



Antenna Composite Gain Test Report

FCC ID	2ABLK-GS5239XX
Equipment	GS7 XGS Tri Gateway, GS7 10GE Tri Gateway
Brand Name	Calix
Model Name	GS7 XGS GS5239XG, GS7 10GE GS5239E
Applicant	Calix Inc. 1035 N. McDowell Blvd. Petaluma, CA94954 U.S.A.
Standard	KDB662911 D03 v01
Sample Received	Mar. 25, 2024
Start Test Date	Apr. 11, 2024
Final Test Date	May 22, 2024

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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History of this test report

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1. Operation Mode and Antenna Information

Antenna Position	RF Port			Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	2.4GHz	5GHz	6GHz					
2G5G Ant1	1	3	-	Alpha	290-20543	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G5G Ant2	2	4	-	Alpha	290-20544	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
5G Ant3	-	1	-	Alpha	290-20546	Dipole	I-PEX	5GHz UNII 1~3
5G Ant4	-	2	-	Alpha	290-20545	Dipole	I-PEX	5GHz UNII 1~3
6G Ant1	-	-	1	Alpha	290-20548	Dipole	I-PEX	6GHz
6G Ant2	-	-	2	Alpha	290-20549	Omni	I-PEX	6GHz
6G Ant3	-	-	3	Alpha	290-20547	Dipole	I-PEX	6GHz
6G Ant4	-	-	4	Alpha	290-20550	Omni	I-PEX	6GHz

Note:

2.4GHz Operation Mode (2TX/2RX)

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

2G5G Ant1~2 could transmit/receive simultaneously.

5GHz Operation Mode (4TX/4RX)

2G5G Ant1~2 and 5G Ant3~4 can be used as transmitting/receiving antenna.

2G5G Ant1~2 and 5G Ant3~4 could transmit/receive simultaneously.

6GHz Operation Mode (4TX/4RX)

6G Ant1~4 can be used as transmitting/receiving antenna.

6G Ant1~4 could transmit/receive simultaneously.

2. Table for Multiple Listing

The EUT has two equipment/model names, the difference is listed in the following table:

EUT	Equipment Name	Model Name	BOSA	10G PHY port	SLIC IC
1	GS7 XGS Tri Gateway	GS7 XGS GS5239XG	With	1 port	Brand : Intel Model : SLC220
2	GS7 10GE Tri Gateway	GS7 10GE GS5239E	Without	2 port	Brand : Microsemi Model : Le9632

Note1: From the above, EUT 2 has been selected as representative mode for the test and its data was recorded in this report

Note2: The above information was declared by manufacturer.



3. Table for EUT Supports Functions

Function
AP Router
Bridge
Extender

Note: The above information was declared by manufacturer.

4. 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

5. 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	Rofy Chen	23.5-24.5 / 50-55	Apr. 11, 2024 ~ May 22, 2024

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

6. Test Facility and Configuration

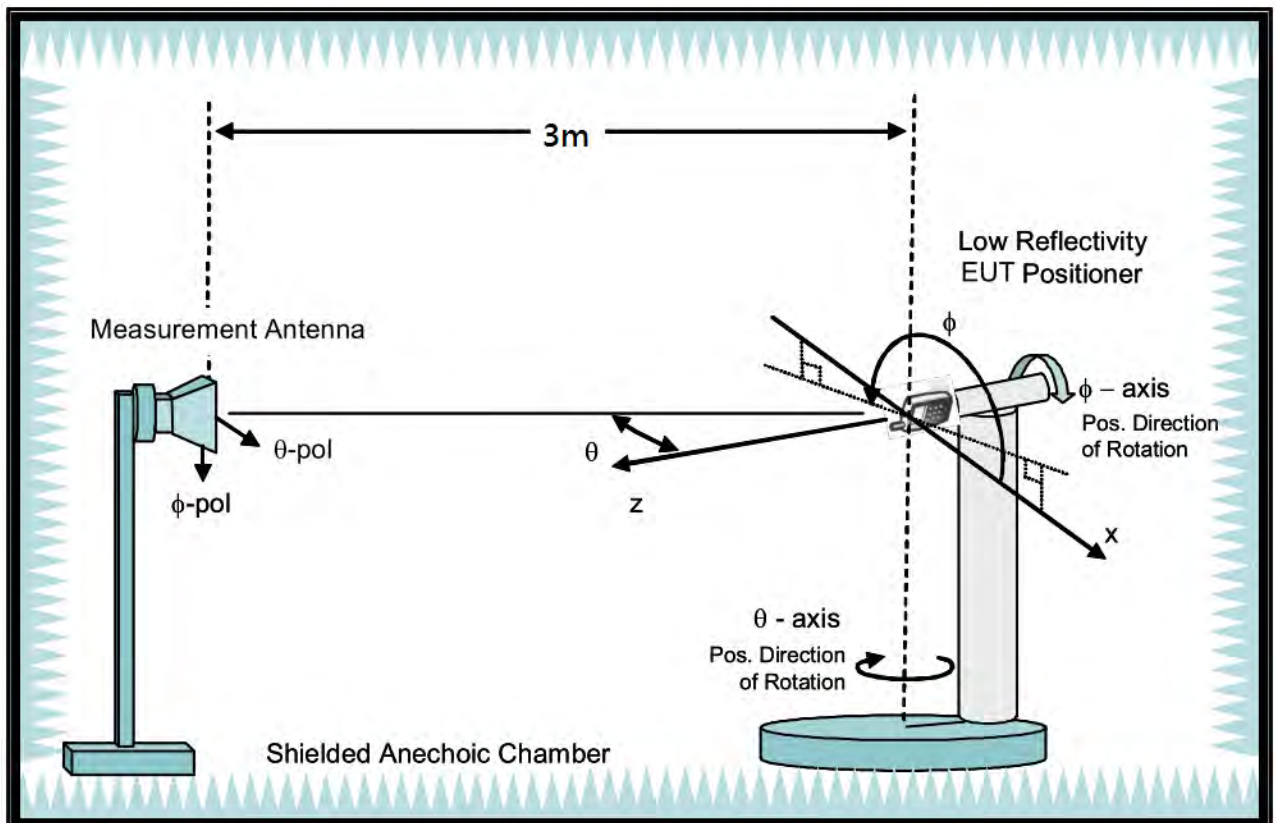
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

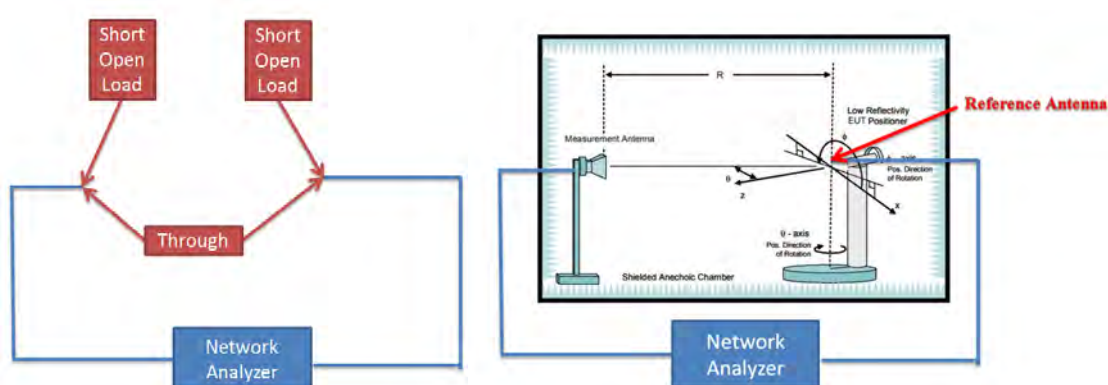
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



7. 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)	-33.55	-33.38	-32.91	-32.29	-32.48	-32.25	-32.33	-32.85	-32.67	-33.37	-32.53	-33.75	-34.72	-35.33
G(phi) reading (dB)	-33.11	-32.68	-32.48	-32.45	-32.85	-31.35	-32.76	-32.68	-32.57	-32.81	-32.85	-33.62	-34.33	-35.29
Reference gain (dBi)	10.3	10.3	10.1	11.1	11.3	11.7	12.1	11.5	11.2	11.1	11.3	11	11.1	10.5
Factor(theta) (dB)	43.85	43.68	43.01	43.39	43.78	43.95	44.43	44.35	43.87	44.47	43.83	44.75	45.82	45.83
Factor(phi) (dB)	43.41	42.98	42.58	43.55	44.15	43.05	44.86	44.18	43.77	43.91	44.15	44.62	45.43	45.79

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.

Factor = gain factor + power gain conversion= (Reference antenna gain)-(G reading)

8. 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 9 tables.

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

9. 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)	1.46	-1.71	0.54	-0.43	0.38
Ant. 2 (dBi)	0.69	1.46	-2.82	1.36	2.43
Ant. 3 (dBi)	-	1.44	2.92	2.17	3.43
Ant. 4 (dBi)	-	1.82	2.87	3.31	-1.61
DG [1SS] (dBi)	4.09	6.88	7.19	7.73	7.39
Polarization	Theta	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	60	97.5	105	105	82.5
$\Phi(^{\circ})$	30	285	300	307.5	75

Note: The DG 1SS max value position is the maximum value of section 13 table DG 1SS Result.

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(1.46/20)}$	$10^{(-1.71/20)}$	$10^{(0.54/20)}$	$10^{(-0.43/20)}$	$10^{(0.38/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(0.69/20)}$	$10^{(1.46/20)}$	$10^{(-2.82/20)}$	$10^{(1.36/20)}$	$10^{(2.43/20)}$
Ant. 3 [$10^{(G/20)}$]	-	$10^{(1.44/20)}$	$10^{(2.92/20)}$	$10^{(2.17/20)}$	$10^{(3.43/20)}$
Ant. 4 [$10^{(G/20)}$]	-	$10^{(1.82/20)}$	$10^{(2.87/20)}$	$10^{(3.31/20)}$	$10^{(-1.61/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.183	0.821	1.064	0.952	1.045
Ant. 2 [$10^{(G/20)}$] value	1.083	1.183	0.723	1.169	1.323
Ant. 3 [$10^{(G/20)}$] value	-	1.18	1.4	1.284	1.484
Ant. 4 [$10^{(G/20)}$] value	-	1.233	1.392	1.464	0.831
Sum All Antenna [Amax]	2.266	4.418	4.578	4.869	4.683
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.09	6.88	7.19	7.73	7.39

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) = $10 \cdot \log(10^{(G_{ant1}/20)} + 10^{(G_{ant2}/20)} + 10^{(G_{ant3}/20)} + 10^{(G_{ant4}/20)} + \dots)^2 / N_{ant}$



DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	-0.57	0.47	-1.9	-2.5
Ant. 2 (dBi)	2.59	3.09	2.5	3.03
Ant. 3 (dBi)	-2.78	-5.24	-5.56	-7.73
Ant. 4 (dBi)	3.76	4.51	4.33	2.95
DG [1SS] (dBi)	7.14	7.44	6.67	5.98
Polarization	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	60	75	67.5	75
$\Phi(^{\circ})$	22.5	30	30	30

Note: The DG 1SS max value position is the maximum value of section 13 table DG 1SS Result.

DG_1SS max value position calculation

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(-0.57/20)}$	$10^{(0.47/20)}$	$10^{(-1.9/20)}$	$10^{(-2.5/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(2.59/20)}$	$10^{(3.09/20)}$	$10^{(2.5/20)}$	$10^{(3.03/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(-2.78/20)}$	$10^{(-5.24/20)}$	$10^{(-5.56/20)}$	$10^{(-7.73/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(3.76/20)}$	$10^{(4.51/20)}$	$10^{(4.33/20)}$	$10^{(2.95/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.936	1.056	0.804	0.75
Ant. 2 [$10^{(G/20)}$] value	1.347	1.427	1.334	1.417
Ant. 3 [$10^{(G/20)}$] value	0.726	0.547	0.527	0.411
Ant. 4 [$10^{(G/20)}$] value	1.542	1.681	1.646	1.404
Sum All Antenna [Amax]	4.552	4.711	4.311	3.982
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	7.14	7.44	6.67	5.98

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) = $10 \cdot \log(10^{(G_{ant1}/20)} + 10^{(G_{ant2}/20)} + 10^{(G_{ant3}/20)} + 10^{(G_{ant4}/20)} + \dots)^{2/N_{ant}}$

10. Summary of Test Result

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.61	4.07	4.41	3.66	3.3
Ant. 2 Max Gain (dBi)	3.15	3.95	3.69	3.56	3.77
Ant. 3 Max Gain (dBi)	-	3.9	3.52	4.19	3.67
Ant. 4 Max Gain (dBi)	-	4.07	3.62	4.6	4.99
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/120/330	Theta/52.5/270	Theta/52.5/277.5	Theta/82.5/105	Theta/60/247.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/180	Theta/60/90	Theta/60/45	Theta/75/97.5	Theta/75/90
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	-	Theta/105/292.5	Theta/90/82.5	Theta/97.5/82.5	Theta/75/352.5
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	-	Phi/97.5/292.5	Theta/127.5/307.5	Theta/112.5/307.5	Theta/112.5/307.5
Max Gain (dBi)	3.15	4.07	4.41	4.6	4.99
DG [1SS] (dBi)	4.09	6.88	7.19	7.73	7.39
DG [2SS] (dBi)	3.15	4.07	4.41	4.73	4.99
DG [4SS] (dBi)	-	4.07	4.41	4.6	4.99

Note:

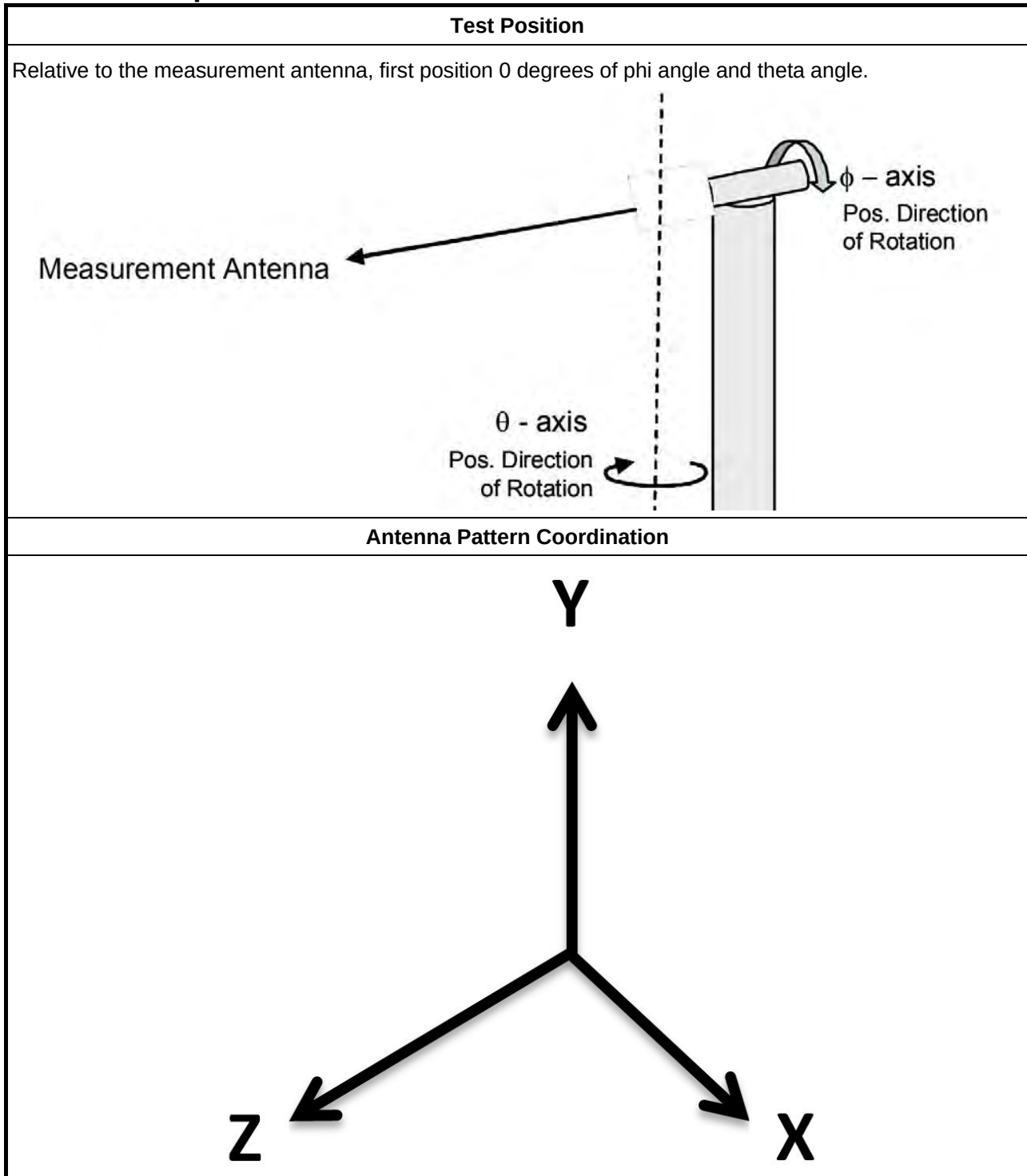
1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (4SS) = Directional Gain (1SS) – 6dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.57	4.18	3.89	3.82
Ant. 2 Max Gain (dBi)	3.78	4.25	4.39	4.07
Ant. 3 Max Gain (dBi)	5.99	4.05	4.08	4.55
Ant. 4 Max Gain (dBi)	4.64	4.51	4.33	3.64
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/22.5/90	Phi/135/195	Theta/60/90	Theta/30/90
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/67.5/195	Phi/82.5/15	Phi/67.5/15	Phi/60/352.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/270	Theta/75/270	Theta/82.5/262.5	Theta/90/262.5
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/75/15	Phi/75/30	Phi/67.5/30	Phi/82.5/202.5
Max Gain (dBi)	5.99	4.51	4.39	4.55
DG [1SS] (dBi)	7.14	7.44	6.67	5.98
DG [2SS] (dBi)	5.99	4.51	4.39	4.55
DG [4SS] (dBi)	5.99	4.51	4.39	4.55

Note:

1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (4SS) = Directional Gain (1SS) – 6dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)

11. Test Setup



Note:

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



12. 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. 20, 2023	Dec. 19, 2024
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	Jul. 28, 2023	Jul. 27, 2024
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.



13. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz and 5GHz U-NII 1~3.....	Page 16
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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.61	4.07	4.41	3.66	3.3
Ant. 2 Max Gain (dBi)	3.15	3.95	3.69	3.56	3.77
Ant. 3 Max Gain (dBi)		3.9	3.52	4.19	3.67
Ant. 4 Max Gain (dBi)		4.07	3.62	4.6	4.99
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/120/330	Theta/52.5/270	Theta/52.5/277.5	Theta/82.5/105	Theta/60/247.5
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/75/180	Theta/60/90	Theta/60/45	Theta/75/97.5	Theta/75/90
Ant. 3 Polarization/Θ(°)/Φ(°)		Theta/105/292.5	Theta/90/82.5	Theta/97.5/82.5	Theta/75/352.5
Ant. 4 Polarization/Θ(°)/Φ(°)		Phi/97.5/292.5	Theta/127.5/307.5	Theta/112.5/307.5	Theta/112.5/307.5
Max Gain (dBi)	3.15	4.07	4.41	4.6	4.99
DG [1SS] (dBi)	4.09	6.88	7.19	7.73	7.39
DG [2SS] (dBi)	3.15	4.07	4.41	4.73	4.99
DG [4SS] (dBi)		4.07	4.41	4.6	4.99



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

Appendix A

DG 1SS Result

Freq(Hz)	2.45GPol.	Phi-/	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.57/-5.52	-5.64/-6.17	-7.22/-8.01	-7.67/-7.85	-8.02/-8.21	-7.88/-6.83	-6.2/-6.16	-6.45/-7.01	-7.32/-7.11	-6.72/-6.29	-5.92/-5.53	-5.24/-5.04	-4.99/-5.09	-5.36/-5.62	-6.13/-7.05	-7.44/-7.69	-7.91/-7	-6.38/-6.08	-6.37/-6.71	-6.48/-6.09	-5.8/-5.93	-5.93/-5.91	-6.33/-6.09	-5.67/-5.71
Θ(7.5°)	-4.57/-4.56	-4.65/-4.99	-5.72/-6.93	-7.66/-8	-8.09/-8.2	-7.66/-8	-6.24/-5.54	-5.29/-5.68	-6.33/-6.39	-6.06/-5.62	-5.46/-5.4	-5.5/-5.66	-5.88/-6.22	-6.62/-6.82	-6.54/-6.49	-6.38/-6.29	-5.56/-4.92	-4.46/-4.35	-4.9/-5.72	-6.15/-5.88	-5.58/-5.32	-5.05/-5.31	-5.63/-5.29	-4.97/-4.67
Θ(15°)	-4.14/-4.2	-4.46/-4.84	-5.43/-6.37	-7.44/-7.91	-7.77/-7.62	-7.43/-7.31	-7.01/-6.3	-5.74/-5.67	-5.87/-6.16	-6.18/-5.93	-5.84/-6.06	-6.5/-7.01	-7.65/-8.4	-8.32/-7.67	-7.42/-6.7	-6.02/-5.32	-4.64/-4.34	-4.2/-4.26	-4.68/-5.59	-6.75/-7.35	-6.95/-5.81	-4.63/-4.08	-3.99/-4.09	-4.18/-4.1
Θ(22.5°)	-4.4/-4.77	-5.23/-5.5	-5.83/-6.57	-7.75/-8.36	-7.9/-7.24	-7.05/-7.25	-7.66/-7.58	-7.27/-7	-6.84/-6.93	-6.93/-6.76	-7.05/-7.6	-6.72/-9.89	-10.97/-10.73	-9.63/-8.99	-8.1/-7.67	-7.42/-6.89	-6.33/-6.16	-6.05/-6.27	-6.81/-7.79	-9.48/-10.48	-9.18/-6.59	-4.82/-4.06	-3.92/-4.1	-4.29/-4.36
Θ(30°)	-4.54/-4.68	-5.09/-5.56	-6.16/-6.99	-8.12/-9.47	-10.1/-9.7	-9.25/-9.17	-9.94/-10.23	-10.09/-9.53	-8.64/-8.66	-8.8/-8.62	-8.67/-9.36	-10.8/-13.05	-14.51/-14.55	-11.91/-9.9	-9/-9.14	-9.42/-9.04	-8.5/-8.25	-8.31/-8.82	-9.64/-10.66	-12.67/-13.32	-11.58/-8.75	-6.73/-6.14	-6.18/-5.78	-4.97/-4.43
Θ(37.5°)	-3.69/-3.25	-3.33/-3.79	-4.53/-5.48	-6.5/-7.64	-9.13/-10.97	-12.93/-14.86	-14.73/-13.52	-10.37/-8.07	-6.77/-6.38	-6.58/-7.13	-8.53/-11.7	-14.81/-13.7	-9.87/-7.6	-6.55/-6.32	-6.73/-7.28	-7.59/-7.6	-7.61/-8.03	-8.58/-9.05	-9.93/-11.22	-12.34/-13.6	-13.35/-11.94	-12.28/-11.86	-10.03/-6.91	-4.66/-3.49
Θ(45°)	-2.89/-2.63	-3.01/-3.49	-3.62/-3.93	-4.56/-5.12	-5.66/-6.47	-7.24/-7.73	-7.7/-6.81	-5.84/-5.26	-4.88/-4.71	-4.55/-4.42	-4.75/-6.11	-8.86/-11.78	-9.86/-7.2	-5.59/-4.6	-4.93/-5.53	-5.77/-5.93	-6.51/-7.66	-8.67/-9.02	-9.26/-9.54	-9.85/-10.5	-11.03/-12.54	-14.85/-13.64	-9.33/-6.05	-4.05/-3.02
Θ(52°)	-4.38/-5.05	-6.13/-6.85	-6.72/-6.54	-6.78/-6.87	-6.81/-6.94	-7.62/-7.85	-7.73/-7.19	-6.67/-6.65	-6.77/-6.82	-6.7/-6.95	-7.74/-9.23	-10.2/-9.34	-8.18/-8.26	-7.94/-7.03	-6.02/-5.42	-5.22/-5.08	-5.07/-5.52	-5.95/-6.03	-6.12/-6.44	-7.34/-8.26	-8.68/-10.6	-15.46/-11.68	-7.7/-5.88	-5.15/-4.99
Θ(60°)	-9.24/-10.39	-10.17/-9.75	-8.51/-7.37	-6.58/-5.82	-5.18/-5.07	-5.64/-6.84	-8.39/-9.03	-8.1/-6.54	-4.9/-3.56	-2.55/-2.17	-4.66/-8.86	-6.24/-4.65	-6.06/-9.1	-9.37/-6.2	-4.3/-3.54	-3.57/-3.95	-4.39/-4.94	-5.79/-6.4	-6.79/-7.4	-9.2/-12.54	-10.29/-8.61	-8.44/-9.03	-8.55/-8.39	
Θ(67.5°)	-3.55/-4.17	-5.88/-7.15	-6.66/-6.2	-6.17/-6.25	-6.54/-7.62	-10.18/-14.8	-15.73/-13.36	-10.68/-8.39	-6.06/-4.34	-2.77/-1.89	-2.01/-3.25	-5.39/-8.82	-8.47/-6.71	-6.6/-7.11	-7.71/-7.5	-6.63/-6.2	-5.99/-5.84	-6.04/-6.38	-6.44/-6.16	-7.06/-9.1	-9.64/-7.22	-6.29/-7.85	-14.39/-10.95	-6/-4.23
Θ(75°)	-4.8/-6.73	-10.06/-13.45	-14.36/-12.35	-11.34/-11.27	-11.01/-10.69	-9.59/-8.18	-6.57/-5.49	-5.29/-5.52	-5.37/-4.91	-4.3/-6.69	-3.71/-4.55	-5.89/-8.13	-10.7/-8.92	-7.48/-6.86	-8.19/-8.47	-7.9/-7.24	-6.43/-6.19	-5.8/-5.12	-4.66/-5.27	-6.82/-7.4	-6.27/-5.58	-7.9/-14.19	-12.65/-7.54	-5.38/-5.22
Θ(82.5°)	-5.22/-5.67	-7.74/-9.53	-7.75/-6.4	-5.91/-6.02	-6.31/-6.58	-6.99/-7.42	-7.37/-6.78	-6.34/-6.48	-6.82/-6.89	-6.57/-5.76	-4.87/-4.53	-5.24/-7.91	-12.96/-10.52	-8.04/-7.13	-6.58/-5.5	-4.33/-3.47	-3.18/-3	-2.78/-3	-3.76/-5	-6.39/-7.71	-8.57/-10.33	-12.02/-13.59	-13.34/-8.87	-5.31/-4.18
Θ(90°)	-4.88/-7.1	-10.66/-13.69	-11.62/-9.48	-8.89/-8.78	-9.07/-9.69	-11.01/-10.87	-8.66/-6.69	-5.66/-5.38	-5.2/-4.86	-4.51/-4.68	-5.14/-5.71	-7.08/-8.75	-10.26/-10.78	-12.07/-11.19	-7.7/-5.29	-3.62/-2.4	-1.83/-1.75	-1.97/-2.73	-3.79/-5.09	-5.86/-6.76	-8.43/-10.65	-12.93/-14.23	-11.84/-7.55	-5.17/-5.18
Θ(97.5°)	-10.91/-13.39	-11.37/-8.46	-7.45/-7.55	-8.15/-10	-10.14/-10.61	-10.74/-9.47	-6.82/-5.2	-4.75/-5.16	-5.58/-5.1	-4.16/-3.79	-4.03/-4.31	-5.2/-8.24	-10.76/-9.33	-9.2/-9.44	-8.2/-6.31	-3.48/-1.89	-1.04/-4.08	-0.31/-0.38	-0.56/-1.13	-2.48/-5.2	-8.7/-9.68	-10.55/-13.45	-11.63/-8.18	-6.67/-8.56
Θ(105°)	-5.65/-3.37	-3.22/-4.89	-6.84/-7.56	-7.9/-9.32	-9.16/-8.56	-7.92/-7.54	-6.64/-5.17	-4.19/-4.34	-5.47/-6.79	-6.86/-6.05	-5.36/-5.2	-5.07/-5.76	-8.55/-12.33	-9.27/-7.46	-6.26/-1.96	-0.54/-1.63	2.05/2.32	2.36/2.07	1.21/-0.6	-3.2/-6.15	-8.52/-10.81	-9.71/-6.21	-4.32/-5.35	-9.07/-9.39
Θ(120°)	-3.44/-2.47	-3.14/-4.95	-6.54/-6.94	-7.95/-9.19	-9/-8.02	-7.82/-7.87	-6.81/-5.38	-4.84/-5.72	-7.61/-8.84	-7.06/-3.97	-3.26/-4.92	-7.39/-8.1	-9.54/-9.47	-9.23/-8.3	-3.65/-0.54	1.21/1.9	2.23/2.32	1.70/-3.2	-1.77/-3.69	-3.71/-4.66	-7.07/-9.81	-8.6/-6.88	-7.03/-8.28	-8.31/-5.26
Θ(122°)	-14.83/-15.05	-10.77/-8.53	-7.47/-6.79	-7.39/-9.26	-9.7/-9.68	-8.41/-9.99	-11.6/-13.02	-13.1/-12.18	-11.72/-10.17	-9.38/-5.38	-2.39/-1.35	-1.69/-3.27	-6.58/-10.98	-9.55/-6.09	-3.7/-1.76	-0.64/-0.23	-0.22/-0.58	-1.04/-0.61	0.29/0.8	0.4/-1.26	-5.3/-10.75	-9.08/-6.59	-5.44/-5.61	-7.92/-14.82
Θ(127.5°)	-8.17/-9.33	-8.15/-7.3	-6.66/-6.37	-6.68/-7.5	-6.81/-8.67	-6.08/-7.55	-7.63/-8.49	-8.8/-6.24	-3.98/-3.51	-4.42/-5.63	-4.76/-4.21	-4.46/-4.81	-4.75/-5.59	-7.66/-9.61	-4.85/-1.12	1.09/2.14	2.43/2.11	1.61/2.8	1.08/0.56	-1.4/-7.9	-8.11/-7.3	-7.29/-8.93	-9.31/-7.39	-6.4/-7.04
Θ(135°)	-8.03/-8.46	-9.47/-10.13	-9.18/-6.91	-5.4/-4.74	-4.74/-5.28	-5.72/-5.95	-6.12/-6.62	-7.09/-5.38	-3.32/-2.58	-2.7/-2.89	-2.65/-2.76	-3.82/-6.28	-8.76/-5	-1.72/-1.14	-1.92/-1.98	-1.83/-1.67	-1.54/-1.54	-1.24/-0.5	0.09/0.18	-0.27/-0.93	-1.8/-3.77	-7.41/-8.39	-7.17/-4.44	-8.81/-8.98
Θ(142.5°)	-2.74/-1.61	-1.89/-3.04	-3.96/-3.54	-2.52/-1.86	-1.71/-1.92	-1.92/-2.12	-2.86/-4.2	-6.52/-6.52	-5.4/-5.19	-5.19/-4.65	-3.44/-3.26	-4.74/-9.19	-15.31/-7.94	-2.87/-0.1	1.55/2.14	1.83/-1.82	1.81/-1.51	0.93/0.37	-0.08/-0.82	-2.22/-4.35	-6.1/-3.67	-6.74/-8.23	-4.67/-4.97	
Θ(150°)	-3.53/-1.92	-1.41/-1.72	-2.41/-2.79	-2.59/-2.25	-2.15/-2.32	-2.27/-2.15	-2.48/-3.69	-5.88/-1.55	-6.72/-7.4	-6.5/-5.41	-3.93/-3.13	-3.11/-4.09	-6.42/-8.7	-7.84/-4.88	-2.18/-0.82	-0.38/-0.08	0.14/-0.03	-0.55/-1.51	-2.65/-3.55	-4.2/-4.57	-8.6/-8.23	-3.88/-8.5	-8.58/-6.12	
Θ(157.5°)	-10.53/-7.33	-5.34/-4.7	-4.94/-5.41	-5.55/-5.5	-5.57/-5.73	-5.55/-5.37	-5.55/-6.5	-7.76/-8.08	-7.1/-5.23	-3.91/-3.06	-2.88/-3.32	-4.44/-6.49	-7.14/-7.09	-6.24/-5.83	-6.02/-6.4	-6.18/-5.55	-5.14/-4.85	-4.68/-4	-5.4/-6.03	-7.08/-7.98	-8.62/-9.82	-11/-10.75	-9.91/-10.11	-11.03/-11.24
Θ(165°)	-12.08/-11.01	-8.56/-7.15	-6.88/-7.2	-7.67/-7.92	-8.3/-9.05	-10.01/-10.72	-10.14/-8.85	-7.48/-6.07	-4.69/-3.68	-3.14/-2.97	-3.18/-3.84	-4.98/-6.65	-7.9/-8.38	-8.8/-8.71	-9.18/-10.07	-10.92/-11.39	-10.96/-10.35	-10.02/-9.91	-8.77/-8.55	-8/-8.3	-6.32/-6.15	-6.52/-6.92	-6.93/-7.03	-7.65/-9.08
Θ(172.5°)	-8.55/-7.68	-5.73/-4.58	-4.16/-4.3	-4.73/-5.06	-5.12/-5.34	-5.76/-6.09	-6.23/-6.41	-5.62/-5.14	-4.55/-4.19	-4.28/-4.82	-5.69/-7.22	-6.82/-6.63	-10.44/-11.6	-12.32/-13.28	-13.77/-13.37	-10.96/-10.35	-11.3/-10.74	-5.99/-5.44	-4.59/-3.96	-4.04/-4.64	-5.52/-6.36	-6.74/-6.8	-7.03/-7.66	
Θ(180°)	-9.26/-7.49	-5.48/-4.18	-3.53/-3.36	-3.55/-3.71	-3.51/-3.2	-3.15/-3	-2.95/-2.99	-3.25/-3.65	-4.12/-4.73	-5.49/-6.26	-6.8/-7.58	-8.03/-8.3	-8.49/-7.91	-7.32/-6.97	-6.26/-5.43	-4.84/-4.11	-3.71/-3.41	-3.37/-3.57	-3.92/-4.07	-3.95/-4.19	-5.19/-6.78	-8.69/-10.33	-10.91/-10.43	-9.81/-9.54
Freq(Hz)	2.45GPol.	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°)	-6.59/-6.4	-6.43/-6.67	-6.88/-6.94	-6.94/-6.94	-7.02/-7.29	-6.98/-6.21	-5.64/-5.54	-5.92/-6.75	-7.75/-7.58	-7.83/-8.32	-8.54/-8.41	-8.75/-8.21	-7.83/-7.47	-7.17/-6.9	-6.8/-7.14	-7.02/-6.98	-7.28/-7.05	-6.81/-6.55	-6.67/-6.81	-7.3/-7.59	-8.18/-8.49	-8.05/-8.11	-7.38/-7.1	-6.9/-6.7
Θ(7.5°)	-6.1/-6.07	-6.12/-6.27	-6.36/-6.21	-6.01/-6.2	-6.39/-5.84	-5.72/-5.82	-5.7/-5.36	-5.15/-5.64	-6.73/-8.04	-8.79/-9.07	-9.05/-9.27	-8.54/-7.78	-7.11/-6.59	-6.19/-5.9	-5.75/-5.67	-5.74/-5.94	-6.31/-6.78	-7.14/-7.1	-6.68/-6.22	-6.2/-6.46	-6.6/-6.69	-6.68/-6.57	-6.45/-6.4	-6.33/-6.23
Θ(15°)	-4.05/-3.55	-3.80/-4.71	-2.51/-2.52	-2.62/-2.95	-3.3/-3.35	-3.4/-3.72	-4.19/-4.34	-4.07/-4.19	-4.88/-5.8	-6.72/-7.29	-7.48/-7.24	-6.73/-6.1	-5.54/-5.18	-5.01/-4.98	-5.08/-5.48	-5.92/-6.3	-6.61/-6.9	-7.14/-7.47	-7.39/-6.68	-6.03/-5.45	-5.42/-5.5	-5.46/-5.21	-4.39/-4.25	
Θ(22.5°)	-2.81/-1.83	-0.99/-0.6	-0.51/-0.61	-0.69/-0.9	-1.55/-2.22	-2.79/-3.5	-4.26/-4.88	-5.04/-5.31	-5.78/-6.24	-6.44/-6.25	-5.79/-5.05	-4.23/-3.64	-3.54/-3.84	-4.28/-4.82	-5.54/-6.38	-7.27/-7.91	-8.3/-8.56	-8.22/-7.66	-7.33/-6.47	-6.61/-5.94	-4.99/-4.65	-4.87/-5.28	-5.49/-5.11	-4.23/-3.2
Θ(30°)	-2.47/-0.96	0.09/0.56	0.57/0.46	0.43/0.08	-0.73/-1.72	-2.47/-3.01	-3.88/-5.09	-6.15/-6.67	-6.82/-6.72	-6.35/-5.68	-4.77/-3.85	-2.94/-2	-1.55/-1.7	-2.19/-2.73	-3.3/-3.82	-4.35/-4.67	-4.7/-4.49	-4.12/-3.72	-3.75/-3.8	-4.22/-4.58	-4.34/-3.94	-4.04/-4.56	-5.31/-4.68	-4.63/-3.22
Θ(37.5°)	-1.81/-0.82	0.89/1.35	1.51/-1.46	1.36/0.89	0.25/-0.59	-1.14/-1.22	-1.33/-1.84	-2.58/-3.21	-3.57/-3.46	-2.91/-2.15	-1.43/-0.94	-0.53/0.16	0.27/-0.11	-0.47/-0.58	-0.81/-1.18	-1.52/-1.61	-1.53/-1.22	-0.85/-0.85	-1.33/-1.85	-2.25/-2.44	-1.89/-2.11	-2.72/-3.37	-3.49/-2.5	
Θ(45°)	-1.2/-0.09	0.95/1.71	2.04/1.66	0.90/1.1	-0.54/-1.22	-1.86/-2.14	-2.1/-1.83	-1.47/-1.48	-1.92/-2.76	-2.87/-2.02	-0.90/-1	0.75/1.04	1.27/1.3	0.91/0.53	0.0									



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

Appendix A

Θ(22.5°)	-0.00.92	2.44/3.7	3.69/2.5	-0.11/-2.57	-2.91/-3.49	-3.74/-4.54	-4.89/-4.63	-5.31/-5.69	-3.37/-3.01	-1.89/0.04	1.07/1.8	1.72/1.46	1.74/1.95	1.41/0.22	-0.71/-1.35	-1.64/-2.16	-2.69/-2.99	-2.84/-2.76	-2.54/-2.44	-1.62/-1.06	-1.59/-0.91	-0.56/-0.42	-0.03/0.22	-0.04/-0.07
Θ(30°)	-0.6/0.54	2.28/2.38	1.96/0.45	-2.12/-4.32	-4.93/-5.83	-7.14/-8.14	-8.29/-6.92	-5.17/-4.15	-3.24/-2.98	-2.31/-2.18	-0.24/-1.77	2.88/3.06	2.52/1.89	1.38/0.23	-1.47/-2.22	-2.34/-2.47	-3.71/-3.97	-4.13/-4.02	-4.87/-5.04	-3.96/-2.32	-1.47/-1.52	-2.81/-2.99	0.04/0.05	2.07/0.61
Θ(37.5°)	-0.08/0.12	3.93/0.84	2.72/-0.87	-3.09/-2.71	-2.6/-3.71	-5.22/-5.56	-6.04/-6.24	-3.03/-2.12	-1.09/0.52	-0.01/-0.2	0.65/2.9	3.62/3.12	2.77/2.21	0.34/-1.81	-1.71/-0.91	-0.26/-0.08	-5.22/-6.71	-6.74/-5.79	-5.55/-3.5	-3.83/-3	0.69/-1.54	-2.59/-1	0.38/-0.18	
Θ(45°)	1.29/1.07	1.04/1.46	1.12/-0.58	-0.6/-0.88	-3.25/-5.15	-4.91/-4.25	-4.36/-4.72	-3.06/-3.75	-0.62/-0.26	0.31/0.89	0.73/-0.47	1.81/3.27	2.8/2.2	1.94/-0.62	-1.81/0.37	0.49/-1.66	-4.13/-7.76	-7.66/-5.98	-3.98/-2.22	-1.42/-2.38	-4.96/-2.9	-1.21/0.19	-0.89/-0.65	0.77/1.12
Θ(52.5°)	0.73/0.19	1.44/-1.39	-0.06/-0.08	0.1/-2.19	-6.81/-6.66	-4.35/-4.45	-4.65/-4.89	-5.56/-3.82	-2/-0.59	0.18/0.86	1.38/1.93	3.62/3.94	3.47/3.01	1.41/-1.29	0.21/0.95	-0.62/-2.49	-3.63/-5.92	-7.97/-6.7	-4.9/-2.85	-2.64/-1.13	-3.35/-4.89	-2.62/-1.87	-1.03/0.45	1.36/1.15
Θ(60°)	2.34/0.71	-0.67/1.45	0.34/0.6	-0.49/-3.15	-7.08/-6.09	-4.45/-5.53	-6.84/-7.21	-6.17/-5.04	-3.17/-3	-2.07/0.56	0.72/-1.47	2.97/2.62	2.39/-0.78	-1.29/0.9	-0.94/-0.27	-3/-3.39	-6.13/-7.82	-8.06/-6.62	-5.77/-6.04	-4.32/-4.37	-1.93/0.65	1.45/2.28	1.81/2.57	
Θ(67.5°)	2.42/0.7	-2.1/-0.01	0.53/0.92	0.02/-3.9	-5.91/-3.23	-2.83/-3.31	-4.67/-4.86	-4.18/-2.38	-1.39/-2.58	-2.80/-2.7	1.34/1.24	2.83/3.28	2.19/1.36	-0.73/-1	-1.46/-1.43	-1.64/-1.72	-2.24/-2.85	-5.15/-7.59	-9.64/-7.98	-5.11/-5.41	-5.3/-2.19	-1.01/0.63	1.53/2.02	1.07/2.11
Θ(75°)	2.13/1.11	-0.71/-1.75	-1.93/-1.61	-1.43/-2.61	-1.22/-0.23	-0.78/-2.09	-3.55/-3.7	-3.77/-4.83	-4.3/-3	-3.21/-2.24	0.26/-1.49	-0.22/2.45	2.19/0.56	-0.83/-1.58	-3.69/-4.9	-3.22/-3.98	-2.17/-2.23	-3.08/-4.73	-4.63/-3.33	-2.25/-2.19	-3.9/-1.8	-0.06/0	0.89/1.86	0.92/2.77
Θ(82.5°)	1.47/1.49	-0.55/-4.14	-3.97/-3	-3.69/-1.7	-1.6/-1.52	-2.6/-2.35	-1.36/-1.98	-2.93/-4.31	-5.01/-4.33	-4.04/-2.02	0.78/0.55	1.27/0.5	-0.69/-4.24	-2.93/-2.63	-1.89/-2.82	-2.84/-4.71	-3.05/-1.8	-1.89/-2.82	-3.19/-1.15	0.11/-0.56	-3.2/-3.11	-1.2/0.04	-0.07/0.13	0.99/1.97
Θ(90°)	1.13/1.6	0.69/-1.97	-4.57/-2.91	-2.16/-0.6	-0.82/-1.63	-3.05/-3.25	-2.77/-2.4	-3.1/-2.67	-3.01/-3.51	-4.47/-4.64	-1.62/0.22	-0.4/-0.11	-1.43/-3.42	-5.26/-4.16	-3.66/-4.5	-2.28/-4.18	-4.55/-2.31	-2.07/-3.69	-2.7/-0.99	0.17/-0.1	-3.04/-3.92	-3.05/-2.13	-0.86/-1.21	1.04/1
Θ(97.5°)	0.13/-0.38	0.97/-1.06	-2.18/-0.73	-1.47/-1.87	-2.1/-4.11	-5.44/-5.24	-4.15/-2.47	-2.56/-2.35	-3.66/-4.44	-4.09/-2.71	-0.63/0.15	-0.87/-2.1	-4.09/-4.75	-6.5/-5.76	-4.74/-3.99	-2.28/-3.83	-5.76/-4.67	-4.35/-5.41	-3.76/-1.59	0.35/0.11	-1.53/-2.47	-5.4/-3.68	-1.96/-1.35	-0.16/0.39
Θ(105°)	-1.08/-2.36	0.33/-1	-1.23/-2.03	-3.21/-3.52	-4.56/-4.37	-6.52/-5.87	-5.22/-3.48	-2.39/-3.01	-6.62/-3.84	-3.21/-2.73	-1.96/-1.65	-1.76/-1.66	-2.74/-4.27	-4.2/-8.19	-3.34/-4.26	-2.06/-1.85	-4.88/-7.36	-6.82/-8.61	-7.09/-3.04	-0.99/-2	-2.33/-5.12	-0.50/-3.22	-3.01/-3.22	-2.55/-0.35
Θ(112.5°)	-0.55/-4.21	-1.87/-1.11	-0.82/-2.69	-3.81/-6.01	-7.71/-4.49	-4.57/-5.12	-4.06/-3.32	-2.98/-3.04	-4.08/-4.31	-3.8/-2.01	-2.73/-2.76	-2.46/-4.62	-5.75/-5.25	-7.01/-6.34	-5.32/-4.02	-2.5/-1.96	-2.94/-4.34	-6.58/-6.81	-5.11/-4.89	-4.29/-3.42	-2.88/-5.54	-7.7/-5.51	-1.09/-2.45	-3.45/-1.06
Θ(120°)	-1.43/-1.17	-3.05/-1.67	-0.93/-2.96	-5.53/-5.12	-4.09/-4.66	-5.2/-8.13	-7.98/-5.54	-3.93/-4.11	-3.25/-2.51	-3.15/-5.02	-6.16/-3.25	-1.58/-3.09	-3.85/-3.7	-3.37/-7.43	-4.37/-5.09	-0.18/-2.2	-3.92/-6.66	-7.92/-4.81	-1.05/-0.72	-2.69/-6.83	-7.48/-2.89	-2.78/-3.03	-4.89/-2.35	
Θ(127.5°)	-0.68/-2.44	-1.25/-0.78	0.65/0.42	-1.69/-4	-4.59/-5.18	-7.92/-8.17	-6.33/-3.33	-3.01/-3.31	-3.17/-2.13	-1.3/-4.17	-5.18/-3.56	-3.2/-4.13	-4/-7.59	-6.96/-5.84	-2.79/-4.6	-3.32/-7.29	-2.27/-1.79	-5.96/-6.63	-7.35/-9.97	-6.56/-2.13	-2.98/-2.19	-1.24/-1.98	-7.08/-0.31	
Θ(135°)	-4.3/-1.85	-1.42/-3.23	-3.2/-2.11	-3.04/-7.81	-8.76/-7.5	-6.42/-5.21	-5.6/-4.56	-3.38/-3.08	-2.0/-2.54	-1.8/-2.46	-5.11/-1.94	-2.99/-3.35	-2.35/-2.92	-1.25/-1.71	-6.26/-3.21	-11.91/-4.44	-5.31/-6.09	-3.22/-3.12	-3.8/-4.98	-4.97/-3.7	-4.96/-4.38	-3.92/-3.19	-1.07/-1.68	-4.49/-5.04
Θ(142.5°)	-3.12/-2.75	-1.21/-0.94	-3.36/-2.89	-2.44/-7.06	-6.59/-9.89	-9.04/-8.03	-6.84/-4.84	-2.56/-1.82	-2.85/-4.88	-2.49/-1.57	-2.92/-1.26	-0.77/-0.33	-3.28/-3.46	-3.6/-2.52	-2.4/-2.08	-2.81/-3.65	-3.6/-3.72	-3.65/-3.98	-5.07/-5.05	-8.72/-7	-5.25/-2.36	-0.9/-0.65	-0.5/-0.13	-0.26/-0.68
Θ(150°)	-2.96/-3.28	-2.28/-3.93	-3.88/-2.15	-2.64/-4.38	-4.48/-5.4	-7/-8.06	-7.02/-5.83	-5.79/-3.78	-2.77/-3.2	-4.46/-4.89	-5.32/-6	-3.71/-3.76	-6.24/-7.02	-6.51/-5.9	-7.12/-7.58	-9.14/-8.77	-5.64/-3.41	-3.58/-3.62	-0.83/-1.56	-2.93/-2.27	-4.31/-4.21	-2.33/-1.81		-0.88/0.5
Θ(157.5°)	-0.67/-2.39	-4.44/-3.81	-3.03/-3.19	-4.39/-6.39	-8.17/-7.98	-8.9/-6.15	-3.48/-3.72	-3.04/-4.66	-7.37/-6.81	-4.81/-3.71	-3.5/-3.84	-2.53/-2.81	-3.22/-1.63	-1.12/-3.32	-3.78/-4.51	-5.17/-7.21	-8.79/-7.56	-3.79/-4.09	-4.73/-6.12	-4.21/-3.71	-2.22/-0.05	1.18/1.33	0.8/0.74	0.77/-0.11
Θ(165°)	-1.58/-1.24	-1.41/-1.92	-3.12/-3.48	-3.24/-3.3	-3.08/-3.3	-2.91/-3.17	-4.37/-6.52	-7.24/-5.14	-3.92/-4.3	-4.81/-2.25	-0.41/-0.22	-1.26/-2.5	-3.28/-3.46	-3.6/-2.52	-2.4/-2.08	-2.81/-3.65	-3.6/-3.72	-3.65/-3.98	-5.07/-5.05	-8.72/-7	-5.25/-2.36	-0.9/-0.65	-0.5/-0.13	-0.26/-0.68
Θ(172.5°)	-2.24/-1.67	-2.04/-3.65	-5.25/-5.66	-6.71/-7.2	-7.3/-6.58	-6.66/-7.6	-9.01/-10.43	-7.84/-4.93	-2.6/-1.05	-0.7/-0.97	-1.99/-1.97	-1.33/-0.93	-0.74/-1.06	-1.58/-2.83	-4.95/-6.05	-8.63/-8.65	-9.92/-10.93	-11.49/-10.37	-9.76/-8.95	-8.95/-8.81	-7.19/-4.61	-3.49/-3.74	-4.83/-5.57	
Θ(180°)	-7.79/-9.68	-10.56/-9.15	-6.8/-4.27	-3.42/-3.36	-3.94/-4.74	-5.59/-6.33	-6.7/-7	-7.79/-8.29	-8.06/-7.53	-6.46/-5.6	-4.45/-3.12	-2.69/-2.67	-2.36/-2.42	-2.5/-2.59	-3.34/-4.46	-4.66/-5.44	-6.23/-7.25	-7.88/-7.53	-7.62/-6.29	-4.5/-4.06	-4.27/-4.64	-5.15/-5.07	-5.08/-5.01	-5.17/-4.59
Freq(Hz)	536Pol.	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°)	-3.46/-4.72	-5.46/-6.2	-6.01/-5.9	-4.93/-3.56	-2.56/-1.65	-0.88/-0.12	0.51/0.9	1.51/3.6	1.13/1.36	1.52/1	0.31/-0.42	-1.61/-2.48	-3.03/-3.36	-3.43/-3.48	-2.91/-3	-2.08/-1.35	-0.87/0.07	0.01/0.62	0.97/1.23	1.54/1.5	1.37/1.16	0.98/0.55	-0.01/-0.69	-1.51/-2.56
Θ(7.5°)	-1.71/-1.63	-1.51/-1.5	-1.55/-1.68	-1.81/-1.88	-1.76/-1.39	-0.57/-0.07	0.47/0.84	1.09/1.46	1.43/-1.29	1.17/0.89	0.11/-0.79	-1.73/-3.12	-4.51/-5.32	-6.36/-6.08	-4.91/-3.4	-2.31/-1.18	-0.16/0.2	0.61/1.01	1.34/1.52	1.87/2.04	1.48/1.06	0.8/0.12	-0.52/-0.88	-1.48/-1.55
Θ(15°)	-0.09/0.2	0.57/0.35	0.14/-0.01	0.2/0.58	0.67/0.96	1.65/1.64	1.81/1.73	1.45/-1.46	0.93/0.29	-0.13/-0.28	-0.28/-3.26	-4.35/-5.45	-5.61/-6.14	-5.41/-3.38	0.08/0.59	1.24/1.83	1.87/2.16	1.83/1.67	1.42/0.57	-0.17/-0.42	-0.32/-0.61	-0.78/-0.31		
Θ(22.5°)	-0.01/0.71	0.73/0.33	-0.51/-0.71	-0.16/0.1	-0.21/-0.11	-0.15/0.08	0.37/0.21	-0.10/0.33	0.37/0.14	0.13/-0.92	-1.52/-2.79	-4.57/-5.52	-5.66/-5.06	-5.48/-4.76	-3.97/-2.23	-1.55/-1.19	-0.55/0.4	1.05/1.02	1.07/0.82	0.26/0.39	0.19/-0.35	-0.2/-0.56	-1.1/-0.97	-0.37/0.16
Θ(30°)	1.07/0.43	-0.5/-1.51	-2.08/-1.69	-1.45/-0.69	-0.21/0.37	1.13/1.53	1.77/2.27	2.34/2.22	1.54/-1.25	1.09/0.21	0.17/-0.19	-1.76/-3.34	-3.4/-4.2	-1.62/-1.65	-1.32/-0.89	-1.14/-1.26	-1.84/-2.51	-2.18/-2.57	-2/-1.43	-0.73/-0.14	-0.44/-0.33	-1.27/-1.05	0.34/-1.29	1.81/1.76
Θ(37.5°)	1.08/0.76	-0.1/-0.54	-0.86/0.55	2.36/3.24	3.16/3.47	2.59/2.52	2.65/2.61	2.99/3.19	3.95/3.75	2.78/1.36	1.16/1.37	0.38/-0.82	-0.59/0.49	0.87/1.04	0.21/-0.05	-0.94/-0.69	-0.01/-0.82	-1.5/-0.86	0.21/0.75	-0.11/0.47	0.32/0.53	-0.73/-0.38	1.28/1.12	1.54/-1.2
Θ(45°)	1.93/1.97	1.21/0.08	0.87/2.91	4.55/5.14	4.84/-4.5	3.99/3.51	3.63/3.96	3.76/3.34	2.92/2.96	3.45/3.83	3.27/1.48	1.24/1.42	1.09/0.09	1.06/2	0.69/1.85	2.04/1.19	0.68/1.28	2.46/2.84	2.67/2.21	1.93/2.43	2.72/2.35	1.74/1.42	2.33/-4.2	3.23/1.89
Θ(52.5°)	2.67/1.75	2.34/2.02	3.33/5.16	5.44/-7.2	3.67/3.27	3.46/4.32	4.55/4.8	5.35/4.72	3.76/2.97	4.64/4.87	3.41/-6.9	2.13/2.66	1.85/2.75	3.72/2.99	3.2/3.34	3.21/2.97	3.36/3.84	3.82/4.07	3.95/4.2	3.65/3.68	2.65/3.76	3.08/2.51	1.93/-7.4	4.37/2.42
Θ(60°)	3.88/3.78	2.92/2.07	3.81/6.18	5.99/3.86	3.17/3.3	3.84/3.63	3.54/4.36	5.01/5.48	5.51/4.43	4.23/4.74	5.42/2.58	-0.69/2.3	2.56/2.43	3.11/3.05	4.43/5.15	4.23/3.18	2.83/2.28	3.53/3.88	4.24/4.33	4.22/4.02	2.93/3.47	4.75/4.49	3.39/4.62	4.84/3.86
Θ(67.5°)	4.71/4.74	5.02/3.19	4.45/5.69	4.29/3.88	4.48/4.92	4.04/3.32	2.89/3.12	4.33/1.71	4.65/3.99	4.67/5.42	5.05/1.82	2.95/3.72	2.81/2.67	2.02/3.33	4.94/4.93	4.22/2.87	2.25/3.33	3.64/3.57	3.94/-7.6	4.94/4.63	4.93/3.77	3.95/3.64	3.55/4.97	5.86/5.12
Θ(75°)	5.06/4.5	4.32/5.69	4.26/4.41	3.7/3	3.62/3.75	3.99/4.77	4.64/2.33	4.23/3.8	3.79/4.08	4.55/3.88	4.75/4.25	1.86/4.01	4.09/1.93	2.40/-98	4.34/5.29	2.84/2.58	4.47/4.12	3.82/3.5	4.17/5.22	5.15/5.19	5.68/4.94	4.41/4.66	4.13/3.48	5.14/4.77
Θ(82.5°)	4.42/5.3	5/3.42	4.76/4.49	3.67/3.96	4.52/5.22	5.75/6.17	6.71/6.19	5.93/5.45	3.72/-99	4.16/4.17	4.94/3.59	4.22/3.37	2.57/2.94	1.48/3.55	4.72/3.08	1.94/2.83	3.91/4.91	5.15/4.94	4.36/5.11	4.97/4.88	4.52/4.81			



