



Antenna Composite Gain Test Report

FCC ID	QXO-AP3020
Equipment	Access Point
Brand Name	Extreme Networks
Model Name	AP3020
Applicant	Extreme Networks, Inc. 2121 RDU Center Drive Morrisville North Carolina United States 27560
Manufacturer	Extreme Networks, Inc. 2121 RDU Center Drive Morrisville North Carolina United States 27560
Standard	KDB662911 D03 v02
Sample Received	Mar. 16, 2026
Start Test Date	Mar. 16, 2026
Final Test Date	Mar. 16, 2026

Approved by: Sam Chen

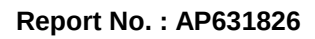
Sporton International Inc. Hsinchu Laboratory

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1. Operation Mode and Antenna Information

Antenna Position	RF Port			Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	2.4GHz	5GHz	6GHz					
2G 5GL 6G Ant1	1	1	1	WNC	95XPAM15.G93	PIFA	I-PEX	2.4GHz, 5GHz UNII 1~2A, 6GHz <For Radio 1>
2G 5GL 6G Ant2	2	2	2	WNC	95XPAM15.G92	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~2A, 6GHz <For Radio 1>
2G5GAnt1	1	1	-	WNC	95XPAM15.G90	PIFA	I-PEX	2.4GHz,5GHz UNII 1~3 <For Radio 2>
2G5GAnt2	2	2	-	WNC	95XPAM15.G91	Dipole	I-PEX	2.4GHz,5GHz UNII 1~3 <For Radio 2>

Note:

For Radio 1:

2.4GHz, 5GHz UNII 1~2A, 6GHz Operation Mode (1, 2TX/2RX)

The EUT can support both 1TX and 2TX functions.

For 1TX

Only 2G 5GL 6G Ant1 can be use as transmitting antenna.

For 2TX/2RX

2G 5GL 6G Ant1~2 can be used as transmitting/receiving antenna.

2G 5GL 6G Ant1~2 could transmit/receive simultaneously.

For Radio 2:

2.4GHz, 5GHz UNII 1~3 Operation Mode (1, 2TX/2RX)

The EUT can support both 1TX and 2TX functions.

For 2TX/2RX

2G5GAnt1~2 can be used as transmitting/receiving antenna.

2G5GAnt1~2 could transmit/receive simultaneously.

2. Table for Radio Function

Function Radio (R)	WLAN 2.4GHz	WLAN 5GHz	WLAN 6GHz	Bluetooth	IEEE 802.15.4
1	V	V (UNII 1~2A)	V	-	-
2	V	V (UNII 1~3 or UNII 2C~3)	-	-	-
3	-	-	-	V	V

Note 1: For WLAN 2.4GHz and 5GHz: The Radio1 and Radio 2 can't operate at the same frequency simultaneously

Note 2: The above information was declared by manufacturer.



3. Test Frequency

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

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

4. Testing Location

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rofy Chen	23.5-24.5 / 45-55	Mar. 16, 2026

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

5. Test Facility and Configuration

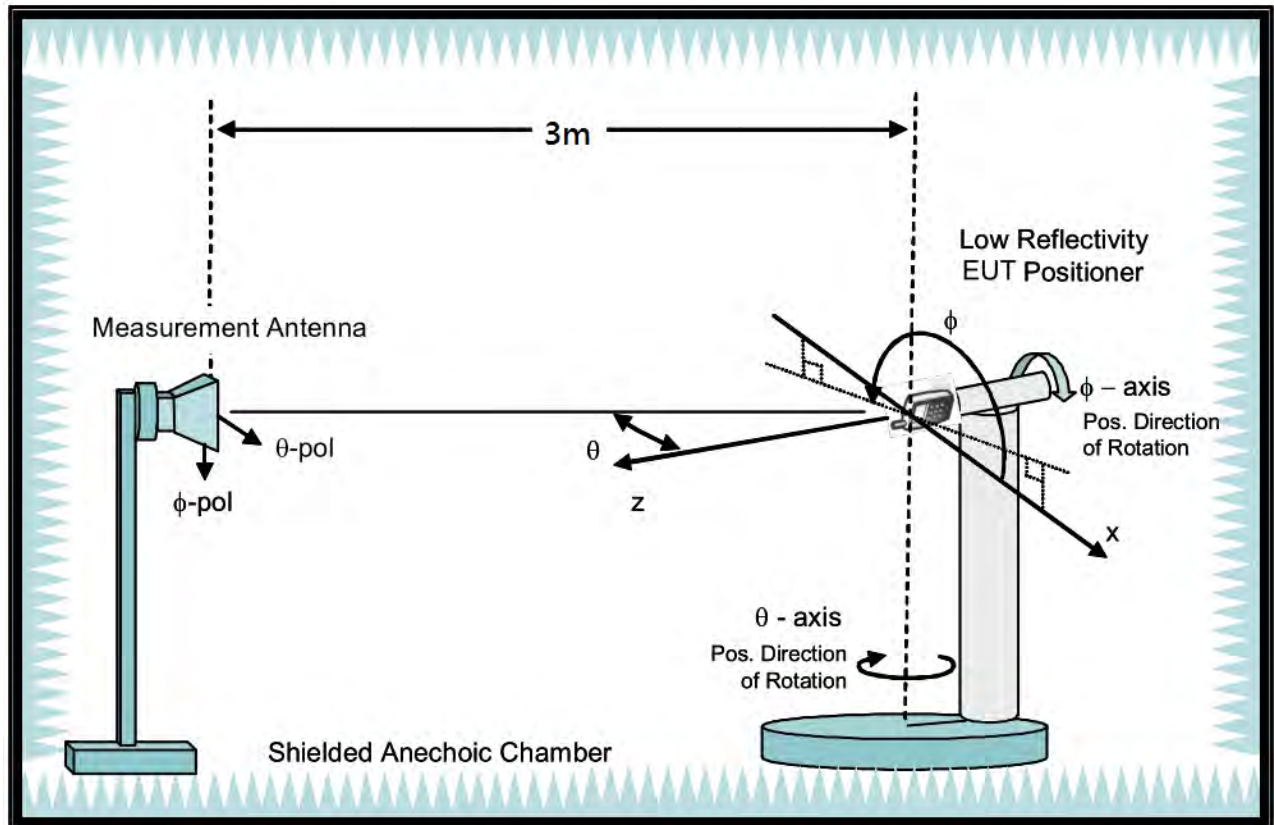
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

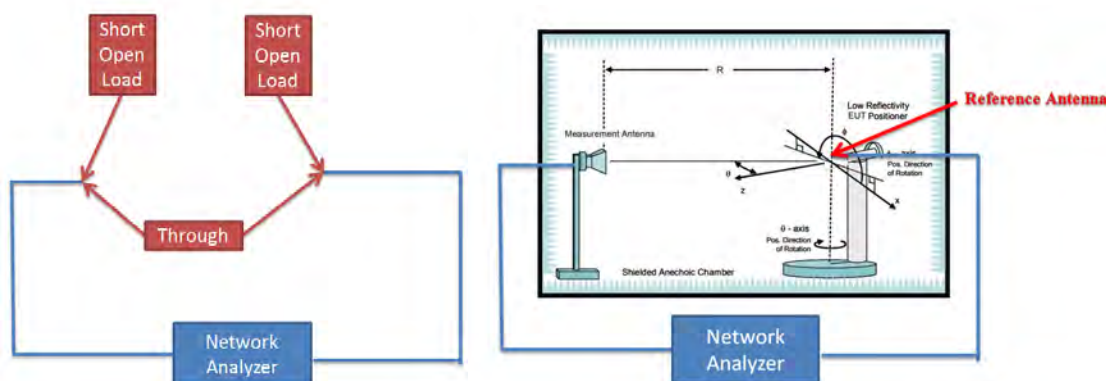
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



6. Reference Calibration

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

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



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

Note:

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

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

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

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



7. Test Method

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

DG steps:

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

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

8. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

2G 5GL 6G Ant1~2:

Frequency (Hz)	2.45G	5.2G	5.3G	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	-3.8	-1.78	-1.22	-2.92	-1.46	0.32	-1.49
Ant. 2 (dBi)	5.18	3.66	4.13	3.75	2.86	0.25	3.97
DG [1SS] (dBi)	4.81	4.37	4.87	4.05	3.98	3.3	4.67
Polarization	Phi	Phi	Phi	Phi	Phi	Theta	Phi
$\Theta(^{\circ})$	7.5	7.5	7.5	30	37.5	22.5	60
$\Phi(^{\circ})$	322.5	142.5	142.5	142.5	120	240	135

For 2G5GAnt1~2:

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-5.07	-2.68	-2.33	-3.24	-5.16
Ant. 2 (dBi)	5.74	3.9	4.04	4.97	5.83
DG [1SS] (dBi)	4.93	4.23	4.44	4.81	4.98
Polarization	Theta	Phi	Theta	Theta	Theta
$\Theta(^{\circ})$	0	15	7.5	15	7.5
$\Phi(^{\circ})$	352.5	67.5	330	135	150

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



DG_1SS max value position calculation

2G 5GL 6G Ant1~2:

Frequency (Hz)	2.45G	5.2G	5.3G	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(-3.8/20)}$	$10^{(-1.78/20)}$	$10^{(-1.22/20)}$	$10^{(-2.92/20)}$	$10^{(-1.46/20)}$	$10^{(0.32/20)}$	$10^{(-1.49/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(5.18/20)}$	$10^{(3.66/20)}$	$10^{(4.13/20)}$	$10^{(3.75/20)}$	$10^{(2.86/20)}$	$10^{(0.25/20)}$	$10^{(3.97/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.646	0.815	0.869	0.714	0.845	1.038	0.842
Ant. 2 [$10^{(G/20)}$] value	1.816	1.524	1.609	1.54	1.39	1.029	1.579
Sum All Antenna [Amax]	2.461	2.339	2.478	2.254	2.235	2.067	2.422
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.81	4.37	4.87	4.05	3.98	3.3	4.67

For 2G5G Ant1~2:

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(-5.07/20)}$	$10^{(-2.68/20)}$	$10^{(-2.33/20)}$	$10^{(-3.24/20)}$	$10^{(-5.16/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(5.74/20)}$	$10^{(3.9/20)}$	$10^{(4.04/20)}$	$10^{(4.97/20)}$	$10^{(5.83/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.558	0.735	0.765	0.689	0.552
Ant. 2 [$10^{(G/20)}$] value	1.936	1.567	1.592	1.772	1.957
Sum All Antenna [Amax]	2.494	2.301	2.357	2.461	2.509
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.93	4.23	4.44	4.81	4.98

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) = $10 \cdot \log(10^{(G_{ant1}/20)} + 10^{(G_{ant2}/20)} + 10^{(G_{ant3}/20)} + 10^{(G_{ant4}/20)} + \dots)^{1/2/N_{ant}}$

9. Summary of Test Result

2G 5GL 6G Ant1~2

Freq(Hz)	2.45G	5.2G	5.3G	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	1.12	2.93	2.62	3.38	3.03	3.14	3.59
Ant. 2 Max Gain (dBi)	5.37	4	4.54	3.97	4.01	2.34	4.43
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/45	Phi/52.5/15	Theta/75/345	Theta/67.5/0	Theta/75/0	Theta/75/0	Theta/75/0
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/15/322.5	Phi/15/120	Phi/22.5/135	Phi/22.5/135	Phi/15/120	Phi/15/135	Phi/7.5/120
Max Gain (dBi)	5.37	4	4.54	3.97	4.01	3.14	4.43
DG [1SS] (dBi)	4.81	4.37	4.87	4.05	3.98	3.3	4.67
DG [1SS] (dBi) Revised	5.37	4.37	4.87	4.05	4.01	3.3	4.67

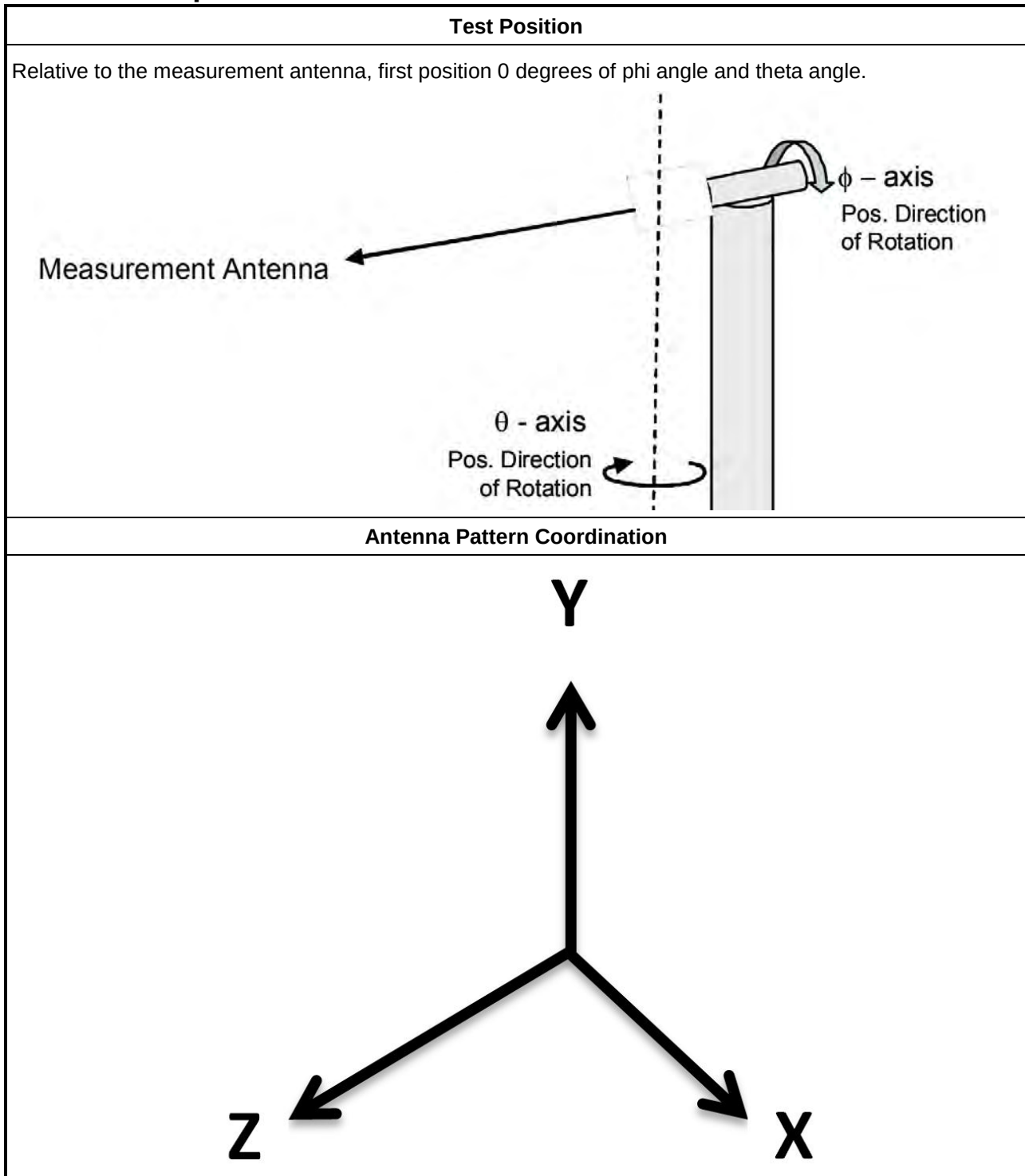
For 2G5G Ant1~2:

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.26	1.95	2.21	2.92	2.29
Ant. 2 Max Gain (dBi)	5.9	4.48	4.52	5.21	5.83
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/90/247.5	Theta/82.5/270	Theta/127.5/262.5	Theta/112.5/270	Theta/120/270
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/0/337.5	Phi/7.5/247.5	Phi/15/75	Theta/7.5/135	Theta/7.5/150
Max Gain (dBi)	5.9	4.48	4.52	5.21	5.83
DG [1SS] (dBi)	4.93	4.23	4.44	4.81	4.98
DG [1SS] (dBi) Revised	5.9	4.48	4.52	5.21	5.83

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. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01 (F) (2) (e) (ii)
4. Directional Gain (2SS) = Directional Gain (1SS) – 3dB

10. Test Setup



Note:

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

**11. Test Equipment and Calibration Data**

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

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

NCR means Non-Calibration required.



12. Test Results

Please refer to the appendix.

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Freq(Hz)	2.45G	5.2G	5.3G	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	1.12	2.93	2.62	3.38	3.03	3.14	3.59
Ant. 2 Max Gain (dBi)	5.37	4	4.54	3.97	4.01	2.34	4.43
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/60/45	Phi/52.5/15	Theta/75/345	Theta/67.5/0	Theta/75/0	Theta/75/0	Theta/75/0
Ant. 2 Polarization/Θ(°)/Φ(°)	Phi/15/322.5	Phi/15/120	Phi/22.5/135	Phi/22.5/135	Phi/15/120	Phi/15/135	Phi/7.5/120
Max Gain (dBi)	5.37	4	4.54	3.97	4.01	3.14	4.43
DG [1SS] (dBi)	4.81	4.37	4.87	4.05	3.98	3.3	4.67
DG [1SS] (dBi) Revised	5.37	4.37	4.87	4.05	4.01	3.3	4.67
DG [2SS] (dBi)	5.37	4	4.54	3.97	4.01	3.14	4.43



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

DG 1SS Result

Freq(Hz)	2.45GPol.	PhiH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
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°)	3.58/2.69	1.63/0.16	-1.71/-4.28	-7.38/-2.85	-6.6/-4.89	-2.96/-1.11	0.65/2.05	2.32/0.16	3.79/4.21	4.47/4.56	4.52/4.33	3.94/3.37	3.28/2.35	1.16/-0.28	-2.16/-4.7	-7.47/-7.38	-5.77/-4.33	-2.57/-0.84	0.72/2.07	2.32/3.1	3.74/-11	4.39/4.53	4.55/4.39	4.04/5.1
Θ(7.5°)	3.7/2.8	1.58/0.03	-1.93/-4.41	-6.98/-7.19	-5.39/-3.57	-1.88/-0.39	0.96/2.11	3.73/3.73	4.03/4.25	4.47/4.58	4.72/4.77	4.37/3.81	3.05/2.15	1.02/-0.32	-1.97/-4.11	-6.08/-5.56	-4.34/-3.34	-2.49/-1	0.44/1.96	2.33/3.23	3.91/4.36	4.63/4.81	4.81/4.63	4.27/2.7
Θ(15°)	3.85/2.93	1.71/0.13	-1.72/-3.91	-5.77/-5.6	-3.95/-2.44	-1.16/-0.09	0.81/1.61	2.37/3.03	3.54/3.94	4.16/4.33	4.39/4.29	4.03/3.55	2.92/2.09	1.1/-0.07	-1.42/-3.15	-4.67/-4.2	-3.17/-2.28	-1.58/-0.94	0.18/1.53	2.86/3.03	3.77/4.29	4.62/4.8	4.81/4.66	4.35/3.84
Θ(22.5°)	3.82/2.86	1.64/0.14	-1.57/-3.59	-4.97/-4.5	-2.96/-1.65	-0.66/0	0.53/0.9	1.38/2	2.51/2.92	3.19/3.39	3.51/3.48	3.27/2.86	2.25/1.47	0.49/-0.54	-1.72/-3.24	-4.2/-3.32	-2.35/-1.55	-0.96/-0.41	0.26/1.27	1.59/2.62	3.41/4.02	4.41/4.62	4.62/4.54	4.28/3.84
Θ(30°)	3.51/2.57	1.39/-0.09	-1.81/3.66	-4.73/-3.81	-2.15/-0.97	-0.27/0.04	0.10/0.2	0.77/1.32	1.9/2.15	2.25/2.36	2.57/2.67	2.58/2.31	1.76/0.98	0.02/-1.06	-2.24/-3.66	-4.4/-3.85	-2.78/-1.97	-1.35/-0.82	-0.25/0.55	1.64/1.85	2.77/3.46	3.91/4.18	4.28/4.25	4.02/3.53
Θ(37.5°)	2.73/1.6	0.19/-1.45	-3.18/-4.69	-4.95/-3.2	-1.38/-0.3	0.12/0.04	-0.33/-0.17	0.62/1.68	2.2/2.28	2.14/2.07	2.17/2.26	2.19/1.87	1.32/0.51	-0.51/-1.71	-3.02/-4.55	-5.67/-5.51	-4.31/-3.4	-2.63/-1.95	-1.32/-0.66	0.31/1.45	2.49/3.22	3.71/4.08	4.33/4.36	4.15/3.59
Θ(45°)	1.66/0.13	-1.8/-3.87	-6.76/-5.99	-6.07/-3.45	-1.38/-0.3	0.01/-0.22	-0.82/-0.71	0.52/1.51	2.2/0.6	1.91/8.5	2.12/-27	2.17/1.83	1.21/0.31	-0.84/-2.2	-3.69/-5.43	-7.18/-7.26	-6/-4.76	-3.57/-2.56	-1.93/-1.57	-1.19/-0.34	0.66/1.59	2.32/3.91	3.36/3.58	3.42/-7.7
Θ(52.5°)	0.55/-1.37	-3.34/-4.66	-6.19/-7.81	-7.04/-4.6	-2.55/-1.48	-1.04/-1.06	-1.45/-0.94	0.36/1.16	1.42/1.33	1.12/1.18	1.53/1.82	1.78/1.32	0.57/0.51	-1.91/-3.49	-5.2/-6.81	-7.59/-6.84	-5.8/-4.25	-3.12/-2.35	-2.12/-2.25	-2.4/-1.74	-0.92/-0.07	0.05/1.67	2.34/2.76	2.68/1.97
Θ(60°)	-1.09/-3.17	-4.85/-5.65	-6.39/-6.95	-6.29/-4.88	-3.57/-2.62	-2.02/-1.83	-1.92/-1.42	-0.28/0.55	0.48/0.42	0.51/0.6	0.42/-0.16	-1.15/-2.5	-0.47/-5.72	-7.36/-7.36	-6.83/-6.34	-6.12/-5.12	-4.32/-3.87	-3.77/-3.73	-3.47/-3	-2.02/-1.45	-1.09/-0.32	0.51/1.02	1.10/-4.6	
Θ(67.5°)	-3.1/-5.57	-6.73/-7.07	-7.69/-7.77	-6.6/-5.22	-4.13/-3.16	-2.26/-1.89	-1.93/-1.68	-0.88/-0.19	0.10/0.9	0.11/0.16	0.11/-0.13	-0.76/-1.76	-3.11/-4.6	-6.21/-7.68	-7.51/-7.05	-7.05/-6.71	-6.99/-7.46	-6.82/-5.97	-4.95/-3.84	-2.84/-2.16	-1.87/-1.64	-1.72/-1.57	-0.98/-0.62	-0.78/-1.53
Θ(75°)	-6.01/-7.67	-7.22/-6.9	-6.54/-6.66	-6.08/-5.44	-4.6/-3.5	-2.66/-2.4	-2.49/-2.1	-1.16/-0.44	-0.19/-0.27	-0.4/-0.43	-0.49/-0.71	-1.31/-2.34	-3.73/-5.42	-6.85/-7.68	-7.14/-7.24	-7.61/-8.04	-8.61/-9.67	-9.28/-7.72	-6.35/-5.23	-4.3/-3.65	-3.09/-2.8	-2.92/-3.64	-2.78/-2.23	-2.51/-3.76
Θ(82.5°)	-8.96/-10.19	-8.98/-8.01	-7.15/-7.04	-6.19/-5.57	-4.64/-3.13	-2.17/-2.31	-3.08/-3.1	-1.98/-0.97	-0.55/-0.57	-0.65/-0.61	-0.58/-0.76	-1.52/-2.87	-4.71/-6.68	-8.32/-8.26	-8.38/-8.68	-8.73/-8.65	-9.01/-9.54	-9.16/-8.2	-7.53/-7.09	-5.85/-4.59	-3.35/-2.72	-3.45/-5.14	-5.5/-4.53	-4.51/-6.03
Θ(90°)	-11.57/-11.97	-9.37/-7.9	-7.54/-8.49	-8.89/-8.43	-6.95/-4.83	-3.35/-3.04	-3.51/-3.73	-2.96/-1.86	-1.21/-1.06	-1.14/-1.19	-1.3/-1.75	-2.82/-4.62	-7.28/-10.07	-10.72/-10.59	-10.89/-10.61	-9.46/-8.38	-8.44/-9.19	-9.28/-8.18	-6.95/-6.66	-5.65/-4.35	-3.46/-3.19	-4.18/-7.25	-8.67/-8.79	-8.56/-9.84
Θ(97.5°)	-15.28/-14.15	-10.4/-8.03	-7.12/-7.44	-7.89/-8.62	-7.56/-5.5	-4.35/-4.27	-4.76/-4.82	-3.89/-2.75	-1.92/-1.53	-1.42/-1.55	-1.88/-2.73	-4.49/-7.14	-9.96/-11.33	-10.47/-9.73	-9.4/-8.5	-8.34/-8.18	-9.14/-10.26	-9.42/-7.95	-6.08/-6.33	-6.31/-5.28	-4.38/-4.36	-5.7/-8.17	-8.81/-10.11	-11.4/-13.58
Θ(105°)	-13.26/-11.48	-9.73/-7.69	-6.87/-7.81	-8.39/-9.16	-8.32/-5.81	-4.29/-4.25	-4.86/-4.96	-4.02/-2.85	-2.17/-2.01	-2.13/-2.34	-2.73/-3.54	-5.23/-7.74	-10.63/-11.86	-10.96/-10.19	-9.8/-8.99	-9.18/-9.11	-9.83/-10.07	-10.61/-8.2	-6.31/-6.49	-7.43/-6.72	-5.51/-5.19	-6.23/-9.34	-11.5/-10.84	-12.23/-13.96
Θ(112.5°)	-14.81/-11.44	-8.85/-6.91	-6.12/-7.29	-9.6/-10.83	-8.75/-5.8	-4.08/-3.94	-4.92/-5.84	-5.01/-3.52	-2.56/-2.29	-2.41/-2.61	-3.07/-4.18	-6.42/-9.66	-12.96/-12.46	-11.47/-10.46	-9.89/-9.22	-9.19/-9.29	-10.04/-11.99	-10.73/-6.56	-4.25/-3.77	-4.45/-5.07	-5.27/-5.74	-7.24/-11.32	-13.93/-11.65	-12.66/-15.27
Θ(120°)	-15.76/-14.85	-10.05/-6.53	-5.1/-5.56	-8.06/-11.71	-10.36/-7.15	-4.9/-3.96	-4.12/-4.99	-5.58/-5.47	-5.19/-4.68	-4.17/-3.87	-4.02/-5	-7.22/-11.03	-13.29/-13.67	-12.67/-12.46	-10.95/-9.66	-8.02/-8.73	-8.94/-9.66	-8.43/-5.97	-4.75/-5.3	-7.16/-8.9	-9.36/-10.33	-10.82/-10.26	-8.34/-6.86	-7.5/-10.71
Θ(127.5°)	-12.83/-15	-11.91/-7.14	-4.84/-4.43	-6.57/-8.09	-10.22/-9.31	-7.76/-6.94	-6.66/-5.59	-6.21/-5.42	-4.82/-4.76	-5.50/-5.82	-7.54/-10.04	-12.9/-13.85	-13.75/-14.12	-14.36/-11.35	-9.05/-8.41	-5.72/-7.25	-8.02/-9.39	-9.19/-7.54	-6.3/-5.71	-5.64/-5.72	-5.77/-6.21	-6.62/-6.41	-5.58/-4.78	-5.4/-7.96
Θ(135°)	-11.28/-14.68	-13.96/-9.67	-6.63/-5.52	-5.91/-6.83	-7.61/-8.09	-8.36/-8.79	-9.57/-10.53	-10.54/-8.55	-6.27/-4.9	-4.56/-5.08	-6.17/-7.61	-9.17/-10.74	-12.76/-13.18	-12.16/-9.59	-7.96/-7.58	-7.45/-7.48	-8.61/-9.99	-10.15/-7.76	-5.97/-5.1	-4.81/-4.83	-5.28/-6.13	-7.33/-7.46	-7.01/-6.01	-6.16/-8.28
Θ(142.5°)	-12.53/-15.62	-14.13/-11.81	-10.33/-9.42	-9.34/-9.36	-8.37/-7.37	-6.63/-6.6	-6.45/-6.71	-7.15/-7.66	-7.83/-7.35	-6.86/-6.62	-6.86/-7.37	-8.17/-9.7	-11.19/-11.77	-10.7/-10.07	-9.27/-9.1	-9.41/-10.37	-10.3/-10.71	-9.72/-7.73	-6.64/-6.32	-6.08/-6.71	-7.99/-9.76	-10.99/-10.57	-8.9/-7.72	-7.72/-9.29
Θ(150°)	-14.37/-15.78	-14.37/-11.92	-10.39/-10.31	-9.39/-10.61	-9.7/-8.33	-7.11/-6.1	-5.27/-4.73	-4.44/-4.31	-4.41/-4.65	-4.96/-5.26	-5.66/-6.15	-6.93/-8.28	-9.95/-10.88	-12.71/-3.53	-12.34/-11.84	-11.38/-10.8	-10.01/-9.28	-8.63/-8.06	-8.06/-8.28	-9.08/-9.95	-11.33/-12.72	-12.29/-11.03	-9.72/-9.17	-9.51/-11.02
Θ(157.5°)	-15.66/-15.46	-14.97/-12.77	-11.1/-10.44	-9.95/-10.29	-10.58/-10.32	-9.66/-8.83	-7.75/-6.69	-5.86/-5.19	-4.66/-4.36	-4.13/-4.11	-4.35/-4.89	-5.87/-7.56	-10.11/-12.37	-14.54/-14.17	-11.58/-9.77	-8.74/-8.48	-8.13/-8.8	-9.5/-10.5	-11.27/-12.46	-12.83/-13.36	-12.99/-12.24	-11.54/-10.95	-10.82/-10.78	-11.71/-12.93
Θ(165°)	-15.57/-15.32	-15.16/-13.3	-11.83/-10.49	-10.28/-10.4	-11.27/-11.26	-11.34/-11.38	-11.13/-10.43	-9.52/-8.57	-7.62/-6.85	-6.4/-6.24	-6.36/-6.87	-7.99/-9.9	-15.58/-11.93	-10.24/-9.26	-8.82/-9.07	-9.52/-11.17	-12.84/-15.01	-14.51/-15.07	-14.34/-13.28	-12.07/-11.37	-10.94/-10.91	-11.71/-12.02	-12.59/-14.14	
Θ(172.5°)	-14.96/-16.06	-14.91/-15.35	-14.86/-13.97	-13.33/-13.21	-13.43/-13.1	-12.61/-12.55	-12.12/-3.6	-12.33/-12.27	-11.45/-10.75	-10.66/-10.91	-15.34/-12.27	-15.04/-15.05	-13.87/-15.44	-13.96/-12.44	-11.83/-12.11	-13.32/-12.33	-12.95/-14.52	-14.58/-14.66	-13.82/-13.71	-11.85/-11.49	-11.19/-11.1	-10.94/-12.13	-12.95/-13.58	-15.17/-15.72
Θ(180°)	-15.34/-15.71	-15.13/-15.1	-15.34/-15.19	-14.79/-15.1	-14.73/-14.65	-13.94/-12.98	-13.06/-12.41	-12.53/-12.57	-12.32/-12.36	-12.84/-14.37	-15.19/-15.82	-15.72/-15.04	-15.52/-15.43	-16.25/-15.04	-15.73/-15.51	-15.27/-15.33	-13.82/-12.74	-11.75/-11.55	-11.33/-11	-11.84/-12.4	-12.78/-12.96	-13.51/-14.79	-14.72/-14.94	-14.63/-14.82
Freq(Hz)	2.45GPol.	PhiH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-1.71/-0.43	0.59/1.42	2.03/2.48	2.79/2.93	2.92/2.76	2.48/2.08	1.51/0.73	-0.33/-1.69	-3.47/-5.93	-9.18/-11.36	-9.8/-6.98	-4.89/-3	-1.23/0.11	1.14/1.93	2.54/2.98	3.28/3.43	3.45/3.28	2.95/2.44	1.70/7.2	-0.52/-2.04	-3.97/-6.46	-9.34/-9.95	-8.3/-6.61	-4.88/-3.26
Θ(7.5°)	-1.59/-0.6	0.4/1.19	1.74/2.14	2.12/2.53	2.52/3.5	2.02/1.57	0.98/0.18	-0.88/-2.29	-4.08/-6.54	-9.98/-12.22	-10.34/-7.59	-5.18/-3.5	-1.81/-0.47	0.62/1.49	2.18/2.76	3.16/3.42	3.53/3.43	3.13/2.67	2.02/1.11	-0.04/-1.42	-3.23/-5.53	-8.05/-8.39	-7.16/-5.88	-4.42/-2.84
Θ(15°)	-1.35/-0.48	0.09/0.78	1.28/1.65	1.91/2.04	2.12/2.05	1.81/1.43	0.92/0.22	-0.77/-2.09	-3.78/-6.01	-9.93/-11.88	-10.53/-8.25	-6.23/-4.5	-2.96/-1.69	-0.63/0.3	1.11/1.83	2.41/2.83	3.06/3.09	2.94/2.6	2.05/1.3	0.31/-0.91	-2.5/-4.48	-6.41/-6.52	-5.56/-4.59	-3.72/-2.68
Θ(22.5°)	-0.58/0.26	0.91/1.37	1.69/1.84	1.96/1.93	1.97/1.92	1.75/1.41	1.0/3.3	-0.67/-1.98	-3.58/-5.54	-7.95/-10.14	-9.03/-7.17	-5.5/-4.18	-3.05/-2.19	-1.48/-0.89	-0.30/0.1	1.08/1.64	1.97/2.13	2.11/1.86	1.42/0.81	0.03/-1.04	-2.5/-4.08	-5.35/-5.21	-4.28/-3.3	-2.42/-1.47
Θ(30°)	0.37/1.1	1.68/2.03	2.21/2.27	2.22/2.09	1.93/1.83	1.66/1.36	0.91/0.25	-0.73/-1.96	-3.35/-4.84	-6.4/-7.85	-7.52/-1.69	-4.94/-3.98	-3.12/-2.39	-1.94/-1.67	-1.54/-1.26	-0.79/-0.17	0.29/0.58	0.73/0.7	0.52/0.14	-0.48/-1.35	-2.52/-3.75	-4.3/-3.95	-3.17/-2.28	-1.42/-0.5
Θ(37.5°)	0.81/1.4	1.87/2.15	2.25/2.27	2.22/0.4	1.85/1.69	1.51/2.5	0.82/0.13	-0.83/-2.05	-3.34/-4.45	-5.53/-6.23	-4.43/-3.77	-3.15/-2.63	-2.39/-1.88	-1.41/-0.95	-0.56/-0.33	-0.36/-0.61	-1.07/-1.83	-2.82/-3.73	-3.76/-3.14	-2.41/-1.57	-2.41/-1.57	-0.69/0.08		
Θ(4																								



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(75°)	3.542/67	0.9/-0.35	-1.04/-1.83	-2.58/-2.57	-2.02/-1.63	-0.96/0.18	1.39/1.82	3.04/3.87	4.38/4.68	4.78/4.87	4.77/4.59	4.3/3.84	3.21/2.52	1.7/0.86	-0.22/-1.58	-1.96/-1.31	-0.34/0.34	1.14/1.66	2.14/2.36	2.94/3.31	3.61/3.91	4.14/4.32	4.31/4.13	4.02/4.08
Θ(15°)	3/1.91	0.85/-0.45	-1.54/-2.86	-3.95/-3.67	-2.42/-1.51	-0.50/-7	1.74/2.68	3.48/4.15	4.48/4.48	4.54/3.49	4.41/4.34	4.26/3.92	3.29/3.07	2.47/1.67	0.3/-1.53	-2.6/-1.99	-1.2/-0.56	0.10/0.67	1.14/1.7	2.35/2.87	3.39/3.79	4.12/4.33	4.34/4.21	4.04/3.71
Θ(127.5°)	2.84/1.75	0.31/-1.78	-4.01/-5.52	-5.84/-4.83	-3.21/-2.22	-1.06/-0.01	1.15/2.7	3.32/3.96	4.21/4.31	4.24/4.12	4.17/4.58	4.47/4.07	3.39/2.7	1.80/7.5	-0.59/-2.21	-3.93/-3.53	-2.56/-2.03	-1.23/-0.32	0.64/1.34	1.86/2.16	3.09/3.66	4.19/4.47	4.26/3.78	
Θ(30°)	1.87/1.06	0.17/-1.4	-3.63/-5.74	-5.66/-4.8	-3.09/-1.33	-0.34/0.35	0.75/1.75	2.86/3.64	3.66/3.65	3.34/3.37	3.25/3.49	3.39/3.8	3.08/2.29	1.16/-0.04	-1.43/-2.72	-4.24/-3.92	-2.64/-1.53	-0.66/0.14	0.94/1.71	2.27/2.53	2.6/2.42	2.22/2.4	3.06/3.67	3.72/3.25
Θ(37.5°)	1.96/1.19	0.51/-0.5	-1.9/-3.31	-3.81/-3.78	-2.74/-2.32	-1.52/-0.22	1.19/2.15	2.64/3.41	3.83/3.85	3.87/3.95	3.88/3.56	3.41/3.47	3.06/2.24	1/-0.97	-2.68/-4.26	-6.13/-6	-4.8/-3.13	-1.03/0.39	1.22/2.08	2.72/2.74	2.16/1.77	1.92/2.25	2.82/3.13	3/2.56
Θ(45°)	1.96/1.88	1.25/-0.11	-1.47/-2.57	-2.81/-3.35	-3.65/-3.04	-1.73/-0.09	1.48/2.18	2.71/3.23	3.54/3.33	3.69/3.95	3.73/3.18	3.03/3.07	2.83/2.2	1.37/0.12	-1.68/-4.1	-1.02/-6.95	-5.46/-3.17	-1.19/0.07	0.73/1.33	2.28/3.26	3.44/2.87	2.71/2.12	2.27/2.49	2.47/2.22
Θ(52.5°)	2.38/2.34	1.4/-0.39	-2.16/-3.38	-4.13/-4.67	-5.04/-4.21	-2.02/0.67	1.39/1.33	1.49/2.12	2.71/3.51	4/3.86	3.24/2.06	1.9/2.28	2.05/1.42	0.3/-1.53	-3.47/-7.03	-11.12/-9.89	-7.05/-4.58	-1.65/0.39	0.98/1.96	3.11/3.18	2.7/2.74	3.02/2.86	2.69/2.3	1.67/1.88
Θ(60°)	2/1.73	0.22/-1.87	-3.78/-4.44	-4.64/-4.97	-5.03/-5.37	-2.77/0.87	1.58/1.57	1.89/2.23	2.38/2.59	3.06/3.14	2.63/1.73	1.15/1.52	1.39/0.66	0.07/-1.21	-2.83/-5.66	-9.45/-9.67	-8.07/-6.39	-3.86/-2.25	-1.48/0.55	2.44/2.71	2.15/1.78	1.67/1.77	1.91/7.6	1.65/1.98
Θ(67.5°)	0.62/0.48	-1.7/-3.95	-5.4/-5.79	-6.16/-6.01	-6.04/-6.22	-1.56/0.9	1.04/0.39	0.85/1.38	1.41/1.84	1.99/2.7	1.49/0.31	-0.02/-0.12	-0.22/-0.48	-0.79/-2.45	-4.97/-10.22	-14.73/-12.87	-9.55/-7.65	-4.31/-2.33	0.11/0.62	2.19/1.85	1.11/0.88	0.44/0.45	0.55/0.16	0.38/1.15
Θ(75°)	-0.84/-2.19	-3.47/-5.61	-6.64/-7.81	-7.01/-7.03	-6.69/-5.91	-1.57/0.54	-0.84/0.04	1.28/1.35	1.42/1.43	1.19/1.14	0.45/-0.51	-1.46/-1.21	-0.82/-1.71	-1.98/-3.71	-5.7/-10.64	-12.98/-12.01	-10.8/-7.48	-5.78/-3.42	-2.18/0.41	1.67/0.93	0.46/-0.79	-2.63/-1.86	-0.82/-1.56	-0.39/0.13
Θ(82.5°)	-3.48/-6.42	-8.12/-7.05	-5.78/-7.58	-8.44/-8.11	-6.36/-5.21	-1.71/0.02	-1.03/0.74	-0.01/-0.04	0.23/0.22	0.69/0.85	0.05/-1.31	-2.45/-2.53	-3.37/-3.82	-3.96/-5.63	-8.66/-13.99	-14.43/-13.4	-15.33/-9.55	-6.98/-5.18	-3.93/-1.49	0.45/-0.37	0.4/-0.9	-4.16/-4.69	-3.4/-4.07	-0.99/0.2
Θ(90°)	-4.29/-10.69	-10.6/-8.29	-5.92/-7.07	-8.87/-10.06	-6.77/-4.99	-2.47/-0.8	-2.26/-1.69	-0.43/-1.01	-0.83/-1.14	-1.62/-1.46	-1.8/-2.91	-4.44/-4.51	-5.31/-5.58	-5.27/-7.29	-9.61/-13.61	-10.66/-9.62	-6.09/-3.99	-2.17/-2.38	-0.79/-2.34	-3.93/-6.38	-4.63/-5.98	-3.16/-0.78		
Θ(97.5°)	-7.84/-11.7	-8.71/-9.43	-6.04/-8.41	-10.44/-10.79	-6.12/-4.49	-3.06/-3.02	-4.46/-3.16	-1.5/-2.28	-2.67/-3.1	-3.46/-3.19	-3.55/-4.32	-5.24/-5.97	-7.07/-6.25	-7.22/-7.98	-10.99/-13.22	-10.27/-9.46	-11.9/-9.86	-14.32/-12.85	-8.25/-6.53	-4.02/-3.89	-2.77/-5.26	-4.96/-7.14	-5.47/-8.56	-4.8/-2.55
Θ(105°)	-9.59/-19.9	-8.23/-8.57	-7.5/-8.54	-11.34/-11.63	-6.82/-5.55	-5.21/-3.64	-4.6/-3.66	-1.05/-1.4	-4.05/-4.75	-5.11/-4.8	-4.49/-5.55	-6.98/-8.22	-8.7/-8.29	-7.08/-7.86	-10.26/-9.4	-8.47/-9.64	-11.04/-9.3	-9.77/-8.49	-10.96/-11.26	-8.89/-7.57	-6.24/-6.38	-7.33/-8.07	-5.94/-7.92	-7.44/-4.74
Θ(112.5°)	-14.3/-8.48	-7.14/-9.09	-8.3/-10.58	-13.55/-9.61	-6.04/-5.22	-4.92/-5.15	-5.52/-4.68	-3.85/-4.99	-5.33/-5.15	-5.31/-6.2	-7.67/-9.79	-11.81/-9.6	-9.08/-9.24	-11.27/-9.44	-8.58/-7.76	-10.12/-11.26	-8.8/-8.18	-10.01/-10.65	-9.97/-11.06	-7.08/-6.4	-7.72/-8.4	-5.08/-9.41	-9.8/-10.96	
Θ(120°)	-13.81/-10.64	-11.17/-11.65	-13.3/-13.95	-9.93/-6.92	-6.11/-6.15	-6.31/-5.25	-5.48/-4.55	-3.96/-5.17	-6.17/-5.86	-7.53/-7.79	-7.42/-7.9	-7.65/-10.08	-10.07/-10.1	-8.37/-10.47	-11.07/-7.83	-6.61/-8.82	-8.58/-9.46	-7.27/-8.37	-8.22/-7.46	-8.77/-8.56	-7.36/-5.2	-6.54/-9.95	-5.68/-10.26	-13.67/-13.18
Θ(127.5°)	-10.81/-13.86	-13.72/-13.32	-14.1/-12.88	-10.02/-7.38	-6.49/-7.73	-7.73/-7.08	-7.41/-7.3	-5.71/-4.96	-4.81/-5.45	-5.53/-6.78	-9.54/-8.72	-9.37/-7.88	-9.78/-10.35	-10.66/-10.39	-8.07/-5.66	-7.3/-12.87	-10.67/-7.24	-5.01/-4.26	-5.98/-5.88	-9.23/-6.16	-5.62/-7.02	-8.04/-11.87	-8.41/-9.55	-14.68/-10.79
Θ(135°)	-13.56/-14.99	-15.15/-14.28	-12.19/-12.63	-10.2/-8.27	-6.36/-7.81	-7.14/-6.41	-5.53/-5.11	-4.87/-5.56	-5.76/-5.41	-6.48/-9.95	-8.55/-8.99	-9.33/-10.05	-11.45/-13.41	-7.72/-8.24	-9.06/-12.32	-8.96/-8.91	-7.23/-5.64	-5.24/-8.36	-10.21/-7.85	-6.4/-10.03	-4.04/-14.38	-13.86/-10.45	-9.23/-11.74	
Θ(142.5°)	-15.94/-13.99	-11.06/-10.63	-11.9/-13.58	-12.73/-12.96	-15.16/-12.22	-8.47/-7.06	-8.48/-9.23	-4.88/-7.31	-6.71/-7.1	-7.39/-7.33	-9.66/-9.34	-8.99/-10.58	-12.25/-11.08	-11.91/-13.42	-14.54/-10.04	-9.65/-10.95	-8.96/-6.79	-5.68/-6.97	-9.52/-13.44	-12.09/-10.95	-10.63/-13.82	-12.74/-15.86	-15.18/-15.31	-11.33/-12.89
Θ(150°)	-14.84/-15.33	-14.32/-12.71	-11.92/-13.24	-13.95/-15.34	-14.81/-15.16	-12.17/-9.99	-10.03/-10.45	-9.8/-9.86	-10.24/-10.45	-10.3/-10.59	-10.52/-10.6	-12.05/-12.33	-13.15/-14.66	-14.63/-12.33	-10.51/-9.66	-9.65/-9.24	-9.04/-10.91	-9.73/-13.61	-11.56/-11.14	-8.61/-9.72	-9.7/-13.64	-14.09/-15.45	-13.09/-14.28	-15.71/-14.78
Θ(157.5°)	-14.41/-16.01	-15.65/-13.86	-13.99/-15.16	-15.41/-15.56	-15.13/-14.92	-15.71/-15.87	-15.09/-15.28	-13.42/-11.41	-10.25/-10.4	-10.76/-12.39	-14.62/-14.73	-13.44/-13.97	-14.17/-14.82	-15.39/-15.02	-15.04/-14.07	-11.69/-10.45	-9.94/-9.47	-8.24/-7.73	-8.3/-11.79	-14.23/-15.6	-15.24/-15.14	-15.69/-15.08	-15.02/-14.99	
Θ(165°)	-15.24/-15.22	-15.45/-15.09	-14.92/-15.18	-14.96/-15.07	-15.66/-15.42	-15.32/-14.25	-13.74/-12.7	-11.91/-10.96	-11.13/-11.78	-13.06/-13.88	-14.12/-13.4	-12.88/-13.56	-14.73/-15.13	-14.8/-14.54	-13.92/-11.93	-10.51/-9.11	-9.41/-8.5	-9/-10.28	-12.14/-15.25	-15.47/-15.22	-14.67/-14.65	-13.33/-14.15	-14.58/-15.06	-15.38/-15.32
Θ(172.5°)	-15.98/-15.61	-15.9/-15.93	-15.26/-15.44	-15.38/-15.21	-14.46/-14.52	-13.24/-12.73	-12.79/-12.09	-11.8/-10.97	-10.76/-10.67	-10.28/-9.83	-10.75/-12.39	-14.86/-15.09	-15.53/-15.22	-15.99/-14.93	-12.52/-11.18	-10.95/-10.91	-11.28/-11.43	-11.87/-14.03	-15.32/-14.91	-15.64/-10.03	-15.46/-15.42	-14.81/-15.94	-15.44/-15.9	-15.67/-15.13
Θ(180°)	-15.6/-15.34	-13.36/-13.23	-12.77/-12.52	-11.75/-10.83	-10.23/-9.83	-9.6/-9.31	-9.62/-10.07	-10.65/-10.63	-11.72/-12.41	-12.99/-13.47	-14.86/-15.17	-15.77/-14.84	-15.43/-14.81	-15.56/-14.15	-12.69/-13.16	-13.93/-13.32	-13.5/-13.04	-13.3/-13.98	-14.72/-13.6	-12.93/-12.7	-13.47/-13.6	-14.48/-14.96	-15.74/-14.68	-15.71/-15.24
Freq(Hz)	5.3/GPol.	Theta°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DGc(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°)	-0.03/0.89	1.4/1.68	2.08/2.54	2.99/3.17	3.02/2.9	2.55/2.18	1.56/0.82	-0.1/-1.09	-2.42/-3.79	-5.22/-5.01	-4.22/-3.17	-2.39/-1.49	-0.58/0.11	0.84/1.38	1.8/2.08	2.18/2.2	2.23/2.1	1.84/1.51	0.96/0.34	-0.51/-1.63	-3.16/-1.57	-6.98/-6.59	-5.06/-3.67	-2.51/-1.5
Θ(7.5°)	-0.14/0.69	0.75/0.9	1.72/2.1	2.72/2.83	2.56/2.42	2.39/2.09	1.81/0.76	0.26/-0.68	-1.97/-3.32	-4.14/-3.5	-2.33/-1.57	-1.05/-0.35	0.71/1.53	2.18/2.5	2.8/2.92	3.07/3.18	3.16/3.11	2.83/2.55	2.1/1.62	1.04/0.28	-0.84/-2.25	-3.51/-3.62	-2.88/-2.15	-1.51/-0.69
Θ(15°)	-1.81/-0.66	0.67/1.26	1.31/4.1	1.82/2.56	2.71/2.81	2.85/2.56	1.73/0.73	-0.36/-1.46	-2.83/-4.04	-4.6/-3.81	-2.63/-1.97	-1.52/-0.93	-0.25/0.9	1.58/2.19	2.55/2.85	3.07/3.3	3.13/2.9	2.54/2.13	2.66/1.28	1.06/2.67	-4.21/-4.8	-4.67/-4.49	-3.98/-2.69	
Θ(22.5°)	-3.98/-2.58	-0.89/-0.44	-0.23/0.48	1.42/1.34	1.63/1.56	1.72/1.33	0.58/0.27	-1.15/-2.07	-3.14/-4.38	-5.56/-5.73	-4.63/-3.78	-2.19/-0.99	-0.05/0.62	1.01/1.22	1.36/1.66	1.98/2.17	2.09/1.81	1.66/1.31	0.97/0.41	-0.3/-1.1	-2.18/-3.66	-5.57/-7.34	-6.78/-5.33	-4.67/-4
Θ(30°)	-3.64/-2.15	-0.89/-0.79	-0.71/0.33	1.06/1.44	1.78/2.06	1.63/0.88	-0.19/-0.54	-0.64/-0.95	-2.32/-0.47	-6.5/-7.63	-6.12/-3.74	-1.3/0.41	0.81/1	0.93/0.84	0.62/0.4	0.22/0.4	0.71/1.16	1.2/0.61	-0.28/-1.43	-2.52/-3.42	-4.43/-5.44	-5.89/-4.8	-3.88/-3.81	-4.12/-3.75
Θ(37.5°)	-4.89/-4.83	-2.82/-1.38	-0.60/-4.9	0.95/1.4	1.96/2.03	1.43/0.37	-0.83/-0.48	-0.28/0.24	-1.23/-3.68	-5.2/-5.91	-4.18/-2.45	-0.31/0.76	1.14/1.07	0.49/0.33	0.23/0.07	-0.35/-0.91	-0.68/0.27	1.06/0.35	-2.15/-5.03	-5.78/-6.06	-6.82/-8.73	-9.29/-7.32	-4.49/-3.03	-3.21/-4.2
Θ(45°)	-2.63/-2.38	-2.55/-1.76	-0.77/-0.09	0.59/1.11	1.51/1.39	0.88/-0.06	-0.33/-0.06	-0.13/-0.81	-2.21/-5.22	-5.88/-5.4	-3.75/-2.94	-1.41/-0.82	-0.48/-0.44	-0.8/-0.89	-0.79/-0.15	0.3/-0.23	-0.85/-0.05	0.67/-0.71	-3.33/-5.11	-5.68/-6.88	-9.01/-10	-8.47/-6.7	-5.37/-4.38	-4.34/-3.94
Θ(52.5°)	0.03/0.27	0.03/-0.62	-1.15/-0.45	0.09/0.38	0.82/0.6	0.01/-0.55	-0.58/-0.52	-1.3/-2.13	-3.31/-4.78	-5.3/-4.77	-4.43/-5.19	-5.13/-4.06	-3.07/-1.88	-1.68/-1.84	-2.08/-0.52	0.28/0.23	-0.76/-0.28	-0.54/-1.99	-5.77/-6.74	-5.14/-5.84	-8.39/-8.89	-6.51/-4.4	-4.58/-4.9	-3.66/-1.53
Θ(60°)	0.67/1.38	1.34/0.24	-0.60/-0.76	-0.76/-0.55	-0.19/-0.05	-0.07/0.01	0.33/-0.27	-1.34/-2.58	-3.96/-4.36	-5.49/-5.66	-6.07/-7.11	-6.75/-5.56	-4.82/-4.6	-4.09/-3.57	-3.22/-1.78	-1.01/-0.8	-0.96/-1.26	-1.67/-4.01	-6.78/-5.16					



