



Antenna Composite Gain Test Report

FCC ID	L4B-RTBN9X00
Equipment	WiFi8 Quad-band Gaming Router
Brand Name	ASUS
Model Name	GT-BN98 Pro, GT-BN98, GT-BN30000
Applicant	Asus Computer Internationa 48720 Kato Road, Fremont, CA 94538,United States
Standard	KDB662911 D03 v02
Sample Received	Dec. 16, 2025
Start Test Date	Dec. 27, 2025
Final Test Date	Dec. 28, 2025

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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1. Operation Mode and Antenna Information

Antenna Position	RF Port		Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G/5G Ant1	4	1	Whayu	C660-510680-A	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G/5G Ant2	1	4	Whayu	C660-510681-A	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G/5G Ant3	2	3	Whayu	C660-510682-A	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G/5G Ant4	3	2	Whayu	C660-510683-A	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
6GL Ant1	1	-	Whayu	C660-510676-A	Dipole	I-PEX	6GHz UNII 5~6
6GL Ant2	2	-	Whayu	C660-510677-A	Dipole	I-PEX	6GHz UNII 5~6
6GL Ant3	3	-	Whayu	C660-510678-A	Dipole	I-PEX	6GHz UNII 5~6
6GL Ant4	4	-	Whayu	C660-510679-A	Dipole	I-PEX	6GHz UNII 5~6
6GH Ant1	1	-	Whayu	C660-510676-A	Dipole	I-PEX	6GHz UNII 7~8
6GH Ant2	2	-	Whayu	C660-510677-A	Dipole	I-PEX	6GHz UNII 7~8
6GH Ant3	3	-	Whayu	C660-510678-A	Dipole	I-PEX	6GHz UNII 7~8
6GH Ant4	4	-	Whayu	C660-510679-A	Dipole	I-PEX	6GHz UNII 7~8

Note:

2.4GHz and 5GHz Operation Mode (4TX/4RX)

2G5G Ant1~4 can be used as transmitting/receiving antenna.

2G5G Ant1~4 could transmit/receive simultaneously.

6GHz Operation Mode (4TX/4RX)

6GL Ant1~4 and 6GH Ant1~4 can be used as transmitting/receiving antenna.

6GL Ant1~4 and 6GH Ant1~4 could transmit/receive simultaneously.

2. Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
GT-BN98 Pro	All the models are identical, the difference model served as marketing strategy.
GT-BN98	
GT-BN30000	

Note 1: From the above models, model: GT-BN98 Pro was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.



3. Test Frequency

The listed frequency of each bands are selected to represent each frequency bands

Band [MHz]	Test Frequency [MHz]
2400-2483.5	2450
5150-5250	5200
5250-5350	5300
5470-5725	5600
5725-5850	5785
5925-6425	6175
6425-6525	6475
6525-6875	6695
6875-7125	6995

4. Testing Location

Testing Location		
Sporton International Inc. Hsinhua Laboratory		
☒	HWA YA	ADD : No.13-1 & 14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333, Taiwan R.O.C.

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rex Liao	23.5-24.5 / 45-55	Dec. 27, 2025 ~ Dec. 28, 2025

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

5. Test Facility and Configuration

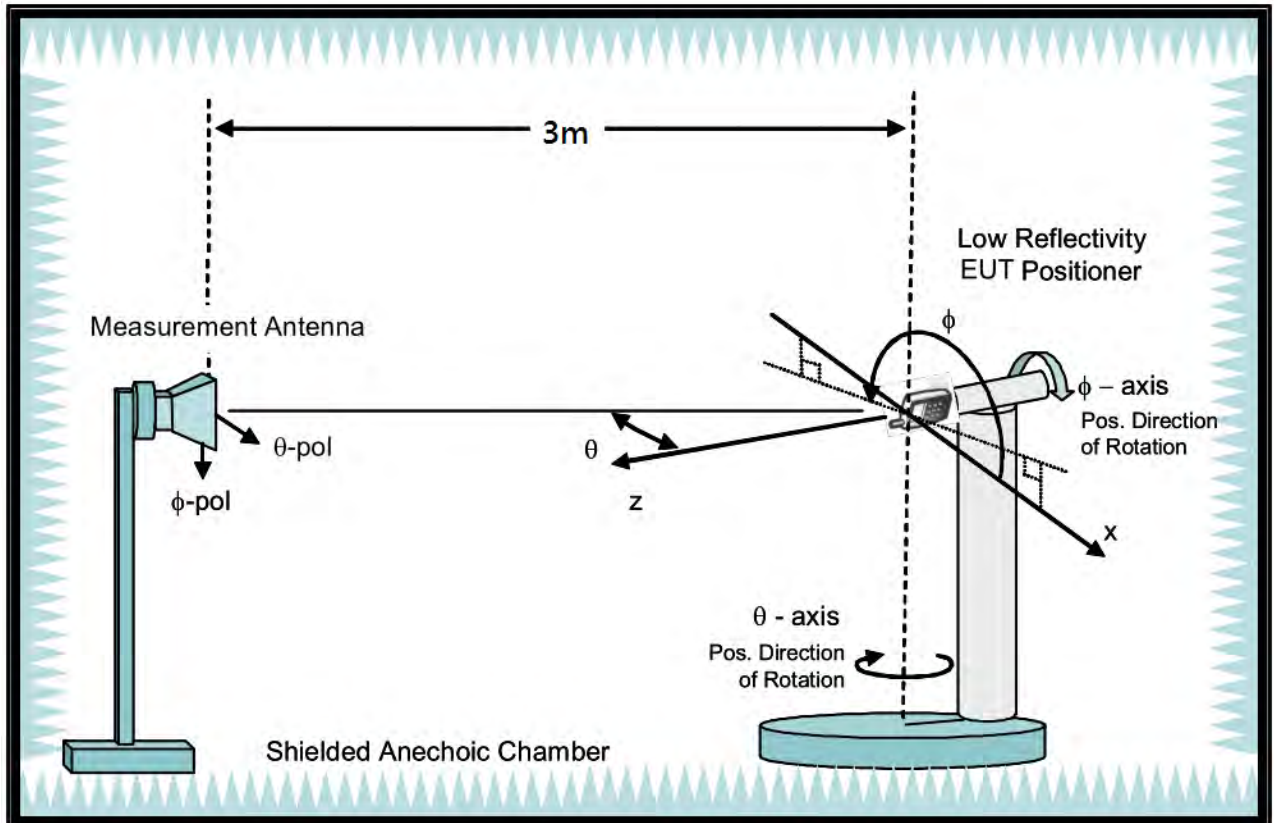
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

Turntable: Multi-axis positioner (Theta and Phi angle).

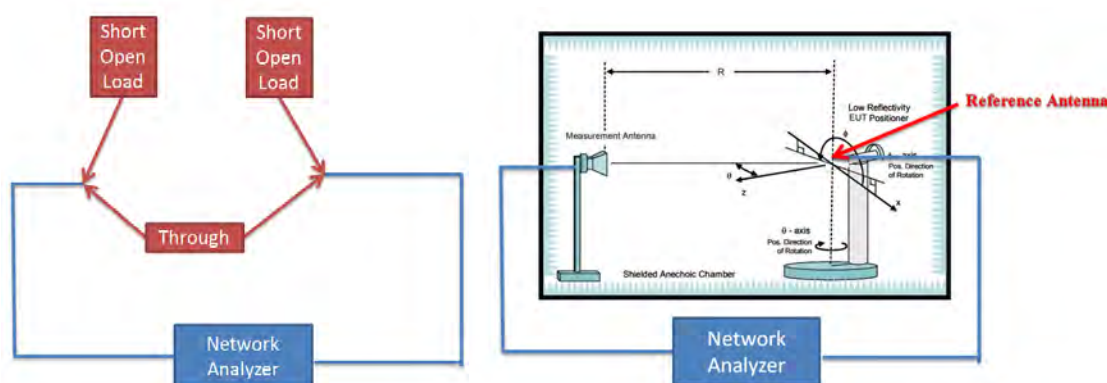
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



6. Reference Calibration

Connected cables to VNA calibration kit and use network analyzer internal function to do calibration. Do short, open and load to each side. Then connect through to both side and calibrate G values. The cable loss is calibrated and set inside the network analyzer.

Measurement Antenna is connected to port1 of Network analyzer and reference antenna connected to port 2 of Network Analyzer. Record G values and used with reference antenna gain to calculate gain factor.



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-32.12	-32.48	-32.45	-34.55	-34.56	-34.78	-34.94	-34.89	-34.99	-35.16	-35.32	-35.68	-35.88	-35.97
G(phi) reading (dB)	-32.35	-32.11	-32.43	-34.12	-33.95	-34.23	-34.56	-34.68	-34.78	-35.32	-35.45	-35.67	-35.86	-36.11
Reference gain (dBi)	10.2	10.2	10.2	11	11.3	11.6	12	11.6	11.4	11.3	11.4	11.1	11	10.3
Factor(theta) (dB)	42.32	42.68	42.65	45.55	45.86	46.38	46.94	46.49	46.39	46.46	46.72	46.78	46.88	46.27
Factor(phi) (dB)	42.55	42.31	42.63	45.12	45.25	45.83	46.56	46.28	46.18	46.62	46.85	46.77	46.86	46.41

Note:

$$G \text{ reading (dB)} = 20 \cdot \log(V_2/V_1) = 10 \cdot \log(P_2/P_1)$$

V2 is the voltage of VNA port2 is measured, V1 is the voltage of VNA port1 is the reference source.

P2 is the power of VNA port2 is measured, P1 is the power of VNA port1 is the reference source.

$$\text{Factor} = \text{gain factor} + \text{power gain conversion} = (\text{Reference antenna gain}) - (G \text{ reading})$$

7. Test Method

EUT set on multi-axis positioner and adjust EUT's physical center to measurement reference center. Measurement antenna set at phi polarization and 1.5 meter height. Port 1 of Network analyzer connect to antenna 1 of EUT. Record G value every 7.5 degree from 0 to 352.5 degree on Phi angle and 0 to 180 on theta angle of multi-axis positioner. Then set measurement antenna to theta polarization and repeat process. Repeat process to each antenna of EUT.

DG steps:

1. Each Phi and Theta polarization antenna gain are measured for all test angles.
2. Composite Phi and Theta antenna gain are computed, using formula in KDB662911 D01 d) (i) and e) (ii), for all angles.
3. Composite antenna gain are examined for all angles to determine max gain and Phi/Theta position. Max gain and phi/theta position are listed in section 8 tables.

Note: Antenna gain = G reading + factor, The factor of chapter five includes reference antenna gain factor and power gain conversion.

8. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	0.35	-1.72	1.15	2.61	0.03
Ant. 2 (dBi)	-1.09	3.19	-0.68	-0.5	3.11
Ant. 3 (dBi)	0.97	-0.04	0.04	1.53	1.06
Ant. 4 (dBi))	-3.36	-5.34	-3.22	-3.82	-6.12
DG [1SS] (dBi)	5.39	5.58	5.49	6.3	6.15
Polarization	Theta	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	75	90	82.5	82.5	90
$\Phi(^{\circ})$	255	285	292.5	292.5	285

Note: The DG 1SS max value position is the maximum value of section 12 table DG 1SS Result.

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	-4.33	2.71	-1.04	2.65
Ant. 2 (dBi)	-2.58	-3.62	-1.51	-2.27
Ant. 3 (dBi)	2.78	-6.56	2.97	0.43
Ant. 4 (dBi))	1.18	3.48	-1.79	-3.43
DG [1SS] (dBi)	5.74	5.99	5.91	5.69
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	45	97.5	75	82.5
$\Phi(^{\circ})$	187.5	232.5	0	75

Note: The DG 1SS max value position is the maximum value of section 12 table DG 1SS Result



DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [10 ^{^(G/20)}]	10 ^{^(0.35/20)}	10 ^{^(-1.72/20)}	10 ^{^(1.15/20)}	10 ^{^(2.61/20)}	10 ^{^(0.03/20)}
Ant. 2 [10 ^{^(G/20)}]	10 ^{^(-1.09/20)}	10 ^{^(3.19/20)}	10 ^{^(-0.68/20)}	10 ^{^(-0.5/20)}	10 ^{^(3.11/20)}
Ant. 3 [10 ^{^(G/20)}]	10 ^{^(0.97/20)}	10 ^{^(-0.04/20)}	10 ^{^(0.04/20)}	10 ^{^(1.53/20)}	10 ^{^(1.06/20)}
Ant. 4 [10 ^{^(G/20)}]	10 ^{^(-3.36/20)}	10 ^{^(-5.34/20)}	10 ^{^(-3.22/20)}	10 ^{^(-3.82/20)}	10 ^{^(-6.12/20)}
Ant. 1 [10 ^{^(G/20)}] value	1.041	0.82	1.142	1.351	1.003
Ant. 2 [10 ^{^(G/20)}] value	0.882	1.444	0.925	0.944	1.431
Ant. 3 [10 ^{^(G/20)}] value	1.118	0.995	1.005	1.193	1.13
Ant. 4 [10 ^{^(G/20)}] value	0.679	0.541	0.69	0.644	0.494
Sum All Antenna [Amax]	3.721	3.8	3.761	4.131	4.058
DG [10*log(Amax ² /Nant)]	5.39	5.58	5.49	6.3	6.15

Note:

Directional Gain (1SS) is the max value of every look angle. Each position value is calculated by KDB662911 D01 d) (i).

Directional gain (1SS) = 10*log(10^{^(G_{ant1}/20)}+10^{^(G_{ant2}/20)}+ +10^{^(G_{ant3}/20)} +10^{^(G_{ant4}/20)}+.....)^2/Nant)

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [10 ^{^(G/20)}]	10 ^{^(-4.33/20)}	10 ^{^(2.71/20)}	10 ^{^(-1.04/20)}	10 ^{^(2.65/20)}
Ant. 2 [10 ^{^(G/20)}]	10 ^{^(-2.58/20)}	10 ^{^(-3.62/20)}	10 ^{^(-1.51/20)}	10 ^{^(-2.27/20)}
Ant. 3 [10 ^{^(G/20)}]	10 ^{^(2.78/20)}	10 ^{^(-6.56/20)}	10 ^{^(2.97/20)}	10 ^{^(0.43/20)}
Ant. 4 [10 ^{^(G/20)}]	10 ^{^(1.18/20)}	10 ^{^(3.48/20)}	10 ^{^(-1.79/20)}	10 ^{^(-3.43/20)}
Ant. 1 [10 ^{^(G/20)}] value	0.607	1.366	0.887	1.357
Ant. 2 [10 ^{^(G/20)}] value	0.743	0.659	0.84	0.77
Ant. 3 [10 ^{^(G/20)}] value	1.377	0.47	1.408	1.051
Ant. 4 [10 ^{^(G/20)}] value	1.146	1.493	0.814	0.674
Sum All Antenna [Amax]	3.873	3.988	3.949	3.851
DG [10*log(Amax ² /Nant)]	5.74	5.99	5.91	5.69

Note:

Directional Gain (1SS) is the max value of every look angle. Each position value is calculated by KDB662911 D01 d) (i).

Directional gain (1SS) = 10*log(10^{^(G_{ant1}/20)}+10^{^(G_{ant2}/20)}+ +10^{^(G_{ant3}/20)} +10^{^(G_{ant4}/20)}+.....)^2/Nant)

9. Summary of Test Result

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.83	2.7	3.61	2.7	2.59
Ant. 2 Max Gain (dBi)	2.15	3.19	3.3	3.19	3.57
Ant. 3 Max Gain (dBi)	2.06	3.97	3.52	3.63	2.63
Ant. 4 Max Gain (dBi)	1.53	2.52	3.55	2.31	2.81
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/157.5/0	Theta/60/292.5	Theta/60/292.5	Theta/52.5/292.5	Theta/45/232.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/105/277.5	Theta/90/285	Theta/90/300	Theta/82.5/262.5	Theta/82.5/285
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/180	Theta/75/322.5	Theta/67.5/30	Theta/45/180	Theta/22.5/195
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/37.5/0	Theta/105/225	Theta/105/225	Theta/60/337.5	Theta/90/195
Max Gain (dBi)	2.83	3.97	3.61	3.63	3.57
DG [1SS] (dBi)	5.39	5.58	5.49	6.3	6.15
DG [2SS] (dBi)	2.83	3.97	3.61	3.63	3.57

Note:

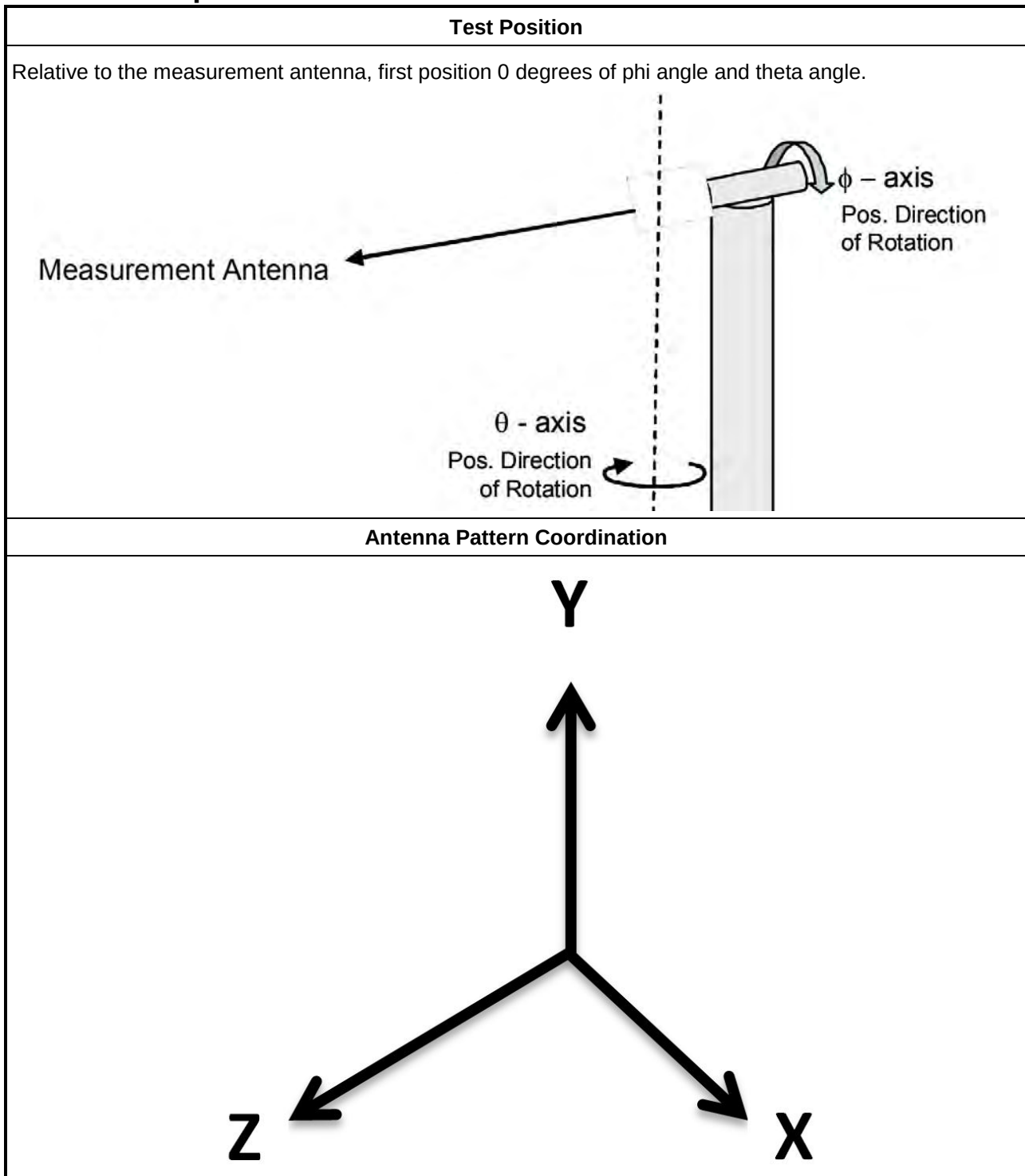
1. Antenna max gain is the max value of each individual antenna through all measurement angles. Each antenna max gain is the max value of measurement G of theta and phi through all measurement angles.
2. The max gain is the max value of all antennas.
3. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (2SS) = Directional Gain (1SS) – 3dB5.

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	2.37	2.71	2.32	2.65
Ant. 2 Max Gain (dBi)	2.43	2.44	2.98	2.82
Ant. 3 Max Gain (dBi)	2.78	3.63	3.89	3.18
Ant. 4 Max Gain (dBi)	3.81	3.48	2.6	2.38
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/75	Theta/97.5/232.5	Theta/90/142.5	Theta/82.5/75
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/67.5	Theta/82.5/270	Theta/120/105	Theta/112.5/135
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/45/187.5	Theta/52.5/22.5	Theta/67.5/0	Theta/75/15
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/97.5/225	Theta/97.5/232.5	Theta/120/45	Theta/120/45
Max Gain (dBi)	3.81	3.63	3.89	3.18
DG [1SS] (dBi)	5.74	5.99	5.91	5.69
DG [2SS] (dBi)	3.81	3.63	3.89	3.18

Note:

1. Antenna max gain is the max value of each individual antenna through all measurement angles. Each antenna max gain is the max value of measurement G of theta and phi through all measurement angles.
2. The max gain is the max value of all antennas.
3. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (2SS) = Directional Gain (1SS) – 3dB

10. Test Setup



Note:

Photos of Test Position: Please refer to the test photos in the appendix.

**11. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1531	1GHz~18GHz	Dec. 19, 2025	Dec. 18, 2026
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Aug. 06, 2025	Aug. 05, 2026
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

Note: Calibration Interval of instruments listed above is one year.

NCR means Non-Calibration required.



12. Test Results

Please refer to the appendix.

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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.83	2.7	3.61	2.7	2.59
Ant. 2 Max Gain (dBi)	2.15	3.19	3.3	3.19	3.57
Ant. 3 Max Gain (dBi)	2.06	3.97	3.52	3.63	2.63
Ant. 4 Max Gain (dBi)	1.53	2.52	3.55	2.31	2.81
Ant. 1 Polarization/θ(°)/φ(°)	Phi/157.5/0	Theta/60/292.5	Theta/60/292.5	Theta/52.5/292.5	Theta/45/232.5
Ant. 2 Polarization/θ(°)/φ(°)	Theta/105/277.5	Theta/90/285	Theta/90/300	Theta/82.5/262.5	Theta/82.5/285
Ant. 3 Polarization/θ(°)/φ(°)	Theta/60/180	Theta/75/322.5	Theta/67.5/30	Theta/45/180	Theta/22.5/195
Ant. 4 Polarization/θ(°)/φ(°)	Theta/37.5/0	Theta/105/225	Theta/105/225	Theta/60/337.5	Theta/90/195
Max Gain (dBi)	2.83	3.97	3.61	3.63	3.57
DG [1SS] (dBi)	5.39	5.58	5.49	6.3	6.15
DG [2SS] (dBi)	2.83	3.97	3.61	3.63	3.57



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

DG 1SS Result

Freq(Hz)	2.45G/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°)	-3.39/-4.6	-5.77/-6.61	-6.91/-6.86	-6.9/-7.05	-6.37/-5.24	-4.39/-4.24	-4.48/-4.58	-4.19/-3.9	-3.65/-3.34	-2.92/-2.52	-2.4/-2.8	-3.4/-3.75	-3.72/-3.67	-3.77/-4.13	-4.93/-6.18	-7.84/-9.85	-10.31/-9.55	-7.94/-6.13	-5.15/-5.09	-4.7/-3.55	-2.53/-1.78	-1.31/-1	-1.1/-1.48	-1.95/-2.53
Θ(7.5°)	-3.24/-4.88	-6.43/-6.65	-5.77/-4.48	-3.53/-3.07	-2.73/-2.41	-2.54/-3.34	-4.25/-4.13	-3.91/-4.16	-4.85/-5.74	-6.34/-5.48	-5.02/-4.88	-4.69/-4.01	-3.24/-2.75	-2.77/-3.18	-3.94/-5.01	-6.65/-9.89	-10.58/-11.3	-5.87/-4.02	-3.54/-2.97	-2.02/-2.07	-1.52/-1.07	-1.1/-1.46	-1.85/-2.38	
Θ(15°)	-3.93/-5.01	-6.29/-6.18	-4.87/-3.44	-2.46/-1.96	-1.76/-1.78	-2.43/-3.96	-5.52/-4.86	-4.46/-4.41	-4.82/-5.35	-5.74/-6.37	-7.05/-6.25	-5.78/-5.1	-3.76/-2.78	-2.57/-3.01	-3.43/-4.08	-5.33/-7	-9/-10.53	-10.14/-7.67	-5.22/-3.64	-2.99/-2.86	-3.29/-3.89	-3.6/-3.1	-3.18/-3.65	-3.97/-3.91
Θ(22.5°)	-4.43/-5.29	-5.08/-4.45	-3.84/-3.41	-3.27/-3.26	-3.1/-2.88	-3.27/-4.19	-4.9/-5.24	-5.78/-6.3	-6.13/-5.02	-4.25/-4.6	-6.75/-9.3	-8.17/-6.75	-5.12/-3.93	-3.78/-4.63	-4.77/-4.99	-5.26/-5.36	-6.17/-7.48	-8.63/-7.62	-5.55/-3.89	-3.1/-3.02	-3.8/-5.18	-5.9/-3.59	-5.14/-5.5	-5.22/-4.48
Θ(30°)	-4.56/-4.05	-4.44/-3.84	-3.18/-3.24	-4.3/-5.86	-5.75/-4.39	-3.92/-3.86	-3.8/-3.87	-4.49/-5.8	-7/-6.67	-5.05/-4.68	-6.02/-9.52	-13.77/-11.12	-8.39/-6.53	-5.71/-5.97	-4.94/-5.18	-3.9/-3.11	-3.2/-4.79	-7.09/-7.68	-6.69/-5.47	-4.02/-3.89	-6.35/-5.77	-6.33/-6.5	-6.63/-5.84	-5.67/-5.8
Θ(37.5°)	-2.97/-2.52	-3.35/-4.2	-3.62/-4.07	-5.56/-6.28	-4.72/-3.63	-3.36/-3.38	-2.74/-1.9	-2.36/-3.91	-5.44/-5.26	-4.16/-3.7	-4.53/-7.15	-10.93/-12.6	-11.11/-8.63	-7.43/-7.5	-6.61/-4.71	-3.12/-2.26	-2.29/-4.11	-6.01/-7.28	-6.41/-5.12	-4.19/-3.79	-3.79/-3.39	-4.07/-4.25	-5.11/-5.88	-5.6/-4.79
Θ(45°)	-2.47/-1.59	-2.1/-3.36	-4.14/-4.52	-5.32/-4.62	-3.58/-3.4	-3.72/-4.1	-3.22/-1.8	-1.92/-3.4	-5.69/-5.73	-4.34/-3.41	-3.25/-4.24	-6.04/-7.22	-8.23/-6.94	-5.62/-5.88	-5.96/-4.95	-3.35/-3.02	-2.94/-4.52	-4.62/-5.22	-4.91/-3.56	-2.64/-2.36	-2.69/-3.38	-3.88/-3.54	-4.12/-5.18	-4.59/-3.89
Θ(52.5°)	-2.66/-1.34	-1.9/-4.19	-5.17/-4.8	-4.62/-3.62	-2.21/-1.83	-2.78/-3.93	-3.05/-2.41	-3.28/-5.14	-7.32/-5.96	-4.54/-4.22	-3.83/-3.64	-4.37/-5.1	-6.66/-5.54	-3.88/-4.34	-5.47/-5.37	-4.27/-3.71	-3.89/-3.8	-3.82/-5.09	-5.23/-3.96	-2.66/-2.35	-2.95/-3.34	-2.37/-2.31	-2.51/-2.57	-2.8/-3.46
Θ(60°)	-2.82/-1.27	-2.19/-5.16	-6.12/-5.25	-5.42/-4.49	-2.84/-1.83	-2.54/-3.57	-2.01/-2.26	-5.59/-8.02	-7.19/-6.48	-5.13/-4.08	-3.9/-3.57	-3.26/-3.69	-5.84/-5.25	-3.06/-3.45	-4.9/-4.57	-3.99/-3.22	-4.14/-4.57	-4.21/-5.48	-7.02/-5.63	-3.96/-4.21	-5/-2.59	-1.31/-1.1	-0.83/-0.52	-1.63/-3.72
Θ(67.5°)	-1.92/-0.67	-2.31/-4.21	-4.6/-4.79	-4.42/-6	-2.89/-2.12	-3.54/-4.2	-1.64/-2.25	-7.46/-7.69	-5.48/-6.2	-6.43/-5.24	-4.76/-4.3	-3.4/-4.39	-5.41/-4.5	-2.38/-3.16	-4.1/-4.4	-3.08/-2.21	-3.9/-5.98	-5.82/-7.86	-10.16/-6.3	-4.88/-6.59	-7.07/-3.9	-1.93/-0.88	-0.25/-0.41	-2.17/-4.31
Θ(75°)	-1.47/-1.38	-4.16/-5.69	-3.26/-4.31	-4.83/-3.57	-3.23/-2.78	-4.42/-4.64	-1.81/-2.19	-7.82/-5.85	-3.62/-4.46	-5.76/-5.52	-5.37/-6.4	-5.83/-4.51	-5.24/-4.35	-1.28/-1.79	-3.1/-3.87	-3.33/-3.02	-5.12/-5.89	-6.45/-9.94	-9.33/-6.63	-5.86/-9.04	-6.33/-3.75	-2.31/-1.3	-1.01/-1.29	-2.44/-3.08
Θ(82.5°)	-3.51/-4.2	-5.98/-4.36	-3.77/-5.62	-4.9/-3.68	-4.91/-5.02	-5.96/-7.09	-2.94/-2.19	-5.03/-4.75	-2.71/-3.13	-4.1/-5.88	-6.09/-6.7	-6.01/-4.73	-5.6/-4.12	-0.97/-0.99	-1.78/-2.87	-2.72/-3.26	-7.53/-7.29	-8.71/-10.98	-7.06/-6.39	-7.62/-7.02	-4.66/-2.74	-1.88/-2.8	-3.05/-1.95	-2.41/-3.63
Θ(90°)	-5.13/-6.47	-7.84/-5.89	-4.64/-5.64	-4.74/-5	-6.43/-5.58	-4.15/-6.78	-4.87/-3.21	-4.09/-5.25	-2.81/-2.31	-2.67/-4.09	-7.78/-10.05	-7.14/-1.3	-3.43/-3.02	-0.8/-0.68	-2.37/-3.06	-2.84/-2.81	-6.46/-6.84	-8.66/-7.45	-5.28/-6.36	-8.11/-6.59	-5.7/-4.61	-3.94/-4.6	-4.44/-3.22	-4.16/-4.71
Θ(97.5°)	-5.87/-5.99	-5.34/-3.86	-3.53/-5.4	-5.05/-4.42	-6.64/-5.35	-4.27/-7.17	-5.56/-1.84	-3.35/-6.17	-3.37/-2.47	-2.67/-4.11	-8.96/-12.73	-9.15/-6.77	-5.78/-4.81	-2.15/-1.79	-2.27/-2.4	-2.52/-4.2	-7.59/-7.36	-8.02/-7.54	-6.85/-8.47	-5.39/-4.73	-5.28/-6.62	-7.02/-6	-5.66/-5.3	-5.01/-5.8
Θ(105°)	-4.3/-4.2	-4.02/-3.81	-4.46/-6.02	-5.82/-5.47	-7.16/-4.76	-3.3/-6	-5.73/-1.89	-2.72/-5.71	-3.73/-2.46	-3.71/-4.69	-7.29/-8.95	-9.05/-7.17	-5.93/-6.17	-5.18/-2.98	-2.08/-3.56	-4.32/-7.3	-7.15/-7.14	-4.89/-5.66	-4.88/-5.82	-4.21/-3.57	-4.6/-6.06	-6.21/-6.9	-7.76/-6.8	-5.34/-4.87
Θ(112.5°)	-4.28/-5.76	-3.38/-2.32	-2.86/-4.43	-6.31/-7.06	-8.16/-4.97	-3.72/-6.09	-4.96/-1.9	-2/-3.97	-4.04/-3.43	-4.88/-6.02	-7.46/-8.65	-8.09/-4.98	-4.64/-5.47	-3.55/-3.25	-5.78/-5.3	-4.66/-4.48	-5.54/-5.62	-6.19/-4.59	-4.62/-4.95	-3.28/-2.74	-3.34/-4.14	-5.09/-6.54	-7.18/-5.42	-3.43/-2.52
Θ(120°)	-3.54/-4.47	-1.48/-1.23	-3.36/-6.98	-6.39/-5.85	-7.11/-4.74	-6.75/-7.06	-5.28/-2.35	-1.4/-2.26	-3.54/-4.06	-5.04/-5.8	-6.14/-7.98	-6.71/-5.1	-4.64/-5.06	-3.09/-2.7	-3.73/-4.09	-3.95/-4.18	-5.03/-4.62	-6.03/-4.89	-4.66/-3.81	-2.61/-2.81	-3.31/-3.72	-5.08/-7.5	-8.53/-5.15	-2.32/-1.35
Θ(127.5°)	-3.43/-6.41	-3.77/-2.9	-2.71/-2.9	-4.23/-5.69	-4.67/-3.1	-3.6/-5.79	-6.01/-5.67	-4.72/-3.41	-3.84/-4.38	-4.88/-5.79	-6.87/-7.07	-5.86/-6.28	-7.87/-7.13	-2.85/-1.36	-2.27/-4.42	-4.89/-3.6	-3.36/-4.28	-6.08/-6.03	-5.18/-3.44	-2.37/-2.38	-6.04/-6.27	-8.04/-4.52	-1.69/-9.1	
Θ(135°)	-6.31/-7.08	-4.25/-2.87	-3.91/-6.17	-5.12/-2.94	-3.21/-6.16	-6.88/-5.38	-5.13/-4.57	-5.21/-4.71	-4.37/-4.35	-4.96/-6.41	-7.96/-8.23	-6.35/-6.12	-7.95/-7.15	-3.98/-2.1	-2.52/-3.28	-2.14/-0.93	-1.1/-2.83	-5.27/-6.61	-7.17/-5.92	-5.36/-4.79	-3.92/-3.25	-3.2/-3.81	-4.34/-3.84	-2.79/-3.1
Θ(142.5°)	-6.36/-3.35	-1.97/-2.84	-6.18/-10.4	-7.2/-1.43	-4.12/-6.66	-9.65/-7.31	-5.45/-4.96	-5.15/-5.29	-5.12/-5.35	-6.05/-6.69	-7.61/-4.73	-5.6/-4.92	-6.08/-6.07	-4.09/-3.29	-3.24/-2.58	-2.22/-1.9	-2.48/-4.6	-5.59/-7.23	-5.53/-4.48	-4.22/-4.41	-4.51/-3.93	-3.14/-3.02	-3.36/-3.4	-4.56/-6.91
Θ(150°)	-3.03/-1.62	-1.61/-3.05	-5.76/-8.17	-5.98/-4.06	-4.58/-7.63	-1.75/-8.85	-6.54/-5.27	-6.88/-8.15	-5.43/-5.87	-6.88/-7.49	-6.76/-5.79	-5.12/-4.64	-4.06/-3.87	-4.4/-0.8	-3.52/-3.59	-4.34/-4.81	-4.95/-4.45	-4.59/-5.66	-3.53/-3.15	-3.08/-3.29	-3.67/-3.7	-3.87/-4.25	-5.14/-4.96	
Θ(157.5°)	-1.28/-2.15	-2.88/-4.46	-5.74/-6.37	-4.89/-3.94	-4.55/-6.64	-9.62/-9.61	-7.11/-5.21	-4.05/-3.72	-4.01/-4.63	-5.14/-9.1	-4.52/-4.28	-3.94/-3.25	-2.66/-2.62	-3.11/-3.79	-4.52/-5.94	-6.92/-6.32	-4.98/-3.87	-3.08/-2.61	-2.46/-2.48	-2.48/-2.4	-2.35/-2.49	-2.95/-3.49	-3.64/-3.41	-3.19/-3.02
Θ(165°)	-3.77/-4.39	-5.69/-6.59	-6.37/-5.39	-4.61/-5.46	-5.42/-6.73	-8.57/-8.63	-7.66/-7.28	-5.36/-4.85	-4.74/-4.49	-3.98/-3.4	-2.95/-2.57	-2.16/-2.03	-2.31/-2.64	-2.91/-3.23	-3.57/-4.13	-4.89/-5.37	-5.37/-6.85	-3.68/-2.54	-2.21/-2.28	-2.27/-2.09	-2/-2.25	-2.93/-4.8	-3.2/-2.95	-3.21/-3.11
Θ(172.5°)	-5.27/-6.13	-6.52/-5.91	-5.42/-5.4	-5.19/-5.43	-6.09/-6.71	-7.21/-7.73	-7.78/-7.24	-6.76/-6.33	-5.8/-5.3	-4.78/-3.42	-3.87/-3.54	-3.3/-4.43	-4.06/-4.13	-4.07/-3.53	-3.03/-2.97	-3.2/-3.47	-3.49/-3.28	-3.1/-3.2	-3.71/-4.21	-4.41/-4.53	-4.48/-4.06	-4.17/-4.3	-4.33/-3.9	-3.62/-3.79
Θ(180°)	-4.88/-4.7	-4.07/-3.2	-2.71/-2.57	-2.81/-3.38	-3.94/-4.25	-4.36/-4.4	-4.58/-4.62	-4.41/-4.21	-4.03/-4.22	-4.6/-4.8	-4.98/-5.17	-5.2/-5.02	-4.95/-5.02	-5.08/-4.69	-4.38/-4.4	-4.78/-5.21	-5.16/-4.89	-5.01/-5.92	-7.68/-9.02	-7.6/-5.67	-4.39/-3.85	-3.91/-4.14	-4.19/-3.94	-3.83/-3.91
Freq(Hz)	2.45G/Pol.	Theta+	-	+	-	+	+	-	+	-	+	-	-	-	-	+	-	-	+	-	-	+	+	
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°)	-6.56/-5.66	-4.81/-4.41	-4.33/-4.42	-4.64/-5.09	-5.63/-6.04	-6.17/-6.31	-6.74/-7.06	-7.19/-7.36	-7.6/-8.21	-8.92/-9.29	-9.55/-9.68	-9/-8	-7.24/-6.84	-6.78/-6.54	-6.04/-5.49	-5/-4.77	-4.7/-4.68	-4.69/-4.81	-5.41/-6.93	-8.87/-9.86	-9.57/-8.47	-8.19/-8.99	-9.76/-9.04	-7.97/-7.31
Θ(7.5°)	-6.72/-6.09	-5.44/-5.34	-5.48/-5.79	-6.28/-6.72	-7.18/-7.62	-7.85/-7.74	-7.14/-6.3	-5.95/-6.32	-7.06/-7.53	-7.72/-7.84	-7.75/-7.61	-7.04/-6.57	-6.34/-6.23	-6.58/-7.12	-7.72/-8.34	-9.25/-9.59	-9.12/-8.32	-7.41/-6.63	-6.35/-6.61	-7.64/-8.85	-8.92/-7.61	-6.45/-6.45	-7.36/-8.06	-7.79/-7.02
Θ(15°)	-5.17/-5.27	-5.47/-5.31	-4.89/-4.9	-5.06/-6.65	-4.32/-4.14	-4.01/-3.79	-3.44/-3.1	-3.07/-3.65	-4.67/-5.51	-5.95/-5.9	-5.33/-4.71	-4.17/-3.72	-3.36/-3.1	-4.74/-5.34	-5.79/-6.28	-7.26/-7.91	-8.24/-7.89	-7.54/-6.75	-5.82/-5.6	-5.58/-5.19	-4.79/-5.31	-6.63/-6.77	-6.79/-6.53	
Θ(22.5°)	-2.76/-2.66	-2.76/-2.7	-2.38/-1.93	-1.51/-1.04	-0.86/-1.04	-2.58/-2.25	-2.63/-2.52	-2.34/-2.66	-3.33/-3.69	-3.65/-3.23	-2.75/-2.55	-2.72/-2.8	-2.67/-2.15	-1.57/-1.41	-1.51/-1.3	-1.72/-2.26	-2.99/-3.65	-3.93/-4.06	-4.08/-3.57	-2.86/-2.6	-3.24/-3.15	-6.74/-4.95	-6.49/-6.95	-4.93/-4.2
Θ(30°)	-0.25/-0.27	-0.57/-0.85	-0.91/-0.75	-0.37/-0.08	0.17/-0.38	-1.47/-1.71	-1.36/-0.79	-0.65/-1.02	-1.54/-1.82	-1.81/-1.43	-1.08/-1.1	-1.37/-1.59	-1.57/-1.05	-0.25/-0.13	-0.02/-0.19	-0.23/-0.44	-0.71/-0.69	-0.36/-0.4	-0.87/-0.7	-0.07/-0.24	-0.04/-0.53	-1.28/-2.27	-3.73/-4.05	-2.71/-1.02
Θ(37.5°)	2.621/5.1	1.04/0.6	0.34/0.06	-0.11/-0.32	0.55/0.42	0.46/0.33	0.59/0.1	0.93/0.43	-0.11/-0.39	-0.67/-0.55	-0.33/-0.18	0.19/0.54	0.68/1	1.471/4.7	0.84/0.22	0.1/-0.17	-0.13/-0.77	1.58/1.5	0.92/1	1.591/9.2	1.771/3.9	0.77/-0.16	-1.29/-0.73	0.881/43
Θ(45°)	2.481/4.6	1.11/0.5	1.27/1.14	0.52/0.22	0.53/1.14	1.15/0.83	0.78/1.01	1.09/0.94	0.52/0.11	-0.35/-0.9	-1.05/-0.85	-0.10/-9	1.622/0.3	2.392/4.6	1.970/9.1	0.35/0.53	0.46/1.33	2.232/0.8	1.481/4.5	1.912/0.9	2.051/86	1.08/0.39		