Radiated Composite Gain Data_2.4GHz, 5GHz U-NII 1~3

Appendix A

Θ(75°)	0.66/-1.05	-3.11/0.56	1.15/0.43	-2.35/-2.21	-1.68/-3.07	-4.51/-6.79	-4.93/-5.68	-5.83/-5.78	-3.87/-2.42	-1.65/-1.29	-0.17/-2.04	-1.54/-0.08	-0.22/0.19	-0.32/-1.29	-2.98/-5.14	-3.68/-2.12	0.01/0.22	-1.66/-4.31	-3.78/-3.52	-4.9/-5.96	-3.58/0.17	1.08/1.93	2.87/1.75	2.41/0.81
Θ(82.5°)	0.64/-1.64	-1.02/0.41	0.23/-0.88	-1.96/-2.02	0.88/-0.52	-4.51/-7.73	-6.69/-6.36	-5.88/-4.56	-4.93/-2.04	-0.93/-1.43	-1.72/-2.76	-2.16/-0.13	-0.39/-2.55	-1.63/-1.58	-3.96/-5.07	-2.32/-1.07	-0.22/-0.41	-1.8/-1.97	-1.69/-2.38	-2.26/-3.99	-6.13/-1.25	0.6/-0.04	0.58/1.11	1.34/0.84
Θ(90°)	1.05/-0.67	-2.16/-2.63	0.54/-0.58	-2.96/0.77	1.39/0.01	-2.83/-4.91	-5.2/-4.04	-4.32/-4.59	-3.18/-2.86	-1.67/-1.28	-0.02/-2.29	-2.05/-1.77	-1.22/-2.36	-3.69/-3.93	-2.99/-5.99	-2.94/-2.96	-2.79/-1.59	-0.53/-0.8	-2.02/-4.03	-2.78/-3.16	-6.04/-4.47	-1.41/-0.75	-2.56/-0.63	-0.11/-0.56
Θ(97.5°)	-0.66/-0.73	-1.52/-2.55	0.97/0.4	-2.13/0.49	-0.06/-2.89	-6.05/-7.44	-5.98/-5.04	-4.21/-3.84	-3.51/-3.73	-3.2/-2.35	-1.74/-3.54	-2.22/-1.43	-2.77/-4.4	-3.66/-3.44	-5.15/-4.18	-3.02/-2.38	-4.49/-5.22	-2.66/-3.74	-3.95/-3.49	-2.55/-2.09	-4.08/-6.99	-2.45/-0.68	-0.77/0.23	-0.05/0.86
Θ(105°)	0.14/0.17	-1.63/-1.68	1.76/2.69	0.31/1.15	0.76/-3.84	-7.21/-9.72	-6.46/-4.94	-3.97/-4.28	-4.33/-3.29	-4.46/-2.98	-2.91/-1.27	-3.86/-3.01	-3.11/-3.94	-5.1/-4.93	-6.53/-5.86	-4.53/-1.87	-4.83/-9.88	-6.23/-5.42	-6.03/-2.45	-1.28/-1.19	-3.69/-6.38	-2.36/-2.2	-0.2/0.83	0.87/1.06
Θ(112.5°)	-0.62/-1.57	-0.31/-1.44	0.36/0.75	-1.48/-0.57	-0.89/-2.44	-7.55/-8.14	-8.98/-5.56	-4.74/-4.25	-4.33/-4.28	-3.9/-1.62	-1.35/-4.06	-4.6/-4.38	-4.24/-4.16	-3.99/-6.07	-6.42/-7.13	-3.79/-3.67	-6.17/-11.56	-8.48/-9.23	-8.41/-3.89	-1.23/-1.63	-5.58/-8.41	-3.04/-0.47	-0.92/-0.94	-0.08/-0.18
Θ(120°)	0.06/-1.32	-0.16/-0.32	0.94/-0.61	-4.32/-2.28	-2.83/-3.89	-2.52/-5.58	-5.83/-5.1	-3.19/-3.18	-3.95/-5.38	-4.19/-2.99	-3.3/-3.45	-5.32/-4.66	-5.65/-7.04	-4.55/-4.01	-8.65/-7.28	-3.32/-2.24	-3.34/-6.77	-6.53/-6.86	-7.12/-5.29	-1.78/-0.43	-3.58/-5.82	-0.43/-1.99	-3.63/-3.47	0.39/0.7
Θ(127.5°)	-4.14/-2.84	-1.1/-0.63	1.43/-4.03	-4.04/-5.92	-3.84/-4.67	-5.59/-5.59	-4.74/-3.16	-1.84/-3.16	-4.47/-2.9	-1.38/-2.95	-3.4/-5.34	-6.08/-3.24	-5.6/-2.29	-3.06/-4.85	-8.52/-9.66	-4.32/-2.16	-4.94/-4.27	-5.3/-5.17	-6.93/-9.14	-6.19/-3.29	-5.66/-3.92	-0.65/-1.89	-2.31/-2.24	-3.39/-2.04
Θ(135°)	-0.93/-7.43	-1.58/-2.92	-3.27/-0.41	-2.55/-5.64	-7.23/-9.57	-6.79/-5.43	-3.53/-3.91	-3.13/-2.89	-2.14/-1.68	-0.59/-1.66	-4.11/-3.47	-2.49/-2.92	-3.82/-6.93	-2.41/-2.49	-2.99/-6.28	-5.39/-4.19	-3.36/-5.3	-2.56/-1.86	-3.85/-4.21	-5.03/-1.33	0.1/-0.05	-0.25/-3.36	-2.82/-2.1	-1.66/-0.73
Θ(142.5°)	-0.89/-1.49	-3.32/1.23	-2.67/-3.49	-6.22/-5.39	-4.94/-5.07	-4.98/-5.25	-4.17/-2.91	-2.17/-2.63	-3.73/-5.08	-7.01/-7.88	-5.06/-2.5	-4.29/-4.64	-2.58/1.2	0.47/-3.29	-2.23/-1.2	-6.68/-4.65	-4.35/-4.23	-4.38/-5.84	-5.33/-4.48	-2.94/-1.91	0.84/-0.39	-4.28/-4.13	-2.25/-1.44	-4.39/-2.24
Θ(150°)	-1.73/-0.69	1.65/0.87	-0.86/-0.11	-0.96/-5.31	-4.87/-5.39	-3.05/-3.25	-4.53/-4.4	-2.99/-1.9	-1.66/-3.05	-4.9/-1.59	-1.7/-5.73	-3.77/-2.8	-4.95/-1.89	-1.29/-2.42	-1.65/-2.33	-4.6/-4.89	-4.16/-4.68	-7.15/-6.96	-8.74/-7.13	-5.21/-3.43	-1.49/-2.07	-2.77/-2.2	-2.33/-3.11	-1.83/-1.62
Θ(157.5°)	3.08/2.51	-2.36/-6.63	-1.96/-1.49	-2.01/-4.04	-4.85/-7.69	-7.89/-5.4	-4.4/-4.33	-5.83/-4.75	-3.64/-4.43	-4.87/-3.17	-2.54/-4.01	-2.91/-3.52	-7.16/-6.13	-5.04/-5.1	-6.84/-6.87	-6.36/-8.91	-7.81/-5.93	-5.98/-3.52	-1.66/-0.27	-1.62/-0.86	-0.83/0.27	3.98/3.39		2.62/3.79
Θ(165°)	2.16/0.78	-2.46/-2.55	-3.14/-5.23	-7.1/-8.01	-5.9/-4.57	-4.34/-5.63	-7.16/-7.74	-7.85/-8.02	-7.19/-4.54	-2.72/-1.9	-1.51/-2.52	-3.62/-3.76	-3.89/-3.06	-2.85/-2.51	-3.22/-4.03	-5.19/-4.85	-4.16/-5.71	-6.76/-6.08	-4.7/-3.46	-3.56/-3.65	-0.82/0.07	1.49/2.12	2.1/2.18	3.34/2.7
Θ(172.5°)	0.73/0.29	-1.29/-2.47	-3.02/-4.09	-5.32/-5.98	-6.15/-6.46	-6.11/-5.38	-5.87/-5.92	-6.87/-4.24	-2.13/-1.04	-0.54/-0.88	-0.93/-2.23	-2.61/-3.66	-4.45/-4.26	-4.99/-4.58	-5.21/-5.12	-4.98/-4.55	-3.74/-3.86	-4.6/-4.84	-5.18/-6.47	-8.52/-7.9	-8.16/-7.98			
Θ(180°)	-5.23/-6.95	-7.42/-6.94	-6.63/-5.76	-4.97/-5.59	-5.7/-7.01	-7.72/-8.28	-9.29/-9.46	-7.97/-6.04	-4.85/-3.93	-3.3/-2.52	-1.77/-1.38	-1.34/-1.4	-1.37/-1.69	-2.09/-2.39	-4.04/-4.98	-6.17/-7.61	-7.49/-7.87	-8.24/-7.03	-6.58/-4.75	-3.44/-2.91	-3.55/-3.08	-2.66/-2.57	-1.82/-1.26	-1.27/-1.65
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(0°)	-7.65/-6.74	-5.05/-4.04	-2.9/-1.73	-0.87/0.22	1.04/1.19	1.22/1.46	1.42/1.25	0.89/0.55	-0.15/-0.89	-1.61/-2.49	-3.51/-4.58	-5.14/-5.95	-6.62/-6.01	-5.06/-3.49	-2.86/-0.83	-0.59/0.13	0.52/0.88	1.26/1.47	1.4/0.8	0.66/0.14	-0.67/-1.71	-2.77/-4.03	-5.18/-6.87	-8.03/-8.2
Θ(7.5°)	-6.72/-6.42	-6.46/-5.68	-4.98/-2.73	-2.41/-1.62	-0.61/-0.31	0.37/0.95	0.52/0.55	0.2/-0.51	-0.89/-1.14	-1.6/-2.51	-3.17/-4.97	-6.75/-7.55	-7.61/-6.97	-5.54/-3.94	-2.74/-1.31	-0.38/0.44	1.19/1.38	1.94/2.3	2.27/2.08	1.77/1.07	0.35/-0.81	-1.5/-2.77	-4.21/-4.74	-5.91/-7.52
Θ(15°)	-5.6/-6.4	-6.58/-5.13	-3.41/-2.4	-0.99/0.05	1.24/1.8	2.12/1.97	1.79/1.41	0.84/0.28	-0.1/-0.91	-0.89/-0.83	-1.12/-2.29	-2.84/-4.06	-4.23/-3.77	-2.85/-2.62	-2.51/-1.55	-0.73/-0.15	0.91/1.47	1.89/2.49	2.55/2.22	1.84/1.2	0.47/-0.38	-0.99/-1.87	-3.18/-3.91	-5.35/-5.32
Θ(22.5°)	-3.58/-3.03	-2.42/-1.87	-1/0.34	1.22/1.56	1.88/2.19	2.31/2.45	2.74/2.88	2.92/2.68	1.86/0.46	-0.93/-0.4	-0.19/-0.91	-1.82/-2.71	-2.56/-1.79	-1.97/-2.87	-3.16/-1.85	-0.53/0.4	1.25/1.61	1.95/1.91	1.76/1.22	1.13/1.36	0.87/0.16	-0.51/-1.1	-1.44/-2.22	-3.73/-3.55
Θ(30°)	-1.9/-1.31	0.41/1.79	2.15/1.87	0.74/0.36	1.23/2.21	3.22/3.75	4.22/4.19	3.97/3.68	3.47/2.99	2.71/1.99	1.04/-0.05	-0.58/-1.55	-1.15/-0.18	-0.32/-1.38	-1.83/-1.66	-0.94/-0.26	0.86/1.64	2.15/3.01	3.69/3.57	2.78/1.87	1.49/1.46	0.74/-0.01	-0.89/-1.3	-2.5/-2.42
Θ(37.5°)	-2.93/-0.81	1.27/1.85	1.40/46	0.01/-0.11	1.77/2.49	3.54/4.22	4.2/4.78	4.5/4.71	4.75/4.73	4.39/3.19	2.53/1.53	-0.76/-1.4	-0.24/0.16	0.19/-1.36	-3.21/-2.59	-1.23/1	2.49/3.28	3.69/3.53	3.23/2.82	2.72/2.16	1.74/1.11	0.44/0.48	0.96/0.17	-1.89/-2.53
Θ(45°)	0.77/0.9	1.84/3.32	4.15/3.79	3.17/3.46	3.46/3.91	4.41/4.73	5.18/5.82	6.24/6.22	5.73/5.19	5.39/5.42	4.22/2.89	2.33/0.33	-1.86/0.89	2.22/0.91	-1.9/-0.66	1.73/0.7	3.5/3.65	3.37/2.66	2.96/3.57	3.09/2.39	0.69/1.99	3.53/3.63	3.19/1.99	
Θ(52.5°)	4.01/2.1	2.11/3.51	3.05/3.4	3.56/4.27	4.08/3.89	4.49/5.29	5.95/9.3	6.11/6.08	5.83/5.37	5.45/7.3	4.86/4.56	1.42/-0.69	1.14/1.54	2.41/0.57	0.44/1.22	1.54/2.01	2.83/6.5	3.95/3.71	3.73/4.13	3.74/4.33	4.61/3.34	1.67/1.59	3.76/3.99	3.14/3.64
Θ(60°)	4.38/3.89	4.2/4.8	3.99/3.48	4.3/5.46	5.36/4.79	4.2/4.22	4.5/4.6	4.96/4.93	4.86/6.06	5.95/5.24	4.97/4.37	2.9/-0.38	0.35/0.34	3.51/3.76	0.25/2.49	2.82/3.39	4.77/4.82	4.68/4.41	4.47/4.63	4.7/4.76	4.38/3.64	2.58/1.38	4.41/5.28	4.4/4.83
Θ(67.5°)	4.97/3.44	4.43/5.33	4.68/4.01	4.57/5.28	4.44/3.13	3.28/2.67	3.13/5	5.91/5.04	4.66/5.37	4.89/5.25	4.04/2.32	-0.98/1.66	1.43/0.7	4.12/0.7	2.18/3.15	3.24/3.29	4.01/4.06	3.04/1.97	2.92/3.45	4.52/5.09	4.93/4.34	4.09/2.71	3.09/5.52	5.31/5.75
Θ(75°)	5.66/4.11	4.15/4.11	4.54/4.9	4.93/5.11	3.6/4.53	6.04/6.26	5.64/4.5	6.26/6.62	4.58/4.2	5.54/5.22	3.9/1.66	1.07/-0.58	2.26/-0.15	2.53/1.63	1.96/3.99	3.53/2.39	2.81/3.72	3.06/0.66	2.58/4.68	4.78/5.49	6.59/5.71	5.79/4.12	1.29/4.89	4.46/2.6
Θ(82.5°)	4.78/2.78	4.88/4.94	2.82/2.69	4.29/4.93	4.31/5.82	7.39/6.99	6.14/5.19	6.43/6.57	2.79/4.03	5.48/3.83	1.82/1.21	0.16/2.63	0.93/0.18	0.65/0.58	3.34/2.6	2.31/1.98	4.48/4.76	3.8/2.28	2.97/5.28	5.36/4.9	6.34/5.34	5.95/5.26	2.14/95	3.83/4.98
Θ(90°)	5.65/4.06	2.64/3.33	2.13/-0.04	1.12/3.66	3.35/4.79	6.7/6.86	5.2/4.56	6.08/7.21	5.36/2.56	5.34/3.94	1.44/-0.12	0.98/-0.43	2.11/1.49	0.86/1.86	0.65/4.13	3.74/2.27	3.14/5.35	4.58/3.52	4.17/6.2	5.89/5.21	6.21/6.04	4.16/4.13	0.26/2.21	3.98/5.32
Θ(97.5°)	4.03/1.49	1.23/1	0.77/-0.56	0.63/3.33	3.07/4.63	6.59/6.66	5.23/4.46	5.63/5.83	1.99/2.96	4.24/1.36	-0.26/-1.58	-1.37/1.22	1.17/1.35	1.82/-0.84	1.61/3.43	3.41/1.24	2.13/5.12	5.07/3.13	3.74/5.33	5.34/3.88	5.45/5.51	3.63/3.16	1.84/3.73	0.85/2.94
Θ(105°)	1.06/0.28	0.29/1.53	-2.61/-3.13	-1.55/2.23	2.92/1.37	4.07/4.36	3.24/2.54	3.57/4.71	1.81/2.99	4.83/2.52	1.84/1.24	-0.43/-1.75	0.93/0.14	-0.64/0.1	-1.94/0.88	2.13/1.02	0.41/5.48	5.33/4.3	4.5/5.32	5.26/5.02	5.67/5.4	3/1.32	0.66/2.5	-0.08/1.3
Θ(112.5°)	-1.41/-0.02	-3.62/-0.02	-1.08/-3.71	-4.46/-0.89	-0.44/-0.27	1.61/1.98	0.14/-1.42	1.16/0.58	0.54/3.31	2.77/1.79	1.3/0.33	0.52/-0.46	0.72/-0.32	-0.4/-1.5	-1.98/0.71	1.41/2.79	2.31/3.95	4.62/1.65	2.08/2.35	4.07/5.25	6.08/6.49	4.11/-0.18	2.33/3.32	0.51/-0.02
Θ(120°)	-0.43/-2.5	0.19/0.13	0.66/-0.72	-1.15/-2.74	-0.33/-0.22	-1.88/-0.63	-0.58/-1.43	-1.7/-0.96	-0.16/2.64	2.45/1.15	-0.07/1.96	0.8/-2.96	-0.98/1.15	-1.98/0.94	-0.75/-1.23	0.19/2.94	1.68/3.52	4.58/2.3	-0.81/0.68	3.8/3.83	2.92/4.13	4.03/-0.22	2.69/3.01	1.52/0.13
Θ(127.5°)	-3.98/-1.43	-3.37/-1.03	-1.01/-0.86	-1.3/-1.62	-1.73/-1.8	-2.98/-3.79	-1.8/-1.66	-1.83/-0.51	0.97/0.83	0.37/-0.19	1/-0.65	-3.83/-4.43	-0.89/-0.82	0.11/0.74	-0.79/-2.41	-0.91/1.12	2.45/0.76	2.89/1.5	0.32/-0.13	2.79/4.38	2.72/3.85	1.56/-1.41	2.33/2.66	0.58/-1.64
Θ(135°)	-1.61/-1.44	-0.44/-1.45	-1.17/-0.03	1.04/-3.21	-3.6/-2.84	-3.55/-4.67	-4.84/-3.35	-3.35/-1.54	-0.48/-1.54	-2.8/-1.05	0.54/-0.75	-3.46/-3.1	-2.56/											





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

Appendix A

Θ(22.5°)	-2.19/-2.43	-2.01/-1.63	-2.47/-4.27	-7.12/-11.23	-10.74/-11.99	-14.89/-15.2	-18.85/-18.55	-17.68/-19.39	-8.94/-8.67	-4.28/-2.82	-3.46/-3.09	-3.74/-4.21	-2.67/-1.32	-1.25/-1.78	-1.71/-1.89	-1.76/-2.27	-3.52/-5.29	-7.72/-10.04	-12.45/-13.38	-10.88/-8.99	-8.24/-5.48	-3.93/-3.82	-3.24/-1.93	-1.49/-1.44	
Θ(30°)	-2.28/-1.85	-2.15/-3.92	-4.53/-4.86	-5.94/-7.56	-10.16/-13.21	-12.33/-10.27	-11.51/-12.18	-13.08/-18.04	-18.17/-16.6	-10.87/-7.2	-4.07/-3.4	-3.4/-2.75	-2.51/-2.97	-2.4/-2.08	-2.03/-2.3	-3.02/-4.27	-6.14/-7.73	-8.68/-10.2	-12.85/-13.8	-12.35/-9.78	-7.23/-5.13	-3.56/-3.14	-1.65/-0.81	-0.98/-1.57	
Θ(35°)	-2.36/-3.62	-2.65/-1.73	-3.17/-7.21	-8.47/-7.63	-5.98/-4.06	-3.26/-3.52	-3.38/-3.7	-7.16/-8.48	-17.12/-12.22	-13.06/-7.97	-6.7/-3.5	-5.22/-2.95	-3.25/-2.56	-2.34/-2.84	-3.19/-3.51	-4.12/-5.37	-6.68/-7.44	-8.91/-12.78	-18.95/-18	-12.92/-10.64	-7.54/-4.98	-3.39/-3.45	-2.25/-2.26	-1.75/-1.47	
Θ(45°)	-1.37/-2.13	-5.56/-3.98	-3.4/-7.65	-9.23/-5.93	-5.23/-3.56	-3.57/-3.95	-4.16/-5.83	-6.12/-6.89	-9.77/-14.56	-16.15/-12.41	-5.89/-6.21	-5.52/-3.81	-3.7/-4.53	-3.06/-4.26	-5.22/-3.01	-3.46/-5.33	-6.75/-8.74	-11.28/-19.52	-15.38/-10.68	-8.05/-6.69	-7.43/-5.71	-4.92/-3.78	-3.56/-4.81	-2.72/-1.29	
Θ(52.5°)	-1.79/-4.09	-2.46/-3.0	-4.04/-5.7	-5.15/-5.37	-6.08/-6.42	-6.82/-7.98	-9.61/-11	-15.82/-13.87	-11.97/-9.42	-13.38/-18.66	-7.58/-4.11	-5.37/-3.23	-3.34/-4.06	-2.08/-5.19	-2.02/-3.96	-3.77/-5.6	-6.9/-10.42	-15.29/-18.97	-15.68/-8.61	-7.41/-4.73	-4.56/-4.22	-4.91/-4.1	-2.8/-3.56	-2.13/-2.19	
Θ(60°)	-0.87/-3.65	-2.36/-0.89	-3.17/-3.07	-3.69/-5.33	-8.73/-14.65	-17.53/-18.39	-16.32/-19.07	-18.92/-18.59	-16.94/-18.92	-16.18/-12.6	-15.62/-7.66	-4.84/-4.53	-3.4/-4.53	-3.49/-2.45	-7.08/-4.3	-5.19/-8.45	-6.84/-10.3	-16.04/-18	-17.08/-11.14	-7.66/-7.11	-6.49/-5.97	-6.48/-5.01	-3.31/-3.04	-4.15/-1.3	
Θ(67.5°)	-1.4/-3.21	-4.34/-3.12	-6.15/-3.85	-4.76/-12.22	-19.42/-11.98	-8.39/-8.24	-9.7/-11.11	-11.71/-9.68	-10.43/-15.07	-13.77/-15.43	-17.3/-7.14	-6.29/-3.55	-5.08/-5.29	-1.74/-6.12	-8.88/-5.7	-6.95/-7.44	-9.45/-14.07	-19.24/-17.61	-17.75/-14.87	-9.99/-6.94	-5.88/-4.71	-7.33/-6.83	-6.1/-2.14	-5.79/-1.46	
Θ(75°)	-2.13/-3.23	-2.9/-3.79	-9.15/-8.93	-8.12/-14.05	-9.32/-6.64	-5.15/-4.49	-5.8/-8.04	-12.22/-10.45	-9.01/-10.88	-17.09/-18.5	-18.67/-19.15	-11.83/-9.23	-5.88/-6.56	-6.53/-3.5	-11.57/-8.67	-9.48/-10.29	-12.41/-17.47	-19.08/-18.06	-17.53/-15.97	-11.62/-7.77	-6.02/-4.91	-6.55/-7.8	-7.06/-2.96	-4.8/-1.64	
Θ(82.5°)	-4.37/-3.04	-4.1/-8.8	-12.12/-14.4	-13.54/-5.11	-3.9/-4.76	-4.33/-3.58	-4.81/-10.03	-18.92/-17.6	-10.6/-10.44	-17.61/-18.54	-19.14/-18.1	-14.15/-13.69	-9.2/-14.26	-4.22/-5.15	-13.92/-9.5	-10.45/-13.41	-14.6/-13.29	-12.23/-12.26	-11.6/-8.97	-9.18/-8.25	-6.95/-6.72	-6.28/-8.98	-7.8/-8.78	-5.01/-3.73	
Θ(90°)	-5.03/-5.7	-5.6/-12.07	-14.72/-14.85	-11.05/-3.28	-3.46/-6.37	-6.57/-5.91	-8.21/-14.9	-18.99/-14.32	-14.37/-18.46	-18.31/-18.07	-19.14/-13.81	-12.38/-15.79	-15.7/-17.27	-11.59/-5.13	-9.37/-15.09	-12.5/-14.47	-12.33/-11.2	-9.38/-10.77	-11.64/-10.23	-8.4/-11.18	-7.46/-8.52	-7.87/-11.92	-6.42/-9.18	-5.09/-4.27	
Θ(97.5°)	-5.64/-10.41	-8.64/-17.04	-10.23/-9.83	-6.48/-3.32	-4.33/-7.37	-8.45/-8.95	-11.47/-15.65	-16.94/-15.71	-17.38/-15.53	-18.59/-19.16	-18.12/-19.2	-17.34/-11.98	-19.08/-15.45	-8.8/-8.13	-14.94/-17.39	-12.86/-15.68	-11.78/-10.94	-9.17/-9.84	-11.03/-10.1	-9.45/-10.51	-12.11/-13.12	-13.1/-12.5	-8.1/-9.45	-7.59/-5.06	
Θ(105°)	-9.61/-17.45	-11.94/-18.33	-9.71/-10.36	-9.3/-6.61	-6.41/-8.3	-11.48/-15.85	-18.39/-17.15	-13.24/-18.06	-16.53/-15.74	-18.27/-18.42	-18.98/-14.15	-11.46/-10.53	-11.75/-19.16	-15.29/-9.89	-13.33/-18.46	-12.78/-18.72	-18.44/-13.23	-10.92/-12.64	-12.52/-10.82	-14.5/-16.94	-15.9/-12.42	-14.33/-11.51	-6.77/-10.83	-5.69/-5.19	
Θ(112.5°)	-7.83/-17.98	-11.17/-11.63	-8.91/-12.33	-12.11/-9.87	-10.81/-9.84	-10.33/-16.77	-18.5/-17.85	-18.75/-17.86	-17.67/-15.36	-17.48/-17.31	-15.05/-12.05	-10.93/-9.57	-19.14/-13.36	-10.38/-10.04	-17.36/-13.64	-13.86/-15.93	-14.41/-11.84	-15.61/-16.52	-14.73/-15.57	-18.12/-18.97	-15.45/-17.81	-12.86/-11.09	-5.58/-7.47	-8.22/-8.59	
Θ(120°)	-11.92/-11.41	-12.68/-8.02	-7.45/-9.4	-13.69/-9.84	-10.45/-12.92	-11.78/-14.57	-19.33/-17.42	-18.08/-17.89	-15.02/-11.17	-16.9/-16.51	-17.96/-13.02	-10.24/-7.85	-7.54/-7.64	-11.08/-11.6	-14.68/-15.98	-18.37/-15.37	-14.59/-14.4	-14.58/-14.01	-16.12/-17.79	-18.39/-19.14	-18.06/-13.54	-18.64/-15.57	-14.12/-10.3	-12.09/-10.31	
Θ(127.5°)	-15.3/-9.83	-7.16/-3.3	-5.51/-4.46	-6.43/-11.43	-9.74/-8.86	-15.45/-18.33	-18.02/-13.11	-12.64/-18.1	-18.76/-18.8	-10.38/-15.4	-18.27/-18.42	-18.98/-14.15	-11.46/-10.53	-11.75/-19.16	-15.29/-9.89	-13.33/-18.46	-12.78/-18.72	-18.44/-13.23	-10.92/-12.64	-12.52/-10.82	-14.5/-16.94	-15.9/-12.42	-14.33/-11.51	-6.77/-10.83	-5.69/-5.19
Θ(135°)	-17.96/-6.33	-4/-5.56	-3.18/-4.06	-8.61/-16.48	-18.89/-14.18	-13.38/-16.71	-15.06/-18.08	-11.99/-12.46	-11.75/-16.61	-18.47/-18.79	-17.27/-12.86	-10.18/-7.32	-7.2/-11.06	-8.58/-9.69	-10.79/-14.2	-18.99/-8.93	-8.57/-8.94	-9.96/-12.67	-9.83/-10.94	-15.34/-17.73	-15.1/-10.47	-7.26/-6.92	-5.22/-10	-18.65/-18.91	
Θ(142.5°)	-12.1/-8.11	-6.17/-4.07	-4.43/-4.82	-6.06/-8.1	-14.2/-12.23	-18.18/-47	-18.31/-15.12	-12.51/-13.68	-17.38/-15.53	-14.97/-12.58	-12.16/-8.99	-9.22/-10.12	-10.21/-12.34	-17.87/-16.93	-16.59/-17.47	-18.08/-17.09	-8.09/-6.28	-10.14/-16.32	-10.93/-8.31	-15.89/-18.24	-19.61/-9.35	-6.04/-13.5	-7.72/-7.75	-10.87/-12.36	
Θ(150°)	-8.23/-10.52	-7.36/-6.63	-2.6/-2.6	-4.6/-5.11	-6.24/-6.54	-8.89/-14.68	-19.37/-14.04	-18.42/-14.26	-14.46/-13.09	-18.27/-15.14	-12.18/-13.79	-8.29/-5.64	-10.02/-10.15	-10.73/-13.44	-18.09/-16.8	-14.71/-17.96	-15.76/-14.58	-9.84/-11.2	-17.01/-9.44	-13.19/-12.04	-12.6/-9.35	-4.11/-3.82	-8.24/-5.73	-3.86/-4.07	
Θ(157.5°)	-12.65/-16.53	-12.04/-5.29	-2.76/-2.52	-4.3/-8.09	-13.71/-18.43	-18.32/-11.41	-11.06/-18.48	-18.44/-12.1	-15.36/-19.19	-12.66/-12.76	-18.88/-12.2	-5.01/-7	-9.08/-8.06	-8.63/-13.23	-8.39/-8.51	-8.16/-9.93	-10.83/-10.81	-10.19/-12.8	-17.97/-14.08	-9.79/-8.16	-9.12/-5.47	-4.72/-2.07	-1.46/-3.13	-4.57/-8.54	
Θ(165°)	-18.78/-18.57	-12.32/-10.5	-12.87/-12.45	-7.75/-5.09	-5.6/-7.02	-6.37/-6.41	-10.95/-14.7	-13.68/-10.18	-8.53/-7.15	-9.89/-9.47	-8.01/-10.59	-14.56/-16.86	-19.07/-18.4	-11.57/-5.73	-6.31/-5.76	-4.84/-5.5	-5.84/-7.35	-10.05/-12.98	-16.04/-17.33	-15.27/-10.97	-9.51/-8.1	-6.71/-8.7	-8.62/-6.86	-8.82/-10.28	
Θ(172.5°)	-11.31/-10.07	-8.57/-9	-11.87/-14.55	-19.37/-17.77	-15.96/-12.89	-9.22/-7.23	-9.08/-12.13	-14.44/-10.22	-6.4/-4.77	-3.15/-3.84	-5.17/-5.87	-9.53/-13.12	-18.55/-18.96	-14.72/-13.45	-9.27/-6.73	-8.33/-7.43	-8.93/-10.63	-12.69/-14.14	-17.45/-18.83	-18.69/-19.31	-18.72/-18.72	-18.83/-14.5	-9.98/-9.14	-11.93/-16.75	
Θ(180°)	-12.48/-12.82	-13.76/-11.12	-7.87/-5.36	-12.4/-6.65	-6.12/-6.98	-6.96/-8.19	-8.68/-8.88	-9.6/-9.99	-10.43/-9.18	-7.84/-7.27	-6.69/-5.39	-5.1/-5.12	-4.38/-4.08	-3.89/-3.49	-4.2/-5.35	-5/-6.24	-7.47/-7.82	-8.69/-9.27	-9.96/-9.31	-8.51/-7.47	-6.22/-6.27	-6.55/-7.31	-8.74/-9.63	-9.83/-7.76	
Freq(Hz)	5.3G/Pol	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°)	-5.68/-7.75	-8.39/-9.95	-11.72/-13.54	-10.99/-8.52	-7.24/-5.2	-4.4/-2.8	-1.63/-1.54	-0.89/-0.87	-1.42/-0.89	-0.78/-1.39	-1.98/-2.17	-2.92/-4.26	-5.22/-6.21	-7.91/-10.15	-9.85/-12.3	-9.29/-7.52	-6.36/-5.36	-4.29/-4.27	-3.24/-2.34	-1.89/-1.88	-1.67/-1.68	-1.51/-1.59	-2.03/-2.84	-3.58/-4.5	
Θ(7.5°)	-4.9/-5.87	-6.74/-7.91	-8.1/-8.69	-10.86/-9.39	-9.17/-8.26	-5.69/-5.33	-4.42/-3.26	-2.57/-1.96	-1.81/-1.58	-1.61/-1.8	-2.39/-2.98	-3.25/-4.57	-5.63/-6.92	-8.93/-9.88	-9.78/-9.87	-7.36/-5.59	-4.27/-3.61	-2.67/-1.91	-1.69/-1.28	-0.66/-0.49	-1.15/-1.12	-1.23/-1.65	-1.61/-1.93	-3.71/-4.09	
Θ(15°)	-3.93/-4.5	-5.51/-6.99	-7.19/-6.93	-7.1/-7.98	-8.97/-8.4	-7.95/-7.56	-6.98/-7.28	-7.12/-6.47	-8.23/-6.33	-6.76/-5.48	-5.89/-5.8	-6.08/-6.78	-7.49/-8.36	-7.53/-6.51	-5.69/-5	-3.51/-2.38	-1.78/-0.94	-0.59/-0.51	-0.54/-0.02	-0.35/-0.59	-0.53/-0.92	-0.71/-1.12	-2.38/-3.03		
Θ(22.5°)	-3.08/-3.27	-4.5/-5.4	-7.55/-9.13	-10.58/-13.42	-18.53/-19.42	-18.58/-13.86	-14.45/-14.27	-16.12/-31	-11.36/-11.46	-10.35/-16.59	-18.64/-11.99	-11.34/-8.78	-8.46/-7.62	-7.92/-6.13	-5.89/-4	-2.88/-1.54	-0.380/31	0.510/65	0.920/87	0.621/66	1.030/46	0.940/301	-0.82/-1.38	-1.76/-2.21	
Θ(30°)	-2.06/-3.08	-3.31/-4.95	-7.37/-11.47	-13.22/-13.68	-15.46/-17.45	-13.16/-12.88	-14.99/-11.29	-10.96/-9.14	-10.04/-9.28	-9.6/-14.22	-14.56/-16.8	-12.71/-11.16	-8.83/-4.78	-5.95/-4.84	-3.91/-2.22	-1.38/-0.29	0.3/-0.23	-1.01/-0.86	0.030/35	0.171/22	1.23/14	0.740/75	0.35/-0.36	-0.48/-1.83	
Θ(37.5°)	-2.84/-2.41	-3.61/-5.11	-9.07/-10.66	-8.61/-10.1	-9.83/-6.64	-6.72/-6.11	-5.17/-6.81	-7.6/-8.38	-13.21/9.53	-9.57/-9.31	-11.81/-11.5	-10.67/-9.89	-7.36/-6.49	-5.03/-2.13	-1.32/-0.32	-0.71/-0.54	0.35/-0.52	-1/-0.47	0.891/25	1.052/3	2.221/94	0.971/5	1.820/01	-1.14/-2.3	
Θ(45°)	-1.45/-1.36	-1.85/-6.1	-8.73/-6.06	-4.6/-6.6	-6.97/-5.07	-1.84/-5.74	-0.44/-9.36	-10.74/-9.53	-9.34/-10.56	-14.92/-12.77	-8.46/-9.89	-11.14/-10.35	-6.62/-4.22	-4.13/-2.41	-0.69/-0.1	0.740/87	0.25/-0.12	0.171/47	2.712/96	2.66/85	2.32/02	1.671/55	1.341/01	-0.91/-1.24	
Θ(52.5°)	-1.14/-2.55	-2.36/-4.28	-4.32/-3.08	-4.99/-4.36	-2.41/-1.27	-1.97/-2.96	-5.78/-8.82	-8.57/-11.18	-9.78/-9.21	-9.14/-15.34	-14.45/-13.62	-10.1/-6.98	-4.33/-3.64	-1.380/17	-0.51/-0.41	1.360/93	0.061/03	2.233/44	4.164/41	3.44/43	2.692/62	1.221/2	1.642/31	2.01/-0.26	
Θ(60°)	-0.77/-2.01	-2.79/-4.52	-2.06/-1.14	-3.16/-5.85	-2.15/-1.21	-0.65/-1.82	-4.03/-3.98	-3.75/-4.72	-4.78/-8.22	-6.86/-10.52	-11.75/-10.85	-12.3/-8.62	-7.84/-4.25	-2.33/-0.12	-0.20/54	1.13/-0.29	-1.09/159	2.893/3	3.493/3	2.72/84	2.592/04	1.842/67	2.132/1	2.160/79	
Θ(67.5°)	-0.55/-1.55	-0.65/-4.71	-2.08/-0.62	-3.38/-3.01	0/105	0.53/-0.8	-2.08/-1.59	-0.51/-1.89	-3.95/-7.3	-5.54/-9.66	-12.53/-13.87	-9.8/-7.49	-5.01/-4.48	-1.87/0.35	0.940/87	1.131/61	-0.741/26	2.21/93	1.461/4	0.610/03	0.891/2	1.511/11	1.341/66	2.932/19	
Θ(75°)	1.01/-1.71	-0.4/-2.79	-1.6/-2.0																						



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

Appendix A

Θ(75°)	-4.59/-4.81	-3.47/-2.11	-5.48/-6.88	-9.95/-17.91	-12.61/-8.82	-9.34/-11.69	-14.15/-18.97	-12.93/-8.67	-7.57/-7.81	-10.57/-11.88	-18.25/-18.3	-18.46/-14.22	-16.06/-9.12	-6.17/-8.14	-13.51/-10.15	-7.97/-9.06	-7.6/-7.6	-9.1/-14.67	-13.58/-14.83	-10.18/-10.51	-10.54/-10.54	-9.14/-10.47	-11.35/-6.41	-6.2/-5.87
Θ(82.5°)	-4.63/-6.78	-3.22/-2.18	-9.23/-7.89	-11.03/-14.62	-7.27/-9.02	-10.97/-11.88	-15.8/-17.8	-16.45/-9.48	-13.58/-12.69	-9.89/-15.23	-17.44/-14.06	-19.05/-18.11	-16.42/-10.36	-9.98/-13.43	-14.17/-11.57	-8.75/-11.72	-9.16/-6.7	-8.61/-11.19	-17.76/-18.28	-12.82/-10.25	-9.2/-10.06	-10.97/-9.97	-11.43/-9.47	-5.37/-4.96
Θ(90°)	-5.27/-3.79	-4.52/-7.13	-17.44/-13.27	-15.17/-9.72	-6.99/-7.37	-10.58/-13.24	-14.6/-15.07	-18.95/-19.08	-10.34/-12.13	-10.37/-13.84	-11.16/-14.86	-18.03/-19.12	-14.74/-18.01	-13.06/-16.61	-11.75/-12.9	-12.12/-15.09	-13.06/-8.04	-7.42/-9.94	-18.25/-18.76	-16.22/-17.9	-13.98/-13.56	-15.23/-10.01	-11.91/-4.56	-5.92/-8.3
Θ(97.5°)	-6.36/-6.79	-5.65/-8.73	-12.83/-14.63	-13.09/-5.2	-4.79/-10.02	-14.95/-14.68	-16.08/-17.07	-18.49/-18.51	-17.07/-18.09	-12.1/-12.52	-17.68/-9.8	-12.25/-17.94	-19.21/-18.81	-18.55/-18.15	-14.17/-18.03	-15.14/-13.71	-13.08/-10.49	-10.01/-12.93	-17.28/-17.46	-16.37/-14.75	-14.76/-17.73	-14.36/-7.8	-6.71/-2.74	-3.64/-1.82
Θ(105°)	-6.57/-11.37	-11.45/-17.1	-8.51/-6.5	-7.91/-3.09	-2.71/-10.01	-18.86/-19.12	-14.52/-18.88	-16.07/-17.77	-12.82/-14.55	-18.4/-12.89	-18.14/-10.81	-13.73/-12.54	-16.2/-15.95	-14.41/-17.02	-17.84/-18.91	-18.34/-15.11	-14.95/-14.59	-12.67/-11.3	-17.64/-18.07	-18.83/-13.57	-17.35/-18.6	-14.67/-8.01	-5.91/-5.1	-2.42/-4.9
Θ(112.5°)	-8.93/-11.4	-18.68/-18.6	-15.2/-7.68	-5.28/-4.5	-4.4/-6.31	-12.81/-17.83	-18.64/-14.67	-16.29/-15.24	-18.96/-13.53	-16.09/-13.28	-14.37/-18.21	-15.31/-12.16	-12.78/-14.06	-13.3/-17.69	-18.42/-17.78	-15.2/-18.35	-17.68/-18.17	-18.11/-19.76	-18.22/-18.19	-18.67/-19.06	-18.25/-15.43	-10.26/-5.53	-7.16/-8.79	-3.31/-6.18
Θ(120°)	-11.4/-12.66	-18.96/-12.39	-6.17/-8.2	-8.72/-6.85	-8.4/-12.09	-9.83/-13.54	-18.98/-15.24	-12.86/-17.52	-17.12/-19.02	-17.74/-16.88	-19.32/-18.28	-19.51/-16.56	-12.28/-18.15	-12.61/-13.71	-17.97/-13.86	-14.47/-17.91	-15.95/-18.23	-18.91/-17.75	-16.22/-17.87	-15.92/-18.94	-15.71/-11.66	-16.64/-18.09	-11.4/-10.02	-4.74/-9.13
Θ(127.5°)	-15.75/-16.38	-11.96/-11.12	-4.43/-6.52	-8.76/-14.31	-11.36/-11.76	-17.14/-17.88	-18.26/-15.74	-12.59/-15.69	-15.31/-19.35	-18.28/-18.16	-17.67/-16.32	-11.67/-9.07	-12.7/-13.28	-11.96/-16.82	-12.16/-18.17	-17.95/-17.95	-18.88/-16.76	-19.25/-18.25	-18.48/-13.57	-6.68/-8.66	-9.97/-11.32	-6.35/-9.16	-17.1/-9.51	-10.85/-13.49
Θ(135°)	-9.12/-17.6	-8.19/-3.65	-2.73/-2.39	-5.23/-13.69	-18.46/-15.92	-12.59/-12.82	-11.87/-18.33	-12.5/-13.62	-15.77/-17.75	-11.15/-13.4	-18.8/-16.79	-9/-10.03	-18.73/-17.98	-19.07/-18.36	-11.3/-11.53	-19.1/-12.41	-14.65/-17.9	-18.06/-17.45	-18.28/-11.17	-8.15/-8.97	-6.57/-5.48	-3.93/-7.1	-17.73/-7.83	-9.71/-15.05
Θ(142.5°)	-11.52/-7.61	-12.42/-6.45	-6.5/-10.82	-19.13/-10.06	-8.28/-9.33	-15.64/-17.53	-18.63/-15.39	-11.83/-14.01	-18.39/-18.72	-18.86/-18.29	-18.68/-8.17	-9.69/-17.09	-18.57/-17.5	-19.44/-18.71	-16.92/-14.58	-15.49/-13.81	-11.96/-10.77	-13.38/-15.62	-19.2/-15.71	-6.78/-4.12	-5.87/-7.62	-7.01/-4.93	-9.47/-8.48	-11.19/-12.18
Θ(150°)	-5.03/-4.96	-1.61/-3.11	-2.18/-2.37	-6.89/-15.74	-14.06/-8.87	-7.88/-10.64	-16.99/-16.64	-14.46/-12.65	-14.71/-13.34	-18.39/-9.98	-6.96/-12.53	-8.8/-9.09	-17.84/-18.75	-17/-10.44	-14/-11.9	-14.07/-13.41	-9.24/-9.52	-12.87/-15.98	-18.59/-10.21	-9.5/-16.1	-13.26/-19.06	-9.7/-4.53	-4.73/-9.9	-3.24/-15.2
Θ(157.5°)	-1.690/0.3	-4.36/-12.27	-3.76/-1.72	-2.26/-4.78	-12.83/-18.95	-17.24/-16.76	-16.99/-16.65	-18.08/-13.93	-17.67/-12.63	-11.17/-14.39	-6.91/-3.8	-5.34/-8.81	-5.71/-7.61	-15.75/-10.95	-9.4/-1.19	-7.54/-8.36	-10.13/-13.73	-15.47/-19.23	-17.85/-8.28	-6.12/-3.78	-5.49/-4.54	-5.27/-3.99	-0.9/-1.61	-5.26/-4.18
Θ(165°)	-3.17/-4.77	-14.47/-14.35	-8.59/-10.32	-13.84/-15.41	-10.58/-9.3	-8.04/-8.95	-9.82/-10.69	-13.96/-13.71	-10.84/-9.57	-10.37/-11.37	-12.55/-11.98	-11.93/-12.78	-14.58/-7.81	-6.16/-4.22	-6.27/-8.1	-11.24/-13.27	-15.81/-18.5	-17.35/-19.03	-18.94/-11.69	-6.61/-6.69	-3.51/-4.15	-2.84/-2.76	-6.64/-8.9	-4.24/-4.87
Θ(172.5°)	-5.75/-7.79	-11.15/-11.92	-12.37/-18.64	-18.27/-13.54	-9.55/-7.87	-6.65/-5.82	-7.87/-10.59	-19.21/-11.75	-6.4/-3.93	-2.58/-2.29	-2.15/-3.93	-6.3/-8.88	-12.95/-12.92	-17.05/-13.5	-13.66/-14.2	-12.77/-13.92	-12.86/-13.92	-15.71/-13.1	-12.69/-13.61	-16.57/-14.35	-14.1/-11.83	-10.97/-17.4	-11.34/-6.88	-7.34/-11.55
Θ(180°)	-15.35/-18.22	-16.63/-16.26	-11.81/-6.79	-5.01/-5.95	-7.01/-8.47	-9.16/-10.05	-12.43/-17.14	-15.04/-13.89	-10.74/-7.89	-5.91/-4.61	-3.28/-2.16	-1.58/-1.12	-0.79/-0.98	-1.31/-1.25	-3.41/-4.58	-5.65/-9.05	-9.88/-12.02	-13.76/-11.81	-10.8/-9.3	-7.41/-5.51	-5.56/-4.73	-4.06/-4.11	-3.83/-4.71	-7.01/-6.06
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°)	-13.57/-16	-14.41/-12.48	-9.1/-6.44	-5.23/-13.69	-2.4/-1.8	-1.55/-1.13	-0.94/-9.07	-0.12/-0.07	-0.59/-1.09	-1.46/-2.13	-2.94/-4.36	-5.43/-7.65	-10.17/-12.05	-13.02/-11.28	-11.59/-6.82	-5.59/-5.5	-4.48/-3.65	-2.95/-1.92	-1.66/-2.08	-1.73/-1.93	-3.54/-4.29	-4.89/-5.87	-8.77/-14.31	-8.45/-13.75
Θ(7.5°)	-9.93/-11.59	-13.93/-13.86	-12.1/-8.44	-6.5/-6.62	-5.85/-4.52	-3.42/-2.55	-2.75/-2.28	-2.22/-2.43	-2.28/-2.54	-2.92/-3.97	-4.7/-6.2	-7.48/-8.68	-11.26/-12.54	-13.37/-10.58	-8.34/-6.17	-4.22/-2.73	-1.82/-1.22	-0.30/-29	0.40/52	0.770/79	0.4/-0.3	-0.44/-1.7	-3.55/-4.64	-6.71/-9.2
Θ(15°)	-8.03/-8.71	-10.56/-9.45	-8.6/-8.39	-6.53/-6.4	-4.58/-6.41	-5.11/-5.2	-4.73/-4.4	-4.43/-3.35	-4.12/-3.98	-4.71/-5.35	-6.14/-7.28	-8.47/-10.7	-9.5/-8.6	-7.6/-7.98	-7.42/-5.62	-3.53/-4.27	-1.02/-0.26	0.251/0.3	1.26/1.4	1.44/1.21	0.620/1	-0.15/-1.36	-3.08/-5	-7.67/-9.1
Θ(22.5°)	-5.52/-5.5	-4.96/-5.27	-5.31/-4.31	-4.62/-5.59	-4.18/-7.2	-8.22/-5.83	-8.62/-9.4	-8.83/-7.18	-6.33/-6.56	-8.29/-6.31	-11.02/-13.61	-17.43/-14.38	-9.82/-6.08	-7.35/-9.48	-5.29/-3.31	-2.41/-2.5	-3.50/19	0.71/41	2.25/2.13	2.492/23	1.840/76	0.38/-0.7	-2.17/-3.57	-5.51/-5.37
Θ(30°)	-2.91/-3.54	-3.95/-2.86	-3.03/-4.97	-7.23/-10.14	-12/-13.08	-10.34/-9.39	-8.35/-7.68	-8.59/-8.91	-10.66/-11.47	-9.33/-8.83	-10.28/-18.3	-17.92/-17.23	-12.86/-7.27	-4.53/-4.49	-3.12/-1.7	-1.49/-0.76	0.02/1.12	1.58/2.53	3.24/3.12	3.09/2.63	2.18/1.37	0.670/0.4	-0.68/-0.8	-1.22/-2.31
Θ(37.5°)	-1.95/-2.26	-1.33/-1.56	-3.51/-6.72	-9.97/-10.86	-8.64/-7.6	-7.42/-7.14	-8.5/-6.58	-7.55/-6.6	-7.159/-0.3	-6.23/-4.22	-4.84/-6.36	-9.86/-11.29	-9.21/-7.76	-4.99/-5.7	-1.44/1.03	1.260/09	-1.820/76	2.78/2.45	2.75/2.49	2.1/48	0.530/17	-0.65/-0.36	1.030/82	-1.18/-0.83
Θ(45°)	-0.26/-1.49	-3.02/-2.2	-4/-6.97	-7.41/-5.6	-6.37/-5.55	-4.54/-3.78	-4.13/-3.91	-4.12/-5.74	-5.72/-6.38	-4.96/-5.87	-7.45/-7.92	-7.52/-8.2	-9.27/-5.18	-2.59/-0.94	0.16/-0.82	-2.24/-0.75	1.67/2.79	3.06/2.62	2.41/89	0.13/-0.24	-0.26/-1.01	-1.34/-0.08	0.892/26	1.860/68
Θ(52.5°)	0.91/-1.85	-2.14/-1.29	-5.52/-8.47	-5.1/-3.61	-4.19/-4.83	-2.51/-1.85	-2.43/-4.03	-3.59/-3.37	-4.48/-6.82	-5.39/-6.64	-8.27/-7.93	-6.06/-5.81	-6.45/-4.04	-0.060/75	0.38/-0.99	-2.06/-0.5	1.85/2.91	2.92/2.42	2.11/53	0.570/09	-0.83/-1.07	-1.80/-2.06	0.982/15	2.051/73
Θ(60°)	0.31/-0.58	-0.03/-1.85	-3.82/-4.65	-4.09/-2.72	-1.86/-0.49	-0.57/-1.75	-3.81/-6.32	-6.55/-6.11	-6.23/-4.22	-4.84/-6.36	-9.86/-11.29	-9.21/-7.76	-4.99/-5.7	-1.44/1.03	1.260/09	-1.820/76	2.78/2.45	2.75/2.49	2.1/48	0.530/17	-0.65/-0.36	1.030/82	-1.18/-0.83	
Θ(67.5°)	0.770/52	0.57/-1.4	-3.97/-4.42	-1.34/-2.77	-2.69/-5	-5.93/-4.32	-4.02/-5.61	-4.82/-3.39	-5.1/-6.71	-3/-10.1524	-9.93/-4.7	-5.1/-4.25	0.770/99	0.35/-0.37	-0.970/41	1.48/2.4	1.830/72	-0.32/-1.19	-1.120/22	0.841/85	2.740/93	0.501/6	2.741/55	
Θ(75°)	-0.4/-0.35	1.67/0.57	-1.17/-3.95	-2.42/-2.69	-6.42/-2.77	-1.23/-1.64	-1.290/29	1.540	-4.53/-4.82	-2.02/-4.86	-9.18/-11.53	-16.79/-6.3	-6.38/-6.28	-3.90/17	-0.680/21	-1.21/-0.03	0.881/05	0.84/-0.32	-1.03/-1.24	-1.15/-1.1	0.961/98	1.880/07	-1.060/93	1.18/-0.03
Θ(82.5°)	-1.79/-2.47	0.781/37	-1.8/-3.2	-2.75/-4.99	-5.75/-2.05	0.38/-0.19	1.593/07	2.750/93	-7.79/-4.02	-2.86/-10.5	-11.86/-18.5	-10.17/-6.8	-7.54/-7.84	-2.04/-2.58	-1.07/-1.14	-2.08/-0.43	0.280/13	0.01/-0.69	-0.69/-0.7	-0.14/-0.28	0.380/34	1.20/63	-2.950/03	-0.06/-2.1
Θ(90°)	-3.75/-3.07	-1.060/08	-3.7/-7.49	-3.39/-2.75	-6.68/-2.28	0.15/-1.52	-1.860/97	2.891/83	-3.43/-9.23	-2.28/-9.59	-11.48/-13.35	-17.12/-7.04	-13.04/-8.59	-10.75/-3.14	-4.79/-2.56	-4.09/-2.76	-1.80/17	0.27/0.5	-1.40/23	0.01/0.1	-2.05/-0.78	-0.46/-1.67	-4.46/-2.81	-0.6/-2.54
Θ(97.5°)	-7.2/-7.39	-1.2/-2.057	-1.73/-5.26	-5.36/-3.12	-6.88/-4.25	-2.42/-3.38	-1.74/1.8	1.5/-0.83	-1.31/-18.93	-8.77/-18.45	-7.28/-10.32	-12.3/-7.75	-5.96/-4.38	-4.99/-4.78	-4.19/-4.13	-2.2/0.82	1.190/43	-0.03/-0.32	-1.36/-1.95	-3.55/-1.96	-1.03/-3.45	-4.54/-1.47	-3.37/-3.1	
Θ(105°)	-4.22/-6.57	-2.57/-1.3	-3.85/-6.99	-4.99/-2.45	-2.26/-3.77	-4.52/-7.95	-12.68/-5.21	-1.81/-1.55	-7.96/-4.87	-3.62/-8.25	-10.53/-9.07	-9.4/-7.01	-9.78/-11	-10.25/-5.8	-6.74/-6.51	-6.81/0.5	-4.470/15	-0.01/-0.94	-0.01/-0.82	-1.39/-2.53	-4.85/-2.79	-1.96/-3.78	-4.26/-4.73	-3.71/-3.47
Θ(112.5°)	-5.84/-6.51	-5.45/-1.63	-4.11/-5.07	-5.68/-5.34	-5.27/-6.36	-7.08/-11.03	-13.55/-11.03	-7.74/-12.92	-18.57/-9.55	-10.16/-18.88	-11.03/-12.62	-10.11/-12.62	-15.62/-11.61	-7.25/-8.4	-9.23/-9.17	-7.34/-2.61	-2.3/-2.01	-0.85/-1.52	-3.29/-3.1	-3.8/-1.9	-1.38/-1.16	-0.54/-4.96	-2.79/-5.09	-3.25/-7.18
Θ(120°)	-6.28/-15.08	-12.51/-1.79	-1.92/-3.69	-6.26/-11.05	-8.71/-5.99	-6.87/-1.5	-8.59/-15.02	-18.45/-19.33	-18.96/-12.07	-16.56/-18.27	-12.28/-8.71	-11.91/-17.76	-9.14/-9.36	-13.63/-6.36	-5.45/-3.13	-3.08/-4.06	-1.9/-1.8	-3.14/-2.37	-3.16/-3.02	-1.290/06	-1.89/-4.54	-3.12/-3.22	-3.24/-6.8	
Θ(127.5°)	-7.39/-10.35	-11.45/-3.9	-1.52/-5.91	-7.33/-9.92	-9.87/-12.01	-14.82/-10.07	-6.15/-7.																	