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(45°)	-2/-2	-4.38/4.26	-4.81/6.33	-5.13/3.55	-5.01/-2.37	-0.38/-0.51	1.06/2.22	2.39/2.93	3.43/3.38	3.2/3	2.47/0.85	1.3/0.96	0.56/-0.13	-1.87/-5.27	-7.52/-6.79	-6.03/-5.97	-4.71/-2.14	-0.5/-0.02	0.36/1.75	2.02/1.2	1.2/0.55	-1.19/-1.29	-0.69/-0.07	-0.15/-0.78
Θ(52°)	-1.64/-2.21	-3.77/-5.34	-5.66/-7.16	-7.12/-4.4	-5.66/-1.03	0.72/0.08	0.74/2.01	2.16/2.58	2.89/2.47	2.56/2.54	2.31/1.79	1.21/1.18	0.83/-0.59	-3.32/-8.54	-12.56/-12.63	-10.57/-9.21	-6.84/-3.63	-1.41/-1.07	0.88/1.98	2.01/1.85	2.41/2.28	0.73/-0.66	0.2/0.37	-0.61/-1.34
Θ(60°)	-0.39/-0.15	-1.94/-4.14	-4.59/-8.05	-8.89/-6.9	-4.75/-1.38	0.42/-0.19	0.65/2.14	1.94/1.86	2.33/2.11	2.09/1.78	1.4/1.13	0.53/0.84	1.04/-0.49	-3.29/-8.3	-13.55/-13.52	-11.9/-10.86	-6.65/-6.03	-3.61/-2.46	-0.53/1.15	1.67/1.64	2.02/1.75	0.40/0.74	0.71/0.04	-0.49/-0.56
Θ(67.5°)	-1.55/0.17	-1.39/-3.78	-6.1/-9.11	-9.4/-8.03	-4.38/-1.07	-0.09/0.27	0.17/1.52	1.85/1.95	2.13/1.89	1.81/2.27	0.75/0.2	-0.37/-0.01	-0.57/-1.78	-4.38/-7.78	-13.38/-15.22	-11.38/-10.81	-8.84/-7.42	-5.4/-2.16	-0.88/-0.22	0.63/1.64	2.03/-0.04	0.03/0.23	-0.23/-0.99	-0.25/-1.19
Θ(75°)	-3.59/-0.27	-2.21/-6.5	-8.08/-9.1	-10.55/-6.63	-5.27/-1.94	-1.06/-0.64	-0.99/0.33	0.95/1.27	1.17/1.44	1.61/0.69	-0.19/-0.76	-1.44/-1.02	-0.88/-2.98	-4.49/-7.3	-10.45/-14.76	-11.89/-13.52	-11.46/-9.13	-5.2/-2.01	-1.27/0.09	0.89/2.5	2.41/-0.75	-2.07/-0.67	-0.76/-1.95	-1.87/-3.22
Θ(82.5°)	-4.71/-0.94	-3.81/-1.4	-10.92/-7.8	-10.42/-9.06	-6.66/-1.82	-1.84/-0.77	-0.96/-0.56	0.14/0.57	0.75/0.74	1.18/-0.26	-1.25/-2.4	-2.62/-2.05	-2.81/-4.62	-7.6/-9.04	-10.71/-14.65	-12.66/-13.24	-12.66/-8.48	-4.4/-2.77	-2.93/-0.14	0.62/2.23	2.53/-0.96	-4.25/-2.59	-2.33/-2.25	-3.74/-3.39
Θ(90°)	-6.77/-2.83	-4.78/-10.28	-10.4/-8.1	-6.88/-8.77	-6.76/-2.89	-2.79/-2.87	-1.82/-1.59	-1.08/-0.34	-0.03/0.31	0.36/-0.7	-1.97/-4.14	-4.19/-2.71	-3.35/-6.06	-8.61/-7.63	-10.27/-15.19	-12.61/-12.85	-12.24/-8.79	-7.67/-4.94	-5.09/-1.47	-1.17/1.18	1.34/-0.2	-4.74/-6.3	-3.92/-3.19	-4.45/-2.52
Θ(97.5°)	-7.6/-6.38	-11.43/-6.96	-8.52/-7.29	-6.43/-8.13	-5.18/-4.46	-3.69/-2.97	-2.65/-2.71	-1.45/-1.28	-0.88/-1.01	-1.02/-1.79	-3.02/-5.38	-4.85/-3.97	-4.44/-7.86	-8.17/-8.68	-11.67/-14.42	-12.38/-13.72	-13.86/-10.37	-12.42/-8.64	-8.67/-5.16	-5.69/-1.03	-1.72/-2.32	-7.21/-6.01	-4.58/-4.48	-6.77/-2.1
Θ(105°)	-7.13/-9.33	-10.64/-7.63	-7.1/-7.61	-5.76/-8.47	-3.93/-5.59	-3.75/-4.3	-3.95/-4.36	-2.67/-1.28	-2.36/-2.69	-1.87/-3.4	-4.24/-5.32	-5.39/-6.18	-6.29/-7.3	-5.62/-8.48	-10.22/-13.88	-6.57/-8.95	-15.82/-11.48	-12.71/-10.91	-13.87/-9.29	-10.56/-4.74	-7.69/-7.3	-9.07/-5.26	-6.27/-5.67	-8.97/-6.22
Θ(112.5°)	-8.41/-10.52	-8.74/-5.86	-8.64/-8.91	-9.18/-8.25	-4.8/-5.58	-4.44/-5.67	-5.05/-4.28	-4.06/-3.1	-3.11/-2.76	-4.78/-5.49	-5.82/-5.47	-6.22/-6.71	-6.72/-7.59	-7.46/-10.8	-9.63/-9.39	-8.17/-11.97	-12.11/-9.74	-8.85/-5.35	-13.32/-11.49	-15.06/-4.85	-9.09/-5.97	-7.95/-5.1	-6.52/-8.02	-9.16/-5.31
Θ(120°)	-14.04/-7.26	-8.95/-8.65	-9.99/-13.06	-10.13/-8.12	-5.51/-5.74	-5.49/-6.29	-5.08/-5.24	-4.77/-3.59	-3.11/-4.7	-5.33/-7.18	-6.41/-6.36	-7.48/-7.33	-5.78/-5.65	-8.45/-9.75	-11.71/-11.06	-6.98/-7.46	-12.61/-10.45	-8.28/-2.55	-8.78/-13.12	-10.15/-5.44	-5.1/-5.93	-8.06/-4.1	-8.25/-8.51	-13.05/-12.37
Θ(127.5°)	-15.56/-12	-12.36/-12.97	-15.61/-13.16	-8.47/-10.03	-10.42/-8.16	-7.13/-9.07	-6.08/-4.94	-5.28/-4.39	-5.25/-5.43	-6.71/-8.02	-8.14/-8.46	-7.97/-7.01	-6.86/-7	-9.74/-8.36	-11.07/-6.47	-5.71/-9.87	-11.08/-8.38	-9.12/-7.43	-5.9/-10.68	-14.03/-3.42	-3.25/-9.29	-12.97/-7.14	-9.8/-10.53	-8.95/-15.65
Θ(135°)	-13.46/-14.76	-15.52/-13.76	-15.59/-13.77	-10.34/-11.07	-11.72/-7.07	-5.67/-10.55	-8.41/-6.48	-7.11/-6.87	-6.94/-7.4	-6.71/-9.36	-9.55/-8.62	-9.02/-8.8	-6.64/-5.32	-8.19/-8.33	-9.94/-9.12	-7.38/-14.46	-10.6/-7.57	-9.38/-8.57	-11.85/-10.49	-15.28/-9.27	-4.93/-7.86	-15.18/-11	-15.12/-11.82	-13.74/-12.63
Θ(142.5°)	-15.1/-13.67	-11.91/-10.97	-14.58/-13.68	-15.97/-15.76	-13.94/-8.97	-9.12/-9.68	-8.72/-4.75	-7.71/-7.47	-7.56/-8.45	-9.32/-9.51	-9.84/-9.61	-10.06/-9.59	-8.12/-10.42	-10.44/-9.34	-9.55/-9.5	-9.01/-10.34	-10.73/-7.58	-10.49/-9.13	-9.52/-12.64	-12.98/-10.71	-15.08/-10.13	-12.68/-15.28	-12.44/-12.47	-13.45/-12.92
Θ(150°)	-12.88/-14.16	-10.93/-10.48	-11.45/-14.73	-13.35/-12.17	-12.41/-12.22	-15.21/-13.37	-10.09/-9.06	-9.15/-8.84	-9.56/-11.29	-10.89/-11.07	-11.23/-11.28	-11.11/-10.31	-11.25/-13.86	-14.73/-11.4	-11.34/-10.33	-7.43/-8.52	-8.1/-8.2	-9.64/-15.11	-13.05/-11.55	-15.41/-15.76	-14.62/-14.71	-11.94/-15.84	-12.59/-9.44	
Θ(157.5°)	-14.43/-13.31	-12.51/-12.67	-13.15/-14.88	-15.6/-15.21	-14.35/-13.2	-12.6/-12.09	-13.11/-15.59	-16.05/-15.61	-15.17/-13.82	-13.71/-12.95	-12.87/-11.56	-12.25/-14.77	-15.64/-14.16	-15.03/-15.18	-14.49/-10.28	-9.06/-10.33	-9.89/-9.71	-9.65/-9.6	-9.68/-10.41	-12.15/-14.45	-15.29/-15.3	-15.98/-14.94	-15.98/-14.77	-14.72/-14.65
Θ(165°)	-15.26/-15.11	-15.53/-15.38	-15.44/-14.5	-14.78/-13.04	-11.37/-11.24	-10.79/-11.03	-11.09/-11.01	-11.46/-11.66	-12.63/-13.38	-14.89/-15.46	-15.73/-14.81	-14.07/-13.81	-15.34/-14	-11.89/-10.34	-9.58/-9.85	-10.04/-10.93	-13.28/-13.22	-13.94/-15.26	-15.31/-15.33	-15.08/-12.91	-12.24/-13.65	-14.55/-15.42	-15.74/-13.68	
Θ(172.5°)	-15.63/-15.3	-14.75/-13.69	-11.49/-11.09	-11.64/-11.33	-11.34/-12.74	-12.71/-12.5	-12.58/-13.67	-14.57/-15.22	-15.85/-15.92	-15.51/-15.4	-15.45/-14.62	-14.71/-15.32	-15.49/-14.87	-15.49/-13.15	-10.71/-9.09	-9.04/-9.77	-11.27/-12.31	-14.75/-15.89	-15.54/-15.04	-14.24/-13.81	-14.61/-15.04	-15.51/-15.22	-14.76/-15.63	
Θ(180°)	-15.24/-14.89	-15.55/-15.86	-15.31/-13.6	-14.27/-13.9	-14.2/-14.05	-14.57/-12.87	-11.49/-11.52	-12.22/-12.98	-12.99/-13.43	-13.55/-14.06	-14.46/-15.2	-15.69/-15.02	-15.72/-14.67	-15.24/-15.22	-15.1/-15.63	-15.3/-15.47	-14.99/-15.15	-15.42/-14.84	-14.53/-13.38	-13.01/-14.61	-15.72/-15.44	-14.81/-14.28	-15.64/-15.7	-15.42/-15.56
Freq(Hz)	6.475GHzPol.	Theta°	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DC(0dB)	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°)	-1.75/-1.32	-0.40/-29	0.7/1	1.18/1.28	1.3/1.22	1.11/0.84	0.37/-0.27	-1.14/-2.31	-3.72/-5.55	-6.91/-7.03	-5.4/-4.4	-3.4/-2.21	-1.22/-0.53	0.17/0.58	0.83/1.21	1.44/1.43	1.34/1.19	0.92/0.54	-0.13/-0.89	-2.08/-3.18	-4.52/-6.24	-6.93/-6.83	-5.22/-4.01	-2.92/-2.23
Θ(7.5°)	-0.36/0.33	0.86/0.42	0.1/0.35	0.61/1.02	1.12/1.2	1.21/1.14	0.71/0.34	-0.64/-2.2	-4.12/-5.76	-5.74/-4.79	-3.62/-2.65	-1.34/-0.22	0.29/0.71	1.21/1.7	2.17/2.29	2.15/1.97	1.81/1.46	0.88/0.17	-0.83/-2.07	-3.62/-5.5	-7.3/-8.95	-8.59/-9.52	-3.54/-2.06	-1.55/-0.66
Θ(15°)	0.2/0.96	0.97/0.44	0.09/0.2	1.13/1.59	1.75/1.78	1.43/0.92	0.49/-0.42	-1.62/-3.31	-5.45/-6.14	-4.53/-2.65	-1.34/-0.36	0.34/0.79	1.04/1.17	1.56/2.06	2.36/2.44	2.32/1.9	1.82/1.22	0.37/-0.41	-1.29/-1.97	-2.77/-3.37	-4.29/-5.52	-6.25/-5.55	-3.87/-3.21	-1.46/-0.17
Θ(22.5°)	-3.59/-2.49	-1.33/-0.86	-0.53/0.03	0.75/1.35	1.57/1.67	1.35/0.27	-0.84/-1.78	-3.14/-4.57	-4.98/-4.96	-4.21/-2.67	-1.56/-1.29	-1.19/-1.11	-0.47/0.6	1.56/2.12	2.56/2.26	3.41/3.13	2.71/2.05	1.16/-0.13	-1.55/-2.83	-3.71/-4.61	-5.92/-6.74	-7.04/-6.85	-7.18/-7.44	-6.7/-4.5
Θ(30°)	-3.18/-2.65	-1.23/-0.83	-0.12/1.04	1.42/1.51	0.85/0.65	0.71/0.26	-0.74/-2.11	-3.99/-5.52	-4.83/-4.84	-4.68/-4.92	-4.26/-3.34	-2.47/-1.65	-0.68/0.19	1.242/3.7	2.953/3.8	2.852/4.9	2.181/7.9	0.98/0.62	-2.04/-2.84	-3.54/-4.64	-6.48/-7.9	-7.91/-8.24	-8.6/-9.7	-4.57/-2.76
Θ(37.5°)	-0.16/0.37	0.94/0.99	1.38/2.24	2.03/1.31	-0.11/-0.57	-0.4/-0.66	-1.81/-3.22	-4.22/-5.9	-6.32/-6.97	-5.71/-9.1	-2.51/-1.81	-1.58/-0.7	0.49/1.27	1.77/2.43	2.46/2.72	1.73/2.21	1.43/1.51	0.19/-1.07	-2.04/-3.19	-4.4/-5.91	-7.5/-7.2	-6.31/-7.84	-7.68/-4.19	-2.49/-1.45
Θ(45°)	-2.63/-0.82	0.18/1.03	1.31/1.6	1.77/0.88	-0.09/-0.83	-0.47/-0.58	-1.1/-1.15	-1.96/-4	-5.88/-6.56	-6.57/-3.36	-1.89/-1.67	-2.15/-1.95	-0.26/1.34	1.94/2.34	1.98/1.68	0.52/-0.39	-0.83/0.02	-0.9/-1.95	-1.81/-2.63	-5.65/-8.62	-8.88/-8.2	-7.18/-9.65	-8.8/-6.61	-4.69/-2.99
Θ(52.5°)	-3.02/-2.95	-0.39/1.12	1.3/0.75	0.81/0.68	-0.19/0.01	0.0/-0.5	-1.03/0.14	-0.68/-2.91	-4.72/-6.61	-4.29/-2.21	-2.45/-3.49	-3.22/-7.7	-0.25/0.72	1.39/0.97	0.53/0.5	0.03/-0.75	-1.8/-1.22	-2.15/-2.74	-2.52/-3.7	-8.65/-12.43	-8.72/-7.58	-6.98/-5.8	-4.34/-3.34	-3.07/-2.14
Θ(60°)	1.25/-0.15	0.28/1.13	1.84/1.01	0.48/-0.2	-0.66/-0.27	-0.31/-1.26	-0.75/0.69	-0.07/-2.81	-3.79/-5.66	-2.41/-1.5	-3.44/-4.74	-3.64/-2.87	-0.17/0.47	0.4/-1.24	-1.53/-1.68	-1.24/-1.52	-2.25/-1.96	-3.33/-4.55	-3.02/-3.96	-9.01/-12.68	-9.82/-7.18	-6.76/-4.62	-1.68/-0.8	-1.06/0.26
Θ(67.5°)	2.81/4.4	0.15/0	1.06/0.83	-0.6/-1.68	-2.34/-1.63	-0.85/-1.13	-1.03/0.34	-0.69/-3.23	-3.56/-3.66	-1.66/-1.86	-3.04/-4.05	-3.47/-2.88	-0.88/-0.63	-0.74/-2.28	-3.15/-3.86	-1.68/-1.8	-2.33/-1.92	-3.08/-3.42	-2.26/-3.83	-6.63/-13.29	-9.57/-5.74	-7.45/-3.14	-1.31/-1.14	-1.01/0.5
Θ(75°)	2.71/61	0.52/-0.45	0.69/0.86	-1.82/-2.74	-3.49/-2.19	-1.53/-2.29	-2.95/-0.69	-1.1/-3.08	-3.61/-4.34	-2/-2.29	-3.32/-3.02	-4.28/-4.17	-1.76/-1.16	-1.51/-3.64	-4.68/-4.61	-2.89/-3.19	-2.25/-2.06	-2.31/-2.27	-1.25/-3.07	-7.94/-12.39	-11.87/-5.76	-3.46/-1.4	-1.5/-2.55	-1.01/0.11
Θ(82.5°)	0.24/-0.33	0.44/-0.73	-0.64/-1.31	-4.22/-5.02	-4.5/-2.47	-2.44/-3.2	-2.8/-1.24	-2.08/-3.17	-3.22/-4.21	-2.19/-2.86	-2.98/-2.94	-4.92/-5.73	-2.84/-2.04	-1.4/-3.32	-5.53/-3.33	-4.864/-4.57	-2.25/-1.39	-1.15/-2.48	-0.37/-3.23	-5.63/-10.16	-8.67/-5.47	-3.17/-1.12	-2.59/-4.35	-1.05/-0.37
Θ(90°)	-2.36/-3.41	-0.35/-1.18	-1.8/-3.78	-7.81/-8.84	-6.1/-2.62	-3.17/-4.74	-4.19/-3.14	-3.04/-4.06	-3.71/-4.52	-2.39/-3.19	-3.35/-2.51	-4.8/-6.58	-4.1/-2.5	-1.3/-2.83	-5.86/-2.92	-5.77/-5.77	-3.57/-1.96	-1.55/-2.21	-0.03/-2.89	-4.31/-10.12	-6.52/-6.45	-5.14/-3.4	-5.06/-5.86	-1.01/-2.37
Θ(97.5°)	-4.37/-6.27	-1.8/-3.73	-4.57/-5.21	-8.86/-11.6	-7.99/-2.96	-4.13/-6.69	-5.79/-3.17	-3.76/-5.14	-4.31/-5.04	-3.53/-4.69	-4.31/-3.99	-5.39/-6.34	-4.57/-1.78	-1.57/-2.87	-5.84/-2.96</									



Radiated Composite Gain Data_2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(97.5°)	-5.56/-3.22	-11.31/6.06	-12.41/-3.7	-9.2/-6.41	-5.42/-6.38	-1.62/-3.27	-4.05/-1.83	-2.09/-2.98	-1.02/-1.69	-1.22/-1.03	-1.96/-2.56	-2.75/-4.35	-6.55/-6.03	-8.32/-11.33	-11.78/-14.92	-13.32/-13.55	-15.47/-12.3	-8.86/-6.3	-10.04/-4.19	-1.32/-0.51	-0.57/-2.67	-4.07/-6.8	-3.71/-1.95	-4.34/-2.38
Θ(105°)	-8.73/-7.62	-10.45/-4.86	-12.06/-4.08	-13.28/-5.54	-8.33/-4.28	-4.12/-2.84	-4.32/-1.87	-3.78/-4.11	-2.63/-2.07	-2.94/-3.37	-2.94/-3.05	-3.77/-5.11	-6.01/-5.52	-8.96/-8.81	-11.37/-11.32	-10.31/-11.11	-12.44/-11.18	-11.44/-7.41	-10.15/-8.43	-8.55/-3.35	-3.92/-6.46	-4.63/-6.41	-6.05/-3.43	-5.87/-3.45
Θ(112.5°)	-10.79/-10.51	-12.65/-5.87	-10.15/-6.01	-13.87/-5.46	-10.53/-3.95	-7.21/-4.82	-7.19/-4.72	-5.93/-2.97	-3.74/-3.89	-3.85/-5.41	-4.33/-3.66	-5.14/-7.15	-5.17/-5.26	-7.58/-10.18	-9.17/-11.32	-9.91/-9.68	-14.42/-11.77	-12.29/-9.58	-12.25/-8.25	-11.34/-2.25	-4.76/-4.74	-5.71/-3.16	-6.58/-5.42	-6.74/-5.71
Θ(120°)	-16.07/-9.03	-10.08/-6.67	-11.52/-9.37	-14.08/-7.16	-7.19/-8	-4.96/-3.55	-7.12/-5.89	-3.91/-5.59	-5.67/-5.05	-6.12/-6.15	-5.61/-5.98	-6.77/-5.86	-4.98/-3.38	-7.68/-12.24	-9.6/-13.96	-9.16/-10.5	-11.83/-9.04	-8.97/-10.47	-5.1/-9.55	-10.49/-4.27	-4.21/-10.34	-7.6/-3.28	-9.97/-8.39	-11.37/-11.85
Θ(127.5°)	-15.59/-11.56	-8.31/-11.77	-14.84/-12.86	-11.75/-9.42	-7.77/-5.36	-7.42/-6.12	-6.47/-4.74	-5.38/-6.02	-6.44/-7.62	-5.55/-6.07	-7.71/-9.01	-8.87/-7.1	-6.21/-5.62	-10.45/-7.83	-8.73/-6.29	-6.19/-8.91	-11.13/-11.12	-6.43/-9.93	-8.32/-8	-13.14/-2.1	-3.51/-15.52	-4.3/-4.71	-14.76/-7.5	-11.41/-13.51
Θ(135°)	-13.3/-14.2	-11.38/-12.16	-15.78/-13.95	-12.44/-12	-9.62/-7.06	-8.64/-7.28	-7.4/-7.71	-5.2/-4.78	-6.04/-6.44	-6.97/-8.12	-9.82/-8.81	-10.17/-9.09	-10.51/-8.59	-9.32/-5.63	-6.14/-5.32	-9.2/-8.65	-11.88/-13.85	-5.45/-9.85	-11.16/-6.95	-10.21/-5.25	-4.48/-7.05	-14.12/-8.57	-11.49/-12.08	-10.38/-10.27
Θ(142.5°)	-13.5/-10.73	-11.37/-13.46	-14.48/-11.4	-9.12/-10.64	-10.02/-9.58	-10.74/-9.3	-8.29/-9.54	-6.84/-5.64	-5.81/-7.52	-6.86/-7.05	-8.24/-8.02	-9.23/-9.25	-9.88/-8.08	-10.68/-10.41	-9.45/-8.74	-8.72/-12.41	-10.58/-10.78	-6.02/-11.97	-7.91/-10.84	-11.82/-7.76	-10.76/-15.16	-11.93/-14.32	-13.34/-10.35	-14.9/-15.06
Θ(150°)	-12.65/-11.84	-10.82/-10.47	-12.08/-12.31	-10.33/-11.01	-13.99/-14.9	-12.8/-8.39	-9.09/-10.83	-11.84/-11.28	-9.9/-9.5	-10.16/-10.21	-9.02/-8.47	-9/-8.75	-10.14/-9.08	-12.48/-11.45	-8.72/-8.61	-9.96/-8.01	-7.45/-4.94	-6.41/-12.56	-13.45/-12.47	-13.26/-11.35	-9.94/-14.98	-9.66/-8.9	-10.51/-11.92	-10.25/-9.08
Θ(157.5°)	-12.32/-13.58	-11.7/-12.54	-12.7/-12.43	-11.8/-13.34	-13.98/-13.09	-12.63/-12.76	-13.5/-14.66	-13.77/-13.01	-11.81/-10	-9.38/-9.2	-7.53/-6.63	-7.73/-10.82	-12.37/-12.86	-10.27/-8.86	-11.4/-12.53	-11.86/-10.74	-10.03/-7.79	-9.11/-11.33	-11.94/-11.3	-11.2/-12.04	-13.13/-13.65	-12.28/-10.33	-10.59/-10.63	-10.23/-10.36
Θ(165°)	-15.5/-15.88	-15.68/-14.75	-15.28/-15.47	-14.88/-14.38	-13.17/-12.52	-12.55/-12.19	-13.19/-13.37	-12.49/-10.65	-9.63/-10.54	-12.84/-13.05	-11.46/-11.68	-13.16/-14.23	-14.06/-12.46	-14.35/-13.96	-12.92/-13.54	-13/-8.91	-6.9/-6.42	-7.2/-9.18	-11.13/-11.54	-14.2/-15.22	-14.76/-14.97	-14.48/-12.81	-12.06/-11.89	-14.56/-15.89
Θ(172.5°)	-15.24/-15.36	-15.36/-13.49	-11.72/-11.51	-12.17/-12.44	-11.52/-10.99	-10.91/-9.85	-9.53/-9.33	-9.41/-9.79	-9.97/-9.96	-10.95/-11.82	-12.4/-12.69	-13.79/-15.22	-15.29/-14.01	-12.82/-11.45	-9.77/-9.54	-9.98/-10.17	-9.78/-9.18	-9.55/-11.53	-13.25/-13.93	-14.84/-15.18	-14.85/-13.87	-12.8/-10.8	-11.71/-13.29	-15.77/-14.77
Θ(180°)	-15.09/-15.3	-15.42/-14	-13.69/-12.88	-12.96/-11.6	-10.73/-10.86	-11.68/-11.35	-12.99/-14.1	-13.47/-13.8	-14.32/-13.85	-14.11/-14.05	-14.73/-14.17	-13.85/-13.17	-12.43/-11.81	-12.71/-13.93	-14.7/-14.73	-14.22/-14.98	-15.38/-15.68	-15.08/-15.68	-13.92/-14.11	-13.92/-14.03	-14.19/-13.63	-13.29/-13.8	-14.96/-15.65	-15.17/-15.11
Freq(Hz)	6.995G/Pol.	Theta-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-1.02/-0.35	0.71/0.91	1/1.46	1.82/1.83	1.89/1.59	1.08/0.31	-0.02/-0.85	-1.61/-2.87	-4.68/-6.76	-7.33/-6.81	-4.93/-3.56	-2.06/-1.32	-0.77/-0.11	0.61/1.25	1.4/1.37	1.43/1.47	1.57/1.44	1.13/0.63	-0.1/-0.89	-1.79/-2.92	-4.58/-6.72	-7.03/-5.68	-4.34/-3.53	-2.13/-1.14
Θ(7.5°)	-2.13/-1.33	0.05/0.72	1.22/1.65	1.87/2.25	2.48/2.23	1.59/1.01	0.2/-0.54	-2.2/-4	-6.63/-7.01	-5.48/-3.12	-1.54/-0.32	0.4/0.72	1.06/1.46	1.79/1.73	1.71/1.69	1.68/1.48	1.27/1.07	0.55/-0.1	-0.81/-1.92	-3.15/-4.61	-6.48/-8.76	-9.08/-7.63	-6.07/-5.13	-3.46/-2.38
Θ(15°)	-1.5/-1.45	-1.34/-0.1	1.33/2.17	2.59/2.91	3.04/2.69	2.37/1.88	1.27/0.43	-0.96/-2.58	-4.07/-5.68	-4.94/-2.96	-1.52/-0.77	-0.13/0.34	0.84/1.04	1.39/1.89	2.33/2.54	2.43/2.34	2.57/2.37	1.63/0.36	-0.99/-2.12	-3.64/-5.14	-6.81/-9.47	-13.67/-13	-9.16/-6.16	-3.73/-1.89
Θ(22.5°)	-1.74/-1.41	-1.74/-1.12	-0.08/1.04	2.05/2.49	2.47/2.52	2.01/0.91	-0.29/-1.26	-1.99/-3	-4.38/-6.37	-6.97/-6.72	-5.81/-5.19	-3.55/-1.41	0.29/1.6	2.34/2.89	3/2.86	2.84/2.81	2.76/2.6	2.01/0.98	-0.33/-1.73	-3.05/-4.67	-6.51/-8.6	-10.18/-9.57	-7.89/-5.51	-3.6/-2.78
Θ(30°)	-3.71/-2.91	-2.4/-1.27	0.52/1.11	1.17/1	1.31/1.32	0.98/0.31	-1.04/-1.93	-2.24/-3.05	-4.62/-7.45	-9.38/-7.73	-4.71/-2.83	-2.25/-1.38	0.26/1.85	2.85/3.17	3.82/3.84	3.46/2.06	0.85/0.85	1.05/0.7	-0.18/-1.03	-2.1/-3.48	-7.18/-9.79	-7.83/-5.74	-6.33/-9.08	-6.19/-4.33
Θ(37.5°)	-0.94/-0.13	0.48/1.09	1.67/1.62	0.49/-0.49	-0.26/0.54	0.97/0.52	-0.45/-0.93	-1.87/-3.19	-5.43/-6.58	-4.99/-3.74	-2.83/-2.44	-1.83/-1.52	-0.33/1.11	2/1.95	2.88/2.96	2.56/0.99	0.8/0.45	0.77/-0.47	-3.29/-5.31	-5.5/-6.9	-9.57/-9.18	-6.41/-6.06	-5.87/-4.68	-2.98/-1.51
Θ(45°)	-1.62/-0.12	1.09/1.15	1.85/2.15	1.36/-0.36	-0.81/-0.04	0.45/0.08	0.45/0.17	-1.91/-3.47	-4.42/-3.24	-2.05/-2	-2.68/-2.91	-2.02/-1.17	-0.6/1.22	1.87/1.43	0.64/0.92	1.13/0.52	0.05/-0.47	-0.08/-1.8	-3.32/-2.2	-1.92/-3.41	-6.47/-6.76	-6.28/-6.71	-5.74/-3.94	-2.78/-2.95
Θ(52.5°)	-1.13/-0.04	0.57/1.04	1.64/2.42	1.78/0.21	-0.85/-1.41	-1.81/-1.51	0.41/0.49	-2.54/-5.55	-3.55/-1.67	-2.53/-3.08	-2.1/-1.4	-1.38/-1.02	-0.97/0.53	1.23/0.64	-0.51/-1.33	-2.2/-0.54	-1.02/-1.14	-0.67/-2.64	-3.08/-0.68	-0.86/-3.29	-8.26/-9.63	-6.31/-4.52	-3.28/-4.33	-4.01/-1.62
Θ(60°)	1.16/1.26	1.81/1.69	1.81/2.42	2.17/1.03	-0.13/-0.99	-2.15/-2.93	-0.92/-0.6	-3.77/-8.17	-3.15/-1.62	-3.8/-4.55	-1.45/-0.26	-0.92/-1.05	-1.85/-0.52	0.75/1.06	-0.5/-2.03	-4.1/-3.61	-4.39/-1.96	-1.15/-4.47	-5.1/-0.73	-1.32/-4.99	-9.64/-12.19	-8.11/-3.12	-1.7/-2.56	-1.82/0.41
Θ(67.5°)	2/1.7	1.52/1.13	2.15/2.06	1.44/0.91	-0.24/-0.82	-2.04/-2.69	-1.04/-1.1	-4.19/-6.94	-2.39/-0.91	-5.23/-5.53	-1.24/-0.46	-1.71/-1.15	-1.37/-0.24	0.09/0.97	-0.45/-1.72	-4.41/-5	-5.35/-1.36	-1.63/-4.47	-4.78/-1.59	-3.17/-7.88	-12.8/-8.89	-4.19/-1.06	-1.11/-1.11	-1.46/0.37
Θ(75°)	2/0.35	0.29/0.11	1.57/1.16	-0.12/-0.68	-1.93/-2.04	-3.29/-2.64	-1.65/-1.85	-3.39/-5.97	-2.97/-1.48	-3.65/-4.83	-2.79/-0.94	-1.38/-1.77	-2.12/-0.85	-0.44/0.91	-0.81/-2.68	-3.33/-6.41	-5.23/-0.85	-2.16/-3.31	-3.13/-0.66	-2.17/-10	-13.19/-8.02	-2.54/-0.14	0.18/-0.07	-1.77/-0.42
Θ(82.5°)	1.66/-0.74	-0.93/-1.65	0.71/-0.78	-2.68/-3.34	-3.68/-3.96	-3.01/-2.72	-3.04/-3.12	-3.92/-4.84	-3.17/-2.41	-3.44/-3.92	-2.87/-1.96	-2.91/-2.51	-2.78/-2.04	-0.84/-0.16	-1.07/-3.62	-3.82/-6.56	-3.86/-0.51	-0.32/-1.68	-1.89/-0	-1.14/-7.71	-11.09/-6.76	-1.86/0.57	-0.14/-1.68	-2.11/-1.66
Θ(90°)	0.02/-2.6	-1.32/-1.87	-1.02/-1.86	-5.29/-6.76	-3.58/-6.12	-3.31/-4.88	-3.9/-3.95	-5.12/-4.92	-3.22/-3.9	-4.67/-2.82	-3.45/-2.62	-3.21/-4.19	-4.29/-2.34	-0.94/-0.61	-2.63/-3.6	-3.87/-6.86	-3.61/-1.04	-0.8/-2.25	-2.59/-0.96	-1.14/-7.55	-7.78/-8.41	-3.48/-0.76	-2.14/-5.17	-2.33/-1.73
Θ(97.5°)	-2.82/-4.7	-3.39/-2.82	-2.34/-3.98	-8.27/-10.84	-4.83/-6.58	-6.14/-6.48	-4.45/-4.56	-6.28/-4.96	-4.21/-5.17	-6.49/-2.58	-2.89/-1.94	-3.06/-3.99	-3.89/-2.43	-0.75/-0.78	-3.97/-2.73	-3.14/-7.33	-6.46/-3.63	-4.53/-4.65	-3.55/-3.64	-3.07/-9.63	-7.89/-7.94	-7.9/-5.55	-6.31/-8.36	-2.58/-2.69
Θ(105°)	-6.67/-4.81	-2.69/-4.32	-4.69/-5.88	-8.39/-7.25	-7.33/-6.88	-9.78/-6.55	-4.44/-3.85	-7.03/-5.46	-4.63/-5.08	-7.97/-3.48	-3.38/-3.15	-2.69/-3.04	-3.1/-2.72	-1.34/-1.35	-2.33/-3.36	-4.48/-7.26	-8.33/-8.65	-6.9/-6.88	-9.86/-9.31	-5.07/-7.7	-12.31/-8.68	-9.24/-9.38	-11.24/-7.89	-4.9/-6.55
Θ(112.5°)	-6.49/-2.78	-2.63/-5.22	-4.39/-5.12	-8.83/-6.72	-8.94/-7.52	-9.88/-10.43	-6.4/-7.24	-14.6/-9.74	-4.64/-6.67	-9.04/-4.45	-4.06/-3.58	-4.46/-2.37	-3.42/-3.88	-1.41/-2.85	-3.49/-4.7	-5.31/-9.4	-11.92/-8.44	-6.73/-6.51	-8.68/-9.44	-3.44/-7.06	-15.56/-5.92	-7.66/-9.81	-8.76/-6.9	-6.97/-7.25
Θ(120°)	-6.87/-4.77	-5.03/-6.95	-5.31/-6.69	-12.07/-7.67	-6.19/-13.03	-9.43/-11.84	-10.93/-7.27	-10.02/-10.89	-6.43/-5.63	-7.45/-6.71	-4.89/-4.97	-6.41/-3.59	-3.39/-5.42	-1.81/-3.68	-3.48/-7.25	-4.96/-6.34	-15.37/-7.66	-9.59/-10.16	-5.73/-7.1	-4.01/-3.86	-15.43/-10.7	-7.64/-11.3	-5.39/-6.64	-7.17/-7.24
Θ(127.5°)	-7.24/-7.26	-8.25/-8.95	-9.42/-11.8	-15.15/-12.99	-10.68/-10.4	-14.9/-11.25	-10.08/-8.31	-9.83/-10.98	-8.08/-7.64	-9.7/-7.25	-5.31/-6.37	-7.45/-9.57	-5.34/-5.68	-5.26/-5.8	-4.65/-5.94	-4.1/-5.39	-14.32/-12.84	-9.66/-12.17	-8.07/-6.81	-7.95/-7.87	-14.45/-14.76	-15.61/-15.4	-8.99/-12.17	-9.64/-6.76
Θ(135°)	-6.72/-8.07	-8.21/-11.54	-10.01/-9.4	-10.94/-13.67	-12.19/-12.89	-12.55/-13.95	-14.72/-12.98	-11.89/-11.18	-12/-8.04	-6.69/-8.46	-8.05/-6.36	-7.63/-7.97	-9.15/-6.15	-5.39/-4.55	-3.2/-5.42	-11.78/-5.92	-13.25/-10.1	-11.9/-14.42	-7.91/-6.86	-7.05/-5.73	-14.8/-13.8	-13.86/-8.69	-12.82/-10.33	-11.67/-8.82
Θ(142.5°)	-7.73/-7.84	-7.42/-8.19	-11.85/-12.83	-10.92/-10.69	-12.52/-10.88	-11.15/-13.83	-14.53/-12.37	-11.46/-12.17	-11.32/-7.93	-6.79/-6.98	-10.94/-9.74	-6.47/-7.41	-5.38/-6.76	-6.61/-7.66	-8.82/-8.89	-14.89/-10.35	-9.17/-13.41	-10.54/-15.54	-11.11/-15.19	-9.85/-9	-8.27/-13.38	-13.87/-10.43	-13.55/-10.85	-6.72/-7.39
Θ(150°)	-12.88/-12.42	-15.89/-14.6	-12.61/-12.83	-15.17/-12.07	-11.78/-11.28	-13.72/-15.88	-15.03/-13.43	-11.33/-10.51	-12.75/-11.99</															