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(15°)	-4.31/3.95	-3.56/3.69	-4.73/5.01	-3.35/-2.19	-2.58/2.98	-3.59/5.58	-6.06/6.51	-4.68/4.18	-3/-2.5	-1.37/0.68	-1.19/1.23	-1.31/-1.64	-4.09/-7.39	-7.99/-6.29	-3.84/3.82	-4.64/-5.24	-4.36/-3.55	-3.79/5.34	-4.63/3.98	-2.44/-2.49	-3/-4.56	-4.34/3.12	-3.21/3.15	-3.34/4.08
Θ(22.5°)	-5.41/5.88	-6.84/-4.22	-2.32/-1.6	-1.42/-2.3	-3.25/-2.28	-2.26/-2.66	-3.52/-3.97	-4.73/-4.72	-3.71/-3.42	-3.05/-2.45	-2.77/-2.86	-3.62/-3.65	-5.83/-7.38	-7.14/-4.64	-2.36/-1.99	-2.42/-3.17	-2.49/-3.49	-3.85/-5.53	-6.19/-5.32	-3.11/-1.89	-1.67/-1.66	-2.5/-4.08	-5.25/-3.96	-4.05/-4.35
Θ(30°)	-4.98/-5.23	-4.82/-3.22	-3.5/-2.83	-2.72/2.63	-3.09/-3.62	-3.05/-2.84	-4.77/-5.74	-5.81/-4.99	-3.62/-2.01	-2.14/-2.26	-2.82/-3.4	-4.77/-4.94	-4.71/-4.6	-4.85/-5.04	-4.31/-3.08	-4.11/-4.19	-2.08/-2.72	-4.57/-3.97	-2.33/-3.43	-4.11/-4.37	-3.26/-1.53	-2.2/-3.69	-3.5/-3.43	-3.27/-4.31
Θ(37.5°)	-4.95/-5.3	-6.27/-5.3	-5.98/-5.21	-4.05/-2.63	-2.86/-3.85	-5.52/-4.46	-4.17/-3.94	-4.35/-4.3	-3.53/-2.55	-3.12/-3.32	-2.6/-3.72	-4.72/-5.05	-6.09/-4.95	-4.03/-4.72	-4.41/-2.98	-3.44/-6.48	-3.36/-3.37	-3.08/-3.36	-3.53/-5.6	-4.29/-3.36	-3.43/-3.57	-3.67/-5.61	-4.47/-3.24	-6.97/-4.06
Θ(45°)	-4.02/-7.22	-9.31/-7.55	-6.49/-5.28	-5.87/-7.57	-8.01/-8.21	-7.09/-8.07	-6.99/-4.22	-3.74/-4.76	-7.04/-8.42	-7.45/-6.21	-6.36/-7.96	-8.14/-8.7	-5.73/-4.64	-3.76/-4.28	-3.88/-3.06	-4.53/-7.1	-2.22/-3.4	-5.27/-7.28	-7.38/-5.61	-6.52/-5.93	-5.96/-7.38	-3.75/-4.41	-5.19/-3.23	-5.75/-4.87
Θ(52.5°)	-7.34/-6.11	-4.21/-2.52	-4.47/-3.86	-2.86/-4.35	-4.37/-6.41	-5.42/-5.41	-4.74/-4.36	-3.86/-3.22	-5.34/-4.69	-7.46/-7.07	-8.91/-9.45	-10.04/-9.6	-6.84/-5.84	-3.81/-6.25	-4.64/-9.91	-3.02/-5.21	-4.74/-4.42	-3.3/-4.47	-6.61/-9.97	-4.82/-3.71	-6.84/-3.87	-2.51/-4.61	-2.65/-3.51	-5.75/-4.87
Θ(60°)	-7.04/-3.43	-3.1/-3.07	-4.9/-4.21	-4.47/-1.86	-3.13/-3.38	-2.11/-5.34	-7.89/-6.12	-4.18/-2.7	-3.83/-3.75	-5.83/-4.39	-4.75/-5.04	-6.46/-9.51	-9.53/-9	-4.11/-4.52	-7.67/-3.71	-3.51/-10.21	-5.56/-6.08	-4.79/-11.45	-6.12/-5.88	-3.6/-2.82	-5.61/-4.22	-3.03/-2.63	-0.69/-2.83	-4.79/-4.4
Θ(67.5°)	-6.56/-4.18	-5.42/-5.35	-4.61/-4.93	-5.75/-4.31	-7.02/-8.22	-7.32/-5.52	-5.17/-4.98	-5.06/-3.69	-3.27/-2.91	-3.67/-5.18	-5.52/-5.05	-5.44/-9.14	-8.2/-5.27	-3.45/-3.87	-6.6/-4.75	-3.09/-7.82	-7.27/-7.45	-7.55/-6.93	-5.83/-5.46	-2.42/-5.26	-4.91/-1.91	-3.3/-3.85	-2.96/-2.87	-4.8/-5.78
Θ(75°)	-8.68/-7.4	-9.94/-11.67	-5.3/-4.24	-5.97/-7.11	-10.4/-9.6	-8.52/-5.61	-4.85/-5.21	-9.58/-8.29	-5.46/-5	-4.45/-3.51	-4.91/-5.45	-6.5/-11.15	-7.2/-4.03	-4.95/-2.82	-4.39/-4.84	-5.92/-5.78	-7.03/-5.7	-3.34/-3.72	-3.59/-6.07	-9.18/-4.8	-4.93/-4.52	-5.03/-3.79	-5.34/-4.88	
Θ(82.5°)	-6.6/-8.43	-12.78/-11.6	-8.34/-3.29	-5.49/-5.39	-5.57/-6.82	-8.92/-6.31	-6.94/-5.84	-8/-7.98	-5.58/-6.25	-6.88/-5.7	-3.96/-3.73	-5.41/-10.86	-7.26/-5.92	-4.53/-2.86	-4.52/-6.19	-4.84/-4.61	-6.39/-3.5	-4.88/-7.25	-5.37/-4.46	-2.5/-5.7	-6.46/-5.88	-4.03/-4.22	-7.49/-3.98	-7.07/-7.42
Θ(90°)	-9.76/-4.36	-8.91/-8.26	-7.73/-6.08	-7.72/-5.65	-6.09/-3.86	-6.77/-5.04	-7.66/-5.37	-5.18/-5.57	-11.46/-9.43	-6.67/-6	-4.04/-3.11	-5.13/-10.09	-9.66/-12.11	-6.5/-4.05	-4.58/-4.53	-4.21/-4.69	-4.29/-4.26	-6.21/-5.4	-4.78/-6.63	-6.49/-3.87	-2.66/-3.13	-6.15/-8.77	-5.67/-10.64	
Θ(97.5°)	-8.22/-5.14	-7.39/-7.04	-5.19/-6.67	-3.79/-7.6	-6.16/-6.21	-6.72/-5.62	-6.83/-5.09	-4.1/-5.2	-7.08/-6.05	-6.84/-6.17	-6.76/-7.8	-7.01/-6.42	-11.28/-8.57	-7.34/-6.35	-4.67/-3.88	-4.89/-4.49	-3.13/-3.71	-8.81/-5.84	-3.62/-4.92	-6.75/-5.68	-4.46/-4.76	-4.54/-4.08	-4.71/-8.15	-5.01/-4.82
Θ(105°)	-5.9/-9.77	-6.62/-6.22	-4.59/-4.53	-5.86/-6.65	-5.61/-4.65	-5.63/-5.58	-6.72/-5.46	-5.58/-6.3	-6.75/-6.58	-6.19/-6.56	-7.14/-6.36	-5.74/-7.17	-7.13/-7.62	-9.41/-5.94	-8.3/-4.49	-6.26/-7.78	-5.2/-8.16	-5.02/-6.79	-8.76/-4.65	-5.21/-5.35	-3.58/-0.93	-4.25/-4.53	-8.69/-7.72	-6.46/-7.03
Θ(112.5°)	-8.95/-4.79	-8.41/-5.22	-4.75/-7.2	-5.97/-6.1	-10.84/-9.41	-6.38/-8.46	-5.4/-6.08	-6.36/-7.81	-4.78/-6.41	-7.42/-7.46	-6.67/-9.03	-10.83/-6.6	-6.19/-4.52	-7.75/-5.95	-8.62/-5.15	-1.72/-8.11	-5.62/-7.47	-8.31/-4.74	-4.78/-6.63	-6.85/-2.51	-2.99/-7.29	-0.18/-5.42	-4.33/-6.2	
Θ(120°)	-4.9/-6	-7.13/-12.89	-7.32/-7.58	-8.68/-9.78	-11.48/-9.81	-7.45/-8.42	-10.94/-8.83	-6.28/-5.65	-9.08/-8.53	-6.99/-11	-6.04/-7.01	-6.66/-7.67	-10.94/-6.42	-5.37/-3.83	-8.64/-9.35	-5.75/-5.23	-6.75/-6.04	-7.69/-7.57	-7.16/-4.94	-8.51/-6.65	-11.09/-10.78	-11.01/-7.81	-9.31/-7.66	-4/-3.1
Θ(127.5°)	-7.65/-10.68	-7.44/-6.55	-5.48/-4.07	-7.36/-9.91	-9.76/-7.83	-7.77/-7.24	-7.88/-7.92	-7.34/-6.87	-7.37/-9.38	-8.97/-7.04	-8.78/-5.39	-6.26/-8.5	-6.91/-7.25	-8.4/-8.61	-11.73/-8.55	-5.18/-3.35	-4.74/-7.07	-4.2/-7.27	-8.16/-6.64	-7.02/-9.55	-9.13/-35	-7.56/-4.37	-6.26/-7.84	-7.32/-6.21
Θ(135°)	-4.31/-5.04	-5.47/-4.73	-6.32/-9.46	-12.98/-13.61	-8.55/-9.39	-7.14/-9.67	-9.87/-4.9	-5.92/-8.91	-7.35/-4.07	-12.07/-7.14	-6.38/-4.27	-5.58/-6.7	-7.34/-7.64	-6.1/-9.04	-7/-7.1	-7.12/-8.92	-8.75/-6.69	-6.81/-4.76	-5.68/-8.98	-8.53/-13.46	-8.9/-7.04	-8.16/-6.94	-4.47/-1.48	-5.32/-9.05
Θ(142.5°)	-9.32/-5.49	-6.24/-9.92	-6.02/-10.63	-13.54/-14.09	-12.32/-12.51	-8.79/-9.05	-11.77/-9.26	-7.94/-11.34	-6.87/-8.11	-12.37/-9.99	-9.65/-7.92	-10.27/-7.54	-6.47/-6.27	-6.44/-7.53	-10.99/-8.45	-7.8/-6.92	-5.82/-5.7	-7.78/-8.28	-8.62/-9.25	-9.77/-9.11	-10.28/-13.08	-10.66/-12.22	-8.39/-5.66	-4.15/-4.97
Θ(150°)	-8.3/-9.73	-9.65/-8.93	-8.16/-7.31	-9.23/-13.11	-10.96/-10.78	-11.88/-10.84	-8.68/-8.99	-8.81/-8.91	-10.82/-9.41	-10.29/-10.18	-10.44/-8	-5.88/-5.26	-5.6/-6.92	-7.98/-8.8	-4.77/-5.95	-5.17/-4.54	-3.91/-5.25	-7.09/-8.12	-12.98/-9.58	-6.38/-7.92	-8.44/-8.67	-7.97/-8.26	-9.32/-12.28	-10.49/-9.11
Θ(157.5°)	-11.42/-9.67	-10.04/-9.74	-10.37/-10.98	-10.55/-11.68	-10.02/-9.39	-8.88/-8.01	-6.18/-7.3	-6.67/-6.26	-6/-6.26	-7.23/-7.67	-7.23/-4.76	-5.06/-5.68	-5.39/-6.15	-7.24/-7.29	-6.36/-6.43	-6.25/-6.63	-7.94/-8.79	-6.93/-6.57	-8.16/-7.86	-6.92/-7.86	-9.85/-8.8	-9.75/-7.41	-7.4/-8.95	-8.77/-10.51
Θ(165°)	-8.32/-10.4	-10.18/-10.55	-11.47/-11.96	-9.28/-7.3	-6.37/-6.65	-8.27/-7.8	-6.14/-4.15	-3.48/-2.85	-3.31/-2.94	-3.17/-3.4	-3.85/-4.42	-6.07/-7.35	-6.7/-7.5	-8.55/-6.68	-6.29/-6.61	-6.23/-6.92	-7.6/-8.61	-4.82/-5.26	-5.97/-9.21	-12.54/-11.96	-8.55/-8.06	-7.23/-8.82	-9.23/-9.08	-9.73/-10.42
Θ(172.5°)	-7.81/-11.73	-15.29/-13.51	-11.99/-10.02	-7.24/-6.04	-6.17/-6.51	-5.04/-4.41	-4.06/-4.47	-4.64/-4.39	-5.02/-5.7	-5.97/-6.86	-6.16/-7.75	-9.6/-10.17	-8.92/-9.36	-11.03/-10.49	-10.3/-8.79	-7.16/-7.23	-7.46/-6.53	-6.23/-8.14	-9.43/-7.85	-7.08/-8.82	-9.09/-7.46	-8.32/-9.4	-8.89/-7.55	-8.05/-8.17
Θ(180°)	-10.59/-14.72	-12.71/-10.53	-9/-8.17	-6.73/-6.73	-7.54/-6.98	-5.56/-5.03	-5.4/-5.43	-6.33/-6.29	-7.3/-6.8	-7.92/-7.7	-7.01/-9.62	-7/-6.26	-7.3/-9.1	-8.73/-9.69	-10.12/-9.79	-9.86/-10.66	-9.99/-10.18	-12.17/-10.86	-7.24/-6.39	-6.47/-5.66	-5.29/-5.87	-6.09/-6.96	-6.78/-6.58	-8.67/-8.95
Freq(Hz)	5.6GPol.	Theta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(ΘB)	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°)	-5.15/-5.2	-5.62/-5.51	-5.2/-4.66	-4.8/-4.58	-4.08/-4.05	-3.51/-3.72	-4/-3.45	-4.14/-4.88	-3.56/-3.42	-3.14/-3.06	-3.28/-3.38	-3.28/-3.87	-4.61/-4.34	-4.52/-4.51	-4.3/-4.03	-3.89/-4.32	-4.2/-4.14	-4.57/-5.4	-4.73/-4.38	-4.04/-3.57	-4.01/-3.86	-4.02/-3.96	-3.63/-4.14	-3.96/-4.29
Θ(7.5°)	-4.47/-4.95	-4.51/-3.94	-4.19/-4.45	-4.38/-3.1	-2.07/-1.65	-1.28/-0.94	-1.93/-2.47	-2.73/-2.34	-2.04/-1.15	-1.4/-1.2	-0.97/-1.82	-2.4/-2.85	-3.93/-3.83	-3.79/-4.25	-4.44/-3.72	-3.28/-3.13	-3.33/-3.02	-2.74/-2.73	-2.46/-2.75	-3.73/-3.84	-4.39/-4.71	-4.84/-4.98	-5.14/-5.04	-5.66/-5.12
Θ(15°)	-5.33/-4.5	-3.74/-4.17	-3.72/-2.91	-2.37/-1.08	-0.51/-0.18	-0.010.18	0.15/-0.1	-0.58/-1.48	-1.68/-2.15	-3.12/-4.28	-5.2/-4.46	-3.62/-2.83	-2.38/-1.65	-0.89/-1.1	-1.63/-2.55	-3.08/-2.74	-3.03/-3.13	-3.31/-3.4	-4.87/-4.83	-3.89/-4.27	-4.06/-4.43	-4.49/-4.01	-4.15/-4.63	
Θ(22.5°)	-3.01/-1.66	-0.87/-2.48	-3.12/-1.84	-1.61/-1.62	-1.93/-2.67	-1.66/-1.95	-1.38/-0.78	-0.80/-0.59	-1.73/-2.36	-1.95/-2.24	-2.26/-3.21	-2.92/-2.66	-3.17/-2.86	-1.93/-2.32	-3.61/-3.22	-2.66/-2.03	-2.16/-1.82	-1.13/-1.56	-1.63/-1.98	-1.28/-1.27	-1.68/-4.24	-5.07/-4.3	-4.05/-3.37	
Θ(30°)	-1.78/-1.47	-0.430.62	0.740.26	-0.270.02	0.641.09	0.240.27	0.10.32	1.151.05	1.64/0.54	-2.01/-1.36	-2.73/-2.12	-0.48/-0.63	-1.69/-2.96	-4.18/-3.02	-2.22/-1.41	-1.53/-9.9	-2.36/-1.16	-0.9/-0.71	-1.15/-2.31	-2.46/-1.61	-2.08/-0.76	-0.71/-1.87	-2.18/-2.41	-1.33/-1.45
Θ(37.5°)	-0.26/-0.26	1.112/5.1	1.661/5.8	1.381/8.5	1.021/5.5	1.42/2.1	1.862/8.3	3.422/6.4	1.490/5.5	0.550/5.8	0.59/0.13	0.931/4.6	0.520/4.4	1.80/6.2	0.520/0.1	-0.26/-1.72	-0.12/-0.89	-0.30/0.26	0.29/-0.16	2.211/3.7	1.241/5.3	0.0/6.4	0.17/-1.51	0.260/3.9
Θ(45°)	-0.72/-0.84	-0.741/9.6	0.61/3.1	1.152/3.5	1.861/8.8	0.732/3.9	1.291/9.3	3.181/3.8	3.041/7.9	1.21/9.3	1.730/5.7	0.607/0.73	1.189/-0.59	2.672/0.26	2.181/5.1	1.02/-0.57	1.730/9.7	0.612/2.2	1.08/2.4	3.762/6.9	3.511/9.3	-0.241/2.5	1.051/5.5	1.941/6.8
Θ(52.5°)	-0.91/-1.34	-1.290.56	-0.37/-1.59	-1.591.35	1.781/3.4	0.311/8.6	0.422/3.3	1.411/0.3	1.551.51	-0.130.26	0.9/-0.58	-0.01/-1.95	-2.3/-2.15	1.611/8.5	3.121/9.8	1.261/2.8	3.141/3.4	1.682/6.7	1.052/4.7	2.762/7.2	1.490/3.6	0.751/0.9	1.330/6.2	-0.60/3
Θ(60°)	-0.64/-1.13	0.441/7.9	2.14/2.1	4.133/3.2	1.582/9.3	2.412/4.7	2.072/4.9	4.382/8.8	2.2/2.07	2.773/6.4	2.971/4.9	0.970/7.67	-0.051/0.09	0.921/8.9	2.133/7.7	0.911/7.5	3.451/9.6	1.692/4.2	3.123/12.2	2.863/4.5	3.532/9.7	1.872/11.2	3.14/3	3.222/4.2
Θ(67.5°)	0.222/0.04	-0.162/5	5.244/8.4	5.13/9.2	2.651/2.2	3.053/7.9	3.723/9.3	4.643/2.1	3.494/9.4	5/3.7	2.531/0.4	1.092/4.4	2.652/4.4	5.254/2.6	1.71/2.4	3.921/6.5	3.23/2.8	4.173/9.7	4.053/9.4	4.582/9.9	3.323/3.7	4.533/2.7	3.413/2.2	
Θ(75°)	0.71/2	0.961/8.6	4.885/1.7	3.622/8.7	2.443/4.4	1.883/1.3	4.044/2.2	2.92/8.3	3.62/9.6	2.554/3.2	5.284/1.1	4.322/2.5	2.482/											



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(52.5°)	-8.15/-5.14	-8.67/-8.81	-6.42/-5.13	-7.37/-11.88	-10.17/-7.1	-8.88/-7.54	-7.15/-7.16	-3.74/-7.57	-8.03/-9.41	-7.6/-8.73	-6.15/-5.56	-8.84/-6.51	-9.8/-7	-6.6/-7.37	-5.61/-8.25	-4.72/-4.43	-7.69/-6.36	-4.85/-2.08	-4.28/-6.08	-4.39/-6.05	-5.79/-5.85	-3.42/-4.8	-5.66/-6.03	-5.44/-3.77
Θ(60°)	-6.9/-4.5	-3.08/-4.95	-3.52/-3.26	-2.02/-2.98	-5.33/-5.17	-3.74/-8.6	-9.57/-6.54	-5.01/-5.01	-4.1/-6.3	-4.03/-3.72	-6.52/-5.71	-8.78/-9.8	-15.8/-6.11	-1.94/-5.32	-6.89/-7.82	-6.91/-5.48	-5.22/-4.69	-5.77/-4.02	-6.71/-5.09	-9.1/-6.9	-6.24/-5.47	-2/-4.12	-6.85/-6.37	-3.51/-4.02
Θ(67.5°)	-5.51/-3.81	-2.74/-3.32	-5.72/-6.2	-2.18/-3.87	-4.17/-4.2	-6.32/-7.41	-5.69/-4.41	-8.45/-1.91	-2.46/-4.21	-5.69/-4.49	-4.11/-4.63	-6.67/-16.66	-10.39/-12.2	-4.77/-4	-4.91/-6.09	-9.61/-7.22	-5.7/-8.45	-4.92/-5.49	-7.06/-4.95	-7.65/-4.96	-7.96/-6.17	-3.26/-4.07	-7.17/-3.08	-2.8/-3.2
Θ(75°)	-7.46/-6.67	-4.07/-5.99	-6.45/-6.6	-5.66/-8.28	-6.26/-7.22	-13.18/-6.06	-7.45/-5.3	-11.11/-3.94	-3.33/-3.29	-7.41/-5.14	-7/-7.16	-5.42/-8.76	-6.34/-8.4	-6.92/-2.57	-4.79/-6.49	-7.21/-8.71	-5.72/-7.32	-7.44/-6.59	-9.73/-4.8	-8.66/-10.33	-6.68/-4.15	-2.73/-5.31	-8.79/-5.81	-4.53/-5.47
Θ(82.5°)	-7.89/-5.31	-7.28/-8.59	-5.87/-8.02	-9.68/-8.1	-6.92/-8.55	-11.74/-3.77	-3.85/-3.92	-4.56/-5.92	-5.39/-5.07	-8.25/-4.16	-3.24/-5.32	-4.68/-10.24	-5.81/-4.99	-6.19/-4.41	-3.53/-5.5	-4.32/-5.6	-8.79/-4.93	-8.15/-6.12	-5.47/-7.68	-6.34/-6.59	-3.53/-4.27	-6.59/-10.05	-4.46/-6.25	-5.94/-8.56
Θ(90°)	-7.11/-9.95	-11.36/-9.57	-8.25/-7.39	-9.98/-8.06	-6.24/-6.84	-5.62/-5.4	-4.93/-3.93	-5.45/-3.99	-6.35/-8.94	-8.55/-6.81	-5.68/-9.97	-4.54/-4.76	-10.73/-7.12	-6.88/-6.63	-4.32/-3.5	-4.79/-3.36	-6.5/-3.82	-10.33/-9.16	-5.09/-6.19	-4.09/-6.73	-3.64/-3.95	-4.54/-6.27	-5.02/-3.27	-6.2/-5.12
Θ(97.5°)	-7.04/-8.71	-6.74/-8.18	-7.01/-5.94	-12.33/-7.09	-8.64/-6.04	-6.59/-6.21	-6.01/-4.42	-6.59/-5.74	-3.13/-8.03	-7.66/-7.76	-7.34/-5.81	-4.86/-4.92	-15.6/-9.55	-6.31/-6.22	-4.75/-4.3	-3.62/-2.9	-3.81/-3.13	-6.38/-6.28	-3.79/-1.72	-2.79/-8.79	-2.12/-2.02	-4.09/-6.76	-3.75/-3.64	-4.77/-5.26
Θ(105°)	-6.81/-6.46	-8.18/-8.65	-4.02/-7.9	-6.12/-6.2	-6.65/-5.41	-6.89/-9.43	-7.48/-7.41	-9.96/-7.92	-6.77/-5.75	-7.44/-4.82	-3.9/-4.14	-4.54/-11.36	-13.7/-7.41	-8.65/-9.58	-6.53/-4.4	-5.98/-4.93	-3.84/-3.64	-7.17/-5.22	-6.75/-4.57	-5.94/-10.18	-2.05/-1.72	-5.59/-4.72	-3.96/-4.07	-5.39/-3.11
Θ(112.5°)	-9.95/-5.72	-5.42/-8.33	-2.88/-6.07	-7.7/-6.83	-8.17/-6.16	-7.49/-6.74	-8.72/-5.06	-4.6/-5.65	-9.15/-7.12	-7.07/-6.65	-5.18/-5.06	-6.92/-10.33	-10.62/-5.51	-6.87/-9.52	-4.45/-3.48	-6.95/-6.31	-4.58/-3.96	-9.82/-5.6	-2.43/-4.66	-10.93/-7.59	-6.07/-5.65	-4.4/-7.26	-4.63/-5.66	-8.49/-4.75
Θ(120°)	-5.42/-5.7	-6.55/-8.55	-7.7/-10.8	-9.5/-8.88	-8.08/-9.06	-9.65/-8.69	-7.18/-8.74	-5.35/-4.65	-7.96/-6.48	-6.76/-7.18	-6.61/-7.26	-8.53/-7.65	-10.96/-6.73	-6.08/-8.96	-3.98/-7.11	-4.97/-6.34	-6.81/-5.05	-3.85/-6.66	-8.86/-4.84	-8.43/-6.3	-5.41/-7.32	-7.57/-9.37	-7.5/-5.43	-5.84/-4.38
Θ(127.5°)	-7.36/-7.89	-5.62/-4.78	-7.34/-4.3	-4.97/-8.96	-8.23/-7.49	-10.86/-7.02	-8.08/-5.43	-9.34/-9.67	-7.82/-7.84	-7.73/-4.75	-6.64/-10.33	-8.74/-5.91	-5.55/-8.06	-9.1/-7.46	-6.03/-5.6	-4.67/-5.02	-8.09/-7.43	-8.05/-2.97	-4.48/-6.86	-8.55/-7.2	-5.45/-5.56	-7.46/-7.38	-4.13/-12.06	
Θ(135°)	-8.03/-1.77	-2.69/-5.72	-1.0/-7.73	-8.72/-5.69	-6.06/-9.23	-15.48/-15.18	-6.92/-6.07	-5.21/-8.16	-7.3/-7.61	-8.23/-9.64	-6.42/-7.98	-7.36/-10.82	-10.71/-8.47	-13.56/-9.08	-10/-6.96	-7.68/-7.15	-6.31/-5.77	-8.31/-5.58	-5.96/-5.21	-7.48/-6.88	-5.89/-4.69	-8.09/-5.7		
Θ(142.5°)	-6.12/-4.19	-6.4/-7.46	-7.94/-9.16	-8.18/-10.26	-11.15/-12.64	-10.78/-8.01	-9.7/-8.18	-9.53/-9.97	-9.1/-8.7	-7.79/-6.34	-6.45/-5.57	-3.19/-3.77	-4.47/-6	-7.52/-8.45	-6/-6.61	-9.16/-7.88	-7.44/-5.9	-6.49/-6.07	-8.74/-9.93	-9.67/-10.82	-7.85/-6.03	-4.98/-4.79	-8.72/-6.74	-4.53/-4.87
Θ(150°)	-5.1/-5.72	-7.76/-6.76	-6.38/-7.9	-8.25/-6.83	-8.81/-11.39	-10.5/-11.97	-11.54/-10.39	-9.91/-10.25	-10.49/-9.25	-10/-11.72	-11.3/-6.58	-5.12/-6.31	-6.02/-6.97	-7.51/-6.79	-6.7/-8.46	-8.29/-6.31	-6.82/-8.37	-9.2/-8.43	-6.6/-6.95	-10.63/-9.73	-6.97/-7.41	-12.22/-14.77	-12.72/-10.21	-11.02/-7.57
Θ(157.5°)	-11.81/-9.66	-9.44/-8.47	-5.8/-5.52	-6.6/-8.48	-9/-8.86	-8.31/-9.02	-8.91/-8.26	-7.3/-5.7	-4.76/-5.31	-5.37/-4.31	-5.17/-4.94	-6.4/-5.15	-4.46/-5.58	-8.01/-7.91	-7/-5.91	-6.07/-6.67	-7.08/-6.93	-7.92/-7.44	-5.83/-5.18	-5.87/-6.72	-7.04/-6.9	-8.06/-9.61		
Θ(165°)	-6.18/-7.84	-8.06/-6.69	-8.49/-10.11	-10.63/-12.3	-11.11/-10.22	-9.93/-11.43	-9.29/-6.84	-4.82/-2.97	-2.28/-2.09	-2.09/-3.07	-3.87/-4.97	-5.61/-6.96	-8.64/-8.72	-10.78/-11.04	-8.69/-7.83	-6.07/-5.38	-4.97/-5.38	-6.4/-6.4	-6.72/-8.16	-8.5/-10.9	-13.19/-11.5	-8.76/-6.59	-7.6/-7.67	-7.25/-6.62
Θ(172.5°)	-9.43/-10.82	-10.91/-11.32	-10.33/-8.93	-8.7/-8.3	-8.78/-9.89	-10.82/-8.54	-8.16/-6.45	-5.21/-3.78	-3.84/-3.59	-3.57/-3.31	-3.49/-4.14	-5.34/-5.72	-6.79/-7.31	-8.78/-8.61	-6.7/-6.26	-6.3/-5.69	-5.8/-7.23	-8.25/-8.66	-8.48/-9.56	-11.49/-12.65	-11.48/-8.89	-8.19/-8.36	-8.18/-7.27	-7.48/-10.31
Θ(180°)	-12.63/-11.84	-8.77/-7.76	-7.62/-7.36	-6.62/-6.9	-7.61/-7.27	-7.58/-8.37	-8.47/-9.2	-8.27/-7.71	-6.83/-5.35	-5.29/-5.09	-5.46/-5.52	-4.99/-5.52	-6.29/-6.13	-6.14/-6.42	-7.21/-8.52	-10.7/-12.77	-12.64/-12.07	-10.22/-8.74	-8.84/-6.71	-6.78/-7.31	-7.64/-6.86	-6.14/-7.27	-8.92/-10.58	
Freq(Hz)	5.785GPol.	Theta/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
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(7.5°)	-5.87/-4.32	-4.23/-4.55	-3.75/-3.33	-3.28/-3.25	-2.85/-2.9	-2.65/-2.33	-1.88/-2.48	-2.77/-3.35	-3.72/-2.93	-3.46/-3.36	-2.35/-1.36	-1.37/-1.32	-1.55/-2.05	-2.03/-2.25	-3.18/-3.27	-3.14/-3.33	-2.77/-2.48	-2/-1.76	-2.59/-2.92	-1.93/-1.93	-2.36/-2.14	-3.73/-5.25	-5.49/-6.44	-7.32/-6.31
Θ(15°)	-5.34/-3.34	-2.17/-1.97	-1.99/-2.45	-2.71/-3.28	-4.38/-5.49	-5.48/-4.14	-2.74/-1.08	-0.06/-0.14	-0.27/-0.44	-0.15/-0.23	-0.41/-0.6	-0.95/-1.68	-2.68/-3.4	-2.87/-3.53	-4.53/-4.02	-2.96/-2.93	-3.77/-3.53	-2.62/-2.25	-3.06/-3.33	-1.81/-1.17	-1.16/-1.64	-1.79/-2.8	-4.07/-4.86	-5.97/-5.83
Θ(22.5°)	-3.64/-3.33	-2.83/-2.57	-1.94/-1.33	-0.63/-0.02	-0.16/-0.13	0.26/-0.09	1.25/-1.13	-1.32/-1.72	-0.92/-0.13	-0.9/-1.7	-0.46/-0.13	-0.41/-1.06	-0.53/-0.53	0.66/-0.37	-2.37/-4.53	-4.82/-2.94	-2.71/-4.4	-4.65/-4.36	-3.58/-4.87	-4.39/-3.91	-2.41/-1.11	-0.52/-0.75	-2.42/-1.86	-2.99/-4.06
Θ(30°)	-0.83/-1.04	-1.6/-0.79	-0.04/-0.1	-1.03/-1.6	-1.44/-0.16	0.25/-0.84	1.61/-0.02	-1.58/-1.98	-3.94/-1.25	0.22/-0.13	0.48/-0.22	-1.18/-3.44	-3.51/-1.84	-0.42/-0.05	0.64/-1.56	-1.34/-0.18	-1.31/-2.69	-1.85/-2.4	-2.02/-1.01	-0.03/-0.99	-1.77/-2.03	-1.47/-1.04	-3.17/-3.9	-1.76/-1.34
Θ(37.5°)	0.39/-0.59	-0.18/-0.3	-0.27/-0.13	1.24/-1.77	1.42/-2.94	2.63/-1.11	2.17/-1.2	2.38/-1.84	1.68/-1.47	2.17/-1.08	-0.79/-0.44	-0.71/-0.34	0.69/-1.18	1.38/-1.11	0.19/-0.57	1.27/-1.03	-1.01/-0.6	-0.2/-0.44	1.65/-1.94	0.72/-0.04	0.25/-0.89	1.13/-0.97	0.25/-0.01	-1.47/-0.59
Θ(45°)	2.76/-0.93	1.83/-0.23	1.23/-1.83	2.08/-1.81	0.86/-1.26	1.27/-0.69	2.68/-2.59	2.28/-1.73	0.02/-1.06	1.99/-2.27	1.40/-83	0.33/-0.44	1.95/-1.21	1.48/-0.47	0.73/-1.47	2.58/-3.01	0.59/-0.45	0.27/-0.26	2.01/-0.95	2.07/-3.25	3.16/-4.23	3.82/-2.08	2.82/-0.19	1.83/-39
Θ(52.5°)	1.15/-1.21	0.92/-1.65	1.37/-1.81	1.97/-1.81	2.01/-2.03	-0.67/-1.44	4.95/-3.79	0.61/-0.2	2.13/-1.99	2.13/-65	1.02/-0.17	-1.09/-1.79	-3.09/-2.02	-0.48/-1.54	1.293	3.67/-3.35	0.92/-1.83	2.66/-1.17	1.97/-2.08	2.31/-39	2.06/-3.33	2.36/-3.36	2.8/-1.23	2.63/-2.76
Θ(60°)	-2.81/-0.25	0.47/-0.03	1.85/-2.41	-1.17/-2.48	0.41/-0.67	-0.22/-0.3	2.47/-2.27	0.48/-1.26	2.02/-2.18	2.71/-0.6	1.93/-1.31	-0.04/-1.61	-2.47/-0.6	1.09/-1.84	1.94/-2.05	3.28/-4.28	3.41/-1.8	2.85/-1.26	2.68/-2.7	2.86/-0.94	0.41/-1.74	1.58/-2.53	1.76/-1.58	2.44/-0.28
Θ(67.5°)	0.77/-0.8	1.91/-3.08	4.72/-4.58	2.92/-1.77	2.77/-2.15	2.64/-3.21	3.92/-3.92	4.14/-3.63	4.46/-3.84	3.96/-5.03	3.85/-4.74	3.27/-0.84	0.54/-1.73	0.74/-3.39	2.82/-1	4.61/-5.15	3.86/-2.59	3.01/-2.76	4.09/-3.54	2.87/-2.44	3.34/-86	3.58/-3.05	3.17/-2.13	3.32/-2.65
Θ(75°)	2.29/-1.97	2.54/-2.32	5.88/-4.75	2.86/-2.85	3.58/-3.14	3.03/-4.1	4.44/-3.09	4.18/-2.9	4.38/-2.78	1.91/-4.93	4.44/-98	4.69/-3.41	1.49/-1.39	2.55/-3.97	3.49/-3.76	5.86/-13	4.98/-1.39	3.61/-4.93	5.76/-4.45	3.72/-4.65	4.58/-5.73	5.02/-4.73	1.91/-2.02	1.33/-1.67
Θ(82.5°)	1.27/-1.63	2.73/-2.52	3.39/-2.99	0.26/-2.23	2.41/-2.27	2.39/-2.71	4.62/-3.06	3.63/-1.65	2.22/-2.47	0.04/-2.62	3.14/-57	6.12/-4.88	2.58/-1.95	3.54/-2.54	3.23/-4.77	5.84/-5.45	5.33/-1.04	5.33/-5.07	5.27/-4.15	5.97/-5.45	5.81/-5.47	4.34/-3.64	0.87/-0.65	0.29/-1.51
Θ(90°)	0.57/-1.06	1.15/-2.38	1.8/-1.5	-1.07/-0.44	-0.73/-0.72	1.32/-0.3	2.45/-1.7	1.42/-0.47	-0.48/-2.27	1.34/-1.81	2.73/-3.38	4.97/-4.91	3.38/-3.05	3.48/-1.89	3/-3.39	4.24/-21	4.86/-3	5.22/-4.19	3.66/-4.61	6.15/-3.8	5.28/-4.52	3.41/-0.91	0.61/-1.23	0.52/-1.06
Θ(97.5°)	-0.92/-1.92	0.21/-1.5	-0.3/-0.95	0.06/-2.6	-4.41/-3.09	-2.46/-1.22	1.71/-1.27	-1.19/-2.32	0.43/-1.54	1.15/-2.77	2.79/-2.24	3.73/-4.17	2.57/-1.35	2.93/-29	2.41/-3.7	2.58/-3.22	3.58/-2.81	3.63/-3.96	4.59/-5.51	5.31/-2.62	3.23/-1.39	3.21/-08	-0.89/-2.26	-0.86/-2.32
Θ(105°)	-4.19/-1.59	-3.02/-0.64	-0.76/-0.79	1.43/-0.54	-0.33/-2.4	-4.79/-0.43	-1.17/-1.02	-2.03/-2.03	0.95/-0.75	1.21/-1.64	1.09/-2.1	1.84/-1.66	-0.26/-1.66	1.08/-2.63	0.74/-3.53	2.33/-2.32	2.21/-2.94	1.24/-1.19	4.67/-3.87	2.39/-2.41	1.59/-2.78	2.83/-1.81	-0.12/-2.29	-0.95/-0.55
Θ(112.5°)	-4.91/-4.13	0.26/-1.55	-1.39/-0.56	-0.49/-0.99	-0.83/-1.46	-5.21/-2.86	-2.12/-1.01	-3.53/-4.12	-0.21/-0.48	0.83/-0.71	-0.22/-51	2.53/-1.09	-1.77/-0.45	-2.57/-0.98	0.17/-2.52	2.90/-0.1	1.98/-1.95	0.74/-1.19	3.08/-2.01	1.91/-1.63	1.15/-3.17	2.69/-0.39	-0.61/-1.3	-3.99/-0.87
Θ(120°)	-5.81/-4.22	-2.5/-2.83	-0.93/-0.71	-2.79/-1.44	-2.51/-0.71	-1.28/-3.82	-4.39/-3.03	-3.27/-5.29	-2.77/-0.52	0.55/-0.5	-1.85/-0.41	0.9												



Sporton International Inc. Hsinchu Laboratory



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(22.5°)	-9.76/14.64	-51.73/18.58	-12.61/11.35	-11.79/-13.67	-17.55/-22.29	-27.29/16.62	-14.66/-13.72	-11.08/10.56	-12.11/-11.53	-14.7/-13.83	-11.57/-7.89	-6.08/-5.96	-8.73/-16.82	-21.44/-12.59	-7.36/-7.84	-12.14/-15.74	-14.61/-14.97	-11.63/-14.89	-18.54/-19.29	-16.01/-11.17	-9.54/-8.2	-10.96/-13.47	-15.55/-8.4	-7.02/-7.44
Θ(30°)	-13.18/-23.49	-25.38/-13.83	-9.6/-7.13	-8.84/-12.15	-16.44/-23.47	-24.48/-16.01	-20.06/-26.18	-19.98/-12.15	-9.23/-7.08	-6.85/-9.16	-9.19/-14.07	-15.88/-12.46	-11.4/-14.13	-11.55/-11.91	-10.94/-8.09	-9.71/-17.91	-14.84/-10.65	-8.79/-11.24	-12.37/-15.42	-19.22/-22.74	-11.48/-7.7	-7.96/-8.47	-13.39/-16.62	-9.6/-8.15
Θ(142.5°)	-10.22/-24.29	-15.39/-13.83	-9.99/-9.11	-12.31/-11.59	-18.03/-15.01	-14.83/-16.01	-22.48/-23.5	-27.92/-11.28	-6.67/-3.35	-3.27/-5.87	-7.09/-12.65	-18.71/-14.56	-13.95/-18.04	-14.75/-9.53	-7.22/-7.86	-9.85/-17.84	-23.62/-13.72	-19.05/-14.52	-11.28/-13.83	-11.26/-4.82	-8.12/-8.42	-13.72/-8.19	-13.87/-6.17	
Θ(45°)	-10.61/-17.8	-17.13/-14.97	-13.85/-13.42	-14.56/-17.66	-14.51/-13.13	-17.25/-19.85	-16.13/-12.48	-11.17/-8.96	-9.2/-17.03	-12.63/-8.86	-8.04/-12.11	-17.29/-32.3	-11.02/-14.16	-20.13/-14.71	-7.4/-5.91	-8.16/-12.54	-24.42/-19.25	-16.21/-21	-23.05/-15.99	-11.19/-10.96	-10.42/-6.67	-5.79/-7.91	-7.57/-8.62	-10.41/-8.79
Θ(52.5°)	-12.14/-17.23	-7.54/-6.65	-8.4/-14.49	-6.92/-16.1	-16.31/-20.56	-13.96/-11.99	-13.46/-7.08	-6.48/-6.21	-5.13/-7.7	-10.83/-9.36	-12.67/-10.28	-16.74/-14.54	-12.14/-12.81	-12.82/-14.5	-9.154/-8.23	-12.66/-18.02	-21.99/-20.2	-16.19/-23.62	-28.85/-29.68	-13.04/-13.66	-13.94/-9.75	-6.19/-8.14	-7.85/-10.94	-11.94/-11.06
Θ(60°)	-16.86/-14.42	-9.1/-5.65	-11.75/-12.23	-14.68/-12.07	-11.82/-18.42	-13.57/-22.12	-10.25/-11.73	-10.18/-4.69	-6.38/-8.92	-6.94/-4.34	-7.72/-1.98	-10.27/-16.7	-12.44/-12.4	-13.63/-7.87	-12.75/-18.22	-19.1/-30.34	-20.74/-30.61	-15.08/-14.13	-12.25/-10.12	-13.73/-5.27	-3.72/-6.13	-4.71/-7.29	-15.27/-8.94	
Θ(67.5°)	-11.36/-14.31	-14.3/-7.7	-14.46/-13.68	-15.24/-10.95	-19.2/-28.82	-21.38/-15.19	-17.16/-8.52	-12.04/-7.29	-8.06/-7.76	-7.07/-13.03	-9.11/-5.55	-5.56/-23.6	-10.98/-8.28	-7.94/-9.43	-16.02/-11.76	-11.26/-26.18	-15.73/-22.85	-21.28/-25.85	-14.28/-9.68	-9.17/-9.86	-8.92/-5.16	-4.22/-7.05	-6.38/-7.54	-13.53/-13.95
Θ(75°)	-15.51/-13.86	-12.78/-14.87	-9.88/-15.53	-11.53/-10.76	-19.99/-20	-14.14/-9.28	-13.87/-11.72	-32.37/-15.43	-13.23/-14.2	-11.27/-8.71	-11.18/-9.41	-6.97/-20.2	-15.7/-7	-8.45/-7.6	-12.51/-11.36	-10.17/-21.63	-21.42/-23.07	-14.64/-19.16	-13.74/-10.46	-8.82/-8.24	-8.86/-5.17	-6.9/-5.13	-4.33/-8.18	-9.22/-8.54
Θ(82.5°)	-7.82/-20.74	-13.54/-16.75	-11.84/-6.73	-17.15/-15.6	-15.91/-15.55	-13.91/-13.51	-18.16/-11.15	-14.59/-17.95	-20.25/-10.78	-13.76/-11.28	-8.55/-8.65	-10.17/-10.24	-12.82/-7.82	-6.38/-10.03	-9.83/-19.55	-12.19/-24.79	-24.72/-10.56	-15.83/-18.78	-12.86/-8.52	-7.44/-6.57	-9.24/-5.46	-6.07/-4.58	-6.38/-7.14	-23.68/-8.47
Θ(90°)	-12.29/-7.25	-11.1/-8.42	-11.03/-7.98	-13.48/-16.99	-13.82/-11.31	-15.72/-16.11	-39.58/-17.13	-11.21/-12.29	-28.17/-19.18	-12.35/-11.35	-9.16/-7.94	-10.01/-12.56	-12.47/-18.73	-8.92/-11.48	-11.4/-19.21	-11.77/-30.37	-15.7/-8.76	-14.64/-23.63	-18.93/-10.34	-10.57/-8.96	-12.39/-13.12	-9.15/-4.69	-7.87/-13.99	-7.69/-14.63
Θ(97.5°)	-10.58/-6.93	-8.05/-8.19	-9.35/-11.57	-13.94/-8.53	-8.77/-16.48	-14.98/-17.42	-17.51/-12.27	-10.71/-12.97	-14.62/-27.19	-15.78/-12.38	-19.42/-16.18	-18.1/-14.12	-13.27/-11.62	-12.76/-18.05	-17.35/-17.24	-15.3/-20.06	-22.12/-16.82	-15.83/-20.57	-24.88/-12.39	-12.8/-11.55	-10.89/-11.75	-5.21/-4.28	-7.82/-12.21	-4.43/-7.48
Θ(105°)	-6.65/-11.22	-8.88/-8.19	-11.89/-11.21	-9.49/-11.24	-13.02/-12.32	-8.82/-13.38	-14.7/-13.15	-20.11/-17.03	-21.97/-30.69	-28.08/-19.26	-16.08/-14.38	-31.78/-12.8	-14.42/-12.56	-17.06/-11.4	-11.8/-11.18	-26.66/-13.65	-25.5/-20.42	-21.32/-14.42	-13.06/-21.28	-24.74/-18.19	-21.24/-15.81	-15.01/-5.76	-6.39/-9.04	-6.64/-7.54
Θ(112.5°)	-11.29/-7	-11.09/-8.87	-7.3/-14.89	9/-15.82	-18.25/-16.98	-12.38/-19.55	-20.81/-15.75	-22.63/-31.66	-16.86/-25.18	-25.83/-23.33	-14.38/-14.01	-20.99/-30.11	-26.89/-6.63	-8.07/-13.1	-16.92/-12.27	-12.82/-15.88	-14.7/-10.48	-13.9/-15.95	-21.12/-16.93	-16.83/-15.52	-8.09/-4.77	-5.66/-9.96	-14.99/-6.68	-4.99/-7.07
Θ(120°)	-14.47/-6.06	-11.12/-16.85	-12.76/-17.34	-23.68/-18.37	-22.06/-22.24	-17.72/-13.93	-13.38/-16.92	-19.24/-17.39	-23.11/-17.66	-15.67/-25.83	-15.5/-17.42	-11.13/-13.83	-13.6/-7.88	-8.25/-7.41	-14.1/-16.58	-12.57/-17.76	-13.63/-12.12	-19.06/-16.84	-27.11/-12.32	-14.43/-9.67	-11.65/-11.15	-14.5/-13.53	-12.28/-14.62	-6.2/-4.89
Θ(127.5°)	-9.41/-27.7	-8.68/-8.19	-10.99/-10.06	-8.9/-14.5	-26.53/-13.83	-12.07/-16.65	-11.02/-15.75	-13.61/-16.35	-15.71/-20.66	-32.4/-17.02	-21.54/-12.39	-11.06/-13.82	-16.32/-8.36	-10.01/-10.57	-21.89/-21.93	-15.93/-14.49	-12.22/-8.52	-11.28/-16.18	-14.95/-13.15	-10.97/-7.83	-10.36/-16.83	-14.51/-10.76	-9.94/-13.05	-19.01/-10.47
Θ(135°)	-2.75/-7.15	-14.05/-8.55	-7.81/-16.48	-17.65/-20.43	-13.49/-15.64	-16.58/-13.96	-13.45/-13.96	-20.52/-16.38	-16.87/-24.18	-18.29/-20.06	-19.74/-20.21	-20.84/-17.32	-16.99/-13.06	-12.93/-24	-14.01/-12.25	-19.49/-18.45	-18.41/-15.41	-21.39/-17.33	-16.78/-21.83	-17.79/-19.65	-13.59/-11.09	-10.84/-6.81	-5.05/-5.24	-8.11/-6.97
Θ(142.5°)	-9.6/-26	-8.32/-24.38	-11.65/-14.51	-14.9/-15.99	-17.43/-41.91	-21.47/-14.74	-25.67/-16.18	-17.04/-21.63	-15.24/-12.43	-20.12/-19.04	-15.26/-13.98	-10.29/-9.55	-12.34/-9.1	-8.88/-15.69	-12.24/-8.07	-10.34/-12.82	-24.7/-25.45	-19.54/-27	-18.56/-12.37	-12.06/-15.71	-21.85/-23.09	-17.66/-15.53	-11.63/-9.98	-4.11/-6.1
Θ(150°)	-7.86/-17.72	-14.43/-11.58	-9.27/-9.25	-9.26/-11.5	-13.32/-16.55	-22.40/-20.74	-18.79/-13.59	-11.52/-13.23	-15.27/-16.69	-16.06/-14.61	-14.27/-11.51	-7.32/-5.79	-5.75/-9.1	-6.63/-8.68	-9.47/-8.53	-11.76/-14.5	-14.37/-13.57	-17.79/-19.28	-17.65/-13.15	-10.69/-11.69	-14.55/-15.19	-13.44/-11.41	-12.16/-12.97	-12.02/-8.64
Θ(157.5°)	-14.56/-12.89	-15.17/-9.07	-9.18/-11.18	-6.3/-21.28	-16.71/-13.5	-14.46/-21.23	-19.37/-18.53	-14.02/-11.63	-9.84/-8.83	-10.44/-6.65	-8.65/-4.78	-3.95/-4.64	-4.55/-5.08	-5.74/-7.99	-9.41/-8.02	-7.86/-9.46	-15.96/-23.4	-17.17/-16.52	-18.16/-13.2	-10.2/-7.92	-8.28/-7.66	-9.39/-9.63	-9.63/-10.36	-9.96/-11.86
Θ(165°)	-7.34/-37	-11.57/-10.09	-16.16/-28.66	-19.53/-13.17	-12.3/-13.97	-20.85/-21.96	-25.45/-14.5	-12.64/-11.08	-9.88/-9.23	-9.94/-8.45	-8.61/-8.35	-8.93/-9.58	-8.95/-9.99	-11.9/-12.36	-11.18/-9.51	-8.25/-7.8	-9.09/-7.93	-8.15/-10.48	-12.79/-15.88	-26.65/-28.37	-17.48/-14.32	-11.67/-11.69	-12.1/-10.12	-10.94/-10.57
Θ(172.5°)	-7.76/-12.45	-15.04/-14.24	-13.75/-15.28	-14.34/-14.7	-15.6/-18.79	-15.22/-12.42	-12.82/-15.42	-17.18/-12.9	-15.99/-13.98	-13.49/-17.97	-13.71/-14.74	-16.59/-18.04	-14.17/-14.72	-16.19/-15.25	-13.48/-11.82	-10.48/-10.1	-10.64/-9.86	-9.64/-11.07	-13.33/-15.2	-19.17/-25.11	-26.75/-19.83	-15.47/-12.15	-10/-7.11	-7.73/-7.34
Θ(180°)	-13.42/-28.47	-19.89/-15.33	-16.38/-17.52	-15.29/-13.9	-13.77/-12.84	-12.2/-13.47	-19.19/-18.46	-23.47/-24.92	-25.58/-15.62	-14.53/-12	-11.91/-11.27	-11.2/-10.12	-10.25/-10.96	-11.34/-11.05	-11.2/-12.09	-13.08/-14.29	-14.69/-14.63	-15.92/-18.25	-13.83/-15.53	-19.75/-15.66	-16.23/-17.87	-10.57/-14.82	-10.87/-9.17	-9.73/-10.12
Freq(Hz)	5.36GPol	ThetaAnt.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°)	-13.94/-13.4	-14.6/-14.68	-15.15/-15.61	-16.16/-17.4	-17.08/-13.51	-12/-13.57	-16.8/-11.75	-11.18/-12.78	-8.83/-10.94	-9.84/-9.47	-11.52/-10.86	-11.77/-11.05	-11.42/-11.48	-11.57/-11.51	-11.56/-11.88	-11.01/-11.7	-12.47/-12.39	-11.78/-13.78	-12.15/-14.68	-16.64/-17.25	-26.74/-22.53	-25.28/-25.57	-17.22/-16.63	-14.71/-13.78
Θ(7.5°)	-17.63/-18.99	-18.81/-17.65	-22.14/-25.34	-22.91/-16.06	-12.3/-9.63	-6.62/-4.84	-4.75/-4.76	-3.65/-4.5	-4.07/-4.67	-5.6/-5.25	-5.88/-17.8	-7.68/-8.39	-9.19/-9.56	-7.25/-4.67	-5.56/-6.03	-6.79/-8.01	-7.44/-8.11	-7.82/-8.19	-9.8/-10.74	-14.95/-16.81	-19.38/-23.57	-21.68/-18.85	-18.17/-19.58	
Θ(15°)	-33.71/-17.81	-13.85/-16.14	-15.52/-22.21	-18.69/-15.33	-14.87/-11.82	-9.67/-6.73	-6.39/-6.5	-6.39/-7.52	-7.75/-8.74	-10.46/-9.95	-9.3/-10.9	-12.97/-15.88	-16.84/-12.46	-11.74/-7.55	-5.90/-4.01	-4.42/-6.76	-9.85/-5	-7.47/-7.86	-10.24/-9.32	-11.29/-12.05	-13.81/-15.28	-12.65/-15.96	-18.97/-25.31	
Θ(22.5°)	-23.83/-11.65	-8.43/-13.38	-23.03/-21.24	-24.94/-33.75	-22.68/-19.34	-13.67/-11.29	-9.93/-9.76	-11.36/-14.75	-11.4/-19.01	-16.03/-21.88	-25.38/-28.32	-20.78/-19.65	-17.27/-13.68	-8.44/-4.97	-3.86/-3.77	-4.97/-7.98	-9.92/-6.03	-4.41/-3.37	-3.53/-3.63	-2.92/-3.84	-4.99/-6.77	-9.25/-11.53	-18.87/-17.68	-18.91/-18.46
Θ(30°)	-15.77/-15.39	-13.24/-10.88	-12.37/-13.63	-12.95/-11.91	-10.72/-10.36	-10.06/-12.94	-10.24/-11.96	-12.36/-11.03	-9.43/-9.3	-12.07/-14.94	-27.91/-14.53	-13.07/-11.39	-9.59/-10.2	-7.93/-6.2	-4.14/-3.55	-3.63/-12.42	-7.49/-1.55	-0.9/-3.02	-3.68/-1.55	-2.63/-0.39	-3.16/-3.96	-5.91/-8.5	-10.5/-20.93	-18.52/-16.25
Θ(37.5°)	-15.02/-15.27	-9.95/-6.41	-12.15/-12.1	-7.13/-8.15	-10.33/-8.02	-11.9/-14.9	-9.43/-7.9	-3.78/-3.3	-5.22/-5.55	-5.15/-4.1	-5.78/-12.08	-9.31/-8.76	-8.03/-7.79	-4.4/-6.08	-4.18/-5.56	-4.28/-19.71	-5.62/-1.37	-2.17/-3.06	-2.3/-1.53	-1.52/-1.81	-1.63/-3.39	-4.52/-3.62	-3.58/-8.3	-13.18/-11.57
Θ(45°)	-10.79/-11.15	-10.68/-4.72	-8.1/-9.37	-9.11/-8.68	-8.35/-7.73	-17.49/-9.56	-4.72/-4.9	-5.36/-10.57	-12.59/-6	-3.8/-1.95	-2/-7.28	-8.65/-10.92	-9.48/-12.15	-3.23/-4.9	-2.63/-5.2	-2.74/-11.16	-2.44/-2.21	-4.74/-3.56	-1.64/-0.7	0.280/33	0.59/-0.79	-2.83/-2.97	-3.22/-7.42	-8.37/-6.13
Θ(52.5°)	-9.52/-14.46	-9.08/-4.34	-5.37/-13.01	-7.78/-13.9	-7.12/-12.54	-16.54/-12.61	-16.07/-15.42	-26.59/-16.27	-12.12/-15.04	-17.91/-23.31	-6.74/-9.16	-5.75/-12.74	-29.65/-19.42	-4.83/-4.97	-2.91/-3.22	-3.51/-4.98	-0.06/-3.37	-3.57/-0.93	-1.24/-1.14	0.191/84	0.39/-0.28	-1.18/-0.82	-0.21/-5.31	-7.36/-5.52
Θ(60°)	-8.25/-18	-5.61/-5.27	-12.57/-5.7	-2.37/-2.95	-10.15/-9.93	-8.95/-9.39	-4.81/-7.23	-3.69/-1.37	-4/-5.62	-5.31/-15.62	-10.35/-5.08	-10.62/-5.67	-4.6/-1.92	-3.13/-3.64	1.21/-3.26	-3.34/-1.59	-0.730/-37		1.373/61	1.020/06	-1.1/-1.2	0.55/-2.56	-5.48/-5.28	
Θ(67.5°)	-9.37/-9.8																							



