



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

Appendix A

Frequency (MHz)	Theta (deg)	Phi (deg)	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°)			
5.785GHz	0°	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		
	0°	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	2.43/2.57	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	
	0°	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/-7.35	-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		
	0°	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		
	0°	30°	0.76/0.58	0.36/0.15	-0.04/-0.04	0.11/-0.04	-0.65/-1.81	-4.17/-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		
	0°	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		
	0°	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	0.68/0.24			
	0°	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		
	0°	60°	-0.26/-1.1	-3.12/-3.72	-4.1/-5.3	-5.7/-4.97	-4.93/-6.25	-8.6/-10.6	-9.15/-6.21	-3.59/-2.3	-1.9/-1.76	-1.19/-0.26	-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	0.60/3.7	1.13/1.36	0.67/-0.57			
	0°	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°	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	-1.74/-1.82	-0.74/-1.13	-1.25/-0.41	0.51/1.02	1.87/1.44	0.52/-0.43	0.51/1.38	0.78/-1.35			
	0°	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	-3.67/-2.93	-2.76/-2.14	-0.85/-0.64	-0.66/-0.29	-1.75/-1.82	1.25/0.28	0.56/0.52	2.53/1.1	-0.26/0.93	-0.97/-0.54	-1.16/4.48			
	0°	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		
	0°	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			
	0°	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	-2.38/1.29	0.78/0.66	-0.74/0.56	-2.38/-1.73	0.8/-1.44	-1.83/-3.22			
	0°	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		
0°	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			
0°	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			
0°	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			
0°	142.5°	-2.69/-5.42	-2.94/-1.67	-2.93/-2.89	-5.29/-4.41	-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	-3.67/-2.93	-2.76/-2.14	-0.85/-0.64	-0.66/-0.29	-1.75/-1.82	1.25/0.28	0.56/0.52	2.53/1.1	-0.26/0.93	-0.97/-0.54	-1.16/4.48				
0°	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			
0°	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			
0°	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			
0°	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			
0°	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			
5.785GHz	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi	Phi		
5.785GHz	0°	0°	-8.5/-7.85	-6.01/-4.28	-3.08/-1.75	-0.32/0.65	1.46/2.29	2.51/2.64	2.74/2.7	2.35/1.84	1.19/0.58	-0.13/-1.17	-2.68/-4.93	-7.84/-10.01	-11.23/-10.2	-7.56/-5.25	-3.49/-2.31	-1.39/-0.5	0.22/1.02	1.51/1.69	1.73/1.67	1.52/1.03	0.72/0.07	-1.37/-3.06	-4.19/-5.14	-5.98/8		
	0°	7.5°	-9.93/-9.11	-6.55/-4.82	-3.49/-2.61	-1.48/-0.71	0.12/1.03	1.39/1.48	1.56/1.48	1.38/1.04	0.42/0.2	-1.03/-2.04	-3.39/-5.23	-6.36/-7.7	-7.15/-6.24	-4.74/-2.67	-1.13/-0.02	0.95/1.81	2.53/3.06	3.3/3.39	3.32/3.08	2.82/2.21	1.55/0.78	-0.42/-1.84	-3.32/-5.72	-7.64/-9.16		
	0°	15°	-10.25/-7.8	-5.31/-3.08	-1.11/-0.13	0.71/1.19	1.45/1.74	2.08/2.43	2.74/2.67	2.57/2.18	1.67/0.91	-0.2/-1.42	-2.83/-4.47	-5.2/-5.69	-5.81/-5.58	-4.55/-2.73	-1.16/0.16	1.12/2.05	2.76/3.33	3.66/3.87	3.88/3.52	2.95/2.19	1.52/0.7	-0.31/-1.46	-2.84/-9.1	-7.26/-9.46		
	0°	22.5°	-6.08/-3.92	-3.57/-2.62	-1.5/-1.32	-0.67/0.13	0.95/1.02	0.98/1.28	1.76/1.96	2.1/8.3	1.34/0.5	-0.35/-1.46	-2.91/-4.35	-5.54/-6.6	-6.66/-6.17	-4.69/-2.78	-1.21/-0.08	0.74/1.47	2.18/2.91	3.44/3.72	3.69/3.54	3.31/2.72	1.89/0.97	-0.33/-1.24	-2.56/-4.48	-6.65/-7.45		
	0°	30°	-5.66/-3.1	-4.03/-3.46	-3.11/-1.91	-0.67/0.02	0.20/2.9	0.25/0.37	0.24/0.36	0.68/0.81	0.62/0.07	-0.29/-1.02	-2.18/-3.55	-4.43/-4.83	-5.09/-4.72	-3.78/-2.74	-1.65/-0.12	1.14/2.3	3.11/3.76	4.02/3.87	3.36/2.64	2.15/1.95	1.61/0.77	-0.22/-0.64	-1.29/-2.14	-3.41/-4.29		
	0°	37.5°	-6.01/-6.77	-4.6/-3.69	-3.44/-2.65	-1.99/-1.47	-1.08/-0.55	0.07/0.2	0.77/0.68	-0.02/0.67	-1.18/-1.8	-2.43/-2.57	-2.92/-															



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/-4.93	-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	-2.61/-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/-2.36	-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	2.94/3.03	3.02/2.2	1.23/0.73	-0.22/-0.21	-1.83/-1.94	-2.29/-1.76	-2.21/-0.89	-0.20/0.86	1.53/1.45	0.42/0.28	
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/-5.99	-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	2.49/1.93	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/-1.18	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	0.03/-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/-3.52	-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	-4.61/6.31	-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/-4.99	-3.97/-4.13	-3.34/-4.11	-4.42/-5.14	-5.51/5.98	-6.54/7.43	-6.33/-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	-4.62/2.28	-3.9/-3.38	-1.66/-2.28	-2.79/4.79	-4.26/4.26	-6.88/5.95	-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
Theta(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	-1.82/0.31	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	-4.87/5.28	1.99/2.47	3.01/3.47	3.46/2.74	1.41/0.31	1.72/-0.75	-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	-7.68/0.95	-9.14/7.48	-4.77/2.44	-1.18/0.34	0.47								



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/-6.63	-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	-0.30/0.01	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/-6.58	-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	-1.71/-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	0.15/0.01	-0.11/-0.64	-1.4/-2.53	-4.31/-4.82	-4.98/-6	-5.64/-4.85	-5.77/-6.36	-5.73/-7.45	-5.83/-4.7	-4.96/-5.4	-5.35/-6.54	-6.98/-5.04	-2.98/-0.7	-1.53/-0.77	-0.23/-0.31	1.38/1.8	0.02/-1.03	-0.51/-0.98	-1.48/-3.9	-4.62/-3.69	-1.54/-3.74
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	-6.61/-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	-5.7/-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/-2.49	-2.44/-1.32																				