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

Appendix A

Θ(120°)	-12.09/-7.44	-16.12/-7.96	-15.72/-10.95	-11.57/-15.83	-18.31/-12.88	-11.21/-14.79	-18.62/-19.36	-18.46/-15.65	-17.9/-17.56	-15.06/-9.6	-8.29/-9.93	-13.06/-12.51	-14.23/-11.32	-12.44/-15.62	-10.77/-13.81	-10.22/-8.49	-6.67/-9.19	-9.83/-11.16	-14.47/-12.12	-9.41/-7.57	-13.1/-18.19	-18.22/-13.6	-10.72/-15.46	-10.79/-18.31
Θ(127.5°)	-4.57/-15.8	-9.9/-13.1	-9.01/-12.34	-12.48/-13.03	-18.14/-19.32	-18.17/-18.32	-18.12/-18.36	-18.59/-19.3	-14.32/-12.81	-15.81/-8.15	-9.54/-10.31	-14.41/-11.43	-15.21/-11.79	-15.44/-19.14	-9.99/-10.49	-11.48/-7.08	-8.02/-8.15	-7.25/-11.12	-14.01/-13.82	-8.82/-6.1	-6.92/-9.39	-8.26/-13.17	-18.55/-13.45	-17.57/-3.94
Θ(135°)	-5.54/-3.93	-13.29/-7.85	-10.37/-15.12	-16.32/-18	-19.33/-18.22	-12.09/-10.27	-9.97/-11.66	-15.25/-18.74	-17.09/-18.45	-18.68/-14.55	-12.16/-15.02	-13.06/-8.25	-7.76/-7.06	-7.23/-16.68	-8.8/-8.74	-17.51/-17.85	-8.06/-19.13	-5.67/-7.87	-9.06/-11.55	-8.91/-3.46	-2.02/-5.48	-7.91/-11.59	-18.18/-11.18	-14.99/-8.57
Θ(142.5°)	-19.32/-7.67	-8.08/-18.94	-11.51/-14.27	-18.01/-19.38	-18.52/-18.99	-14.53/-12.71	-12.23/-12.67	-15/-18.54	-18.88/-13.88	-8.31/-6.35	-9.27/-7.03	-4.67/-4.88	-3.8/-4.56	-10.19/-14.89	-10.73/-14.94	-12.65/-11.69	-10.81/-11.3	-8.28/-6.65	-3.82/-4	-4.55/-3.06	-1.29/-2.53	-10.17/-13.44	-16.7/-16.04	-15.41/-17.9
Θ(150°)	-17.7/-9.14	-9.73/-12.78	-8.46/-9.3	-8.16/-8.78	-10.31/-14.02	-16.46/-16.43	-18.24/-18.51	-13.71/-14.2	-8.1/-8.42	-9.39/-10.68	-13.8/-18.02	-19.13/-14.71	-15.69/-19.1	-19.1/-16.62	-14.89/-18.41	-18.02/-10.26	-9.09/-11.04	-10.89/-6.38	-6.36/-6.95	-9.28/-10.35	-10.5/-14.46	-15.76/-15.44	-19.28/-9.49	-10.89/-18.33
Θ(157.5°)	-10.29/-13.1	-13.11/-12.77	-18.06/-18.22	-18.09/-13.92	-10.91/-10.96	-10.1/-8.76	-8.24/-7.4	-6.8/-6.8	-18.55/-11.4	-10.7/-4.63	-4.21/-6.23	-9.61/-10	-8.85/-11.05	-16.66/-19.03	-13.71/-10.47	-8.66/-7.77	-7.88/-7.28	-6.69/-6.51	-6.76/-7.44	-14.01/-7.97	-14.01/-7.97	-7.21/-8.54		
Θ(165°)	-18.24/-18.79	-17.2/-11.57	-10.19/-9.62	-10.02/-11.05	-13.48/-17.93	-18.26/-16.88	-16.34/-18.57	-18.96/-18.89	-17.92/-18.11	-17.13/-13.44	-10.58/-8.01	-5.12/-3.18	-2.13/-2.12	-3/-5.09	-6.71/-8.04	-8.05/-7.68	-6.92/-5.56	-4.66/-5.6	-6.99/-8.1	-9.07/-9.98	-12.09/-15.21	-16.06/-12.15	-9.02/-8.01	-8.99/-11.8
Θ(172.5°)	-16.9/-17.69	-18.45/-16.67	-13.99/-11.97	-12.29/-11.69	-11.93/-12.8	-12.98/-15.51	-17.47/-18.18	-18.5/-18.67	-16.2/-14.25	-12.04/-10.24	-8.94/-7.55	-6.78/-6.09	-6.41/-7.17	-7.92/-8.62	-10.04/-10.18	-9.59/-9.48	-10.09/-9.97	-10.87/-12.85	-13.52/-16.72	-19.34/-18.71	-18.29/-18.02	-18.63/-17.78	-16.56/-18.24	-16.66/-16.83
Θ(180°)	-9.33/-10.85	-14.55/-18.76	-18.22/-17.52	-17.29/-16.88	-17.62/-17.53	-18.34/-18.43	-17.43/-14.22	-13.11/-12.21	-11.68/-10.89	-9.97/-9.35	-8.94/-8.64	-8.19/-7.91	-7.63/-7.62	-7.6/-8.01	-10.75/-12.99	-14.37/-15.39	-16.52/-15.96	-16.33/-17.74	-16.16/-15.22	-13.3/-10.82	-9.23/-8.5	-10.74/-10.86	-10.28/-9.27	
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°)	-19.41/-15.47	-12.01/-8.97	-6.56/-5.02	-3.71/-2.43	-1.73/-1.03	-0.62/-0.35	-0.29/-0.35	-0.41/-1	-1.94/-2.93	-4.16/-5.5	-7.52/-9.97	-14.49/-18.31	-17.93/-11.8	-7.33/-5.05	-0.19/-0.51	-1.52/-0.98	-0.77/-0.24	-0.19/-0.51	-0.88/-1.71	-2.72/-3.57	-4.64/-6.26	-8.89/-12.5	-18/-15.3	
Θ(7.5°)	-14.61/-10.46	-8.11/-5.55	-3.94/-2.71	-1.74/-1.18	-0.53/-0.19	0.39/0.5	0.46/0.31	0.02/-0.8	-1.82/-2.81	-4.21/-5.99	-7.78/-9.8	-13.37/-17.7	-16.59/-11	-7.66/-5.55	-4.49/-3.66	-2.64/-2.09	-1.88/-1.08	-1.21/-1.32	-0.95/-1.35	-1.77/-2.36	-3.25/-4.35	-5.86/-7.7	-10.63/-13.32	-16.44/-15.25
Θ(15°)	-9.29/-13.7	-5.75/-4.66	-3.88/-2.51	-1.73/-0.96	0.07/0.54	0.68/0.55	0.22/-0.15	-0.44/-1.04	-2/-2.83	-3.93/-5.61	-7.64/-9.35	-10.48/-11.37	-12.88/-13.86	-12.45/-9.07	-6.88/-6.6	-4.79/-5.11	-5.64/-4.98	-5.91/-6.6	-4.91/-4.77	-4.84/-4.93	-5.24/-5.69	-6.46/-7.7	-8.8/-10.2	-12.34/-10.44
Θ(22.5°)	-7.6/-7.3	-3.73/-2.52	-1.68/-0.92	-0.91/-0.68	-0.77/-1.13	-1.57/-2.51	-3.47/-4.37	-4.73/-4.81	-5.39/-5.56	-5.51/-6.21	-8.07/-10.87	-12.57/-12.01	-11.06/-10.76	-10.43/-9.44	-8.04/-7.33	-9.74/-12.64	-14.47/-14.27	-15.3/-15.38	-14.89/-13.44	-12.02/-11.4	-10.62/-9.93	-9.1/-9.38	-9.64/-7.97	
Θ(30°)	-7.95/-5.47	-3.34/-1.37	-0.55/-0.17	-0.07/-0.25	-0.99/-1.65	-1.82/-1.59	-1.63/-1.91	-2.47/-3.78	-5.61/-6.31	-9.47/-7.81	-6.21/-5.85	-7.03/-8.96	-9.09/-6.67	-4.83/-5.23	-7.77/-12.13	-18.74/-18.69	-18.93/-18.59	-16.35/-16.55	-15.06/-14.64	-14.66/-16.17	-19.28/-17.91	-15.31/-11.94	-11.1/-10.9	-10.58/-8.78
Θ(37.5°)	-8.24/-9.59	-3.82/-1.87	-0.9/-1.26	-0.49/0.73	1.71/-76	1.63/-13	0.82/-107	0.89/0.08	-1.42/-6.61	-6.94/-8.72	-8.67/-4.3	-4.71/-7.89	-6.26/-3.6	-3.23/-6.67	-16.81/-13.57	-11.08/-12.72	-15.57/-19.82	-15.52/-9.53	-7.79/-6.38	-5.28/-4.28	-3.83/-8.08	-8.45/-16.3	-17.89/-14.54	-13.11/-10.4
Θ(45°)	-5.9/-4.81	-3.34/-2.43	-2.48/-2.28	-1.48/0.74	2.21/-205	1.48/1.79	2.32/-27	2.65/-39	1.51/-6.21	-1.71/-3.52	-10.45/-8.72	-4.14/-4.05	-6.02/-3.95	-2.49/-7.33	-15.35/-5.52	-8.94/-4.25	-2.71/-9.4	-2.59/-2.38	-2.05/-1.08	-0.52/-0.5	-2.25/-5.98	-12.08/-12.43	-8.79/-6.85	
Θ(52.5°)	-3.56/-1.73	-0.55/-0.05	-2.56/-1.28	1.94/3.44	2.32/0.95	0.75/1.8	2.94/3.37	2.96/2.16	1.48/1.13	1.03/-0.12	-4.69/-3.99	-0.24/-1.61	-0.86/0.02	-3.81/-11.9	-3.79/-3.17	-7.83/-8.02	-3.3/-2.01	-2.11/-3.2	-4.3/-3.98	-3.15/-2.26	-1.51/-0.1	-0.31/-3.03	-7.8/-10.64	-7.75/-5.09
Θ(60°)	-1.71/-0.56	0.21/-0.27	-2.22/-2.15	1.96/2.82	1.82/0.94	2.86/3.86	3.95/-3.7	3.17/2.14	1.10/52	0.96/1.31	-0.34/-7.28	-3.67/0.29	-0.61/-0.87	-0.84/-9	-1.7/-0.92	-5.45/-4.75	-2.35/-2.89	-5.62/-5.68	-6.4/-24	-3.25/-3.88	-4.54/-3.84	-2.21/-2.8	-7.45/-6.98	-3.62/-1.6
Θ(67.5°)	-1.62/-0.49	0.55/-1.04	-2.66/-1.16	3.27/2.8	1.10/2.91	3.04/2.77	1.88/1.48	0.97/0.79	0.95/1.44	1.112/18	0.20/3.24	2.14/2.03	0.1/-0.8	-6.99/-1.55	1.48/-1.16	-1.77/-6.59	-3.28/-2.9	-1.72/-3.36	-2.54/-2.94	-2.16/-0.98	-0.68/-1.84	-2.57/-2.61	-5.81/-11.45	-5.31/-1.64
Θ(75°)	-0.68/0.54	0.75/-0.31	-1.95/0.43	2.39/2.21	0.35/1.86	2.33/1.1	0.15/0.71	1.37/1.71	1.97/1.77	1.17/2.1	1.9/-0.46	-1.86/1.78	1.16/-1.07	-2.06/-3.66	2.65/-0.32	-11.77/-6.8	-3.14/-0.69	-0.02/0.22	0.02/0.47	-0.22/-1.4	-1.13/-1.65	-2.53/-2.24	-5.05/-10.34	-5.12/-0.57
Θ(82.5°)	-0.01/7.8	3.18/-0.29	-1.66/0.5	1.29/0.59	-0.11/-76	1.17/-0.24	-0.27/0.1	0.32/0.32	-0.57/1.61	-1.67/-1.2	2.42/3.27	0.25/-0.21	-2.47/0.88	1.41/-7.05	-0.16/-1.77	-0.99/-0.07	-1.65/-1.99	-1.08/0.93	-0.13/-1.62	-0.17/-1.5	-2.28/-4.7	-8.24/-18.08	-8.74/-1.94	
Θ(90°)	-3.11/-0.05	1.21/0.09	-0.10.69	1.73/0.87	-0.27/0.56	0.22/-2	-2.16/-0.84	0.2/0.65	0.68/0.42	-0.42/0.93	2.61/1.37	-1.31/-1.75	-0.93/-1.19	-1.38/-4.57	-1.54/-3.73	-5.29/-5.95	-3.58/-0.78	-0.95/-1.31	0.52/-16	1.68/-1.5	-1.34/-0.8	-3.33/-7.37	-15.09/-18.2	-13.06/-5.83
Θ(97.5°)	-4.85/-0.04	0.82/-2.02	-1.9/-1.22	0.33/-0.74	-2.51/-1.04	-0.86/-2.1	-1.72/-0.39	0.07/0.15	-0.2/-0.58	0.55/2.8	3.72/-0.69	2.39/2.14	-0.93/-1.04	-2.74/-0.04	0.63/-2.27	-5.67/-10.79	-2.14/-0.27	-1.65/-2.89	0.72/1.83	1.46/-2.42	-3.18/-1.32	-4.77/-9.78	-18.21/-18.77	-14.71/-7.43
Θ(105°)	-9.34/-2.56	-1.08/-13.8	-5.32/-3.69	-1.91/-1.98	-3.33/-3.61	-2.16/-3.17	-3.15/-2.64	-2.29/-1.54	-0.75/-0.48	0.01/0.59	2.24/0.47	-2.28/0.14	0.69/-3.46	-0.35/-6.44	1.02/-0.89	-6.45/-12.87	-2.39/-0.1	-3.01/-7.96	0.08/1.61	0.88/-4.89	-0.05/-6.1	-6.66/-19.19	-12.67/-8.13	-15.41/-19.27
Θ(112.5°)	-17.97/-6.28	-2.49/-4.52	-5.99/-7.3	-3.71/-4.51	-4.73/-8.89	-2.56/-2.91	-3.22/-3.73	-3.84/-3.21	-2.1/-1.73	-6.17/39	0.89/-1.62	0.84/0.6	-2.54/0.28	-2.37/-3.41	-0.48/-4.26	-3.93/-1.69	-5.78/-19.16	-2.38/-0.51	-1.54/-7.5	-4.71/-3.66	-17.71/-14.63	-11.62/-11	-18.45/-13.05	
Θ(120°)	-11.67/-5.87	-3.74/-7.07	-8.82/-5.33	-9.19/-3.19	-7.12/-8.55	-5.72/-2.75	-2.35/-3.15	-3.84/-3.69	-3.64/-3.26	-2.13/-0.07	0.8/-1.02	-1.28/-0.4	-0.32/-0.93	0.78/-2.49	-4.35/-4.96	-5.14/-9	-2.84/-0.55	-1.77/-13.1	-8.35/-7.91	-10.31/-8.28	-6.94/-3.8	-9.98/-11.44	-10.83/-15.29	-17.94/-13.67
Θ(127.5°)	-10.61/-8.73	-8.15/-11.95	-11.48/-8.94	-10.58/-5.19	-5.68/-8.88	-11.14/-7.37	-5.62/-4.54	-2.97/-3.2	-3.57/-1.26	0.21/2.08	-1.23/-3.27	-1.29/-0.91	-1.28/0.44	0.1/-6.84	-7.18/-5	-5.62/-6.8	-5.1/-2.97	-2.76/-7.44	-14.19/-17.16	-17.03/-9.1	-16.65/-18.34	-18.5/-14.53	-15.89/-15.48	-15.1/-18.79
Θ(135°)	-8.27/-8.13	-5.54/-6.63	-18.74/-11.16	-17.56/-10.97	-6.79/-7.84	-8.66/-6.81	-6.44/-6.53	-6.23/-5.03	-4.05/-3.04	-1.24/-1.68	-3.94/-2.77	-3.15/-0.99	-2.11/-3.13	-1.17/-4.25	-13.11/-3.14	-3.15/-8.11	-11.29/-4.65	-1.8/-2.82	-5.86/-12.84	-13.51/-7.76	-8.2/-17.42	-17.65/-17.5	-18.75/-18.34	-10.72/-9.07
Θ(142.5°)	-12.1/-18.25	-17.14/-14.9	-14.2/-7.37	-7.2/-6.36	-5.16/-4.62	-5.18/-6.04	-5.07/-3.95	-3.28/-2.81	-3.04/-3.82	-6.38/-6.71	-6.07/-7.31	-5.51/-3.43	-3.64/-3.99	-5.41/-13.02	-10.95/-10.49	-19.08/-11.43	-4.05/-1.38	-3.86/-8.57	-10.98/-18.97	-13.31/-6.27	-5.79/-12.32	-12.67/-9.86	-16.01/-18.5	-12.81/-7.76
Θ(150°)	-15.6/-10.57	-12.22/-17.76	-13.85/-8.36	-7.58/-8.98	-7.98/-7.21	-6.26/-5.95	-6.1/-6.17	-6.86/-8.62	-8.28/-6.87	-6.47/-6.65	-6.9/-8.68	-12.75/-8.28	-4.08/-4.51	-9.66/-11.85	-8.78/-11.64	-16.91/-18.13	-6.98/-5.08	-9.54/-16.27	-15.94/-17.2	-14.07/-14.24	-9.72/-10.33	-19.32/-12.28	-9.61/-9.45	-8.09/-10.45
Θ(157.5°)	-12.79/-11.68	-12.94/-18.84	-15.79/-9.87	-8.9/-9.3	-11.42/-12.42	-13.83/-15.3	-14.01/-12.63	-9.96/-7.73	-6.31/-8.81	-10.77/-12.52	-13.34/-10.12	-7.56/-7.42	-9.46/-12.68	-15.78/-17.66	-18.86/-17.57	-17.34/-19.34	-15.44/-15.52	-17.4/-13.96	-10.23/-12.5	-15.84/-18.62	-10.83/-6.91	-6.84/-10.37	-18.13/-15.72	
Θ(165°)	-19.22/-17.2	-14.58/-14.88	-18.06/-15.91	-13.16/-12.92	-13.89/-15.86	-14.33/-13.72	-13.14/-11.78	-10.94/-10.12	-9.77/-9.4	-9.51/-9.92	-10.27/-10.65	-11.35/-12.05	-13.1/-13.48	-13.46/-19.36	-15.58/-12.1	-10.45/-9.16	-9.22/-9.19	-9.78/-11.01	-12.04/-11.65	-10.31/-9.8	-10.31/-12.52	-19.2/-17.53	-15.83/-13.97	-16.4/-18.55
Θ(172.5°)	-19.59/-17.5	-17.63/-17.56	-16.87/-14.39	-12.24/-10.57	-10.38/-10.77	-10.17/-9.38	-9.73/-9.11	-8.05/-8.11																



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

Appendix A

Θ(172.5°)	-12.76/-13.22	-15.87/-17.53	-17.75/-19	-18.71/-18.81	-18.16/-19.08	-17.37/-18.79	-19.03/-18.59	-16.84/-15.1	-12.76/-12.36	-9.72/-7.15	-5.4/-4.55	-4.69/-4.92	-5.13/-5.26	-6.02/-8.19	-11.18/-14.84	-17.62/-14.07	-11.79/-10.06	-9.15/-9.46	-10.1/-10.42	-10.18/-10.6	-11.29/-12.72	-13.69/-12.69	-11.5/-12.99	-15.98/-15.23
Θ(180°)	-11.6/-12.33	-15.48/-18.45	-19.13/-17.64	-17.55/-17.69	-17.97/-17.62	-18.74/-18.89	-15.77/-12.46	-11.46/-10.04	-9.45/-9.52	-8.95/-8.18	-7.69/-7.88	-8.55/-10.18	-12.17/-14.11	-14.56/-14.89	-14.32/-16.55	-18.25/-17.88	-19.11/-19.17	-18.13/-17.8	-18.25/-18.37	-19.25/-19.29	-17.3/-14.83	-14.83/-14.47	-14.52/-13.9	-12.28/-13.46
Freq(Hz)	5.65/Pol.	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°)	-13.64/-11.23	-9.26/-7.77	-6.61/-6.07	-5.27/-4.47	-4.44/-4.33	-4.24/-3.89	-3.49/-3.41	-3.51/-3.73	-3.96/-4.35	-5.26/-6.71	-8.09/-10.39	-12.95/-15.77	-15.41/-12.37	-9.46/-7.05	-5.31/-4.14	-3.45/-3.06	-2.55/-2.32	-2.2/-2.27	-2.82/-3.41	-4.02/-4.81	-6.08/-6.92	-8.72/-10.83	-14.67/-18.99	-18.47/-17.37
Θ(7.5°)	-17.47/-11.44	-8.25/-6.51	-5.2/-4.2	-3.23/-2.63	-2.69/-2.75	-2.44/-2.62	-3.22/-3.98	-4.8/-6.05	-8.2/-11	-15.05/-17.7	-18.08/-18.16	-17.15/-13.99	-11.26/-9.22	-7.37/-5.75	-4.49/-3.41	-2.5/-1.98	-1.63/-1.64	-1.61/-1.66	-1.77/-2.09	-2.71/-5.65	-5.28/-7.38	-10.01/-14.13	-17.88/-19.51	-
Θ(15°)	-14.19/-10.88	-8.13/-6.13	-4.99/-4.34	-3.55/-2.54	-1.9/-1.14	-0.53/-0.1	0.34/0.55	0.48/0.29	0.03/-0.31	-1.28/-2.46	-4.03/-6.34	-9.54/-13.23	-15.86/-16.83	-18.59/-17.16	-10.64/-5.98	-3.43/-1.98	-1.14/-0.61	-0.68/-0.85	-1.17/-1.58	-1.71/-2.17	-3.17/-4.24	-5.78/-7.87	-11.38/-16.06	-19.06/-14.64
Θ(22.5°)	-12.59/-7.89	-4.7/-3.15	-3/-2.89	-2.45/-1.38	-0.71/0.52	0.821/0.9	0.941/0.6	0.930/0.6	0.07/-1.01	-1.84/-2.66	-3.45/-4.41	-6.07/-8.73	-12.3/-16.82	-17.46/-11.14	-6.81/-4.82	-3.85/-3.64	-3.89/-4.67	-5.41/-5.43	-5.09/-5.17	-5.49/-5.49	-5.54/-5.91	-7.26/-9.1	-11.56/-13.94	-13.83/-11.26
Θ(30°)	-13.62/-8.62	-4.7/-2.77	-2.02/-2	-1.83/-1.36	-0.9/-0.34	0.48/1.3	2.06/2.19	2/1.53	0.97/0.09	-1.23/-3.16	-4.69/-4.52	-4.12/-5.13	-8.96/-16.37	-15.46/-11.11	-9.42/-9.56	-11.9/-16.48	-18.43/-14.78	-9.7/-7.68	-6.14/-5.21	-5.06/-4.81	-5.06/-5.32	-5.05/-6.02	-8.32/-12.59	-16.35/-14.77
Θ(37.5°)	-4.79/-5.56	-2.17/-0.36	-0.47/-1.31	-1.42/-1.59	-0.79/0.08	1.54/2.56	2.923/0.7	2.381/6.8	1.4/0.93	0.36/-0.97	-3.48/-4.45	-3.57/-5.04	-9.13/-11.76	-9.31/-13.88	-10.7/-13.98	-16.22/-12.43	-9.23/-6.98	-5.87/-5.54	-6.46/-9.03	-8.87/-9.85	-10.42/-9.8	-8.62/-5.62	-3.28/-2.82	-3.44/-4.69
Θ(45°)	-3.78/-4.39	-1.17/0.77	0.781/0.9	0.59/-0.84	-0.471/0.7	2.282/6.1	2.041/2.9	0.870/9.2	0.96/1.3	1.81/-1.49	-0.14/-3.25	-4.72/-3.76	-3.74/-4.82	-6.31/-6.2	-8.8/-17.53	-14.71/-11.82	-10.34/-9.27	-9.4/-9.03	-8.46/-8.96	-9.48/-7.67	-4.31/-3.26	-4.45/-5.76	-3.75/-2.13	-2.08/-3.89
Θ(52.5°)	-2.29/-3.19	-1.63/-0.68	0.591/0.9	-0.06/-1.86	0.282/0.8	2.41/-8.8	1.531/2.2	1.311/5.7	1.7/0.25	2.682/7.5	0.94/-3.7	-4.04/-3.66	-4.82/-6.25	-4.11/-6.9	-17.11/-11.85	-8.8/-6.52	-3.92/-2.97	-3.69/-5.49	-6.21/-4.62	-2.15/-1.24	-1.71/-1.56	-1.29/-3.27	-4.44/-2.49	-1.02/-0.81
Θ(60°)	-4.16/-3.28	-2.18/-0.17	1.72/2.64	1.18/-0.5	1.56/2.12	1.47/0.64	1.32/2.23	2.53/2.59	2.66/2.94	2.8/2.71	2.31/0.51	-2.69/-2.65	-1.16/-1.26	-0.62/-2.68	-10.45/-5.01	-3.43/-1.68	-1.08/-2.28	-4.09/-5.02	-4.22/-3.21	-1.13/0.55	0.35/-0.67	-1.17/-2.5	-5.14/-4.31	-3.83/-3.55
Θ(67.5°)	-2.99/-3.37	-1.93/-0.63	1.97/2.61	1.51/0.55	2.69/2.14	0.39/0.42	1.74/2.48	2.38/2.08	1.92/2.31	1.77/-1.53	2.53/2.87	1.77/-1.53	-2.53/-1.06	-1.03/-0.22	-1.77/-7.47	-4.01/-2.03	-3.1/-3.06	-3/-3.69	-4.57/-5.61	-6.33/-5.57	-2.99/-5.22	1.62/0.69	-2.08/-3.44	-7.19/-5.17
Θ(75°)	-2.62/-3.66	-2.76/-1.4	1.4/1.88	0.68/-0.45	1.87/1.46	0.84/2.03	3.48/3.56	3/2.07	1.4/1.54	1.62/1.66	1.44/0.58	-1.71/-1.22	0.83/1.4	1.28/-1.99	-2.5/-7.07	-4.07/-6.7	-3.04/-1.65	-2.34/-2.66	-1.19/-1.01	-1.13/-1.09	1.32/1.86	-0.46/-2.16	-8.61/-11.71	-5.29/-2.74
Θ(82.5°)	-2.96/-2.59	-2.2/-0.38	0.350/3.2	-0.31/-0.42	1.79/0.98	0.6/2.28	3.23/2.67	1.3/-0.27	-0.91/-0.58	0.07/-0.63	-1.22/-1.12	-1.74/0.02	0.53/0.26	-0.94/-2.92	-0.69/-0.73	-5.18/-10.04	-3.47/-1.92	-0.92/-1.41	-0.09/0.87	0.98/-0.4	1.21/8.9	-1.21/-2.55	-7.76/-17.56	-7.97/-3.24
Θ(90°)	-0.7/-1.81	-2.17/-1.11	0.34/0.6	1.16/-1.03	0.24/0.18	-1.57/1.03	2.83/2.96	2.06/0.54	-1.1/-1.67	-1.56/-2.93	-3.39/-2.57	-2.82/-3.78	0.5/0.6	-0.1/-1.26	-2.64/-2.11	-5.94/-1.78	-4.13/-0.22	-1.21/-0.1	1.48/2.86	1.6/-2.19	-0.61/2	-2.25/-4.69	-5.99/-18.68	-8.04/-1.83
Θ(97.5°)	-2.69/-3.73	-4.21/-3.33	-2.55/-0.88	0.09/-0.43	0.52/-0.35	-2.19/0.17	1.93/2.09	1.66/0.54	-0.94/-0.63	-1.11/-2.18	0.17/1.24	-0.35/0.97	0.76/0.07	-0.93/-4.46	-2.03/-2.64	-5.8/-17.35	-1.35/-1.77	0.89/-1.07	0.06/2.27	1.98/3	-2.81/0.2	-4.53/-14.9	-14.36/-18.45	-9.09/-3.19
Θ(105°)	-4.05/-0.59	-4.11/-6.16	-2.98/-4.12	-2.68/-2.5	-0.96/0.24	-1.4/-0.97	0.59/1.36	1.3/0.13	-0.95/-1.47	-2.19/-2.89	-1.41/0.39	-0.71/-0.29	0.12/-0.69	-1.88/-2.83	-4.47/-3.92	-6.82/-16.1	-2.42/2.35	0.74/-4.82	-1.74/1.86	2.63/-1.3	-2.23/1.36	-3.05/-12.52	-15.16/-19.25	-9.59/-4.77
Θ(112.5°)	-8.17/-4.08	-10.34/-8.31	-6.48/-9.93	-2.67/-2.34	-2.13/-1.34	-2.96/-1.99	-1.90/-2.4	0.87/-0.92	-1.13/-1.35	-4.69/-2.87	-0.39/-4.09	-3.28/-2.52	-1.84/-5.66	-4.69/-5.4	-5.01/-11.93	-3.54/-1.32	-0.59/-12.38	-3.5/0.44	0.72/-4.17	-8.71/-2.81	-6.87/-18.69	-16.46/-13.93	-8.36/-9.86	-
Θ(120°)	-3.8/-2.2	-7.59/-8.74	-10.28/-13.58	-4.8/-5.21	-3.12/-1.96	-2.51/-4.36	-3.54/-2.92	-4.22/-3.16	-3.64/-3.67	-2.92/-1.94	-0.73/-3.08	-3.69/-1.41	-3.04/-1.76	-2.55/-0.36	-7.98/-4.87	-7.39/-9.15	-7.46/-1.26	-0.72/-6.49	-15.4/-11.39	-7.01/-8.06	-12.73/-18.24	-14.14/-19.03	-1.04/-9.59	-10.08/-13.45
Θ(127.5°)	-10.58/-6.05	-12.07/-11.79	-13.8/-11.95	-3.46/-3.48	-4.25/-4	-3.74/-5.44	-6.34/-5.63	-4.18/-3.76	-4.32/-3.99	-4.05/-2.19	-0.41/-3.94	-2.01/-4.01	-3.88/-4.12	-1.81/-4.27	-12.06/-6.86	-8.47/-10.41	-11.5/-4.11	-1.26/-4.52	-11.06/-18.75	-19.19/-11	-18.49/-13.71	-18.2/-11.44	-11.34/-7.54	-6.17/-9.44
Θ(135°)	-9.06/-8.7	-18.33/-8.42	-6.48/-9.93	-3.27/-0.99	-2.71/-4.95	-7.32/-7.03	-6.81/-5.95	-4.82/-5.02	-6.38/-5.46	-4.42/-2.1	-2/-8.26	-3.03/-4.09	-3.18/-1.24	-2.83/-1.88	-6.96/-13.38	-6.23/-11.9	-19.5/-6.83	-1.95/-5.09	-5.77/-11.35	-12.17/-8.16	-9.88/-18.86	-18.3/-15.23	-12.31/-9.04	-5.04/-7.3
Θ(142.5°)	-18.21/-18.09	-13.75/-11.02	-8.8/-8.17	-5.87/-6.88	-5.56/-5.05	-4.16/-4.85	-7.09/-8.8	-10.52/-10.78	-8.21/-5.2	-3.77/-6.57	-8.9/-3	-4.77/-6.8	-4.86/-7.24	-10.45/-6.77	-15.7/-10.7	-5.61/-9.19	-10.5/-9.67	-13.53/-14.86	-9.86/-10.54	-10.53/-10.17	-12.47/-17.12	-14.58/-14.7	-1.04/-9.59	-10.08/-13.45
Θ(150°)	-5.6/-7.72	-18.74/-14.12	-9.03/-10.28	-11.71/-7.63	-6.46/-6.69	-8.92/-10.3	-9.24/-7.55	-4.84/-2.81	-2.49/-3.03	-3.89/-4.69	-3.53/-1.74	-3.43/-7.18	-3.96/-3.43	-6.14/-8.29	-14.54/-13.02	-12.24/-14.91	-16.19/-7.97	-10.37/-18.91	-18.23/-18.11	-18.11/-14.2	-10.7/-12.35	-14.8/-12.18	-7.47/-4.98	-4.75/-5.23
Θ(157.5°)	-8.96/-11.55	-19.23/-14.04	-10.05/-10.28	-0.98/-7.88	-6.35/-8.88	-5.13/-4.89	-4.39/-4.62	-5.98/-7.04	-6.45/-6.46	-6.44/-7.93	-8.66/-10.38	-10/-6.73	-5.76/-6.75	-9.9/-15.32	-14.61/-19.11	-18.03/-17.88	-18.44/-12.12	-10.99/-11.9	-12.65/-13.82	-12.02/-11	-10.77/-4.92	-8.8/-9.63	-11.29/-10.84	-9.02/-9.87
Θ(165°)	-9.55/-12.73	-7.26/-13.87	-11.22/-10.98	-12.21/-13.02	-12.21/-10.59	-11.17/-12.89	-15.4/-13.57	-13.18/-13.17	-14.59/-16.48	-18.57/-18.6	-18.77/-18.98	-18.38/-17.53	-18.53/-16.26	-12.83/-10.11	-6.99/-4.84	-3.66/-3.36	-3.58/-7.46	-10.69/-13.42	-14.77/-16.44	-19.61/-18.66	-17.19/-12.79	-14.14/-19.03	-13.09/-10.31	-
Θ(172.5°)	-10.38/-8.96	-7.5/-6.6	-6.48/-6.83	-6.89/-7.36	-8.44/-8.74	-9.42/-9.68	-10.05/-10.56	-10.12/-9.24	-8.52/-9.03	-9.29/-10.93	-13.12/-16.32	-18.9/-14.7	-18.42/-11.66	-7.94/-5.8	-4.75/-4.64	-4.91/-6.02	-7.95/-10.55	-13.79/-16.02	-17.64/-16.96	-16.58/-16.58	-16.73/-16.28	-16.46/-16.55	-17.45/-17.03	-14.49/-12.54
Θ(180°)	-13.12/-11.82	-13.14/-11.49	-11.57/-11.35	-10.68/-9.76	-9.39/-9.06	-9.09/-8.86	-9.23/-10.31	-12.32/-13.41	-14.91/-16.17	-17.1/-18.03	-17.29/-15.93	-13.99/-12.26	-11.55/-11.54	-12.61/-14.13	-16.49/-18.7	-17.37/-17.16	-16.21/-16.41	-16.89/-16.97	-16.24/-16.35	-15.11/-13.47	-13.68/-14.8	-15.89/-18.17	-18.31/-18.2	-18/-18.4
Freq(Hz)	5.785G/Pol.	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°)	-2.06/-2.07	-2.76/-3.67	-4.27/-5.19	-7.02/-7.69	-9.25/-11.45	-13.89/-15.72	-14.13/-12.42	-9.83/-7.29	-5.58/-4.6	-3.94/-3.49	-3.02/-2.21	-1.16/-0.4	-0.25/-0.99	-2.29/-3.18	-4.25/-5.06	-5.89/-7.81	-10.39/-14.65	-18.73/-18.2	-16.49/-11.24	-7.57/-5.12	-3.28/-1.8	-0.74/-0.64	-0.67/-0.71	-0.52/-0.47
Θ(7.5°)	-0.48/-1.06	-1.49/-1.61	-2.16/-2.72	-3.91/-3.97	-5.81/-7.73	-11.91/-18.71	-17.6/-16.92	-11.63/-9.39	-6.24/-4.56	-3.25/-2.14	-1.48/-0.81	-0.45/-0.87	-1.77/-2.95	-3.9/-4.15	-4.28/-4.97	-6.18/-8.29	-11.23/-15.03	-18.48/-18.93	-13.89/-9.23	-6.9/-5.07	-3.74/-2.61	-1.75/-1.12	-0.39/-0.15	-0.34/-0.27
Θ(15°)	-0.43/-0.84	-1.26/-1.32	-2.02/-2.23	-2.74/-2.96	-3.92/-6.07	-7.9/-11.68	-18.35/-19.14	-14.47/-10.6	-7.49/-5.27	-3.46/-2.47	-2.02/-1.39	-1.04/-1.09	-1.58/-2.63	-3.95/-5.21	-5.72/-4.83	-4.91/-5.82	-7.8/-10.67	-16.32/-17.65	-14.5/-10.55	-8.52/-7.06	-6.31/-5.48	-4.51/-3.32	-2.07/-0.93	-0.44/-0.35
Θ(22.5°)	-1.24/-0.67	-0.52/-0.9	-1.54/-1.41	-1.64/-2.13	-3.5/-6.3	-8.43/-11.71	-17.6/-18.17	-16.16/-10.88	-7.46/-5.47	-4.21/-3.39	-2.53/-1.62	-0.81/-0.91	-2.03/-4.48	-5.78										



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

Appendix A

Θ(22.5°)	-6.8/-9.62	-8.93/-10.98	-12.14/-14.74	-14.28/-13.48	-13.45/-11.09	-9.78/-7.66	-6.19/-4.46	-3.5/-3.65	-3.76/-4.64	-5.58/-5.86	-8.84/-6.36	-7.29/-9.65	-18.54/-17.92	-10.9/-8.66	-7.72/-9.14	-9.97/-10.1	-10.74/-12.73	-10.89/-9.96	-12.87/-11.93	-11.54/-11.3	-11.03/-15.51	-18.75/-16.16	-13.7/-11.94	-8.62/-8.58
Θ(30°)	-18.62/-17.65	-18.24/-19.09	-19.35/-19.09	-14.67/-9.32	-7.14/-5.54	-4.45/-4.79	-4.56/-3.95	-3.51/-3.33	-2.3/-2.21	-3.15/-4.06	-6.09/-4.77	-3.31/-3.95	-6.92/-19.08	-13.53/-5.78	-4.47/-4.5	-6.97/-8.84	-10.29/-11.07	-13.54/-11.62	-10.56/-9.23	-8.09/-6.35	-8.55/-9.87	-11.55/-13.22	-14.28/-13.21	-15.89/-17.78
Θ(142.5°)	-17.47/-17.26	-14.92/-13.43	-12.19/-8.36	-5.66/-3.17	-2.26/-3.02	-3.23/-4.57	-5.35/-5.5	-1.02/-5.57	-0.40/-1.87	-0.24/-1.56	-5.39/-2.58	-1.06/-4.97	-1.53/-5.63	-2.39/-1.97	-1.53/-2.17	-0.96/-5.84	-7.05/-7.15	-10.72/-10.4	-8.62/-8.64	-7.64/-7.23	-9.08/-10.22	-6.83/-5.28	-7.24/-14.71	
Θ(45°)	-9.26/-9.56	-7.1/-6.57	-4.62/-2.58	-1.49/-2.49	-2.92/-1.02	-6.57/-3.92	-2.27/-1.6	-1.02/-2.67	-5.28/-4.64	-1.210/-67	-0.81/-3.31	-1.41/-0.05	-2.44/-7.24	-3.780/-24	0.170/-47	-2.49/-4.22	-5.42/-6.71	-12.43/-11.62	-12.14/-8.17	-8.22/-6.25	-6.79/-6.53	-7.09/-6.05	-1.79/-2.19	-4.75/-9.25
Θ(52.5°)	-6.51/-5.38	-6.29/-5.32	-3.58/-2.51	-2.58/-4.96	-8.96/-7.45	-4.19/-4.23	-2.05/-2.05	-0.21/-0.38	-6.01/-2.04	-0.071/-88	-6.09/-4.79	-0.41/-9.09	-3/-1.66	0.561/-71	2.030/-68	-1.97/-5.25	-7.69/-6.73	-7.15/-14.5	-10.76/-7.32	-4.6/-6.69	-0.40/-5.1	-3.94/-2.04	-1.41/-0.27	-3.28/-8.55
Θ(60°)	-4.29/-3.49	-5.24/-6.8	-2.52/-1.93	-4.56/-12.75	-11.68/-7.51	-9.53/-11.04	-8.07/-5.29	-0.810/-82	1.660/-63	-2.610/-21	2.590/-74	-2.10/-0.88	-2.25/-0.49	1.62/-0.38	1.592/-73	0.2/-2.49	-4.58/-4.52	-4.94/-6.73	-5.8/-3.96	-2.55/-1.65	-4.27/-1.29	-1.57/-0.96	1.120/-53	-0.83/-3.06
Θ(67.5°)	-2.93/-1.03	-2.56/-4.19	-3.25/-3.79	-7.08/-5.18	-3.91/-4.49	-7.2/-8.58	-19/-12.03	-4.18/-0.8	0.12/-1.57	-1.711/-77	2.781/-03	1.2/-0.85	-1.550/-32	0.671/-66	2.591/-61	-0.81/-2.05	-0.97/-1.95	-4.4/-3.83	-3.68/-1.42	-0.880/-35	-2.01/-2.52	-0.590/-49	0.941/-71	-0.34/-2.57
Θ(75°)	-1.980/-28	-0.72/-2.01	-3.81/-9.79	-17.54/-7.61	-3.76/-2.75	-0.280/-74	-0.72/-6.47	-9.17/-5.62	-3.82/-3.04	-2.55/-4.12	1.432/-39	-0.181/-91	-2.68/-1.59	1.14/-0.96	3.132/-81	-0.35/-0.26	0.880/-39	-1.4/-2.7	-1.05/-0.33	1.192/-16	0.03/-1.33	-0.24/-1	2.168	0.47/-1.64
Θ(82.5°)	1.431/-21	-2.25/-2.38	-4.48/-8.27	-10.19/-3.6	-2.03/-0.24	2.32/-67	2.49/-1.72	-5.94/-4.03	-3.85/-4.79	-3.69/-3.01	0.74/-0.36	1.06/-0.16	-1.351/-37	-0.730/-62	2.441/-12	0.311/-74	2.280/-37	0/-0.61	0.03/-0.45	2.62/-44	1.9/-1.52	0.010/-87	2.93/-0.37	1.620/-67
Θ(90°)	-2.37/-1.33	-1.46/-1.9	-3.76/-12.55	-8.44/-4.41	-4.75/-1.64	3.153/-27	2.45/-0.65	5.54/-2.61	-1.28/-5.94	-4.35/-2.65	-1.95/-0.86	-2.18/-1.2	-1.42/-2.35	1.92/-2.2	0.291/-47	-1.151/-15	1.582/-26	0.660/-79	0.890/-7	1.313/-76	1.56/-0.13	-2.041/-12	0.310/-94	1.48/-3.68
Θ(97.5°)	-0.17/-2.14	-5.57/-6.42	-6.42/-18.38	-10.45/-2.18	-5.02/-4.73	2.213/-76	2.24/-1.16	-5.67/-2.07	-2.65/-6.36	-2.23/-1.72	1.460/-46	-0.91/-6.26	-3.280/-37	0.5/-1.13	-0.34/-0.44	-1.351/-57	2.52/-31	0.911/-48	0.791/-14	1.443/-74	1.660/-17	-1.890/-89	-0.110/-39	0.81/-1.48
Θ(105°)	-3.82/-6.07	-14.36/-10.41	-8.86/-18.88	-18.84/-9.26	-8.55/-15.53	-2.260/-61	-8.01/-312	-6.4/-5.59	-2.54/-6.25	-7.15/-2.24	-0.981/-96	1.180/-86	-2.36/-11.47	0.180/-13	-3.2/-1.29	-1.67/-0.48	2.283/-33	1.51/-35	0.010/-6	2.223/-3	0.332/-12	-1.38/-2.05	-2.450/-56	0.2/-3.9
Θ(112.5°)	-4.28/-9.35	-18.44/-12.84	-11.89/-17.34	-18.13/-5.78	-11.32/-13.66	-3.39/-0.07	-1.5/-7.21	-14.09/-6.87	-7.22/-8.26	-2.68/-1.87	1.872/-04	-0.34/-1.43	-9.26/-1.08	1.02/-0.35	-0.12/-0.12	-3.2/-2.75	0.822/-55	1.580/-61	0.02/-0.22	1.361/-46	-1.63/-3.92	-3.27/-9.29	-3.84/-0.86	-0.79/-3.73
Θ(120°)	-2.89/-13.25	-17.05/-10.72	-17.89/-8.84	-15.31/-6.18	-6.55/-12.54	-18.52/-9.68	-6.84/-9.09	-7.23/-3.88	-3.67/-6.37	-4.64/-0.88	0.24/-0.05	-1.66/-3.07	-4.09/-7.69	-7.470/-12	-0.92/-1.22	-1.16/-3.93	-3.23/-1.73	-1.53/-4.39	-2.25/-1.93	0.36/-2.5	-6.43/-2.17	-4.71/-11.35	-4.15/-1.77	-1.17/-3.28
Θ(127.5°)	-1.65/-9.96	-11.64/-15.17	-8.21/-7.06	-8.86/-13.1	-15.57/-17.49	-10.67/-9.05	-9.54/-7.47	-6.81/-8.6	-7.34/-3.88	0.182/-39	1.1/-5.71	-5.18/-2.41	-3.66/-6.43	-0.180/-58	-1.26/-0.89	-1.92/-9	-18.8/-9.59	-10.35/-5.73	-3.85/-2.83	0.13/-5.07	-7.27/-2.98	-5.33/-14.3	-2.87/-1.62	-3.45/-2.56
Θ(135°)	-4.1/-12.61	-6.19/-7.27	-6.53/-18	-8.03/-7.57	-13.51/-15.1	-18.76/-10.09	-8.82/-7.38	-6.26/-9.07	-9.42/-3.69	0.131/-15	0.23/-2.78	-11.39/-8.64	-1.68/-0.17	-4.32/-0.35	0.95/-1.62	-3.07/-5.7	-12.88/-17.18	-12.57/-8.44	-9.63/-4.66	-3.85/-13.3	-7.18/-4.48	-5.57/-15.65	-8.63/-3.54	-2.04/-4.4
Θ(142.5°)	-9.78/-7.08	-5.42/-3.99	-8.86/-13.96	-5.36/-10.22	-11.75/-11.01	-13.23/-11.46	-10.12/-12.77	-11.71/-8.14	-5.4/-2.51	0.691/-66	-3.69/-17.2	-8.83/-9.23	-0.99/-5.05	-7.4/-0.26	1.010/-33	-2.36/-5.25	-5.17/-5.84	-8.9/-12.05	-6.84/-2.97	-7.66/-9.1	-7.07/-14.4	-2.56/-2.36	-3.1/-3.92	-5.89/-3.94
Θ(150°)	-12.06/-17.42	-10.29/-6.89	-8.66/-13.63	-14.42/-18.86	-13.53/-10.96	-11.23/-11.58	-13.37/-11.76	-10.84/-7.32	-5.31/-5	-4.78/-5.27	-5.02/-6.18	-10.41/-17.92	-8.88/-3.68	-3.38/-5.05	-4.59/-2.76	-2.41/-3.95	-9.74/-19.33	-19.15/-10.74	-6.8/-1.92	-6.29/-12.45	-9.19/-7.6	-11.76/-13.57	-11.85/-8.95	-7.84/-7.1
Θ(157.5°)	-5.7/-5.92	-9.71/-15.3	-14.69/-10.92	-9.35/-12.1	-14.69/-15.2	-15.57/-12.39	-11.8/-10.71	-8.28/-6.18	-4.7/-4.9	-5.71/-16.71	-8.94/-8.92	-17.28/-12.68	-6.26/-4.76	-5.09/-6.03	-4.73/-4.37	-5.97/-9.22	-8.78/-6.75	-7.17/-7.88	-8.79/-10.51	-15.44/-17.57	-19.13/-16.53	-14.11/-12.21	-8.98/-11.32	-17.66/-12.88
Θ(165°)	-7.5/-5.43	-3.61/-2.99	-2.13/-2.05	-3.53/-5.64	-6.48/-8.28	-10.24/-10.85	-11.68/-13.1	-10.2/-7.51	-6.42/-7.27	-8.55/-14.72	-16.02/-7.93	-6.44/-6.15	-10.2/-14.08	-11.37/-3.33	-6.17/-6.28	-6.17/-9.9	-10.27/-11.58	-11.89/-19.26	-17.85/-15.27	-13.61/-10.65	-11.24/-12.59	-11.1/-17.57	-16.7/-12.75	-13.98/-18.8
Θ(172.5°)	-18.13/-18.01	-14.06/-12.66	-12.58/-12.78	-10.44/-10.63	-11.67/-12.56	-12.77/-12.58	-9.86/-9.74	-11.05/-13.49	-17.88/-18.15	-11.92/-9.15	-8.22/-6.54	-7.38/-7.98	-10.71/-14.08	-14.15/-12.18	-8.84/-8.07	-8.33/-9.12	-11.52/-14.26	-15.58/-16.68	-11.8/-9.47	-8.94/-9.13	-16.02/-12.87	-7.48/-6.22	-8.48/-9.86	
Θ(180°)	-7.58/-8.66	-9.03/-9.26	-10.89/-13.6	-10.17/-18.32	-18.59/-18.71	-17.55/-14.63	-14.42/-12.7	-12.02/-13.11	-13.77/-13.4	-12.73/-13.48	-15.19/-15.72	-17.32/-15.26	-16.67/-19.16	-16.19/-14.24	-9.41/-8.26	-8.92/-9.64	-6.69/-9.75	-10.63/-11.31	-12.06/-15.27	-18.69/-18.55	-17.17/-17.7	-11.8/-9.52	-8.24/-10.63	-18.01/-14.01
Freq(Hz)	5.3GPol	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°)	-9.58/-9.91	-9.31/-7.74	-6.53/-7.6	-7.08/-6.55	-6.93/-5.9	-6.31/-7.12	-7.66/-8.93	-8.8/-10.03	-12.39/-13.63	-15.53/-16.64	-19.13/-18.05	-18.88/-15.07	-11.64/-9.6	-8.12/-6.91	-5.12/-8.45	-3.91/-4.11	-5.94/-4.02	-6.35/-7.14	-6.91/-9.91	-12.57/-18.3	-18.54/-18.58	-17.49/-19.03	-18.26/-11.64	-11.26/-7.88
Θ(7.5°)	-14.74/-10.95	-8.25/-6.3	-5.16/-3.53	-3.33/-2.45	-3.04/-4.32	-4.76/-5.11	-5.99/-6.46	-8.82/-13.9	-12.86/-16.01	-18.43/-18.02	-15.89/-12.74	-9.15/-8.51	-8.1/-8.66	-8.52/-7.39	-7.49/-6.44	-6.8/-6.37	-8.47/-7.47	-10.86/-11.99	-13.33/-17.91	-17.44/-17.36	-18.73/-11.41	-15.75/-11.31		
Θ(15°)	-18.12/-9.98	-5.39/-2.73	-2.47/-2.18	-0.92/-1.11	-2.16/-1.63	-3.14/-7.46	-5.66/-6.51	-6.69/-8.05	-10.42/-10.52	-16.86/-10.63	-11.08/-11.43	-12.77/-13.86	-13.86/-12.66	-11.46/-10.88	-12.96/-11.71	-11.84/-12.62	-12.34/-11.81	-12.82/-14.64	-14.99/-15.91	-15.33/-15.87	-15.48/-13.37	-11.41/-12.6	-13.82/-15.63	-17.42/-17.99
Θ(22.5°)	-17.98/-9.17	-4.72/-1.54	-0.26/-0.75	-2.72/-3.13	-4.61/-6.92	-6/-8.43	-8.93/-7.63	-9.92/-10.27	-9.06/-8.82	-10.84/-8.16	-7.25/-7.76	-9.19/-11.27	-13.29/-14.4	-15.13/-17.12	-15.82/-13.65	-13.96/-16.25	-17.38/-15.86	-11.25/-10.38	-8.87/-9.01	-7.92/-7.47	-9.31/-9.68	-11/-12.27	-12.63/-15.63	-16.82/-17.59
Θ(30°)	-19.38/-9.9	-5.03/-3.91	-3.22/-3.22	-4.03/-6.65	-8.82/-10.27	-13.22/-14.27	-12.01/-12.49	-12.74/-11.53	-11.96/-11.17	-8.2/-7.64	-6.23/-5.19	-4.93/-6.48	-10.79/-15.42	-17.77/-18.94	-18.49/-11.64	-10.49/-13.08	-15.12/-17.44	-14.71/-12.35	-9.5/-8.67	-5.38/-4.37	-4.41/-5.01	-7.95/-10.6	-8.79/-7.3	-8.53/-13.88
Θ(37.5°)	-18.67/-8.93	-5.28/-2.61	-1.66/-0.44	-7.32/-8.99	-9.97/-15.07	-19.01/-16.72	-14.79/-13.18	-9.55/-12.31	-9.74/-8.5	-6.06/-4.1	-5.62/-9.48	-11.3/-12.94	-18.79/-18.86	-10.61/-8.05	-6.32/-9.98	-17.48/-16.02	-18.3/-14.96	-13.58/-8.44	-9.03/-5.37	-6.76/-6.93	-6.25/-10.97	-11.24/-9.56	-11.19/-17.46	
Θ(45°)	-14.11/-10.71	-7.61/-7.28	-5.77/-7.02	-7.53/-8.52	-13.5/-17.15	-17.59/-15.33	-13.33/-18.73	-17.77/-15.17	-10.01/-9.59	-9.19/-8.18	-8.53/-6.51	-4.11/-5.15	-9.55/-9.3	-8.95/-12.05	-10.15/-7.06	-6.52/-8.7	-10.48/-15.63	-19.87/-13.8	-18.97/-15.81	-12.8/-12.26	-10.31/-7.16	-10.41/-9.15	-9.07/-10.36	-12.29/-18.66
Θ(52.5°)	-15.98/-7.31	-5.09/-6.28	-7.76/-5.34	-5.87/-10.53	-15.06/-19.4	-15.73/-14.26	-11.61/-13.18	-19.22/-16.79	-14.54/-13.35	-7.85/-6.17	-8.15/-6.36	-4.36/-6.43	-5.82/-5.57	-10.9/-15.87	-5.94/-5.97	-9.47/-15.47	-15.11/-14.31	-17.29/-18.27	-18.44/-15.81	-17.69/-9.93	-14.71/-12.45	-9.99/-15.78	-11.99/-7.53	-13.05/-13.84
Θ(60°)	-9.95/-7.47	-12.57/-6.61	-5.24/-5.64	-8.19/-9.44	-13.74/-12.7	-7.6/-8.03	-9.39/-7.93	-11.51/-14.4	-13.04/-16.58	-12.82/-6.42	-8.36/-8.78	-5.65/-3.76	-9.45/-5.52	-3.64/-14.09	-6.53/-6.13	-8.46/-13.69	-17.43/-16.11	-18.5/-17.56	-19.31/-17.26	-17.84/-18.98	-9.37/-17.26	-10.69/-12.9	-14.87/-13.3	-14.24/-11.05
Θ(67.5°)	-11.54/-9.94	-12.06/-6.1	-6.82/-5.51	-6.59/-6.53	-4.86/-12	-8.51/-8.03	-8.17/-8.67	-9.36/-9.68	-10.73/-15.45	-16.15/-5.53	-6.39/-6.89	-4.57/-6.6	-5.75/-4.72	-17.09/-7.25	-5.93/-12.19	-13.49/-11.26	-15.3/-14.34	-18.97/-14.24	-17.13/-18.52	-15.51/-17.03	-10.64/-9.48	-12.04/-17.02	-16.6/-13.45	-12.79/-15.45
Θ(75°)	-8.52/-5.44	-9.75/-9.58	-5.77/-5.22	-5.97/-3.88	-1.69/-2.17	-5.6/-6.77	-10.54/-11.03	-9.73/-16.25	-18.99/-18.47	-14.93/-7.63	-4.65/-4.													