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(75°)	-13.87/-14.69	-8.72/-10.15	-12.96/-13.12	-12.68/-27.13	-29.08/-17.68	-20.05/-11.24	-31.86/-10.46	-23.38/-9.03	-4.74/-5.88	-11.2/-10.81	-29.96/-7.78	-2.55/-9.78	-10.46/-13.98	-7.77/-6.13	-8.3/-14.31	-23.16/-17.04	-17.87/-15.85	-35.31/-17.84	-25.86/-21.39	-25.19/-15.94	-13.45/-10.24	-6.51/-9.31	-22.47/-8.98	-11.74/-12.48
Θ(82.5°)	-13.48/-11.32	-9.55/-24.65	-11.44/-19.22	-11.6/-18.68	-18.42/-21.87	-25.22/-10.99	-14.31/-12.97	-13.1/-19.75	-11.54/-6.56	-17.85/-8.21	-8.23/-6.6	-2.62/-10	-9.47/-6.69	-6.71/-7.76	-6.95/-9.64	-15.06/-9.64	-13.81/-14.42	-22.11/-19.05	-17.57/-13.47	-14.73/-16.14	-6.79/-6.21	-6.94/-12.35	-6.49/-6.7	-9.9/-15.62
Θ(90°)	-7.73/-13.53	-22.59/-10.82	-17.34/-12.27	-12.28/-14.02	-26.29/-23.08	-15.54/-15.87	-18.13/-12.93	-24.68/-19.24	-16.25/-18.94	-13.46/-10.15	-8.84/-20.17	-6.84/-7.74	-24.23/-7.15	-17.15	-10.52/-10.95	-19.83/-10.09	-12.66/-14.53	-27.27/-33.1	-16.07/-13.96	-11.2/-10.25	-4.2/-4.3	-6.19/-10.24	-5.55/-4.84	-10.39/-49
Θ(97.5°)	-5.82/-10.42	-10.13/-8.05	-10/-13.67	-14.94/-10.07	-11.33/-11.7	-20.02/-14.05	-21.93/-11.87	-19.65/-21.15	-12.44/-27.04	-11.91/-12.91	-13.71/-12.87	-15.78/-9.68	-34.04/-11.89	-9.39/-18.21	-15.98/-10.02	-14.13/-11.67	-13.39/-14.5	-19.38/-18.62	-19.18/-13.1	-11.53/-10.51	-5.33/-5.56	-9.16/-13.06	-4.66/-6.14	-6.16/-9.76
Θ(105°)	-9.04/-6.15	-12.96/-14.4	-8.32/-24.57	-11.21/-11.24	-14.74/-11.4	-18.44/-16.37	-19.42/-22.35	-17.93/-17.1	-14.87/-15.92	-20.39/-11.97	-14.05/-11.6	-18.77/-20.82	-29.44/-11.06	-12.87/-12.39	-33.68/-17.93	-19.12/-13.07	-22.7/-16.91	-21.21/-24.16	-22.13/-15.85	-10.84/-11.7	-9.67/-12.1	-14.86/-13.17	-6.34/-6.51	-8.49/-6.65
Θ(112.5°)	-10.99/-9.17	-8.44/-16.9	-4.97/-9.22	-11.92/-7.76	-14.88/-16.18	-23.41/-21.87	-15.96/-14.32	-19.51/-23.53	-38.78/-19.6	-23.37/-21.45	-14.32/-13.95	-11.86/-10.87	-19.76/-8.7	-11.49/-16.36	-14.51/-13.25	-8.84/-14.88	-27.37/-16.5	-27.06/-16.84	-16.29/-21.11	-22.84/-20.94	-17.73/-10.63	-12.11/-10.66	-10.11/-10.68	-16.47/-7.69
Θ(120°)	-9.34/-9.37	-8.93/-10.99	-15.32/-37.6	-25.28/-17.88	-19.47/-38.55	-17.88/-18.95	-15.01/-16.83	-26.42/-13.34	-13.89/-20.1	-14.59/-15.52	-11.44/-16.34	-20.44/-16.15	-13.2/-10.46	-10.04/-15.1	-14.95/-15.25	-9.39/-11.09	-18.14/-11.48	-13.14/-14.4	-24.93/-22.23	-14.29/-12.85	-10.96/-8.6	-7.21/-11.64	-8.62/-8.96	-13.51/-5.47
Θ(127.5°)	-10.35/-12.83	-11.62/-7.75	-12.2/-7.68	-5.73/-12.58	-16.12/-17.33	-17.95/-9.37	-23.33/-14.97	-21.6/-13.59	-16.67/-17.51	-18.87/-16.3	-14.45/-13.42	-14.67/-21.4	-10.28/-8.78	-6.61/-11.66	-27.02/-17.61	-11.91/-17.13	-15.08/-8.39	-13.39/-10.02	-19.86/-12.02	-17.49/-27.13	-15.94/-13.25	-10.81/-23.51	-16.33/-11.41	-9.01/-22.88
Θ(135°)	-10.52/-5.58	-12.39/-10.66	-16.24/-11.05	-15.95/-20.98	-16.6/-20.21	-33.68/-30.35	-15.28/-14.44	-20.86/-17.74	-15.43/-19.2	-15.7/-18.82	-10.64/-7.83	-9.66/-15.44	-12.95/-21.17	-17.24/-17.75	-20.17/-17.12	-28.24/-17.6	-17.6/-11.81	-17.97/-19.59	-14.46/-11.29	-13.71/-11.33	-12.57/-12.72	-9.41/-4.5	-6.21/-16.58	
Θ(142.5°)	-8.3/-6.35	-11.21/-12.94	-13.29/-11.08	-9.47/-13.05	-25.65/-18.31	-20.71/-22.6	-35.11/-21.03	-31.51/-19.5	-21.45/-17.78	-19.08/-11.15	-12.99/-11.9	-7.9/-8	-9.91/-9.63	-13.04/-13.79	-9.58/-10.88	-12.53/-14.92	-17.24/-14.36	-27.15/-13.51	-15.6/-23.21	-41.74/-18.36	-12.97/-10.93	-8.3/-11.13	-15.89/-8.57	-2.85/-2.5
Θ(150°)	-2.54/-4.52	-12.6/-14.05	-10.99/-7.62	-8.53/-11.74	-20.27/-13.43	-13.28/-16.7	-21.93/-14.12	-9.36/-12.87	-15.1/-18.49	-13.81/-17.63	-14.83/-6.4	-4.53/-5.32	-3.94/-3.98	-6.16/-6.05	-5.97/-10.12	-13.89/-14.63	-17.93/-23.92	-15.49/-17.25	-18.1/-16.69	-24.63/-26.24	-17.13/-18.87	-13.9/-11.52	-14.44/-5.75	-13.47/-7.69
Θ(157.5°)	-18.72/-11	-10.25/-12.88	-8.99/-9.45	-11.91/-19.99	-26.99/-18.07	-18.43/-21.64	-17.99/-13.97	-12.87/-9.69	-10.36/-10.55	-10.94/-9.99	-6.64/-4.98	-3.76/-5.21	-7.2/-7.07	-8.78/-10.72	-14.03/-13.95	-9.35/-14.17	-9.21/-15.56	-12.72/-11.8	-11.22/-10.14	-10.54/-11.12	-12.67/-11.2	-9.67/-5.37	-6.62/-10.17	
Θ(165°)	-6.72/-8.26	-10.22/-8.18	-9.6/-13.51	-18.44/-31.06	-18.21/-16.76	-17.26/-20.85	-15.91/-13.38	-9.61/-7.12	-5.78/-5.27	-4.59/-5.63	-5.44/-6.48	-6.8/-7.83	-11.38/-11.73	-11.74/-14.55	-18.62/-15.56	-12.5/-10.04	-7.33/-7.23	-8.54/-11.78	-15.58/-24.7	-26.35/-15.26	-16.53/-12.52	-10.65/-7.96	-10.79/-13.98	-12.66/-8.04
Θ(172.5°)	-9.46/-12.59	-11.72/-10.66	-10.25/-9.53	-10.8/-12.54	-14.44/-14.47	-15.65/-14.37	-13.99/-12.34	-11.01/-5.87	-9.44/-8.05	-6.62/-7.42	-7.47/-8.8	-11.09/-9.87	-10.23/-12.25	-12.64/-12.65	-12.39/-11.02	-10.16/-8.78	-8.09/-7.95	-8.9/-10.08	-11.23/-13.22	-17.49/-20.79	-24.57/-18.35	-18.91/-20.97	-12.15/-8.43	-9.15/-10.86
Θ(180°)	-21.4/-12.78	-11.87/-12	-12.86/-13.22	-12.64/-10.96	-9.92/-10.05	-10.21/-11.45	-12.84/-14.52	-17.2/-23.86	-28.55/-22.16	-15.29/-11.46	-12.25/-9.97	-8.77/-7.95	-6.26/-5.79	-6.24/-6.52	-6.46/-6.56	-7.65/-8.34	-10.31/-10.56	-12.03/-13.53	-15.86/-12.37	-11.56/-10.66	-10.37/-12.18	-12.1/-10.55	-8.72/-7.75	-10.34/-14.95
Freq(Hz)	5.785GPol.	ThetaAnt. 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°)	-18.77/-19.42	-27.93/-26.47	-22.29/-25.83	-20.24/-10.48	-12.51/-11.97	-10.71/-8.41	-8.15/-10.37	-9.65/-10.65	-9.09/-10.54	-11.51/-11.36	-12.89/-14.04	-16.65/-19.25	-18.6/-21.73	-23.38/-27.3	-33.5/-28.79	-27.31/-31.61	-32.31/-33.93	-21.27/-24.39	-21.48/-25.6	-26.28/-31.15	-23.23/-22.08	-22.66/-27.36	-20.59/-21.47	
Θ(7.5°)	-30.65/-17.34	-15.63/-16.44	-15.51/-18.31	-19.27/-14.01	-10.44/-9.75	-9.51/-8.46	-7.06/-8.42	-8.63/-9.09	-8.99/-7.37	-8.51/-7.91	-9.23/-10.13	-11.1/-16.29	-19.42/-20.08	-21.87/-22.16	-24.38/-24.09	-21.97/-16.87	-13.59/-11.58	-9.17/-7.79	-7.9/-8.98	-9.8/-10.2	-12.46/-11.81	-14.28/-15.8	-17.78/-16.2	-23.2/-26.5
Θ(15°)	-38.29/-19.47	-22.23/-21.37	-13.18/-16.42	-19.84/-20.04	-22.48/-26.88	-27.54/-15.66	-9.82/-6.41	-4.97/-5.2	-5.6/-6.13	-7.02/-6.59	-7.89/-9.05	-11.89/-14.31	-12.1/-10.52	-10.69/-13.27	-22.11/-22.61	-16.31/-13.53	-8.59/-4.1	-2.92/-2.7	-4.38/-7.08	-8.39/-15.68	-12.15/-12.01	-11.5/-13.5	-12.61/-13.45	-15.13/-18.97
Θ(22.5°)	-21.94/-18.68	-16.25/-22.37	-13.04/-14.46	-11.73/-10.82	-10.84/-11.43	-10.72/-9.31	-10.02/-10.33	-12.85/-10.49	-10.49/-9.22	-9.48/-9.56	-10.41/-9.71	-10.22/-14.54	-13.51/-14.39	-13.42/-10.58	-14.88/-16.99	-7.20/-9.47	-5.5/-7.28	-5.14/-4.84	-5.8/-8.18	-5.86/-6.75	-5.38/-6.15	-10.04/-9.26	-12.51/-16.27	
Θ(30°)	-10.77/-8.16	-8.95/-16.15	-19.89/-17.47	-16.46/-20.82	-23.3/-18.73	-14.15/-12.03	-9.87/-10.86	-17.84/-17.69	-22/-25.44	-18.14/-11.29	-9.5/-7.36	-6.22/-15.86	-21.23/-20.96	-17.28/-13.43	-8.44/-13.3	-5.450/3.55	-0.43/-4.24	-2.69/-2.48	-2.23/-1.79	-1.68/-1.9	-3.05/-3.67	-3.58/-4.18	-7.57/-13.55	-11.09/-11.91
Θ(37.5°)	-5.93/-6.41	-14.83/-9.21	-17.96/-10.63	-9.34/-8.8	-8.13/-7.75	-5.77/-8.13	-3.28/-6.98	-4.56/-2.88	-1.44/-2.75	-6.04/-8.97	-20.4/-9.55	-8.2/-9.29	-11.38/-8.34	-11.78/-9.21	-7.25/-2.53	-2.490/7.1	-1.63/-2.21	0.1/-0.31	0.420/4.8	1.370/5.6	-1.42/-4.38	-3.28/-3.38	-4.87/-11.32	-10.48/-7.14
Θ(45°)	-8.51/-19.08	-6.39/-14.5	-7/-5.8	-2.4/-10.24	-11.94/-10.09	-7.34/-10.06	-3.82/-3.62	-2.34/-1.9	-2.84/-3.75	-2.3/-4.05	-4.49/-7.72	-8.57/-7.07	-10.25/-4.36	-6.62/-11.51	-3.5/-2.61	-1.442/-5.9	-2.10/5.2	1.87/-0.08	1.070/29	0.791/24	0.930/39	0.11/-1.62	-3.77/-11.11	-4.18/-4.49
Θ(52.5°)	-12.28/-11.7	-7.39/-15.39	-7.02/-4.22	-7.24/-7.79	-7.04/-9.12	-8.95/-3.29	-2.05/-6.16	-5.77/-6.21	-6.33/-4.45	-4.19/-2.46	-7.74/-5.94	-8.49/-10.78	-14.88/-9.03	-9.35/-6.51	-2.88/-2.65	-0.22/-1.66	-1.610/3.55	0.45/-0.83	-0.31/-0.07	-0.84/-0.82	1.232/3.1	1.47/-0.53	-4.27/-10.07	-2.52/-4.83
Θ(60°)	-14.11/-7.48	-2.95/-13.8	-2.63/-2.65	-13.67/-5.64	-8.9/-16.5	-13.25/-10.36	-7.18/-5.89	-20.17/-12.66	-14.24/-22.63	-7.51/-7.69	-6.23/-7.92	-3.73/-25.36	-18.95/-30.99	-7.6/-3.21	-3.33/-4.6	-1.910/-0.67	-1.22/-1.98	-0.00/-0.95	-0.74/-2.66	-1.06/-2.03	0.222/3.3	0.16/-1.72	-9.75/-7.43	-2.73/-8.28
Θ(67.5°)	-10.04/-3.19	-3.24/-8.55	-4.16/-6.57	-5.94/-7.48	-5.97/-6.85	-6.11/-8.46	-0.13/-2.05	-1.371/0.3	1.54/-3.23	-2.35/-0.49	-0.87/-14.95	-10.25/-10.42	-5.54/-2.77	-3.38/-5.99	-4.11/0.2	-1.8/-4.16	1.81/-1.3	-1.37/-6.05	-3.59/-0.7	0.222/3.6	0.48/-2.79	-6.98/-3.61	-5.32/-9.13	
Θ(75°)	-3.62/-5.03	-3.73/-8.88	0.8/-2.25	-2.04/-0.95	-1.81/-0.06	-1.72/-4.26	1.18/-0.49	0.25/-0.64	-0.74/-2.97	-4.320/3.7	-2.25/-2.65	-0.5/-6.1	-4.83/-14.03	-5.42/-5.65	-2.72/-4.05	-5.31/2.2	0.2/-5.43	0.420/5.8	-1.25/-5.3	-2.230/2.4	2.161/9.7	-1.55/-3.08	-7.62/-3.6	-12.19/-6.79
Θ(82.5°)	-4.13/-7.35	-3.04/-2.78	0.7/-0.14	-3.63/-5.16	-1.58/-0.42	-2.5/-1.85	1.450/0.8	0.04/-1.1	-2.9/-3.46	-11.58/-4.27	-4.35/-8.13	1.21/-3.12	-3.92/-9.13	-9.7/-8.6	-6.12/-4.74	-4.330/3.7	0.85/-3.34	0.421/0.5	-2.01/-2.89	0.741/5.3	2.592/0.7	-1.45/-2.4	-4.59/-4.62	-8.05/-6.17
Θ(90°)	-7.49/-4.64	-4.48/-1.4	-1.54/-1.77	-4.66/-3.73	-5.7/-2.69	-3.01/-5.67	-0.85/-5.4	-7.53/-15.33	-9.68/-4.17	-11.12/-8.44	-6.33/-6.73	-1.41/-0.93	-4.66/-4.52	-13.3/-15.65	-6.02/-5.73	-7.13/-2.38	0.57/-0.78	0.53/-0.05	-3.2/-2.71	0.031/2.3	2.531/0.3	-0.79/-4.94	-0.54/-2.89	-3.98/-7.33
Θ(97.5°)	-5.34/-5.51	-6.29/-2.85	-4.39/-5.98	-2.62/-3.71	-4.85/-9.36	-9.04/-6.4	-0.92/-4.69	-7.4/-16.46	-9.34/-7.32	-20.88/-8.13	-5.22/-3.44	-3.03/-4.04	-9.31/-12.06	-13.5/-7.93	-6.83/-4.28	-5.93/-4.11	-2.45/-1.61	-1.67/-1.58	-1.69/-1.21	-2.31	0.62/-3.78	-0.66/-2.45	-1.36/-2.23	-12.91/-6.17
Θ(105°)	-6.16/-4.96	-7.77/-6.56	-6.07/-3.35	0.180/1.2	-2.73/-4	-12.91/-7.89	-3.44/-6.63	-7.04/-14.83	-9.95/-5.65	-9.04/-5.26	-7.26/-3.36	-6.81/-9.87	-18.23/-7.51	-6.74/-7.95	-9.87/-3.47	-4.57/-4.73	-3.95/-4.5	-4.59/-2.29	-1.45/-4.81	-2.47/-3.66	-3.33/-4.12	-2.15/-3.78	-2.25/-6.5	-3.57/-6.55
Θ(112.5°)	-7.35/-9.71	-4.61/-13.5	-2.98/-0.74	-1.22/-1.12	-2.62/-4.21	-15.07/-10.33	-9.12/-7.88	-11.81/-13.52	-11.54/-8.19	-9.83/-3.8	-16.19/-5.35	-6.14/-6.36	-24.42/-14.35	-23.08/-15.74	-10.6/-2	-5.8/-10.16	-6.42/-7.85	-5.96/-6.07	-4.97/-7.69	-2.17/-1.64	-4.52/-0.83	-2.65/-5.89	-3.4/-3.94	-7.15/-7.42
Θ(120°)	-16.33/-9.41	-6.45/-4.99	-4.36/-4.46	-3.74/-2.78	-4.65/-1.04	-3.16/-6.96	-9.43/-10.63	-10.48/-14.72	-11.74/-6.4	-6.81/-5.97	-6.93/-7.08	-2.66/-4.25	-9.13/-3.3	-13.55/-13.63										



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(120°)	-9.28/20.13	-14.39/10.37	-12.27/-9.93	-10.29/-16.7	-17.17/-11.67	-13.45/-23.38	-19.14/-15.92	-20.6/-13.29	-13.68/-17.17	-16.09/-13.44	-11.6/-15.44	-12.87/-12.11	-8.54/-8.49	-9.15/-7.75	-14.41/-12.37	-9.57/-8.36	-9.68/-9.79	-11.01/-32.24	-20.31/-13.39	-33.21/-17.88	-17.19/-23.44	-10.68/-10.66	-8.04/-7.28	-9.52/-7.93
Θ(127.5°)	-8.09/-10.13	-11.52/-10.8	-7.04/-4.32	-14.03/-27.66	-17.1/-16.69	-20.49/-16.03	-25.07/-8.52	-15.82/-15.74	-15.27/-14.51	-18/-9.42	-8.27/-5.54	-11.02/-23.81	-12.19/-12.12	-12.82/-11.8	-9.44/-11.04	-15.03/-11.86	-10.54/-12.04	-12.29/-17.38	-32.12/-24.45	-15.40/-12.61	-8.57/-6.27	-13.98/-8.51	-11.27/-9.17	
Θ(135°)	-6.19/-10.78	-7.59/-6.74	-8.58/-3.7	-15.57/-14.71	-10.9/-12.35	-29.87/-14.9	-18.67/-16.03	-16.84/-19.9	-20.56/-19.24	-22.38/-11.79	-7.09/-5.46	-4.38/-28.23	-9.72/-7.2	-5.93/-6.65	-7.57/-8.69	-13.24/-18.27	-11.74/-8.21	-7.9/-11.48	-14.38/-17.23	-18.21/-22.5	-12.53/-12.63	-21.35/-12.74	-13.78/-10.35	-7.84/-5.5
Θ(142.5°)	-14.22/-11.52	-9.4/-8.57	-7.53/-11.04	-19.35/-26.03	-18.74/-15.81	-12.08/-11.15	-20.22/-18.45	-18.26/-24.34	-23.07/-23.26	-28.05/-11.68	-11.45/-10.56	-13.03/-12.8	-9.15/-6.41	-8.22/-10.89	-21.77/-26.37	-14.68/-10.43	-8.66/-11.76	-15.44/-17.04	-18.22/-16.98	-24.78/-23.17	-12.54/-9.03	-11.85/-17.94	-10.69/-12.55	-9.42/-6.64
Θ(150°)	-16.65/-11.77	-12.25/-11.76	-17.35/-15.95	-18.12/-22.98	-18.84/-16.86	-20.86/-33.76	-23.67/-15.53	-14.74/-14.48	-26.87/-24.08	-21.43/-17.4	-15.03/-13.47	-13.37/-14.41	-13/-12.87	-12.53/-17.14	-13.84/-13.57	-11.84/-10.76	-12.79/-16.35	-20.79/-17.59	-21.36/-30.13	-21.81/-22.04	-16.64/-11.13	-12.91/-11.04	-12.61/-16.87	-12.02/-15.71
Θ(157.5°)	-31.19/-24.95	-17.17/-18.79	-31.01/-23.78	-29.12/-29.96	-23.45/-29.3	-23.08/-22.74	-27.81/-15.26	-16.24/-14.61	-13.09/-16.22	-18.1/-15.97	-14.72/-14.51	-12.93/-12.17	-16.22/-16.19	-13.65/-19.72	-16.38/-15.41	-14.28/-14.15	-12.45/-14.13	-18.03/-13.99	-36.11/-35.92	-26.21/-23.78	-15.32/-12.13	-12.68/-20.92	-19.18/-22.67	
Θ(165°)	-30.72/-23.57	-16.87/-17.03	-17.62/-14.43	-13.27/-12.91	-12.91/-13.47	-15.2/-22.97	-18.08/-12.94	-11.69/-9.46	-9.65/-9.16	-10.31/-10.44	-9.64/-9.71	-11.65/-12.36	-12.11/-13.46	-14.31/-15.86	-17.23/-17.65	-21.72/-25.2	-24.27/-21.82	-25.05/-16.87	-17.01/-18.49	-21.08/-22.46	-25.45/-25.49	-27.49/-29.2	-21.13/-15.63	-18.82/-23.74
Θ(172.5°)	-20.94/-23.87	-32.59/-24.86	-15.62/-11.02	-9.29/-10.34	-9.94/-10.89	-15.46/-17.38	-21.12/-19.63	-19.17/-13.36	-11.51/-10.92	-9.58/-10.11	-10.22/-10.67	-11.53/-10.51	-10.12/-10.23	-10.6/-11.75	-12.12/-12.1	-10.86/-12.73	-13.33/-14.11	-15.35/-15.76	-17.45/-17.72	-15.85/-14.66	-13.94/-12.69	-10.91/-10.35	-11.21/-13.68	-18.72/-25.12
Θ(180°)	-17.38/-18.91	-17.23/-12.86	-9.62/-9.18	-10.38/-12.15	-16.31/-26.56	-30.08/-22.84	-21.69/-18.95	-17.71/-16.33	-16.92/-16.98	-15.04/-15.84	-15.64/-14.37	-12.74/-12.29	-12.17/-12.33	-13.72/-16.04	-15.97/-17.62	-22.53/-20.44	-22.81/-22.83	-26.01/-24.68	-22.17/-19.44	-18.34/-14.92	-14.94/-15.26	-17.71/-18.65	-20.97/-18.92	
Freq(Hz)	5.2GPol	ThetaAnt. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
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°)	-15.6/-30.03	-20.41/-15.32	-11.66/-10.51	-8.72/-6.36	-5.96/-5.35	-4.54/-4.16	-3.89/-3.66	-2.85/-3.35	-3.57/-4.08	-4.07/-4.38	-5.34/-3.7	-10.70/-10.35	-13.31/-16.47	-19.73/-17.73	-4.72/-4.02	-9.65/-7.8	-17.31/-6.31	-2.89/-2.95	-2.82/-3.09	-1.79/-3.75	-4.17/-4.68	-4.88/-4.63	-8.36/-10.5	
Θ(7.5°)	-24.05/-23.3	-15.45/-11.93	-9.21/-8.12	-7.26/-6.16	-4.86/-4.62	-3.74/-4.31	-4.69/-4.94	-5.66/-5.66	-6.44/-6.81	-7.12/-7.27	-8.02/-9.84	-13.44/-20.13	-24.47/-21.15	-20.49/-18.57	-17.68/-17.51	-13.12/-10.32	-9.18/-8.78	-6.93/-6.68	-6.39/-7.08	-6.42/-7.2	-8.14/-7.29	-8.08/-8.6	-8.23/-9.2	-11.83/-16.28
Θ(15°)	-18.85/-15.4	-13.44/-11.7	-11.09/-8.73	-7.32/-6.55	-4.01/-2.62	-1.71/-1.65	-1.63/-1.2	-1.64/-2.1	-3.62/-4.9	-6.04/-6.13	-7.8/-10.74	-11.89/-11.14	-9.32/-8.95	-9.53/-12.16	-13.58/-18.36	-24.04/-20.04	-12.74/-10.59	-10.1/-7.72	-8.08/-8.65	-9.06/-8.14	-9.04/-10.73	-13.85/-16.74	-15.86/-15.01	-17.81/-22.11
Θ(22.5°)	-12.96/-13.23	-15.43/-13.74	-7.75/-4.88	-3.41/-3.22	-3.65/-3.67	-4.13/-4.92	-5.73/-4.42	-2.52/-1.7	-2.44/-3.9	-6.59/-5.79	-5.27/-6.13	-6.49/-7.55	-8.54/-10.62	-11.57/-13.42	-15.19/-25.3	-30.07/-18.85	-8.72/-7.94	-8.81/-10.33	-10.57/-8.62	-8.36/-10.09	-12.86/-22.16	-21.59/-16.32	-14.48/-13.17	
Θ(30°)	-12.45/-8.5	-7.58/-5.96	-3.77/-4.51	-5.08/-3.7	-2.39/-2.54	-1.64/-0.62	-1.17/-2.51	-2.38/-1.3	-1.94/-2.84	-4.15/-5.63	-5.33/-5.37	-5.53/-6.54	-7.04/-9.8	-12.14/-8.12	-11.48/-18.06	-12.21/-17.92	-20.51/-15.02	-14.72/-22.46	-19.81/-19.94	-17.45/-14.77	-15.24/-14.56	-18.35/-25.45	-23.02/-13.67	-11.63/-12.82
Θ(37.5°)	-6.52/-5.8	-5.42/-7.3	-3.63/-3.68	-2.68/-1.65	-1.87/-1.52	-1.33/-1.12	-0.86/-2.3	-0.78/-2.79	-3.37/-8.18	-4.02/-7.49	-4.48/-5.03	-5.46/-10.07	-12.62/-6.87	-8.52/-7.95	-9.64/-10.83	-11.12/-12.03	-11.49/-14.87	-10.94/-10.13	-10.21/-12.86	-12.28/-20.33	-15.04/-17.09	-17.73/-8.55	-8.05/-9.73	
Θ(45°)	-8.59/-17.83	-16.68/-11.93	-5.55/-4.01	-2.88/-2.72	-1.76/-1.31	-2.74/-3.7	-2.08/-1.43	-1.67/-0.68	-1.39/-3.96	-1.69/-4.04	-6.39/-6.56	-10.55/-11.16	-8.5/-95	-3.58/-4.99	-6.91/-8.23	-8.85/-9.89	-11.9/-14.5	-9.29/-6.46	-6.71/-6.48	-8.5/-9.25	-11.85/-9.44	-14.5/-6.75	-7/-6.98	
Θ(52.5°)	-10.24/-11.31	-12.71/-9.14	-7.33/-3.85	-3.75/-3.01	-2.61/-1.48	-1.9/-2.09	-0.6/-0.63	-2.71/-1.85	-1.15/-1.97	-2.82/-1.91	-5.48/-9.32	-14.59/-20.81	-14.71/-9.09	-6.49/-3.87	-2.31/-3.38	-5.06/-6.65	-5.74/-7.56	-7.34/-8.09	-10.67/-6.17	-5.93/-3.97	-6.73/-7.03	-9.62/-6.73	-11.9/-6.31	-6.36/-8.09
Θ(60°)	-6.22/-15.16	-12/-5.32	-3.35/-0.53	-1.41/-0.06	-1.07/-0.09	-1.48/-0.79	0.080/84	-2.85/-2.76	-2.31/-1.63	-1.39/-0.82	-1.47/-7.03	-13.66/-13.59	-13.82/-7.94	-7.82/-5.02	-2.2/-3.61	-4.85/-5.15	-2.84/-5.15	-6.82/-9.32	-4.81/-5.14	-4.56/-5.46	-5.57/-6.48	-6.42/-7.13	-12.89/-4.64	-5.99/-4.95
Θ(67.5°)	-8.57/-28.04	-8.25/-3.38	-0.740/-32	-1.16/-0.13	-2.070/06	-1.193/-13.62	-1.330/-10.51	-4.53/-3.38	-1.960/-9	-0.44/-0.11	0.26/-4.28	-13.95/-11.87	-10.95/-5.25	-7/-4.466	-1.58/-4.2	-5.15/-5.61	-2.52/-3.04	-3.162/-43	-3.8/-5.16	-2.36/-4.8	-3.485/-0.08	-5.83/-0.86	-8.87/-3.16	-4.43/-6.47
Θ(75°)	-14.1/-14.98	-6.08/-2.17	-0.7/-0.68	-2.57/-1.9	-4.9/-1.67	-4.28/-4.08	-2.76/-1.89	-7.02/-5.48	-4.08/-3.82	-2.18/-2.27	-0.6/-1.61	-6.54/-6.83	-13.29/-7.56	-6.87/-4.22	-2.35/-4.52	-4.23/-5.91	-1.88/-1.45	-0.74/-1.52	-4.17/-2.41	-1.5/-2.82	-0.99/-2.07	-5.09/-8.62	-7.59/-2.72	-4.73/-2.8
Θ(82.5°)	-21.99/-10.31	-6.29/-3.77	-0.94/-1.44	-5.79/-6.5	-6.63/-5.21	-6.52/-9.36	-7.27/-10.74	-6.75/-5.94	-8.08/-4.99	-4.3/-2.55	-4.44/-5.34	-17.36/-11.08	-7.86/-3.72	-5.19/-4.84	-3.37/-3.61	-0.63/-1.05	0.21/-1.46	-2.830/-0.2	0.44/-2.11	0.19/-1.49	-3.35/-10.99	-5.29/-4.1	-2.43/-3.54	
Θ(90°)	-13.02/-10.24	-9.59/-1.8	-2.16/-4.7	-10.66/-10.52	-6.25/-5.97	-15.32/-13.51	-9.94/-9.84	-14.4/-17.67	-8.94/-10.9	-8.38/-11.3	-6.77/-6.74	-4.84/-6.34	-16.36/-13.51	-11.45/-5.29	-4.84/-3.88	-2.61/-3.36	-0.19/-0.69	-0.070/-3.1	-0.561/13	3.19/-0.25	-0.31/-0.6	-2.93/-8.54	-4.72/-3.28	-2.57/-5.35
Θ(97.5°)	-12.22/-13.68	-9.41/-2.9	-3.92/-6.44	-12.7/-12.04	-7.73/-8.09	-15.32/-23.22	-19.79/-17	-14.12/-17.83	-7.27/-5.82	-7.66/-9.09	-5.41/-9.79	-6.56/-10.91	-11.43/-10.1	-11.69/-5.73	-3.78/-3.68	-4.21/-4.3	-0.16/-0.1	-0.90/-62	1.25/1.24	1.61/-0.62	-0.24/-0.9	-2.45/-6.1	-4.69/-3.61	-2.82/-7.84
Θ(105°)	-13.21/-11.89	-10.55/-4.23	-3.9/-5.58	-9.53/-9.21	-9.91/-13.33	-15.87/-17.31	-19.47/-17.64	-16.4/-11.77	-8.98/-7.4	-9.68/-8.31	-5.19/-7.91	-7.55/-14.16	-13.69/-11.3	-8.68/-6.41	-4.55/-3.29	-3.95/-5.49	-1.35/-1.72	-1.71/-0.25	0.77/1.14	0.79/-2.13	-1.86/-9.06	-2.6/-5.92	-5.78/-4.81	-2.83/-5.13
Θ(112.5°)	-8.41/-10.7	-8.97/-4.96	-5.85/-7.62	-11.93/-12.68	-11.93/-13.62	-14.92/-15.51	-13.33/-17.21	-17.02/-14.96	-11.05/-8.05	-18.68/-11.63	-8.05/-9.72	-10.59/-19.86	-10.32/-12.48	-8.43/-6.64	-6.85/-5.16	-4.71/-4.1	-1.83/-4.12	-2.68/-1.33	-2.65/-0.79	-0.48/-1.32	-1.71/-0.73	-3.26/-5.84	-8.58/-3.18	-2.83/-7.05
Θ(120°)	-10.48/-12.31	-9.2/-6.9	-7.02/-6.89	-14.61/-12.47	-16.55/-13.36	-13.78/-24.36	-19.54/-21.43	-15.89/-9.13	-17.93/-13.95	-17.59/-15.23	-9.29/-10.36	-8.11/-16.27	-14.27/-9.92	-7.85/-9.72	-15.89/-9.92	-7.44/-4.96	-3.82/-3.2	-2.03/-2.22	-3.74/-3.1	-1.02/-1.09	-1.79/-1.98	-3.2/-9.66	-9.67/-4.54	-4.95/-8.73
Θ(127.5°)	-8.99/-16.57	-9.59/-5.89	-8.22/-12.76	-11.22/-12.15	-11.81/-15.1	-16.85/-28.89	-21.62/-10.37	-19.52/-14.16	-18.59/-20.15	-21.52/-15.09	-10.28/-12.34	-8.09/-12.03	-21.63/-11.84	-10.16/-9	-8.79/-8	-9.57/-82	-7.51/-3.92	-1.01/-1.99	-3.94/-3.83	-0.9/-0.86	-2.43/-4.95	-7.67/-16.21	-6.41/-4.22	-5.42/-10.75
Θ(135°)	-14.74/-8.22	-10.74/-9.3	-14.04/-17.05	-15.65/-27.58	-14.33/-11.62	-12.98/-13.11	-16.25/-16.68	-27.1/-23.64	-24.92/-14.75	-14.67/-17.59	-17.03/-4.75	-8.38/-15.56	-13.45/-12.66	-10.54/-6.82	-7.44/-12.51	-16.02/-14.5	-9.04/-3.89	-2.41/-3.44	-4.92/-3.76	-2.78/-1.56	-3.91/-11.25	-20.71/-12.65	-3.6/-4.04	-5.36/-9.02
Θ(142.5°)	-15.25/-10.28	-8.17/-9.2	-10.4/-18.51	-18.18/-29.02	-27.75/-26.63	-15.92/-13.31	-12.87/-14.33	-21.21/-26.93	-12.58/-16.28	-17.22/-18.85	-13.98/-10.79	-10.74/-14.13	-16.68/-12.45	-10.99/-9.71	-9.62/-13.23	-16.39/-17.77	-8.51/-4.02	-3.22/-5.07	-5.27/-4.72	-3.87/-3.2	-4.68/-5.8	-10.24/-9.86	-7.15/-7.88	-9.68/-17.98
Θ(150°)	-19.15/-14.23	-11.23/-11.26	-14.2/-24.49	-26.06/-23.03	-17.08/-21.2	-29.47/-18.66	-20.8/-23.83	-31.05/-19.97	-14.86/-16.47	-20.68/-23.01	-22.93/-18.35	-22.52/-22.99	-23.37/-23.28	-18.91/-22.95	-14.74/-12.73	-12.17/-11.06	-8.39/-6.09	-5.98/-6.11	-5.22/-4.92	-5.3/-5.23	-3.98/-5.24	-8.28/-9.94	-14.28/-18.61	-17.3/-26.79
Θ(157.5°)	-16.89/-18.56	-24.77/-29.56	-27.33/-34.57	-34.47/-22.84	-15.48/-14.31	-12.99/-11.35	-11.86/-12.9	-16.36/-19.72	-17.91/-16.61	-18.92/-26.84	-20.12/-20.85	-29.03/-18.95	-18.37/-23.22	-24.64/-24.87	-15.93/-13.12	-12.69/-12.06	-9.67/-8.22	-6.85/-6.23	-4.98/-4.65	-5.6/-5.38	-5.73/-6.99	-8.14/-9.45	-12.99/-14.82	-19.58/-21.66
Θ(165°)	-20.21/-20.25	-23.49/-24.82	-33.45/-24.04	-16.69/-17.49	-19.44/-15.53	-13.22/-11.9	-11.33/-11.49	-13.88/-13.47	-14.47/-18.77	-22.79/-26.13	-29.55/-41.85	-40.07/-30.98	-36.92/-25.9	-22.88/-20.85</										



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(172.5°)	-19.39/15.94	-14.31/16.92	-20.54/13.39	-9.34/10.64	-13.4/13.41	-18.22/19.46	-13.7/12.53	-8.99/8.71	-7.41/7.75	-6.96/7.97	-8.25/8.73	-9.14/10.58	-12.38/13.04	-13.85/13.3	-12.11/12.77	-15.6/17.52	-16.33/14.74	-16.89/18.17	-16.05/15.57	-15.62/12.31	-10.15/10.1	-10.63/9.54	-8.92/9.01	-12.99/37.29
Θ(180°)	-13.94/16.43	-18.08/11.71	-9.09/9.87	-13.52/13.63	-12.52/17.77	-16.24/14.81	-15.05/17.18	-15.96/17.75	-11.99/12.67	-11.68/10.7	-10.71/10.11	-10.15/10.63	-10.37/10.07	-10.81/11.76	-10.76/11.54	-14.02/14.27	-17.69/34.04	-25.28/19.18	-18.28/13.75	-12.87/11.63	-11.06/12.69	-11.57/12.95	-14.8/15.54	-14.51/14.26
Freq(Hz)	5.6GPol.	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-13.21/15.72	-15.4/14.53	-11.14/8.84	-6.43/4.62	-3.33/2.67	-2.37/2.1	-1.74/1.78	-1.85/1.69	-2.42/3.76	-5.13/5.91	-7.19/9.75	-12.11/13.65	-18.37/24.68	-29.08/22.99	-15.99/12.69	-10.47/9.02	-7.49/6.46	-5.91/6.29	-5.63/5.49	-5.29/5.66	-5.66/6.48	-7.03/7.57	-8.77/10.28	-10.86/12.46
Θ(7.5°)	-18.67/17.79	-14.63/10.62	-7.76/6.42	-4.77/3.61	-4.14/4.13	-3.52/3.26	-2.79/2.51	-2.89/2.94	-3.21/3.98	-5.95/8.54	-9.73/11.17	-11.86/11.16	-11.54/12.39	-13.24/12.86	-12.16/11.42	-9.83/8.63	-7.84/8.27	-7.25/6.1	-5.86/6.13	-5.73/6.17	-7.82/8.09	-10.2/12.41	-12.22/12.94	-14.78/16.93
Θ(15°)	-24.39/18.5	-16.21/11.19	-9.23/8.05	-7.25/5.94	-4.12/3.51	-3.57/3.21	-3.53/3.67	-3/2.35	-2.92/3.35	-5.2/6.97	-7.17/6.26	-6.65/7.97	-9.65/12.42	-15.59/17.85	-14.91/12.02	-10.09/9.14	-8.94/8.89	-7.94/6.94	-6.02/4.96	-4.4/4.72	-5.67/8.23	-10.36/10.67	-10.92/13.47	-16.71/21.09
Θ(22.5°)	-15.88/18.2	-14.71/9.84	-8.91/6.59	-5.67/4.12	-1.77/1.51	-1.85/1.74	-1.42/0.67	-0.98/1.33	-1.79/0.77	-1.32/2.63	-2.87/3.92	-6.86/10.92	-13.1/13.56	-15.97/22.42	-20.58/17.77	-20.76/19.37	-15.6/19.92	-19.53/19.87	-19.39/16.41	-12.23/9.57	-8.8/9.26	-11.98/14.27	-15.96/20.85	-22.75/17.21
Θ(30°)	-13.18/13.34	-9.2/6.63	-6.07/4.1	-3.9/1.44	0.09/0.65	-0.32/0.58	-0.87/2.48	-1.22/0.3	-1.98/3.98	-2.46/2.32	-1.88/2.8	-7.19/10.95	-11.6/8.48	-8.7/11.62	-9.91/10.55	-11.42/11.29	-16.85/15.67	-12.45/17.37	-17.9/16.37	-10.57/11.28	-12.51/15.55	-17.92/29.32	-20.84/20.27	-23.38/14.15
Θ(37.5°)	-6.45/8.43	-5.85/3.44	-2.27/2.47	-2.99/1.15	-0.16/0.52	0.97/0.85	0.01/0.6	1.53/1.13	-0.56/2.79	-0.23/1.54	-2.88/4.68	-8.06/16.74	-12.03/8.41	-4.97/3.59	-6.49/11.45	-6.13/8.89	-12.02/9.77	-7.74/9.55	-14.39/27.53	-12.68/9.52	-9.83/12.24	-13.04/20.71	-11.26/19.54	-12.39/17.78
Θ(45°)	-3.88/5.81	-7.16/4.13	-3.37/2.28	-0.9/1.96	-1.04/0	-0.36/1.2	0.39/0.35	-0.11/0.06	-2.92/2.99	-5.55/6.44	-3.84/6.43	-7.77/14.8	-6.36/4.78	-5.27/2.15	-3.65/9.22	-4.9/6.81	-8.91/11.32	-11.93/7.2	-4.94/8.65	-15.78/17.37	-12.76/7.8	-11.61/10.85	-8.71/13.1	-6.29/6.21
Θ(52.5°)	-16.46/24.47	-24.47/7.89	-4.96/0.52	-4.97/2.08	-0.37/0.39	-1.31/3.1	0.50/9.1	-1.73/1.91	-1.34/1.56	-1.99/1.23	-5.72/9.57	-8.13/4.58	-5.62/3.79	-7.06/6.89	-4.28/7.83	-11.83/13.85	-16.29/9.59	-4.23/6.25	-11/15.37	-9.01/7.35	-7.95/5.53	-4.2/13.86	-5.71/8.15	-
Θ(60°)	-12.06/12.86	-12.07/5.4	-2.13/4.02	0.17/1.13	0.32/0.05	0.03/1.35	-0.08/1.75	0.32/2.29	-0.24/1.56	-0.23/1.54	-2.88/4.68	-7.07/16.02	-15.25/4	-6.12/1.88	-1.08/8.24	-4.9/8.29	-9.39/5.44	-1.34/2.9	-5.89/9.14	-4.8/4.82	-4.28/5.83	-2.74/8.61	-5.16/8.15	-
Θ(67.5°)	-13.72/22.88	-4.63/1.14	1.09/0.79	0.21/1.84	-0.74/0.87	1.04/0.29	1.08/0.31	-1.62/4.31	-0.21/2.39	-0.59/1.48	0.49/2.22	-3.46/9.83	-22.9/3.11	-3.73/1.37	-5.39/2.6	-1.03/0.22	-0.94/6.21	-3.84/1.8	0.76/0.27	-1.3/5.05	-1.31/1.91	-0.87/4.58	-2.81/4.61	-3.41/4.21
Θ(75°)	-12.88/10.91	-3.07/1.14	2.92/1.11	-2.64/0.57	-4.03/1.88	-1.42/3.38	-1.51/2.54	-3.12/6.6	-2.77/0.12	-3.68/2.85	-0.11/0.96	-2.52/4.63	-15.64/6.34	-3.67/1.88	-4.14/3.85	-2.08/0.42	-0.17/1.41	-0.18/1.58	1.34/0.18	1.04/2	1.22/0.85	0.86/4.84	-2.27/1.17	-2.86/3.09
Θ(82.5°)	-10.47/6.49	-1.56/1.17	0.34/6.6	-9.05/4.5	-5.78/5.13	-6.48/10.84	-7.05/2.48	-7.57/8.3	-11.12/4.58	-8.11/7.3	-2.55/1.3	-1.74/3.86	-12.37/12.99	-6.25/4.39	-4.72/6.67	-3.88/1.14	-0.31/0.26	-1.793/3.19	2.21/2.22	1.82/0.5	1.54/2.45	0.04/4.25	-3.73/1.77	-3.57/3.93
Θ(90°)	-7.4/6.2	-2.92/0.73	-2.71/8.45	-1.17/6.75	-5.57/7.43	-8.85/14.61	-12.82/3.36	-11.79/21.86	-11.4/7.59	-6.19/6.87	-4.89/5.23	-2.32/3.78	-8.99/19.59	-10.72/5.99	-5.35/3.14	-4.25/0.48	-0.96/0.67	1/2.83	2.68/2.93	1.97/1.32	0.31/1.4	-2.02/3.1	-4.37/2.74	-4.64/2.8
Θ(97.5°)	-10.65/14.15	-5.12/6.09	-5/2.82	-1.18/8.59	-6.9/8.6	-15.83/15.6	-9.48/7.02	-14.87/17.05	-6.41/6.07	-2.71/5.51	-3.93/5.73	-4.9/6.36	-10.83/17.9	-9.55/5.02	-4.41/8.04	-2.23/2.62	-1.81/0.58	0.04/0.57	2.6/2.32	0.94/1.38	-0.41/0.08	-1.67/1.22	-4.08/3.96	-5.16/4.29
Θ(105°)	-11.94/10.02	-3.64/1.72	-5/4.59	-10.05/12.47	-10.59/8.49	-10.63/14.72	-12.67/12.17	-14.71/12.26	-7.46/5.6	-3.08/5.53	-4.44/3.07	-4.51/8.16	-12.68/12.26	-11.78/4.7	-3.4/1.6	-1.96/2.87	-1.22/0.15	-1.69/1.93	1.24/0.94	0.57/0.38	-0.55/1.12	-3.9/1.7	-3.64/1.99	-3.39/5.09
Θ(112.5°)	-14.4/10.2	-5.85/3.65	-7.22/7.68	-9.66/8.53	-9.36/9.94	-9.73/11.78	-22.55/19.48	-12.3/10.86	-7.2/8.84	-6.99/5.48	-7.45/5.13	-4.46/6.3	-11.78/8.04	-6.92/4.82	-5.05/1.93	-2.17/0.22	-0.89/1.72	-1.84/0.2	0.41/0.17	1.56/1.35	-0.84/0.71	-0.21/4.2	-4.43/3.74	-3.22/7.25
Θ(120°)	-18.92/10.08	-9.62/4.74	-9.65/7.53	-14.76/12.85	-7.7/9.26	-12.35/14.13	-25.73/19.73	-10.47/10.8	-11.23/8.49	-9.68/14.04	-8.41/9.36	-8.89/10.62	-16.31/17.89	-10.1/10.27	-6.5/5.94	-4.11/1.56	-2.43/2.76	-0.64/0.53	-0.52/0.05	0.79/1.07	0.01/0.16	-1.2/4.42	-10.65/5.37	-10.11/11.96
Θ(127.5°)	-8.43/5.15	-13.76/6.85	-6.27/8.3	-9.04/17.13	-15.66/19.8	-28.57/21.7	-14.28/12.23	-12.96/18.14	-18.65/16.48	-21.65/21.34	-16.21/8.19	-6.93/8.54	-15.38/18.86	-11.81/10.84	-6.78/10.8	-10.36/19.2	-5.68/3.4	-0.08/0.48	-1.26/0.28	0.27/0.52	-1.34/4.56	-8.13/11.87	-8.89/6.4	-6.44/13.73
Θ(135°)	-9.3/3.7	-4.21/10.47	-11.87/19.08	-15.95/15.44	-17.68/15.2	-14.96/10.94	-10.87/19.41	-14.74/4.42	-23.27/23.32	-21.44/24.56	-16.68/7.71	-7.69/6.82	-10.88/13.37	-21.56/10.09	-7.48/8.46	-10.47/11.55	-10.86/6	-1.91/1.67	-2.72/2.34	-1.22/0.56	-2.19/7.45	-8.52/7.25	-6.37/4.1	-5.71/12.62
Θ(142.5°)	-7.99/5.53	-5.83/6.34	-10.69/14.05	-16.02/19.75	-21.96/24.53	-16.41/18.52	-17.18/15.71	-34.62/14.04	-14.28/15.4	-12.45/17	-12.58/7.85	-8.31/8.29	-10.71/10.14	-19.27/17.16	-13.69/14.23	-18.17/13.3	-7.58/4.43	-3.06/3.02	-4.72/4.85	-2.56/0.48	-2.33/4.89	-12.7/10.06	-12.04/12.79	-13.66/18.6
Θ(150°)	-15.67/12.12	-13.25/16.39	-27.35/20.05	-16.74/14.41	-17.08/20.56	-23.74/23.04	-20.31/19.79	-23.18/15.95	-14.34/24.04	-24.57/29.95	-34.31/25.73	-19/14.9	-13.07/14.72	-21.36/19.39	-15.82/15.78	-19.99/14.54	-5.99/5.25	-5.09/5.03	-5.02/5.3	-4.02/2.81	-2.63/4.09	-7.07/19.7	-10.13/11.52	-13.86/17.96
Θ(157.5°)	-16.02/14.86	-16.34/18.82	-20.08/31.13	-23.5/22.05	-27.85/22.42	-15.66/12.59	-17.37/13.12	-21.46/23.24	-19.09/20.05	-25.18/23.23	-22.46/23.24	-23.55/34.1	-20.83/22.91	-34.72/27.4	-24.11/18.1	-11.19/4.88	-9.74/7.94	-6.84/8.07	-7.88/1.72	-6.52/9.24	-8.81/0	-11.04/8.25	-9.96/16.22	-31.66/22
Θ(165°)	-15.7/16	-17.94/20.06	-22.93/16.64	-12.24/10.96	-9.63/8.43	-7.57/5.11	-7.36/6.84	-9.51/13.84	-16.66/25.23	-32.62/19.39	-19.78/21.23	-22.04/17.09	-15.93/16.44	-14.2/14.62	-15.29/15.55	-28.3/20.9	-22.08/16.52	-16.29/10.63	-8.25/6.1	-7.39/6.5	-7.37/10.23	-8.88/14.02	-12.77/16.34	-23.13/18.22
Θ(172.5°)	-22.98/20.21	-15.71/14.11	-9.83/8.43	-8.97/9.38	-8.23/6.35	-5.99/6.04	-6.63/7	-7.69/18.9	-10.21/11.69	-14.35/17.26	-21.42/21.74	-18.8/15.2	-15.05/15.55	-13.5/12.25	-11.44/8.89	-7.94/7.43	-6.96/4.64	-5.78/5.8	-6.63/6.85	-6.86/7.3	-8.53/9.03	-10.64/13.04	-17.5/18.38	-16.07/19.52
Θ(180°)	-26.54/16.7	-13.99/13.03	-16.76/14.68	-10.4/8.79	-8.44/8.06	-8.24/7.4	-7.78/1.12	-8.22/7.6	-8.91/10.56	-11.1/12.57	-14.12/15.52	-15.89/15.44	-14.94/14.36	-12.6/10.99	-9.73/8.77	-8.48/7.44	-6.6/7.29	-6.8/7.04	-7.08/7.4	-8.28/9.94	-12.16/13.37	-15.37/17.01	-20.61/21.62	-28.68/31.42
Freq(Hz)	5.785GPol.	PhiAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-5.36/5.88	-6.22/6.28	-7/8.53	-5.96/8.37	-10.01/13.85	-14.87/18.22	-21.97/21.14	-16.51/12.14	-11.79/10.93	-8.6/7.45	-8.12/8.45	-7.5/6.87	-6.4/5.67	-5.75/5.56	-5.96/6.18	-6.9/8.33	-10.38/12.71	-15.29/21.63	-27.02/18.7	-14.84/12.33	-11.53/8.3	-7.37/9	-6/4.65	-5.06/4.98
Θ(7.5°)	-7.58/8.4	-7.02/5.82	-5.29/5.05	-6.9/7.13	-7.56/11.77	-16.58/16.22	-25.83/23.56	-12.99/11.93	-7.99/8.09	-6.91/6.62	-6.94/7.44	-7.43/5.51	-4.3/2.72	-2.52/3.02	-4.5/5.39	-6.6/7.34	-8.4/8.61	-10.47/10.27	-14.09/23.31	-20.6/16.11	-9.95/6.63	-5.11/4.96	-5.93/6.68	-6.25/5.64
Θ(15°)	-2.87/2.84	-2.6/2.7	-2.94/4.8	-9.2/11.27	-11.3/10.39	-13.62/15.7	-18.05/23.11	-20.71/19.47	-10.37/9.12	-8.91/8.79	-8.35/6.28	-5.15/4.47	-4.51/3.65	-3.74/4.77	-5.98/6.45	-8.03/9.68	-8.03/9.47	-9.57/14.79	-21.84/17.62	-10.78/5.48	-4.27/3.94	-5.12/10.19	-8.38/4.64	-
Θ(22.5°)	-3.71/6.32	-8.35/8.39	-6.77/5.49	-4.19/6.48	-7.91/7.97	-13.73/13.57	-23.72/17																	