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	-2.23/-2.31	-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	-1.22/-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	-3.1/-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/-8.33	-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/-1.03	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	-1.9/-3.64	-6.74/-8.06	-6.17/-4.82	-4.92/-3.14	-2.88/-5.27	-5.11/-3.53	-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°)	-5.47/-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	-6.4/-7.82	-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	-1.62/-1.71	-6.19/-5.98	-7.2/-6.17	-6.46/-6.87	-4.85/-3.04	-4.82/-5.58	-4.18/-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
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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/-6.1	-7/-5.4	-5.6/-5.46	-6.98/-8.49	-7.14/-5.56	-5.33/-6.17	-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	0.76/0.02	-0.78/-2.15	-3.56/-4.33	-4.79/-5.78	-6.02/-6.15	-5.81/-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	2.72/2.8	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	-3.72/-5.67	-2.97/-5.36	-6.18/-5.22	-6.43/-6.51	-4.77/-6.1	-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	1.72/2.69	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/-2.4	-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/-5.06	-5.99/-7.02	-7.54/-9.73	-7.6/-5.59	-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

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(52.5°)	-0.45/-1.13	-1.29/-1.3	-0.83/-1.02	-1.46/-1.26	-2.1/-3.25	-3.01/-3.72	-4.1/-4.31	-3.58/-1.67	-0.35/0.21	0.71/0.48	-0.22/-0.1	-0.78/-1.1	-0.04/0.74	0.54/-0.18	-0.83/-1.84	-3.11/-3.93	-3.58/-3.11	-3.3/-3.2	-4.02/-3.52	-2.27/0.85	-1.57/0.68	0.91/5.2	2.28/2.56	1.53/0.11
0(60°)	-1.21/-2.09	-3.56/-4.38	-2.93/-2.38	-2.11/-1.95	-3.08/-4.86	-6.82/-8.9	-8.41/-8.23	-5.67/-3.3	-1.86/-0.29	0.34/0.64	-0.40/0.27	-1.19/-2.47	-1.16/-0.09	-0.11/0.82	-1.07/-1.76	-2.74/-3.38	-3.3/2.04	-0.71/-0.3	-0.78/-1.08	-0.31/0.85	1.57/0.68	0.31/0.27	1.82/2.17	0.88/-0.63
0(67.5°)	-0.87/-1.79	-2.69/-2.72	-3.11/-4.01	-2.61/-2.63	-4.91/-6.94	-7.97/-7.34	-6.69/-5.92	-4.67/-3.16	-2.06/-0.8	-0.94/-0.93	-1.51/-2.07	-2.27/-2.86	-1.7/-2.04	-3.09/-3.78	-4.24/-3.56	-2.37/-1.87	-2.14/-2.57	-2.54/-2.77	-1.33/-0.13	-1.27/2.22	2.23/1.65	1/0.49	1.32/0.1	0.86/-1.1
0(75°)	-0.53/-0.97	-2.5/-2.2	-3.77/-5.68	-3.82/-3.81	-6.26/-6.05	-5.25/-5.01	-5.02/-5.5	-5.01/-3.24	-1.79/-0.91	-0.47/-0.74	-0.43/-2	-1.14/-2.43	-1.21/-1.16	-1.81/-3.64	-4.26/-3.01	-1.91/-0.73	-2.38/-2.9	-1.49/-0.37	-0.56/2.8	2.17/2.28	3.66/3.23	1.85/1.13	0.63/1.21	0.46/-1.16
0(82.5°)	-1.01/-0.71	-1.79/-1.85	-2.67/-3.71	-3.1/-6.17	-9.53/-7.95	-4.19/-3.34	-3.47/-4.71	-6.69/-6.41	-3.44/-2.04	-2.34/-2.54	-2.56/-3.29	-4.33/-5.66	-2.94/-2.43	-3.99/-4.35	-2.72/-1.89	0.40/0.77	-1.83/-1.7	0.57/-0.59	-0.19/0.96	2.99/2.86	2.04/1.29	0.1/-0.2	0.33/-0.13	-1.3/-2.1
0(90°)	-0.47/-1.83	-3.66/-3.94	-3.1/-2.54	-1.21/-4.04	-5.95/-5.1	-4.39/-5.09	-4.84/-5.49	-6.03/-5.65	-5.23/-5.77	-5.53/-3.54	-4.42/-4.8	-8/-9.28	-9.05/-4.86	-5.39/-6.96	-4.58/-4.95	-3.82/-2.44	-3.28/-2.54	-0.04/-1.38	-1.52/0.15	1.26/1.95	1.5/1.1	0.2/-0.18	0.26/0.99	0.17/-0.56
0(97.5°)	-0.77/-2.04	-3.48/-2.36	-2.45/-2.72	-1.51/-4.55	-5.85/-5.03	-5.26/-6.46	-4.66/-4.64	-6.03/-4.54	-4.03/-4.18	-4.83/-3.1	-4.19/-3.97	-7.22/-8.23	-7.6/-11	-6.25/-5.7	-3.43/-4.64	-2.01/-1.81	-3.27/-0.76	0.79/-2.69	-3.07/-0.64	2.01/2.26	2.05/2.27	-1.96/-1.77	0.06/-0.41	-1.29/-2.5
0(105°)	-3.69/-3.97	-5.01/-3.32	-0.76/-0.13	-0.21/-3.57	-4.88/-5.79	-4.91/-3.55	-3.84/-3.91	-4.17/-5.43	-6.04/-5.31	-3.71/-2.75	-3.94/-2.88	-6.17/-5.5	-4.75/-4.49	-6.75/-9.07	-6.98/-4.48	-3.3/-1.95	-2.36/0.19	1.42/-2.19	-2.96/1.03	1.89/2.66	1.03/-0.96	-2.14/-0.12	1.15/-0.16	-2.89/-3.07
0(112.5°)	-4.4/-5.2	-3.15/-1.52	0.04/0.16	0.41/-1.13	-4.02/-2.27	-1.17/-0.72	-0.82/-1.02	-1.37/-4.05	-6.38/-6.73	-8.37/-7.14	-6.26/-4.62	-6.21/-5.68	-5.07/-7.06	-7.38/-10.8	-8.72/-7.09	-3.6/-4.31	-6.05/-2.36	0.1/-2.6	-1.91/0.74	0.47/0.7	-1.22/-1.85	-3.53/-1.36	-0.04/-0.61	-3.22/-3.21
0(120°)	-0.12/-1.66	-0.46/-0.82	-1.3/-1.97	-4.11/-4.97	-3.97/-3.52	-2.97/-2.25	-1.85/-1.88	-2.21/-3.16	-3.5/-3.65	-4.68/-5.28	-5.84/-5.83	-5.37/-5.28	-2.8/-3.96	-4.62/-4.49	-6.64/-3.93	-2.15/-6.07	-1.9/-0.35	-0.04/-2.52	-4.66/-3.07	-1.94/-0.26	-2.32/-4.76	-5.69/-2.04	0.43/0.33	-1.85/-1.5
0(127.5°)	-0.07/-1.88	-1.4/-1.18	-3.69/-4.98	-5.86/-6.18	-3.45/-2.69	-2.8/-4.71	-5.9/-5.11	-4.06/-3.53	-2.3/-2.44	-3.17/-3.7	-4.62/-5.9	-7.14/-6.07	-4.46/-6.52	-5.92/-5.37	-9.47/-3.96	-3.21/-7.44	-2.81/-0.9	-1.77/-5.97	-5.64/-1.61	-0.76/0.79	0.02/-3.95	-6.89/-4.94	-2.83/-2.35	-2.55/-1.6
0(135°)	-5.17/-6.18	-7.57/-6.67	-5.3/-5.41	-4.82/-3.85	-3.29/-3.88	-6.87/-9.88	-9.5/-9.49	-5.99/-3.17	-2.75/-3.23	-2.77/-2.45	-2.99/-2.48	-3/-6.25	-6.74/-6.52	-5.05/-9.1	-8.07/-6.9	-3.57/-3.65	-2.58/0.25	-0.17/-4.06	-4.15/-1.43	-1.42/-2.47	-0.99/-2.44	-4.97/-3.59	-2.42/-4.86	-3.52/-2.89