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

Appendix A

Θ(75°)	1.49/-3.16	-2.27/-5.45	-5.78/-2.79	-2.33/-3.04	-1.98/-1.09	-0.95/-0.97	-3.69/-10.25	-9.21/-3.26	-3.2/-2.76	-0.36/-0.17	1.37/-2.5	-2.04/-1.48	-5.59/-0.41	-3.28/0.18	-3.23/-2.8	1.38/0.67	-0.25/-0.26	-0.63/-1.52	-0.39/-1.06	2.61/2.05	1.84/1.44	-0.13/-1.71	0.28/2.19	3.27/2.38
Θ(82.5°)	2.3/-3.15	-1.89/-3.67	-6.41/-6.78	-5.16/-2.45	-0.06/0.25	2.22/3.04	0.8/-6.31	-4.12/-1.34	-5.93/-4.23	-0.3/-0.17	0.44/-1.72	-2.32/-3.16	-0.37/-3.5	-0.84/-2.44	-8.12/-0.09	2.62/1.83	0.91/0.74	-1.32/-0.74	0.48/2.69	2.67/2.96	2.5/-1.91	0.59/-0.36	0.18/2.43	2.82/2.76
Θ(90°)	3.36/-2.54	-2.18/-9.05	-12.79/-10.05	-3.35/-1.36	-3.78/-1.1	2.74/3.52	0.88/-4.28	-3.92/0.11	-0.95/-11.01	-0.64/0.75	0.34/-1.02	-5.65/-4.77	-3.60/-0.83	-1.81/-1.94	-2.47/-3.14	0.43/-0.12	-0.02/0.76	-1.01/-0.85	-1.58/1.43	2.99/3.44	2.3/-1.69	1.31/-1.7	-1.75/-1.84	3.39/3.18
Θ(97.5°)	0.51/-6.52	-4/-11.75	-5.57/-11.52	-7.92/-2.75	-4.25/0.36	3.76/4.19	1.52/-7.26	-6.55/0.65	-2.71/-7	0.64/0.86	2.81/-7.46	-5.18/-7.55	-0.09/-2.52	-3.02/-0.88	-4.59/-2.01	0.51/0.16	1.01/0.81	0.44/0.12	-0.96/1.44	2.49/1.98	0.99/0.66	0.81/-6.77	0.47/1.25	1.91/-19
Θ(105°)	-1.7/-7.95	-12.25/-14.81	-15.98/-18.29	-10.89/-4.6	-5.16/-6.65	-2.47/0.47	-1.02/-5.87	-12.38/-3.66	-8.21/-5.5	1.98/2.58	2.88/2.47	-2.56/-1.82	-18.96/-0.41	-3.32/-2.8	-3.41/-2.94	0.36/3.4	2.22/1.71	1.53/-1.2	0.23/0.94	1.56/3.17	1.76/2.17	0.58/-4.8	-0.1/-0.21	2.23/-0.56
Θ(112.5°)	-7.03/-18.51	-8.72/-14.74	-13.2/-15.38	-17.63/-12.95	-16.26/-18.25	-4.78/-2.12	-2.66/-16.59	-7.11/-7.08	-15.91/-1.51	1.18/1.01	3.34/-3.31	-1.06/-12.83	-2.16/-0.99	-3.46/-4.61	0.54/3.11	3.11/1.99	0.43/-1.5	0.07/0.75	1.51/0.83	0.29/1.29	-0.53/-8.55	-1.27/-1.77	-0.42/-2.1	1.83/-2.48
Θ(120°)	-9.13/-8.92	-10.53/-17.35	-18.4/-6.3	-16.51/-7.95	-8.14/-13.09	-17.97/-11.16	-12.48/-12.89	-16.11/-13.32	-19.35/-3.37	1.47/1.65	1.39/1.23	-0.96/-2.24	-15.8/-4.74	0.11/-2.64	-1.04/-3.7	-2.92/0.91	2.13/0.89	-0.85/-1.56	-3.54/-2.3	-2.55/-0.33	-3.85/-1.21	-4.03/-17.21	-10.28/-2.34	-0.44/-6.36
Θ(127.5°)	-8.87/-6.99	-9.97/-7.55	-18.23/-18.57	-6.53/-5.31	-8.6/-10.59	-12.17/-9.97	-7.57/-7.26	-9.25/-7.8	-3.97/-1.81	0.3/3.28	0.53/-4.71	-5.03/-17.97	-6.27/-0.51	-0.45/-0.83	0.34/-1.49	-5.85/-6.5	-1.88/-1.91	-4.22/-4.77	-3.24/-4.53	-2.17/-2.76	-4.67/-30.7	-10.63/-11.5	-14.41/-2.48	-0.67/-5.76
Θ(135°)	-11.66/-6.67	-6.93/-8.39	-10.19/-18.64	-7.8/-18.25	-9.7/-11.73	-8.23/-8.67	-11.31/-10.8	-8.5/-5.44	-3.37/-3.06	-0.54/1.63	2.01/-4.67	-5.78/-5.96	-4.63/-7.35	0.50/4.4	-3.17/-0.65	-1.69/-7.69	-9.36/-4.38	-5.05/-0.82	-1.18/-2.55	-1.65/-4.9	-7.33/-0.61	-2.05/-9.46	-11.4/-5.22	-5.07/-4.81
Θ(142.5°)	-8.56/-11.23	-5.9/-5.71	-10.68/-13.39	-5/-10.81	-9.1/-10.83	-14.74/-10.54	-5.79/-3.95	-2.71/-3.17	-2.44/-0.77	1.63/-0.58	6.4/-10.36	-10.03/-13.93	-12.64/-3.88	-0.3/-1.35	-3.13/-2.5	-1.03/-1.34	5.72/-9.67	-5.05/-3.35	-7.5/-3.41	-1.82/-6.5	-5.47/-2.76	-2.21/-4.05	-10.45/-10.87	-8.29/-6
Θ(150°)	-9.05/-9.98	-19.24/-7.56	-10.06/-11.32	-8.05/-14.78	-13.68/-8.04	-8.35/-8.19	-7.08/-7.39	-4.69/-4.25	-5.69/-9.27	-8.87/-2.54	-3.18/-5.86	-10.74/-12.82	-15.68/-5.93	-5.09/-4.14	-0.95/-0.54	-2.49/-3.73	-3.46/-4.92	-12.04/-0.89	-5.09/-3.03	-3.47/-4.94	-6.51/-7.22	-8.42/-9.6	-9.28/-11.76	-18.9/-13.83
Θ(157.5°)	-5.42/-3.16	-4.58/-14.25	-9.68/-5.18	-4.57/-8.24	-15.23/-18.16	-17.65/-14.59	-8.92/-7.67	-4.46/-5.99	-7.42/-8.56	-11.77/-1.2	-5.09/-6.32	-17.81/-18.8	-17.51/-16.25	-8.41/-5.81	-4.87/-4.24	-4.27/-6.4	-10.51/-18.01	-12.23/-6.79	-3.89/-5.17	-8.26/-12.36	-9.58/-11.31	-10.19/-11.25	-16.39/-11.13	-19.06/-16.13
Θ(165°)	-18.7/-11.65	-5.86/-2.06	0.26/0.06	-2.05/-2.58	-2.91/-4.46	-4.99/-7.86	-12.51/-12.89	-11.94/-10.11	-7.99/-7.09	-6.82/-8.14	-8.03/-7.05	-6.71/-8.38	-12.98/-10.18	-7.85/-13.57	-15.31/-16.03	-14.77/-10.88	-11.38/-9.27	-9.38/-8.6	-8.08/-10.81	-16.05/-18.54	-18.67/-16.78	-18.88/-18.26	-11.58/-8.09	-6.29/-7.14
Θ(172.5°)	-14.49/-13.32	-10.28/-9.85	-8.51/-7.08	-3.83/-2.82	-3.93/-6.28	-7.59/-10.74	-13.13/-18.22	-17.57/-18.7	-14.73/-9.62	-6.9/-6.43	-5.52/-6.74	-9.26/-11.47	-14.78/-17.18	-15.64/-14.66	-14.36/-14.02	-15.05/-18.32	-17.95/-17.24	-15.42/-10.53	-9.74/-7.43	-5.99/6	-6.36/-7.75	-14.83/-15.98	-14.15/-10.92	-18.93/-10.96
Θ(180°)	-10.55/-11.93	-12.54/-11.66	-11.99/-9.47	-8.43/-10.35	-12.39/-10.48	-8.53/-9.43	-9.67/-9.22	-11.09/-12.48	-12.76/-14.46	-17.81/-18.91	-18.28/-19.18	-16.75/-15.14	-12.48/-10.96	-9.94/-6.86	-4.79/-4.2	-4.15/-4.47	-4.39/-4.93	-5.37/-5.99	-6.76/-7.14	-8.91/-11.84	-15.05/-12.37	-9.17/-11.26	-13.13/-15.61	-18/-12.49
Freq(Hz)	5.785GPol.	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°)	-12.55/-13.19	-13.13/-10.99	-9.01/-7.53	-6.88/-5.36	-4.15/-3.59	-2.81/-2.15	-1.85/-1.58	-1.75/-2.28	-2.34/-2.99	-4.09/-5.16	-6.1/-7.59	-9.22/-10.96	-12.16/-11.5	-10.13/-8.48	-6.88/-6.09	-5.29/-4.41	-3.69/-3.52	-3.45/-3.58	-3.82/-4.27	-5.05/-5.42	-5.78/-6.15	-6.5/-7.18	-7.04/-8.12	-11.71/-14.13
Θ(7.5°)	-11.54/-9.96	-7.39/-5.53	-4.04/-3.34	-3.08/-2.64	-3/-3.4	-3.21/-3.41	-3.72/-4.24	-4.68/-4.74	-4.68/-5.15	-5.63/-5.69	-6.06/-6.71	-7.77/-9.16	-10.98/-13.01	-12.39/-11.82	-9.22/-9.68	-5.18/-3.87	-2.69/-2.01	-1.51/-1.42	-1.29/-1.89	-2.52/-3.19	-3.92/-4.61	-5.81/-7.1	-8.84/-10.7	-12.91/-12.8
Θ(15°)	-9.79/-7.47	-5.52/-4.05	-3.69/-3.33	-2.58/-4.03	-2.81/-3.69	-3.27/-3.19	-2.88/-2.88	-2.89/-3.3	-3.43/-3.91	-4.64/-7.21	-7.52/-7.81	-8.36/-9.97	-12.71/-18.53	-14.21/-12.93	-9.58/-7.62	-4.44/-4.94	-3.1/-3.54	-3.92/-3.54	-7.15/-9	-10.78/-11.97	-14.34/-17.39	-18.06/-19.01	-15.91/-17	
Θ(22.5°)	-6.77/-4.99	-4.54/-4.86	-6.25/-8.57	-10.75/-8.84	-5.79/-3.75	-2.76/-1.38	-1.11/-1.33	-1.44/-1.66	-1.69/-1.25	-1.65/-2.67	-4.61/-7.33	-9.04/-8.83	-9.49/-10.5	-12.17/-14.31	-18.35/-18.88	-18.73/-18.3	-19.31/-15.42	-12.55/-12.14	-11.61/-11.04	-10.27/-9.93	-12.19/-13.82	-14.05/-13.47	-12.09/-9.88	-7.71/-5.92
Θ(30°)	-3.96/-2.63	-2.68/-0.45	-8.17/-14.29	-13.71/-8.38	-5.71/-4.48	-3.79/-2.29	-1.41/-1.07	-1.07/-1.06	-1.05/-1.04	-0.54/-0.29	-0.88/-1.33	-1.68/-8.32	-5.67	-10.62/-15.9	-18.59/-18.47	-17.45/-18.66	-19.02/-14.99	-12.4/-11.23	-11.74/-13.43	-12.79/-12.19	-11.67/-13.94	-11.49/-7.71	-4.95/-3.44	
Θ(37.5°)	-2.61/-2.46	-3/-6.78	-11.53/-11.4	-6.34/-3.58	-1.65/-0.64	0.13/0.61	0.45/0.56	0.55/0.51	0.23/-0.67	-0.82/-0.58	0.05/-3.65	-6.48/-5.88	-9.42/-17.81	-17.87/-17.98	-15.09/-13.02	-8.46/-4.56	-3.2/-2.96	-2.51/-2.53	-4.86/-5.94	-16.71/-17.9	-11.65/-13.83	-12.45/-12.94	-7.13/-2.93	
Θ(45°)	-3.24/-2.73	-3.72/-7	-9.14/-5.93	-3.39/-2.85	-3.12/-2.54	-1.22/-0.43	0.15/0.14	0.04/-0.76	-1.75/-1.88	-0.52/0.63	1.08/-0.6	-5.8/-7.63	-6.27/-10.82	-17.97/-13.75	-11.22/-8.42	-6.19/-4	-2.72/-2.7	-3.95/-7.3	-11.93/-16.94	-17.9/-17.59	-12.09/-8.85	-9.11/-10.24	-8.64/-5.95	-4.06/-4.08
Θ(52.5°)	-1.79/-1.47	-2.88/-2.73	-3.14/0.04	0.42/-0.42	-1.36/-1.52	-1.73/-1.81	-1.48/-0.73	-0.87/-2.13	-3.78/-1.62	1.59/2.81	2.08/-2.89	-7.45/-6.31	-6.95/-10.43	-6.55/-6.48	-2.06/-1.38	-1.84/-3.59	-6.83/-10.27	-6.66/-4.84	-5.2/-7.42	-11.56/-18.82	-5.99/-5.46	-14.92/-7.5	-3.77/-2.64	
Θ(60°)	-3.76/-0.07	-1.01/-2.3	-1.38/0.8	-0.82/-0.12	-2/-6.3	-4.39/-3.63	-2.74/-2.04	-0.78/0	-0.92/-0.85	-1.09/-1.33	-3.48/-4.28	-3.37/-0.86	-3.51/-6.23	-3.95/-10.66	-12.39/-18.73	-11.77/-12.19	-15.72/-18.59	-6.75/-7.16	-13.84/-18.74	-3.71/-4.14	-8.13/-6.24	-1.43/-7.41	-1.87/-4.59	
Θ(67.5°)	-3.83/-2.76	-1.23/-2.22	-1.13/-2.24	-2.92/-5.5	-5.45/-4.6	-4.45/-2.54	-1.26/-1.01	0.57/-0.15	-0.87/-2.41	-0.51/-1.91	0.42/-4.5	-6/-4.53	-15.21/-11.59	-11.34/-9.97	-5.69/-2.51	-2.92/-6.7	-13.02/-18.86	-18.42/-14.58	-6.27/-3.03	-1.69/-2.19	-1.85/-5.05	-9.6/-6.43	-13.97/-5.03	-1.97/-4.71
Θ(75°)	-4.9/-2.16	-2.67/-3.88	-1.01/-1.27	-2.35/-3.82	-6.07/-4.95	-4.31/-2.54	-1.59/-2.4	-4.11/-3.32	-1.63/-1.5	-3.14/-0.82	-1.22/-4.52	-5.54/-2.28	-4.26/-12.94	-8.8/-15.23	-8.57/-7.6	-8.23/-16.66	-17.73/-18.39	-18.61/-18.73	-18.72/-6.34	-5.15/-9.17	-5.45/-4.77	-6.62/-3.2	-4.55/-3.3	-0.55/-4.7
Θ(82.5°)	-4.51/-1.6	-0.97/0.76	1.2/0.48	-2.57/-4.45	-6.15/-5.71	-5.28/-3.78	-2.49/-3	-3.75/-5.31	-3.48/-4.28	-3.37/-0.86	-3.51/-6.23	-3.95/-10.66	-12.35/-18.73	-11.67/-12.11	-15.72/-18.59	-6.75/-7.16	-13.72/-18.59	-18.46/-6.88	-9.71/-4.14	-3.71/-6.24	-8.13/-4.57	-15.89/-8.17	-11.43/-7.41	
Θ(90°)	-7.86/-3.41	-3.85/-3.66	-0.88/-3.11	-5/-6.55	-8.49/-9.54	-8.03/-6.95	-5.55/-4.31	-5.53/-4.83	-4.1/-3.95	-7.01/-2.24	-3.66/-7.3	-2.58/-3.96	-6.6/-18.42	-12.66/-18.25	-12.2/-12.44	-8.65/-5.32	-13.44/-6.45	-1.7/-2.86	-5.42/-3.31	-1.38/-3.67	-7.87/-2.33	-0.99/-1.77	-3.8/-6.06	-4.2/-6.02
Θ(97.5°)	-9.42/-6.38	-4.67/-4.43	-2.58/-3.05	-8.84/-6.78	-10.18/-7.85	-6.23/-4.61	-3.79/-4.11	-5.06/-7.64	-7.94/-7.97	-4.93/-4.1	-1.88/-3.19	-6.55/-10.2	-14.71/-9.93	-13.71/-15.28	-9.64/-11.7	-7.04/-5.59	-11.8/-4.71	-1.15/0.67	0.62/0.51	-1.82/-2.86	-5.36/-4.74	-3.87/-4.39		
Θ(105°)	-5.15/-9.28	-3.55/-4.42	-2.51/-4.76	-7.02/-16.58	-10.39/-12.68	-9.48/-7.43	-6.84/-5.74	-7.98/-7.42	-6.35/-4.7	-3.71/-7.19	-7.05/-5.62	-3.77/-6.2	-15.88/-10.8	-7.55/-6.28	-11.53/-11.2	-16.48/-5.38	-8.25/-6.97	-3.18/-2.61	-5.16/-3.4	-1.42/5.55	-12.99/-2.26	-4.63/-1.71	-3.29/-8.88	
Θ(112.5°)	-4.63/-8.68	-4.34/-5.95	-4.16/-1.96	-2.58/-6.82	-16.05/-12.04	-9.63/-7.8	-7.24/-8.06	-10.06/-9.34	-6.75/-7.11	-8.15/-7.99	-8.78/-4.18	-7.15/-14.07	-9.25/-9.65	-6.62/-8.84	-9.81/-14.57	-9.96/-10.45	-8.06/-5.96	-2.95/-1.54	-4.07/-5.2	-4.91/-2.64	-2.55/0.03	2.46/1.02	-1.06/-0.13	-0.4/-9.75
Θ(120°)	-1.83/-6.54	-3.38/-0.82	-2.24/-1.73	-3.79/-1.45	-9.99/-17.69	-17.41/-15.44	-14.78/-12.76	-10.36/-7.72	-7.98/-13.66	-16.87/-11.22	-9.39/-11.38	-11.31/-8.6	-11.66/-12.53	-11.95/-11.16	-10.96/-8.3	-5.53/-7.4	-14.23/-10.16	-0.52/0.14	-4.92/-5.68	0.04/3.62	2.3/-2	-1.67/-3.63	-1.56/0	-0.13/-0.84



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

Appendix A

Θ(127°)	-1.55/-5.55	-7.42/-4.35	-7.19/-5.2	-5.39/-9.74	-8.67/-10.64	-10.38/-11.78	-18.61/-18.35	-17.68/-18.28	-19.39/-14.82	-11.37/-9.66	-17.88/-11.87	-12.25/-18.65	-10.07/-10.95	-17.71/-6.1	-6.33/-18.88	-10.44/-9.67	-3.19/-16.34	-2.99/-3.79	-7/-16.65	-1.97/-2.61	2.82/3.99	3.66/-1.03	1.93/46	-1.98/-3.8
Θ(135°)	-0.09/-1.02	-8.24/-4.8	-4.82/-4.69	-4.21/-2.95	-3.88/-5.95	-9.75/-15.85	-15.44/-15.01	-18.19/-13.27	-10.08/-13.02	-8.8/-12.03	-12.53/-13.14	-16.8/-17.43	-18.26/-18.2	-17.71/-18.79	-8.17/-9.22	-11.98/-8.58	-11.78/-3.23	-9.48/-5.55	-1.9/-6.4	-9.45/-2.3	-5.67/-2.64	-0.5/-2.09	1.58/3.33	1.23/-3.05
Θ(142.5°)	-3.18/-4.65	-15.88/-7.95	-5.83/-7.91	-7.12/-5.58	-5.64/-5.73	-5.75/-5.08	-4.64/-4.54	-4.82/-5.19	-5.89/-8.67	-17.51/-12.87	-10.61/-15.65	-16.71/-17.64	-16.81/-10.39	-1.88/-9.21	-16.03/-9.54	-8.16/-10.59	0.62/-1.92	-17.3/-12	0.08/-1.95	-14.34/-3.26	0.07/-5.29	-11.71/-7.46	-4.93/-3.96	-5.75/-5.08
Θ(150°)	-7.5/-6.06	-11.21/-19.13	-10.04/-9.55	-12.55/-15.33	-18.6/-19.01	-18.83/-18.45	-18.22/-13.61	-17.65/-18.78	-12.42/-10.45	-10.87/-10.31	-7.85/-6.21	-10.75/-13.77	-5.57/-7.89	-18.93/-8.25	-14.76/-11.89	-7/-2.38	0.64/-0.99	-7.59/-19.41	-15.18/-10.13	-7.94/-3.1	-1.13/-4.09	-10.92/-13.9	-13.1/-12.63	-13.26/-11.43
Θ(157.5°)	-8.14/-4.65	-3.91/-6.03	-10.93/-18.45	-18.71/-18.72	-18.69/-18.72	-18.95/-18.24	-18.1/-13.26	-18.42/-15.93	-10.83/-8.36	-6.51/-5.01	-5.79/-10.23	-18.6/-13.88	-13.87/-17.85	-12.39/-13.4	-12.04/-5.38	-2.43/-1.3	-4.11/-2.99	-4.92/-4.92	-5.04/-5.79	-6.8/-6.78	-6.64/-7.6	-11.88/-9.22	-5.01/-4.8	-9.05/-8.89
Θ(165°)	-11.13/-15.3	-14.45/-13.3	-14.37/-12.73	-12.67/-11.32	-10.47/-9.22	-6.59/-4.6	-3.77/-3.58	-4.23/-5.71	-7.01/-8.17	-8.93/-11.23	-12.54/-11.71	-11.94/-17.92	-18.37/-12.35	-12.4/-16.01	-15.91/-10.04	-5.9/-5.59	-7.15/-10.94	-14.91/-19.18	-11.45/-9.06	-7.5/-6.3	-5.97/-5.87	-6.98/-7.98	-7.85/-7.69	-1.94/-15.23
Θ(172.5°)	-18.21/-19.22	-16.62/-15.31	-13.38/-11.33	-10.71/-10.06	-9.36/-7.88	-7.97/-6.97	-6.23/-6.18	-7.08/-9.06	-11.39/-14.17	-16.92/-16.59	-13.64/-9.93	-10.54/-10.22	-9.49/-8.04	-6.5/-3.88	-3.12/-3.03	-3.21/-3.63	-4.68/-5.51	-6.28/-6.82	-7.65/-7.26	-6.51/-5.43	-5.18/-6.07	-7.99/-11.41	-15.38/-19.2	-18.42/-17.4
Θ(180°)	-9.95/-10.66	-13.52/-18.33	-19.25/-14.28	-12.58/-12.48	-13.43/-12.67	-11.73/-10.63	-9.55/-9.04	-8.51/-8.45	-8.34/-8.68	-9.18/-9.59	-9.98/-10.81	-12.74/-14.82	-18.37/-17.83	-17.72/-16.1	-10.65/-7	-4.21/-3.31	-3.1/-3.7	-3.54/-3.99	-4.72/-5.19	-5.58/-6.01	-6.61/-8.19	-9.95/-11.91	-12.93/-13.26	-11.87/-11.27
Freq(Hz)	5.3G/Pol	Phi/Ant. 4	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-9.16/-9.22	-10.88/-9.33	-7.74/-7.74	-7.99/-8.18	-7.8/-8.46	-9.12/-9.91	-12.1/-13.91	-15.3/-14.47	-12.6/-10.55	-8.7/-4.75	-6.5/-5.55	-5.77/-6.12	-6.7/-6.73	-8.19/-9.6	-10.9/-10.93	-11.42/-11.48	-11.04/-10.55	-10.13/-10.34	-9.36/-8.48	-8.95/-9.55	-10.18/-10.43	-9.85/-10.45	-11.7/-9.93	
Θ(7.5°)	-6.88/-8.92	-10.05/-10.17	-11.74/-13.94	-16.93/-19.03	-16.76/-17.38	-16.15/-15.05	-10.11/-13.98	-13.59/-13.22	-11.51/-11.91	-11.88/-10.56	-9.27/-8.33	-6.75/-6.69	-5.06/-4.71	-4.51/-4.68	-5.07/-5.59	-6.68/-7.6	-8.81/-10.71	-12.39/-13.66	-14.87/-15.15	-12.31/-10.77	-9.57/-8.71	-7.54/-7.34	-7.63/-8.17	-6.68/-6.5
Θ(15°)	-7.08/-8.86	-9.99/-9.8	-9.62/-9.13	-9.34/-9.29	-9.31/-9.46	-10.08/-9.94	-10.32/-10.75	-10.9/-10.74	-10.05/-9.85	-9.41/-8.61	-8.17/-7.69	-6.41/-5.21	-3.98/-3.17	-2.82/-3.13	-4.84/-7.21	-10.17/-12.68	-14.23/-12.43	-9.85/-8.67	-7.28/-5.97	-4.91/-4.28	-3.68/-3.53	-3.45/-4.59	-4.62/-4.63	-4.78/-6.08
Θ(22.5°)	-11.58/-12.02	-8.84/-5.77	-4.77/-1.59	-6.52/-7.94	-7.2/-7.44	-7.9/-7.23	-6.34/-5.98	-5.66/-6.04	-6.82/-8.1	-9.04/-7.7	-5.48/-3.91	-3.3/-2.88	-2.43/-2.48	-3.24/-4.86	-7.32/-8.4	-9.71/-8.99	-8.42/-8.05	-7.48/-6.54	-5.88/-5.36	-5.06/-4.8	-5.69/-5.57	-5.77/-6.4	-6.72/-7.51	-10.69/-11.81
Θ(30°)	-8.63/-9.05	-5.36/-4.29	-4.93/-7.55	-12.64/-18.26	-15.26/-14.3	-15.25/-17.4	-16.97/-13	-10.13/-7.96	-6.72/-6.73	-7.47/-8.5	-6.69/-3.45	-1.67/-1.7	-2.26/-2.38	-2.98/-4.94	-8.6/-11.73	-13.63/-14.42	-15.51/-12.12	-10.22/-7.08	-7.8/-9.29	-8.65/-8.07	-8.63/-10.85	-13.29/-11.03	-5.35/-3.12	-3.82/-7.28
Θ(37.5°)	-8.08/-6.4	-2.09/-2.57	-5.6/-11.56	-12.12/-8.86	-9.05/-10.88	-14.71/-18.4	-17.79/-17.72	-14.08/-9.03	-5.43/-3.8	-4.09/-5.32	-3.06/-0.66	-0.22/-0.66	-1.06/-2.07	-4.83/-8.12	-8.9/-8.24	-8/-9.52	-14.48/-17.88	-11.34/-7.58	-5/-4.35	-7.18/-13.16	-8.41/-4.39	-4.47/-9.63	-14.13/-6.83	-6.07/-9.18
Θ(45°)	-2.46/-4.79	-3.52/-3.31	-5.54/-4.85	-4.08/-5.78	-8.45/-15.25	-13.68/-11.12	-10.67/-12.33	-8.76/-7.18	-5.96/-4.77	-3.9/-3.6	-4.79/-5.72	-2.34/-2.1	-1.58/-3.28	-5.03/-7.04	-7.13/-4.29	-4.01/-3.79	-14.93/-18.91	-10.57/-9.79	-4.73/-4.42	-4.39/-6.54	-13.87/-10.66	-5.14/-5.11	-11.64/-5.51	-2.48/-2.97
Θ(52.5°)	-4.1/-4.9	-4.47/-5.21	-0.98/-7.82	-7.17/-10.59	-18.05/-14.52	-9.21/-7.45	-6.72/-7.93	-9.25/-8.49	-6.39/-5.19	-4.84/-3.17	-1.95/-1.05	0.86/-0.57	-1.85/-1.25	-2.65/-3.7	-3.52/-2.46	-3.28/-3.37	-5.12/-11.79	-16.24/-19.72	-5.22/-3.79	-4.23/-5.41	-10.09/-15.47	-10.71/-9.06	-10.71/-6.26	-2.48/-2.7
Θ(60°)	-1.34/8.8	-4.93/-5.67	-13.55/-8.81	-8.93/-17.05	-17.25/-11	-9.95/-10.01	-10.63/-13.75	-14.2/-10.18	-6.79/-5.1	-4.94/-3.34	-2.41/-1.49	0.01/0.94	-1.96/-2.57	-3.17/-9.72	-7.18/-3.28	-1.65/-2.57	-4.73/-6.85	-10.46/-15.53	-11.1/-8.76	-9.12/-11.54	-14.05/-6.96	-3.06/-1.23	-0.77/-1.1	-0.87/-1.28
Θ(67.5°)	-1.12/-1.45	-6.96/-5.91	-5.56/-3.3	-4.97/-14.14	-16.23/-9.9	-9.32/-8.86	-11.83/-11.3	-8.35/-7.7	-6.44/-3.4	-1.14/0.28	-1.61/-6.2	-1.87/-4.64	-1.64/-7.29	-8.5/-4.84	-4.53/-5.63	-5.22/-5.12	-7.56/-14.75	-14.08/-9.24	-8.73/-12.41	-17.25/-8.88	-1.52/0.13	0.64/-2.99	-2.01/-3.7	
Θ(75°)	-0.54/-2.99	-6.2/-6.02	-10.62/-9.4	-7.98/-12.05	-12.41/-0.71	-8.87/-7.78	-7.96/-8.66	-9.46/-10.75	-8.49/-5.36	-4.56/-4.61	-0.22/0.41	-2.88/-7.42	-6.52/-6.46	-9.02/-12.21	-9.85/-15.99	-4.36/-2.19	-6.08/-5.29	-3.76/-2.1	-18.81/-7.13	-0.88/-0.24	-0.56/-0.26	-1.24/-0.6		
Θ(82.5°)	-0.66/-2.35	-5.9/-7.31	-9.77/-5.02	-6.92/-14.74	-17.38/-10.81	-8.56/-6.77	-5.5/-4.97	-4.6/-4.52	-5.75/-6.38	-3.76/-3.04	-1.93/0.76	-1.11/-3.35	-2.75/-7.32	-6.82/-7.21	-18.55/-8.66	-12.71/-13.22	-4.27/-2.75	-3.93/-5.97	-3.19/0.18	-0.59/-4.87	-11.49/-15.23	-3.37/-0.35	-1.25/0.41	0.03/-1.05
Θ(90°)	-1.47/-1.39	-3.75/-4.38	-7.58/-6.3	-3.66/-5.88	-18.64/-12.66	-7.21/-6.4	-5.53/-4.5	-4.51/-4.47	-3.29/-2.77	-3.82/-4.44	-4.53/-3.1	-0.62/-2.2	-3.02/-3.21	-8.7/-8.15	-7.24/-10.9	-6.69/-17.02	-12.04/-6	-7.18/-10.27	-2.161/-32	2.66/1.3	-4.48/-14.23	-5.98/-3	-1.87/-8.07	-0.17/-1.42
Θ(97.5°)	-0.37/-0.73	-1.79/-2.05	-5.94/-7.14	-10.41/-10.41	-17.04/-13.66	-11.13/-9.41	-6.5/-4.7	-8.33/-4.21	-4.96/-4.53	-2.86/-3.44	-5.14/-1.51	-2.86/-3.56	-4.31/-6.16	-12.04/-14.83	-16.96/-8.58	-6.95/-11.39	-17.94/-11.19	-11.65/-10.41	-4.01/-0.58	2.12/2.61	-0.98/-7.66	-7.54/-3.68	-1.94/-0.03	1.43/-0.02
Θ(105°)	-2.13/-1.89	-2.07/-2.65	-6.11/-7.79	-7.75/-7.46	-12.51/-10.71	-10.15/-7.36	-5.46/-5.06	-4.13/-3.21	-3.78/-4.03	-2.61/-2.54	-4.94/-5.12	-1.2/-3.23	-3.24/-5.67	-7.14/-12.89	-9.01/-13.87	-9.51/-7.98	-10.96/-17	-14.53/-14.34	-9.37/-3.77	-0.39/-1.25	0.21/-5.91	-5.81/-2.25	-3.98/-2.58	-2.71/-1.9
Θ(112.5°)	-0.65/-2.71	-2.18/-2.7	-6.53/-10.48	-8.49/-13.28	-18.81/-14.83	-10.12/-8.47	-7.61/-5.96	-5.39/-4.44	-5.46/-4.32	-3.28/-5.92	-0.89/-3.12	-1.75/-5.08	-6.03/-8.75	-9.85/-11.21	-13.93/-17.81	-16.28/-7.97	-7.83/-10.6	-10.46/-6.88	-8.27/-7.85	-5.51/-1.8	-1.13/-4.99	-11.5/-5.67	-1.22/-3.66	-3.84/-1.5
Θ(120°)	-0.97/-0.91	-3.67/-3.73	-4.05/-8.87	-7.35/-9.99	-17.74/-14.58	-18.34/-16.88	-14.63/-10.2	-7.89/-6.67	-4.13/-3.82	-4.88/-10.68	-6.77/-5.54	-4.24/-5.87	-1.78/-14.83	-8.21/-17.05	-5.38/-9.96	-2.8/-6.96	-0.85/-4.98	-1.76/1.15	-0.58/-1.71	-8.78/-10.05	-1.56/-3.09	-4.68/-1.39		
Θ(127.5°)	-2.79/-2.58	-3.19/-2.83	-1.53/-1.72	-7.31/-9.79	-15.71/-17.56	-17.84/-16.69	-11.67/-10.46	-7.27/-3.94	-3.53/-2.84	-4.09/-6.11	-9.6/-7.58	-4.9/-6.93	-5.75/-10.07	-9.23/-6.52	-3.8/-9.36	-7.11/-11.37	-13.53/-6.29	-8.58/-8.86	-9.72/-15.09	-12.18/-4.49	-4.55/-12.54	-5.2/-1.16	-0.57/-2.09	-6.48/-3.72
Θ(135°)	-5.32/-8.29	-4.26/-7.71	-9.03/-10.44	-7.56/-9.39	-12.35/-10.49	-11.54/-16.14	-19.09/-19.93	-6.24/-7.4	-2.02/-0.81	-3.19/-3.43	-4.03/-2.6	-3.09/-3.92	-5.37/-4.54	-2.27/-1.12	-10.82/-8.36	-16.25/-8.67	-13.9/-17.58	-6.54/-3.5	-5.44/-7.94	-10.88/-12.46	-15.37/-14.87	-9.75/-7.58	-1.93/-4.02	-2.95/-8.89
Θ(142.5°)	-5.11/-4.56	-3.71/-5.15	-8.56/-8.92	-9.92/-11.99	-12.96/-18.16	-18.93/-14.89	-9.34/-6.83	-3.69/-1.74	-2.89/-5.02	-1.67/-0.23	-0.5/-3.6	-2.97/-1.42	-4.69/-2.93	-2.82/-12.14	-2.8/-4.15	-9.59/-8.75	-19.18/-11.75	-12.86/-15.45	-11.61/-10.52	-9.95/-5.55	-2.4/-6.26	-17.42/-12.43	-17.07/-7.01	-6.67/-6.33
Θ(150°)	-7.76/-11.52	-16.42/-17.86	-17.92/-15	-10.24/-9.28	-8.88/-10.64	-12.89/-13.62	-9.77/-0.1	-6.21/-6.52	-7.31/-7.6	-7.43/-9.49	-11.97/-7.6	-6.89/-7.23	-6.21/-0.8	-4.54/-6.68	-6.66/-9.44	-19.14/-17.69	-16.92/-9.7	-7.01/-6.79	-6.33/-4.32	-1.78/-2.52	-5.65/-3.8	-1.61/-2.05	-3.44/-4.75	
Θ(157.5°)	-0.86/-1.98	-4.02/-6.78	-7.97/-9.61	-14.09/-18.07	-17.65/-17.99	-15.86/-10.46	-7.56/-6.65	-7.59/-10.38	-15.22/-13.16	-9.95/-7.06	-4.87/-4.69	-6.27/-8.47	-8.77/-9.44	-2.3/-0.7	-6.32/-9.03	-10.83/-13.65	-18.21/-17.9	-14.35/-11.62	-10.46/-10.54	-10.07/-7.67	-5.19/-3.1	-1.75/-8.03	-0.47/-1.33	-1.94/-1.27
Θ(165°)	-8.0/-4.03	-0.97/-2.17	-3.7/-4.7	-5.87/-8.1	-8.93/-9.6	-9.5/-9.02	-9.54/-13.02	-18.39/-14.5	-9.09/-6.34	-4.78/-3.02	-2.42/-2.28	-2.9/-4.48	-7.18/-10.5	-16.45/-11.78	-8.47/-7.09	-8/-9.5	-11.44/-13.07	-14.86/-14.08	-14.31/-16.51	-18.79/-19.21	-15.26/-9.38	-6.18/-4.98	-4.92/-4.07	-2.86/-1.81
Θ(172.5°)	-4.52/-3.85	-3.41/-4	-5.02/-5.73	-6.06/-6.78	-7.75/-9.95	-13.64/-18.16	-19.24/-18.13	-14.76/-12.1	-10.39/-8.93	-7.27/-5.72	-4.53/-3.44	-3.16/-2.94	-2.87/-3.1	-3.56/-3.83	-5.12/-6.65	-9.08/-12.58	-19.07/-19.09	-17.67/-18.01	-16.25/-11.92	-10.16/-8.95	-8.89/-8.89	-8.57/-8.16	-8.67/-9.27	-8.43/-7.23
Θ(180°)	-19.25/-19.08	-18.37/-15.58	-12.05/-11.07	-11.36/-12.01	-14.37/-16.64	-16.87/-17.48	-18.45/-17.63	-18.38/-18.47	-19.12/-19.53	-16.42/-13.58	-													



Radiated Composite Gain Data_2.4GHz, 5GHz U-NII 1~3

Appendix A

Θ (180°)	-17.34/-19.32	-16.12/-11.49	-9.66/-9.36	-9.88/-10.92	-11.07/-9.92	-9.48/-9.37	-10.42/-12.09	-15.45/-18.94	-18.53/-18.65	-15.93/-14.69	-14.77/-15.55	-18.32/-18.09	-19.3/-17.89	-17.63/-19.41	-18.21/-16.38	-13.83/-12.3	-11.49/-11.23	-11.91/-13.19	-14.25/-15.35	-14.57/-13.34	-12.36/-13.99	-16.77/-18.02	-19.01/-18.32	-19.07/-18.68
Freq(Hz)	5.785G/Pol.	Phi(Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-6.1/-6.8	-7.71/-8.38	-10.46/-11.75	-14.91/-17.75	-19.08/-19.05	-17.68/-15.87	-12.23/-10.23	-8.89/-7.62	-7.2/-7.02	-6.26/-6.47	-6.28/-6.43	-6.86/-7.71	-8.72/-10.2	-11.55/-13.5	-15.69/-18.45	-19.19/-17.99	-19.23/-16.74	-14.39/-14.05	-12.46/-11.46	-10.34/-9.16	-8.59/-8.2	-6.93/-7.14	-8.16/-7.89	-10.93/-9.7
Θ (7.5°)	-10.32/-13.39	-12.63/-11.84	-11.73/-13.42	-14.53/-14.68	-14.76/-14.68	-15.33/-14.61	-13.99/-12.58	-10.5/-9.58	-8.86/-9	-8.36/-8.71	-9.07/-9.23	-9.83/-10.02	-10.1/-10.41	-10.94/-12.98	-15.21/-16.28	-18.34/-18.77	-18.56/-16.95	-14.1/-12.8	-10.54/-9.66	-8.99/-8.48	-8.25/-7.7	-7.62/-7.7	-10.07/-10.29	-10.79/-10.56
Θ (15°)	-5.62/-5.47	-5.39/-5.58	-6.23/-6.31	-6.25/-7.11	-8.15/-9.75	-12.06/-14.7	-19.32/-18.07	-18.88/-15.35	-12.77/-10.84	-9.48/-8.88	-8.37/-8.18	-7.36/-6.55	-5.83/-5.62	-5.99/-6.98	-7.12/-8.09	-8.45/-9.53	-11.42/-11.77	-14.47/-13.28	-13.79/-11.86	-9.62/-7.98	-6.9/-6.06	-5.13/-4.8	-5.17/-4.85	-5.1/-5.76
Θ (22.5°)	-1.97/-1.57	-2.17/-2.92	-3.13/-3.6	-4.43/-6.49	-10.93/-15.75	-17.99/-18.4	-15.23/-13.03	-10.43/-9.89	-10.28/-9.7	-9.29/-9.45	-8.8/-5.69	-3.3/-2.56	-2.8/-3.48	-3.35/-2.86	-2.87/-3.75	-5.47/-7.53	-8.71/-11	-13.3/-11.34	-7.91/-6.09	-5.14/-5.16	-5.01/-4.4	-3.57/-3.72	-5.87/-6.58	-4.77/-2.93
Θ (30°)	-2.34/-0.6	-2.09/-3.06	-2.88/-3.51	-5.13/-7.32	-10.07/-13.41	-17.18/-18.7	-17.6/-15.73	-10.61/-8.08	-7.72/-8.17	-8.53/-8.13	-7.3/-4.99	-2.57/-2.06	-3.41/-4.03	-2.43/-1.88	-3.42/-5.19	-6.11/-6.08	-6.51/-8.74	-7.34/-7.46	-7.46/-6.82	-5.38/-5.08	-6.17/-5.87	-3.6/-2.33	-2.92/-4.6	-4.74/-2.52
Θ (37.5°)	-2.32/-1.32	-2.77/-2.6	-2.39/-3.13	-5.1/-9	-12.16/-12.95	-13.74/-14.79	-18.54/-18.11	-17.7/-14.49	-10.82/-8.48	-6.42/-5.19	-5.19/-3.14	-2.09/-3.57	-3.57/-1.62	-2.7/-5.91	-7.09/-6.87	-7.6/-9.49	-11.82/-14.41	-18.18/-19.09	-16.13/-10.85	-8.32/-5.03	-2.11/-2.23	-4.26/-2.07	-0.03/-1.16	-4.6/-2.62
Θ (45°)	-2.26/-1.35	-3.71/-4.16	-2.07/-3.69	-7.68/-12.26	-13.25/-12.99	-12.72/-11.47	-11.64/-14.13	-17.27/-14.74	-11.68/-11.21	-9.92/-6.42	-5.4/-5.84	-2.61/-2.61	-3.55/-2.22	-4.18/-6.5	-7.31/-9.69	-13.59/-15.84	-9.42/-8.72	-13.7/-18.62	-12.52/-9.89	-8.61/-7.25	-6.62/-4.28	-2.5/-2.17	-1.28/-1.37	-3.84/-1.69
Θ (52.5°)	-1.65/-1.65	-3.2/-1.97	-0.77/-3.64	-6.26/-5.07	-5.81/-7.72	-9.22/-9.47	-10.67/-14.84	-17.48/-15.08	-16.32/-19.4	-12.11/-5.89	-4.58/-3.06	-2.51/-3.38	-1.63/-2.69	-3.43/-5.67	-8.12/-10.69	-12.18/-9.61	-12.99/-18.4	-17.45/-12.98	-11.68/-9.23	-7.3/-9.21	-11.13/-5.48	-4.15/-6.81	-3.13/-1.16	-2.75/-3.61
Θ (60°)	-1.5/-6.23	-2.43/-0.89	-1.23/-4.54	-4.72/-4.39	-6.78/-12.18	-19.48/-18.83	-17.42/-18.07	-19.23/-18.46	-15.97/-14.33	-10.51/-5.99	-3.81/-2.92	-1.78/-1.93	-3.21/-2.85	-3.96/-6.43	-9.92/-17.78	-12.94/-8.81	-8/-15.22	-16.15/-15.52	-11.07/-11.36	-13.15/-10.49	-9.39/-7.73	-2.67/-0.43	-2.66/-1.08	-0.64/-3.19
Θ (67.5°)	-1.44/-5.38	-5.06/-2.83	-0.69/-3.61	-3.36/-4	-7.46/-15.9	-18.89/-18.88	-18.65/-19.08	-17.79/-19.28	-15.61/-9.76	-7.83/-5.56	-3.29/-2.15	-1.92/-1.49	-1.32/-3.25	-4.47/-9.1	-12.73/-14.47	-15.02/-13.44	-9.35/-8.18	-12.08/-18.65	-12.11/-7.99	-14.25/-17.58	-6.37/-3.1	-1.54/-0.47	-1.29/-0.2	1.1/-0.33
Θ (75°)	-3.32/-6.89	-9.72/-6.46	-2.13/-3.25	-5.59/-6.99	-12.06/-17.83	-17.64/-17.99	-17.75/-18.17	-18.04/-17.75	-14.63/-10.64	-10.2/-12.45	-4.6/-2.61	-2.86/-1.47	-1.76/-2.63	-3.22/-6.75	-8.35/-11.09	-18.35/-12.89	-5.42/-3.45	-5.96/-12.75	-6.14/-3.43	-5.64/-15.65	-7.01/-1.22	0.320/65	2.40/36	1.43/-1.91
Θ (82.5°)	-1.5/-6.23	-2.43/-0.89	-1.23/-4.54	-4.72/-4.39	-6.78/-12.18	-19.48/-18.83	-17.42/-18.07	-19.23/-18.46	-15.97/-14.33	-10.51/-5.99	-3.81/-2.92	-1.78/-1.93	-3.21/-2.85	-3.96/-6.43	-9.92/-17.78	-12.94/-8.81	-8/-15.22	-16.15/-15.52	-11.07/-11.36	-13.15/-10.49	-9.39/-7.73	-2.67/-0.43	-2.66/-1.08	-0.64/-3.19
Θ (90°)	0.72/-4.5	-5.06/-7.22	-1.33/-2.95	-5.71/-2.61	-4.08/-7.17	-6.16/-6.23	-7.2/-6.66	-6.39/-5.48	-6.01/-7.84	-8.85/-11.94	-7.03/-5.23	-6.05/-4.53	-5.09/-7.43	-7.4/-10.86	-6.67/-16.65	-7.26/-9.3	-11.23/-8.13	-7.1/-5.19	-3.08/-2.08	-2.06/-5.42	-11.66/-17.06	-4.24/-1.27	-0.42/-0.81	0.88/-0.3
Θ (97.5°)	-0.24/-6.51	-3.55/-6.25	-3.32/-3.03	-6.91/-9.37	-6.43/-7.74	-8.87/-9.69	-7.04/-6.2	-5.4/-5.85	-6.59/-5.1	-8.16/-12.98	-4.86/-6.61	-6.35/-4.75	-5.78/-7.69	-10.01/-6.34	-15.23/-15.33	-7.8/-9.28	-14.58/-14.47	-9.58/-7.18	-2.86/-1.78	-0.88/-0.92	-2.69/-11.28	-6.46/-0.71	0.20/2	-0.640/-41
Θ (105°)	-0.55/-0.27	-1.59/-1.8	-1.02/-1.06	-3.14/-3.24	-4.76/-10.15	-14.54/-18.71	-12.54/-9.47	-6.66/-6.41	-7.04/-4.8	-5.02/-8.46	-6.5/-4.72	-3.62/-3.74	-3.55/-3.72	-7.02/-9.09	-18.6/-18.98	-10.44/-10.56	-10.25/-17.67	-10.49/-8.33	-7.12/-4.3	-0.840/-4	-2.56/-8.39	-3.14/-3.21	-1.38/-0.95	1.150/-79
Θ (112.5°)	-1.87/-1.52	-0.96/-1.24	-0.96/-2.25	-5.4/-6.47	-6.4/-8.63	-15.89/-18.38	-14.5/-9.32	-6.23/-4.9	-4.05/-3.9	-7.31/-6.16	-3.96/-5	-4.21/-4.1	-3.25/-4.73	-5.79/-10.85	-12/-15.6	-17.7/-14.48	-10.24/-16.45	-8.97/-11.67	-17.28/-11.51	-4.2/-1.29	-4.82/-14.98	-3.56/-0.65	-2.25/-1.89	-2.34/-1.42
Θ (120°)	-0.34/-2.53	1.140/-95	-0.06/-1.89	-5/-7.76	-9.87/-11.36	-11.44/-17.3	-14.67/-9.84	-6.67/-5.02	-4.05/-4.8	-4.96/-4.28	-4.71/-5.85	-4.86/-6.61	-7.53/-5.91	-6.96/-6.56	-10.15/-12.9	-9.78/-8.87	-9.99/-6.57	-5.6/-9.77	-10.76/-8.07	-1.75/-0.07	-6.56/-6.59	0.14/-3.32	-5.23/-4.62	-0.780/-14
Θ (127.5°)	-4.4/-4.36	-1.16/-1.3	-1.54/-5.81	-6.45/-13.27	-10.33/-14.57	-13.26/-13.77	-13.13/-10.24	-7.2/-6.17	-4.75/-4.49	-6.65/-10.14	-4.99/-6.69	-7.45/-3.02	-6.97/-5.78	-9.2/-9.74	-18.58/-17.47	-14.52/-6.34	-10.6/-5.58	-8.02/-9.68	-12.15/-13.86	-12.02/-7.77	-15.78/-10.56	-5.55/-2.52	0.01/-2.03	-2.93/-3
Θ (135°)	-3.28/-14.01	-8.84/-7.22	-8.03/-6.76	-8.23/-12.3	-12.91/-17.95	-17.99/-11.75	-8.53/-7.18	-6.15/-4.18	-2.91/-4.17	-5.4/-11.72	-5.53/-4.72	-4.14/-3.44	-2.19/-11.8	-5.01/-2.9	-4.62/-15.59	-6.49/-8.86	-12.65/-15.13	-7.75/-7.05	-11.08/-10.39	-8.09/-9.43	-6.42/-4.13	-7.34/-9.12	-3.69/-1.83	-6.99/-1.92
Θ (142.5°)	-2.52/-5.15	-7.11/-5.84	-6.18/-9.42	-14.43/-17.66	-19.24/-18.5	-17.59/-18.74	-15.8/-9.92	-7.35/-7.92	-10.4/-10.54	-19.03/-18.12	-13.86/-5.46	-4.09/-4.9	-5.52/-3.37	-3/-4.88	-8.35/-3.1	-9.34/-7.83	-10.43/-12.8	-9.41/-16.12	-18.86/-18.38	-15.14/-7.53	-12.24/-10.29	-2.44/-1.74	-5.17/-3.96	
Θ (150°)	-13.51/-8.88	-5.43/-5.65	-7.26/-5.11	-4.44/-4.9	-5.18/-6.79	-8.54/-9.13	-9.82/-10.79	-8.69/-7.68	-7.63/-8.95	-8.03/-7.7	-10.47/-13.45	-9.01/-10.16	-18.86/-8.85	-6.81/-14.92	-9.21/-6.03	-7.39/-6.49	-7.81/-10.78	-16.76/-18.41	-13.85/-11.31	-6.6/-0.7	0.87/-2.75	-7.04/-5.07	-6.89/-8.5	-10.7/-12.29
Θ (157.5°)	0.01/-4.32	-10.7/-10.72	-8.56/-15.31	-18.02/-15.22	-13.15/-14.16	-14.68/-10.86	-8.1/-7	-8.08/-9.56	-9.71/-10.98	-15.84/-15.09	-15.2/-11.46	-7.08/-5.04	-6.52/-15.9	-12.23/-7.07	-7.07/-10.53	-18.13/-11.82	-9.76/-14.16	-18.08/-10.2	-10.16/-10.77	-8.5/-4.65	-2.78/-1.95	-1.430/21	1.160/9	0.620/74
Θ (165°)	0.3/-1.32	-2/-2.48	-3.68/-5.38	-7.06/-8.37	-9.47/-9.6	-9.11/-9.92	-12.6/-16.13	-18.38/-18.01	-16.07/-11.25	-8.1/-7.19	-6.44/-6.4	-5.71/-4.47	-4.05/-4.49	-7.14/-11.69	-14.79/-12.83	-10.2/-8.75	-8.88/-12.68	-19.23/-16.81	-13.03/-10.22	-10.04/-11.22	-8.92/-11.28	-5.08/-4.31	-2.6/-1.27	0.481/-27
Θ (172.5°)	-1.88/-1.31	-1.96/-2.99	-4.36/-6.08	-6.64/-10.31	-12.46/-13.77	-12.48/-13.61	-18.83/-17.16	-16.54/-13.95	-11.62/-10.88	-10.62/-12	-13.47/-14.97	-12.46/-11.19	-10.14/-8.98	-8.19/-7.06	-7.22/-8.01	-10.99/-12.39	-16.94/-18.02	-17.87/-18.65	-19.07/-15.35	-13.77/-13.8	-10.85/-8.01	-5.99/-3.16	-1.12/-0.74	
Θ (180°)	-7.55/-6.76	-9.23/-12.68	-14.68/-15.12	-13.41/-13.57	-11.73/-11.78	-13.04/-13.87	-14/-12.91	-11.36/-11.5	-12.86/-14.24	-16.86/-19.05	-18.27/-18.42	-17.86/-18.43	-18.32/-15.15	-13.58/-12.28	-11.68/-11.96	-12.56/-12.54	-12.55/-12.22	-14.3/-16.54	-18.24/-18.65	-18.47/-19.13	-19.15/-15.83	-13.06/-11.87	-10.34/-8.19	-7.19/-8.93
Freq(Hz)	5.785G/Pol.	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°)	-11.13/-10	-9.41/-9.22	-8.37/-8.07	-7.95/-7.29	-7.16/-7.12	-7.32/-7.14	-7.7/-9.42	-10.81/-13.21	-14.48/-17.12	-19.06/-19.06	-18.37/-18.02	-15.83/-14.38	-13.1/-11.87	-10.95/-10.11	-9.63/-9.27	-9.14/-9.13	-8.87/-9.22	-9.5/-10.15	-11.07/-11.98	-13.07/-14.14	-16.27/-17.6	-18.65/-18.87	-18.5/-18.41	-14.26/-11.79
Θ (7.5°)	-13.46/-13.18	-12.74/-12.66	-11.92/-11.33	-11.41/-11.29	-10.51/-10.03	-8.88/-7.78	-9.27/-10.47	-13.55/-17.89	-19.58/-17.95	-15.46/-13.8	-13.06/-12.99	-14.03/-14.49	-13.47/-12.83	-11.99/-10.86	-10.12/-9.6	-9.22/-9.04	-8.52/-8.79	-9.8/-9.79	-10.48/-11.99	-17.9/-18.3	-19.42/-18.81	-15.24/-13.74	-12.86/-13.22	
Θ (15°)	-11.01/-11.39	-11.39/-11.09	-8.58/-6.88	-5.17/-4.03	-3.03/-1.94	-1.06/-1.26	-1.93/-3.43	-5.39/-8.22	-12.21/-18.5	-16.2/-10.5	-8.17/-7.57	-7.6/-9.03	-11.13/-12.02	-10.19/-8.88	-8.13/-8.07	-8.11/-8.45	-8.24/-8.37	-7.8/-7.28	-7.87/-7.61	-7.85/-8.71	-9.97/-11.56	-13.72/-12.33	-12.18/-10	-9.88/-10.04
Θ (22.5°)	-10.39/-10.12	-8.21/-5.79	-4.25/-2.82	-1.04/-0.18	0.541/0.3	0.24/-0.57	-1.09/-1.16	-1.64/-2.37	-4.3/-8.29	-14.14/-8.96	-4.56/-3.38	-4.16/-6.63	-7.91/-7.44	-7.8/-9.89	-10.62/-9.55	-8.46/-8.28	-8.8/-7.81	-6.85/-7.18	-8.97/-10.63	-12.19/-12.13	-12.06/-13.94	-17.69/-14.05	-9.44/-7.45	-8.52/-9.21
Θ (30°)	-7.5/-3.52	-3.37/-1.13	0.330/5	-0.28/-0.31	0.25/0.46	0.280/23	0.07/-0.21	-0.85/-1.62	-2.24/-2.91</															



