	-0.97/-0.38	-4.6/-3.87	0.36/-0.6	-1.58/-0.11	1.46/-1.03	-4.88/-8.59	-15.87/-16.11	-3.81/-3.22																	
0(135°)	-5.89/-9.54	-8.55/-10.87	-15.09/-19.07	-18.39/-15.9	-13.79/-14.74	-15.25/-17.14	-19.16/-19.15	-15.7/-15.84	-17.32/-15.26	-16.12/-16.64	-13.79/-10.01	-11.13/-16.74	-9.57/-3.68	-5.02/-17.8	-9.19/-5.54	-3.81/-4.08	-1.96/-1.03	-2.58/-1.17	0.88/0.85	-0.75/-3.11	-2.91/-1.22	-3.81/-10.71	-12.38/-18.26	-10.35/-6.62																	
0(142.5°)	-11.72/-18.6	-19.36/-18.79	-14.84/-12.72	-14.41/-16.49	-14.85/-14.11	-13.16/-13.49	-16.67/-14.16	-11.77/-13.86	-17.06/-15.78	-10.7/-18.52	-17.83/-10.46	-8.51/-10.24	-5.23/-4.11	-6.89/-10.28	-7.4/-5.42	-5.37/-2.86	-0.58/-2.31	-3.91/-2.48	-1.16/-1.05	-1.9/-2.8	-6/-5.18	-2.73/-3.63	-9.88/-9.93	-8.64/-9.8																	
0(150°)	-5.03/-7.63	-10.23/-11.64	-18.11/-18.12	-17.88/-17.8	-14.68/-11.18	-9.67/-9.05	-8.57/-7.47	-8.09/-12.3	-18.88/-14.33	-11.93/-12.66	-9.94/-8.61	-9.94/-12.75	-12.88/-9.29	-7.2/-6.85	-7.1/-5.31	-3.48/-3.03	-3.87/-6.19	-7.82/-5.36	-3.28/-3.27	-7.25/-11.01	-8.55/-8.39	-8.18/-6.96	-6.73/-7.33	-6.63/-4.4																	
0(157.5°)	-9.84/-17.42	-18.61/-16.84	-13.16/-12.15	-13.95/-17.59	-18.91/-18.02	-16.02/-14.58	-15.07/-15.87	-17.81/-17.95	-18.26/-18.98	-17.57/-11.61	-8.13/-6.69	-5.59/-4.24	-3.46/-3.53	-4.43/-5.44	-6.36/-7.14	-9.3/-12.51	-14.61/-13.42	-9.89/-6.55	-5.59/-6.81	-7.66/-6.22	-5.33/-5.04	-4.41/-4.05	-3.96/-4.2	-4.87/-6.5																	
0(165°)	-7.15/-6.22	-7/-10.97	-15.48/-17.32	-18.38/-18.42	-18.07/-18.39	-15.82/-16.16	-16.44/-15.84	-15.13/-13.69	-12.28/-11.15	-11.61/-13.56	-14.32/-11.66	-8/-5.15	-3.62/-3.17	-3.6/-4.47	-5.76/-7.05	-7.59/-7.02	-6.24/-5.7	-5.99/-6.66	-6.99/-6.59	-6.06/-5.81	-5.58/-5.2	-5.78/-7.66	-8.77/-8.53	-9.61/-9.39																	
0(172.5°)	-16.81/-17.51	-14.82/-12.71	-11.15/-10.84	-11.39/-12.67	-15.44/-17.43	-17.92/-18.76	-17.89/-16.12	-15.1/-14.54	-14.97/-16.01	-16.68/-15.19	-12.45/-9.79	-7.17/-5.35	-4.28/-3.83	-3.78/-4.11	-4.4/-4.34	-4.28/-3.88	-3.51/-3.1	-2.81/-2.47	-2.27/-2.65	-4.16/-5.8	-6.87/-8.66	-12.85/-16.68	-16.62/-16.51	-15.24/-13.49																	
0(180°)	-13.74/-17.79	-18.28/-15.32	-10.35/-8.37	-7.21/-5.8	-4.75/-4.02	-3.51/-3.02	-3.04/-3.72	-4.42/-4.7	-5.33/-6.02	-6.83/-7.56	-8.4/-9.59	-11.42/-14.52	-18.42/-17.58	-17.33/-15.98	-12.53/-10.23	-8.76/-7.48	-6.82/-6.58	-6.22/-5.55	-5.29/-5.43	-5.89/-5.66	-5.67/-6.62	-7.44/-7.48	-8.05/-8.91	-10.08/-11.13																	
5.785G/Pol.	Theta/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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°)																	
0(0°)	-0.18/0.03	-0.11/0.04	-0.52/-1.62	-2.88/-4.22	-6.25/-8.33	-12.49/-18.58	-18.99/-14.46	-9.49/-6.64	-4.65/-2.94	-1.94/-1.01	-0.49/-0.11	0.20/0.1	0.12/0.03	-0.35/-0.75	-1.44/-2.61	-3.96/-5.94	-8.4/-11.81	-17.15/-19.12	-16.91/-11.48	-8.14/-5.9	-4.45/-2.87	-1.57/-0.27	-0.11/0.1	-0.01/0.06																	
0(7.5°)	-1.59/-1.4	-1.41/-1.43	-1.56/-2.61	-4.86/-6.53	-8.9/-10.61	-16.2/-17.31	-18.7/-11.95	-8.28/-6.07	-4.64/-3.24	-2.18/-1.29	-0.74/-0.26	0.15/0.52	0.80/0.88	0.70/0.42	0.07/0.78	-1.93/-3.59	-5.97/-8.87	-11.6/-14.9	-13.87/-10.85	-7.89/-5.63	-4.22/-2.98	-2.07/-1.41	-1.12/-1.41	-1.71/-2.06																	
0(15°)	-1.86/-2.65	-3.93/-4.33	-3.82/-3.84	-4.58/-4.69	-6.97/-8.66	-11.93/-17.01	-14.72/-10.29	-6.98/-5.01	-3.56/-2.79	-2.28/-2.03	-1.97/-1.7	-1.17/-0.46	0.37/0.93	1.29/1.41	1.23/0.59	-0.41/-1.81	-3.78/-6.1	-8.16/-9.97	-11.17/-10.06	-8.13/-5.94	-4.79/-3.6	-3.36/-2.85	-2.01/-1.56	-1.71/-1.52																	
0(22.5°)	0.75/0.95	0.5/-0.79	-1.96/-1.73	-2.48/-3.58	-6.7/-9.63	-15.56/-18.69	-16.91/-11.02	-8.29/-6.15	-4.34/-3.13	-2.61/-2.84	-3.57/-4.27	-4.03/-3.1	-2.04/-0.99	-0.28/-0.1	-0.27/0.94	-2.08/-3.49	-4.74/-5.91	-8.07/-12.15	-13.7/-11.58	-10.37/-9.95	-4.75/-4.21	-3.94/-2.81	-1.61/-1.6	-0.72/0.32																	
0(30°)	1.29/0.97	0.3/-0.36	-1.01/-1.98	-3.12/-4.92	-6.86/-8.63	-11.54/-15.91	-18.41/-15.95	-13.57/-10.91	-8.14/-5.1	-3.02/-2.49	-3.86/-4.21	-4.23/-3.83	-3.18/-2.17	-1.56/-1.72	-2.09/-2.49	-3.97/-3.09	-3.93/-6.27	-10.98/-12.76	-12.41/-13	-11.34/-9.06	-7.41/-6	-5.17/-4.87	-1.21/0.06	0.95/1.29																	
0(37.5°)	1.43/0.68	-0.47/-1.88	-3.25/-4.92	-6.31/-9.21	-11.42/-12.85	-14.33/-16.03	-19.43/-19.12	-18.05/-12.28	-8.1/-5.56	-3.76/-3.47	-4.59/-5.89	-5.53/-3.52	-1.76/-0.63	-0.23/-0.4	-0.46/-0.35	-0.56/-1.21	-2.98/-5.01	-5.68/-7.06	-11.47/-9.24	-6.75/-6.11	-5.47/-4.33	-2.65/-0.87	-0.47/-0.83	-0.03/0.72																	
0(45°)	-3.57/-3.52	-4.53/-5.56	-5.44/-6.05	-8.04/-10.44	-11.42/-13.16	-14.31/-19.06	-19.01/-16.09	-12.9/-8.81	-7.19/-4.97	-3.01/-2.08	-2.65/-4.44	-5.74/-3.9	-0.91/1.03	1.93/1.19	0.34/-1.84	-4.15/-6.52	-12.01/-15.71	-8.34/-6.45	-5.2/-4.06	-3.69/-3.48	-2.54/-1.7	-1.09/-1.61	-3.15/-4.34																		
0(52.5°)	-11.23/-8.56	-7.56/-8.45	-7.18/-5.59	-8.79/-13.84	-15.87/-17.7	-17.68/-15.74	-13.36/-13.71	-19.19/-17.48	-8.27/-4.91	-3.22/-3.07	-5.38/-6.94	-5.37/-2.94	1.68/4.3	1.65/1.13	0.3/-1.69	-4.09/-9.01	-9.75/-8.71	-7.26/-5.54	-4.73/-5.89	-6.45/-7.1	-7.84/-6.47	-4.92/-5.54	-7.29/-10.33																		
0(60°)	-4.14/-4.72	-3.7/-5.78	-8.96/-9.6	-10.16/-11.29	-9.39/-10.96	-14.57/-15.32	-11.51/-9.65																																		



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta (°)	12.46/10.69	14.4/14.44	14.28/13.75	15.88/15.31	18.4/18.08	18.24/16.45	18.93/16.47	18.79/17.17	11.01/10.22	11.68/13.63	13.6/15.47	10.46/16.13	8.61/9.74	19.76/6.48	6.14/10.52	7.83/4.46	3.89/6.49	6.04/3.95	3.94/7.16	9.4/5.76	14.86/18.19	15.08/18.64	13.5/12.15	6.1/6.44
Theta (135°)	-18.92/12.62	-10.26/17.63	-11.26/13.06	-10.63/8.62	-7.01/8.8	-12.24/18.77	-12.66/10.06	-11.44/10.16	-9.18/8.98	-9.56/11.62	-13.6/18.17	-14.5/13.69	-6.17/12.83	-7.03/2.94	-5.24/12.23	-12.97/6.34	-7.48/7.33	-14.11/11.77	-4.15/4.36	-15.05/9.33	-6.11/8.92	-13.81/8.13	-11.94/12.4	-7.28/9.89
Theta (142.5°)	-8.57/18.9	-7.49/6.17	-8.21/7.61	-5.97/4.75	-6.03/9.88	-11.32/14.05	-16.24/13.2	-10.92/12.5	-12.22/10.39	-11.83/14.53	-18.79/11.4	-11.16/6.88	-6.27/13.27	-12.56/8.47	-8.04/15.01	-10.11/7.97	-5.97/4.5	-8.37/9.91	-5.06/3.61	-7.62/17.82	-7.7/5.78	-10.35/14.33	-9.57/10.88	-9.63/5.25
Theta (150°)	-8.2/3.59	-2.94/4.56	-5.99/5.49	-5.3/6.34	-10.59/18.62	-18.7/17.69	-14.18/12.01	-9.96/7.78	-7.4/10.33	-18.42/17.24	-9.66/9.43	-11.48/6.37	-5.87/11.44	-18.4/9.89	-8.43/7.15	-7.38/8.6	-6.08/4.95	-5.38/6.15	-5.67/5.46	-8.04/15.21	-17.74/9.92	-10.72/15.28	-17.99/16.23	-17.33/15.43
Theta (157.5°)	0.77/-0.99	-4.45/-9.49	-16.34/16.35	-17.76/18.69	-14.16/-9.99	-9.58/10.89	-9.84/7.69	-6.94/7.2	-8.66/12.98	-17.44/18.55	-18.35/18.83	-11.35/7.33	-8.64/9.74	-18.84/18.57	-17.92/17.98	-13.72/11.03	-10.98/12.42	-10.55/7.67	-7.86/8.21	-8.8/11.51	-16.45/16.75	-11.84/7.58	-4.45/1.74	0.65/1.51
Theta (165°)	-5.01/6.22	-5.66/5.72	-6.89/9.17	-10.82/11.34	-12.9/18.76	-18.22/14.83	-11.2/9.27	-8.72/10.36	-12.6/14.32	-15.54/18.73	-16.92/11	-7.84/6.78	-6.73/6.74	-6.33/6.29	-6.65/7.48	-8.1/8.74	-9.72/10.56	-10.7/9.62	-8.24/8	-7.85/7.1	-5.97/5.1	-4.73/3.6	-2.18/2.23	-3.16/3.94
Theta (172.5°)	-5.69/5.34	-6.83/8.53	-10.81/12.37	-11.95/12.48	-14.48/16.1	-12.15/10.9	-10.55/10.1	-10.44/11.48	-12.17/11.94	-11.87/11.5	-10.74/9.57	-9.56/9.33	-9.25/9.3	-9.66/10.57	-12.29/15.26	-15.76/14.83	-13.24/12.23	-11.8/10.76	-9.12/7.44	-5.35/3.68	-3.04/3.57	-4.41/5.01	-5.86/7.14	-7.64/6.98
Theta (180°)	-7.42/8.44	-10.79/12.41	-14.55/15.28	-14.04/14.35	-13.94/13.09	-12.49/14.89	-18.57/18.5	-18.88/17.24	-14.78/12.88	-11.43/9.7	-8.06/6.74	-5.72/5.19	-5.29/5.53	-5.86/6.24	-6.23/5.58	-7.14/8.03	-9.55/12.64	-17.36/17.79	-15.46/11.1	-8.8/8.24	-7.02/6.73	-7.65/10.38	-13.37/10.18	-7.76/7.18
Freq(Hz)	2.45G/Pol.	Phi/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°)	-18.42/18.14	-16.05/14.4	-13.1/11.94	-10.78/9.79	-8.99/8.26	-7.66/7.26	-7.1/7.11	-7.22/7.57	-8.17/8.96	-9.87/11.05	-12.44/14.13	-15.83/17.07	-17.13/16.03	-14.24/12.45	-10.84/9.5	-8.53/7.82	-7.34/7.03	-6.89/6.92	-7.12/7.49	-7.95/8.59	-9.51/10.59	-11.86/13.13	-14.39/15.83	-17.67/19.43
Theta (7.5°)	-17.02/14.68	-12.77/11.37	-10.24/9.18	-8.22/7.38	-6.63/5.96	-5.44/5.09	-4.89/4.79	-4.78/4.92	-5.26/5.74	-6.31/7.01	-7.87/8.95	-10.13/11.62	-13.24/15.12	-16.57/16.31	-15.06/13.58	-12.23/11.22	-10.4/9.93	-9.69/9.75	-10.11/10.7	-11.51/12.72	-14.43/16.51	-17.69/18.4	-17.88/18.46	-18.64/19.3
Theta (15°)	-12.22/10.72	-9.3/8.35	-7.52/6.7	-5.84/5.09	-4.42/3.83	-3.35/2.94	-2.64/2.46	-2.35/2.33	-2.46/2.71	-3.07/3.51	-4.03/4.71	-5.56/6.56	-7.79/9.3	-11.33/13.49	-15.56/16.66	-16.58/15.65	-14.56/13.81	-13.62/13.84	-14.38/15.24	-16.51/18.47	-18.84/18.78	-17.75/18.27	-18.09/18.15	-15.68/13.6
Theta (22.5°)	-8.65/7.62	-6.49/5.83	-5.25/4.57	-3.85/3.15	-2.53/2	-1.56/1.15	-0.8/0.58	-0.42/0.35	-0.38/0.54	-0.79/1.15	-1.59/2.17	-2.9/3.82	-4.9/6.29	-7.87/9.6	-11.49/13.4	-15.44/17.27	-18.34/18.83	-19.08/19.34	-19.42/19.17	-18.22/18.46	-18.32/18.23	-17.55/16.18	-14.59/12.94	-11.28/9.81
Theta (30°)	-6.08/5.19	-4.61/4.22	-3.8/3.26	-2.62/1.91	-1.25/0.73	-0.30/0.13	0.48/0.72	0.94/1.05	1.05/0.96	0.78/0.54	0.19/0.31	-0.9/1.62	-2.5/3.52	-4.77/6.12	-7.59/9.25	-11.1/13.19	-15.5/17.41	-18.54/18.47	-17.78/16.78	-15.81/15.32	-15.29/15.3	-14.61/13.03	-11.2/9.59	-8.18/6.94
Theta (37.5°)	-4.7/4.21	-3.96/3.72	-3.39/2.9	-2.22/1.42	-0.66/0.03	0.46/0.93	1.31/1.61	1.84/1.97	1.97/1.87	1.71/1.45	1.09/0.6	0.01/0.69	-1.49/2.4	-3.43/4.58	-5.82/7.19	-8.71/10.34	-12.1/13.66	-16.14/16.23	-16.33/16.81	-17.74/17.66	-14.89/11.66	-9.13/7.35	-6.07/5.22	
Theta (45°)	-4.39/4.23	-4.08/3.81	-3.35/2.76	-1.99/1.06	-0.10/0.72	1.39/1.95	2.37/2.66	2.88/2.94	2.87/2.68	2.42/2.08	1.66/1.16	0.56/0.07	-0.78/1.57	-2.6/3.78	-5.15/6.8	-8.64/10.8	-13.35/15.95	-18.33/18.1	-18.24/18.25	-18.08/18.36	-19.24/18.43	-14.27/10.55	-7.95/6.28	-5.19/4.61
Theta (52.5°)	-4.53/4.43	-4.29/3.87	-3.14/2.3	-1.38/0.35	0.62/1.5	2.21/2.8	3.23/3.52	3.73/3.71	3.59/3.31	2.94/2.49	1.94/1.33	0.67/0.04	-0.8/1.77	-2.91/4.31	-5.96/7.89	-10.37/13.29	-16.42/18.36	-18.52/17.44	-19.01/16.79	-15.04/13.63	-12.37/10.92	-9.44/8.11	-6.84/5.84	-5.05/4.61
Theta (60°)	-5.97/5.82	-5.56/4.95	-3.85/2.61	-1.42/0.27	0.73/1.54	2.2/2.8	3.27/3.65	3.89/4.02	4/3.81	3.48/3.07	2.56/1.97	1.36/0.08	-0.1/1.1	-2.06/3.23	-4.46/5.97	-7.83/9.96	-11.76/13.17	-14.61/15.28	-14.66/13.49	-12.15/10.95	-9.78/8.67	-7.76/7.24	-7.04/6.91	-6.51/6.17
Theta (67.5°)	-7.06/6.76	-6.33/5.48	-4.18/2.77	-1.4/0.14	0.87/1.66	2.25/2.8	3.27/3.66	3.95/4.11	4.13/3.94	3.61/3.13	2.56/1.93	1.24/0.47	-0.39/1.36	-2.35/3.44	-4.72/6.42	-8.93/11.98	-14.53/15.48	-14.81/13.17	-12.01/11.54	-11.48/11.28	-10.64/9.66	-8.58/7.74	-7.44/7.4	-7.37/7.24
Theta (75°)	-6.67/6.46	-5.95/5.04	-3.7/2.34	-1.08/0.1	1.13/2.01	2.68/3.22	3.68/4.02	4.21/4.26	4.19/3.95	3.52/3.93	2.16/1.3	0.39/0.61	-1.66/2.75	-3.87/5.11	-6.82/9.5	-12.94/14.14	-19.2/10.59	-9.46/8.76	-8.75/9.48	-10.85/11.92	-11.87/10.96	-9.78/8.49	-7.43/6.91	-6.73/6.68
Theta (82.5°)	-5.25/4.67	-4.88/5.57	-3.77/2.04	-0.60/0.14	1.68/2.6	3.34/3.94	4.38/4.66	4.78/4.75	4.63/4.41	3.99/3.3	2.34/1.15	-0.22/1.82	-3.45/4.94	-6.24/7.77	-9.99/11.95	-11.83/10.35	-9.57/9.55	-9.96/11.15	-13.3/16.79	-18.46/17.83	-17.96/18.34	-16.13/13.86	-11.89/10.53	-9.56/8.88
Theta (90°)	-7.24/6.2	-5.16/3.96	-2.37/0.75	0.55/1.57	2.36/2.99	3.49/3.86	4.14/4.31	4.37/4.38	4.23/3.73	2.91/1.93	0.66/0.92	-2.5/3.88	-5.18/6.67	-8.05/8.45	-7.78/7.1	-7.22/8.17	-17.77/18.43	-17.07/17.03	-18.7/17.17	-13/10.86	-9.73/9.05	-8.56/8.04	-7.53/7.43	
Theta (97.5°)	-7.02/5.8	-4.41/3.1	-1.66/0.26	0.93/1.84	2.55/3.09	3.43/3.54	3.48/3.36	3.28/3.34	3.53/3.64	3.44/3.92	2.16/1.17	-0.16/1.72	-3.13/4.37	-5.71/7.25	-8.07/7.69	-6.8/6.57	-7.36/9.01	-11.53/13.66	-13.39/12.6	-12.61/13.62	-16.61/18.17	-15.78/11.6	-9.31/8.01	-7.53/7.43