0(142.5°)	-1.36/-4.53	-2.48/-0.99	-1.64/-2.37	-2.82/-3.39	-4.09/-5.04	-4.36/-4.12	-5.08/-5.54	-4.23/-4.04	-5.67/-6.67	-6.41/-5.76	-6.13/-7.23	-6.51/-5.06	-3.86/-4.22	-4.23/-4.8	-5.49/-5.9	-6.99/-8.17	-4.58/-1.61	-1.52/-3.37	-3.86/-2.48	-1.69/-3.27	-5.18/-1.95	-0.82/-0.98	-0.68/-0.7	-1.21/-1.15
0(150°)	-3.73/-2.78	-2.57/-2.84	-2.03/-1.44	-1.42/-1.88	-2.51/-4.36	-6.09/-6.13	-5.12/-3.96	-3.48/-4.94	-5.78/-4.94	-3.49/-2.42	-2.01/-2.05	-2.5/-1.57	-1.73/-3.43	-4.92/-5.54	-6.78/-7.06	-7.41/-10.48	-8.05/-5.75	-6.02/-7.17	-7.08/-6.78	-4.84/-3.43	-4.44/-7.47	-6.15/-6.02	-6.53/-7.23	-5.17/-4.68
0(157.5°)	-0.12/-0.71	-1.48/-1.95	-1.59/-0.68	-0.26/-0.54	-1.5/-2.7	-3.91/-4.68	-4.41/-4.25	-4.47/-5.28	-6.43/-6.9	-6.24/-4.86	-3.38/-1.96	-0.79/-0.48	-0.78/-0.72	-0.48/-0.52	-0.92/-1.56	-2.99/-5.27	-6.23/-6.35	-6.46/-4.99	-3.82/-4.06	-5.35/-4.55	-3.42/-3.44	-3.98/-4.5	-5.33/-3.94	-1.63/-0.28
0(165°)	-1.57/-1.45	-0.98/-0.59	0.06/0.62	0.71/0.13	-0.84/-2.14	-3.8/-5.81	-7.81/-9.54	-12.09/-11.61	-9.15/-7.05	-5.3/-4.07	-3.16/-2.68	-2.51/-2.44	-2.42/-2.81	-3.37/-4.08	-4.71/-4.99	-4.93/-5.48	-5.31/-5.39	-5.71/-6.13	-6.22/-5.62	-4.92/-3.72	-2.33/-1.44	-0.98/-1.09	-1.12/-1.29	-1.41/-1.66
0(172.5°)	-1.8/-1.19	-0.97/-1.24	-1.94/-2.92	-3.75/-4.75	-6.04/-7.07	-8.55/-10.91	-12.13/-12.11	-11.33/-9.05	-7.47/-6.67	-5.82/-4.9	-4.18/-3.97	-4.12/-4.56	-4.74/-4.62	-4.21/-3.81	-3.71/-4.03	-4.58/-4.74	-4.88/-5.4	-5.65/-5.94	-5.86/-5.59	-6.17/-6.68	-6.71/-5.87	-5.61/-5.57	-5.68/-5.37	-4.24/-3.11
0(180°)	-3.7/-3.74	-4.04/-4.83	-5.64/-6.83	-7.33/-8.61	-9.36/-9.71	-9.63/-8.35	-7.17/-6.05	-5.18/-4.48	-3.82/-3.27	-2.93/-2.58	-2.55/-2.28	-2.02/-2.02	-2.14/-2.4	-2.83/-3.37	-4.08/-5	-5.98/-6.57	-7.39/-7.9	-7.83/-7.55	-7.07/-6.33	-5.89/-5.65	-5.36/-5.23	-5.33/-6.05	-5.64/-4.75	-3.81/-3.66
5.6G/Pol.	Phi	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(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°)	-4.91/-3.42	-2.01/0.94	-0.18/0.4	1/1.58	2.17/2.54	2.76/2.68	2.48/2.31	2.11/1.85	1.36/0.85	0.03/0.89	-2.06/-3.47	-4.8/-5.41	-4.95/-3.85	-2.61/-1.39	-0.58/0.09	0.74/1.25	1.71/2.16	2.4/2.33	2.16/2.02	1.81/1.45	0.93/0.4	-0.56/-1.61	-2.73/-3.68	-4.2/-4.97
0(7.5°)	-5.17/-3.99	-2.36/-1.43	-0.69/0.09	0.41/0.74	1.18/1.62	2.02/2.17	2.15/1.86	1.51/1.3	0.63/0.29	-0.3/-0.99	-1.8/-2.73	-3.71/-4.4	-4.28/-3.7	-2.67/-1.6	-0.63/0.2	0.94/1.52	2.07/2.43	2.65/2.68	2.54/2.32	1.89/1.31	0.73/0.05	-1.07/-1.9	-3.22/-4.9	-6.1/-6.37
0(15°)	-7.43/-5.41	-3.33/-1.33	-0.10/0.99	1.41/1.69	1.97/2.04	2.01/2.33	2.46/2.5	2.48/2.15	1.71/1.25	0.89/0.5	0.01/0.67	-1.52/-2.73	-3.81/-4.19	-3.56/-2.33	-1.2/-0.37	2.12/2.26	2.7/2.71	3.12/3.22	3.03/2.64	1.59/1.52	0.62/0.33	-1.44/-2.64	-4.23/-6.17	-7.08/-7.74
0(22.5°)	-4.7/-5.41	-4/-2.41	-1.16/-0.55	-0.34/0.18	0.98/1.38	1.99/2.4	2.45/2.68	2.63/2.47	2.22/1.83	1.31/0.86	0.11/0.86	-2.21/-3.78	-4.84/-4.66	-3.57/-2.27	-0.98/-0.13	0.78/1.61	2.4/2.86	3.01/2.87	2.46/2.04	1.52/0.75	-0.05/-0.83	-1.74/-2.56	-3.43/-4.56	-5.53/-6.93
0(30°)	-4.51/-3.26	-2.04/-1	-0.18/0.2	0.71/1.46	2.06/2.36	3.06/3.29	3.04/3.07	2.87/2.64	2.31/1.71	0.9/0.08	-1.13/-2.2	-3.12/-4.72	-6.58/-8.22	-9.36/-8.38	-6.1/-3.1	-0.45/-1.6	1.87/2.11	2.49/2.79	2.9/2.67	1.91/0.76	-0.57/-2.08	-3.4/-4.6	-5.86/-6.87	-6.22/-5.42
0(37.5°)	-1.9/-1.41	-0.78/-0.44	-0.10/0.22	1.26/1.85	2.56/3.05	3.35/3.51	3.87/3.97	3.51/3.03	2.45/1.7	1.17/0.36	-0.78/-2.17	-3.22/-4.83	-7.43/-9.14	-9.08/-7.87	-5.26/-2.55	-0.71/0.21	0.59/1.39	2.36/3.18	3.35/2.85	1.97/0.47	-1.42/-2.79	-3.82/-4.58	-5.77/-6.05	-4.58/-3.4
0(45°)	-4.34/-3.29	-2.36/-1.54	-0.21/0.05	2.12/2.74	3.49/4.02	3.93/3.73	3.65/3.85	3.99/3.77	3.43/2.45	1.49/0.57	-0.24/-1.66	-3.19/-5.14	-6.62/-7.12	-6.69/-6.87	-7.01/-5.99	-4.7/-3.26	-2.42/-1.44	-0.26/0.59	0.83/0.52	-0.85/-2.84	-3.48/-4.01	-3.43/-2.94	-3.11/-4.08	-4.44/-4.64
0(52.5°)	-5.22/-4.07	-3.1/-2.07	-0.85/-0.21	0.24/1.1	2.76/3.65	3.93/4.06	3.8/3.54	3.55/3.71	3.41/1.98	0.26/-1.3	-1.07/-2.29	-3.7/-4.57	-5.01/-5.12	-4.49/-4.45	-4.01/-3.15	-2.91/-2.77	-2.58/-1.68	-1.15/-0.68	-1.16/-2.29	-2.62/-2.08	-2.37/-2.47	-2.84/-3.81	-4.1/-5.09	-9.6/-7.39
0(60°)	-8.22/-6.88	-3.91/-2.42	-1.13/-0.05	1.46/2.42	3.06/3.8	4.17/4.04	3.35/2.57	2.49/2.74	2.49/1.16	0.17/0.65	-0.41/-1.02	-2.01/-4.09	-6.63/-5.15	-3.42/-3.19	-3.79/-3.46	-4.23/-1.61	-1.03/-0.7	-0.69/-0.98	-1.14/-4.5	-2.23/-2.39	-2.42/-3.6	-4.85/-5.98	-6.31/-7.25	-9.01/-11.16
0(67.5°)	-7.76/-5.95	-4.17/-2.02	-0.51/0.55	1.53/2.4	3.64/3.91	3.44/2.77	2.61/2.37	1.24/0.15	-0.47/-1.03	-0.49/-1	-2.94/-0.99	-6.15/-4.64	-3.66/-3.65	-3.29/-4.32	-4.33/-2.05	-1.32/-1.08	-0.68/-1.21	-1.48/-1.28	-1.37/-2	-2.81/-3.75	-4.98/-6.17	-6.61/-7.57	-7.39/-7.9	-10.42/-9.9
0(75°)	-7.13/-6	-3.87/-3.55	-2.67/-1.36	0.27/1.42	2.72/3.23	2.94/2.43	1.7/0.5	-0.11/-0.82	-0.31/0.39	0.53/0.19	-1.51/-2.54	-3.78/-5.01	-5.63/-4.9	-3.17/-3.66	-3.78/-6.03	-5.56/-3.25	-2.25/-1.64	-0.46/-0.69	-0.87/-0.52	-1.17/-3.61	-5.19/-5.01	-5.28/-7.13	-9.25/-9.51	-7.39/-9.79
0(82.5°)	-6.11/-6.88	-5.77/-3.15	-1.63/-0.23	0.72/1.4	1.83/2.04	1.88/1.66	0.95/0.06	-0.17/1.04	1.96/1.87	0.94/1.33	-3.73/-5.34	-6.47/-6.23	-4.92/-2.72	-4.17/-5.67	-5.74/-5.63	-2.15/-0.15	-1.11/-1.8	-0.83/-0.78	-0.31/0.38	0.17/-1.99	-3.33/-3.92	-3.95/-5.88	-7.97/-9.18	-8.83/-6.93
0(90°)	-3.34/-3.																							