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Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.57	4.18	3.89	3.82
Ant. 2 Max Gain (dBi)	3.78	4.25	4.39	4.07
Ant. 3 Max Gain (dBi)	5.99	4.05	4.08	4.55
Ant. 4 Max Gain (dBi)	4.64	4.51	4.33	3.64
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/22.5/90	Phi/135/195	Theta/60/90	Theta/30/90
Ant. 2 Polarization/Θ(°)/Φ(°)	Phi/67.5/195	Phi/82.5/15	Phi/67.5/15	Phi/60/352.5
Ant. 3 Polarization/Θ(°)/Φ(°)	Theta/75/270	Theta/75/270	Theta/82.5/262.5	Theta/90/262.5
Ant. 4 Polarization/Θ(°)/Φ(°)	Phi/75/15	Phi/75/30	Phi/67.5/30	Phi/82.5/202.5
Max Gain (dBi)	5.99	4.51	4.39	4.55
DG [1SS] (dBi)	7.14	7.44	6.67	5.98
DG [2SS] (dBi)	5.99	4.51	4.39	4.55
DG [4SS] (dBi)	5.99	4.51	4.39	4.55



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(22.5°)	0.68/1.33	1.08/0.26	-0.37/-0.72	-0.81/-0.31	-0.47/-1.06	-1.35/-2.77	-4.88/-6.25	-6.65/-5.95	-4.29/-2.8	-2.18/-1.75	-1.43/-1.52	-1.45/-0.44	0.62/1.33	1.8/1.72	1.05/-0.08	-0.59/-0.58	-0.54/-0.6	-0.69/-1.31	-2.35/-3.36	-4.84/-4.96	-3.97/-2.98	-1.92/-1.06	-0.88/-1.23	-0.88/-0.13
Θ(30°)	1.43/0.59	-0.21/-0.49	-1.17/-1.03	-0.2/0.2	0.03/0.14	0.3/-0.27	-0.73/-0.9	-1.2/-2.68	-4.25/-3.32	-1.84/-1.1	-0.89/-1.36	-1.4/-0.33	0.71/1.45	1.9/2.23	2.18/1.58	-0.02/-0.81	-0.95/-1.45	-1.69/-2.17	-2.22/-2.48	-2.54/-1.29	0.23/1.08	1.85/2.14	1.77/1.69	1.36/1.46
Θ(142.5°)	2.58/2.8	1.63/0.53	-0.09/-0.28	0.16/0.52	0.44/0.03	-0.77/-1.63	-3.32/-4.89	-5.17/-3.4	-1.38/-3.2	-0.77/-0.48	-0.31/0.97	1.88/2.1	2.39/3.11	3.24/2.64	2.31/1.36	0.7/-0.6	-2.68/-4.61	-8.11/-8.38	-2.21/0.42	1.88/2.14	4.65/4.2	3.48/3.4	2.58/3.33	
Θ(45°)	4.46/4.07	2.57/1.11	0.8/1.31	2.12/2.28	1.48/1.08	0.62/-0.62	-1.26/-1.32	-1.87/-2.07	-1.79/-0.39	1.01/1.94	2.36/2.7	2.62/2.3	2.91/3.33	3.88/4.48	4.24/3.15	1.94/0.68	-0.85/-1.55	-1.17/-1.01	-1.43/-1.2	-1.29/-2.96	-3.7/-2.67	-1.43/0.53	3.13/4.37	4.39/4.27
Θ(52.5°)	4.34/2.3	3.86/3.32	3.46/4.3	4.06/3	1.71/1.08	-0.27/-1.97	-1.76/-1.94	-2.09/-1.79	-2.13/-0.89	0.62/1.98	2.54/3.04	4.14/4.21	3.97/4.19	4.45/4.88	3.6/2.25	0.63/0.35	1.1/2.06	2.31/2.39	2.23/1.67	1.51/1.11	1.85/2.99	4.06/3.82	3.88/5.05	5.26/5
Θ(60°)	4.67/5.29	5.09/4.39	5.22/5.45	4.15/2.38	1.86/0.84	-1.3/-3.43	-2.56/-1.71	-0.46/0.69	1.67/1.93	1.84/3.47	4.69/4.93	4.46/4.45	4.09/4.12	4.43/4.65	4.25/3.19	1.99/0.98	-0.02/1.1	2.29/2.42	1.53/1.32	0.42/-0.72	1.04/2.14	4.65/4.2	5.67/4.99	5.73/5.5
Θ(67.5°)	5.16/5.16	5.55/6.17	6.67/5.81	3.9/3.24	1.44/-0.29	-1.07/-0.81	0.14/0.29	0.82/2.9	3.83/4.25	3.84/0.3	4.86/4.4	3.67/4.86	5.43/5.34	5.42/5.38	3.7/2.83	2.37/2.29	3.23/2.02	-0.19/-1.51	-0.44/-0.71	-1.57/0.08	1.79/2.78	3.6/4.91	5.7/5.63	4.95/5.15
Θ(75°)	4.73/5.14	5.87/6.2	5.82/4.74	2.76/1.23	0.33/-1.97	-1.29/0.94	1.81/1.99	2.05/2.86	4.08/4.53	4.23/4.16	4.91/5	3.93/4.32	5.69/5.99	6.41/6.25	4.31/2.74	3.33/3.72	3.59/1.87	0.55/0.99	1.31/0.19	-0.32/0.49	1.71/2.85	3.2/4.16	4.34/4.67	3.61/4.41
Θ(82.5°)	4.62/5.06	5.8/5.76	5.52/4.67	2.96/1.75	0.52/-0.4	1.37/2.39	2.83/2.69	1.76/2.72	4.23/4.99	4.36/3.94	4.02/3.54	2.55/3.48	4.74/5.3	6.26/5.8	3.49/3.36	3.13/3.53	3.24/1.13	-1.27/0.97	1.49/1.92	0.23/-0.4	1.44/2.25	2.39/3.19	4.49/5.11	2.28/2.9
Θ(90°)	3.13/4.51	5.98/6.15	5.29/4.2	3.5/3.17	2.53/0.88	1.63/3.19	3.02/2.18	0.69/0.92	2.48/3.51	2.92/2.32	3.31/4.01	2.73/2.35	3.27/4.5	5.26/4.8	1.68/1.7	2.25/1.85	1.51/0.23	-2.13/-1.63	-0.51/-0.02	-0.37/0.21	2.29/2.4	1.82/1.17	2.8/3.05	2.06/1.83
Θ(97.5°)	2.12/3.2	4.09/5.16	5/3.04	1.63/0.31	2.71/1.86	-0.24/-1.58	2.81/1.82	-0.13/0.28	0.88/0.92	1.35/0.71	2.52/3.42	2.41/-0.18	-0.01/-1.42	1.48/1.54	0.76/0.76	-0.15/0.65	2.33/0.21	-1.85/-1.03	0.04/0.15	-0.16/0.74	0.76/1.36	1.29/1.5	2.89/3.2	2.32/0.78
Θ(105°)	2.2/2.34	4.44/4.68	4.73/2.25	0.76/2.13	3.77/0.54	-2.56/0.35	1.75/0.67	-0.41/-1.37	-0.7/-0.2	0.06/2.11	2.58/2.72	3.35/1.13	0.05/0.02	-0.13/1.05	1.57/0.6	-2.53/-0.9	1.15/1.11	-0.12/-0.51	1.19/1.49	0.6/0.79	0.74/0.72	-0.13/0.66	2.85/3.18	4.07/3.65
Θ(112.5°)	3.62/4.8	5.23/4.98	3.69/2.33	-0.27/-0.5	-0.94/-0.27	-3.68/-0.46	0.41/0.67	-0.73/-6.48	-3.24/-0.97	0.73/2.94	1.33/1.31	1.39/0.21	0.23/-1.9	-0.91/0.81	1.3/0.91	-0.02/-0.34	2.1/1.73	-0.07/-0.67	-0.72/-0.85	-0.33/-1.55	0.03/-1.17	-1.45/-0.26	-0.21/4.8	2.89/3.56
Θ(120°)	1.57/2.96	3.74/5.67	2.61/1.25	-1.24/-2.49	-1.15/-3.22	-3.35/-6.74	-4.52/-4.83	-4.18/-3.06	-1.8/0.63	0.18/1.64	-0.41/0.28	-0.4/-2.52	-1.23/-3.49	-2.69/0.44	1.09/0.27	-0.21/-1.78	1.23/-1.43	-4.68/-1.61	-1.51/-0.72	-1.68/-2.37	-2.03/-2.43	-1.04/0.1	-1.86/-3.11	-2.5/0.46
Θ(127.5°)	0.79/0.41	-0.72/1.77	2.43/-0.88	-4.27/-4.59	-3.55/-3.23	-5.52/-10.01	-7.97/-8.32	-6.35/-5.54	-2.24/-1.25	1.1/-1.38	-0.49/-2.9	-3.76/-3.16	-1.54/-2.57	-4.17/-0.88	-0.62/1.39	0.83/-1.27	-2.25/-2.11	-2.62/-5.15	-4.01/-3.78	-0.51/-1.96	-6.46/-3.1	-0.61/3.7	-1.3/-0.54	-3.14/-1.26
Θ(135°)	-0.46/-0.53	-1.02/1.83	3.34/1.42	-1.17/-1.92	-3.58/-7.55	-7.21/-5.66	-4.64/-4.23	-3.39/-2.56	-2.38/-1.05	-2.74/-1.63	-2.59/-3.2	-5.13/-1.78	-0.54/-1.8	1.52/1.79	0.27/0.3	-3.2/-4.24	-5.79/-2.56	-0.69/-1.89	-2.11/-3.93	-2.88/-3.77	-2.74/-4.56	-3.22/-1.42	0.1/-1.56	-0.7/-2.3
Θ(142.5°)	-0.6/-0.01	0.63/1.1	-1.32/-3.82	-4.4/-5.47	-5.18/-4.09	-3.89/-2.8	-1.67/-1.92	-3.32/-3.8	-6.17/-5.31	-2.76/-2.33	-2.52/-3.42	-0.82/-2.19	-1.03/-2.76	-0.51/-3.9	-4.08/-6.76	-4.86/-2.28	-3.13/-2.27	-1.62/-2.09	-0.44/-0.58	-3.55/-4.44	-2.62/-1.91	-1.17/-0.35	-1.23/-3.48	-2.5/0.46
Θ(150°)	-2.24/0.26	2.27/-1.93	-3.15/-5.56	-6.79/-5.04	-3.74/-3.53	-4.06/-3.27	-1.76/-1.72	-3.52/-4.97	-3.5/-0.07	1.04/0.77	-0.44/-1.31	0.46/2.29	0.62/0.49	0.45/-2.75	-7.6/-6.86	-8.09/-5.71	-4.67/-3.81	-5.02/-6.46	-6.56/-6.77	-5.59/-4.04	-5.29/-2.98	-2.82/-2.14	-3.06/-2.91	-2.49/-1.7
Θ(157.5°)	-6.68/-6.08	-4.67/-6.03	-7.7/-6.57	-5.15/-3.85	-3.2/-3.83	-4.95/-5.22	-5.26/-5.9	-6.86/-8.73	-10.66/-9.16	-7.01/-6.77	-5.47/-2.74	-1.22/0.25	-0.4/-2.24	-1.61/-3.51	-8.09/-9.82	-6.97/-5.49	-5.16/-6.14	-6.33/-6.27	-5.95/-4.98	-3.21/-1.13	-0.51/0.51	1.18/0.55	-0.09/-1.02	-1.83/-3.46
Θ(165°)	-2.01/-2.36	-3.06/-2.61	-1.44/-0.43	-0.15/0.12	-0.17/-0.56	-1.68/-3.06	-4.08/-5.15	-5.82/-5.25	-4.13/-3.54	-3.17/-3.41	-4.33/-5.99	-6.1/-4.27	-3.87/-5.41	-7.95/-6.1	-3.71/-2.2	-1.61/-1.45	-2.05/-3.39	-4.56/-5.4	-5.94/-5.68	-4.2/-1.89	-0.03/0.45	0.28/0.45	0.65/0.59	-0.51/-1.39
Θ(172.5°)	-1.93/-2.49	-2.63/-3.12	-3.76/-4.81	-6.35/-7.98	-8.36/-7.87	-8.15/-7.16	-7.35/-8.66	-9.17/-8.4	-6.48/-5.5	-5.01/-5.27	-6.77/-7.25	-6.24/-5.13	-4.74/-4.66	-4.41/-4.43	-5.12/-5.65	-5.38/-5.28	-5.47/-6.42	-7.72/-8.6	-8.31/-8.27	-8.65/-8.68	-7.33/-6.45	-5.41/-5.15	-4.82/-4.4	-3.21/-2.14
Θ(180°)	-5.25/-4.02	-2.97/-2.49	-2.84/-3.34	-3.43/-3.62	-4.09/-4.58	-5.41/-7.03	-8.12/-8.38	-8.94/-9.08	-8.88/-9.2	-8.52/-7.33	-6.66/-6.05	-4.84/-4.22	-4/-0.5	-4.45/-4.82	-5.19/-5.22	-5.43/-5.18	-4.75/-4.9	-5.57/-5.92	-6.41/-6.73	-7.04/-7.06	-7.09/-7.21	-6.71/-6.97	-7.5/-8.22	-8.28/-5.97
Freq(Hz)	6.995/GPol.	ThetaL	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	5/-5.52	-5.23/-4.95	-4.57/-3.46	-2.31/-0.77	-0.25/0.29	0.74/1.27	1.66/1.63	1.45/1.36	1.32/0.93	-0.05/-1.06	-1.99/-2.81	-3.8/-3.71	-3.96/-4.35	-4.59/-4.6	-4.32/-3.54	-2.48/-1.56	-0.77/-0.31	-0.08/0.31	0.52/0.91	1.06/1.14	1.3/1.14	0.68/-0.22	-1.35/-2.64	-3.53/-4.58
Θ(7.5°)	-6.66/-4.95	-5.81/-6.06	-4.93/-4.25	-4.01/-3.03	-2.4/-1.41	-0.55/0.21	0.53/0.7	0.63/1.01	1.03/0.58	-0.16/-0.97	-1.88/-2.96	-4.03/-4.7	-5.09/-5.75	-5.64/-5.28	-4.29/-3.04	-2.01/-1.21	-0.55/0.01	0.39/0.52	0.59/0.84	0.86/0.8	0.54/0.3	-0.02/-0.51	-0.92/-1.76	-3.14/-3.83
Θ(15°)	-3.77/-6.08	-7.15/-7.1	-7.34/-7.1	-5.56/-3.94	-2.74/-1.39	-0.83/-0.93	-0.93/-0.81	-1.1/-1.2	-1.52/-1.64	-1.77/-1.93	-1.79/-2.28	-2.78/-3.73	-4.68/-6.22	-7.01/-6.35	-5.56/-5.06	-4.16/-3.89	-3.09/-2.4	-1.65/-0.7	-0.08/0.5	0.77/0.98	0.98/0.59	0.07/-0.42	-0.61/-0.72	-1.61/-2.66
Θ(22.5°)	-3.81/-4	-3.34/-3.66	-4.16/-3.98	-2.53/-1.02	-0.66/-0.71	-0.76/-0.72	-0.11/-0.35	0.14/0.35	0.3/-0.37	-1.5/-2.61	-3.45/-3.71	-3.83/-3.63	-3.68/-4.68	-6.58/-8.19	-6.63/-4.84	-3.27/-2.22	-1.34/-0.47	0.89/1.94	2.63/3	3.22/3.32	3.06/2.39	1.39/-0.17	-2.62/-4.56	-5.29/-4.33
Θ(30°)	-4.91/-4.53	-5.06/-4.93	-5.62/-3.85	-2.0/-0.2	0.73/1.2	1.48/1.47	1.44/1.06	0.6/-0.38	-0.77/-0.38	-0.71/-1.98	-3.66/-5.03	-4.92/-4.23	-3.7/-2.9	-3.53/-3.99	-4.07/-3.62	-3.1/-1.68	0.21/1.73	2.38/2.76	3/2.99	2.67/2.55	2.24/1.51	0.35/-1.32	-3.63/-5.83	-7.16/-6.16
Θ(37.5°)	-2.08/-2.24	-3.35/-4.35	-4.57/-3.65	-2.1/-0.83	-0.04/0.15	-0.34/-1	-1.11/-0.57	0.25/0.22	-0.53/-0.57	-0.59/-1.28	-2.9/-4.41	-5.29/-5.58	-5.11/-2.94	-2.13/-1.16	-1.7/-2.59	-1.55/-0.21	0.88/1.63	2.11/2.5	2.58/2.96	2.91/2.78	2.62/0.9	1.15/-0.27	-0.38/-1.04	-1.27/-1.09
Θ(45°)	-1.86/-1.34	-3.84/-4.8	-5.62/-4.58	-1.8/-0	-0.05/-0.97	-1.58/-1.66	-1.22/-1.78	-2.2/-1.57	-1.16/-1.37	-0.12/-1.64	-2.12/-2.17	-2.75/-4.27	-4.7/-3.14	-1.34/-0.33	-0.85/-2.16	-1.4/-0.28	-0.2/0.25	0.66/1.86	2.02/1.39	1.34/2.22	2.96/3.06	2.77/1.98	-0.37/-1.14	-0.94/-0.47
Θ(52.5°)	-1.12/-1.77	-0.64/-1.29	-1.11/-0.56	0.19/0.31	-1.65/-3.47	-2.43/-0.44	0.26/-0.32	-1.2/-1.9	-2.19/-0.84	-0.58/-1	-1.35/-0.98	-2.09/-2.95	-3.38/-2.13	-1.63/0.32	0.12/-1.19	-1.91/-1.27	-0.23/-0.3	0.11/0.54	1.12/0.61	-0.08/0.29	2.66/1.45	2.56/2.14	1.74/-0.29	-0.66/-0.35
Θ(60°)	-0.91/-1.1	-0.04/-0.5	0.08/1.22	1.44/0.76	-1.83/-3.88	-1.44/1.03	1.68/0.86	0.01/-0.56	-0.98/-2.25	-2.23/-0.35	-0.38/-0.45	-1.14/-2.6	-3.03/-2.46	-0.66/1.63	1.1/0.42	-1.2/0.52	0.66/-0.22	-0.63/-0.12	0.93/1.03	0.68/0.38	1.07/1.23	1.64/1.73	1.29/-0.42	-0.65/0.61
Θ(67.5°)	-0.12/0.04	0.16/-0.51	0.49/1.83	1.92/1.88	1.37/0.31	0.89/1.92	1.81/0.73	-0.96/-1.69	-2.01/-2.57	-3.71/-2.22	-1.45/-1.29	-1.8/-3.92	-1.19/-0.65	1.29/2.17	0.71/-0.77	-1.84/0.32	-0.19/-0.93	-1.08/-1.49	1.06/1.55	1.41/0.26	0.6/0.9	0.57/0.69	0.74/0.11	-0.95/0.68
Θ(75°)	-0.3/-0.7	-0.16/-0.57	0.97/2.34	2.82/2.59	2.68/2.23	2.59/2.87	2.2/1.08	-0.03/-1.74	-2.35/-3.42	-6.61/-4.55	-3.47/-4.21	-3.39/-3.21	-5.78/-1.87	0.20/0.88	1.36/1.64	-0.47/-0.96	-3.91/-1.61	-0.35/-0.24	0.98/1.34	2.56/3.21	2.79/1.59	-0.64/0.57	0.94/1.03	0.52/-0.32
Θ(82.5°)	-1.41/-0.99	0.42/-0.53	-0.23/0.32	1.28/1.87	1.89/1.86	2.18/2.29	1.87/0.37	-1.09/-2.76	-4.49/-5.59	-7.38/-3.72	-1.45/-4.4	-2.47/-2.13	0.13/1.08	0.88/1.64	-1.11									



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Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(22.5°)	-0.22/0.8	1.04/0.2	-0.1/-0.69	-1.52/-1.86	-2.28/-3.9	-6.31/-10.82	-18.68/-18.37	-15.95/-11.31	-8.36/-7.16	-7.95/-9.45	-9.28/-7.4	-5.25/-3.69	-2.69/-2.37	-2.25/-2.78	-3.27/-3.72	-3.34/-2.53	-1.95/-1.6	-2.45/-3.64	-5.99/-9.02	-15.39/-18.43	-11.8/-6.89	-3.82/-1.67	-1.49/-2.21	-1.28/-0.77
Θ(30°)	0.44/-1.27	-1.98/-1.62	-1.78/-1.94	-1.36/-1.78	-2.06/-3.12	-4.62/-7.47	-9.86/-9.63	-8.51/-8.53	-8.02/-6.13	-4.58/-4.87	-5.49/-5.72	-5.43/-4.44	-3.12/-2.37	-1.84/-1.5	-1.44/-1.73	-2.48/-2.9	-3.05/-3.3	-3.58/-5.21	-8.14/-11.72	-15.74/-15.2	-8.61/-5.5	-3.75/-2.1	-0.76/0	0.21/0.14
Θ(35°)	-0.1/-0.01	-0.38/-1.67	-2.88/-3.34	-2.76/-1.81	-2.07/-1.09	-2.06/-4.19	-6.61/-8.45	-7.93/-6.09	-5.76/-5.7	-5.15/-3.41	-8.62/-10.19	-10.84/-7.06	-4.79/-5.15	-4.99/-3.88	-2.01/-2.07	-3.04/-4.65	-6.07/-8.02	-10.24/-12.91	-18.43/-18.62	-7.5/-15.39	-1.14/-1.17	-4.78/-2.86	-2.43/-0.87	0.17/0.66
Θ(45°)	0.17/-0.08	-1.82/-4.94	-5.11/-6.08	-4.99/-2.96	-2.74/-3.82	-6.72/-11.93	-17.1/-13.27	-10.92/-10.25	-7.96/-5.69	-3.75/-3.43	-3.64/-4.92	-4.85/-5.2	-3.66/-3.86	-2.38/-0.72	-0.5/-1.36	-3.54/-8.05	-9.51/-6.89	-5.44/-5.35	-5.8/-6.22	-8.56/-17.12	-18.91/-18.31	-10.53/-7.36	-4.42/-2.92	-1.98/-1.12
Θ(52.5°)	-0.85/-1.55	-4.81/-5.47	-3.94/-4.43	-6.95/-8.25	-7.94/-8.24	-10.34/-19.19	-11.31/-6.39	-6.04/-7.68	-13.61/-10.71	-7.59/-6	-7.96/-10.87	-7.2/-2.68	-5.35/-4.08	-4.06/-2.84	-3.02/-4.18	-5.67/-7.26	-7.12/-5.66	-4.67/-4.1	-4.99/-7.35	-10.74/-18.14	-6.31/-3.31	-1.84/-3.75	-3.33/-3.44	-3.17/-2.2
Θ(60°)	-1.98/-1.22	-2.71/-4.11	-2.76/-3.04	-4.45/-6.31	-8.01/-9.18	-11.86/-18.94	-11.34/-5.01	-2.58/-4.39	-14.88/-10.62	-8.39/-4.72	-8.82/-4.82	-8.2/-6.59	-8.09/-7.23	-4.74/-3.38	-2.01/-2.07	-5.04/-8.99	-10.48/-8.44	-5.69/-6.41	-7.02/-9.84	-15.32/-14.45	-7.24/-2.6	-0.79/-0.78	-0.84/-2.86	-2.14/-7.27
Θ(67.5°)	-5.29/-5.36	-9.04/-2.96	-1.9/-4.23	-6.79/-7.59	-14.27/-16.6	-13.11/-18.6	-13.2/-6.58	-3.41/-2.95	-5.58/-6.67	-9.53/-8.07	-4.85/-5.91	-8.09/-1.78	-1.5/-2.57	-2.6/-2.09	-3.42/-4.93	-8.29/-9.48	-5.69/-7.56	-10.02/-11.96	-10.96/-14.03	-19.31/-10.4	-6.05/-1.06	-0.47/-0.67	-3.62/-3.27	-6.08/-6.63
Θ(75°)	-8.84/-5.86	-8.51/-4.09	-3.5/-5.16	-5.56/-6.85	-10.27/-12.46	-13.63/-18.33	-10.16/-5.41	-4.1/-3.82	-4.95/-6.72	-6.76/-6.41	-2.58/-2.09	-4.34/-4.01	-1.63/-0.74	-1.09/-1.44	-2.64/-7.88	-6.73/-6.73	-5.54/-8.72	-13.9/-15.45	-12.24/-18.18	-19.47/-11.13	-9.23/-3.71	-2.72/-2.98	-7.46/-6.58	-12.66/-16.56
Θ(82.5°)	-12.66/-7.85	-7.76/-5	-3.47/-4.52	-3.63/-4.4	-8.29/-10.21	-12.03/-18.2	-12.81/-7.62	-4.62/-4.15	-3.87/-3.33	-4.77/-6.03	-3.59/-5.1	-8.73/-4.1	-2.39/-2.03	-1.33/-0.68	-4.51/-11.71	-13.96/-4.45	-4.92/-8.82	-17.81/-17.27	-17.72/-15.23	-10.18/-5.89	-4.25/-2.99	-2.43/-4.52	-6.49/-4.99	-7.9/-18.52
Θ(90°)	-17.48/-8.85	-6.24/-8.38	-6.39/-5.98	-4.55/-6.11	-9.52/-11.63	-14.06/-12.06	-15.19/-11.28	-9.17/-6.68	-6.2/-3.52	-4.01/-4.65	-2.19/-3.24	-9.52/-8.76	-4.24/-3.29	-2.18/-2.71	-9.83/-13.34	-11.2/-8.97	-7.63/-12.81	-14.03/-15.03	-12.02/-13.79	-9.38/-6.45	-2.97/-2.15	-3.54/-8.46	-12.38/-14.52	-14.78/-18.55
Θ(97.5°)	-18.14/-11.95	-7.43/-8.13	-6.65/-7.99	-17.73/-7.35	-10.7/-8.26	-14.47/-17.07	-14.92/-11.55	-9.13/-6.24	-8.82/-8.37	-3.33/-7.35	-4.8/-5.84	-14.54/-12.22	-11.09/-9.43	-8.15/-11.39	-7.79/-6.36	-7.92/-7.01	-5.81/-7.27	-8.86/-14.46	-17.36/-18.85	-11.89/-8.11	-8.01/-7.89	-9.25/-13.87	-13.29/-15.08	-11.63/-13.34
Θ(105°)	-6.83/-4.27	-9.11/-1.44	-3.02/-6.55	-9.11/-17.85	-9.96/-14.34	-15.37/-11.57	-7.61/-6.85	-6.17/-7.45	-10.87/-7.31	-6.21/-6.68	-2.32/-6.28	-10.69/-7	-7.27/-8.38	-11.74/-9.13	-2.93/-2.73	-7.15/-7.11	-3.97/-3.87	-7.94/-18.46	-19.36/-11.31	-11.75/-12.5	-12.34/-17.77	-17.12/-19.14	-6.89/-7.13	-4.09/-6.22
Θ(112.5°)	-1.31/-1.32	1.58/-2.04	0.67/-1.67	-5.18/-11.91	-18.16/-11.24	-9.89/-6.93	-5.69/-5.75	-8.25/-18.16	-11.56/-5.46	-1.95/-1.15	-2.66/-5.65	-6.37/-4.19	-1.98/-5.38	-6.28/-3.93	-1.68/-2.7	-3.99/-2.9	-2.17/-4.58	-9.93/-17.31	-13.8/-16.58	-13.17/-15.91	-11.34/-14.49	-11.22/-13.32	-9.99/-5.36	-4.7/-0.82
Θ(120°)	-1.17/0.65	0.29/0.85	0.27/1.81	-4.98/-8.15	-7.44/-13.3	-11.51/-9.15	-10.47/-19.64	-12.03/-9.36	-9.24/-2.94	-1.9/-0.24	-2.7/-4.11	-3.97/-3.58	-2.9/-5.89	-3.66/-2.46	-0.57/-1.08	-4.71/-4.18	-6.33/-6.51	-15.44/-11.43	-12.14/-16.46	-14.2/-18.12	-19.1/-15.76	-7.34/-3.87	-3.38/-9.13	-9.3/-2.98
Θ(127.5°)	0.22/-1.12	-3.95/-3.94	-0.81/-5.9	-9.9/-9.1	-8.07/-8.09	-10.62/-17.85	-19.33/-17.63	-16.6/-9.42	-5.75/-3.02	0.47/-0.68	-1.83/-5.69	-4.48/-2.34	-1.86/-1.21	-3.18/-1.3	-0.89/0.75	-0.51/-3.88	-9.8/-18.02	-11.75/-9.28	-8.01/-12.97	-10.75/-14.02	-16.94/-6.76	-7.7/-2.5	-9.96/-4.93	-6.47/-1.68
Θ(135°)	-5.7/-11.1	-12.13/-7.16	-2.53/-4.46	-6.84/-8	-11.78/-18.85	-13.86/-14.11	-17.56/-11.81	-8.18/-7.44	-4.76/-0.39	-1.23/-1.93	-5.42/-2.75	-2.52/-0.96	0.31/0.49	2.43/-1.5	1.86/1.3	-3.62/-14.56	-10.8/-7.25	-4.49/-6.32	-3.85/-6.21	-6.28/-4.59	-9.01/-7.81	-7.38/-13.94	-12.35/-17.71	-7.13/-7.78
Θ(142.5°)	-9.37/-13.1	-10.76/-7.41	-15.23/-10.06	-7.07/-8.2	-9.85/-8.13	-8.68/-9.91	-10.66/-14.94	-14.7/-10.14	-8.15/-8.11	-4.2/-3.16	-4.05/-4.53	-2.96/-3.27	-0.42/-0.76	0.63/-1.96	-2.62/-5.52	-4.71/-14.18	-6.33/-6.51	-10.9/-12.6	-8.2/-5.64	-8.32/-19.25	-18.97/-10.8	-11.18/-9.42	-11.6/-14.92	
Θ(150°)	-9.52/-4.89	-8.4/-15.51	-6.16/-12.76	-18.64/-11.02	-8.48/-9.07	-11.66/-12.27	-10.42/-9.95	-11.09/-12.88	-7.07/-2.34	0.28/0.94	-5.53/-1.2	-1.34/0.12	-0.93/-0.07	0.06/-2.82	-6.92/-9.4	-11.53/-9.41	-9.61/-13.71	-18.42/-18.23	-16.99/-14.01	-16.96/-12.4	-5.56/-2.86	-5.06/-4.44	-4.99/-14.21	
Θ(157.5°)	-19.36/-10.53	-6.49/-7.94	-15.14/-18.18	-15.66/-13.13	-11.85/-14.28	-17.59/-13.32	-10.17/-8.78	-10.33/-15.83	-16.56/-9.8	-9.28/-12.68	-15.5/-10.24	-4.72/-1.27	0.06/-0.3	-1.88/-5.87	-14.02/-18.02	-8.06/-5.79	-6.09/-8.48	-11.73/-12.71	-13.15/-12.83	-17.5/-18.25	-12.43/-5.74	-5.26/-7.67	-8.79/-12.08	-19.31/-18.85
Θ(165°)	-18.09/-17.78	-19.31/-13.54	-9.25/-7.1	-6.93/-6.69	-7.31/-9.93	-12.38/-13.42	-12.32/-11.11	-10.31/-10.16	-9.84/-9.71	-8.73/-7.53	-7.47/-8.47	-9.13/-8.55	-7.66/-9.24	-12.25/-7.01	-2.75/-0.84	-0.5/-1.46	-3.23/-5.6	-7.72/-9.09	-9.77/-11.71	-12.83/-10.33	-7.04/-5.11	-5.52/-5.72	-5.16/-6.1	-9.41/-13.25
Θ(172.5°)	-17.3/-19.38	-18.84/-16.85	-14.39/-14.48	-15.16/-17.57	-17.3/-18.19	-18.92/-19.15	-17.15/-18.89	-18.41/-18.6	-15.41/-15.62	-16.62/-17.8	-18.89/-15.68	-11.51/-9.3	-8.22/-7.37	-6.81/-5.93	-5.37/-5.09	-5.22/-6.09	-7.29/-9.9	-147/-17.97	-18.55/-18.86	-16.5/-13.82	-9.94/-9.48	-9.52/-11.11	-12.22/-15.59	-18.34/-18.84
Θ(180°)	-9.29/-6.82	-6.24/-6.47	-6.36/-7.51	-8.63/-9.05	-10.93/-12.11	-14.25/-19.19	-17.65/-16.03	-15.14/-13.83	-11.63/-9.94	-8.24/-6.71	-6.09/-5.11	-12.53/-3.77	-3.75/-4.34	-5.7/-7.18	-8.38/-9.42	-11.04/-12.33	-13.11/-14.63	-18.14/-18.33	-16.34/-15.22	-13.95/-11.1	-8.2/-6.93	-6.17/-7.02	-7.52/-9.25	-9.76/-7.78
Freq(Hz)	6.995GPol.	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°)	-18.82/-16.39	-10.61/-7.63	-5.12/-3.21	-1.75/-0.68	0.14/0.78	1.01/1.17	1.26/1.23	0.87/0.29	-0.23/-0.77	-1.8/-3.25	-4.82/-6.05	-8.48/-10.57	-12.14/-12.35	-10.1/-7.79	-5.49/-14.5	-3/-1.96	-1.59/-0.93	-0.74/-0.68	-0.52/-0.38	-0.59/-0.56	-0.92/-1.41	-2.51/-4.71	-7.95/-13.41	-14.05/-19.19
Θ(7.5°)	-13.69/-16.48	-12.56/-8.88	-6.52/-2.57	-4.27/-3.43	-3.08/-2.32	-2.07/-1.72	-1.77/-1.73	-2.24/-2.41	-2.76/-3.54	-7.2/-9.59	-13.06/-18	-18.63/-16.27	-10.87/-11.72	-4.72/-3.03	-1.98/-1.65	-1.1/-0.73	-0.5/-0.38	-0.04/0.06	0.36/1.7	-0.05/-0.47	-1.3/-2.51	-3.67/-6.14	-8.83/-10.7	
Θ(15°)	-10.97/-18.72	-17.55/-12.66	-8.96/-6.68	-6.49/-3.91	-3.82/-9.99	-2.04/-1.84	-2.05/-2.39	-3.05/-4.07	-5.01/-5.5	-5.68/-6.08	-6.88/-6.58	-10.85/-13.24	-14.6/-16.08	-14.48/-10.45	-7.42/-5.58	-4.97/-4.25	-4.03/-3.99	-3.67/-2.57	-1.45/-0.54	-0.55/0.18	-0.72/-0.48	-1.07/-1.66	-2.15/-2.63	-3.91/-6.73
Θ(22.5°)	-14.86/-11.39	-9.59/-7.82	-6.37/-4.94	-3.12/-1.43	-0.72/0.21	0.76/1.02	0.94/0.86	0.61/-0.09	-1.24/-3	-4.77/-6.6	-8.61/-9.95	-9.91/-9.79	-9.87/-11.89	-16.18/-17.9	-13.31/-8.88	-6.61/-6.21	-6.1/-5.21	-3.23/-1.27	-0.05/0.32	0.65/1.15	0.87/-0.28	-1.69/-3.08	-5.7/-9.8	-15.3/-15.85
Θ(30°)	-11.35/-8.45	-9.97/-11.04	-10.46/-6.96	-3.89/-0.71	1.032/-3.8	2.893/-0.7	2.811/-93	0.73/-0.4	-0.43/-0.47	-1.04/-2.7	-5.17/-7.07	-7.43/-7.81	-8.74/-10.43	-10.49/-12.43	-18.81/-15.73	-12.91/-11.13	-7.55/-4.81	-3.38/-2.16	-0.86/-0.35	-0.1/-0.16	-0.89/-2.77	-4.71/-4.74	-7.94/-9.52	-13.15/-17.52
Θ(37.5°)	-6.99/-5.07	-5.93/-8.1	-9.28/-6.63	-3.35/-1.17	0.151/-2.1	1.862/-5.6	2.571/-97	1.11/-0.11	-0.76/0.15	0.88/-0.21	-2.47/-5.69	-8.33/-8.41	-11.41/-8.68	-6.84/-8.28	-10.65/-10.85	-9.13/-9.38	-6.65/-7.97	-5.83/-3.73	-2.62/-2.26	-2.89/-4.26	-5/-5.26	-8.03/-10.29	-6.35/-4.45	-4.99/-6.78
Θ(45°)	-6.8/-5.29	-5.99/-9.52	-9.58/-5.5	-2.21/-1.68	-2.25/-2.12	-1.11/0.62	1.851/-74	0.18/-1.53	-0.27/-1.69	0.71/0.78	-0.6/-4.97	-8.89/-9.68	-12.34/-8.77	-6.26/-5.42	-6.25/-3.72	-8.72/-13.73	-14.96/-10.97	-6.6/-3.96	-3.94/-5.26	-5.2/-5.7	-6.76/-7.95	-8.97/-9.19	-6.72/-5.16	-3.65/-5.18
Θ(52.5°)	-6.25/-4.02	-2.92/-6.22	-5.59/-2.33	0.08/-1.26	-4.8/-6.87	-1.83/-1.56	2.752/-4	1.36/-0.51	-3.02/-2.11	-0.56/0.47	-0.16/-3.47	-7.07/-7.97	-8.43/-6.83	-4.67/-3.79	-5.18/-9.29	-19.3/-15.95	-10.89/-10.71	-11.5/-11.73	-8.82/-7.8	-9.42/-10.19	-12.4/-13.02	-11.82/-12.22	-7.75/-5.21	-5.28/-7.41
Θ(60°)	-5.21/-2.86	-2.38/-4.52	-3.1/-0.98	-0.17/-2.05	-4.27/-5.54	-1.042/-39	3.893/-57	1.82/-0.93	-3.48/-5.13	-4.88/-2.33	-0.8/-1.79	-6.14/-7.32	-5.88/-4.1	-1.61/-1.63	-3.33/-4.66	-14.35/-8.66	-6.53/-9.6	-15.48/-10.16	-9.49/-11.06	-11.92/-12.55	-10.9/-16.4	-19.18/-18.14	-13.74/-9.41	-4.31/-4.58
Θ(67.5°)	-5.69/-4.39	-4.41/-9.1	-3.19/-1.24	-0.63/-0.82	-0.69/-0.97	0.973/-0.2	3.71/-23	0.83/-2.88	-4.59/-4.81	-7.26/-6.48	-3.5/-4.4	-1.82/-4.27	-3.74/0.29	1.22/-0.4	-10.81/-6.58	-6.71/-15.22	-14.71/-10.85	-9.84/-11.07	-9.71/-12.79	-10.15/-14.92	-19.23/-13.53	-16.37/-12.9	-8.25/-4.85	
Θ(75°)	-6.6/-27	-3.94/-4.76	-3.63/-1.75	-1.31/-1.19	0.161/-17	2.093/-01	3.242/-7	0.72/-3.42	-5.81/-6.52	-9.56/-8.28	-6.63/-2.85	-7.26/-8.44	-4.1/-1.27	1.53/-0.9										



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

θ(75°)	2.452/82	3.012/84	1.920/16	-0.050/1	-2.82/6.03	-4.11/1.71	-1.02/2.56	-4.73/4.12	-1.24/-0.1	-0.48/-0.16	1.2/1.7	2.06/2.41	2.04/2.33	3.13/2.36	1.82/2.03	1.88/1.08	0.09/-0.66	-0.59/-0.28	-0.240/-3.1	0.02/-0.3	-0.71/0.11	0.48/1.49	1.31/68	2.49/32.1
θ(82.5°)	2.59/132	2.44/2.04	0.97/-1.35	-0.82/0.16	-1.13/-2.28	-0.14/-1.39	1.4/-0.75	-3.7/-4.76	-1.39/-0.17	-1.41/-1.74	0.75/2.05	2.1/1.85	1.86/3.13	3.5/2.54	1.89/1.76	0.56/0.16	-1.86/-2.81	-3.1/-1.19	-0.16/0.92	1/-0.24	-0.3/-0.35	0.12/0.19	0.75/1.06	1.89/1.84
θ(90°)	2.52/3.2	2.54/1.78	0.85/-0.98	-0.39/1.17	-1.03/-1.24	0.89/2.21	2.45/1.41	-0.78/-3.04	-1.87/-1.19	-1.97/-1.41	1.35/98	3.06/1.56	-0.03/0.52	1.88/1.81	0.95/0.44	-1.55/-2.01	-2.19/-1.07	-0.53/-0.09	0.56/1.04	-0.8/-2.44	-3/-1.94	-0.5/0.32	0.77/1.55	2.62/3.68
θ(97.5°)	2.59/1.67	-0.04/0.5	0/-0.83	1.19/2.16	-0.03/-2.29	-1.06/-0.05	-0.69/-2.27	-5.62/6.7	-2.38/0.39	-0.98/-0.27	1.27/2.44	2.22/0.19	-0.33/0.8	1.95/2.27	1.72/0.42	-0.84/-2.8	-2.21/-1.92	-1.36/0.48	0.74/1.01	-0.15/-1.2	-2.64/-2.38	-1.87/-1.8	-1.40/91	1.48/2.06
θ(105°)	0.41/-1.26	-1.8/-2.51	-1.66/-1.03	1.06/2.57	0.66/-4.73	-5.18/-2.22	-1.29/-2.3	-8.44/-12.7	-4.21/-0.53	-0.59/0.1	-0.37/-0.06	0.29/-1.22	-2.07/-0.66	-0.29/0.4	0.36/-1.02	-1.13/-2.65	-3.43/-1.82	0.07/0.66	1.72/1.56	-0.22/-1.02	-2.14/-2.32	-2.44/-2.6	-2.15/0.26	0.93/1.44
θ(112.5°)	0.03/-0.68	-4.62/-4.99	-3.88/-3.51	-2.47/-0.97	-1.66/-6.8	-1.17/-4.92	-10.49/-8.62	-2.57/-3.51	-7.21/-1.67	-10.78/-3.21	-1.97/-2.53	-3.3/-5.67	-1.9/-0.97	-1.11/-0.79	-0.18/-3.32	-5.11/-5.34	-3.29/-2.45	-0.68/-0.67	-1.71/-1.15	-1.31/-1.59	-3.87/-3.37	-3.18/-0.15	-0.49/0.16	
θ(120°)	-2.16/-4.63	-7.85/-10.78	-9.13/-6.62	-4.75/-5.55	-4.5/-5.44	-11.87/-16.41	-16.14/-13.96	-12.94/-7.45	-5.24/-8.65	-16.54/-5.83	-3.23/-6.15	-4.78/-3.87	-3.52/-8.94	-8.37/-5.3	-8.13/-6.48	-3.75/-3.48	-5.6/-7.52	-6.86/-7.08	-3.81/-5.88	-5.73/-3.32	-2.52/-3.01	-4.56/-8.89	-7.66/-5.24	-4.08/-4.17
θ(127.5°)	-13.56/-16.53	-10.09/-9.89	-17.85/-12.79	-8.27/-13.16	-18.8/-18.08	-17.49/-18.4	-18.83/-16.92	-11.75/-11.4	-13.16/-14.77	-18.68/-13.54	-15.78/-11.09	-14.48/-13.79	-8.74/-11.38	-13.41/-5.82	-5.77/-10.47	-10.3/-6.35	-7.56/-6.98	-7.54/-6.24	-12.34/-6.31	-5.09/-6.84	-9.05/-11.31	-17.63/-15.04	-12.35/-14.2	-12.42/-12.9
θ(135°)	-14.35/-15.99	-10.46/-12.79	-13.89/-16.17	-10.69/-7.23	-13.62/-19.03	-18.49/-18.55	-19.09/-18.64	-14.21/-8.11	-6.86/-8.08	-13.54/-17.82	-19.1/-15.18	-16.05/-18.98	-18.53/-14.05	-8.22/-9.44	-10.59/-12.58	-10.36/-11.27	-17.64/-13.64	-6.74/-7.54	-5.3/-5.7	-11/-18.91	-8.66/-8.22	-12.73/-11.51	-15.99/-14.51	-12.88/-13
θ(142.5°)	-19.13/-18.41	-18.01/-12.48	-9.18/-9.73	-15.71/-17.99	-13.23/-10.8	-9.33/-9.11	-12.32/-19.06	-17.75/-15.83	-15.59/-18.52	-15.21/-12.27	-11.46/-16.95	-15.08/-17.22	-13.75/-9.03	-8.1/-9.12	-15.06/-8.77	-7.58/-8.88	-5.58/-7.36	-8.43/-3.28	-1.56/-2.74	-4.35/-5.43	-6.09/-5.3	-10.4/-17.55	-17.51/-10.99	-8.67/-17.33
θ(150°)	-15.87/-14.02	-12.89/-12.61	-11.7/-11.86	-14.18/-17.26	-17.32/-10.49	-7.6/-7.2	-8.87/-12.95	-14.4/-10.14	-7.61/-7.58	-10.31/-12.94	-15.2/-17.87	-18.22/-17.88	-18.88/-17.84	-16.27/-17.61	-19.24/-17.92	-14.23/-17.79	-15.57/-18.15	-15.37/-17.18	-5.89/-6.73	-6.97/-5.78	-6.28/-8.22	-10.6/-18.22	-18.37/-17.38	-18.74/-18.13
θ(157.5°)	-15.01/-13.7	-8.99/-7.75	-9.1/-12.8	-16.92/-15.05	-15.67/-19.25	-17.57/-16.87	-18.92/-18.31	-13.93/-10.25	-9.31/-10.98	-14.66/-12.87	-13.57/-19.66	-12.29/-11.19	-17.43/-18.42	-17.28/-17.9	-17.84/-16.99	-17/-14.4	-10.86/-11.09	-8.89/-8.48	-7.88/-6.54	-4.88/-4.87	-10.9/-10.22	-10.13/-8.4	-7.98/-9.48	
θ(165°)	-12.49/-10.25	-9.08/-9.71	-10.05/-9.26	-8.84/-9.41	-9.52/-10.79	-14.2/-15.59	-15.7/-13.75	-11.43/-9.39	-8.1/-8.27	-9.94/-14.45	-17.19/-12.74	-11.16/-11.24	-12.46/-15.69	-18.53/-18.7	-14.95/-13.44	-13.91/-14.97	-18.73/-18.21	-19.21/-18.72	-15.55/-12.96	-11.19/-9.42	-7.85/-7.85	-8.4/-8.87	-8.89/-9.13	-9.95/-12.93
θ(172.5°)	-8.56/-8.99	-11.48/-12.94	-13.01/-14.29	-16.51/-18.22	-18.87/-17.41	-16.5/-15.57	-13.93/-12.19	-11.46/-10.75	-9.7/-8.83	-8.26/-8.3	-9.02/-10.73	-12.56/-16	-19.2/-18	-19.25/-19.41	-11.78/-10.34	-11.11/-13.74	-17.09/-19.19	-15.46/-12.3	-11.41/-11.11	-12.46/-15.48	-18.28/-18.44	-14.8/-10.75	-8.76/-8.39	-9.01/-9.26
θ(180°)	-18.12/-18.91	-18.75/-18.53	-17.79/-18.81	-15.46/-14.06	-13.03/-12.78	-12.71/-13.63	-14.45/-15.71	-16.49/-17.37	-18.93/-17.99	-18.43/-18.86	-18.24/-19.13	-18.89/-17.72	-18.54/-17.39	-16.58/-14.39	-12.57/-10.96	-9.62/-8.99	-8.79/-8.38	-7.97/-7.78	-7.67/-7.64	-8.13/-8.95	-9.12/-9.22	-10.44/-12.1	-14.73/-17.83	
Freq(Hz)	6.175GPol.	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°)	-13.99/-14.91	-16.1/-17.6	-18.03/-26.18	-16.95/-14.23	-12.16/-11	-9.85/-8.93	-8.12/-7.35	-7.04/-7.41	-8.12/-8.59	-9.61/-10.54	-11.42/-13.86	-16.78/-17.76	-18.86/-19.13	-17.97/-18.31	-18.47/-21.56	-12.89/-11.14	-9.8/-8.94	-7.71/-6.9	-7.57/-7.72	-7.66/-7.78	-7.66/-7.92	-9.17/-10.68	-12.07/-12.95	-13.63/-16.38
θ(7.5°)	-18.3/-19.2	-17.87/-18.42	-17.56/-15.51	-13.99/-12.51	-11.6/-10.88	-11.02/-10.56	-9.66/-8.43	-7.78/-7.6	-7.73/-7.75	-7.86/-7.98	-9.14/-10.73	-13.63/-15.84	-19.15/-17.38	-18.73/-19.02	-18.39/-15.72	-12.89/-10.62	-8.96/-8.32	-8.05/-7.7	-7.65/-7.67	-7.96/-8.22	-8.84/-10.09	-11.62/-12.93	-13.81/-14.84	-16.76/-17.11
θ(15°)	-12.34/-16.12	-19.01/-17.94	-17.85/-17.95	-19.29/-18.08	-19.3/-17.82	-17.97/-17.96	-13.04/-13.98	-9.07/-8.52	-7.91/-7.7	-7.62/-7.8	-8.78/-10.89	-13.44/-16.38	-19.17/-10.98	-18.97/-13.39	-18.12/-17.47	-15.09/-11.97	-10.49/-9.7	-8.47/-8.2	-8.23/-8.16	-8.32/-8.32	-8.37/-8.99	-9.7/-8.66	-8.25/-8.24	-9.65/-8.8
θ(22.5°)	-8.89/-14.1	-16.13/-16.58	-15.69/-16.1	-17.91/-15.01	-12.17/-11.5	-10.88/-10.05	-8.73/-8.01	-7.21/-6.24	-5.92/-7.03	-7.17/-9.78	-10.91/-13.82	-19.32/-18.39	-17.33/-17.26	-15.19/-18.59	-13.34/-14.04	-10.35/-9.96	-10.08/-10.01	-11.97/-13.54	-13.34/-10.35	-8.42/-7.23	-6.5/-6.25	-6.27/-6.54	-7.33/-8.56	-9.74/-8.51
θ(30°)	-7.5/-6.87	-9.19/-12	-15.61/-17.72	-16.51/-13.87	-13.25/-14.77	-15.38/-12.31	-8.97/-6.65	-5.07/-4.57	-4.51/-4.88	-6.04/-7.56	-9/-13.47	-17.82/-18.45	-19.15/-16.5	-14.89/-17.95	-17.69/-13.25	-11.27/-10.03	-10.59/-13.27	-15.96/-15.82	-16.31/-15.59	-12.64/-9.78	-7.71/-5.87	-4.87/-4.29	-5.08/-7.16	-10.04/-9.02
θ(37.5°)	-10.69/-9.74	-11.13/-10.09	-17.3/-18.56	-18.97/-16.18	-18.06/-13.24	-9.78/-9.13	-9.27/-8.66	-7.15/-6.31	-5.55/-5.08	-5.7/-8	-10.6/-15.99	-19.18/-16	-14.04/-13.54	-9.94/-17.14	-17.75/-13.57	-12.21/-12.47	-12.38/-11.24	-11.56/-15.66	-15.06/-11.13	-10.29/-10.42	-9.91/-9.69	-7.89/-6.2	-5.4/-6.33	-8.87/-10.6
θ(45°)	-8.68/-10.34	-11.75/-13.81	-17.48/-19.09	-17.43/-14.31	-14.25/-14.63	-15.5/-17.35	-14.81/-13.11	-12.45/-11.59	-10.66/-9.77	-8.87/-10.7	-11.59/-14.72	-14.44/-10.7	-14.04/-18.47	-10.84/-12.2	-12.84/-18.4	-13.57/-14.71	-18.47/-17.09	-12.47/-10.55	-9.17/-8.2	-8.18/-7.3	-8.05/-6.25	-6.45/-7.75		
θ(52.5°)	-8.21/-10.62	-13.47/-11.33	-11.2/-11.48	-12.33/-11.04	-12.68/-13.8	-14.32/-10.97	-8.51/-7.91	-8.88/-10.69	-11.73/-11.27	-11.33/-14.26	-17.11/-18.13	-12.04/-11.01	-17.28/-18.34	-10.51/-7.91	-6.48/-10.49	-15.21/-17.6	-18.09/-16.97	-17.6/-18.69	-19.44/-17.76	-16.38/-12.08	-11.92/-11.65	-10.79/-9.49	-7.13/-5.26	-5.33/-7.4
θ(60°)	-8.2/-8.87	-11.53/-11.4	-11.4/-10.34	-10.02/-9.92	-12.64/-12.61	-9.39/-7.01	-6.83/-7.52	-8.86/-10.36	-12.4/-14.09	-13.13/-14.98	-15.25/-19.46	-9.45/-11.23	-12.38/-16.48	-12.6/-6.9	-7.31/-8.96	-11.42/-15.96	-15.9/-17.52	-16.88/-15.26	-12.89/-11.72	-12.07/-11.84	-13.93/-10.53	-9.79/-8.5	-9.21/-7.37	-5.01/-6.19
θ(67.5°)	-7.33/-8.05	-10.92/-9.63	-10.62/-13.21	-12.1/-11.55	-11.07/-8.58	-6.94/-5.95	-7.07/-8.11	-9.61/-11.85	-14.68/-17.08	-13.67/-13.35	-18.95/-14.86	-7.8/-5.9	-10.61/-8.86	-8.05/-9.54	-8.44/-11.31	-15.1/-18.37	-16.71/-16.4	-8.34/-8.26	-7.65/-8.19	-9.93/-9.23	-7.38/-6.43	-5.47/-6.19		
θ(75°)	-6.9/-8.98	-10.07/-7.42	-7.07/-8.87	-8.41/-7.77	-7.78/-7.28	-6.98/-7.5	-9.27/-14.88	-19.08/-13.14	-12.96/-17.93	-16.46/-13.14	-14.9/-11.8	-7.77/-5.01	-6.07/-8.44	-12.75/-11.36	-7.89/-6.26	-6.63/-8.03	-10.79/-12.44	-12.14/-9.66	-8.67/-7.13	-7.23/-8.57	-10.82/-12.19	-12.05/-11.69	-9.66/-7.74	-6.92/-8.51
θ(82.5°)	-10.12/-10.58	-14.54/-10.12	-9.09/-8.81	-8.43/-8.47	-8.48/-7.09	-6.81/-7.68	-10.32/-14.05	-17.22/-16.26	-18.81/-19.29	-11.67/-9.7	-12.04/-7.51	-6.35/-4.79	-4.97/-6.17	-10.85/-12.15	-8.92/-5.65	-5.95/-6.18	-8.72/-8.73	-8.09/-7.55	-7.31/-7.42	-6.55/-7.09	-9.11/-12.4	-13.34/-12.94	-12.15/-8.92	-7.91/-9.45
θ(90°)	-12.07/-13.24	-17.68/-15.31	-14.91/-15.57	-13.06/-14.01	-16.95/-17.32	-17.62/-18.69	-17.51/-17.79	-15.61/-15.56	-15.37/-9.85	-8.9/-8.84	-10.48/-6.16	-10.45/-8.41	-6.66/-5.06	-8.29/-13.09	-14.04/-10.72	-7/-6.64	-10.96/-12.98	-13.49/-9.7	-10.53/-8.15	-7.69/-7.73	-7.34/-7.69	-8.68/-11.09	-12.65/-15.1	-11.03/-9.48
θ(97.5°)	-15.66/-14.23	-18.55/-18.44	-17.77/-17.31	-19.37/-18.54	-18.88/-17.97	-12.76/-10.39	-9.9/-10.75	-12.29/-13.32	-11.2/-11.37	-11.95/-10.44	-11.89/-14.25	-12.23/-9.88	-7.18/-4.17	-4.07/-5.41	-7.5/-8.94	-7.42/-7.82	-8.13/-14.34	-19.49/-15.58	-12.11/-11.17	-8.74/-8.53	-9.09/-9.32	-13.88/-19.13	-18.43/-17.75	-11.34/-14.23
θ(105°)	-17.58/-18.62	-18.3/-13.23	-12.17/-19.07	-15.73/-15.47	-15.04/-9.23	-6.17/-5.34	-7.93/-12.38	-15.03/-10.1	-8.08/-8.9	-11.01/-8.99	-10.2/-12.21	-16.23/-18.12	-11.63/-8.52	-6.18/-4.64	-4.75/-5.65	-5.9/-3.58	-5.03/-4.78	-13.9/-18.46	-18.75/-18.83	-18.06/-10.53	-7.69/-11.4	-9.01/-13.34	-17.52/-18.9	-19.37/-15.64
θ(112.5°)	-12.18/-13.97	-14.13/-9.31	-9.15/-19.05	-10.29/-10.6	-19.02/-13.52	-6.31/-4.96	-5.41/-12.01	-12.53/-6.37	-5.36/-10.45	-12.38/-9.32	-11.55/-9.89	-9.89/-18.85	-12.14/-9.33	-8.18/-4.1	-6.53/-7.79	-6.14/-6.7	-5.27/-8.55	-11.63/-14.54	-14.75/-17.61	-16.46/-14.97	-7.35/-9.48	-10.59/-11.68	-18.1/-18.99	-10.27/-17.47
θ(120°)	-7.49/-13.27	-9.81/-6.22	-10.14/-12.73	-10.86/-12.38	-18.09/-6.88	-4.13/-4.79	-9.46/-12.87	-8.96/-6.2	-9.33/-14.26	-12.86/-10.22	-13.85/-18.72	-15.06/-18.03	-15.19/-8.27	-7.09/-6.61	-5.59/-8.96	-8.76/-4.44	-6.1/-6.28	-9.15/-11.8						