Theta (105°)	-5.85/5.48	-4.39/3.02	-1.44/0.08	1.32/2.25	2.97/3.54	3.91/3.96	3.74/3.36	3.02/2.92	3/3	2.73/2.23	1.54/0.6	-0.64/2.03	-3.19/4.28	-5.63/6.85	-7.27/6.78	-6.27/6.8	-8.46/10.69	-13.61/14.9	-12.77/11.31	-11.13/11.52	-12.48/13.5	-11.68/9.01	-7.08/5.87	-5.37/5.52
Theta (112.5°)	-5.8/5.65	-4.81/3.38	-1.57/0.16	1.53/2.51	3.14/3.65	4/4.1	3.9/3.5	3.01/2.63	2.37/2.1	1.74/1.28	0.61/0.4	-1.54/2.58	-3.51/4.63	-6.02/7.47	-8.41/8.52	-9.13/11.5	-16.65/18.94	-17.95/11.87	-8.74/7.94	-8.8/10.96	-14.62/16.94	-12.46/9.51	-7.96/6.87	-6.02/5.71
Theta (120°)	-5.57/5.12	-4.64/3.54	-1.79/0.08	1.61/2.65	3.28/3.68	3.95/4	3.79/3.36	2.75/2.13	1.58/1.1	0.62/0.01	-0.92/2.12	-3.26/4.15	-5.15/6.66	-8.75/10.64	-10.73/10.32	-11.98/17.76	-18.62/17.1	-11.19/9.57	-5.65/5.24	-6.1/7.98	-11.11/14.72	-12.45/9.56	-8.43/9.7	-7.1/6.13
Theta (127.5°)	-8.25/6.11	-6.15/5.84	-4.42/2.31	-0.43/0.94	1.75/2.23	2.53/2.62	2.51/2.16	1.61/0.99	0.42/0.16	-0.92/1.98	-3.42/4.76	-5.57/6.12	-6.98/8.24	-9.14/8.61	-7.56/7.55	-9.23/13.08	-18.99/19.69	-12.89/9.57	-7.77/9.2	-9.45/11.74	-14.41/15.51	-10.86/8.09	-6.91/6.87	-7.06/6.83
Theta (135°)	-6.37/6.18	-6.17/6.37	-6.28/5.05	-3.12/1.36	-0.16/0.54	0.88/1.01	0.96/0.79	0.48/0.07	-0.45/1.2	-2/4	-5.74/6.87	-7.36/7.89	-8.85/9.87	-9.96/9.2	-8.62/9.11	-10.86/13.38	-14.45/12.47	-9.79/8.07	-7.66/8.62	-10.91/14.27	-18.14/18.67	-13.5/9.41	-7.07/6.19	-6.17/6.42
Theta (142.5°)	-5.7/5.53	-5.23/5.08	-4.98/4.48	-3.29/1.86	-0.72/0.01	0.31/0.34	0.21/0.07	-0.46/1	-1.82/3.08	-4.92/7.1	-9.01/9.91	-10.37/11.2	-12.25/12.85	-12.81/13.09	-14.61/18.07	-17.36/18.03	-15.84/12.94	-10.75/9.41	-9.2/9.95	-11.54/13.42	-14.94/15.94	-14.48/10.96	-7.93/6.23	-5.58/5.57
Theta (150°)	-6.26/6.38	-6.28/6.12	-5.91/5.47	-4.63/3.49	-2.42/1.67	-1.3/1.26	-1.53/2.02	-2.72/3.73	-5.2/7.25	-10.07/13	-14.27/13.59	-12.85/12.56	-12.29/11.94	-11.85/12.4	-13.67/15.31	-17.11/19.29	-18.2/18.53	-17.96/15.17	-14.1/14.19	-14.87/15.06	-14.22/13.27	-12.5/11.29	-9.38/7.71	-6.69/6.35
Theta (157.5°)	-8.09/8.31	-8.48/8.51	-8.47/8.27	-7.79/6.94	-6.02/5.33	-5.04/5.14	-5.6/6.44	-7.75/9.64	-12.4/15.71	-17.12/14.56	-11.97/10.39	-9.47/9.1	-9.05/9.31	-9.85/10.76	-12.14/13.89									



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta (°)	Phi (°)	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°)	
0	0.25/0.2	0.09/-0.22	-1.03/-1.93	-2.98/-4.11	-5.49/-7.46	-9.84/-13.1	-14.68/-12.87	-9.93/-7.63	-5.66/-4.39	-3.15/-2.1	-1.38/-0.93	-0.73/-0.76	-0.86/-0.86	-1.03/-1.54	-2.35/-3.33	-4.7/-5.94	-7.51/-9.62	-12.01/-13.75	-13.47/-11.16	-8.62/-6.48	-4.72/-3.33	-2.31/-1.49	-0.93/-0.37	0.06/0.18	
7.5	-0.41/-0.47	-0.56/-0.62	-1.46/-2.36	-3.64/-5.03	-6.44/-8.66	-11.44/-13.64	-14.52/-12.57	-9.91/-7.6	-5.75/-4.25	-2.94/-1.81	-0.97/-0.56	-0.38/-0.22	0.11/0.3	0.12/-0.32	-1.06/-2.17	-3.63/-5.31	-7.39/-9.66	-12.16/-13.94	-13.79/-11.42	-8.84/-6.78	-4.97/-3.59	-2.63/-2.04	-1.42/-0.71	-0.32/-0.35	
15	-1.71/-1.62	-1.7/-2.03	-2.82/-3.99	-5.59/-7.36	-9.25/-11.79	-14.07/-15.41	-15.54/-13.35	-11.51/-9.37	-7.59/-5.98	-4.43/-2.95	-1.94/-1.25	-0.8/-0.26	0.28/0.4	0.3/0.08	-0.58/-1.55	-2.88/-4.71	-7.02/-10.3	-14.56/-16.79	-13.9/-11.2	-8.97/-7.48	-6/-4.75	-3.89/-3.22	-2.57/-1.89	-1.71/-1.78	
22.5	-2.58/-2.32	-2.33/-2.62	-3.21/-4.31	-5.85/-7.33	-9.4/-11	-13.47/-16.13	-15.25/-12.26	-10.2/-8.46	-6.7/-5.24	-3.81/-2.71	-1.93/-1.27	-0.67/-0.15	0.1/0.07	0.02/-0.23	-0.52/-1.09	-1.94/-3.28	-5.47/-9.09	-15.24/-18.69	-19.82/-13.82	-10.21/-7.91	-6.43/-5.46	-4.72/-4.11	-3.52/-2.94	-2.81/-2.69	
30	-2.73/-2.67	-2.99/-3.14	-3.12/-3.63	-4.69/-6.02	-7.44/-9.41	-11.96/-14.1	-12.29/-10.17	-8.49/-7.34	-6.3/-5.21	-4.15/-3.09	-2.16/-1.47	-1.08/-0.93	-1.03/-0.99	-0.82/-0.77	-0.93/-1.11	-1.64/-2.89	-5.02/-7.5	-11.07/-18.45	-18.55/-12.51	-9.36/-7.96	-7.4/-6.84	-6.05/-5.81	-5.22/-4.18	-3.47/-2.88	
37.5	-4.96/-3.81	-3.52/-3.45	-3.11/-3.11	-3.95/-5.16	-6.42/-8.19	-11.11/-14.35	-16.08/-14.67	-11.45/-8.57	-6.3/-4.68	-3.34/-2.44	-1.79/-1.24	-1.02/-1.04	-0.98/-1.12	-1.57/-2.28	-2.75/-3.27	-3.96/-4.75	-5.33/-7.36	-13.13/-18.34	-15.56/-12.2	-11.05/-11.08	-11.81/-11.3	-9.65/-8.31	-7.57/-7.04	-6.93/-6.35	
45	-7.43/-6	-4.93/-4.52	-3.92/-3.6	-4.17/-4.65	-5.25/-6.5	-8.39/-10.74	-13.63/-16.55	-12.73/-7.72	-4.51/-2.61	-1.42/-0.69	-0.21/0.16	0.02/-0.39	-0.52/-0.67	-1.08/-1.91	-3.08/-4.56	-4.8/-4.69	-5.88/-9.13	-13.3/-18.32	-17.98/-18.9	-18.87/-18.15	-17.53/-16.97	-14.76/-12.56	-10.3/-8.89	-7.84/-7.62	
52.5	-9.73/-10.6	-9.03/-7.86	-6.79/-5.87	-5.78/-5.79	-6.3/-8.31	-10.88/-14.43	-17.4/-17.94	-13.47/-7.87	-4.3/-2.37	-1.19/-0.8	-1.03/-1.05	-1.68/-2.52	-2.44/-2.48	-2.97/-3.19	-4.3/-5.86	-6.24/-6.48	-7.04/-10.28	-18.3/-15.05	-13.76/-15.75	-18.74/-18.22	-16.42/-17.54	-16.93/-14.16	-12.16/-11.32	-11.76/-10.29	
60	-16.39/-18.17	-11.28/-9.83	-8.23/-6.74	-5.95/-5.86	-6.88/-8.74	-11.71/-16.61	-17.86/-18.53	-12.2/-7.7	-4.38/-2.33	-0.96/-0.06	-0.04/-0.38	-1.17/-1.92	-2.19/-2.76	-2.59/-2.62	-2.92/-4.27	-6.43/-7.09	-8.26/-10.46	-12.43/-10.46	-10.65/-17.05	-18.89/-14.5	-11.2/-10.94	-12.68/-15.23	-13.55/-14.01	-15.61/-16.1	
67.5	-19.28/-19.39	-11.97/-10.99	-9.51/-8.79	-8.19/-9.39	-12.88/-18	-18.76/-14.23	-12.1/-9.7	-7.02/-4.99	-3.17/-1.97	-1.72/-1.55	-2.26/-3.15	-3.92/-5.56	-5.99/-7.36	-7.52/-6.25	-6.75/-9.37	-11.21/-10.58	-9.77/-12.8	-12.18/-11.32	-11.72/-16.42	-18.41/-13.79	-13.85/-16.18	-16.89/-16.61	-15.42/-13.93	-16.91/-19.16	
75	-14.86/-12.54	-10.11/-10.67	-9.97/-10.05	-9.99/-13	-18.1/-18.05	-10.98/-8.87	-8.43/-7.62	-6.3/-5.03	-3.5/-2.15	-1.38/-0.91	-1.33/-2.09	-2.99/-5.58	-6.81/-11.46	-10.12/-8.83	-8.72/-8.24	-10.29/-12.01	-16.38/-17.38	-18.3/-11.32	-14.83/-18.91	-14.61/-11.31	-11.04/-13.22	-18.34/-15.07	-15.46/-16.57	-18.07/-18.77	
82.5	-11.45/-10.07	-8.67/-9.54	-8.88/-8.91	-8.29/-10.06	-16.21/-14.43	-8.93/-7.49	-8/-9.59	-9.59/-7.19	-5.14/-4	-2.91/-2.66	-3.14/-4.04	-5.88/-8.11	-11.08/-14.61	-12.05/-9.17	-7.47/-8.47	-13.57/-14.8	-14.29/-14.84	-13.77/-16.64	-15.37/-18.66	-9.62/-10.03	-10.7/-16.01	-12.37/-13.93	-13.9/-18.33	-17.52/-14.75	
90	-18.81/-17.21	-12.97/-14.27	-10.84/-9.69	-9.47/-13.4	-17.06/-10.95	-7.2/-6.36	-6.9/-7.99	-9.23/-9.72	-9.7/-7.84	-7.03/-7.01	-7.84/-9.16	-10.79/-12.25	-18.76/-18.48	-17.94/-15.2	-15.86/-14.86	-13.32/-12.36	-13.62/-16.81	-16.17/-16.05	-17.95/-12.13	-10.8/-9.75	-17.78/-16.31	-15.96/-14.35	-17.02/-17.56	-18.46/-18.51	
97.5	-17.46/-18.78	-17.29/-18.25	-15.36/-14.63	-15.66/-18.41	-12.67/-7.48	-6.27/-6.67	-7.71/-9.68	-9.72/-8.47	-8.29/-8.61	-11.08/-12.29	-14.08/-16.05	-16.01/-14.51	-14.65/-12	-13.44/-16.05	-13.18/-13.97	-18.22/-14.58	-13.01/-15.62	-18.78/-19.22	-18.59/-14.47	-12.01/-15.09	-18.58/-17.2	-18.98/-17.29	-18.7/-17.22	-18.55/-18.99	
105	-17.12/-17.9	-17.63/-14.87	-14.24/-13.54	-16.91/-19.86	-12.21/-8.06	-5.85/-6.17	-7.88/-8.27	-7.61/-8.52	-10.47/-12.05	-11.3/-9.4	-9.37/-11.91	-16.75/-19.05	-18.05/-17.03	-14.77/-11.43	-12.27/-13.47	-15.23/-13.05	-12.96/-16.77	-18.52/-17.62	-18.68/-19.35	-18.91/-17.78	-18.34/-18.99	-17.46/-18.56	-17.65/-17.49	-18.11/-18.16	
112.5	-17.67/-16.49	-12.01/-10.14	-9.61/-9.59	-11.37/-10.49	-6.02/-4.16	-4.28/-6.14	-8.74/-9.05	-7.44/-7.1	-7.56/-10.13	-12.52/-9.39	-7.08/-6.87	-8.17/-10.64	-12.7/-13.39	-15.08/-18.21	-17.48/-18.29	-14.27/-10.11	-12.99/-18.49	-17.81/-17.38	-17.57/-16.91	-17.73/-17.76	-18.22/-18.49	-15.98/-17.39	-15.02/-16.81	-17.48/-18.58	
120	-10.15/-10.4	-7.91/-6.2	-6.03/-6.85	-7.96/-7.91	-6.07/-5.8	-6.68/-8.81	-13.49/-15.58	-11.15/-8	-6.65/-7.15	-8.26/-7.95	-7.82/-8.13	-6.89/-6.04	-7.84/-7.13	-10.42/-11.85	-13.99/-18.1	-18.09/-17.68	-17.33/-18.28	-11.85/-12	-19.24/-15.69	-18.46/-16.08	-15.13/-18.54	-14.17/-18.64	-13.25/-11.39	-12.32/-13.67	
127.5	-18.2/-18.53	-15.76/-15.44	-15.99/-13.37	-11.66/-8.46	-6.02/-4.61	-5.37/-8.47	-13.47/-19.28	-12.41/-8.98	-7.8/-7.47	-7.62/-7.49	-7.15/-7.45	-7.04/-8.5	-9.93/-9.47	-9.88/-11.07	-14.87/-17.26	-18.14/-17.39	-14.24/-19	-14.34/-17.64	-18.23/-16.82	-18.12/-19.33	-15.57/-14.84	-18.57/-17.6	-19.34/-18.29	-18.21/-18.99	
135	-12.9/-16.17	-15.27/-15.45	-18.89/-14.97	-11.97/-9.36	-8.02/-8.21	-9.66/-13.27	-19.07/-17.94	-13.42/-10.03	-7.51/-5.76	-4.82/-4.63	-5.71/-6.79	-7.67/-10.02	-14.3/-13.29	-11.08/-12.65	-11.35/-10.19	-18.77/-18.64	-15.87/-16.83	-15.47/-18.9	-18.64/-13.65	-11.47/-16.92	-17.19/-18.53	-18.41/-17.5	-17.01/-18.88	-18.4/-12.72	
142.5	-7.37/-7.08	-7.83/-7.24	-7.74/-8.53	-8.34/-7.59	-7.09/-7.49	-8.27/-8.67	-8.82/-8.03	-7.64/-8.05	-8.9/-9.06	-8.57/-7.63	-8.88/-6.97	-7.43/-7.07	-5.81/-6.58	-8.39/-10.24	-14.77/-12.97	-13.66/-15.6	-9.8/-8.2	-12.03/-17.77	-17.1/-12.39	-9.97/-9.72	-10.15/-11.59	-13.49/-12.26	-9.97/-8.19	-8.29/-9.09	
150	-10.44/-11.4	-10.79/-9.59	-9.31/-9.59	-9.87/-10.78	-11.79/-14.02	-16.12/-14.22	-11.95/-10.55	-9.99/-10.15	-10.26/-9.42	-7.54/-5.61	-4.48/-4.29	-3.94/-3.35	-3.76/-5.13	-6.95/-9.52	-13.32/-15.83	-18.61/-16.89	-12.58/-12.27	-14.78/-16.24	-15.84/-16.22	-17.92/-19.19	-18.32/-18.92	-18.29/-17.15	-13.23/-12.55	-13.24/-12.6	
157.5	-16.63/-16.15	-14.37/-12.61	-11.82/-11.27	-10.74/-10.28	-10.62/-11.59	-13.71/-16.97	-18.41/-16.65	-14.13/-12.5	-11.44/-10.73	-9.46/-8.07	-7.07/-5.95	-4.57/-3.78	-3.79/-3.77	-3.83/-4.13	-5.05/-7.02	-10.02/-11.29	-11.36/-11.98	-13.81/-15.39	-16.93/-18.39	-19.73/-17.27	-13.71/-11.56	-11.58/-13.96	-17.8/-17.96	-16.93/-16.74	
165	-17.97/-17.22	-15.08/-13.42	-12.33/-10.92	-10.17/-10.28	-10.47/-10.75	-11.66/-13.45	-15.16/-16.6	-15.79/-14.82	-13.42/-12.3	-11.19/-10.19	-9.09/-7.79	-6.64/-5.75	-5.81/-6.65	-8.67/-13.14	-17.72/-18.53	-13.42/-11.65	-11.74/-12.93	-15.1/-16.83	-17.4/-17.4	-17.36/-19.04	-17.17/-18.29	-19.37/-19.19	-17.54/-19.12	-17.82/-17.79	
172.5	-15.26/-15.36	-16.06/-16.84	-16.97/-17.78	-17.6/-16.55	-15.85/-15.41	-15.16/-15.64	-17.53/-18.68	-18.94/-17.75	-18.6/-18.29	-17.16/-16.91	-17.06/-17.92	-18.48/-18.64	-17.12/-14.5	-12.27/-9.82	-8.23/-7.54	-7.33/-7.75	-8.68/-10.44	-12.66/-14.78	-15.96/-15.7	-16.11/-17.38	-18.85/-17.79	-17.89/-17.86	-18.17/-17.48	-16.32/-15.51	
180	-9.2/-9.39	-10.1/-11.03	-12.52/-14.57	-15.81/-17.3	-17.83/-18.28	-17.83/-16.47	-15.54/-14.54	-13.14/-11.87	-10.67/-9.66	-8.94/-8.35	-8.13/-8.19	-8.21/-8.27	-8.36/-8.56	-8.87/-9.49	-10.34/-11.54	-13.14/-15.02	-17.49/-19.22	-18.55/-18.99	-18.02/-16.52	-15.26/-13.7	-12.07/-10.73	-10.01/-9.87	-9.64/-9.52	-8.34/-9.22	
Freq(Hz)	Theta/Ant. 4	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°)
0	0	-11.42/-9.8	-7.89/-6.34	-4.72/-3.52	-2.5/-1.58	-0.92/-0.48	-0.18/0.02	0.0/-0.13	-0.41/-0.83	-1.42/-2.15	-3.2/-4.51	-6.07/-7.93	-10.03/-12.14	-12.58/-11.03	-8.57/-6.38	-4.61/-3.36	-2.37/-1.6	-1.03/-0.61	-0.27/-0.13	-0.17/-0.34	-0.64/-1.06	-1.65/-3.28	-3.38/-4.57	-6.05/-7.76	-9.59/-11.41
7.5	14.71/-11.71	-8.78/-6.42	-4.57/-3.29	-2.3/-1.57	-1.06/-0.63	-0.3/-0.19	-0.21/-0.34	-0.55/-0.87	-1.31/-1.95	-2.84/-3.82	-5.06/-6.61	-8.31/-10.27	-11.51/-14.08	-15.98/-11.48	-9.48/-7.27	-5.36/-3.82	-2.71/-1.91	-1.2/-0.74	-0.42/-0.27	-0.27/-0.52	-0.99/-1.58	-2.33/-3.29	-4.63/-6.22	-8.3/-10.95	-13.11/-16.11
15	-13.8/-10.43	-7.69/-5.75	-4.27/-3.03	-2.1/-1.37	-0.77/-0.22	0.09/0.33	0.54/0.59	0.48/0.2	-0.26/-0.75	-1.35/-2.07	-3.09/-4.36	-5.9/-7.97	-10.66/-13.75	-14.36/-11.53	-8.37/-5.89	-4.14/-2.87	-2.02/-1.46	-1.15/-1.03	-1.16/-1.62	-2.32/-3.1	-3.85/-4.91	-6.47/-8.64	-11.56/-16.4	-18.61/-18.5	
22.5	-13.08/-10.45	-8.61/-6.96	-5.43/-4.16	-3.01/-2.11	-1.36/-0.79	-0.46/-0.11	0.1/0.25	0.44/0.52	0.38/0.03	-0.55/-1.32	-2.39/-3.85	-5.66/-7.95	-10.78/-14.08	-15.74/-13.79	-10.58/-8.12	-6.14/-4.54	-3.37/-2.71	-2.5/-2.62	-3.09/-3.81	-4.76/-5.62	-6.27/-7	-8.06/-9.39	-10.73/-12.04	-13.73/-14.3	
30	-14.23/-11.7	-10.32/-8.88	-6.83/-4.98	-3.5/-2.33	-1.39/-0.76	-0.18/0.21	0.3/0.36	0.48/0.52	0.32/-0.06	-0.78/-1.7															



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Freq(Hz)	5.6G/Pol.	Phi/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°)	-16.23/-10.26	-13.87/-10.04	-7.05/-5.12	-3.64/-2.56	-1.72/-1.02	-0.53/-0.19	-0.04/0.03	-0.02/0.22	-0.61/-1.21	-2/-3.13	-4.68/-6.92	-10.21/-14.98	-17.37/-18.35	-13.05/-9.34	-6.64/-4.65	-3.14/-2.03	-1.14/-0.44	0/0.29	0.38/0.34	0.16/-0.19	-0.6/-1.21	-1.98/-3.04	-4.52/-6.43	-8.6/-11.57		