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	-2.8/-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	2.95/2.59	2.15/1.96	0.96/0.16	-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	0.67/0.7	0.62/0.09	-0.6/-2.01	-2.54/-1.87	-1.98/-1.11	-0.07/0.72	1.35/1.76	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	1.54/0.48	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/-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/-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	-7.75/9.62	-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	-12.8/12.21	-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	-6.32/7.96	-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/14.4	Theta/18.53	Theta/17.63	Theta/12.46/9.98	Theta/7.4/5.19	Theta/4.52/4.89	Theta/6.26/7.97	Theta/9.32/8.84	Theta/8.31/7.88	Theta/8.05/8.67	Theta/10.77/13.92	Theta/16.83/17.08	Theta/15.34/13.1	Theta/10.5/8.82	Theta/8.28/9.06	Theta/11.46/14.01	Theta/15.97/16.24	Theta/14.75/13.05	Theta/12.69/13.3	Theta/15.34/15.93	Theta/16.75/18.53	Theta/18.34/17.25	Theta/16.1/15.55	Theta/15.59/15.78
Theta(30°)	-14.99/14.44	-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(37.5°)	-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	-18.88/19.1
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°)	-17.43/17.41	-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°)	-10.89/12.92	-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	-1.0/0.64	-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	-9/7.95	-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	-																					



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

Appendix A

Table with columns for Freq(Hz), Phi(Ant. 3), Gain, and various frequency bands (e.g., O(45), O(52.5), O(60), O(67.5), O(75), O(82.5), O(90), O(97.5), O(105), O(112.5), O(120), O(127.5), O(135), O(142.5), O(150), O(157.5), O(165), O(172.5), O(180), O(187.5), O(195), O(202.5), O(210), O(217.5), O(225), O(232.5), O(240), O(247.5), O(255), O(262.5), O(270), O(277.5), O(285), O(292.5), O(300), O(307.5), O(315), O(322.5), O(330), O(337.5), O(345)).



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

Appendix A

Table with columns for frequency (MHz), antenna type (Theta/Ant. 3), and gain (dBi) for various U-NII bands (7.5, 82.5, 90, 97.5, 105, 112.5, 120, 127.5, 135, 142.5, 150, 157.5, 165, 172.5, 180, 187.5, 195, 202.5, 210, 217.5, 225, 232.5, 240, 247.5, 255, 262.5, 270, 277.5, 285, 292.5, 300, 307.5, 315, 322.5, 330, 337.5, 345). Each cell contains a numerical gain value.