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(15°)	-18.39/-16.9	-15.81/-15.28	-14.7/-14.21	-13.64/-12.98	-12.21/-11.12	-10.04/-9.29	-8.43/-7.64	-7.24/-7.48	-7.77/-7.28	-6.28/-5.04	-3.89/-3.18	-3.05/-3.31	-3.48/-3.41	-3.21/-3.23	-3.71/-4.72	-6.29/-8.25	-10.42/-13.23	-15.49/-15.42	-13.88/-12.64	-12.24/-12.54	-13.15/-14.05	-15.28/-17	-18.84/-20.56	-20.31/-18.76
Θ(22.5°)	-16.42/-15.88	-15.11/-14.09	-12.92/-11.84	-10.86/-9.83	-8.75/-7.56	-6.84/-6.37	-5.6/-5.27	-5.16/-5.6	-5.73/-4.83	-3.55/-2.47	-1.88/-1.94	-2.7/-3.63	-4.08/-3.68	-2.7/-1.94	-1.62/-1.8	-2.4/-3.23	-4.38/-5.98	-8.39/-11.34	-12.67/-11.25	-9.67/-8.44	-8.71/-9.27	-10.47/-12.27	-14.52/-16.08	-15.97/-15.67
Θ(30°)	-10.01/-10.3	-10.9/-10.2	-8.39/-7.64	-1.17/-6.94	-6.35/-5.59	-5.18/-4.52	-4.21/-3.57	-3.45/-3.7	-3.47/-2.63	-1.82/-1.33	-1.42/-2.22	-3.51/-4.88	-6.08/-6.61	-5.66/-4.04	-2.67/-1.98	-1.97/-2.16	-2.42/-3.11	-4.76/-7.91	-10.72/-8.99	-6.71/-5.81	-5.92/-6.63	-7.81/-9.26	-10.32/-10.32	-9.81/-8.69
Θ(37.5°)	-5.47/-5.54	-5.28/-4.7	-4.11/-3.79	-3.98/-4.44	-4.41/-4.13	-4.22/-4.22	-3.53/-2.68	-2.48/-2.63	-2.31/-1.65	-1.16/-0.91	-1.15/-1.68	-1.93/-2.19	-2.96/-4.22	-5.36/-4.97	-3.5/-2.44	-2.31/-2.54	-2.42/-2.42	-3.6/-4.68	-8.37/-6.21	-4.37/-3.94	-4.48/-5.48	-6.68/-7.77	-8.18/-7.49	-6.29/-5.47
Θ(45°)	-3.62/-3.79	-3.51/-2.87	-2.17/-2.03	-2.75/-4.13	-4.67/-4.25	-4.03/-3.99	-3.19/-2.32	-2.35/-2.65	-2.22/-1.42	-0.81/-0.83	-0.61/-0.37	-0.61/-0.37	-0.59/-1.32	-2.74/-4.1	-4.12/-2.69	-2.08/-2.45	-2.61/-2.13	-2.62/-4.92	-5.87/-3.96	-2.75/-2.98	-4.09/-5.66	-7.33/-8.39	-7.88/-5.9	-4.12/-3.35
Θ(52.5°)	-6.21/-6.74	-6.37/-5.3	-3.94/-3.13	-3.42/-4.93	-6.62/-6.61	-5.94/-5.3	-3.64/-2.49	-2.88/-3.33	-2.71/-7.6	-0.99/-0.72	-1.04/-1.01	-0.310/26	0.460/29	-0.56/-2.11	-3.45/-2.87	-1.89/-1.71	-1.71/-1.21	-1.66/-3.46	-3.94/-2.69	-2.1/-2.62	-4.46/-7.85	-11.62/-11.71	-8.97/-6.62	-5.33/-5.16
Θ(60°)	-27.35/-22.46	-16.83/-16.23	-12.58/-7.79	-5.19/-4.48	-5.1/-5.82	-6.22/-6.68	-5.05/-3.74	-4.16/-4.21	-3.41/-2.19	-0.95/-0.71	-1.53/-1.75	-0.720/18	2.060/53	0.01/-1.11	-2.7/-3.13	-2.07/-1.59	-1.77/-1.16	-1.08/-2.75	-3.36/-2.14	-1.98/-3.23	-7.17/-19.21	-14.66/-10.97	-10.74/-11.43	-12.87/-15.79
Θ(67.5°)	-8.5/-7.26	-6.47/-7.97	-12.08/-12.08	-7.58/-5.7	-4.76/-4.49	-4.76/-5.43	-5.27/-5.41	-6.05/-5.76	-5.2/-3.03	-1.09/-0.96	-2.29/-2.91	-1.8/-0.93	-0.55/-0.44	-0.74/-1.69	-3.19/-3.91	-2.88/-2.5	-3.05/-2.12	-1.42/-3.13	-3.46/-2.08	-2.51/-5.03	-13.58/-9.74	-4.63/-4.82	-7.44/-9.69	-9.83/-9.44
Θ(75°)	-5.32/-4.83	-4.03/-4.56	-5.69/-5.83	-5.79/-7.13	-6.41/-5.04	-5.03/-4.93	-4.49/-5.74	-6.14/-6.1	-10.02/-5.98	-2.08/-1.09	-2.17/-3.67	-3.36/-2.5	-2.1/-2.04	-2.28/-3.2	-4.87/-5.56	-4.16/-3.9	-4.63/-2.37	-2.99/-5.92	-10.27/-4.34	-2.01/-3.25	-4.93/-2.97	-6.17/-7.05	-5.81/-5.49	
Θ(82.5°)	-3.76/-3.34	-3.21/-4.79	-5.54/-4.57	-5.27/-9.24	-9.27/-6.47	-6.02/-5.57	-5.46/-8.16	-6.81/-5.46	-9.74/-10.48	-4.25/-1.99	-2.17/-3.46	-3.7/-2.83	-2.15/-2.28	-3.59/-5.5	-7.08/-6.29	-4.83/-4.68	-4.85/-2.49	-1.91/-5.6	-5.78/-2.03	-2.26/-6.65	-7.03/-2.64	-2.09/-4.27	-6.44/-5.62	-4.5/-4.2
Θ(90°)	-4.08/-2.54	-2.37/-4.91	-7.51/-5.53	-5.78/-10.95	-20/-10.82	-7.86/-5.11	-4.64/-9.59	-10.84/-6.45	-8.44/-15.72	-8.55/-4.26	-3.31/-0.49	-4.32/-3.21	-2.24/-2.38	-4.26/-7.09	-8.62/-7.64	-6.69/-6.2	-5.65/-3.51	-3.55/-7.7	-5.24/-1.63	-2.64/-8.4	-5.84/-2.79	-3.55/-5.98	-6.65/-6.34	-6.58/-5.96
Θ(97.5°)	-6.2/-3.77	-3.35/-6.82	-11.93/-6.44	-4.93/-6.27	-12.04/-20.95	-12.37/-5.67	-3.85/-6.97	-11.41/-7.45	-7.25/-12.36	-17.08/-1.82	-5.28/-5.23	-4.91/-3.34	-2.32/-3.09	-6.34/-10.09	-11.36/-10.38	-7.39/-5.59	-6.35/-6	-5.36/-6.85	-3.09/-1.53	-3.92/-9.71	-5.66/-4.45	-7.12/-9.41	-8.5/-9.58	-10.87/-8.49
Θ(105°)	-4.84/-3.4	-2.85/-5.23	-13.8/-11.06	-5.47/-4.71	-7.16/-12.17	-16.78/-7.71	-4.7/-6.41	-10.61/-8.78	-6.72/-8.04	-15.24/-13.48	-7.05/-5.38	-5.07/-4.26	-3.88/-4.87	-7.28/-9.51	-11.94/-11.78	-7.65/-5.94	-8.26/-8.68	-7.34/-5.2	-2.8/-2.56	-5.95/-11.22	-6.87/-1.64	-12.35/-10.87	-8.74/-9.66	-8.88/-5.96
Θ(112.5°)	-4.1/-3.4	-2.61/-3.44	-6.84/-10.38	-6.04/-4.51	-6.07/-10.11	-12.5/-8.06	-6.26/-7.75	-10.77/-11.13	-8.46/-7.85	-12.39/-17.6	-8.28/-5.98	-6.04/-5.89	-5.98/-7.01	-8.76/-11.46	-12.4/-8.57	-6.44/-7.72	-11.98/-8.47	-5.53/-3.74	-2.87/-4.22	-8.89/-9.88	-6.68/-7.77	-6.93/-7.34	-6.55/-7.45	-7.33/-5.13
Θ(120°)	-4.77/-4.66	-4.37/-4.47	-6.05/-7.98	-6.4/-5.6	-5.43/-7.6	-8.16/-6.62	-6.04/-6.97	-8.95/-12.02	-11.43/-8.95	-10.23/-19.34	-15.68/-10.74	-11.48/-13.45	-13.29/-12.11	-12.06/-11.92	-8.57/-6.27	-6.76/-10.83	-13.02/-7.98	-5.36/-5.64	-4.96/-6.14	-8.18/-7.06	-5.56/-5.79	-7.11/-7.4	-7.78/-9.36	-9.57/-6.25
Θ(127.5°)	-3.3/-2.82	-3.26/-4.32	-6.44/-9.86	-8.51/-5.94	-5.68/-6.28	-6/-5.19	-5.12/-5.63	-6.71/-8.93	-10.29/-8.48	-8.96/-13.34	-21.34/-14.45	-12.46/-12.6	-12.71/-12.25	-12.22/-10.62	-8.02/-7.51	-10.25/-14.13	-10.3/-7.7	-7.72/-7.32	-5.68/-5.25	-6.2/-7.26	-7.01/-7.04	-8.47/-10.92	-15.11/-21.42	-10.75/-5.4
Θ(135°)	-4.34/-3.6	-3.56/-4.38	-6.49/-10.99	-13.43/-8.93	-6.95/-6.1	-5.73/-5.86	-6.51/-7.31	-8.24/-9.65	-9.73/-8.04	-7.33/-8.48	-11.6/-13.83	-12.77/-13.45	-15.95/-19.02	-18.45/-14.93	-13.02/-14.55	-14.44/-12.53	-6.98/-1.6	-8.63/-7.17	-4.82/-4.17	-5.42/-8.97	-12.25/-10.6	-10.14/-12.73	-20.66/-10.89	-10.16/-3.2
Θ(142.5°)	-15.76/-14.2	-9.23/-11.22	-11.8/-13.12	-8.13/-9.51	-8.21/-7.56	-7.27/-11.2	-7.92/-11.63	-12.21/-16.03	-15.55/-11.75	-9.9/-10	-11.24/-12.45	-17.52/-16.03	-13.44/-12.39	-12.01/-11.5	-10.07/-8.65	-8.01/-9.29	-11.64/-10.28	-7.34/-6.37	-7.64/-11.57	-15.1/-11.84	-10.14/-11.27	-15.41/-24.64	-21.96/-18.5	
Θ(150°)	-11.36/-9.95	-12.8/-8.86	-9.06/-9.89	-10.88/-11.28	-11.1/-10.34	-9.51/-8.95	-8.98/-9.92	-11.82/-14.57	-18.81/-24.9	-27.8/-30.33	-46.01/-35.95	-28.66/-21.64	-17.47/-15.35	-14.21/-13.99	-13.91/-13.3	-12.37/-12.37	-13.43/-15.67	-18.9/-15.39	-11.72/-10.16	-10.4/-12.27	-14.91/-15.6	-14.59/-13.95	-14.14/-14.33	-13.87/-12.42
Θ(157.5°)	-8.98/-8.12	-7.88/-8.1	-8.74/-9.8	-12.03/-14.02	-14.84/-14.58	-13.9/-13	-12.23/-11.8	-11.81/-11.76	-11.85/-12.07	-12.34/-11.93	-11.29/-10.69	-10.25/-9.82	-10.14/-11.79	-14.69/-17.55	-19.37/-19.95	-20.85/-22.79	-24.86/-23.96	-20.5/-16.88	-14.46/-12.98	-12.3/-12.16	-12.48/-12.97	-13.53/-13.41	-12.19/-10.71	-10.01/-9.37
Θ(165°)	-13.6/-13.33	-13.59/-14.63	-15.79/-17.32	-19.18/-20.57	-19.26/-17.74	-16.49/-15.61	-15.14/-14.79	-14.24/-13.29	-12.29/-11.51	-11.09/-10.69	-10.16/-9.43	-8.91/-8.68	-8.74/-9.22	-9.74/-10.14	-10.41/-11.03	-12/-12.96	-14.42/-16.18	-17.88/-18.31	-17.43/-16.25	-14.98/-13.69	-12.83/-12.64	-13.57/-15.21	-15.79/-14.15	-13.19/-13.37
Θ(172.5°)	-17.14/-14.99	-14.45/-15.31	-16.67/-18.51	-19.97/-20.41	-20.03/-19.74	-19.85/-20.27	-20.9/-21.07	-19.84/-17.5	-15.29/-13.62	-12.54/-11.61	-10.77/-9.64	-8.48/-7.62	-7.14/-7.09	-7.32/-7.75	-8.37/-9.25	-10.37/-11.76	-13.75/-16.42	-20.17/-23.8	-23.05/-20.22	-18.14/-16.29	-15.03/-14.52	-14.75/-15.56	-21.85/-20.02	
Θ(180°)	-7.63/-7.01	-6.96/-7.51	-8.41/-9.68	-11.1/-12.66	-14.66/-17.28	-20.94/-26.96	-31.56/-25.91	-21.73/-18.99	-17.2/-16.09	-15.02/-13.74	-12.61/-11.79	-11.33/-10.68	-10.39/-10.59	-11.66/-12.93	-14.35/-15.99	-17.01/-17.46	-17.96/-19.29	-20.63/-21.46	-22.78/-23.17	-21.93/-20.9	-19.29/-17.36	-15.29/-13.2	-11.57/-10.5	-9.65/-8.72
Freq(Hz)	5.2GPol.	Phi/Ant. 3	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
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°)	-14.17/-12.46	-12.68/-11.54	-10.23/-10.66	-8.89/-8.9	-9.16/-9.5	-8.11/8.16	-8.02/-8.1	-9.33/-10.2	-16.21/-15.12	-17.54/-21.97	-21.84/-19.24	-20.71/-20.28	-17.66/-17.74	-18.84/-16.22	-16.82/-20.08	-17.21/-14.58	-17.71/-18.35	-21.44/-19.24	-17.71/-17.36	-19.53/-18.89	-18.09/-20.92	-24.49/-30.28	-22.88/-19.87	-18.38/-17.37
Θ(7.5°)	-22.42/-28.73	-13.56/-10.29	-8.28/-7.15	-6.46/-6.12	-6.69/-8.51	-10.21/-12.26	-14.58/-15.99	-19.16/-23.12	-29.52/-27.08	-36.32/-27.56	-20.99/-17.61	-15.34/-13.34	-13.43/-14.24	-9.74/-9.71	-9.49/-9.5	-9.82/-9.24	-9.63/-11.21	-15.71/-15.91	-15.31/-15.35	-16.17/-16.87	-19.43/-30.09	-18.17/-19.35	-14.25/-13.91	-15.14/-21.07
Θ(15°)	-13.4/-10	-12.2/-14.02	-13.33/-11.01	-13.86/-12.28	-9.34/-7.63	-6.75/-7.74	-9.16/-12.51	-16.82/-23.55	-22.51/-18.79	-15.7/-13.37	-13.14/-15.21	-17.62/-19.69	-22.23/-20.96	-23.99/-16.39	-18.73/-35.65	-15.38/-8.02	-5.62/-6.24	-8.95/-12	-12.2/-9.6	-9.77/-12.65	-20.84/-21.85	-13.98/-9.67	-8.76/-14.61	-22.36/-17.66
Θ(22.5°)	-23.26/-17.23	-13.21/-14.68	-9.79/-5.62	-5.54/-6.91	-5.96/-4.51	-3.32/-3.85	-5.09/-6.73	-7.8/-10.08	-17.2/-29.65	-18/-14.08	-14.06/-23.21	-25.64/-29.22	-27.07/-23.18	-13.39/-10.69	-9.55/-10.74	-14.56/-9.66	-6.32/-6.54	-7.35/-9.04	-11.34/-6.9	-5.48/-7.28	-12.2/-18.15	-17.75/-14.08	-11.34/-11.23	-16.23/-9.63
Θ(30°)	-10.42/-9.25	-14.85/-15.28	-22.14/-13.34	-11.13/-12.89	-6.19/-2.89	-2.51/-3.48	-4.98/-7.27	-6.12/-9.02	-16.28/-30.31	-19.81/-17.33	-20.21/-24.16	-17.25/-13.38	-17.97/-16.28	-10.11/-11.51	-13.44/-7.85	-6.03/-6.58	-7.58/-5.03	-6.29/-7.46	-5.21/-6.69	-10.16/-12.74	-6.99/-5.8	-8.42/-12.64	-18.61/-23.46	
Θ(37.5°)	-6.65/-10.19	-14.74/-10.37	-17.77/-23.22	-16.73/-13.89	-12.15/-6.31	-7.07/-7.66	-6.09/-4.98	-4.31/-7.05	-10.22/-23.42	-17.45/-22.51	-21.97/-17.1	-16.04/-17.74	-18.91/-9.37	-10.73/-17.27	-12.51/-12.14	-12.66/-9.45	-8.91/-7.52	-6.47/-7.54	-9.53/-13.61	-7.28/-8.97	-7.9/-16.1	-11.08/-11.04	-20.24/-25.42	-25.56/-10.87
Θ(45°)	-15.54/-22.5	-14.64/-18.24	-18.32/-8.01	-7.32/-13.22	-25.84/-23.95	-13.59/-9.16	-7.6/-9.1	-6.31/-7.99	-12.07/-17.64	-30.24/-15.51	-15.39/-18.7	-19.05/-15.58	-28.57/-13.7	-9.41/-9.99	-14.06/-14.01	-26.33/-4.99	-3.77/-9.52	-6.75/-7.55	-5.98/-12.11	-27.22/-11.93	-22.64/-16.7	-18.74/-14.03	-14.03/-28.14	-21.07/-11.95
Θ(52.5°)	-20.25/-9.4	-10.46/-8.3	-9.75/-5.93	-5.01/-7.77	-7.54/-7.33	-15.09/-10.74	-9.91/-11.71	-9.35/-10.28	-12.38/-8.28	-18.23/-14.74	-14.9/-13.21	-19.07/-15.85	-41.74/-16.02	-14.95/-15.51	-20.69/-14.19	-10.09/-10.11	-3.95/-13.6	-3.5/-5.43	-11.42/-14.44	-8.01/-7.4	-14.77/-6.36	-8.78/-17.42	-14.76/-11.36	-12.21/-10.96
Θ(60°)	-13.88/-6.99	-6.96/-6.85	-6.91/-6.32	-6.37/-6.56	-7.74/-6.56	-7.38/-6.12	-8.01/-11.3	-6.73/-7.78	-23.1/-10.38	-11.27/-23.82	-20.77/-16.22	-19.14/-23.69	-24.24/-19.64	-13.3/-14.16	-31.91/-24.67	-13.23/-11.4	-6.15/-7.07	-12.12/-12.18	-6.14/-8.09					



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(60°)	-11.97/-11.83	-6.01/-6	-3.48/-8.88	-2.64/-5.12	-7.84/-3.67	-3.86/-4.49	-8.1/-2.97	-0.08/-1.85	-3.46/-4.07	-4.27/-6.25	-1.16/-1.48	-1.94/-0.52	0.57/-1.91	-1.4/-1.5	-3.16/0.32	-5.89/-2.83	-2.57/-3.26	-1.78/-4.05	-4.32/-2.99	-9.8/-14.99	-5.42/-4.06	-6.95/-6.14	-8.73/-4.44	-1.32/-1.74
Θ(67.5°)	-2.65/-0.82	-0.99/0	3.52/-2.85	-0.91/-1.64	-5.38/-2.26	-1.27/-4.23	-5.05/-2.14	-3.25/-2.53	-1.77/-8.88	-3.33/-9.55	-1.54/-0.85	-1.97/-1.33	0.83/-1.22	-1.51/-0.42	-4.45/-0.04	-6.53/-2.24	-3.37/-6.27	-0.59/-5.37	-2.2/-3.56	-6.88/-1.45	0.07/-1.07	-1.45/0.85	-0.68/-2.1	-0.5/0.1
Θ(75°)	-0.02/-0.03	-0.48/-0.52	1.87/-2.34	-1.81/-4.88	-4.97/-3.34	-2.24/-0.09	-3.4/-1.21	-3.7/-4.02	-1.75/-4.96	-4.77/-4.73	-1.59/-1.15	-2.57/-3.31	1.47/0.32	-2.32/-1.43	-2.42/-1.49	-6.47/-2.07	-3.81/-3.39	-0.67/-5.21	-0.95/-1.17	-2.33/8.1	1.52/-1.09	0.55/-1.96	-0.15/-6.33	-2.86/-0.89
Θ(82.5°)	2/-0.75	-1.1/-2.51	-1.17/-4.69	-1.78/-5.23	-6.78/-3.74	-2.52/-4.65	-4.59/-1.24	-3.72/-5.9	-2.4/-2.08	-4.89/-4.48	-2.59/-3.02	-1.7/-2.33	0.69/0.31	-1.76/-2.93	-2.89/-1.74	-3.76/-2.2	-6.02/-1.83	-1.76/-6.07	-1.44/0.88	0.30/0.4	-0.74/-6.2	-2.35/-2.18	-3.38/-8.99	-3.67/-9.51
Θ(90°)	-6.18/-5.52	-2.62/-5.71	-11.92/-1.16	-1.88/-0.47	-10.9/-10.73	-3.98/-9.27	-5.62/-2.24	-3.21/-8.89	-5.42/-3.23	-3.53/-3.78	-5.7/-9.85	-3.41/-3.32	-3.54/-1.76	-3.96/-3.23	-5.19/-2.6	-4.69/-0.67	-4.07/-6.09	-6.21/-6.69	-0.31/0.89	-0.23/-5.16	-7.81/-7.46	-2.99/-6.35	-13.46/-13.71	-5.13/-5.02
Θ(97.5°)	-6.11/-2.2	-6.93/-7.81	-14.04/-3.35	-4.81/-5.71	-18.93/-11.99	-7.29/-10.62	-6.4/-2.84	-4.05/-8.23	-7.23/-5.85	-3.62/-4.31	-5.79/-8.46	-5.97/-5.41	-5.04/-5.81	-6.57/-5.49	-9.35/-2.14	-7.47/-3.19	-4.12/-8.47	-6.18/-5.78	-9.47/-8.09	-1.76/-0.12	-3.64/-13.46	-9.47/-8.09	-1.52/-2.25	-1.18/-8.93
Θ(105°)	-19.91/-3.98	-7.27/-12.45	-10.69/-9.34	-6.18/-9.92	-7.42/-7.9	-5.98/-8.29	-7.22/-5.32	-6.07/-6.43	-15/-8.23	-6.03/-5.08	-4.01/-2.79	-5.68/-4.96	-4.53/-5.49	-8.01/-10.59	-6.68/-5.37	-6.1/-4.52	-7.41/-14.13	-3.72/-5.83	-4.71/-0.81	-5.58/-6.93	-9.29/-11.48	-2.21/-1.26	-8.99/-15.06	-4.33/-3.48
Θ(112.5°)	-10.44/-12.66	-7.96/-10.91	-9.82/-9.53	-6.6/-5.35	-7.06/-6.6	-4.8/-4.74	-9.05/-12.87	-7.48/-6.86	-15.84/-11.51	-7.29/-10.26	-7.26/-6.22	-5.79/-3.09	-5.75/-6.64	-7.4/-10.53	-5.9/-8.47	-14.46/-3.62	-8.14/-20.65	-3.92/-7.16	-7.06/-0.93	-5.28/-4.92	-5/-7.96	-4.08/-2.61	-7.49/-11.04	-16.98/-10.28
Θ(120°)	-8.43/-12.38	-8/-7.67	-14.5/-5.51	-7.83/-4.09	-9.07/-8.35	-4.01/-5.79	-6.56/-11.78	-8.82/-17.78	-12.15/-13.46	-12.57/-9.93	-10.31/-12.77	-11.47/-7.16	-8.81/-7.81	-8.73/-6.53	-7.15/-5.26	-8.93/-5.37	-6.51/-28.34	-9.8/-20.21	-14.45/-2.56	-4.85/-2.5	-9.46/-19.52	-4.89/-3.58	-8.21/-10.74	-11.06/-8.39
Θ(127.5°)	-6.2/-12.65	-17.11/-8.84	-17.79/-7.06	-5.12/-8.84	-9.28/-10.51	-5.35/-9.68	-7.33/-7.81	-8.69/-18.46	-13.67/-8.96	-13.9/-8.14	-11.72/-15.11	-16.32/-27.58	-9.98/-11.23	-11.27/-8.46	-9.7/-16.97	-6.97/-4.78	-11/-13.94	-20.82/-11.32	-8.9/-5.67	-12.95/-6.75	-12.3/-10.56	-15.9/-5.6	-6.96/-13.89	-15.06/-8.49
Θ(135°)	-12.32/-11.39	-4.71/-13.86	-12.04/-13.94	-12.63/-20.99	-11.91/-11.94	-9.61/-8.56	-5.88/-7.03	-11.66/-13.48	-13.3/-14.08	-14.06/-12.74	-10.12/-10.59	-9.33/-9.64	-7.03/-7.75	-7.67/-9.52	-16.47/-14.96	-8.88/-7.88	-12.74/-13.73	-15.94/-13.17	-7.42/-5.98	-8.35/-18.23	-12.31/-32.4	-11.72/-14.06	-1.15/-11.72	-8.37/-8.61
Θ(142.5°)	-14.73/-19.97	-6.11/-9.86	-13.28/-15.37	-19.37/-18.17	-13.85/-13.63	-17.35/-10.46	-9.43/-7.82	-8.41/-9.71	-13.42/-19.09	-15.44/-15.48	-13.3/-11.97	-12.59/-13.67	-14.37/-12.03	-11.88/-12.72	-17.57/-18.89	-23.06/-22.76	-12.56/-11.34	-11.26/-17.8	-11.52/-14.95	-9.26/-10.3	-17.81/-10.92	-16.56/-32.61	-17.89/-19.87	
Θ(150°)	-13.65/-9.2	-7.36/-11.85	-24.68/-15.9	-20.38/-17.39	-17.06/-22.18	-13.84/-9.35	-11.61/-10.82	-9.06/-9.48	-11.25/-14.04	-21.7/-25.11	-22.21/-14.07	-12.07/-14.02	-17.71/-20.37	-18.29/-14.5	-14.16/-12.88	-13.59/-15.87	-26.18/-16.32	-10.54/-9.3	-9.6/-13.09	-11.13/-9.45	-11.92/-26.35	-17.75/-15.01	-15.53/-18.19	-21.53/-30.5
Θ(157.5°)	-7.05/-11.76	-17/-11.73	-9.88/-9.58	-7.69/-8.86	-9.47/-10.86	-9.61/-8.56	-12.93/-19.42	-15.35/-16.63	-14.59/-11.54	-11.91/-12.64	-12.61/-13.72	-14.54/-15.93	-17.55/-20.2	-32.62/-18.83	-15.36/-14.62	-15.64/-8.71	-12.12/-10.81	-12.64/-12.88	-10.46/-10.7	-12.59/-15.83	-16.04/-13.28	-12.4/-17.16	-16.45/-11.98	-8.9/-7.12
Θ(165°)	-16.52/-12.79	-9.26/-8.54	-8.59/-8.62	-9.24/-10.87	-16.17/-11.39	-10.82/-11.14	-15/-25.32	-21.6/-17.44	-11.18/-12.95	-7.7/-5.22	-10.57/-8.86	-6.67/-8.14	-9.64/-9.4	-9.66/-9.49	-9.21/-12.4	-15.83/-20.11	-15.79/-11.88	-10.16/-10.56	-11.23/-12.01	-10.7/-7.1	-12.91/-4.35	-5.93/-7.66	-8.51/-12.4	
Θ(172.5°)	-9.36/-6.48	-6.79/-8.43	-8.34/-8.78	-9.98/-10.6	-11.21/-12.28	-15.02/-15.89	-21.35/-26.65	-18.97/-15.38	-13.21/-13.35	-13.09/-14.22	-13.92/-13.48	-14.2/-16.25	-16.44/-15.12	-13.26/-12.52	-11.56/-12.29	-14.24/-18.89	-25.43/-18.32	-16.21/-16.1	-16.9/-20.83	-19.82/-15.28	-13.29/-12.98	-12.65/-15.98	-20.64/-17.01	-14.64/-14
Θ(180°)	-7.82/-9.34	-10.39/-10.35	-10.34/-11.74	-12.22/-12.99	-13.74/-16.12	-17.91/-18.39	-19.87/-29.65	-23.35/-17.51	-14.49/-15.33	-16.92/-17.1	-14.39/-10.94	-9.52/-9.3	-7.45/-7.1	-9.07/-9.72	-10.24/-12.93	-14.37/-17.37	-21.4/-24.66	-26.99/-31.39	-23.4/-18.9	-16.28/-15.58	-17.5/-24.02	-21.93/-14.93	-11.43/-9.92	-9.19/-8.23
Freq(Hz)	5.6GPol.	PhiAnt.3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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°)	-19.07/-14.67	-20.29/-22.14	-20.85/-18.1	-18.43/-18.49	-14.82/-10.95	-9.82/-9.49	-9.47/-9.39	-9.41/-9.37	-8.73/-9.19	-10.4/-12.32	-13.27/-16.72	-20.49/-23.74	-27.72/-19.54	-16.11/-15.41	-13.45/-10.34	-9.99/-9.74	-9.08/-9.3	-9.34/-8.41	-7.9/-7.47	-7.36/-7.57	-7.65/-8.81	-10.46/-10.36	-9.08/-11.01	-14.1/-18.05
Θ(7.5°)	-19.77/-23.04	-18.39/-16.6	-16.23/-18.63	-18.51/-26	-19.37/-12.21	-9.94/-9.83	-10.18/-9.82	-9.77/-8.36	-7.07/-7.06	-7.53/-7.88	-9.06/-12.68	-18.48/-20.28	-19.11/-25.95	-15.97/-15.32	-13.25/-10.64	-11.19/-9.18	-8.06/-10.15	-11.37/-9.9	-9.23/-11.35	-13.98/-14.66	-12.36/-11.07	-11.73/-14.09	-14.95/-17.23	-20.96/-20.21
Θ(15°)	-20.55/-18.95	-15.22/-13.52	-13.16/-10.33	-9.05/-9.51	-11.61/-17.82	-13.94/-18.8	-14.98/-12.27	-10.82/-8.26	-7.88/-9.84	-11.29/-13.31	-15.14/-14.48	-13.04/-15.84	-17.89/-24.19	-10.32/-9.75	-8.56/-7.44	-8.41/-10.08	-9.95/-14.07	-10.53/-8.61	-8.47/-11.42	-11.09/-8.68	-8.07/-9.22	-15.4/-16.19	-13.62/-17.84	-14.62/-21.24
Θ(22.5°)	-18.88/-13.16	-13.31/-11.91	-12.23/-15.78	-16.17/-10.18	-6.16/-5.63	-9.43/-37.27	-15.46/-15.77	-15.9/-9.11	-8.83/-10.43	-11.19/-12.34	-12.17/-11.35	-14.31/-14.33	-14.39/-14.65	-16.14/-15.21	-14.32/-11.67	-13.72/-8.34	-8.28/-8.91	-9.03/-11.99	-10.36/-9.24	-10.18/-11.42	-12.4/-17.16	-14.94/-14.47	-17.35/-23.48	
Θ(30°)	-11.42/-11.11	-19.21/-22.12	-17.34/-11.3	-8.55/-6.51	-4.53/-4.48	-6.24/-9.95	-13.61/-13.12	-13.61/-11.78	-9.35/-9.62	-14.39/-9.97	-9.46/-11.35	-12.29/-16.48	-15.56/-11.6	-17.37/-13.15	-12.12/-12.41	-10.23/-11.73	-18.67/-9.12	-8.41/-14.52	-9.19/-8.27	-8.95/-6.67	-5.83/-10.17	-22.45/-10.66	-10.62/-13.72	-13.55/-29.52
Θ(37.5°)	-11.15/-10.45	-22.7/-16.18	-13.92/-11.3	-7.47/-7.25	-8.85/-7.37	-7.26/-5.42	-4.11/-5.26	-10.66/-14.72	-15.64/-12.55	-10.39/-8.09	-14.25/-18.13	-13.33/-20.33	-17.47/-19.34	-20.14/-11.62	-13.76/-15.99	-11.06/-11.82	-8.71/-4.23	-9.38/-8.99	-6.73/-4.95	-6.24/-9.45	-12.18/-13.22	-10.97/-8.77	-15.31/-19.09	-18.52/-16.72
Θ(45°)	-14.97/-17.75	-12.57/-18.32	-25.64/-12.69	-11.08/-14.12	-15.1/-8.18	-7.23/-13.53	-7.29/-25.28	-10.19/-7.79	-14.77/-17.88	-9.71/-9.17	-15.55/-13.89	-10.23/-14.55	-27.05/-32.35	-16.34/-15.36	-10.53/-12.47	-12.47/-4.96	-13.05/-6.42	-5.41/-7.05	-10.58/-13.15	-12.06/-11.25	-16.16/-33.53	-18.38/-19.11	-13.59/-16.23	
Θ(52.5°)	-34.4/-9.35	-13.75/-14.11	-13.47/-6.59	-11.62/-8.43	-20.74/-22.57	-13.15/-24.77	-12.17/-6.48	-11.29/-6.03	-10.5/-18.89	-15.69/-13.94	-13.12/-8.96	-11.91/-26.91	-26.34/-19.89	-19.22/-10.18	-7.31/-15.78	-11.23/-15.77	-11.3/-6.23	-6.86/-8.16	-12.3/-4.86	-9.49/-2.55	-12.2/-8.86	-13.23/-24.55	-13.14/-16.27	-20.7/-14.1
Θ(60°)	-15.19/-8.96	-10.43/-14.04	-6.98/-4.67	-4.35/-6.61	-6.91/-9.72	-7.82/-8.65	-11.93/-9.72	-14.03/-8.22	-14.2/-12.52	-13.69/-18.25	-19.35/-16.72	-18.13/-18.1	-26.88/-18.57	-18.59/-14.96	-8.95/-14.08	-13.37/-15.73	-8.15/-6.61	-15.31/-7.31	-12.39/-18.5	-15.32/-8.65	-8.96/-9.42	-5.87/-11.16	-10.1/-8.1	-10.96/-17.25
Θ(67.5°)	-13.09/-5.9	-6.44/-12.81	-6.01/-12.13	-3.03/-6.65	-11.42/-8.58	-8.19/-5.55	-9.94/-7.54	-7.63/-8.04	-20.34/-10.39	-19.89/-18.2	-24.26/-27	-20.34/-18.55	-17.69/-11.55	-10.53/-17.82	-9.41/-13.16	-10.25/-10.28	-9.09/-10.28	-7.74/-5.81	-8.05/-9.33	-5.52/-15.2	-7.73/-7.59	-11.72/-17.79		
Θ(75°)	-19.59/-10.58	-10.58/-18.41	-12.82/-12.59	-12.98/-13.03	-13.85/-13.23	-10.32/-9.09	-10.26/-8.31	-7.03/-9.25	-11.85/-11.16	-12.98/-15.67	-22.39/-18.89	-17.2/-16.18	-18.96/-20.77	-17.76/-21.17	-14.36/-13.85	-8.49/-9.27	-11.38/-14.67	-8.16/-14.63	-6.88/-6.3	-15.59/-14.25	-11.64/-14.19	-19.7/-12.16	-19.18/-14.98	-14.85/-16.97
Θ(82.5°)	-35.02/-11.34	-19.75/-17	-13.45/-13.9	-17.4/-19.65	-14.95/-10.89	-11.87/-15.35	-9.93/-8.04	-5.83/-10.8	-8.86/-11.95	-14.15/-11.19	-16.77/-11.71	-13.94/-24.47	-19.43/-19.69	-14.39/-12.91	-8.81/-10.85	-8.29/-13.26	-8.98/-0.95	-8.21/-6.6	-7.34/-7.24	-10.84/-7.39	-11.94/-10.79	-15.1/-13.76	-19.98/-29.21	-20.38/-18.94
Θ(90°)	-23.06/-8.98	-18.47/-25.32	-13.06/-13.3	-12.99/-12.26	-7.84/-3.2	-6.63/-10.39	-15.07/-9.72	-8.71/-11.3	-7.5/-16.19	-11.11/-10.64	-12.83/-13.8	-13.98/-19.98	-18.82/-15.23	-12.75/-14.28	-10.76/-24.91	-8.31/-10.24	-7.24/-8.38	-15.59/-11.47	-6.45/-8.39	-6.88/-11.75	-11.09/-17.83	-5.68/-9.63	-2.02/-20.8	-21.77/-16.12
Θ(97.5°)	-20.57/-15.67	-19.32/-16.31	-13.65/-8.98	-11.86/-10.54	-11.58/-7.83	-9.15/-7.4	-11.37/-8.78	-9.14/-18.56	-11.06/-16.12	-12.37/-10.19	-11.21/-14.45	-14.93/-15.29	-26.54/-13.61	-30.92/-18.55	-18.13/-8.63	-7.91/-7.58	-9.02/-8.27	-16.18/-22.52	-9.23/-5.47	-6.91/-13.98	-6.34/-10.27	-9.2/-13.47	-15.35/-24.8	-22.31/-14.2
Θ(105°)	-24.07/-14.39	-14.18/-12.92	-14.26/-12.48	-12.64/-9.1	-10.9/-8.66	-8.5/-8.91	-12.81/-10.5	-9.64/-11.47	-17.63/-18.48	-23.66/-15.11	-19.75/-18.91													