Sporton International Inc. Hsinchu Laboratory



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(22.5°)	-0.72/-1.7	-2.91/-4.66	-6.03/-5.92	-6.19/-6.22	-6.18/-7.04	-8.4/-9.49	-10.29/-8.83	-6.22/-4.69	-3.9/-3.85	-4.18/-3.97	-3.15/-1.08	-0.3/-0.14	-0.3/-0.58	-0.95/-1.2	-1.56/-1.86	-2.47/-3.17	-4.24/-3.54	-7.07/-8.34	-9/-9.04	-8.47/-7.99	-6.57/-5.81	-4.37/-2.66	-1.28/-0.43	-0.07/-0.09
Θ(30°)	-2.69/-3.28	-3.2/-3.5	-4.27/-5.24	-6.15/-6.22	-6.51/-6.24	-7.42/-9.62	-13.73/-11.81	-8.11/-5.22	-4.08/-4.16	-4.54/-3.86	-2.69/-1.58	-0.85/-0.27	-0.16/-0.74	-1.59/-2.79	-3.81/-3.65	-3.2/-2.88	-3.19/-3.54	-4.47/-5.64	-6.41/-6.61	-6.34/-6.27	-6.45/-7.53	-8.15/-6.25	-3.1/-0.14	-0.74/-1.38
Θ(142.5°)	-2.87/-3.01	-2.24/-1.67	-1.67/-2.26	-4.27/-2.26	-3.76/-5.47	-5.84/-7.28	-8.89/-10.92	-10/-8.2	-7.38/-6	-5/-5.15	-4.31/-3.05	-2.99/-1.89	-1.75/-1.3	-0.79/-0.69	-1.63/-4.07	-5.58/-5.62	-5.22/-5.42	-5.46/-5.04	-4.6/-4.66	-4.58/-3.32	-1.92/-2.15	-4.47/-21	-8.35/-8.04	-5.54/-3.32
Θ(45°)	-3.21/-1.35	-0.59/-0.96	-1.21/-1.12	-2.2/-5.01	-6.72/-8.56	-11.5/-10.95	-8.47/-8.42	-7.28/-5.61	-4.89/-5.87	-4.84/-3.29	-2.74/-3.23	-2.36/-1.5	-1.09/-0.87	-1.18/-2.56	-4.05/-5.56	-6.81/-6.71	-6.28/-5.6	-5.56/-6.67	-7.13/-5.46	-3.53/-2.33	-2.63/-4.61	-7.24/-7.82	-7.78/-6.82	-5.48/-4.74
Θ(52.5°)	-2/-0.17	0.1/-0.83	-1.8/-2.25	-3.44/-6.61	-10.25/-13.65	-13.08/-19.6	-6.97/-9.26	-8.73/-6.4	-4.97/-3.81	-2.53/-2.35	-2.97/-3.92	-3.4/-2.33	-2.06/-1.81	-2.04/-3.38	-5.56/-8.69	-11.37/-10.99	-8.62/-7.68	-6.05/-4.02	-3.75/-3.19	-2.12/-3.05	-5.51/-8.98	-5.44/-5.59	-5.51/-6.66	-8.25/-5.49
Θ(60°)	-1.81/-0.55	-1.22/-2.47	-3.99/-3.74	-3.84/-6.83	-10.79/-15.62	-13.07/-5.28	-5.06/-6.78	-6.49/-5.68	-5.48/-4.96	-3.37/-2.44	-2.99/-3.91	-3.47/-1.85	-2.62/-2.56	-2.36/-2.77	-3.95/-6.22	-8.17/-8.56	-8.17/-7.77	-8.58/-7.72	-7.35/-4.41	-2.09/-2.84	-5.18/-6.89	-8.31/-8.57	-7.11/-6.29	-5.55/-5.36
Θ(67.5°)	-2.9/-1.8	-3.58/-5.17	-5.65/-4.95	-5.31/-8.84	-13.03/-19.01	-8.27/-4.52	-5.62/-7.58	-6.63/-6.06	-5.38/-4.88	-3.72/-2.62	-3.33/-4.71	-4.32/-3.67	-3.22/-3.2	-2.2/-3.12	-6.12/-10.84	-17.93/-13.82	9.41/-10.45	-8.98/-6.19	-5.33/-3.93	-1.6/-3	-5.78/-7.01	-9.16/-10.43	-8.98/-8.96	-6.76/-3.38
Θ(75°)	-3.86/-4.9	-6.04/-7.07	-6.96/-7.55	-5.85/-9.9	-14.15/-14.38	-6.97/-4.39	-8.43/-7.6	-5.03/-4.53	-4.87/-5.85	-5.99/-4.94	-5.15/-5.36	-5.65/-6.42	-3.86/-4.08	-3.05/-4	-6.67/-12.94	-17.99/-13.04	-10.99/-10.08	-12.34/-7.74	-7.28/-3.33	-1.41/-3.38	-5.54/-6.67	-18.66/-14.48	-10.36/-11.06	-5.91/-3.79
Θ(82.5°)	-6.79/-11.39	-14.96/-8.04	-4.55/-7.01	-7.75/-11.71	-10.53/-10.49	-6.48/-4.5	-7.39/-8.1	-6.05/-6.3	-5.46/-6.44	-5.92/-4.35	-4.52/-4.91	-5.86/-5.13	-6/-5.36	-4.16/-5.02	-8.2/-16.21	-16.75/-14.78	-18.75/-12.45	-12.19/-10.07	-11.48/-5.34	-1.69/-4.26	-4.22/-8.3	-19.46/-18.54	-14.91/-17.49	-4.89/-2.18
Θ(90°)	-6.78/-18.75	-17.77/-8.91	-4.44/-6.57	-8.45/-12.66	-10.37/-8.23	-6.33/-4.69	-8.57/-8.27	-5.93/-6.38	-6.35/-7.22	-8.2/-6.96	-6.34/-6.57	-7.72/-6.94	-7.26/-6.13	-4.96/-6.36	-9.32/-14.6	-10.77/-8.95	-19.3/-13.84	-18.61/-9.36	-11.84/-7.09	-4.57/-6.43	-4.83/-9.26	-11.2/-18.07	-13.22/-18.83	-6.79/-2.66
Θ(97.5°)	-9.37/-12.77	-10/-8.9	-4.55/-7.63	-10.39/-13.22	-7.79/-5.52	-5.35/-6.42	-9.37/-11.9	-5.27/-7.06	-7.38/-9.62	-10.71/-8.72	-7.09/-6.56	-7.52/-7.96	-8.62/-6.04	-6.38/-6.88	-10.92/-15.11	-9.87/-8.93	-12.23/-8.49	-17.48/-18.49	-14.26/-8.97	-6.11/-8.08	-6.01/-10.76	-8.1/-12.74	-9.66/-18.44	-7.12/-5.38
Θ(105°)	-8.85/-9.01	-7.9/-7.76	-6.39/-7.97	-11.43/-12.58	-6.21/-5.92	-6.97/-6	-8.38/-6.97	-5.75/-7.47	-8.1/-9.55	-10.34/-10.25	-8.91/-7.99	-9.93/-11.81	-10.37/-9.5	-9.6/-8.85	-10.04/-8.94	-7.9/-9.22	-13.15/-12.94	-10.85/-9.05	-9.4/-7.86	-5.57/-8.1	-7.72/-10.3	-7.78/-10.96	-10.08/-5.01	
Θ(112.5°)	-16.12/-7.91	-5.7/-8.55	-7.36/-10.66	-14.91/-9.3	-5.91/-5.04	-5.76/-7.93	-9.57/-8.14	-6.9/-8.94	-9.11/-9.47	-9.93/-11.64	-9.23/-11.93	-12.27/-15.65	-14.18/-9	-8.33/-8.62	-11.13/-9.2	-7.7/-6.9	-9.61/-11.5	-7.98/-7.12	-7.1/-10.51	-9.87/-11.84	-7.03/-5.84	-6.36/-8.83	-5.27/-11.13	-12.6/-13.57
Θ(120°)	-15.39/-11.75	-1.17/-11.93	-15.1/-15.56	-9.46/-5.65	-5.79/-6.37	-7.01/-6.91	-9.94/-6.31	-5.82/-8.67	-9.96/-9.13	-13.56/-14.32	-11.75/-11.84	-11.12/-11.84	-12.05/-10.57	-7.72/-10.48	-11.56/-6.92	-5.38/-8.05	-6.03/-7.7	-7.5/-6.34	-8.09/-7.65	-7.13/-4.98	-6.64/-12.33	-5.88/-10.3	-18.59/-15.91	
Θ(127.5°)	-11.22/-15.99	-15.33/-14.57	-13.73/-13.71	-9.49/-6.51	-5.61/-8.44	-8.55/-8.38	-10.82/-11.89	-4.89/-9.97	-9.66/-11.6	-10.71/-12.66	-16.68/-12.55	-12.95/-10.1	-12.02/-11.89	-11.03/-10.19	-6.96/-4.22	-6.61/-14.07	-10.16/-6.12	-3.44/-3.4	-5.57/-8.05	-9.4/-7.68	-6.5/-8.1	-7.28/-13.9	-9.44/-8.97	-18.66/-12.21
Θ(135°)	-14.9/-18.2	-18.23/-15.89	-13.33/-13.86	-10.18/-7.53	-7.64/-8.08	-8.28/-7.87	-6.86/-6.47	-6.51/-8.6	-10.09/-9.76	-11.98/-17.58	-15.39/-18.11	-18.38/-13.13	-14.52/-13.3	-13.33/-17.42	-7.25/-7.29	-8.51/-12.93	-8.47/-8.32	-6.25/-4.12	-3.56/-7.71	-10.9/-8.59	-6.32/-10.3	-9.11/-17.94	-17.14/-10.09	-8.9/-11.89
Θ(142.5°)	-18.91/-16.31	-11.45/-10.69	-15.62/-15.16	-14.03/-14.12	-17.82/-12.99	-8.19/-7.14	-9.67/-12.58	-11.49/-7.92	-8.99/-10.1	-11.53/-12.19	-18.59/-16.85	-15.15/-17.68	-18.48/-15.27	-15.88/-18.25	-16.13/-10	-9.43/-10.64	-8.17/-5.61	-4.14/-5.69	-9.25/-15.49	-12.54/-11.16	-12.19/-18.78	-14.22/-18.87	-18.1/-18.14	-12.01/-14.65
Θ(150°)	-17.49/-17.9	-16.55/-13.83	-12.34/-14.34	-16.57/-18.24	-18.54/-18.39	-13.81/-11.15	-11.66/-12.5	-17.14/-12.75	-15.25/-17.53	-17.5/-18.75	-19.1/-17.63	-18.42/-17.66	-18.02/-13.26	-10.29/-9.22	-12.59/-9.66	-9.39/-11.9	-9.5/-8.61	-12.1/-18.2	-7.95/-8.68	-9.36/-15.29	-17.67/-18.08	-14.79/-16.75	-19.16/-16.89	
Θ(157.5°)	-16.79/-18.75	-18.49/-16.41	-15.76/-17.5	-18.83/-17.95	-17.13/-18.09	-18.75/-18.39	-17.81/-18.6	-15.05/-12.36	-11.12/-11.27	-12.65/-15.16	-17.75/-18.79	-17.69/-18.86	-17.12/-18.67	-18.04/-18.49	-18.28/-16.27	-12.63/-10.36	-9.72/-9	-7.51/-6.82	-7.21/-9.16	-10.42/-12.27	-16.1/-18.61	-18.49/-17.95	-19.04/-18.75	-18.07/-17.96
Θ(165°)	-18.85/-17.77	-18.59/-18.21	-17.97/-18.87	-18.06/-18.23	-19/-18.54	-18.74/-16.65	-14.91/-13.95	-13.43/-12.58	-13.07/-14.02	-16.02/-17.13	-18.84/-18.22	-17.73/-18.48	-18.02/-18.31	-17.06/-16.75	-15.24/-12.96	-10.33/-8.4	-7.68/-8.71	-8.35/-9.93	-12.71/-17.66	-18.29/-16.45	-17.39/-16.46	-15.4/-16.07	-17.01/-18.53	-18.48/-18.53
Θ(172.5°)	-19.37/-18.51	-19.38/-18.91	-17.98/-18.72	-18.5/-17.47	-17.24/-16.48	-14.26/-13.6	-13.42/-13.13	-12.15/-11.25	-11.08/-10.84	-10.44/-10.5	-11.99/-14.91	-18.63/-17.9	-18.19/-17.96	-19.08/-17.3	-13.31/-11.55	-10.99/-10.96	-11.47/-11.72	-12.81/-15.91	-17.74/-17.31	-18.81/-18.88	-18.43/-18.23	-18.05/-18.73	-18.24/-19.09	-18.39/-17.68
Θ(180°)	-18.68/-17.53	-14.34/-14.37	-14.32/-13.67	-12.53/-11	-10.16/-9.69	-8.95/-8.71	-9.24/-9.66	-10.45/-11.05	-12.18/-13.11	-14.15/-15.31	-17.27/-17.34	-18.41/-17.51	-17.92/-17.74	-18.28/-16.11	-14.19/-14.2	-15.33/-15.27	-14.91/-14.36	-14.95/-15.92	-16.73/-15.84	-14.29/-14.17	-15.1/-15.77	-16.51/-17.45	-18.48/-17.83	-18.62/-18.22
Freq(Hz)	5.30Ppl	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°)	-6.58/-6.09	-5.88/-6.45	-6.61/-5.66	-4.5/-4	-4.22/-3.84	-3.76/-3.39	-3.39/-3.25	-3.44/-3.66	-3.96/-4.38	-4.84/-5.15	-5.9/-6.73	-7.35/-7.59	-7.35/-7.4	-7.45/-7.28	-6.82/-6.53	-6.39/-6.1	-5.68/-5.29	-5.03/-4.81	-4.85/-4.82	-4.85/-4.94	-5.19/-5.84	-6.49/-7.13	-7.42/-7.74	-8.28/-8.7
Θ(7.5°)	-6.39/-6.25	-5.43/-5.35	-5.67/-6.84	-3.49/-3.37	-3.79/-3.85	-3.57/-3.41	-3.29/-3.36	-3.08/-3	-3.58/-6.35	-3.21/-2.79	-3.15/-3.91	-4.78/-4.83	-4.07/-3.51	-3.33/-3.53	-3.67/-3.3	-3.66/-3.1	-2.68/-2.13	-1.83/-1.5	-1.47/-1.25	-1.04/-0.94	-1.22/-1.68	-2.12/-2.67	-3.28/-3.86	-4.47/-5.44
Θ(15°)	-11.15/-10.79	-8.41/-6.99	-7.62/-7.77	-5.74/-5.58	-5.58/-4.93	-3.92/-3.54	-3.94/-4.19	-4.27/-4.12	-4.24/-3.76	-2.92/-2.66	-3.07/-3.98	-5.17/-5.24	-5.02/-3.43	-3.89/-3.76	-3.99/-3.79	-3.32/-2.86	-2.61/-2.54	-2.59/-2.53	-1.86/-1.71	-1.86/-2.46	-3.05/-4.07	-5.62/-4.99	-8.75/-9.44	
Θ(22.5°)	-16.13/-16.7	-13.54/-12.74	-12.21/-10.96	-8.92/-8	-7.31/-6.55	-4.91/-4.47	-4.86/-4.64	-4.34/-4.12	-3.99/-3.99	-4.24/-5.18	-5.72/-5.95	-6.16/-5.88	-5.22/-4.49	-4.35/-4.8	-5.17/-4.81	-4/-3.38	-3.27/-3.74	-4.34/-5.26	-5.72/-5.82	-5.65/-5.2	-4.98/-6.11	-5.71/-7	-8.42/-9.46	-10.4/-12.22
Θ(30°)	-9.9/-11	-8.47/-9.47	-10.43/-10.1	-8.29/-7.31	-6.85/-6.53	-5/-4.84	-5.41/-4.37	-3.05/-2.08	-2.63/-77	-5.3/-6.5	-5.73/-77	-2.2/-1.51	-1.53/-2.25	-2.65/-3.4	-4.51/-6.01	-6.63/-6.31	-5.48/-5.1	-5.57/-7.02	-8.53/-10.01	-10.17/-8.97	-7.98/-7.14	-5.94/-4.21	-3.52/-4.46	-7.37/-9.58
Θ(37.5°)	-12.92/-15.65	-11.74/-9.3	-8.2/-6.77	-5.95/-5.8	-4.63/-3.4	-3.4/-3.35	-5.66/-4.32	-2.21/-1.17	-1.27/-2.76	-3.7/-4.5	-3.79/-2.58	-0.87/-0.56	-1.05/-1.8	-2.52/-3	-3.69/-4.7	-5.64/-6.64	-6.56/-5.15	-4.04/-5.15	-9.29/-13.51	-11.44/-10.13	-9.96/-11.66	-10.3/-6.37	-3.54/-3.21	-4.84/-8.23
Θ(45°)	-6.89/-6.83	-7.71/-6.91	-5.94/-4.82	-4.58/-4.67	-3.66/-3.51	-3.23/-3.81	-3.88/-2.88	-2.05/-1.8	-1.52/-4.71	-4.61/-3.86	-3.09/-2.9	-1.76/-1.79	-2.25/-2.84	-2.89/-2.89	-3.18/-2.85	-2.41/-2.92	-4.25/-3.7	-2.71/-4.21	-7.07/-8.19	-8.05/-9.61	-13.39/-15.73	-10.29/-5.77	-3.79/-4.35	-3.67/-4.68
Θ(52.5°)	-1.16/-1.23	-1.92/-2.96	-3.55/-2.66	-3.07/-4.27	-4.13/-3.9	-3.31/-3.51	-3.24/-2.45	-2.47/-2.19	-2.55/-3.57	-3.91/-3.8	-4.09/-3.51	-5.48/-5.3	-4.79/-3.74	-2.82/-2.56	-2.52/-1.53	-0.63/-1.06	-2.21/-2.3	-2.72/-3.98	-8.76/-9.75	-6.59/-7.72	-12.54/-15.48	-7.81/-3.82	-2.98/-3.98	-4.43/-2.54
Θ(60°)	0.140/89	0.68/-0.4	-1.26/-1.43	-3.02/-4.78	-5.22/-3.51	-2.24/-1.57	-1.21/-1.71	-1.91/-2.23	-2.99/-2.82	-2.98/-3.82	-5.64/-7.35	-6.56/-5.25	-5.17/-5.13	-2.21/-44	-0.82/-0.71	-0.81/-1.81	-2.07/-4.16	-7.43/-5.91	-5.23/-8.08	-14.84/-15.13	-6.17/-2.23	-2.03/-2.62	-1.39/-0.63	
Θ(67.5°)	-0.01/0.4	1.09/-1.19	-0.42/-1.67	-4.19/-6.23	-6.83/-4.36	-2.85/-1.99	-1.28/-1.65	-2.16/-2.33	-3.68/-3.46	-2.52/-4.25	-7.54/-7.43	-4.41/-3.88	-3.79/-4.38	-3.26/-2.08	-2.34/-1.37	-0.57/-0.65	-0.73/-1.62	-0.67/-2.34	-6.23/-5.32	-5.07/-8.79	-19.11/-13.65	-5.03/-2.07	-2.02/-1.6	0.750.88
Θ(75°)	-1.57/-1.03	0.43/-1.29	-0.34/-1.95	-5.08/-6.76	-7.17/-7.5	-3.19/-0.97	-0.38/-0.14	-1.52/-1.58	-3.07/-3.73	-2.65/-3.27	-6.03/-4.64	-2.3/-2.1												



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(67.5°)	-6.6/-2.54	-3.44/-4.62	-6.29/-8.55	-10.67/-12.3	-8.32/-4.54	-3.31/-4.91	-5.82/-3.93	-4.08/-4.13	-4.1/-5.13	-4.61/-4.84	-5.17/-5.6	-6.02/-4.2	-2.95/-2.67	-5.71/-9.25	-14.96/-17.6	-18.31/-13.28	-14.74/-10.29	-9.19/-6.22	-6.3/-5.67	-3.8/-2.22	-1.87/-7.43	-8.88/-7.76	-9.42/-10.68	-9.44/-9.52
Θ(75°)	-9.58/-1.91	-3.48/-8.94	-10.69/-8.47	-11.69/-12.72	-10.61/-4.67	-4.43/-6.51	-9.34/-6.87	-6.87/-5.12	-6.15/-6.65	-4.62/-5.05	-5.87/-6.52	-8.18/-5.53	-4.73/-4.45	-6.37/-8.35	-10.49/-17.6	-17.44/-18.91	-17.78/-14.29	-9.08/-6.13	-6.05/-4.24	-3.8/-1.39	-1.87/-9.29	-11.31/-7.4	-7.26/-8.36	-10.22/-13.06
Θ(82.5°)	-9.76/-2.14	-4.24/-18.46	-17.63/-7.09	-10.32/-9.8	-13.49/-2.86	-6.4/-6.22	-6.84/-6.8	-9.61/-6.12	-5.72/-7.05	-5.22/-6.69	-7.36/-9.52	-9.65/-6.75	-6.31/-6.62	-7.71/-8.75	-11.49/-18.09	-18.48/-15.11	-13.98/-17.2	-10.14/-8.91	-9.8/-4.91	-4.22/-2.03	-2.26/-10.46	-14.37/-9.71	-9.2/-5.84	-11.08/-8.4
Θ(90°)	-10.05/-4.23	-5.48/-10.7	-11.36/-7.41	-7.09/-9.07	-13.27/-2.75	-6.94/-8.74	-6.88/-6.66	-9.7/-7.27	-6.21/-6.88	-6.46/-7.66	-7.8/-11.41	-11.76/-7.66	-7.13/-7.82	-8.75/-8.63	-10.67/-18.26	-15.46/-18.63	-17.66/-14.87	-17.82/-13.49	-13.42/-6.19	-6.57/-4.04	-3.9/-9.56	-12.34/-9.32	-10.35/-6.16	-12.27/-4.01
Θ(97.5°)	-8.92/-6.97	-12.28/-6.47	-8.07/-6.52	-6.78/-8.29	-8.33/-5.09	-8.44/-7.3	-6.61/-7.22	-7.74/-7.99	-8.67/-7.37	-8.71/-9.64	-10.1/-13.34	-11.83/-8.23	-7.25/-9.63	-9.9/-9.38	-11.95/-16.56	-14.24/-17.64	-16.89/-12.62	-17.75/-15.8	-17.36/-8.71	-13.24/-6.3	-8.41/-5.48	-13.14/-10.42	-12.01/-8.16	-18.51/-2.66
Θ(105°)	-5.84/-9.34	-10.61/-7.35	-6.1/-7.52	-6.27/-8.64	-6.53/-7.87	-6.27/-9.5	-9.38/-8.85	-8.84/-9.36	-8.46/-11.96	-11.36/-14.68	-15.03/-11.73	-8.59/-9.18	-7.6/-9.36	-10.11/-15.4	-17.44/-12.68	-18.51/-12.62	-13.54/-10.83	-14.85/-9.3	-15.79/-9.1	-14.14/-8.6	-14.32/-9.41	-14.32/-9.41	-14.32/-9.41	-14.32/-9.41
Θ(112.5°)	-7.88/-10.55	-9.18/-5.8	-7.86/-8.18	-12.05/-8.13	-5.49/-10.59	-6.23/-9.3	-9.62/-7.09	-7.67/-8.91	-8.72/-7.08	-12.35/-15.88	-17.02/-16.06	-14.47/-12.05	-10.53/-10.56	-8.55/-12.24	-11.05/-9.14	-7.54/-13.18	-12.8/-12.57	-10.26/-4.99	-18.69/-17.02	-19.11/-5.8	-14.73/-8.24	-9.32/-8.28	-14.8/-11.19	-11.7/-5.21
Θ(120°)	-15.94/-6.37	-8.26/-9.87	-10.49/-14.76	-12.74/-7.49	-6.01/-8.44	-7.17/-8.81	-7.42/-7.92	-9.02/-8.5	-8.66/-11.35	-11.04/-17.37	-18.49/-17.88	-18.08/-15.35	-10.82/-8.66	-9.75/-11.84	-15.09/-12.3	-7.76/-8.76	-13.52/-10.34	-12.57/-6.19	-11.91/-16.1	-17.25/-5.72	-9.07/-10.14	-11.29/-4.68	-11.43/-9.62	-16.88/-13.4
Θ(127.5°)	-18.32/-12.33	-14.08/-18.8	-18.46/-15.37	-9.66/-9.79	-11.96/-10.15	-7.58/-10.43	-8.62/-7.95	-7.99/-7.65	-11.73/-11.28	-14.02/-18.41	-17.73/-18.57	-18.05/-13.06	-11.45/-10.03	-13.41/-12.42	-17.74/-6.24	-6.09/-10.7	-11.95/-7.64	-5.94/-9.38	-5.94/-12.59	-17.71/-4.69	-3.91/-9.93	-19.3/-11.76	-13.09/-11.53	-9.1/-18.55
Θ(135°)	-17.9/-17.49	-19.09/-15.62	-18.68/-17.61	-13.52/-12.83	-14.6/-8.45	-5.8/-13.36	-10.15/-7.74	-9.15/-8.9	-10.16/-13.58	-12.14/-18.77	-17.94/-18.17	-17.78/-17.94	-11.21/-8.49	-12.47/-11.45	-12.48/-9.78	-7.88/-17.34	-13.21/-8.17	-9.13/-11.05	-12.37/-13.74	-17.82/-8.43	-5.58/-9.74	-17.7/-12.45	-18.52/-12.59	-17.23/-14.21
Θ(142.5°)	-18.07/-15.45	-12.45/-11	-16.8/-17	-18.94/-18.35	-15.29/-11.24	-12.47/-11.95	-9.35/-8.78	-11.09/-11.3	-11.22/-13.26	-15.89/-18.35	-17.97/-18.89	-18.99/-17.19	-16.34/-16.35	-18.09/-16.17	-12.46/-10.22	-9.37/-9.88	-10.89/-12.77	-14.21/-18.9	-15.91/-17.9	-18.59/-17.6	-18.71/-14.62	-13.79/-12.97	-13.78/-13.37	-15.54/-14.66
Θ(150°)	-18.34/-17.95	-18.25/-15.53	-12.02/-10.98	-11.73/-11.58	-11.73/-13.66	-13.23/-13.23	-13.83/-14.89	-16.64/-17.92	-18.5/-19.26	-18.84/-18.76	-17.76/-17.29	-17.99/-18	-18.93/-18.62	-18.54/-14.29	-11.11/-9.18	-8.86/-9.61	-11.3/-13.36	-16.55/-18.74	-17.17/-18.7	-18.66/-18.77	-18.97/-18.41	-18.97/-19.04	-18.48/-18.11	-18.22/-18.07
Θ(180°)	-18.92/-17.42	-19.08/-18.94	-18.11/-15.48	-16.3/-16.42	-15.91/-16.7	-16.91/-13.8	-12.42/-12.17	-13.18/-14.32	-14.88/-15.33	-15.59/-15.95	-17.03/-18.72	-19/-18.42	-18.72/-17.63	-18.27/-17.98	-17.55/-18.45	-18.01/-18.3	-17.88/-17.54	-19.06/-17.06	-18.09/-16.92	-16.17/-17.64	-18.38/-17.95	-17.88/-17.46	-18.95/-18.89	-18.76/-18.26
Freq(Hz)	6.475GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-10.54/-12.3	-13.03/-12.84	-12.63/-12.06	-11.02/-10.1	-9.25/-8.42	-7.31/-6.31	-5.73/-5.34	-5.24/-5.35	-5.43/-5.45	-5.7/-6.25	-6.95/-7.79	-8.55/-8.82	-9.26/-9.55	-9.87/-10.34	-10.4/-9.64	-8.74/-8.16	-8.04/-7.35	-6.75/-6.29	-6.36/-6.17	-6.27/-5.88	-5.66/-5.6	-5.91/-6.67	-7.42/-8.08	-8.09/-9.18
Θ(7.5°)	-9.15/-8.8	-10.25/-16.22	-18.71/-7.98	-16.51/-13.24	-12.05/-10.14	-7.71/-7.57	-4.5/-3.58	-3.37/-3.87	-4.29/-4.44	-5.02/-5.73	-6.44/-6.56	-5.91/-5.11	-5.16/-5.36	-5.44/-5.11	-4.66/-5.05	-5.42/-5.55	-5.51/-5.52	-5.79/-6.22	-6.95/-7.71	-8.26/-8.4	-7.9/-8.09	-11.71/-7.89	-6.83/-6.53	-7.73/-8.26
Θ(15°)	-6.14/-7.68	-11.13/-16.42	-18.18/-16.27	-13.11/-10.73	-9.15/-7.47	-6.64/-5.78	-4.58/-3.86	-3.61/-4	-4.55/-4.87	-3.57/-3.93	-3.38/-3.09	-3.2/-3.28	-3.52/-3.25	-3.52/-3.66	-3.94/-3.89	-3.57/-3.37	-3.84/-4.14	-5.17/-6.1	-7.03/-7.15	-6.84/-5.79	-5.19/-4.89	-5.07/-5.13	-5.21/-4.99	-5.3/-5.06
Θ(22.5°)	-13.17/-13.64	-17.43/-19.19	-16.54/-15.35	-12.49/-9.47	-7.56/-6.12	-5.3/-6	-5.7/-5.67	-6.83/-7.98	-6.92/-4.65	-2.68/-1.8	-1.98/-3.34	-5.09/-6.11	-5.58/-4.19	-3.4/-3.08	-2.34/-0.65	0.220/39	0.08/-0.77	-2.12/-4.03	-5.9/-6.74	-6.1/-5.36	-4.92/-5.62	-6.56/-7.1	-8.08/-10.87	-14.61/-13.99
Θ(30°)	-11.71/-12.06	-9.17/-6.72	-7.79/-8.06	-8.49/-9.4	-11.44/-9.47	-6.25/-5.15	-5.41/-6.26	-8.32/-8.47	-5.1/-3.1	-3.02/-4.43	-5.67/-6.43	-7.27/-1.74	-5.66/-5.32	-1.58/-0.75	-0.170/-9.1	0.910/55	-0.2/-0.92	-2.18/-4.52	-6.42/-6.71	-6.16/-6.59	-5.92/-6.65	-8.32/-12.9	-16.67/-18.94	-10.85/-9.34
Θ(37.5°)	-4.28/-3.91	-3.39/-3.2	-3.3/-3.21	-5.42/-8.74	-12.4/-12.16	-8.17/-6.58	-6.89/-7.87	-7.33/-6.49	-4.95/-5.08	-6.32/-5.33	-3.39/-3.16	-4.23/-3.87	-2.23/-0.71	0.430/7	0.81/06	-0.31/-1.78	-1.57/-1	-2.65/-4.99	-6.78/-8.06	-9.25/-9.77	-9.16/-6.18	-4.98/-7.91	-10.08/-7.04	-5.64/-4.91
Θ(45°)	-5.92/-4.92	-4.24/-2.96	-2.73/-1.7	-4.62/-5.63	-7.47/-9.19	-6.88/-4.97	-6.41/-5.53	-3.39/-4.16	-4.62/-5.17	-5.31/-1.96	-1.25/-2.42	-3.67/-3.78	-2.29/-0.74	0.330/95	0.890/86	-0.21/-1.98	-2.79/-1.17	-2.46/-3.93	-3.51/-4.17	-7.88/-12.25	-10.74/-7.72	-6.12/-9.78	-10.92/-7.74	-6.18/-5.06
Θ(52.5°)	-4.24/-4.84	-2.9/-1.65	-1.49/-3.17	-4.45/-3.88	-4.85/-5.24	-4.56/-4.15	-3.83/-0.94	-0.88/-2.18	-1.31/-5.19	-2.92/-0.29	-1.25/-4.4	-4.68/-4.16	-1.63/-0.91	0.31/-0.09	-0.030/-58	0.48/-1.09	-3.27/-2.17	-3.68/-3.89	-2.43/-2.91	-8.47/-14.59	-8.77/-6.4	-5.88/-6.38	-5.75/-4.29	-4.41/-3.48
Θ(60°)	1.150/-35	0.290/-03	0.68/-1.2	-3.38/-3.24	-3.59/-4.17	-3.38/-3.39	-2.280/-42	0.62/-1.47	-2.14/-3.11	-1.71/-0.61	-0.25/-3.59	-0.68/-0.38	-0.31/-2.56	-2.29/-1.58	-0.82/-0.94	-2.49/-2.04	-3.33/-5	-1.83/-2.19	-8.38/-13.63	-9.59/-6.2	-5.62/-4.89	-2.25/-0.96	-1.74/-0.66	
Θ(67.5°)	2.871/89	-0.78/-0.39	0.62/-0.67	-3.64/-4.28	-5.36/-5.13	-2.79/-2.03	-2.150/-61	-0.861/-136	-1.71/-2.1	-0.98/-1.72	-2.45/-4.01	-3.43/-3.23	-1.15/-1.34	-1.09/-3.13	-3.81/-3.75	-1.17/-0.85	-1.91/-2.7	-2.26/-2.67	-0.26/-2.02	-9.12/-14.75	-9.45/-4.27	-3.31/-2.72	-1.07/-0.35	-7.80/-6.4
Θ(75°)	3.032	1.23/-0.17	0.99/-0.2	-4.81/-4.91	-5.54/-3.95	-2.18/-2.34	-4.12/-0.3	0.64/-1.1	-1.71/-2.64	-1.28/-2.19	-3.3/-2.9	-4.52/-4.33	-1.84/-1.63	-1.21/-3.75	-4.65/-4.73	-3.24/-2.85	-1.45/-1.07	-1.15/-1.54	0.89/-1.05	-7.22/-13.05	-12.46/-4.47	-1.7/-0.28	-0.46/-1.21	0.25/-3
Θ(82.5°)	1.030/-11	0.75/-0.34	0.02/-2.2	-8.28/-5.73	-6.16/-3.32	-2.54/-2.77	-2.86/-0.06	-0.17/-1.35	-1.37/-2.41	-1.34/-2.5	-5.44/-6.34	-2.88/-2.32	-1.13/-3.3	-4.73/-2.73	-4.4/-3.2	-1.35/-0.36	0.61/-0.55	1.75/-1.41	-4.16/-9.98	-8.35/-4.38	-2.010/-5	-0.78/-2.64	1.010/58	
Θ(90°)	-1.39/-2.99	0.26/-0.74	-0.78/-4.33	-14.63/-13.79	-7.3/-2.38	-2.58/-3.99	-3.5/-0.69	-1.19/-2.35	-1.99/-2.85	-1.39/-2.34	-2.27/-1.58	-4.51/-7.08	-4.37/-2.81	-1.21/-2.3	-5.17/-2.14	-4.52/-4.3	-13.8/-0.96	0.14/-0.68	1.87/-1.04	-2.48/-9.98	-6.03/-6.06	-4.42/-2.18	-3.37/-4.54	1.05/-1
Θ(97.5°)	-3.44/-5.98	-1.2/-3.4	-3.6/-5.77	-14.49/-19.13	-9.41/-2.07	-3.08/-5.66	-4.97/-1.43	-1.98/-3.52	-2.6/-3.62	-1.73/-3.21	-2.64/-2.92	-4.81/-6.8	-5.22/-1.54	-1.13/-2.03	-5.75/-2.49	-5.1/-5.36	-6.23/-2.44	-2.74/-1.98	0.41/-2.29	-2.42/-9.73	-6.87/-7.34	-11.36/-9.88	-10.92/-6.61	-0.82/-5.17
Θ(105°)	-7.39/-7.22	-3.76/-7.4	-6.96/-5.31	-10.61/-13.3	-8.11/-5.8	-4.82/-5.57	-6.87/-5.06	-3.03/-4.06	-3.98/-4.73	-2.82/-3.1	-3.45/-4.33	-4.54/-5.68	-5.6/-2.99	-1.79/-12.3	-4.88/-3.94	-5.88/-5.43	-8.57/-5.57	-6.08/-4.42	-3.27/-6.57	-4.33/-10.12	-10.13/-7.96	-12.28/-16.54	-13.37/-6.03	-6.34/-8.43
Θ(112.5°)	-3.52/-6	-4.91/-7.63	-8.04/-7.49	-10.2/-13.45	-7.55/-6.2	-8.45/-5.37	-4.95/-4.37	-4.92/-7.8	-7.58/-5.03	-3.68/-2.72	-2.58/-5.38	-4.64/-7	-4.41/-5.22	-2.28/-4.01	-3.05/-4.32	-3.34/-7.72	-11.96/-6.72	-4.29/-4.24	-5.35/-7.34	-4.88/-9.66	-16/-9.35	-12.83/-12.53	-12.11/-6.89	-6.13/-5.96
Θ(120°)	-6.85/-7.46	-5.1/-6.75	-11.07/-11.37	-14.28/-18.74	-10.08/-7.55	-10.9/-85	-7.44/-7.85	-10.23/-11.22	-8.22/-9.66	-6.22/-9.33	-2.81/-6.2	-5.57/-8.06	-4.68/-5.53	-3.64/-4.66	-3.09/-8.26	-5.54/-9.39	-18.69/-8.12	-4.93/-7.47	-7.22/-12.32	-5.75/-9.19	-11.08/-8.12	-7.45/-12.26	-12.24/-9.56	-4.86/-6.79
Θ(127.5°)	-11.68/-11.54	-9.04/-7.95	-12.17/-15.17	-15.81/-18.71	-17.1/-10.72	-12.48/-15.8	-10.33/-8.15	-14.15/-13.67	-10.08/-9.39	-8.28/-9.57	-6.53/-6.52	-9.96/-8.74	-10.55/-5.2	-5.86/-3.61	-4.31/-9.55	-6.18/-8.02	-18.8/-15.51	-9.66/-15.52	-8.64/-12.21	-8.07/-11.28	-14.82/-18.03	-17.51/-17.84	-11.78/-14.04	-4.54/-8.25
Θ(135°)	-8.74/-8.77	-9.19/-12.42	-12.98/-11.2	-8.87/-12.75	-15.42/-10.71	-12.19/-17.64	-14.51/-14.73	-18.2/-11.61	-8.65/-8.67	-8.07/-1.88	-7.26/-7.79	-8.83/-7.92	-4.71/-3.94	-5.87/-10	-9.26/-10.46	-17.72/-17.73	-14.15/-6.3	-12.21/-14.48	-8.96/-9.34	-17.26/-14.07	-18.59/-13.3	-13.28/-14.62	-13.77/-13.52	
Θ(142.5°)	-8.05/-6.67	-7.93/-9.39	-14.18/-17.91	-13.8/-10.89	-8.74/-10.35	-13.27/-16.13	-18.77/-18.2	-18.3/-10.8																



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(120°)	-19.34/-8.52	-11.59/-6.65	-13.88/-12.62	-15.73/-8.02	-11.66/-9.11	-12.73/-8.65	-14.74/-11.48	-9.15/-11.95	-13.57/-11.68	-16.81/-17.2	-17.63/-17.37	-15.09/-10.38	-10.05/-7.19	-11.84/-15.1	-15.12/-15.36	-11.72/-10.45	-12.28/-9.1	-10.37/-14.43	-10.14/-14.97	-15.4/-3.82	-6.48/-18.95	-14.43/-5.67	-17.13/-11.99	-11.95/-12.48
Θ(127.5°)	-18.25/-12.13	-12.75/-15.74	-18.14/-17.62	-12.31/-13.43	-13.04/-9.21	-9.96/-10.47	-10.87/-8.61	-8.79/-12.49	-14.72/-16.38	-11.96/-14.93	-18.33/-18.97	-18.16/-13.83	-12.48/-9.26	-12.65/-10.58	-11.69/-8.17	-5.61/-8.58	-15.93/-11.98	-5.51/-10.85	-8.47/-7.98	-14.48/-4.22	-3.97/-17.69	-11.12/-12.37	-18.27/-11.63	-11.93/-15.83
Θ(135°)	-15.06/-17.66	-19.42/-18.04	-18.28/-18.86	-15.32/-15.46	-14.96/-9.99	-12.74/-10.15	-9.83/-10.46	-7.45/-8.29	-12.65/-14.13	-15.31/-15.39	-18.37/-17.14	-18.83/-18.28	-17.83/-12.77	-13.18/-7.55	-8.19/-6.47	-8.67/-8.65	-16.92/-17.01	-5.27/-11.27	-12.67/-10.38	-10.46/-7.74	-8.94/-10.86	-16.2/-17.64	-16.72/-12.99	-10.24/-10.14
Θ(142.5°)	-14.45/-10.69	-11.94/-14.83	-16.72/-14.45	-11.63/-12.88	-13.62/-13.33	-14.81/-11.21	-10.12/-13.9	-10.42/-9.42	-11.69/-17.21	-14.43/-12.52	-17.9/-17.89	-18.36/-18.51	-18.25/-14.6	-12.58/-11.96	-10.94/-11.84	-9.91/-14.53	-12.74/-15.7	-9.25/-13.61	-8.84/-11.08	-12.04/-9.75	-14.12/-17.67	-15.02/-17.86	-17.73/-14.22	-17.54/-18.32
Θ(150°)	-15.82/-18.67	-15.34/-12.96	-14.33/-17.14	-15.15/-13.91	-17.9/-15.66	-14.78/-8.51	-9.15/-11.25	-12.54/-13.78	-14.4/-16.11	-17.25/-18.51	-18.87/-18.6	-18.62/-17.91	-16.35/-13.81	-18.26/-18.61	-13.76/-12.79	-10.71/-11.04	-7.87/-8.45	-7.09/-16.03	-14.73/-13.6	-14.21/-11.88	-9.85/-18.01	-11.21/-11.52	-12.24/-12.18	-10.2/-8.67
Θ(157.5°)	-18.04/-18.28	-18.17/-18.42	-15.72/-14.6	-14.54/-16.68	-18.81/-16.63	-13.7/-13.56	-15.89/-18.88	-18.38/-18.66	-19.22/-17.55	-17.66/-18.42	-17.65/-16.74	-15.72/-16.83	-19.09/-14.59	-13.02/-13.02	-15.08/-13.78	-14.2/-17.84	-13.11/-10.79	-12.1/-11.45	-12.34/-11.78	-11.19/-12.88	-14.78/-17.68	-17.92/-13.52	-11.14/-10.67	-10.38/-10.02
Θ(165°)	-18.65/-19.01	-18.46/-17.95	-18.46/-18.31	-17.61/-16.16	-15.93/-15.36	-14.64/-14.29	-14.4/-14.51	-13.65/-11.85	-10.77/-11.84	-15.45/-17.46	-16.78/-18.71	-18.52/-17.08	-15.63/-15.82	-16.56/-16.06	-14.67/-15.49	-14.82/-9.34	-5.95/-5.02	-6.26/-9.6	-12.82/-13.06	-16.06/-18.79	-17.27/-18.73	-19.01/-15.99	-14.83/-15.82	-17.75/-18.91
Θ(172.5°)	-18.33/-18.71	-17.88/-14.91	-12.31/-12.85	-14.4/-15.25	-14.21/-13.19	-13.11/-10.91	-10.22/-9.57	-9.42/-9.53	-9.6/-9.99	-10.95/-12.37	-13.37/-13.76	-15.38/-17.73	-17.84/-15.92	-14.29/-11.38	-9.46/-9.07	-8.89/-10.13	-9.4/-8.48	-9.45/-12.41	-17.21/-17.82	-17.82/-18.3	-19.4/-16.98	-13.34/-11.24	-12.43/-15.13	-18.38/-18.47
Θ(180°)	-17.53/-18	-17.7/-16.23	-15.38/-14.62	-14/-11.91	-10.55/-11.04	-12.19/-11.92	-14.22/-15.65	-9.49/-12.29	-16.71/-17.55	-18.47/-17.69	-18.77/-17.51	-16.84/-15.51	-16.68/-18.39	-18/-16.44	-16.1/-18.09	-18.6/-18.97	-17.3/-19.07	-17.4/-18.53	-18.23/-18.68	-18.63/-18.16	-17.49/-18.36	-19.37/-18.53	-18.13/-18.92	
Freq(Hz)	6.995GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-0.35/-9.05	-8.61/-9.23	-10.8/-9.71	-8.19/-7.74	-7.6/-52	-6.66/-8.87	-5.98/-6	-5.57/-5.6	-6.28/-6.81	-6.52/-6.84	-7.45/-7.7	-7.6/-7.97	-8.83/-9.01	-8.22/-7.64	-8.11/-9.11	-7.14/-7.94	-6.08/-5.93	-5.55/-5.23	-5.27/-5.45	-5.87/-5.99	-5.97/-6.17	-6.45/-7.23	-7.31/-8.12	
Θ(7.5°)	-16.08/-16	-13.37/-12.22	-12.4/-10.85	-9.28/-7.66	-5.92/-4.98	-5.07/-4.71	-4.6/-4.44	-5.25/-5.43	-6.08/-5.82	-4.97/-4.38	-4.16/-4.05	-4.2/-4.78	-5.25/-5.19	-5.04/-5.54	-6.02/-6.1	-5.85/-5.88	-6/-5.74	-5.88/-5.97	-6.04/-6.42	-6.94/-7.69	-7.98/-7.84	-8.4/-9.41	-10.77/-12.29	-11.98/-14.26
Θ(15°)	-11.71/-14.49	-17.37/-15.45	-11.91/-9.76	-8.55/-6.79	-5.58/-5.46	-5.08/-5.08	-4.96/-5.18	-6.13/-6.42	-5.64/-4.73	-3.39/-3.03	-3.34/-3.36	-5.9/-7.65	-9.12/-9.44	-7.86/-5.36	-4.05/-3.71	-3.88/-3.72	-2.97/-2.76	-3.12/-4.3	-5.57/-6.65	-8.31/-9.6	-10.78/-14.27	-15.33/-17.44	-14.73/-12.59	-11.41/-10.58
Θ(22.5°)	-8.99/-10.45	-12.58/-15.18	-16.46/-13.04	-9.84/-7.42	-6.29/-5.5	-5.93/-7.66	-8.47/-7.57	-6.11/-5.22	-4.99/-5.05	-5.71/-7.01	-8.39/-11.1	-12.02/-10.07	-7.48/-4.82	-3.08/-2.01	-2.17/-2.65	-2.9/-2.68	-2.11/-1.56	-1.49/-2.22	-3.53/-5.18	-6.51/-7.5	-8.34/-10.16	-10.28/-8.86	-8.45/-8.46	-8.06/-8.53
Θ(30°)	-16.97/-18.19	-18.14/-16.65	-12.82/-11.74	-14.83/-12.75	-8.2/-7.04	-7.51/-9.07	-10.94/-8.28	-4.97/-3.63	-4.26/-6.45	-8.66/-7.6	-6.25/-5.38	-4.66/-4.07	-2.74/-1.28	-0.250/-0.48	1.010/-0.59	0.06/-1.54	-3.11/-3.12	-2.67/-2.24	-2.79/-3.74	-4.54/-4.97	-6.85/-9.21	-8.03/-7.06	-8.74/-18.06	-18.01/-16.9
Θ(37.5°)	-5.52/-5.36	-5.28/-4.69	-4.58/-6.89	-11.26/-15.81	-11.12/-7.98	-6.43/-6.48	-6.38/-4.57	-5.06/-4.8	-5.74/-5.58	-3.43/-2.2	-2.77/-4.28	-4.62/-3.74	-2.16/-0.78	-0.160/-1.1	0.811/-0.5	0.03/-1.1	-3.2/-4.78	-3.52/-4.43	-8.21/-16.09	-9.46/-9.81	-12.25/-5.92	-5.03/-5.6	-8.63/-9.1	-6.56/-5.39
Θ(45°)	-5.17/-6.63	-2.41/-2.27	-2.49/-3.73	-5.84/-11.08	-13.18/-9.95	-6.36/-5.11	-2.7/-2.44	-5.60/-5.15	-4.87/-3.6	-1.48/-1.56	-2.54/-4.73	-4.87/-3.6	-1.990/-0.1	5.010/-4.1	-1.18/-0.92	0.07/-0.34	-1.86/-3.64	-2.68/-4.85	-6.5/-4.47	-4/-5.7	-9.94/-7.63	-4.66/-6.3	-7.28/-6.32	-5.89/-6.66
Θ(52.5°)	-2.74/-2.47	-2.56/-1.99	-2.29/-2.43	-2.92/-6.09	-9.15/-8.7	-7.67/-4.87	-0.730/-2.3	-3.25/-5.92	-1.70/-4.2	-1.25/-4.16	-4.05/-3.45	-3.68/-2.83	-2.51/-0.99	0.040/-4.1	-1.51/-3.48	-3.75/-1.27	-1.65/-3.17	-3.03/-5.1	-4.91/-1.45	-2.33/-6.06	-13.48/-10.06	-5.13/-4.33	-3.56/-6.15	-6.94/-3.44
Θ(60°)	1.330/-17	-0.24/-0.23	-0.5/-0.58	-0.78/-2.91	-4.89/-5.06	-6.13/-6.11	-1.110/-26	-16.64/-7.76	-1.640/-42	-2.12/-4.44	-2.33/-1.78	-3.3/-3.15	-3.92/-1.82	-0.770/-49	-1.03/-3.17	-5.13/-4.17	-4.4/-2.62	-2.45/-6.1	-5.67/-0.62	-1.86/-7.04	-11.99/-12.82	-7.38/-2.29	-1.52/-2.67	-2.440/-17
Θ(67.5°)	3.081/-67	-0.15/-0.05	0.96/-0.21	-0.21/-1.82	-4.68/-4.25	-5.3/-5.34	-0.60/-64	-2.54/-5.69	-0.740/-25	-3.87/-4.03	-1.463/-1.78	-4.23/-2.86	-1.170/-29	-0.69/-1.96	-5.37/-4.77	-4.66/-1.32	-1.48/-3.1	-2.93/-9.52	-13.92/-8.16	-2.38/-0.69	-0.93/-0.88	-1.880/-37		
Θ(75°)	3.991/-27	-0.41/-0.78	1.32/-0.09	-0.72/-3.54	-7.14/-5.15	-7.22/-4.28	-0.790/-23	-1.48/-4.61	-1.44/-5.06	-2.62/-3.21	-1.37/-1.23	-3.41/-3.29	-2.89/-0.94	-1.130/-31	-1.47/-2.22	-2.69/-4.97	-5.21/-1.17	-1.58/-2.12	-1.99/-1.31	-0.44/-9.39	-14.27/-6.93	-0.69/-0.02	-0.53/-0.07	-2.09/-0.69
Θ(82.5°)	3.070/-03	-1.17/-2.51	0.5/-1.71	-2.82/-6.49	-8.25/-6.49	-6.58/-4.33	-2.26/-1.22	-2.21/-3.1	-1.44/-1.17	-2.45/-2.1	-1.48/-1.84	-3.39/-2.68	-2.35/-1.7	-1.71/-0.86	-1.61/-2.24	-2.36/-5.39	-4.75/-1.55	0.38/-0.68	-0.48/-1.68	-0.92/-0.35	-17.1/-5.39	-0.220/-77	0.09/-1.44	-1.77/-21
Θ(90°)	3.27/-2.83	-2.17/-2.27	-1.48/-3.15	-5.36/-8.61	-5.61/-8.03	-5.4/-6.5	-3.47/-2.33	-3.59/-3.36	-1.39/-2.03	-3.28/-1.26	-2.16/-1.87	-1.31/-3.7	-1.13/-1.4	-2.42/-1.85	-1.21/-5.83	-5.24/-2.26	-0.13/-0.83	-0.550/-95	-0.02/-9.75	-10.17/-3.1	-2.25/-2.08	-1.31/-4.32	-0.84/-2.58	
Θ(97.5°)	-3.96/-7.53	-5.48/-4.16	-3.18/-6.45	-11.28/-11.93	-4.93/-6.69	-6.35/-6.65	-3.27/-2.9	-4.89/-3.6	-2.43/-3.75	-5.15/-0.96	-2.59/-1.67	-2.63/-3.72	-3.83/-2.33	-1.28/-0.49	-3.55/-1.37	-2.07/-6.13	-8.89/-4.31	-3.44/-2.94	-1.66/-1.75	-1.38/-9.44	-9.79/-7.3	-7.55/-4.85	-5.03/-7.56	-0.82/-3.04
Θ(105°)	-8.39/-7.61	-4.61/-5.68	-5.72/-7.66	-10.23/-7.8	-6.15/-6.29	-9.85/-5.5	-3.14/-2.33	-5.98/-4.07	-2.93/-4.36	-7.22/-2.17	-3.09/-3.62	-3.43/-3.38	-3.3/-3.21	-2.71/-1.26	-1.56/-3.11	-4.66/-6.11	-9.55/-9.47	-5.54/-5.86	-9.47/-8.77	-4.53/-7.06	-13.71/-8.3	-8.94/-7.96	-11.99/-6.79	-3.97/-9.81
Θ(112.5°)	-15.5/-2.19	-3/-6.54	-5.77/-5.53	-10.53/-7.8	-6.89/-6.55	-9.28/-10.16	-5.2/-0.6	-17.62/-9.02	-3.01/-5.63	-3.17/-1.48	-6.34/-3.39	-4.66/-4.54	-1.96/-3.3	-3.33/-6.15	-4.92/-9.36	-12.66/-7.74	-6.47/-5.23	-8.94/-8.88	-2.91/-5.92	-13.96/-6.47	-8.3/-10.15	-11.48/-6.01	-7.14/-9.17	
Θ(120°)	-5.65/-3.98	-4.15/-7.78	-5.86/-7.46	-15.8/-9.94	-7.85/-13.92	-8.84/-11.89	-14.98/-8.84	-12/-12.25	-6.46/-5.07	-7.22/-5.32	-3.23/-4.32	-8.41/-5.3	-3.63/-5.16	-0.64/-3.05	-3.35/-10.54	-4.72/-7.5	-18.31/-9.71	-13.31/-11.91	-6.73/-7.65	-2.75/-3.46	-17.76/-13.7	-8.73/-11.3	-6.17/-5.32	-6.75/-6.26
Θ(127.5°)	-6.47/-7.07	-7.64/-11.69	-15.76/-13.76	-18.7/-18.08	-14/-10.71	-17.58/-11.67	-11.14/-11.68	-14.9/-17.84	-8.53/-7.35	-10.67/-7.9	-3.76/-4.95	-6.58/-9.02	-4.53/-8.41	-3.75/-5.37	-4.69/-6.53	-5.14/-7.98	-15.98/-14.32	-17.6/-12.94	-9.27/-10.46	-8.34/-2.77	-19.25/-18.98	-18.36/-18.66	-8.66/-13.83	-9.96/-5.64
Θ(135°)	-6.95/-9.43	-9.36/-18.19	-19.31/-12.97	-11.84/-15.11	-13.77/-14.17	-13.61/-15.62	-17.65/-18.37	-18.08/-14.47	-14.92/-9.06	-8.43/-10.37	-8.61/-6.14	-6.51/-6.98	-8.37/-5.07	-4.14/-2.83	-2.21/-5.72	-11.92/-10.91	-14.35/-18.73	-18.02/-16.71	-11.39/-8.96	-6.53/-6.08	-18.99/-15.75	-15.06/-7.86	-13.65/-13.22	-11.81/-8.1
Θ(142.5°)	-7.46/-7.43	-8.72/-10.47	-17.99/-16.94	-12.33/-11.91	-13.62/-10.91	-12.37/-15.96	-19.04/-18.18	-18.32/-18.12	-15.11/-8.73	-6.96/-8.38	-13.77/-11.45	-7.2/-6.4	-5.13/-5.63	-6.98/-7.24	-9.13/-12.64	-18.2/-12.82	-10.64/-14.39	-18.73/-18.41	-14.07/-18.14	-13.87/-9.96	-9.31/-14.41	-15.66/-10.8	-18.65/-15.48	-6.24/-6.84
Θ(150°)	-13.82/-19.4	-18.89/-17.8	-17.63/-18.23	-18.66/-13.72	-12.52/-11.95	-15.18/-19.15	-17.47/-15.95	-13.59/-12.97	-15.7/-12.59	-9.86/-9.29	-10.09/-13.59	-14.66/-10.25	-8.76/-11.56	-11.08/-10.23	-9.96/-8.63	-8.36/-12.83	-17.85/-18.39	-18.03/-17.78	-18.77/-17.36	-15.3/-14.04	-12.62/-11.15	-10.2/-9.76	-14.53/-12.56	-12.03/-12.6
Θ(157.5°)	-11.31/-9.52	-13.61/-14.06	-15.61/-18	-19.14/-17.31	-14.65/-13.96	-14.98/-17.46	-17.45/-18.5	-17.36/-17.94	-18.69/-17.96	-15.36/-11.77	-9.65/-9.71	-11.04/-10.48	-15.49/-12.21	-10.92/-12.2	-13.66/-12.84	-13.75/-13.27	-13.55/-16.95	-17.53/-18.8	-18.16/-18.63	-18.18/-19.4	-18.76/-16.26	-15.51/-14.72	-15/-17.27	-18.72/-18.63
Θ(165°)	-14.8/-15.88	-16.1/-18.64	-18.07/-17.54	-18.60/-18.92	-18.29/-17.51	-17.62/-18.07	-18.95/-16.94	-16.26/-15.42	-15.25/-13.33	-11.58/-10.67	-9.86/-10.08	-10.51/-11.03	-11.36/-11.71	-12.26/-16.05	-17.99/-18.23	-16.52/-15.9	-18.76/-17.85	-19.14/-17.83	-18.63/-18.09	-18.				