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

Appendix A

Table with columns for Frequency (MHz), Gain, and various antenna configurations (Theta/Ant. 4, Phi/Ant. 4, etc.) for frequencies from 172.5 to 180 MHz.



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/-19.92	-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/-18.9	-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°)	-16.59/-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		



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

Appendix A

Theta	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	225	235	245	255	265	275	285	295	305	315	325	335	345	355																	
Theta	35	45	55	65	75	85	95	105	115	125	135	145	155	165	175	185	195	205	215	225	235	245	255	265	275	285	295	305	315	325	335	345	355																	
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°)	Phi(355°)	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°)	Phi(355°)
0(180°)	-18.71/18.25	-18.66/18.68	-18.38/18.29	-18.12/18	-17.81/17.28	-17.41/17.84	-18.21/19	-18.32/18.59	-18.62/18.46	-18.02/18.54	-19.11/18.87	-19.05/18.47	-17.79/18.52	-17.36/17.19	-18.01/17.99	-18.58/17.55	-18.1/19.27	-18.09/18.35	-17.77/18.43	-18.38/19.05	-18.71/18.16	-18.02/19.11	-18.14/18.21	-18.79/17.62	0(0°)	0.25/0.2	0.04/0.3	-0.73/1.16	-1.67/2.38	-3.44/4.95	-6.89/9.12	-11.91/14.24	-12.98/9.89	-7.25/5.29	-3.7/2.64	-1.85/1.31	-0.83/0.35	-0.08/0.07	-0.26/0.46	-0.74/1.14	-1.79/2.77	-3.99/5.43	-7.33/9.36	-11.07/11.81	-11.21/9.02	-6.73/5.29	-4.01/2.84	-1.9/1.15	-0.44/0.06	
0(180°)	-18.71/18.25	-18.66/18.68	-18.38/18.29	-18.12/18	-17.81/17.28	-17.41/17.84	-18.21/19	-18.32/18.59	-18.62/18.46	-18.02/18.54	-19.11/18.87	-19.05/18.47	-17.79/18.52	-17.36/17.19	-18.01/17.99	-18.58/17.55	-18.1/19.27	-18.09/18.35	-17.77/18.43	-18.38/19.05	-18.71/18.16	-18.02/19.11	-18.14/18.21	-18.79/17.62	0(0°)	0.25/0.2	0.04/0.3	-0.73/1.16	-1.67/2.38	-3.44/4.95	-6.89/9.12	-11.91/14.24	-12.98/9.89	-7.25/5.29	-3.7/2.64	-1.85/1.31	-0.83/0.35	-0.08/0.07	-0.26/0.46	-0.74/1.14	-1.79/2.77	-3.99/5.43	-7.33/9.36	-11.07/11.81	-11.21/9.02	-6.73/5.29	-4.01/2.84	-1.9/1.15	-0.44/0.06	
0(180°)	-18.71/18.25	-18.66/18.68	-18.38/18.29	-18.12/18	-17.81/17.28	-17.41/17.84	-18.21/19	-18.32/18.59	-18.62/18.46	-18.02/18.54	-19.11/18.87	-19.05/18.47	-17.79/18.52	-17.36/17.19	-18.01/17.99	-18.58/17.55	-18.1/19.27	-18.09/18.35	-17.77/18.43	-18.38/19.05	-18.71/18.16	-18.02/19.11	-18.14/18.21	-18.79/17.62	0(0°)	0.25/0.2	0.04/0.3	-0.73/1.16	-1.67/2.38	-3.44/4.95	-6.89/9.12	-11.91/14.24	-12.98/9.89	-7.25/5.29	-3.7/2.64	-1.85/1.31	-0.83/0.35	-0.08/0.07	-0.26/0.46	-0.74/1.14	-1.79/2.77	-3.99/5.43	-7.33/9.36	-11.07/11.81	-11.21/9.02	-6.73/5.29	-4.01/2.84	-1.9/1.15	-0.44/0.06	
0(180°)	-18.71/18.25	-18.66/18.68	-18.38/18.29	-18.12/18	-17.81/17.28	-17.41/17.84	-18.21/19	-18.32/18.59	-18.62/18.46	-18.02/18.54	-19.11/18.87	-19.05/18.47	-17.79/18.52	-17.36/17.19	-18.01/17.99	-18.58/17.55	-18.1/19.27	-18.09/18.35	-17.77/18.43	-18.38/19.05	-18.71/18.16	-18.02/19.11	-18.14/18.21	-18.79/17.62	0(0°)	0.25/0.2	0.04/0.3	-0.73/1.16	-1.67/2.38	-3.44/4.95	-6.89/9.12	-11.91/14.24	-12.98/9.89	-7.25/5.29	-3.7/2.64	-1.85/1.31	-0.83/0.35	-0.08/0.07	-0.26/0.46	-0.74/1.14	-1.79/2.77	-3.99/5.43	-7.33/9.36	-11.07/11.81	-11.21/9.02	-6.73/5.29	-4.01/2.84	-1.9/1.15	-0.44/0.06	
0(180°)	-18.71/18.25	-18.66/18.68	-18.38/18.29	-18.12/18	-17.81/17.28	-17.41/17.84	-18.21/19	-18.32/18.59	-18.62/18.46	-18.02/18.54	-19.11/18.87	-19.05/18.47	-17.79/18.52	-17.36/17.19	-18.01/17.99	-18.58/17.55	-18.1/19.27	-18.09/18.35	-17.77/18.43	-18.38/19.05	-18.71/18.16	-18.02/19.11	-18.14/18.21	-18.79/17.62	0(0°)	0.25/0.2	0.04/0.3	-0.73/1.16	-1.67/2.38	-3.44/4.95	-6.89/9.12	-11.91/14.24	-12.98/9.89	-7.25/5.29	-3.7/2.64	-1.85/1.31	-0.83/0.35	-0.08/0.07	-0.26/0.46	-0.74/1.14	-1.79/2.77	-3.99/5.43	-7.33/9.36	-11.07/11.81	-11.21/9.02	-6.73/5.29	-4.01/2.84	-1.9/1.15	-0.44/0.06	



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

Appendix A

Theta/Ant. 5	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(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
Theta(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
Theta(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
Theta(67.5°)	-9.02/-16.27	-17.83/-13.82	-7.13/-6.74	-9.46/-13.05	-13.31/-14.12	-16.77/-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
Theta(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/-13.3	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
Theta(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
Theta(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	-15.7/-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/-2.9	0.24/-5.73	-8.41/-5.04	-3.6/-5.8	-7.53/-6.76	-6.25/-5.09
Theta(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	
Theta(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	-0.87/-2.39	-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/-6.01
Theta(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
Theta(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
Theta(127.5°)	-5.43/-10.6	-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
Theta(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	-11.5/-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
Theta(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
Theta(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
Theta(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
Theta(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
Theta(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
Theta(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)	5.885G/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°)
Theta(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
Theta(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
Theta(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
Theta(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
Theta(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
Theta(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	-8.88/-8.59	-7.43/-5.53	-5.58/-10.69	-13.82/-10.7	-5.18/-4.15	-5.37/-6.2	-7.84/-6.03
Theta(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
Theta(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/-8.79	-8.03/-10.3	-14.3/-18.52	-19.38/-12.87	-12.71/-16.21	-13.3/-16.59	-18.56/-17.13
Theta(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	-8.79/-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		