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(127°5')	-9.69/-7.61	-15.17/-6.89	-4.38/-12.36	-19.02/-13.67	-9.26/-10.74	-11.24/-16.54	-17.74/-19.22	-15.97/-11.91	-11.06/-11.47	-9.76/-15.73	-11.9/-12.61	-10.76/-13.58	-11.5/-18.85	-17.29/-11.73	-15.1/-18	-9.76/-5.58	-9.37/-9.66	-11.76/-9.24	-8.12/-7.77	-7.76/-9.6	-14.46/-18.82	-13.52/-8.24	-9.1/-6.01	-12.05/-13.18
Θ(135°)	-10.48/-11.4	-16.02/-5	-4.06/-9.38	-10.54/-5.57	-5.75/-11.85	-16.69/-11.19	-8.9/-10.38	-15.49/-13.42	-7.81/-7.87	-8.94/-15.46	-18.7/-14.75	-19/-12.95	-11.47/-13.92	-10.57/-10.95	-15.37/-13.38	-11.6/-15.32	-17.56/-10.2	-6.7/-5.25	-5.19/-7.35	-12.02/-18.6	-10.68/-16.85	-10.43/-17.58	-8.68/-11.78	-14.57/-18.79
Θ(142.5°)	-9.63/-7.3	-9.96/-6.98	-5.31/-8.6	-12.77/-16.77	-10.89/-12.75	-10.53/-10.98	-11.73/-11.82	-13.19/-15.06	-11.07/-11.03	-10.22/-15.9	-15.79/-19.61	-18.37/-18.97	-17.1/-18.7	-16.61/-8.38	-9.42/-14.46	-12.82/-7.24	-5.59/-2.3	-0.81/-1.32	-2.15/-4.7	-10.22/-18.6	-8.01/-6.52	-11.36/-15.7	-10.73/-8.17	-13.23/-17.95
Θ(150°)	-15.3/-15.9	-9.36/-7.08	-6.81/-6.95	-9.71/-16.82	-18.12/-11.73	-9.62/-7.56	-7.12/-9.69	-14.43/-10.78	-6.91/-5.42	-6.52/-7.77	-8.95/-17.49	-11.3/-7.24	-8.44/-18.85	-19/-18.96	-18.58/-17.81	-13.45/-12.61	-8.08/-6.95	-11.71/-12.09	-8.03/-8	-7.5/-5.09	-7.62/-14.91	-18.92/-12.14	-12.52/-12.79	-8/-8.17
Θ(157.5°)	-12.92/-18.92	-13.59/-10.4	-8.97/-9.15	-10.76/-9.09	-7.56/-8.27	-9.99/-12.79	-15.3/-18.74	-19.19/-17.9	-17.61/-18.45	-13.71/-9.41	-8.99/-11.09	-9.62/-7.49	-8.39/-14.7	-18.61/-18.78	-18.27/-18.54	-16.8/-14.1	-12.77/-17.61	-17.71/-13.94	-10.39/-9.51	-7.69/-5.4	-4.15/-3.99	-4.76/-5.99	-8.25/-9.13	-6.46/-7.02
Θ(165°)	-9.2/-10.21	-11.58/-10.92	-9.38/-7.04	-5.99/-5.28	-14.88/-4.99	-5.99/-7.52	-9.53/-11.04	-11.73/-11.36	-11.05/-11.49	-13.1/-17.41	-18.61/-15.53	-11.41/-10.64	-10.35/-10.27	-9.88/-10.48	-14.57/-17.55	-14.62/-9.71	-9.11/-11.44	-13.87/-14.56	-14.48/-12.59	-9.76/-7.66	-6.32/-6.12	-5.89/-5.48	-5.04/-4.53	-5.18/-7.19
Θ(172.5°)	-9.39/-10.16	-11.05/-13.88	-14.68/-13.37	-12.79/-12.87	-13.06/-13.18	-13.98/-13.79	-13.23/-13.8	-13.45/-12.75	-12.18/-12.23	-11.73/-10.94	-11.81/-12.28	-12.2/-12.18	-11.95/-11.87	-12.33/-14.03	-16.78/-18.64	-17.14/-17.83	-18.51/-17.4	-16.39/-14.86	-14.48/-14.75	-15.99/-16.47	-16.71/-15.54	-14.4/-12.98	-11.83/-10.65	-9.65/-8.57
Θ(180°)	-12.29/-11.8	-9.55/-9.11	-9.5/-8.9	-8.39/-9.19	-9.65/-10.84	-12.54/-14.41	-16.93/-18.76	-18.95/-17.66	-18.5/-19.3	-18.91/-16	-14.69/-14.65	-14.23/-13.51	-12.05/-10.77	-9.98/-9.49	-9.1/-8.91	-8.78/-8.29	-8.01/-7.82	-7.43/-7.53	-8.24/-8.96	-10.55/-11.9	-14.34/-16.52	-17.53/-17.97	-18.07/-17.25	-18.5/-15.12
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°)	-12.98/-13.24	-12.19/-11.81	-10.98/-9.08	-8.63/-7.63	-7.47/-7.26	-6.95/-6.52	-6.83/-7.51	-8.04/-9.19	-10.63/-12.29	-16.83/-19.19	-19.03/-19.25	-17.77/-12.76	-10.73/-9.57	-9.14/-8.79	-8.64/-7.8	-7.13/-6.94	-6.32/-6.06	-6.61/-6.8	-7.46/-7.7	-8.41/-9.37	-9.59/-11.45	-11.57/-12.29	-12.12/-11.94	-12.28/-12.27
Θ(7.5°)	-14.28/-12.35	-12.72/-13.01	-10.57/-9.55	-9.58/-9.24	-9.69/-10.5	-10.93/-7.14	-11.06/-10.9	-10.74/-9.66	-9.10/-8.88	-9.49/-10.27	-11.11/-11.63	-13.24/-12.78	-11.99/-10.2	-11.97/-12.49	-11.76/-10.19	-8.87/-7.93	-7.35/-6.89	-6.74/-7.41	-8.04/-8.86	-10.85/-12.09	-15.71/-18.23	-18.36/-18.76	-18.41/-18.1	-17.72/-16.85
Θ(15°)	-13.69/-18.31	-18.64/-18.57	-19.23/-18.88	-13.19/-12.16	-11.78/-11.73	-14.05/-16.92	-18.12/-18.2	-18.87/-15.37	-9.21/-10.81	-8.7/-7.93	-6.98/-7.59	-8.76/-10.08	-11.1/-13.42	-17.99/-18.94	-17.91/-19.35	-14.7/-13.82	-12.41/-12.44	-13.45/-15.01	-17.24/-19.03	-18.77/-18.97	-16.82/-15.25	-16.99/-16.05	-15.68/-16.25	-14.88/-13.27
Θ(22.5°)	-18.53/-18.71	-11.65/-8.62	-8.13/-8.62	-6.59/-5.82	-7.03/-9.14	-10.71/-12.22	-11.92/-11.06	-10.34/-9.78	-8.97/-8.35	-9.24/-10.58	-9.04/-7.88	-8.59/-9.51	-9.41/-10.72	-13.66/-18	-18.99/-17.45	-13.9/-12.41	-11.04/-11.12	-11.49/-13.2	-14.82/-17.61	-17.8/-17.95	-18.25/-17.57	-16.53/-17.48	-18.17/-18.39	-17.95/-18.09
Θ(30°)	-19.09/-17.77	-12.23/-8.33	-7.14/-7.03	-7.26/-7.86	-10.32/-12.04	-11.83/-11.21	-9.35/-7.57	-6.41/-6.27	-6.48/-7.38	-9/-11.12	-7.11/-11.53	-13.05/-14.87	-13.2/-11.71	-14.84/-18.14	-18.69/-17.72	-15.97/-13.76	-12.48/-11.02	-10.51/-9.93	-9.18/-9.21	-9.05/-9.72	-10.43/-11.2	-14.34/-17.22	-17.13/-15.23	-14.67/-15.04
Θ(37.5°)	-11.32/-11.32	-7.8/-5.65	-5.89/-7.12	8.41/-11.11	-12.83/-14.05	-16.62/-18.95	-17.94/-13.99	-8.88/-6.62	-8.07/-11.11	-11.54/-12.75	-16.86/-19.22	-15.22/-15.01	-19.05/-18.92	-13.54/-13.5	-13.89/-9.68	-7.52/-6.88	-7.06/-8.37	-9.65/-7.68	-8.47/-5.72	-6.52/-8.16	-9.82/-12.36	-11.27/-8.02	-6.9/-7.44	
Θ(45°)	-11.07/-16.04	-11.08/-10.51	-10.57/-10.18	-8.81/-9.25	-12.05/-18.55	-18.32/-18.24	-17.49/-17.65	-18.08/-12.49	-8.48/-7.55	-10.01/-8.99	-10.07/-16.04	-18.14/-17.51	-14.96/-9.39	-9.08/-18.11	-7.2/-7.39	-8.95/-7.61	-8.36/-7.46	-5.07/-3.82	-2.43/-2.72	-4.33/-6.15	-8.23/-9.71	-8.5/-6.87		
Θ(52.5°)	-10.39/-15.15	-12.16/-14.09	-8.86/-8.26	-7.68/-8.36	-10.84/-15.53	-17.4/-14.37	-12.41/-12.55	-11.74/-11.4	-9.35/-7.32	-8.56/-11.5	-15.9/-11.26	-13.07/-18.97	-15.33/-12.76	-11.75/-7.36	-7.39/-9.2	-13.94/-10.9	-7.71/-8.13	-8.31/-8.57	-7.18/-7.8	-6.17/-3.77	-2.48/-1.72	-2.34/-4.63	-6.7/-8.66	-8.48/-8
Θ(60°)	-10.86/-18.2	-12.99/-13.27	-10.63/-6.25	-5.94/-6.96	-10.65/-18.38	-15.03/-10.56	-10.87/-11.25	-8.16/-4.76	-3.82/-5.97	-8.47/-9.98	-16.55/-14.74	-8.62/-9.86	-10.53/-10.23	-9.69/-4.52	-3.9/-8.82	-11.61/-7.23	-7.96/-8.7	-8.83/-9.21	-11.21/-10.12	-6.72/-5.06	-3.51/-4.61	-6.35/-9.64	-7.37/-6.16	
Θ(67.5°)	-9.68/-13.27	-9.22/-12.2	-10.37/-5.81	-3.87/-3.38	-5.51/-10.67	-11.54/-9.51	-8.7/-9.08	-8.78/-6.64	-5.81/-8.6	-12.11/-13.27	-18.67/-13.83	-6.37/-4.76	-7.91/-14.12	-7.55/-4.36	-7.47/-12.44	-17.22/-11.11	-10.5/-9.57	-11.38/-10.73	-10.18/-10.15	-11.25/-11.56	-10.46/-9.43	-7.53/-5.88	-6.53/-5.2	-8.62/-8.76
Θ(75°)	-6.73/-9.83	-10.1/-11.4	-7.42/-5.2	-3.59/-2.89	-3.81/-6.61	-8.14/-6.99	-12.74/-16.23	-13.52/-10.83	-8.34/-10.04	-18.59/-16.36	-14.07/-9.2	-6.53/-7.78	-8.42/-10.41	-7.94/-5.61	-11.13/-18.06	-18.51/-18.89	-9.49/-8.76	-9.19/-12.67	-10.8/-10.34	-9.42/-8.57	-9.85/-9.41	-9.75/-9.13	-8.09/-6.54	-5.12/-5.26
Θ(82.5°)	-13.41/-11.16	-12.43/-12.5	-8.7/-7.43	-5.7/-5.17	-6.06/-9.79	-16.47/-17.02	-17.68/-18.12	-18.84/-18.71	-16.28/-13.39	-14.71/-12.48	-9.87/-13.45	-7.8/-7.65	-8.79/-16.3	-9.28/-7.2	-6.6/-7.19	-7.99/-8.13	-7.62/-8.4	-8.24/-9.79	-8.61/-7.05	-6.05/-4.59	-9.38/-13.37	-15.2/-12.64	-10.82/-17.82	-14.26/-13.46
Θ(90°)	-18.85/-14.72	-13.68/-15.22	-13.62/-10.87	-8.92/-8.29	-6.81/-8.21	-7.3/-18.24	-17.86/-16.14	-17.17/-18.35	-17.27/-12.86	-11.3/-9.94	-8.78/-10.06	-8.45/-9.41	-5.2/-9.11	-18.71/-13.48	-9.67/-13.4	-6.13/-6.71	-6.07/-6.69	-10.23/-9.52	-8.93/-6.73	-5.24/-4.64	-17.14/-14.02	-19.48/-12.69	-16.84/-19.32	-17.21/-18.11
Θ(97.5°)	-18.1/-19.14	-17.89/-19.12	-15.94/-18.54	-19.03/-15.51	-11.19/-14.56	-12.63/-6.01	-5.67/-8.7	-17.47/-17.77	-10.85/-6.61	-5.81/-5.98	-8.1/-11.07	-16.7/-6.86	-6.1/-8.01	-16.05/-17.89	-19.44/-9.76	-7.6/-8.4	-7.36/-15.56	-17.55/-18.79	-18.52/-8.86	-6.99/-5.02	-6.02/-9.86	-10.63/-16.2	-17.05/-18.52	-16.35/-17.26
Θ(105°)	-15.39/-14.39	-19.13/-10.3	-16.77/-15.88	-17.7/-18.59	-14.7/-18.99	-14.19/-6.99	-5.66/-8.93	-17.93/-8.26	-5.63/-6.72	-6.27/-6.66	-5.69/-10.2	-19.9/-4	-8.94/-8.05	-10.93/-10.2	-6.9/-4.03	-2.76/-2.66	-3.94/-6.36	-7.85/-13.95	-18.17/-17.58	-10.76/-8.32	-9.31/-7.41	-12.74/-12.34	-13.67/-13.94	-18.89/-18.42
Θ(112.5°)	-14.4/-13.34	-13.7/-16.18	-9.27/-13.25	-11.84/-8.53	-8.78/-18.49	-11.35/-5.47	-4.11/-7.29	-18.99/-7.91	-10.37/-12.92	-7.05/-4.62	-10.62/-12.56	-17.77/-12.19	-13.26/-15.13	-12.9/-10.65	-9.39/-5.54	-4.16/-1.79	-2.68/-5.14	-12.96/-17.16	-12.67/-15.17	-15.32/-14.84	-17.21/-18.17	-9.63/-13.73	-18.85/-18.37	-11.26/-18.46
Θ(120°)	-9.71/-8.52	-16.19/-13.2	-12.16/-18.25	-12.17/-10.74	-18.55/-10.54	-4.73/-4.08	-5.65/-12.32	-10.99/-19.9	-10.03/-17.95	-16.15/-12	-18.06/-11	-11.42/-14.27	-9.47/-10.91	-9.72/-14.78	-12.98/-12.25	-8.65/-5.38	-6.4/-6.19	-8.41/-10.05	-16.73/-7.69	-13.23/-16.13	-7.55/-13.71	-16.39/-11.63	-18.6/-16.23	-13.07/-15.48
Θ(127.5°)	-8.58/-14.6	-15.57/-11.14	-10.31/-18.16	-7.14/-7.64	-10.43/-10.56	-8.71/-9.6	-12.92/-18.1	-9.58/-5.85	-7.15/-9.27	-9.57/-9.26	-11.89/-11.78	-10.17/-9.9	-11.58/-15.07	-11.33/-6.44	-7.81/-11.29	-11.24/-8.37	-6.65/-4.43	-8/-9.34	-10.85/-7.63	-12.73/-17.81	-12.28/-16.85	-15.05/-11.78	-11.69/-17.82	-11.31/-13.8
Θ(135°)	-13.04/-11.1	-8.74/-6.14	-7.17/-16.8	-18.32/-10.49	-6.59/-1.94	-18.68/-16.86	-9.53/-5.35	-5.21/-7.4	-7.29/-6.63	-7.87/-13.36	-13.25/-9.17	-6.11/-7.44	-12.56/-15.97	-7.68/-6.55	-6.51/-8.59	-11.46/-17.65	-12.49/-13.59	-7.1/-19.21	-12.99/-17.72	-7.65/-6.91	-18.24/-16.57	-10.68/-17.83	-15.37/-11.35	-17.71/-13.5
Θ(142.5°)	-18.14/-10.22	-18.29/-13.48	-10.81/-9.28	-12.41/-17.66	-17.05/-15.77	-18.07/-12.28	-5.47/-3.29	-2.86/-4.83	-8.13/-10.76	-13.36/-18.88	-13.64/-8.74	-9.28/-13.31	-18.56/-16.88	-13.87/-10.91	-9.92/-11.75	-18.07/-18.24	-17.73/-17.72	-17.94/-9.49	-10.98/-12.94	-17.97/-13.15	-9.41/-8.12	-12.07/-15.97	-11.02/-17.41	-18.93/-17.63
Θ(150°)	-6.29/-5.61	-6.57/-7.14	-17.7/-12.83	-18.35/-12.97	-9.56/-8.72	-8.45/-8.3	-11.53/-18	-16.96/-13.54	-11.25/-9.92	-10.31/-13.58	-18.99/-18.11	-13.15/-12.87	-19.01/-19.1	-13.86/-12.96	-14.67/-13.85	-12.79/-16.98	-19.26/-16.75	-13.29/-18.64	-13.81/-9.11	-10.36/-11.52	-7.92/-5.85	-7.59/-9.4	-8.11/-8.74	-10.69/-6.53
Θ(157.5°)	-13.68/-14.78	-18.9/-15.01	-8.94/-5.93	-5.72/-8.89	-14.64/-12.56	-7.19/-5.04	-5.83/-5.77	-6.11/-7.44	-18.79/-17.67	-18.14/-18.78	-17.78/-17.65	-17.34/-18.14	-18.16/-14.52	-10.29/-7.46	-7.88/-13.58	-17.43/-18.99	-17.21/-12.83	-12.29/-14.32	-13.87/-13.22	-14.54/-13.87	-9.56/-8.62	-11.15/-14.01		
Θ(165°)	-13.97/-18.99	-13.92/-9.14	-9.4/-10.33	-8.79/-8.65	-10.66/-14.05	-17.27/-19.49	-18.33/-15.18	-12.39/-11.65	-13.41/-18.21	-17.98/-16.86	-18.4/-8.66	-17.91/-13.5	-11.15/-8.91	-7.61/-7.14	-6.12/-5.63	-5.82/-7.65	-10.3/-14.18	-15.99/-16.2	-15.32/-14.4	-12.45/-10.79	-11/-14.22	-18.21/-14.53	-12.21/-15.99	-17.79/-15.74
Θ(172.5°)	-18.84/-16.73	-12.79/-10.17	-9.66/-13.47	-15.41/-14.54	-12.9/-15.93	-15																		



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(180°)	-5.19/-3.82	-3.35/-2.89	-2.91/-3.43	-4.46/-6.07	-7.67/-9.38	-12.39/-18.37	-16.93/-12.27	-9.55/-8.97	-9.56/-10.9	-13.99/-18.17	-14.74/-8.56	-6.4/-6.15	-7.03/-7.91	-8.13/-8.57	-9.12/-9.39	-9.9/-11.02	-13.3/-16.61	-19.41/-18.13	-18.64/-16.82	-14.25/-11.47	-9.07/-8.9	-9.33/-8.8	-7.52/-7.49	-8.31/-8.47
Θ(160°)	-13.87/-17.35	-16.88/-16.05	-15.82/-14.78	-13.6/-12.8	-12.13/-11.6	-11.59/-12.85	-12.75/-11.9	-11.79/-11.14	-9.08/-7.75	-7.22/-7.02	-7.13/-7.21	-7.42/-7.88	-8.58/-8.39	-8.24/-8.89	-9.8/-11.39	-13.33/-16.78	-17.27/-18.15	-19.01/-18	-15.91/-12.4	-8.99/-8.93	-8.63/-8.33	-8.62/-8.88	-9.38/-9.8	-10.19/-10.37
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°)	-17.66/-18.41	-19.03/-18.69	-16.75/-13.31	-9.89/-7.91	-6.76/-6.01	-5.71/-5.39	-4.64/-4	-3.78/-3.47	-3.63/-4.18	-4.81/-5.67	-6.44/-7.3	-8.39/-11.48	-15.47/-18.51	-18.93/-18.61	-18.78/-17.11	-14.4/-12.52	-10.45/-8.95	-8.29/-7.63	-7.33/-6.47	-6.22/-6.35	-6.6/-6.79	-6.86/-7.45	-7.9/-9.39	-11.62/-15.59
Θ(7.5°)	-9.05/-9.61	-9.0/-12.61	-18.54/-19.43	-18/-17.81	-18.9/-18.14	-18.9/-11.83	-9.73/-8.58	-7.74/-8.13	-8.23/-8.51	-8.98/-9.3	-8.81/-9.37	-14.58/-15.06	-17.86/-19.01	-15.68/-12.98	-10.71/-9.03	-8/-7.45	-6.27/-4.96	-4.24/-3.75	-3.37/-3.07	-3.61/-3.75	-3.97/-4.03	-4.87/-5.83	-6.46/-7.07	-7.82/-8.14
Θ(15°)	-5.89/-5.54	-5.88/-7.42	-9.5/-13.57	-18.85/-17.85	-18.61/-14.54	-11.95/-8.82	-6.45/-5.57	-5.51/-6	-7.19/-9.01	-10.58/-11	-11.01/-12.49	-15.29/-19.24	-19.13/-16.04	-13.5/-13.17	-13.68/-13.57	-10.62/-7.85	-5.83/-4.34	-3.32/-2.61	-2.43/-1.82	-2.13/-2.3	-3/-3.42	-3.75/-4.36	-5.08/-6.05	-6.48/-6.11
Θ(22.5°)	-3.76/-4.05	-4.58/-6.03	-10.23/-15.08	-18.01/-17.36	-13.83/-9.53	-6.53/-4.39	-3.32/-2.38	-1.93/-2.49	-3.71/-5.89	-8.88/-12.42	-16.74/-17.76	-18.93/-17.81	-18.33/-17.46	-18.88/-18.29	-13.57/-7.61	-3.52/-0.91	0.82/-1.95	2.59/-2.62	2.41/-95	0.79/-0.27	-1.15/-1.89	-2.81/-3.42	-4.51/-5.46	-5.78/-4.5
Θ(30°)	-3.67/-3.54	-5.11/-7.87	-8.74/-9.94	-13.31/-19.24	-17.67/-15.97	-12.86/-10.79	-8.86/-7.87	-7.02/-6.32	-5.61/-6.46	-8.37/-12.8	-16.08/-14.4	-13.62/-12.57	-12.65/-15.02	-15.85/-11.2	-7.05/-3.16	-0.64/-0.69	1.57/-1.98	1.65/-1.78	1.83/-1.88	2.01/-1.57	0.32/-0.99	-2.32/-3.43	-4.07/-5.34	-6.23/-5.09
Θ(37.5°)	-4.98/-3.69	-5.72/-8.27	-8.58/-8.69	-8.44/-6.98	-7.29/-8.34	-9.7/-10.85	-10.17/-9.78	-12.28/-15.6	-10.44/-9.26	-10.01/-11.09	-10.32/-8.68	-9/-8.97	-9.28/-9.9	-8.88/-7.6	-5.06/-2.74	-2.3/-1.64	-1.95/-1.55	-0.91/-1.72	-2.38/-1	-0.220/-2.9	1.14/-1.55	0.92/-0.1	-1.31/-3.3	-6.66/-7.53
Θ(45°)	-4.56/-4.46	-8.35/-12.7	-9.64/-5.71	-2.77/-2.65	-4.04/-5.84	-8.92/-8.91	-8.82/-8.49	-8.39/-10.04	-15.78/-18.15	-11.87/-9.59	-7.6/-6.22	-4.81/-5.39	-6.9/-7.72	-7.54/-5.1	-3.21/-2.08	-0.270/-5	0.68/-0.2	-0.33/-0.71	-1.8/-2.92	-3.68/-3.57	-1.61/-0.52	0.54/-1.24	0.98/-0.24	-2.44/-5.11
Θ(52.5°)	-4.53/-5.65	-10.67/-14.78	-10.85/-5.62	-3.47/-3.29	-3.88/-3.61	-4.04/-4.26	-6.76/-5.14	-6.03/-9.16	-14.55/-15.61	-11.03/-6.35	-3.7/-3.44	-3.53/-5.32	-4.59/-4.81	-3.82/-3.41	-2/-0.49	-1.6/-0.6	-0.45/-1.31	-0.850/-53	0.850/-74	-0.81/-2.05	-3.58/-3.12	-0.570/-96	2.11/-11.9	-1.76/-3.81
Θ(60°)	-2.92/-4.56	-5.88/-4.61	-1.390/-2.1	-0.3/-2.68	-4.6/-5.84	-6.27/-7.13	-8.45/-6.53	-5.89/-7.16	-10.32/-13.75	-10.05/-7.67	-4.92/-4.11	-5.49/-5.65	-3.35/-2.04	-1.33/-2.55	-1.45/-1.8	-0.86/-1.4	-1.67/-1.46	-1.03/-1.15	1.95/-1.73	1.57/-1.14	-0.51/-2.41	-1.61/-1.44	2.53/-2.4	0.2/-3.62
Θ(67.5°)	-3.99/-4.14	-6.75/-5.25	-2.30/-25	-0.06/-1.52	-2.21/-2.63	-3.78/-5.76	-5.28/-2.88	-2.17/-3.88	-8.41/-10.95	-9.9/-7.25	-6.15/-7.58	-10.03/-6.98	-3.18/-4.26	-2.61/-2.7	-3.7/-4.26	-4.42/-4.9	-4.19/-0.77	2.153/-79	4.564/-55	3.752/-32	0.1/-1.58	-1.680/-89	2.72/-44	-0.82/-3.85
Θ(75°)	-3.89/-3.11	-3.14/-4.05	-0.610/-2.18	1.79/-0.82	-2.54/-2.08	-3.98/-7.89	-5.39/-1.23	0.06/-1.47	-6.51/-14.3	-13.71/-7.24	-8.85/-2.08	-11.45/-7.95	-7.47/-7.44	-2.82/-0.78	-2.39/-2.5	-4.96/-8.24	-6.290/-8	4.565/-82	5.995/-79	3.982/-71	0.880/-37	0.090/-82	2.65/-95	0.56/-1.21
Θ(82.5°)	-0.180/-9.1	0.12/-1.61	0.342/-6.1	0.65/-1.66	-1.37/-0.98	-2.23/-3.22	-2.30/-26	1.12/-1.29	-7.7/-12.53	-11.05/-5.32	-3.5/-6.96	-12.19/-6.64	-6/-5.56	-1.58/-1.57	-5.25/-5	-6.61/-10.02	7.81/-0.97	3.115/-0.4	5.635/-0.4	3.140/-1.4	-1.02/-1.36	-0.71/-1.27	0.072/-25	1.06/-0.28
Θ(90°)	-1.97/-0.87	-0.42/-1.3	0.282/-2	1.41/-2.52	-3.14/-1.02	-1.38/-3.31	-3.71/-0.88	-0.16/-2.22	-7.25/-18.11	-18.01/-11.01	-5.31/-4.2	-8.82/-6.12	-1.86/-3.77	-0.580/-18	-4.28/-7.49	-5.55/-12.49	-8.83/-3.54	0.63/-3.99	4.674/-22	3.070/-39	-0.94/-0.63	0.870/-66	0.171/-7.1	2.09/-0.88
Θ(97.5°)	1.082/-3.3	1.57/-1.8	-2.52/-0.4	0.46/-0.59	-1.22/-1	-1.12/-3.04	-2.76/-2.07	-1.99/-3.13	-5.91/-6.36	-11.21/-7.05	-1.91/-3.53	-12.81/-5.12	-1.74/-7.13	-2.62/-1.34	-3.89/-11.74	-6.27/-17.5	-6.49/-2.13	0.863/-99	4.485/-0.9	3.570/-19	-1.96/-0.4	0.980/-26	-2.96/-1.69	2.77/-7.8
Θ(105°)	-1.332/-7.1	1.99/-0.09	-1.51/-0.49	-0.18/-1.49	-1/-0.75	-0.75/-2.38	-6.71/-5.58	-3.38/-2.38	-1.73/-5.8	-14.65/-8.05	-1.71/-4.82	-16.41/-10.28	-1.43/-10.23	-6.12/-2.23	-3.11/-19.14	-5.65/-17.53	-4.53/-0.78	1.032/-68	3.92/-4	1.2/-1.04	-2/-0.66	0.40/-0.5	-0.52/-3.16	1.02/-2.85
Θ(112.5°)	-0.240/-0.3	-1.22/-4.47	-4.51/-2.18	1.673/-2.9	2.171/-63	-1.83/-4.2	-8.09/-6.55	-4.56/-3.27	-3.18/-10.28	-14.15/-7.59	-4.47/-8.99	-12.18/-10.87	-1.42/-14.11	-8.35/-0.53	-4/-18.3	-4.92/-13.92	-5.23/-0.74	0.90/-1.3	1.390/-9	-2.88/-6.59	-6.4/-2.45	-0.78/-0.42	-1.31/-3.4	1.33/-0.86
Θ(120°)	-5.04/-1.95	-1.07/-1.33	-5.96/-3.9	-0.370/-6	-0.47/-3.16	-3.89/-5.85	-7.61/-2.72	-6.96/-5.38	-6.65/-12.06	-13.93/-8.58	-7.33/-10.28	-7.77/-12.47	-9.23/-10.35	-9.23/-8.09	-4.09/-7.63	-16.31/-4.8	-3.95/-11.77	-7.3/-9.56	-15.69/-5.62	-6.31/-11.61	-0.71/-5.57	-3.35/-1.21	0.9/-3.1	
Θ(127.5°)	-5.03/-4.37	-2.88/-5.51	-4.11/-3.2	-0.620/-0.7	-0.13/-0.15	-1.5/-3.29	-4.32/-5.95	-5.91/-6.5	-8.31/-12.61	-19.09/-7.37	-5.83/-7.57	-7.85/-7.3	-3.31/-7.56	-13.1/-11.61	-4.85/-6.29	-19.1/-6.85	-6.27/-8.42	-3.17/-3.14	-7.41/-7.5	-7.9/-7.48	-13.21/-17.58	-9.19/-5.52	-3.37/-0.81	0.59/-2.94
Θ(135°)	-11.16/-8.42	-3.71/-1.05	-1.9/-2.64	-2.45/-0.67	-0.19/-0.94	-2.15/-3.07	-3.28/-4.13	-5.36/-5.15	-6.91/-8.72	-11.88/-12.32	-5.81/-6.48	-4.45/-6.1	-2.4/-6.3	-13.25/-16.27	-8.47/-13.3	-16.89/-13.93	-7.21/-10.5	-11.58/-8.35	-8.9/-6.66	-6.11/-7.11	-5.7/-5.41	-12.03/-8.3	-3.860/-64	-0.74/-4.86
Θ(142.5°)	-6.1/-6.39	-2.56/-2.7	-2.06/-3.54	-5.19/-7.2	-9.03/-10.57	-12.48/-17.73	-18.71/-17.51	-11.29/-6.63	-5.9/-6.89	-8.63/-9.1	-9.99/-8.01	-5.8/-5.9	-8.99/-11.46	-14.09/-17.87	-14.1/-8.52	-6.84/-18.4	-7.61/-10.12	-11.91/-5.6	-14.86/-9.23	-12.35/-12.24	-17.75/-12.78	-18.68/-10.57	-13.76/-12.06	-7.88/-13.08
Θ(150°)	-17.53/-17.1	-9.58/-6.53	-7.09/-7.13	-4.56/-3.3	-6.44/-10.2	-13.88/-8.85	-6.45/-6.69	-6.4/-11.3	-16.62/-15.85	-10.61/-8.62	-4.42/-3.21	-6.47/-10.13	-18.73/-18.95	-17.52/-13.12	-8.41/-6.44	-6.51/-10.02	-14.80/-10.89	-5.79/-7.95	-18.87/-18.45	-10.04/-10.7	-18.26/-10.56	-7.18/-4.15	-8.7/-17.11	
Θ(157.5°)	-10.74/-15.58	-15.47/-16.2	-18.56/-7.1	-1.29/-2.6	2.332/-5.9	1.53/-0.17	-2.78/-5.39	-4.81/-2.42	-1.05/-1.62	-4.62/-5.97	-7.84/-14.75	-15.52/-12.67	-9.85/-18.37	-11.18/-6.27	-4.62/-3.42	-4.09/-7.95	-16.51/-18.55	-18.64/-18.21	-14.87/-18.02	-12.16/-5.79	-4.8/-6.23	-6.15/-6.19	-8.16/-8.19	-6.72/-1.74
Θ(165°)	-17.48/-19.85	-18.63/-13.54	-9.5/-7.1	-3.81/-1.02	0.330/-6.2	-0.18/-2.6	-5.67/-6.36	-4.3/-2.75	-2.42/-2.75	-2.78/-2.56	-3.8/-5.68	-7.26/-4.87	-7.95/-8.37	-12.13/-17.15	-17.69/-18.03	-12.69/-9.15	-8.53/-10.6	-12.86/-13.19	-10.37/-10.9	-4.74/-3.76	-3.59/-4.9	-7.23/-9.08	-9.12/-9.04	-11.09/-14.63
Θ(172.5°)	-11.44/-10.36	-8.81/-7.76	-5.8/-4.59	-3.94/-3.23	-2.71/-6.4	-2.96/-3.12	-3.24/-7.33	-7.91/-14.57	-18.71/-12.13	-8.47/-6.78	-6.12/-6.5	-6.67/-13.51	-17.59/-18.42	-15.7/-13.9	-12.98/-12.88	-13.23/-14.09	-14.16/-14.06	-12.72/-10.01	-7.16/-5.66	-5.51/-5.56	-6.03/-7.45	-10.21/-12.41	-15.07/-17.62	-17.59/-14.15
Θ(180°)	-11.61/-12.89	-15.48/-15.76	-17.43/-17.38	-13.17/-12.34	-13.11/-13.4	-13.7/-12.67	-9.56/-7.72	-6.56/-5.7	-5.62/-6.32	-7.2/-7.54	-7.64/-9.17	-13.02/-15.9	-13.6/-11.32	-10.36/-9.5	-8.06/-7.11	-6.84/-7.16	-7.04/-7.05	-7.17/-6.92	-7.04/-7.44	-8.35/-10.06	-12.71/-16.16	-18.22/-18.62	-18.26/-14.48	-12.25/-12.7
Freq(Hz)	6.475GPol.	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°)	-2.98/-3.12	-3.09/-3.14	-2.94/-9.21	-3.24/-3.69	-4.13/-4.79	-5.58/-7.15	-8.32/-9.37	-10.71/-11.23	-12.19/-12.21	-11.12/-8.58	-6.22/-4.54	-3.62/-3.05	-3.22/-3.53	-3.52/-2.78	-2.34/-2.36	-2.75/-2.8	-3.44/-4.72	-6/-8	-9.21/-10.27	-9.95/-10.22	-10.05/-8.34	-6.71/-3.03	-4.34/-3.91	-3.98/-3.67
Θ(7.5°)	-3.91/-3.4	-2.71/-2.3	-2.38/-2.88	-3.55/-4.31	-4.93/-5.17	-6.25/-8.24	-11/-12.24	-11.08/-9.19	-7.28/-6.42	-5.34/-4.1	-3.22/-8.88	-2.47/-2.5	-2.6/-2.8	-3.08/-3.05	-2.85/-2.34	-2.2/-2.5	-2.96/-3.75	-5.29/-6.45	-7.91/-9.17	-10.41/-12.75	-15.45/-15.24	-12.71/-10.58	-9.7/-8.57	-7.21/-5.37
Θ(15°)	-5.71/-4.81	-3.26/-2.43	-2.23/-2.51	-2.43/-2.8	-3.33/-3.79	-5.13/-6.67	-8.4/-8.67	-10.1/-10.09	-10.24/-8.04	-8.08/-5.43	-5.22/-5.26	-5.73/-5.18	-5.36/-4.09	-2.73/-1.27	-0.49/-0.21	-0.35/-0.67	-1.44/-2.65	-1.11/-5.7	-7.99/-9.82	-12.24/-14.97	-18.42/-17.86	-17.51/-11.89	-10.09/-9.51	-8.71/-7.73
Θ(22.5°)	-7.99/-5.89	-4.3/-3.69	-3.67/-2.75	-2/-1.98	-2.44/-3.1	-4.95/-7.2	-8.06/-9.01	-10.53/-14.07	-17.54/-12.22	-8.64/-7.26	-6.55/-6.06	-6.02/-6.04	-6.09/-4.83	-3.25/-1.51	-0.170/-24	-0.67/-2.32	-4.09/-6.21	-9.08/-12.76	-14.86/-12.3	-10.47/-10.89	-11.09/-11.7	-12.1/-10.2	-8.12/-8.55	-10.19/-10.75
Θ(30°)	-7.26/-4.93																							



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(22.5°)	-4.26/-5.47	-6.43/-8.92	-11.94/-15.7	-15.69/-12.66	-10.28/-10.77	-11.94/-11.44	-10.13/-7.8	-5.62/-4.52	-3.68/-3.45	-3.98/-5.17	-7.85/-11.54	-15.93/-17.31	-18.14/-13.7	-17.29/-15.75	-11.55/-8.19	-4.98/-3.01	-1.81/-0.74	0.22/1.06	1.55/2.03	2.17/2.01	1.64/0.74	-0.77/-2.64	-4.04/-4.31	-5.37/-4.59
Θ(30°)	-6.89/-7.76	-9.33/-10.77	-13.76/-13.81	-11.99/-10.79	-10.71/-11.01	-10.1/-9.45	-8.63/-8.95	-10.29/-12.19	-10.85/-7.64	-6.32/-6.85	-8.45/-12.9	-18.54/-18.29	-18.4/-13.7	-9.6/-6.52	-4.35/-2.6	-1.29/-0.39	0.63/-1.74	2.15/2.2	2.22/27	1.53/-1.12	0.54/-0.39	-1.41/-3.15	-6.42/-8.21	-9.06/-7.2
Θ(37.5°)	-6.72/-8.66	-12.6/-15.86	-18.69/-18.52	-13.69/-9.63	-8.19/-8.88	-11.27/-14.73	-15.66/-11.95	-9.51/-8.52	-10.07/-11	-12.5/-11.68	-13.01/-12.39	-10.49/-11.3	-16.6/-7.41	-5.27/-3.35	-2.79/-2.74	-2.2/-1.52	-10.1/-7.06	1.39/-1.66	1.84/-2.19	2.13/-2.16	1.75/-0.63	-0.35/-2.07	-4.09/-7.23	-6.74/-5.94
Θ(45°)	-5.73/-7.75	-8.22/-10.76	-16.69/-15.17	-10.15/-6.71	-5.53/-6.05	-7.83/-8.86	-12.44/-16.13	-14.54/-11.09	-11.27/-17.54	-17.61/-17.55	-18.35/-9.19	-4.91/-4.03	-6.13/-6.34	-4.1/-3.64	-4.78/-3.9	-3.4/-2.15	-1.33/-0.43	0.01/0.89	1.29/0.56	-0.50/75	1.46/-1.5	1.21/-0.41	-5.04/-7.4	-7.64/-5.55
Θ(52.5°)	-7.13/-7.04	-4.56/-5.02	-6.89/-7.43	-5.91/-5.11	-6/-9.4	-7.86/-8.5	-9.45/-11.95	-14.63/-15.76	-15.81/-13.22	-14.84/-14.97	-10.78/-5.45	-2.69/-3.03	-5.29/-6.24	-3.4/-2.47	-0.75/-0.32	-0.73/-0.8	-0.06/-1.31	1.66/-1.22	-0.62/-1.3	-0.51/-1.04	2.31/-55	-0.19/-4.32	-5.23/-4.06	
Θ(60°)	-4.24/-4.52	-3.33/-3.73	-4.48/-3.21	-2.81/-3.41	-5.43/-6.11	-5.92/-5.6	-12.77/-15.79	-15.1/-11.05	-8.41/-6.18	-4.25/-6.2	-8.49/-9.79	-6.48/-2.47	-2.09/-1.4	-0.68/-0.38	-1.45/-2.6	-2/-0.27	2.19/-2.46	1.80/-1.6		-0.82/0.8	2.36/-2.73	1.06/-3.35	-4.67/-2.75	
Θ(67.5°)	-2.62/-2.24	-2.34/-3.51	-3.84/-3.17	-3.75/-3.59	-3.44/-3.42	-2.83/-4.08	-7.04/-11.81	-13.4/-10.2	-10.24/-10.71	-10.77/-8.43	-7.88/-6.57	-6.92/-9.76	-6.41/-6.17	-4.01/-2.01	-3.45/-3.68	-1.77/-1.16	-3.22/-2.18	-0.84/0.84	2.64/3.04	2.47/0.85	-1.32/-0.46	0.51/-1.03	1.08/-1.47	-3.47/-2.2
Θ(75°)	-3.38/-2.87	-4.01/-4.62	-2.18/-1.18	-1.05/-1.75	-1.82/-1.68	-0.76/-0.76	-2.27/-6.35	-8.93/-7.95	-8.96/-11.35	-13.74/-10.58	-9.9/-9.9	-9.38/-6.48	-2.08/-2.59	-4.83/-3.71	-5.68/-7.32	-3.57/-4.2	-3.46/-0.75	2.48/3.09	3.9/-3.9	2.94/-1.67	-1.38/-0.69	0.42/0.32	-0.48/-2.38	-2.96/-2.36
Θ(82.5°)	-4/-1.14	-2.09/-3.78	-2.24/-2.92	-2.93/-1.89	-3.06/-2.42	-0.64/-0.2	-1.67/-6.45	-8.6/-6.81	-9.94/-18.07	-17.04/-7.51	-5.41/-6.68	-7.35/-5.67	-5.42/-2.15	-5.14/-8.68	-8.31/-10.84	-5.06/-0.95	3.07/4.08	3.05/-9	0.28/-0.52	-2.06/-1.16	0.71/-1.16	-0.88/-1.53	-1.36/-1.42	
Θ(90°)	-3.2/-2.09	-1.48/-2.54	-1.73/-0.78	-1.1/-2.44	-3.44/-1.7	0.89/0.1	-1.17/-4.86	-3.71/-3.81	-6.48/-14.9	-19.07/-5.38	-3.91/-9.46	-10.35/-7.84	-4.1/-5.33	-6.71/-3.02	-6.56/-9.64	-9.21/-9.89	-10.41/-3.97	1.72/3.42	3.85/-1.75	0.42/-1.16	-1.97/-2.63	-0.44/-2.78	-4.6/-3.57	-1.87/-0.6
Θ(97.5°)	-1.5/-1.85	-2.24/-2.26	-1.95/-1.96	-6.06/9.61	-8.62/-4.51	-0.23/-0.59	-2.37/-3.58	-2.24/-3.29	-8.29/-13.56	-14.9/-3.75	-5.28/-9.85	-11.25/-10.07	-3.95/-1.59	-6.86/-2.69	-7.71/-18.85	-7.15/-4.87	-18.63/-8.29	-0.54/-1.75	2.69/0.89	-1.28/-2.36	-1.78/-1.56	-0.35/-1.12	-4.82/-2.01	0.04/-0.35
Θ(105°)	1.2/0.98	-1.18/-1.6	-1/-1.54	-4.18/-3.98	-3.93/-2.56	-3.08/-1.6	-6.76/-4.81	-7.14/-18.03	-12.56/-4.3	-6.01/-10.82	-12.78/-9.09	-4.35/-6.33	-11.91/-4.1	-3.4/-17.6	-8.69/-5.65	-6.96/-4.31	-1.62/-21	2.14/-1.63	-1.75/-2.92	-1.51/-3.51	0.25/-1.97	-12.79/-7.73	-1.58/-1.49	
Θ(112.5°)	-3.84/-0.88	-2.74/-3.5	-1.45/-3.12	-3.76/-5.74	-5.37/-3.97	-3.24/-4.54	-4.17/-4.94	-4.42/-5.54	-7.77/-12.42	-12.59/-6.16	-6.01/-8.44	-14.86/-7.51	-3.96/-9.4	-14.1/-4.99	-5.49/-11.44	-9.97/-5.99	-7.13/-6.16	-1.86/-1.14	-0.85/-2.59	-9.37/-3.66	-2.01/-6.07	-3.73/-5.78	-5.63/-3.18	1.06/-3.03
Θ(120°)	-1.59/-0.41	-1.08/-1.43	-0.17/0.24	0.62/-0.19	-1.27/-2.44	-3.49/-4.16	-4.9/-6.43	-8.93/-13.44	-8.96/-8.69	-15.62/-4.96	-5.09/-7.38	-18.14/-8.82	-4.35/-7.34	-1.78/-6.79	-6.45/-16.46	-12.2/-8.09	-9.71/-9.26	-8.82/-10.64	-8.57/-8.81	-9.51/-4.33	-6.95/-17.6	-8.17/-8.4	-9.35/-4.79	-1.43/-5.46
Θ(127.5°)	-3.34/-2.4	-1.88/-2.53	-2.73/-0.99	-0.25/0.62	-1.82/-4.29	-6.35/-8.13	-7.67/-11.44	-18.02/-11.36	-8.56/-13.43	-9.41/-7.91	-10.18/-11.21	-17.72/-8.45	-6.15/-6.12	-9.15/-11.53	-6.47/-7.81	-16.25/-7.24	-8/-8.6	-8.33/-10.03	-12.07/-10.78	-10.15/-7.45	-11.57/-17.47	-6.59/-7.93	-6.53/-3.88	-5.84/-4.18
Θ(135°)	-7.56/-5.19	-7.28/-8.67	-4.12/-0.19	2.86/3.15	3.22/2.18	0.47/-1.1	-4.11/-8.12	-5.88/-4.41	-5.1/-9.66	-11.66/-9.33	-11.99/-6.6	-7.72/-11.23	-7.64/-6.16	-10.18/-16.74	-10.82/-8.09	-15.39/-12.24	-7.09/-8.01	-9.08/-2.87	-5.97/-9.93	-7.21/-8.91	-5.59/-3.73	-7.45/-8.45	-4.93/-1.21	-3.29/-7.4
Θ(142.5°)	-6.38/-3.71	-4.78/-3.01	-5.6/-3.91	-2.71/-2.44	-2.64/-0.61	-4.02/-2.21	-5.52/-11.81	-8.79/-5.55	-5.03/-7.12	-15.99/-19.27	-14.96/-9.54	-9/-9.28	-8.49/-7.78	-8.26/-8.37	-18.99/-10.55	-6.33/-10.45	-13.01/-12.16	-3.94/-1.38	-13.02/-8.27	-12.43/-10.83	-17.86/-15.33	-18.21/-10.42	-9.29/-8.23	-10.04/-4.12
Θ(150°)	-5.9/-5.67	-5.69/-7.23	-10.71/-17.31	-18.17/-11.34	-6.86/-5.26	-6.14/-8.49	-10.98/-7.1	-3.2/-9.15	-3.23/-9.98	-8.39/-13.29	-14.53/-9.57	-5.28/-9.95	-13.07/-16.48	-17.48/-16.75	-8.65/-7.91	-8.41/-9.59	-12.71/-7.46	-13.55/-13.86	-17.68/-17.34	-12.77/-12.33	-19.06/-11.7	-4.12/-3.64	-9.88/-4.37	
Θ(157.5°)	-10.71/-9.31	-8.85/-9.71	-14.23/-13.14	-6.88/-3.86	-2.85/-2.71	-3.01/-3.53	-3.94/-3.89	-5.02/-4.79	-3.48/-2.12	-1.77/-4.43	-8.67/-17.3	-9.69/-9.88	-7.26/-8.27	-10.85/-7.8	-7.77/-6.37	-6.61/-13.02	-16/-11.79	-16.83/-19.35	-19.12/-15.85	-9.98/-9.48	-15.13/-14.82	-7.99/-6.76	-8.04/-13	-18.63/-13.53
Θ(165°)	-15.84/-16.45	-18.22/-16.57	-15.33/-10.66	-6.51/-3.43	-1.6/-0.71	-1.05/-2.15	-3.85/-5.77	-6.24/-6.1	-5.89/-6.06	-7.45/-3.82	-7.62/-9.02	-12.21/-19.26	-15.15/-10.09	-9.47/-10.79	-11.85/-10.5	-8.93/-8.35	-8.92/-9.12	-8.58/-13.2	-6.25/-4.92	-3.85/-3.71	-5.19/-5.85	-12.62/-10.47	-17.89/-10.92	-17.36/-15.85
Θ(172.5°)	-18.62/-18.35	-17.89/-13.67	-12.08/-10.65	-9.12/-8.79	-7.82/-7.51	-7.02/-6.66	-7.77/-10.32	-13.97/-17.82	-16.53/-13.15	-10.55/-8.99	-8.67/-9.23	-11.05/-17.08	-18.59/-16.2	-16.57/-17.72	-15.14/-11.86	-10.85/-10.5	-9.68/-9.54	-8.96/-7.8	-6.67/-5.64	-4.96/-5.61	-7.49/-10.47	-11.82/-10.39	-10.66/-11.97	-13.05/-16.31
Θ(180°)	-16.07/-18.77	-16.51/-15.82	-13.65/-12.64	-12.14/-11.91	-10.11/-7.89	-6.4/-6.22	-5.65/-6.79	-8.11/-8.96	-9.71/-11.94	-13.6/-14.18	-12.7/-12.22	-12.95/-15.18	-17.37/-18.32	-16.63/-18.28	-17.66/-17.59	-18.56/-17.16	-15.15/-13.59	-12.68/-12.4	-12.39/-10.94	-8.99/-8.65	-8.12/-12.52	-6.85/-7.28	-8.83/-8.75	-9.97/-11.74
Freq(Hz)	6.995GPol	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°)	-3.87/-3.73	-2.68/-2.47	-2.83/-3.12	-3.07/-3.02	-3.47/-3.76	-3.97/-4.44	-5.14/-5.63	-6.09/-6.22	-6.94/-6.8	-6.81/-6.54	-5.82/-5.76	-5.94/-5.67	-5.08/-4.15	-3.4/-3.12	-3.19/-3.34	-4.06/-4.58	-4.98/-5.26	-5.63/-6.28	-7.16/-8.43	-9.14/-9.36	-9.79/-9.22	-8.27/-7.27	-7.02/-5.95	-5.83/-5.17
Θ(7.5°)	-3.74/-4	-3.22/-3.6	-4.62/-5.1	-4.63/-4.39	-4.86/0.63	-6.91/-8.26	-10.99/-13.67	-16.32/-16.74	-14.08/-11.01	-9.13/-7.72	-6.95/-6.21	-6.35/-5.21	-3.96/-2.6	-1.94/-1.73	-1.49/-1.34	-1.57/-1.69	-1.91/-2.01	-2.42/-2.98	-3.9/-4.71	-4.84/-5.66	-6.72/-6.75	-6.78/-6.06	-5.91/-5.57	-5.28/-4.32
Θ(15°)	-3.62/-3.62	-3.58/-4.04	-4.47/-4.16	-3.89/-4.33	-3.92/-5.12	-6.78/-8.56	-9.38/-13.06	-16.35/-17.85	-16.48/-9.83	-6.13/-3.92	-2.63/-2.1	-2.22/-2.52	-2.73/-2.81	-2.51/-1.74	-1.27/-0.88	-0.35/-0.05	-0.34/-1.02	-2.07/-3.43	-4.76/-5.66	-1.71/-7.97	-8.05/-8.74	-7.67/-6.71	-5.55/-5.12	-3.95/-3.77
Θ(22.5°)	-4.92/-5.16	-5.05/-4.87	-4.84/-4.89	-5.66/-6.19	-8.67/-12.32	-14.45/-14.93	-12.63/-11.78	-12.88/-12.91	-12.08/-9.14	-5.27/-2	-0.48/-0.31	-0.87/-1.36	-2.14/-2.68	-2.13/-0.46	0.52/0.92	0.26/-0.75	-2.38/-4.38	-6.63/-9.52	-11.82/-12.73	-13.3/-14.19	-14.12/-12.72	-8.48/-6.63	-4.81/-4.79	
Θ(30°)	-3.85/-4.32	-6.38/-7.56	-9.26/-12.83	-12.93/-11.54	-12.32/-17.41	-18.95/-17.61	-18.64/-15.7	-12.55/-11.7	-10.49/-8.84	-7.68/-5.76	-2.91/-1.05	-1.04/-2.23	-3.06/-3.2	-2.08/-0.64	0.39/0.89	0.32/-1.12	-4.23/-8.94	-18.32/-14.79	-11.14/-8.42	-7.61/-6.68	-6.95/-8.27	-10.81/-13.91	-13.57/-9.69	-71/-4.96
Θ(37.5°)	-2.38/-3.48	-6.25/-11.35	-18.69/-17.29	-13.75/-11.8	-11.17/-12.09	-13.08/-13.93	-11.21/-10.46	-10.66/-9.7	-7.85/-6.25	-6.72/-6.37	-5.44/-4.04	-3.11/-3.13	-2.61/-2.25	-1.33/0.41	1.07/0.24	-2.48/-6.7	-10.78/-11.68	-10.92/-8.37	7.53/-8	7.35/-6.34	-5.27/-4.85	-5.79/-7.97	-11.59/-13.7	-10.7/-6.57
Θ(45°)	-4.16/-3.06	-5.54/-9.44	-7.39/-5.76	-5.14/-5.73	-7.26/-8.59	-10.11/-10.24	-9.91/-12.37	-12.57/-15.36	-15.66/-7.88	-5.69/-6.38	-6.92/-5.78	-4.98/-3.62	-3.61/-3.19	-1.97/-0.09	-0.53/-4.2	-8.67/-11.88	-9.37/-11.36	-16.01/-18.91	-19.02/-17.74	-13.13/-8.85	-8.55/-8.78	-6.54/-7.42	-8.77/-11.15	
Θ(52.5°)	-7.71/-5.91	-7.86/-10.61	-8.59/-4.6	-3.67/-4.13	-6.79/-7.47	-8.49/-10.43	-7.55/-5.16	-7.1/-14.71	-19.27/-8.32	-7.79/-9.93	-8.46/-7.43	-3.32/-3.27	-3.41/-3.63	-2.85/-0.39	-6.73/-12.19	-16.51/-10.21	-5.61/-5.93	-9.11/-13.15	-13.24/-11.29	-9.06/-11.27	-12.98/-16.21	-17.45/-12.44	-9.61/-7.75	-10.82/-10.64
Θ(60°)	-13.21/-7.74	-9/-13.45	-8.07/-3.95	-3.11/-4.39	-4.46/-5.27	-8.3/-13.62	-9.93/-10.74	-15.97/-17.92	-7.8/-6.83	-5.9/-6.68	-6.61/-4.28	-2.32/-1.83	-3.52/-4.53	-4.17/-5.66	-12.7/-18.51	-18.38/-11.27	-11.17/-13.95	-13.07/-13.15	-9.72/-13.23	-11.1/-12.97	-19.13/-17.82	-13.39/-18.2	-10.16/-8.69	-14.7/-19.48
Θ(67.5°)	-6.16/-6.67	-4.95/-6.99	-6.96/-4.28	-3.27/-3.05	-2.1/-2.97	-7.49/-17.1	-14.41/-9.56	-10.4/-9.3	-7.4/-55	-3.26/-2.86	-3.4/-2.82	-1.40/-0.08	-1.19/-5	-6.82/-7.92	-13.62/-11.42	-15.88/-16.14	-13.59/-10.81	-9.38/-13.46	-15.41/-18.05	-13.91/-13.11	-17.58/-6.81	-4.55/-8.47	-1.74/-13.8	-8.57/-12.98
Θ(75°)	-12.64/-3.75	-2.09/-5	-7.73/-6.42	-3.61/-2.94	-3.46/-6.03	-18.34/-14.2	-7.49/-7.7	-11.64/-9.54	-5.19/-2.57	-2.24/-3.42	-5.19/-3.1	-1.47/-0.86	-2.29/-5.68	-6.4/-6.56	-9.31/-16.73	-14.27/-12								