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ (165°)	-17.74/-18.13	-18.07/-17.4	-18.25/-18.78	-17.96/-18.2	-18.62/-19.05	-17.23/-18.31	-18.79/-18.4	-18.37/-18.36	-18.9/-17.76	-17.5/-18.45	-18.2/-18.98	-18.16/-18.02	-17.33/-19.15	-18.49/-18.85	-19.23/-18.24	-19.5/-18.16	-18.36/-18.15	-18.34/-18.42	-18.03/-18.58	-17.62/-16.13	-15.44/-15.88	-16.98/-18.53	-18.63/-18.89	-17.43/-17.68
Θ (172.5°)	-18.21/-19.17	-17.25/-17.88	-18.18/-18.57	-17.32/-18.44	-18.17/-18.57	-18.4/-17.41	-18.62/-18.76	-18.61/-17.16	-16.35/-15.84	-16.14/-17.1	-17.88/-17.7	-18.18/-18.2	-18.5/-17.37	-19.08/-18.04	-18.7/-17.22	-17.72/-19.08	-19.03/-17.7	-18.19/-19.22	-18.34/-18.32	-17.77/-18.49	-19.16/-18.79	-17.35/-19	-18.32/-17.16	-18.08/-18.01
Θ (180°)	-18.87/-18.87	-17.88/-17.72	-17.35/-19.02	-17.55/-18.02	-17.7/-18.32	-17.62/-17.76	-18.73/-18.22	-18.38/-18.03	-18.12/-18.97	-17.66/-17.96	-17.99/-17.88	-17.69/-18.2	-18.58/-19.2	-18.09/-17.8	-17.83/-17.91	-18.99/-18.12	-17.85/-17.98	-17.86/-18.17	-17.86/-18.15	-17.86/-18.9	-17.76/-18.27	-18.08/-18.76	-18.51/-18.05	-17.92/-19.06
Freq(Hz)	5.2GPol.	Theta/Ant. 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°)	-1.42/-0.45	0.28/0.94	1.57/1.89	2.02/2	1.75/1.31	0.79/0.21	-0.42/-1.42	-2.67/-4.6	-7.74/-11.54	-16.18/-14.42	-10.16/-6.61	-4.16/-2.27	-0.90/-06	0.93/-1.49	1.97/2.23	2.31/-2.2	2.02/1.64	1.1/0.3	-0.82/-2.2	-3.79/-5.79	-8.6/-12.43	-15.66/-12.98	-8.93/-5.82	-3.66/-2.17
Θ (7.5°)	-2.41/-1.41	-1.23/-0.76	0.86/1.29	1.36/1.2	0.87/0.48	0.09/-0.53	-0.87/-2.18	-2.68/-4.22	-6.41/-9.92	-13.18/-12.71	-9.47/-6.58	-3.93/-2.01	-0.47/-0.39	1.15/1.67	2.01/2.27	2.37/2.25	2.06/1.67	1.07/0.25	-0.88/-2.25	-3.92/-5.84	-8.34/-11.55	-14.24/-13.27	-10.05/-7.2	-5.16/-3.28
Θ (15°)	-3.14/-2.22	-1.13/-0.45	-0.130/0.35	0.32/1.07	1.21/1.16	0.87/0.36	-0.35/-1.23	-2.42/-4.12	-6.65/-10.33	-14.46/-15.9	-12.51/-8.7	-5.63/-3.71	-2.48/-0.97	-0.030/0.75	1.37/1.65	1.71/1.8	1.51/1.28	0.930/0.4	-0.45/-1.54	-3.12/-5.08	-7.65/-10.97	-13.97/-12.03	-8.93/-6.65	-4.91/-3.89
Θ (22.5°)	-2.74/-2.09	-1.15/-0.77	-0.86/-0.26	0.41/0.44	0.76/0.68	0.39/-0.14	-0.76/-1.92	-3.44/-5.48	-8.28/-12.41	-17.87/-18.4	-13.17/-9.3	-6.67/-0.53	-4.04/-2.68	-1.35/-0.23	0.43/0.88	1.04/1.14	1.26/1.3	1.27/0.9	0/-1.33	-2.93/-4.58	-6.55/-9.29	-13.2/-14.55	-10.55/-6.89	-4.44/-2.82
Θ (30°)	-4.06/-2.91	-1.79/-1.19	-1.23/-0.42	0.22/0.72	1.15/1.36	0.89/-0.07	-1.46/-3.11	-4.95/-7.23	-10.42/-13.66	-18.49/-18.31	-15.07/-11.7	-8.42/-6.25	-5.29/-3.82	-2.94/-1.78	-0.92/-0.37	-0.36/0.06	0.53/0.94	0.83/0.19	-0.88/-2.23	-3.93/-5.9	-8.3/-10.54	-12.75/-15.36	-10.06/-9.78	-6.68/-4.4
Θ (37.5°)	-5.11/-4.04	-2.77/-2.03	-1.8/-1.15	-1.01/-0.3	0.42/0.33	-0.35/-1.51	-3.07/-4.39	-5.45/-6.65	-8.92/-11.92	-15.4/-15.94	-13.58/-11.02	-8.49/-6.86	-5.78/-4.91	-4.44/-3.23	-2.11/-1.89	-2.11/-1.66	-0.97/-0.43	-0.41/-1.41	-3.26/-5.18	-6.61/-7.83	-8.77/-10.26	-12.52/-14.77	-14.66/-11.52	-8.71/-6.39
Θ (45°)	-5.85/-5.35	-4.93/-4.17	-3.5/-3.22	-2.86/-1.56	-0.68/-0.56	-1.41/-2.81	-3.99/-4.6	-5.25/-6.69	-8.87/-12.92	-14.79/-17.18	-14.79/-13.14	-10.94/-9.1	-7.63/-6.61	-6.89/-5.77	-4.87/-4.67	-4.91/-4.66	-3.51/-2.63	-2.97/-4.2	-5.68/-7.48	-8.67/-9.44	-10.03/-9.92	-10.69/-13.2	-14.88/-11.59	-9.01/-7.16
Θ (52.5°)	-6.47/-6.45	-6.23/-5.82	-5.45/-5	-4.46/-3.27	-1.96/-1.66	-2.61/3.88	-4.57/-4.96	-5.89/-7.96	-10.95/-14.92	-18.34/-17.5	-15.3/-15.04	-14.29/-12.63	-12.53/-11.94	-12.5/-8.9	-6.99/-5.88	-6.53/-6.81	-5.72/-5.23	-5.61/-7.32	-8.65/-9.09	-9.95/-10.89	-10.76/-10.36	-10.47/-12.22	-14.04/-11.39	-8.33/-6.86
Θ (60°)	-7.38/-6.83	-7.38/-7.4	-7.11/-7.41	-7.31/-5.9	-3.42/-3.4	-4.57/-5.73	-5.81/-5.54	-6.12/-7.96	-11.27/-15.81	-18.14/-17.9	-17.09/-16.85	-17.3/-14.68	-14.85/-16.18	-18.93/-16.03	-12.67/-10.23	-10.24/-10.01	-9.4/-8.27	-9.79/-11.61	-13.12/-12.48	-11.89/-12.25	-11.87/-10.82	-10.52/-12.34	-15.27/-13.52	-9.94/-8.08
Θ (67.5°)	-7.82/-6.97	-7.48/-8.2	-8.8/-8.87	-8.73/-7.84	-5.73/-5.55	-6.58/-8.07	-7.45/-7.59	-8.91/-18.88	-14.49/-13.8	-18.62/-17.64	-17.65/-18.85	-19.08/-17.09	-17.37/-18.67	-17.63/-18.84	-18.38/-14.27	-13.06/-12.83	-12.49/-12.86	-15.12/-10.84	-18.31/-17.53	-18.11/-16.76	-13.83/-12.03	-11.77/-13.14	-17.48/-17.82	-12.28/-9.26
Θ (75°)	-9.7/-9.96	-7.82/-9.08	-10.79/-10.36	-10.79/-9.61	-8.16/-7.58	-9.19/-11.09	-9.73/-8.8	-9.5/-11.64	-13.6/-16.31	-17.27/-17.08	-18.01/-17.51	-18.54/-19.05	-18.7/-18.58	-18.45/-17.69	-18.39/-18.11	-14.89/-15.06	-18.53/-18.37	-12.06/-14.98	-18.37/-18.85	-15.27/-12.87	-11.77/-13.18	-16.99/-18.44	-14.46/-10.37	
Θ (82.5°)	-9.24/-9.63	-9.39/-10	-11.14/-12.13	-11.78/-9.66	-9.12/-8.76	-11.94/-15.6	-13.53/-10.6	-10.88/-12.13	-13.21/-14.49	-14.99/-16.74	-17.8/-19.11	-18.57/-18.44	-18.74/-15.29	-15.14/-14.2	-17.31/-17.44	-18.32/-15.65	-18.69/-17.97	-19.7/-13.8	-11.67/-12.38	-14.13/-17.26	-16.16/-12.79	-11.43/-11.75	-16.09/-17.73	-16.05/-11.88
Θ (90°)	-11.34/-10.26	-10.58/-13.03	-12.57/-12.94	-13.67/-12.46	-10.64/-10.55	-13.53/-17.66	-15.56/-12.73	-12.25/-12.73	-13.03/-15.18	-16.54/-18.02	-18.5/-18.77	-16.69/-17.63	-18.59/-15.51	-14.99/-13.96	-17.61/-18.73	-18.48/-15.64	-18.02/-17.66	-18.94/-17.53	-12.42/-13.21	-14/-15.91	-15.36/-13.67	-12.48/-13.21	-14.98/-18.8	-17.92/-14.24
Θ (97.5°)	-14.44/-12.8	-12.85/-15.6	-18.47/-17.99	-15.4/-13.93	-12.64/-12.84	-15.56/-17.66	-18.69/-16.81	-14.9/-14.48	-14.77/-15.32	-15.35/-18.01	-17.9/-18.06	-18.01/-17.58	-17.78/-16.65	-16.33/-14.43	-17.53/-18.91	-17.89/-16.56	-18.66/-18.33	-18.52/-18.01	-17.85/-16.25	-14.97/-15.64	-16.18/-15.04	-14.71/-16.19	-18.66/-19.42	-18.77/-17.33
Θ (105°)	-15.53/-15.4	-16.74/-18.45	-18.03/-18.1	-17.3/-15.89	-15.25/-15.66	-17.37/-18.88	-17.55/-18.01	-16.13/-17.63	-15.08/-15.28	-16.13/-17.63	-17.97/-17.65	-17.92/-19.26	-19.26/-18.36	-14.2/-15.23	-16.54/-18.35	-18.82/-18.88	-18.62/-18.62	-18.98/-18.04	-18.17/-18.19	-17.3/-19.02	-19.31/-19.26	-17.46/-18.92	-18.41/-18.11	-18.59/-18.01
Θ (112.5°)	-18.82/-18.1	-18.61/-18.91	-18.22/-18.22	-17.91/-18.87	-18.53/-19.62	-19.05/-17.8	-19.22/-19.39	-17.42/-15.9	-15.6/-16.28	-16.89/-16.62	-18.25/-18.02	-19.5/-18.15	-18.16/-18.14	-14.53/-16.57	-15.03/-16.83	-18.36/-18.25	-18.5/-18.18	-16.31/-17.92	-17.44/-18.84	-19.44/-18.41	-18.52/-18.08	-17.86/-18.11	-18.32/-18.1	-17.65/-18.89
Θ (120°)	-18.13/-18.22	-18.15/-18.13	-18.09/-18.44	-18.89/-17.82	-18.71/-17.67	-17.9/-19.22	-18.68/-18.66	-17.76/-17.21	-18.29/-18.2	-19.43/-17.64	-17.22/-19.31	-18.76/-18.23	-17.98/-17.7	-17.02/-14.98	-15.8/-17.72	-18.09/-17.23	-18.89/-18.04	-15.93/-15.52	-15.25/-16.41	-18.33/-18.75	-19.19/-18.75	-18.8/-18.41	-19.06/-19.16	-18.55/-17.77
Θ (127.5°)	-18.48/-17.95	-18.28/-18.44	-18.55/-18.2	-18.12/-18.16	-17.65/-18.06	-17.75/-17.92	-17.57/-18.07	-18.03/-17.62	-18.66/-18.74	-18.58/-18.93	-17.65/-17.96	-18.71/-18.44	-18.45/-15.12	-18.29/-18.12	-17.21/-17.99	-18.27/-18.06	-17.91/-18.83	-18.15/-17.72	-18.15/-17.72	-19.16/-17.68	-18.86/-18.09	-18.27/-17.79	-18.41/-18.11	-17.55/-18.17
Θ (135°)	-17.7/-18.92	-18.95/-18.45	-18.63/-18.78	-18.44/-18.19	-18.07/-17.89	-18.2/-18.76	-18.67/-18.15	-18.24/-17.96	-18.49/-19.22	-18.62/-18.87	-17.75/-18.81	-17.97/-18.05	-17.29/-16.59	-18.23/-17.96	-18.39/-18.58	-18.3/-18.17	-18.06/-18.51	-18.3/-18.58	-17.09/-17.35	-18.71/-17.92	-17.81/-17.32	-19.29/-17.79	-19.12/-17.53	-17.96/-18.07
Θ (142.5°)	-18/-18.06	-18.64/-18.24	-18.32/-17.95	-17.76/-17.52	-17.85/-19.02	-18.73/-19.15	-18.28/-19.45	-18.66/-18.23	-18.37/-18.98	-18.56/-17.42	-17.97/-18.99	-17.77/-18.99	-18.18/-18.4	-17.82/-14.92	-16.73/-19.18	-18.29/-17.72	-16.2/-18.11	-18.92/-17.44	-17.64/-17.08	-18.53/-17.93	-18.87/-18.65	-18.38/-17.87	-18.21/-18.4	-18.9/-18.3
Θ (150°)	-18.48/-19.42	-18.1/-19.15	-18.73/-18.94	-18.27/-17.98	-18.25/-17.85	-16.89/-15.76	-16.23/-18.46	-16.38/-18.03	-18.76/-17.63	-19.09/-18.75	-18.43/-17.97	-17.36/-17.83	-15.43/-13.02	-14.06/-14.01	-15.34/-18.05	-18.71/-18.69	-18.32/-16.65	-16.67/-18.57	-18.31/-18.42	-18.21/-18.18	-19.09/-18.41	-18.55/-19.12		
Θ (157.5°)	-18.72/-18.89	-17.79/-18.69	-18.37/-17.83	-18.53/-18.05	-18.29/-17.26	-17.96/-17.27	-17.83/-17.9	-17.93/-18.94	-18.12/-17.62	-17.98/-18.76	-18.26/-18	-17.96/-17.77	-17.43/-15.94	-13.73/-13.95	-13.59/-13.2	-16.04/-18.24	-18.23/-18.73	-16.66/-14.94	-14.77/-15.87	-18.08/-18.68	-17.45/-17.97	-18.69/-18.94	-18.94/-18.83	-18.28/-17.75
Θ (165°)	-17.52/-17.58	-18.52/-18.77	-17.67/-17.86	-19.12/-17.64	-17.17/-17.35	-17.34/-17.82	-18.74/-18.69	-19.21/-19.32	-19.2/-17.75	-18.94/-18.5	-18.25/-18.06	-18.91/-19.17	-17.73/-17.49	-17.73/-17.49	-17.63/-18.87	-17.8/-18.54	-18.57/-18.25	-16.63/-15.12	-14.43/-17.32	-15.71/-17.93	-19.16/-18.21	-17.46/-17.29	-18.59/-18.03	-19.08/-17.77
Θ (172.5°)	-18.02/-18.39	-19.13/-17.21	-18.04/-18.07	-17.89/-18	-17.81/-19.24	-17.79/-18.49	-18.21/-19.3	-17.57/-17.25	-19.1/-18.95	-18.22/-17.8	-18.98/-18.07	-17.83/-17.63	-18.53/-19.32	-18.54/-19.08	-18.6/-18.88	-18.03/-17.83	-18.48/-17.35	-17.96/-17.54	-18.16/-18.87	-18.16/-17.79	-18.43/-18.49	-17.91/-18.53	-17.41/-18.58	-17.55/-18.17
Θ (180°)	-18.24/-18.84	-18.54/-19.17	-18.72/-19.02	-18.43/-17.86	-18.05/-18.63	-17.62/-18.1	-18.97/-17.78	-18.57/-18.54	-18.4/-18.34	-18.08/-18.52	-17.75/-18.4	-17.64/-18.55	-18.26/-18.11	-17.78/-18.88	-17.47/-18.26	-17.38/-17.59	-18.32/-18.05	-18.94/-17.67	-18.12/-18.55	-19.29/-18.82	-18.43/-17.16	-17.56/-18.01	-17.87/-18.75	-18.97/-17.73
Freq(Hz)	5.3GPol.	Phi/Ant. 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°)	0.86/-0.41	-2.26/-4.48	-7.03/-10.5	-12.26/-9.56	-6.11/-3.62	-1.59/-0.07	1.11/1.99	2.65/3.15	3.19/3.69	3.77/3.74	3.33/2.26	2.52/1.72	0.58/-0.75	-2.31/-4.57	-7.51/-10.9	-11.44/-8.22	-4.91/-2.56	-0.76/0.55	1.62/2.42	3.08/3.51	3.83/3.95	3.97/3.93	3.72/3.37	2.832/0.7



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(75°)	-1.55/-0.02	1.13/1.79	2.08/2.43	2.66/2.59	2.45/2.07	1.26/0.55	-0.78/-1.97	-3.99/-6.34	-9.75/-16.55	-18.03/-13.69	-8.76/-6.11	-4.04/-2.26	-0.67/0.45	1.31/0.83	2.18/2.27	2.21/2.05	1.91/1.52	0.95/0.02	-1.11/-2.53	-3.99/-5.6	-7.99/-12.2	-19.01/-18.07	-12.3/-8.13	-5.51/-2.93
Θ(15°)	-2.61/-1.01	0.49/1.54	2.04/2.23	2.67/2.56	2.18/1.53	0.86/0.15	-0.59/-1.54	-2.96/-5.26	-8.71/-14.57	-17.67/-14.87	-8.57/-5.12	-3.48/-2.19	-1.11/-0.02	0.53/1.07	1.20/0.91	0.48/0.53	0.50/0.26	-0.14/-0.88	-1.81/-3.23	-5.19/-7.71	-10.45/-13.14	-15.52/-15.4	-11.92/-8	-5.44/-3.8
Θ(127.5°)	-2.4/-2.38	-0.68/0.72	0.83/1.43	2.34/2.2	1.55/0.9	0.24/-0.55	-1.59/-2.33	-3.44/-5.16	-7.97/-13.97	-17.54/-12.91	-6.98/-4.12	-2.91/-2.25	-1.07/-0.07	0.35/0.75	1.05/0.87	0.59/0.64	0.38/0.35	-0.14/-1.19	-2.83/-4.83	-7.14/-10.04	-15.56/-18.31	-15.28/-6.61	-7.87/-6.43	-4.79/-2.89
Θ(30°)	-2.7/-2.01	-2.27/0.74	-0.13/1.15	2.25/2.16	1.93/1.13	-0.08/-1.04	-1.69/-2.51	-3.8/-5.94	-8.28/-12.57	-17.74/-13.72	-8.64/-5.27	-2.75/-1.26	-0.7/0.34	-0.06/0.28	0.14/-0.7	-0.85/-0.7	-0.57/-1.03	-1.88/-2.07	-2.51/-3.23	-4.28/-6.2	-9.41/-15.71	-18.41/-14.85	-8.87/-5.82	-5.11/-4.21
Θ(37.5°)	-3.59/-2.71	-1.95/-0.82	-0.7/0.65	1.25/1.72	1.25/-0.12	-1.33/-1.9	-2.72/-4.66	-6.79/-9.31	-12.3/-16.46	-18.59/-16.12	-10.38/-6.74	-4.22/-2.99	-1.49/-1.24	-0.09/0.05	-0.84/-1.63	-1.37/-1.23	-1.64/-1.99	-2.74/-2.9	-2.55/-3.7	-5.14/-7.22	-10.09/-17.35	-18.42/-11.18	-8.45/-7.12	-5.45/-4.42
Θ(45°)	-3.24/-2.81	-3.52/-2.18	-1.54/-0.04	1.06/1.73	0.95/-0.08	-1.37/-2.24	-3.94/-6.73	-10.31/-13.72	-15.99/-17.99	-18.51/-16.51	-10.94/-9.34	-5.85/-3.8	-2.14/-2.43	-2.23/-2.59	-3.26/-2.75	-2.69/-2.49	-2.05/-2.88	-3.83/-4.66	-5.15/-5.97	-8.23/-11.03	-14.81/-17.88	-18.23/-11.66	-9.48/-8.55	-6.59/-4.21
Θ(52.5°)	-4.4/-3.98	-3.75/-2.86	-2.39/-1.68	-0.13/0.07	-0.24/-1.42	-2.82/-3.7	-5.39/-8.13	-10.99/-13.34	-17.18/-18.9	-18.93/-18.3	-13.13/-10.74	-8.08/-5.65	-4.64/-4.34	-3.35/-3.87	-4.7/-5.87	-4.58/-4.42	-4.38/-5.05	-8.3/-8.52	-9.98/-13.85	-18/-18.2	-18.26/-19.17	-18.59/-16.7	-13.17/-11.31	-9.08/-6.08
Θ(60°)	-5.96/-5.84	-5.7/-4.25	-4.06/-3.71	-2.12/-1.54	-1.63/-2.73	-3.65/-4.54	-5.85/-8.5	-12.58/-18.11	-19.25/-18.73	-18.76/-16.6	-14.4/-12.37	-10.68/-7.8	-5.93/-5.69	-5.92/-7.22	-6.39/-7.29	-6.98/-6.68	-5.93/-7.36	-10.24/-11	-9.88/-12.74	-18.03/-18.9	-18.49/-18.01	-17.73/-16.97	-16.66/-15.2	-12.45/-9.36
Θ(67.5°)	-9.6/-8.17	-7.82/-5.96	-6.17/-6.29	-5.08/-4.09	-3.91/-4.86	-5.54/-7.08	-8.64/-10.84	-14.2/-18.43	-18.93/-17.86	-19.27/-15.71	-17.07/-14.87	-12.77/-10.53	-8.33/-7.32	-9.17/-9.09	-9.01/-9.64	-11.52/-12.48	-6.36/-7.37	-11.51/-13.1	-8.43/-10.92	-18.6/-17.37	-16.23/-14.5	-16.24/-18.4	-18.26/-15.56	-13.42/-13.91
Θ(75°)	-9.7/-10.17	-8.78/-6.82	-7.69/-8.26	-7.75/-7.64	-7.72/-7.57	-8.8/-9.36	-9.74/-11.73	-15.13/-18.54	-17.98/-18.7	-18.71/-18.81	-17.89/-15.93	-13.6/-10.89	-10.46/-10.19	-11.47/-12.12	-11.28/-12.22	-16.46/-11.65	-5.95/-6.19	-15.08/-17.85	-16.69/-12.88	-18.88/-17.99	-15.57/-14.06	-18.04/-17.45	-16.35/-16.74	-11.94/-12.27
Θ(82.5°)	-8.52/-9.08	-8.81/-6.77	-7.05/-8.52	-9.16/-8.68	-9.52/-10.45	-12.83/-11.44	-14.18/-15.4	-18.58/-17.9	-15.76/-16.48	-11.11/-13.28	-19.1/-18.15	-18.93/-18.42	-16.14/-16.03	-13.5/-11.49	-10.82/-11.37	-14.78/-15.72	-14.97/-16.41	-17.84/-12.63	-18.09/-17.46	-18.42/-14.41	-12.95/-17.8	-17.56/-18.11	-16.79/-13.62	-9.57/-10.94
Θ(90°)	-8.69/-9.57	-9.62/-8.22	-8.11/-8.14	-9.82/-11.37	-11.01/-12.28	-18.34/-14.43	-12.63/-13.59	-12.93/-13.83	-19.06/-18.67	-17.66/-18.1	-16.91/-13.81	-11.92/-11.35	-10.85/-11.06	-17.8/-13.81	-18.08/-15.22	-18.52/-14.26	-9.83/-13.77	-18.43/-12.37	-18.97/-13.97	-11.11/-15.48	-18.41/-15.57	-18.4/-14.36	-18.4/-14.62	-8.68/-9.62
Θ(97.5°)	-8.92/-11.33	-10.84/-10.23	-10.81/-8.14	-9.49/-13.39	-11.76/-13.87	-18.19/-18.35	-15.66/-16.09	-13.36/-13.46	-17.28/-18.79	-18.44/-18.86	-15.62/-12.43	-12.15/-12.8	-11.61/-12.24	-15.11/-13.67	-12.53/-16.31	-17.47/-19.49	-17.55/-18.35	-12.84/-10.72	-14.4/-16.84	-10/-12.33	-17.73/-18.57	-18.36/-17.66	-17.8/-14.33	-11.49/-9.11
Θ(105°)	-10.14/-14.54	-15.79/-12.37	-13.42/-10.1	-9.84/-12.84	-14.18/-15.4	-18.58/-17.9	-15.76/-16.48	-14.92/-12.08	-13.19/-16.19	-18.93/-17.7	-18.16/-15.94	-14.85/-13.91	-13.16/-12.78	-18.04/-18.27	-12.1/-14.26	-13.98/-16.07	-10.67/-14.6	-13.58/-9.97	-18.24/-17.97	-18.91/-18.08	-14.48/-16.72	-14.46/-14.05		
Θ(112.5°)	-16.39/-18.3	-18.12/-17.62	-14.10/-9.92	-10.16/-14.59	-14.98/-16.04	-17.47/-17.92	-16.85/-16.7	-14.96/-13.01	-13.23/-13.83	-17.42/-18.59	-18.88/-18.46	-18.39/-18.5	-14.98/-13.97	-14.05/-13.66	-10.49/-17.75	-18.74/-19.15	-10.36/-11.21	-15.77/-17.26	-8.03/-11.14	-13.5/-8.43	-18.53/-13.16	-17.17/-18.56	-11.45/-16.14	-15.29/-17.01
Θ(120°)	-19.31/-18.67	-18.63/-18.59	-16.19/-10.55	-11.74/-15.62	-18.88/-18.26	-18.12/-18.92	-18.23/-19.28	-16.78/-14.54	-12.22/-12.86	-11.86/-13.4	-14.2/-18.47	-18.45/-19.11	-12.78/-17.63	-15.68/-13.27	-11.4/-14.87	-16.52/-14.54	-8.15/-12.9	-17.64/-13.69	-7.18/-8.72	-15.84/-7.71	-11.86/-13.77	-9.97/-18.26	-16.58/-12.41	-13.45/-16.72
Θ(127.5°)	-17.49/-18.77	-16.72/-17.75	-14.18/-17.4	-11.61/-10.28	-15.07/-17.7	-18.99/-18.52	-17.75/-17.24	-16.19/-19.72	-11.52/-9.99	-10.55/-12.49	-13.65/-16.1	-15.34/-17.98	-17.49/-15.97	-19.08/-17.8	-14.47/-19.1	-12.05/-12.63	-17.63/-13.03	-12.64/-9.64	-18.55/-12.38	-9.59/-19.09	-12.29/-18.31	-14.9/-17.8	-14.46/-17.4	
Θ(135°)	-18.27/-17.25	-18.05/-16.16	-14.03/-14.56	-14.36/-16.09	-15.83/-19.39	-18.54/-17.31	-18.21/-18.24	-19.29/-16.81	-15.16/-19.49	-15.65/-16.2	-13.95/-13.1	-17.8/-14.68	-17.88/-14.85	-17.89/-15.52	-18.54/-17.76	-17.78/-13.33	-18.4/-12.46	-15.36/-17.47	-9.76/-7	-14.83/-13.49	-17.73/-17.73	-18.39/-18.6	-17.12/-18.08	-18.59/-15.98
Θ(142.5°)	-17.8/-15.22	-15.39/-16.69	-15.91/-17.16	-17.91/-18.3	-19.09/-17.38	-18.48/-18.17	-17.61/-18.74	-17.75/-18.46	-16.9/-15.25	-15.66/-17.8	-18.72/-18.47	-17.98/-18.44	-17.99/-18.07	-17.79/-17.86	-14.52/-17.74	-18.18/-18.42	-17.98/-9.15	-10.22/-13.5	-9.6/-8.86	-13.53/-17.32	-18.32/-18.19	-18.8/-18.44	-18.18/-18.51	-18.21/-16.24
Θ(150°)	-17.41/-17.07	-18/-18.16	-16.14/-15.9	-18.99/-17.31	-16.4/-14.82	-14.27/-16.23	-16.54/-17.38	-18.38/-18.4	-18.29/-17.32	-18.41/-17.79	-18.63/-17.24	-18.56/-17.89	-18.35/-17.61	-17.35/-17.95	-13.06/-12.85	-13.03/-15.16	-17.71/-14.49	-11.11/-9.32	-7.08/-7.7	-11.72/-16.57	-16.89/-16.75	-17.65/-19.13	-18.66/-18.79	-18.28/-14.97
Θ(157.5°)	-16.85/-16.32	-18.37/-18.69	-18.99/-18.74	-17.99/-17.98	-18.28/-18.02	-17.9/-17.63	-17.87/-18.48	-18.57/-17.49	-17.82/-18.34	-18.78/-18.79	-17.44/-18.44	-18.72/-18.78	-19.22/-18.72	-17.43/-13.51	-12.13/-13.25	-12.63/-12.88	-14.94/-13.81	-10.45/-9.72	-9.97/-11.31	-15.4/-18.39	-17.42/-17.14	-18.23/-18.33	-18.35/-16.14	-14.07/-13.97
Θ(165°)	-18.1/-19.16	-17.5/-19.1	-15.21/-14.08	-15.26/-16.97	-19.18/-18.18	-16.84/-15.1	-13.71/-14.08	-15.53/-17.13	-18.01/-19.2	-18.01/-17.69	-18.61/-18.23	-18.36/-18.56	-18.52/-18.22	-16.29/-15.42	-17.62/-17.65	-17.79/-14.98	-13.56/-13.96	-15.88/-18.15	-18.76/-18.23	-17.82/-18.51	-17.96/-18.3			
Θ(172.5°)	-18.67/-18	-18.5/-17.78	-16.32/-15.74	-16.14/-16.19	-15.87/-15.51	-16.02/-17.09	-16.9/-16.58	-18.68/-18	-18.11/-18.45	-17.96/-17.68	-18.31/-19.14	-18.26/-18.42	-18.6/-18.34	-19.23/-19.04	-16.64/-14.34	-13.22/-12.98	-13.34/-14.48	-15.54/-16.41	-15.6/-14.52	-13.82/-13.8	-15.45/-18.51	-19.21/-17.75	-17.63/-18.28	-18.56/-17.96
Θ(180°)	-18.23/-18.84	-18.47/-18.45	-18/-18.3	-18.55/-18.44	-17.33/-18.16	-18.75/-18.51	-18.31/-18.63	-17.32/-17.36	-18.38/-18.96	-17.6/-19	-19.08/-17.95	-17.37/-18.1	-17.62/-18.26	-19.14/-18.85	-18.13/-18.87	-18.14/-17.46	-18.1/-19.01	-19/-17.48	-18.44/-18.5	-18.54/-19.05	-18.36/-18.51	-17.68/-18.41	-17.94/-18.76	-19.02/-17.78
Freq(Hz)	6.475GHz	Phi/Ant. 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°)	0.78/-0.16	-1.12/-3.16	-5.71/8.84	-16.47/-18.16	-12.33/-3.77	-3.96/-1.59	0.03/0.5	1.79/2.35	2.82/3.12	3.25/3.16	3.18/2.8	2.46/1.82	1.03/-0.35	-1.84/-3.94	-6.77/-11.28	-10.18/-6.26	-3.6/-1.61	-0.09/0.16	1.77/2.2	5.52/2.84	3.15/2.7	3.05/2.72		
Θ(7.5°)	0.34/-0.69	-1.84/-3.89	-6.71/-9.88	-13.08/-15.96	-12.01/-7.65	-4.44/-1.98	-0.36/-1.1	1.95/2.56	2.73/2.97	2.84/2.43	2.46/1.99	1.44/0.85	0.17/-0.84	-2.27/-4.35	-7.68/-13.21	-17.51/-14.23	-8.28/-5.01	-2.67/-0.95	0.61/1.73	2.43/2.78	3.07/3.23	3.26/3.13	2.78/2.18	1.71/1.35
Θ(15°)	-0.52/-1.71	-3.51/-5.74	-7.62/-9.51	-12.62/-16.67	-10.56/-5.78	-2.52/0	1.62/-7	3.48/3.93	4.01/3.84	3.47/3.08	2.73/2.35	1.38/0.45	-0.46/-1.52	-2.77/-4.93	-8.67/-15.86	-18.08/-13.15	-8.73/-6.33	-4.51/-2.74	-0.94/0.39	1.43/1.9	2.14/2.37	2.62/2.9	2.82/-3	1.48/0.76
Θ(22.5°)	-0.56/-1.65	-3.14/-5.49	-9.28/-14.33	-18.51/-12.1	-6.91/-3.44	-0.95/0.57	1.07/1.43	1.73/2.16	2.73/2.63	2.83/2.66	1.73/0.33	-1.11/-2.15	-3.23/-5.17	-9.02/-17.5	-17.48/-10.83	-8.55/-6.88	-4.26/-1.8	-0.08/0.09	2/2.63	2.99/3.21	3.07/2.59	2.19/2.11	1.86/1.27	
Θ(30°)	0.16/-1.4	-2.55/-4.68	-8.2/-18.23	-17.62/-8.66	-5.09/-3.06	-1.55/-0.39	0.41/1.1	1.64/1.8	2.42/2.37	2.44/2.21	2.05/1.77	1.36/0.75	-0.29/-1.68	-2.72/-4.81	-9.86/-17.73	-14.17/-15.01	-7.33/-6.69	-3.24/-0.65	0.64/1.42	1.97/2.28	2.33/2.29	2.67/3.14	3.05/2.2	1.180/0.89
Θ(37.5°)	-1.84/-2.98	-3.35/-3.98	-6.63/-4.76	-17.27/-7.95	-5.73/-4.51	-2.54/-0.57	0.42/1.28	2.29/2.59	2.86/2.67	2.62/-2.1	1.44/0.99	0.8/-0.07	-1.29/-2.89	-0.03/-6.97	-11.86/-15.2	-13.06/-17.58	-16.19/-8.88	-2.45/-0.57	-0.15/0.36	1.79/2.93	3.06/2.74	1.96/1.1	0.78/0.85	0.04/-0.97
Θ(45°)	-2.43/-4.26	-6.31/-6.08	-7.36/-13.54	-16.48/-9.38	-6.98/-4.82	-2.09/-0.08	0.68/1.15	1.75/2.45	2.97/3.13	2.95/2.46	1.75/0.9	0.09/-0.51	-1.86/-3.52	-4.59/-7.02	-12.89/-17.91	-18.45/-18.22	-10.78/-5.7	-3.9/-3.69	-2.09/0.18	1.31/1.2	0.73/0.02	-0.03/0.47	0.48/0.2	-0.18/-0.81
Θ(52.5°)	-1.41/-2.96	-7.78/-10.18	-9.1/-14.47	-18.53/-10.56	-7.14/-4.35	-1.47/-1.07	0.51/0.85	1.28/1.61	1.86/1.93	2.02/2.01	1.68/0.8	-0.34/-0.96	-2.65/-											



Radiated Composite Gain Data 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix A

Θ(52.5°)	-7.61/-6.13	-3.63/-2.65	-1.95/-1.21	-1.31/-1.66	-1.66/-2.14	-2.77/-3.06	-4.49/-6.98	-9.42/-11.19	-14.4/-17.41	-13.19/-10.22	-10.38/-8.51	-6.57/-6.59	-6.85/-4.59	-3.76/-4	-3.89/-5.01	-7.84/-7.05	-6.25/-6.33	-7.63/-8.52	-8.4/-9.01	-10.4/-10.48	-14.09/-18.76	-18.55/-12.83	-11.58/-11	-8.67/-7.2
Θ(60°)	-7.66/-8.58	-5.27/-4.33	-3.49/-2	-3.1/-3.18	-2.13/-3.25	-4.33/-4.2	-5.28/-8.14	-10.96/-13.71	-17.73/-18.35	-13.53/-9.85	-8.55/-9.63	-9.04/-9.16	-8.42/-5.38	-4.82/-6.04	-6.28/-6.92	-8.47/-8.76	-7.95/-7.42	-9.02/-11.2	-12.29/-15.42	-14/-14.59	-18.55/-18.77	-18.29/-13.05	-11.67/-10.86	-8.66/-6.65
Θ(67.5°)	-7.38/-9.82	-6.59/-6.09	-5.69/-3.4	-4.26/-4.8	-3.51/-4.58	-5.88/-5.65	-7.12/-9.83	-13.8/-19.16	-18.85/-17.75	-14.7/-11.21	-9.99/-10.98	-10.94/-10.98	-10.51/-7.87	-7.45/-8.12	-9.01/-8.7	-9.37/-11.43	-8.95/-8.43	-11.95/-16.42	-15.05/-18.87	-18.38/-18.3	-17.57/-17.95	-17.79/-12.32	-10.78/-11.13	-9.32/-6.73
Θ(75°)	-7.84/-9.54	-7.39/-6.74	-7.11/-4.68	-5.77/-7.54	-5.44/-6.62	-8.48/-7.47	-8.6/-13.31	-18.63/-18.09	-18.69/-18	-15.37/-12.72	-11.07/-12.96	-15.25/-13.37	-11.59/-10.02	-10.11/-11.08	-12.37/-11.21	-8.98/-13.66	-10.17/-8.99	-15.81/-17.89	-14.82/-17.93	-18.87/-18.08	-18.58/-17.2	-15.23/-11.15	-12.38/-12.01	-11.14/-6.85
Θ(82.5°)	-8.37/-10.04	-7.38/-7.64	-8.89/-6.22	-7.62/-10.18	-7.73/-8.89	-11.11/-10.12	-10.75/-15.87	-17.96/-19.15	-17.5/-18.31	-15.94/-12.56	-12.16/-11.86	-13.72/-12.89	-11.99/-10.38	-9.68/-11.26	-14.18/-12.81	-11.04/-18.78	-10.43/-9.16	-17.25/-17.29	-18.63/-18.7	-18.58/-18.51	-14.35/-16.94	-14.27/-11.83	-14.85/-17.5	-13.95/-6.71
Θ(90°)	-9/-11.18	-8.23/-8.25	-10.78/-8.35	-8.86/-12.05	-11.61/-11.03	-15.02/-13.04	-13.64/-18.55	-18.98/-18.63	-18.38/-18.2	-17.97/-12.57	-12.19/-13.04	-13.35/-12.62	-12.59/-10.57	-8.61/-10.08	-14.28/-12.26	-11.33/-18.78	-9.39/-8.52	-14.11/-18.82	-18.64/-18.54	-17.8/-18.93	-14.39/-18.28	-15.77/-13.53	-18.81/-18.88	-18.8/-9.59
Θ(97.5°)	-11.9/-13.57	-10.14/-11.15	-11.74/-10.48	-11.24/-14.5	-14.57/-15.86	-16.32/-16.75	-18.64/-17.2	-17.77/-17.44	-19.09/-18.82	-18.61/-13.99	-12.93/-13.19	-13.02/-13.38	-13.27/-10.32	-8.54/-10.78	-15.55/-12.33	-13.01/-17.92	-12.74/-11.7	-18.62/-17.9	-18.1/-19.06	-18.11/-18.34	-16.2/-18.19	-18.78/-18.44	-19.06/-19.13	-18.48/-10.78
Θ(105°)	-14.12/-17.14	-11.14/-13.56	-14.98/-12.55	-15.57/-15.74	-16.47/-17.66	-17.99/-18.33	-18.06/-17.22	-18.09/-17.71	-18.24/-18.13	-19.09/-16.23	-13.7/-11.98	-13.23/-15.57	-14.18/-10.2	-9.15/-12.47	-14.75/-13.68	-13.09/-18	-17.25/-17.54	-18.7/-18.02	-19.01/-17.94	-17.92/-18.7	-17.66/-17.79	-18.33/-17.03	-17.72/-16.03	-18.29/-10.99
Θ(112.5°)	-14.86/-18.18	-13.03/-17.85	-18.99/-15.16	-16.99/-18.49	-18.7/-18.32	-18.45/-18.88	-18.07/-17.32	-17.64/-17.61	-18.32/-18.84	-17.97/-18.24	-16.21/-14.75	-17.37/-17.47	-13.25/-12.35	-11.29/-12.33	-17.75/-13.56	-15.95/-16.17	-17.58/-17.03	-18.45/-18.59	-18.6/-18.03	-17.82/-18.39	-17.83/-18.07	-18.9/-17.87	-15.43/-15.04	-15.29/-13.38
Θ(120°)	-18.03/-18.11	-16.06/-18.06	-19.22/-15.72	-16.83/-18.53	-17.8/-18.65	-18.06/-19.3	-17.47/-18.76	-18.14/-17.87	-18.64/-19.12	-18.01/-18.16	-18.13/-18.98	-18.91/-18.24	-14.99/-15.38	-15.86/-17.16	-17.92/-12.35	-12.83/-17.55	-17.68/-16.71	-14.84/-17.08	-17.82/-16.97	-17.84/-17.39	-18.76/-18.96	-18.61/-18.21	-17.28/-16.24	-15.16/-15.92
Θ(127.5°)	-17.89/-18.66	-17.74/-17.88	-19.07/-17.54	-17.48/-18.51	-17.98/-19.23	-18.42/-18.05	-18/-18.23	-19.24/-17.37	-18.7/-19.09	-17.52/-18.19	-18.23/-18.86	-18.73/-19.14	-18.55/-17.96	-19.02/-16.73	-14.67/-16.21	-16.65/-13.65	-17.73/-18.33	-12.7/-16.66	-17.34/-14.02	-15.43/-17.73	-17.91/-17.94	-18.1/-18.27	-18.53/-18.21	-18.61/-15.23
Θ(135°)	-18.03/-19.03	-17.85/-18.49	-14.64/-14.63	-17.19/-18.95	-18.53/-18.22	-17.93/-18.01	-18.53/-18.29	-18.58/-18.04	-17.89/-17.3	-18.84/-18.79	-16.61/-18.38	-18.63/-18.63	-17.45/-18.63	-15.03/-17.85	-18.73/-14.54	-18.36/-19	-16.73/-14.11	-15.55/-12.97	-16.64/-17.93	-18.62/-17.59	-17.47/-16.92	-18.87/-18.45		
Θ(142.5°)	-18.22/-18.28	-17.82/-17.81	-18.22/-18.4	-18.1/-18.27	-18.65/-18.5	-18.34/-18.61	-18.28/-17.88	-18.25/-18.44	-18.03/-17.8	-17.43/-18.21	-18.43/-17.47	-18.91/-17.54	-17.47/-16.64	-18.22/-18.36	-17.94/-18	-17.97/-18.04	-16.34/-18.36	-14.22/-19.09	-18.52/-17.45	-18.97/-16.03	-13.69/-18	-19.02/-18.41	-18.72/-15.16	-15.54/-19.38
Θ(150°)	-17.26/-17.92	-17.79/-18.68	-18.74/-17.94	-18.18/-17.54	-18.36/-18.51	-18.31/-18.56	-17.71/-19.16	-18.1/-18.39	-17.54/-17.94	-17.91/-17.99	-18.41/-18.94	-18.52/-18.88	-17.43/-18.48	-19.33/-17.37	-18.65/-18.97	-18.06/-17.88	-14.51/-18.82	-18.73/-18.64	-18.45/-17.58	-18.22/-19.37	-17.63/-18.34	-18.34/-17.19	-17.78/-18.59	-17.81/-18.93
Θ(157.5°)	-18.46/-18.57	-17.8/-18.2	-18.48/-19.17	-18/-18.59	-18.36/-18.72	-18.44/-18.01	-18.73/-18.22	-18/-17.55	-18.03/-18.7	-18.64/-18.44	-18.5/-18.93	-17.84/-18.01	-18.2/-19.09	-18.21/-15.62	-17.41/-15.35	-19.07/-18.13	-13.69/-14.28	-18.65/-18.38	-17.96/-17.31	-19.77/-18.31	-18.94/-18.24	-16.79/-17.49	-18.65/-19.12	-18.19/-17.75
Θ(165°)	-17.69/-18.3	-17.74/-17.79	-18.76/-18.98	-18.93/-17.75	-17.8/-18.75	-18.65/-17.23	-18.01/-17.83	-17.84/-18.54	-18.09/-18.57	-18.45/-18.55	-18.91/-18.33	-19.21/-18.36	-17.8/-18.2	-17.33/-18.36	-18.88/-18.22	-18.3/-17.65	-16.83/-15.26	-17.27/-18.54	-18.72/-18.43	-18.43/-19.16	-17.19/-15.79	-16.77/-17.95	-18.14/-18.29	-18.43/-17.99
Θ(172.5°)	-17.46/-17.92	-18.39/-17.39	-17.98/-18.2	-18.54/-17.71	-17.24/-17.24	-17.94/-18.65	-17.4/-18.78	-19.12/-18.89	-17.83/-18.01	-17.46/-18.78	-18.35/-18.77	-18.9/-17.68	-18.09/-19.06	-17.94/-19.06	-18.2/-18.76	-18.8/-18.51	-18/-17.74	-17.36/-17.52	-18.23/-17.89	-18.28/-17.9	-18.72/-16.97	-17.22/-18.42	-17.99/-18.16	-18.22/-17.9
Θ(180°)	-18.17/-17.51	-18.64/-18.54	-19/-18.08	-18.98/-18.19	-19.29/-18.54	-17.56/-18.35	-18.12/-19.17	-18.49/-17.86	-19.19/-17.8	-18.73/-18.75	-18.09/-18.71	-18.87/-18.15	-17.58/-17.27	-17.59/-16.68	-16.31/-17.55	-18.5/-18.78	-17.76/-18.85	-17.5/-19.05	-17.65/-17.64	-18.66/-17.79	-18.29/-18.16	-19.15/-18.82	-18.17/-18.64	
Freq(Hz)	6.995G/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°)	-	-3/-5.27	-8.61/-14.77	-18.06/-13.24	-7.77/-4.53	-2.46/-0.77	2.44/-0.93	3.27/-0.39	3.37/-0.24	3.06/-0.66	2.25/-1.44	0.34/-1.16	-3.28/-6.03	-9.7/-15.36	-16.94/-9.83	-5.61/-2.91	-1.090/-0.22	3.27/-0.34	3.45/-0.41	3.12/-69	1.960/-78			
Θ(7.5°)	0.12/-1.08	-1.97/-4.11	-6.76/-11.62	-16.22/-10.7	-6.13/-2.89	-0.820/-0.97	2.183/-16	3.874/-33	4.43/-4.39	3.96/-36	3.172/-74	2.15/-1.05	-0.61/-2.82	-5.77/-9.2	-12.82/-17.27	-14.44/-9.63	-6.16/-3.81	-2.01/-0.3	0.86/-1.78	2.38/-2.94	3.31/-3.56	3.64/-3.59	3.41/-3.03	2.72/-71.9
Θ(15°)	0.24/-0.37	-1.25/-2.81	-5.77/-11.9	-16.27/-8.94	-4.58/-2.04	-0.41/-1.4	1.91/-2.58	3.35/-4	4.34/-23	4.08/-41	3.98/-83	3.27/-2.16	0.46/-2.02	-4.8/-11.1	-12.15/-18.68	-13.99/-8.93	-5.3/-2.56	-0.550/-37	0.85/-109	1.48/-184	2.26/-2.6	2.65/-2.64	2.48/-2.08	1.55/-2
Θ(22.5°)	-0.91/-1.2	-2.52/-3.73	-6.9/-15.12	-17.32/-8.28	-4.57/-2.54	-1.47/-0.59	0.34/-1.57	2.67/-0.38	3.93/-45	3.43/-12	2.77/-2.45	2.41/-69	0.71/-1.27	-4.91/-8.42	-10.6/-15.18	-17.74/-8.66	-4.53/-2.19	-0.60/-25	0.91/-141	2.2/-2.97	3.07/-2.6	2.26/-31	2.27/-2.25	1.440/-12
Θ(30°)	-4.95/-2	-3.24/-5.15	-8.74/-17.3	-14.67/-8.64	-5.57/-4.54	-2.66/-0.24	1.63/-2.62	3.13/-3.56	4.124/-25	4.04/-37	2.261/-37	1.061/-19	0.47/-1.58	-4.89/-6.81	-9.44/-17.59	-16.79/-5.724	-7.25/-5.82	-2.4/-0.58	0.15/-1.66	2.88/-3.58	3.82/-8.3	3.68/-3.69	3.27/-2.66	2.94/-21.21
Θ(37.5°)	-1.38/-2.96	-5.12/-7.89	-10.75/-13.98	-18.33/-11.81	-7.83/-4.9	-2.53/-0.61	0.65/-1.54	2.16/-2.58	3.28/-3.55	3.41/-3.02	2.42/-3.35	0.54/-0.23	-0.61/-2.64	-4.62/-5.56	-7.53/-16.55	-12.51/-11.73	-11.26/-4.59	-0.640/-94	1.89/-2.92	3.75/-3.96	3.27/-2.76	2.09/-1.72	2.31/-2.02	0.79/-0.3
Θ(45°)	-3.1/-4.07	-4.93/-8.74	-15.09/-17.21	-17.9/-11.34	-5.45/-4.18	-1.73/-0.07	0.78/-1.23	2.13/-17	3.68/-53	3.22/-77	2.21/-142	0.36/-0.2	-0.33/-1.91	-5.29/-6.58	-8.53/-18.86	-8.48/-11.69	-16.39/-4.65	-1.550/-31	0.35/-1.64	1.990/-57	-0.530/-22	1.47/-2.08	0.9/-0.02	-0.98/-2.64
Θ(52.5°)	-2.87/-4.38	-4.53/-6.66	-13.21/-18.95	-17.96/-10.55	-5.39/-4.5	-2.530/-42	1.36/-2.5	3.384/-23	4.354/-11	3.42/-65	1.430/-97	0.13/-1.05	-2.2/-8	-6.95/-8.46	-12.17/-18.75	-13.3/-16.67	-9.56/-4.09	-2.24/-0.94	0.130/-83	1.50/-45	0.560/-45	1.160/-56	0.430/-84	0.07/-0.82
Θ(60°)	-1.27/-3.5	-3.88/-5.54	-13.98/-13.62	-13.77/-14.17	-6.15/-7.3	-1.48/-1.29	1.74/-2.21	3.23/-54	3.53/-73	3.97/-39	1.90/-07	-1.38/-2.16	-2.08/-2.98	-7.49/-11.81	-12.53/-18.77	-19/-13.79	-8.98/-5.77	-4.18/-3.48	-2.16/-1.2	0.0/-34	0.030/-31	0.370/-41	0.490/-99	1.570/-32
Θ(67.5°)	-0.72/-4.02	-6.18/-5.43	-13.18/-15.24	-10.41/-14.39	-6.96/-5.76	-1.750/-35	0.580/-108	1.82/-68	2.64/-2.91	3.53/-3.32	2.310/-31	-2.41/-4.77	-4.7/-3.74	-9.46/-17.77	-15.24/-18.05	-18.5/-15.68	-7.32/-8.08	-4.59/-4.77	-3.07/-0.92	-1.93/-1.6	-0.89/-0.44	-0.230/-88	1.28/-1.12	1.280/-48
Θ(75°)	-1.19/-5.07	-9.39/-6.99	-14.79/-14.41	-9.2/-16.11	-8.74/-4.46	-2.630/-8	1.160/-54	-0.040/-95	1.9/-23	2.43/-23	2.170/-38	-0.64/-4.96	-4.87/-4.39	-11.55/-17.92	-12.87/-16.95	-18.27/-15.4	-6.95/-6.82	-3.45/-3.65	-1.640/-0.1	-1.280/-11	0.26/-0.51	-0.43/-0.11	0.61/-0.21	0.02/-2.45
Θ(82.5°)	-3.34/-5.99	-12.96/-9.53	-16.28/-14.27	-10.92/-11.1	-8.6/-7.44	-0.750/-57	0.23/-0.71	0.03/-0.34	0.97/-1.27	1.73/-2.35	1.90/-05	-3.21/-5.24	-5.9/-4.77	-15.56/-15.56	-17.24/-17.84	-18.1/-15.4	-9.15/-6.23	-5.06/-3.58	-2.55/-1.04	-0.850/-62	0.69/-0.5	-2.39/-1.66	-0.23/-1.72	-1.15/-3.7
Θ(90°)	-5.69/-6.44	-16.02/-12.36	-17.26/-11.42	-11.39/-11.1	-10.18/-11.49	-0.83/-1.51	-2.57/-1.87	-0.84/-1.88	0.46/-0.63	0.78/-1.11	0.77/-0.67	-3.07/-5.07	-8.53/-7.26	-14.97/-15.14	-12.74/-17.55	-18.72/-17.5	-14.72/-8.29	-6.51/-3.44	-5.05/-3.77	-1.570/-46	0.35/-1.17	-4.69/-5.16	-1.36/-3.7	-2.64/-5.01
Θ(97.5°)	-8.56/-9.28	-17.66/-14.14	-17.7/-10.38	-10.45/-10.81	-9.46/-11.93	-2.21/-3.47	-3.9/-2.36	-1.47/-3.02	-1.52/-2.15	-0.82/-0.58	-1.1/-2.45	-2.86/-5.21	-10.72/-9.74	-15.84/-17.9	-18.81/-1									