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°)
Φ(60°)	-15.59/-12.05	-18.08/-17.57	-14.16/-18.86	-15.03/-18.76	-15.01/-10.44	-7.5/-8.46	-17.62/-13.24	-12.84/-12.85	-9.28/-8.72	-11.2/-9.92	-6.05/-7.45	-4.75/-6.06	-8.25/-5.96	-6.31/-7.93	-9.07/-11.23	-9.78/-6.91	-8.24/-5.02	-4.91/-8.26	-7.72/-12.94	-14.16/-8.67	-6.73/-5.38	-7.59/-8.96	-6.86/-9.22	-14.87/-18.8
Φ(67.5°)	-4.07/-4.71	-5.54/-4.26	-6.74/-11.83	-8.88/-11.06	-13.12/-13.79	-16.61/-15.88	-18.13/-17.33	-10.95/-12.35	-11.61/-9.43	-9.98/-13.42	-14.61/-14.65	-11.29/-6.88	-9.71/-7.84	-7.53/-9.58	-8.91/-10.17	-11.31/-9.06	-12.39/-8.29	-18.97/-13.19	-15.1/-8.44	-7.01/-5.09	-3.09/-3.54	-3.85/-4.6	-8.6/-15.68	-10.73/-5.03
Φ(75°)	-4.39/-5.82	-4.66/-4.64	-7.77/-8.46	-11.4/-15.09	-18.25/-11.21	-13.08/-13.52	-10.84/-16.6	-16.18/-12.41	-14.79/-12.04	-16.93/-18.38	-15.4/-10.5	-8.8/-7.62	-6.22/-9.61	-7.79/-12.63	-14.47/-17.97	-13.41/-15.42	-12.91/-11.08	-14.27/-10.93	-7.49/-4.87	-4.41/-7.54	-8.74/-18.45	-11.67/-5.67	-6.24/-7.71	-6.9/-4.92
Φ(82.5°)	-16.02/-18.76	-18.94/-14.05	-18.13/-18.5	-17.51/-18.72	-18.05/-17.86	-13.85/-10.5	-9.9/-9.68	-15.18/-16.99	-18.61/-13.99	-7.73/-6.4	-8.03/-10.6	-12.53/-13.94	-9.42/-8.82	-7.44/-8.7	-12.09/-18.77	-14.7/-18.28	-11.13/-8.82	-10.73/-14.31	-15.09/-5.92	-5.49/-4.87	-4.41/-10.46	-16.82/-18.14	-13.39/-9.54	-12.34/-14.27
Φ(90°)	-16.25/-13.44	-8.43/-9.17	-11.36/-9.28	-7.29/-6.31	-7.11/-12.29	-17.94/-18.76	-16.13/-13.03	-12.62/-11.81	-14.2/-15.01	-16.54/-18.06	-17.63/-15.75	-11.41/-10.09	-9.01/-13.57	-10.82/-12.99	-11.1/-13.56	-14.74/-17.24	-15.83/-9.32	-10.11/-12.46	-16.48/-4.44	-4.39/-7.42	-5.62/-12.18	-14.95/-8.66	-9.95/-10.42	-12.64/-16.84
Φ(97.5°)	-16.72/-17.16	-18.99/-14.34	-12.91/-12.03	-11.73/-9.21	-9.72/-8.16	-13.67/-17.45	-17.28/-15.32	-8.87/-8.58	-9.43/-15.22	-17.58/-17.97	-19.28/-17.98	-17.96/-14.59	-14.53/-17.22	-17.96/-16.95	-18.44/-12.36	-18.57/-8.25	-7.14/-5.02	-8.18/-6.12	-12.28/-7.71	-5.68/-7.06	-7.8/-17.74	-13.15/-7.47	-9.95/-11.18	-8.63/-11.86
Φ(105°)	-10.62/-4.18	-11.76/-15.59	-13.34/-17.31	-18.25/-14.29	-15.08/-15.37	-12.78/-16.44	-14.54/-12.49	-13.75/-14.09	-13.68/-14.99	-18.89/-10.67	-8.89/-11.15	-15.22/-13.53	-12.2/-13.92	-13.79/-14.55	-18.07/-12.09	-15.26/-18.1	-11.66/-7.97	-10.52/-7.76	-12.97/-8.9	-7.37/-8.41	-4.44/-9.36	-11.52/-3.56	-6.81/-7.75	-4.05/-4.27
Φ(112.5°)	-9.96/-11.37	-10.97/-17.53	-18.22/-19.03	-17.94/-18.66	-18.41/-15.15	-14.46/-16.93	-8.72/-10.04	-13.07/-19.33	-13.89/-13.86	-17.39/-11.93	-7.28/-6.96	-9.37/-18.41	-16.92/-10.67	-8.73/-9.36	-11.81/-8.89	-16.02/-18.73	-10.2/-8.23	-9.49/-12.32	-13.41/-5.01	-5.81/-9.12	-9.51/-6.02	-10.95/-4.49	-7.57/-10.76	-4.52/-3.57
Φ(120°)	-4.05/-13.12	-10.83/-16.54	-15.29/-18.43	-18.47/-17.86	-15.15/-13.88	-17.25/-18.43	-19.27/-12.4	-15.85/-14.22	-12.9/-18.42	-18.89/-13.57	-12.64/-13.78	-13.48/-11.01	-8.95/-9.66	-11.65/-9.15	-13.16/-12.4	-12.17/-15.36	-9.21/-18.03	-16.86/-12.82	-8.84/-2.68	-3.61/-9.65	-6.51/-7.11	-10.52/-6.26	-8.38/-11.53	-17.86/-6.11
Φ(127.5°)	-4.59/-10.5	-11.9/-6.63	-6.88/-8.85	-10.27/-14.89	-18.47/-15.39	-16.32/-17.35	-17.76/-12.26	-13.52/-15.26	-11.69/-13.25	-15.95/-18.64	-16.36/-9.37	-8.31/-9.87	-8.68/-11.3	-10.08/-7.88	-11.24/-12.05	-16.51/-13.03	-17.86/-7.34	-11.52/-12.55	-3.1/-1.84	-6.6/-17.8	-6.78/-7.67	-9.75/-18.74	-15.06/-18.19	-14.46/-6.36
Φ(135°)	-4.46/-7.8	-10.54/-7.8	-8.59/-9.5	-9.51/-11.72	-13.83/-15.47	-17.13/-14.06	-15.81/-19.37	-15.47/-13.71	-15.6/-13.03	-10.04/-10.56	-11.72/-18.04	-17.9/-19.06	-13.66/-18.66	-17.95/-19.04	-19.24/-19.48	-16.96/-13.66	-8.82/-9.83	-15.56/-8	-1.55/-0.69	-8.23/-12.78	-8.01/-18.82	-7.2/-8.72	-9/-17.6	-8.85/-5.48
Φ(142.5°)	-18.24/-14.64	-15.35/-12.58	-9.17/-11.39	-14.59/-13.34	-12.97/-11.88	-9.96/-10.92	-13.02/-18.57	-15.13/-9.67	-7.67/-7.45	-8.3/-10.76	-14.4/-14.27	-11.79/-11.73	-14.49/-12.49	-10.33/-13	-14.54/-13.88	-12.35/-8.66	-9.63/-15.56	-17.96/-11.45	-2.07/-2.18	-8.52/-10.85	-18.65/-10.78	-18.61/-13.17	-7.23/-4.33	-5.38/-14.78
Φ(150°)	-11.21/-10.6	-11.06/-15.63	-16.09/-15.62	-15.63/-16.84	-15.23/-13.97	-12.68/-15.89	-19.08/-18.47	-17.09/-10.24	-6.96/-6.21	-7.66/-9.03	-8.8/-7.93	-7.62/-8.41	-9.1/-8.89	-8.94/-10.25	-10.54/-11.86	-14.06/-17.51	-13.31/-6.88	-5.33/-5.04	-1.78/-1.35	-3.73/-5.23	-8.49/-17.87	-18.22/-9.55	-6.12/-6.15	-11.45/-14.9
Φ(157.5°)	-12.41/-8.9	-8.69/-9.97	-14.35/-17.71	-18.67/-13.15	-10.68/-11.46	-14.43/-14.24	-14.05/-15.79	-15.71/-12.79	-9.33/-7.89	-8.89/-9.29	-6.76/-4.35	-3.16/-3.63	-5.51/-8.59	-12.11/-16.87	-17.49/-18.07	-16.11/-13.25	-11.16/-9.11	-6.68/-3.77	-1.91/-2.14	-3.06/-3.1	-3.52/-6.38	-10.78/-10.53	-11.21/-18.19	-19.1/-12.45