Θ(7.5°)	-19.56/-16.71	-12.82/-9.52	-6.53/-4.47	-2.91/-1.85	-1.05/-0.3	0.21/0.56	0.82/0.97	1.01/0.89	0.53/0.05	-0.66/-1.66	-2.89/-4.49	-6.6/-9.53	-13.63/-17.95	-15.81/-11.45	-7.91/-5.55	-3.78/-2.54	-1.61/-1.05	-0.77/-0.65	-0.54/-0.61	-0.87/-1.36	-1.98/-2.81	-3.81/-5.13	-6.97/-9.56	-12.76/-16.88		
Θ(15°)	-18.75/-15.02	-10.93/-7.81	-5.52/-3.7	-2.46/-1.58	-0.69/0.14	0.71/1.16	1.56/1.84	1.88/1.71	1.34/0.86	0.16/-0.74	-1.85/-3.27	-4.9/-7.07	-9.96/-13.84	-17.64/-15.43	-11.39/-8.24	-6.09/-4.27	-2.88/-2.01	-1.4/-1.16	-1.09/-1.33	-1.9/-2.84	-3.89/-5.12	-6.61/-8.7	-11.5/-15.5	-18.11/-17.3		
Θ(22.5°)	-18.89/-11.56	-9.03/-7.18	-5.65/-4.21	-3.07/-1.9	-0.71/0.1	0.86/1.57	1.98/2.2	2.16/1.98	1.57/0.92	0.01/-1.17	-2.67/-4.5	-6.75/-9.94	-13.79/-17.59	-17.48/-14.98	-12.59/-10.43	-8.29/-6.13	-4.52/-3.16	-2.2/-1.78	-1.76/-1.98	-2.58/-3.74	-5.26/-6.86	-9.11/-12.5	-17.71/-19.44	-18.08/-18.17		
Θ(30°)	-15.01/-11.66	-9.94/-8.4	-6.52/-4.39	-2.52/-1.05	0/0.59	1.32/1.72	1.83/1.91	2.01/1.94	1.5/0.88	0.01/-1.08	-2.28/-3.53	-5.27/-7.71	-10.78/-14.78	-19.26/-18.94	-16.64/-12.85	-9.51/-6.85	-4.92/-3.32	-2.53/-2.45	-2.94/-3.52	-3.82/-4.36	-5.62/-7.99	-11.04/-15.2	-17.6/-18.9	-18.24/-17.48		
Θ(37.5°)	-17.68/-19.1	-14.43/-10.43	-7.02/-4.27	-2.4/-1.01	-0.02/0.71	1.37/1.54	1.66/1.7	1.62/1.48	1.21/0.76	0.1/-0.87	-2.14/-3.83	-5.68/-8.42	-12.16/-16.28	-17.57/-16.42	-14.15/-11.45	-8.89/-7.67	-6.96/-7.08	-6.87/-5.97	-5.25/-5.43	-6.74/-8.41	-9.81/-11.85	-14.67/-18.07	-17.58/-18.5	-17.73/-18.74		
Θ(45°)	-17.95/-18.92	-18.06/-14.79	-8.57/-4.81	-2.23/-0.57	0.65/1.43	2.08/2.09	2/1.83	1.52/1.25	1.07/0.8	0.24/-0.51	-1.71/-3.36	-4.93/-7.01	-9.61/-11.81	-15.27/-17.31	-18.53/-16.8	-13.81/-10.81	-8.5/-6.38	-4.81/-4.41	-4.97/-6.31	-7.69/-9.4	-12.41/-17.37	-18.77/-17.97	-18.31/-18.63	-18.83/-17.42		
Θ(52.5°)	-17.4/-18.84	-19.32/-12.71	-8.07/-5.05	-2.62/-0.76	0.71/1.66	2.23/2.4	2.36/2.06	1.77/1.43	1.15/0.71	-0.23/-1.35	-3.07/-5.18	-7.12/-9.72	-11.23/-14.19	-17.62/-18.3	-17.76/-17.31	-13.75/-12.31	-12.28/-13.61	-13.56/-10.24	-8.02/-7.56	-8.43/-11.53	-18.05/-17.94	-18.04/-18.15	-18.67/-15.18	-13.89/-14.98		
Θ(60°)	-19.47/-18.8	-18.52/-13.32	-9.07/-5.83	-3.23/-1.3	0.26/1.38	2.14/2.47	2.54/2.48	2.33/2.17	1.86/1.29	0.22/-1.22	-3.41/-6.25	-9.27/-11.59	-12.65/-14.1	-16.28/-18.81	-18.24/-19.07	-17.99/-18.44	-18.46/-17.34	-10.29/-7.96	-7.18/-8.18	-13.6/-18.27	-18.96/-19.15	-18.54/-17.41	-18.66/-19.29	-17.81/-18.23		
Θ(67.5°)	-17.62/-17.4	-13.22/-11.03	-8.79/-6.66	-4.1/-2.07	-0.47/0.85	1.49/1.44	1.18/1.14	1.47/1.85	2.17/1.97	1.04/-0.51	-2.72/-5.28	-7.8/-9.95	-11.84/-13.98	-17.25/-18.64	-17.48/-19.02	-18.67/-18.52	-18.02/-18.96	-17.74/-12.95	-12.01/-16.53	-19.03/-18.56	-18.09/-18.1	-18.56/-18.68	-18.7/-17.59	-18.16/-19.2		
Θ(75°)	-18.09/-14.26	-11.39/-8.47	-5.59/-3.62	-2.65/-1.85	-0.88/-0.23	-0.04/0.13	0.02/-0.58	-1.12/-1.13	-0.67/-0.18	-0.03/-0.7	-2.05/-4.29	-6.9/-9.32	-11.38/-12.89	-14.33/-17.56	-17.97/-17.8	-17.86/-18.8	-18.97/-17.93	-18.22/-18.86	-15.72/-16.2	-17.7/-18.53	-18.99/-18.95	-18.48/-17.94	-19.12/-17.27	-18.23/-18.97		
Θ(82.5°)	-14.21/-11.64	-9.48/-7.31	-5.35/-3.73	-1.94/-0.26	0.72/1.04	0.81/-0.18	-1.48/-2.2	-2.18/-1.8	-1.64/-1.89	-2.86/-4.5	-6.95/-10.68	-15.04/-18.22	-17.91/-18.89	-18.32/-18.99	-18.83/-17.82	-18.29/-19.11	-19.09/-18.38	-18.51/-18.19	-17.81/-17.38	-18.08/-18.79	-17.77/-19.05	-17.9/-17.58	-19.01/-17.49	-18.86/-15.59		
Θ(90°)	-18.12/-17.64	-14.43/-10.76	-7.25/-4.48	-2.48/-1.15	0.13/1	0.92/0.54	0.13/-0.37	-0.41/-0.4	-0.74/-1.64	-3.12/-5.2	-7.38/-8.91	-10.92/-12.71	-16.01/-15.69	-15.74/-15.91	-17.77/-18.78	-18.98/-18.54	-18.27/-15.77	-11.97/-17.38	-19.08/-18.47	-19.2/-17.96	-18.89/-18.6	-18.74/-18.75	-18.69/-18.66	-17.65/-18.85		
Θ(97.5°)	-17.69/-18.85	-14.8/-10.53	-8.25/-6.99	-5.11/-2.74	-0.83/0.4	1.17/1.06	0.35/-0.04	0.11/0.36	0.3/-0.59	-2.66/-5.05	-7.7/-10.3	-13.25/-16.03	-18.73/-19.29	-18.61/-18.3	-17.38/-18.72	-17.52/-19.24	-16.48/-12.73	-13.53/-15.09	-19.22/-18.75	-17.25/-18.66	-18.89/-16.85	-16.86/-17.81	-18.55/-17.91	-18.34/-18.92		
Θ(105°)	-15.87/-15.59	-13.19/-9.69	-6.48/-4.49	-3.54/-3.02	-2.37/-1.26	-0.61/0.03	0.41/-0.05	-0.6/-0.78	-1.23/-1.7	-2.77/-4.8	-8.45/-12.46	-17.42/-19.14	-18.56/-18.38	-17.94/-17.87	-18.39/-17.39	-18.26/-18.07	-18.89/-14.71	-15.7/-18.43	-18.54/-17.77	-18.54/-17.32	-16.42/-17.43	-17.68/-18.91	-17.59/-15.19	-15.36/-14.48		
Θ(112.5°)	-18.21/-14.24	-10.45/-7.6	-6.4/-5.72	-5.07/-3.62	-2.44/-1.69	-1.14/-1.11	-1.52/-1.26	-0.83/-1.04	-1.2/-1.86	-3.81/-6.4	-9.95/-15.81	-18.06/-18.28	-19.09/-17.4	-18.55/-17.73	-17.61/-18.65	-17.77/-15	-13.75/-12.92	-18.25/-18.23	-18.89/-18.88	-16.87/-14.59	-15.09/-18.68	-17.77/-14.08	-13.98/-13.7	-14.97/-18.08		
Θ(120°)	-14.54/-12.16	-10.54/-9.45	-9.07/-8.66	-8.65/-8.37	-6.63/-4.62	-3.56/-2.48	-1.28/-0.83	-0.97/-1.49	-2.75/-4.92	-6.96/-9.82	-13.79/-18.07	-19.07/-18.04	-18.64/-17.53	-15.68/-13.6	-15.03/-14.11	-15.5/-18.16	-19.27/-17.41	-15.42/-18.55	-17.12/-18.86	-19.3/-17.59	-17.62/-18.88	-16.78/-18.78	-18.9/-18.99	-18.54/-17.72		
Θ(127.5°)	-13.44/-14.76	-13.84/-13.57	-11.86/-10.78	-9.08/-7.82	-6.92/-5.64	-4.32/-3.17	-2.18/-1.23	-0.91/-1.27	-2.14/-3.64	-6.24/-9.75	-13.81/-18.99	-18.73/-17.92	-18.64/-18.12	-19.04/-18.15	-15.99/-16.13	-13.82/-17.46	-17.82/-17.96	-17.03/-17.91	-18.49/-18.77	-17.67/-18.23	-17.77/-19.03	-17.94/-17.53	-18.23/-18.26	-15.92/-12.86		
Θ(135°)	-16.92/-15.38	-14.24/-14.15	-12.28/-9.41	-6.75/-4.21	-2.73/-1.78	-1.12/-0.68	-0.3/0.06	0.36/0.18	-0.84/-2.58	-5.28/-8.86	-13.28/-17.51	-18.28/-18.78	-18.27/-18.44	-19.24/-19.12	-18.6/-13.89	-12.22/-9.35	-9.98/-11.18	-14.81/-17.79	-18.23/-19.29	-17.23/-17.56	-18.28/-18.72	-18.3/-19.36	-17.82/-18.39	-18.29/-17.36		
Θ(142.5°)	-18.4/-18.94	-16.42/-12.34	-8.9/-6.57	-5.09/-3.66	-2.2/-1.06	-0.15/0.46	0.81/0.78	0.51/-0.07	-1.1/-2.84	-5.31/-8.34	-12.81/-18.33	-18.5/-17.62	-18.2/-18.86	-17.63/-19.08	-18.2/-15.21	-13.25/-11.11	-15/-12.95	-14.36/-18.95	-18.42/-18.71	-18.53/-15.48	-12.59/-16.69	-18.1/-13.89	-13.41/-17.4	-18.4/-18.27		
Θ(150°)	-13.77/-12.52	-11.93/-11.38	-10.26/-8.9	-7.19/-5.65	-4.03/-2.68	-1.66/-0.93	-0.37/-0.15	-0.52/-1.68	-3.56/-6.03	-9.08/-13.12	-17.71/-18.43	-17.99/-14.97	-13.07/-11.42	-10.27/-9.85	-9.85/-10.76	-12.06/-14.35	-16.08/-14.46	-15.86/-17.31	-16.8/-16.72	-15.01/-12.65	-13.18/-17.63	-17.6/-14.47	-14.32/-18.5	-17.81/-16.19		
Θ(157.5°)	-12.69/-10.8	-9.2/-8.33	-7.62/-7.24	-6.85/-6.46	-5.88/-4.8	-3.6/-2.55	-2.02/-2.14	-2.92/-4.19	-5.67/-7.36	-9.23/-11.89	-15.63/-18.74	-18.31/-15.05	-11.69/-9.29	-7.51/-6.6	-7.05/-8.96	-12.21/-15.51	-14.62/-12.31	-11.1/-10.95	-11.64/-13.07	-14.31/-15.53	-19.11/-18.83	-19.09/-17.69	-17.55/-18.32	-17.74/-15.33		
Θ(165°)	-18.39/-18.91	-18.59/-15.48	-13.41/-11.74	-10.08/-8.32	-6.81/-5.33	-4.18/-3.49	-3.48/-3.97	-4.94/-6.05	-7.58/-9.27	-11.6/-14.95	-19.25/-18.44	-18.48/-14.06	-11.38/-9.63	-8.92/-9.59	-12.01/-16.88	-19.01/-18.47	-18.34/-19.23	-18.38/-17.79	-17.85/-17.67	-17.9/-18.28	-17.35/-18.66	-19.08/-18.22	-17.77/-19.39	-18.19/-18.95		
Θ(172.5°)	-18.59/-15.53	-14.75/-14.36	-14.26/-13.75	-13.26/-12.22	-10.92/-9.62	-8.7/-8.35	-8.7/-9.33	-10.52/-12.04	-14.01/-15.63	-16.84/-17.88	-19.03/-19.1	-17.69/-17.34	-18.44/-18.53	-18.26/-18.93	-17.9/-19.08	-16.39/-15.24	-14.87/-14.91	-15.44/-15.77	-15.56/-15.3	-16/-18.08	-18.86/-18.56	-18.69/-19.13	-17.84/-19.95	-18.95/-17.38		
Θ(180°)	-18.8/-18.92	-17.88/-17.9	-17.23/-18.98	-18.15/-18.33	-17.95/-18.85	-18.85/-17.1	-17.79/-17.57	-18.37/-19.11	-17.77/-18.82	-18.77/-18.9	-19.24/-17.82	-18.03/-17.48	-17.94/-18.72	-17.99/-17.84	-18.06/-17.1	-16.47/-16.6	-17.8/-19.19	-17.25/-18.24	-17.73/-18.79	-17.58/-18.18	-18.47/-18.88	-18.37/-18.79	-18.61/-18.03	-18.9/-17.56		
Freq(Hz)	5.6G/Pol.	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°)	0.59/0.62	0.63/0.51	0.1/-0.41	-1.13/-2.18	-3.39/-4.96	-6.96/-9.88	-14.42/-18.71	-16.05/-11.32	-8.14/-6.04	-4.59/-3.5	-2.7/-2.09	-1.59/-1.16	-0.85/-0.82	-0.97/-1.27	-1.63/-2.03	-2.59/-3.4	-4.77/-6.63	-9.06/-12.72	-19.32/-19.02	-13.83/-9.5	-6.69/-4.43	-2.8/-1.63	-0.79/-0.3	-0.04/0.29		
Θ(7.5°)	-0.68/-0.59	-0.44/-0.49	-0.81/-1.21	-1.83/-2.78	-3.75/-4.96	-6.81/-9.52	-13.15/-17.26	-15.37/-10.89	-7.68/-5.55	-4.02/-3.02	-2.25/-1.6	-1.0/-0.45	-0.18/-0.09	-0.1/-0.34	-0.74/-1.29	-2.01/-3.05	-4.5/-6.34	-8.73/-12.42	-18.97/-19.05	-13.86/-9.62	-6.94/-4.91	-3.46/-2.27	-1.48/-1.06	-0.95/-0.75		
Θ(15°)	-2.2																									



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

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°)				
0(0°)	-12.59/-9.37	-8.31/-8.87	-8.65/-8.36	-7.71/-7.31	-7.32/-7.41	-7.52/-7.99	-8.09/-8.05	-8.87/-9.68	-10.32/-10.89	-11.27/-11.21	-10.71/-10.64	-11.24/-11.53	-10.76/-9.89	-9.01/-8.38	-8.03/-7.98	-7.79/-7.98	-8.35/-8.85	-9.14/-9.45	-10.05/-10.51	-10.46/-10.56	-11.03/-11.99	-12.35/-12.14	-12.01/-11.51	-11.45/-12.93						
0(7.5°)	-12.02/-10.13	-10.62/-10.84	-9.64/-9.59	-9.17/-9.12	-9.57/-11.03	-12.26/-13.72	-14.24/-14.95	-16.58/-16.97	-16.12/-15.38	-14.15/-13.03	-12.57/-12.53	-12.25/-11.69	-11.19/-9.93	-8.47/-7.25	-6.4/-5.92	-5.99/-6.16	-6.59/-6.96	-6.44/-6.24	-7.1/-8.06	-7.93/-8.02	-7.96/-7.73	-7.71/-7.86	-7.79/-7.64	-8.55/-11.31						
0(15°)	-18.44/-16.74	-14.46/-12.34	-10.72/-9.89	-9.88/-8.63	-9.38/-11.49	-13.98/-15.39	-15.64/-16.56	-17.3/-18.48	-17.72/-15.57	-12.44/-10.45	-8.71/-7.62	-7.34/-7.07	-6.73/-6.07	-5.17/-4.39	-3.86/-3.77	-4.06/-4.49	-5.74/-6.95	-8.26/-9.1	-9.74/-10.63	-10.17/-9.31	-7.87/-7.09	-6.77/-7.2	-7.7/-8.25	-10.52/-16.12						
0(22.5°)	-11.23/-13.33	-13.78/-11.87	-10/-7.29	-5.92/-5.36	-5.53/-6.98	-8.54/-9.81	-11.19/-11.59	-11.22/-10.6	-10.8/-11.49	-11.8/-10.83	-9.5/-8.56	-7.88/-7.07	-5.98/-5	-4.21/-3.9	-3.64/-3.47	-3.48/-4.02	-5.03/-6.62	-8.95/-10.66	-12.26/-11.41	-9.17/-7.91	-7.79/-7.89	-8.52/-9.82	-12.43/-13.17	-12.83/-12.81						
0(30°)	-7.93/-11.62	-13.88/-18.87	-18.42/-14.23	-9.22/-7.02	-6.92/-8.07	-9.22/-10.15	-12.39/-16.8	-17.11/-16.03	-10.83/-9.72	-9.93/-10.88	-11.77/-12.97	-12.17/-8.9	-6.67/-5.96	-5.59/-4.68	-3.75/-3.33	-3.14/-3.48	-4.01/-4.89	-5.76/-6.77	-8/-8.99	-10.96/-14.23	-14.66/-10.87	-8.06/-7.15	-7.57/-6.82	-6.75/-6.99						
0(37.5°)	-10.16/-13.86	-12.17/-10.56	-10.07/-13.3	-16.36/-13.7	-13.03/-14.59	-17.62/-18.91	-18.08/-17.59	-17.5/-16.18	-17.82/-18.91	-14.21/-10.83	-10.68/-10.14	-8.99/-6.59	-4.42/-2.79	-2.05/-1.51	-1.47/-2.2	-3.68/-5.13	-6.13/-6.1	-6.16/-7.76	-10.71/-12.6	-9.31/-7.29	-7.74/-8.92	-8.79/-8.15	-8.33/-9.35	-10.48/-9.7						
0(45°)	-18.35/-18.6	-18.06/-14.27	-15.51/-17.84	-18.1/-18.08	-17.69/-17.2	-18.27/-17.59	-17.45/-18.1	-17.57/-15.22	-16.09/-17.08	-18.11/-17.85	-8.67/-5	-4.38/-4.19	-2.44/-0.72	-0.080/0.16	0.71/1.19	1.39/1.12	0.34/-1.01	-3.98/-10.12	-18.06/-12.71	-7.38/-5.45	-6.45/-12.17	-17.81/-14.71	-9.75/-8.71	-10.91/-17.8						
0(52.5°)	-9.66/-9.5	-14.4/-19.16	-18.7/-18.19	-18.22/-17.7	-13.91/-13.31	-16.46/-17.95	-17.78/-11.95	-11.82/-18.19	-15.69/-14.03	-14.93/-15.51	-13.68/-9.25	-6.14/-5.23	-4.99/-3.24	-2.34/-2.69	-2.64/-1.72	-3.0/7.8	0.41/-1.09	-4.75/-11.28	-6.67/-4.84	-5.71/-7.74	-9.58/-9.52	-10.45/-11.43	-18.65/-18.45	-13.66/-10.75						
0(60°)	-11.8/-15.2	-14.61/-12.44	-13.55/-11.89	-18.12/-19.26	-10.7/16	-7.13/-8.83	-13.12/-18.87	-16.21/-13.55	-17.56/-17.34	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55	-16.21/-13.55
0(67.5°)	-13.34/-12.48	-11.79/-10.49	-8.65/-7.93	-9.25/-10.9	-9.88/-9.98	-14.38/-18.9	-12.55/-11.59	-14.04/-17.18	-16.46/-14.45	-15.32/-16.34	-18.45/-17.75	-14.86/-9.17	-5.01/-3.38	-1.94/-1.13	-1.3/-2.32	-2.93/-4.11	-2.36/0.06	-0.45/-2.91	-6/-3.78	-2.44/-3.33	-5.42/-6.44	-8.22/-12.64	-15.56/-13.06	-13.5/-12.86						