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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.26	1.95	2.21	2.92	2.29
Ant. 2 Max Gain (dBi)	5.9	4.48	4.52	5.21	5.83
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/90/247.5	Theta/82.5/270	Theta/127.5/262.5	Theta/112.5/270	Theta/120/270
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/0/337.5	Phi/7.5/247.5	Phi/15/75	Theta/7.5/135	Theta/7.5/150
Max Gain (dBi)	5.9	4.48	4.52	5.21	5.83
DG [1SS] (dBi)	4.93	4.23	4.44	4.81	4.98
DG [1SS] (dBi) Revised	5.9	4.48	4.52	5.21	5.83
DG [2SS] (dBi)	5.9	4.48	4.52	5.21	5.83



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

Appendix B

DG 1SS Result

Freq(Hz)	2.45G/Pol.	Phi+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-2.3/-1.35	-0.560/49	1.32/23	3/3.57	4.05/4.3	4.36/24.3	4.02/3.71	3.26/2.63	1.78/0.66	-0.84/-2.78	-5.32/-7.16	-6.35/-4.8	-3.43/-2.04	-0.630/57	1.61/2.57	3.28/3.83	4.21/4.4	4.43/4.35	4.18/3.85	3.35/2.67	1.80/66	-0.83/-2.91	-5.43/-6.43	-4.93/-3.4
Θ(15°)	-2.18/-1.29	-0.490/51	1.52/44	3.18/3.77	4.19/4.38	4.33/4.11	3.84/3.48	32/36	1.52/0.42	-1.01/2.84	-5.06/-6.23	-5.35/-3.99	-2.82/-1.9	-0.640/46	1.352/3.39	3.19/3.78	4.17/4.38	4.46/4.4	4.23/3.86	3.36/2.69	1.80/61	-0.9/-3.03	-5.75/-6.53	-4.87/-3.37
Θ(15°)	-2.14/-1.4	-0.720/25	1.29/2.23	3.01/3.6	3.99/4.14	4.09/3.91	3.64/3.27	2.78/2.13	1.26/0.2	-1.09/-2.7	-4.54/-5.29	-4.28/-2.98	-1.99/-1.28	-0.760/17	1.01/1.91	2.79/3.36	3.78/4	4.06/3.98	3.81/3.54	3.09/2.44	1.57/0.48	-0.93/-2.94	-5.67/-6.16	-4.61/-3.24
Θ(22.5°)	-2.44/-1.99	-1.06/-1.06	0.55/1.63	2.46/3.06	3.43/3.54	3.55/3.47	3.29/2.9	2.34/1.61	0.66/-0.47	-1.8/-3.23	-4.52/-4.47	-3.2/-1.96	-1.12/-0.61	-0.31/-0.05	0.83/-1.47	2.22/2.73	3.1/3.29	3.31/3.22	3.04/2.78	2.35/1.75	0.96/-0.01	-1.24/-1.35	-5.36/-5.53	-4.28/-3.22
Θ(30°)	-3.07/-2.56	-1.82/-0.82	-0.010/61	1.35/2.01	2.42/2.57	2.61/2.69	2.67/2.36	1.83/1.1	0.12/-1.19	-2.75/-4.37	-5.46/-4.85	-3.33/-1.81	-0.98/-0.54	-0.35/-0.14	0.34/0.05	1.64/2	2.26/2.41	2.43/2.35	2.14/1.81	1.37/0.89	0.25/-0.64	-1.93/-3.9	-5.49/-5.75	-4.74/-3.81
Θ(37.5°)	-3.34/-2.19	-1.31/-0.76	-0.480/07	0.610/94	1.41/1.53	1.57/1.73	1.85/1.74	1.31/0.59	-0.46/-1.92	-3.87/-6.07	-7.41/-5.69	-3.49/-2.11	-1.38/-1.13	-1.06/-0.83	-0.250/44	0.92/1.28	1.56/1.76	1.81/1.71	1.4/1	0.57/0.11	-0.5/-1.42	-2.83/-5.01	-6.55/-6.78	-5.7/-4.59
Θ(45°)	-3.48/-2.27	-1.52/-1.02	-0.76/-0.5	-0.160/25	0.530/56	0.630/86	1.030/99	0.670/0.8	-0.85/-2.15	-3.92/-6.1	-8.22/-8.71	-5.07/-3.33	-2.56/-2.49	-2.68/-2.49	-1.87/-1.22	-0.79/-0.37	0.240/82	1.14/1.13	0.79/0.29	-0.26/-0.79	-1.49/-2.54	-4.06/-6.31	-7.62/-8.13	-6.8/-5.14
Θ(52.5°)	-4.02/-3.25	-2.74/-1.97	-1.36/-0.98	-0.65/-0.37	-0.58/-0.94	-0.8/-0.3	-0.03/-0.16	-0.6/-1.3	-2.3/-3.72	-5.74/-7.95	-9.35/-8.11	-5.3/-3.63	-3.15/-3.64	-4.33/-4.21	-3.34/-2.41	-1.82/-1.73	-1.53/-0.52	0.080/12	-0.28/-0.91	-1.63/-2.37	-3.26/-4.4	-5.77/-6.85	-7.43/-7.17	-6.14/-5.05
Θ(60°)	-5.01/-4.01	-2.88/-2.05	-1.57/-1.23	-1.15/-1.47	-1.15/-1.47	-1.15/-1.47	-2.26/-2.04	-2.24/-2.67	-6.5/-10.15	-12.15/-9.53	-5.41/-3.32	-2.92/-3.81	-5.23/-5.53	-4.39/-2.91	-1.83/-1.52	-1.7/-1.34	-0.75/-0.54	-0.81/-1.48	-2.46/-3.48	-4.42/-5.45	-6.61/-6.28	-6.62/-5.94	-5.56/-5.46	
Θ(67.5°)	-6.27/-4.02	-2.59/-1.93	-1.64/-1.65	-1.99/-2.55	-3.5/-4.67	-5.07/-5.11	-4.4/-4.03	-4.01/-4.07	-4.11/-4.65	-6.43/-10.15	-15.51/-10.87	-6.8/-4.32	-3.99/-4.83	-5.93/-6	-4.87/-3.54	-2.64/-2.32	-2.12/-1.59	-0.94/-0.51	-0.39/-0.74	-1.49/-2.28	-2.96/-3.61	-4.49/-5.67	-6.59/-6.95	-7.13/-7.38
Θ(75°)	-7.06/-4.25	-2.72/-2.14	-2.01/-1.25	-2.55/-3.03	-3.58/-4.61	-6.63/-8.06	9.01/-8.42	-8.4/-7.97	-6.86/-6.38	-7.33/-9.86	-15.02/-14.89	-11.4/-7.79	-6.89/-7.09	-6.94/-5.75	-4.41/-3.26	-2.57/-2.18	-2/1.73	-1.42/-1.14	-0.92/-0.93	-1.3/-1.85	-2.49/-3.31	-4.55/-6.74	-9.42/-10.91	-10.29/-9.19
Θ(82.5°)	-7.4/-5.48	-4.04/-3.22	-2.89/-2.84	-3.03/-3.39	-3.85/-4.52	-5.92/-8.45	-8.62/-8.06	-8.42/-9.42	-8.99/-8.29	-8.65/-10.58	-13.46/-14.93	-11.84/-9.14	-8.86/-9.99	-10.62/-8.34	-6.08/-4.55	-3.19/-2	-1.09/-0.51	-0.43/-0.73	-1.01/-1.23	-1.63/-2.34	-3.39/-4.73	-6.16/-8.02	-10.1/-11.28	-10.92/-9.32
Θ(90°)	-8.7/-8.88	-4.93/-3.63	-3.13/-3.09	-3.38/-3.88	-4.52/-5.37	-7.01/-8.28	-8.52/-7.99	-8.61/-10.33	-10.17/-8.84	-8.7/-10.06	-12.48/-14.47	-10.4/-7.49	-7.13/-6.63	-10.36/-9.03	-6.64/-5.34	-4.65/-3.63	-2.63/-1.91	-1.62/-1.81	-2.17/-2.49	-2.79/-3.21	-3.91/-4.82	-5.66/-6.45	-7.35/-8.27	-8.93/-9.13
Θ(97.5°)	-6.88/-4.76	-3.52/-3.03	-2.97/-3.03	-3.3/-3.74	-4.41/-5.48	-7.12/-7.91	-7.28/-7.32	-9.37/-12.94	-10.96/-7.92	-7.59/-9.29	-11.49/-13.22	-9.23/-7.12	-8.02/-10.14	-11.68/-8.85	-5.96/-4.58	-4.14/-3.64	-3.08/-2.75	-2.71/-2.89	-3.2/-3.56	-3.81/-3.85	-4/-4.58	-5.55/-6.72	-7.55/-7.76	-7.71/-7.8
Θ(105°)	-7.24/-5.07	-3.24/-2.39	-2.03/-1.94	-1.99/-2.22	-2.75/-3.62	-4.69/-5.39	-5.37/-5.85	-8.58/-15.18	-13.5/-8.06	-6.64/-7.58	-10.01/-14.04	-11.66/-9.25	-10.28/-11.4	-11.21/-8.14	-5.15/-3.5	-2.88/-2.68	-2.58/-2.83	-4.66/-5.36	-6.01/-5.93	-5.57/-5.67	-6.46/-7.94	-9.48/-9.8		
Θ(112.5°)	-8.12/-4.74	-2.64/-2.07	-2.42/-2.95	-3.28/-3.5	-3.91/-4.61	-5.42/-5.66	-5.41/-5.93	-8.69/-15.62	-13.14/-9.28	-7.7/-7.87	-9.36/-10.4	-10.64/-10.76	-11.19/-11.75	-11.06/-7.35	-4.27/-2.66	-2.1/2.02	-1.92/-1.92	-2.22/-2.72	-3.53/-4.85	-6.76/-8.11	-8.11/-8.11	-8.25/-8.47	-9.63/-12	-12.05/-11.3
Θ(120°)	-11.1/-8.43	-6.26/-4.82	-3.88/-3.33	-3.33/-3.84	-4.59/-5.04	-5.04/-4.89	-5.26/-7.06	-10.62/-15.26	-13.11/-9.65	-8.24/-8.66	-10.8/-10.57	-8.54/-7.59	-7.39/-7.38	-7.7/-6.3	-4.21/-2.67	-2.15/-2.62	-3.59/-4.23	-4.28/-4.13	-4.3/-5.14	-6.84/-8.35	-8.3/-7.85	-7.55/-6.92	-6.85/-8.42	-11.54/-13.09
Θ(127.5°)	-14.22/-11.29	-7.48/-4.71	-3.31/-2.84	-3.02/-3.24	-3.1/-2.79	-2.59/-2.66	-3.28/-3.54	-8.97/-12.77	-11.72/-8.01	-7.69/-7.62	-9.94/-13.12	-10.78/-11.4	-7.56/-5.59	-3.06/-1.33	-0.89/-1.57	-2.93/-3.91	-3.39/-3.55	-3.63/-4.5	-6.53/-8.6	-8.56/-8.64	-9.18/-10.74	-14.71/-15.38		
Θ(135°)	-8.51/-7.23	-5.09/-3.54	-2.76/-2.6	-2.81/-3.08	-3.21/-3.3	-3.45/-3.75	-4.53/-6.25	-9.56/-13.27	-15.02/-10.23	-6.77/-6.01	-7.72/-9.53	-10.81/-9.79	-9.03/-8.55	-7.65/-5.86	-3.75/-2.12	-1.52/-1.96	-3.29/-4.79	-4.86/-4.13	-3.82/-4.32	-5.75/-7.69	-7.99/-7.31	-7.71/-9.22	-9.85/-10.47	-10.41/-9.56
Θ(142.5°)	-6.55/-4.96	-3.81/-3.03	-2.71/-2.87	-3.43/-4.03	-4.46/-4.62	-4.82/-5.48	-6.86/-9.48	-13.11/-15.19	-13.47/-10.32	-8.59/-8.52	-9.23/-9.65	-9.71/-9.2	-8.43/-6.9	-5.84/-3.4	-3.46/-3.34	-3.63/-4.51	-5.54/-6.31	-6.38/-6.05	-5.86/-6.25	-7.43/-8.71	-8.39/-7.52	-7.6/-8.9	-9.7/-10.33	-9.83/-8.67
Θ(150°)	-7.25/-5.68	-4.86/-4.32	-4.14/-4.37	-4.55/-5.42	-5.55/-5.48	-5.47/-6.05	-7.72/-11.25	-15.21/-14.67	-11.92/-9.4	-9.16/-9.84	-9.93/-10.12	-10.54/-9.39	-8.11/-6.84	-5.43/-4.54	-4.09/-4.3	-4.93/-6.15	-6.42/-6.35	-6.11/-5.85	-6.99/-7.59	-6.39/-6.91	-8.48/-9.58			
Θ(157.5°)	-9.12/-8.27	-7.73/-7.28	-7.02/-7.15	-7.07/-6.62	-6.18/-5.9	-5.92/-6.43	-7.83/-10.61	-13.48/-12.87	-11.06/-9.99	-9.24/-9.52	-10.54/-10.93	-11.31/-10.72	-9.32/-7.95	-6.83/-6.17	-5.89/-6.11	-6.8/-7.24	-7.74/-8.15	-7.6/-7.13	-6.92/-7.19	-8.2/-8.51	-8.74/-7.59	-7.11/-7.32	-8.24/-9.18	-9.68/-10.04
Θ(165°)	-13.88/-13.13	-11.71/-11.55	-10.21/-9.08	-7.83/-6.78	-6.2/-6.14	-6.48/-7.05	-8.19/-10.3	-11.36/-12.28	-11.53/-11.74	-11.41/-11.44	-11.85/-12.27	-13.13/-13.24	-12.8/-12.17	-11.28/-10.57	-10.45/-11.05	-11.5/-11	-11.87/-12.04	-12.05/-12.65	-12.39/-11.58	-11.6/-10.52	-10.29/-10.79	-13.1/-12.19	-13.31/-15.56	
Θ(172.5°)	-14.55/-12.68	-12.22/-11.55	-10.77/-9.68	-8.52/-7.72	-7.45/-7.74	-6.48/-9.39	-10.61/-14.8	-12.16/-13.4	-13.72/-14.96	-15.14/-15.78	-15.23/-14.87	-15.14/-13.8	-14.76/-15.25	-14.61/-13.91	-14.76/-15.25	-14.76/-15.25	-15.39/-15.54	-14.76/-15.25	-15.39/-15.54	-14.21/-14.47	-14.44/-15.76	-15.58/-14.56	-15.71/-14.87	
Θ(180°)	-10.63/-11.41	-11.97/-12.74	-12.91/-12.19	-11.2/-10.45	-10.3/-10.69	-11.54/-12.68	-14/-15.34	-15.14/-15.2	-14.69/-15.39	-15.32/-15.13	-15.41/-15.58	-14.79/-14.59	-14.69/-14.93	-14.34/-14.36	-15.19/-15.5	-14.53/-14.87	-14.33/-13.99	-13.69/-14.29	-14.33/-14.03	-14.24/-15.02	-15.15/-15.2	-14.99/-15.47	-15.57/-14.33	-12.54/-11.24
Freq(Hz)	2.45G/Pol.	Theta+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	4.78/4.45	3.92/3.17	2.24/1.06	-0.36/-2.18	-4.69/-7.16	-6.43/-4.71	-3.06/-1.67	-0.30/82	1.59/2.51	3.23/3.78	4.22/4.55	4.75/4.78	4.64/4.36	3.89/3.2	2.27/3.03	-0.82/-3.09	-5.9/-7.6	-6.25/-4.67	-3.3/-1.84	-0.540/46	1.34/2.35	3.19/3.89	4.44/7.5	4.92/4.93
Θ(7.5°)	4.77/4.44	3.86/3.07	2.09/0.87	-0.63/-2.59	-5.33/-8.16	-6.94/-4.91	-3.02/-1.43	-0.220/81	1.7/2.45	3.09/3.6	3.99/4.36	4.58/4.61	4.52/4.28	3.84/3.19	2.29/1.03	-0.56/-2.67	-5.08/-6.13	-4.96/-3.6	-2.41/-1.38	-0.380/62	1.42/2.27	3.11/3.82	4.37/4.71	4.94/9.3
Θ(15°)	4.75/4.43	3.89/3.13	2.17/0.99	-0.49/-2.38	-5.02/-7.34	-6.32/-4.29	-2.43/-0.86	0.35/1.31	2.09/2.69	3.17/3.56	3.89/4.11	4.28/4.38	4.34/4.18	3.84/3.24	2.41/1.28	-0.41/-1.99	-3.92/-4.67	-3.81/-2.57	-1.48/-0.57	0.140/69	1.29/2.27	2.76/5.4	4.15/4.58	4.84/8.7
Θ(22.5°)	4.354/0.3	3.5/2.82	1.98/0.9	-0.39/-2.06	-4.42/-6.21	-5.55/-3.85	-1.88/-0.32	0.93/1.93	2.7/3.23	3.58/3.8	3.94/4.06	4.154/17	4.14/3.96	3.6/2.98	2.16/1.05	-0.31/-1.94	-3.27/-3.35	-2.59/-1.57	-0.67/0.06	0.65/1.15	1.56/1.95	2.4/3.02	3.6/4.04	4.344/4.8
Θ(30°)	3.78/3.53	3.06/2.47	1.820/99	-0.03/-1.39	-3.31/-5.05	-5.22/-3.7	-2.17/-0.66	0.69/1.82	2.71/3.36	3.76/3.94	4.01/4.05	4.02/3.98	3.89/3.71	3.31/2.7	1.880/86	-0.44/-1.69	-2.52/-2.27	-1.52/-0.73	-0.040/45	0.84/1.16	1.43/1.64	1.89/2.3	2.77/3.23	3.6/3.82
Θ(37.5°)	3.23/3.03	2.62/2.11	1.540/86	0.02/-1.12	-2.8/-4.25	-4.93/-3.9	-2.93/-1.69	-4.00/-86	1.94/2.78	3.28/3.56	3.72/3.8	3.78/3.7	3.5/3.29	2.85/2.23	1.430/41	-0.67/-1.57	-1.87/-1.38	-0.72/0.17	0.230/48	0.63/0.75	0.91/0.6	1.25/1.53	1.95/2.44	2.91/3.22
Θ(45°)	2.54/2.41	1.99/1.45	0.920/35	-0.34/-1.3	-2.8/-3.79	-4.82/-4.53	-4.2/-3.41	-2.29/-1	0.26/1.22	1.78/2.1														



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

Appendix B

Θ(22°)	-4.64/-3.41	-1.95/-0.38	0.80/81	2.23/2.74	2.99/3.31	3.23/2.67	1.88/0.44	-0.99/-2.4	-3.01/-3.89	-4.66/-5.5	-6.8/-5.93	-3.75/-2.69	-1.97/-1.2	-0.25/0.64	1.15/1.37	1.54/1.4	1.43/1.27	1.09/0.59	0.10/-0.44	-1.03/-1.72	-2.61/-3.35	-4.84/-7.96	-12.08/-12.2	-10.15/-6.57
Θ(30°)	-7.83/-4.92	-2.88/-1.46	-0.43/0.54	1.25/2.22	2.91/3.5	3.25/2.56	1.68/0.53	-0.3/-1.5	-2.88/-4.81	-6.49/-8.66	-9.63/-6.23	-2.94/-1.69	-0.67/-0.32	-0.13/0.34	0.44/0.45	0.61/1.7	1.53/1.34	0.89/0.32	0.03/-0.69	-1/-2/1.7	-3.54/-4.68	-5.8/-7.31	-10.36/-9.83	-8.87/-8.68
Θ(37.5°)	-6.94/-6.43	-4.41/-1.08	-0.16/0.35	0.26/0.92	2.16/3.2	3.06/2.35	1.47/0.8	0.18/-1.1	-2.27/-4.31	-6.63/-10.2	-9.48/-4.78	-1.96/-0.91	-0.72/-1.05	-1.24/-0.8	-0.16/0.31	1.06/1.77	1.87/1.59	1.36/1.11	0.53/-0.94	-2.17/-2.86	-4.09/-6.41	-7.16/-7.73	-9.5/-9.83	-8.21/-7.48
Θ(45°)	-6.14/-4.56	-4.8/-3.07	-2.16/-1.32	0.27/1.52	2.58/2.8	2.23/1.76	1.71/1.19	-0.31/-1.69	-2.5/-3.95	-4.23/-5.39	-7.89/-5.56	-2.66/-1.88	-1.6/-1.11	-0.42/-0.09	0.80/0.86	1.05/1.64	2.17/1.69	1.05/0.73	0.49/-0.59	-2.85/-4.67	-5.81/-6.15	-7.03/-7.3	-8.49/-11.26	-9.35/-9.36
Θ(52.5°)	-5.86/-6.91	-7.22/-4.53	-2.58/-1.19	-0.25/0.46	1.23/1.77	1.81/1.86	1.21/1.19	-0.86/-1.69	-2.11/-2.62	-3.36/-4.92	-6.96/-15.7	-3.4/-3.36	-3.41/-2.02	-0.08/0.69	0.71/0.2	0.29/1.07	1.33/0.78	0.19/-0.53	-1.07/-1.77	-3.42/-5.67	-6.97/-7.48	-8.11/-8.95	-9.98/-11.56	-6.97/-7.52
Θ(60°)	-7.57/-5.34	-5.34/-5.03	-4.65/-2.12	-0.6/-1	-0.29/0.55	0.01/0.82	1.67/1.6	-1.24/-1.71	-3.02/-4.94	-5.13/-2.51	-6.26/-5.49	-4.88/-4.57	-4.41/-1.52	-0.18/0.27	0.87/0.77	0.21/0.41	1.03/0.72	0.42/-0.11	-0.83/-1.33	-3.26/-5.53	-8.65/-9.86	-8.45/-9.06	-6.99/-9.63	-9.66/-10.27
Θ(67.5°)	-9.06/-6.61	-6.97/-6.38	-5.55/-3.2	-1.98/-2.53	-1.57/-1.47	-2.38/-0.78	-0.74/-2.4	-2.37/-1.9	-3.7/-6.59	-5.93/-5.1	-5.87/-6.24	-6.8/-7.02	-4.93/-1.66	0.09/0.23	-0.07/-0.1	0.02/0.77	0.98/0.87	0.97/-0.03	-1.58/-2.54	-3.85/-5.58	-9.27/-10.53	-8.35/-10.4	-11.64/-10.66	-5.78/-5.66
Θ(75°)	-8.54/-6.99	-7.93/-6.83	-6.06/-4.64	-3.37/-3.8	-2.3/-2.8	-4.63/-1.84	-2.01/-4.4	-2.86/-3.5	-5.8/-7.65	-9.66/-8.2	-6.79/-5.95	-7.87/-8.68	-5.91/-1.81	0.16/-1.01	-1.61/-0.61	-0.30/7.7	1.54/1.5	1.77/1.34	-1.01/-1.92	-3.32/-4.88	-6.83/-10.18	-9.29/-10.87	-9.93/-10.19	-8.47/-8.78
Θ(82.5°)	-7.49/-8.48	-8.22/-5.99	-7.28/-4.97	-4.96/-7.61	-4.51/-5.94	-4.83/-2.71	-5.06/-6.5	-4.28/-5.31	-6.78/-8.38	-10.34/-8.06	-6.47/-7.91	-10.03/-4.75	-5.61/-2.19	-1.32/-2.96	-2.42/-1.38	-0.45/-1.39	1.61/1.29	1.27/0.55	-1.08/-2.32	-3.65/-4.53	-5.44/-7.46	-6.81/-10.55	-15.77/-10.23	-6.36/-6.2
Θ(90°)	-6.76/-5.87	-7.63/-5.7	-6.13/-5.17	-4.97/-7.08	-6.28/-8.4	-6.44/-5.25	-9.15/-6.97	-5.85/-6.44	-7.44/-8.93	-10.71/-9.7	-7.88/-7.87	-9.5/-7.43	-6.96/-3.7	-3.48/-5.46	-4.48/-3.32	-1.42/0.35	1.76/1.28	0.65/0.54	-1.97/-2.68	-4.09/-5.13	-6.69/-6.26	-7.62/-9.76	-14.61/-13.75	-8.26/-8.62
Θ(97.5°)	-6.01/-6.18	-7.98/-5.87	-8.84/-6.24	-5.83/-6.83	-6.98/-9.89	-6.51/-5.33	-10.32/-6.87	-6.61/-8.9	-7.34/-7.53	-9.9/-9.15	-10.49/-7.81	-5.14/-3.72	-4.6/-7.21	-8.31/-4.42	-2.85/-0.58	-0.13/-1.44	-1.63/-1.97	-4.48/-4.59	-6.43/-7.04	-9.62/-8.07	-8.39/-11.83	-12.05/-10.18	-10.58/-9.95	
Θ(105°)	-7.51/-9.24	-9.81/-6.23	-8.63/-7.56	-6.91/-7.87	-7.41/-11.04	-7.32/-6.4	-10.48/-6.61	-7.72/-10.77	-6.78/-7.41	-10.96/-10.37	-8.88/-8.46	-9.24/-7.81	-7.29/-8.02	-7.55/-8.86	-1.13/-6.31	-3.23/-3.34	-2.51/-3.99	-3.38/-2.56	-7.33/-7.8	-9.1/-9.41	-11.55/-10.37	-9.83/-12.04	-13.41/-11	-5.75/-8.11
Θ(112.5°)	-6.67/-7.58	-9.62/-7.5	-6.77/-8.1	-9.3/-7.95	-7.97/-11.91	-9.63/-9.84	-13.87/-9.54	-10.84/-11.09	-7.8/-10.1	-9.65/-8.36	-6.52/-6.78	-9.92/-9.55	-6.97/-4.17	-4.3/-8.71	-7.03/-4.31	-3.84/-3.51	-4.76/-5.99	-4/-3.62	-9.09/-10.04	-10.75/-9.18	-9.2/-8.45	-10.39/-12.71	-15.16/-11.42	-7.09/-7.62
Θ(120°)	-7.06/-8.02	-5.11/-6.28	-9.86/-5.78	-7.43/-11.19	-9.28/-10.06	-9.93/-9.75	-14.45/-12.01	-11.24/-11.14	-11.03/-14.91	-13.36/-9.37	-9.9/-9.15	-7.11/-7.19	-8.65/-8.99	-6.15/-5.75	-8.31/-4.42	-1.98/-2.7	-3.46/-1.66	-5.31/-3.49	-7.27/-8.91	-7.94/-9.26	-7.61/-10	-9.38/-11.79	-9.83/-11.33	-7.89/-5.27
Θ(127.5°)	-6.34/-8.77	-8.27/-7.86	-9.34/-8.46	-9.9/-10.39	-10.25/-8.21	-9.71/-9.65	-12.27/-10.94	-10.93/-11.38	-11.65/-13.49	-9.87/-8.62	-7.36/-7.37	-8.74/-10.79	-5.53/-4.37	-7.87/-14.48	-6.11/-3.92	-4.43/-2.06	-4.56/-8.99	-6.27/-4.38	-9.32/-10.99	-8.14/-10.07	-11.03/-12.48	-11.12/-9.86	-14.91/-10.64	-8.39/-7.09
Θ(135°)	-7.3/-8.5	-7.34/-7.92	-9.92/-8.66	-10.53/-11.29	-9.83/-10	-11.92/-12.26	-12.42/-12.33	-11.27/-11.47	-13.42/-11.75	-11.77/-9.88	-8.17/-9.6	-10.39/-6.98	-3.34/-5.11	-8.79/-7.32	-7.79/-11.54	-4.45/-4.17	-10.6/-10.69	-7.13/-6.45	-11.14/-13.32	-10.49/-10.02	-15.76/-12.41	-15.54/-10.12	-12.28/-15.22	-11.29/-5.92
Θ(142.5°)	-9.64/-13.39	-5.43/-11.45	-8.35/-8.24	-11.37/-15.81	-11.77/-10.7	-10.5/-13.9	-13.96/-15.14	-13.9/-14.39	-13.32/-13.49	-13.57/-11.99	-10.72/-9.94	-7.66/-8.19	-10.91/-11.22	-10.34/-9.47	-8.21/-4.53	-3.84/-6.73	-7.64/-8.75	-6.87/-7.53	-11.61/-11.83	-10.91/-9.86	-11.84/-11.68	-14.16/-15.37	-10.89/-9.7	-8.7/-7.54
Θ(150°)	-6.65/-5.93	-5.54/-6.37	-6.49/-5.55	-5.75/-8.08	-9.34/-10.54	-10.47/-10.6	-11.91/-11.54	-12.25/-14.88	-13.71/-13.73	-12.86/-15.19	-16.25/-14.01	-7.73/-4.98	-4.34/-4.21	-4.22/-6.54	-9.84/-11.84	-15.24/-13.77	-9.69/-8.77	-8.88/-9.95	-12.86/-14.27	-14.02/-13.86	-12.89/-13.86	-15.08/-15.87	-13.79/-12.12	-9.7/-6.32
Θ(157.5°)	-6.24/-6.31	-7.3/-8.08	-7.85/-7.45	-8.18/-12.98	-14.72/-15.66	-10.47/-15.12	-15.36/-14.28	-13.97/-13.25	-12.68/-12.3	-12.07/-15.1	-15.94/-15.17	-13.52/-10.6	-7.96/-7.03	-7.34/-8.79	-9.89/-10.92	-11.5/-10.89	-9.69/-9.12	-10/-12.31	-15.19/-15.04	-14.13/-15.54	-14.21/-13.79	-14.87/-14.82	-11.63/-8.03	-9.07/-6.32
Θ(165°)	-10.96/-13.29	-13.41/-12.61	-12.06/-12.99	-12.94/-12.59	-12.34/-12.13	-13.49/-15.09	-15.19/-15.26	-14.05/-12.2	-10.92/-10.79	-11.14/-12.15	-13.24/-13.2	-12.15/-9.7	-8.72/-8.14	-7.85/-9.79	-7.98/-8.34	-8.04/-8.07	-9.3/-11.71	-13.56/-14.25	-15.4/-15	-15.45/-13.62	-13.94/-12.54	-10.31/-9.42	-10.66/-11.35	
Θ(172.5°)	-15.83/-14.1	-11.53/-9.26	-10.06/-10.65	-11.49/-11.75	-12.25/-14.1	-15.24/-14.4	-13.74/-13.85	-14.35/-14.74	-15.34/-14.5	-11.33/-9.55	-8.56/-7.34	-6.56/-5.69	-4.78/-4.01	-3.71/-3.56	-3.43/-3.72	-4.25/-5.06	-5.79/-6.79	-7.65/-9.4	-11.12/-14.91	-13.32/-12.99	-12.91/-11.81	-11/-12.07	-14.71/-14.13	
Θ(180°)	-6.79/-6.47	-7.79/-8.7	-8.43/-7.48	-6.61/-6.49	-7.19/-7.58	-8.06/-9.87	-11.31/-13.3	-15.04/-15.53	-13.79/-11.71	-10.66/-7.92	-7.23/-6.43	-6.29/-5.95	-5.96/-5.72	-5.63/-5.89	-6.08/-5.86	-5.99/-6.84	-7.93/-9.72	-10.79/-13.44	-15.93/-15.66	-15.11/-12.75	-10.58/-9.81	-9.39/-9.25	-9.46/-9.12	-8.5/-7.74
Freq(Hz)	5.63GPa	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°)	1.02/0.5	0.03/-0.85	-1.79/-2.72	-4.09/-6.08	-7.98/-8.85	-6.83/-4.49	-2.75/-1.5	-0.5/0.4	1.26/1.82	2.07/2.22	1.87/1.86	1.91/1.75	1.28/0.96	0.19/-0.47	-1.06/-2.35	-3.99/-5.35	-6.65/-8.1	-5.62/-3.76	-1.44/-0.24	0.32/1.02	1.66/2.26	2.62/2.93	3.04/3.05	2.74/2.1
Θ(7.5°)	1.54/0.36	-0.59/-1.58	-2.56/-3.77	-5.57/-7.86	-10.45/-13.59	-11.9/-8.01	-5.03/-2.48	-0.49/0.87	1.88/2.55	2.65/2.51	3.63/2.58	2.56/2.3	1.98/1.38	0.91/0.38	-0.29/-1.57	-2.94/-3.92	-5.33/-6.5	-4.71/-1.99	0.37/1.74	2.32/2.86	3.43/3.86	4.07/4.29	4.44/-3.5	3.71/2.72
Θ(15°)	1.3/0	-0.87/-1.35	-1.76/-2.3	-3.71/-5.4	-7.88/-12.69	-12.51/-17.13	-3.19/-0.87	0.75/-1.95	2.76/3.12	3.07/3.03	2.72/3.7	2.21/1.87	1.79/1.87	1.46/1	0.29/-0.62	-1.61/-2.56	-4.27/-4.69	-0.74/0.95	1.74/2.43	2.83/3.14	3.36/3.66	3.71/3.69		3.12/4.2
Θ(22.5°)	0.96/0.28	-0.17/-0.77	-1.46/-2.12	-3.25/-4.36	-7.28/-11.79	-12.34/-7.96	-4.47/-2.22	-0.61/0.24	1.49/2.21	2.37/2.51	2.34/2.12	2.01/2.02	2.12/1.93	1.26/0.26	-0.75/-1.75	-2.56/-3.45	-4.67/-4.87	-3.35/-1.76	-0.33/0.51	0.94/1.35	1.83/2.2	2.45/2.55	2.5/2.41	1.95/1.59
Θ(30°)	1.16/1.08	0.23/-1.05	-2.73/-3.32	-3.45/-3.94	-5.92/-6.89	-5.54/-3.99	-2.86/-2.14	-0.88/0.52	1.13/0.98	1.34/2.32	2.82/3.6	1.97/1.94	2.47/2.2	1.42/0.5	-0.24/-1.06	-2.04/-3.37	-4.6/-3.67	-2.36/-1.69	-0.47/0.5	1.21/1.52	2.22/2.53	2.62/2.5	2.67/2.64	2.11/4.6
Θ(37.5°)	1.36/1.28	1.13/0.19	-1.2/-2.24	-2.48/-2.9	-5.15/-7.63	-6.23/-4.54	-3.12/-2.31	-1.03/0.16	0.85/1.27	1.7/2	2.7/0.6	2.56/2.89	2.58/2.02	1.61/0.96	0.03/-0.92	-1.51/-2.29	-3.02/-3.16	-4.39/-5.94	-4.22/-1.01	1.37/2.12	2.02/2.11	2.19/2.33	2.74/2.7	1.95/1.41
Θ(45°)	2.14/1.77	1.29/0.51	-1.46/-3.1	-2.81/-2.74	-4.34/-6.3	-5.62/-6.83	-5.68/-3.72	-1.73/-0.39	0.33/0.86	1.6/1.35	1.39/1.29	2.16/2.3	2.23/2.14	1.18/-1.55	-1.71/-1.88	-3.28/-5.55	-7.74/-6.42	-4.76/-4.27	-3.73/-2.25	-1.2/0.12	0.67/0.87	0.93/1.15	1.78/1.88	1.74/2.17
Θ(52.5°)	1.65/0.36	0.31/0.05	-2.05/-3.45	-2.55/-2.19	-3.53/-4.77	-5.81/-5.98	-3.87/-1.41	-0.11/0.77	0.2/0.43	1.43/1.67	1.23/1.41	1.55/1.77	1.79/1.81	1.83/0.81	-0.65/-0.97	-1/-2.44	-3.78/-5.3	-7.21/-6.42	-3.61/-1.38	-0.76/-1.43	-1.42/-1.11	-1.32/-1.07	0.57/0.71	0.76/1.66
Θ(60°)	1.31/0.71	0.37/-0.07	-1.98/-2.87	-3.02/-3.34	-3.65/-3.39	-3.15/-3.17	-2.07/-0.55	0.61/1.57	1.56/0.68	0.71/1.03	0.68/0.85	0.39/-0.18	0.75/1.31	1.65/1.51	-0.38/-1.64	-1.69/-2.48	-3.15/-4.16	-5.35/-3.65	-1.61/-0.67	-0.84/-1.16	-1.45/-0.64	-1.25/-1.88	-0.55/-0.92	-0.64/-1.1
Θ(67.5°)	-0.53/-0.98	-0.02/-1.37	-3.35/-2.83	-3.3/-4.18	-4.38/-4.77	-4.34/-3.36	-2.33/-1.54	-0.01/1.79	2.06/0.52	-0.72/-0.82	-0.92/-0.31	-0.28/-0.35	0.14/0.48	1.19/0.67	-1.11/-0.7	-0.79/-2.58	-2.58/-3.41	-4.5/-2.25	-0.81/-0.19	-0.22/-0.91	-1.57/-1.47	-2.25/-3.04	-1.51/-2.12	-1.66/0.5
Θ(75°)	-1.63/-2.14	0.15/-1.61	-5/-8.2	-5.48/-6.67	-4.54/-5.56	-4.87/-3.23	-1.16/-1.6	-0.72/0.48	1.07/-0.2	-3.45/-3.34	-3.09/-1.42	-0.62/-2.16	-1.04/-0.08	0.04/-0.59	-1.59/-0.48	-0.61/-1.73	-2.11/-3.08	-3.14/-1.08	-0.2/-0.51	0.13/0.31	-0.27/-0.28	-1.92/-4.06</		