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(97.5°)	-4.03/-7.2	-3.82/-6.62	-7.69/-4.94	-5.19/-11.75	-19.36/-12.54	-8.87/-6.3	-3.55/-4.71	-5.09/-3.07	-3.03/-5.09	-2.320-25	-0.88/-1.7	-1.550-74	0.25/-0.06	-1.020/-87	-1.15/-4.23	-3.33/-2.58	-3.51/-5.91	-7.64/-4.34	-1.33/-0.32	1.53/-15.88	-7.05/-6.59	-0.69/-5.03	-22.73/-20.41	-20.12/-7.04
Θ(105°)	-11.74/-4.69	-11.51/-5.11	-8.72/-4.06	-6.41/-4.12	-5.54/-11.06	-8.34/-3.55	-7.28/-6.2	-9.44/-7.61	-3.55/-4.38	-8.27/-5.85	-4.43/-9.14	-2.39/-3.47	-3.83/-3.1	-4.27/-1.47	-1.3/-3.74	-7.88/-6.57	-1.6/-4.42	-16.41/-7.01	-0.12/-1.87	-2.51/-14.07	-7.12/-3.09	0.07/-6.06	-8.4/-14.33	-12.97/-3.32
Θ(112.5°)	-11.35/-12.52	-6.97/-19.78	-7.56/-10.54	-7.53/-12.17	-5.46/-5.88	-8.55/-12	-6.31/-2.6	-6.71/-20.81	-5.01/-4.68	-7.92/-11.63	-4.71/-7.25	-5.74/-17.06	-5.82/-15.22	-6.76/-8.06	-12.58/-9.95	-8.31/-6.03	-6.77/-8.17	-4.28/-6.28	-1.83/-3.84	-5.33/-5.2	-2.43/-3.58	-12.78/-16.2	-26.38/-6.69	
Θ(120°)	-6.44/-7.07	-10.98/-21.42	-5.27/-5.34	-10.9/-7.43	-9.83/-5.54	-5.38/-10.63	-11.89/-8.35	-6.55/-14.58	-15.51/-6.68	-4.25/-4.9	-8.27/-5.23	-9.5/-4.52	-4.8/-9.14	-5.12/-17.65	-7.31/-12.21	-19.51/-4.41	-4.54/-10.81	-6.13/-11.71	-5.21/-9.32	-4.89/-6.05	-15.08/-13.05	-4.24/-0.5	-3.93/-9.73	-7.37/-5.83
Θ(127.5°)	-3.45/-5.18	-11.02/-8.8	-10.67/-5.71	-6.67/-9.79	-7.77/-7.79	-4.83/-4.32	-9.46/-9.26	-14.44/-11.11	-10.01/-12.34	-11.55/-8.97	-8.01/-7.12	-6.66/-9.94	-9.57/-3.33	-2.79/-8.94	-5.36/-3.49	-4.98/-11.72	-10.35/-10.88	-9.44/-7.87	-7.03/-11.74	-22.61/-17.56	-6.43/-2.98	-5.29/-12.6	-16.07/-6.01	
Θ(135°)	-21/-5.86	-7.33/-19.05	-9.12/-12.13	-7.59/-12.83	-21.02/-8.02	-8.63/-4.32	-6.51/-9.57	-12.23/-7.94	-5.25/-8.65	-8.96/-13.49	-9.55/-6.78	-8.83/-6.12	-8/-65	-5.94/-7.25	-5.64/-7.46	-4.1/-17.89	-10.96/-1.39	-10.12/-6.67	-4.31/-11.77	-13.21/-22.62	-5.61/-4.51	-18.42/-17	-6.57/-9.85	
Θ(142.5°)	-12.33/-14.63	-15.98/-16.92	-7.97/-7.14	-12.03/-16.94	-19.6/-15.57	-9.85/-7.02	-8.91/-6.54	-6.14/-14.91	-12.21/-7.29	-3.91/-4.78	-10.01/-15.47	-13.86/-7.28	-6.27/-7.11	-8.81/-8.14	-6.12/-6.12	-6.33/-5.75	-8.09/-5.2	-9.66/-12.98	-9.74/-5.14	-6.8/-15.66	-8.88/-5.75	-6.74/-12.92	-11.44/-10.71	-8.69/-10.11
Θ(150°)	-10.24/-15.02	-28.63/-19.37	-21.19/-11.26	-16.66/-20.64	-12.29/-9.69	-8.97/-8.2	-7.95/-7.94	-6.07/-7.57	-10.17/-11.61	-24.15/-13.4	-8.61/-6.25	-6.45/-8.58	-9.77/-8.88	-7.57/-6.92	-8.93/-10.68	-9.41/-10.46	-13.17/-21.23	-10.09/-4.7	-6.12/-8.06	-6.86/-6.18	-5.44/-7.51	-10.98/-14.66	-16.86/-17.26	-9.95/-3.63
Θ(157.5°)	-7.45/-10.34	-10.95/-10.87	-8.78/-10.13	-14.19/-20.51	-20.28/-12.17	-8.63/-8.92	-8/-5.75	-4.19/-4.5	-5.59/-5.21	-5.37/-6.77	-7.59/-8.03	-8.16/-8.71	-12.07/-15.17	-13.53/-13.96	-13.66/-7.88	-6.69/-7.14	-8.41/-12.55	-18.72/-10.8	-7.55/-7.32	-7.89/-10.81	-16.16/-9.41	-1.71/-7.83	-10.3/-8.54	
Θ(165°)	-5.47/-3.74	-3.64/-3.98	-4.38/-5.42	-6.44/-7.37	-7.58/-7.73	-8.86/-12.4	-13.93/-13.17	-11.54/-10.33	-8.37/-5.63	-3.38/-2.07	-1.69/-2.01	-2.43/-2.87	-3.59/-4.43	-5.31/-5.93	-6.33/-6.97	-7.03/-6.81	-9.3/-13.76	-18.83/-13.81	-11.56/-12.14	-11.83/-10.43	-9.62/-9.71	-11.07/-10.78	-8.69/-7.58	-6.74/-6.51
Θ(172.5°)	-8.58/-7.86	-7.52/-6.87	-6.41/-6.16	-6.35/-6.46	-7.18/-8.03	-9.33/-11.55	-13.42/-15.45	-16.16/-78	-22.61/-24.35	-15.88/-11.81	-9.69/-8.19	-6.9/-5.88	-5.63/-5.57	-5.48/-5.84	-6.14/-6.32	-16.47/-10.36	-16.16/-28.92	-23.94/-19.71	-23.47/-38.64	-19.58/-14.15	-12.96/-12.64	-14.24/-15.18	-14.65/-13.14	-11.64/-10.61
Θ(180°)	-7.81/-8.23	-7.34/-7.25	-7.91/-7.42	-8.19/-9.86	-11.77/-14.72	-18.78/-23.11	-30.44/-34.42	-25.71/-22.11	-18.13/-16.63	-16.1/-13.6	-11.42/-10.19	-9.6/-8.54	-7.31/-7.33	-7.14/-6.51	-8.28/-10.21	-10.39/-12.11	-13.02/-11.84	-9.73/-9.83	-10.71/-11.71	-11.5/-11.91	-13.15/-22	-16.42/-13.98	-10.18/-7.97	-7.16/-9.63
Freq(Hz)	2.45GPol.	PhiAnt.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°)	-11.86/-10.37	-15.95/-18.27	-17.51/-15.97	-15.08/-14.63	-14.13/-13.46	-13.08/-13.42	-14.27/-14.76	-14.65/-15.35	-15.91/-14.81	-13.15/-12.01	-12.29/-14.05	-15.82/-15.39	-14.33/-14.55	-15.98/-18.08	-20.6/-24.38	-31.69/-40.28	-16.18/-13.72	-11.25/-10.14	-11.49/-11.51	-11.25/-10.14	-8.77/-8.47	-9.78/-11.86	-12.77/-11.85	
Θ(7.5°)	-9.9/-11.46	-13.34/-12.46	-10.47/-8.96	-8.19/-8.04	-8.21/-8.87	-10.28/-12.57	-15.17/-14.39	-12.57/-11.82	-11.48/-10.73	-9.33/-8.18	-8.36/-10.06	-12.62/-13.89	-13.37/-13.92	-16.38/-19.71	-20.78/-18.01	-15.86/-15.16	-15.94/-16.47	-14.71/-12.18	-9.87/-7.88	-6.59/-6.06	-5.96/-5.86	-5.52/-5.6	-6.65/-8.45	-9.88/-9.7
Θ(15°)	-10.68/-11.42	-11.16/-9.17	-7.37/-6.27	-5.72/-5.61	-5.96/-6.95	-8.95/-11.56	-12.81/-10.83	-8.96/-8.25	-7.3/-8.52	-7.87/-11.4	-7.32/-8.85	-11.47/-13.22	-12.91/-13.71	-17.21/-23.28	-19.88/-14.76	-12.11/-11.03	-11.52/-12.46	-12.32/-10.55	-7.94/-6.59	-4.39/-4.03	-4.48/-5.23	-5.66/-1.47	-7.36/-9.33	-10.92/-10.76
Θ(22.5°)	-14.59/-14.04	-10.86/-8.39	-6.79/-5.98	-5.59/-5.32	-5.25/-6.48	-8.46/-7.58	-7.09/-7.31	-8.73/-8.52	-9.18/-9.15	-9.41/-10.46	-12.41/-14.04	-13.84/-15.34	-19.24/-23.08	-18.84/-12.78	-9.84/-8.82	-9.23/-10.26	-10.35/-9.62	-6.97/-5.22	-4.32/-4.6	-6.21/-9.03	-11.49/-12.07	-12.37/-13.88	-16.58/-16.68	
Θ(30°)	-20.35/-16.57	-12.39/-9.09	-7.33/-6.78	-6.66/-6.08	-5.25/-5.07	-5.62/-6.16	-6.16/-6.07	-6.61/-7.45	-8.17/-9.23	-10.94/-12.99	-14.96/-16.07	-16.21/-16.67	-18.18/-18.92	-20.7/-25.31	-19.82/-13.51	-9.54/-7.51	-7.42/-8.59	-9.25/-8.58	-7.28/-6.42	-6.47/-7.9	-10.87/-14.44	-1.71/-22.1	-31.3/-19.62	-19.49/-23.81
Θ(37.5°)	-19.88/-18.77	-14.51/-10.56	-8.38/-7.6	-7.63/-7.23	-6.04/-5.31	-5.35/-5.36	-5.16/-5.77	-7.68/-9.57	-10.57/-11.46	-12.85/-14.64	-16.76/-20.45	-21.21/-18.29	-19.75/-25.45	-29.16/-26.87	-19.01/-12.71	-8.71/-6.75	-6.53/-7.29	-7.82/-7.49	-6.99/-7.4	-8.81/-10.6	-9.27/-11.93	-7.92/-10.1	-16.32/-22.41	-18.97/-20.65
Θ(45°)	-15.82/-16.87	-18.46/-13.67	-10.19/-8.59	-8.37/-8.75	-8.29/-7.52	-6.85/-6.91	-5.12/-6.04	-9.09/-12.53	-14.75/-16.23	-13.64/-14.99	-15.56/-15.64	-17.71/-19.45	-18.12/-15.54	-10.34/-7.06	-5.71/-5.51	-5.75/-6.02	-6.88/-7.84	-9.08/-7.95	-5.88/-5.17	-6.24/-8.98	-15.07/-30.5	-22.18/-18.66		
Θ(52.5°)	-13.47/-14.42	-19.08/-21.22	-15.87/-11.76	-9.77/-9.43	-9.65/-9.52	-9.11/-7.23	-5.69/-6.74	-11.1/-16.49	-17.6/-17.91	-17.29/-15.13	-14.52/-16.86	-19.74/-16.94	-14.07/-12.98	-13.93/-14.29	-12.98/-13.52	-11.33/-7.13	-4.83/-4.38	-5.6/-7.74	-9.03/-10.3	-9.54/-6.38	-4.31/-3.96	-4.96/-7.11	-10.74/-16.42	-16.42/-14.83
Θ(60°)	-12.95/-16.62	-19.34/-26.59	-30.02/-17.64	-11.52/-9.61	-9.71/-9.32	-9.38/-8.25	-6.18/-7.19	-12.77/-15.59	-13.34/-14.41	-16.98/-17.58	-19.35/-25.35	-24.51/-20.44	-16.48/-13.4	-13.39/-15.4	-13.01/-13.58	-10.71/-7.26	-5.3/-4.76	-8.78/-10.03	-10.26/-10.75	-9.16/-9.69	-6.14/-6.06	-5.89/-6.06	-7.23/-9.91	-11.97/-12.74
Θ(67.5°)	-12.24/-12.42	-21.73/-20.71	-18.37/-29.25	-13.56/-10.13	-9.75/-9.33	-8.52/-9.62	-6.45/-6.15	-13.09/-12.68	-15.61/-16.58	-21.07/-25.43	-30.42/-31.52	-14.56/-16.2	-15.17/-15.4	-12.93/-14.76	-5.17/-5.12	-8.14/-11.37	-11.49/-13.64	-12.26/-12.07	-13.83/-13.62	-10.53/-8.17	-7.83/-9.74	-12.48/-13.75		
Θ(75°)	-12.87/-11.58	-20.08/-16.4	-13.53/-23.44	-15.48/-10.29	-9.24/-7.51	-7.8/-9.09	-5.01/-5.12	-10.63/-11.42	-9.39/-11.71	-14.87/-15.96	-20.73/-36.8	-32.69/-24.37	-26.92/-23.6	-16.54/-16.81	-13.05/-11.86	-10.4/-7.44	-6.22/-6.42	-10.89/-17.44	-15.41/-14.02	-12.43/-14.07	-15.78/-16.8	-18.2/-13.05	-10.36/-11.42	-14.81/-16.95
Θ(82.5°)	-16.46/-12.34	-15.93/-14.09	-11.93/-18.62	-13.93/-10.05	-8.84/-6.05	-6.55/-10.69	-5.25/-6.44	-8.77/-10.1	-9.47/-11.65	-13.71/-14.61	-19.75/-37.41	-29.02/-28.64	-35.42/-17.15	-12.68/-16.1	-8.65/-11.69	-9.78/-6.78	-8.76/-10.5	-16.52/-13.91	-10.41/-9.52	-9/-9.66	-9.28/-9.24	-11.95/-19.01	-16.32/-14.85	-16.86/-19.78
Θ(90°)	-16.74/-13.74	-15.89/-12.76	-10.93/-15.82	-14.07/-10.07	-9.28/-5.34	-4.93/-9.38	-3.24/-4.02	-7.12/-8.22	-7.44/-8.74	-10.18/-10.77	-14.92/-34.16	-23.82/-20.78	-17.35/-15.88	-13.05/-9.46	-8.7/-10.3	-10.13/-6.92	-10.72/-12.07	-16.71/-10.95	-8.39/-7.99	-8.14/-9.84	-10.64/-10.48	-12.43/-17.04	-18.95/-16.98	-16.24/-17.98
Θ(97.5°)	-13.51/-12.48	-15.53/-13.45	-9.91/-14.02	-13.05/-10.21	-11.84/-5.58	-4.48/-8.68	-5.39/-3.65	-5.62/-6.01	-5.17/-6.13	-8.23/-10.75	-16.1/-20.59	-18.18/-21.22	-22.92/-20.44	-14.44/-9.82	-9.82/-12.05	-7.5/-8.33	-18.93/-12.5	-11.59/-8.97	-8.25/-9.19	-11.66/-15.51	-14.64/-17.34	-34.96/-21.36	-17.56/-16.95	-15.28/-14.57
Θ(105°)	-13.81/-13.3	-13.73/-12.08	-10.39/-13.9	-12.93/-10.28	-12.72/-9.38	-4.58/-7.12	-5.97/-3.73	-5.11/-6.23	-5.08/-5.1	-6.56/-6.86	-10.82/-14.29	-14.8/-20.23	-20.22/-20.23	-12.18/-7.5	-7.92/-15.28	-11.64/-10.31	-13.11/-16.08	-12.02/-12.83	-10.65/-9.59	-9.65/-8.59	-7.44/-9.24	-14.49/-19.51	-22.5/-29.26	-18.03/-13.99
Θ(112.5°)	-12.94/-17.07	-13.06/-10.03	-9.79/-13.97	-12.98/-10.31	-14.23/-8.56	-5.52/-6.49	-8.66/-3.24	-3.38/-4.43	-4.79/-5.81	-8.25/-10.99	-13.08/-14.93	-15.22/-13.29	-15.74/-19.74	-10.18/-9.04	-16.32/-11.91	-6.98/-8.38	-14.48/-15.7	-13.09/-9.01	-6.08/-5.38	-6.63/-7.96	-8.83/-11.74	-18.14/-17.07	-18.23/-16.83	-14.57/-11.81
Θ(120°)	-10.82/-20.67	-12.38/-8.92	-10.22/-14.33	-12.72/-10.89	-14.91/-11.89	-7.14/-7.49	-8.57/-5.48	-3.57/-3.18	-3.39/-4.33	-6.29/-8.16	-9.07/-9.2	-8.97/-9.65	-13.72/-24.25	-12.64/-10.98	-11.9/-9.45	-8.02/-11.23	-21.42/-11.29	-7.37/-6.84	-6.93/-7.42	-10.33/-17.19	-20.47/-19.59	-25.92/-25.26	-18.27/-14.92	-11.41/-9.13
Θ(127.5°)	-12.16/-25.72	-11.99/-8.4	-9.51/-13.76	-13.68/-10.43	-11.57/-16.83	-10.89/-8.25	-8.75/-6.6	-6.93/-5.64	-4.8/-4.53	-4.84/-5.26	-5.82/-6.64	-7.78/-10.37	-18.05/-18.69	-9.45/-7.85	-10.16/-15.36	-16.49/-12.65	-8.71/-9.7	-7.65/-10.19	-15.32/-19.55	-28.72/-18.11	-12.66/-11.51	-13.59/-18.83	-28.25/-25.54	-14.05/-10.25
Θ(135°)	-23.09/-22.02	-12.48/-10.12	-11.96/-16.48	-12.73/-9.43	-9.7/-14.41	-16.2/-13.97	-8.89/-8.88	-7.72/-6.46	-5.95/-6.08	-6.64/-7.43	-8.48/-9.28	-9.57/-11.4	-19.84/-17.57	-10.12/-10.1	-16.75/-19.39	-10.21/-8	-8.24/-9.63	-11.58/-16.63	-42.01/-18.42	-15.84/-14.76	-12.53/-11.2	-11.61/-13.8	-17.81/-27.29	-23.44/-17.26
Θ(142.5°)	-19.68/-14.67	-12.37/-12.21	-14.1/-15.36	-12.22/-10.01	-10.38/-13.48	-12.72/-12.94	-10.33/-9.89	-9.44/-8.3	-7.54/-7.79	-8.37/-8.81	-8.85/-8.56	-8.85/-11.43	-19.31/-18.75	-14.25/-17.88	-12.32/-9									



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Θ(150°)	-18.25/16.97	-15.64/17.12	-25.44/38.36	-25.62/18.94	-17.37/16.28	-15.25/14.25	-13.93/16.25	-15.68/11.44	-9.19/-7.93	-8.11/-7	-5.71/-5.6	-4.75/-4.85	-5.79/-4.92	-5.37/-6.02	-6.57/8.47	-10.09/12.45	-17.7/10.68	-9.06/9.98	-10.62/10.9	-13.1/17.02	-26.89/18.6	-21.47/28.42	-24.42/28.75	-22.44/22.11
Θ(157.5°)	-20.19/23.15	-22.31/21.22	-24.02/25.24	-22.17/17.46	-19.3/-22.41	-19.68/20.4	-34.09/18.67	-15.25/11.46	-9.21/-8.48	-7.27/-6.85	-6.18/-5.77	-6.78/-6.85	-6.37/-6.22	-6.82/-7.7	-9.31/-8.49	-8.55/-12.86	-12.64/-8.23	-8.95/-10.97	-13.19/-14.07	-18.39/-20.96	-23.56/27.52	-34.72/30.17	-25.15/-22.51	-20.26/18.08
Θ(165°)	-24.7/-30.15	-22.11/19.45	-21.48/-21.97	-20.67/-17.09	-22.12/21.29	-18.94/19.13	-22.55/32.35	-21.54/-19.84	-17.25/-13.98	-12.26/10.21	-8.96/-8.03	-7.32/-6.43	-5.78/-6.08	-7.02/-8.16	-10.22/12.17	-14.26/13.89	-11.07/-9.46	-10.25/13.7	-16.76/16.93	-15.66/-15.89	-15.68/19.3	-24.52/22.78	-22.51/20.68	-19.71/21.68
Θ(172.5°)	-15.07/15.38	-15.9/-19.13	-18.54/15.68	-15.7/-16.74	-17.46/19.91	-21.43/23.65	-24.74/27.28	-20.97/16.86	-15.41/14.05	-13.83/12.54	-10.84/12.61	-13.39/12.23	-14.03/14.02	-12.73/13.43	-15.16/16.65	-16.21/14.45	-13.78/13.93	-16.81/19.32	-16.25/14.32	-14.37/15.21	-17.76/17.09	-14.27/13.36	-13.28/13.97	-15.3/-14.32
Θ(180°)	-11.03/-11.24	-11.26/12.12	-12.52/14.06	-14.89/16.55	-17.91/20	-20.21/21.87	-27.68/42.2	-24.38/19.7	-18.9/-16.07	-15.66/17.12	-16.31/15.52	-14.04/-12.52	-12.86/13.42	-12.64/13.2	-14.89/-16.01	-13.94/12.88	-14.68/-18.07	-24.21/34.75	-18.05/16.86	-23.51/22.38	-17.34/14.09	-12.11/11.91	-10.71/10.09	-10.71/10.59
Freq(Hz)	5.3GPol.	PhiAnt. 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°)	-25.05/-22.82	-13.8/12.33	-11.07/-9.97	-8.56/-8.23	-7.87/-7.1	-5.77/-5.39	-5.06/-3.89	-3.51/-4.28	-4.83/-4.42	-4.85/-6.4	-7.1/-9.4	-12.26/-12.55	-24.19/-21.83	-21.08/-14.75	-10.59/-8.97	-7.51/-6.65	-5.45/-5.35	-5.52/-5.53	-5.96/-6.36	-5.93/-6.99	-7.58/-8.45	-10.9/-11.51	-13.1/-18.64	-21.16/-33.02
Θ(7.5°)	-26.89/-19.7	-15.61/13.44	-10.48/-9.07	-7.64/-6.45	-6.89/-6.75	-5.54/-5.53	-5.1/-3.65	-3.54/-3.72	-4.24/-5.91	-5.96/-7.54	-11.89/-13.3	-19.14/-28.93	-22.88/16.67	-17.78/16.03	-11.95/-9.38	-7.92/-6.39	-5.36/-5.29	-5.69/-6.26	-7.87/-8.26	-7.59/-5.86	-5.44/-6.91	-7.46/-7.94	-10.45/-10.35	-15.92/22.19
Θ(15°)	-37.15/16.36	-10.9/-9.77	-12.2/10.8	-7.09/-4.85	-5.1/-4.96	-4.52/4.87	-3.87/3.28	-3.8/3.75	-5.21/5.87	-5.87/6.89	-8.51/9.47	-10.83/12.39	-16.52/31.43	-24.37/24.45	-14.34/12.65	-13.19/12.04	-7.87/-6.63	-6.61/6.31	-5/-3.76	-3.64/-4.46	-4.66/5.56	-7.39/7.43	-7.27/10.14	-10.41/16.74
Θ(22.5°)	-19.91/-20.73	-15.47/-12.78	-15.16/-14.3	-8.65/-6.4	-7.35/-5.43	-3.74/-4.22	-4.71/-4.94	-5.24/-6.17	-6.34/-6.7	-6.08/-7.2	-8.45/-9.26	-10.86/-14.16	-20.99/-20.78	-15.23/-18.38	-14.28/-11.72	-10.03/-8.45	-6.9/-8.31	-9.76/-9.56	-7.82/-6.55	-5.67/-5.32	-5.63/-7.19	-6.96/-6.5	-8.81/-14.89	-37.72/18.63
Θ(30°)	-21.72/-27.27	-28.98/17.62	-15.51/-10.67	-8.9/-7.73	-8.36/-6.66	-4.83/-5.45	-5.58/-6.56	-5.16/-7	-9.55/-10.59	-11.04/-11.46	-11.6/-9.59	-15.21/18.25	-20.19/15.65	-15.19/15.65	-12.51/12.54	-10.46/-10.76	-8.84/-11.95	-10.75/-9.43	-6.76/-5.7	-6.61/-8.3	-8.1/-6.66	-8.01/10.86	-11.16/11.24	-12/-12.24
Θ(37.5°)	-19.29/-16.9	-26.94/14.2	-15.45/9.52	-9.18/-8.19	-6.64/-9.98	-9.2/-8.13	-7.5/-7.5	-8.36/9.02	-9.77/13.15	-12.15/12.25	-14.84/13.36	-10.27/-10.04	-18/-23.26	-19.13/16.72	-20.3/-17.87	-12.3/-19.45	-11/-9.8	-5.93/-6.2	-5.3/-4.3	-4.49/-4.86	-6.49/-10.98	-12.1/-10.7	-12.94/-10.88	-17.42/14.06
Θ(45°)	-15.4/-21.22	-29.22/16.68	-12.35/-12.79	-10.82/-10.83	-9.63/-9.66	-8.5/-12.39	-9.28/-8.75	-10.1/-9.82	-14.1/-16.52	-13.17/-16.45	-19.81/-17.52	-17.33/-16.74	-20.8/-21.24	-14.82/-12.69	-20.46/-18.83	-6.69/-6.9	-11.41/-8.5	-5.71/-9.82	-8.23/-8.12	-11.13/-15.31	-14.92/-14.69	-15.02/-13.08	-11.01/-10.21	-
Θ(52.5°)	-18.93/-15.68	-19.48/12.46	-14.83/-12.58	-18.26/-11.64	-8.56/-7.33	-8.43/-10.09	-11.81/-8.69	-9.91/-7.22	-11.26/-8.06	-13.71/-17.41	-19.39/-18.35	-20.99/-17.29	-18.86/13.36	-14.7/-21.66	-15.19/15.65	-12.84/-9.67	-6.77/-8.34	-7.05/-9.58	-8.2/-6.88	-7.15/-8.87	-10.52/-15.19	-10.52/15.19	-26.58/13.94	-
Θ(60°)	-21.16/14.21	-16.25/11.35	-11.18/-10.7	-14.37/8.92	-12.02/-8.74	-7.66/-9.61	-12.06/-8.48	-8.7/-5.57	-8.84/-6.28	-9.43/-10.92	-14.76/17.47	-13.64/-13.44	-16.21/17.64	-12.48/19.05	-18.89/7.34	-8.98/17.11	-12.67/8.09	-9.86/-15.14	-8.09/-8.64	-7.27/8.35	-16.93/-18.17	-12.7/8.93	-15.06/-40.99	-15.32/13.84
Θ(67.5°)	-20.28/-19.49	-17.87/-12.94	-9.52/-9.3	-11.06/-8.14	-9.08/-10.13	-10.40/-10.04	-9.59/-8.55	-10.76/-7.54	-11.7/-5.88	-9.56/-9.27	-12.7/-13.97	-18.2/-12.4	-20.57/-15.73	-13.67/-16.3	-11.5/-11.33	-13.13/-15.31	-19.23/-6.98	-12.38/-8.25	-10.1/-9.91	-9.07/-12.7	-7.96/-6.44	-9.49/-21.44	-14.46/-15.3	-15.94/13.7
Θ(75°)	-13.14/-15.91	-26.75/15.93	-10.94/-9.5	-8.64/-8.48	-9.25/-9.29	-10.76/10.37	-8.80/-7.53	-13.28/11.15	-9.73/-7.17	-11.18/10.21	-9.97/14.16	-15.54/-14.28	-17.41/14.15	-12.04/-26.58	-15.19/12.35	-13.73/16.93	-14.51/9.91	-14.09/12.57	-6.72/-9.79	-9.01/-12.92	-10.65/-7.71	-10.58/14.47	-14.49/-14.9	-18.68/-19.46
Θ(82.5°)	-15.17/15.82	-33.51/17.01	-18.63/-12.53	-13.76/14.28	-10.39/9.91	-12.92/8.81	-9.18/-7.44	-11.73/-9.46	-11.35/-10.16	-17.41/14.49	-12.12/10.81	-13.31/-19.63	-12.66/-15.79	-25.63/-23.66	-19.2/-16.73	-24.31/10.13	-18.76/-12.13	-10.31/-14.56	-10.72/11.07	-6.54/-9.8	-12.11/11.45	-12.45/17.68	-18.56/-17.5	-12.11/20.73
Θ(90°)	-16.84/-20.02	-24.59/18.12	-29.14/-19.44	-27.16/-15.14	-14.04/-10.05	-13.61/-9.45	-9.27/-7.59	-7.78/-9.39	-12.74/10.27	-10.26/13.66	-11.29/-11.05	-13.54/-16.31	-19.12/20.84	-20.72/-19.52	-17.33/-11.06	-18.02/-12.04	-11.31/-17.17	-13.8/-9.38	-10.45/-10.19	-6.25/-10.41	-11.87/11.19	-18.58/-12.49	-15.34/-16.41	-14.63/28.18
Θ(97.5°)	-20.34/-14.13	-26.86/14.98	-12.05/-18.27	-13.15/12.41	-11.09/8.74	-8.83/-6.66	-6.81/7.38	-7.27/-6.61	-5.24/-8.21	-9.97/14.16	-11.68/18.77	-15.83/12.48	-16.71/-11.97	-15.91/25.1	-19.17/14.47	-12.51/12.48	-6.61/-8.15	-5.27/-6.56	-9.64/-22.82	-9.29/-13.6	-21.11/24.9	-20.57/16.23	-10.58/19.14	-
Θ(105°)	-17.39/-26.31	-16.39/14.61	-16.57/9.03	-10.97/13.16	-11.96/-12.43	-10.17/-9.74	-6.92/-8.75	-6.26/-6.55	-6.84/-6.18	-4.55/-6.95	-9.44/-10.25	-7.3/-9.64	-11.78/14.11	-23.64/-15.56	-11.54/-9.13	-13.38/16.72	-10.6/-12.88	-11.33/-12.1	-13.69/-8.79	-6.44/-8.73	-5.61/-5.41	-10.56/11.95	-28.81/-16.26	-18.42/-22.8
Θ(112.5°)	-29.97/-15.64	-17.02/14.86	-15.35/-11.57	-7.9/-13.43	-13.9/-11.63	-12.24/-11.1	-6.91/-5.98	-6.37/-6.89	-6.07/-6.15	-7.17/-6.25	-8.59/-8.56	-11.79/-14.93	-14.57/-17.42	-20.64/10.96	-18.43/13.38	-23.19/-10.9	-5.26/-16.7	-10.52/-7.85	-7.76/-10.76	-9.41/-12.92	-19.66/-6.26	-7.39/-25.57	-23.79/23.95	-24.14/-15.91
Θ(120°)	-21.84/-16.7	-15.65/18.3	-14.22/13.09	-12.28/12.59	-11.16/15.13	-14.16/9.57	-17.25/-17.2	-6.93/-6.97	-11.37/12.55	-11.38/11.09	-9.53/-11.7	-20.67/14.67	-9.86/-15.72	-12.97/14.41	-10.46/8.64	-17.52/13.63	-6.83/-11.12	-9.63/-21.5	-10.81/9.55	-22.24/23.97	-21.05/-12.13	-30.19/-29.2	-10.55/-9.97	-
Θ(127.5°)	-25.44/-24.16	-17.14/-21.6	-15.12/14.63	-11.94/-10.3	-15.12/14.63	-11.94/-10.3	-15.79/-12.33	-11.4/-16.27	-14.33/-8.98	-7.81/-10.36	-8.93/-11.05	-18.99/-14.18	-9.4/-7.7	-10.02/23.26	-16.53/-20.81	-12.37/-18.17	-16.17/-8.6	-8.19/-14.58	-8.28/-13.69	-19.5/-15.7	-14.87/-16.62	-21.53/-18.85	-17.94/-9.29	-12.07/-19.47
Θ(135°)	-21.26/-21.35	-11.63/14.22	-28.22/18.76	-15.79/-21.51	-13.04/-8.37	-9.17/-15.9	-15.42/9.55	-10.53/-9.72	-9.85/-11.45	-11.5/-8.06	-8.52/-7.78	-8.32/-9.69	-12.89/13.5	-17.45/-15.09	-13.76/-24.84	-13.73/-19.79	-12.66/-9.71	-10.75/-11.26	-8.13/-9.31	-11.77/-29.1	-28.4/-16.03	-16.93/15.23	-14.67/-19.81	-19.56/23.05
Θ(142.5°)	-17.01/-19.8	-20.34/21.86	-19.38/24.32	-15.95/-22.08	-14/-11.79	-11.35/-13.47	-16.16/12.56	-13.68/-10.55	-8.29/-9.33	-13.44/13.31	-15.02/21.88	-31.93/-22.19	-16.02/14.92	-21.35/-24.97	-23.38/-28.04	-15.23/-10.96	-7.77/-5.1	-8.56/-9.9	-12.12/17.41	-24.27/-21.21	-25.43/-25.09	-16.42/-16.51	-18.34/-35.21	-15.3/-17.4
Θ(150°)	-13.17/-14.84	-17.72/-29.04	-18.81/-12.87	-14.85/-33.65	-15.92/-12.34	-13.43/-12.32	-11.95/-14.25	-16.32/-15.03	-11.91/-10.85	-11.26/-12.21	-14.52/-13.51	-11.03/-11.69	-15.36/-18.23	-25.04/23.58	-23.89/-18.04	-8.93/-8.07	-5.66/-5.39	-7.33/-9.97	-22.7/-15.73	-15.34/-20.55	-16.52/-13.28	-18.95/-26.04	-21.41/-21.53	-24.71/-18.24
Θ(157.5°)	-14.24/-15.42	-18.63/29.63	-17.81/-16.88	-18.42/-15.49	-13.05/-14.37	-17.18/-12.67	-9.59/-9.79	-10.21/-9.55	-8.76/-8.74	-9.41/-9.52	-11.11/-9.44	-10.63/-12.73	-12.67/-15.59	-17.74/-11.89	-9.24/-8.73	-7.83/-7.79	-9.44/-12.62	-13.49/-13.49	-15.75/-16.79	-17.31/23.35	-28.31/20.74	-16.28/-11.92	-16.12/20.23	-19.71/14.85
Θ(165°)	-23.18/-29.3	-22.83/22.98	-23.55/-24.55	-21.37/-18.89	-16.9/-19.25	-12.14/-10.43	-8.53/-7.52	-8.1/-8.29	-8.44/-8.49	-8.5/-11.06	-11.92/-12.18	-14.95/-14.92	-13.81/-15.64	-15.36/-10.1	-8.73/-9.75	-11.54/-14.91	-17.55/-13.08	-10.24/-10.76	-12.39/-15.67	-14.02/-11.6	-12.96/-14.83	-14.91/-22.71	-27.71/-16.42	-14.92/-21.76
Θ(172.5°)	-21.83/-23.19	-24.98/22.34	-19.44/-18.18	-15.35/-13.91	-12.71/-11.37	-9.61/-9.1	-8.24/-6.99	-8.06/-8.85	-9.74/-11.3	-11.79/-14.32	-15.88/-20.18	-33.57/37.95	-24.29/21.53	-21.53/-15.82	-15.1/-16.1	-15.83/-15.46	-13.86/-11.47	-11.74/-15.68	-24.84/-14.04	-9.29/11.54	-11.2/-9.71	-19.19/-25.52	-24.22/26.11	-
Θ(180°)	-22.92/-20.33	-16.68/14.76	-14.22/-12.42	-10.26/-9.77	-10.44/-10.29	-9.37/-9.07	-8.99/-9.45	-11.58/-12.78	-12.56/-13.95	-18.25/-19.35	-17.33/-18.28	-17.27/-16.19	-18.35/-17.88	-15.09/-17.68	-22.45/-20.94	-18.45/-17.15	-15.75/-17.19	-20.03/-13.06	-8.28/-7.7	-8.12/-6.71	-6.24/-6.68	-9.61/12.38	-16.5/-16.49	-21.53/-19.48
Freq(Hz)	5.3GPol.	ThetaAnt. 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(																



Radiated Composite Gain Data 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix A

Freq(Hz)	5.785GPol.	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°)	-12.86/-13.21	-13.93/-13.81	-11.82/-10.07	-8.07/-6.52	-6.1/-5.59	-5.4/-5.75	-6.25/-5.87	-4.98/-6.3	-7.71/-7.7	-8/-9.21	-11.29/-13.52	-18.35/-18.77	-14.95/-17.48	-14.3/-9.01	-8.68/-9.23	-7.19/-5.46	-5.04/-5.1	-5.14/-6.36	-7.65/-6.08	-5.97/-6.87	-5.7/-5.44	-7.68/-8.01	-9.06/-10.25	-10.72/-12.5
Θ(7.5°)	-25.21/-22.65	-29.65/-20.88	-18.32/-13.41	-10.3/-7.29	-6.34/-5.91	-6.62/-8.71	-9.55/-9.48	-8.16/-7.74	-7.78/-8.5	-7.8/-7.99	-8.81/-9.24	-8.96/-10.37	-13.6/-18.03	-20.23/-14.35	-10.48/-10.51	-10.18/-7.98	-7.93/-7.86	-6.51/-6.07	-6.11/-6.77	-5.7/-4.2	-6.83/-7.37	-6.84/-10.53	-8.93/-11.38	-15.71/-15.25
Θ(15°)	-17.77/-18.69	-24.36/-13.63	-13.19/-11.7	-10.56/-8.53	-8.56/-7.94	-9.26/-8.04	-7.82/-7.14	-7.33/-6.6	-7.06/-9.39	-8.93/-8.51	-9.34/-7.93	-8.94/-8.41	-11.26/-19.76	-25.7/-20.48	-14.99/-14.23	-10.13/-7.46	-8.54/-11.03	-9.63/-7.91	-7.13/-7.46	-8.16/-7.9	-7.62/-7.49	-7.41/-7.99	-10.79/-11.09	-12.6/-17.66
Θ(22.5°)	-20.67/-17	-20.72/-14.5	-15.49/-12.35	-10.8/-9.74	-9.7/-9.27	-13.43/-9.89	-8.32/-7.33	-6.22/-6.66	-9.09/-9.26	-9.3/-7.43	-10.58/-12.91	-13.39/-10.5	-11.29/-12.94	-14.37/-11.79	-10.95/-13.45	-11.72/-9.7	-10.04/-8.14	-6.07/-7.87	-6.87/-7.42	-6.88/-4.88	-4.45/-8.32	-10.51/-9.64	-11.26/-10.31	-12.18/-12.35
Θ(30°)	-25.2/-16.27	-19.71/-15.93	-10.22/-15.6	-9.14/-8.6	-10.31/-8.77	-10.15/-9.98	-14.49/-12.65	-11.28/-14.25	-12.26/-11.49	-19.38/-27.84	-14.94/-11.74	-11.66/-19.06	-19.08/-15.84	-19.76/-13.19	-13.95/-22.87	-17.4/-17.26	-15.21/-14.73	-10.62/-9.31	-9.72/-9.73	-8.28/-9	-9.07/-6.67	-5.94/-8.72	-11.46/-18.02	-28.66/-25.3
Θ(37.5°)	-16.59/-17.85	-25.2/-19.87	-9.79/-10.4	-9.19/-11.36	-10.81/-8.58	-9.07/-10.19	-11.18/-13.14	-17.74/-19.46	-13.07/-15.09	-11.84/-9.48	-14.32/-19.84	-23.08/-29.03	-19.96/-19.63	-14.15/-14.62	-13.55/-35.82	-18.43/-18.54	-14.14/-14.16	-12.31/-10.85	-9.04/-5.87	-7.83/-10.77	-12.87/-13.92	-14.97/-10.34	-8.41/-9.35	-9.31/-16.37
Θ(45°)	-18.73/-27.31	-22.73/-21.74	-16.45/-17.54	-20.67/-10.01	-12.51/-11.42	-9.7/-8.78	-10.03/-9.97	-11.3/-15.66	-12.53/-11.2	-7.91/-12.27	-20.8/-19.36	-20.18/-17.73	-14.55/-17.73	-12.34/-15.48	-17.91/-25.44	-12.01/-14	-23.87/-13.12	-10.3/-10.3	-9.23/-10.73	-11.08/-9.13	-7.34/-7.57	-10.95/-12.98	-15.48/-18.76	-13.69/-19.2
Θ(52.5°)	-16.04/-15.66	-17.66/-19.47	-13.65/-18.6	-12.81/-17.47	-9.86/-9.99	-16.43/-12.38	-11.56/-11.45	-9.4/-14.92	-11.64/-9.29	-9.29/-10.97	-13.23/-19.39	-17.24/-14.84	-16.23/-15.05	-10.61/-16.55	-19.55/-15.26	-16.77/-13.91	-14.97/-10.23	-8.16/-7.51	-11.81/-8.57	-7.59/-8.24	-9.7/-25.05	-10.73/-9.85	-14.44/-13.37	-21.16/-13.49
Θ(60°)	-17.25/-14.52	-9.29/-10.22	-18.38/-15.47	-8.2/-10.08	-12.21/-9.69	-13.62/-16.36	-10.29/-13.41	-8.21/-10.01	-9.49/-9.44	-8.28/-8.34	-14.5/-22.5	-17.04/-16.91	-21.11/-24.74	-9.95/-12.84	-22/-14.29	-13.21/-11.36	-11.7/-14.9	-10.42/-11.23	-13.11/-7.89	-9.27/-11.41	-14.02/-16.04	-6.32/-10.39	-13.31/-28.13	-16.25/-14.32
Θ(67.5°)	-9.55/-14.18	-10.32/-8.93	-14.85/-13.21	-8.97/-7.82	-8.53/-8.71	-15.85/-12.17	-7.96/-13.72	-11.41/-6.87	-6.61/-9.75	-11.7/-9.78	-15.86/-28.81	-19.76/-21.56	-14.91/-18.54	-12.12/-29.31	-17.72/-10.28	-17.21/-21.74	-12.56/-18.12	-10.42/-9.34	-8.74/-5.8	-8.95/-9.97	-29.24/-11.44	-23.2/-11.68	-10.26/-13.32	-14.59/-10.07
Θ(75°)	-11.21/-17.48	-9.94/-7.32	-11.79/-13.21	-7.99/-8.12	-6.52/-7.68	-12.85/-10.45	-8.57/-10.23	-14.13/-10.47	-9.04/-10.12	-11.11/-9.64	-10.39/-17.16	-17.95/-14.49	-13.01/-14.91	-14.19/-15.36	-20.34/-25.9	-11.96/-16.75	-10.4/-14.15	-10.46/-7.82	-8.97/-7.61	-13.09/-12.67	-11.3/-4.82	-8.31/-10.63	-10.73/-10.76	-13.42/-12.04
Θ(82.5°)	-10.55/-18.8	-14.21/-13.06	-11.74/-15.33	-12.66/-9.78	-10.02/-7.7	-9.48/-5.54	-7.12/-5.26	-8.11/-6.6	-7.74/-7.79	-10.15/-9.25	-8.83/-13.21	-26.6/-14.41	-10.67/-15.23	-15.72/-25.29	-17.35/-15.08	-10.43/-14.07	-12.22/-10.7	-9.13/-8.59	-10.02/-13.18	-7.41/-5.94	-7.35/-8.46	-10.26/-23.42	-16.18/-11.28	-18.96/-14
Θ(90°)	-13.89/-30.09	-13.89/-19.92	-15.78/-16.49	-25.95/-13.4	-13.79/-10.03	-7.85/-9.17	-5.6/-5.59	-7.93/-6.24	-8.22/-9.58	-12.44/-12.44	-11.17/-17.87	-12.18/-7.44	-12.36/-21.93	-30.87/-22.37	-18.58/-7.63	-8.73/-8.23	-13.33/-9.9	-12.07/-13.22	-9.95/-12.44	-6.86/-12.03	-12.53/-13.58	-20.93/-13.65	-17.65/-22.51	-20.92/-11.79
Θ(97.5°)	-16.53/-17.27	-15.32/-15.21	-28.6/-11.26	-23.64/-17.45	-20.82/-8.77	-8.21/-7.78	-8.22/-6.43	-6.3/-6.87	-5.76/-9.39	-11.39/-13.25	-20.09/-9	-4.86/-7.29	-19.4/-23.09	-13.94/-17.85	-6.84/-9.34	-8.13/-9.74	-15.9/-5.59	-11.5/-11.58	-4.99/-3.75	-4.71/-12.14	-12.63/-11.06	-17.62/-12.02	-21.13/-22.95	-21.41/-19.41
Θ(105°)	-14.24/-21.43	-14.03/-25.25	-10.44/-10.22	-14.71/-17.39	-10.61/-11.22	-9.55/-12.92	-8.11/-6.74	-10.02/-9.31	-9.04/-9.48	-7.58/-5.95	-6/-5.28	-5.47/-12.56	-17.99/-21.8	-12.76/-28.02	-7.92/-7.07	-9.45/-20.89	-7.27/-6.91	-13.4/-8.43	-10.12/-6.64	-8.02/-15.94	-9.04/-3.48	-11.04/-11.42	-22.17/-16.36	-20.41/-14.24
Θ(112.5°)	-26.22/-12.82	-16.36/-15.91	-12.29/-12.65	-16.85/-17.82	-10.42/-8.25	-10.15/-6.88	-8.67/-7.5	-5.01/-6.62	-8.77/-7.93	-6.83/-5.43	-6.75/-9.15	-15.78/-22.68	-12.85/-20.46	-13.33/-16.1	-8.78/-6.89	-30.4/-8.05	-8.61/-6.31	-14.64/-12.64	-3.16/-2.66	-18.13/-17.35	-17.09/-9.96	-8.65/-18.99	-10.76/-23.99	-16.34/-12.89
Θ(120°)	-16.83/-18.98	-17.73/-21.94	-10.53/-18.3	-17.58/-15.41	-14.4/-8.48	-15.45/-8.54	-7.51/-12.55	-7.69/-7.61	-8.51/-8.86	-8.34/-12.44	-14.28/-25.2	-11.47/-12.38	-15.99/-22.93	-17.47/-18.55	-13.83/-21.91	-10.59/-9.26	-8.74/-7.4	-6.36/-11.28	-16.07/-7.85	-20.1/-13.01	-11.97/-18.93	-19.94/-15.34	-19.07/-17.58	-13.52/-14.04
Θ(127.5°)	-11.79/-16.09	-14.4/-18.47	-12.96/-14.45	-13.08/-17.15	-17.01/-11.29	-16.07/-11.87	-8.86/-7.77	-10.22/-15.29	-13.3/-13.32	-16.79/-16.65	-10.32/-7.47	-6.82/-10.51	-10.44/-13.01	-13.15/-13.32	-18.07/-11.65	-11.93/-18.23	-9.18/-6.63	-11.11/-31.44	-8.05/-6.74	-10.85/-16.54	-11.91/-14.62	-17.54/-16.21	-20.17/-17.36	-20.41/-33.89
Θ(135°)	-16.12/-12.6	-10.24/-19.13	-23.21/-20.86	-20.07/-18.47	-17.63/-26.57	-36.35/-23.68	-17.05/-9.43	-6.48/-6.14	-9.48/-12.46	-16.29/-15.6	-11.43/-11.35	-11.42/-11.08	-9.3/-14.69	-16.51/-13.48	-15.4/-12.13	-13.1/-19.28	-6.91/-8.86	-15.36/-11.47	-10.51/-13.99	-11.67/-11.94	-13.04/-12.72	-17.43/-14.12	-10.46/-7.86	
Θ(142.5°)	-17.91/-20.47	-32.05/-30.31	-32.51/-28.68	-15.99/-13.42	-15.3/-17.22	-16.81/-13.4	-13.71/-15.88	-12.68/-9	-9.38/-11.72	-13.77/-13.93	-14.37/-12.04	-10.76/-10.55	-10.28/-13.63	-12.61/-17.99	-28.2/-17.51	-17.77/-10.65	-8.13/-5.16	-5.84/-8.76	-16.48/-24.6	-18.81/-14.37	-13.6/-13.77	-8.48/-8.66	-13.67/-14.33	-12.42/-14.68
Θ(150°)	-28.86/-19.98	-18.13/-16.36	-18.07/-23.97	-19.41/-15.07	-14.33/-15.12	-15.84/-16.03	-12.09/-12.05	-15.97/-18.64	-18.22/-16.14	-15.42/-17.29	-17.86/-17.8	-15.1/-15.14	-16.78/-24.07	-24.17/-21.81	-14.44/-11.48	-8.61/-7.26	-8.26/-7.84	-10.93/-9.74	-8.7/-12.91	-26.54/-30.9	-20.54/-14.17	-20.66/-18.6	-18.76/-18.54	-19.94/-27.04
Θ(157.5°)	-19.89/-20.41	-15.29/-12	-11.62/-12.89	-18.72/-35.48	-25.3/-19.15	-14.84/-14.6	-12.62/-10.76	-10.28/-10.66	-10.55/-10.21	-9.27/-9.49	-11.3/-14.78	-21.64/-30.58	-20.82/-16.95	-16/-14.43	-12.95/-9.84	-8.16/-7.65	-9.57/-12.26	-18.01/-9.93	-7.68/-10.38	-14.71/-12.63	-13.93/-15.15	-15.4/-17.18	-14.37/-14.44	-18.97/-27.14
Θ(165°)	-23.11/-18.93	-16.72/-18.44	-18.93/-18.69	-19.47/-17.71	-15.93/-17.86	-21.7/-38.12	-18.97/-13.14	-11.13/-9.79	-9.67/-10.11	-12.1/-13.8	-16.82/-21.27	-21.09/-18.68	-19.99/-17.88	-12.72/-11.23	-10.74/-15.63	-13.58/-18.64	-24.57/-14.46	-12.57/-12.49	-11.55/-15.01	-18.08/-14.28	-18.92/-21.95	-21.44/-22.5	-20.81/-22.51	
Θ(172.5°)	-23.15/-23.27	-20.41/-18.69	-17.9/-18.5	-19.92/-18.13	-18.39/-21.43	-21.04/-20.73	-20.86/-20.51	-18.43/-17.4	-17.25/-17.9	-21.72/-17.91	-19.73/-23.12	-23.41/-24.36	-26.54/-16.72	-17.36/-13.86	-10.76/-10.88	-12.15/-13.52	-15.41/-19.36	-20.61/-16.09	-11.76/-10.27	-13.44/-21.47	-18.72/-15.46	-16.25/-16.55	-18.64/-22.45	-18.67/-23.6
Θ(180°)	-17.41/-17.05	-16.12/-15.23	-15.17/-14.49	-14.14/-14.09	-15.43/-16.71	-18.17/-19.23	-20.37/-21.48	-24.86/-24.98	-22.05/-28.09	-31.69/-25.39	-22.05/-21.41	-21.56/-24.61	-25.83/-28.43	-18.33/-17.32	-20.09/-20.67	-18.96/-20.47	-26.17/-42.55	-26.32/-17.22	-11.21/-10.42	-11.35/-10.82	-15.05/-21.36	-26.91/-19.85	-17.69/-26.97	-29.25/-22.97
Freq(Hz)	5.785GPol.	Theta/Ant. 4	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-4.25/-4.4	-4.69/-4.24	-4.54/-5.23	-5.84/-6.8	-7.99/-9.59	-12.02/-15.22	-21.65/-40.79	-21.03/-16.21	-13.96/-11.49	-9.34/-8.08	-6.61/-6.23	-5.51/-5.23	-5.58/-4.39	-5.79/-6.51	-6.73/-8.9	-11.05/-13.73	-16.21/-17.78	-17.45/-16.89	-14.08/-12.5	-10.15/-7.67	-7.12/-7.04	-5.63/-5.61	-5.14/-4.42	
Θ(7.5°)	-2.28/-1.95	-3.12/-4.31	-3.95/-4.17	-4.93/-5.33	-6.34/-7.5	-8.97/-9.62	-10.1/-10.68	-11.21/-13.46	-15.64/-19.33	-27.96/-29.97	-22.26/-13.46	-11.68/-7.93	-7.11/-6.02	-4.44/-4.74	-5.89/-5.93	-5.29/-5.9	-6.26/-7.25	-9.54/-12.04	-16.93/-14.63	-9.26/-7.99	-8.33/-6.99	-6.6/-6.31	-4.58/-4.06	-3/-2.55
Θ(15°)	-2.94/-1.64	-0.74/-0.91	-2.64/-3.29	-3.91/-4.94	-7.06/-8.21	-7.49/-8.41	-10.67/-10.45	-10.11/-10.88	-10.84/-11.74	-11.7/-12.12	-14.12/-15.48	-14.64/-11.79	-11.2/-10.86	-8.38/-8.64	-10.87/-10.11	-8.22/-9.44	-13.68/-15.93	-14.06/-16.65	-26.4/-17.92	-9.47/-6.3	-5.34/-4.75	-3.8/-4.01	-5.1/-5.3	-5.91/-5
Θ(22.5°)	-1.88/-1.29	-0.49/-0.44	-1.39/-2.17	-2.89/-2.91	-5.12/-6.1	-5.27/-6.23	-6.72/-6.2	-9.49/-12.52	-16.35/-20.08	-21.91/-18.29	-17.64/-24.84	-19.63/-19.51	-14.05/-15.24	-10.06/-8.75	-11.02/-15.97	-23.39/-13.75	-10.77/-12.62	-9.86/-10	-13.61/-16.16	-10.06/-7.17	-5.03/-3.14	-1.81/-0.75	-1.98/-1.78	-1.72/-2.75
Θ(30°)	0.16/-0.77	-1.01/-0.14	0.22/-0.33	-2.26/-2.42	-3.21/-2.65	-2.08/-																		



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Freq(Hz)	6.175G	6.475G
Ant. 1 Max Gain (dBi)	2.37	2.71
Ant. 2 Max Gain (dBi)	2.43	2.44
Ant. 3 Max Gain (dBi)	2.78	3.63
Ant. 4 Max Gain (dBi)	3.81	3.48
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/75/75	Theta/97.5/232.5
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/75/67.5	Theta/82.5/270
Ant. 3 Polarization/Θ(°)/Φ(°)	Theta/45/187.5	Theta/52.5/22.5
Ant. 4 Polarization/Θ(°)/Φ(°)	Theta/97.5/225	Theta/97.5/232.5
Max Gain (dBi)	3.81	3.63
DG [1SS] (dBi)	5.74	5.99
DG [2SS] (dBi)	3.81	3.63