0(75°)	-6.91/-10.2	-13.26/-18.46	-17.89/-12.89	-12.39/-16.89	-18.58/-15.09	-15.28/-16.93	-18.96/-16.02	-18.21/-18.67	-18.96/-17.42	-18.65/-17.29	-18.51/-19.43	-16.16/-11.42	-9.59/-7.02	-4.41/-3.53	-3.46/-4.63	-4.85/-7.01	-5.86/-3.51	-3.68/-2.74	-3.88/-3.35	-2.28/-4.63	-5.87/-4.09	-3.98/-6.9	-8.95/-12	-11.8/-8.14						
0(82.5°)	-5.55/-8.91	-14.86/-15.81	-17.7/-18.01	-16.87/-18.98	-19.15/-18.13	-14.75/-13.38	-16.08/-14.36	-14.49/-15.89	-13.49/-9.33	-8.57/-8.9	-9.15/-8.64	-5.15/-2.86	-2.23/-0.74	0.02/-0.29	-0.18/-2.79	-5.34/-6.09	-2.64/-3.57	-6.73/-7.35	-6.24/-1.94	-0.92/-5.69	-9.52/-7.64	-7.14/-7.83	-10.63/-16.7	-13.65/-8.13						
0(90°)	-8.32/-11.26	-12.75/-12.9	-12.8/-10.75	-11.54/-13.37	-15.15/-19.36	-18.17/-13.84	-14.91/-19	-18.4/-13.8	-8.81/-8.55	-11.64/-13.88	-9.04/-5.03	-2.44/-1.77	-0.67/-0.07	0.47/1.84	1.64/-0.91	-2.68/-3.02	-0.41/-1.51	1.45/-2.1	-6.85/-3.33	-0.14/-5.09	-10.3/-6.37	-4.74/-3.59	-4.4/-7.04	-6.76/-6.13						
0(97.5°)	-3.47/-8.84	-9.31/-9.23	-13.06/-18.61	-18.19/-15.29	-13.75/-18.16	-18.98/-18.43	-19.92/-17.38	-15.17/-18.65	-18.67/-18.24	-19.08/-11.18	-7.64/-5.51	-4.26/-5.07	-2.48/-1.12	0.13/1.52	1.4/-0.36	-1.77/-0.78	-1.42/1.6	2.27/1.72	-1.77/-0.45	-0.79/-5.54	-4.91/-2.31	-3.63/-9.07	-13.1/-17.39	-8.91/-4.72						
0(105°)	-5.79/-12.14	-15.11/-15.74	-11.57/-9.09	-9.28/-15.6	-18.05/-12.67	-8.76/-9.69	-12.28/-17.74	-12.11/-11.81	-11.49/-11.59	-10.27/-5.58	-4.67/-4.76	-3.77/-2.01	0.74/1.3	1.92/3.41	3.91/0.06	-2.84/-0.96	0.07/1.55	0.95/0.38	-5.11/-0.74	1.61/-3.74	-6.08/-1.14	-1.21/-4.94	-5.73/-9.2	-17.62/-7.7						
0(112.5°)	-5.01/-6.31	-7.83/-8.3	-13.51/-12.09	-7.36/-8.78	-11.63/-17.72	-12.94/-10	-10.2/-9.85	-10.18/-9.63	-7.78/-8.82	-6.82/-4.28	-3.85/-2.16	-0.6/0.33	1.81/1.77	2.95/4.89	3.71/-1.76	-3.06/-0.32	2.76/3.34	3.24/-1.18	-8.04/-0.91	2.15/-0.78	-5.03/-2.09	-2.78/-4.43	-5.07/-6.82	-9.71/-7.11						
0(120°)	-9.42/-9.89	-9.4/-9.61	-17.48/-18.53	-14.15/-10.47	-10.07/-12.64	-17.57/-17.99	-18.25/-18.96	-11.51/-11.43	-16.83/-16.15	-9.64/-10.45	-11.51/-7.35	-4.78/-2.34	-1/0.27	2.47/2.78	-0.64/-1.72	-1.01/0.56	2.82/3.58	3.53/-0.93	-4.94/-0.96	2.04/-0.23	-6.21/-4.82	-3.86/-5.99	-5.21/-7.61	-11.28/-9.78						
0(127.5°)	-18.93/-11.9	-15.2/-17.72	-15.45/-15.02	-18.79/-19.13	-18.94/-19.02	-13.78/-12.69	-14.55/-13.39	-9.1/-12.11	-18.89/-11.08	-13.56/-17.75	-11.55/-8.53	-7.18/-5.89	-5.76/-8.82	-2.08/-1.5	-1.29/-1.62	-1.36/1.49	2.54/2.51	1.47/-2.34	-3.64/-0.38	1.39/0.34	-2.82/-3.35	-2.89/-3.82	-4.91/-5.84	-9.04/-15.37						
0(135°)	-14.61/-14.1	-9.97/-10.05	-10.19/-10.52	-12.78/-18.11	-18.88/-12.92	-11.08/-11.96	-18.86/-18.69	-13.34/-15.37	-10.94/-9.88	-11.72/-14.89	-18.72/-15.95	-9.57/-5.6	-4.37/-2.47	-0.56/-0.09	-1.59/-2.4	-0.42/0.28	-0.37/-1.21	-3.77/-10.7	-10.21/-5.21	-1.89/-2.12	-3.9/-3.93	-2.17/-3.03	-6.03/-8.01	-11.1/-12.93						
0(142.5°)	-13.66/-15.44	-14.17/-15.67	-18.28/-16.92	-16.04/-8.99	-5.78/-5.2	-6.2/-7.91	-10.93/-15.51	-17.25/-14.75	-11.87/-11.99	-12.44/-13.57	-14.35/-11.43	-6.99/-4.96	-5.47/-5.6	-4.34/-3.43	-2.33/-0.73	-1.1/-2.38	-2.59/-3.16	-6.38/-14.56	-17.22/-9.7	-6.33/-8.17	-13.54/-14.3	-10.74/-8.29	-8.29/-8.76	-10.38/-12.66						
0(150°)	-5.94/-7	-8.32/-7.71	-7.95/-10.12	-11.64/-9.01	-7.47/-7.44	-8.52/-9.31	-10.62/-12.52	-14.24/-12.73	-11.36/-10.12	-8.94/-8.44	-8.27/-8.27	-7.88/-9.4	-11.44/-11.43	-9.36/-7.09	-5.88/-6.2	-8.49/-9.48	-3.38/-11.48	-17.15/-18.51	-18.05/-14.88	-10.82/-9.23	-9.46/-10.21	-11.08/-11.63	-10.35/-8.64	-7.2/-5.93						
0(157.5°)	-13.68/-14.52	-13.87/-13.92	-14.99/-14.74	-13.19/-12.94	-13.63/-14.64	-18.92/-19.21	-16.68/-14.02	-11.72/-11.68	-10.64/-10.58	-6.28/-6.4	-7.89/-7.2	-6.51/-6.26	-5.63/-2.23	-7.84/-7.8	-6.87/-5.38	-9.37/-3.34	-9.74/-5.68	-5.46/-5.83	-6.6/8.8	-7.54/-6.12	-5.33/-7.01	-9.69/-13.3	-17.92/-17.98	-12.72/-11.74						
0(165°)	-13.07/-12.72	-13.64/-15.52	-19.29/-18.3	-19.47/-18.56	-17.45/-17.87	-18.77/-18	-14.43/-13.29	-11.61/-10.97	-10.48/-10.51	-11.63/-12.98	-14.66/-15.3	-15.45/-15.69	-15.53/-14.51	-12.52/-10.67	-9.24/-8.37	-7.59/-6.8	-6.15/-5.77	-5.42/-5.66	-7.11/-9.46	-10.73/-10.72	-13/-18.09	-18.76/-17.89	-15.07/-12.23	-11.52/-13.44						
0(172.5°)	-13.51/-12.3	-13.86/-12.36	-12.65/-12.76	-13.75/-15.94	-17.57/-16.08	-13.31/-11.36	-10.45/-10.53	-11.69/-13.14	-13.62/-13.79	-14.81/-16.37	-18.07/-19.09	-17.55/-18.7	-18.26/-19.15	-17.72/-18.78	-17.86/-18.76	-17.86/-18.29	-14.57/-12.06	-10.96/-10.65	-10.96/-11.15	-12.25/-15.84	-18.44/-15.03	-13.35/-13.56	-13.84/-13.18	-12.38/-14.16						
0(180°)	-15.12/-17.75	-18.48/-18.34	-17.63/-18.62	-18.62/-17.61	-15.75/-13.53	-13.17/-14.49	-15.32/-16.3	-16.36/-14.94	-13.46/-12.8	-12.81/-12.66	-12.46/-12.22	-11.43/-10.86	-10.54/-10.98	-11.84/-12.7	-13.51/-14.86	-16.23/-18.11	-17.09/-19.3	-17.42/-16.32	-16.58/-16.73	-16.57/-17.76	-17.81/-17.48	-16.52/-14.16	-13.11/-12.22	-12.19/-12.55						
Freq(Hz)	5.2G/Pol.	Theta/Ant. 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°)						
0(0°)	-10.75/-12.6	-13.31/-12.3	-11.64/-12.22	-13.37/-14.25	-15.33/-18.41	-18.94/-17.18	-14.62/-12.38	-10.6/-9.66	-9.63/-9.25	-8.93/-8.57	-8.21/-8.24	-8.38/-8.75	-9.42/-10.39	-11.1/-11.68	-12.12/-12.57	-13.75/-15.53	-15.64/-15.93	-15.61/-13.81	-11.78/-10.16	-9.29/-8.58	-8.34/-7.77	-7.17/-7.09	-7.43/-7.44	-7.96/-9.65						
0(7.5°)	-9.25/-8.73	-10.97/-12.44	-13.96/-14.07	-14.81/-15.19	-14.53/-14.14	-13.32/-14.27	-14.33/-12.19	-10.58/-9.74	-9.65/-9.04	-8.39/-7.58	-6.																			



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	Phi	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(30°)	Phi(0°)	-16.63/19.48	-19.29/15.94	-15.07/13.97	-11.61/9.45	-7.31/5.93	-6.24/7.11	-9.88/14.64	-14.57/9.63	-7/6.17	-5.89/5.11	-4.2/4.03	-4.75/6.62	-7.72/6.82	-5.54/5.2	-5.77/6.77	-7.95/8.4	-8.29/10.77	-13.54/9.28	-8.13/10.03	-10.76/11.26	-13.59/11.23	-8.45/8.33	-9.25/9.01	-9.47/12.53
Theta(37.5°)	Phi(0°)	-13.84/14.83	-15.79/15.91	-15.87/16.93	-14.45/11.55	-10/9.57	-11.38/12.67	-16.8/19.01	-15.15/9.25	-7.22/7.43	-7.65/6.67	-5.62/4.89	-5.58/7.48	-10.09/9.6	-7.28/6.71	-9.27/13.26	-12.12/9.54	-7.9/8.9	-6.97/3.69	-4/6.85	-12.14/15.09	-13.42/9.12	-6.78/5.96	-6.22/7.63	-12.68/16.64
Theta(45°)	Phi(0°)	-16/13.13	-13.81/16.57	-18.5/18.46	-18.2/18.81	-18.8/15.03	-14.98/18.23	-19.22/15.45	-12.95/12.05	-11.91/11.67	-9.1/7.08	-5.76/5.13	-6.38/7.59	-5.65/4.1	-5.05/7.48	-9.91/11.62	-10.04/7.82	-7.65/11.09	-14.43/14.84	-11.59/7.23	-6.78/10.55	-15.66/14.33	-11.17/10.46	-11.77/15.27	-18.07/18.88
Theta(52.5°)	Phi(0°)	-17.84/19.23	-18.71/17.84	-18.88/19.05	-17.74/16.01	-14.22/14.41	-18.3/19.08	-18.93/10.62	-8.99/11.1	-12.1/11.86	-9.09/5.25	-4.61/3.49	-3.87/5.79	-5.63/3.65	-3.59/5.36	-7.1/8.05	-8.61/6.74	-6.27/6.56	-9.59/18.78	-17.82/18.04	-12.68/11.05	-15.74/17.87	-19.03/18.14	-15.89/17.92	-18.2/18.57
Theta(60°)	Phi(0°)	-8.76/9.18	-10.86/10.37	-12.57/17.55	-18.5/17.64	-19.13/19.02	-18.96/16.96	-14.73/13.38	-10.07/9.71	-10.99/11.86	-10.46/7.57	-6.29/4.59	-3.22/3.92	-3.76/2.62	-3.34/4.56	-6.13/8.02	-7.19/7.99	-8.12/5.2	-5.83/8.35	-14.51/17.82	-16/13.31	-17.46/19.23	-17.23/18.28	-17.91/15.72	-12.76/9.36
Theta(67.5°)	Phi(0°)	-8.23/8.22	-7.21/7.21	-10.13/12.2	-11.17/13.26	-18.12/17.57	-12.15/11.67	-16.5/18.4	-16.11/11.54	-11/13.2	-12.37/8.29	-6.41/6.33	-6.01/6.11	-4.27/2.56	-4.27/2.56	-9.92/9.28	-9.9/12.83	-9.82/10.09	-10.43/13.8	-18.24/17.9	-14.78/18.05	-17.03/13.63	-11.15/9.44	-8.69/11.81	-12.73/9.11
Theta(75°)	Phi(0°)	-12.44/18.9	-17.97/18.1	-12.46/16.48	-18.63/18.57	-15.76/14.08	-17.6/17.71	-14.06/10.59	-12.44/14.75	-10.89/8.18	-7.16/7.86	-9.75/9.48	-6.44/5.56	-5.17/3.62	-2.93/3.44	-5.18/7.92	-11.22/15.19	-9.27/9.8	-10.41/16.11	-18.59/18.67	-17.85/18.61	-14.78/12.75	-13.42/14.74	-12.43/11.28	-10.19/8.52
Theta(82.5°)	Phi(0°)	-17.9/18.03	-18.09/18.11	-18/17.86	-19.01/18.03	-15/16.99	-18.49/13.71	-13.81/14.27	-13.31/17.9	-15.12/12.14	-11.78/9.98	-7.18/6.68	-6.55/6.37	-6.38/5.63	-4.76/3.77	-5.1/6.09	-10.46/14.87	-9.39/6.19	-6.03/7.61	-6.9/9.82	-17.82/13.73	-9.13/10.98	-12.13/18.81	-18.89/18.81	-18.6/17.6
Theta(90°)	Phi(0°)	-17.67/19.19	-13.23/9.5	-8.54/10.34	-13.05/12.63	-18/17.97	-18.81/17.46	-19.26/16.72	-19.01/18.46	-17.21/17.74	-19/12.85	-9/9.36	-7.38/6.71	-5.56/4.71	-4.58/3.68	-4.27/9.29	-12.38/8.39	-6.38/7.77	-8.72/14.46	-11.15/7.78	-18.89/16.58	-16.14/17.96	-10.43/17.45	-12.72/14.86	-16.27/17.81
Theta(97.5°)	Phi(0°)	-18.1/18.9	-18.74/17.28	-17.68/16.29	-17.86/15.78	-17.46/15.82	-19.16/16.68	-15.9/18.08	-19.22/17.73	-18.49/18.24	-12.82/11.62	-14.85/16.24	-9.93/11.49	-10.83/8.11	-7.51/5.3	-3.71/7.45	-9.74/7.09	-3.89/3.81	-7.47/18.82	-17.66/15.07	-9.1/13.47	-15.21/14.11	-18.42/19.25	-16.99/18.84	-17.25/18.25
Theta(105°)	Phi(0°)	-14.75/19.06	-18.71/16.95	-18.42/17.04	-15.74/17.6	-17.44/17.74	-18.81/17.95	-18.27/18.38	-16.55/17	-18.7/18.46	-13.92/12.82	-11.09/13.69	-13.34/11.28	-10.8/10.25	-14.51/10.18	-9.71/9.98	-9.01/7.8	-8.34/4.64	-4.54/6.3	-9.27/4.27	-3.91/16.02	-14.43/4.13	-7.16/8.83	-6.5/17.47	-10.75/11.52
Theta(112.5°)	Phi(0°)	-13.08/18.79	-18.09/13.82	-15.26/15.99	-16.05/13.74	-14.39/17.67	-18.75/15.36	-12.63/15.51	-16.79/15.73	-17.75/18.1	-18.76/14.52	-14.23/12.73	-15.14/18.07	-14.52/12.75	-16.5/11.84	-10.12/14.13	-9.3/8.84	-7.6/7.5	-6.69/9.69	-7.64/0.62	-0.35/10.86	-8.65/5.22	-5.73/16.82	-7.36/10.25	-13.56/10.68
Theta(120°)	Phi(0°)	-8.63/8.78	-10.6/12.86	-10.93/7.51	-8.06/11.72	-13.29/15.09	-18.39/18.82	-18.18/17.94	-15.44/18.02	-15.85/13.49	-17.84/18.27	-19.22/16.28	-16.62/18.3	-19.06/18.66	-11.51/9.33	-10.01/16.47	-12.47/19.29	-10.21/10.31	-6.71/11.67	-8.2/0.15	0.56/6.23	-7.81/3.07	-9.56/11.39	-11.85/5.13	-5.27/7.44
Theta(127.5°)	Phi(0°)	-13.33/11.02	-13.47/11.8	-7.8/9.28	-15.74/14.45	-17.82/19.26	-17.67/15.82	-17.06/17.93	-18.63/15.39	-12.22/13.82	-18.75/18.3	-18.39/18.02	-18.66/19.19	-18.17/17.85	-16.18/11.64	-15.55/15.5	-17.29/9.95	-6.55/6.8	-6.92/11.14	-10.25/2.28	-0.85/8.71	-19.33/12.33	-5.26/6.69	-10.74/10.75	-15.13/16.52
Theta(135°)	Phi(0°)	-5.07/7.39	-8.9/8.64	-9.01/14.17	-18.93/14.43	-13.81/15.11	-18.19/17.28	-13.84/11.66	-9.91/8.99	-8.94/10.24	-15.24/18.98	-15.48/12.73	-12.68/15.3	-17.24/18.02	-12.98/12.35	-8.47/9.71	-18.67/9.64	-8.56/5.55	-5.84/9.31	-8.39/3.56	-1.34/3.05	-11.92/14.59	-11.11/17.65	-11.72/7.82	-3.51/2.89
Theta(142.5°)	Phi(0°)	-13.82/16.56	-18.18/19.18	-18.44/12.67	-18.48/8.25	-11.81/16.94	-15.45/13.95	-12.23/11.96	-11.92/11.63	-10.4/10.49	-8.6/9.67	-9.93/9.29	-10.27/14.17	-18.19/18.45	-18.77/18	-16.15/19.34	-14.61/15.54	-17.31/13.26	-17.42/17.16	-10.63/0.87	-7.02/17.13	-12.79/4.82	-18.03/10.94	-17.18/6.38	-5.61/8.36
Theta(150°)	Phi(0°)	-18.81/13.55	-13.23/13.83	-12.77/12.86	-13.79/19.15	-18.66/14.67	-11.91/9.14	-8.24/8.62	-10.52/13.31	-11.45/9.06	-7.92/6.98	-5.92/5.88	-8.8/8.12	-10.24/14.27	-19.58/18.93	-16.28/14	-15.14/19.45	-12.45/12.85	-14.71/10.67	-9.14/4.96	-2.48/1.42	-1.91/2.93	-4.01/5.29	-6.72/7.71	-9.19/15.57
Theta(157.5°)	Phi(0°)	-11.54/11.4	-12.22/15.17	-18.13/18.96	-15.8/15.22	-14.8/15.06	-15.49/13.78	-12.17/11.76	-12.63/12.62	-11.84/10.26	-8.34/6.49	-5.55/6.32	-8.2/10.52	-12.86/13.51	-11.78/10.42	-9.43/10.15	-14.55/17.29	-15.44/10.6	-7.97/7.75	-11.35/8.52	-3.05/0.1	0.19/0.48	-2.04/5.86	-10.88/13.11	-11.09/10.46
Theta(165°)	Phi(0°)	-9.84/11.79	-14.03/14.48	-12.58/10.91	-11.29/12.41	-14.08/15.26	-19.3/18.77	-17.66/17.56	-18.05/18.46	-14.2/9.98	-7.42/5.61	-5.05/5.84	-7.78/10.3	-12.74/13.8	-13.33/12.38	-11.65/12.38	-14.58/15.23	-11.09/8.36	-7.43/8.2	-9.34/7.5	-4.92/3.19	0.32/4.49	-5.15/6.3	-7.22/8.31	-9.86/10.52
Theta(172.5°)	Phi(0°)	-12.51/12.97	-14.21/14.17	-13.91/13.71	-11.22/11.01	-11.22/11.01	-12.48/13.57	-18.85/18.61	-18.1/17.24	-18.27/17.68	-15.06/14.24	-14.39/15.21	-16.6/17.33	-18.15/17.81	-17.31/18.6	-16.96/16.07	-13.97/11.42	-9/7.74	-8.06/9.13	-10.06/10.27	-10.34/10.42	-13.28/18.26	-11.74/8.44	-8.76/11.4	-15.16/18.5