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

Appendix B

Θ(67.5°)	-12.51/-11.95	-7.16/-8.26	-7.42/-6.06	-3.7/-4.02	-5.51/-4.11	-4.27/-3.83	-3.85/-5.04	-3.68/-1.48	-2.95/-6.07	-7.16/-6.88	-5.61/-4.6	-6.68/-6.05	-2.76/-0.68	-0.51/-0.63	-1.31/-0.69	0.61/0.33	0.24/0.23	0.06/-0.96	-1.79/-2.13	-3.48/-5.67	-9.03/-7.73	-7.9/-6.56	-7/-9.02	-9.22/-8.82
Θ(75°)	-9.79/-10.7	-7.78/-7.64	-6.83/-6.08	-4.1/-5.1	-6.72/-5.85	-7.11/-5.28	-5.27/-10.78	-6.13/-2.71	-3.59/-7.29	-9.52/-7.76	-7.45/-5.85	-7.2/-7.05	-4.59/-1.55	-0.75/-1.82	-2.65/-0.6	0.67/0.99	0.64/-0.14	0.17/-0.5	-2.06/-3.16	-3.97/-5.11	-9.1/-7.82	-7.92/-7.3	-7.88/-10.58	-10.36/-8.28
Θ(82.5°)	-9.1/-9.3	-8.55/-8.25	-7.93/-7.36	-5.69/-6.96	-5.78/-6.71	-8.23/-5.41	-7.43/-11.45	-6.7/-4.84	-5.98/-11.57	-12.89/-8.31	-8.28/-8.02	-8.41/-6.03	-4.31/-2.14	-3.37/-3.49	-2.71/-1.09	0.28/0.7	0.42/-0.27	0.1/-0.08	-2.08/-3.13	-4.63/-5.58	-8/-8.96	-8.65/-9.55	-9.86/-10.79	-12.44/-7.9
Θ(90°)	-8.31/-8.22	-7.84/-8.26	-8.64/-7.98	-8.1/-9.26	-8.47/-9.23	-10.55/-6.97	-9.45/-13.81	-7.91/-7.31	-7.28/-10.56	-10.82/-8.57	-9/-8.64	-8.89/-5.55	-5.59/-3.69	-3.32/-5.46	-5.15/-2.16	-1.70/66	0.31/-1.31	-0.74/-1.44	-2.82/-3.08	-5.31/-6.33	-7.59/-10.55	-10.3/-9.66	-10.69/-12.2	-11.1/-7.18
Θ(97.5°)	-9.02/-7.54	-8.08/-7.06	-8.8/-8.92	-8.66/-9.82	-8.08/-10.64	-7.81/-8.72	-12.86/-10.78	-8.19/-12.15	-9.49/-9.89	-9.43/-8.59	-9.79/-8.77	-7.72/-6.41	-8.46/-3.75	-4.85/-7.57	-6.72/-6.59	-3.69/-2.03	-1.76/-3.48	-2.97/-3.16	-5.61/-5.1	-6.17/-8.05	-11.08/-10.08	-10.49/-11.87	-11.37/-9.17	-8.4/-7.39
Θ(105°)	-7.84/-8.5	-8.9/-9.68	-9.87/-9.82	-9.9/-13.22	-14.35/-13.09	-11.71/-12.35	-15.72/-9.93	-9.16/-12.29	-9.49/-9.12	-8.48/-10.99	-9.68/-9.68	-9.73/-6.62	-7.31/-4.74	-3.65/-7.79	-6.64/-6.21	-6.14/-4.71	-5.95/-7.9	-5.13/-4.61	-7.35/-6.34	-7.66/-8.95	-12.33/-12.83	-14.26/-12.87	-12.24/-9.19	-7.05/-6.2
Θ(112.5°)	-7.22/-8.11	-7.49/-10.12	-10.49/-11.33	-9.55/-12.61	-11.13/-10.36	-11.25/-13.91	-13.03/-10.53	-10.8/-14.56	-9.8/-8.85	-11.15/-11.03	-9.03/-9.01	-9.18/-8.02	-9.96/-8.43	-5.91/-6.75	-9.17/-7.64	-6.81/-7.77	-7.54/-8.51	-6.21/-3.97	-6.5/-8.01	-11.3/-10.79	-11.48/-13.12	-13.15/-10.98	-11.19/-9.89	-7.92/-6.21
Θ(120°)	-7.25/-6.48	-6.06/-7.08	-8.28/-12.04	-12.55/-11.58	-12.43/-11.99	-12.22/-11.4	-12.32/-14.72	-13.76/-12.4	-9.14/-11.63	-13.14/-10.85	-9.44/-8.98	-8.24/-9.31	-9.51/-5.65	-4.17/-11.32	-8.03/-8.33	-5.68/-6.99	-6.55/-10.17	-7.83/-2.7	-4.99/-7.47	-11.08/-10.84	-10.12/-10.51	-12.09/-14.75	-13.88/-7.9	-5.57/-8.39
Θ(127.5°)	-6.94/-6.24	-7.95/-8.15	-8/-8.02	-9.17/-10.09	-15.3/-12.02	-11.22/-9.4	-9.97/-15.95	-11.32/-11.54	-13.91/-15.75	-13.51/-11.04	-11.8/-11.5	-10.23/-9.58	-8.31/-6.92	-6.29/-8.91	-13.87/-3.73	-7.12/-7.23	-5.96/-11.1	-8.24/-4.32	-8.19/-12.35	-8.12/-11.07	-9.33/-12.94	-9.26/-15.36	-13.93/-11.58	-8.82/-6.66
Θ(135°)	-7.64/-7.29	-8.78/-10.39	-12.13/-14.07	-14.73/-13.77	-13.41/-11.84	-11.76/-12.74	-13.92/-14.13	-14.85/-13.58	-15.62/-14.81	-8.55/-7.81	-9.4/-12.02	-12.09/-14.21	-9.38/-8.58	-10.9/-11.33	-4.57/-6.96	-8.54/-5.78	-7.8/-12.44	-8.95/-7.09	-12.62/-13.94	-8.17/-10.29	-14.28/-14.49	-13.04/-11.46	-15.48/-13.96	-11.1/-9.67
Θ(142.5°)	-11.17/-11.68	-12.09/-9.94	-7.62/-8.76	-9.73/-11.88	-13.54/-13.89	-14.87/-14.46	-13.75/-15.68	-14.72/-14.74	-14.68/-12.84	-14.91/-15.68	-15.46/-10.94	-9.02/-7.35	-9.37/-9.16	-10.97/-11.42	-12.29/-8.06	-7.53/-8.89	-9.24/-8.09	-4.9/-6.34	-11.84/-12.29	-10.42/-9.95	-14.55/-16.02	-15.65/-15.86	-11.37/-9.04	-6.34/-7.48
Θ(150°)	-7.12/-7.19	-7.04/-7.29	-8.25/-7.87	-8.52/-8.95	-11.16/-13.27	-14.62/-12.92	-14.08/-14.8	-15.52/-15.84	-12.66/-11.1	-11.31/-12.95	-12.27/-11.27	-11.46/-10.32	-8.61/-8.08	-7.55/-7.31	-7.76/-9.68	-13.88/-15.62	-15.12/-12.92	-9.45/-10.43	-13.03/-15.99	-15.91/-16.06	-14.75/-14.89	-15.51/-14.88	-15.75/-12.57	-12.03/-9.57
Θ(157.5°)	-6.25/-6.78	-8.16/-12.75	-12.91/-10.12	-10.44/-12.85	-13.87/-14.52	-14.62/-13.98	-14.08/-14.9	-14.95/-14.19	-12.64/-13.11	-14.56/-12.99	-12.56/-12.51	-12.62/-10.15	-8/-7.4	-8.52/-11.37	-15.51/-14.76	-15.04/-14.87	-11.98/-10.27	-9.63/-9.94	-11.73/-10.91	-11.17/-13.21	-13.5/-14.12	-13.36/-10.48	-9.06/-8.44	-6.69/-5.3
Θ(165°)	-9.34/-10.08	-12.62/-14.09	-11.71/-11.78	-12.97/-12.95	-12.62/-14.99	-15.58/-15.87	-14.5/-15.29	-14.23/-11.68	-11.39/-11.73	-12.11/-12.53	-14.59/-15.83	-15.28/-13.38	-11.87/-10.87	-9.69/-9.32	-7.89/-7.51	-7.34/-7.52	-8.4/-9.79	-11.82/-12.29	-12.46/-14.08	-14.11/-15.15	-13.76/-10.51	-9.58/-7.91	-7.09/-8.31	
Θ(172.5°)	-15.46/-13.88	-11.47/-9.22	-9.12/-9.95	-11.38/-12.85	-14.3/-14.87	-15.93/-14.45	-14.72/-15.55	-15.39/-14.97	-15.47/-14.57	-12.77/-11.04	-9.28/-8.06	-7/-5.99	-5.21/-4.49	-4.31/-4.22	-4.34/-4.6	-5.07/-5.72	-6.75/-8.04	-9.12/-10.18	-11.36/-13.18	-12.9/-11.51	-12.95/-13.33	-11.92/-10.64	-11.09/-11.85	-12.86/-15.02
Θ(180°)	-8.68/-8.96	-10.18/-10.61	-10.03/-9.35	-8.01/-7.84	-7.93/-8.67	-9.24/-10.05	-11.3/-13.43	-14.24/-13.64	-12.43/-11.48	-9.72/-8.93	-8/-7.75	-7.23/-6.78	-6.3/-6.28	-6.2/-6.43	-6.73/-7.25	-7.57/-7.41	-8.1/-8.79	-9.7/-11.65	-14.09/-15.57	-15.23/-15.51	-12.43/-11.39	-11.58/-11.03	-10.53/-9.46	-8.92/-8.22
Freq(Hz)	5.7855/Pol	Theta/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	3.072/55	1.971/17	0.221/1.08	-2.7/4.88	-6.43/-4.39	-2.53/-1.12	0.08/1.32	2.21/3.04	3.54/4.07	4.23/4.36	4.44/4.38	4.28/4.09	3.49/2.95	2.13/1.07	-0.25/-1.68	-3.63/-6.44	-6.93/-3.92	-1.98/-0.54	0.95/2.24	2.85/3.34	3.93/4.42	4.75/4.82	4.64/4.57	4.34/4.02
Θ(7.5°)	2.08/1.53	0.69/-9.11	-0.87/-2.38	-4.19/-6.56	-8.07/-7.25	-5.33/-3.35	-1.42/0.08	1.49/2.75	3.72/4.57	4.94/4.85	4.98/4.77	4.39/3.84	3.11/2.49	1.80/83	-3.64/-1.54	-3.05/-5.41	-6.46/-4.5	-2.23/-1.04	0.21/1.54	2.66/3.3	3.79/4.19	4.46/4.53	4.33/3.85	3.58/3.02
Θ(15°)	1.39/0.54	-1.88/-1.17	-2/-3.21	-5.72/-7.82	-7.92/-6.78	-5.34/-3.09	-0.62/1.05	2.27/3.15	2.22/7.4	3.14/2.95	3.55/3.98	3.94/3.49	2.87/2.29	1.46/0.78	0.09/-0.84	-1.97/-3.43	-5.08/-5.13	-2.95/-1.13	0.48/1.6	2.31/2.81	3.35/3.77	3.95/4.02	3.79/3.32	2.83/2.22
Θ(22.5°)	0.36/-0.74	-1.15/-2.15	-3.27/-5.96	-8.26/-8.98	-7.77/-7.62	-7.67/-5.98	-3.38/-1.14	0.36/0.95	2.21/3	3.43/55	3.95/4.06	3.93/28	2.81/2.52	2.06/1.41	0.51/-0.61	-1.61/-2.96	-4.04/-3.93	-2/-0.54	0.71/1.61	1.94/2.13	2.36/2.59	2.95/3.45	3.62/3.51	2.52/1.66
Θ(30°)	0.53/-0.17	-1.56/-2.63	-4.07/-6.35	-8.68/-8.86	-8.01/-7.47	-7.34/-4.92	-2.67/-0.63	1.15/2.11	2.81/3.78	4.07/4	4.02/4.17	3.83/2.83	2.74/2.72	1.90/42	-0.83/-1.05	-0.32/-1.62	-3.19/-4.23	-4.32/-3.4	-1.86/-0.43	0.77/1.26	1.26/1.45	2.07/2.83	2.88/2.57	1.93/1.36
Θ(37.5°)	0.23/-1.15	-2.53/-3.15	-3.53/-5.98	-9.18/-9.87	-7.39/-6.28	-4.92/-3.49	-1.92/-0.92	0.31/1.59	2.22/7.4	3.14/2.95	3.55/3.98	3.66/3.08	2.56/2.15	1.57/0.67	-0.36/-0.93	-1.1/-1.69	-3.24/-4.69	-4.41/-2.78	-0.83/-0.13	-0.31/-0.67	0.14/0.89	1.47/1.87	2.02/2.06	1.89/1.59
Θ(45°)	-0.85/-1.26	-2.41/-3.58	-5.76/-8.11	-9.91/-9.42	-8.12/-7.19	-5.34/-3.4	-2.38/-1.14	0.19/1.05	1.43/1.78	2.68/2.62	2.43/2.45	2.68/2.5	1.82/1.46	1.69/1.24	-0.24/-1.23	-1.74/-3.05	-4.76/-4.37	-3.66/-3.46	-3.18/-2.3	-0.93/-0.88	-0.47/-0.51	-1.23/0.34	1.3/0.77	0.48/-0.36
Θ(52.5°)	-2.38/-2.59	-3.15/-4.78	-5.58/-6.62	-9.43/-10.7	-9.11/-8.05	-7.02/-5.63	-3.67/-1.71	-0.26/0.18	0.06/0.22	1.49/2.39	2.18/1.74	1.64/1.2	0.78/0.87	1.43/1.03	-0.12/-1.67	-2.99/-3.86	-5.66/-5.72	-4.45/-3.75	-3.54/-3.59	-3.89/-3.18	-1.92/-1.6	-2.79/-1.53	0.05/0.05	-0.41/-1.47
Θ(60°)	-4.14/-4.14	-3.61/-4.18	-6.01/-6.42	-8.79/-10.96	-10.06/-8.62	-7.21/-4.53	-2.08/-0.52	-0.05/-0.16	-0.48/-0.12	0.65/1.7	1.78/0.93	-0.07/-0.57	0.57/0.79	0.83/0.96	-0.5/-3.01	-3.03/-4.41	-5.82/-4.8	-4.19/-3.69	-4.38/-4.77	-3.1/-2.16	-1.13/-1.54	-4.78/-2.88	-1.58/-1.38	-1.36/-2.52
Θ(67.5°)	-4.98/-5.42	-3.68/-4.26	-5.17/-6	-9.08/-11.46	-9.66/-10.33	-8.67/-4.62	-1.48/0.07	-0.19/-0.45	-0.62/-0.13	-0.28/-0.42	-0.17/-0.36	-0.54/-1.5	-0.46/0.39	0.27/-0.37	-2.05/-2.46	-2.29/-3.79	-5.32/-4.85	-3.1/-3.22	-3.53/-2.91	-2.43/-2.33	-2.33/-1.87	-5.21/-3.75	-2.11/-1.57	-1.49/-2.67
Θ(75°)	-5.84/-5.84	-3.98/-5.54	-4.82/-4.92	-8.65/-10.2	-10.65/-12.63	-10.81/-5.44	-1.87/-0.73	-0.92/-0.71	-0.75/-0.85	-1.77/-4.18	-2.36/-1.94	-0.54/-2.91	-1.67/-0.07	-0.2/-0.96	-2.34/-2.05	-1.75/-3.22	-3.56/-4.05	-2.66/-1.03	-0.93/-1.94	-2.27/-1.44	-1.37/-1.58	-5.77/-4.56	-2.79/-2.22	-2.39/-3.54
Θ(82.5°)	-5.78/-6.63	-4.38/-7.41	-5.82/-6.11	-9.93/-9.61	-11.92/-12.34	-10.97/-7.57	-4.73/-2.95	-2.66/-1.63	-2.04/-3.1	-3.66/-6.96	-3.8/-3.46	-1.21/-4.73	-2.94/-0.69	-0.87/-2.83	-2.97/-2.19	-1.75/-2	-2.33/-3.83	-1.93/-1.05	-1.06/-1.12	-2.03/-0.73	-0.71/-0.82	-3.41/-3.83	-3.19/-2.99	-3.3/-2.58
Θ(90°)	-7.74/-7.09	-4.49/-7.45	-4.34/-4.88	-9.15/-8.07	-12.35/-12.68	-9.71/-9.94	-9.55/-8.16	-5.98/-3.72	-3.78/-6.28	-5.25/-7.26	-3.28/-4.2	-2.13/-4.93	-3.68/-1.91	-1.55/-3.93	-3.64/-3.78	-3.83/-2.09	-2.4/-4.02	-1.61/-1.74	-1.55/0.45	-0.84/-0.85	-0.47/-1.05	-1.51/-3.21	-4.04/-3.56	-2.38/-2.74
Θ(97.5°)	-7.55/-5.97	-4.42/-9.06	-4.86/-6.28	-10.25/-9.15	-11.07/-10.18	-10.02/-12.59	-14.3/-13.84	-9.82/-6.98	-10.79/-11.99	-9.09/-5.98	-3.97/-4.96	-3.68/-7.52	-6.7/-3.53	-3.36/-6.14	-6.33/-7.64	-5.68/-2.92	-4.28/-5.11	-2.07/-3.41	-3.06/-1.07	-1.7/-2.59	-1.26/-2.21	-2.59/-3.18	-4.67/-3.38	-2.52/-4.33
Θ(105°)	-7.55/-5.8	-6.59/-8.42	-5.37/-6.8	-10.04/-9.92	-9.4/-8.9	-9.54/-9.25	-7.42/-7.61	-8.22/-8.11	-10.54/-12.67	-10.53/-10.01	-6.39/-6.96	-6.43/-8.89	-7.31/-6.19	-5.9/-8.35	-9.19/-7.66	-8.35/-4.48	-5.85/-5.87	-3/-3.44	-2.73/-1.85	-2.91/-3.52	-1.53/-3.05	-2.47/-4.93	-5.47/-4.39	-1.49/-3.24
Θ(112.5°)	-5.99/-6.32	-7.24/-9.11	-8.68/-11.18	-11.64/-10.61	-9.16/-9.14	-12.4/-9.22	-6.8/-6.04	-6.27/-6.29	-6.22/-6.48	-9.92/-10.12	-8.7/-7.46	-8.31/-8.81	-8.38/-7.67	-7.31/-10.12	-9.15/-8.84	-6.35/-5.45	-5.79/-5.34	-4.06/-1.36	-1.3/-3.41	-4.05/-1.73	-0.95/-1.2	-3.25/-6.7	-5.76/-2.68	-1.77/-3.81
Θ(120°)	-6.47/-7.51	-9.17/-10.81	-9.32/-11.13	-10.97/-13.05	-15.6/-13.53	-14.94/-9.59	-7.14/-7.41	-6.36/-5.1	-5.5/-7.14	-8.73/-11.15	-10.													



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

Appendix B

Gain Result

Freq(Hz)	2.45GPol.	PhiAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)		
Θ(0°)	-11.72/-14.87	-6.69/-13.89	-18.27/-14.71	-11.97/-10.09	-8.49/-7.35	-6.71/-6.33	-5.75/-5.09	-4.59/-4.33	-4.34/-4.37	-4.73/-5.29	-6.27/-1.63	-9.57/-11.94	-15.15/-17.83	-18.13/-17.17	-16.36/-12.83	-10.97/-9.28	-7.94/-6.98	-6.31/-5.58	-4.77/-4.15	-3.76/-3.6	-3.77/-3.72	-4.07/-4.76	-5.69/-6.75	-7.99/-9.54		
Θ(7.5°)	-11.43/-14.78	-19.13/-18.98	-15.8/-12.76	-10.44/-8.72	-7.47/-6.72	-6.37/-6.19	-5.75/-5.15	-4.67/-4.42	-4.38/-4.47	-4.68/-5.14	-5.95/-7.08	-8.59/-10.5	-13.2/-17.32	-18.21/-18.1	-17.99/-14.19	-11.51/-9.93	9/-6.92	-6/-5.21	-4.48/-3.93	-3.58/-3.37	-3.34/-3.39	-3.65/-4.27	-5.19/-6.26	-7.55/-9.23		
Θ(15°)	-10.69/-14.28	-18.94/-18.6	-15.47/-12.46	-10.1/-8.53	-7.4/-6.8	-6.49/-6.07	-5.58/-5.03	-4.56/-4.34	-4.38/-4.51	-4.66/-4.87	-5.29/-5.83	-6.61/-7.68	-9.47/-12.27	-17.11/-18.55	-19.06/-16.51	-13.19/-10.93	-9.26/-7.85	-6.75/-5.84	-4.89/-4.07	-3.5/-3.19	-2.98/-2.85	-2.95/-3.43	-4.3/-5.43	-6.8/-8.55		
Θ(22.5°)	-10.66/-15.64	-17.74/-17.78	-18.09/-13.92	-11.24/-9.51	-8.43/-7.77	-6.96/-6.07	-5.25/-4.82	-4.57/-4.46	-4.6/-4.83	-5.01/-5	-4.95/-5	-5.25/-5.89	-7.22/-9.42	-13.11/-18.77	-17.94/-18.31	-15.22/-13.25	-11.25/-9.46	-8.04/-6.78	-5.59/-4.6	-3.83/-3.28	-2.38/-2.46	-3.7/-4.84	-6.23/-8.04			
Θ(30°)	-11.75/-16.06	-19.73/-18.91	-18.49/-18.9	-16.07/-13.09	-10.98/-9.75	-8.37/-6.63	-5.22/-4.56	-4.54/-4.59	-4.91/-5.45	-6.09/-6.29	-5.92/-5.44	-5.27/-5.21	-6.1/-7.82	-10.64/-14.14	-16.14/-15.5	-14.63/-14.43	-13.09/-11.14	-9.25/-7.59	-6.33/-5.31	-4.42/-3.56	-2.85/-2.46	-2.52/-3.09	-4.03/-5.25	-6.8/-8.87		
Θ(37.5°)	-10.96/-11.53	-12.35/-14.3	-18.2/-18.94	-17.92/-17.42	-13.4/-11.24	-9.22/-6.95	-5.06/-4.03	-3.78/-4.07	-4.67/-5.6	-6.71/-7.37	-7.01/-6.06	-5.41/-5.51	-6.34/-8.07	-10.7/-13.13	-13.64/-13.27	-13.56/-13.6	-12.42/-10.51	-8.67/-7.27	-6.35/-5.55	-4.69/-3.4	-3.17/-2.95	-3.25/-4.04	-5.17/-6.55	-8.15/-9.89		
Θ(45°)	-10.09/-10.18	-11.22/-13.27	-15.86/-18.25	-18.77/-16.77	-14.24/-12.36	-10.7/-3.8	-5.42/-4.29	-3.84/-3.92	-4.6/-5.8	-7.2/-8.16	-7.06/-6.6	-5.87/-5.65	-6.43/-8.34	-11.01/-12.81	-13.07/-13.69	-15.7/-16.87	-13.88/-10.12	-7.16/-6.03	-5.46/-5.14	-4.72/-4.2	-3.89/-4	-4.54/-5.43	-6.62/-8.15	-9.7/-10.37		
Θ(52.5°)	-11.59/-13.61	-16.96/-17.77	-18.14/-19.03	-18.45/-16.67	-17.22/-17.45	-13.14/-8.69	-6.12/-5.02	-4.71/-4.88	-5.69/-7.28	-9.48/-10.75	-9.65/-7.61	-6.01/-5.59	-6.52/-8.76	-11.34/-11.62	-10.54/-10.39	-12.08/-16.71	-19.05/-11.75	-7.78/-6.03	-5.54/-5.61	-5.6/-5.39	-5.17/-5.22	-5.41/-5.76	-6.49/-7.67	-9.07/-10.38		
Θ(60°)	-13.99/-14.73	-13.62/-12.55	-12.8/-12.66	-12.59/-13.54	-17.28/-18.87	-18.51/-11.34	-7.62/-5.9	-5.35/-5.35	-5.71/-6.76	-9.07/-12.59	-13.05/-9.06	-6/-4.87	-5.55/-9.37	-11.08/-11.43	-9.09/-7.47	-7.63/-9.86	-13.44/-12.16	-8.73/-6.83	-6.33/-6.23	-7.05/-6.98	-6.31/-5.59	-5.15/-5.1	-5.53/-6.43	-8.07/-10.96		
Θ(67.5°)	-12.97/-9.99	-8.22/-7.88	-8.05/-6.68	-9.92/-11.59	-14.48/-18.91	-17.84/-14.95	-10.64/-8.7	-8.06/-7.51	-6.87/-7.11	-9.17/-13.53	-18.1/-11.01	-6.58/-5.05	-5.64/-7.93	-7.68/-5.66	-7.85/-9.61	-10.9/-9.45	-7.14/-5.68	-5.14/-5.23	-5.53/-5.4	-4.84/-4.28	-4.27/-4.95	-5.93/-6.9	-8.56/-11.77			
Θ(75°)	-13.18/-9.25	-7.52/-7.43	-7.95/-8.81	-9.73/-10.26	-10.47/-11.79	-16.1/-17.63	-16.95/-12.87	-11.64/-10.07	-7.79/-6.81	-8.03/-11.28	-18.09/-18.06	-11.87/-9.02	-9.13/-10.45	-10.57/-8.35	-6.24/-5.39	-6.15/-8.01	-9.6/-8.92	-7/-5.51	-4.82/-4.64	-4.56/-4.28	-4/-4.02	-4.58/-6.2	-8.82/-10.89	-12.33/-14.73		
Θ(82.5°)	-12.85/-10.71	-9.12/-8.45	-8.62/-9.14	-9.46/-9.33	-9.04/-9.38	-11.81/-19.09	-18.23/-14.58	-13.29/-12.57	-9.6/-7.88	-8.42/-10.96	-15.38/-16.98	-12.01/-10.79	-13.84/-9.47	-6.14/-4.82	-4.9/-5.57	-5.87/-5.34	-4.51/-4.01	-3.98/-4.34	-4.69/-4.95	-5.35/-5.97	-6.48/-7.51	-9.79/-13.02	-15.16/-14.79			
Θ(90°)	-15.75/-14.41	-11.16/-9.13	-8.62/-8.89	-9.41/-9.9	-10.35/-11.57	-15.45/-19.02	-18.7/-15.23	-15.9/-17.68	-13.51/-9.47	-8.71/-10.06	-13.63/-17.22	-10.91/-7.58	-7.08/-8.51	-10.74/-10.34	-7.68/-5.73	-5.09/-5.33	-5.81/-5.74	-5.09/-4.5	-4.31/-4.63	-5.05/-5.23	-5.46/-5.86	-6.64/-6.14	-6.77/-8.04	-9.84/-12.49		
Θ(97.5°)	-11.53/-8.83	-7.36/-6.99	-6.83/-6.82	-7.04/-7.4	-8/-9.32	-11.8/-12.62	-10.57/-9.89	-12.45/-18.25	-13.22/-8.37	-7.61/-9.02	-12.29/-14.75	-9.71/-7.04	-7.4/-9.75	-12.32/-11.09	-7.71/-5.4	-4.4/-4.32	-4.87/-5.41	-5.58/-5.44	-5.45/-5.84	-6.31/-6.28	-6.23/-6.75	-7.63/-8.26	-8.44/-8.46	-9.1/-11.2		
Θ(105°)	-10.42/-8.86	-6.69/-6.78	-5.63/-5.42	-5.08/-4.78	-4.83/-5.53	-6.97/-8.32	-8.38/-8.44	-10.83/-18.24	-14.6/-7.87	-6.3/-7.17	-10.14/-15.33	-12.5/-9.44	-10.04/-11.94	-11.77/-9.26	-6.39/-4.5	-3.61/-3.53	-4.16/-3.55	-5.54/-7.15	-7.21/-4.73	-7.84/-7.47	-6.17/-6.85	-7.79/-9.39	-11.02/-10.97	-10.11/-10.96		
Θ(112.5°)	-13.48/-8.25	-5.56/-5.43	-6.91/-6.88	-9.44/-9.21	-9/-9.73	-11.51/-12.25	-10.9/-10.13	-12.21/-19.03	-14.67/-8.83	-7.38/-7.49	-8.68/-10.18	-10.32/-10.72	-11.16/-11.74	-11.43/-8.67	-5.71/-3.82	-2.58/-1.95	-2.04/-2.78	-3.87/-4.93	-6.03/-7.52	-9.65/-10.61	-9.54/-9.19	-9.81/-10.95	-13.62/-18.69	-18.37/-18.62		
Θ(120°)	-14.73/-12.14	-9.83/-6.52	-7.86/-7.55	-7.52/-7.6	-7.46/-7.16	-6.78/-6.39	-6.31/-7.34	-10.36/-18.5	-17.67/-13	-11.29/-12.05	-13.22/-10.76	-7.79/-6.55	-6.12/-6.1	-6.72/-7.18	-6.59/-5.18	-3.91/-3.44	-3.77/-4.52	-5.28/-5.8	-6.27/-7.23	-9.13/-10.49	-9.39/-8.19	-7.81/-7.43	-7.52/-9.36	-13.48/-16.58		
Θ(127.5°)	-17.35/-13.49	-8.18/-4.58	-2.94/-2.48	-2.79/-3.41	-4.1/-4.67	-5.1/-5.29	-5.88/-7.8	-12.52/-18.47	-16.25/-9.91	-7.38/-7.58	-11.08/-14.31	-10.57/-8.49	-8.04/-8.03	-7.52/-5.87	-3.51/-1.46	-0.56/-0.64	-2.13/-3.79	-5.13/-6.03	-7.05/-8.79	-12.08/-14.55	-11.17/-8.59	-7.92/-8	-6.49/-10.6	-15.86/-18.15		
Θ(135°)	-7.81/-6.41	-4.82/-3.4	-2.7/-2.83	-3.79/-5.25	-6.88/-8.35	-9.41/-9.85	-10.34/-11.91	-16.31/-18.69	-17.05/-13.4	-7.1/-6.1	-7.19/-9.42	-10.57/-10.26	-10.05/-9.77	-8.93/-7.2	-4.71/-2.52	-1.38/-1.39	-2.24/-3.37	-4.29/-5	-5.94/-7.51	-10.27/-13.72	-12.27/-9.27	-8.43/-9.04	-9.68/-10.7	-10.03/-9.95		
Θ(142.5°)	-6.13/-5.05	-4.35/-3.85	-3.66/-4.05	-5.09/-6.49	-7.85/-8.83	-9.64/-10.74	-12.63/-15.57	-17.81/-17.87	-14.74/-10.74	-8.81/-8.09	-8.38/-9.12	-9.5/-5.84	-4.29/-3.26	-2.8/-2.93	-3.84/-4.84	-6.16/-7.24	-8.84/-8.25	-8.86/-10.08	-12.43/-14.44	-12.01/-9.04	-8.04/-8.41	-9.49/-10.12	-9.35/-7.75			
Θ(150°)	-6.31/-5.79	-5.6/-5.59	-5.71/-6.21	-6.89/-7.35	-7.44/-7.4	-7.5/-8.24	-10.27/-14.38	-17.83/-17.07	-12.15/-9.61	-8.95/-9.26	-9.86/-10.39	-10.28/-9.39	-7.8/-5.89	-4.14/-2.93	-2.4/-2.57	-5.98/-7.35	-8.79/-10.09	-11.42/-13.25	-16.73/-18.02	-15.75/-11.22	-9.11/-8.44	-8.7/-9.12	-8.85/-7.73			
Θ(157.5°)	-9.2/-9.52	-10.18/-10.58	-10.85/-11.04	-10.32/-9.01	-8.01/-7.68	-7.8/-8.54	-10.51/-14.72	-19.11/-15.55	-11.68/-9.7	-9.03/-9.38	-10.31/-11.22	-11.58/-11	-9.69/-8.08	-6.63/-5.66	-5.15/-5.11	-5.47/-6.05	-6.72/-7.49	-8.47/-9.63	-11.04/-13.25	-17.58/-18.83	-18.41/-12.63	-9.88/-8.64	-8.39/-8.72	-9.24/-9.5		
Θ(165°)	-19.04/-19.14	-17.75/-19.34	-16.15/-13.29	-10.6/-8.78	-7.96/-8.18	-10.88/-10.46	-12.78/-17.73	-19.23/-19.01	-14.65/-12.37	-11.5/-11.62	-12.41/-13.53	-14.3/-14.36	-13.83/-12.74	-11.73/-11.02	-10.67/-10.63	-10.93/-11.32	-11.53/-11.65	-12.08/-13.19	-14.95/-18.1	-17.03/-17.46	-17.73/-13.67	-11.88/-11.23	-11.52/-12.9	-15.24/-18		
Θ(172.5°)	-15.63/-15.5	-15.63/-14.94	-13.77/-12.04	-10.31/-9.26	-9.06/-9.71	-11.21/-13.19	-15.88/-17.65	-17.86/-18.92	-17.46/-18.03	-18.26/-19.22	-17.96/-17.77	-18.59/-17.71	-17.29/-16.87	-16.43/-16.42	-17.06/-18.37	-18.75/-18.71	-18.13/-17.68	-17.7/-19.04	-18.27/-18.87	-18.78/-18.25	-16.82/-16.4	-16.92/-18.73	-18.67/-17.54	-18.31/-17.8		
Θ(180°)	-10.9/-11.46	-12.72/-14.04	-14.5/-13.73	-12.65/-11.91	-11.66/-11.97	-12.81/-13.92	-15.62/-18.35	-18.51/-18.51	-17.78/-18.81	-17.52/-17.85	-19.24/-18.31	-17.6/-17.31	-17.1/-16.77	-16.51/-16.82	-17.91/-19.08	-17.56/-18.79	-18.1/-17.8	-17.62/-19.26	-19.27/-18.29	-17.79/-17.98	-18.11/-18.15	-17.85/-17.97	-18.66/-15.69	-13.2/-11.47		
Freq(Hz)	2.45GPol.	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°)	-4.66/-4.35	-4.22/-4.26	-4.43/-4.63	-4.89/-5.38	-6.14/-7.25	-8.99/-13.3	-13.63/-16.34	-17.73/-18.01	-19.12/-15.08	-11.96/-9.66	-7.71/-6.08	-4.78/-3.97	-3.53/-3.31	-3.18/-3.22	-3.44/-4.04	-4.59/-5.97	-7.02/-8.2	-9.95/-12.68	-16.31/-18.27	-18.81/-18.37	-18.04/-14.12	-11.42/-9.31	-7.71/-6.55	-5.71/-5.05		
Θ(7.5°)	-4.34/-4.07	-4.07/-4.2	-4.48/-4.79	-5.19/-5.77	-6.53/-7.63	-9.41/-11.16	-12.15/-12.99	-14.11/-14.56	-13.67/-12.17	-10.38/-4.47	-6.85/-5.34	-4.1/-3.31	-2.8/-2.93	-2.32/-2.35	-2.6/-3.11	-3.79/-4.71	-5.71/-6.78	-12.89/-16.28	-19.03/-18.77	-18.54/-15.38	-11.76/-9.07	-7.27/-6.12	-5.36/-4.74			
Θ(15°)	-3.14/-2.95	-2.96/-3.13	-3.39/-3.76	-4.22/-4.78	-5.42/-6.33	-7.47/-8.4	-8.61/-8.45	-8.43/-8.31	-8/-7.57	-7/-6.31	-5.51/-5.48	-3.58/-2.76	-2.12/-1.63	-1.36/-1.42	-1.72/-2.19	-2.76/-3.53	-4.35/-5.25	-6.28/-7.58	-9.2/-11.09	-13.58/-16.3	-17.49/-15.3	-11.63/-8.45	-6.36/-5.05	-4.19/-3.56		
Θ(22.5°)	-2.46/-2.28	-2.33/-2.4	-2.56/-2.83	-3.14/-3.58	-4.14/-4.81	-5.55/-5.92	-5.68/-5.08	-4.51/-3.97	-3.62/-3.42	-3.39/-3.46	-2.22/-1.54	-0.89/-0.45	-0.29/-0.5	-0.89/-1.39	-1.94/-2.61	-3.23/-3.97	-4.94/-5.68	-6.85/-8	-9.33/-10.43	-11.2/-11.16	-9.94/-7.71	-5.83/-4.5	-3.51/-2.81			
Θ(30°)	-2.1-84	-1.86/-1.87	-1.86/-1.95	-2.09/-2.36	-2.81/-3.43	-4.08/-4.49	-4.32/-3.63	-2.71/-1.88	-2.15/-0.88	-0.9/-1.15	-1.31/-1.15	-0.71/-0.36	0.45/-0.14	0.31/-0.37	-1.33/-1.58	-1.89/-2.35	-3.31/-3.58	-4.36/-5.28	-6.31/-7.19	-8.75/-6.66	-5.31/-4.06	-3.07/-2.38				
Θ(37.5°)	-1.65/-1.61	-1.68/-1.71	-1.69/-1.61	-1.59/-1.66	-2/-2.56	-3.33/-3.94	-4.26/-3.79	-2.79/-1.64	-0.62/-0.05	-0.02/-0.18	-0.19/-0.04	0.41/0.85	1.19/-1.29</													



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

Appendix B

Θ(22°5′)	-8.05/10.44	-11.93/10.24	-8.54/6.91	-6.61/5.94	-6.51/6.51	-6.84/7.89	-9.85/13.53	-16.73/19.07	-15.21/12.96	-10.16/7.16	-5.63/4.84	-4.48/5.3	-7.3/2.94	-9.89/8.98	-8.21/8.37	-8.96/10.13	-9.96/9.67	-9.17/10.43	-10.96/11.68	-11.38/11.03	-9.99/8.81	-9.55/12.39	-15.5/12.71	-9.82/7.61
Θ(30°)	-12.42/10.18	-10.86/12.28	-12.54/11.14	-8.95/6.21	-5.27/5.19	-7.13/9.89	-12.05/14.37	-15.47/17.17	-17.79/17.11	-15.62/14.17	-9.49/5.67	-4.16/4.56	-5.9/7.78	-9.31/8.97	-9.73/11.62	-13.91/10.43	-12.11/12.03	-12.65/14.85	-14.78/15.98	-12.02/11.91	-11.68/11.31	-11.14/10.25	-10.55/9.83	-10.01/11.57
Θ(142.5′)	-11.04/12.88	-13.26/19.84	-8.46/10.04	-10.88/9.14	-6.81/4.95	-5.16/3.37	-8.36/17.57	-15.04/19.19	-18.05/18.39	-17.55/18.58	-9.49/5.33	-4.28/5.53	-7.71/10.62	-14.78/17.96	-16.83/18.84	-15.54/15.21	-14.64/12.66	-11.52/12	-13.78/17.9	-12.03/13.28	-13.14/14.58	-12.56/9.92	-9.05/9.44	-10.59/11.37
Θ(45°)	-11.71/9.27	-11.05/9.42	-11.72/13.55	-7.35/4.83	-4/4.05	-4.98/5.94	-6.72/9	-15.08/18.78	-16.65/15.07	-10.33/7.77	-7.11/6.09	-5.73/7.4	-10.62/11.98	-12.34/18.05	-17.8/19.04	-18.24/16	-11.71/11.05	-11.24/11.15	-10.51/11.08	-14.81/17.75	-18.68/15.88	-13.72/10.48	-9.23/11.13	-13.66/18.9
Θ(52.5′)	-8.18/13.35	-18/13.51	-12.13/9.8	-7.23/4.67	-6.61/5.48	-7.42/5.57	-5.45/9.22	-18.33/15.72	-11.26/9.88	-8.09/6.84	-6.83/6.61	-6.88/11.45	-18.86/17.17	-11.76/11.68	-14.73/18.97	-18.98/14.35	-10.82/10.12	-11.28/13.17	-12.23/11.03	-13.14/18.8	-18.24/18.3	-14.88/12.47	-13.99/12.14	-7.75/6.65
Θ(60°)	-13.71/9.8	-10.38/11.61	-17.32/10.51	-6.51/8.89	-8.83/6.4	-7.63/6.4	-5.75/10.21	-18.43/12.73	-11.98/13.45	-9.31/6.2	-5.71/6.42	-7.85/11.3	-18.24/10.27	-9.82/9.79	-8.43/10.19	-14.17/15.23	-10.88/10.14	-11.13/13.52	-13.58/12.03	-15.14/17.39	-19.12/17.9	-11.61/9.17	-9.32/9.4	-11.32/17.87
Θ(67.5′)	-14.99/10.82	-12.06/13.78	-18.1/10.42	-7.15/10.54	-10.17/9.8	-11.35/7.21	-8.23/17.46	-15.47/9.74	-11.94/17.49	-10.32/5.31	-4.99/7.45	-11.15/15.38	-11.81/7.42	-6.75/6.06	-7.01/9.35	-11.36/11.12	-10.06/9.36	-10.12/13.38	-16.06/16.89	-18.38/17.78	-16.68/15.97	-10.95/10.05	-13.31/10.66	-5.96/7.23
Θ(75°)	-15.07/14.39	-15.83/14.95	-18.74/13.62	-8.99/12.15	-9.52/9.57	-14.43/7.34	-8.54/17.72	-10.02/10.15	-14.55/18.39	-16.18/8.2	-5.46/7.52	-10.41/16.46	-9.54/4.43	-4.06/5.81	-6.27/6.3	-8.97/9.49	-8.4/8.88	-9.02/10.43	-16.24/18.7	-18.73/17.11	-13.94/14.18	-11.91/10.8	-10.99/10.03	-9.31/12.66
Θ(82.5′)	-10.06/16.34	-18.73/11.63	-18.66/10.34	-9/2.194	-10.5/13.18	-10.7/6.76	-12.64/18.29	-10.48/11.7	-14.38/16.7	-14.29/7.06	-5.28/6.83	-12.15/12.51	-7.28/4.1	-4.53/6.19	-4.94/5.3	-7.11/6.51	-8.7/8.72	-8.75/11.75	-14.01/18.82	-19.06/13.9	-17.78/12.31	-9.81/11.78	-19.18/10.07	-7.4/8.93
Θ(90°)	-8.83/8.38	-17.46/11.7	-13.82/10.57	-9.82/18.16	-14.58/18.69	-11.5/9.3	-19.44/11.23	-8.92/10.34	-11.93/13.28	-11.51/9.04	-6.76/6.81	-9.43/10.75	-8.38/4.94	-5.2/6.94	-5.38/6.32	-6.57/7.37	-6.77/7.41	-9.42/9.94	-15.08/17.27	-18.34/13.65	-12.11/10.86	-10.79/9.86	-16.17/14.54	-8.79/12.11
Θ(97.5′)	-8.4/7.99	-12.7/18.31	-19.73/10.19	-10.22/13.36	-10.92/16.41	-10.61/8	-17.28/9.41	-9.41/13.58	-10.71/10.7	-9.77/7.86	-6.05/6.17	-10.46/8.32	-4.39/2.95	-4.09/6.81	-7.62/6.53	-6.75/7.54	-9.64/10.42	-11.09/12.52	-14.56/16.43	-18.59/17.71	-14.69/13.56	-10.38/12.46	-12.61/9.95	-11.73/12.75
Θ(105°)	-10.48/14.37	-19.07/8.5	-15.78/15.93	-14.92/14.62	-11.65/18.46	-10.77/9.29	-17.95/8.3	-9.22/15.54	-8.07/9.82	-11.3/10.12	-8/7.47	-8.65/6.98	-6.96/7.04	-6.82/8.26	-6.87/7.34	-6.01/9.2	-9.26/12.01	-11.28/9.65	-14.59/17.51	-18.6/18.95	-19.62/14.33	-10.87/13.13	-14.93/11.69	-7.22/11.7
Θ(112.5′)	-8.17/9.89	-18.64/15.02	-12.98/15.74	-18.05/13.43	-11.2/17.68	-13.3/12.94	-18.78/10.9	-14/13.42	-9.57/12.44	-10.09/7.96	-5.14/5.46	-9.31/9.08	-5.79/3.14	-3.85/7.91	-7.13/5.31	-6.47/7.37	-11.11/12.27	-8.98/9.31	-16.93/18.86	-18.92/17.74	-17.72/13.57	-12.13/14.16	-17.83/11.71	-7.73/10.01
Θ(120°)	-7.08/10.37	-6.38/8.02	-18.66/9.67	-11.21/16.05	-11/14.23	-15.06/12.46	-19.37/14.34	-14.78/13.43	-10.89/16.62	-14.28/8.94	-7.8/8.13	-8.75/6.02	-3.53/4.34	-12.38/7.71	-5.83/6.71	-7.48/12.6	-10.27/8.04	-13.83/18.82	-18.53/18.57	-18.63/17.99	-11.6/12.81	-9.62/13.47	-9.61/5.45	-11.73/12.75
Θ(127.5′)	-8.84/13.2	-12.17/11.65	-15.87/14.52	-18.56/18.44	-15.43/12.27	-12.66/14.93	-19.35/18.89	-18.63/16.34	-14.55/15.41	-9.46/8.22	-6.49/6.5	-10.09/11.13	-5.34/3.68	-8.28/16.46	-8.81/7.07	-9.44/4.47	-9.7/18.05	-8.46/5.95	-15.39/19.11	-17.93/15.3	-19.18/10.97	-11.61/9.39	-18.19/11.65	-11.53/10.49
Θ(135°)	-9.18/12.16	-10.05/11.29	-17.69/13.39	-16.13/18.27	-15.09/15.16	-18.79/17.92	-17.7/15.38	-13.21/14.71	-18.51/15.08	-12.76/9.45	-7.21/9.36	-10.58/6.62	-3.48/5.41	-10.64/8.35	-8.75/13.23	-3.63/4.15	-16.95/14.96	-7.89/6.82	-14.03/17.62	-18.12/14.49	-19.41/13.43	-19.11/9.88	-12.87/19.27	-14.01/7.19
Θ(142.5′)	-10.02/15.89	-12.26/12.54	-8.27/8.55	-12.85/19.08	-13.03/13.31	-14.92/17.87	-18.38/17.58	-16.08/17.9	-18.74/18.91	-16.27/12.56	-10.54/9.97	-8.75/3.21	-11.01/11.29	-10.36/11.7	-13.34/3.84	-3/2.194	-11.7/13.72	-9.27/9.79	-15.35/16.22	-18.64/16.49	-18.98/13.66	-16.3/18.27	-10.81/9.88	-9.33/7.03
Θ(150°)	-6.25/5.42	-5.11/6.52	-6.91/5.73	-6.25/9.48	-12.04/13.52	-13.33/13.64	-15.37/12.85	-13.19/17.11	-13.82/12.85	-14.04/18.09	-19.19/17.02	-8.95/5.21	-3.11/2.56	-3.78/6.99	-9.12/12.27	-17.22/19.41	-13.3/11.2	-10.11/10.6	-13.73/17.02	-18.22/18.8	-17.9/18.68	-17.88/19.26	-15.68/13.17	-9.56/6.45
Θ(157.5′)	-5.74/6.26	-7.68/8.93	-9.88/10.12	-12.89/18.26	-18.26/19.25	-17.59/17.15	-18.5/16.54	-15.96/15.04	-13.86/12.98	-13.21/17.24	-18.65/18.25	-15.87/10.71	-7.1/5.98	-6.71/8.44	-9.95/11.09	-11.55/11.21	-9.76/8.93	-9.73/13.24	-18.71/17.01	-16.36/18.55	-18.74/17.71	-18.68/17.64	-12.71/8.35	-5.73/5.59
Θ(165°)	-11/14.26	-18.11/18.72	-17.72/19.01	-17.22/15.03	-13.96/13.27	-14.74/17.64	-18.23/18.84	-16.04/12.44	-10.73/10.58	-11.15/12.73	-14.34/15.31	-17.04/15.93	-12.54/9.39	-7.93/7.15	-7.03/6.96	-7.13/7.6	-7.21/7.12	-8.55/12.04	-14.92/15.62	-17.93/18.32	-19.1/17.59	-18.38/14.39	-10.9/9.37	-10.52/11.45
Θ(172.5′)	-18.14/18.45	-13.88/11.15	-11.41/11.58	-11.97/12.18	-13.37/15.98	-17.58/18.31	-16.54/18.15	-19.22/18.73	-18.07/17.22	-11.94/8.67	-7.51/6.36	-5.64/8.11	-3.94/13.4	-2.69/2.36	-2/2.03	-2.39/3.37	-4.27/5.49	-6.86/8.68	-11.28/16.87	-18.92/18.34	-17.37/15.75	-14.43/12.19	-11.07/12.41	-16.88/15.42
Θ(180°)	-5.45/5.38	-6.97/7.75	-7.4/6.25	-5.51/5.17	-5.92/6.55	-7/2.918	-16.1/15.25	-17.73/18.26	-16.54/11.9	-9.6/7.21	-5.93/5.28	-4.83/4.69	-4.65/4.4	-4.24/4.45	-4.63/4.56	-4.66/5.71	-6.95/9.12	-11.2/15.6	-18.36/18.33	-17.99/13.57	-10.28/9.36	-9.13/6.79	-8.65/8.63	-8.04/6.56
Freq(Hz)	5.63GPol	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°)	-12.09/13.01	-11.73/11.91	-11.66/10.41	-9.7/9.69	-8.99/8	-7.92/7.69	-7.87/8.57	-8.67/8.86	-9.14/9.46	-10.34/10.43	-11.04/11.16	-12.63/13.03	-12.98/12.16	-12.71/11.42	-9.44/9.45	-9.86/8.28	-6.61/7.35	-8.91/8.24	-6.47/6.3	-6.93/6.88	-6.83/6.42	-6.7/7.65	-6.59/9.51	-10.14/10.72
Θ(7.5°)	-9.38/11.55	-12.11/12.66	-13.34/12.86	-13.28/14.59	-14.68/14.81	-14.36/13.42	-11.94/11.15	-9.7/8.91	-8.34/8.53	-9.03/8.9	-8.77/9.14	-9.46/10.11	-10.41/11.22	-10.89/9.41	-8.48/8.75	-8.28/8.13	-4.89/5.13	-5.88/4.74	-2.72/1.73	-1.71/1.52	-1.22/1.08	-1.21/1.59	-2.33/4.38	-5.25/7.57
Θ(15°)	-8.4/10.23	-11.28/10.86	-10.58/9.97	-10.6/11.88	-13.41/15.37	-14.94/12.68	-9.19/7.72	-6.7/5.91	-5.5/5.77	-6.37/7.26	-7.98/8.06	-7.46/7.05	-7.58/8.04	-8.27/8.14	-7.49/6.49	-5.23/4.13	-3.84/4.1	-4.66/4.14	-2.97/1.64	-1.24/0.71	-0.8/0.52	-0.8/1.25	-2.49/3.8	-5.44/6.6
Θ(22.5′)	-7.03/8.54	-9.08/9.13	-9.14/8.62	-8.31/8.25	-9.95/12.14	-14.95/12.76	-15.94/15.12	-13.41/12.19	-9.55/8.94	-9.73/9.6	-10.11/9.02	-7.29/7.65	-6.97/7.06	-7.3/7.17	-6.24/5.11	-4.03/3.32	-3.27/3.27	-2.57/1.88	-0.97/0.88	-1.41/1.66	-1.55/1.29	-1.2/1.9	-3.04/3.84	-4.54/6.6
Θ(30°)	-5.52/5.14	-5.8/7.77	-10.18/8.96	-6.65/5.83	-6.21/5.76	-5.8/7.72	-11.09/16.27	-16.42/12.14	-11.51/13.26	-12.47/10.1	-7.95/7.2	-6.23/4.98	-4.83/5.18	-5.22/4.91	-4.13/4.39	-3.22/3.33	-3.19/2.35	-1.39/1.16	-0.76/1.04	-1.4/1.95	-1.31/0.66	-0.34/0.6	-0.66/1.12	-2.67/4.63
Θ(37.5′)	-3.4/3.04	-2.74/3.83	-5.75/6.56	-4.12/3.53	-5.29/7.13	-8.17/9.09	-8.99/13.02	-12.85/11.26	-10.7/9.83	-8.11/7.64	-7.45/5.43	-3.53/3.33	-3.63/3.55	-2.76/2.65	-2.89/3.14	-2.86/2.41	-1.9/2.25	-4.54/7.25	-6.45/3.95	-1.63/0.96	-1.31/0.88	-0.48/0.38	-0.11/0.55	-1.98/3.23
Θ(45°)	-0.79/1.01	-0.88/1.36	-3.85/5.71	-4.01/3.29	-4.42/6.65	-8.79/12	-13.61/11.87	-8.95/7.11	-6.89/6.34	-5.03/5.31	-6.56/4.74	-2.27/1.44	-2.19/2.05	-0.99/0.74	-2.25/3.88	-3/1.85	-2.77/5.81	-8.54/7.54	-5.74/4.95	-4.43/3.1	-2.02/1.75	-1.75/1.31	-0.9/0.69	-0.64/0.61
Θ(52.5′)	0.16/1.58	-1.24/1.1	-3.38/5.02	-3.47/6.21	-3.35/4.75	-6.75/6.77	-4.72/2.72	-2.12/2.11	-4.63/6.69	-5.44/5.06	-6.62/3.46	-1.24/0.65	-1.09/0.92	-0.19/0.92	-2.61/2.45	-1.28/1.63	-2.98/3.53	-6.88/6.01	-4.15/2.52	-2.01/3.21	-3.51/3.32	-3.26/3.03	-1.74/1.49	-0.95/0.24
Θ(60°)	1.27/0.27	-0.27/0.33	-2/3.26	-4.19/3.91	-2.94/2.71	-2.98/2.24	-0.48/0.17	0.59/0.67	0.3/3.18	-4.35/3.96	-4.65/2.41	-1.01/1.08	-0.56/0.4	0.55/1.41	0.6/2.47	-1.72/1.33	-2.07/3.75	-4.06/2.34	-1.23/0.67	-1.34/2.24	-2.36/1.72	-2.22/2.47	-1.83/2.73	-2.67/0.32
Θ(67.5′)	-0.4/1.02	-0.09/0.79	-2.3/2.31	-3.85/3.94	-3.25/4.55	-3.49/1.45	-0.37/0.07	0.91/77	0.9/2.52	-6.37/6.12	-5.93/3.16	-1.1												