Sporton International Inc. Hsinchu Laboratory



Radiated Composite Gain Data 6GHz U-NII 5~U-NII 6

Appendix B

Gain Result

Freq(Hz)	6.175GiPol.	PhiAnt.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°)	-9.33/-9.01	-9.73/-9.73	-11.59/-13.61	-13.58/-14.93	-18.26/-19.37	-18.14/-18.94	-17.98/-17.92	-17.95/-15.49	-17.98/-17.1	-18.37/-13.62	-17.15/-11.1	-10.97/-13.55	-12.35/-12.38	-12.49/-12.5	-13.52/-13.08	-16.06/-18.49	-17.35/-18.94	-18.73/-15.43	-18.61/-14.51	-17.41/-14.07	-11.09/-12.86	-12.21/-10.54				
Θ(7.5°)	-8.79/-7.06	-7.29/-7.64	-10.57/-14.21	-15.41/-18.1	-18.65/-18.16	-17.3/-18.69	-19.03/-18.59	-18.94/-19.02	-18.67/-18.07	-17.98/-18.76	-18.46/-17.89	-15.54/-18.84	-17.98/-17.63	-17.48/-18.4	-18.33/-18.04	-16.78/-17.33	-18.22/-18.45	-18.78/-19.13	-19.1/-17.39	-14.38/-14.3	-11.05/-10.11	-10.53/-10.56	-12.71/-15.02	-13.83/-11.53		
Θ(15°)	-10.52/-12.59	-11.18/-9.28	-9.28/-9.98	-14.77/-17.33	-19.31/-19	-17.42/-19.32	-17.76/-19.07	-17.29/-18.78	-16.47/-16.07	-19.04/-17.9	-18.29/-19.22	-15.34/-11.22	-13.24/-17.95	-19.17/-16.16	-17.04/-14.49	-13.05/-17.5	-18.74/-17.67	-19.13/-17.17	-15.18/-16.27	-14.24/-12.92	-10.78/-8.53	-6.22/-6.59	-4.93/-9.09	-8/-7.41		
Θ(22.5°)	-8.15/-18.61	-12.82/-12.52	-17.03/-15.13	-16.37/-18.68	-19.18/-18.98	-19.25/-19.24	-17.85/-19.79	-18.92/-18.4	-12.43/-13.98	-1.96/-18.17	-18.63/-19.16	-17.96/-13.4	-14.18/-15.86	-18.02/-17.62	-16.09/-17.51	-17.52/-17.92	-19.18/-18.44	-17.84/-18.07	-18.88/-17.5	-16.67/-18.82	-18.88/-17.5	-12.14/-11.41	-10.54/-6.88			
Θ(30°)	-9.6/-14.19	-14.58/-13.1	-16.87/-15.05	-17.06/-14.24	-15.35/-15.64	-16.78/-18.19	-18.84/-18.54	-19.28/-18.59	-15.36/-14.01	-11.74/-14.13	-17.59/-17.21	-18.25/-10.03	-17.96/-13.04	-10.17/-18.85	-19.18/-18.69	-14.57/-16.18	-18.47/-18.32	-18.4/-17.71	-17.89/-11.42	-10.62/-9.95	-13.7/-14.04	-10.9/-7.12	-11.97/-14.32	-17.53/-14.3		
Θ(37.5°)	-6.53/-9.22	-13.76/-18.39	-11.45/-9.9	-17.78/-18.49	-14.55/-12.73	-18.25/-18.47	-18.81/-18.45	-18.67/-17.31	-15.19/-12.59	-15.66/-13.88	-17.2/-14.12	-9.09/-14.7	-18.85/-10.42	-13.29/-13.04	-15/-13.8	-15.34/-18.65	-15.09/-18.62	-18.02/-16.59	-18.71/-18.59	-18.13/-13.12	-9.35/-9.73	-18.56/-9.05	-8.14/-8.16	-4.44/-12.06		
Θ(45°)	-9.36/-5.91	-12.03/-7.58	-18.12/-9.47	-13.74/-18.37	-15.99/-15.06	-19.41/-17.36	-15.85/-15.14	-15.37/-19.33	-13.74/-12.38	-13.4/-12.35	-12.55/-11.51	-8.53/-9.54	-18.95/-7.97	-14.51/-12.52	-18.85/-16.31	-18.45/-17.06	-18.25/-15.33	-15.78/-12.88	-13.25/-17.14	-17.76/-17.56	-12.96/-8.69	-16.63/-19.14	-11.01/-7.41			
Θ(52.5°)	-16.85/-15.19	-9.22/-7.6	-15.76/-12.02	-11.94/-18.01	-17.17/-14.5	-17.95/-19.29	-17.91/-13.58	-19.08/-12.77	-17.63/-13.68	-14.55/-11.14	-12.28/-9.38	-10.78/-14.66	-11.03/-12.39	-16.25/-19.02	-12.59/-17.86	-14.91/-11.48	-18.23/-18.38	-15.19/-18.58	-13.68/-18.52	-10.14/-17.11	-12.93/-11.12	-15.17/-7.03	-9.92/-10.32	-13.16/-12.46		
Θ(60°)	-11.59/-14.55	-16.31/-13.09	-12.52/-19	-16.32/-17.52	-18.56/-18.84	-17.84/-18.68	-18.59/-19	-18.55/-17.82	-16.41/-12.55	-13.68/-15.99	-17.17/-13.16	-14.97/-17.54	-17.16/-13.05	-15.43/-11	-18.42/-17.26	-17.17/-18.83	-14.17/-13.84	-17.97/-16.49	-10.92/-18.54	-10.98/-17.94	-11.13/-13.98	-14.17/-11.83				
Θ(67.5°)	-12.75/-17.34	-6.87/-13.73	-18.29/-13.93	-19.28/-13.41	-18.49/-18.06	-18.15/-19.11	-19.3/-18.64	-15.96/-18.74	-15.87/-11.67	-15.77/-15.22	-15.66/-15.06	-13.5/-6.96	-14.35/-10.09	-11.82/-17.11	-17.91/-19.45	-17.13/-17.97	-18.61/-16.28	-18.14/-10.64	-16.22/-17	-18.92/-14.65	-19.19/-17.6	-16.63/-14.78	-6.72/-15.74			
Θ(75°)	-10.41/-18.11	-13.36/-18.28	-12.77/-9.99	-18.35/-15.11	-17.11/-18.93	-17.73/-17.8	-13.2/-18.1	-17.25/-17.81	-14.22/-14.84	-10.1/-12.71	-9.14/-18.24	-8.97/-8.25	-12.98/-13.51	-17.85/-8.71	-15.03/-19.18	-11.64/-12.74	-16.42/-18.94	-18.69/-14.57	-18.45/-13.74	-19.02/-18.46	-17.91/-16.06	-18.05/-13.87	-13.46/-14.71	-18.28/-13.74		
Θ(82.5°)	-15.24/-14.55	-13.64/-17.98	-18.26/-17.19	-18.01/-17.5	-18.12/-17.93	-19.07/-19.19	-13.52/-18.04	-18.14/-13.43	-18.94/-14.78	-10.36/-17.58	-9.63/-13.8	-13.01/-17.65	-18.31/-17.77	-14.57/-17.62	-18.99/-14.9	-18.09/-14.47	-16.69/-17.58	-18.26/-15.66	-18.85/-15.58	-19.02/-18.15	-16.62/-18.9	-18.31/-16.77	-17.32/-18.22	-13.01/-14.43		
Θ(90°)	-7.02/-12.64	-18.52/-15.48	-14.34/-9.72	-15.5/-17.96	-18.51/-16.71	-17.23/-17.4	-16.68/-18.03	-14.12/-15.61	-17.82/-19.47	-19.07/-17.87	-18.18/-13.8	-18.89/-10.77	-14.25/-12.68	-14.04/-18.97	-15.86/-16.48	-19.43/-17.91	-17.65/-18.67	-18.34/-15.08	-12.82/-12.64	-16.68/-15.45	-11.84/-10.21	-16.32/-15.72	-11.84/-18.16			
Θ(97.5°)	-13.4/-18.13	-10.14/-18.95	-17.73/-11.69	-13.6/-12.08	-15.42/-18.98	-15.22/-18.22	-19.04/-18.04	-18.71/-18.38	-11.57/-15.25	-8.62/-13.93	-18.35/-14.01	-12.25/-18.17	-15.74/-17.56	-18.76/-17.08	-16.62/-19.21	-19.25/-18.87	-18.35/-18.86	-18.31/-13.66	-18.61/-17.1	-17.57/-18.26	-16.13/-19.27	-10.17/-15.3	-18.37/-18	-17.81/-9.74		
Θ(105°)	-13.88/-11.93	-10.45/-16.62	-11.02/-17.99	-11.81/-16.98	-17.12/-14.49	-17.15/-15.42	-17.42/-19.84	-11.36/-17.47	-18.5/-18.99	-14.78/-16.67	-16.43/-15.13	-17.18/-17.19	-12.71/-19.59	-12.71/-12.92	-18.03/-12.62	-13.93/-17.66	-17.71/-15.76	-18.87/-18.98	-15.36/-18.81	-17.13/-16.78	-13.5/-18.42	-18.18/-16.74	-10.25/-13.07	-8.72/-10.55		
Θ(112.5°)	-7.09/-7.71	-13.43/-13.58	-15/-16.39	-19.28/-11.1	-18.62/-17.36	-17.08/-14.22	-15.34/-17.53	-17.47/-18.55	-18.11/-18.72	-11.4/-17.32	-17.43/-12.13	-15.48/-11.5	-12.05/-10.41	-18.51/-17.69	-14.55/-13.03	-14.92/-15.36	-18.34/-17.5	-19.09/-17.92	-18.49/-17.85	-16.11/-17.14	-17.59/-16.12	-8.64/-16.79	-10.99/-11.7	-7.33/-11.57		
Θ(120°)	-10.65/-9.66	-12.23/-9.27	-13.12/-11.08	-6.69/-13.93	-17.94/-11.32	-18.12/-14.27	-12.05/-19.3	-16.61/-10.96	-13.82/-14.55	-11.08/-14.97	-10.62/-8.98	-13.09/-8.67	-9.83/-12.2	-17.49/-18.53	-13.02/-14.87	-19.11/-13.93	-13.33/-18.88	-15.46/-18.16	-18.45/-19.29	-16.83/-18.72	-13.08/-11.96	-18.27/-19.04	-17.77/-13.66	-19.02/-11.2		
Θ(127.5°)	-11.12/-15.36	-18.21/-15.01	-13.51/-9.14	-10.63/-12.62	-12.92/-18.37	-11.97/-18.45	-17.48/-15.03	-13.08/-17.37	-18.46/-18.06	-18.02/-13.91	-17.89/-18.43	-19/-11.75	-15.33/-17.9	-17.5/-17.83	-14.3/-12.18	-12.71/-13.47	-11.63/-17.86	-17.09/-18.33	-18.49/-14.83	-18.01/-18.52	-13.37/-15.1	-18.32/-18.09	-11.37/-18.22	-19.15/-18.44		
Θ(135°)	-9.77/-11.96	-17.89/-14.54	-18.56/-17.94	-18.75/-17.49	-19.26/-15.63	-18.24/-13.41	-17.02/-18.57	-17.99/-18.88	-18.69/-16.46	-15.87/-17.27	-13.05/-17.86	-9.72/-12.46	-13.86/-9.52	-14.11/-13.98	-13.35/-11.53	-18.86/-18.92	-17.53/-18.54	-13.29/-14.96	-19.69/-18.42	-19.45/-17.42	-18.52/-18.19	-13.42/-14.57	-15.48/-19.85	-11.71/-15.95		
Θ(142.5°)	-16.1/-15.41	-13.4/-12.35	-18.47/-18.97	-15.88/-15.15	-17.23/-12.93	-13.83/-18.91	-12.98/-11.36	-17.73/-15.08	-12.77/-11.83	-15.35/-15.35	-16.67/-11.74	-10.25/-11.46	-10.93/-12.72	-12.74/-18.25	-12.89/-18.65	-18.96/-15.81	-18.97/-17.48	-19.53/-15.01	-17.47/-19.15	-15.21/-16.52	-18.07/-18.55	-15.15/-19.4	-16.64/-18.18	-11.4/-13.35		
Θ(150°)	-15.27/-12.97	-17.48/-14.66	-15.19/-18.73	-18.4/-16.19	-18.43/-18.19	-18.62/-13.12	-13.02/-13.51	-16.56/-15.34	-16.21/-11.28	-14.03/-12.87	-15.26/-9.84	-8.25/-9.85	-10.13/-10.55	-17.31/-18.4	-18.56/-18.47	-17.53/-17.86	-18.11/-18.78	-17.79/-18.46	-17.54/-17.87	-15/-18.75	-17.27/-19.14	-16.51/-18.7	-14.2/-15.11	-18.57/-18.42		
Θ(157.5°)	-19.01/-17.67	-16.26/-13.17	-12.65/-18.71	-15.05/-12.93	-14.97/-18.03	-18.21/-18.11	-18.56/-18.51	-16.34/-15.01	-15.21/-17.33	-18.09/-16.15	-9.84/-7.05	-7.68/-10.7	-12.45/-13.2	-14.16/-19.02	-18.92/-18.53	-17.63/-17.83	-18.9/-17.63	-18.63/-18.26	-17.31/-17.64	-16.81/-17.71	-17.19/-17.64	-17.38/-17.03	-15.52/-16.03	-15.82/-18.01		
Θ(165°)	-15.49/-14.62	-15.36/-14.53	-12.56/-14.53	-18.78/-18.57	-17.95/-19.03	-18.04/-18.34	-17.96/-18.33	-17.62/-16.69	-17.41/-14.68	-14.54/-14.06	-15.69/-15.04	-12.97/-11.05	-11.04/-13.61	-18.94/-18.6	-16.21/-17.46	-15.84/-14.33	-17.74/-18.56	-16.49/-17.17	-14.79/-18.03	-18.36/-17.56	-15.81/-17.24	-15.87/-17.54	-18.44/-16.75	-18.41/-19.18		
Θ(172.5°)	-15.3/-16.6	-18.57/-18.82	-18.17/-18.15	-18.95/-18.29	-17.96/-18.66	-18.95/-17.82	-18.54/-18.06	-18.68/-17.89	-18.43/-18.74	-17.79/-18.59	-19.15/-18.97	-17.48/-18.21	-18.26/-18.78	-18.18/-18.38	-18.91/-18.43	-19.08/-18.09	-19.08/-18.6	-17.76/-17.54	-18.25/-18.1	-18.4/-14.32	-17.59/-14.99	-18.05/-18.75	-17.56/-17.92	-18.75/-15.35		
Θ(180°)	-13.56/-14.59	-16.59/-15.46	-16.89/-18.73	-19.27/-17.92	-18.6/-17.38	-19.26/-18.62	-18.12/-18.58	-18.22/-17.75	-18.08/-17.91	-18.23/-19.19	-18.83/-17.68	-18.19/-18.4	-18.09/-17.89	-18.26/-18.89	-18.69/-17.63	-17.93/-18.3	-18.71/-18.79	-16.4/-15.67	-18.16/-17.25	-18.11/-16.59	-15.27/-16.45	-15.3/-13.71	-12.6/-13.64	-14.41/-14.16		
Freq(Hz)	6.175GiPol.	ThetaAnt.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°)	-18.61/-16.29	-13.72/-11.37	-10.34/-18.18	-8.87/-8.93	-8.21/-8.76	-7.89/-8.71	-9.29/-9.6	-9.62/-10.71	-10.85/-11.36	-11.57/-11.66	-13.62/-15.7	-16.68/-18.57	-17.78/-17.32	-17.8/-18.42	-17.48/-18.08	-17.68/-18.57	-19.2/-18.07	-18.43/-18.52	-18.56/-19.08	-17.35/-19.09	-18.11/-17.25	-17.66/-18.9	-18.7/-18.42	-19.11/-18		
Θ(7.5°)	-19.09/-17.12	-13.8/-9.56	-8.44/-8.17	-7.42/-8.5	-10.92/-11.82	-12.75/-13.98	-15.12/-16.12	-15.88/-18.19	-15.83/-14.51	-16.47/-17.54	-17.76/-18.71	-18.01/-18.68	-18.25/-18.56	-18.47/-16.57	-15.64/-14.52	-15.49/-11.87	-12.47/-13.42	-15.93/-15.86	-19.07/-17.4	-16.67/-15.45	-16.65/-15.55	-13.67/-14.77	-13.28/-13.15	-13.53/-15.69		
Θ(15°)	-13.84/-14.28	-10.81/-10.29	-9.54/-8.71	-7.94/-18.15	-7.82/-8.1	-7.21/-6.93	-5.24/-4.3	-4.92/-6.72	-7.72/-10.46	-12.75/-11.77	-11.01/-13.73	-11.57/-10.92	-15.67/-19.13	-15.71/-19.08	-18.41/-18.76	-18.5/-18.7	-18.07/-17.68	-18.52/-18.86	-14.49/-11.1	-10.76/-12.11	-13.13/-15.66	-18.1/-18.26	-18.13/-17.77	-19.08/-12.25		
Θ(22.5°)	-9.64/-12.31	-6.34/-5.34	-5.23/-4.94	-10.27/-9.05	-3.11/-2.03	-2.85/-3.93	-4.53/-5.25	-5.18/-5.95	-5.68/-4																	



Radiated Composite Gain Data 6GHz U-NII 5~U-NII 6

Appendix B

Θ(22°5′)	-18.14/-17.1	-18.06/-18.73	-14.92/-12.74	-16.75/-19.27	-18.14/-17.21	-15.8/-13.8	-17.39/-18.23	-10.74/-11.81	-10.34/-17.25	-18.17/-16.22	-14.79/-11.03	-9.47/-10.27	-11.34/-10.33	-9.46/-12.05	-14.53/-17.55	-18.05/-18.08	-13.94/-13.05	-17.42/-18.25	-18.02/-14.69	-12.48/-16.95	-17.49/-12.99	-10.25/-10.05	-14.4/-19.31	-15.37/-15.53
Θ(30°)	-18.06/-17.1	-12.36/-12.77	-15.77/-13.87	-18.34/-14.7	-12.27/-16.52	-17.62/-18.69	-18.83/-16.38	-18.03/-18.7	-18.48/-14.76	-12.98/-18.05	-13.4/-14.86	-17.9/-18.98	-16.25/-19.44	-17.39/-15.95	-13.62/-12.45	-11.58/-14.8	-17.63/-12.5	-17.25/-17.79	-14.95/-17.13	-18.98/-14.12	-18.94/-18.38	-16.92/-16.09	-10.65/-11.57	-18.37/-16.9
Θ(37.5°)	-15.38/-17.98	-15.49/-18.79	-18.26/-17.62	-18.35/-9.95	-11.11/-18.26	-17.79/-18.28	-14.9/-13.83	-18.15/-17.98	-19.33/-12.86	-13.73/-18.04	-17.51/-13.82	-18.43/-18.98	-16.25/-17.95	-17.2/-13.03	-18.67/-13.73	-16.01/-11.96	-11.53/-12.26	-15.76/-18.37	-17.94/-18.82	-14.71/-18.31	-17.62/-17.84	-14.15/-12.98	-18.44/-17.28	
Θ(45°)	-17.69/-18.38	-14.88/-14	-11.48/-15.44	-19.27/-15.71	-16.59/-18	-18.65/-15.78	-18.09/-18.09	-17.45/-18.39	-16.38/-16.32	-14.17/-18.64	-15.37/-16.92	-16/-17.58	-14.31/-17.18	-17.19/-18.12	-17.61/-19.25	-18.04/-18.96	-14.81/-18.75	-18.65/-12.57	-13.94/-18.23	-19.23/-17.68	-13.62/-19.01	-15.89/-13.03	-16.1/-19.44	-17.86/-18.24
Θ(52.5°)	-17.69/-17.93	-18.71/-14.04	-13.63/-16.66	-18.94/-16.86	-14.79/-18.89	-16.24/-15.94	-18.38/-17.72	-18.95/-17.49	-18.77/-15.98	-19.02/-19.2	-16.61/-16.65	-18.07/-17.1	-13.32/-14.1	-13.71/-13	-14.91/-12.69	-16.73/-8.09	-17.57/-14.89	-15.08/-19.18	-18.87/-17.71	-16.63/-19.14	-18.32/-18.11	-18.11/-18.02	-15.96/-16.98	-13.69/-13.78
Θ(60°)	-14.79/-11.69	-19.01/-16.44	-17.69/-15.89	-17.7/-18.86	-15.39/-16.65	-15.39/-16.65	-15.49/-18.21	-16/-12.92	-15.97/-18.69	-17.17/-19.1	-13.27/-18.62	-19.03/-18.49	-15.95/-17.63	-17.96/-17.22	-11.18/-19.22	-14.86/-17.57	-15.51/-18.53	-15.06/-15.32	-9.55/-12.03	-18.21/-18.36	-12.44/-17.01	-15.19/-17.88	-15.55/-19.21	-17.26/-16.77
Θ(67.5°)	-17.7/-10.11	-15.09/-17.98	-16.99/-17.97	-15.41/-18.76	-15.04/-12.54	-19.08/-13.72	-15.91/-19.06	-12.09/-10.2	-14.14/-17.63	-13.86/-18.29	-18.25/-14.99	-19.16/-17.07	-13.49/-18.38	-16.22/-17.88	-13.26/-14.05	-18.8/-18.73	-18.62/-13.94	-18.75/-17.45	-16.57/-13.83	-17.39/-18.62	-11.02/-13.9	-14.06/-14	-13.36/-17.3	-14.24/-18.32
Θ(75°)	-18.27/-17.16	-15.64/-17.59	-14.57/-18.66	-17.31/-15.62	-19.54/-12.81	-16.1/-15.23	-18.21/-18.27	-12.87/-18.95	-14.13/-18.47	-17.27/-18.38	-17.81/-18.47	-17.53/-18.9	-16.45/-18.51	-17.07/-18.2	-17.7/-14.11	-15.68/-15.97	-17.44/-17.08	-18.88/-17.9	-15.76/-18.1	-18.22/-13.26	-12.81/-10.51	-15.36/-18.9	-15.38/-11.02	-17.95/-10.9
Θ(82.5°)	-14.85/-18.61	-18.5/-17.92	-15.49/-16.33	-16.71/-18.79	-13.45/-19.08	-13.31/-14.96	-18.61/-19.16	-16.42/-17.3	-16.44/-18.05	-17.38/-17.09	-19.19/-18.82	-18.51/-15.23	-18.32/-16.73	-19.35/-18.66	-17.78/-18.88	-18.44/-17.48	-18.61/-12.26	-12.85/-14.25	-18.11/-11.99	-15.19/-12.23	-12.76/-14.76	-18.93/-11.59		
Θ(90°)	-13.98/-18.98	-19.01/-18.59	-19.3/-18.05	-16.93/-16.3	-18.99/-18.07	-17.36/-12.83	-16.71/-16.95	-16.92/-15.66	-18.53/-19.46	-19.3/-18.18	-16.35/-17.98	-17.27/-16	-17.05/-18.9	-17.2/-18.24	-18.71/-16.84	-18.69/-18.69	-18.06/-14.38	-17.53/-15.43	-11.7/-17.59	-18.9/-18.89	-17.53/-18.34	-17.71/-15.62	-16.46/-17.14	-13.48/-17.1
Θ(97.5°)	-16.89/-18.81	-18.29/-18.13	-16.19/-15.57	-17.63/-19.75	-14.13/-18.3	-13.53/-18.58	-18.05/-16.81	-18.15/-17.93	-12.48/-17.21	-18.31/-14.11	-18.21/-17.16	-13.38/-18.71	-12.03/-17.56	-12.94/-16.6	-18.43/-18.61	-12.52/-15.28	-16.79/-18.7	-16.65/-18.02	-18.92/-16.23	-18.17/-17.94	-14.81/-15.41	-16.98/-18.03	-18.73/-17.89	-12.95/-17.7
Θ(105°)	-17.85/-18.72	-19.21/-14.83	-17.38/-15.77	-13.52/-18.1	-17.49/-14.54	-17.77/-17.71	-14.78/-18.83	-14.03/-18.69	-16.24/-13.87	-13.9/-18.7	-17.19/-18.98	-11.03/-16.37	-12.32/-13.95	-13.44/-17.64	-18.14/-13.77	-18.42/-17.05	-17.69/-17.95	-18.64/-18.67	-17.29/-18.27	-18.9/-17.24	-17.55/-18.62	-14.07/-18.01	-18.95/-18.13	-14.86/-17.56
Θ(112.5°)	-16.98/-16.32	-15.4/-18.9	-19.27/-16.84	-18.62/-18.2	-18.07/-18.52	-18.3/-18.58	-17/-16.23	-13.44/-12.81	-17.41/-11.88	-17.73/-18.29	-16.42/-16.26	-18.17/-15.88	-19.03/-19.03	-17.86/-17.99	-18.42/-18.31	-19.15/-17.02	-18.24/-12.55	-19.07/-17.5	-13.15/-17.56	-18.71/-18.08	-18.32/-18.21	-18.59/-18.39	-17.12/-18.08	-11.35/-15.54
Θ(120°)	-17.82/-18.19	-14.06/-11.47	-17.04/-14.11	-19.14/-18.54	-18.26/-15.17	-13.25/-16.74	-18.21/-18.26	-18.88/-18.64	-18.27/-18.53	-17.56/-18.04	-13.69/-18.31	-17.77/-13.12	-12.3/-18.1	-17.71/-13.63	-19.01/-11.91	-17.88/-18.82	-17.99/-17.69	-18.96/-16.61	-18.96/-14.58	-16.12/-9.61	-15.32/-16.61	-17.75/-19.15	-18.98/-14.46	-12.17/-16.65
Θ(127.5°)	-15.89/-16.44	-14.16/-18.21	-17.38/-18.54	-12.04/-17.07	-19.32/-19.19	-19.11/-19.57	-18.51/-17.82	-15.76/-15.78	-16.13/-16.81	-18.31/-15.23	-17.75/-11.94	-15.08/-13.91	-18.44/-11.97	-18.33/-12.28	-18.84/-17.87	-18.23/-14.93	-18.84/-18.97	-18.21/-14.04	-19.15/-17.33	-18.75/-14.05	-16.08/-18.99	-17.28/-14.4	-18.53/-14.92	-19.07/-16.54
Θ(135°)	-13.37/-15.98	-17.83/-17.72	-18.9/-18	-19/-17.56	-15.47/-15.47	-15.33/-14.32	-11.99/-12.18	-10.69/-15.9	-16.67/-16.49	-18.69/-14.21	-16.9/-16.08	-18.81/-14.75	-19.02/-18.82	-18.8/-17.31	-18.86/-18.45	-18.64/-14.97	-17.8/-18.11	-18.35/-17.47	-19.13/-13.84	-13.76/-14.63	-16.65/-17.64	-17.51/-12.9	-11.51/-18.83	-18.32/-14.18
Θ(142.5°)	-14.62/-16.65	-19.75/-15.55	-18.93/-18.75	-18.79/-18.45	-18.52/-18.58	-17.9/-18.62	-18.8/-17.55	-18.5/-16.78	-18.65/-18.19	-17.77/-18.16	-16.22/-16.18	-18.87/-17.4	-12.55/-16.4	-17.89/-18.05	-17.62/-19.32	-17.81/-12.3	-18.72/-19.04	-18.59/-19.12	-18.67/-18.28	-16.23/-15.78	-15.94/-18.67	-17.85/-18.68	-12.63/-13.7	
Θ(150°)	-18.4/-18.51	-15.8/-19.36	-18.93/-18.85	-17.81/-19.01	-18.32/-18.64	-17.43/-17.21	-18.91/-17.94	-19.42/-18.91	-16.05/-16.13	-17.59/-14.69	-15.05/-18.33	-19.02/-17.91	-18.69/-17.21	-18.7/-17.9	-18/-18.6	-18.59/-18.55	-19.81/-18.55	-19.48/-18.36	-19.58/-17.9	-19.19/-17.88	-16.22/-11.8	-11.93/-13.41	-18.89/-16.94	-16.86/-17.6
Θ(157.5°)	-18.45/-19.16	-15.3/-14.67	-18.8/-17.82	-18.61/-18.41	-18.48/-16.13	-17.42/-19.1	-17.95/-18.71	-18.45/-19.27	-19.07/-18.1	-16.24/-15.29	-17.31/-17.91	-14.93/-17.79	-19.25/-17.64	-19.01/-17.99	-17.99/-17.93	-17.61/-18.21	-18.51/-18.98	-18.58/-18.01	-14.93/-14.61	-14.27/-14.07	-11.42/-11.1	-13.31/-16.71	-17.24/-18.8	-17.49/-17.07
Θ(165°)	-15.23/-11.32	-10.07/-11.6	-14.54/-18.05	-17.55/-19.04	-17.69/-18.69	-19.01/-15.9	-16.55/-14.74	-14.59/-14.74	-13.42/-12.2	-12.66/-14.3	-17.59/-18.44	-14.24/-14.1	-17.89/-18.51	-18.03/-15.82	-17.3/-17.15	-18.73/-19.1	-19.05/-17.62	-18.43/-18.53	-19.1/-18.56	-18.48/-17.93	-15.72/-13.73	-18.1/-18.25	-18.98/-18.14	
Θ(172.5°)	-17.19/-18.85	-17.84/-18.99	-18.88/-18.03	-18.63/-17.91	-17.78/-18.13	-19.08/-18.51	-16.04/-16.7	-18.07/-17.48	-16.07/-15.79	-17.09/-17.59	-18.08/-17.13	-18.33/-16.32	-14.58/-12.56	-17.38/-18.46	-17.99/-18.08	-19.44/-18.93	-17.98/-18.68	-18.97/-18.63	-18.3/-18.96	-18.72/-19.15	-18.12/-18.7	-18.13/-18.35		
Θ(180°)	-18.63/-17.3	-18.09/-18.36	-19.04/-17.49	-17.27/-18.03	-16.31/-18.45	-17.71/-19.1	-17.49/-19.13	-18.21/-17.67	-19.23/-17.16	-18.2/-19.06	-19.06/-19.44	-18.79/-18.67	-18.95/-19.11	-17.99/-18.47	-18.43/-18.89	-17.67/-19.07	-18.79/-18.98	-18.75/-18.56	-17.69/-17.41	-19.19/-17.13	-15.6/-17.12	-18.98/-18.3	-18.24/-18.14	
Freq(Hz)	6.1750Pol.	ThetaAnt.2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
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°)	-12.5/-12.54	-11.96/-11.92	-10.81/-11.97	-11.21/-12.1	-11.67/-12.85	-12.26/-13.01	-11.89/-12.58	-11.49/-9.23	-9.66/-9.92	-9.39/-9.34	-7.89/-9.01	-10.49/-9.75	-10.82/-11.34	-11.01/-12.14	-10.27/-12.08	-11.47/-12.55	-12.17/-13.12	-12.12/-13.4	-12.57/-14.3	-15.75/-15.3	-17.94/-15.54	-16.65/-18.89	-17.66/-15.04	-16.97/-15.46
Θ(7.5°)	-17.37/-17.54	-19.31/-17.96	-19.18/-16.76	-15.94/-17.35	-10.71/-12	-12.29/-15.78	-16.63/-17.64	-18.21/-13.74	-12.86/-11.65	-8.9/-9.56	-9.54/-12.33	-13.7/-12.95	-10.39/-9.21	-10.09/-8.97	-8.33/-8.3	-7.66/-8.07	-8.94/-10.3	-9.49/-10.08	-10.05/-11.8	-11.07/-12.15	-13.99/-14.84	-16.12/-16.33	-17.97/-16.16	
Θ(15°)	-14.54/-16.27	-18.41/-15.15	-16.43/-14.74	-15.09/-12.72	-17.92/-17.33	-13.52/-11.5	-10.92/-12.66	-11.93/-12.66	-12.08/-12.11	-8.41/-7.77	-10.65/-10.18	-7.86/-7.71	-9.86/-10.13	-9.92/-9.75	-11.16/-9.69	-8.32/-7.23	-6.14/-5.35	-5.79/-10.87	-11.76/-19.29	-18.49/-19.36	-18.39/-13.65	-16.18/-15.14	-12.82/-12.19	
Θ(22.5°)	-13.98/-8.64	-8.94/-11.95	-18.41/-12.21	-8.54/-9.37	-9.8/-9.84	-6.1/-4.5	-5.31/-5.35	-7.14/-7.23	-8.37/-12.43	-9.52/-6.17	-6.32/-6.69	-9.07/-6.34	-5.47/-7.19	-5.02/-5.32	-5.97/-9.29	-4.89/-6.75	-5.71/-5.67	-8.18/-7.19	-5.59/-3.64	-4.39/-4.66	-5.29/-5.33	-6.89/-11.34	-14.11/-18.38	-13.36/-13.91
Θ(30°)	-9.14/-67	-8.15/-8.94	-8.91/-6.96	-5.11/-7.5	-6.89/-4.94	-3.93/-5.22	-6.67/-6.48	-5.54/-4.34	-4.04/-7.39	-8.85/-7.31	-3.38/-7.39	-9.06/-6.33	-4/-4.98	-5.93/-6.24	-8.5/-13.67	-10.76/-10.73	-8.75/-7.76	-7.48/-6.66	-6.76/-9.32	-7.8/-8.09	-8.04/-14.03	-6.84/-6.26	-6.76/-7.61	-7.46/-6.87
Θ(37.5°)	-6.28/-5.8	-8.91/-5.86	-6.09/-9.61	-9.85/-7.91	-4.48/-5.6	-7.72/-7.78	-5.11/-5.42	-5.06/-1.85	-2.76/-5.84	-8.64/-2.73	-2.58/-7.85	-3.65/-6.12	-3.86/-5.33	-4.65/-3.34	-3.65/-1.84	-2.57/-2.81	-2.65/-2.22	-2.35/-3.22	-4.76/-4.14	-4.84/-6.41	-3.78/-4.16	-7.26/-10.51	-8.02/-6.81	-5.61/-5.2
Θ(45°)	-4/-5.19	-5.25/-6.84	-6.79/-8.74	-5.03/-12.2	-4.82/-6.31	-6.57/-3.03	-4.72/-6.02	-1.81/-1.11	-3.01/-5.26	-5.68/-3.49	-3.49/-3.53	-3.79/-4.16	-3.06/-2.58	-3.11/-3.19	-5.3/-6.33	-6.69/-5.8	-5.79/-8.35	-6.71/-8.5	-9.95/-9	-5.81/-3.54	-7.44/-5.41	-3.86/-3.57	-5.08/-4.82	-5.45/-7.01
Θ(52.5°)	-2.97/-5.75	-5.35/-6.81	-5.13/-4.59	-1.95/-14.9	0.49/-3.91	-4.55/-1.66	-2.12/-4.51	-3.19/-0.23	-3/-3.93	-4/-2.89	-2.71/-1.84	-3.93/-1.79	-5.87/-3.62	-1.9/-3.14	-2.55/-2.41	-1.89/-2.72	-2.730/-27	-0.4/-0.86	-1.3/-0.59	-2.29/-4.58	-1.48/-6.12	-1.63/-6.71	-2.61/-4.6	-6.06/-3.76
Θ(60°)	-1.89/-3.03	-5.95/-6.69	-5.08/-3.07	-3.97/-2.52	-1.01/-3.34	-6.29/-4.27	-4.82/-5.78	-2.990/-4.6	-2.25/-3.38	-1.62/-3.25	-0.58/-1.94	-2.04/-6.2	-4.3/-6.53	-4.49/-3.89</										



Radiated Composite Gain Data 6GHz U-NII 5~U-NII 6

Appendix B

Θ(75°)	-16.14/-14.62	-16.17/-15.14	-15.39/-11.28	-9.81/-6.96	-8.75/-7.73	-8.83/-11.03	-6.84/-9.99	-9.63/-17.57	-7.67/-12.72	-18.9/-19.07	-16.18/-13.05	-15.37/-18.58	-19.48/-19.13	-19.12/-17.86	-17.32/-18.45	-14.24/-16.94	-18.68/-17.72	-17.93/-16.03	-9.83/-18.94	-16.33/-12.56	-19/-17.42	-16.38/-17.53	-14.47/-18.46	-18.46/-13.63
Θ(82.5°)	-18.91/-17.97	-11.24/-13.15	-15.97/-11.42	-10.89/-8.47	-10.46/-17.77	-12.29/-11.91	-9.7/-12.92	-18.4/-12.58	-13.1/-18.8	-14.48/-16.94	-18.9/-12.91	-19.32/-19.25	-15.82/-17.55	-11.84/-15.55	-14.24/-18.13	-10.87/-16.76	-14.33/-15.03	-13.29/-18.13	-12.97/-9.46	-10.41/-11.95	-10.54/-10.87	-12.65/-18.68	-18.11/-11.98	-17.55/-19.39
Θ(90°)	-15.51/-18.52	-17.06/-11.81	-16.77/-17.42	-10.57/-17.03	-15.51/-12.21	-14.76/-17.08	-18.61/-13.49	-15.13/-16.21	-17.94/-13.54	-13.91/-13.94	-19.02/-18.79	-16.31/-16.98	-18.08/-18.87	-12.91/-15.87	-16.52/-14.39	-10.94/-13.71	-16.66/-12.21	-10.31/-8.73	-11.23/-12.57	-12.43/-14.53	-12.19/-15.82	-7.35/-14.63	-9.37/-18.19	-15.51/-17.9
Θ(97.5°)	-17.52/-17.52	-15.2/-18.55	-11.29/-13.01	-10.61/-10.01	-9.87/-11.59	-13.18/-13.82	-13.32/-15.33	-17.95/-17.47	-14.03/-18.62	-12.03/-12.15	-12.1/-18.67	-18.09/-17.1	-18.82/-18.88	-13.5/-15.64	-17.64/-13.55	-16.83/-10.58	-11.3/-11.88	-9.35/-12.8	-11.75/-13.29	-9.89/-9.11	-17.69/-16.42	-11.42/-16.26	-13.41/-18.27	-19.07/-16.81
Θ(105°)	-18.01/-17.69	-18.78/-13.2	-17.61/-16.23	-16.5/-13.34	-18.22/-19.17	-18.65/-12.35	-12.35/-13.21	-18.74/-10.7	-16.25/-14.19	-16.11/-11.11	-16.46/-18.1	-14.53/-17.95	-18.44/-19.32	-18.25/-17.64	-14.64/-14.18	-8.93/-15.75	-7.81/-13.47	-14.49/-9.45	-12.51/-11.9	-7.34/-12	-12.67/-11.15	-16.87/-18.71	-17.14/-17.61	-17.33/-18.97
Θ(112.5°)	-18.51/-17.78	-17.33/-18.12	-15.54/-18.42	-12.6/-11.19	-13.89/-9.85	-9.83/-10.65	-16.23/-11.43	-10.14/-9.59	-18.43/-16.18	-7/-12.96	-15.42/-16.75	-15.28/-18.92	-18.11/-15.69	-17.78/-17.21	-18.21/-17.45	-10.94/-17.62	-12.23/-9.98	-11.1/-9.21	-10.41/-9.82	-6.4/-10.1	-8.39/-17.14	-10.43/-13.91	-12.75/-15.63	-17.52/-18.37
Θ(120°)	-18.62/-14.37	-14.33/-10.28	-8.15/-7.09	-12.91/-8.53	-8.8/-7.94	-6.81/-9.9	-10.14/-8.94	-5.2/-18.33	-9.03/-8.12	-13.46/-15.13	-18.71/-19.05	-17.51/-14.96	-17.91/-17.61	-17.25/-17.81	-16.01/-16.32	-18.91/-18.37	-13.36/-10.76	-14.63/-12.39	-18.35/-12.44	-9.17/-17.86	-9.71/-10.68	-11.72/-8.63	-9.72/-18.06	-17.81/-17.78
Θ(127.5°)	-18.41/-15.43	-18.7/-17.94	-18.96/-17.79	-10.99/-12.97	-10.52/-19.01	-13.86/-14.06	-5.33/-15.25	-10.82/-12.91	-8.94/-9.64	-18.05/-13.91	-13.79/-6.76	-9/-17.59	-17.68/-17.72	-18.93/-13.9	-18.26/-18.85	-16.3/-12.57	-10.1/-12.86	-10.04/-10.86	-17.46/-10.51	-17.31/-12.08	-18.78/-14.84	-17.6/-11.44	-14.59/-13.85	-15.06/-18.36
Θ(135°)	-19/-18.43	-15.95/-18.32	-18.04/-15.67	-10.52/-11.38	-11.14/-11.87	-15.84/-10.95	-6.35/-9.22	-10.82/-15.93	-15.97/-18.17	-12.64/-13.33	-12.86/-16	-16.18/-13.59	-17.42/-18.76	-18.75/-17.18	-19.16/-18.33	-18.85/-18.53	-15.47/-17.76	-9.87/-13.13	-17.9/-11.41	-11.11/-10.66	-15.91/-14.62	-16.57/-17.83	-14.73/-12.13	-18.6/-17.84
Θ(142.5°)	-9.65/-13.97	-11.53/-11.94	-12.19/-12.58	-12.73/-11.18	-7.87/-11.51	-9.91/-7.82	-11.27/-6.94	-6.13/-15.9	-13.89/-9.33	-11.99/-18.89	-16.52/-19.28	-16.58/-12.84	-18.74/-17.99	-18.26/-17.65	-17.89/-16.23	-15.12/-12.66	-15.01/-17.62	-19.05/-18.73	-11.89/-11.69	-15.93/-14.63	-14.38/-18.03	-12.35/-8.63	-7.39/-10.41	-12.58/-11.66
Θ(150°)	-13.08/-17.6	-16.86/-15.43	-8.74/-11.67	-12.82/-8.86	-9.85/-15.19	-7.77/-4.7	-4.76/-8.19	-9.66/-10.92	-18.71/-13.28	-14.7/-17.65	-17.6/-19.01	-17.88/-17.71	-18.74/-17.58	-17.96/-17.71	-18.89/-18.37	-17.58/-17.45	-18.03/-18.15	-19.06/-17.16	-13.86/-12.33	-14.47/-17.68	-18.69/-17.79	-17.8/-18.67	-18.99/-19.12	
Θ(157.5°)	-18.7/-16.48	-15.32/-14.43	-12.9/-13.66	-12.93/-11.24	-13.26/-11.04	-11.61/-14.73	-9.38/-7.8	-8.95/-8.34	-14.59/-18.69	-17.74/-17.52	-16.67/-16.58	-19.11/-19.14	-17.69/-18.39	-18.16/-17.37	-17.42/-19.07	-17.89/-16.47	-19.41/-18.24	-14.99/-12.51	-13.66/-13.76	-13.4/-11.63	-11.51/-12.53	-14.33/-16.09		
Θ(165°)	-17.97/-18.84	-18.05/-17.9	-12.9/-11.72	-12.07/-15.14	-18.11/-18.19	-16.89/-12.79	-11.35/-12.63	-17.29/-18.07	-15.47/-12.46	-14.82/-18.26	-18.88/-18.19	-19.46/-17.89	-18.78/-18.8	-19.27/-18.11	-18.43/-12.67	-12.43/-10.16	-9.72/-11.26	-9.33/-9.34	-11.27/-12.89	-15.23/-18.3	-18.19/-15.55	-13.99/-13.22	-12.79/-14.14	-14.85/-14.4
Θ(172.5°)	-17.66/-17.99	-17.97/-18.02	-18.81/-18.66	-18.9/-14.32	-12/-10.46	-9.39/-9.71	-12.93/-14.78	-17.37/-18.55	-19.07/-16.3	-15.87/-14.81	-19.96/-17.95	-18.08/-18.88	-17.9/-18.56	-16.52/-16.11	-14.2/-15.02	-11.3/-12.91	-10.45/-9.44	-9.98/-9.4	-8.68/-10.58	-11.95/-14.94	-17.24/-17.42	-17.87/-17.58	-17.7/-18.8	-18.51/-19.08
Θ(180°)	-15.42/-18.08	-13.26/-14.3	-11.63/-12.68	-10.67/-12.7	-12.35/-12.76	-15.5/-17.09	-18.74/-17.72	-17.56/-18.49	-18.5/-19.28	-15.89/-14.24	-14.63/-16.14	-18.98/-18.02	-17.36/-18.34	-18.24/-17.64	-18.49/-18.97	-16.21/-18.77	-16.33/-15.34	-15.67/-13.86	-13.4/-13.27	-14.83/-15.86	-16.83/-16.8	-19.14/-18.9	-18.16/-18.64	-18.97/-18.67
Freq(Hz)	6.175GPol.	ThetaAnt.3	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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°)	-9.63/-10.14	-10.06/-10.83	-12.69/-12.04	-14.04/-15.06	-14.66/-16.68	-16.96/-17.81	-19.14/-14.96	-13.33/-14.66	-13.89/-11.42	-12.21/-11.06	-14.11/-13.66	-16.26/-12.96	-17.86/-15.24	-18.74/-17.04	-17.34/-18.73	-18.02/-19.13	-18.26/-18.05	-19.06/-18.55	-18.06/-19.57	-16.79/-15.94	-15.45/-13.22	-13.19/-11.27	-11.5/-9.61	
Θ(7.5°)	-6.27/-7.69	-9.08/-9.2	-9.16/-8.6	-10.43/-12.05	-14.42/-19.07	-18.02/-18.77	-18.09/-16.48	-14.79/-12.07	-9.71/-9.54	-9.55/-9.23	-11.42/-12.87	-14.41/-14.31	-12.03/-10.72	-10.13/-9.74	-10.15/-10.12	-9.53/-11.32	-11.49/-10.9	-11.54/-14	-14.14/-15.86	-15.63/-15.79	-13.28/-10.44	-8.43/-7.5	-6.35/-5	-5.48/-5.42
Θ(15°)	-4.9/-6.18	-7.99/-11.23	-12.3/-10.3	-8.53/-6.3	-7.35/-9.71	-11.72/-10.75	-11.31/-9.72	-10.18/-13.77	-15.26/-17.32	-15.12/-17.07	-18.26/-14.53	-12.18/-10.68	-10.18/-10.49	-10.84/-10.65	-9.26/-8.85	-9.65/-14.17	-14.67/-11.2	-9.72/-9.53	-10.91/-11.54	-11.6/-12.4	-13.73/-15.63	-12.48/-7.61	-4.19/-3.25	-4.08/-4
Θ(22.5°)	-2.88/-3.99	-6.94/-6.47	-5.8/-4.61	-5.69/-7.18	-5.59/-6.93	-7.12/-8.86	-15.15/-10.74	-8.66/-13.47	-17.77/-19.24	-18.26/-16.11	-10.93/-10.25	-10.06/-10.76	-9.94/-9.24	-6.92/-6.48	-6.81/-11.59	-9.49/-7.96	-6.92/-5.4	-10.01/-12.11	-5.48/-6.19	-6.82/-6.46	-4.48/-4.46	-3.98/-3.76	-2.62/-1.51	
Θ(30°)	-1.31/-1.75	-5.21/-7.58	-6.98/-6.16	-4.15/-3.37	-5.39/-8.36	-6.39/-7.02	-10.83/-7.33	-8.89/-11.68	-9.56/-10.31	-12.3/-8.18	-5.18/-2.92	-4.42/-6.18	-8.22/-11.15	-8.26/-5.26	-4.12/-6.45	-5.9/-7.89	-9.89/-6.22	-5.74/-5.3	-5.71/-7.08	-8.13/-4.75	-1.42/-1.26	-3.08/-1.36	-4.63/-3.8	-0.98/-1.12
Θ(37.5°)	0.4/-0.27	-1.75/-2.55	-3.24/-3.64	-3.89/-3	-5.49/-5.49	-6.81/-4.04	-6.17/-9.49	-7.11/-7.25	-7.12/-9.46	-19.02/-12.97	-11.44/-15.91	-11.66/-8	-6.37/-6.47	-6.69/-5.88	-8.25/-15.5	-7.23/-8.98	-6.17/-10.2	-7.29/-4.82	-4.07/-3.27	-5.63/-4.65	-0.8/-4.65	-1.85/-0.25	-2.32/-1.86	-0.18/-0.24
Θ(45°)	-0.73/-1.26	-2.43/-3.86	-2.72/-2	-1.81/-2.78	-5.03/-4.95	-3.36/-4.37	-13.75/-2.88	-8.23/-6.88	-13.7/-6.55	-4.21/-9.1	-5.05/-1.56	-2.23/-4.42	-1.242/-7.8	1.56/-2.66	-3.24/-5.6	-4.61/-4.86	-3.26/-2.89	-4.24/-5.18	-4.85/-4.46	-1.68/-2.93	-0.35/-4.38	-1.940/-66	-1.33/-1.7	-1.54/-2.74
Θ(52.5°)	0.48/0.84	-1.52/-4.64	-1.54/-2.45	-2.35/-1.41	-2.04/-2.45	-4.37/-3.57	-7.68/-1.38	-3.42/-8.21	-6.56/-2	-7.66/-18.18	-7.45/-9.47	-3.44/-3.2	-5.27/-4.25	-3.1/-5.34	-5.68/-2.91	-6.13/-3.92	-4.93/-8.42	-1.6/-4.99	-1.79/-4.54	-1.58/-1.47	-0.77/-0.6	-2.01/-02	-5.3/-0.37	-1.59/-2
Θ(60°)	0.06/-0.01	-0.09/-1.24	1.09/-0.15	1.06/-0.21	0.51/-1.84	-2.85/-0.3	-3.36/-1.85	-6.41/-1.37	-6.18/-7.83	-3.97/-1.81	-3.55/-3.85	-4.87/-9.56	-3.63/-8.78	-1.21/-2.64	-4.23/-4.04	-2.68/-3.06	-4.08/-12.3	-3.05/-1.41	-1.6/-0.07	-5.63/-4.65	-0.8/-4.65	-1.85/-0.25	-2.32/-1.86	
Θ(67.5°)	0.19/0.48	0.52/0.31	1.51/0.2	1.56/-2.69	-0.91/-0.34	-1.65/-0.99	-4.67/-1.87	-2.57/-1.75	-6.61/-8.88	-4.54/-6.92	-2/-2.24	-2.54/-2.66	-2.85/-7.18	-3.59/-1.96	-4.12/-2.86	-2.66/-6.67	-5.73/-3.71	-4.69/-8.55	-4.4/-3.77	-0.26/-4.73	-1.81/-1.12	-1.57/-2	0.87/0.61	
Θ(75°)	-2.29/-2.03	-1.5/-1.29	-0.18/-0.85	-0.96/-0.55	-0.7/-1.14	-2.13/-3.81	-2.6/-1.3	-0.43/-2.46	-0.97/-6.56	-2.31/-2.24	-1.77/-3.95	-3.05/-4.13	-1.13/-3.21	-1.38/-3.87	-0.97/-3.34	-6.41/-3.23	-8.17/-4.41	-5.78/-3.13	-5.13/-5.31	-2.87/-3.78	-2.71/-2.3	-2.29/-0.08	-0.48/-0.62	-2.53/-1.57
Θ(82.5°)	-1/-2.51	-0.64/-1.08	0.26/-1.37	-2.22/0.43	-0.53/-4.34	-2.51/-1.34	-1.13/-2.16	-3.27/-5.64	-4.12/-3.59	-1.84/-2.96	-0.26/-1.81	-3.75/-3.63	-1.32/-1.14	-8.7/-1.68	-3.38/-1.13	-3.67/-2.32	-4.93/-7.09	-1.85/-2.51	-2.82/-1.92	-7.48/-2.49	-4.19/-1.4	-1.25/-1.75	-4.03/-0.11	
Θ(90°)	1.07/-3.14	-3.05/-3.62	-1.37/-4.99	-3.37/-4.26	-3.53/-2.56	-5.66/-4.08	-3.78/-5.69	-3.05/-4.86	-2.09/-2.45	-6.39/-2.37	-0.07/-3.46	-0.78/-1.78	0.81/-2.75	-0.05/-1.15	-3.23/-0.73	-1.27/-2.01	-3.12/-3	-0.9/-4.64	-8.4/-5.14	-6.09/-7.65	-10.4/-4.49	-2.91/-3.9	-2.16/-3.82	-5.71/-1.75
Θ(97.5°)	-1.81/-3.05	-2.18/-4.32	-2.02/-3.28	-4.87/-3.56	-7.6/-4.6	-8.44/-6.51	-0.54/-4.68	-4.34/-3.09	-0.16/-1.38	-1.99/0.42	-1.61/-7.05	-0.36/-4.88	-0.18/-2.14	-1.88/-1.06	-13.09/-1.09	0.54/-2.61	-2.26/-2.35	-2.08/-4.92	-4.01/-5.35	-2.92/-6.82	-11.43/-8.34	-4.55/-5.46	-4.8/-5.51	-3.47/-2.01
Θ(105°)	-6.57/-4.84	-15.57/-12.32	-6.82/-6.68	-7.4/-4.8	-3.81/-2.01	-5.81/-8.95	-1.65/-4.73	-6.52/-2.4	0.1/-1.46	-3.63/-0.93	-0.81/-7.78	-1/-2.5	-7.31/-5.81	-6.04/-0.74	-13.75/-4.77	-2.28/-5.92	-4.84/-3.35	-5.08/-7.89	-10.75/-8	-3.79/-7.34	-6.69/-6.26	-3.13/-3.87	-4.17/-8.37	-6.47/-7.89
Θ(112.5°)	-3.62/-14.24	-5.86/-10.4	-4.33/-8.69	-11.22/-5.49	-10.08/-6.75	-7.65/-3.27	-2.54/-5.08	-3.31/-8.47	-2.71/-4.51	-4.06/-7.09	-9.71/-9.2	-5.49/-3.31	-8.65/-10.67	-6.85/-7.83	-15.29/-7.6	-7.03/-11.59	-10.34/-5.95	-9.49/-9.31	-11.89/-7.36	-6.16/-9.74	-5.52/-14.1	-8.46/-9.66	-3.49/-8.21	-8.5/-2.72
Θ(120°)	-8.43/-5.86	-9.56/-16.64	-7.47/-5.8	-10.34/-6.68	-10.4/-8.3	-3.34/-6.78	-3.06/-3.02	-4.02/-4.85	-3.84/-1.7	-4.25/-5.55	-7.27/-7.7	-4.5/-7.71	-4.12/-2.34	-5.53/-7.28	-17.6/-8.21									