Theta(180°)	Phi(0°)	-17.01/18.33	-18.65/18.35	-17.35/17.2	-18.32/14.31	-11.86/11.55	-12.5/13.36	-15.02/14.67	-13.27/12.64	-12.66/14.25	-16.03/17.71	-17.87/17.75	-18.55/17.47	-17.62/16.79	-15.02/14.21	-13.67/13.07	-12.06/10.5	-9.26/8.65	-8.91/9.46	-9.91/10.85	-12.19/13.76	-16.78/18.56	-10.41/6.75	-7.53/10.36	-13.87/17.31
Freq(Hz)	Phi(Ant. 5)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Phi(0°)	-13.31/10.85	-9.85/9.86	-10.42/9.85	-8.85/9.94	-7.09/6.1	-5.91/5.95	-5.64/6.14	-6.69/7.3	-7.65/8.18	-8.73/9.79	-11.13/13.06	-14.82/16.19	-16.84/16.81	-16.56/14.92	-14.32/13.76	-13.18/12.04	-11.7/10.6	-10.21/10.06	-9.62/9.14	-9.18/9.81	-10.16/10.69	-12.32/13.93	-14.53/14.94	-14.59/15.73
Theta(7.5°)	Phi(0°)	-18.87/18.93	-16.85/15.81	-14.95/14.95	-12.92/12.08	-11.1/9.76	-10.18/10.33	-10.62/11.65	-12.33/13.07	-12.82/12.98	-13.41/14.18	-15.75/16.57	-15.49/14.23	-12.46/10.48	-8.88/7.18	-5.99/5.3	-4.73/4.43	-3.9/3.4	-3.48/3.46	-3.92/4.47	-5.3/5.99	-6.96/7.26	-9.01/11.16	-12.58/14.61	-17.97/17.4
Theta(15°)	Phi(0°)	-17.39/17.6	-18.41/13.42	-10.05/8.85	-7.67/7.05	-6.8/6.22	-5.74/5.69	-5.34/5.82	-6.45/7.37	-8.78/10.89	-13.47/15.82	-17.59/17.83	-17.74/16.97	-16.28/13.69	-10.73/8.09	-6.17/4.63	-3.63/2.99	-2.58/2.24	-2.19/2.06	-2.5/3.73	-5.05/6.17	-6.61/6.85	-7.81/8.01	-8.37/9.28	-12.23/17.33
Theta(22.5°)	Phi(0°)	-10.29/11.3	-8.38/8.49	-7.46/6.62	-5.81/5.51	-5.91/7.13	-9.56/9.81	-8.68/7.83	-7.37/7.3	-7.69/9.44	-12.19/14.96	-17.37/17.24	-15.75/13.77	-11.79/10.07	-7.94/5.9	-4.72/4.18	-4.05/4.59	-4.75/4.45	-4.16/3.83	-4.13/4.77	-4.92/5.43	-6.11/6.33	-6.92/6.53	-6.82/8.08	-9.66/12.02
Theta(30°)	Phi(0°)	-14.22/11.4	-10.28/12.6	-14.91/12.16	-10.15/10.18	-11.72/12.63	-14.76/14.19	-14.71/15.69	-14.11/12.47	-11.39/11.43	-10.42/8.96	-9.46/9.72	-8.2/6.52	-5.41/4.54	-3.33/2.35	-1.9/1.69	-1.93/1.91	-1.87/2.4	-3.32/4.83	-6.84/8.47	-8.5/9.01	-7.81/7.24	-6.68/6.02	-6.42/8.65	-11.02/13.74
Theta(37.5°)	Phi(0°)	-18.91/12.78	-9.33/9.1	-11.5/13.32	-13.05/15.16	-18.84/18.63	-13.52/12.61	-12.57/10.61	-9.08/10.05	-14.06/16.6	-12.89/9.18	-7.26/5.38	-4.04/3.74	-3.59/2.94	-2.19/1.29	-1.05/1.55	-1.95/1.75	-0.78/0.26	0.8/0.09	-2.1/4.93	-6.64/7.94	-9.79/9.81	-9.65/10.29	-10.59/12.27	-12.37/17.68
Theta(45°)	Phi(0°)	-10.89/18.03	-9.66/8.64	-10.78/11.17	-12.86/18.71	-18.02/19.18	-16.19/18.41	-18.52/18.11	-17.93/14.21	-8.42/7.52	-7.1/6.94	-6.66/5.09	-3.88/3.89	-3.05/1.54	-0.89/0.86	-1.03/1.59	-1.92/1.12	0.05/0.39	-0.48/1.8	-2.3/1.9	-1.71/2.52	-5.37/8.16	-12.04/18.05	-17.47/18.24	-13.23/8.63
Theta(52.5°)	Phi(0°)	-8.19/10.5	-13.38/12.43	-14.85/18.44	-19.16/18.49	-16.32/12.72	-12.23/14.26	-17.32/19.36	-15.97/12.76	-10.15/8.65	-7.08/5.51	-5.44/4.06													



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	Phi	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°)
0(45°)	-13.03/-10.65	-10.36/-14.75	-18.34/-16.66	-18.36/-18.78	-18.73/-18.69	-18.35/-17.73	-15.65/-11.91	-15.48/-18.84	-14.47/-12.82	-12.16/-13.08	-14.45/-10.85	-7.79/-7.42	-6.26/-3.11	-0.67/-0.22	-1.18/-1.47	-1.52/-0.4	1.04/0.88	1.09/0.75	0.15/0.21	-1.02/-2.81	-3.5/-4.49	-6.63/-11.04	-13.17/-11.83	-9.46/-10.71
0(52.5°)	-11.83/-14.76	-15.16/-12.46	-14.46/-18.71	-18.64/-18.48	-14.88/-12.56	-13.35/-12.38	-13.22/-13.81	-16.45/-17.78	-15.27/-17.17	-18.17/-15.23	-14.95/-9.24	-6.63/-9.46	-7.72/-3.59	-1.38/-0.98	-0.74/0.75	1.93/2.79	3.22/3.4	1.34/-1.09	-2.64/-3.19	-4.14/-3.8	-3.48/-4.49	-6.29/-8.33	-11.36/-11.62	-8.61/-6.79
0(60°)	-7.25/-11.15	-16.58/-16.75	-10.92/-11.58	-12.61/-16.7	-11.79/-11.26	-14.79/-18.02	-16.01/-12.29	-15.32/-15.27	-18.58/-15.91	-13.83/-7.38	-6.34/-6.91	-4.63/-4.8	-4.62/-1.97	-1.66/-2.05	-1.57/-0.69	0.72/1.33	0.49/0.42	1.04/-0.6	-4.35/-5.6	-3.29/-4.76	-6.46/-5.37	-6.04/-6.57	-7.2/-8.04	-7.87/-7.01
0(67.5°)	-9.02/-16.27	-17.83/-13.82	-7.13/-6.74	-9.46/-13.05	-13.31/-14.12	-16.71/-15.48	-17.34/-18.22	-17.34/-18.48	-17/-11.85	-8.76/-6.63	-5.31/-6.04	-4.21/-2.3	-2.28/0.63	1.59/0.96	0.71/1.84	2.92/3.5	0.62/-1.14	-1.29/-2.76	-5.72/-3.85	-2.87/-4.84	-5.58/-7.64	-10.91/-11.27	-8.46/-8.65	-8.09/-6.61
0(75°)	-10.38/-14.59	-15.2/-13.1	-13.32/-16.42	-18.38/-18.62	-19.17/-17.83	-12.26/-7.24	-8.71/-17.18	-12.03/-14.26	-16.2/-17.71	-10.45/-11.92	-11.17/-8.27	-3.47/-0.29	-0.12/1.33	2.93/3.99	2.89/2.04	1.69/2.08	-0.34/-1.29	-1.67/-2	-3.98/-2.21	-0.02/-2.49	-5.48/-5.6	-7.52/-5.59	-5.16/-5.83	-5.46/-6.03
0(82.5°)	-13.85/-9.77	-11.89/-10.37	-19.6/-18.77	-10.91/-7.25	-8.43/-13.62	-17.91/-14.49	-17.36/-19.12	-11.52/-14.7	-19.21/-14.17	-8.51/-7.1	-7.21/-6.06	-4.87/-2.11	-1.13/-0.33	2.04/2.53	1.1/0.3	0.44/-0.46	-2.05/-4.9	-3.44/-0.96	-0.91/-1.29	-0.99/-5.24	-4.41/-2.81	-1.85/-2.29	-4.64/-6.55	-8.09/-13.06
0(90°)	-8.13/-17.76	-11.77/-7.35	-7.26/-8.58	-8.96/-8.36	-9.21/-12.07	-19.41/-18.19	-15.71/-11.45	-14.4/-6.84	-7.42/-8.17	-5.2/-3.98	-5.61/-4.14	-3.73/-2.05	-0.99/-0.42	1.71/1.86	-0.01/-1.86	-2.01/-2.88	-3.61/-3.09	-0.49/-0.25	-0.52/0.29	0.24/-5.73	-8.41/-5.04	-3.6/-5.8	-7.53/-6.76	-6.25/-5.09
0(97.5°)	-11.9/-13.17	-10.7/-12.96	-9.9/-11.35	-10.04/-19.34	-18.39/-18.89	-17.44/-17.19	-17.89/-18.91	-11.59/-6.97	-12.64/-14.78	-9.29/-6.83	-4.03/-2.52	-2.27/-2.01	-1.06/-0.73	-1.64/-1.05	-1.39/-3.9	-5.5/-1.7	1.36/2.6	0.56/0.58	-1.05/-6.77	-2.28/0.26	-1.97/-2.08	-5.32/-13.81	-5.41/-6.18	
0(105°)	-6.92/-12.47	-8.06/-17.33	-18.55/-14.19	-16.19/-15.42	-10.15/-18.42	-14.01/-11.32	-14.65/-15.92	-9.42/-11.12	-18.16/-17.58	-9.12/-8.75	-6.27/-4.48	-1.81/-2.08	-3.39/-3.1	-3.22/-0.66	-1.09/1.02	-1.20/-2.8	-1.69/1.1	0.11/7.77	-1.58/1.12	0.28/-8.19	0.13/2.96	-0.8/-0.92	-7.32/-18.17	-12.22/0.61
0(112.5°)	-7.39/-13	-11.08/-7.98	-8.41/-10.64	-18.23/-19.51	-14.59/-17.61	-15.42/-11.05	-9.98/-9.57	-13.52/-17.8	-16.1/-9.62	-9.92/-8.26	-5.06/-6.51	-4/-3.02	-2.28/-1.15	-2.37/0.22	1.06/-4.69	-12.36/-2.85	-0.27/1.43	-0.91/-2.1	-3.65/1.93	0.75/-11.53	-2.21/4.9	-3.31/-7.06	-10.39/-19.38	-15.15/-8.18
0(120°)	-7.26/-12.93	-16.21/-12.85	-12.26/-13.73	-16.63/-13.27	-12.01/-17.2	-19.11/-18.92	-18.12/-18.98	-18.9/-17.6	-15.99/-16.16	-14.95/-12.32	-16.2/-15.06	-9.38/-6.5	-5.3/-4.2	-6.2/-4.62	-6.95/-16.68	-9.27/2.94	0.6/0.97	-0.32/-1.97	-2.52/2.41	3.05/-1.79	-1.67/-1.51	-4.72/-6.7	-10.55/-12.3	-11.06/-7
0(127.5°)	-5.43/-10.61	-9.77/-13.94	-14.46/-14.89	-18.36/-17.65	-16.03/-11.73	-9.54/-6.18	-5.73/-9.22	-14.27/-11.52	-10.4/-12.97	-17.39/-19.25	-17.22/-19.13	-17.65/-15.6	-11.31/-9.93	-4.09/-2.41	-3.5/-2.59	-0.51/-0.1	1.74/1.5	1.25/-2.2	-2.8/0.67	-0.01/-5.05	-9.68/-7.57	-6.98/-6.85	-9.64/-10.7	-8.49/-5.12
0(135°)	-17.81/-18.74	-18.37/-18.61	-18.89/-16.68	-15.95/-15.94	-16.19/-18.01	-18.49/-19.24	-17.12/-15.39	-18.78/-14.36	-11.51/-13.96	-16.98/-14.66	-10.05/-8.06	-8.54/-8.05	-8.78/-8.09	-4.5/-2.88	-3.15/-1.25	-0.84/-2.86	-1.17/0.46	0.5/-1.67	-2.7/0.37	-0.2/-2.28	-5.32/-7.41	-11.95/-17.64	-15.77/-8.81	-7.29/-10.32
0(142.5°)	-17.18/-18.96	-19.3/-16.75	-15.48/-14.74	-13.66/-12.46	-14.15/-19.08	-18.1/-17.64	-16.23/-18.09	-18.01/-17.22	-17.11/-13.43	-11.69/-12.09	-10.61/-9.27	-8.66/-8.01	-10.42/-11.48	-7.35/-3.67	-2.5/-1.79	-2.73/-4.37	-4.61/-5.17	-4.69/-5.33	-4.19/-1.42	-1.58/-5.16	-9.02/-7.53	-7.42/-9.17	-10.32/-15.07	-18.12/-18.85
0(150°)	-18.27/-17.75	-17.52/-15.76	-17.85/-18.2	-17.72/-18.95	-18.17/-13.8	-10.71/-9.92	-10.65/-12.06	-12.2/-11.5	-12.6/-14.21	-17.37/-17.41	-16.74/-13.06	-10.34/-8.93	-9.09/-9.83	-9.98/-10.18	-8.7/-6.04	-5.65/-6.95	-7.95/-6.66	-5.44/-5.3	-5.35/-3.54	-2.72/-3.97	-5.84/-4.03	-2.77/-4.05	-7.13/-11.95	-17.1/-18.55
0(157.5°)	-9.11/-8.81	-8.35/-9.13	-10.83/-14.73	-17.68/-17.77	-17.22/-16.58	-14.27/-15.63	-17.07/-18.87	-13.33/-11.6	-12.15/-14.27	-15.88/-18.31	-19.04/-17.58	-17.85/-16.13	-12.61/-11.88	-12.63/-11.82	-10.13/-9.24	-9.62/-10.02	-8.44/-6.44	-4.88/-4.51	-4.44/-3.25	-2.92/-4.23	-6.49/-8.52	-8.98/-7.97	-7.48/-7.92	-8.72/-8.53
0(165°)	-14.18/-17.15	-18.93/-18.67	-18.49/-18.65	-19.2/-18.87	-15.49/-13.91	-12.84/-12.85	-13.78/-14.71	-16.27/-18.68	-18.48/-17.71	-18.69/-18.34	-17.49/-18.71	-17.43/-13.65	-11.37/-10.23	-10.39/-11.26	-11.37/-10.3	-9.1/-7.87	-6.9/-6.04	-5.43/-4.91	-4.46/-5.03	-6.8/-10.07	-14.29/-19.23	-13.24/-10.83	-10.5/-11.02	-11.13/-11.37
0(172.5°)	-10.6/-10.5	-9.44/-9.57	-9.42/-9.43	-10.67/-12.75	-14.77/-16.79	-19.01/-18.42	-17.86/-18	-18.58/-18.4	-19.28/-18.45	-17.21/-16.43	-16.98/-18.63	-19.1/-19.3	-17.64/-17.98	-17.52/-16.59	-14.85/-13.73	-13.17/-12.74	-12.1/-10.77	-9.21/-8.57	-8.68/-10.38	-12.09/-14.32	-18.11/-17.91	-19.43/-18.07	-15.62/-13.92	-13.1/-11.31
0(180°)	-14.02/-12.09	-10.79/-10.98	-10.25/-10.31	-11.8/-12.34	-12.38/-12.44	-12.21/-12.62	-13.47/-13.66	-14.59/-15.72	-16.51/-16.99	-17.12/-17.42	-17.16/-16.43	-14.94/-13.86	-13.33/-13.04	-12.75/-12.35	-12.52/-12.49	-12.34/-12.21	-12.75/-12.92	-12.8/-12.32	-12.45/-13.65	-16.1/-17.35	-18.25/-17.8	-17.81/-18.45	-17.2/-17.86	-15.37/-14.1
Freq(Hz)	5.785G/Pol.	Theta/Ant. 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°)
0(0°)	-4.51/-4.78	-5.48/-6.9	-8.41/-9.05	-9.26/-8.28	-7.64/-6.63	-6.19/-6.1	-5.2/-4.78	-4.18/-4.26	-4.32/-4.48	-4.76/-4.79	-5.13/-5.17	-5.36/-5.74	-6.38/-7.01	-7.95/-9.05	-8.93/-9.92	-7.7/-7.74	-7.75/-7.77	-5.95/-5.28	-5.35/-5.49	-5.41/-5.63	-5.19/-4.79	-4.37/-4.97	-5.16/-4.27	-3.84/-4.15
0(7.5°)	-7.24/-7.51	-7.52/-9.06	-10.74/-12.32	-12.75/-13.37	-12.13/-10.57	-9.26/-7.8	-7.25/-6.95	-6.81/-6.87	-7.06/-7.45	-7.94/-8.02	-7.53/-6.58	-5.91/-5.34	-4.97/-4.92	-4.89/-5.08	-5.7/-6.27	-6.51/-6.13	-5.94/-6.08	-5.82/-4.62	-3.38/-2.83	-2.77/-3.11	-3.95/-4.26	-4.92/-5.97	-6.95/-6.85	-6.25/-6.64
0(15°)	-13.69/-12.51	-10.26/-9.05	-9/-9.75	-10.98/-12.85	-11.81/-9.92	-8.63/-7.48	-5.74/-4.45	-3.48/-3.1	-3.33/-4.18	-5.47/-7.6	-10.18/-11.87	-11.4/-9.01	-6.66/-5.06	-3.84/-3.22	-2.97/-3.31	-3.56/-4.06	-4.44/-4.81	-5.52/-5.43	-4.81/-3.72	-3.42/-3.13	-3.61/-4.2	-5.53/-7.94	-13.41/-15.71	-14.27/-14.07
0(22.5°)	-5.27/-6.98	-10.85/-11.27	-9.72/-7.62	-6.63/-6.41	-6.5/-5.69	-4.94/-4.71	-4.35/-4.6	-4.92/-5.2	-5.46/-5.27	-5.21/-5.43	-5.28/-5.57	-6.34/-6.58	-5.75/-4.57	-4/-3.93	-4.19/-4.76	-5.45/-5.94	-5.19/-3.99	-4.28/-5.29	-5.68/-5.09	-5.01/-6.21	-6.41/-7.03	-9.46/-14.82	-17.37/-10.99	-5.71/-4.91
0(30°)	-7.97/-7.67	-10.49/-12.14	-11.06/-8.9	-6.9/-7.02	-8.41/-10.08	-9.62/-7.43	-7.74/-10.33	-11.13/-10.33	-8.75/-7.17	-5.52/-4.54	-3.68/-3.27	-3.37/-3.84	-3.89/-3.05	-2.17/-1.93	-2.9/-5.15	-8.13/-9.42	-6.72/-5.12	-5.09/-5.26	-3.73/-3.33	-4.06/-5.91	-9.98/-12.67	-14.75/-18.7	-10.56/-7.62	-6.32/-8.43
0(37.5°)	-12.84/-17.1	-16.46/-15.56	-12.61/-13.02	-17.47/-19.11	-18.08/-14.2	-16.01/-15.4	-11.07/-10.97	-17.67/-19.3	-18.84/-16.37	-17.55/-11.91	-10.84/-13.65	-11.67/-13.4	-13.25/-14.4	-8.25/-9.16	-7.26/-10.8	-8.8/-11.61	-17.25/-18.39	-7.43/-5.53	-5.58/-10.69	-13.82/-10.7	-5.18/-4.15	-5.37/-8.2	-7.84/-6.03	
0(45°)	-16.41/-10.1	-9.51/-14.15	-15.29/-11.93	-14/-16.05	-16.59/-18.35	-18.19/-18.92	-19.05/-18.71	-18.82/-18.87	-17.33/-15.03	-13.91/-15.98	-11.61/-11.68	-7.97/-12.06	-17.45/-6.44	-4.62/-5.06	-4.53/-4.76	-6.23/-5.31	-5.98/-4.22	-3.46/-6.04	-8.14/-8.03	-8.96/-11.76	-13.72/-8.81	-6.39/-6.23	-7.45/-8.3	-9.67/-14.8
0(52.5°)	-18.02/-13.76	-17.09/-17.21	-14.45/-17.06	-18.06/-16.47	-14.32/-12.94	-10.41/-9.14	-10.26/-15.1	-15.66/-10.12	-8.06/-9.03	-9.02/-6.04	-5.98/-10.01	-8.25/-8.18	-12.88/-16.68	-9.72/-11.41	-13.41/-7.19	-5.46/-3.85	-6.08/-6.8	-7.78/-6.79	-8.03/-10.3	-14.3/-18.52	-19.38/-12.87	-12.71/-16.21	-13.3/-16.59	-18.56/-17.13
0(60°)	-9/-8.25	-11.47/-11.44	-11.05/-17.52	-11.1/-12.81	-18.75/-13.95	-10.13/-9.1	-14.08/-14	-13.98/-12.16	-6.79/-5.84	-8.13/-6.76	-6.57/-7.56	-5.26/-4.76	-7.24/-7.9	-8.11/-9.76	-13.58/-9.01	-5.61/-3.73	-5.68/-6.81	-13/-15.26	-19.15/-19.07	-7.93/-4.18	-4.57/-5.45	-8.87/-12.42	-11.2/-14.08	-16.17/-13.84
0(67.5°)	-3.25/-4.24	-5.46/-5.94	-9.04/-11.39	-7.34/-8.96	-13.32/-12.18	-14.05/-16.35	-17.67/-15.55	-11.29/-13.8	-10.64/-8.59	-12.15/-12.91	-9.21/-10.													