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

Appendix B

Θ(75°)	-13.5U-18.5	-14.69-17.58	-18.35-18.7	-10.93-11.26	-14.29-13.21	-15.92-9.35	-7.01-17.23	-10.96-6.75	-8.36-12.11	-12.2-6.86	-6.3-7.5	-12.78-11.62	-10.74-7.4	-7.17-8.98	-9.55-7.33	-7.16-9.27	-10.61-14.83	-15.32-11.94	-11.63-12.86	-13.32-12.52	-12.2-12.11	-9.26-7.76	-10.08-11.5	-10.38-7.95
Θ(82.5°)	-10.92-17.43	-17.88-19.31	-18.45-18.66	-13.01-16.37	-12.47-15.22	-16.19-8.24	-10.67-18.7	-9.6-7.45	-11.49-19.24	-13.82-12.7	-7.59-8.74	-11.77-9.71	-7.17-6.13	-9.47-8.27	-6.62-5.51	-6.7-9.24	-10.5-14.5	-13.3-9.14	-9.85-11.9	-14.11-13.21	-11.55-12.74	-10.1-9.59	-9.81-10.77	-13.81-8.64
Θ(90°)	-12.37-18.12	-16.31-18.43	-18.21-18.08	-17.51-18.55	-14.16-15.39	-16.79-9.03	-12.68-18.15	-8.93-9.09	-10.31-17.92	-10.57-8.85	-8.3-8.99	-10.31-7.82	-7.21-7.25	-6.96-7.44	-8.92-8	-9.7-9.24	-10.96-13.62	-11.5-10.1	-9.91-9.75	-12.58-11.27	-11.22-12.9	-11.59-10.12	-10.65-12.73	-16.59-10.15
Θ(97.5°)	-14.43-17.82	-19.02-15.13	-17.05-17.93	-18.78-18.85	-12.27-18.68	-11.17-12.02	-17.54-12.79	-8.13-12.94	-16.14-12.38	-8.55-8.41	-9.25-9.28	-8.18-8.63	-8.9-5.1	-6.67-3.7	-7.06-9.86	-8.8-11.68	-12.2-12.69	-13.5-9.85	-10.82-10.14	-12.06-12.45	-16.45-13.85	-12.22-12.83	-11.67-10.19	-10.26-10.17
Θ(105°)	-12.2-15.62	-17.68-19.26	-17.46-17.44	-17.97-19.27	-18.45-18.03	-16.03-13.81	-18.43-9.91	-8.47-14.39	-12.6-9.73	-7.43-10.84	-9.5-9.6	-6.22-9.46	-5.38-7.66	-6.18-7.04	-9.08-10.5	-15.62-16.16	-15.52-10.17	-9.51-9.46	-11.66-13.47	-17.84-18.32	-16-13.59	-12.67-10.28	-12.45-9.31	
Θ(112.5°)	-11.39-13.06	-10.11-14.95	-19.04-18.1	-13.09-19.66	-14.8-14.76	-19.04-17.9	-14.69-10.2	-10.91-17.58	-10.68-9.54	-10.9-11.25	-8.42-9.07	-8.66-7.67	-9.54-7.69	-6.47-7.02	-9.13-8.68	-8.17-14.29	-14.2-14.73	-10.64-7.58	-7.45-11.49	-17.21-17.25	-16.14-16.18	-14.65-10.95	-11.21-13.28	-14.69-11.97
Θ(120°)	-13.22-12.15	-10.77-8.76	-9.83-18.36	-18.04-15.94	-19.06-18.34	-17.32-14.82	-16.25-17.71	-16.21-13.6	-10.33-14.15	-14.5-11.26	-8.58-8.49	-7.38-8.75	-8.88-4.22	-4.84-11.84	-10.16-12.76	-9.42-13.34	-13.34-18.27	-15.42-6.42	-7.91-12.4	-13.68-17.64	-16.34-13.2	-12.66-16.63	-19.31-11.91	-7.83-13.78
Θ(127.5°)	-10.38-12.37	-18.41-16.41	-12.04-11.5	-11.55-11.08	-18.98-17.47	-17.83-13.32	-13.76-18.84	-13.96-14.87	-16.18-18.5	-15.3-11.43	-12.52-12.14	-10.29-9.45	-8.51-8	-6.65-8.1	-17.04-5.47	-10.65-9.61	-9.14-16.76	-9.24-5.99	-10.67-17.53	-10.72-10.86	-16.14-17.06	-11.15-18.05	-16.15-17.02	-11.93-7.63
Θ(135°)	-9.86-9.66	-9.23-12.14	-17.35-19.33	-17.61-17.53	-18.1-14.07	-14.16-17.54	-18.05-18.55	-18.55-17.06	-19.19-17.92	-8.68-7.56	-9-12.47	-15.72-16.85	-9.6-9.9	-13.43-14.42	-5.26-9.86	-10.97-6.18	-9.82-17.81	-8.93-7.14	-14.67-19.07	-11.1-10.4	-17.17-17.8	-14.78-11.58	-19.2-17.84	-18.84-14.19
Θ(142.5°)	-17.82-18.53	-18.5-13.57	-8.6-8.29	-9.22-12.4	-17.76-16.29	-16.92-17.64	-18.45-19.02	-17.53-18.13	-19.1-14.88	-16.92-18.54	-17.85-11.03	-8.11-7.29	-9.21-9.56	-11.5-11.7	-15.25-10.43	-9.74-11.08	-14.85-14.11	-6.08-6.61	-14.16-18.73	-18.99-14.08	-17.41-18.83	-19.18-18.66	-12.3-12.91	-9.06-10.62
Θ(150°)	-6.3-5.85	-5.77-6.32	-7.22-7.21	-8.29-11.1	-15.91-17.93	-16.33-14.72	-15.95-16.75	-17.97-19.02	-13.46-12.4	-13.9-15.04	-12.88-11.7	-11.55-10.63	-9.57-8.72	-8.02-8.38	-9.4-11.58	-15.19-18.54	-18.02-13.93	-9.91-11.12	-14.55-19.01	-18.97-18.78	-17.64-17.4	-17.89-16.93	-18.85-17.04	-15.53-9.02
Θ(157.5°)	-6.94-7.56	-10.31-18.6	-13.87-9.64	-11.39-16.71	-19.28-18.17	-17.82-16.38	-16.67-17.72	-17.71-5.56	-13.97-14.72	-16.6-14.62	-13.8-13.86	-12.32-10.08	-7.65-6.7	-8.26-12.45	-18.27-17.47	-17.31-16.87	-12.1-9.84	-19.17-9.92	-12.24-14.08	-15.11-18.42	-18.22-19.03	-15.89-12.88	-9.99-6.88	-7.17-5.93
Θ(165°)	-13.11-14.66	-18.21-16.66	-12.99-13.73	-16.6-17.3	-15.49-17.43	-19.18-18.55	-17.03-18	-19.14-16.16	-15.56-14.68	-13.9-13.99	-17.08-18.54	-18.51-15.12	-12.58-11.07	-10.08-9.88	-9.49-8.6	-7.07-6.55	-6.11-6.64	-7.6-9.49	-12.64-13.14	-13.3-15.39	-16.05-18.15	-15.49-10.81	-9.76-9.2	-8.35-10.64
Θ(172.5°)	-18.85-15.63	-12.02-10.38	-11-12.48	-14.66-16.16	-17.74-17.35	-18.89-17.33	-17.67-18.35	-19.03-18.25	-18.18-17.46	-13.6-10.87	-8.61-7.17	-5.8-4.46	-3.71-2.95	-2.91-2.92	-3.23-3.67	-4.17-4.72	-5.59-7.1	-3.86-9.74	-11.43-14.29	-14.26-12.31	-13.7-14.5	-12.49-10.56	-11.04-12.15	-14.55-18.25
Θ(180°)	-7.73-9.56	-10.05-10.63	-9.85-8.67	-7.45-6.83	-7.83-9.22	-10.2-11.6	-13.8-16.86	-16.83-15.56	-13.21-11.76	-9.57-7.85	-7.19-6.66	-6.13-5.49	-4.97-4.85	-4.82-5.07	-5.37-6.19	-6.44-6.62	-7.09-7.98	-9.6-12.51	-15.98-18.84	-18.5-19.11	-13.52-11.47	-11.66-11.2	-10.68-9.23	-8.33-7.68
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°)	-6.28-5.75	-5.44-5.28	-5.01-5.01	-5.13-4.98	-4.99-5.36	-5.89-6.4	-6.9-6.57	-6.57-6.83	-6.98-7.08	-6.86-6.16	-5.94-6.02	-5.77-5.53	-5.34-5	-4.98-5.14	-5.47-5.07	-5.27-5.75	-5.87-5.09	-5.11-5.51	-5.37-4.85	-5.75-6.11	-5.54-5.49	-4.54-4.71	-5.44-5.71	-6.05-6.06
Θ(7.5°)	-7.59-7.22	-7.06-6.68	-6.23-5.88	-6.98-8.1	-9.77-11.99	-13.46-14.09	-12.33-10.36	-8.36-6.88	-5.98-5.56	-5.32-5.15	-5.16-5.08	-5.15-5.14	-4.87-4.43	-4.13-4.14	-4.29-4.03	-3.92-4.5	-4.95-4.73	-4.14-4.63	-4.95-4.5	-3.99-4.25	-4.59-4.8	-4.8-4.29	-4.17-4.78	-5.61-6.6
Θ(15°)	-7.8-6.89	-9.53-6.93	-8.63-6.91	-10.96-12.44	-12.93-13.68	-14.43-11.58	-7.96-6.07	-5.11-4.64	-4.64-4.45	-4.57-4.4	-4.11-3.89	-3.82-3.81	-3.64-3.42	-3.52-3.43	-3.19-3.1	-3.08-3.25	-3.47-3.87	-3.98-3.91	-3.77-3.85	-4.4-4.79	-5.01-4.92	-5.3-5.11	-4.9-5.15	-5.54-6.75
Θ(22.5°)	-8.64-10.23	-11.33-13.06	-13.08-15.34	-15.34-12.23	-10.69-13.33	-18.91-18.18	-16.71-13.94	-12.70-9.13	-3.91-7.7	-6.23-5.5	-4.31-3.63	-2.87-2.6	-2.49-2.3	-2.22-2.11	-2.04-2.09	-2.13-2.31	-2.32-2.34	-2.37-2.92	-3.38-3.83	-4.52-5.03	-3.54-3.96	-4.46-3.95	-4.05-4.23	-5.56-6.93
Θ(30°)	-6.65-7.03	-8.67-9.27	-12.02-16.35	-15.62-10.51	-8.86-11.6	-16.72-13.8	-11.28-8.67	-7.51-7.48	-6.6-5.34	-3.93-3.54	-3.71-3.05	-1.83-1.84	-2.36-2.34	-2.21-2.16	-2-1.33	-0.72-0.54	-1.34-2.67	-4.43-6.11	-6.72-6.07	-4.41-3.72	-3.97-4.03	-3.62-3.46	-4.41-5.03	-5.3-5.6
Θ(37.5°)	-5.14-6.25	-6.4-6.48	-7.83-11.47	-12.67-8.95	-9.43-10.99	-9.96-8.31	-7.56-8.77	-9.21-8.11	-6.83-7.3	-4.86-4.51	-3.37-2.3	-1.31-1.43	-2.25-2	-1.57-1.71	-1.95-1.27	-0.61-0.63	-1.45-3.14	-2.27-4.07	-2.96-3.04	-4.24-5.2	-4.05-3.41	-3.17-3.96	-4.04-2.88	-2.47-3.1
Θ(45°)	-3.33-3.57	-4.93-4.9	-5.64-6.11	-10.79-10.51	-9.02-7.18	-6.58-5.44	-4.97-3.92	-3.2-7.9	-3.73-4.05	-2.13-1.53	-2.37-1.83	-0.65-0.88	-2.52-2.22	-1.77-2.39	-2.97-2.73	-4.21-4.69	-4.29-4.47	-2.75-1.18	-6.68-5.1	-3.87-4.86	-4.93-4.43			
Θ(52.5°)	-4.41-3.61	-3.28-4.37	-4.35-5.33	-9.12-12.87	-10.91-10.41	-11.53-10.9	-8.09-5.95	-4.99-5.18	-5.36-4.43	-3.61-2.34	-2.64-2.81	-1.87-2.87	-3.5-2	-0.24-0.23	-1.14-2.14	-2.7-3.14	-4.02-4.24	-3.41-3.42	-3.58-5.01	-7.37-7.01	-5.21-5.56	-8.07-7.71	-3.94-2.93	-3.44-4.4
Θ(60°)	-4.81-3.83	-3.09-3.83	-5.34-5.06	-7.97-10.86	-9.65-10.16	-10.03-7.53	-2.81-2.1	-2.28-2.34	-4.04-3.92	-3.15-3.38	-3.31-3.81	-1.73-0.92	-0.39-0.65	-0.91-3.88	-2.57-3.03	-4.34-3.27	-3.18-3.89	-4.75-2.4	-8.47-8.11	-2.82-3.9	-8.63-7.08	-4.69-4.57	-3.49-3.82	
Θ(67.5°)	-5.04-4.82	-2.02-3.11	-4.21-4.71	-8.42-11.81	-9.63-9.97	-9.38-4.46	-1.77-1.13	-2.19-2.7	-4.98-4.65	-6.03-5.41	-3.04-3.65	-1.92-0.32	0.29-0.16	-2.47-3.01	-1.24-2.05	-3.78-2.33	-1.78-3.54	-4.71-3.53	-3.12-4.07	-2.87-6.22	-5.96-5.46	-3.47-2.57	-1.54-2.93	
Θ(75°)	-4.45-4.48	-2.54-5.1	-5.24-5.02	-9.49-11.36	-10.5-13.72	-10.52-3.92	-1.13-1.16	-1.93-1.46	-0.95-2.27	-4.7-13.27	-7.97-5.46	-1.65-4.34	-2.37-0.38	0.14-0.42	-1.73-1.83	-0.22-1.27	-2.34-2.73	-1.89-1.39	-2.13-3.12	-2.4-1.92	-1.03-0.67	-4.6-4.87	-3.18-2.01	-6.06-2.09
Θ(82.5°)	-4.15-5.27	-2.64-6.87	-6.33-5.93	-11.18-10.9	-12.28-13.17	-10.84-6.57	-3.93-3.25	-3.03-2.18	-2.31-4.81	-6.83-17.7	-7.77-5.99	-1.37-5.95	-2.52-0.49	-0.53-2.6	-1.86-1.22	-0.01-0.08	-0.63-3.41	-1.58-0.91	-1.9-2.24	-2.13-0.53	-0.24-0.47	-1.4-2.26	-3.14-2.74	-1.61-0.69
Θ(90°)	-6.85-5.7	-3.03-6.66	-5.08-5.86	-14.27-10.36	-15.45-13.72	-9.28-9.53	-6.9-4.16	-3.68-8.51	-8.59-17.85	-5.95-6.92	-1.9-5.89	-3.23-0.82	-1.32-3.94	-2.04-2.17	-2.35-0.18	-0.42-3.99	-1.19-0.96	-1.82-0.18	-1.46-0.5	0.09-0.4	-0.21-2.1	-3.71-3.26	-1.89-1.43	
Θ(97.5°)	-8.28-5.88	-3.13-8.49	-4.67-6.95	-14.53-11.53	-11.92-10.04	-9.5-13.28	-16.27-14.97	-11.41-8.33	-11.55-17.75	-16.42-11.67	-7.18-5.99	-3.68-8.05	-6.52-5.29	-2.88-6.22	-5.24-6.88	-4.3-0.85	-2.46-4.63	-1.94-2.81	-1.78-0.36	-2.41-2.7	-0.5-1.54	-1.32-2.5	-4.6-3.25	-1.68-2.47
Θ(105°)	-8.49-6.11	-5.16-7.67	-4.54-6.08	-14.14-15.02	-11.72-8.86	-8.78-8.93	-6.19-6.17	-7.84-7.27	-10.28-14.13	-17.7-17.42	-9.32-7.96	-6.37-8.76	-6.45-5.51	-5.14-7.8	-8.79-6.56	-7.73-2.87	-4.54-5.41	-2.81-3.13	-0.84-0.05	-2.73-4.06	-1.13-1.42	-0.96-0.54	-6.13-4.06	-0.52-2.2
Θ(112.5°)	-8.41-6.16	-6.46-5.88	-8-11.13	-15.2-12.17	-9.85-10.5	-12.84-8.68	-5.38-4.78	-4.77-4.99	-4.72-7.48	-13.78-12.39	-10.86-7.64	-8.69-8.17	-6.55-10.2	-8.41-8.06	-5.17-3.92	-4.25-3.89	-5.08-1.24	0.79-1.57	-3.06-1.78	-0.51-0.02	-1.29-5.78	-7.79-3.09	-1.35-3.62	
Θ(120°)	-8.42-7.04	-8.83-10.82	-8.91-10.95	-12.35-16.21	-18.47-15.51	-12.99-11.52	-5.99-6.61	-5.71-4.58	-6.1-9.97	-14.39-17.56	-16.42-9.99	-14.32-10.84	-7.49-6.8	-8.72-17.14	-11.63-9.84	-4.88-5.13	-2.33-3.95	-9.44-0.86	2.29-3.69	-3.26-0.18	-0.26-0.59	-3.29-8.25	-13.52-1.89	-4.04-5.66
Θ(127.5°)	-7.91-9.57	-8.45-17.41	-																					



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

Appendix B

Θ(127.5°)	-11.38/-11.77	-10.62/9.95	-10.2/-10.66	-10.73/-10.14	-9.25/-8.69	-9.23/-10.77	-12.22/-12.63	-13.66/-13.31	-14.54/-19.03	-15.81/-18.48	-18.23/-14.81	-14.38/-18.03	-17.42/-16.72	-18.74/-16.51	-10.3/-7.58	-5.97/-16.17	-5.77/-7.69	-10.95/-9.93	-9.68/-10.27	-7.7/-10.97	-11.7/-11.85	-17.77/-18.05	-18.41/-16.59	-12.18/-11.16
Θ(135°)	-13/-11.57	-9.41/-9.86	-11.97/-13.3	-11.09/-9.42	-9.78/-11.74	-14.22/-12.78	-13.07/-15.16	-14.45/-14.34	-15.96/-15.49	-18.63/-18.97	-18.8/-19.04	-18.11/-15.7	-16.3/-13.69	-13.99/-14.47	-15.02/-16.21	-14.09/-12.09	-10.11/-11.89	-13.29/-13.67	-12.73/-10.52	-10.45/-14.06	-15.58/-16.27	-18.27/-19.15	-19.19/-18.07	-12.95/-11.84
Θ(142.5°)	-17.25/-18.97	-18.29/-17.11	-15.81/-14.44	-12.91/-13.53	-13.36/-12.27	-12.59/-13.53	-13.36/-14.08	-16.21/-18.04	-19.36/-16.36	-15.18/-17.41	-18.07/-19.07	-17.53/-15.61	-14.4/-15.59	-18.9/-17.33	-17.05/-13.75	-12.64/-17.98	-8.33/-9.56	-10.69/-11.71	-12.31/-11.57	-9.75/-9.76	-12.71/-18.2	-18.32/-18.86	-19.11/-19.19	-19.24/-19.75
Θ(150°)	-14.86/-13.26	-13.3/-13.96	-13.83/-11.76	-10.28/-10.36	-11.8/-13.15	-13.63/-13.78	-15.29/-19.05	-17.66/-17.95	-18.49/-18.76	-18.91/-17.7	-17.93/-16.92	-14.16/-15.18	-17.52/-17.19	-12.34/-12.73	-17/-17.1	-17.86/-13.31	-10.75/-11.3	-13.93/-15.73	-14.72/-13.1	-12.77/-14.64	-16.62/-17.83	-17.38/-19.09	-18.82/-18.42	-17.3/-19.63
Θ(157.5°)	-14.93/-14.27	-14.32/-13.64	-11.95/-11.1	-11.26/-13.11	-16.1/-18.33	-19.09/-18.34	-18.74/-18.29	-19.31/-18.03	-18.52/-18.64	-18.36/-19.1	-19.01/-18.41	-17.81/-18.53	-18.08/-18.15	-14.86/-15.47	-19.5/-18.35	-19.49/-15.31	-14.36/-15.13	-17.82/-18.18	-17.95/-17.49	-17.54/-17.94	-17.48/-17.53	-15.21/-15.37	-17.28/-18.85	-17.88/-18.78
Θ(165°)	-13.31/-18.83	-15.91/-12.38	-11.11/-11.24	-12.05/-13.86	-15.63/-17.35	-16.93/-18.34	-17.66/-17.19	-18.88/-19.22	-19.41/-19.12	-19.14/-18.31	-19.17/-17.5	-18.36/-18.03	-18.83/-19.1	-19.04/-17.64	-18.89/-18.7	-15.86/-18.33	-17.62/-17.71	-18.86/-17.53	-18.83/-13.61	-13.4/-15.17	-18.82/-18.76	-19.21/-18.12		
Θ(172.5°)	-18.55/-18.16	-17.92/-16.87	-16.93/-17.02	-18.84/-17.84	-19.04/-17.58	-19.24/-17.95	-18.21/-18.22	-18.48/-18.54	-18.62/-18.22	-17.96/-17.37	-17.48/-19.31	-17.54/-16.49	-14.97/-14.72	-15.1/-15.66	-17/-18.83	-17.62/-18.79	-18.56/-18.54	-18.1/-17.93	-18.78/-17.83	-17.47/-16.39	-14.56/-13.86	-14.46/-16.4	-19.51/-18.2	-19.41/-18.73
Θ(180°)	-17.78/-18.37	-19.4/-18.04	-18.75/-18.02	-18.88/-18.07	-17.78/-17.64	-18.42/-18.26	-18.11/-18.48	-18.27/-18.31	-18.4/-17.71	-18.8/-17.9	-17.36/-18.31	-18.1/-18.78	-17.34/-18.73	-17.38/-19.04	-18.07/-19.01	-17.98/-18.7	-17.9/-18.25	-18.74/-17.89	-19.32/-17.72	-19.1/-17.96	-18.14/-18.62	-18.65/-17.38	-18.34/-18.58	-18.34/-19.21
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°)	2.86/2.66	2.02/0.94	-0.38/-1.96	-4.21/-7.1	-13.83/-17.77	-13.83/-8.01	-4.65/-4.24	-1.02/0.1	1.26/2.05	2.79/3.4	3.52/3.63	3.89/3.48	2.71/2.02	1.2/0.15	-1.06/-2.15	-4.98/-8.11	-14.06/-18.03	-13.92/-8.09	-4.28/-1.9	0.09/1.32	2.33/3.15	3.59/3.6	3.25/3.24	3.27/3.33
Θ(7.5°)	2.53/2.25	1.57/0.51	-0.7/-2.42	-4.34/-7.41	-12.72/-19.06	-15.21/-8.47	-4.71/-7.3	-0.07/0.97	1.72/2.51	3.11/3.48	3.99/0.49	3.85/3.34	2.73/2.23	1.71/0.98	-0.02/-1.44	-3.32/-6.17	-11.2/-18.89	-14.91/-8.12	-4.05/-1.53	0.38/1.63	2.52/3.36	3.96/4.12	3.8/3.19	2.82/2.75
Θ(15°)	1.76/1.22	0.44/-0.44	-1.45/-2.38	-3.59/-5.74	-8.97/-14.55	-17.31/9.05	-4.49/-1.63	0.29/1.5	2.17/2.44	2.47/2.96	3.24/3.24	3.22/2.53	2.35/2.22	1.53/0.8	-0.21/-1.59	-3.42/-5.74	9.6/-16	-18.85/-11.15	-5.9/-2.88	-0.7/0.66	1.62/2.42	2.94/3.04	2.85/2.6	2.32/2.09
Θ(22.5°)	0.77/-0.04	-0.79/-1.63	-2.22/-2.76	-3.91/-6.06	-10.07/-17.64	-13.21/-7.24	-3.49/-1.27	0.1/0.68	1.46/2.09	2.66/3.19	3.34/3.04	2.68/2.61	2.43/2.13	1.21/-0.22	-1.69/-3.26	-5.26/-8.03	-12.09/-17.5	-17.08/-12.62	-8.21/-4.98	-2.3/-0.67	0.23/0.81	0.72/0.58	0.49/0.81	0.97/1.25
Θ(30°)	-0.07/-0.45	-1.05/-2.04	-2.94/-3.97	-6.01/-8.96	-13.64/-17.88	-14.59/-7.82	-3.98/-1.67	-0.15/0.72	1.19/1.05	1.67/2.72	3.19/2.94	2.91/2.67	2.82/2.11	0.85/0.51	-1.89/-3.34	-5.11/-7.33	-10.85/-13.69	-13.57/-13.35	-10.61/-6.4	-0.13/-1.56	-0.93/-0.51	-0.41/-0.66	-0.81/-0.81	-0.71/-0.27
Θ(37.5°)	-1.55/-1.39	-1.86/-2.75	-3.76/-5.4	-7.45/-10.01	-13.78/-18.94	-16.7/-9.72	-5.29/-2.14	-0.39/0.37	0.61/0.61	0.91/1.73	2.44/2.48	2.71/2.72	2.31/1.58	0.66/-0.44	-1.73/-3.26	-4.84/-6.97	-9.68/-10.33	-9.65/-9.62	-9.62/-7.07	-3.85/-1.79	-0.95/-0.71	-0.6/-0.71	-0.61/-0.73	-1.23/-1.62
Θ(45°)	-2.39/-2.92	-3.83/-4.26	-5.13/-6.86	-9.47/-12.39	-15.92/-16.43	-16.39/-17.34	-8.12/-4.98	-2.88/-1.98	-1.52/-1.15	-0.45/0.3	1.36/0.78	0.85/0.61	0.95/0.83	0.26/-0.73	-2.24/-3.7	-4.77/-6.95	-9.42/-9.85	-10.56/-12.18	-10.3/-7.43	-5.58/-3.82	-2.85/-2.52	-2.16/-1.84	-1.17/-1.76	-3.03/-2.98
Θ(52.5°)	-3.9/-5.77	-7.45/-6.91	-6.54/-7.62	-8.91/-11.39	-15.29/-16.25	-14.59/-17.2	-13.37/-1.58	-4.83/-3.29	-2.32/-0.64	0.31/0.79	1.02/0.03	-0.77/-0.77	-0.59/-0.56	-1.2/-2.88	-4.31/-4.87	-6.35/-8.45	-9.87/-9.9	-10.99/-11.83	-10.71/-8.86	-6.17/-5.34	-5.01/-4.16	-3.59/-3.89	-2.75/-3.21	-4.27/-3.68
Θ(60°)	-6.86/-7.57	-8.18/-9	-9.59/-9.77	-8.82/-10.51	-15.78/-16.79	-16.25/-18.1	-18.59/-10.86	-6.86/-4.61	-4.07/-3.17	-1.81/-1.22	-0.93/-2.07	-3.1/-3.69	-3.25/-2.74	-2.8/-4.12	-5.41/-5.67	-6.78/-10.27	-11.4/-9.88	-10.93/-13.57	-11.27/-10.01	-9.86/-8.3	-8.23/-6.62	-5.37/-5.56	-4.54/-7.07	-8.87/-6.72
Θ(67.5°)	-11.66/-10.25	-9.71/-11.89	-13.59/-11.58	-9.73/-10.34	-19.53/-17.72	-19.05/-18.96	-17.72/-13.49	-9.08/-6.11	-5.49/-4.43	-2.78/-2.6	-2.76/-3.48	-5.13/-6.1	-5.72/-5.58	-5.21/-7.01	-1.81/-7.04	-12.58/-9.36	-10.79/-13.27	-11.48/-10.46	-10.5/-9.63	-9.76/-9.08	-8.64/-8.77	-6.79/-8.21	-10.28/-11.6	
Θ(75°)	-17.35/-12.74	-11.91/-14.67	-19.65/-12.94	-10.18/-12.81	-15.48/-16.95	-18.28/-18.77	-17.82/-15.54	-11.7/-8.07	-7.47/-6.46	-5.99/-5.71	-6.23/-6.31	-9.49/-8.27	-9.44/-9.23	-8.11/-10.12	-16.71/-8.99	-8.26/-11.95	-15.01/-9.66	-10.33/-15.65	-13.9/-11	-11.28/-11.17	-10.79/-10.47	-10.31/-13.15	-10.52/-11.69	-14.67/-18.92
Θ(82.5°)	-18.55/-14.09	-14.8/-16.11	-19.17/-17.74	-14.47/-16.45	-15.96/-15.1	-17.55/-18.2	-18.85/-18.83	-15.36/-11.45	-9.67/-8.41	-5.74/-6.28	-7.54/-8.61	-10.01/-10.69	-11.35/-12.97	-12.78/-14.16	-13.29/-9.42	-8.72/-10.23	-14.82/-10.46	-9.96/-14.46	-14.42/-12.49	-12.46/-12.97	-12.94/-12.85	-12.43/-14.4	-15.64/-18.05	-18.64/-18.83
Θ(90°)	-18.49/-14.14	-16.68/-16.15	-17.96/-18.67	-18.69/-18.26	-16.53/-18.07	-18.51/-18.9	-18.88/-18.33	-18.47/-15.18	-13.11/-11.22	-8.2/-7.85	-8.46/-10.73	-11.73/-13.9	-14.63/-16.14	-18.23/-17.21	-16.71/-12.7	-9.68/-9.63	-13.13/-12.24	-10.66/-12.74	-14.77/-16.14	-15.4/-15.25	-14.73/-16.73	-15.22/-16.37	-15.46/-18.15	-17.96/-16.13
Θ(97.5°)	-14.38/-18.59	-19.38/-19.24	-18.97/-18.77	-18.03/-19.03	-18.09/-18.33	-18.61/-18.51	-18.87/-18.89	-17.82/-18.26	-15.5/-13.03	-8.72/-10.02	-9.44/-13.12	-13.98/-18.55	-15.97/-18.44	-17.34/-16.39	-18.3/-17.58	-13.75/-11.03	-13.43/-17.81	-15.49/-15.22	-19.24/-18.37	-16.67/-15.89	-16.68/-15.44	-15.5/-18.04	-16.49/-12.99	
Θ(105°)	-14.62/-17.1	-18.73/-18.36	-18.41/-18.35	-18.11/-18.04	-17.9/-19.04	-18.71/-18.4	-18.26/-18.49	-18.98/-16.67	-15.41/-12.34	-12.58/-14.92	-12.66/-18.57	-18.39/-18.13	-18.37/-16.99	-18/-19.18	-19.22/-18.94	-17.92/-14.05	-14.05/-18.83	-18.55/-12.81	-12.82/-12.59	-15.34/-18.6	-18.13/-17.4	-18.55/-16.22	-17.44/-16.23	-14.1/-12.76
Θ(112.5°)	-15.78/-18.17	-17.98/-18.17	-18.14/-14.65	-17.86/-18.97	-17.71/-18.3	-18.82/-17.72	-18.9/-18.13	-15.12/-12	-13.24/-13.29	-17.78/-16.76	-17.37/-13.96	-15.85/-18.88	-19.47/-14.21	-17.16/-15.7	-16.79/-14.62	-18.17/-18.71	-17.47/-17.77	-18.03/-17.5	-16.38/-13.27	-10.87/-14.92	-17.97/-18.22	-13.4/-14.41	-15.64/-19.16	-13.64/-15.79
Θ(120°)	-16.68/-18.29	-17.42/-18.16	-17.73/-17.63	-18.39/-18.9	-19.11/-18.04	-17.22/-18.58	-18.98/-18.28	-16.36/-15.43	-13.34/-15.29	-15.35/-13.98	-15.25/-17.05	-17.21/-13.71	-18.9/-18.6	-16.9/-12.89	-14.46/-18.9	-16.44/-14.27	-19.14/-17.55	-19.72/-16.99	-17.63/-14.61	-17.18/-18.62	-12.16/-13.1	-10.95/-14.33	-15.64/-14.79	
Θ(127.5°)	-9.28/-18.24	-17.89/-18.73	-17.74/-18.68	-18.07/-18.12	-17.72/-17.96	-18.41/-18.15	-15.97/-16.85	-17.36/-16.56	-18.66/-13.68	-13.25/-14.7	-9.38/-9.91	-13.96/-15.17	-18.6/-15.69	-18.33/-19	-18.6/-15.5	-18.9/-19.24	-18.64/-14.11	-14.23/-16.64	-19.08/-18.57	-14.21/-14.42	-18.25/-18.91	-14.25/-11.71	-11.94/-12.47	-17.77/-11.52
Θ(135°)	-11.23/-14.37	-18.21/-18.19	-16.41/-18.01	-18.13/-17.9	-17.85/-17.9	-18.16/-18.18	-18.36/-18.13	-14.21/-17.67	-18.63/-18.1	-18.82/-14.32	-11.39/-15.29	-18.99/-17.16	-12.09/-11	-16.37/-19.95	-17.45/-17.83	-18.04/-18.43	-18.03/-16.21	-15.95/-15.73	-18.68/-17.4	-14.19/-13.23	-18.85/-19.34	-18.17/-17.39	-12.51/-12.23	-15.82/-16.06
Θ(142.5°)	-13.86/-11.34	-13.69/-18.27	-18.99/-18.42	-19.04/-17.73	-18.76/-14.14	-13/-10.34	-14.73/-14.83	-17.45/-17.09	-14.69/-18.95	-18.39/-18.94	-18.85/-19.12	-18.73/-15.64	-17.51/-18.38	-19.04/-18.94	-18.61/-18.2	-15.64/-17.38	-19.25/-18	-19.64/-16.55	-18.11/-18.32	-16.54/-15.41	-15.45/-18.19	-16.1/-17.38	-14.09/-12.34	-14.96/-17.04
Θ(150°)	-18.52/-17.27	-18.33/-19.1	-19.15/-18.11	-18.15/-18.25	-19.18/-19.2	-17.93/-17.83	-17.13/-17.62	-19.31/-19.04	-18.21/-17.92	-17.17/-16.79	-17.04/-19.48	-18.18/-13.75	-11.68/-14.26	-19.15/-17.25	-17.8/-17.63	-15.82/-16.46	-18.99/-18.18	-19.39/-18.45	-18.33/-18.41	-17.73/-17.97	-17.55/-16.13	-14.23/-13.77	-17.89/-19.06	-18.16/-16.12
Θ(157.5°)	-18.28/-17.62	-18.32/-18.75	-19.04/-17.59	-18.5/-17.22	-18.46/-14.99	-14.5/-15.25	-17.06/-19.12	-17.99/-18.11	-18.04/-19.16	-18.09/-18.92	-18.42/-17.6	-18.7/-18.48	-18.94/-18.77	-17.41/-15.32	-14.86/-17.4	-17.74/-18.16	-16.64/-17.58	-17.85/-18.88	-18.63/-18.71	-18.74/-17.55	-17.53/-15.49	-14.85/-16.54	-17.97/-18.34	
Θ(165°)	-13.58/-12.57	-13.4/-16.06	-18.66/-19.32	-17.78/-19.15	-17.43/-17.81	-19.02/-17.66	-18.16/-18.3	-19.13/-18.28	-17.78/-18.83	-18.63/-18.42	-19.21/-18.65	-18.05/-17.42	-17.78/-18.79	-17.73/-19.77	-17.89/-19.91	-19.04/-18.58	-18.22/-19.1	-18.32/-18.01	-17.58/-17.8					



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

Appendix B

Θ(180°)	-18.91/-17.58	-17.55/-18.85	-17.46/-18.82	-17.62/-17.46	-14.88/-13.97	-15.21/-16.61	-18.57/-18.69	-18.15/-18.19	-18.25/-18.48	-19.09/-18.07	-18.24/-19	-18.17/-18.32	-18.65/-17.22	-19.14/-18.44	-18.08/-18.64	-17.67/-17.45	-17.42/-18.33	-19/-19.63	-18.25/-18.96	-17.98/-18.05	-18.16/-18.93	-17.51/-18.06	-18.92/-18.86	-17.14/-18.24
Freq(Hz)	5.6G/Pol.	Theta/Ant. 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°)	3.09/2.59	1.69/0.3	-1.45/-3.56	-6.95/-11.84	-15.89/-10.7	-6.35/-3.38	-1.27/0.56	2.02/3.17	3.65/4.25	4.39/4.51	4.49/4.61	4.64/4.38	3.59/2.77	1.69/0.22	-1.67/-4.18	-7.54/-12.11	-13.64/-9.04	-5.19/-2.41	-0.39/1.16	2.3/3.06	3.67/4.1	4.45/4.68	4.76/4.81	4.69/4.22
Θ(7.5°)	3/2.39	1.39/0.15	-1.15/-3.26	-5.64/-8.78	-13.52/-15.56	-9.93/-5.47	-2.20/-1.7	1.91/3.17	4.07/5	5.21/4.94	5.06/4.79	4.47/3.93	3.09/2.2	1.3/-0.15	-1.97/-4.52	-7.88/-12.25	-13.56/-9.31	-5.3/-2.64	-0.75/0.7	1.97/3.03	3.69/4.11	4.35/4.44	4.34/4.21	3.92/3.83
Θ(15°)	2.6/2.13	1.7/0.51	-0.95/-2.4	-4.2/-6.01	-8.63/-11.62	-10.34/-6.14	-2.68/-0.11	1.82/3.23	4.22/4.81	4.97/4.71	4.44/49	3.71/3.16	2.42/1.74	0.55/-0.85	-2.81/-5.72	-9.74/-17.61	-17.62/-11.61	-6.74/-3.65	-1.75/-0.35	0.76/1.76	2.57/3.05	3.36/3.41	3.27/3.08	2.73/2.84
Θ(22.5°)	1.84/1.01	0.63/0.04	-1.12/-2.77	-4.86/-7.07	-10.02/-13.63	-12.25/-7.15	-2.8/-0.03	1.69/2.16	3.27/3.86	3.92/3.84	3.64/3.19	2.29/1.5	1.1/1.01	0.13/-1.54	-4.46/-8.35	-12.84/-18.16	-18.94/-15.48	-9.9/-5.58	-2.67/-0.74	0.22/0.84	1.25/1.4	1.4/1.49	1.97/2.58	2.72/2.57
Θ(30°)	1.19/0.65	-0.06/-0.68	-2.21/-4.47	-7.31/-10.45	-12.98/-14.47	-12.86/-8.28	-3.9/-0.91	1.24/2.44	3.11/3.78	3.47/3.4	3.73/3.4	2.35/1.01	1.34/1.11	-0.15/-2.51	-5.5/-8.67	-11.67/-15.46	-18.85/-17.37	-15.18/-9.53	-5.13/-1.75	-0.03/0.42	0.38/0.44	0.56/1.1	2.2/0.9	1.82/1.68
Θ(37.5°)	-0.33/-1.54	-2.56/-3.91	-5.48/-7.46	-9.49/-11.92	-15.55/-13.28	-9.99/-6.85	-3.66/-0.78	1.24/2.24	2.59/2.93	2.69/2.62	3.32/3.08	1.77/1.49	1.36/0.52	-0.84/-2.36	-4.34/-7.09	-9.5/-11.46	-13.98/-18.91	-17.75/-9.36	-5.93/-4	-2.04/-1.56	-2/-1.38	-0.86/0.4	1.41/0.62	0.07/0.23
Θ(45°)	-3.49/-4.35	-4.76/-5.8	-8.73/-11.24	-12.53/-15.08	-15.58/-11.87	-9.58/-8.01	-5.73/-3.01	-0.97/0.01	0.37/0.32	0.96/1.11	1.9/1.6	0.98/0.33	0.27/-0.59	-1.29/-1.92	-3.13/-5.28	-8.11/-10.61	-12.24/-18.09	-19/-13.98	-8.96/-6.58	-5.96/-4.98	-4.48/-3.71	-2.88/-1.61	-0.3/-1.08	-1.47/-2.08
Θ(52.5°)	-6.16/-7.05	-7.36/-8.62	-12.81/-16.09	-14.91/-16.44	-18.22/-13.61	-10.31/-9.59	-7.97/-4.7	-2.17/-0.83	-0.99/-1.01	0.52/0.99	1.33/0.44	-1.15/-1.38	-1.5/-1.84	-2.04/-2.85	-4.2/-5.14	-7.39/-11.95	-15.69/-18.14	-18.53/-12.97	-11.54/-11.26	-10.01/-8.76	-6.83/-4.38	-4.14/-2.42	-1.9/-2.97	-3.66/-4.98
Θ(60°)	-9.19/-9.82	-10.29/-10.6	-13.54/-18.42	-13.66/-16.69	-18.83/-17.89	-13.25/-13.36	-11.2/-7.33	-4.21/-2.73	-2.17/-1.86	-0.69/-0.01	-0.33/-1.19	-3.4/-3.94	-3.63/-3.17	-3.33/-4.09	-4.89/-5.5	-7.65/-13.6	-15.86/-17.59	-18.44/-16.07	-12.9/-10.82	-11.03/-10.58	-8.16/-5.19	-5.28/-3.93	-3.96/-5.91	-6.83/-9.31
Θ(67.5°)	-15.19/-14.09	-10.37/-9.93	-12.4/-17.62	-17.93/-19.06	-17.87/-18.16	-16.5/-17.89	-14.85/-9.26	-6.95/-5.39	-3.75/-3.25	-2/-1.34	-1.87/-3.31	-5.89/-7.26	-6.16/-5.35	-4.8/-5.35	-6.93/-7.21	-9.61/-16.73	-17.86/-16.28	-13.97/-15.13	-13.4/-11.86	-12.81/-11.17	-9.91/-5.64	-6.94/-6.14	-6.36/-7.6	-10.81/-13.37
Θ(75°)	-17.76/-18.14	-11.33/-10.28	-11.57/-18.49	-18.45/-13.79	-17.43/-18.49	-18.54/-17.95	-17.45/-12.17	-10.83/-8.49	-6.29/-4.39	-3.77/-3.14	-4.55/-6.83	-8.49/-9.82	-9.69/-8.85	-6.29/-7.2	-8.67/-9.1	-10.44/-17.56	-18.88/-17.57	-12.97/-14.86	-17.11/-11.61	-10.23/-10.28	-8.59/-6.56	-8/-8.81	-9.1/-10.27	-13.26/-15.56
Θ(82.5°)	-18.05/-19.72	-11.92/-12.29	-11.67/-17.84	-14.12/-12.34	-15.99/-18.05	-17.98/-17.55	-19.31/-16.16	-15.01/-11.64	-9.63/-7.25	-5.31/-4.3	-5.98/-9.23	-11.63/-12.67	-12.33/-9.21	-8.54/-9.68	-11.23/-12.01	-14.22/-15.64	-14.96/-19.03	-13.79/-16.4	-18.2/-13.6	-9.45/-8.65	-8.09/-10.67	-11.45/-13.2	-18.2/-19.03	
Θ(90°)	-17.02/-17.58	-13.24/-15.04	-12.98/-17.04	-13.5/-12.01	-16.08/-18.77	-18.14/-18.32	-18.78/-18.66	-18.18/-15.63	-14.29/-10.71	-7.47/-5.62	-6.89/-10.96	-13.66/-14.5	-14.73/-11.53	-12.27/-13.53	-12.59/-13.93	-15.33/-17.26	-13.27/-18.82	-16.66/-15.23	-18.05/-18.92	-10.97/-8.82	-7.41/-6.93	-8.45/-10.98	-13.75/-16.3	-19.14/-18.18
Θ(97.5°)	-18.19/-16.4	-14.82/-14.59	-12.78/-17.38	-13.47/-15.01	-17.77/-17.55	-18.36/-18.17	-18.53/-18.84	-18.56/-18.1	-18.29/-13.68	-8.61/-7.42	-7.92/-14.1	-16.42/-19.64	-15.55/-14.16	-17.07/-17.96	-18.37/-15.8	-18.74/-18.7	-14.18/-18.48	-17.32/-16.16	-18.92/-18.79	-16.83/-9.21	-7.7/-8.64	-11.65/-15.12	-15.02/-13.47	-13.5/-18.43
Θ(105°)	-15.54/-18.22	-17.25/-19.14	-15.72/-18.31	-14.73/-15.04	-17.37/-18.04	-19.75/-18.31	-17.62/-18.1	-18.17/-18.71	-17.65/-14.45	-10.15/-12.11	-11.31/-17.44	-19.19/-18.38	-15.83/-14.57	-17.76/-17.85	-19.27/-14.01	-18.39/-18.52	-17.05/-17.78	-18.52/-17.94	-18.09/-13.88	-17.58/-13.89	-9.72/-9.17	-13.22/-13.49	-11.92/-10.38	-13.9/-15.97
Θ(112.5°)	-15.26/-19.05	-18.78/-17.53	-19.25/-18.34	-16.73/-18.71	-18.92/-18.93	-18.19/-18.06	-18.32/-18.87	-18.71/-17.64	-11.6/-9.86	-11.72/-15.04	-17.21/-18.81	-19.09/-19.07	-14.55/-11.29	-13.94/-18.49	-18.31/-17.49	-15.03/-18.87	-19.19/-18.86	-18.4/-16.9	-19.23/-14.62	-17.83/-15.62	-10.44/-8.97	-11.3/-15.77	-13.14/-9.53	-11.9/-17.99
Θ(120°)	-18.97/-17.92	-19.24/-18.67	-18.87/-18.85	-19/-18.45	-17.53/-17.02	-18.16/-18.09	-18.89/-17.78	-17.95/-16.32	-12.17/-10.52	-10.98/-12.39	-17.63/-15.65	-19.64/-18.26	-12.98/-10.01	-18.66/-19.21	-13.17/-14.57	-15.36/-18.91	-18.04/-18.55	-18.48/-16.4	-19.4/-17.86	-15.42/-18.89	-13.59/-10.75	-10.7/-12.84	-10.71/-10.63	-15.05/-17.92
Θ(127.5°)	-18.66/-18.37	-19.55/-18.81	-17.75/-18.13	-17.29/-17.41	-19.28/-18.29	-18.09/-18.41	-18.56/-17.42	-17.43/-17.51	-15.86/-14.97	-12.58/-12.35	-10.77/-10.33	-14.5/-13.23	-17.88/-17.01	-18.59/-15.2	-16.82/-15.98	-17.58/-16.37	-18.03/-18.45	-18.57/-17.25	-18.55/-18.95	-19.18/-18.16	-17.83/-18.19	-17.5/-19.13	-9.15/-9.36	-12.3/-17.01
Θ(135°)	-16.69/-19.06	-17.48/-17.55	-19.01/-19.59	-19.09/-18.86	-17.62/-17.93	-17.64/-17.83	-18.11/-18.44	-17.68/-18.44	-18.4/-17.32	-18.75/-14.15	-11.01/-13.37	-17.77/-18.25	-14.64/-14.7	-18.08/-18.82	-17.85/-17.49	-18.71/-18.16	-14.67/-16.13	-19.33/-17.51	-17.57/-18.71	-13.71/-13.64	-13.36/-17.58	-10.8/-13.78	-11.52/-10.87	-12.65/-12.6
Θ(142.5°)	-13.58/-18.93	-18.58/-18.54	-18.79/-18.43	-17.9/-15.52	-18.19/-16.92	-14.6/-13.78	-16.87/-15.31	-16.04/-19.82	-17.74/-15.93	-15.65/-18.32	-19.08/-17.05	-18.16/-18.98	-14.14/-18.18	-15.5/-19	-17.28/-19.1	-18.7/-15.9	-15.92/-16.88	-17.86/-18.18	-18.87/-19.32	-17.86/-14.78	-18.87/-12.52	-14.52/-11.52	-14.56/-18.31	-18.64/-14.63
Θ(150°)	-18.12/-18.18	-18.42/-19.05	-19.17/-17.78	-17.9/-17.87	-17.21/-17.41	-17.51/-18.44	-18.42/-17.49	-19.34/-18.05	-19.12/-18.77	-18.99/-18.57	-16.34/-15.89	-15.5/-18.62	-14.4/-18.77	-17.81/-17.96	-17.17/-18.15	-14.55/-18.1	-13.51/-14.02	-18.12/-17.94	-18.94/-17.45	-18.23/-18.48	-18.25/-13.5	-15.35/-19.03	-17.84/-18.66	-18.46/-18.19
Θ(157.5°)	-19.08/-17.87	-19.15/-17.99	-18/-18.69	-18.38/-18.31	-19.02/-17.56	-18.8/-17.97	-18.84/-17.61	-18.38/-19.46	-17.1/-19	-17.5/-18.97	-18.53/-19.21	-17.52/-18.94	-17.62/-17.94	-18.14/-19.01	-18.59/-18.96	-18.56/-17.62	-17.8/-19.15	-17.85/-18.33	-18.76/-18.63	-18.84/-18.82	-15.81/-11.71	-9.96/-10.21	-12.54/-14.51	-14.58/-16.38
Θ(165°)	-18.29/-17.6	-19.12/-18.64	-18.8/-17.19	-18.83/-18.84	-19.02/-18.02	-18.64/-18.19	-18.01/-18.12	-18.23/-18.36	-18.1/-18.17	-18.34/-17.92	-16.28/-18.57	-17.15/-87	-14.93/-14.08	-13.84/-14.21	-16.93/-18.52	-17.45/-19.15	-18.35/-18.74	-17.45/-19.15	-18.35/-18.74	-19.46/-18.92	-17.99/-17.77	-14.52/-12.65	-15.19/-18.29	-18.06/-17.37
Θ(172.5°)	-18.66/-18.37	-19.55/-18.81	-17.75/-18.97	-18.45/-17.92	-18.93/-18.6	-19.72/-18.78	-18.73/-18.15	-15.93/-15.56	-16.2/-16.63	-17.31/-18.26	-18.04/-18.92	-18.27/-17.46	-17.22/-17.69	-17.31/-18.38	-18.53/-19.13	-18.15/-18.98	-18.04/-18.69	-18.57/-17.25	-18.55/-18.95	-19.18/-18.16	-17.83/-18.19	-17.5/-19.13	-9.15/-9.36	-12.3/-17.01
Θ(180°)	-18.29/-18.8	-18.18/-16.99	-18.21/-18.09	-18.99/-18.69	-18.65/-17.57	-18.7/-17.97	-18.6/-19.12	-18.86/-19.22	-18.66/-17.63	-18.79/-18.74	-17.6/-18.46	-18.59/-17.68	-17.06/-16.74	-16.66/-17.51	-18.17/-18.7	-18.9/-17.97	-18.8/-17.78	-18.7/-18.74	-18.95/-18.72	-17.17/-18.76	-17.24/-17.72	-17.26/-18.37	-18.15/-18.96	-17.88/-18.88
Freq(Hz)	5.785G/Pol.	Phi/Ant. 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°)	-0.59/1.1	2.74/3.63	4.23/4.7	5.05/5.24	5.87/5.27	5.06/4.66	4.13/1.8	1.93/0.37	-1.8/-4.3	-8.33/-16.42	-17.96/-9.63	-4.94/-2.08	-0.31/-1.6	2.27/2.25	4.08/4.62	4.94/5.04	5.01/4.79	4.48/4.09	3.43/2.66	1.52/-0.14	-2.22/-5.13	-9.55/-17.75	-16.75/-8.12	-4.45/-2.01
Θ(7.5°)	-1.19/0.57	1.94/2.77	3.37/3.12	3.53/3.68	3.48/3.75	3.73/3.4	3.39/2.59	1.47/0.09	-1.7/-4.23	-8.89/-17.92	-14.97/-9.44	-3.61/-1.3	0.08/1.16	2.21/2.87	3.41/3.9	4.24/4.37	3.47/3.26	4.17/3.82	3.26/2.59	1.63/0.35	-1.7/-4.47	-8.73/-16.02	-18.15/-9.59	-5.48/-2.94
Θ(15°)	-1.69/-0.38	0.94/1.99	2.73/1.1	3.91/4.44	3.43/4.44	3.55/5.2	3.35/2.77	1.75/0.35	-1.59/-4.3	-8.26/-15.54	-16.97/-9.62	-5.5/-2.75	-1.07/0.11	0.84/1.67	2.49/3.03	3.36/3.59	3.53/3.53	3.41/3.15	2.58/1.85	0.67/-0.78	-2.65/-3.35	-9.35/-15.07	-13.64/-7.81	-4.96/-3.07
Θ(22.5°)	-3.03/-2.43	-1.09/0.23	1.03/1.58	1.91/1.86	1.88/1.86	2.12/2.39	2.65/2.08	0.79/-1.33	-4.19															