Φ(165°)	-18.5/-17.9	-18.05/-15.46	-13.05/-12.15	-12.19/-13.68	-18.22/-18.19	-17.47/-15.85	-14.9/-14.85	-16.76/-19.01	-18.82/-18.38	-18.55/-18.36	-13.47/-7.93	-4.91/-3.94	-4.58/-6.32	-7.84/-9.25	-10.16/-11.69	-13.66/-16.71	-18.11/-15.15	-8.86/-6.4	-5.76/-7.19	-7.5/-5.98	-4.7/-4.68	-5.65/-7.96	-9.29/-10.24	-12.68/-18.48
Φ(172.5°)	-9.45/-11.03	-12.17/-14.24	-14.11/-16.52	-18.22/-18.77	-17.11/-12.45	-11.64/-12.29	-12.63/-13.71	-17.32/-18.66	-17.58/-18.72	-19.26/-18.39	-17.61/-13.33	-9.75/-8.03	-7.44/-7.78	-8.98/-11.1	-14.59/-19.01	-17.45/-12.43	-8.67/-6.58	-5.9/-6.66	-7.73/-9.78	-11.33/-11.36	-9.8/-7.76	-7.07/-8.35	-7.92/-6.86	-7.65/-9.27
Φ(180°)	-18.11/-17.4	-18.55/-18.6	-19.81/-18.43	-18.55/-19	-16.24/-13.42	-12.87/-12.22	-11.47/-11.52	-11.79/-12.33	-12.87/-14.24	-15.75/-16.1	-15.22/-13.71	-12.49/-12	-11.99/-13.25	-15.81/-17.58	-17.26/-14.22	-12.16/-10.73	-10.3/-10.02	-10.49/-11.1	-11.62/-12.2	-12.61/-13.55	-13/-12.99	-15.63/-17.85	-17.27/-18.48	-17.84/-18.48
Freq(Hz)	5.2G/Pol.	Phi/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°)
Φ(0°)	-6.6/-6.7	-7.04/-7.07	-6.81/-6.7	-6.49/-6.52	-6.69/-7.12	-7.61/-8.65	-9.88/-10.55	-10.73/-10.47	-10.09/-9.66	-9.07/-8.56	-7.92/-7.37	-6.75/-6.06	-5.34/-4.94	-4.61/-4.39	-5.01/-5.69	-6.67/-7.74	-8.84/-9.67	-10.19/-10.68	-10.81/-11.03	-10.91/-10.14	-9.5/-8.48	-7.42/-6.23	-5.62/-5.15	-5.11/-5.53
Φ(7.5°)	-3/-3.03	-3.41/-4.09	-4.75/-5.44	-5.96/-6.54	-6.84/-7.25	-8.15/-8.95	-9.11/-9.26	-9.38/-9.01	-8.16/-7.34	-6.69/-6.88	-7.07/-7.13	-6.75/-6.23	-5.67/-5.29	-5.25/-5.6	-6.15/-6.96	-7.86/-8.53	-8.66/-8.45	-8.03/-7.82	-7.76/-8.19	-9.03/-9.65	-10.05/-10.1	-9.42/-7.96	-6.44/-5.15	-4.25/-3.81
Φ(15°)	-2.39/-2.61	-3.71/-4.17	-4.83/-5.37	-5.4/-5.36	-5.81/-6.9	-8.29/-9.23	-10.58/-10.28	-8.54/-6.71	-5.57/-4.95	-4.48/-4.28	-4.4/-4.42	-4.56/-4.78	-4.99/-5.04	-5.27/-5.81	-6.78/-8.03	-9.65/-11.46	-12.27/-11.26	-9.17/-7.6	-6.62/-6.57	-7.4/-8.16	-9.06/-9.71	-9.16/-7.91	-6.27/-4.84	-3.3/-2.78
Φ(22.5°)	-8.68/-7.72	-8.48/-8.57	-8.79/-9.11	-9.07/-10.08	-10.33/-9.47	-8.28/-7.41	-5.89/-4.66	-3.9/-3.42	-3.26/-3.5	-3.64/-3.69	-4.28/-4.62	-5.06/-5.95	-6.82/-7.49	-8.13/-8.33	-8.28/-8.05	-8.33/-9.71	-12.95/-18.53	-13.57/-9.33	-7.5/-7.64	-8.71/-9.34	-10.11/-11.16	-11.25/-10.85	-9.85/-8.76	-7.83/-8.16
Φ(30°)	-6.17/-5.02	-3.91/-3.23	-3.57/-4.24	-4.66/-4.31	-3.36/-2.69	-2.51/-2.17	-2.28/-2.35	-1.87/-1.67	-1.94/-2.64	-3.78/-4.46	-4.82/-5.21	-5.56/-6.57	-6.66/-12	-17.57/-18.49	-16.94/-13.88	-10.9/-9.44	-10.39/-15.09	-18.91/-13.76	-10.43/-9.23	-10.36/-12.89	-13.82/-14.8	-16.43/-18.44	-18.04/-18.37	-17.37/-10.77
Φ(37.5°)	-4.82/-3.08	-2.57/-2.36	-2.23/-1.54	-0.45/-0.4	0.17/-0.29	-0.10/0.11	0.15/0.17	0.34/-1.46	-3.3/-3.5	-6.79/-8.06	-9.04/-9.13	-7.83/-7.15	-8.26/-12.08	-18.7/-18.04	-18.91/-16.86	-14.89/-12.68	-13.02/-18.49	-17.78/-16.38	-9.29/-5.92	-5.7/-8.5	-13.41/-18.97	-18.47/-18.38	-17.87/-14.92	-9.6/-6.47
Φ(45°)	-5.37/-3.89	-3.33/-2.5	-1.19/-0.02	0.99/1.15	1.22/1.18	1.02/0.58	0.53/0.93	0.90/0.33	-1.1/-3.05	-5.03/-5.18	-5.51/-7.39	-9.02/-9.79	-8.11/-6.99	-6.72/-7.34	-9.3/-12.59	-13.71/-13.28	-18.64/-17.89	-14.89/-10.62	-10.41/-13.26	-16.37/-13.71	-10.26/-9.92	-9.3/-8.25	-6.17/-4.72	-4.66/-4.01
Φ(52.5°)	-8.71/-6.9	-5.98/-4.72	-4.12/-2.89	-1.6/-0.11	1.49/2.04	1.76/0.95	0.73/1.06	1.12/0.31	-1.29/-4.13	-7.97/-8.69	-6.29/-6.82	-8.54/-10.26	-9.69/-9.77	-7.21/-7.31	-8.82/-11.92	-11.63/-12.05	-14.14/-13.1	-12.23/-13.43	-19.02/-17.21	-10.44/-7.87	-7.31/-8.14	-8.33/-10.3	-10.09/-10.28	-11.28/-10.38
Φ(60°)	-13.58/-7.4	-6.61/-3.69	-2.33/-1.28	-0.80/-1.1	0.57/0.28	-0.35/-1.27	-1.77/-1.44	-0.74/-0.85	-2.17/-5.72	-12.77/-15.22	-9.65/-9.19	-9.19/-13.02	-18.77/-11.56	-9.13/-8.77	-13.38/-18.71	-11.23/-10.95	-9.26/-9.79	-13.3/-18.53	-16.54/-13.07	-10.01/-9.92	-11.13/-13.41	-14.75/-11.37	-13.73/-13.96	-17/-15.08
Φ(67.5°)	-10.73/8.6	-7.65/-5.89	-4.24/-3.48	-3.4/-2.85	-3.65/-1.74	-0.3/-0.06	-0.19/-0.34	-0.38/-0.85	-3.23/-7.57	-16.54/-9.18	-5.15/-4.53	-6.15/-8.81	-8.69/-5.29	-5.16/-5.95	-9.15/-14.89	-12.94/-9.05	-8.38/-11.93	-18.81/-17.86	-18.98/-18.78	-12.54/-11.32	-18.71/-18.43	-14.08/-9.84	-9.91/-11.92	-10.55/-9.37
Φ(75°)	-12.84/-10.81	-15.19/-11.57	-9.71/-7.77	-5.89/-3.94	-2.8/-1.72	-0.58/-0.23	-1.23/-3.46	-6.05/-6.55	-5.65/-5.93	-8.04/-9.69	-10.4/-12.06	-12.71/-13.27	-9.76/-6.93	-8.77/-10.95	-13.7/-									