Radiated Composite Gain Data 6GHz U-NII 5~U-NII 6

Appendix B

Θ(127.5°)	-13.44/-15.76	-13.49/-13.53	-8.39/-16	-19.36/-13.46	-17.93/-17.64	-18.63/-14.63	-15.38/-16.4	-17.57/-17.01	-18.05/-16.32	-19.01/-11.45	-13.46/-14.27	-17.73/-16.09	-17.55/-18.67	-19.11/-19.06	-15.9/-17.63	-14.17/-15.87	-9.65/-18.9	-19.19/-14.59	-12.35/-11.04	-11.84/-18.93	-17.84/-18.9	-14.57/-15.97	-18.74/-15.16	-16.47/-16.69
Θ(135°)	-13.36/-14.32	-14.44/-16.05	-18.43/-18.09	-18.05/-18.53	-10.7/-13.81	-14.27/-15.76	-17.17/-18.36	-9.57/-16.29	-13.76/-13.87	-19.12/-18.85	-18.81/-10.35	-11.59/-13.57	-18.56/-14.83	-14.79/-18.82	-16.69/-18.27	-18.4/-15.81	-15.64/-15.78	-18.78/-14.61	-17.61/-18.8	-19.21/-15.94	-13.33/-17.94	-11.63/-8.98	-9.94/-14.2	-14.55/-13.26
Θ(142.5°)	-10.67/-13.72	-19.1/-17.7	-14.53/-11.5	-10.87/-14.9	-13.07/-10.35	-17.02/-11.12	-8.07/-10.09	-15.22/-17.7	-18.37/-17.09	-18.09/-16.71	-18.32/-19.24	-18.29/-17.62	-17.14/-12.99	-16.92/-18.12	-18.6/-17.88	-17.58/-12.82	-16.98/-19.14	-18.67/-16.08	-18.35/-17.17	-19.35/-17.64	-14.42/-14.89	-14.83/-19.16	-14.16/-11.58	-17.65/-10.05
Θ(150°)	-13.51/-10.48	-7.69/-7.65	-7.06/-10.96	-9.33/-14.8	-13.25/-10.77	-16.77/-11.79	-15.47/-17.91	-17.76/-18.58	-19.1/-18.53	-18.62/-15.43	-15.67/-18.09	-16.03/-18.36	-18.71/-17.91	-18.35/-15.86	-19.34/-18.53	-18.07/-18.51	-19.26/-17.23	-17.98/-16.27	-16.85/-18.48	-14.62/-18.22	-18.07/-17.93	-18.53/-17.12	-12.3/-11.32	-11/-13.8
Θ(157.5°)	-12.32/-16.16	-16.95/-18.32	-15.67/-12.68	-15.96/-15.4	-8.25/-10.03	-13.66/-12.13	-11.21/-16.19	-16.58/-12.81	-16.18/-18.89	-18.09/-17.56	-13.91/-12.69	-12.18/-14.63	-17.77/-18.77	-18.88/-17.68	-18.29/-19.31	-17.74/-17.55	-13.2/-11.1	-12.4/-17.64	-18.26/-19.46	-18.45/-18.41	-19.65/-18.03	-16.8/-18.67	-17.18/-11.92	-10.18/-10.4
Θ(165°)	-11.65/-12.68	-12.46/-11.67	-13.82/-15.51	-13.33/-14.14	-13.09/-14.51	-18.65/-17.81	-14.8/-12.2	-14.9/-18.62	-16.65/-18.33	-18.82/-11.78	-10.47/-9.5	-11.05/-16	-12.18/-18.25	-15.99/-14.59	-12.22/-13.84	-16.07/-18.82	-17.96/-16.2	-14.98/-13.51	-11.43/-12.39	-12.14/-13.01	-15.24/-14.95	-15.04/-18.27	-18.54/-19.12	-16.5/-13.77
Θ(172.5°)	-18.59/-18.72	-18.33/-18.82	-17.33/-14.02	-13.14/-13.92	-13.98/-16.18	-16.51/-15.94	-18/-17.77	-18.15/-18.41	-18.6/-17.4	-15.35/-15.27	-15.28/-15.2	-18.87/-17.04	-18.09/-15.93	-18.23/-17.18	-18.2/-17.91	-18.71/-18.22	-18.53/-15.41	-14.12/-13.69	-11.37/-11.71	-11.39/-12.11	-14.26/-14.51	-15.64/-13.41	-15.71/-19.07	-18.85/-18.56
Θ(180°)	-19.93/-19.1	-18.6/-16.81	-17.7/-15.52	-14.92/-19.41	-17.42/-18.31	-17.25/-19.01	-17.96/-16.44	-13.13/-13.03	-15.08/-16.85	-19.18/-16.3	-12.92/-15.65	-14.63/-19.38	-17.22/-17.24	-16.4/-17.14	-16.7/-16.35	-15.46/-14.43	-15.88/-15.03	-13.69/-18.08	-17.04/-18.49	-18.41/-18.64	-18.84/-18.97	-17.88/-19.07	-15.83/-18.41	-16.47/-18.26
Freq(Hz)	6.175GPol.	ThetaAnt. 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°)	-17.72/-16.34	-14.32/-16.96	-13.6/-11.06	-12.56/-12.42	-10.12/-11.71	-13.49/-16.56	-14.56/-16.15	-14.91/-15.38	-16.05/-18.26	-15.61/-18.13	-13.56/-14.98	-13.55/-12	-11.08/-11.09	-11.45/-10.37	-10.42/-10.84	-10.23/-11.08	-11.52/-12.17	-12.91/-14.56	-14.49/-18.77	-17.53/-18.18	-18.81/-18.05	-18.06/-18.61	-17.94/-17.84	-17.61/-19.04
Θ(7.5°)	-17.32/-17.62	-14.31/-17.17	-15.54/-13.13	-12.9/-13.63	-17.47/-13.96	-16.12/-16.04	-14.1/-13.54	-15.11/-18.87	-18.9/-18.45	-13.07/-11.65	-9.56/-8.62	-8.7/-9.92	-9.42/-10.38	-8.77/-9.46	-10.52/-8.97	-10.11/-11.03	-11.42/-10.21	-10.44/-10.04	-10.97/-12.02	-13.17/-12.18	-12.19/-15.83	-14.44/-19.02	-17.8/-18.3	-17.65/-19.51
Θ(15°)	-11.07/-14.54	-18.53/-18.62	-18.31/-18.29	-17.24/-9.44	-7.88/-9.07	-13.04/-17.48	-17.47/-13.49	-11.06/-10.95	-10.28/-7.97	-6.65/-5.93	-4.75/-4.2	-3.73/-4.02	-4.15/-4.37	-4.46/-4.69	-5.78/-6.27	-8.33/-8.08	-10.49/-10.94	-7.05/-5.8	-7.49/-12.36	-13.59/-9.39	-9.09/-9.78	-9.8/-10.59	-10.96/-10.05	-11.39/-9.46
Θ(22.5°)	-9.1/-11.81	-11.59/-13.97	-16.85/-12.3	-12.69/-15.35	-10.56/-11.26	-12.54/-10.63	-10/-10.53	-11.72/-11.71	-9.62/-8.82	-10.59/-15.1	-15.08/-18.41	-13.3/-12.2	-9.19/-10.86	-11.45/-14.71	-15.96/-14.94	-8.54/-7.32	-9.52/-8.72	-6.79/-7.08	-10.81/-9.44	-7.75/-5.25	-3.96/-6.54	-9.69/-12.14	-9.79/-8.76	-9.57/-11.21
Θ(30°)	-16.52/-12.17	-10.33/-7.81	-5.06/-5.58	-8.08/-12.43	-9.53/-4.55	-7.21/-8.87	-9.08/-9.93	-5.88/-4.99	-6.19/-6.97	-3.94/-4.94	-5.94/-6.06	-5.54/-6.05	-8.58/-10.01	-8.28/-5.58	-6.32/-6.97	-6.37/-7.49	-6.19/-4.99	-5.22/-4.3	-5.77/-4.99	-6.19/-4.99	-5.22/-4.3	-5.77/-4.99	-6.19/-4.99	-5.22/-4.3
Θ(37.5°)	-6.75/-7.81	-7.98/-4.7	-6.82/-2.43	-5.68/-9.12	-4.23/-3.78	-7.96/-6.14	-6.06/-8.61	-7.05/-5.8	-10.88/-10.19	-13.42/-12.67	-7.89/-10.3	-18.64/-13.57	-15.21/-11.7	-8.19/-5.92	-5.71/-7.93	-6.25/-4.71	-3.75/-5.39	-4.46/-4.8	-4.78/-7.08	-6.9/-4.95	-3.78/-4.37	-4.12/-6.46	-5.7/-6.03	-5.47/-6.22
Θ(45°)	-2.79/-0.82	-2.25/-3.97	-3.17/-4.61	-3.04/-4.66	-6.42/-5.02	-5.61/-6.52	-8.66/-6.51	-9.45/-7.3	-9.5/-5.09	-3.830/-0.7	1.511/-6.7	-0.401/-18	-1.1/-1.97	-0.73/-3.92	-2.42/-2.95	-1.49/-2.95	-3.21/-1.69	-4.11/-3.43	-1.71/-2.58	-7.95/-4.43	-5.04/-6.04	-3.93/-3	-1.07/-1.35	-1.07/-1.35
Θ(52.5°)	-2.03/-1.1	0.3/-2.35	-3.55/-4.75	-2.68/-6.45	-5.52/-7.39	-3.55/-6.68	-5.56/-5.64	-5.16/-3.5	-3.94/-6.4	-8.4/-10.74	-11.86/-10.2	-13.34/-17.1	-5.36/-6.67	-5.4/-36	-7.6/-11.4	-1.82/-1.29	-1.23/-1.75	-1.71/-1.11	0.16/-1.01	-2.81/-4.72	-5.35/-5.16	-5.28/-2.39	-0.68/-0.74	-0.68/-0.74
Θ(60°)	-6.12/-2.52	-3.89/-2.98	-7.26/-5.8	-2.94/-5.42	-2.69/-3.05	-4.8/-1.73	-1.79/-6.15	-3.92/-2.54	-4.95/-3.05	-2.58/-2.8	-1.93/-0.14	-0.440/-16	-1.23/-1.58	-2.26/-3.34	-0.52/-3.51	-4.19/-5.72	-7.27/-4.09	-4.24/-1.51	-2.87/-0.75	-1.02/-0.08	-1.46/-1.38	-0.92/-1.76	-0.81/-2.29	-1.65/-2.28
Θ(67.5°)	-2.88/-3.01	-2.89/-4.23	-3.19/-1.66	-0.04/-1.06	-2.26/-1.36	-0.07/-1.89	-3.96/-2.57	-0.14/-1.38	-5.32/-4.04	-4.14/-2.31	-4.37/-0.46	-3.4/-0.9	-0.65/-0.03	0.65/-0.03	-1.48/-1.84	-5.51/-3.89	-3/-4.02	-4.54/-2.78	-5.84/-2.7	-5.44/-2.4	-1.79/-2.36	0.03/-0.26	-0.6/-1.13	-0.83/-0.81
Θ(75°)	-1.74/-0.93	-0.410/-77	0.33/-0.25	-0.89/-3.27	-2.28/-0.77	-1.16/-4.85	-3.81/-6.68	-7.84/-3.54	-2.21/-2.39	-2.28/-1	-4.32/-1	1.940/-79	0.960/-05	-0.77/-1.55	-3.55/-3.36	-3.44/-1.27	-1.74/-3.31	-6.98/-1.81	-2.38/-2.66	-3.09/-1.07	-1.1/-2.77	-0.59/-2.16	-1.17/-0.01	0.98/-0.46
Θ(82.5°)	-0.470/-4.3	2.120/-38	-0.680/-17	-0.43/-1.36	-1.98/-2.71	-3.01/-2.46	-5.73/-2.27	-3.97/-1.45	-4.6/-4.59	-2.8/-2.48	-2.57/-0.08	0.4/-1.45	0.49/-1.51	-4.31/-3.2	0.74/-3.63	-2.21/-1.21	-4.76/-3.67	-6.48/-5.32	-7.51/-6.47	-2.76/-2.51	-1.39/-3.7	-0.06/-1.35	-2.09/-2.57	1.4/-1.63
Θ(90°)	-2.220/-97	0.171/-76	-2.97/-1.11	0.29/-3.24	-2.41/-1.43	-3.64/-2.05	-2.84/-2.69	-3.65/-1.95	-4.11/-2.99	1.94/-2.1	-2.820/-34	-0.85/-4.1	1.28/-1.04	-3.79/-3.96	-3.02/-1.19	-0.20/-0.47	-4.08/-2.36	-8.08/-0.75	-5.4/-7.08	-4.81/-1.58	-6.85/-5.4	-2.5/-1.96	-2.5/-1.96	-2.5/-1.96
Θ(97.5°)	-3.06/-2.15	-0.25/-37	-1.940/-06	-1.01/-6.26	-1.15/-7.63	-6.86/-6.21	-8.57/-8.36	-2.95/-3.23	-4.97/-4.74	-1.3/-3.91	-1.48/-0.98	-0.46/-2.12	1.19/-1.47	-7.94/-1.8	8.020/-21	3.81/-62	0.72/-1.14	-5.55/-7.27	-7.8/-2.59	0.08/-3.16	-3.23/-4.6	-6.8/-4.07	-3.77/-1.45	-0.96/-0.98
Θ(105°)	-4.34/-2.26	-4.06/-4.83	-6.17/-2.25	-2.63/-8.38	-6.2/-9.74	-5.92/-3.91	-7.63/-2.38	-2.64/-0.9	-2.69/-4.76	-4.04/-5.81	-7.16/-5.6	-3.34/-5.06	-5.82/-2.63	-8.75/-9.73	-6.31/-2.83	-0.55/-9.16	-4.67/-3.43	-9.21/-3.5	-4.27/-2.1	-13.77/-2.13	-0.7/-3.85	-1.62/-2.16	-3.22/-1.25	-4.66/-3.92
Θ(112.5°)	-2.25/-1.83	-1.13/-5.96	-6.82/-4.16	-1.41/-4.88	-7.34/-6.11	-6.56/-3.45	-3.88/-3.81	-5.01/-3.09	-6.86/-10.22	-7.54/-16.12	-7.8/-6.34	-14.19/-8.7	-5.98/-13.3	-12.58/-16.7	-2.580/-03	0.83/-2.38	-0.72/-1.67	-18.76/-5.89	-1.230/-24	-4.47/-5.02	-1.71/-15.85	-1.1/-1.77	-5.13/-2.4	-2.52/-1.57
Θ(120°)	-1.99/-2.49	-4.88/-4.24	-2.12/-1.31	-3.85/-4.88	-6.63/-6.14	-9.57/-3.1	-12.04/-6.75	-8.35/-9.97	-10.46/-6.63	-4.34/-9.57	-5.54/-7.05	-1.34/-7.9	-5.44/-4.98	-16.53/-12.58	-8.91/-14.52	-6.96/-5.6	-3.04/-6.14	-8.23/-8.73	-5.35/-2.81	-1.06/-2.18	-7.80/-3	-7.85/-3.36	-1.37/-2.75	-1.54/-1.18
Θ(127.5°)	-2.5/-1.69	-2/-2.19	-3.99/-4.99	-4.36/-2.15	-3.89/-4.15	-9.01/-3.76	-3.64/-5.03	-5.54/-3.86	-6.73/-8.28	-14.15/-14	-8.69/-4.87	-11.41/-6.53	-6.63/-14.45	-18.04/-16.51	-8.59/-7.24	-6.77/-4.76	-6.21/-9.71	-8.4/-5.15	-11.88/-18.77	-4.98/-1.21	-7/-1.31	-0.19/-0.34	-4.06/-4.73	-5.25/-1.81
Θ(135°)	-2.56/-1.7	-1.72/-2.86	-1.65/-0.86	-2.19/-0.94	-3.41/-4.73	-3.34/-5.03	-4.39/-7.16	-6.65/-7.47	-7.81/-7.67	-19.72/-12.8	-5.03/-15.57	-6.73/-15.26	-8.67/-7.56	-9.36/-7.59	-6.03/-4.82	-2.85/-5.45	-8.09/-14.48	-17.42/-8.17	-8.77/-16.6	-10.55/-11.58	-6.69/-4.32	-2.72/-7.1	-2/-0.7	-0.55/-3.39
Θ(142.5°)	-0.65/-0.49	-0.6/-1.7	-2.59/-7.71	-3.17/-5.79	-5.21/-9.23	-7.07/-11.82	-10.14/-6.03	-8.59/-15.44	-13.15/-13.53	-11.97/-10.86	-18.47/-18.41	-10.45/-18.01	-16.44/-9.44	-9.06/-19.19	-15.22/-9.76	-7.52/-6.03	-6.59/-8.43	-11.11/-12.58	-12.04/-9.54	-13.99/-12.99	-17.92/-11.45	-8.01/-7.84	-8.5/-4.12	-2.8/-1.59
Θ(150°)	-11.9/-10.95	-7.84/-8.88	-8.4/-6.53	-10.19/-12.83	-19.18/-12.63	-14.43/-7.96	-8.62/-13.4	-12.49/-18.86	-14.17/-15.32	-16.71/-9.76	-13.12/-18.44	-18.62/-16.6	-13.02/-13.44	-18.25/-15.41	-13.17/-13.86	-11.01/-9.32	-17.81/-6.97	-8.41/-12.26	-14.9/-16.17	-8.81/-7.65	-4.84/-6.14	-10.07/-14.17	-19.07/-19.18	-18.06/-12.52
Θ(157.5°)	-16.85/-15.98	-15.53/-19.38	-18.83/-16.31	-15.77/-13.36	-11.15/-12.73	-16.15/-14.37	-17.01/-17.84	-13.85/-12.34	-18.41/-19.48	-16.6/-19.9	-13.8/-11.52	-9.94/-13.2	-16.85/-16.67	-15.95/-14.55	-17.84/-17.92	-17.99/-17.6	-18.11/-14	-14.68/-17.14	-17.37/-17.85	-12.61/-7.53	-8.71/-11.63	-11.59/-10.05	-9.77/-10.34	-13.33/-18.52
Θ(165°)	-10.58/-11.24	-10.04/-9.9	-9.97/-9.48	-9.67/-11.93	-12.81/-9.97	-9.28/-9.44	-10.15/-18.7	-15.77/-17.55	-18.8/-17.58	-18.99/-14.82	-12/-12.43	-14.19/-17.28	-17.84/-18.79	-18.43/-14.99	-18.88/-17.38	-18.14/-18.13	-17.54/-16.37	-17.87/-18.66	-17.19/-17.32	-16.97/-18.7	-18.22/-18.91	-14.22/-10.85	-9.29/-7.81	-8.7/-9.46
Θ(172.5°)	-17.54/-17.85	-13.32/-14.33	-13.14/-14.47	-14.25/-14.92	-14.29/-16.19	-19.19/-18.48	-18.55/-18.88	-17.96/-18.75	-19.11/-18.42	-19.06/-18.78	-18.14/-19.23	-17.65/-18.03	-18											



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Freq(Hz)	6.695G	6.995G
Ant. 1 Max Gain (dBi)	2.32	2.65
Ant. 2 Max Gain (dBi)	2.98	2.82
Ant. 3 Max Gain (dBi)	3.89	3.18
Ant. 4 Max Gain (dBi)	2.6	2.38
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/90/142.5	Theta/82.5/75
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/120/105	Theta/112.5/135
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/67.5/0	Theta/75/15
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/120/45	Theta/120/45
Max Gain (dBi)	3.89	3.18
DG [1SS] (dBi)	5.91	5.69
DG [2SS] (dBi)	3.89	3.18



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Sporton International Inc. Hsinchu Laboratory



Radiated Composite Gain Data 6GHz U-NII 7~U-NII 8

Appendix C

Θ(22.5°)	-6.6/-6.67	-4.8/-11.71	-7.73/-7.17	-7.6/-9.51	-13.4/-18.86	-17.92/-15.73	-13.8/-17	-16.17/-11.91	-10.49/-14.36	-11.08/-17.47	-12.87/-9.92	-12.52/-16.39	-14.87/-10.57	-7.69/-7.72	-7.45/-9.26	-10.84/-12.81	-16.76/-15.18	-16.46/-17.55	-19.08/-18.14	-16.78/-10.13	-7.77/-6.48	-5.72/-7.13	-6.92/-5.88	-4.34/-4.47
Θ(30°)	-6.04/-7.18	-8.91/-11.79	-10.82/-10.82	-10.31/-11.66	-15.44/-13.6	-18.86/-17.6	-15.16/-18.47	-19/-13.12	-15.01/-10.28	-10.4/-12.6	-12.4/-19.14	-11.39/-7.55	-7.63/-6.85	-6.07/-7.2	-9.32/-9.4	-12.04/-9.65	-13.02/-11.48	-18.29/-18.15	-19.15/-17.57	-18.09/-13.7	-13.19/-14.43	-11.51/-7.58	-8.83/-8.3	-5.99/-5.57
Θ(142.5°)	-6.73/-6.68	-9.73/-17.65	-13.44/-18.24	-18.87/-18.52	-18.73/-17.89	-18.76/-18.21	-16.07/-17.22	-17.65/-16.45	-14.89/-14.17	-14.16/-10.07	-12.08/-6.91	-5.53/-10.79	-5.67/-4.89	-6.05/-7.28	-7.5/-6.1	-6.06/-7.1	-9.5/-18.69	-17.7/-18.45	-17.83/-14.55	-18.86/-12.78	-10.4/-11.67	-8.9/-10.53	-8.57/-10.4	-8.84/-10.15
Θ(45°)	-9.25/-10.01	-8.84/-10.58	-14.71/-11.99	-17.43/-19	-18.81/-18.9	-18.89/-18.65	-18.87/-18.76	-18.26/-18.66	-8.71/-6.72	-9.77/-8.76	-5.87/-6.07	-6.39/-4.1	-5.17/-7.85	-8.56/-6.94	-9.05/-9.02	-7.1/-8.18	-9.84/-11.04	-10.25/-11.87	-18.04/-17.8	-18.72/-17.07	-11.51/-10.48	-9.93/-8.75	-8.03/-10	-9.77/-10.62
Θ(52.5°)	-6.54/-6.11	-5.39/-5.05	-10.14/-7.32	-10.79/-10.39	-16.97/-18.74	-17.19/-15.52	-18.74/-14.65	-15.89/-13.6	-7.48/-6.27	-7.48/-6.27	-8.16/-7.39	-6.58/-4.41	-4.15/-6.8	-4.86/-5.94	-5.6/-10.24	-9.72/-7.23	-7.86/-9.69	-8.85/-12.93	-11.23/-14.25	-19.23/-19.17	-18.72/-15.37	-11.11/-7.22	-6.5/-6.7	-8.87/-7.64
Θ(60°)	-4.66/-5.4	-3.7/-3.96	-4.92/-4	-6.54/-8.11	-11.07/-16.83	-12.93/-13.23	-18.23/-16.14	-17.71/-9.95	-8.59/-5.36	-7.68/-10.33	-5.82/-8.73	-5.37/-6.2	-9.99/-5.95	-4.16/-10.14	-10.72/-13.25	-9.61/-12.85	-10.85/-14.06	-14.79/-17.54	-17.98/-18.02	-17.03/-16.03	-14.8/-8.51	-8.83/-7.71	-5.93/-6.3	-7.17/-4.78
Θ(67.5°)	-4.32/-3.14	-3.03/-3.12	-2.99/-4.69	-4.13/-7.06	-9.86/-13.79	-14.35/-16.77	-15.1/-18	-12.5/-12.66	-9.94/-10.43	-8.57/-6.59	-9.11/-10.95	-7.52/-6.17	-7.1/-9.48	-8.54/-11.13	-13.6/-10.67	-10.26/-17.88	-19.03/-16.1	-12.35/-19.75	-13.69/-18.17	-15.78/-17.96	-11.54/-14.15	-11.69/-10.31	-9.04/-7.56	-5.26/-3.73
Θ(75°)	-4.42/-3.75	-4.44/-4.72	-3.77/-7.62	-6.61/-6.29	-10.51/-13.98	-15.72/-14.39	-12.96/-17.7	-11.56/-11.16	-12.8/-10.89	-5.42/-5.29	-7.16/-12.41	-7.5/-8.14	-5.76/-8.76	-7.17/-10.31	-12.97/-14.49	-11.02/-12.94	-14.7/-19.03	-18.15/-17.17	-17.98/-17.99	-17/-18.05	-18.67/-10.58	-12.89/-17.2	-9.18/-9.55	-6.38/-4.28
Θ(82.5°)	-5.95/-5.94	-6.21/-6.58	-5.99/-6.45	-7.66/-4.73	-11.45/-13.37	-17.22/-16.85	-16.35/-17.96	-11.87/-10.78	-15.45/-12.12	-5.38/-4.31	-7.4/-9.12	-7.09/-5.99	-5.34/-7.7	-6.69/-9.88	-10.17/-11.73	-15.25/-13.68	-13.18/-18.37	-11.63/-14.73	-16.9/-17.55	-17.65/-18.07	-18.19/-18.59	-15.58/-13.2	-10.17/-11.95	-8.74/-8.41
Θ(90°)	-8.38/-9.65	-9.77/-10.04	-9.66/-8.27	-6.73/-8.46	-14.19/-12.05	-13.89/-17.87	-18.33/-16.81	-11.69/-18.59	-11.18/-11.4	-4.55/-7.37	-10.19/-5.88	-9.49/-4.02	-7.6/-10.34	-9.21/-8.58	-17.74/-18.99	-13.62/-17.42	-13.67/-13	-17.73/-14.91	-19.12/-17.45	-18.28/-15.85	-18.06/-15.05	-15.28/-14.26	-10.36/-11.48	-8.66/-9.42
Θ(97.5°)	-10.65/-8.83	-11.64/-11.1	-9.51/-11.09	-7.88/-9.94	-16.71/-18.3	-14.29/-19.12	-17.47/-19.21	-13.34/-18.06	-9.72/-7.52	-5.26/-9.75	-9.45/-6.04	-9.28/-6.7	-7.89/-10.81	-9.01/-6.88	-18.31/-17.82	-18.81/-17.8	-18.36/-13.64	-13.76/-17.4	-18.57/-16.79	-18.38/-15.34	-13.04/-11.89	-12.56/-14.85	-10.79/-10.99	-10.57/-7.65
Θ(105°)	-9.79/-6.05	-8.91/-8.57	-9.03/-10.95	-10.19/-10.91	-15/-18.38	-17.77/-17.43	-18.93/-19.17	-18.29/-11.35	-7.63/-6.24	-9.52/-11	-7.3/-6.67	-8.34/-7.9	-7.87/-5.46	-12.54/-8.98	-10.17/-10.01	-18.93/-18.49	-17.88/-11.36	-18.68/-15.58	-14.27/-15.69	-10.53/-12.75	-13.77/-11.07	-13.05/-9.47	-8.19/-8	
Θ(112.5°)	-7.84/-8.98	-6.03/-7.43	-7.33/-7.2	-9.27/-11.73	-12.01/-9.91	-19.19/-15.89	-18.94/-15.45	-17.12/-12.81	-9.01/-10.85	-11.66/-7.84	-6.84/-7.69	-8.05/-5.07	-10.43/-6.31	-5.78/-9.6	-8.84/-19.09	-8.22/-16.74	-17.42/-18.67	-15.48/-17.95	-18.89/-15.85	-17.49/-18.71	-14.59/-14.54	-10.96/-12.27	-11.37/-11.93	-7.96/-8.6
Θ(120°)	-6.48/-12.09	-6.56/-8.09	-7.93/-8.33	-7.48/-10.3	-14.16/-16.16	-13.34/-18.42	-18.41/-18.27	-12.68/-12.23	-15.29/-10.35	-5.72/-6.64	-4.97/-7.68	-9.52/-10.43	-4.33/-8.72	-17.15/-9.91	-5.69/-9.44	-13.29/-18.94	-17.85/-18.41	-18.65/-17.97	-15.98/-18.23	-18.37/-18.68	-16.53/-13.71	-12.8/-9.25	-8.85/-13.81	-9.22/-8.84
Θ(127.5°)	-6.68/-6.94	-6.93/-5.84	-8.51/-7.32	-10.18/-8.79	-9.09/-10.69	-15.79/-18.28	-18.58/-16.67	-15.72/-10.31	-12.72/-7.15	-5.69/-5.23	-4.8/-12.51	-5.46/-11.8	-11/-6.63	-6.72/-11.67	-18.93/-19.26	-15.93/-17.95	-18.09/-17.3	-19.03/-18.99	-17.97/-18.63	-18.05/-19.15	-18.81/-18.98	-12.96/-10.38	-7.41/-8.98	-9.81/-6.68
Θ(135°)	-6.43/-5.66	-5.93/-4.86	-5.68/-7.69	-7.57/-10.08	-9.94/-14.94	-19.14/-18.53	-18.54/-18.06	-18.61/-17.82	-10.31/-9.94	-8.38/-5.4	-9.76/-7.16	-8.5/-11.22	-4.82/-6.82	-8.37/-6.72	-14.1/-12.41	-18.33/-17.81	-18.65/-18.55	-13.85/-17.72	-18.67/-18.95	-18.52/-18.55	-17.67/-15.34	-12.71/-10.06	-8.96/-8.47	-7.41/-5.8
Θ(142.5°)	-6.98/-5.63	-7.49/-8.79	-6.66/-7.27	-8.39/-10.5	-12.06/-12.33	-13.21/-15.28	-19.1/-18.74	-18.39/-16.19	-11.18/-9.97	-9.86/-5.26	-5.82/-8.21	-5.09/-4.98	-6.56/-8.06	-7.88/-14.67	-18.03/-18.1	-18.57/-18.32	-18.03/-13.7	-18.25/-17.89	-18.21/-18.72	-18.21/-18.38	-14.73/-10.32	-9.04/-11.12	-10.17/-11.53	-8.9/-7.29
Θ(150°)	-10.37/-6.14	-8.11/-10.37	-8.05/-8.23	-8.64/-11.08	-12.56/-11.3	-11.93/-13.78	-17.04/-13.05	-11.28/-10.73	-11.27/-6.85	-5.69/-9.25	-6.01/-2.64	-3.28/-5.58	-8.29/-14.07	-17.96/-18.46	-19.01/-17.51	-19.19/-18.53	-18.36/-17.71	-17.44/-17.74	-19.23/-17.49	-18.48/-18.87	-17.78/-16.94	-11.15/-8.92	-10.48/-8.98	-10.24/-10.91
Θ(157.5°)	-7.84/-8.45	-8.8/-10.99	-15.84/-17.05	-12.07/-10.7	-12.61/-16.78	-18.79/-18.66	-18.61/-16.9	-16.52/-12.66	-11.33/-9.8	-8.66/-3.98	-3.64/-5.96	-10.83/-12.8	-13.72/-14.37	-12.57/-12.83	-16.96/-18.02	-17.37/-18.12	-13.25/-13.96	-15.22/-17.68	-17.89/-17.71	-18.19/-18.05	-16.29/-12.69	-11.81/-11.48	-10.26/-9.28	-8.29/-7.36
Θ(165°)	-9.02/-9.97	-10.06/-10.01	-10.63/-12.94	-14.44/-18.11	-17.43/-17.2	-18.1/-17.84	-17.41/-15.65	-13.44/-14.27	-12.21/-8.97	-6.81/-6.5	-7.13/-11.6	-17.87/-12.88	-9.15/-10.55	-13.71/-10.78	-9.29/-8.24	-8.43/-11.42	-13.61/-17.67	-18.4/-19.2	-17.88/-18.5	-14.88/-13.16	-10.76/-9.41	-8.66/-9.05	-9.24/-10.03	-11.22/-9.39
Θ(172.5°)	-5.57/-5.78	-6.25/-7	-7.9/-8.18	-9.96/-10.66	-12.52/-13.59	-18.42/-18.21	-18.5/-17.79	-13.99/-13.22	-10.9/-8.04	-7.95/-10.27	-14.66/-19.14	-18.23/-17.94	-18.25/-12.22	-7.93/-5.57	-5.45/-5.51	-7.45/-7.97	-10.16/-11.28	-15.33/-18.8	-18.24/-17.66	-18.9/-14.16	-12.1/-9.16	-7.66/-6.46	-5.78/-5.37	-5.67/-5.41
Θ(180°)	-4.37/-4.15	-4.17/-3.99	-4.34/-4.77	-5.75/-7.04	-7.84/-9.57	-11.39/-14.44	-17.9/-18.36	-18.36/-14.15	-10.22/-8.97	-10.84/-15.01	-17.28/-16.95	-17.46/-17.12	-8.92/-6.25	-5.54/-6.74	-7.29/-7.75	-10.15/-10.53	-11.54/-13.87	-16.21/-17.94	-18.75/-19.27	-16.83/-14.85	-11.91/-11.01	-9.19/-7.97	-6.78/-6.26	-6.01/-5.54
Freq(Hz)	6.695GPol.	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-18.41/-16.24	-13.55/-12.24	-8.31/-7.02	-6.27/-5.01	-4.91/-3.94	-4.13/-3.59	-3.91/-3.31	-3.59/-4.03	-3.73/-5.22	-5.93/-5.61	-7.06/-9.22	-11.8/-17.61	-18.67/-17.19	-12.06/-10.05	-9.31/-6.9	-5.88/-4.51	-3.8/-3.2	-3.93/-3.18	-3.04/-2.82	-4.19/-5.1	-5.12/-4.69	-8.3/-10.63	-12.51/-15.24	
Θ(7.5°)	-13.03/-16.68	-18.82/-18.55	-15.05/-12.98	-11.66/-11.88	-10.84/-11.07	-8.89/-8.9	-9.27/-9.15	-9.14/-9.12	-8.98/-9.72	-9.02/-9.89	-11.88/-12.7	-9.56/-11.69	-9.5/-6.32	-5.55/-6.35	-6.09/-7.1	-6.49/-6.56	-4.73/-4.23	-3.71/-2.97	-2.75/-2.85	-2.81/-3.61	-4.53/-5.55	-6.79/-8.34	-9.78/-9.9	-10.03/-10.33
Θ(15°)	-15.1/-16.29	-17.6/-17.54	-16.34/-11.67	-10.39/-10.91	-10.61/-9.85	-8.9/-7.9	-8.1/-8.29	-8.8/-10.61	-15.31/-11.36	-8.55/-7.54	-7.26/-7.41	-9.65/-10.48	-10.87/-10.51	-8.89/-7.62	-7.74/-6.25	-5.57/-4.95	-3.9/-2.87	-2.86/-3.21	-3.2/-3.18	-2.88/-2.57	-2.49/-2.29	-3.82/-5.58	-7.35/-7.58	-9.85/-14.33
Θ(22.5°)	-11.16/-11.64	-14.67/-15.12	-14.22/-14.76	-12.8/-10.19	-8.65/-9.33	-9.72/-11.31	-11.98/-11.3	-10.56/-10.39	-12.56/-9.6	-9.73/-6.61	-7.65/-10.25	-10.64/-10.28	-10.23/-12.53	-10.95/-8.31	-6.47/-6.09	-5.4/-44	-1.95/-1.59	-1.77/-3.1	-3.26/-3.59	-2.53/-1.59	-1.82/-3.13	-2.48/-3.53	-6.34/-5.46	-8.36/-11.04
Θ(30°)	-6.6/-10.03	-10.27/-7.9	-11.91/-12.22	-9.42/-7.61	-7.09/-8.7	-8.9/-7.96	-8.43/-9.76	-9.29/-9.73	-6.25/-5.39	-6.3/-8.12	-9.88/-7.1	-10.77/-13.19	-9.98/-8.34	-7.51/-7.86	-8.8/-7.31	-6.59/-3.78	-1.87/-2.52	-3.27/-3.33	-1.79/-1.22	-2.89/-2.14	-1.77/-4.21	-7.42/-4.81	-7.76/-5.99	-8.56/-6.64
Θ(37.5°)	-7.52/-8.46	-8.74/-7.74	-7.15/-3.31	-5.71/-5.46	-8.22/-10.16	-8.53/-7.31	-6.99/-7.83	-7.31/-5.69	-5.28/-5.55	-10.09/-12.09	-8.84/-8.86	-11.92/-9.87	-18.66/-12.17	-8.4/-9.16	-6.67/-5.9	-3.99/-3.59	-2.23/-2.61	-3.17/-3.94	-2.33/-1.19	-1.84/-2.23	-1.96/-3.21	-3.5/-5.88	-5.49/-7.78	-6.55/-7.61
Θ(45°)	-12.75/-8.37	-5.31/-5.85	-4.99/-4.27	-4.63/-5.69	-5.58/-5.84	-5.13/-4.21	-4.56/-7.38	-9.99/-9	-5.77/-6.88	-10.35/-11.3	-8.12/-10.06	-11.06/-8.7	-7.57/-5.88	-7.63/-6.87	-9.56/-9.49	-6.16/-9.04	-6.4/-6.02	-3.28/-4.31	-1.76/-2.33	-6.3/-6.66	-6.99/-4.56	-5.8/-5.29	-8.2/-7.3	-6.74/-6.22
Θ(52.5°)	-10.46/-9.74	-6.52/-5.91	-8.42/-6.31	-4.36/-4.31	-3.87/-3.78	-4.35/-6.67	-5.82/-6.67	-7.02/-7.05	-6.49/-6.58	-7.08/-6.74	-7.16/-6.45	-6.02/-6.55	-7.08/-6.71	-8.58/-7.47	-10.67/-6.5	-7.33/-3.51	-3.07/-4.69	-3.7/-5.93	-3.34/-9.4	-3.99/-5.31	-6.17/-5.61	-10.84/-5.07	-9.72/-7.66	-9.89/-9.23
Θ(60°)	-7.3/-8.23	-6.22/-6.93	-6.52/-4.56	-5.08/-3.75	-3.1/-2.98	-4.07/-4.03	-4.99/-4.85	-3.53/-7.81	-5.53/-3.42	-5.94/-8.8	-4.05/-5.08	-4.08/-4.49	-5.03/-6.62	-5.42/-5.13	-4.15/-3.48	-4.17/-4.37	-3.63/-6.13	-4.19/-4.46	-3.86/-4.79	-5.57/-6.53	-6.28/-4.45	-6.71/-7.91	-8.25/-10.18	-10/-6.16
Θ(67.5°)	-3.71/-4.43	-3.58/-4.6	-4.42/-3.76	-3.32/-12.2	-1.75/-3.59	-3.53/-3.18	-3.99/-3.09	-1.71/-7.26	-4.8/-2.16	-5.81/-6.31	-5.78/-8.04	-4.1/-7.22	-5.74/-5.6	-4.32/-6.51	-5.72/-5.76	-6.51/-6.27								