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(67.5°)	-6.46/-6.53	-9.28/-12.64	-10.99/-12.73	-12.33/-9.87	-9.16/-8.66	-7.71/-8.96	-11.78/-12.5	-11.9/-12.52	-14.85/-16.15	-14.07/-11.8	-9.19/-7.84	-6.6/-9.61	-10.42/-7.54	-7/-8.9	-9.35/-9.85	-9.54/-7.45	-8.26/-13.18	-17.86/-15.57	-14.8/-12.91	-11.41/-8.94	-8.05/-7.71	-8.82/-7.84	-6.1/-6.54	-8.35/-8.3
Θ(75°)	-7.34/-6.08	-7.28/-10.26	-11.36/-13.39	-11.45/-9.71	-9.23/-9.7	-10.92/-14.42	-17.85/-16.79	-13.8/-14.91	-17.1/-18.74	-16.91/-14.24	-13.05/-11.36	-11.17/-14.81	-13.47/-10.26	-6.39/-8.79	-10.15/-6.53	-6.64/-7.54	-8/-12.32	-18.53/-13.54	-11.05/-8.99	-11.32/-11.22	-10.05/-7.41	-7.18/-6.27	-6.06/-7.03	-8.4/-8.81
Θ(82.5°)	-8.22/-5.78	-6.85/-10.08	-10.50/-10.89	-9.9/-8.75	-9.92/-14.41	-17.03/-15.18	-15.33/-15.74	-14.71/-12.42	-14.99/-18.02	-16.83/-18.24	-17.14/-18.22	-16.55/-11.29	-6.02/-7.07	-7.66/-6.75	-7.95/-11.11	-12.07/-18.85	-17.02/-11.44	-9.91/-8.82	-8.87/-10.71	-11.08/-9.24	-7.35/-6.14	-4.99/-6.34	-6.89/-9.28	
Θ(90°)	-11.71/-10.65	-7.94/-8.5	-10.2/-9.84	-10.53/-11.11	-10.44/-13.89	-18.62/-18.74	-19.27/-19.07	-18.21/-18.3	-18.21/-19.19	-17.63/-18.31	-17.32/-18	-18.24/-16.43	-12.25/-8.66	-5.63/-8.02	-10.88/-11.09	-13.24/-12.59	-9.88/-13.25	-16.25/-10.72	-7.89/-8.28	-8.31/-9.21	-11.51/-11.42	-8.39/-4.22	-2.93/-4.45	-7.81/-10.57
Θ(97.5°)	-11.25/-12.94	-12.92/-12.52	-11.56/-12.83	-13.78/-13.6	-14.42/-18.45	-17.65/-18.61	-17.92/-19.7	-14.97/-15.48	-18.77/-18.33	-17.82/-19.24	-17.63/-19.01	-17.22/-14.03	-11.55/-9.13	-7.64/-13.4	-18.43/-15.91	-17.58/-17.42	-11.38/-14.55	-18.09/-9.73	-9.58/-8.02	-8.77/-10.32	-12.03/-12.04	-9.71/-4.19	-4.84/-4.88	-7.43/-6.73
Θ(105°)	-18.12/-16.4	-14.47/-10.45	-9.37/-10.02	-12.19/-12.23	-11.37/-11.31	-14.27/-16.24	-18.31/-17.79	-15.89/-16.28	-19.03/-16.34	-17.89/-17.73	-17.57/-17.21	-15.31/-13.81	-15.89/-17.21	-9.67/-17.3	-15.51/-12.13	-18.33/-15.29	-14.36/-15.1	-17.73/-10.16	-9.81/-8.87	-10.94/-10.2	-14.99/-15.52	-11.43/-7.2	-6.02/-5.49	-6.85/-13.48
Θ(112.5°)	-18.86/-10.68	-14.91/-12.53	-8.47/-11.36	-18.3/-18.08	-8.41/-9.11	-8.58/-14.06	-17.63/-15.15	-11.73/-13.17	-15.5/-19.19	-17.17/-17.92	-18.31/-19.12	-17.89/-17.99	-19.04/-18.46	-16.28/-17.89	-12.56/-14.94	-15.61/-12.15	-18.81/-15.46	-13.62/-9.3	-7.68/-8.93	-18.69/-17.32	-9.5/-13.99	-13.71/-8.69	-10.78/-6.33	-7.99/-15
Θ(120°)	-17.85/-14.89	-9.8/-13.17	-10.14/-10.9	-18.75/-19.38	-13.71/-9.47	-9.55/-12.31	-18.34/-17.85	-12.23/-13.4	-13.04/-16.39	-18.18/-18.75	-18.04/-16.66	-17.57/-18.29	-16.46/-18.49	-13.12/-18.39	-17.38/-12.26	-13.69/-8.86	-10.81/-12.26	-9.41/-12.79	-15.07/-10.26	-18.76/-10.94	-7.29/-18.09	-17.59/-9.31	-18.13/-9	-8.72/-13.81
Θ(127.5°)	-17.64/-11.83	-10.26/-15.06	-18.74/-17.8	-13.82/-8.84	-8.57/-10.11	-11.94/-15.13	-18.31/-16.8	-10.48/-10.44	-10.47/-13.63	-18.39/-18.93	-17.34/-18.03	-18.78/-17.68	-15.11/-16.81	-18.77/-17.46	-12.18/-16.08	-8.32/-9.76	-14.2/-12.63	-7.79/-15.38	-18.28/-18.21	-9.98/-6.38	-11.46/-13.57	-8.53/-12.39	-18.29/-7.77	-14.64/-19.04
Θ(135°)	-18.16/-14.35	-8.78/-9.18	-14.81/-15.1	-18.44/-18.02	-12.17/-9.34	-10.39/-12.37	-16.76/-18.99	-17.1/-14.72	-14.2/-10.88	-11.09/-10.92	-15.08/-18.18	-18.47/-18.07	-15.35/-18.37	-17.4/-14.35	-12.85/-8.49	-11.17/-7.72	-19.1/-17.62	-7.51/-16.46	-14.94/-13.9	-14/-6	-10.41/-17.18	-18.75/-18.82	-19.01/-11.56	-12.05/-17.31
Θ(142.5°)	-18.08/-17.92	-13.33/-14.44	-17.76/-10.44	-10.61/-13.99	-15.04/-12.19	-13.18/-16.03	-15.03/-16.1	-11.35/-13.08	-18.91/-18.58	-16.38/-11.56	-11.65/-13.75	-18.19/-18.58	-17.13/-18.25	-16.66/-12.62	-11.09/-12.25	-18.86/-11.04	-7.73/-12.93	-19.17/-13	-18.76/-10.94	-7.29/-18.09	-16.25/-13.68	-16.5/-10.13	-16.1/-11.42	-18.38/-18.61
Θ(150°)	-11.64/-16.96	-13.28/-11.01	-10.85/-18.27	-15.37/-12.13	-9.81/-10.45	-12.54/-15.57	-12.97/-16.61	-12.16/-8.28	-6.86/-9.98	-12.97/-18.2	-13.51/-15.59	-18.96/-18.85	-16.86/-18.17	-19.19/-18.08	-15.6/-18.29	-18.94/-16.14	-13.6/-8.6	-5.36/-7.01	-17.73/-14.96	-11.37/-12.7	-18.46/-13.79	-14.08/-10.7	-8.84/-9.94	-10.41/-9.66
Θ(157.5°)	-6.64/-11.8	-9/-7.39	-5.69/-6.87	-10.48/-17.22	-17.43/-17.46	-15.21/-12.94	-12.61/-12.21	-12.72/-14.88	-19.17/-18.66	-17.51/-17.19	-14.04/-13.97	-14.09/-12.39	-11.03/-11.63	-16.48/-19.08	-16.76/-11.09	-9.61/-14.85	-18.21/-10.66	-10.02/-12.34	-14.28/-12.25	-11.81/-17.14	-18.08/-19.07	-19.38/-11.16	-9.51/-14.08	-16.68/-6.26
Θ(165°)	-4.93/-6.6	-6.71/-6.76	-6.44/-6.77	-9.31/-12.26	-17.21/-13.49	-14.06/-9.42	-7.38/-6.85	-7.33/-7.93	-7.85/-7.76	-8.32/-9.52	-14.14/-18.64	-18.47/-18.3	-19.11/-18.25	-16.75/-16.61	-15.62/-13.72	-13.34/-17.5	-16.82/-17.01	-17.1/-18	-16.3/-15.3	-14.61/-12.61	-9.58/-8.54	-9.32/-10.83	-10.82/-7.56	-4.85/-4.05
Θ(172.5°)	-7.11/-8.41	-7.55/-6.66	-7.5/-9.4	-13.19/-18.69	-18.4/-12.69	-10.42/-9.2	-8.54/-8.19	-7.93/-8.16	-8.14/-7.42	-7.51/-8.68	-11.33/-12.01	-9.3/-7.62	-7.82/-10.12	-15.01/-13.85	-18.35/-15.96	-14.15/-14.56	-14.91/-18.72	-18.03/-18.15	-18.61/-13.3	-10.94/-10.55	-10.26/-9.04	-7.01/-5.81	-5.86/-6.5	
Θ(180°)	-10.8/-11.89	-12.69/-13.84	-15.37/-16.4	-18.68/-19.61	-18.25/-17.37	-17.63/-18.58	-18.38/-18.64	-17.36/-18.29	-15.58/-14.8	-15.84/-18.98	-17.56/-18.23	-12.02/-8.64	-7.63/-8.07	-9.79/-11.64	-12.98/-13.43	-13.5/-13.32	-14.68/-17.87	-17.94/-18.7	-18.27/-15.87	-14.35/-13.58	-13.16/-12.15	-10.86/-10.01	-8.89/-8.99	-9.75/-10.8
Freq(Hz)	6.475G/Pol.	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°)	-12.82/-12.91	-11.79/-12.2	-12.45/-11.41	-10.44/-10.33	-10.74/-12.77	-14.97/-15.69	-15.34/-15.56	-17.7/-19.01	-18.76/-17.52	-16.74/-15.14	-14.45/-13.74	-13/-12.75	-12.26/-11.33	-10.21/-9.61	-9.09/-9.14	-9.16/-9.81	-10.83/-11.13	-10.56/-10.92	-11.85/-12.29	-14.75/-18.19	-18.82/-19.25	-17.95/-18.04	-18.39/-15.81	-14.09/-13.28
Θ(7.5°)	-9.23/-9.79	-10.09/-9.99	-9.91/-9.18	-9.06/-8.9	-8.55/-9.35	-10.25/-10.94	-10.78/-10.65	-10.05/-10.98	-13.92/-17.33	-18.45/-17.81	-18.22/-18.31	-17.8/-17.12	-15.57/-15.19	-15.05/-14.63	-13.96/-13.88	-14.33/-14.6	-16.08/-16.7	-18.48/-17.69	-15.9/-16.07	-14.88/-13.13	-12.14/-11.14	-9.89/-9.59	-9.31/-8.7	
Θ(15°)	-6.3/-7.27	-8.09/-9.12	-9.11/-9.52	-11.71/-14.25	-16.76/-15.77	-14.97/-13.78	-15.43/-18.38	-17.94/-14.43	-16.17/-11.78	-17.88/-16.76	-16.58/-17.23	-15.83/-16.91	-14.31/-12.74	-11.05/-9.55	-8.77/-8.8	-7.37/-7.71	-9.01/-10.49	-11.15/-8.95	-8.37/-7.5	-7.46/-6.85	-5.64/-6.46	-5.85/-5.7		
Θ(22.5°)	-5.85/-6.57	-7.28/-8.05	-9.32/-10.46	-10.78/-8.63	-7.72/-7	-6.29/-6.13	-6.65/-6.99	-6.65/-6.07	-6.34/-6.72	-7.08/-7.46	-8.52/-9.6	-9.43/-9.99	-10.77/-10.87	-10.25/-9.45	-9.3/-9.36	-10.44/-12.5	-14.16/-10.52	-7.64/-6.62	-7/-7.57	-7.71/-7.57	-7.16/-6.48	-6.84/-7.16	-6.45/-6.99	-5.08/-5.21
Θ(30°)	-6.01/-5.04	-5.32/-4.58	-6.15/-6.44	-6.02/-6.4	-5.95/-13.31	-11.56/-9.42	-6.38/-6.22	-4.66/-3.03	-2.74/-2.67	-3.01/-3.73	-4.8/-6.06	-5.02/-3.72	-3.24/-3.47	-5.08/-7.8	-4.4/-3.9	-4.09/-4.76	-5.35/-4.93	-5.36/-6.07	-5.12/-5.57	-2.79/-4.23	-3.4/-4.91	-5.96/-5.78		
Θ(37.5°)	-3.51/-4.95	-5.19/-4.49	-3.26/-2.56	-2.73/-3.82	-5.89/-9.92	-14.71/-15.38	-11.65/-10.61	-8.96/-5.83	-3.52/-2.46	-2.3/-2	-1.51/-1.17	-0.87/-1.44	-1.65/-2.56	-3.58/-6.86	-11.65/-8.62	-5.76/-4.27	-4.55/-6.48	-7.64/-9.79	-9.09/-14.34	-18.44/-13.22	-9.3/-6.2	-4.13/-2.41	-2.1/-2.69	
Θ(45°)	-3.25/-2.45	-1.57/-1.18	-0.170/-3.1	-2.73/-3.37	-6.22/-11.08	-16.31/-18.72	-18.05/-18.76	-17.41/-12.53	-6.81/-3.8	-2.17/-1.16	-0.311/-0.4	-1.320/-82	0.60/-52	-0.96/-3.83	-5.69/-4.95	-3.89/-4.16	-4.69/-3.23	-1.39/-1.47	-1.0	0.560/-0.6	0.1/-1.36	-3.61/-5.69	-3.38/-2.07	-1.51/-3.02
Θ(52.5°)	-0.070/-2.6	0.98/-1.51	1.91/-2.1	1.19/-1.34	-4.47/-8.59	-11.35/-13.35	-18.32/-18.32	-19.08/-11.66	-6.87/-3.81	-2.09/-1.09	0.141/-59	2.140/-99	-0.05/-0.16	-0.55/-2.47	-2.86/-2.59	-2.99/-3.4	-2.14/-1.48	-0.71/-1.26	-1.49/-0.84	-1.03/-0.86	-0.020/-63	0.740/-86	-0.63/-0.28	0.810/-67
Θ(60°)	0.410/-58	2.042/-77	3.613/-55	1.81/-50.9	-3.15/-4.85	-4.06/-3.94	-3.98/-4.66	-5.53/-6.36	-6.19/-4.93	-1.480/-51	0.931/-15	1.390/-96	2.122/-3	1.31/-0.09	-1.29/-1.61	-1.2/-1.67	-1.87/-3.34	-6.8/-9.41	-12.7/-12.63	-7.78/-4.3	-2.86/-1.46	-0.021/-73	2.111/-2	1.061/-22
Θ(67.5°)	1.912/-53	3.733/-76	3.712/-95	0.95/-2.04	-3.62/-3.25	-1.010/-16	0.480/-08	-0.38/-1.43	-2.19/-1.6	0.031/-25	1.340/-77	0.601/-91	1.632/-08	2.922/-67	1.921/-39	1.21/-0.29	-1.31/-3.73	-0.85/-9.49	-7.78/-8.23	-11.26/-6.54	-1.050/-57	-0.20/-29	1.341/-16	0.991/-54
Θ(75°)	3.283/-18	3.113/-99	4.513/-57	1.09/-1.71	-1.34/-0.58	0.541/-0.4	1.771/-57	0.931/-21	0.81/-0.02	0.51/-74	1.650/-66	-1.640/-22	1.772/-61	3.642/-9	3.173/-02	1.194/-0.4	-1.73/-3.63	-3.98/-2.63	-2.74/-3.9	-6.23/-5.32	-1.750/-87	0.18/-0.01	1.592/-12	1.742/-14
Θ(82.5°)	2.92/-88	2.873/-35	3.393/-23	1.51/-0.52	0.391/-83	1.841/-5	2.352/-41	1.961/-65	1.060/-7	1.030/-56	-0.36/-2.08	-0.960/-81	1.532/-16	3.533/-79	3.452/-65	-0.93/-2.51	-2.59/-3.03	-3.85/-2.62	-2.15/-3.2	-5.47/-8.53	-5.46/-0.96	0.260/-1	1.682/-64	1.941/-42
Θ(90°)	0.260/-17	-0.831/-82	3.043/-18	2.51/-74	1.342/-14	2.221/-92	1.270/-64	0.210/-35	0.710/-34	-0.190/-17	0.72/-115	-0.640/-78	1.742/-48	3.292/-68	1.350/-27	-1.84/-2.57	-1.47/-3.55	-2.18/-3.15	-6.42/-7.48	-3.82/-2.29	-1.94/-0.43	1.82/-3	1.52/-20.28	
Θ(97.5°)	-4.73/-1.77	-1.52/-1.59	1.671/-94	0.60/-94	1.320/-05	0.89/-0.48	-0.37/-0.09	0.23/-0.17	-1.391/-58	-1.18/-0.88	0.11/-48	1.240/-2	-0.21/-0.09	2.251/-7	-0.24/-1.33	-4.09/-8.03	-4.4/-6.12	-8.32/-3.98	-1.24/-0.43	0.28/-1.56	-3.9/-2.17	-1.540/-37	-0.111/-76	1.081/-65
Θ(105°)	-3.81/-3.1	-1.84/-3.09	-1.62/-0.96	-2.27/-1.86	-1.25/-0.75	0.150/-49	-1.06/-0.56	-1.22/-2.3	-2.69/-3.84	-4.25/-1.44	0.490/-91	-0.66/-0.29	-0.69/-0.63	-0.06/-1.31	-2.58/-4.58	-9.34/-7.04	-5.26/-8.4	-7.67/-2.92	-2.45/-1.19	-0.56/-1.16	-2.54/-1.84	-2.61/-0.91	-2/-1.55	-0.030/-0.2
Θ(112.5°)	-2.37/-1.16	-1.88/-3.94	-5.22/-6.4	-5.91/-7.44	-8.34/-6.2	-3.6/-2.41	-1.12/-3.48	-6.02/-4.37	-3.48/-2.49	-3.56/-3.38	-1.96/-1.43	-0.91/-1.59	-2.21/-2.61	-2.29/-2.61	-3.02/-2.8	-6.4/-7.1	-4.18/-9.58	-13.56/-1.47	-1.290/-4	-0.42/-4.22	-1.89/-1.93	-5.85/-5.18	-4.33/-2.87	-1.49/-2.04
Θ(120°)	-3.38/-3.26	-3.32/-4.58	-8.13/-10.34	-13.44/-10.13	-10.56/-8.14																			



Radiated Composite Gain Data_6GHz U-NII 5~8

Appendix B

Θ(120°)	-6.61/-9.03	-16.05/-12.55	-8.7/-15.31	-15.28/-11.74	-9.59/-7.92	-8.74/-11.98	-15.72/-16.75	-8.93/-7.79	-10.16/-16.92	-18.16/-18.57	-16.43/-9.25	-17.89/-17.63	-18.75/-18.2	-16.54/-17.31	-16.79/-15.86	-14.33/-11.29	-10.37/-11.09	-13.9/-7.54	-11.24/-7.84	-19.15/-13.05	-10.51/-18.46	-10.28/-11.55	-13.01/-7.66	-6.55/-9.67
Θ(127.5°)	-8.19/-18.66	-16.6/-12.74	-10.76/-17.81	-18.92/-18.53	-9.22/-5.54	-6.89/-10.72	-18.28/-13.51	-10.06/-10.55	-10.82/-14.3	-18.75/-17.92	-17.72/-17.62	-17.81/-18.6	-19.02/-19.14	-17.23/-19.12	-17.08/-9.96	-13.23/-11.59	-13.89/-10.5	-10.27/-8.97	-16.64/-16.11	-13.5/-11.41	-7.1/-17.38	-17.06/-15.27	-11.14/-18.25	-10.98/-10.67
Θ(135°)	-8.25/-15.31	-18.88/-17.13	-8.55/-11.28	-17.9/-16.29	-10.76/-8.05	-6.87/-9.11	-14.76/-18.87	-9.27/-6.95	-8.32/-14.46	-18.07/-17.71	-18.05/-14.08	-14.48/-19.32	-18.89/-14.3	-18.18/-13.69	-17.8/-16.64	-9.83/-6.19	-15.9/-18.68	-10.29/-15.6	-9.92/-8.06	-9.01/-4.13	-10.76/-18.09	-8.85/-9.84	-17.46/-14.37	-14.71/-11.5
Θ(142.5°)	-10.89/-12.16	-15.79/-11.9	-7.32/-5.87	-6.38/-10.57	-14.01/-14.83	-11.95/-10.09	-10.52/-14	-18.63/-17.98	-16.42/-17.89	-17.32/-17.67	-15.04/-12.43	-15.88/-18.76	-15.28/-17.63	-17.86/-10.81	-15.88/-14.92	-11.57/-12.6	-18.69/-18.06	-5.41/-7.15	-18.18/-17.98	-18.47/-17.75	-12.37/-14.05	-17.52/-13.85	-19.34/-15.61	-16.42/-12.14
Θ(150°)	-15.2/-17.16	-18.87/-19.09	-18.71/-18.37	-17.78/-16.65	-12.13/-10.17	-9.21/-10.18	-11.88/-14.81	-18.77/-18.47	-18.24/-16.81	-18.71/-17.87	-12.79/-10.78	-18.86/-18.05	-13.45/-13.97	-18.68/-17.63	-18.11/-13.99	-17.81/-16	-12.16/-6.74	-4.22/-5.37	-12.83/-15.01	-11.38/-17.67	-14.93/-12.32	-15.35/-10.88	-13.28/-16.35	-12.83/-10.43
Θ(157.5°)	-8.77/-6.43	-5.98/-8.29	-11.02/-9.08	-5.71/-5.11	-6.78/-11.79	-18.58/-18.6	-11.27/-9.12	-9.59/-13.04	-17.16/-18.08	-18.1/-18.18	-14.85/-16.06	-18.86/-18.16	-17.63/-16.81	-16.15/-15.55	-12.36/-9.32	-8.41/-12.01	-17.3/-7.13	-7.2/-9.87	-13.02/-12.11	-10.87/-11.04	-14.56/-17.72	-16.74/-12.14	-11.16/-12.05	-8.69/-7.09
Θ(165°)	-8.79/-7.1	-5.42/-4.97	-5.42/-6.06	-5.89/-6.32	-7.58/-10.39	-14.27/-11.89	-8.99/-7.66	-6.85/-4.78	-3.81/-4.19	-5.96/-9.41	-15.78/-18.64	-15.02/-14.64	-18.93/-18.8	-19.09/-18.61	-14.98/-17.28	-19.45/-16.48	-15.95/-17.09	-18.07/-17.82	-18.36/-17.2	-12.94/-8.99	-7.28/-6.28	-12.06/-14.64	-11/-8.57	-6.92/-7.21
Θ(172.5°)	-7.6/-8.03	-7.56/-7.98	-9.34/-10.12	-10.71/-10.94	-11.51/-13.82	-18.14/-17.39	-12.34/-10.86	-11.1/-11.88	-13.21/-12.5	-11.35/-9.29	-7.95/-8.28	-10.35/-15.76	-18.4/-18.91	-14.59/-14.76	-17.94/-17.77	-18.37/-18.94	-16.47/-12.93	-11.33/-11.96	-13.96/-13.42	-11.02/-10.02	-8.94/-8.85	-7.86/-5.88	-5.18/-5.45	-6.13/-6.97
Θ(180°)	-12.36/-11.47	-9.66/-10.43	-11.41/-13.8	-17.93/-18.92	-19.4/-18.88	-17.68/-19.15	-17.86/-17.99	-13.82/-10.28	-8.93/-8.73	-8.91/-9.47	-10.53/-13.96	-16.5/-15.08	-14.77/-15.36	-18.05/-18.27	-18.13/-19.32	-18.13/-18.69	-19.04/-17.99	-17.6/-18.81	-19.03/-19.46	-17.77/-18.15	-15.76/-13.17	-12.67/-12.94	-12.86/-14.17	
Freq(Hz)	6.995GPol.	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°)	-13.24/-12.19	-9.89/-9.57	-9.5/-8.93	-8.13/-7.45	-7.59/-7.81	-5.15/-5.08	-5.02/-5.09	-6.02/-6.72	-7.75/-8.57	-8.56/-9.49	-11.06/-12.14	-13.89/-15.21	-14.77/-12.98	-15.1/-13.71	-13.69/-13.08	-11.48/-10.15	-9/-8.27	-8.18/-8.52	-8.43/-8.53	-8.79/-8.73	-9.17/-9.84	-9.95/-10.74	-12.17/-14.18	-13.95/-13.54
Θ(7.5°)	-19.14/-18.77	-16.56/-16.94	-18.34/-16.45	-14.92/-14.88	-16.81/-19.55	-19.55/-18.43	-17.26/-14.74	-13.06/-12.15	-11.75/-13.13	-13.33/-12.89	-12.42/-11.66	-12.16/-12.99	-12.93/-11.55	-10.29/-9.53	-8.84/-8.37	-7.78/-6.99	-6.23/-5.24	-4.97/-5.31	-5.99/-6.87	-7.55/-7.42	-8.34/-10.09	-11.38/-11.68	-11.5/-13.47	-17.53/-18.8
Θ(15°)	-15.65/-16.62	-16.47/-18.46	-18.17/-16.66	-15.97/-14.05	-11.95/-12.54	-14.86/-16.83	-18.13/-18.21	-16.79/-14.9	-13.06/-12	-11.32/-11.36	-10.88/-11.99	-13.66/-17.01	-15.36/-14	-12.63/-11.25	-9.16/-7.73	-7.27/-7.11	-6.75/-6.05	-5.69/-6.04	-6.44/-7.28	-8.25/-9.12	-9.92/-10.57	-11.7/-12.47	-12.5/-13.94	-15.76/-15.97
Θ(22.5°)	-11.3/-12.31	-12.56/-15.28	-16.28/-15.75	-14.12/-11.28	-11.39/-11.12	-10.09/-9.22	-8.64/-9.25	-10.79/-12.22	-10.88/-12.05	-12.32/-10	-8.12/-7.7	-8.72/-9.94	-10.9/-11.14	-10.28/-9.54	-9.33/-9.65	-8.7/-7.08	-6.17/-6.39	-8.28/-10.74	-13.22/-15.43	-16.86/-17.48	-17.16/-16.46	-17.16/-17.74	-15.67/-11.87	-9.72/-9.1
Θ(30°)	-5.35/-7.92	-8.92/-10.42	-11.65/-10.57	-9.85/-8.61	-8.64/-8.6	-8.9/-10.32	-10.47/-10.39	-9.8/-8.18	-6.46/-6.6	-8.24/-9.08	-8.1/-6.98	-7.18/-7.84	-10.67/-14.35	-13.87/-12.12	-10.41/-9.43	-11.29/-15.23	-18/-18.09	-15.46/-10.84	-7.19/-4.98	-4.41/-4.54	-4.35/-4.89	-6.14/-8.44	-11.84/-11.72	-8.06/-5.51
Θ(37.5°)	-2.77/-4.59	-4.51/-7.56	-6.8/-5.84	-7.2/-8.15	-8.34/-7.61	-7.13/-6.89	-7.53/-7.37	-7.22/-6.87	-6.07/-5.71	-5.93/-6.22	-6.13/-4.72	-4.7/-4.32	-5.38/-5.05	-4.98/-3.66	-4.31/-5.01	-6.09/-6.96	-6.42/-5.45	-4.39/-4.36	-4.51/-3.79	-4.18/-4.05	-2.85/-2.36	-1.78/-2.11	-3.7/-5.87	-4.99/-2.87
Θ(45°)	-1.66/-2.78	-1.42/-4.25	-4.76/-6.82	-8.92/-10.45	-8.84/-7.53	-6.15/-4.66	-3.67/-2.97	-2.16/-1.61	-1.72/-2.18	-2.81/-2.76	-3.51/-3.62	-2.4/-1.15	-1.27/-1.6	-1.29/-0.66	-1.21/-2.33	-2.8/-3.16	-4.84/-8.16	-9.38/-9.55	-6.41/-6.99	-7.91/-10.42	-11.33/-13.67	-11.34/-4.29	-1.22/-1.75	-5.13/-5.25
Θ(52.5°)	0.32/-1.5	-3.63/-1.7	-1.46/-5.04	-6.6/-4.53	-4.28/-3.8	-4/-4.57	-4.07/-3.9	-3.52/-2.16	-1.29/-1.99	-3.34/-3.21	-2.59/-2.11	-0.630.11	-0.41/-1.56	-2.5/-3.62	-1.85/-0.27	-0.81/-3.02	-2.02/-0.38	0.780.21	0.480.31	-0.7/-1.57	-1.82/-2.29	-3.18/-3.73	-1.51/-1.39	-0.16/-1.86
Θ(60°)	-0.05/-1.62	-2.080.63	0.22/-2.64	-1.77/-0.57	-0.57/-1.32	-2.76/-4.75	-7.73/-7.92	-5.92/-4.32	-3.25/-3.42	-2.65/-1.4	-1.09/-0.59	0.170.56	0.64/-1.06	-3.22/-2.79	-1.23/-1.62	2.491.62	-0.33/-2.66	-4.68/-4.95	-2.69/-1.12	-0.79/-1.12	-1.76/-0.41	0.051.39	1.820.41	
Θ(67.5°)	1.530.93	-0.431.17	1.4/-0.97	0.581.45	0.571/-3.9	-3.08/-4.95	4.97/-3.97	-2.61/-2.58	-3.68/-4.86	-2.61/-1.17	0.240.37	-0.42/-1.09	-2.01/-2.42	-1.270.82	1.330.29	-0.140.71	-1.28/-2.57	-8.34/-18.71	-18.84/-18.24	-11.82/-5.7	-2.55/-2.46	-1.640.16	1.291.91	2.491.8
Θ(75°)	2.410.32	-0.562.48	2.951.25	1.92	0.59/-0.12	-1.16/-1.42	-0.240.18	1.271.05	-0.2/-0.9	0.910.71	-0.67/-1.37	-1.73/-2.86	-2.65/-1.51	0.853.3	3.021.3	1.881.74	0.62/-1.83	-3.62/-3.44	-2.31/-2.84	-7.54/-6.56	-1.410.02	-1.27/-1.25	0.040.97	1.451.97
Θ(82.5°)	1.161.79	2.142.63	3.141.04	-0.25/-0.94	-1.4/-1.01	-0.92/-0.49	0.070.41	1.030.63	1.141.86	1.920.83	-0.34/-2.46	-4.33/-6.39	-1.721.63	3.373.64	1.480.53	0.711.14	0.06/-1.9	-4.22/-3.61	-2.33/-4.14	-8.49/-10.08	-3.62/-0.5	-0.83/-0.5	0.43/-0.01	1.111.1
Θ(90°)	1.6/-0.22	0.581.89	2.412.08	0.53/-0.79	-1.37/-1.64	-0.68/-1.45	-0.250.34	0.971.23	1.24/-0.62	-0.920.46	-1.12/-1.45	-4.14/-3.87	-1.090	1.441.35	0.951.31	-0.54/-3.24	-1.82/-1.88	-5.71/-5.63	-2.22/-2.57	-4.66/-8.33	-4.81/-3.51	-3.2/-2.13	-1.25/-0.44	-1.800.43
Θ(97.5°)	0.43/-2.63	-2.330.5	0.17/-0.12	-0.1/-1.49	-3.33/-5.22	-2.56/-3.14	-1.83/-1.75	-1.58/-2.33	-2.26/-1.81	-0.31/-1.01	-3.09/-2.5	-4.05/-5.16	-2.950.07	-1.42.27	-1.25/-2.72	-6.86/-7.65	-1.98/-4.42	-12.35/-5.89	0.35/-1.01	-2.75/-7.14	-2.44/-2.16	-2.94/-1.67	-1.86/-2.4	-3.09/-3.6
Θ(105°)	-5.17/-4.08	-4.5/-2.67	-1.96/-2.18	-1.14/-1.26	-2.47/-4.13	-6.57/-3.25	-3.82/-3.16	-4.88/-4.81	-4.69/-2.65	-2.46/-2.49	-2.72/-4.21	-4.25/-4.92	-4.52/-2.17	-3.92/-3.82	-8.25/-5.41	-5.75/-11	-2.17/-4.22	-13.04/-3.38	-1.83/-9.7	-2.13/-6	-2.28/-1.44	-4.64/-1.45	-1.58/-2.36	-6.39/-7.76
Θ(112.5°)	-7.97/-10.76	-5.91/-6.08	-2/-1.87	-4.85/-5.78	-4.48/-13.02	-7.83/-9.07	-4.87/-5.61	-5.49/-7.21	-7.65/-6.52	-6.34/-6.62	-5.26/-6.12	-5.6/-6.29	-6.22/-5.84	-11.08/-6.31	-8.12/-4.73	-5.43/-10.72	-2.74/-5.03	-15.01/-3.27	-2.53/-1.97	-8.93/-6.64	-3.16/-9.61	-6.07/-1.37	-2.74/-4.94	-12.92/-9.87
Θ(120°)	-7.4/-7.66	-4.96/-8.08	-7.32/-6.17	-11.27/-10.98	-14.72/-14.48	-18.75/-14.31	-8.52/-10.61	-10.79/-8.31	-12.28/-9.21	-11.29/-9.77	-11.7/-5.69	-4.42/-5.94	-7.37/-7.38	-12.71/-8.12	-6.75/-7.87	-5.64/-15.55	-5.94/-9.24	-17.79/-4.67	-4.43/-3.23	-6.13/-19.15	-4.56/-5.11	-1.04/-11.3	-5.38/-6.01	
Θ(127.5°)	-6.88/-10.55	-8.95/-6.68	-8.07/-10.52	-10.84/-12.7	-10.47/-11.87	-9.71/-11.79	-15.22/-17.34	-16.41/-16.54	-13.13/-14.04	-9.93/-13.52	-13.79/-10.09	-9.58/-1.74	-6.72/-7.97	-16.54/-15.62	-9.1/-9.22	-10.32/-16.32	-17.93/-7.14	-12.14/-17.97	-5.66/-10.07	-5.56/-5.41	-14.23/-10.55	-6.63/-7.83	-9.16/-4	-4.04/-3.39
Θ(135°)	-6.96/-8.62	-7.06/-4.1	-3.17/-3.41	-7.09/-9	-10.51/-9.87	-8.63/-8.9	-7.32/-6.87	-8.92/-11.32	-11.61/-18.33	-19.31/-13.04	-12.08/-9.56	-6.26/-7.84	-10.86/-10.49	-12.67/-8.68	-7.35/-11.03	-13.96/-7.91	-17.67/-15.21	-11.64/-9.32	-9.39/-11.89	-8.29/-6.33	-7.27/-15.21	-13.52/-3.4	-3.59/-2.84	-3.35/-1.78
Θ(142.5°)	-7.6/-6.07	-4.51/-4.53	-6.47/-7.51	-10.46/-18.17	-11.02/-9.62	-5.79/-2.82	-1.27/-1.29	-2.56/-6.49	-12.27/-13.06	-11.96/-16.09	-13.75/-10.39	-10.3/-9.5	-7.5/-4.69	-7.73/-11.18	-18.82/-18.85	-18.23/-14.05	-11.19/-13.99	-18.58/-11.2	-9/-7.95	-6.99/-13.3	-8.93/-6.92	-5.48/-11.01	-5.3/-2.63	-6.56/-6.26
Θ(150°)	-4.69/-7.17	-9.73/-11.29	-15.98/-17.76	-12.47/-7.6	-6.24/-5.96	-4.87/-3.42	-3.97/-3.76	-4.73/-7	-8.31/-8.11	-5.69/-4.88	-6.49/-11.72	-18.92/-16.72	-12.23/-14.56	-7.05/-6.44	-11.25/-8.72	-10.68/-17.17	-12.51/-9.49	-12.97/-13.94	-18.02/-17.16	-17.42/-17.91	-9.37/-6.62	-6.58/-7.86	-10.7/-13.23	-13.82/-6.54
Θ(157.5°)	-12.98/-11.96	-15.54/-17.68	-19.25/-16.23	-13.49/-12.25	-11.45/-11.21	-13.36/-15.39	-16.62/-16.35	-14.71/-13.07	-10.4/-8.98	-8.76/-9.69	-12.44/-11.98	-7.89/-7.82	-8.3/-8.82	-13.91/-11.84	-12.13/-13.24	-9.86/-11.46	-17.34/-12.68	-11.41/-14.34	-16.36/-13.45	-8.99/-7.48	-7.85/-7.61	-6.41/-6.02	-7.25/-9.29	-13.96/-17.56
Θ(165°)	-8.36/-9.02	-8.68/-7.41	-7.98/-8.97	-10.26/-11.48	-10.52/-8.11	-7.7/-8.62	-11.33/-16.14	-18.32/-16.6	-14.33/-17.3	-13.63/-17.3	-18.47/-18.24	-17.96/-14.32	-14.23/-16.82	-18.39/-17.3	-19.16/-12.16	-11.87/-17.88	-14.67/-10.32	-13.11/-12.79	-10.12/-7.6	-6.15/-6.8	-8.99/-12.71	-17.61/-15.68	-18.85/-18.68	



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

Appendix C

Θ(30°)	0.630/17	0.310/30	-0.27/-1.78	-3.45/-5.46	-7.33/-9.25	-8.91/-8.84	-7.96/-7.12	-7.80/-7.48	-7.51/-7.98	-6.41/-5.64	-2.90/-2.02	-1.07/-1.35	-1.64/-0.69	0.680/86	0.94/11.0	0.830/83	1.01/1.62	1.83/2.59	3.27/3.20	3.35/3.07	2.90/2.21	2.03/1.79	1.65/2.15	2.180/89
Θ(37.5°)	0.721/20	1.140/72	-0.58/-2.56	-5.37/-8.22	-7.88/-6.66	-6.08/-5.81	-6.79/-5.72	-7.16/-6.33	-6.80/-8.48	-6.55/-5.15	-3.30/-1.93	-0.34/-0.06	-0.01/-0.43	0.96/1.71	1.510/95	-0.070/57	1.81/2.48	2.74/2.67	2.78/2.61	2.37/2.16	1.59/1.55	1.24/1.14	2.67/2.80	0.90/1.51
Θ(45°)	2.030/68	0.660/56	-1.38/-4.11	-5.52/-4.38	-3.96/-2.72	-2.00/-2.10	-2.87/-3.39	-3.81/-4.82	-5.35/-6.10	-4.76/-5.48	-5.17/-3.94	-1.60/-0.40	1.04/1.54	1.04/1.94	2.31/1.17	-0.400/55	2.41/3.20	2.34/2.66	2.43/1.93	0.560/39	0.830/35	0.501/25	1.83/3.13	3.02/2.14
Θ(52.5°)	2.500/16	0.051/39	-1.79/-4.84	-4.18/-2.81	-2.27/-3.15	-1.61/-1.28	-2.02/-3.70	-3.44/-3.25	-4.27/-6.52	-5.14/-5.57	-7.50/-4.35	-1.69/-0.32	0.89/1.15	1.92/2.59	2.050/38	0.121/1.8	2.56/3.26	3.12/2.54	2.15/1.57	0.700/41	-0.090/15	0.850/96	1.90/3.23	3.06/2.96
Θ(60°)	1.771/33	1.170/34	-1.40/-3.61	-2.61/-1.79	-1.42/-4.00	-0.50/-1.67	-3.69/-5.89	-5.85/-4.52	-5.73/-3.93	-4.65/-6.11	-8.30/-8.50	-5.43/-3.59	-0.85/-0.29	1.21/2.56	2.43/1.20	-0.21/-1.9	3.32/3.63	2.85/2.30	1.86/-0.41	-1.01/0.28	1.48/1.27	1.37/1.71	2.70/3.50	3.73/2.52
Θ(67.5°)	1.851/48	1.721/07	-0.81/-2.50	-0.19/-1.66	-5.41/-3.05	-2.22/-4.77	-5.60/-3.77	-3.28/-3.73	-3.11/-2.46	-6.63/-6.35	-9.61/-12.24	-6.97/-3.57	0.35/1.19	1.88/2.84	2.170/85	-0.17/-0.94	1.270/85	2.170/85	-0.17/-0.94	0.620/42	3.01/1.52	1.00/0.85	3.66/2.79	
Θ(75°)	1.000/98	2.832/44	0.20/-2.16	-1.71/-2.56	-5.48/-1.81	-0.61/-1.23	-1.07/0.34	1.690/55	-2.78/-3.05	-1.45/-4.07	-8.67/-10.70	-14.53/-5.65	-5.94/-4.46	-1.880/77	-0.460/59	-0.380/48	1.46/1.61	1.28/-0.16	-0.80/-1.05	-0.64/-0.63	1.26/2.22	2.210/44	-0.67/1.67	1.910/98
Θ(82.5°)	0.03/-1.10	2.24/2.96	-1.08/-2.14	-2.15/-4.54	-3.43/0.29	0.69/0.09	1.67/3.11	2.80/1.31	-6.77/-3.47	-2.07/-8.90	-10.80/-12.63	-9.58/-7.30	-7.01/-5.91	-1.39/-2.24	-0.86/-0.76	-1.23/-0.12	0.750/95	0.57/-0.32	-0.61/-0.62	0.090/14	0.830/72	1.46/0.99	-2.37/1.22	1.06/-0.29
Θ(90°)	-1.43/-0.40	0.560/84	-3.52/-6.47	-3.11/-1.95	-3.82/-1.11	0.50/-1.24	-1.63/1.08	2.92/1.87	-2.62/-7.43	-1.85/-7.97	-8.89/-10.58	-10.18/-6.38	-11.84/-8.22	-9.29/-3.00	-4.64/-2.39	-3.40/-2.36	-1.490/78	0.950/08	-1.000/32	0.110/17	-1.78/-0.56	-0.32/-1.08	-3.74/-0.59	0.52/-1.41
Θ(97.5°)	-3.75/-4.07	0.130/05	-1.41/-4.78	-4.68/-1.03	-2.70/-3.23	-2.18/-3.07	-1.58/1.86	1.54/-0.76	-11.36/-6.17	-3.64/-11.63	-8.24/-9.24	-6.08/-9.63	-11.49/-7.42	-5.73/-4.15	-4.49/-4.58	-3.85/-3.68	-1.86/1.13	1.510/63	0.05/-0.24	-1.23/-1.73	-3.23/-1.85	-0.83/-2.09	-2.480/95	-0.49/-0.55
Θ(105°)	-2.23/-5.33	-2.04/-1.19	-2.57/-3.73	-4.42/0.25	0.53/-2.84	-4.27/-7.63	-10.49/-5.03	-1.65/-1.47	-6.73/-7.51	-3.48/-6.97	-9.84/-6.84	-8.04/-5.94	-8.89/-9.79	-8.84/-5.48	-6.42/-6.27	-6.51/-4.64	-4.100/29	0.22/-0.56	0.06/-0.74	-1.31/-2.39	-4.61/-2.68	-1.73/-2.40	-2.00/-2.09	-0.01/-1.35
Θ(112.5°)	-4.11/-5.29	-5.25/-1.54	-3.78/-3.17	-2.47/-1.89	-1.80/-3.32	-6.05/-10.21	-12.38/-9.47	-7.17/-10.92	-15.75/-8.09	-9.17/-12.22	-9.38/-11.57	-8.96/-9.97	-6.29/-7.92	-6.68/-2.50	-2.18/-1.91	-0.77/-1.46	-3.15/-2.97	-3.66/-1.82	-1.29/-1.00	-0.10/-2.23	-1.44/-3.55	-0.27/-3.64		
Θ(120°)	-5.12/-10.69	-11.62/-1.43	-0.53/-2.37	-4.31/-5.45	-5.54/-5.04	-4.98/-6.25	-8.21/-12.12	-11.80/-15.32	-14.93/-11.27	-14.10/-14.51	-11.50/-8.26	-11.21/-14.11	-7.39/-8.82	-10.08/-5.63	-10.51/-5.45	-4.94/-2.99	-2.86/-3.90	-1.81/-1.69	-2.93/-2.25	-1.98/-2.91	-1.14/0.34	-1.75/-4.35	-2.52/-2.40	-0.92/-4.80
Θ(127.5°)	-6.80/-9.38	-8.69/-3.15	0.27/-3.19	-4.98/-8.57	-7.54/-8.87	-12.82/-9.40	-5.89/-6.64	-6.96/-6.12	-7.93/-10.77	-15.09/-10.39	-11.43/-11.09	-10.94/-8.45	-6.35/-9.19	-8.36/-6.99	-8.10/-7.32	-2.43/-2.32	-2.99/-1.17	-1.59/-1.89	-3.23/-2.94	-2.99/-1.17	-0.29/-2.94	-4.00/-2.07	-3.30/-5.81	
Θ(135°)	-8.53/-7.80	-4.35/-1.61	-1.10/-1.13	-3.06/-7.34	-1.78/-7.30	-10.33/-11.90	-9.80/-11.91	-11.58/-9.85	-10.02/-10.16	-9.61/-9.80	-11.81/-8.66	-7.47/-8.60	-6.57/-5.75	-7.69/-8.14	-7.71/-6.62	-6.77/-4.35	-4.49/-4.88	-4.68/-2.25	-1.95/-2.26	-1.000/17	-0.92/-2.02	-3.00/-3.10	-4.95/-1.70	-1.54/-10.82
Θ(142.5°)	-9.58/-3.57	-4.29/-4.22	-3.80/-8.79	-13.08/-8.24	-7.83/-6.95	-10.80/-10.79	-7.15/-4.11	-3.91/-5.88	-9.66/-12.66	-9.24/-9.00	-11.92/-7.67	-8.87/-7.28	-7.17/-10.32	-11.62/-11.67	-12.72/-10.78	-3.87/-2.62	-2.74/-2.98	-2.96/-1.68	-1.82/-2.71	-0.750/88	0.15/-3.10	-5.40/-4.71	-7.64/-6.09	-6.79/-7.82
Θ(150°)	-4.39/-4.41	-1.29/-2.86	-1.53/-1.84	-0.87/-11.37	-10.82/-7.91	-7.09/-7.74	-8.91/-10.53	-9.17/-9.22	-13.31/-11.90	-4.57/-6.87	-5.71/-6.81	-6.21/-10.12	-6.52/-6.14	-6.30/-8.56	-9.18/-7.49	-6.97/-4.49	-1.08/-1.39	-3.57/-4.90	-5.22/-2.82	-1.33/-2.90	-7.33/-16.01	-9.18/-4.37	-4.09/-5.53	
Θ(157.5°)	-0.950/54	-2.67/-6.37	-3.64/-1.30	-0.86/-3.24	-6.05/-12.19	-14.67/-11.12	-9.24/-7.60	-8.76/-8.79	-11.99/-10.86	-7.90/-8.47	-11.70/-1.35	-3.21/-4.23	-5.32/-6.36	-7.01/-4.95	-5.50/-11.09	-3.37/-10.19	-5.28/-2.79	-3.38/-1.20	-1.80/-2.35	-3.20/-3.18	-0.43/-1.50	-4.15/-0.26		
Θ(165°)	-1.76/-2.74	-9.22/-12.29	-4.37/-3.22	-3.68/-6.10	-6.85/-7.44	-6.92/-5.59	-4.37/-3.43	-3.65/-4.06	-3.83/-3.33	-3.89/-6.76	-10.93/-11.02	-9.94/-7.34	-6.34/-3.93	-3.70/-2.92	-5.44/-7.46	-10.41/-11.79	-8.16/-4.84	-2.10/-0.93	-1.43/-2.65	-2.94/-3.92	-2.43/-2.96	-2.55/-2.37	-6.00/-8.12	-3.54/-2.76
Θ(172.5°)	-2.27/-4.03	-6.85/-7.37	-6.92/-10.58	-14.42/-9.68	-6.24/-4.81	-3.11/-1.67	-0.86/-0.28	-0.13/-0.46	-1.00/-0.69	-0.92/-1.51	-1.69/-3.52	-5.37/-1.42	-9.11/-9.33	-9.93/-9.31	-9.36/-7.54	-5.76/-3.91	-2.12/-0.95	-0.42/0.20	-0.01/-0.49	-1.63/-2.80	-3.34/-3.81	-5.73/-9.92	-9.34/-6.27	-6.35/-8.29
Θ(180°)	-10.89/-11.85	-9.58/-7.72	-7.25/-6.10	-4.72/-4.08	-3.55/-3.89	-3.81/-4.04	-3.50/-3.73	-3.81/-2.95	-2.66/-1.86	-1.62/-1.85	-1.56/-1.05	-0.86/-0.78	-0.55/-0.65	-0.66/-0.03	-0.97/-0.80	-0.67/-1.28	-1.01/-1.09	-0.98/-1.10	-1.21/-0.94	-0.99/-0.91	-1.61/-1.76	-1.26/-1.82	-2.57/-3.73	-6.22/-4.77
Freq(Hz)	2.45GPol.	TotalAnt. 2	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ(0°)	-6.30/-6.13	-6.04/-6.10	-6.24/-6.27	-6.19/-6.10	-6.09/-6.09	-6.01/-5.86	-5.73/-5.81	-5.94/-5.97	-6.06/-6.22	-6.52/-6.83	-7.04/-6.98	-6.94/-6.83	-6.68/-6.37	-6.08/-5.65	-5.59/-5.59	-5.93/-6.40	-6.92/-7.20	-7.62/-7.93	-7.97/-7.87	-7.77/-7.65	-7.56/-7.29	-6.90/-6.64	-6.77/-6.75	-6.40/-5.97
Θ(7.5°)	-6.19/-6.26	-6.32/-6.37	-6.55/-6.50	-6.39/-6.65	-7.02/-6.83	-6.66/-6.60	-6.62/-6.79	-6.73/-6.53	-6.49/-6.49	-6.80/-6.56	-6.44/-6.37	-6.31/-5.98	-5.49/-4.96	-4.47/-4.16	-3.98/-3.98	-4.18/-4.37	-4.47/-4.66	-5.05/-5.39	-5.66/-5.83	-5.99/-6.13	-6.19/-6.06	-5.92/-5.98	-6.22/-6.32	-6.23/-6.01
Θ(15°)	-5.13/-5.09	-5.23/-5.48	-5.77/-6.06	-6.33/-6.77	-7.25/-7.47	-7.61/-7.87	-8.19/-8.67	-8.67/-8.36	-8.03/-7.73	-7.34/-6.88	-6.43/-6.06	-5.77/-5.41	-4.95/-4.46	-3.96/-3.58	-3.38/-3.38	-3.41/-4.37	-3.50/-3.62	-3.90/-4.18	-4.39/-4.63	-4.93/-5.21	-5.27/-5.13	-4.95/-4.82	-4.86/-4.95	-4.97/-4.92
Θ(22.5°)	-4.80/-4.70	-4.73/-5.01	-5.37/-5.81	-6.21/-6.58	-7.24/-7.70	-8.24/-8.82	-9.154/-10.57	-11.06/-10.93	-10.43/-9.59	-8.64/-7.13	-6.28/-5.72	-4.31/-4.00	-3.80/-3.76	-3.81/-3.91	-4.10/-4.24	-4.32/-4.39	-4.34/-4.34	-4.39/-4.36	-4.32/-4.31	-4.53/-4.79	-4.81/-4.72	-4.58/-4.47	-4.94/-4.79	
Θ(30°)	-5.58/-4.93	-4.54/-4.35	-4.48/-4.85	-5.03/-5.22	-5.41/-5.53	-5.72/-5.76	-5.84/-6.16	-6.76/-7.22	-7.48/-7.57	-7.10/-6.05	-4.98/-4.12	-3.58/-3.21	-3.03/-3.06	-3.06/-3.13	-3.41/-3.77	-4.14/-4.45	-4.71/-4.74	-4.52/-4.31	-4.20/-4.26	-4.64/-5.04	-5.33/-5.42	-5.28/-5.25	-5.57/-6.11	-6.35/-5.93
Θ(37.5°)	-6.04/-4.62	-3.43/-2.81	-2.77/-3.27	-3.61/-3.56	-3.16/-2.76	-2.26/-1.61	-1.26/-1.25	-1.41/-1.67	-2.01/-2.31	-2.35/-1.89	-1.20/-0.55	-0.040/0.9	-0.00/-0.28	-0.72/-1.24	-1.91/-2.67	-3.38/-3.86	-4.16/-4.03	-3.82/-3.82	-4.00/-4.30	-4.85/-3.7	-5.28/-4.78	-4.60/-4.56	-4.90/-5.67	-6.34/-5.99
Θ(45°)	-5.18/-4.30	-3.10/-2.24	-1.96/-2.60	-3.48/-3.98	-3.73/-3.12	-2.30/-1.29	-0.48/0.04	0.290/37	0.24/-0.08	-0.48/-0.62	-0.34/0.20	0.77/1.24	1.55/1.62	1.32/0.30	-1.40/-3.79	-5.35/-5.56	-4.92/-4.15	-3.88/-4.09	-4.53/-4.97	-5.42/-5.50	-4.98/-4.31	-3.78/-3.54	-3.72/-4.28	-4.94/-5.28
Θ(52.5°)	-2.87/-2.61	-1.76/-0.73	-0.23/-0.50	-1.15/-1.80	-1.97/-1.89	-1.65/-1.38	-1.18/-1.04	-1.00/-1.03	-1.26/-1.57	-2.03/-2.13	-1.50/-0.30	-0.98/1.86	1.95/1.30	-0.21/-2.53	-4.93/-5.12	-3.91/-3.08	-2.68/-2.63	-2.68/-3.40	-4.03/-4.51	-4.79/-4.61	-4.29/-3.96	-3.51/-3.06	-2.72/-2.52	-2.62/-2.69
Θ(60°)	-1.54/-1.04	-0.57/0.19	0.91/1.13	1.00/0.96	1.30/1.60	1.62/1.48	1.34/1.17	1.01/0.98	0.94/0.78	0.52/0.29	0.190/54	1.52/2.56	3.06/2.61	0.84/-2.15	-3.25/-1.20	-0.37/-0.96	-2.06/-2.70	-3.03/-3.24	-2.93/-2.29	-1.57/-0.99	-0.76/-0.87	-1.20/-1.72	-2.19/-2.40	-2.10/-1.53
Θ(67.5°)	-3.95/-2.85	-2.17/-1.28	-0.10/0.67	0.860/1.71	0.901/1.38	1.340/81	0.22/-0.08	-0.20/0.08	0.630/0.99	1.17/1.21	1.13/1.75	2.71/3.13	2.570/3.3	1.08/-1.46	-0.180/35	-0.60/-2.26	-3.17/-3.16	-3.17/-2.84	-2.26/-2.10	-2.47/-3.20	-3.84/-4.22	-4.53/-4.88	-5.57/-6.37	-6.16/-4.73
Θ(75°)	-7.67/-6.79	-5.36/-4.23	-3.09/-1.73	-0.52/0.17	0.81/1.83	2.562/68	2.402/06	1.63/1.24	1.05/1.07	1.080/88	0.69/1.22	2.29/3.12	3.202/46	1.03/-0.30	-0.59/-5.42	-1.75/-2.89	-3.47/-4.40	-5.59/-5.42	-5.13/-5.84	-7.81/-10.44	-10.89/-8.84	-6.66/-5.19	-4.58/-4.81	-6.17/-3.39
Θ(82.5°)	-2.27/-2.75	-2.61/-2.24	-2.09/-2.00	-1.58/-1.56	-2.03/-1.70	-0.80/-0.57	-0.57/-0.46	-0.14/0.22	0.620/87	0.760/29	0.21/1.29	2.49/2.73	1.87/0.02	-2.39/-4.23	-4.05/-3.08	-2.72/-2.88	-3.10/-3.40	-2.97/-2.58	-2.76/-3.37	-3.78/-3.56	-3.36/-3.81	-4.23/-3.51	-2.42/-1.84	-1.56/-1.67
Θ(90°)	-2.55/-2.83	-2.55/-1.53	-0.94/-0.91																					