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/-18.85	-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	1.13/0.4	0.47/0.92	1.31/0.4	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	-18.8/-17.47	-17.2/-18.11	-17.57/-17.71	-15.77/-14.71	-18.36/-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	-8.57/-6.61
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/-17.92	-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	-4.88/-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	-4.58/-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
FreqHz	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	-5.05/-5.11	-5.35/-5.34	-5.6/-6.28	-9.44/-9.74	-11.92/-11.28	-14.12/-18.78	-17.97/-19.13	-13.57/-10.5	-9.73/-9.96	-9.71/-9.78	-9.55/-9.1	-9.11/-9	



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

Appendix A

Table with columns for frequency (MHz), gain (dBi), and various antenna parameters. It lists data for multiple antennas (e.g., PhiAnt. 7, 5.2G/Pol., 5.3G/Pol.) across various frequencies from 7.57 to 18.85 MHz.



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

Appendix A

Freq(Hz)	Theta/Ant. 7	Phi/Ant. 7	Phi(0°)Φ(7.5°)	Phi(15°)Φ(22.5°)	Phi(30°)Φ(37.5°)	Phi(45°)Φ(52.5°)	Phi(60°)Φ(67.5°)	Phi(75°)Φ(82.5°)	Phi(90°)Φ(97.5°)	Phi(105°)Φ(112.5°)	Phi(120°)Φ(127.5°)	Phi(135°)Φ(142.5°)	Phi(150°)Φ(157.5°)	Phi(165°)Φ(172.5°)	Phi(180°)Φ(187.5°)	Phi(195°)Φ(202.5°)	Phi(210°)Φ(217.5°)	Phi(225°)Φ(232.5°)	Phi(240°)Φ(247.5°)	Phi(255°)Φ(262.5°)	Phi(270°)Φ(277.5°)	Phi(285°)Φ(292.5°)	Phi(300°)Φ(307.5°)	Phi(315°)Φ(322.5°)	Phi(330°)Φ(337.5°)	Phi(345°)Φ(352.5°)
Φ(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		
Φ(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		
Φ(165°)	-10.63/11.33	-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		
Φ(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		
Φ(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		
Freq(Hz)	5.3G/Pol.	Theta/Ant. 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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°)		
Φ(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		
Φ(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	-11.29/12.89	-14.05/15.84	-18.28/18.25	-17.89/18.23		
Φ(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		
Φ(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		
Φ(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		
Φ(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		
Φ(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	1.20/7.4	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		
Φ(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		
Φ(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		
Φ(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		
Φ(75°)	-4.22/2.57	-1.06/0.07	0.91/4.44	1.91/9.1	1.43/1.08	1.48/1.95	2.28/2.3	1.64/0.91	0.60/1.3	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		
Φ(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		
Φ(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	-11.77/14.21	-12.97/13.99	-13.58/16.72	-18.59/16.87	-11.87/14.21	-18.59/16.81	-11.39/11.41	-9.97/6.01	-9.97/6.01		
Φ(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	0.90/3.1	-0.74/0.35	0.61/0.41	-0.23/2.36	-3.7/6.3	-8.82/9.84	-12.2/17.27	-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		
Φ(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	-10.41/17.55			
Φ(112.5°)	-8.22/5.62	-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	-3.55/6.63	-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		
Φ(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	0.30/2.6	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		
Φ(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		
Φ(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		
Φ(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		
Φ(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		
Φ(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	-12.99/16.37	-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		
Φ(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														