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

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°)	-18.05/18.46	-13.93/-11.32	-8.18/-6.45	-5.67/-4.86	-4.49/-4.6	-4.78/-4.77	-4.93/-4.93	-4.94/-5.03	-5.7/-6.6	-7.8/-8.97	-10.82/-13.68	-18.16/-17.63	-18.48/-16.49	-12.76/-9.84	-8.99/-7.85	-7.16/-6.58	-5.72/-4.96	-4.43/-4.2	-4.14/-4.3	-4.35/-4.86	-5.73/-6.9	-8.12/-9.98	-12.97/-17.09	-18.1/-17.35
Θ(7.5°)	-13.4/-12.27	-9.89/-10.67	-9.68/-8.28	-7.17/-6.01	-5.44/-5.05	-4.71/-4.62	-4.63/-4.53	-4.35/-4.31	-4.9/-6.06	-7.08/-7.96	-9.21/-11.08	-12.96/-15.25	-18.95/-18.37	-19.11/-15.38	-12.29/-10.38	-8.76/-7.48	-6.44/-5.57	-4.89/-4.6	-4.64/-4.83	-5.14/-5.99	-7.09/-8.47	-10.16/-13.28	-16.54/-17.48	-16.08/-14.28
Θ(15°)	-8.69/-8.31	-8.21/-8.97	-8.71/-7.96	-6.93/-6.06	-5.37/-4.85	-4.2/-3.61	-3.01/-2.35	-2.09/-1.99	-2.27/-2.8	-4.13/-5.03	-6.53/-8.27	-10.18/-11.89	-13.47/-13.53	-13.04/-11.88	-10.42/-9.92	-9.53/-8.79	-8.14/-7.82	-7.69/-7.67	-7.93/-8.4	-9.11/-10.14	-11.37/-12.89	-15.2/-17.36	-17.29/-13.52	-11.56/-10.18
Θ(22.5°)	-8.5/-8.81	-8.76/-7.82	-6.42/-5.04	-3.75/-3.23	-2.82/-2.35	-2.09/-1.88	-1.37/-0.75	-0.28/-0.03	-0.34/-1.07	-2.2/-3.85	-5.8/-8.51	-10.55/-13	-15.74/-17.95	-17.55/-14.74	-11.86/-10.41	-9.16/-7.78	-6.89/-6.94	-7.85/-9.44	-11.09/-12.27	-12.98/-14.16	-15.81/-16.75	-17.53/-17.11	-14.56/-12.9	-10.94/-10.11
Θ(30°)	-6.37/-5.32	-3.84/-2.83	-2.23/-1.73	-1.17/-0.72	-0.20	-0.33/-0.52	-0.21/0.04	0.34/0.05	-0.77/-2.05	-4.5/-6.59	-9.06/-10.88	-11.71/-12.6	-14.67/-15.6	-16.34/-17.07	-14.31/-12.2	-9.92/-8.23	-7.97/-8.14	-8.9/-10.6	-13.64/-18.64	-17.83/-18.77	-17.58/-17.95	-15.09/-11.11	-8.54/-7.13	-6.62/-6.22
Θ(37.5°)	-8.54/-5.69	-4.07/-3.14	-2.31/-1.26	-0.63/-0.1	0/0.4	-0.69/-0.55	-0.29/0.05	0.17/0.19	-0.47/-2.21	-5.2/-10.64	-19.12/-17.61	-17.42/-12.9	-12.1/-12.06	-12.16/-13.38	-16.15/-14.2	-10.93/-9.66	-8.83/-9.32	-12.58/-18.7	-18.03/-18.1	-18.96/-19.12	-18.55/-19.11	-17.52/-13.27	-11.21/-10.45	-9.61/-8.96
Θ(45°)	-6.8/-4.34	-3.47/-2.36	-0.6/-0.07	-0.02/-0.36	-0.93/-0.99	-0.47/-0.38	-1.17/-2.02	-1.9/-1.42	-1.34/-2.96	-6.36/-9.66	-12.78/-15.38	-13.69/-10.36	-8.67/-8.4	-8.05/-10.14	-13.91/-12.71	-11.31/-8.44	-6.88/-8.42	-12.84/-15.29	-14.61/-13.03	-12.33/-13.85	-17.58/-18.59	-18.95/-17.38	-17.35/-15.05	-10.85/-9.22
Θ(52.5°)	-3.12/-1.65	-1.23/-0.38	-0.4/-1.17	-1.28/-1.59	-1.78/-1.4	-0.83/-0.75	-1.71/-2.9	-3.06/-2.68	-2.3/-3.27	-6.68/-10.12	-13.16/-9	-17.88/-17.41	-12.93/-11.46	-10.39/-10.82	-11.76/-13.51	-14.69/-11.91	-14.8/-17.64	-14.03/-13.08	-13.59/-15.76	-15.13/-15.84	-17.25/-17.45	-15.2/-10.53	-8.02/-7.2	-5.57/-4.4
Θ(60°)	-9.16/-7.06	-5.36/-2.92	-1.54/-0.7	-0.13/0.1	0.04/-0.32	-0.01/0.38	0.29/0.14	-0.55/-0.37	-0.38/-0.67	-2.4/-6.19	-10.42/-14.31	-17.29/-18.75	-17.3/-17.41	-18.77/-18.53	-15.82/-14.79	-12.66/-12.8	-17.95/-14.51	-11.51/-12.7	-15.16/-15.72	-15.45/-19.16	-14.51/-12.5	-11.55/-11.69	-10.16/-11.41	-10.79/-10.73
Θ(67.5°)	-9.72/-7.31	-6.15/-2.23	-4.25/-2.57	-1.08/-0.13	1.13/0.04	0.47/0.92	1.31/0.04	0.56/0.04	-0.19/0.1	0.02/0.81	-3.12/-7.67	-10.61/-11.77	-8.87/-8.79	-8.52/-10.91	-10.99/-12.64	-14.68/-19.37	-18.73/-18.4	-14.06/-12.77	-16.86/-19.51	-18.87/-17.47	-17.2/-18.11	-17.57/-17.71	-15.77/-14.71	-10.36/-14.41
Θ(75°)	-12.21/-10.34	-10.41/-8.51	-7.06/-6.95	-6.04/-4.36	-3.07/-1.79	-0.95/-0.59	-0.74/-0.82	-1.05/-1.05	-0.67/-1.89	-3.82/-7.1	-10.02/-9.59	-7.19/-6.09	-5.66/-5.83	-5.76/-10.03	-11.84/-17.35	-17.83/-18.5	-16.26/-17.98	-17.12/-18.7	-18.41/-18.33	-19.5/-18.1	-19.16/-17.93	-19.29/-18.14	-19.2/-17.83	-18.05/-16.43
Θ(82.5°)	-17.89/-18.45	-16.71/-11.03	-10.2/-11.53	-12.71/-12.3	-10.02/-7.29	-4.1/-1.09	1.2/2	1.39/0.13	-1.82/-3.11	-3.71/-4.86	-8.01/-14.18	-18.71/-17.06	-14.22/-10.34	-7.64/-10.29	-12.54/-17.87	-12.21/-10.15	-10.58/-18.8	-18.79/-17.05	-19.21/-13.94	-12.25/-19.33	-19.07/-13.9	-14.38/-13.53	-15.34/-16.77	-15.65/-16.16
Θ(90°)	-13/-10.55	-11.5/-11.48	-11/-8.71	-5.85/-4.28	-4.2/-4.25	-3.54/-0.53	1.74/2.43	2.87/2.47	1.64/0.98	-0.7/-2.63	-5.79/-11.1	-11.15/-7.49	-6.03/-4.46	-4.6/-6.8	-8.25/-11.28	-18.39/-18.35	-15.08/-15.48	-15.93/-11.12	-15.28/-10.9	-12.24/-18.54	-14.56/-12.7	-15.18/-14.52	-15.42/-18.39	-17.79/-16.42
Θ(97.5°)	-10.16/-8.45	-7.24/-4.71	-3.89/-3.6	-3.84/-2.58	-1.01/-0.18	0.76/1.43	1.68/1.85	1.93/1.52	1.29/0.99	0.73/0.06	-1.25/-4.15	-7.99/-8.41	-7.66/-4.79	-6.94/-13.73	-19.33/-18.53	-15.01/-11.72	-18.35/-11.98	-8.87/-18.95	-14.11/-16.26	-11.53/-14.57	-18.27/-19.86	-15.19/-13.06	-13.27/-13.89	-11.42/-11.68
Θ(105°)	-13.45/-10.95	-8.31/-4.94	-2.65/-1.02	0.09/0.57	0.22/-0.39	-0.54/-0.79	-0.42/0.3	0.6/0.72	0.58/0.28	0.48/0.36	-2.53/-4.72	-7.03/-8.23	-12.85/-12.17	-13.32/-18.25	-18.01/-11.69	-11.18/-16.87	-17.33/-9.5	-7.88/-13.43	-12.53/-13.42	-14.25/-19.04	-18.81/-13.69	-14.35/-13.21	-9.68/-9.72	-11.12/-12.17
Θ(112.5°)	-14.17/-14.58	-12.53/-9.02	-5.32/-2.89	-1.03/0.08	1.04/1.58	1.65/1.64	1.87/2.02	1.95/1.33	0.07/-1.25	-3.66/-10.07	-17.34/-10.19	-9.76/-11.41	-14.09/-15.66	-12.44/-14.38	-17.97/-17.49	-17.21/-19.04	-18.7/-19.15	-13.55/-13.08	-12.31/-15.37	-19/-18.25	-17.95/-18.78	-15.59/-19.02	-12.91/-12.01	-11.21/-11.43
Θ(120°)	-9.13/-9.49	-11.82/-12.73	-9.35/-5.93	-2.78/-1.32	-0.04/0.84	1.97/3.22	3.28/2.73	2.16/1.13	-0.22/-2.28	-6.73/-15.91	-18.65/-17.57	-17.63/-16.8	-18.32/-18.31	-19.04/-18.57	-17.45/-13.95	-17.96/-14.59	-17.97/-14.02	-15.21/-17.34	-17.32/-18.31	-18.71/-15.57	-13.68/-18.59	-18.12/-17.38	-14.95/-11.41	-8.58/-7.61
Θ(127.5°)	-18.74/-11.8	-11.64/-9.47	-6.41/5	-2.82/-1.15	0.57/2.41	3.74/4.31	4.01/3.16	1.91/0.69	-0.04/-1.46	-3.84/-6.95	-7.95/-6.67	-6.1/-7.51	-10.07/-12.16	-10.52/-10.03	-10.59/-18.22	-13.88/-17.43	-11.96/-11.22	-13.24/-17.38	-13.3/-16.05	-10.73/-13.33	-15.42/-17.38	-14.87/-18.24	-13.93/-19.29	-17.86/-18.41
Θ(135°)	-7.43/-7.2	-7.48/-7.87	-5.98/-3.51	-0.77/1.54	2.73/3.34	3.36/2.79	2.0/2	-0.95/-2.56	-3.31/3.86	-4.56/-4.42	-4.48/-5.07	-6.87/-6.59	-7.17/-7.33	-9.31/-14.56	-18.11/-12.84	-11.61/-11.2	-11.05/-19.18	-18.53/-18.8	-17.99/-17.72	-18.53/-17.01	-16.98/-18.11	-9.23/-7.52	-9.18/-11.38	-10.83/-8.77
Θ(142.5°)	-2.81/-1.98	-1.11/0.68	-0.19/-0.29	-0.56/-0.37	-0.03/0.08	-0.16/-0.7	-1.32/-2.28	-3.46/-3.97	-4.33/-5.37	-6.11/-6.27	-4.59/-4.53	-3.95/-4.1	-4.93/-5.3	-13.54/-18.03	-14.21/-12.12	-15.27/-17.24	-17.4/-16.36	-18.4/-17.52	-19.19/-18.03	-15.87/-12.6	-10.45/-10.78	-14.09/-11.67	-8.3/-5.5	-3.89/-3.11
Θ(150°)	-2.37/-1.39	-0.52/-0.08	-0.26/-0.68	-1.1/-1.31	-1.17/-1.07	-0.79/-0.87	-1.28/-1.92	-2.61/-3.27	-4.67/-5.81	-6.47/-6.03	-5.05/-4.88	-5.65/-6.2	-7.36/-9.33	-12/-18.16	-19.14/-17.89	-15.22/-12.71	-12.73/-14.01	-14.08/-14.92	-17.94/-17.31	-17.02/-18.8	-16.83/-14.62	-13.78/-11.78	-8.69/-6.16	-4.06/-2.84
Θ(157.5°)	0.74/0.9	0.68/0.37	0.19/-0.15	-0.71/-1.21	-1.43/-1.24	-1.03/-1.12	-1.71/-2.91	-4.73/-7.13	-10.35/-14.77	-16.8/-11.9	-8.43/-6.8	-6.2/-5.81	-5.46/-4.96	-4.78/-5.4	-6.96/-9.83	-12.21/-12.58	-13.31/-15.11	-18.13/-17.25	-17.75/-16.28	-17.97/-18.73	-18.67/-19.1	-13.37/-8.41	-5.13/-2.77	-0.83/0.13
Θ(165°)	-7.14/-5.65	-4.33/-2.98	-2.19/-2.17	-2.49/-2.69	-2.73/-2.77	-3.18/-4.1	-5.87/-3.37	-11.8/-17.37	-19/-17.88	-15.34/-11.78	-9.25/-7.01	-5.74/-5.14	-5.33/-6.19	-7.55/-7.99	-8.73/-8.29	-7.9/-8.53	-10.83/-15.03	-17.62/-18.5	-18.2/-19.05	-18.58/-19.17	-15.53/-11.13	-9.87/-9.91	-11.43/-12.96	-12.68/-10.12
Θ(172.5°)	-5.3/-4.78	-4.42/-4.11	-4.36/-5.06	-5.46/-5.95	-6.18/-6.79	-7.67/-9.44	-12.56/-17.72	-18.87/-18.14	-14.15/-11.49	-11.39/-13.55	-18.09/-18.84	-18.77/-14.29	-11.39/-9.56	-8.37/-7.69	-7.43/-7.7	-8.75/-10.66	-13.55/-17.39	-17.93/-18.85	-18.67/-17.36	-16.51/-15.88	-14.28/-11.91	-10.35/-8.51	-7.4/-6.81	-6.43/-5.88
Θ(180°)	-7.59/-6.95	-6.01/-6.12	-6.87/-6.56	-10.77/-15.07	-18.7/-19.03	-18.41/-19.16	-17.54/-14.85	-12.76/-11.21	-10.28/-9.58	-8.9/-8.66	-8.84/-9.68	-10.97/-12.23	-13.69/-14.85	-15.87/-17.11	-18.72/-19.33	-18.48/-17.18	-15.73/-15.11	-15.89/-18.68	-18.41/-18.04	-18.19/-18.77	-19.11/-18.82	-16.59/-13.58	-11.59/-10.18	-9.21/-6.02
Freq(Hz)	5.785G/Pol.	Theta/Ant.6																						
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°)	-4.31/-4.12	-3.9/-4.23	-4.93/-5.83	-6.82/-8.04	-9.59/-11.3	-15.4/-19.31	-18.18/-17.61	-16.6/-13.25	-10.49/-8.46	-6.98/-5.95	-5.49/-5.31	-4.86/-4.41	-4.18/-4.37	-4.6/-5.42	-6.03/-6.88	-8.18/-9.82	-12.35/-15.14	-16.57/-17.4	-15.17/-12.18	-10.23/-9.08	-8.23/-7.31	-6.61/-6.21	-5.54/-5.11	-4.95/-4.52
Θ(7.5°)	-7.83/-8.06	-8.21/-8.04	-8.09/-8.48	-9.56/-10.66	-11.39/-13.13	-15.02/-14.49	-14.73/-17.09	-16.29/-13.03	-10.11/-8.46	-7.3/-6.38	-5.64/-5.23	-4.73/-4.11	-3.73/-3.5	-3.61/-4.34	-5.2/-6.42	-7.87/-9.44	-11.53/-14.14	-18.87/-18.31	-18.47/-13.75	-10.75/-9.26	-7.95/-6.84	-6.7/-6.42	-6.39/-6.54	-6.58/-6.89
Θ(15°)	-10.42/-11.9	-12.18/-12.11	-11.81/-11.14	-11.86/-13.04	-13.86/-15.48	-14.31/-12.39	-11.92/-18.74	-13.92/-12.29	-9.41/-7.99	-7.1/-6.42	-5.71/-5.32	-5.06/-5.11	-5.35/-5.34	-5.6/-7.24	-9.44/-9.19	-11.28/-11.28	-14.12/-18.78	-19.97/-19.13	-13.57/-10.5	-9.73/-9.96	-9.71/-9.78	-9.55/-9.1	-9.1	



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta (°)	Phi (°)	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°)	
0(90°)	-7.57/-6.92	-7.78/-10.77	-15.04/-18.25	-18.19/-16.59	-18.58/-19.01	-13.57/-13.41	-11.81/-10.59	-9.88/-10.56	-14.82/-16.83	-17.6/-14.87	-10.93/-11.46	-14.24/-18.17	-19.29/-15.55	-15.09/-19.37	-15.88/-18.47	-17.64/-17.38	-17.92/-13.31	-14.19/-14.73	-12.42/-13.3	-15.64/-11.29	-13.48/-10.82	-8.6/-7.79	-9.36/-11.51	-13.51/-9.17	
0(97.5°)	-9.55/-8.43	-7.87/-8.86	-10.69/-13.14	-15.13/-12.23	-9.47/-7.25	-7.81/-10.18	-11.33/-10.84	-10.4/-11.41	-10.82/-14.12	-18.06/-18.06	-18.39/-17.95	-17.27/-18.51	-18.37/-18.54	-18.34/-18.51	-17.95/-18.05	-18.18/-14.49	-18.63/-18.48	-10.15/-7.37	-8.87/-10.54	-14.57/-12.96	-11.97/-19.27	-15.74/-17.52	-15.74/-17.52	-12.65/-12.38	
0(105°)	-13.19/-19.24	-14.69/-10.87	-6.36/-5.24	-9.09/-8.15	-8.6/-11.94	-18.77/-15.86	-8.28/-4.76	-4.33/-4.86	-6.1/-9.36	-12.83/-13.89	-15.45/-15.75	-14.4/-12.62	-10.94/-9.41	-9.62/-11.03	-11.07/-18.34	-15.64/-11.9	-12.68/-15.21	-10.22/-18.43	-13.01/-12.35	-16.34/-17.5	-17.33/-11.52	-13.45/-16.99	-17.94/-18.54	-16.22/-12.86	-11.42/-13.05
0(112.5°)	-12.14/-14.73	-12.05/-10.96	-9.09/-8.15	-8.6/-11.94	-18.77/-15.86	-8.28/-4.76	-4.33/-4.86	-6.1/-9.36	-12.83/-13.89	-15.45/-15.75	-14.4/-12.62	-10.94/-9.41	-9.62/-11.03	-11.07/-18.34	-15.64/-11.9	-12.68/-15.21	-10.22/-18.43	-13.01/-12.35	-16.34/-17.5	-17.33/-11.52	-13.45/-16.99	-17.94/-18.54	-16.22/-12.86	-11.42/-13.05	
0(120°)	-13.53/-8.78	-6.4/-5.27	-5.65/-7.56	-9.97/-7.08	-4.87/-3.79	-3.57/-3.67	-3.61/-4.09	-4.34/-4.32	-4.66/-5.15	-6.57/-7.96	-9.81/-11.73	-13/-18.42	-19.46/-16.85	-14.71/-16.51	-18.15/-17.08	-16.8/-16.86	-13.57/-18.24	-18.19/-17.79	-13.56/-18.01	-16.86/-17.86	-11.67/-16.57	-16.2/-18.14	-17.63/-17.23	-18.22/-13.85	
0(127.5°)	-12.06/-12.4	-12.8/-12.43	-10.49/-7.63	-4.75/-2.63	-1.05/-0.27	-0.69/-1.27	-1.92/-3.58	-6.25/-7.74	-8.03/-9.44	-11.82/-12.81	-12.05/-14.31	-17.36/-17.35	-15.24/-17.72	-16.16/-11.5	-10.31/-12.59	-17.82/-10.89	-8.42/-14.91	-15.3/-19.45	-14.83/-18.7	-16.81/-17.8	-18.64/-12.97	-12.42/-16.48	-17.56/-17.28	-13/-10.62	
0(135°)	-17.58/-18.65	-15.99/-13.41	-10.58/-8.73	-6.58/-3.87	-1.16/0.71	1.05/0.12	-1.82/-4.3	-6.58/-8.84	-10.33/-10.83	-12.96/-14.08	-13.6/-13.43	-13.46/-10.12	-8.07/-5.04	-6.41/-8.81	-11.26/-10.93	-14.1/-7.41	-4.54/-9.29	-13.6/-19.09	-15.71/-18.34	-18.64/-16.85	-10.45/-15.61	-14.08/-19.33	-18.1/-13.54	-10.87/-13.65	
0(142.5°)	-12.56/-10.96	-8.36/-5.88	-3.71/-2.5	-2.09/-2.36	-2.99/-3.47	-4.58/-7.28	-9.8/-11.7	-16.4/-18.12	-18.85/-17.35	-19.22/-18.37	-15.82/-13.52	-12.01/-12.23	-15.21/-14.32	-14.02/-14.98	-18.75/-18.25	-13.76/-8.26	-9.07/-14.13	-7.86/-13.36	-18.97/-10.53	-6.6/-13.57	-14.66/-15.04	-16.32/-11.6	-7.61/-7.96	-10.34/-12.22	
0(150°)	-6.31/-6.9	-5.77/-3.82	-2.19/-1.42	-1.6/-2.81	-4.56/-5.9	-5.69/-4.77	-5.34/-8.48	-14.26/-18.21	-17.23/-16.56	-18.12/-17.4	-18.85/-18.12	-15.75/-12.5	-10.3/-8.06	-5.85/-5.18	-4.83/-5.04	-7.26/-11.95	-15.63/-16.33	-17.47/-16.35	-14.88/-18.12	-19.01/-15.24	-18.87/-15.78	-7.31/-5	-4.39/-4.14	-4.04/-4.69	