Radiated Composite Gain Data 6GHz U-NII 7~U-NII 8

Appendix C

Θ (60°)	-14.55/-19.08	-19.3/-17.31	-16.39/-10.31	-8.14/-9.14	-8.87/-9.05	-8.61/-3.97	-5.38/-4.47	-12.31/-6.72	-4.3/-10.06	-5.44/-8.04	-13.46/-8.43	-9.8/-12.05	-13.4/-18.76	-17.46/-12.26	-16.35/-7.01	-4.44/-8.39	-6.95/-10.13	-7.17/-6.34	-10.87/-9.04	-4.85/-5.37	-9.17/-11.84	-9.72/-15.82	-12.87/-13.62	-13.2/-18.43
Θ (67.5°)	-16.12/-18.06	-13.78/-13.88	-12.67/-13.7	-14.98/-9.3	-8.59/-13.48	-7.19/-6.33	-5.58/-11.39	-9.14/-7.92	-7.67/-7.28	-13.76/-13.73	-12.94/-11.93	-11.92/-17.23	-12.41/-19.01	-10.7/-15.32	-19.06/-9.47	-5.18/-7.15	-7.97/-8.77	-7.63/-4.24	-8.24/-12.65	-8.1/-9.87	-6.95/-7.25	-10.96/-11.17	-10.65/-17.17	-18.6/-15.37
Θ (75°)	-14.89/-13.9	-10.13/-9.46	-8.81/-15.61	-12.29/-10.85	-8.55/-8.53	-9.2/-10.94	-10.71/-12.48	-15.4/-12.41	-12.94/-13.45	-18.52/-18.24	-17.73/-17.72	-17.22/-19.53	-17.25/-12.37	-18.48/-18.92	-18.59/-12.05	-14.08/-14.4	-11.81/-8.72	-6.19/-4.63	-5.51/-7.2	-6.69/-7.33	-14.48/-5.31	-6.57/-10.96	-8.29/-13.88	-13.86/-18.23
Θ (82.5°)	-18.95/-10.74	-15.55/-11.04	-11.62/-9.44	-18.47/-10.54	-11.11/-8.42	-9.95/-8.01	-7.81/-13.52	-11.93/-9.14	-12.53/-16.22	-8.53/-9.72	-18.76/-18.32	-13.79/-13.35	-12.18/-16.66	-18.7/-14.29	-15/-10.65	-16.94/-18.65	-12.9/-6.83	-13.28/-10.08	-16.8/-7.78	-5.42/-5.72	-12.84/-10.68	-7.92/-8.3	-10.59/-17.4	-9.15/-14.8
Θ (90°)	-17.49/-15.47	-17.48/-11.7	-13.76/-8.35	-14.97/-11.65	-6.89/-9.63	-7.69/-4.37	-5.19/-11.14	-5.41/-5.87	-10.12/-8.53	-10.25/-12.69	-7.39/-18.3	-18.74/-11.15	-18.43/-10.78	-18.02/-17.78	-17.99/-18.42	-12.4/-18.31	-14.48/-8.79	-10.81/-12.02	-15/-5.33	-9.26/-3.47	-5.87/-18.82	-13.11/-7.94	-8.33/-10.29	-10.2/-14
Θ (97.5°)	-16.58/-17.07	-16.91/-17.93	-11.53/-7.98	-9.38/-9.87	-6.59/-7.48	-6.76/-4.62	-5.97/-16.66	-3.15/-5.84	-1.46/-8.4	-7.25/-11.49	-7.35/-16.91	-17.34/-11.5	-16.43/-18.25	-18.02/-12.51	-14.05/-19.13	-12.27/-11.26	-19.31/-8.11	-9.08/-8.19	-17.59/-5.12	-9.29/-4.3	-3.35/-11.89	-11.2/-14.17	-12.22/-9.03	-8.32/-14.46
Θ (105°)	-18.36/-14.35	-14.88/-12.86	-8.94/-9.42	-8.63/-7.74	-4.35/-6.45	-5.56/-6.19	-13.39/-4.19	-6.38/-8.77	-9.65/-6.78	-6.63/-11.29	-14.52/-16.48	-18.58/-18.11	-17.33/-18.73	-18.7/-16	-12.27/-10.23	-16.48/-16.24	-18.62/-9.39	-8.99/-7.68	-12.39/-9.15	-14.15/-8.44	-3.95/-5.74	-18.68/-6.33	-13.75/-10.46	-18.46/-18.33
Θ (112.5°)	-18.54/-17.79	-15.53/-9.8	-11.52/-8.8	-12.75/-11.21	-7.24/-9.86	-18.26/-11.85	-14.75/-7.24	-6.95/-15.83	-8.86/-11.42	-16.83/-6.1	-12.04/-19.32	-16.8/-17.23	-15.8/-17.93	-12.01/-17.92	-17.95/-18.55	-13.25/-9.74	-18.05/-18.58	-9.08/-10.06	-9.62/-9.47	-8.3/-13.12	-8.41/-6.69	-7.76/-10.97	-11.23/-13.99	-18.02/-17.61
Θ (120°)	-18.17/-17.26	-13.44/-18.18	-18.62/-17.3	-18.74/-12.52	-17.48/-16.01	-7.8/-6.07	-17.37/-10.15	-4.24/-6.98	-13.71/-7.79	-17.94/-18.46	-14.23/-18.68	-9.38/-19.3	-15.82/-18.32	-17.72/-14.37	-11.29/-19.02	-11.52/-18.1	-17.67/-9.83	-8.66/-7.77	-4.08/-9.9	-18.4/-8.46	-11.77/-14.3	-17.51/-15.04	-13.9/-16.05	
Θ (127.5°)	-17.78/-15.85	-16.22/-18.54	-10.23/-10.45	-8.24/-5.58	-6.15/-11.27	-5.67/-7.07	-12.52/-4.16	-8.01/-8.33	-18.35/-11.67	-10.51/-11.74	-16.02/-15.32	-18.27/-18.71	-15.76/-17.7	-16.65/-12.24	-11.74/-11.66	-15.89/-17.75	-13.11/-8.77	-5.81/-9.46	-10.97/-6.41	-3.44/-4.6	-12.59/-6.56	-4.17/-13.97	-12.41/-13.23	-18.42/-17.41
Θ (135°)	-17.88/-17.87	-18.21/-10.57	-10.13/-17.88	-16.53/-9.94	-8.23/-18.19	-7.13/-6.96	-17.53/-4.28	-4.49/-17.78	-7.61/-9.43	-18.11/-14.1	-18.12/-18.3	-18.88/-18.7	-17.28/-17.79	-18.61/-17.75	-17.72/-18.37	-13.37/-18.41	-17.99/-14.29	-7.42/-6.68	-13.78/-11.21	-4.61/-3.47	-5.78/-10.23	-6.16/-5.88	-8.74/-13.72	-17.89/-11.76
Θ (142.5°)	-17.3/-13.3	-15.31/-8.81	-7.82/-12.76	-15.39/-10.89	-17.77/-16.27	-1.47/-8.79	-5.87/-11.42	-11.46/-6.07	-7.43/-2.96	-8.08/-12.91	-18.67/-18.08	-18.83/-17.74	-17.81/-17.98	-17.4/-17.41	-17.84/-19.03	-18.66/-18.49	-18/-13.26	-8.83/-7.1	-9.81/-12.39	-9.01/-9.08	-11.05/-15.72	-5.74/-4.34	-4.78/-7.12	-12.29/-18.5
Θ (150°)	-18.46/-13.46	-12.13/-14.56	-10.41/-15.92	-16.59/-14.45	-14.97/-18.16	-9.43/-8.23	-17.62/-11	-5.22/-4.3	-6.31/-16	-15.52/-11.5	-12.61/-15.48	-18.14/-13.63	-15.58/-15.2	-18.74/-18.72	-18.37/-18.04	-18/-16.15	-10.35/-10.77	-18.37/-18.01	-10.66/-9.5	-10.77/-11.32	-10.2/-14.01	-17.59/-11.51	-9.48/-9.22	-10.49/-16.22
Θ (157.5°)	-11.13/-15.97	-17.71/-17.72	-16.58/-19.31	-13.93/-10.43	-7.13/-6.96	-11.8/-6.39	-3.83/-3.88	-6.59/-11.53	-18.33/-18.25	-13.07/-16.37	-17.96/-17.66	-18.39/-19.18	-18.71/-16.04	-15.38/-15.54	-15.34/-12.86	-9.01/-7.58	-8.16/-13.06	-15.69/-18.56	-14/-9.84	-8.8/-8.19	-8.79/-11.5	-15.74/-17.05	-18.72/-18.47	-13.73/-15.02
Θ (165°)	-18.32/-18.11	-18.17/-14.74	-18.19/-15.65	-14.19/-13.74	-8.07/-6.69	-4.8/-5.92	-5.32/-5.61	-17.91/-17.96	-17.98/-15.29	-18.64/-17.57	-18.23/-18.66	-18.22/-16.24	-13.44/-14.99	-15.7/-19	-17.72/-15.3	-12.66/-14.1	-14.7/-14.81	-11.09/-8.75	-7.64/-7.27	-10.47/-7.32	-8.03/-9.45	-12.32/-18.26		
Θ (172.5°)	-18.63/-18.6	-15.99/-14.23	-12.23/-9.36	-8.75/-7.4	-7.8/-7.41	-7.59/-7.52	-10.23/-13.24	-15.37/-17.65	-18.37/-18.09	-19.24/-18.1	-19.61/-18.71	-18.33/-15.81	-16.14/-14.07	-11.74/-9.91	-11.14/-10.21	-10.53/-10.6	-10.88/-12.06	-12.65/-11.93	-11.14/-12.55	-13.1/-12.12	-12.68/-11.98	-12.48/-14.13	-14.65/-16.66	-19.14/-18.93
Θ (180°)	-14.29/-14.83	-14/-13	-14.73/-14.31	-12.96/-12.25	-9.76/-10.32	-10.43/-10.16	-10.76/-10.96	-14.53/-17.93	-13.42/-9.68	-8.28/-8.4	-10.44/-11.5	-17.06/-14.21	-18.2/-15.49	-15.25/-13.39	-13.8/-11.71	-11.41/-9.17	-9.78/-8.99	-9.01/-8.37	-8.88/-9.03	-9.67/-10.32	-12.26/-14.13	-15.65/-17.86	-17.64/-18.66	-16.98/-16.59
Freq(Hz)	6.995GPol.	ThetaAnt.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-2.49/-2.52	-2.76/-3.14	-2.89/-3.25	-4.31/-4.9	-5.85/-7.66	-7.24/-8.8	-13.23/-18.82	-18.87/-18.64	-18.31/-11.15	-8.2/-6.71	-7.27/-8.16	-7.06/-5.24	-5.92/-5.52	-7.72/-7.11	-8.22/-9.55	-10.87/-19.3	-15.57/-17.75	-19.08/-17.66	-18.11/-18.03	-16.88/-13.61	-11.14/-9.67	-8.78/-7.71	-6.49/-4.54	-3.26/-2.55
Θ (7.5°)	-2.56/-1.66	-1.53/-1.07	-1.15/-1.88	-3.06/-5.4	-5.72/-8.01	-9.56/-12.16	-14.58/-15.85	-17.92/-18.26	-18.95/-12.8	-10.57/-10.89	-8.11/-5.46	-7.21/-5.94	-7.61/-8.02	-7.18/-8.93	-9.92/-13.12	-14.03/-14.62	-13.51/-14.06	-14.58/-16.46	-17.63/-18.68	-18.91/-17.19	-15.68/-8.45	-5.67/-4.45	-3.58/-2.58	
Θ (15°)	-0.57/-0.12	0.320/42	-0.79/-2.06	-5.3/-6.44	-6.56/-4.74	-7.87/-7.72	-10.32/-12.32	-10.99/-12.62	-10.36/-9.29	-7.38/-6.67	-5.65/-4.99	-2.71/-3.35	-3.19/-5.02	-7.04/-8.47	-10.16/-10.48	-11.42/-10.8	-11.37/-11.67	-14.87/-15.41	-13.56/-11.98	-12.96/-16.23	-10.86/-8.81	-7.5/-4.94	-3.13/-2.38	-2.23/-1.26
Θ (22.5°)	-0.550/-19	-0.161/-0.09	-0.23/-1.78	-3.89/-4.84	-4.56/-5.49	-12.5/-5.99	-6.92/-7.68	-7.38/-11.2	-9.31/-9.11	-12.17/-12.85	-17.84/-10.9	-7.72/-8.27	-14.91/-15.5	-14.85/-13.6	-17.86/-17.16	-18.33/-18.57	-17.24/-18.75	-17.61/-17.83	-17.41/-17.48	-13.77/-16.45	-13.91/-9.43	-8.02/-7.58	-4.73/-4.14	-2.59/-0.9
Θ (30°)	-1.22/-0.92	-1.171/-1.36	-1.09/-2.76	-4.81/-3.9	-3.59/-7.51	-6.13/-2.78	-11.71/-17.48	-11.54/-14.49	-15.88/-19.97	-13.87/-14.16	-11.37/-9.81	-7.96/-6.71	-7.55/-9.65	-13.21/-11.66	-9.25/-9.12	-7.71/-9.82	-17.77/-9.89	-9.71/-8.45	-7.42/-6.42	-15.14/-13.61	-10.27/-5.39	-3.26/-0.83	-0.68/-2.31	
Θ (37.5°)	-0.9/-2.72	-2.64/-2.68	-1.26/-1.01	-2.51/-5.65	-4.49/-7.98	-6.73/-13.14	-11.78/-10.67	-3.7/-8.04	-11.5/-12.18	-14.39/-10.44	-18.74/-16.22	-12.09/-7.94	-6.62/-10.57	-13.39/-15.21	-9.89/-11.49	-10.81/-9.94	-8.32/-6.67	-5.58/-8.46	-5.25/-6.67	-61/3.56	-11.37/-11.3	-17.78/-3.92	-1.87/-1.2	-0.53/-0.72
Θ (45°)	-1.71/-1.34	-0.1/-1.32	-4.37/-2.63	-2.84/-8.4	-3.7/-5.46	-4.56/-14.58	-4.13/-3.38	-5.88/-9.55	-13.76/-14.11	-10.4/-6.79	-8.89/-15.38	-9.67/-13.9	-11.08/-9.02	-11.42/-17.7	-12.35/-12.67	-9.22/-6.49	-9.83/-15.55	-11.08/-10.47	-13.99/-10.55	-6.26/-4.65	-4.07/-6.21	-8.33/-1.54	-5.13/-3.7	-2.45/-0.3
Θ (52.5°)	-0.181/57	-1.33/-8.5	-1.14/-1.05	-5.83/-2.87	-1.76/-3.48	-2.77/-6.22	-3.59/-4.02	-8.4/-16.39	-18.47/-18.25	-18.48/-13.84	-13.21/-10.32	-8.63/-11.24	-7.47/-16.76	-17.68/-17.93	-12.83/-15.13	-16.74/-7.45	-16.07/-18.3	-9.84/-9.99	-3.74/-6.96	-7.91/-5.71	-5.11/-5.59	-6.15/-1.56	-10.39/-2.09	
Θ (60°)	1.42/1.99	1.841/63	0.56/-1.51	-3.25/-4.27	-1.66/-1.81	-2.08/-2.29	-2.7/-6.76	-4.77/-10.04	-5.42/-4.92	-18.26/-9.14	-4.73/-7.82	-17.7/-8.25	-2.32/-4.86	-5.77/-5.14	-8.94/-6.74	-5.5/-12.33	-7.47/-9.52	-4.59/-7.78	-7.19/-4.09	-0.93/-0.99	-5.59/-5.15	-1.67/-2.75	-3.7/-0.99	-0.491/36
Θ (67.5°)	3.890/99	1.791/58	1.381/13	-1.05/-2.05	-1.76/-1.28	-3.42/-1.8	-3.47/-5.28	-5.5/-3.74	-1.35/-3.2	-9.5/-1.16	-5.69/-5.1	-1.97/-6.02	-2.420/23	-0.88/-5.52	-6.74/-2.17	-5.07/-6.43	-12.1/-10.77	-6.52/-2.68	-8.85/-8.33	-2.41/-0.75	-2.16/-4	-1.210/78	-4.91/-3.88	-3.062/45
Θ (75°)	2.971/19	0.432/08	-0.66/-1.43	-1.73/-2.03	-3.09/-3.48	-2.39/-4.55	-5.62/-4.52	-5.96/-4.37	-4.17/-4.3	-3.13/-2.47	-9.3/-17.42	-7.16/-5.05	-8.2/-8.07	-18.25/-6.03	-4.78/-6.57	-8.34/-4.18	-2.41/-2.37	-5.18/-6.3	-1.66/-5.62	-1.18/-1.69	-3.060/99	-3.03/-2.84	-2.99/-0.82	
Θ (82.5°)	-0.390/08	-2.350/-0.38	0.70/-75	-2.72/-0.96	-3.11/-4.06	-5.29/-5.86	-3.12/-5.19	-12.03/-8.4	-3.52/-5	-2.75/-7.18	-11.34/-10.5	-1.84/-15.01	-8.62/-18.37	-8.57/-7.77	-13.17/-8.51	-2.53/-8.97	-9.5/-6.86	-4.83/-8.68	-4.92/-4.89	-1.91/-3.86	-1.53/-3.07	-0.790/32	-0.96/-1.54	-1.471/385
Θ (90°)	-4.56/-3.1	-1.66/-2.28	-0.470/67	-0.86/-1.34	-1.54/-2.67	-5.5/-7.21	-4.48/-1.58	-12.68/-5.23	-9.79/-7.11	-8.03/-18.38	-13.89/-18.74	-6.84/-19.02	-19.32/-8.87	-18.66/-12.37	-5.45/-18.22	-7.53/-10.39	-17.95/-18.45	-12.37/-9.63	-10.41/-2.97	-6.93/-14.2	-6.1/-6.17	-1.21/-2.05	-0.42/-1.8	-1.76/-2.58
Θ (97.5°)	-2.74/-4.99	-6.36/-3.65	-5.01/-0.97	-3.29/-1.86	-0.26/-3.43	-7.85/-3.04	-5.05/-3.76	-4.96/-6.31	-9.51/-11.5	-9.21/-16.27	-16.28/-13.26	-6.45/-8.63	-9.23/-15.47	-18.79/-8.47	-12.8/-18.24	-6.89/-11.11	-10.7/-4.44	-6.45/-8.28	-11.31/-2.33	-7.44/-1.2	-1.88/-5.49	-5.46/-1.46	-6.28/-1.31	-3.85/-1.61
Θ (105°)	-2.7/-4.72	-4.89/-5.93	-7.1/-6.24	-8.02/-8.52	-6.66/-5.57	-6.32/-2.97	-6.43/-3.45	-1.76/-3.65	-1.37/-7.8	-5.84/-7.53	-3.74/-14.18	-13.3/-15.73	-16.28/-12.4	-16.04/-15.79	-10.75/-16.64	-5.14/-7.63	-7.430/31	-2.0						



Radiated Composite Gain Data 6GHz U-NII 7~U-NII 8

Appendix C

Θ(105°)	-13.93/-12.01	-17.42/-18.91	-18.52/-18.11	-17.79/-10.51	-14.97/-18.44	-12.94/-15.13	-11.07/-12.58	-11.68/-10.68	-16.45/-13.64	-16.27/-17.92	-14.64/-18.99	-16.7/-18.72	-12.14/-18.92	-17.77/-17.54	-15.96/-18.07	-11.77/-9.77	-15.19/-15.18	-14.36/-9.91	-12.15/-9.21	-7.69/-8.15	-14.33/-9.55	-9.83/-10.61	-8.9/-13.86	-16.13/-12.19
Θ(112.5°)	-13.15/-13.37	-13.13/-18.57	-18.45/-17.3	-16.9/-15.84	-15.11/-18.47	-18.65/-10.91	-12.12/-7.7	-16.35/-9.59	-9.01/-13.11	-11.23/-11.75	-19.2/-18.74	-18.01/-13.06	-15.19/-14.73	-17.22/-14.76	-14.55/-17.65	-11.24/-10.57	-16.56/-16.26	-18.69/-10.38	-9.71/-8.6	-7.69/-8.56	-8.92/-11.85	-9.19/-8.16	-9.08/-15.37	-14.9/-12.59
Θ(120°)	-8.61/-14.46	-15.43/-15.42	-17.94/-17.47	-18.17/-17.77	-16.79/-16.08	-13.68/-8.99	-18.51/-7.58	-9.13/-14.17	-15.96/-10.3	-12.86/-18.64	-16.35/-10.44	-13.25/-18.06	-12.75/-18.83	-17.27/-19.04	-17.51/-8.34	-13.09/-11.23	-11.32/-12.16	-10.73/-8.38	-6.88/-6.21	-6.28/-6.02	-6.23/-6.15	-6.22/-6.8	-10.79/-5.41	
Θ(127.5°)	-10.92/-19.14	-18.99/-18.17	-18.56/-16.8	-18.56/-14.76	-14.49/-9.48	-10.02/-10.16	-6.79/-14.49	-10.62/-10.08	-12.08/-18.22	-17.72/-18.49	-18.31/-15.56	-13.95/-18.58	-14.38/-17.83	-11.3/-15.6	-17.71/-13.54	-14.03/-10.32	-7.47/-13.32	-14.58/-14.56	-11.44/-7.21	-6.39/-6.13	-4.8/-7.81	-8.51/-4.35	-6.09/-6.49	-5.93/-8.28
Θ(135°)	-18.29/-18.99	-18.71/-17.63	-12.74/-11.81	-15.83/-12.55	-7.5/-11.74	-7.64/-13.82	-9.01/-9.41	-8.62/-10.96	-11.67/-17.37	-18.9/-18.42	-17.73/-17.78	-18.01/-17.83	-18.58/-16.82	-16.05/-18.31	-17.17/-18.03	-17.58/-10.54	-8.95/-14.76	-11.24/-12.58	-17.96/-13.13	-10.98/-10.76	-8.54/-6.97	-9.31/-11.95	-9.78/-9.16	-9.45/-16.45
Θ(142.5°)	-11.42/-12.34	-15.44/-19.06	-17.57/-18.49	-14.19/-12.7	-9.03/-6.94	-13.19/-12.36	-7.77/-6.51	-9.72/-10.64	-16.05/-17.85	-18.78/-17.65	-17.89/-18.56	-17.88/-16.33	-18.59/-17.58	-18.27/-18.62	-18.78/-18.17	-17.64/-13.6	-13.44/-12.67	-14.62/-11.77	-14.59/-9.53	-6.8/-7.21	-7.19/-6.79	-5.93/-6.99	-7.64/-9.38	-9.39/-10.01
Θ(150°)	-11.24/-11.21	-11.88/-11.19	-13.58/-12.92	-13.21/-11.16	-9.33/-13.15	-8.46/-6.87	-8.43/-11	-18.74/-17.57	-18.54/-18.26	-18.35/-15.8	-15.71/-14.9	-14.66/-11.48	-13.86/-18.73	-16.11/-18.02	-17.89/-17.6	-16.31/-13.95	-18.85/-15.17	-13.15/-10.78	-13.19/-12.44	-8.34/-8.7	-12.41/-17.99	-14.06/-11.26	-10.61/-9.28	-9.72/-9.57
Θ(157.5°)	-18.36/-16.52	-13.3/-11.64	-13.07/-10.11	-11.77/-14.01	-12.13/-7.99	-6.86/-7.89	-11.02/-18.09	-18.42/-14.73	-16.37/-18.94	-15.9/-15.5	-14.77/-18.21	-15.18/-16.33	-17.05/-18.55	-17.62/-17.06	-17.59/-17.6	-11.65/-11.4	-14.56/-17.6	-14.39/-9.05	-8.53/-9.91	-8.28/-6.08	-4.78/-4.7	-6.42/-8.71	-10.76/-14.84	-15.5/-19.15
Θ(165°)	-17.83/-18.76	-18.73/-18.36	-18.37/-17.92	-12.59/-11.33	-9.55/-10.65	-13.3/-16.47	-13.37/-13.85	-12.43/-11.34	-13.3/-11.78	-14.59/-15.36	-11.84/-10.53	-9.71/-10.5	-11.46/-13.45	-18.35/-17.83	-19.3/-16.53	-18.36/-17.68	-18.45/-14.42	-11.94/-10.48	-10.18/-9.57	-8.57/-7.83	-6.59/-6.9	-6.58/-8.24	-10.34/-12.8	-14.79/-18.14
Θ(172.5°)	-13.99/-17.32	-18.65/-18.05	-18.68/-17.77	-18.16/-13.93	-11.82/-17.5	-19.07/-15.48	-16.77/-17.91	-14.93/-9.43	-8.31/-10.03	-10.65/-11.68	-18.03/-18.49	-18.52/-17.01	-17.35/-15.4	-17.98/-16.82	-16.85/-16.35	-16.68/-14.16	-12.26/-11.15	-10.57/-9.69	-9.35/-9.29	-9.18/-9	-8.65/-8.48	-8.31/-8.75	-8.93/-11.26	-11.2/-14.06
Θ(180°)	-18.9/-18.05	-18.58/-17.97	-18.52/-14.6	-13.32/-13.58	-15.79/-15.71	-15.41/-16.24	-18.6/-10.74	-7.49/-7.15	-6.59/-8.97	-8.17/-10.41	-9.33/-9.96	-10.48/-12.51	-14.43/-18.55	-17.99/-18.38	-18.83/-19.02	-14.72/-13.39	-11.59/-10.72	-10/-9.56	-9.02/-9.61	-10.03/-10.04	-11.43/-12.16	-13.73/-15.04	-15.74/-17.33	-17.47/-17.36
Freq(Hz)	6.995GPol.	Theta/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-7.49/-8.28	-7.86/-8.25	-8.04/-8.23	-8.08/-10.6	-12.83/-12.06	-10.98/-13.61	-18.07/-18.57	-18.55/-14.96	-17.8/-11.04	-9.71/-7.74	-6.69/-5.59	-5.03/-4.12	-3.82/-3.66	-4.05/-3.82	-5.04/-5.43	-5.94/-7.43	-7.95/-8.1	-8.54/-9.02	-9.53/-10.12	-10.13/-10.58	-10.18/-10.7	-11.31/-11.32	-10.26/-10.04	-9.29/-8.91
Θ(7.5°)	-13.42/-11.53	-10.27/-11.86	-10.76/-10.83	-9.61/-11.42	-11.64/-12.13	-11.43/-11.82	-12.82/-14.49	-18.89/-17.98	-19.28/-17.39	-12.35/-9.77	-7.32/-6.43	-4.21/-3.94	-2.23/-2.5	-2.3/-2.1	-2.59/-3.67	-4.37/-4.89	-4.91/-5.47	-6.02/-5.83	-5.89/-6.76	-8.89/-10.02	-10.43/-9.82	-10.21/-11.21	-13.23/-13.6	-15.48/-13.41
Θ(15°)	-10.39/-12.19	-11.72/-13	-12.27/-13.99	-14.42/-18.35	-15.53/-11.12	-15.71/-16.83	-16.21/-15.67	-18.06/-17.94	-17.51/-11.05	-7.93/-5.98	-4.54/-4.01	-2.81/-2.67	-1.71/-2.03	-1.72/-1.63	-1.76/-2.22	-4.01/-5.92	-4.88/-3.47	-4.37/-4.69	-6.02/-9.33	-10.57/-9.64	-8/-9.07	-10.31/-11.77	-9.7/-9.97	-9.86/-10.69
Θ(22.5°)	-14.57/-15.41	-16.81/-18.6	-14.46/-13.1	-10.21/-12.1	-12.39/-12.4	-17.39/-11.61	-12.18/-15.01	-12.73/-13.47	-8.72/-5.69	-4.5/-5.56	-4.58/-3.39	-2.81/-3.85	-5.11/-9.71	-5.81/-3.5	-3.79/-4.36	-3.54/-11.1	-4.61/-4.8	-6.46/-6.2	-5.44/-5.82	-5.88/-6.9	-9.37/-9.38	-9.91/-9.89	-9.84/-11.05	-11.67/-11.59
Θ(30°)	-9.42/-11.62	-13.97/-18.4	-11.97/-12.07	-9.5/-8.56	-11.36/-10.91	-6.58/-12.04	-11.38/-7.37	-9.67/-12.22	-9.07/-10.9	-7.62/-7.33	-7.54/-5.01	-2.81/-1.98	-4.69/-5.38	-5.73/-4.32	-2.15/-3.77	-5.01/-6.74	-7.47/-6.12	-7/-7.83	-6.29/-4.57	-4.81/-7.76	-9.91/-9.62	-8.39/-9.16	-8.78/-9.44	-8.86/-7.5
Θ(37.5°)	-9.18/-8.73	-8.67/-6.22	-8.23/-7.6	-9.52/-8.41	-7.38/-10.14	-9.71/-8.62	-7.74/-8.77	-14.46/-11.76	-10.42/-7.14	-7.14/-6.33	-4.94/-3.43	-2.47/-1.8	-2.82/-4.34	-2.53/-3.72	-3.06/-6.27	-3.56/-5.64	-6.98/-6.64	-8.5/-4.81	-7.53/-7.54	-6.45/-6.59	-10.85/-10.16	-8.39/-6.47	-7.35/-12.92	-11.9/-9.77
Θ(45°)	-7.09/-7.96	-7.18/-8.59	-5.28/-4.16	-8.45/-5.88	-4.83/-8.37	-7.07/-10.52	-7.68/-10.96	-5.88/-8.39	-4.21/-5.41	-4.68/-2.67	-3.66/-2.85	-5.23/-1.96	-1.35/-3.59	-2.39/-4.54	-3.27/-5.16	-5/-4.84	-6.3/-5.34	-4.62/-4.52	-4.18/-3.79	-3.97/-5.68	-10.43/-6.86	-5.3/-7.39	-6.85/-7.42	-7.57/-5.1
Θ(52.5°)	-5.55/-2.22	-7.96/-5.96	-2.98/-5.96	-6.38/-6.46	-5.68/-8.89	-6.35/-7.17	-4.36/-7.21	-6.15/-6.03	-7.54/-8.06	-8.76/-4.37	-4.85/-2.98	-5.22/-2.16	-4.63/-6.18	-7.13/-4.64	-6.67/-4.39	-3.78/-4.51	-6.82/-4.38	-2.82/-4.26	-2.55/-4.13	-5.49/-5.55	-4.55/-5.09	-6.02/-7.14	-8.97/-9.74	
Θ(60°)	-3.83/-3.21	-5.05/-5.87	-5.73/-2.25	-4.08/-4.04	-4.54/-8.54	-4.43/-6.53	-4.59/-4.04	-5.66/-7.2	-8.8/-17.88	-6.83/-10.05	-3.97/-5.86	-5.66/-4.17	-2.19/-4.07	-3.55/-9.45	-6.99/-8.62	-7.89/-2.61	-4.53/-4.62	-4.99/-6.7	-3.96/-4.49	-3.33/-3.13	-3.47/-2.55	-4.53/-2.28	-3.9/-4.66	-5.5/-4.28
Θ(67.5°)	-2.88/-2.45	-3.12/-7.3	-2.04/-6.14	-1.81/-2.08	-4.26/-3.34	-4.75/-8.27	-4.67/-6.25	-4.14/-6.8	-6.34/-7.15	-4.62/-8.17	-2.22/-3.12	-1.05/-3.77	-3.61/-4.53	-5.56/-8.97	-4.18/-0.75	-1.93/-6.86	-7/-7.32	-5.18/-4.49	-6.3/-3.49	-4.05/-4.44	-3.27/-3.47	-7.64/-3.31	-4.1/-2.69	
Θ(75°)	-1.79/-4.88	-2.65/-0.78	-3.67/-1.49	-2.72/-4.44	-3.88/-1.58	-9.54/-3.89	-8.71/-6.26	-6.32/-9.64	-12.98/-8.68	-4.64/-6.73	-4.53/-4.06	-2.31/-4.49	-4.22/-5.69	-9.54/-3.42	-5.47/-5.1	-1.89/-3.66	-3.74/-1.6	-6.35/-4.18	-3.41/-3.15	-5.78/-0.89	-4.05/-4.71	-4.41/-3.94	-4.22/-4.53	-2.01/-1.85
Θ(82.5°)	-1.23/-4.41	-1.61/-1.15	-7.57/-3.07	-2.27/-3.75	-1.65/-3.9	-7.42/-3.89	-9.77/-5.51	-8.53/-8.6	-12.95/-8.89	-6.79/-16.11	-6.21/-9.7	-7.77/-15.51	-6.18/-10.44	-18.03/-7.94	-9.5/-5.45	-5.58/-4.96	-6.09/-7.99	-3.63/-3.46	-1.93/-4.27	-2.84/-0.32	-2.39/-4.33	-2.49/-4.24	-2.08/-2.71	-1.43/-1.22
Θ(90°)	-1.26/-2.25	-1.9/-2.03	-4.83/-2.3	-1.65/-2.33	-0.34/-3.62	-3.09/-5.22	-5.75/-5.87	-11.82/-7.56	-13.76/-14.23	-8.62/-17.09	-10.59/-12.56	-13.87/-17.61	-9.13/-15.59	-13.06/-12.95	-11.55/-8.15	-12.31/-7.85	-6.75/-8.13	-2.63/-4.24	-2.49/-3.64	-2.16/-6.04	-2.61/-2.74	-2.05/-2.72	-1.26/-1.13	-2.95/-2.47
Θ(97.5°)	-2/-2.67	-2.97/-1.06	-1.56/-1.11	-1.61/-1.13	-1.78/-5.83	-1.35/-3.67	-4.04/-6.68	-18.85/-14.83	-16.84/-17.05	-8.91/-15.23	-12.01/-12.89	-18.31/-15.98	-17.37/-12.97	-16.71/-14.41	-10.57/-12.67	-8.79/-7.89	-5.32/-9.6	-5.95/-4.86	-4.35/-2.94	-2.84/-2.09	-5.53/-8.82	-4.13/-1.42	-2.79/-1.43	-4.01/-2.2
Θ(105°)	-1.67/-1.86	-1.26/-0.15	0.89/-0.29	-1.21/-2.36	-2.11/-2.77	-1.41/-7.05	-6.83/-9.53	-11.1/-6.42	-12.22/-17.62	-14.71/-17.51	-18.42/-18.71	-18.68/-19	-17.38/-17.53	-17.8/-12.46	-14.38/-12.05	-10.81/-7.15	-9.07/-9.82	-8.41/-8.63	-8.2/-4.3	-3.43/-2.23	-6.53/-4.01	-8.16/-1.38	-1.03/-0.7	-1.39/-0.95
Θ(112.5°)	-0.05/-0.66	-0.96/-0.01	0.58/-0.92	-0.41/-1.51	-0.79/-2.84	-2.48/-6.24	-5.22/-6.78	-6.75/-6.43	-12.71/-15.93	-8.9/-16.88	-17.9/-15.99	-17.71/-17.75	-11/-11.04	-14.19/-10.66	-8.47/-13.51	-12.96/-6.27	-12.83/-9.99	-11.8/-17.13	-10.72/-7.09	-2.73/-4.54	-2.81/-2.2	-7.02/-1.21	-0.9/-0.58	-1.62/-2.94
Θ(120°)	0.86/-0.43	-0.86/-1.57	-0.061/35	2.60/-0.2	-0.04/-3.27	-2.14/-6.05	-3.42/-6.79	-9.38/-7.8	-11.96/-10.93	-8.62/-15.87	-11.6/-10.85	-17.41/-16.71	-11.09/-18.8	-17.96/-13.36	-16.61/-19.43	-12.75/-6.23	-6.18/-9.95	-15.25/-18.99	-7.95/-7.93	-3.49/-7.75	-2.46/-0.1	-7.64/-1.02	-2.07/-2.42	-3.61/-1.96
Θ(127.5°)	-0.88/-1.07	-1.09/-1.93	-0.20/-7.8	6/-0.8	-1.56/-2.46	-3.82/-3.95	-4.09/-5.8	-6.84/-11.73	-16.59/-10.66	-14.64/-16.46	-15.77/-14.49	-18.13/-0.75	-17.31/-17.51	-17.35/-13.31	-16.33/-13.53	-16.23/-9.2	-7.16/-9.74	-13.23/-18.62	-13.98/-9.27	-5.09/-9.05	-6.84/-2.74	-4.27/-5.03	-1.48/-4.75	-1.73/-0.33
Θ(135°)	-0.53/-1.57	-2.83/-4.08	-1.05/-0.58	-0.74/-2.84	-3.18/-4.81	-7.26/-5.7	-6.53/-7.01	-7.42/-1.38	-18.3/-18.03	-16.77/-18.08	-18.78/-16.29	-13.37/-17.92	-18.87/-18.64	-17.35/-13.59	-13.79/-17.65	-18.3/-18.7	-14.24/-13.07	-15.18/-17.13	-12.35/-9.99	-5.53/-6.67	-11.01/-5.69	-3.6/-3.78	-3.36/-3.22	-4.42/-3.14
Θ(142.5°)	-3.47/-4.18	-2.14/-1.73	-0.86/-1.26	-2.35/-6.43	-5.98/-6.91	-8.96/-6.91	-6.45/-9.77	-12.6/-17.38	-13.63/-18.09	-17.72/-18.19	-17.83/-19.09	-12.38/-18.17	-17.55/-18.55	-17.69/-15.35	-12.13/-10.05	-10.49/-10.67	-10.77/-12.38	-12.06/-17.71	-12.52/-9.96	-6.79/-4.7	-5.06/-5.95	-8.1/-7.77	-5.79/-4.1	-4.23/-3.58
Θ(150°)	-4.44/-3.6	-3.91/-1.97	-1.69/-2.97	-3.8/-4.33	-6.83/-7.4	-7.99/-9.05	-9.77/-17.6	-12.29/-10.75	-15.78/-17.61	-17.81/-18.36	-18.96/-16.85	-17.08/-13.97	-11.71/-13.51	-14.52/-11.42	-9.38/-7.63	-8.4/-11.55	-15.14/-1							





Antenna Pattern 2.4GHz and 5GHz U-NII 1~U-NII 3

Appendix D

Θ(22.5°)	-11.17/-13.14	-12.67/-13.90	-11.91/-11.58	-12.18/-8.76	-7.96/-6.57	-9.39/-8.21	-7.46/-6.95	-8.90/-7.61	-8.85/-8.10	-8.67/-7.86	-8.73/-9.20	-8.96/-8.44	-11.28/-12.69	-9.77/-6.26	-7.85/-11.78	-7.46/-3.77	-1.88/-2.00	-3.32/-5.51	-4.75/-3.97	-5.15/-7.76	-8.41/-6.15	-4.86/-6.43	-9.15/-6.66	-8.47/-10.71
Θ(30°)	-10.11/-7.68	-5.18/-6.59	-11.51/-10.52	-14.05/-10.49	-9.36/-10.17	-12.89/-11.08	-9.30/-8.97	-8.79/-9.62	-11.17/-10.12	-11.51/-10.63	-8.75/-4.50	-4.39/-13.72	-15.39/-12.49	-9.86/-3.79	-4.86/-8.41	-4.53/-6.09	-0.36/-3.76	-2.15/-2.12	-1.92/-1.34	-1.02/-1.47	-2.72/-3.43	-2.91/-2.43	-3.62/-7.79	-10.30/-11.17
Θ(35°)	-5.13/-5.98	-5.98/-12.23	-10.99/-8.82	-8.88/-8.23	-7.64/-6.96	-5.13/-7.46	-9.19/-6.46	-4.88/-1.73	-0.38/-0.66	-2.22/-3.10	-6.45/-8.11	-4.95/-7.62	-10.82/-7.29	-5.46/-4.94	-2.01/-1.08	-1.49/-2.12	-0.12/-0.22	-0.32/-0.22	0.69/0.84	1.79/-1.27	-0.31/-2.81	-1.95/-1.06	-1.76/-7.12	-8.94/-6.91
Θ(45°)	-4.88/-15.89	-6.15/-10.17	-4.65/-3.11	-7.69/-9.17	-10.63/-9.27	-6.49/-9.42	-3.67/-3.32	-2.20/-1.81	-2.55/-3.06	-0.93/-3.00	-1.36/-5.01	-8.81/-5.11	-9.59/-4.12	-5.27/-7.09	-3.02/-2.23	-0.80/-2.82	-2.00/-0.58	1.92/-0.02	1.25/-0.49	1.14/-1.61	1.33/-1.16	0.84/-0.60	-2.70/-9.29	-2.71/-4.33
Θ(52.5°)	-11.52/-10.88	-7.11/-13.37	-6.56/-3.22	-6.66/-4.79	-6.72/-7.98	-8.13/-3.05	-1.95/-5.55	-4.83/-6.49	-5.58/-2.43	-3.54/-2.30	-5.23/-3.26	-7.79/-10.15	-13.10/-8.03	-8.91/-6.03	-2.33/-2.54	0.19/-1.89	0.67/-0.57	0.03/0.15	0.03/0.15	-0.56/-0.40	1.41/-2.74	2.33/-0.59	-2.31/-7.09	-1.13/-3.01
Θ(60°)	-10.81/-6.62	-2.02/-12.61	-1.41/-1.48	-12.19/-5.16	-8.19/-14.09	-6.10/-9.63	-6.70/-8.95	-8.89/-5.34	-7.36/-10.35	-5.51/-2.37	-3.54/-4.35	-3.22/-15.01	-15.46/-8.57	-4.51/-2.74	-3.02/-4.17	-1.67/-0.53	-1.05/-1.43	0.12/-0.58	-0.45/-2.27	-0.96/0.02	0.37/-2.54	1.10/-0.03	-7.38/-4.41	-1.22/-6.59
Θ(67.5°)	-9.17/-2.89	-2.20/-3.81	-3.32/-4.85	-5.09/-6.69	-5.11/-6.51	-5.82/-7.89	-0.05/-1.37	-1.11/-2.25	2.14/-2.38	-1.63/-0.03	-1.35/-1.57	0.44/-13.09	-9.67/-9.75	-4.17/-1.79	-3.20/-5.63	-3.76/-1.14	-1.70/-3.83	1.86/-1.18	-1.27/-5.80	-3.45/-0.80	1.18/-2.64	1.25/-0.82	-6.59/-1.83	-2.33/-6.62
Θ(75°)	-3.23/-4.58	-2.53/-6.46	0.98/-1.91	-1.68/-0.85	-1.73/0.01	-1.64/-3.47	1.23/-0.07	0.30/-0.05	1.82/-1.18	-3.51/0.69	-2.12/-1.49	1.92/-4.20	-3.78/-10.99	-3.43/-2.87	-1.66/-3.66	-5.05/-1.28	0.27/-0.05	0.48/0.64	-1.18/-0.04	-2.12/-0.34	2.28/-2.22	-0.35/-2.16	-7.30/-2.49	-8.95/-5.75
Θ(82.5°)	-3.65/-5.89	-2.16/-2.67	0.96/-0.09	-2.99/-1.60	-1.49/-0.36	-2.40/-1.35	1.56/0.29	0.25/-3.94	-2.34/-1.73	-10.66/-2.80	-2.86/-0.58	2.71/-2.45	-2.85/-4.73	-4.94/-5.15	-3.50/-3.52	-3.98/0.75	1.00/-3.01	0.48/-1.10	-1.89/-2.53	0.86/-1.60	3.06/-2.67	-0.37/-1.98	-2.43/-2.53	-5.87/-5.70
Θ(90°)	-4.60/-4.11	-4.26/-0.85	-1.43/-1.40	-4.22/-3.34	-5.45/-2.57	-2.77/-5.27	-0.73/-4.69	-7.17/-13.85	-8.82/-4.03	-9.43/-6.20	-4.29/-6.45	-0.32/-0.11	-4.47/-2.63	-6.09/-13.47	-4.70/-4.59	-6.85/-1.68	0.80/-0.60	0.58/0.01	-2.98/-1.46	0.35/-1.53	3.37/-2.15	0.31/-3.82	0.65/-0.75	-3.09/-5.27
Θ(97.5°)	-2.56/-4.29	-4.79/-1.70	-3.34/-5.30	-2.37/-2.81	-6.65/-7.36	-8.56/-5.71	-0.46/-3.93	-7.03/-14.35	-7.61/-6.39	-11.02/-6.88	-4.64/-2.97	-2.81/-2.99	-7.69/-6.26	-7.97/-7.54	-6.33/-3.25	-5.32/-3.41	-2.11/-1.39	-1.58/-1.50	-1.61/-0.94	-1.81/-1.30	1.60/-1.57	-0.09/-2.09	0.31/-0.75	-0.73/-4.59
Θ(105°)	-4.36/-2.50	-6.62/-5.90	-4.04/-3.23	0.48/-0.43	-2.52/-3.27	-1.188/-7.31	-0.48/0.43	-6.70/-9.98	-8.74/-5.26	-8.51/-4.72	-6.43/-2.75	-5.64/-9.39	-15.63/-5.92	-5.79/-6.62	-9.37/-3.32	-4.42/-4.14	-3.77/-4.26	-4.42/-2.17	-1.38/-4.48	-1.88/-0.05	-2.42/-3.48	-1.92/-3.31	-0.82/-3.49	-2.36/-3.59
Θ(112.5°)	-5.79/-6.42	-3.11/-5.78	-0.85/-0.15	-0.87/-0.27	-2.37/-3.94	-13.21/-9.64	-8.30/-6.99	-11.13/-12.28	-10.77/-7.82	-9.29/-3.65	-12.14/-4.79	-5.11/-5.04	-16.29/-7.65	-10.58/-13.03	-8.68/-5.42	-4.05/-8.90	-6.17/-7.12	-5.65/-5.72	-4.66/-7.32	-2.06/-1.56	-4.32/-0.40	-2.18/-4.74	-2.56/-3.11	-6.67/-4.54
Θ(120°)	-8.55/-6.38	-4.51/-0.42	-4.03/-4.29	-3.60/-2.65	-4.51/-0.97	-3.02/-6.69	-9.13/-9.70	-8.32/-10.97	-9.67/-6.10	-6.14/-5.51	-10.36/-6.59	-2.57/-3.98	-7.69/-6.26	-8.44/-11.29	-11.26/-6.07	-2.48/-6.19	-5.08/-8.53	-0.79/-7.41	-4.57/-8.76	-2.24/-0.95	-4.66/-3.23	-5.81/-5.29	-12.34/-8.46	-1.22/-6.59
Θ(127.5°)	-6.40/-6.72	-6.84/-5.57	-3.92/-6.05	-1.16/-1.90	-0.81/-5.76	-14.89/-4.12	-4.74/-4.51	-6.35/-11.76	-11.72/-9.32	-14.82/-11.60	-12.07/-8.11	-6.83/-11.90	-8.07/-7.69	-4.77/-10.37	-15.52/-14.27	-6.00/-1.04	-4.83/-4.22	-6.15/-5.06	-10.53/-8.96	-14.68/-6.06	-4.76/-6.70	-7.38/-14.65	-7.88/-10.55	-8.58/-11.35
Θ(135°)	-8.55/-2.91	-5.89/-5.12	-5.62/-4.37	-3.67/-3.74	-7.78/-3.29	-2.08/-7.89	-8.45/-11.15	-12.52/-13.81	-9.85/-10.41	-13.64/-13.34	-8.64/-6.20	-5.43/-10.65	-12.07/-9.40	-10.67/-9.40	-8.56/-9.55	-10.78/-9.18	-5.80/-6.57	-8.11/-7.45	-9.96/-10.85	-10.18/-9.07	-8.57/-7.32	-11.05/-8.65	-8.32/-4.27	-5.60/-12.15
Θ(142.5°)	-7.49/-0.67	-8.98/-10.01	-9.44/-6.62	-6.82/-3.98	-4.99/-6.98	-11.35/-2.59	-7.26/-10.21	-10.48/-9.81	-12.49/-14.61	-15.22/-8.01	-8.92/-8.93	-7.55/-7.20	-8.82/-9.02	-8.65/-8.01	-8.71/-10.00	-11.46/-12.51	-14.76/-13.02	-14.27/-9.35	-9.10/-7.41	-9.63/-9.00	-6.99/-4.80	-3.15/-8.50	-10.89/-6.28	-2.94/-3.72
Θ(150°)	-1.92/-3.27	-9.28/-11.77	-7.75/-6.22	-5.86/-9.79	-13.64/-7.93	-4.50/-2.68	-3.24/-4.76	-6.35/-10.11	-13.23/-13.47	-12.51/-11.84	-8.67/-4.76	-3.99/-5.02	-3.76/-3.71	-5.68/-4.22	-4.81/-5.83	-5.90/-9.25	-10.21/-15.03	-9.16/-8.95	-9.37/-9.16	-9.69/-9.53	-9.66/-9.99	-10.34/-9.13	-8.43/-9.27	-9.77/-4.40
Θ(157.5°)	-9.67/-8.76	-7.37/-8.04	-7.78/-5.44	-4.53/-7.59	-7.98/-5.62	-3.81/-4.33	-6.95/-9.86	-8.82/-5.80	-6.52/-5.87	-7.38/-5.25	-4.46/-3.10	-4.23/-3.31	-3.12/-4.08	-5.80/-5.93	-7.08/-6.91	-7.42/-6.98	-4.72/-5.83	-8.79/-12.85	-12.60/-12.28	-10.73/-10.14	-10.91/-9.56	-9.27/-9.96	-8.73/-5.10	-4.93/-6.84
Θ(165°)	-6.44/-7.66	-9.60/-7.14	-8.07/-3.32	-8.64/-7.06	-8.94/-9.57	-10.62/-10.99	-6.91/-4.10	-3.45/-3.96	-4.48/-4.80	-4.41/-5.40	-5.25/-6.22	-6.37/-7.28	-9.16/-8.51	-8.17/-8.50	-10.23/-11.16	-10.90/-9.36	-6.98/-6.67	-7.62/-10.11	-11.14/-13.22	-14.18/-12.61	-11.09/-9.44	-7.05/-6.16	-8.07/-12.62	-11.60/-7.68
Θ(172.5°)	-7.59/-9.94	-10.76/-10.08	-8.37/-7.93	-8.10/-7.89	-11.75/-13.17	-4.98/-5.09	-6.55/-7.08	-7.70/-6.80	-5.91/-7.01	-6.90/-7.79	-8.30/-7.11	-6.52/-6.78	-6.75/-6.59	-7.46/-7.76	-7.46/-6.63	-5.97/-6.26	-6.22/-6.33	-6.24/-6.06	-6.16/-7.47	-8.41/-9.67	-9.35/-8.67	-6.62/-5.37	-6.70/-8.39	-6.70/-8.39
Θ(180°)	-12.09/-12.72	-9.81/-7.97	-7.75/-10.62	-11.25/-10.22	-9.47/-7.21	-5.36/-4.66	-5.27/-6.16	-4.19/-5.53	-5.59/-5.60	-5.73/-5.59	-5.54/-5.74	-5.23/-5.16	-5.80/-6.20	-6.24/-6.29	-7.17/-6.93	-8.12/-7.95	-6.86/-7.38	-8.24/-7.91	-7.85/-7.41	-6.31/-6.92	-6.84/-7.22	-7.15/-6.99	-7.99/-9.20	-7.99/-9.20
Freq(Pol)	2.45GPol	TotalAnt.2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
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°)	-7.08/-7.53	-8.01/-8.62	-9.32/-10.16	-11.23/-12.44	-12.82/-12.23	-11.16/-10.77	-11.44/-11.85	-12.32/-11.65	-10.68/-10.03	-9.33/-8.40	-7.56/-7.26	-7.36/-7.46	-7.31/-6.91	-6.52/-6.26	-6.16/-6.45	-7.16/-8.17	-9.59/-10.41	-6.46/-8.89	-9.17/-10.58	-11.37/-10.09	-8.30/-7.78	-7.94/-7.97	-7.61/-7.16	-7.13/-7.30
Θ(7.5°)	-8.86/-10.28	-11.63/-10.10	-12.78/-12.27	-11.98/-11.48	-10.07/-9.06	-9.31/-7.10	-11.01/-9.45	-8.74/-9.53	-10.87/-10.70	-11.05/-10.28	-9.32/-8.67	-7.66/-7.04	-6.45/-6.07	-5.98/-6.12	-6.61/-7.53	-9.16/-11.43	-14.05/-13.85	-12.31/-11.39	-11.42/-11.50	-11.35/-10.45	-9.36/-8.50	-7.67/-6.91	-6.50/-6.59	-6.96/-7.93
Θ(15°)	-10.75/-13.52	-15.20/-12.60	-9.10/-6.79	-4.86/-4.58	-3.89/-3.46	-3.81/-4.56	-4.64/-4.54	-4.57/-5.09	-5.93/-6.84	-8.06/-9.43	-8.98/-8.35	-6.65/-7.00	-6.65/-6.57	-6.79/-7.42	-10.20/-10.23	-14.34/-15.70	-15.76/-15.22	-15.20/-14.37	-11.67/-10.20	-9.90/-10.70	-11.05/-10.91	-6.59/-7.56	-5.59/-6.52	-7.21/-6.62
Θ(22.5°)	-10.12/-9.97	-9.03/-6.67	-4.96/-4.01	-3.56/-3.27	-2.96/-2.89	-3.42/-4.39	-4.98/-5.14	-5.51/-6.21	-7.04/-7.52	-8.07/-8.71	-8.41/-7.54	-7.31/-6.99	-7.24/-7.56	-7.58/-7.73	-8.77/-10.66	-12.55/-12.47	-11.66/-11.42	-12.12/-13.92	-13.07/-11.63	-11.67/-11.99	-11.64/-11.45	-9.32/-7.60	-6.58/-6.70	-7.52/-8.84
Θ(30°)	-7.21/-6.82	-5.49/-4.00	-3.34/-3.64	-4.38/-4.62	-4.50/-3.47	-4.57/-4.95	-5.06/-5.00	-5.49/-6.63	-8.53/-10.41	-10.81/-9.16	-7.94/-7.13	-6.87/-7.13	-7.17/-6.71	-5.67/-6.87	-4.86/-5.52	-6.27/-6.64	-7.30/-8.48	-9.26/-9.00	-8.99/-9.17	-9.58/-8.98	-10.14/-9.29	-8.01/-7.19	-7.18/-8.41	-8.69/-7.98
Θ(37.5°)	-4.39/-4.92	-4.26/-3.11	-3.00/-4.00	-4.67/-3.60	-2.54/-2.57	-3.42/-4.13	-3.76/-2.84	-2.87/-3.26	-4.53/-6.23	-7.39/-7.29	-6.96/-6.89	-6.48/-6.52	-6.55/-5.89	-3.93/-6.22	-2.46/-3.16	-3.85/-4.30	-5.03/-5.94	-6.21/-5.78	-5.55/-5.83	-6.13/-6.36	-6.89/-6.93	-6.26/-6.13	-7.53/-8.38	-6.36/-4.74
Θ(45°)	-3.21/-4.90	-3.83/-2.56	-2.64/-3.26	-2.91/-4.40	-0.64/-1.41	-3.48/-5.81	-6.08/-4.21	-2.96/-2.60	-3.11/-4.14	-5.09/-5.36	-5.64/-6.31	-5.97/-5.00	-4.91/-5.25	-3.77/-1.99	-1.39/-1.75	-2.41/-3.03	-4.08/-5.38	-5.80/-4.70	-5.54/-5.95	-5.48/-5.73	-5.54/-5.95	-7.14/-5.76	-3.18/-2.21	-3.21/-2.21
Θ(52.5°)	-3.26/-4.24	-2.56/-2.15	-2.75/-3.13	-2.72/-1.83	-1.73/-3.09	-5.18/-6.84	-7.70/-6.98	-5.55/-4.35	-3.97/-4.36	-4.83/-4.31	-4.05/-5.59	-5.52/-3.50	-3.26/-4.78	-3.45/-1.17	-0.65/-1.27	-1.85/-2.42	-3.88/-5.72	-6.39/-5.17	-3.71/-3.49	-4.68/-6.35	-6.04/-4.70	-4.41/-5.27	-5.65/-3.35	-1.37/-1.35
Θ(60°)	-3.67/-3.43	-2.38/-3.01	-4.32/-5.25	-5.62/-4.55	-5.29/-4.89	-3.92/-3.82	-4.69/-5.95	-7.47/-7.82	-6.40/-5.10	-4.48/-3.40	-2.76/-3.90	-5.09/-3.11	-2.19/-3.20	-2.93/-1.26	-0.60/-0.77	-0.79/-1.08	-2.30/-4.16	-5.44/-5.08	-3.81/-3.48	-4.65/-6.04	-4.97/-3.03	-2.55/-3.66	-3.89/-1.89	-0.81/-1.83
Θ(67.5°)	-2.71/-2.17	-2.16/-2.90	-4.17/-6.37	-8.82/-8.61	-5.72/-3.37	-3.28/-2.85	-3.66/-4.04	-5.97/-7.84	-8.58/-6.20	-4.80/-3.59	-2.41/-2.79	-4.29/-3.32	-2.07/-2.37	-2.06/-1.47	-1.55/-1.05	-0.70/-1.02	-1.65/-3.59	-4.73/-4.78	-3.68/-2.83	-3.21/-4.26	-3.84/-1.94	-1.32/-2.07	-2.31/-1.34	-1.362/-2.62
Θ(75°)	-0.50/-9.07	-2.20/-3.22	-4.83/-6.38	-11.09/-7.32	-3.66/-2.21	-2.08/-3.03	-3.72/-3.87	-4.13/-5.32	-7.09/-6.44	-5.41/-4.7														