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

Appendix C

Θ(75°)	0.85/-0.07	-2.43/-0.44	1.89/2.20	0.81/-0.02	2.66/2.09	0.95/2.24	3.78/3.84	3.17/2.10	1.45/1.84	2.29/2.45	1.93/1.75	0.95/0.39	2.34/2.99	1.71/-0.94	-1.99/-0.60	-3.07/-3.48	-1.35/-1.27	-1.44/-1.59	-0.67/0.91	-0.67/-0.44	1.64/2.15	0.01/-0.97	-3.36/-2.71	-0.36/0.85
Θ(82.5°)	-0.49/-0.29	-1.63/-0.19	0.57/0.58	-0.07/-0.33	2.14/1.21	0.65/2.43	3.63/3.16	1.71/-0.08	-0.71/0.02	0.84/-0.27	-0.95/0.17	-0.30/1.62	2.35/0.95	-0.59/-2.41	-0.31/-0.16	-2.94/-4.80	-2.64/-1.57	-0.22/-0.53	0.28/2.16	1.60/0.31	1.64/2.44	-0.05/-1.94	-6.02/-6.17	-2.07/-0.74
Θ(90°)	0.13/0.07	-1.58/-1.02	0.56/0.65	1.21/-0.78	0.75/0.73	-1.16/1.20	3.10/3.19	2.32/0.76	-1.89/-1.51	-1.28/-2.74	-1.87/-1.28	1.47/1.35	0.11/-1.17	-1.74/0.12	-3.17/-3.60	-2.51/-0.15	-0.60/0.52	1.72/2.98	1.87/-1.72	-0.49/1.45	-1.38/-3.48	-5.26/-12.79	-5.41/-0.94	
Θ(97.5°)	-2.39/-1.35	-3.28/-3.89	-1.79/-0.72	0.30/0.05	1.06/0.11	-2.03/0.22	1.91/2.21	1.79/0.63	-0.87/0.53	-1.03/-2.07	0.67/1.67	-0.24/1.24	0.92/0.20	-0.53/-3.96	0.01/-0.96	-3.84/-5.80	-1.10/1.93	1.38/0.70	0.11/2.41	2.23/-2.20	-2.38/0.29	-2.86/-9.52	-12.75/-12.70	-8.56/-2.87
Θ(105°)	-2.97/-0.20	-1.92/-5.24	-2.48/-3.27	-2.54/-1.92	-0.50/-0.62	-1.09/-0.87	0.70/1.51	1.44/0.27	-0.87/-1.38	-2.09/-2.65	-1.17/0.77	-0.25/0.08	0.53/-0.49	-1.60/-2.48	-3.01/-1.60	-4.17/-4.68	-1.70/2.39	1.01/4.36	-1.57/2.19	3.22/-0.09	-1.64/1.44	-1.42/-1.53	-13.62/-9.71	-8.14/-3.33
Θ(112.5°)	-6.82/-3.42	-3.64/-5.89	-5.04/-6.87	-2.53/-1.92	-1.47/-0.85	-2.68/-1.82	-0.07/0.46	0.11/-0.77	-1.82/-2.64	-4.10/-3.15	-0.43/-0.98	-4.48/-2.74	-3.17/-1.99	-0.99/-5.01	-2.16/-2.45	-1.92/-3.45	-2.45/-1.36	-0.27/-10.03	-3.34/1.13	1.74/-1.80	-5.73/-2.36	-6.04/-14.37	-12.58/-6.99	-5.92/-8.83
Θ(120°)	-2.58/-1.36	-4.49/-6.83	-5.99/-8.81	-3.93/-4.70	-2.19/-1.24	-2.23/-4.17	-3.17/-2.39	-1.91/-2.79	-3.43/-3.53	-2.83/-1.81	-0.49/-0.15	-3.57/-1.25	-2.80/-1.67	-1.19/0.24	-7.36/-3.77	-3.51/-3.81	-4.12/-1.23	-0.17/-5.04	-12.58/-6.82	-2.71/-1.48	-3.95/-3.68	-9.70/-10.86	-11.09/-7.66	-4.98/-5.65
Θ(127.5°)	-8.65/-5.20	-7.40/-5.48	-7.33/-9.01	-3.34/-3.35	-4.10/-3.84	-3.51/-1.66	-5.04/-4.35	-3.51/-3.44	-4.15/-3.53	-3.46/-1.71	0.10/-3.61	-1.80/-3.68	-3.15/-1.84	-0.25/-3.33	-11.13/-0.60	-5.56/-5.52	-7.40/-3.95	-0.62/-2.06	-7.71/-13.25	-6.83/-3.57	-5.22/-9.16	-7.25/-8.85	-8.54/-5.01	-5.91/-6.62
Θ(135°)	-5.01/-7.79	-5.91/-4.84	-4.72/-6.56	-2.70/-0.78	-2.61/-4.78	-6.97/-6.71	-6.38/-5.53	-4.26/-4.41	-5.52/-4.79	-4.17/-1.03	-1.20/-7.91	-2.49/-3.69	-3.01/-0.70	-0.82/-0.29	-6.13/-11.03	-6.01/-8.19	-13.15/-6.47	-0.04/0.26	-1.80/-6.16	-10.56/-3.01	-2.87/-6.62	-6.67/-10.72	-11.30/-8.24	-3.08/-4.29
Θ(142.5°)	-11.00/-14.98	-10.51/-7.74	-6.28/-7.73	-8.11/-7.31	-5.28/-4.54	-3.22/-3.68	-5.62/-7.12	-8.29/-7.68	-5.42/-3.78	-3.11/-6.29	-5.65/-2.85	-3.51/-3.22	0.03/0.88	-0.34/-3.67	-7.28/-5.70	-4.70/-6.51	-7.03/-7.58	-9.34/-6.53	-2.96/-2.48	-3.68/-4.08	-2.96/-4.50	-11.83/-12.59	-10.16/-9.10	-9.45/-10.02
Θ(150°)	-4.50/-7.40	-14.83/-11.33	-8.45/-9.69	-10.39/-6.35	-1.78/-6.34	-8.40/-8.77	-7.84/-6.26	-3.75/-2.25	-2.22/-2.88	-3.47/-3.84	-2.70/-1.29	-3.04/-5.68	-2.22/-0.79	-2.54/-5.62	-10.01/-9.97	-10.49/-12.25	-8.98/-6.32	-9.53/-15.28	-13.94/-13.21	-14.70/-12.28	-10.08/-11.38	-11.89/-11.41	-6.82/-0.47	-3.46/-3.66
Θ(157.5°)	-6.64/-9.34	-11.14/-10.11	-9.23/-9.68	-8.50/-6.97	-5.76/-5.59	-4.98/-4.70	-4.24/-4.32	-4.93/-5.18	-4.70/-4.81	-4.97/-7.09	-7.80/-8.34	-7.72/-5.33	-4.50/-5.20	-7.07/-9.98	-11.55/-11.85	-11.91/-12.21	-11.67/-8.37	-6.65/-6.20	-6.33/-5.79	-5.81/-5.87	-6.21/-6.26	-7.66/-9.05	-7.34/-5.56	-4.72/-5.39
Θ(165°)	-5.08/-6.09	-7.39/-8.57	-9.11/-10.02	-11.15/-11.90	-11.11/-9.79	-10.51/-11.87	-13.51/-13.76	-12.24/-12.02	-13.11/-14.08	-14.32/-11.96	-9.76/-8.24	-7.50/-7.37	-7.49/-7.88	-7.66/-6.33	-5.22/-4.07	-3.51/-3.21	-3.32/-3.76	-3.82/-4.12	-4.76/-5.29	-5.51/-5.22	-4.80/-4.26	-4.50/-4.07	-3.33/-4.08	-5.56/-6.71
Θ(172.5°)	-8.40/-7.58	-6.90/-6.26	-6.17/-6.57	-6.61/-7.06	-8.00/-8.36	-8.77/-9.18	-9.53/-9.93	-9.28/-8.24	-7.13/-7.37	-6.49/-5.63	-4.72/-4.27	-4.49/-4.73	-4.93/-4.36	-3.86/-3.82	-3.86/-4.24	-4.68/-5.39	-6.45/-7.29	-7.87/-8.59	-9.40/-9.55	-9.28/-9.62	-10.20/-11.13	-11.85/-11.19	-10.52/-11.55	-12.16/-10.67
Θ(180°)	-9.28/-9.06	-9.92/-10.69	-10.87/-10.43	-9.87/-9.11	-8.83/-8.49	-8.64/-8.45	-8.26/-8.24	-8.86/-8.40	-8.36/-8.67	-8.33/-7.53	-7.24/-7.25	-7.46/-8.09	-8.84/-9.63	-10.47/-11.48	-12.26/-14.48	-14.78/-14.49	-14.41/-14.56	-14.46/-14.35	-14.12/-14.23	-13.69/-12.46	-12.11/-11.80	-12.32/-12.53	-13.00/-12.53	-11.25/-12.25
Freq(Hz)	5.785GPol.	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°)	-1.92/-1.68	-1.93/-2.23	-2.45/-2.66	-2.96/-2.63	-2.33/-2.42	-2.56/-2.41	-2.39/-2.45	-2.16/-1.65	-1.30/-1.15	-1.30/-1.62	-1.87/-1.64	-0.91/-0.29	-0.15/-0.76	-1.65/-1.51	-1.21/-0.97	-0.72/-0.64	-0.59/-0.55	-0.06/-0.13	-0.18/-0.10	0.10/0.30	0.48/0.09	-0.28/-0.58	-0.345°Φ(352.5°)	
Θ(7.5°)	-0.35/-0.75	-1.03/-0.70	-0.94/-0.60	-0.95/0.22	0.16/-0.02	-0.20/-0.35	-0.51/-0.48	-0.34/-0.48	-0.44/-0.33	-0.40/-0.43	-0.64/-0.52	-0.39/-0.81	-1.55/-2.38	-2.68/-2.25	-1.75/-1.73	-1.84/-1.97	-1.86/-1.86	-1.42/-0.99	-0.77/-0.35	-0.20/-0.34	-0.33/-0.31	-0.36/-0.35	0.00/0.02	-0.25/-0.17
Θ(15°)	-0.27/-0.63	-0.89/-0.58	-0.63/-0.20	-0.17/0.19	0.38/0.03	-0.03/-0.52	-0.80/-0.97	-1.11/-0.75	-0.40/-0.07	0.50/0.65	0.35/0.15	-0.11/-0.59	-1.34/-2.37	-3.49/-5.46	-4.69/-3.30	-2.58/-1.87	-1.38/-0.99	-0.82/-0.53	-0.44/-0.70	-1.39/-1.98	-2.44/-2.52	-4.23/-2.06	-1.41/-0.63	-0.31/-0.24
Θ(22.5°)	-0.54/0.18	0.32/0.00	-0.30/0.22	0.38/0.20	-0.18/-0.69	-0.84/-0.62	-0.50/-0.40	-0.48/-0.74	-1.03/-1.16	-0.86/-0.41	0.01/0.26	0.46/-0.18	-4.65/-5.87	-3.90/-2.86	-2.20/-1.65	-1.54/-1.64	-1.65/-1.78	-2.18/-2.85	-2.83/-2.46	-2.27/-2.15	-2.29/-2.48	-2.19/-1.43	-0.60/-0.21	
Θ(30°)	-1.65/-0.21	0.16/0.05	0.15/0.78	0.53/0.45	0.52/0.98	1.70/2.12	2.52/2.50	2.35/2.22	2.21/1.92	1.37/0.50	-0.88/-1.57	-0.33/0.66	-0.13/-2.72	-5.19/-4.25	-3.97/-4.77	-4.33/-3.37	-3.06/-2.68	-2.01/-1.62	-1.34/-1.14	-1.94/-3.05	-3.90/-4.39	-4.58/-5.15	-6.49/-6.32	-4.28/-2.25
Θ(37.5°)	-3.84/-0.86	0.76/0.95	0.74/1.01	0.37/-1.39	-0.23/-1.21	2.06/2.02	1.63/1.65	1.96/2.26	2.28/2.57	2.72/2.39	0.69/-1.25	-0.12/0.50	-3.97/-3.06	-2.90/-3.71	-6.39/-5.84	-4.00/-3.02	-2.42/-2.47	-2.96/-3.33	-3.50/-3.90	-3.80/-3.76	-3.63/-3.22	-2.10/-1.79	-2.95/-4.89	-6.83/-4.10
Θ(45°)	-5.32/-2.23	0.14/0.81	2.09/2.56	1.52/0.74	1.82/2.94	2.65/3.23	2.72/3.00	3.12/3.26	3.22/3.18	3.07/3.30	3.28/1.19	-1.52/0.08	0.30/-1.45	-1.19/-1.72	-7.16/-7.17	-4.06/-3.80	-4.43/-4.74	-5.62/-7.27	-6.68/-6.08	-3.75/-2.07	-1.75/-2.08	0.37/-0.61	-0.37/-0.63	-2.51/-1.75
Θ(52.5°)	-3.13/-2.64	-0.10/1.61	3.29/3.08	0.47/0.28	1.97/1.55	1.19/1.73	2.83/3.35	3.57/3.71	3.85/3.40	2.90/3.12	3.05/0.98	-0.70/1.05	-0.81/-0.41	-0.16/-3.23	-5.63/-6.48	-8.63/-10.65	-7.88/-4.58	-3.31/-2.55	-1.89/-1.54	-3.27/-4.39	-2.25/-0.36	-0.83/-1.39	0.70/1.11	-0.56/-2.43
Θ(60°)	-0.46/-1.41	0.54/1.51	3.34/2.64	-0.62/0.13	1.58/0.70	0.18/2.02	2.86/3.08	2.55/2.12	2.16/2.90	3.02/2.55	2.92/2.68	-0.92/-1.24	-0.16/-2.98	-6.22/-5.04	-4.82/-7.16	-3.26/-1.53	-0.53/-2.06	-0.41/-0.61	0.48/0.05	-1.66/-2.59	-0.27/-1.38	-0.72/-1.69	1.00/-0.52	1.58/0.70
Θ(67.5°)	0.81/0.28	-1.78/1.51	2.79/2.21	-0.98/1.81	1.63/-1.47	0.51/2.73	3.51/3.45	2.57/1.59	1.32/1.64	2.01/1.13	1.26/0.38	-0.75/0.24	-0.36/0.97	-1.83/-5.69	-4.12/-2.51	-4.11/-4.51	-1.71/-0.29	-0.32/-1.28	-1.67/-2.37	-1.34/0.77	0.67/1.12	-1.27/-1.69	-2.88/0.03	-0.90/-1.50
Θ(75°)	-0.76/-0.58	-3.09/1.23	2.77/2.29	-0.73/1.48	1.29/-0.97	1.39/3.31	4.03/3.88	3.12/2.27	1.17/1.09	2.28/2.65	1.41/-0.05	-2.09/-2.03	-1.67/-0.43	-1.07/-4.37	-2.78/-0.40	-2.03/-5.64	-3.17/-2.05	-1.97/-2.07	-1.49/-2.10	-1.67/1.24	2.53/1.40	-0.08/-1.39	-3.59/-1.05	0.22/-0.54
Θ(82.5°)	-1.74/-3.20	-2.89/0.71	0.46/0.04	-1.19/0.99	0.08/-0.07	2.47/3.28	2.84/2.64	2.77/2.39	1.27/0.97	2.12/1.68	-1.22/-1.57	-2.25/-0.57	0.52/-1.43	-1.73/-1.09	-0.25/-0.26	-5.31/-6.39	-2.71/-2.67	-2.50/-1.15	-0.29/-0.02	-1.31/-0.68	1.46/-1.49	0.57/0.30	-6.23/-3.22	-1.96/-1.40
Θ(90°)	-0.91/-0.94	-3.94/-3.04	-1.08/-1.17	-3.39/-0.41	0.29/-0.06	1.56/2.68	2.28/1.50	1.48/1.54	1.61/1.37	1.30/1.56	-1.25/-2.59	-1.88/-3.58	1.28/1.23	1.31/-0.02	-1.67/-1.42	-6.29/-5.21	-5.08/-5.38	-2.06/-0.76	0.09/0.85	-0.73/-1.97	0.49/1.14	-1.65/-0.92	-7.55/-9.50	-4.79/-2.54
Θ(97.5°)	-5.36/-2.40	-8.22/-2.50	-2.63/-3.06	-1.85/0.21	0.84/-0.27	1.25/2.45	2.33/1.73	0.63/0.60	-0.78/-0.69	-0.40/-1.82	-5.36/-2.72	-2.44/-1.12	0.15/0.06	0.61/-2.90	-2.41/-2.89	-2.50/-4.80	-6.54/-2.26	-1.38/-2.51	-0.60/0.86	-0.35/-3.60	-0.86/0.13	-2.73/-3.23	-8.94/-8.32	-9.88/-8.14
Θ(105°)	-5.57/-2.67	-4.91/-2.59	-3.01/-1.39	-4.49/-0.69	1.03/-2.03	0.57/1.16	1.36/1.23	1.02/0.98	0.58/-0.46	-1.58/-3.14	-5.92/-2.80	-2.32/-4.72	-1.54/-1.73	-1.42/-1.14	-6.96/-8.22	-2.53/-4.71	-6.93/-1.00	-1.79/-4.05	-2.53/0.18	0.56/-3.09	-2.57/-0.90	-4.83/-7.09	-9.55/-3.92	-9.45/-6.18
Θ(112.5°)	-5.80/-2.81	-4.47/-5.90	-2.65/-2.86	-5.34/-1.35	-0.30/-1.52	-1.81/-0.60	0.34/0.24	0.28/0.30	-0.17/-0.79	-2.49/-6.17	-5.98/-1.26	-4.75/-1.91	-1.21/-1.04	0.00/-8.41	-6.25/-3.86	-5.35/-5.01	-5.84/-2.52	-3.40/-8.45	-5.79/-0.03	0.76/-2.81	-6.11/-4.95	-11.97/-11.13	-7.69/-6.96	-9.47/-7.72
Θ(120°)	-3.57/-6.72	-6.72/-4.88	-4.43/-4.58	-3.35/-4.26	-1.93/-1.71	-3.44/-3.15	-2.31/-1.87	-1.51/-1.62	-2.64/-3.84	-5.79/-6.27	-5.76/-0.75	-2.90/-3.90	-3.97/-3.07	-3.98/-0.67	-6.87/-7.54	-5.90/-3.72	-5.78/-2.81	-2.00/-5.49	-12.21/-8.82	-6.76/-2.56	-4.69/-8.07	-9.44/-13.68	-11.32/-6.76	-6.76/-3.83
Θ(127.5°)	-8.52/-7.24	-8.26/-5.00	-9.54/-3.70	-2.18/-4.82	-5.58/-5.99	-5.64/-3.64	-2.00/-1.78	-2.61/-3.50	-4.15/-5.43	-4.87/-7.02	-0.32/-1.31	-5.60/-4.86	-5.84/-4.08	-1.21/-1.19	-8.03/-12.36	-8.43/-5.11	-6.39/-7.54	-2.56/-3.57	-8.32/-9.17	-10.57/-5.50	-6.76/-8.28	-5		



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

Appendix C

θ(120°)	-3.52/2.89	-6.34/12.32	-5.58/2.93	-14.25/5.11	-2.51/7.68	-6.71/9.32	-8.75/7.72	-5.22/4.11	-7.00/2.55	1.96/4.33	1.90/1.65	-0.22/2.12	-1.19/6.45	0.21/2.53	-0.81/2.23	-0.87/2.33	3.15/1.39	-0.34/1.42	-3.05/2.10	-2.28/0.27	-3.67/1.09	-3.09/4.94	-9.61/1.27	0.07/3.69
θ(127.5°)	-4.18/-5.60	-8.24/-6.58	-6.24/-10.99	-4.60/-4.20	-3.84/-6.81	-7.09/-7.46	-4.28/-2.80	-2.66/-3.30	-3.29/-1.17	1.65/3.89	0.72/-4.33	-4.68/-15.16	-5.88/0.20	0.05/-7.33	0.39/-1.10	-1.50/-1.83	0.63/0.15	-3.60/-4.59	-2.97/-3.94	-2.06/-2.67	-4.31/2.23	-6.73/-5.85	-12.93/-1.47	-0.39/-2.46
θ(135°)	-10.40/-5.57	-4.87/-8.05	-9.61/-7.59	-5.62/-12.25	-8.11/-10.82	-6.79/-3.60	-6.74/-5.47	-5.70/-5.20	-3.14/-2.16	1.32/2.45	2.06/-2.97	-4.38/-5.47	-4.44/-5.99	0.84/0.63	-0.32/0.53	-1.32/0.30	-2.14/-1.20	-2.26/0.16	-0.42/-1.78	-1.51/-3.55	-4.50/-0.10	-1.82/-3.68	-5.98/-4.62	-3.75/-4.42
θ(142.5°)	-1.54/-3.57	-3.33/0.01	-9.69/-4.91	-3.11/6.59	-4.99/8.12	-6.08/-2.44	-3.62/2.51	-2.01/2.30	-1.66/0.37	2.10/0.17	-4.99/-4.45	-8.18/-12.26	-11.71/-1.81	1.40/-0.63	-2.95/-1.73	-0.26/0.96	-4.81/-6.98	-4.71/-3.08	-6.71/-3.01	-1.73/-4.64	-2.66/2.29	-2.06/3.72	-7.53/-6.86	-7.04/-1.68
θ(150°)	-3.36/-4.52	-1.13/-1.04	-8.56/-6.26	-4.44/-12.63	-9.11/-7.08	-6.04/-5.29	-5.44/-5.52	-3.16/-2.68	-3.20/4.73	-3.46/-0.04	-0.93/-4.83	-8.71/-6.22	-7.08/-3.46	-2.44/-2.34	0.16/0.30	-1.38/-2.72	-2.63/-4.34	-9.70/-6.82	-4.85/-2.89	-3.34/-3.43	-2.77/-2.35	-5.25/-9.09	-6.06/-8.20	-9.61/-3.03
θ(157.5°)	-2.11/-1.38	-4.26/-5.64	-7.21/-4.42	-4.06/-6.48	-8.47/-9.92	-12.26/-7.96	-5.94/-4.79	-5.65/-5.36	-3.96/-3.59	-4.30/-1.71	-1.03/-5.28	-14.94/-15.31	-3.40/-5.58	-5.05/-5.17	-4.65/-4.07	-4.48/-5.48	-8.44/-12.80	-10.04/-6.23	-3.40/-3.94	-5.15/-8.34	-9.05/-7.96	-4.37/-4.21	-6.70/-6.91	-5.63/-3.93
θ(165°)	-10.21/-10.02	-5.46/-1.65	0.44/0.17	-1.96/-2.44	-2.32/-3.30	-4.03/-6.59	-11.48/-10.86	-7.24/-6.37	-7.25/-6.38	-4.00/-2.94	-1.99/-2.21	-4.26/-7.61	-10.88/-8.56	-6.28/-7.05	-5.89/-7.10	-6.12/-6.35	-5.44/-4.29	-5.03/-4.15	-4.32/-5.36	-10.88/-12.92	-8.09/-3.29	-2.29/-2.75	-3.78/-3.97	-2.86/-3.90
θ(172.5°)	-5.44/-5.35	-6.89/-6.32	-6.58/-5.69	-2.90/-2.58	-3.77/-6.04	-7.08/-10.08	-11.84/-10.40	-8.35/-6.86	-6.32/-4.65	-4.26/-4.93	-4.09/-5.25	-7.52/-7.89	-8.63/-8.50	-7.64/-7.43	-8.30/-9.16	-8.52/-10.00	-9.70/-8.96	-9.61/-8.82	-8.89/-6.70	-5.55/-5.70	-6.11/-7.46	-8.84/-5.60	-3.42/-3.44	-5.69/-7.76
θ(180°)	-8.07/-11.15	-11.40/-10.42	-10.08/-7.40	-6.34/-7.55	-8.36/-7.97	-7.82/-8.54	-9.05/8.68	-10.49/-10.74	-10.85/-9.41	-9.92/-9.51	-8.35/-8.12	-8.11/-8.58	-8.07/-7.48	-6.78/-5.74	-4.43/-3.94	-4.05/-4.05	-3.85/-4.04	-4.03/-4.11	-4.43/-3.72	-3.22/-4.02	-5.63/-6.28	-6.35/-5.63	-7.62/-6.84	-5.58/-4.93
Freq(Hz)	5.785GPol.	TotalAnt. 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°)	-11.62/-10.36	-9.72/-10.41	-10.87/9.76	-9.64/-8.82	-7.85/-8.88	-9.48/-8.33	-9.44/-8.59	-8.10/-8.13	-7.93/-8.38	-8.25/-6.98	-8.44/-7.54	-7.20/-6.75	-7.58/-6.94	-9.52/-10.42	-10.70/-9.04	-10.04/-9.46	-10.13/-10.13	-9.39/-9.78	-10.70/-9.99	-9.21/-9.75	-8.79/-11.01	-8.38/-9.66	-8.29/-11.63	-8.35/-8.05
θ(7.5°)	-11.50/-11.16	-11.63/-12.66	-13.25/-11.83	-13.55/-15.53	-13.29/-14.43	-15.50/-12.51	-15.47/-14.61	-13.55/-14.31	-14.27/-13.09	-12.99/-11.97	-10.34/-10.53	-9.58/-9.32	-9.36/9.30	-8.05/-8.22	-8.48/-6.72	-7.88/-9.19	-8.33/-9.15	-8.08/-8.13	-8.12/-8.55	-8.62/-8.13	-9.29/-8.23	-7.76/-8.51	-11.83/-11.91	-11.97/-9.51
θ(15°)	-12.88/-15.16	-15.25/-13.99	-12.87/-15.34	-15.67/-13.25	-11.94/-9.84	-9.59/-7.91	-8.00/-9.72	-10.13/-11.60	-9.93/-11.68	-11.24/-12.33	-12.89/-14.87	-12.15/-9.62	-7.36/-5.90	-5.50/-5.41	-6.69/-6.49	-8.28/-11.13	-12.03/-13.57	-13.99/-13.47	-14.19/-12.42	-12.56/-9.88	-8.76/-8.46	-6.69/-6.85	-10.30/-10.85	-10.59/-12.27
θ(22.5°)	-15.29/-14.98	-13.01/-12.82	-10.00/-9.54	-7.07/-6.94	-9.15/-8.08	-7.23/-6.06	-4.28/-3.52	-3.01/-3.16	-3.67/-4.01	-4.60/-4.67	-6.04/-7.31	-6.20/-5.73	-5.28/-4.60	-4.83/-5.93	-7.06/-8.73	-10.23/-12.43	-11.44/-12.32	-11.25/-11.54	-11.20/-9.01	-8.30/-5.20	-4.19/-3.68	-2.25/-2.65	-4.15/-6.41	-11.97/-14.93
θ(30°)	-14.23/-15.12	-9.96/-6.15	-5.24/-4.15	-4.29/-4.74	-5.96/-7.78	-6.76/-6.42	-5.20/-4.31	-3.55/-2.94	-1.74/-1.46	-0.51/0.01	-0.83/-2.08	-5.18/-6.18	-4.52/-2.77	-3.09/-5.18	-6.98/-8.86	-8.15/-5.96	-4.93/-5.53	-4.85/-4.62	-4.90/-6.34	-8.10/-5.70	-5.75/-5.74	-3.07/-2.75	-3.88/-6.01	-9.56/-15.19
θ(37.5°)	-9.87/-12.53	-11.15/-12.81	-8.30/-4.98	-4.95/-6.48	-5.01/-5.42	-4.46/-3.16	-3.32/-1.74	-1.29/-0.00	1.05/-3.80	0.61/-0.51	0.10/-0.90	-5.38/-4.81	-0.69/0.23	-1.98/-4.84	-6.32/-6.42	-3.31/-1.32	-0.98/-0.37	-0.60/-1.22	-2.56/-2.58	-2.77/-3.36	-4.48/-0.04	-4.45/-3.94	-6.38/-4.77	-5.85/-3.52
θ(45°)	-7.98/-8.00	-7.99/-6.81	-5.69/-2.96	-3.46/-4.25	-4.53/-4.40	-2.84/-2.71	-2.30/-1.80	-0.49/-0.72	1.09/2.07	2.96/2.67	-0.23/-1.53	-0.28/-3.96	-5.07/0.12	1.06/-2.14	-7.44/-5.25	0.30/-1.59	-0.28/0.34	-0.46/-0.49	-0.00/-1.31	1.41/2.44	0.45/-1.32	-4.62/-3.24	-4.43/-5.49	-2.37/-4.59
θ(52.5°)	-1.54/-5.31	-7.40/-7.81	-7.97/-5.93	-4.44/-2.32	-1.88/-1.00	-0.83/-0.49	1.21/0.81	0.71/0.48	0.90/2.24	2.50/2.05	-1.10/0.80	-2.29/-4.26	0.03/-1.37	-0.44/-4.63	-4.62/-1.54	-0.62/-0.88	-0.81/-1.07	-0.43/0.18	0.53/-1.55	1.64/2.44	2.39/-1.09	-6.04/-5.89	-2.64/-3.37	-5.75/-2.07
θ(60°)	0.10/-1.39	-8.01/-6.36	-6.84/-6.64	-2.39/-0.10	-0.49/-2.10	-4.38/-3.49	-0.58/0.65	1.00/0.09	-0.35/-1.84	2.64/2.44	-0.13/-2.34	-0.72/-3.33	-2.91/-4.02	2.25/1.03	-4.28/-2.24	-0.94/-0.43	0.28/0.51	0.20/-0.11	0.41/-1.86	1.23/0.33	-0.97/-1.11	-7.25/-5.14	-2.26/-2.89	-3.47/0.28
θ(67.5°)	-0.37/-3.63	-0.98/-3.92	-3.09/-4.26	-1.50/0.31	-0.50/-3.45	-6.34/-8.59	-6.44/-0.36	1.20/-0.29	-0.47/-1.53	1.32/2.15	-1.54/-2.02	-0.38/-2.42	-1.04/-0.06	1.50/-1.38	-4.60/-2.94	-1.35/0.13	1.76/1.16	-0.17/-1.86	-1.42/-1.02	-0.16/-1.79	-1.59/-1.26	-3.38/-3.21	-1.22/-0.39	-0.56/0.48
θ(75°)	2.63/-2.51	-6.73/-11.33	-4.41/-1.69	-0.31/0.38	1.13/-1.24	0.43/-0.81	-2.33/-5.84	-1.84/-0.02	-2.78/-1.94	1.48/-1.74	0.71/-4.17	-1.42/-5.30	0.32/-3.47	0.01/-0.52	-1.77/-1.02	-0.93/0.46	1.43/0.91	-1.75/-5.72	-4.22/-0.37	-0.16/-1.01	1.26/-1.47	1.37/0.66	0.44/0.64	1.69/3.69
θ(82.5°)	2.87/0.24	-2.18/-6.44	-2.63/-1.78	-0.71/-1.43	3.24/3.89	3.88/-1.8	-0.76/-2.70	-2.15/-2.72	-6.88/-0.87	1.61/0.24	-1.00/-2.25	-4.57/-2.26	-0.94/-2.45	-1.60/-1.40	-1.35/-4.22	1.61/2.84	2.77/2.32	-0.67/-3.51	-2.23/-1.03	1.72/-1.99	2.88/2.09	3.20/-2.07	-0.89/0.90	0.72/-2.22
θ(90°)	3.50/-0.41	-7.99/-6.81	-0.67/-1.34	-1.95/-1.77	1.92/-1.99	2.05/-2.55	-0.35/-3.27	-2.16/0.85	-2.04/-5.00	0.25/0.29	1.17/-3.20	-1.53/-4.55	0.72/-1.46	-3.09/-0.23	-4.37/-3.34	3.46/2.25	2.79/2.53	-0.25/-2.92	-2.85/-0.32	0.88/-1.83	2.73/2.38	2.03/-0.49	-3.44/0.10	1.44/2.73
θ(97.5°)	3.57/-1.87	-6.06/-9.35	-0.69/0.11	-2.50/-0.29	-1.32/0.06	2.73/0.34	-0.37/-5.28	-0.78/-1.03	-3.22/-2.03	0.73/-1.96	-0.22/-5.44	-6.96/-1.43	0.62/-2.30	-0.09/-5.56	-3.21/-1.72	0.52/0.24	1.26/0.34	-2.09/-4.34	-2.68/-2.06	-1.07/0.84	2.12/-1.40	-0.70/-3.14	-5.48/-0.12	1.80/2.38
θ(105°)	-1.03/-6.86	-6.45/-12.03	-3.18/-1.16	-2.29/-0.93	-2.13/-5.75	-1.47/0.74	-0.62/-4.36	-4.49/-1.58	-6.91/-1.08	2.12/-1.65	-3.15/0.34	-6.96/-6.76	-1.68/-2.12	-5.67/-3.52	-4.76/-2.97	0.01/-1.16	-0.58/-1.50	-0.81/-1.76	-1.74/-0.36	-2.63/0.41	1.79/0.94	-0.92/-4.28	-1.58/-1.17	-0.62/0.85
θ(112.5°)	-6.25/-7.70	-5.37/-9.48	-4.29/-6.70	-10.72/-6.23	-8.08/-6.36	-3.80/-1.68	-5.88/-7.17	-4.52/-6.01	-1.02/0.92	2.77/-3.67	-3.95/-3.91	-1.04/-6.36	-10.71/-5.99	-5.99/-1.83	-2.62/3.72	0.85/0.63	0.23/-0.92	-0.65/-3.18	-1.24/2.22	1.25/0.62	-1.04/-6.44	-3.88/0.41	0.01/-3.81	
θ(120°)	-4.45/-4.43	-3.97/-4.38	-9.04/-5.56	-11.60/-6.35	-5.38/-3.90	-3.39/-4.79	-5.43/-5.24	-4.54/-4.68	-7.00/-6.07	1.04/0.18	1.02/0.69	-1.01/-1.94	-1.72/-2.01	-4.02/-3.97	-2.74/-7.18	0.06/2.32	2.83/0.86	-2.14/-4.06	-4.06/-3.76	-2.50/-0.82	-2.45/-2.02	-0.80/-3.46	-4.74/-5.27	-0.80/-3.01
θ(127.5°)	-7.51/-3.31	-8.30/-5.27	-3.21/-15.38	-6.96/-4.45	-3.33/-2.58	-4.50/-7.47	-5.66/-3.30	-1.82/-2.90	-2.32/-0.91	1.82/2.46	-1.63/-2.75	-8.55/-8.78	-2.59/-0.18	-1.29/-1.13	-2.24/-4.59	-1.63/-0.50	0.69/0.22	-2.81/-0.95	-7.42/-4.85	-0.80/-0.75	-4.64/-2.23	-2.19/-6.90	-7.22/-7.87	-2.34/-3.92
θ(135°)	-5.59/-5.01	-2.48/-13.08	-12.49/-5.58	-4.60/-4.64	-6.31/-6.80	-5.70/-5.31	-4.57/-3.91	-4.44/-4.99	-2.78/-2.04	-0.49/0.94	-0.79/-2.11	-6.77/-7.27	-7.95/-4.27	-0.26/-2.92	-2.13/-2.73	-5.66/-4.76	-1.04/-1.78	-3.91/-2.23	-0.67/-2.68	-0.33/-1.58	4.44/-0.60	0.19/-3.86	-4.28/-12.84	-3.12/-2.85
θ(142.5°)	-1.59/-3.65	-8.44/-0.05	-9.06/-4.02	-3.32/-3.73	-4.93/-6.81	-4.94/-3.55	-1.44/-1.19	-1.16/-1.56	-1.72/-2.04	0.10/-2.70	-5.42/-7.96	-12.30/-10.18	-6.93/-1.18	-0.15/-1.46	-0.14/-0.06	-0.37/-1.25	-3.61/-4.77	-2.80/-1.32	-4.01/-1.15	-0.13/-3.14	-1.96/0.05	-1.59/-6.11	-2.50/-2.49	-5.35/-3.47
θ(150°)	-3.18/-3.25	-1.56/-0.85	-6.05/-6.85	-4.62/-11.65	-8.60/-5.93	-3.81/-3.95	-4.62/-4.71	-3.77/-3.32	-3.36/-3.88	-2.56/-0.78	-2.65/-0.91	-8.06/-4.79	-4.66/-2.74	-1.54/-1.54	0.03/-0.43	-3.97/-6.82	-7.40/-6.91	-7.81/-7.69	-7.14/-3.59	-4.97/-5.69	-4.34/-2.67	-3.23/-5.25	-4.55/-5.90	-9.20/-3.73
θ(157.5°)	-0.74/-0.89	-4.38/-8.11	-7.49/-4.28	-3.22/-4.40	-6.07/-9.02	-8.90/-5.45	-4.52/-4.30	-5.99/-5.47	-4.12/-0.57	-1.59/-7.24	-12.41/-12.91	-6.22/-4.00	-5.07/-4.92	-4.08/-3.38	-2.62/-2.92	-4.66/-1.07	-8.43/-5.33	-2.97/-2.64	-3.82/-6.04	-9.36/-9.28	-8.31/-5.42	-4.65/-6.02	-4.00/-1.29	
θ(165°)	-6.60/-6.80	-5.80/-1.56	0.39/0.53	-0.44/-1.57	-1.30/-1.83	-4.84/-7.85	-11.88/-12.72	-8.62/-8.03	-5.61/-3.96	-2.95/-2.09	-1.91/-3.71	-5.38/-8.76	-14.92/-13.27	-9.30/-6.65	-6.54/-6.43	-6.49/-7.11	-5.19/-6.14	-7.42/-6.17	-5.19/-6.52	-11.27/-13.87	-8.34/-5.35	-2.41/-2.16	-2.50/-2.49	-1.74/-2.20
θ(172.5°)	-3.56/-4.13	-5.51/-5.51	-3.82/-4.23	-1.60/-1.53	-2.19/-4.51	-5.45/-6.57	-7.39/-6.26	-6.28/-5.39	-5.03/-3.93	-3.70/-5.04	-6.12/-8.14	-9.80/-11.96	-11.81/-11.51	-11.33/-11.28	-9.88/-7.89	-8.58/-8.87	-8.							



Antenna Pattern_2.4GHz, 5GHz U-NII 1~3

Appendix C

θ(165°)	0.54/-0.05	-1.24/-3.38	-5.46/-7.39	-8.44/-8.65	-9.12/-8.52	-8.25/-7.48	-6.69/-6.90	-6.88/-7.25	-7.81/-7.50	-6.01/-5.04	-3.50/-2.79	-2.42/-2.50	-3.36/-5.64	-9.89/-8.35	-3.44/-1.02	-0.43/-1.08	-3.76/-8.28	-11.04/-8.89	-8.09/-6.92	-5.65/-5.01	-4.89/-4.58	-3.70/-2.46	-1.39/-0.04	0.80/0.95
θ(172.5°)	-1.11/-1.37	-3.52/-4.93	-5.31/-5.89	-6.61/-7.69	-9.02/-7.27	-6.64/-5.92	-5.54/-6.55	-7.54/-8.58	-9.61/-9.93	-9.71/-8.79	-7.34/-5.58	-5.09/-5.12	-4.95/-4.41	-3.15/-1.44	-0.81/-0.77	-1.35/-2.65	-4.69/-7.92	-10.75/-10.68	-9.92/-10.81	-11.76/-12.76	-12.58/-10.80	-9.01/-6.55	-4.47/-2.35	-1.12/-1.46
θ(180°)	-6.52/-7.89	-8.91/-8.27	-7.59/-8.24	-9.27/-10.35	-10.30/-9.41	-8.99/-8.69	-9.23/-9.76	-10.00/-10.32	-9.63/-10.02	-9.80/-9.66	-10.10/-10.69	-11.80/-12.29	-12.74/-14.20	-14.97/-15.96	-15.64/-13.46	-11.14/-9.91	-9.77/-9.79	-10.34/-11.78	-12.70/-13.65	-13.30/-11.96	-11.27/-12.64	-14.87/-12.94	-9.91/-7.23	-6.55/-8.16
Freq(Hz)	5.785G/Pol.	TotalAnt. 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°)	-4.91/-5.10	-5.47/-5.77	-6.28/-6.52	-7.15/-6.92	-6.89/-6.85	-6.94/-6.59	-6.39/-6.80	-6.73/-6.56	-6.46/-6.62	-6.04/-6.24	-6.02/-6.14	-6.34/-6.86	-7.37/-7.94	-8.23/-8.47	-8.67/-8.77	-8.73/-8.60	-8.49/-8.51	-8.28/-8.67	-8.70/-8.70	-8.48/-7.96	-7.91/-7.73	-6.65/-6.86	-7.78/-7.52	-9.27/-7.61
θ(7.5°)	-8.60/-10.27	-9.67/-9.22	-8.81/-9.24	-9.68/-9.65	-9.12/-8.75	-8.07/-6.96	-8.01/-8.39	-8.75/-8.98	-8.51/-8.48	-7.59/-7.54	-7.61/-7.70	-8.43/-8.69	-8.46/-8.44	-8.42/-8.78	-8.95/-8.76	-8.72/-8.60	-8.11/-8.17	-8.43/-8.03	-7.50/-7.66	-7.74/-7.95	-7.80/-7.34	-7.34/-7.38	-8.92/-8.67	-8.69/-8.68
θ(15°)	-4.52/-4.48	-4.42/-4.50	-4.24/-3.58	-2.67/-2.29	-1.87/-1.27	-0.73/-1.07	-1.85/-3.28	-5.16/-7.45	-9.47/-10.15	-8.64/-6.60	-5.26/-4.85	-4.47/-4.61	-4.71/-4.72	-4.59/-4.82	-4.59/-5.07	-5.27/-5.95	-6.53/-6.74	-6.95/-6.31	-6.40/-6.22	-5.64/-5.32	-5.16/-4.98	-4.57/-4.09	-4.38/-3.69	-3.85/-4.38
θ(22.5°)	-1.39/-1.00	-1.20/-1.11	-0.64/-0.18	0.60/0.73	0.84/1.12	0.30/-0.50	-0.93/-0.89	-1.10/-1.66	-3.32/-5.93	-8.06/-6.19	-3.17/-1.37	-0.70/-1.12	-1.63/-2.01	-2.02/-2.07	-2.20/-2.74	-3.70/-4.88	-5.74/-6.11	-5.96/-5.77	-5.40/-4.78	-4.36/-4.36	-4.23/-3.94	-3.40/-3.34	-4.29/-3.98	-3.24/-2.01
θ(30°)	-1.18/0.43	0.33/1.02	2.03/1.95	0.95/0.48	0.64/0.63	0.36/0.29	0.14/-0.09	-0.41/-0.74	-1.16/-1.78	-2.82/-3.71	-2.63/-0.51	0.72/0.29	-1.23/-2.12	-1.45/-1.43	-2.88/-4.42	-5.54/-5.61	-4.89/-5.46	-5.54/-6.31	-6.01/-5.36	-4.76/-4.61	-4.68/-4.12	-2.92/-1.95	-2.04/-2.87	-3.56/-1.78
θ(37.5°)	-2.19/-0.70	-0.19/1.14	1.73/1.08	-0.29/-0.97	-0.66/-0.74	-0.51/0.32	0.30/0.35	-0.50/-1.33	-1.33/-0.37	0.22/0.15	0.50/1.66	1.18/-1.35	-2.33/-1.04	-2.27/-5.37	-6.63/-6.61	-7.15/-6.72	-6.29/-8.77	-11.43/-11.81	-12.82/-10.25	-7.30/-4.11	-1.42/-1.52	-3.19/-1.43	0.69/0.24	-2.24/-2.03
θ(45°)	-0.40/0.05	1.07/2.93	4.38/3.22	0.98/0.46	-0.83/-1.85	-2.11/-1.54	-0.36/0.80	1.50/1.45	0.19/-1.89	-2.20/-0.65	0.02/0.61	1.65/-0.22	-2.84/-1.69	-3.39/-5.64	-6.95/-8.10	-7.35/-7.25	-6.94/-7.33	-11.85/-15.52	-8.96/-5.69	-4.96/-4.86	-5.04/-2.99	-1.24/-0.97	0.32/1.03	-0.54/0.13
θ(52.5°)	1.24/0.28	-0.19/1.78	2.41/1.62	0.51/0.70	-1.20/-2.88	-3.08/-2.62	-1.31/-0.73	-0.68/-0.98	-1.89/-3.29	-2.21/1.07	1.92/1.95	-0.15/-3.06	-0.96/-2.59	-3.14/-5.26	-5.97/-6.04	-5.99/-5.07	-8.17/-9.61	-9.69/-9.30	-7.87/-6.26	-4.20/-3.45	-4.20/-4.04	-3.27/-4.38	-1.58/-0.29	-1.61/-0.73
θ(60°)	0.45/0.33	2.27/4.01	2.36/0.54	1.48/2.06	0.19/-1.85	-2.62/-4.05	-4.81/-3.90	-1.98/-0.94	-0.76/-0.59	-1.06/-0.25	2.09/2.44	1.95/-0.74	-2.44/-2.39	-3.38/-4.76	-6.41/-6.73	-4.57/-3.60	-4.19/-10.08	-8.33/-6.65	-4.97/-4.98	-4.87/-4.24	-4.31/-5.00	-1.93/-0.25	-0.16/0.98	0.14/-0.24
θ(67.5°)	1.98/-2.17	1.38/3.60	3.24/0.32	0.84/0.83	0.01/-0.90	-2.14/-3.98	-4.49/-2.51	-0.22/0.07	-1.03/-1.25	-1.48/1.54	2.07/1.29	-1.23/-0.33	-0.74/-2.99	-3.86/-4.95	-5.62/-5.40	-3.29/-4.96	-7.34/-7.03	-9.42/-6.80	-3.13/-1.79	-2.85/-3.01	-2.60/-2.00	0.47/0.35	0.31/2.37	1.96/2.87
θ(75°)	1.83/-0.60	-0.17/1.19	1.54/1.70	1.18/0.14	-3.12/-0.57	0.52/-0.15	-1.95/-3.22	-1.33/0.59	0.59/-0.31	-1.70/-1.35	0.65/0.33	0.11/-0.22	0.01/-2.21	-2.38/-6.48	-6.19/-6.37	-3.76/-5.63	-5.18/-2.62	-4.21/-10.62	-3.09/0.95	-0.31/-3.20	-1.36/-0.25	1.96/1.95	2.73/2.44	1.75/2.45
θ(82.5°)	0.80/-2.27	1.25/1.18	-0.25/-1.74	0.82/0.43	-1.01/-1.43	-1.11/-1.90	-3.62/-3.39	-1.31/0.49	-0.30/-1.27	-0.72/-0.36	-0.45/-0.52	-0.87/0.25	-3.85/-5.94	-7.48/-7.40	-5.24/-5.74	-7.55/-7.89	-2.11/-1.33	-2.24/-4.15	-1.44/1.06	0.74/-4.33	-4.42/-4.07	-0.32/1.04	2.39/3.23	1.24/1.23
θ(90°)	3.16/-0.35	0.35/0.26	0.77/-1.45	-3.61/-0.75	-0.89/0.03	0.74/0.26	-2.12/-3.35	-0.75/1.91	2.16/-0.02	0.57/0.02	-2.46/-2.07	-1.15/-1.86	-3.67/-7.15	-6.45/-9.95	-3.57/-6.71	-2.43/-7.13	-6.57/0.84	0.16/-0.97	0.33/2.17	2.14/-0.61	-0.27/-1.91	-2.65/0.81	0.32/0.80	1.66/2.59
θ(97.5°)	1.75/-1.67	-0.26/-3.37	-1.65/-1.43	-3.92/-1.79	-0.76/0.71	0.78/-0.34	-2.49/-3.16	-0.50/0.64	-0.19/-0.49	-1.47/-5.73	-3.20/-3.20	-3.01/-4.30	-5.52/-5.98	-9.33/-5.26	-3.89/-2.79	-1.55/-3.92	-7.94/-1.58	0.63/-2.39	-1.24/1.59	2.87/0.92	1.32/-1.07	-0.88/2.31	3.48/2.75	-0.53/1.39
θ(105°)	0.09/1.63	-0.47/1.26	-0.93/-0.95	-2.22/-2.73	-3.36/-4.17	-2.06/-2.76	-3.34/-3.23	-1.16/-0.41	-0.88/-0.38	-0.32/-3.35	-3.96/-2.67	-1.77/-2.34	-2.42/-3.23	-5.61/-8.71	-10.34/-4.96	-4.32/-5.41	-7.31/0.45	0.62/0.60	-0.31/1.15	3.43/4.18	3.77/0.88	0.04/0.21	0.34/0.77	1.20/1.40
θ(112.5°)	-0.58/-0.00	-0.88/0.83	-0.43/-2.16	-5.11/-5.47	-4.94/-4.57	-4.34/-4.31	-7.63/-7.37	-3.90/-2.06	-0.48/0.33	-1.59/-1.29	-2.57/-2.91	-0.80/-3.34	-2.59/-4.01	-4.50/-6.20	-5.68/-5.67	-6.90/-5.25	-6.40/-4.84	-0.99/-6.76	-5.58/-4.99	0.81/3.03	4.54/5.03	3.19/1.71	2.32/3.16	-1.82/1.00
θ(120°)	0.52/-0.16	3.53/1.09	2.10/-1.31	-3.45/-5.55	-4.54/-8.11	-6.37/-6.58	-5.64/-4.74	-2.69/-0.73	-0.11/0.87	0.93/0.24	-3.88/-4.69	-3.20/-2.60	-5.17/-3.23	-5.67/-4.98	-5.58/-5.15	-7.10/-3.73	-8.70/-2.59	1.32/-1.64	-6.40/-3.08	3.55/3.89	0.38/1.36	4.11/1.44	3.22/2.86	0.34/1.05
θ(127.5°)	-3.72/-2.02	0.95/-0.80	0.16/-2.45	-5.82/-10.97	-5.87/-6.21	-7.02/-9.32	-9.91/-8.05	-5.57/-4.38	-1.81/-0.69	-2.72/-8.53	-3.60/-6.41	-5.39/-2.74	-6.27/-5.36	-7.76/-8.85	-7.03/-7.31	-5.22/-3.86	-4.36/-5.14	-0.97/-0.49	-1.90/-3.58	0.95/3.05	2.15/3.96	1.53/-0.03	4.18/2.67	-1.82/-1.30
θ(135°)	-0.47/-8.07	-2.09/-3.77	-2.61/-1.23	-4.09/-10.81	-11.85/-11.04	-11.82/-10.63	-8.00/-5.22	-3.52/-1.61	-0.78/-2.36	-3.40/-10.23	-5.10/-4.37	-3.26/-2.96	-1.94/-6.19	-2.83/-1.53	-0.04/-3.78	-3.59/-7.51	-2.99/-5.37	-3.41/-2.02	-2.00/-8.33	-5.44/0.17	2.15/2.24	-0.81/0.06	4.33/3.88	-3.41/0.55
θ(142.5°)	0.01/-2.67	-2.94/-4.17	-5.92/-5.40	-5.68/-6.11	-7.19/-8.68	-9.37/-11.71	-12.94/-9.35	-6.66/-6.39	-7.31/-7.58	-13.65/-13.30	-8.40/-4.63	-3.95/-4.09	-2.03/-2.15	-2.67/-2.93	-1.34/0.16	-8.75/-6.27	-2.75/0.99	-5.29/-2.94	-0.59/-6.56	-8.01/0.26	0.66/-4.48	-9.55/-1.47	2.28/1.82	-2.01/-0.68
θ(150°)	-6.21/-6.17	-3.48/-3.69	-6.03/-4.66	-4.19/-4.69	-4.99/-5.88	-7.13/-7.32	-7.86/-7.99	-7.79/-6.24	-5.78/-6.17	-6.10/-5.64	-6.84/-10.89	-7.38/-7.74	-10.44/-4.68	-5.54/-6.16	-4.19/-5.25	-3.78/-1.33	2.48/2.83	-1.37/-9.20	-10.68/-8.56	-2.60/1.90	1.91/-2.61	-4.48/-1.86	-2.08/-2.53	-3.41/-4.21
θ(157.5°)	1.24/-2.02	-6.17/-7.46	-7.54/-13.66	-15.57/-13.13	-12.09/-9.49	-9.99/-9.33	-7.70/-6.65	-7.70/-8.97	-9.17/-10.15	-12.01/-8.43	-7.13/-5.43	-4.74/-4.84	-5.38/-9.16	-8.76/-4.16	-4.73/-3.79	-0.79/0.27	-0.25/-2.35	-3.88/-2.99	-2.86/-3.46	-3.82/-3.01	-2.15/-1.33	-0.35/1.01	1.44/1.30	1.29/1.48
θ(165°)	0.49/-0.76	-1.35/-1.93	-3.35/-4.90	-5.49/-6.03	-6.42/-6.59	-6.44/-6.85	-8.04/-9.20	-9.78/-10.62	-12.15/-10.40	-7.66/-6.93	-5.57/-5.34	-5.02/-4.29	-3.90/-4.75	-6.81/-10.94	-7.85/-2.44	-1.09/-1.17	-3.00/-6.42	-9.33/-10.14	-8.93/-6.53	-4.67/-3.73	-2.69/-2.13	-1.57/-1.67	-1.63/-0.99	0.85/1.80
θ(172.5°)	-1.78/-1.13	-1.65/-2.88	-4.19/-5.31	-6.89/-7.74	-7.81/-5.81	-4.04/-3.10	-2.49/-3.20	-4.14/-6.21	-8.05/-9.57	-9.88/-11.02	-12.19/-13.56	-11.37/-10.51	-9.63/-8.11	-6.05/-3.61	-2.36/-1.73	-1.82/-2.82	-4.54/-6.75	-8.46/-9.41	-9.73/-10.23	-10.31/-9.97	-10.14/-9.55	-7.42/-5.54	-4.32/-2.44	-0.87/-0.67
θ(180°)	-6.75/-6.43	-8.51/-9.92	-8.53/-8.60	-10.15/-11.41	-9.72/-9.23	-9.93/-9.96	-11.40/-11.59	-10.60/-9.97	-9.08/-8.14	-7.75/-7.72	-8.05/-8.69	-9.68/-10.93	-14.21/-13.19	-12.36/-11.45	-10.71/-10.34	-9.75/-9.08	-9.03/-9.30	-10.36/-11.31	-11.70/-11.81	-11.49/-11.70	-12.23/-9.98	-8.58/-7.79	-7.20/-6.66	-6.81/-8.42

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