0(157.5°)	-2.47/-2.23	-1.99/-1.89	-2.04/-2.64	-3.4/-4.14	-4.88/-5.39	-5.4/-5	-5.6/-8.02	-12.45/-17.67	-18.05/-16.69	-16.18/-15.49	-12.27/-10.29	-10.15/-8.66	-7.3/-6.48	-6.23/-5.96	-6.26/-7.29	-9.78/-11.58	-12.32/-14.35	-16.62/-16.18	-14.55/-15.32	-18.4/-19	-18.84/-18.75	-9.16/-5.66	-4.23/-3.24	-2.55/-2.45	
0(165°)	-5.94/-6.29	-6.15/-5.57	-4.97/-4.33	-4.16/-4.49	-5/-5.05	-4.79/-4.27	-4.03/-4.79	-6.47/-8.51	-10.06/-11.36	-13.33/-14.25	-15.09/-16.12	-14.45/-12.16	-10.08/-8.6	-8.59/-8.78	-9.06/-9.27	-8.9/-9.29	-10.95/-15.45	-18.08/-18.16	-15.14/-14.37	-14.09/-12.73	-11.38/-11.02	-11.2/-10.56	-9.06/-7.43	-6.54/-5.86	
0(172.5°)	-5.21/-4.5	-4.28/-4.15	-4.68/-5.76	-7.47/-8.84	-9.17/-8.46	-7.62/-6.77	-6.32/-6.75	-8.61/-10.36	-11.91/-13.31	-13.53/-12.92	-12.1/-11.12	-10.73/-11.05	-12.52/-14.91	-17.65/-19.27	-19.15/-18.72	-17.66/-17.96	-18.55/-17.56	-15.09/-13.07	-12.64/-14.4	-17.63/-18.69	-18.87/-19.26	-17.44/-15.93	-13.6/-10.72	-8.44/-6.41	
0(180°)	-16.27/-17.69	-17.96/-15.6	-13.48/-12.17	-12.16/-12.07	-10.97/-10.61	-11.01/-10.68	-10.18/-11.41	-14.37/-15.98	-14.55/-14.3	-14.49/-15.55	-16.82/-18.09	-16.99/-15.93	-14.96/-15.47	-16.25/-16.33	-16.86/-17.61	-17.88/-17.03	-14.2/-11.59	-9.37/-7.97	-7.42/-7.82	-8.73/-9.79	-11.45/-14.15	-15.1/-14.32	-13.65/-14.03	-15.08/-16.3	
Freq(Hz)	5.2G/Pol.	Phi/Ant. 7	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	
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°)	
0(0°)	-8.58/-9.59	-10.73/-11.46	-12.18/-15.96	-18.18/-18.64	-18.96/-17.85	-17.55/-17.72	-14.81/-12.63	-10.98/-9.88	-8.88/-8.24	-7.93/-7.31	-6.65/-5.97	-5.64/-5.76	-6.33/-6.98	-8.23/-9.86	-11.76/-12.84	-13.57/-14.93	-17.2/-19.59	-18.67/-16.01	-13.82/-11.88	-10.72/-9.91	-9.51/-9.09	-8.69/-8.37	-7.92/-7.69	-7.83/-7.75	
0(7.5°)	-6.41/-6.66	-7.48/-9.02	-10.93/-12.9	-15.28/-17.4	-17.62/-18.46	-18.55/-19.32	-16.24/-13.02	-10.81/-9.52	-8.75/-8.43	-8.05/-8.03	-8.01/-8.25	-8.48/-8.64	-8.24/-8.12	-8.52/-9.5	-11.26/-13.51	-16.1/-18.97	-18.81/-18.44	-17.64/-16.75	-17.15/-14.75	-12.74/-14.75	-10.18/-9.08	-8.21/-7.62	-7.07/-6.78	-6.68/-6.43	
0(15°)	-6.2/-6.57	-7.49/-8.93	-9.9/-10.77	-11.83/-12.69	-13.78/-16.25	-19.41/-19.29	-15.5/-12.89	-10.94/-9.58	-8.34/-7.26	-6.63/-6.67	-7.36/-8.44	-9.34/-9.6	-9.15/-8.52	-7.88/-7.76	-8.13/-8.9	-10.42/-12.64	-15.86/-18.62	-17.35/-18.38	-18.75/-17.86	-18.44/-16.33	-14.42/-12.65	-10.95/-9.78	-8.47/-7.5	-6.83/-6.47	
0(22.5°)	-6.83/-7.44	-7.67/-7.89	-8.89/-11.1	-10.05/-11.11	-12.87/-16.23	-17.42/-17.17	-16.88/-13.62	-11.61/-10.21	-9.32/-8.85	-8.78/-8.92	-9.11/-8.97	-8.92/-8.88	-8.47/-8.7	-9.34/-9.63	-9.91/-10.12	-10.72/-11.63	-12.98/-14.56	-16.54/-18.79	-17.89/-18.12	-18.98/-17.62	-17.23/-14.26	-11.36/-9.21	-7.69/-6.65	-6.2/-6.4	
0(30°)	-7.18/-8.16	-9.39/-11.06	-13.21/-14.68	-15.51/-16.42	-18.21/-19.77	-18.27/-18.34	-14.74/-11.03	-8.43/-7.15	-6.81/-7.23	-8.15/-9.09	-9.29/-9.08	-8.98/-9.76	-11.64/-14.24	-15.55/-15.19	-13.95/-12.96	-12.43/-12.8	-14.22/-15.66	-17.03/-15.58	-14.93/-14.81	-17.49/-17.98	-18.53/-14.27	-11.9/-10.39	-8.81/-7.74	-7.13/-7.05	
0(37.5°)	-5.93/-6.69	-7.66/-9.56	-12.37/-16.07	-17.66/-19.03	-18.89/-18.6	-19.32/-18.58	-12.02/-8.31	-6.41/-5.57	-5.63/-6.22	-7.77/-8.75	-9.56/-10.4	-10.48/-12.94	-16.05/-16.86	-13.86/-11.47	-10.36/-10.01	-10.37/-12.3	-14.65/-13.92	-11.71/-11.43	-12.66/-15.12	-17.51/-18.98	-18.12/-17.57	-15.68/-11.03	-8.27/-6.3	-5.45/-2.26	
0(45°)	-6.29/-6.75	-7.51/-8.66	-10.28/-12.25	-13.61/-13.91	-13.92/-13.37	-13.68/-15.09	-12.17/-8.74	-6.52/-5.71	-6.17/-11	-8.67/-9.83	-10.16/-10.08	-12.82/-15.48	-19.35/-18	-18.81/-11.86	-9.82/-10.17	-11.1/-12.34	-13.22/-13.32	-14.79/-16.5	-15.95/-15.65	-15.8/-10.6	-12.89/-8.54	-6.32/-5.31	-5.01/-5.36		
0(52.5°)	-13.25/-13.7	-13.23/-13.72	-11.78/-11.4	-14.48/-14.24	-12.29/-10.54	-9.97/-10.57	-8.88/-7.01	-5.69/-5.35	-6.64/-8.39	-11.44/-14.12	-14.91/-14.17	-12.14/-11.55	-13.34/-16.42	-19.78/-19.09	-17.07/-15.53	-14.43/-17.33	-17.53/-18.38	-19.59/-14.81	-11.67/-13.06	-11.67/-13.06	-12.67/-9.74	-8.25/-7.95	-8.93/-11.57		
0(60°)	-7.62/-7.01	-5.98/-5.71	-6.64/-8.56	-12.27/-18.17	-19.43/-14.75	-12.82/-12.09	-9.22/-6.8	-5.55/-5.19	-6.16/-8.4	-11.56/-15.37	-18.55/-15.98	-12.41/-10.35	-9.84/-10.44	-10.63/-12.12	-13.55/-13.78	-12.81/-13.9	-16.12/-14.67	-12.29/-14.68	-19.39/-13.57	-10.5/-11.17	-16.54/-17.38	-18.5/-17.64	-18.82/-18.7	-17.62/-10.39	
0(67.5°)	-5.38/-4.05	-3.15/-3.41	-3.8/-4.89	-6.62/-9.41	-13.5/-18.38	-17.83/-14.69	-9.16/-5.41	-3.77/-3.65	-4.42/-5.99	-8.99/-13.82	-17.25/-14.24	-12.32/-10.69	-11.76/-12.4	-11.38/-12.06	-12.29/-12.02	-15.12/-18.44	-17.89/-12.48	-13.86/-17.43	-17.42/-17.18	-13.13/-15.32	-19.25/-16.08	-16.22/-18.28	-18.99/-13.61	-9.59/-6.73	
0(75°)	-7.43/-6.72	-5.71/-5.69	-5.75/-6.09	-7.28/-8.69	-10.35/-14.3	-17.42/-13.84	-8.13/-6.17	-5.2/-4.73	-4.95/-5.39	-6.63/-9.04	-12.88/-17.56	-17.88/-15.11	-14.72/-14.08	-11.46/-11.22	-11.13/-12.05	-17.69/-17.97	-15.53/-13.47	-17.35/-18.24	-18.77/-15.39	-18.88/-18.68	-16.33/-13.81	-15.3/-17.29	-15.89/-12.35	-10.29/-9.38	
0(82.5°)	-12.36/-11.3	-9.33/-8.47	-8.09/-9.34	-12.69/-18.05	-18.49/-16.76	-18.42/-17.25	-9.53/-6.88	-6.57/-5.36	-3.72/-3.38	-4.39/-7.49	-13.96/-17.88	-18.17/-18.75	-17.93/-19.15	-17.37/-18.47	-18.8/-18.64	-17.89/-18.95	-18.46/-19.55	-18.37/-17.69	-17.25/-17.72	-15.15/-15.58	-16.36/-18.2	-18.46/-17.6	-18.84/-17.31	-15.72/-13.91	
0(90°)	-15.68/-14.02	-11.2/-9.81	-9.66/-10.26	-12/-14.36	-12.81/-11.8	-13.86/-14.22	-13.8/-11.82	-9.97/-7.6	-4.19/-3.59	-4.96/-7.48	-12.9/-17.3	-18.35/-18.95	-18.79/-18.48	-18.54/-17.84	-18.73/-18.52	-19.27/-19.05	-19.06/-17.38	-18.02/-18.95	-16.18/-15.45	-18.62/-17.48	-18.46/-18.4	-18.49/-18.48	-17.87/-16.86	-15.45/-16.18	
0(97.5°)	-13.38/-10.87	-9.32/-8.31	-7.22/-8.07	-10.46/-11.38	-9.21/-8.15	-9.38/-16.81	-17.71/-12.63	-9.08/-6.62	-5.2/-5.06	-7.82/-15.01	-17.94/-15.7	-14.72/-15.67	-19.31/-18.5	-18.53/-19.4	-17.53/-18.08	-18.93/-17.81	-18.53/-18.96	-14.75/-16.57	-16.3/-16.81	-17.28/-17.97	-19.39/-19.19	-18.68/-18.2	-16.36/-16.05	-13.65/-14.26	
0(105°)	-18.06/-15.51	-13.23/-10.9	-10.57/-10.65	-10.48/-9.59	-7.78/-6.45	-7.04/-11.32	-17.64/-10.64	-7.49/-5	-3.95/-4.67	-7.04/-12.87	-17.98/-18.51	-13.58/-10.72	-9.49/-7.57	-9.18/-10.7	-11.68/-17.76	-17.55/-12.77	-10.76/-15.								



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta (°)	Phi (°)	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°)
0(150°)	-17.06/18.51	-18/17.79	-19.33/18.55	-18.07/18.45	-18.68/18.82	-18.72/18.25	-17.82/17.92	-18.67/17.19	-13.8/11.87	-10.36/8.65	-7.13/6.09	-5.91/6.15	-6.69/8.2	-11.5/13.24	-10.51/9.79	-10.76/12.21	-15.27/17.75	-18.42/17.76	-17.28/17.57	-16.11/13.84	-13.57/15.17	-18.55/18.65	-18.81/19.27	-18.47/17.34
0(157.5°)	-17.17/16.52	-17.04/17.29	-18.39/18.31	-17.16/18.23	-19.02/18.03	-17.34/17.95	-18.11/17.38	-17.52/19.39	-17.9/16.98	-15.46/12.7	-10.53/9.46	-9.71/10.09	-10.08/9.88	-9.8/9.45	-9.92/11.95	-15.74/18.54	-19.04/17.79	-16.73/17.61	-17.71/18.05	-18.29/19.06	-18.5/19.07	-18.48/17.32	-18.75/18.47	-18.85/18.72
0(165°)	-10.63/11.36	-12.59/13.03	-13.85/15.14	-16.86/18.55	-19.2/18.52	-18.34/18.34	-18.25/18.25	-18.95/18.26	-17.74/18.92	-19.19/18.39	-17.24/16.32	-15.89/15.49	-16.04/17.18	-18.48/18.38	-16.12/13.77	-12.69/12.83	-13.97/16	-18.59/18.28	-18.06/18.49	-18.38/18.63	-17.95/18.26	-14.47/12.2	-10.83/10.43	-10.45/10.8
0(172.5°)	-13.08/14.33	-15.44/15.83	-16.07/16.8	-17.65/17.85	-17.84/17.75	-17.92/18.17	-18.38/17.82	-17.28/16.47	-15.89/15.64	-15.99/16.12	-16.14/16.09	-16.03/15.86	-15.86/15.57	-14.94/13.56	-12.3/11.76	-12.27/13.32	-15.52/17.41	-19.17/18.42	-18.13/19.1	-19.2/17.82	-17.38/17.96	-16.19/14.72	-13.55/12.85	-12.69/13.08
0(180°)	-18.09/18.35	-17.73/18.79	-18.87/18.5	-17.8/19.11	-18.62/18.62	-18.92/17.7	-16.97/15.55	-14.25/13.13	-12.44/12.19	-12.5/13.18	-14.3/15.27	-16.21/17.02	-17.25/16.99	-17.32/17.86	-18.01/17.98	-19.04/18.17	-19.42/17.69	-19.17/19.18	-18.41/18.71	-17.98/18.8	-19.09/18.06	-17.59/17.9	-19.03/19.12	-19.36/18.86
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°)
0(0°)	-15.22/14.65	-14.11/11.49	-17.32/12.16	-11.74/11.63	-11.29/10.89	-10.48/10.13	-10.07/10.27	-10.96/11.86	-12.61/13.65	-14.42/15.1	-15.75/16.49	-17.65/18.04	-17.9/16.95	-14.92/13.12	-12.13/10.89	-9.77/9.17	-8.78/8.93	-9.06/9.53	-9.69/9.81	-10.14/10.46	-11.01/11.61	-12.83/13.81	-14.75/15.21	-15.31/15.12
0(7.5°)	-18.21/17.34	-15.34/12.76	-10.95/9.74	-8.86/8.42	-7.92/7.24	-6.82/6.66	-6.74/7.09	-7.71/8.33	-9.18/10.07	-10.71/10.82	-10.65/10.78	-11.24/12.11	-13.28/13.79	-14.3/14.3	-14.33/13.68	-13.18/12.62	-11.94/11.14	-10.94/10.79	-10.6/10.88	-11.23/11.97	-11.02/12.89	-14.05/15.84	-18.28/18.25	-17.89/18.23
0(15°)	-17.14/16.96	-13.37/11.22	-9.99/8.77	-7.58/6.73	-5.84/5.15	-4.87/4.93	-5.11/5.29	-5.36/5.63	-5.83/5.8	-5.85/5.71	-5.75/6.13	-7.23/8.68	-9.63/10.36	-11.12/11.66	-12.25/12.67	-13.15/13.33	-12.9/12.25	-12.09/11.99	-11.77/11.5	-11.38/11.17	-11.44/11.88	-12.58/13.67	-15.08/17.37	-18.32/19.07
0(22.5°)	-13.49/11.65	-9.21/7.78	-7.22/6.74	-6.2/5.82	-5.01/4.37	-3.98/3.52	-3.07/2.52	-2.22/2.04	-1.93/2.14	-2.49/3.01	-3.51/4.01	-4.86/5.75	-6.4/7.5	-8.75/10.36	-12.22/14.04	-14.81/13.84	-12.02/11.42	-11.08/11.33	-11.11/10.56	-10.2/11.18	-11.9/13.69	-15.48/18.54	-18.22/19.15	-18.17/15.75
0(30°)	-9.42/7.65	-6.35/5.35	-4.51/4.16	-3.81/3.86	-3.65/3.45	-2.84/1.96	-1.32/0.98	-0.72/0.41	-0.21/0.31	-0.56/1.28	-2.2/3.19	-4.33/5.47	-6.91/8.5	-10.16/10.97	-11.08/11.79	-12.66/12.9	-12.97/13.67	-14.3/15.63	-15.69/16	-16.99/17.98	-17.77/17.93	-17.79/17.72	-17.6/19.61	-14.95/11.46
0(37.5°)	-5.17/3.91	-3.11/2.42	-2.09/2.21	-2.25/2.57	-2.4/1.99	-1.15/0.45	0.01/0.09	-0.1/0.23	-0.01/0.05	-0.18/0.73	-1.61/2.8	-3.81/4.93	-6.47/8.05	-8.67/8.26	-7.91/8.91	-9.71/10.85	-14.57/18.33	-18.1/17.56	-18.35/18.16	-18.65/17.2	-17.86/18.77	-18.56/18.37	-18.81/14.4	-9.97/6.86
0(45°)	-2.52/1.32	-0.21/0.6	0.97/0.66	0.05/1	-2.08/1.2	-0.66/0.83	1.71/1.73	1.2/0.74	0.77/0.89	0.86/0.59	-0.08/1.21	-2.39/3.59	-4.7/6.18	-7.54/7.96	-7.73/8.42	-8.57/9.41	-12.23/16.34	-18.59/17.17	-14.73/15.97	-17.93/18.75	-18.35/17.64	-18.49/18.32	-11.92/8.69	-6.53/4.04
0(52.5°)	-1.95/0.48	1.03/2.08	2.69/2.69	2.28/1.35	0.18/0.68	-0.08/1.5	2.49/2.4	1.61/1.28	1.74/2.12	1.89/1.09	0.19/0.8	-1.93/3.06	-4.29/5.94	-7.22/7.5	-7.79/7.95	-8.58/9.72	-11.43/13.25	-15.11/17.52	-18.88/17.82	-17.73/18.52	-19.2/18.83	-15.95/11.84	-9.03/6.79	-4.97/3.02
0(60°)	-3.49/0.27	-0.07/1.54	2.83/4.99	3.52/2.92	1.74/0.47	0.72/1.75	2.66/2.63	1.53/0.36	0.67/1.57	1.88/1.43	0.58/0.51	-2.17/3.88	-5.75/7.7	-8.7/9.08	-8.05/8.45	-11.03/13.25	-15.09/13.49	-14.8/17.37	-17.86/17.77	-18.42/17.62	-18.6/19.26	-13.38/9.37	-6.67/5.68	-4.83/4.12
0(67.5°)	-3.97/2.84	-1/0.4	2.01/2.86	3.22/3.06	2.48/1.35	1.29/2.05	2.72/3.35	1.34/0.76	0.91/3.2	1.48/1.06	0.5/0.1	-1.51/3.79	-6.77/10.17	-11.68/11.95	-10.32/11.07	-10.55/10.45	-10.76/12.94	-16.9/17.31	-14.71/13.66	-15.29/18.12	-18.9/15.62	-12.37/9.3	-6.96/5.85	-5.55/4.43
0(75°)	-4.22/2.57	-1.06/0.07	0.91/4.4	1.91/9.1	1.43/1.08	1.48/1.95	2.28/2.3	1.64/0.91	0.6/0.13	0.06/0.77	0.8/0.07	-1.81/4.34	-6.29/8.3	-8.31/7.09	-7.58/8.28	-10.21/12.28	-18.84/12.71	-9.15/11.77	-18.6/19.2	-13.7/18.42	-18.16/12.26	-8.29/8.36	-8.25/8.44	-7.84/6.1
0(82.5°)	-4.89/2.56	-0.29/0.99	1.82/1.72	0.79/1.1	-1.9/0.4	1.86/3	2.78/1.7	1.18/0.73	-0.26/1.07	-0.81/0.86	1.78/1.11	-0.49/3.24	-0.65/7.52	-8.07/7.78	-8.79/10.17	-10.92/13.24	-14.84/13.75	-10.81/12.64	-16.85/19.12	-14.45/17.11	-18.84/12.28	-9.39/8.43	-9.22/10.73	-10.96/8.72
0(90°)	-3.45/1.83	0.17/1.21	1.93/1.72	0.71/2.45	-7.18/2.27	1.98/3.28	2.94/1.51	0.02/0.18	-0.32/0.82	-0.87/0.37	1.79/1.95	1.36/0.9	-2.76/6.12	-7.84/8.18	-9.39/10.11	-12.7/10.22	-12.97/13.99	-13.58/16.72	-11.87/14.21	-18.59/16.87	-11.39/11.41	-11.39/11.41	-9.97/6.01	-9.97/6.01
0(97.5°)	-4.45/2.54	-0.39/1.1	2.03/1.9	0.33/4.42	-10.75/3.05	1.29/2.53	1.2/0.92	-0.53/0.63	0.9/0.31	-0.74/0.35	0.61/0.41	-0.23/2.36	-3.7/6.3	-8.82/9.84	-12.2/17.22	-14.44/10.84	-8.65/11.5	-14.3/19.02	-18.21/18.83	-12/14.83	-19.3/17.86	-17.04/17.92	-15.85/11.42	-8.76/5.93
0(105°)	-6.34/3.66	-1.99/0.69	0.12/0.3	-2.22/4.44	-8.12/9.97	1.57/1.75	0.07/2.45	-1.1/1.22	1.74/1.45	-0.08/1.31	-1.33/0.98	-0.8/1.49	-2.03/3.89	-5.89/7.12	-9.73/15.27	-19.14/12.72	-10.84/10.8	-15.81/18.74	-18.06/16.67	-18.46/18.83	-18.75/18.72	-17.81/17.52	-10.41/7.55	-10.41/7.55
0(112.5°)	-8.22/6.62	-3.8/2.34	-1.84/2.37	-4.11/5.93	-3.26/2.23	1.89/1.75	-0.44/2.9	-2.28/0.01	1.39/1.14	-0.07/1.25	-2.19/1.97	-2.21/2.58	-3.55/5.63	-7.76/10.57	-9.56/9.42	-10.88/17.58	-14.55/14.73	-13.57/17.96	-18.91/18.22	-18.07/19.45	-18.43/17.83	-16.82/15.85	-15.78/14.53	-13.39/11.34
0(120°)	-10.59/8.3	-6.52/5.28	-4.26/3.68	-3.31/2.97	-2.11/0.84	-0.33/0.51	-1.72/2.37	-1.47/0.28	0.3/0.26	0.07/0.53	-1.03/1.7	-2.65/2.77	-3.8/3.95	-6.14/7.99	-8.12/10.81	-17.52/15.91	-18.88/13.22	-16.79/16.51	-15.79/15.21	-15.29/19.36	-16.19/17.68	-17.66/18.22	-15.92/14.57	-14.26/13.22
0(127.5°)	-11.74/10.52	-9.7/7.62	-5.95/4.56	-2.96/2.13	-2.14/2.93	-4.79/5.84	-4.1/2.44	-1.22/0.77	-0.97/1.14	-1.63/2.19	-2.47/3.47	-3.8/4.98	-7/8.24	-11.78/11.71	-9.15/10.49	-11.98/17.15	-14.22/18.41	-16.42/14.82	-18.44/16.86	-13.1/17.57	-13.83/18.14	-16.39/19.36	-16.28/14.86	-12.55/12.54
0(135°)	-7.23/6.28	-6.39/5.79	-5.36/5.05	-4.41/4.12	-4.32/3.59	-7.5/9.48	-6.46/3.52	-2.19/1.97	-2.41/3.53	-4.65/4.86	-5.27/5.95	-6.26/8.76	-11.09/12.52	-14.54/12.64	-11.35/13.4	-16.66/16.27	-13.41/19.29	-15.8/18.18	-15.78/18.91	-18.02/18.18	-12.18/11.26	-13.79/16.13	-13.47/11.41	-10.47/8.74
0(142.5°)	-11.41/11.6	-11.34/9.93	-9.32/9.28	-10.03/12.22	-14.09/16.1	-18.06/13.49	-8.5/5.13	-3.48/3.38	-4.7/6.75	-7.89/8.3	-9.04/9.83	-11.48/12.34	-10.53/10.52	-11.75/13.02	-13/13.47	-15.68/16.82	-18.66/17.87	-16.19/18.7	-19.33/18.2	-17.62/18.7	-18.32/15.39	-12.2/10.69	-9.48/8.81	-9.98/11.55
0(150°)	-8.24/8.24	-8.16/8.04	-8.25/8.99	-10.04/11.33	-12.54/14.23	-15.92/15.94	-12.77/10.55	-9.86/10.3	-11.72/13.6	-15.84/16.39	-14.77/13.31	-12.91/12.23	-11.86/12.74	-14.81/14.2	-12.1/12.62	-15.88/18.39	-18.27/18.22	-18.53/18.52	-19.17/18.3	-19.01/18.05	-18.08/18.69	-19.11/12.85	-10.55/9.64	-8.78/8.15
0(157.5°)	-9.57/10.9	-11.92/12.93	-11.92/12.58	-13.58/14.91	-16.18/19	-17.42/19.04	-16.97/16.37	-16.73/13.46	-12.02/11.17	-11.02/11.2	-11.31/11.54	-14.1/11.1	-10.96/12.3	-13.85/14.4	-14.6/15.6	-15.61/19.44	-18.82/18.81	-17.08/16.12	-17.89/17.53	-19.15/18.25	-18.02/18.46	-17.61/14.71	-10.84/9.45	-8.8/8.53
0(165°)	-9.79/9.96	-9.92/9.86	-9.53/9.97	-10.65/11.73	-12.95/14.68	-17.07/18.03	-19.17/19.3	-18.1/18.62	-18.68/18.37	-18.08/18.27	-18.19/18.2	-18.42/18.99	-18.18/18.54	-17.87/18.68	-18.18/17.93	-19.09/19.05	-18.93/15.73	-12.59/11.12	-11.1/12.35	-13.76/14.9	-16.7/19.06	-18.81/18.77	-16.03/12.84	-11.08/10.01
0(172.5°)	-15.46/16.74	-18.03/18.33	-18.79/19.17	-18.43/18.26	-17.88/18.46	-19.44/17.94	-18.94/18.74	-18.77/17.94	-16.45/15.43	-14.02/13.41														



Radiated Composite Gain Data <2.4GHz and 5GHz U-NII 1~U-NII 4>

Appendix A

Theta	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(15°)	-8.87/-8.48	-8.44/-9.05	-9.08/-9.49	-8.42/-8.78	-9.19/-9.56	-10.26/-10.99	-12.04/-12.88	-13.44/-13.18	-12.24/-10.51	-9.2/-8.25	-7.87/-7.45	-6.87/-6.39	-6.22/-6.33	-6.72/-7.12	-7.92/-8.75	-9.15/-9.74	-10.69/-11.83	-13.4/-16.14	-18.99/-19.07	-18.02/-17.76	-18.54/-19.11	-18.2/-15.68	-14.3/-12.9	-11.26/-9.58
Theta(22.5°)	-7.28/-7.63	-8.12/-8.84	-10.37/-11.51	-11.68/-12.18	-13.04/-12.76	-12.45/-11.89	-11.27/-11.36	-11.77/-12.31	-11.99/-11.53	-10.96/-11.15	-11.63/-11.92	-12.06/-12.46	-12.89/-13.22	-12.11/-10.5	-9.6/-9.17	-8.89/-9.29	-10.99/-13.38	-15.87/-17.68	-19.14/-18.6	-19.09/-19.1	-18.67/-15.62	-12.24/-9.86	-8.43/-7.75	-7.65/-7.38
Theta(30°)	-4.75/-5.03	-5.43/-5.32	-5.89/-7.09	-6.89/-11.1	-15.36/-17.64	-19.17/-17.56	-14.12/-11.51	-9.93/-9.39	-9.57/-9.99	-10.93/-12.27	-13.96/-15.04	-15.8/-15.7	-15.91/-16.9	-16.77/-16.03	-15.14/-14.15	-11.11/-9.45	-10.58/-13.91	-19.19/-18.1	-14.95/-13.73	-13.23/-14.21	-16.98/-16.94	-13.82/-10.82	-8.52/-6.79	-5.71/-4.81
Theta(37.5°)	-9.97/-10.0	-10.38/-8.81	-7.49/-7.86	-8.8/-9.98	-13.28/-18.35	-19.18/-18.73	-13.16/-9.82	-7.97/-7.6	-8.63/-10.31	-12.06/-14.22	-17.89/-17.81	-17.67/-17.38	-13.76/-12.42	-12.62/-13.41	-15.29/-16.65	-11.69/-9.61	-9.69/-11.2	-14.2/-19.39	-14.03/-10.96	-11.19/-12.93	-13.87/-13.19	-11.79/-10.3	-8.89/-8.19	-9.37/-10.34
Theta(45°)	-19.31/-18.93	-19.33/-14.62	-10.77/-9.97	-10.3/-11	-12.38/-15.44	-17.32/-14.11	-10.9/-9.3	-8.66/-8.22	-8.76/-11.08	-14.17/-16.67	-18.58/-18.04	-19.11/-19.1	-17.37/-15.31	-15.2/-14.99	-16.57/-19.23	-16.66/-15.39	-13.16/-13.58	-18.58/-19.13	-15.11/-12.09	-10.44/-10.8	-14.74/-15.41	-14.1/-15.02	-15.12/-13.6	-12.13/-14.55
Theta(52.5°)	-7.95/-10.7	-15.25/-18.61	-18.85/-17.21	-15.88/-17.16	-18.04/-18.21	-18.15/-18.32	-12.61/-10.29	-10.18/-10.93	-11.84/-14.17	-18.97/-19	-18.54/-16.66	-16.26/-14.48	-15.38/-14.69	-14.35/-16.66	-18.96/-17.21	-19.32/-13.09	-12/-13.79	-18.89/-18.47	-14.82/-12.32	-17.04/-18.75	-16.77/-12.71	-11.23/-10.36	-7.71/-6.01	-5.9/-6.53
Theta(60°)	-12.25/-18.04	-19.01/-18.22	-18.91/-17.93	-18.49/-18.61	-18.41/-18.74	-18.74/-19.24	-17.3/-16.21	-16.98/-18.83	-18.44/-19.22	-18.35/-17.54	-18.61/-17.84	-18.64/-16.38	-16.1/-17.72	-17.86/-19.01	-18.42/-17.7	-18.93/-19.34	-13.41/-15.7	-17.65/-18.67	-16.8/-17.62	-18.05/-13.19	-9.33/-8.87	-9.06/-8.02	-8.59/-8.55	-9.29/-10.82
Theta(67.5°)	-17.27/-13.13	-15.61/-14.35	-12.72/-12.52	-14.77/-17.52	-17.2/-18.52	-17.61/-18.52	-15.65/-15.24	-17.21/-17.59	-18.5/-18.9	-18.55/-18.41	-15.4/-12.6	-11.85/-11.78	-12.15/-12.74	-12.12/-12.77	-14.03/-18.33	-17.64/-18.59	-15.11/-14.35	-18.4/-14.64	-16.48/-17.3	-15.81/-11.23	-10.96/-11.95	-12.84/-14.27	-13.49/-16.68	-18.78/-19.34
Theta(75°)	-14.21/-13.13	-11.21/-10.33	-9.32/-9.62	-11.69/-17.31	-18.77/-18.3	-18.26/-18.61	-13.53/-12.55	-16.08/-18.17	-18.25/-18.02	-15.87/-13.8	-13.16/-12.86	-12.68/-14.65	-13.86/-14.19	-13.98/-13.69	-15.32/-18.03	-19.4/-18.38	-18.48/-19.15	-19.59/-17.76	-12.85/-12.19	-10.59/-16.95	-14.81/-15.76	-18.15/-18.57	-17.34/-17.97	-18.91/-15.67
Theta(82.5°)	-16.26/-11.4	-8.64/-7.28	-7.48/-8.33	-11.23/-19.02	-18.37/-17.99	-17.94/-19.16	-18.54/-17.78	-15.68/-10.38	-9.52/-13.19	-17.75/-11.44	-9.51/-9.99	-10.22/-11.39	-12.59/-12.87	-17.15/-17.76	-17.56/-17.56	-13.62/-14.2	-18.08/-13.93	-11.81/-13.37	-18.2/-13.05	-12.72/-14.28	-17.94/-17.71	-16.82/-14.82	-17.23/-17.55	-18.72/-17.87
Theta(90°)	-16.31/-12.46	-9.7/-7.81	-6.49/-6.76	-9.42/-15.34	-18.32/-15.86	-16.64/-17.74	-14.67/-15.02	-10.76/-6.44	-6.23/-8.03	-11.16/-11.92	-9.4/-9.71	-9.89/-10.99	-12.4/-15.11	-17.66/-14.02	-13.25/-16.02	-17.78/-16.54	-18.96/-16.78	-8.92/-10.4	-17.4/-17.89	-12.73/-11.28	-15.04/-19.07	-19.05/-16.29	-16.19/-16.9	-17.83/-18.59
Theta(97.5°)	-16.08/-12.5	-9.51/-7.93	-7.8/-8.73	-11.44/-18.27	-17.51/-14.33	-13.31/-13.85	-14.64/-12.04	-8.28/-5.31	-5.21/-7.06	-6.52/-6.08	-5.37/-6.3	-8.4/-10.44	-10.66/-10.89	-11.96/-12.87	-14.15/-17.75	-13.95/-10.84	-12.73/-17.29	-13.56/-14.83	-13.65/-17.71	-15.91/-18.29	-18.86/-17.53	-17.74/-18.23	-17.28/-17.87	-17.58/-18.21
Theta(105°)	-14.72/-13.1	-12.08/-11.09	-11.36/-14.34	-19.2/-15.36	-9.81/-7.06	-7.8/-13.12	-15/-10.99	-6.29/-3.95	-4.69/-5.33	-5.7/-4.39	-3.09/-3.48	-4.49/-5.86	-7.08/-7.72	-9.35/-9.63	-9.82/-11	-18.07/-14.14	-12.17/-14.99	-12.46/-18.79	-17.78/-19.3	-10.52/-17.7	-18.22/-17.3	-18.31/-18.99	-18.89/-18.79	-18.74/-18.32
Theta(112.5°)	-17.36/-14.1	-12.13/-13	-15.56/-14.01	-10.39/-6.79	-5.27/-6.1	-9.11/-12.49	-15.04/-17.85	-8.98/-4.23	-2.88/-4.26	-5.53/-5.29	-4.86/-4.9	-5.8/-7.29	-8.5/-8.52	-10.36/-11.92	-14.78/-18.34	-15.23/-12.33	-14.57/-12.62	-9.23/-10.5	-17.22/-19.18	-15.68/-18.52	-17.88/-14.17	-16.26/-19.47	-17.66/-19.02	-18.6/-18.83
Theta(120°)	-15.58/-15.03	-16.59/-17.71	-18.59/-17.45	-9.85/-5.91	-4.66/-5.21	-7.97/-17.99	-17.87/-17.61	-18.03/-11.91	-7.77/-5.68	-5.86/-7.72	-9.38/-12.16	-11.46/-10.67	-11.22/-11.28	-14.09/-11.29	-8.61/-7.88	-13.56/-11.97	-14.71/-14.39	-13.84/-14.29	-15.68/-16.5	-15.34/-11.48	-18.71/-14.46	-15.85/-17.94	-17.93/-16.2	-14.89/-19.05
Theta(127.5°)	-18.05/-16.68	-17.89/-18.47	-15.95/-11.01	-8.21/-7.13	-6.2/-7.13	-10.54/-15.09	-17.93/-19.13	-16.21/-12.74	-10.32/-9.73	-10.05/-10.43	-12.39/-14.18	-16.64/-18.41	-16.73/-13.45	-11.4/-13.52	-17.15/-18.95	-18.45/-18.06	-13.12/-18.71	-9.48/-13.34	-18.57/-17.04	-18.62/-15.26	-18.24/-16.92	-17.16/-15.23	-17.88/-18.4	-18.81/-18.8
Theta(135°)	-18.19/-18.12	-17.68/-18.46	-15.92/-14.28	-11.83/-11.22	-12.53/-14.91	-17.1/-18.7	-17.82/-18.23	-18.33/-18.51	-18.16/-17.03	-14.79/-13.29	-11.76/-11.35	-12.54/-16.17	-17.84/-18.33	-17.19/-18.3	-15.27/-17.51	-15.57/-14.56	-18.11/-11.64	-12.81/-18.44	-14.64/-18.05	-16.63/-10.96	-16.63/-17.93	-17.75/-13.37	-10.64/-9.46	-9.93/-13.67
Theta(142.5°)	-13.67/-11.9	-11.01/-10.68	-10.26/-9.77	-9.53/-9.7	-11.24/-13.79	-16.49/-17.02	-17.16/-17.3	-18.28/-15.33	-14.81/-16.1	-16.75/-15.35	-12.66/-11.17	-10.19/-9.65	-10.63/-13.05	-14.42/-18.6	-17.86/-14.55	-12.35/-18.52	-17.42/-13.92	-17.64/-17.12	-18.78/-17.87	-19.06/-17.96	-19.29/-19.06	-17.83/-15.18	-13.33/-11.27	-11.66/-13.68
Theta(150°)	-11.55/-12.0	-13.5/-16.69	-17.08/-19.13	-18.7/-19.6	-19.08/-17.7	-18.48/-16.69	-17.82/-17.92	-18.75/-18.13	-16.85/-16.7	-17.73/-18.53	-15.82/-12.72	-10.25/-8.37	-7.35/-7.26	-8.47/-10.73	-12.25/-12.59	-12.89/-17.02	-18.02/-17.5	-19.41/-18.82	-18.29/-18.43	-18.61/-15.68	-14.61/-16.53	-19.24/-15.56	-12.86/-11.17	-10.39/-10.88
Theta(157.5°)	-18.42/-17.31	-18.26/-17.48	-19.31/-17.6	-18.91/-17.66	-17.96/-18.33	-18.46/-18.39	-18.8/-17.7	-18.99/-14.47	-12.63/-12.02	-12.43/-12.33	-10.46/-8.51	-7.17/-6.12	-5.36/-5.29	-6.39/-7.11	-6.63/-6.74	-8.52/-12.52	-19.36/-19.01	-18.92/-14.52	-14.19/-14.56	-13.77/-12.05	-11.17/-11.83	-14.85/-15.27	-13.01/-11.5	-11.92/-13.35
Theta(165°)	-11.25/-11.4	-12.36/-13.51	-15.25/-17.15	-18.08/-18.54	-16.93/-15.73	-15.31/-15.69	-18.68/-18.15	-18.53/-16.01	-13.43/-12.6	-12.56/-13.23	-13.77/-13.56	-13.22/-11.98	-11.12/-11.04	-11.51/-10.83	-10.28/-10.79	-13.12/-17.08	-19.04/-18.54	-17.36/-15.95	-15.15/-16.09	-16.42/-15.38	-13.79/-12.4	-11.51/-10.62	-9.85/-9.86	-10.19/-10.93
Theta(172.5°)	-18.82/-17.33	-18.45/-18.63	-18.73/-18.84	-17.09/-18.04	-17.79/-18.87	-19.14/-17.32	-18.83/-18.61	-19.03/-18.64	-18.37/-17.45	-17.81/-19.42	-19.31/-16.54	-13.5/-10.76	-9.3/-8.7	-9.35/-11.72	-16.43/-17.48	-16.02/-14.6	-14.79/-16.28	-18.02/-18.4	-17.16/-17.54	-17.28/-18.99	-18.95/-19.12	-18.19/-18.15	-18.2/-17.85	-18.38/-17.57
Theta(180°)	-17.74/-16.72	-16.03/-15.53	-16.33/-18.41	-18.7/-18.25	-18.09/-18.67	-19.33/-18.43	-17.62/-18.77	-18.59/-17.3	-16.38/-16.12	-16.13/-16.46	-16.78/-17.33	-18.49/-17.2	-17.79/-17.72	-19.53/-18.31	-18.59/-18.45	-18.94/-18.42	-18.37/-19.03	-18.03/-17.58	-18.96/-18.47	-18.76/-19.08	-17.78/-16.89	-16.9/-17.69	-18.88/-18.39	-18.55/-18.1
Freq(Hz)	5.785G/Pol.	Theta/Ant. 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-12.89/-14.38	-15.71/-17.39	-10.73/-9.93	-8.2/-7.16	-6.42/-5.74	-5.1/-4.75	-4.62/-4.77	-4.88/-5.01	-5.17/-5.31	-5.57/-6.1	-6.94/-8.19	-9.94/-12.46	-15.84/-18.61	-18.23/-16.33	-13.53/-11.1	-8.88/-7.27	-6.06/-5.48	-4.87/-4.32	-4.01/-3.87	-3.87/-3.81	-3.96/-4.43	-5.04/-5.95	-7.33/-9.03	-10.6/-11.95
Theta(7.5°)	-15.3/-16.9	-17.26/-17.12	-14.91/-11.98	-9.57/-8.27	-7.14/-5.61	-4.48/-3.82	-3.38/-3.14	-3.11/-3.37	-3.62/-3.8	-4.16/-4.79	-5.69/-6.9	-8.2/-9.42	-10.45/-11.64	-12.05/-11.21	-9.99/-8.47	-7.32/-6.51	-6.13/-5.9	-5.41/-5.04	-4.9/-5.05	-5.26/-5.47	-5.78/-6.32	-7.8/-8.24	-9.7/-11.6	-13.8/-14.73
Theta(15°)	-12.02/-11.9	-10.48/-10.15	-9.87/-9.39	-8.91/-8.24	-6.89/-5.22	-4.27/-3.45	-2.77/-2.37	-2.27/-2.15	-2.29/-2.53	-3.06/-3.66	-4.41/-5.07	-5.63/-6.04	-6.72/-7.57	-8.58/-8.99	-9.04/-8.57	-7.91/-7.23	-6.85/-6.52	-6.19/-6.04	-6.2/-6.6	-7.58/-8.56	-9.62/-10.06	-10.61/-11.55	-12.6/-13.94	-13.46/-12.68
Theta(22.5°)	-10.14/-8.2	-7.09/-6.01	-5.35/-5.05	-4.55/-4.39	-3.86/-3.38	-3.2/-2.44	-1.85/-1.48	-1.25/-1.29	-1.52/-1.97	-2.66/-3.57	-4.54/-5.38	-6.15/-7.09	-7.97/-8.72	-8.77/-8.67	-9.12/-9.48	-9.37/-8.72	-7.98/-7.67	-7.74/-8.02	-8.62/-9.57	-10.75/-11.74	-12.91/-15.19	-18.6/-18.74	-19.09/-16.83	-12.31/-10.94
Theta(30°)	-7.02/-6.44	-5.6/-4.44	-3.4/-2.82	-2.16/-1.86	-1.82/-1.78	-1.55/-1.1	-0.79/-0.76	-0.85/-1.1	-1.39/-1.89	-2.77/-3.74	-4.37/-4.58	-5.41/-6.6												