Antenna Pattern 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix C

Θ(22.5°)	-6.59/-5.08	-4.39/-2.77	-1.67/-1.79	-3.19/-5.33	-6.87/-5.25	-2.99/-2.25	-2.25/-3.49	-5.69/-5.84	-3.31/-1.13	0.23/0.64	0.21/-0.85	-1.63/-1.54	-0.44/0.31	0.02/-0.41	0.01/1.41	1.81/1.59	1.04/0.39	-0.49/-1.58	-1.94/-1.68	-1.28/-1.52	-1.86/-2.51	-3.55/-4.64	-5.93/-7.63	-8.07/-7.02
Θ(30°)	-5.22/-7.08	-5.37/-3.59	-3.18/-3.05	-3.64/-5.08	-6.62/-8.15	-4.81/-2.71	-2.12/-3.30	-5.29/-3.72	-0.62/0.75	0.53/-0.47	-1.28/-1.15	-1.02/-1.18	-0.86/0.06	0.99/1.34	1.54/2.15	2.03/1.73	1.04/0.42	-0.39/-1.77	-2.28/-1.91	-2.27/-3.50	-3.99/-4.51	-5.02/-6.42	-7.91/-8.56	-6.41/-7.45
Θ(142.5°)	-1.63/-1.71	-2.43/-2.21	-2.12/-1.42	-2.65/-4.71	-8.50/-7.48	-5.82/-4.78	-4.33/-4.22	-3.22/-1.54	0.15/-0.28	-1.15/-0.91	-0.24/0.15	-0.73/-0.72	0.05/0.76	1.41/1.65	1.83/2.21	1.41/0.64	0.78/1.26	0.44/-0.49	-1.55/-2.27	-3.31/-6.11	-8.47/-5.71	-4.52/-5.05	-4.77/-3.49	-2.77/-2.56
Θ(45°)	-4.08/-3.01	-2.89/-1.92	-1.65/-1.29	-1.27/-2.32	-5.24/-4.28	-2.79/-3.60	-2.13/-0.39	-0.62/-0.90	-0.84/-1.36	-1.53/0.36	0.72/-0.07	-0.82/-0.84	0.34/1.37	1.41/1.30	1.34/1.73	1.13/-0.09	-0.91/0.45	0.22/0.10	-0.36/-0.54	-2.59/-5.44	-4.30/-3.74	-5.22/-8.80	-8.44/-5.05	-3.87/-3.39
Θ(52.5°)	-3.19/-3.21	-1.13/-0.50	-0.66/-1.75	-2.12/-1.44	-3.81/-1.42	-0.81/-2.33	-1.92/1.03	0.95/0.40	0.14/-1.55	-0.39/-1.26	0.60/-1.11	-1.07/-0.42	1.33/1.50	1.28/0.12	0.10/0.74	0.75/-0.49	-2.34/-0.67	-0.78/-1.01	-0.11/-0.31	-2.88/-4.81	-2.12/-1.66	-4.04/-5.89	-4.64/-3.32	-8.39/-2.95
Θ(60°)	1.82/1.66	1.83/1.43	1.68/-0.30	-2.25/-2.06	-2.32/-1.14	-0.43/-1.57	-0.41/2.25	1.92/0.31	0.30/-0.59	0.29/0.79	-0.19/-1.88	-1.49/-0.36	1.97/2.12	1.16/-1.82	-2.07/-1.39	-0.52/-0.55	-2.20/-1.23	-1.54/-2.60	-0.35/-0.18	-2.10/-2.59	-1.63/-2.08	-4.33/-3.71	-1.34/-0.60	-1.42/-1.03
Θ(67.5°)	3.33/3.23	2.17/1.00	1.43/-0.01	-2.85/-3.64	-3.58/-1.81	-0.03/-0.23	-0.60/-1.92	2.06/0.48	0.27/-0.35	0.58/0.00	-0.59/-1.72	-1.52/-0.68	1.05/1.06	0.20/-2.18	-3.49/-3.57	-1.09/-0.61	-1.68/-0.82	-1.46/-1.08	0.71/-0.46	-2.68/-1.98	-1.17/-2.56	-2.11/-1.54	-0.48/0.03	-0.23/1.04
Θ(75°)	3.26/3.48	2.49/0.37	1.28/0.75	-4.00/-2.45	-4.36/-1.28	-0.15/-0.93	-2.98/0.56	1.35/0.34	-0.38/-1.19	0.37/-0.38	-1.39/-1.33	-2.97/-1.88	-0.04/0.20	-0.05/-2.46	-3.64/-4.48	-3.08/-2.74	-1.35/-0.87	-0.50/-0.24	1.69/0.65	-2.17/-1.10	-1.51/-3.23	-1.25/0.49	0.36/-0.44	0.62/-1.46
Θ(82.5°)	1.38/2.14	1.95/-0.27	0.09/-0.98	-6.17/-5.51	-5.42/-0.07	-1.04/-1.15	-1.40/0.77	0.37/-0.10	-0.01/-1.13	0.15/-1.10	-1.22/-1.75	-4.04/-3.53	-1.25/-0.95	-0.27/-2.21	-3.90/-2.61	-4.23/-3.04	-1.12/-0.27	0.96/0.04	2.04/0.19	-1.18/-1.38	-1.30/-3.42	-1.76/0.58	-0.18/-0.94	1.27/-1.10
Θ(90°)	-0.84/-0.56	1.29/-0.32	-0.42/-2.59	-6.39/-7.81	-6.32/0.45	-1.42/-2.74	-1.79/0.29	-0.62/-1.14	-0.60/-1.42	-0.21/-1.22	-1.20/-1.15	-3.76/-4.35	-2.52/-1.62	-0.51/-1.39	-4.09/-2.04	-5.01/-4.14	-3.03/-0.79	0.21/-0.46	2.00/0.12	-1.05/-3.05	-1.83/-3.00	-3.77/-1.41	-2.58/-2.26	1.25/0.76
Θ(97.5°)	-2.36/-3.44	-0.87/-1.66	-2.27/-3.12	-6.10/-7.95	-5.83/-0.31	-1.97/-3.39	-2.70/-0.41	-0.96/-2.19	-1.22/-2.09	-0.91/-2.32	-1.92/-2.54	-4.02/-4.45	-3.11/-0.91	-0.59/-1.30	-4.82/-3.22	-4.60/-5.14	-5.87/-1.86	-0.48/-1.40	-2.07/-4.67	-4.56/-3.30	-9.15/-7.13	-8.42/-4.31	-0.75/-0.73	
Θ(105°)	-3.54/-5.14	-2.94/-4.36	-3.50/-3.27	-4.91/-7.36	-4.24/-3.70	-2.47/-4.09	-4.94/-3.54	-1.74/-2.61	-2.75/-3.44	-1.77/-2.57	-2.80/-3.89	-4.17/-4.86	-3.70/-4.38	-3.74/-3.64	-3.07/-4.68	-8.15/-4.69	-5.36/-3.53	-3.14/-5.66	-3.96/-5.88	-9.09/-5.48	-10.10/-8.01	-10.81/-4.39	-6.07/-1.35	
Θ(112.5°)	-2.16/-4.69	-3.53/-3.61	-4.94/-4.81	-8.02/-7.01	-3.39/-4.85	-4.19/-4.27	-3.68/-2.51	-3.07/-5.31	-5.51/-2.92	-3.13/-2.52	-2.43/-5.02	-4.21/-5.82	-3.46/-4.11	-1.36/-3.40	-2.41/-3.08	-3.29/-6.63	-9.35/-5.72	-3.31/-1.59	-5.15/-6.90	-4.72/-4.30	-12.31/-5.75	-7.72/-6.89	-10.24/-5.52	-5.07/-2.56
Θ(120°)	-6.35/-3.87	-3.39/-0.53	-1.22/0.91	-10.43/-7.18	-4.57/-4.96	-5.35/-6.29	-4.42/-4.87	-6.57/-6.64	-5.42/-5.61	-4.98/-3.55	-2.69/-5.91	-3.72/-3.81	-2.69/-3.73	-2.82/-6.82	-3.50/-6.05	-12.37/-6.08	-4.24/-3.77	-5.95/-10.80	-5.45/-3.77	-6.95/-6.33	-5.95/-3.98	-8.81/-6.58	-4.60/-5.93	
Θ(127.5°)	-10.83/-8.91	-7.86/-7.61	-11.25/-12.26	-8.72/-9.27	-10.80/-7.17	-6.36/-9.32	-6.38/-5.04	-7.05/-6.72	-7.82/-7.22	-7.25/-5.73	-6.21/-6.26	-9.33/-7.37	-5.16/-3.07	-4.12/-4.58	-3.12/-6.15	-11.13/-6.98	-6.25/-5.88	-4.07/-9.39	-7.62/-3.83	-3.57/-9.30	-15.30/-10.80	-9.38/-9.60	-3.24/-7.86	
Θ(135°)	-9.12/-8.22	-8.77/-10.72	-11.94/-10.31	-7.59/-9.78	-11.98/-6.42	-4.90/-11.98	-8.79/-6.95	-8.64/-7.04	-6.33/-7.45	-6.63/-7.54	-6.90/-7.41	-8.31/-7.51	-6.23/-3.32	-4.04/-3.23	-5.01/-6.88	-5.51/-9.65	-11.89/-7.71	-7.91/-9.75	-9.28/-11.08	-8.43/-5.85	-5.29/-8.38	-15.11/-9.84	-12.14/-10.48	-12.15/-10.84
Θ(142.5°)	-7.64/-6.13	-6.62/-7.11	-12.29/-14.42	-13.64/-10.17	-7.87/-7.76	-9.84/-10.55	-8.88/-3.31	-10.33/-8.07	-7.01/-9.38	-8.52/-7.71	-7.51/-7.56	-8.13/-8.48	-7.21/-6.16	-6.26/-6.18	-7.01/-7.95	-7.32/-8.45	-9.46/-9.19	-12.15/-8.27	-7.78/-9.82	-8.90/-7.87	-6.55/-8.87	-11.78/-11.84	-11.66/-11.87	-10.93/-7.82
Θ(150°)	-10.15/-11.97	-8.80/-9.95	-10.46/-14.24	-13.62/-11.14	-10.74/-11.69	-15.48/-13.56	-9.26/-9.00	-8.21/-7.85	-7.61/-9.25	-11.82/-13.63	-13.93/-9.45	-12.01/-12.01	-11.72/-12.50	-11.03/-9.82	-10.60/-8.87	-8.86/-6.99	-5.73/-7.20	-10.12/-13.90	-11.72/-9.96	-12.97/-11.50	-11.68/-13.82	-10.81/-9.18	-10.52/-16.28	-8.61/-6.35
Θ(157.5°)	-11.91/-8.74	-8.47/-11.34	-13.13/-15.14	-15.19/-15.14	-14.51/-13.82	-12.87/-12.09	-13.12/-15.21	-15.69/-14.89	-11.82/-10.19	-10.53/-11.57	-13.27/-13.79	-13.69/-13.76	-12.85/-11.81	-11.29/-10.76	-9.96/-8.83	-7.49/-6.77	-7.11/-8.04	-8.74/-8.24	-7.59/-8.19	-10.18/-11.78	-11.99/-11.41	-11.93/-12.77	-14.58/-14.66	-14.74/-14.37
Θ(165°)	-11.24/-10.90	-11.18/-12.52	-14.57/-15.31	-15.26/-13.03	-11.02/-10.26	-10.38/-10.35	-9.82/-9.38	-9.72/-10.03	-10.32/-10.45	-10.60/-10.83	-10.52/-10.65	-10.86/-10.10	-9.04/-9.07	-9.96/-10.42	-9.33/-4.87	-8.34/-8.88	-10.08/-11.56	-12.85/-13.30	-13.84/-15.49	-15.24/-14.93	-14.65/-12.91	-11.83/-13.09	-13.60/-14.27	-14.41/-12.63
Θ(172.5°)	-13.42/-12.42	-11.76/-10.52	-9.86/-9.71	-10.84/-10.62	-11.01/-14.27	-12.19/-12.15	-12.64/-13.10	-12.33/-11.91	-11.34/-10.55	-9.80/-9.24	-9.62/-9.75	-9.07/-7.97	-7.35/-7.20	-6.86/-6.05	-5.19/-5.28	-6.22/-7.52	-9.21/-10.78	-12.31/-12.08	-10.69/-10.47	-10.39/-10.94	-11.77/-12.22	-14.54/-15.47	-14.19/-13.02	-12.84/-12.88
Θ(180°)	-15.43/-14.83	-14.08/-12.60	-13.48/-13.11	-13.37/-13.75	-13.94/-14.34	-14.36/-12.62	-11.25/-11.27	-12.07/-13.06	-13.24/-13.68	-14.07/-13.37	-13.08/-13.74	-11.77/-11.53	-12.82/-13.52	-13.62/-13.57	-14.13/-15.36	-14.60/-14.62	-15.07/-15.04	-15.77/-14.80	-15.23/-14.89	-14.16/-15.27	-15.38/-15.37	-15.18/-14.44	-15.53/-15.75	-15.73/-15.00
Freq(Hz)	6.695GPol.	TotalAnt. 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°)	6.24/-6.10	6.22/-6.20	-6.25/-6.30	-5.93/-5.90	-6.11/-6.32	-5.94/-5.53	-5.12/-5.18	-5.22/-5.18	-4.99/-5.09	-5.55/-5.72	-5.69/-5.92	-6.12/-6.08	-5.88/-5.59	-5.95/-6.40	-6.31/-5.74	-5.60/-5.74	-5.84/-5.92	-6.22/-6.21	-5.94/-6.16	-6.61/-6.62	-6.79/-7.02	-6.69/-5.85	-5.56/-5.92	-6.17/-6.73
Θ(7.5°)	-9.12/-8.75	-8.26/-8.09	-7.09/-6.61	-6.19/-5.53	-4.98/-4.79	-4.26/-3.53	-3.80/-3.66	-3.59/-3.69	-3.72/-3.74	-3.87/-3.54	-3.60/-3.83	-3.88/-3.41	-3.21/-3.31	-4.04/-4.46	-4.19/-3.79	-4.03/-4.56	-5.21/-5.56	-5.69/-5.83	-6.01/-6.48	-6.79/-6.76	-7.24/-8.21	-8.19/-8.11	-7.69/-7.57	-8.38/-8.96
Θ(15°)	-6.42/-6.54	-7.30/-7.77	-8.55/-8.77	-8.77/-7.61	-5.39/-4.00	-3.24/-3.12	-3.60/-4.05	-4.21/-3.74	-2.88/-2.27	-1.91/-1.53	-1.49/-1.68	-2.08/-2.26	-2.27/-2.08	-1.93/-1.78	-1.56/-1.26	-1.14/-1.26	-1.52/-2.09	-2.70/-3.16	-3.82/-4.43	-4.69/-4.82	-5.18/-5.83	-6.22/-6.26	-6.37/-6.51	-6.41/-6.81
Θ(22.5°)	-6.98/-6.98	-5.46/-3.71	-3.55/-4.86	-6.50/-8.18	-7.98/-5.74	-4.18/-3.87	-5.16/-6.45	-5.25/-2.80	-1.10/-0.74	-1.07/-1.45	-1.89/-2.50	-3.23/-3.87	-3.74/-2.31	-1.58/-1.47	-1.52/-0.41	0.54/-1.25	1.58/1.03	-0.07/-1.29	-2.40/-2.64	-4.22/-2.58	-3.27/-4.47	-5.85/-6.70	-6.81/-7.00	-6.54/-6.31
Θ(30°)	-10.46/-9.32	-6.74/-5.35	-4.20/-3.81	-5.32/-6.87	-12.07/-9.28	-6.12/-5.17	-6.62/-9.25	-3.42/-2.09	-0.75/-0.93	-2.46/-3.64	-2.69/-3.30	-2.90/-2.34	-0.22/-1.35	-0.62/-0.36	-0.23/0.66	1.01/0.82	1.71/1.02	0.34/-0.93	-2.60/-3.49	-4.19/-4.96	-5.67/-5.51	-6.09/-6.14	-9.42/-11.59	-11.31/-10.72
Θ(37.5°)	-3.30/-3.31	-3.25/-3.93	-3.65/-3.76	-5.27/-6.99	-9.61/-9.28	-6.97/-6.57	-6.69/-6.71	-3.38/-1.35	-1.46/-2.94	-3.94/-2.87	-1.59/-1.58	-2.35/-2.45	-1.55/-0.51	0.21/0.77	0.67/1.05	0.17/0.81	-1.20/-0.61	-0.60/-2.53	-3.05/-2.95	-3.69/-6.32	-8.84/-5.86	-4.74/-5.95	-7.71/-7.37	-6.14/-4.43
Θ(45°)	-4.80/-3.32	-2.47/-2.12	-2.24/-2.79	-3.67/-4.40	-7.51/-5.64	-5.38/-4.91	-2.51/-1.13	-0.78/-0.83	-2.36/-3.96	-2.29/-0.31	-0.65/-1.91	-3.00/-2.17	-0.60/-0.19	0.30/-0.20	-0.53/-0.42	-0.34/-0.97	-2.16/-1.85	-0.72/-1.12	-0.42/-0.39	-2.88/-7.63	-7.55/-4.74	-5.43/-8.93	-8.22/-5.54	-4.09/-1.40
Θ(52.5°)	-4.06/-4.47	-2.25/-1.66	-1.78/-2.25	-2.17/-2.67	-4.60/-3.42	-4.60/-3.74	-0.26/-0.41	-0.53/-1.18	-2.61/-1.67	-0.28/-0.16	-1.19/-3.27	-3.05/-1.66	0.25/0.67	0.21/0.86	-3.25/-3.02	-1.11/-0.83	-2.51/-2.72	-1.89/-2.32	-1.95/-0.29	-2.89/-5.88	-4.75/-3.00	-3.68/-4.36	-4.60/-5.26	-6.03/-4.64
Θ(60°)	0.16/0.27	-0.03/-0.33	-0.39/-1.66	-1.98/-1.84	-2.63/-2.83	-3.57/-3.55	-0.27/-1.55	0.66/-0.71	2.25/-0.75	0.38/-1.06	-2.44/-3.14	-3.71/-2.06	-1.00/-0.06	-0.52/-1.23	-5.07/-5.75	-3.65/-1.62	-3.66/-2.20	-2.39/-3.44	-3.01/-0.77	-3.10/-6.63	-4.05/-3.54	-3.90/-2.34	-2.23/-2.46	-3.58/-1.68
Θ(67.5°)	2.69/2.27	1.20/-0.20	0.21/-1.14	-1.90/-2.25	-3.34/-6.12	-1.95/-4.36	-0.91/-0.49	-0.22/-1.52	-2.72/-0.39	0.48/-1.19	-2.49/-2.11	-3.75/-3.21	-2.92/-1.96	-0.71/-1.90	-3.63/-5.74	-4.54/-2.35	-3.04/-2.34	-1.62/-1.71	-1.26/-0.31	-2.81/-5.30	-3.00/-2.38	-1.61/-1.33	-1.11/-0.77	-1.74/-0.16
Θ(75°)	3.37/3.53	1.84/-1.50	-0.21/-0.94	-2.55/-2.61	-4.18/-1.34	-2.15/-3.96	-1.04/0.60	-3.51/-1.48	-2.14/-0.43	-0.21/-1.86	-2.82/-2.40	-4.60/-3.83	-3.29/-4.09</											



Antenna Pattern 2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix C

Θ(60°)	-0.54/-1.61	-3.18/-5.03	-6.21/-6.83	-6.91/-5.28	-1.82/-0.80	-0.46/0.55	1.76/2.41	2.49/2.20	1.82/1.39	1.11/0.75	0.39/-0.01	-0.20/-0.25	-1.39/-3.37	-5.03/-6.11	-6.76/-8.12	-9.55/-9.37	-8.27/-5.56	-4.54/-3.57	-2.00/-0.28	0.74/1.10	1.45/1.74	2.21/2.48	2.14/1.47	0.88/0.39
Θ(67.5°)	-1.93/-2.34	-3.80/-5.47	-7.51/-8.21	-8.67/-6.83	-3.46/-2.56	-1.88/-0.92	0.66/0.86	0.56/0.64	0.45/0.63	-0.27/-0.26	-0.98/-1.51	-1.60/-2.73	-4.50/-6.36	-6.48/-7.77	-8.89/-12.10	-11.82/-11.78	-10.48/-7.88	-5.80/-4.58	-2.55/-1.03	0.49/1.10	1.29/1.36	0.90/-0.03	-0.87/-1.21	
Θ(75°)	-3.23/-3.44	-4.16/-6.52	-8.87/-9.25	-9.88/-8.84	-5.24/-3.64	-3.20/-1.75	-0.42/0.34	0.51/-0.08	0.04/0.25	-0.14/-0.79	-1.50/-2.19	-2.88/-3.83	-5.14/-6.95	-6.40/-8.98	-11.01/-15.71	-13.14/-13.26	-15.19/-11.72	-8.07/-5.73	-2.62/-1.80	-2.00/-1.88	-0.79/-0.33	-0.55/-0.64	-0.50/-3.02	
Θ(82.5°)	-5.44/-5.72	-5.47/-7.06	-10.30/-10.95	-10.90/-8.47	-6.34/-5.14	-4.77/-3.27	-1.98/-1.04	-1.37/-1.19	-1.03/-1.13	-1.07/-1.82	-2.27/-3.55	-4.47/-6.26	-8.80/-9.22	-8.88/-9.83	-12.89/-15.21	-15.31/-13.70	-15.50/-14.10	-10.43/-6.53	-3.19/-3.19	-3.83/-3.23	-1.72/-1.01	-2.02/-2.96	-2.94/-3.43	-4.66/-4.55
Θ(90°)	-7.46/-7.67	-7.22/-9.21	-11.18/-11.70	-12.02/-11.51	-8.01/-5.96	-5.68/-4.25	-3.00/-2.07	-1.64/-2.01	-1.89/-2.26	-2.66/-3.14	-3.50/-4.44	-6.11/-8.58	-12.17/-12.62	-11.93/-12.52	-14.95/-15.60	-15.66/-13.46	-15.52/-14.97	-13.58/-12.01	-5.60/-6.51	-6.40/-5.15	-3.48/-3.00	-4.29/-5.87	-5.17/-5.07	-8.86/-6.62
Θ(97.5°)	-11.51/-10.45	-9.12/-11.21	-15.78/-12.14	-13.73/-12.54	-9.83/-8.52	-7.21/-5.61	-5.13/-4.83	-4.50/-4.58	-4.75/-4.22	-4.06/-4.61	-5.99/-7.32	-7.85/-9.78	-12.23/-13.34	-13.85/-13.66	-14.90/-15.90	-14.96/-14.53	-15.60/-15.04	-15.34/-13.03	-8.53/-9.12	-7.85/-5.99	-5.99/-6.33	-6.24/-6.86	-8.80/-9.27	
Θ(105°)	-13.25/-13.36	-12.87/-13.71	-15.06/-15.23	-14.73/-13.77	-11.84/-10.99	-10.74/-8.76	-7.48/-6.66	-5.96/-5.73	-6.57/-6.60	-6.72/-6.63	-7.36/-8.52	-10.49/-14.20	-15.35/-13.51	-12.59/-13.47	-14.50/-14.28	-15.23/-15.28	-15.20/-15.20	-15.32/-14.51	-13.54/-13.66	-10.76/-10.36	-11.11/-13.49	-13.21/-12.26	-10.84/-11.24	-11.97/-11.55
Θ(112.5°)	-15.59/-14.73	-14.22/-14.62	-15.59/-15.50	-14.89/-15.79	-14.24/-13.50	-13.11/-10.26	-8.85/-8.34	-7.96/-7.77	-7.69/-7.21	-7.18/-7.62	-9.59/-10.10	-11.27/-12.94	-13.99/-14.03	-13.11/-13.95	-13.19/-14.17	-14.24/-15.48	-15.60/-15.47	-14.09/-14.74	-14.88/-15.94	-15.85/-14.60	-13.40/-14.32	-12.33/-11.63	-11.31/-12.79	-13.38/-14.64
Θ(120°)	-15.00/-15.17	-14.14/-14.66	-15.33/-15.28	-14.96/-14.80	-13.85/-12.53	-12.90/-11.66	-9.60/-8.70	-8.28/-8.15	-8.53/-8.39	-8.60/-9.21	-10.04/-10.48	-10.59/-11.81	-12.80/-14.66	-14.67/-13.23	-13.94/-14.05	-13.05/-14.57	-16.09/-15.11	-14.00/-13.15	-13.81/-14.22	-14.72/-15.32	-12.81/-10.56	-12.11/-12.17	-11.92/-15.76	-15.23/-14.95
Θ(127.5°)	-15.75/-14.86	-15.16/-15.61	-15.30/-15.31	-15.11/-14.98	-13.63/-11.47	-11.60/-11.99	-10.71/-9.27	-8.18/-7.38	-7.07/-6.99	-7.32/-8.23	-10.08/-10.87	-10.80/-11.49	-14.31/-15.19	-15.30/-11.80	-13.58/-14.98	-14.71/-15.04	-15.98/-14.95	-13.21/-11.19	-11.16/-13.21	-15.23/-9.76	-10.35/-8.95	-12.53/-15.10	-14.59/-15.00	-14.95/-15.31
Θ(135°)	-14.62/-15.51	-15.04/-14.96	-15.79/-15.28	-15.65/-15.45	-15.47/-13.09	-11.83/-12.20	-12.43/-11.99	-11.12/-9.86	-8.65/-8.23	-8.58/-8.99	-7.99/-7.69	-8.57/-10.90	-14.03/-14.52	-12.15/-10.88	-11.49/-14.46	-15.50/-15.26	-15.23/-15.39	-14.97/-15.11	-14.11/-14.66	-15.61/-13.15	-11.89/-11.31	-10.70/-12.78	-13.66/-14.68	-15.35/-14.73
Θ(142.5°)	-14.76/-14.78	-15.27/-15.59	-15.64/-15.09	-15.02/-14.76	-15.34/-16.02	-15.35/-14.16	-13.16/-12.71	-11.93/-11.68	-11.63/-11.21	-10.51/-9.99	-10.54/-10.10	-9.79/-10.84	-12.06/-11.39	-12.06/-11.30	-14.00/-15.38	-15.67/-14.89	-14.32/-13.46	-15.72/-14.68	-15.01/-14.76	-15.26/-14.23	-11.97/-12.14	-14.82/-15.03	-15.07/-15.61	-15.34/-15.26
Θ(150°)	-15.64/-15.99	-14.91/-15.76	-15.00/-15.55	-15.09/-15.15	-15.66/-15.01	-14.74/-13.47	-13.32/-13.98	-13.35/-12.68	-12.24/-11.50	-11.12/-10.13	-9.67/-10.58	-12.66/-13.81	-14.45/-15.12	-12.22/-10.80	-12.26/-12.77	-13.54/-15.60	-15.61/-15.73	-14.94/-14.42	-13.96/-14.26	-14.65/-15.09	-14.97/-15.20	-15.50/-15.33	-15.89/-14.79	-14.49/-15.84
Θ(157.5°)	-15.57/-15.21	-15.58/-15.46	-15.46/-14.96	-15.35/-15.05	-15.06/-14.86	-15.17/-14.15	-14.08/-14.48	-14.98/-15.37	-15.62/-15.12	-14.95/-14.75	-14.55/-14.70	-15.03/-14.73	-13.73/-12.31	-11.31/-11.71	-12.09/-11.98	-14.16/-15.50	-15.23/-15.39	-14.50/-13.35	-12.97/-13.32	-15.14/-15.26	-14.82/-15.57	-15.22/-15.36	-15.48/-14.85	-15.35/-14.73
Θ(165°)	-14.62/-14.84	-15.28/-15.02	-14.94/-15.22	-15.49/-14.90	-14.82/-15.11	-14.27/-15.05	-15.75/-15.53	-15.76/-15.80	-16.04/-14.74	-15.15/-15.46	-15.21/-15.49	-15.51/-15.55	-14.52/-15.23	-15.08/-15.10	-15.35/-15.48	-14.56/-15.34	-15.45/-15.19	-14.39/-13.45	-12.86/-13.25	-13.55/-13.93	-13.90/-13.88	-14.20/-14.86	-15.60/-15.43	-15.17/-14.71
Θ(172.5°)	-15.10/-15.75	-15.08/-14.52	-15.10/-15.30	-14.59/-15.20	-14.98/-15.88	-15.07/-14.91	-15.39/-15.31	-15.05/-14.19	-14.50/-14.11	-14.05/-14.43	-15.38/-14.89	-14.90/-15.17	-15.50/-15.23	-15.79/-15.52	-15.64/-14.96	-14.86/-15.40	-15.74/-14.51	-15.06/-15.29	-15.46/-15.58	-14.95/-15.30	-15.77/-15.63	-14.61/-15.75	-14.83/-14.80	-14.80/-14.93
Θ(180°)	-15.53/-15.84	-15.19/-15.37	-14.97/-16.01	-14.86/-14.93	-14.86/-15.46	-14.61/-14.92	-15.84/-14.98	-15.46/-15.27	-15.25/-15.63	-14.82/-15.22	-14.86/-15.12	-14.65/-15.41	-15.25/-15.61	-14.92/-15.30	-14.64/-15.07	-15.10/-14.84	-15.07/-15.00	-15.77/-14.89	-14.98/-14.90	-16.25/-15.64	-15.07/-14.67	-14.80/-15.36	-15.17/-15.38	-15.40/-15.33
Freq(Hz)	5.3GHz	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°)	3.23/3.13	2.84/2.78	2.93/2.96	3.05/3.20	3.36/3.44	3.52/3.59	3.66/3.68	3.74/3.83	3.57/3.86	3.84/3.85	3.59/3.78	3.43/3.19	2.88/2.68	2.72/2.67	2.61/2.64	2.70/2.82	3.09/3.30	3.52/3.73	3.92/4.06	4.17/4.17	4.13/4.07	4.01/4.02	3.96/3.87	3.75/3.59
Θ(7.5°)	3.06/2.90	1.63/1.22	2.11/2.19	2.22/2.39	2.44/2.66	3.00/3.19	3.63/3.31	3.92/4.05	4.17/4.13	3.99/4.21	4.27/4.16	3.96/3.55	3.30/2.99	2.82/2.68	2.70/2.71	2.60/2.88	3.05/3.25	3.40/3.57	3.77/3.86	3.97/3.83	3.85/3.74	3.60/3.53	3.47/3.34	3.06/3.30
Θ(15°)	2.92/2.84	2.84/2.46	2.06/1.92	1.93/2.94	3.39/3.71	4.00/4.32	4.51/4.68	4.78/4.84	4.77/4.42	4.27/4.16	4.15/3.99	3.89/3.52	2.92/3.10	2.79/2.70	2.65/2.60	2.61/2.89	2.91/3.05	3.20/3.32	3.46/3.69	3.89/4.01	4.05/4.00	3.94/3.87	3.64/3.43	3.13/2.95
Θ(22.5°)	2.11/2.16	2.31/1.93	1.57/1.84	2.46/2.23	2.70/2.82	3.21/3.55	4.14/4.44	4.64/4.71	4.58/4.59	4.57/4.34	4.18/3.97	3.67/3.42	3.01/2.65	2.24/1.92	1.61/1.38	1.22/1.33	1.53/1.90	2.64/3.36	3.97/4.19	4.16/3.96	3.67/3.36	3.12/3.10	3.25/3.39	3.03/2.68
Θ(30°)	1.51/1.46	1.37/0.79	0.44/1.37	1.85/2.17	2.82/3.30	3.38/3.59	3.98/4.30	4.54/4.47	3.90/3.63	3.46/3.22	2.50/2.33	2.03/2.80	1.99/1.83	1.19/0.92	0.65/0.42	-0.00/0.12	0.52/1.45	2.34/2.97	3.41/3.72	3.80/3.68	3.53/3.42	3.23/2.87	2.49/2.34	2.48/2.53
Θ(37.5°)	1.61/0.99	0.46/0.03	-0.16/0.47	0.87/1.66	2.25/2.19	2.38/3.07	3.60/3.96	4.10/4.46	4.49/4.41	4.14/3.70	3.24/2.70	2.65/2.85	2.39/1.58	0.75/-0.05	-0.40/-0.82	-1.42/-1.66	-1.09/0.01	1.42/2.16	2.19/1.99	1.74/1.74	1.97/2.44	2.88/3.17	3.17/2.79	2.29/2.03
Θ(45°)	1.81/0.77	-0.48/-1.28	-1.57/-1.48	-0.40/0.81	1.05/1.37	1.94/2.61	3.44/4.05	4.17/4.08	4.05/3.97	4.06/3.80	3.28/2.81	2.29/2.04	1.71/0.89	-0.27/-1.33	-1.89/-2.41	-2.76/-3.29	-2.83/-1.10	0.53/1.45	1.69/1.46	1.73/2.47	2.88/2.97	2.93/2.95	3.12/3.22	2.92/2.53
Θ(52.5°)	1.56/0.44	-0.94/-2.49	-4.02/-3.95	-2.44/-0.57	0.44/0.83	1.28/2.32	2.71/3.08	2.87/2.64	2.83/3.41	3.51/3.24	2.69/1.44	0.93/1.04	0.71/0.15	-1.89/-3.93	-5.09/-5.05	-5.28/-6.67	-2.72/2.65	-0.93/0.16	0.01/1.04	2.14/2.72	3.12/3.23	3.47/2.26	2.94/2.86	2.72/2.29
Θ(60°)	0.78/-0.35	-1.80/-3.98	-5.60/-6.21	-4.20/-1.67	-0.22/-0.46	0.20/1.39	2.19/2.62	2.60/2.53	2.56/2.59	2.54/2.17	1.73/0.87	-0.35/-0.93	-1.04/-1.63	-2.86/-5.14	-7.23/-8.11	-8.72/-8.14	-8.11/-5.73	-3.67/-2.71	-1.99/-0.49	1.03/1.85	2.13/2.29	2.60/2.74	2.45/1.98	1.70/1.42
Θ(67.5°)	-0.95/-1.63	-3.19/-4.89	-6.77/-8.34	-6.44/-3.11	-1.94/-1.71	-0.71/0.55	1.35/1.10	1.06/1.42	1.11/1.48	0.95/0.89	0.06/0.95	-1.79/-2.51	-3.06/-3.63	-5.54/-8.14	-9.61/-12.03	-10.52/-10.74	-10.82/-7.86	-5.00/-4.27	-2.72/-0.84	0.02/0.45	0.85/1.07	1.23/1.58	1.27/0.75	0.41/-0.06
Θ(75°)	-2.85/-3.77	-4.64/-7.00	-8.42/-9.43	-8.64/-4.94	-3.50/-3.38	-1.92/0.30	0.13/0.57	0.93/0.65	0.89/1.34	1.05/0.51	-0.43/-1.85	-3.29/-3.70	-3.68/-5.23	-7.16/-10.07	-10.37/-12.87	-12.86/-13.40	-15.10/-9.36	-5.60/-4.75	-2.95/-1.74	-1.20/-0.88	-0.26/-0.26	-0.53/-0.33	-0.08/-0.83	-1.21/-1.52
Θ(82.5°)	-4.87/-6.02	-6.61/-8.48	-10.97/-11.57	-10.15/-6.31	-5.42/-4.89	-2.84/-1.30	-0.13/0.39	-0.52/0.53	-0.59/-0.12	0.31/-0.28	-1.50/-3.62	-4.83/-5.75	-6.52/-8.11	-10.32/-13.50	-15.15/-14.87	-15.40/-14.95	-15.42/-11.12	-7.37/-5.69	-3.21/-3.19	-3.34/-2.48	-1.17/-0.89	-2.07/-2.79	-2.08/-2.37	-2.85/-2.85
Θ(90°)	-5.96/-8.00	-8.74/-10.76	-11.24/-11.96	-12.32/-8.98	-6.50/-6.33	-4.38/-2.74	-2.39/-1.71	-1.21/-2.01	-1.78/-1.77	-2.02/-2.43	-3.39/-5.07	-6.85/-7.72	-9.04/-11.07	-12.14/-14.88	-14.73/-15.72	-14.62/-15.98	-14.90/-15.35	-10.68/-9.42	-6.07/-6.28	-5.51/-3.40	-2.93/-2.56	-3.78/-4.85	-4.08/-4.28	-5.19/-4.22
Θ(97.5°)	-10.01/-11.41	-11.52/-13.90	-13.78/-15.11	-15.49/-11.50	-8.34/-8.36	-6.50/-5.93	-5.67/-5.01	-3.60/-3.62	-4.11/-3.47	-3.49/-4.10	-5.85/-7.73	-8.54/-9.36	-11.03/-12.95	-15.08/-15.95	-15.55/-15.00	-15.44/-15.20	-15.13/-15.24	-14.36/-12.51	-8.25/-9.57	-7.60/-5.60	-5.35/-5.97	-7.22/-7.61	-7.08/-7.49	-7.90/-7.21
Θ(105°)	-13.06/-13.72	-13.99/-15.50	-14.99/-15.03	-15.67/-14.77	-10.51/-11.15	-9.11/-6.94	-6.53/-6.04	-5.30/-4.90	-5.90/-6.03	-6.17/-5.66	-6.60/-8.75													

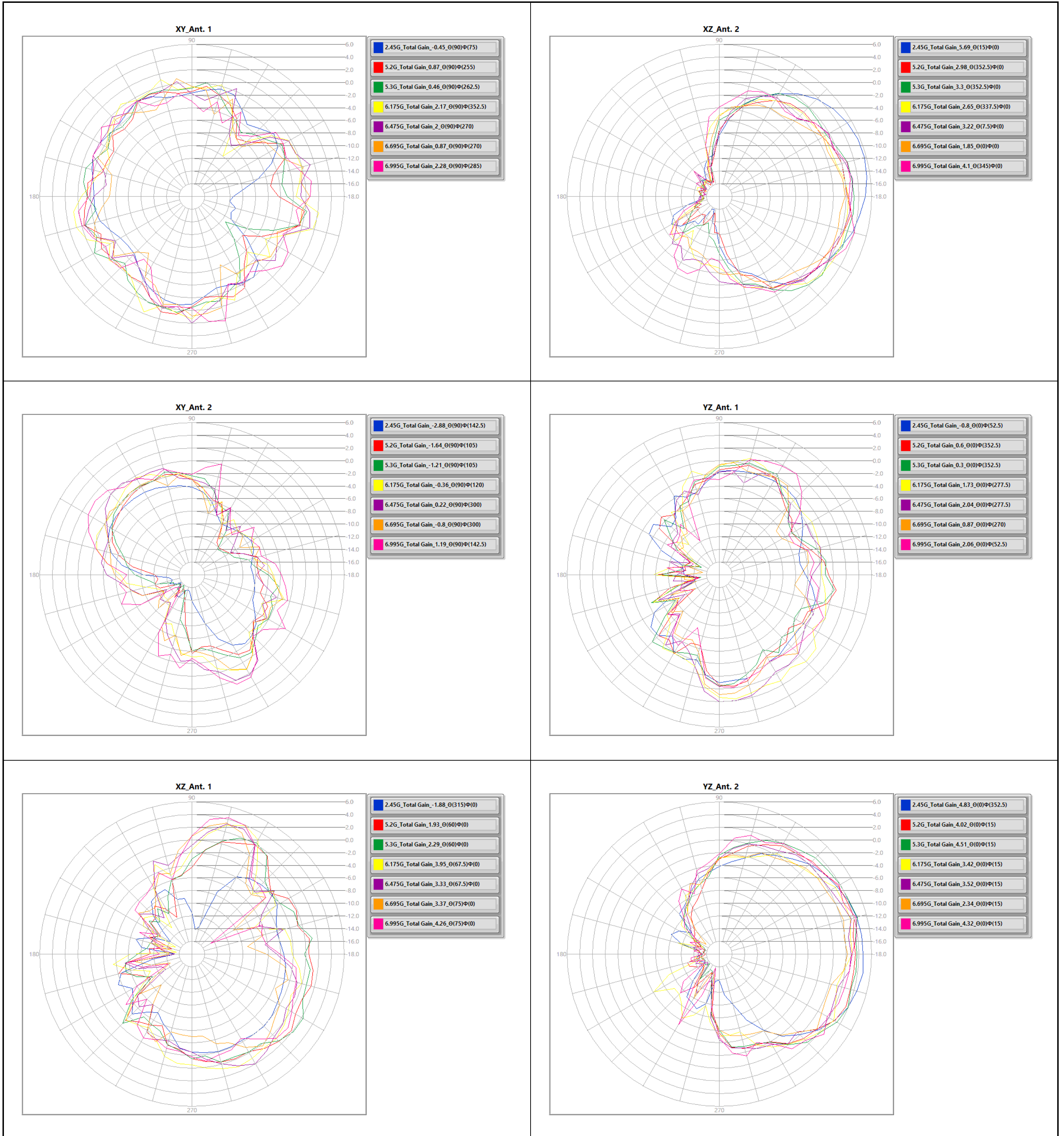


Antenna Pattern_2.4GHz, 5GHz U-NII 1~2A, 6GHz

Appendix C

Θ (112.5°)	-13.35/-15.42	-11.00/-12.91	-15.32/-10.85	-13.38/-15.22	-9.27/-13.45	-8.31/-5.74	-6.01/-6.36	-5.36/-6.09	-5.80/-5.42	-5.35/-5.80	-6.22/-6.51	-6.84/-8.39	-8.70/-9.30	-10.46/-11.43	-15.02/-12.20	-13.62/-14.17	-15.17/-14.69	-15.32/-12.79	-14.61/-12.36	-14.94/-10.86	-8.69/-8.72	-15.00/-6.76	-8.00/-8.58	-9.80/-11.23
Θ (120°)	-15.36/-15.00	-12.75/-12.92	-16.07/-13.15	-12.57/-15.25	-12.68/-10.61	-13.27/-8.86	-8.14/-9.14	-9.42/-7.85	-7.17/-7.00	-6.84/-6.60	-7.52/-7.86	-7.81/-8.46	-8.67/-10.13	-12.99/-12.36	-14.21/-11.21	-10.80/-14.56	-14.45/-14.68	-12.19/-13.61	-9.97/-12.13	-11.56/-10.19	-7.54/-8.41	-11.67/-10.62	-12.48/-12.94	-13.35/-14.12
Θ (127.5°)	-14.62/-15.52	-13.63/-13.56	-16.03/-14.15	-14.11/-15.28	-12.38/-13.62	-13.27/-11.96	-9.81/-9.60	-9.11/-8.15	-7.91/-8.17	-8.00/-8.03	-7.82/-7.61	-7.79/-8.33	-9.81/-12.07	-13.22/-9.68	-11.15/-11.88	-13.26/-12.21	-13.98/-15.23	-11.76/-14.70	-12.73/-12.83	-13.74/-8.45	-11.16/-15.42	-10.14/-9.63	-13.90/-13.98	-14.09/-13.33
Θ (135°)	-15.11/-15.79	-15.01/-15.76	-12.98/-12.75	-12.33/-14.87	-13.25/-12.40	-13.42/-13.74	-12.90/-11.40	-10.62/-9.38	-8.24/-7.69	-8.14/-8.24	-8.64/-9.07	-8.75/-11.51	-9.31/-9.42	-10.35/-10.20	-12.95/-10.73	-15.48/-13.00	-15.03/-11.31	-15.24/-14.26	-14.39/-12.39	-13.60/-11.19	-9.47/-12.98	-15.53/-12.76	-14.46/-14.16	-15.31/-16.05
Θ (142.5°)	-15.05/-15.42	-15.30/-15.01	-15.09/-15.11	-15.28/-15.47	-15.21/-13.05	-13.07/-14.95	-15.39/-14.11	-11.80/-9.32	-8.30/-8.13	-7.86/-8.59	-7.72/-8.36	-9.60/-10.46	-9.41/-10.35	-12.91/-12.11	-12.75/-13.85	-15.28/-15.38	-13.05/-12.59	-10.94/-15.68	-14.97/-14.80	-15.45/-10.67	-10.15/-15.33	-15.48/-15.39	-15.85/-13.45	-13.57/-16.13
Θ (150°)	-14.61/-14.82	-15.24/-15.49	-15.59/-15.19	-15.21/-14.88	-15.43/-15.60	-14.97/-14.70	-12.99/-12.46	-11.67/-11.42	-10.99/-10.20	-9.12/-8.14	-8.71/-9.33	-9.72/-10.03	-10.19/-12.68	-16.17/-12.41	-11.52/-13.29	-15.00/-13.95	-10.98/-13.50	-12.71/-14.03	-15.08/-14.96	-15.69/-16.15	-15.26/-15.18	-14.93/-14.20	-14.86/-15.51	-15.18/-15.61
Θ (157.5°)	-15.82/-15.85	-15.34/-14.79	-15.55/-15.52	-15.03/-15.72	-15.33/-15.87	-15.87/-15.21	-14.78/-14.07	-12.93/-12.24	-11.94/-11.43	-11.08/-10.13	-9.95/-10.59	-10.78/-11.69	-14.79/-15.22	-13.22/-12.31	-13.77/-13.60	-11.70/-12.47	-11.92/-11.88	-14.81/-14.44	-14.58/-14.91	-15.43/-15.34	-15.84/-15.43	-14.58/-14.46	-15.32/-15.27	-15.09/-14.75
Θ (165°)	-15.32/-15.18	-15.33/-15.22	-15.50/-15.29	-15.69/-14.64	-14.97/-15.22	-14.97/-14.60	-14.17/-13.39	-12.62/-12.31	-12.08/-11.84	-11.30/-11.53	-12.48/-14.64	-15.27/-15.34	-14.68/-15.43	-14.48/-15.22	-15.35/-15.14	-15.37/-15.32	-14.51/-13.67	-14.54/-15.64	-15.51/-15.17	-15.35/-15.75	-14.33/-14.02	-14.45/-15.43	-15.41/-15.35	-15.29/-15.18
Θ (172.5°)	-14.88/-14.84	-15.47/-14.85	-14.81/-15.45	-15.75/-14.91	-14.41/-14.86	-14.83/-15.20	-14.75/-15.42	-15.55/-15.77	-15.24/-14.92	-15.12/-15.55	-15.68/-14.93	-15.63/-14.95	-15.45/-15.91	-15.44/-15.28	-15.04/-15.20	-15.07/-15.31	-15.47/-15.36	-15.13/-14.68	-14.80/-15.28	-15.09/-14.88	-15.58/-14.72	-14.66/-14.83	-15.09/-15.64	-15.10/-15.48
Θ (180°)	-15.22/-14.80	-15.75/-15.48	-15.35/-15.02	-15.52/-15.09	-16.04/-15.70	-14.89/-15.42	-15.08/-16.13	-15.71/-14.89	-15.29/-14.83	-15.81/-14.89	-15.35/-14.83	-15.06/-15.70	-15.31/-14.84	-15.26/-14.65	-14.83/-14.45	-14.47/-14.77	-15.72/-15.39	-15.08/-15.55	-13.97/-13.82	-13.21/-13.22	-13.93/-14.06	-14.18/-14.08	-15.34/-15.32	-15.55/-15.09
Freq(Hz)	6.995GHzPol.	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°)	2.41/2.23	2.68/2.55	2.61/2.66	2.67/2.62	2.75/2.68	2.69/2.70	2.99/3.18	3.37/3.43	3.50/3.46	3.41/3.31	3.36/3.27	3.36/3.14	2.90/2.68	2.41/2.39	2.35/2.39	2.34/2.37	2.67/2.90	3.05/3.19	3.13/3.18	3.27/3.40	3.48/3.39	3.48/3.53	3.40/3.25	3.07/2.82
Θ (7.5°)	2.85/2.77	3.21/3.13	3.30/3.22	3.04/3.21	3.30/3.25	3.28/3.55	3.78/4.15	4.38/4.53	4.47/4.41	4.02/3.64	3.79/3.84	3.78/3.42	2.95/2.51	2.19/1.92	1.89/1.79	1.74/1.69	1.85/2.01	2.11/2.39	2.65/2.87	3.04/3.31	3.46/3.58	3.67/3.71	3.74/3.62	3.73/3.59
Θ (15°)	2.84/2.87	2.81/3.08	3.44/3.59	3.74/3.86	4.05/4.09	4.25/4.38	4.32/4.29	4.41/4.53	4.51/4.27	4.11/4.25	4.40/4.61	4.64/4.41	4.10/3.44	2.80/2.15	1.91/1.92	1.91/1.95	2.34/2.63	2.78/2.64	2.45/2.30	2.31/2.38	2.58/2.73	2.68/2.72	2.71/2.62	2.68/3.07
Θ (22.5°)	1.63/2.00	1.49/1.95	2.47/2.81	3.38/3.57	3.61/3.81	3.70/3.44	3.15/3.19	3.51/3.77	4.08/3.48	3.43/3.21	3.07/3.03	3.45/3.55	3.53/3.04	2.16/1.86	1.97/1.88	1.95/2.11	2.29/2.44	2.45/2.34	2.35/2.44	2.86/3.31	3.24/2.71	2.30/2.34	2.36/2.59	2.26/1.62
Θ (30°)	1.79/1.52	1.39/1.65	2.44/2.64	3.22/2.96	2.67/2.54	2.77/3.40	3.80/3.78	3.68/3.77	4.20/4.28	4.06/3.42	2.54/2.05	1.86/2.18	2.16/1.71	1.21/0.67	1.02/1.12	1.13/0.43	-0.32/0.01	1.19/1.62	1.68/2.63	3.44/3.85	3.87/3.85	3.74/3.84	3.47/2.97	3.21/2.63
Θ (37.5°)	1.05/0.91	0.83/0.76	1.29/2.06	1.79/1.60	1.35/1.90	2.50/2.85	2.80/2.94	2.97/2.95	3.40/3.59	3.44/3.06	2.63/1.97	1.60/0.93	0.82/0.11	-0.08/-0.70	-0.28/-1.19	-1.71/-2.49	-0.90/0.72	2.14/2.53	2.75/3.39	4.05/4.13	3.37/2.82	2.13/1.81	2.61/2.60	1.72/1.33
Θ (45°)	-0.57/-0.30	0.16/-0.72	0.12/1.35	1.21/0.32	1.55/1.96	2.28/2.42	2.48/2.55	2.91/3.49	3.75/3.61	3.32/2.96	2.42/1.97	1.43/1.09	0.80/0.16	-1.09/-2.21	-2.51/-3.32	-2.97/-4.44	-3.95/-0.92	0.59/1.48	1.22/2.33	2.63/1.24	0.04/0.44	1.52/2.16	1.20/0.67	0.28/-0.77
Θ (52.5°)	-1.09/-1.00	-0.28/-0.67	-0.30/0.96	0.26/-0.02	0.65/0.22	0.41/1.71	2.27/2.79	3.64/4.32	4.37/4.13	3.49/2.97	2.10/1.85	1.26/0.30	-0.47/-0.47	-2.27/-4.34	-5.17/-5.10	-6.06/-6.24	-5.28/-1.62	-0.17/0.19	0.83/1.53	2.25/1.24	0.97/0.54	1.22/0.76	0.78/1.30	0.83/0.33
Θ (60°)	-0.23/-0.83	0.01/-0.79	-1.70/-0.40	-0.68/-0.93	-0.36/-1.67	0.35/2.07	2.17/2.42	3.30/3.58	3.58/3.76	4.00/3.50	2.40/1.23	0.31/-0.37	-0.58/-1.11	-2.43/-4.47	-5.93/-7.13	-9.21/-8.52	-7.23/-3.81	-2.10/-2.43	-1.68/-0.48	0.67/0.81	0.22/0.37	0.44/0.60	0.88/1.33	2.01/1.11
Θ (67.5°)	-0.12/-1.85	-1.63/-1.76	-2.75/-1.56	-2.43/-2.13	-0.81/-1.43	-0.01/1.24	0.96/1.18	1.84/2.71	2.70/3.04	3.56/3.35	2.66/1.31	-0.59/-2.18	-2.32/-1.97	-3.76/-5.00	-6.88/-8.32	-9.52/-11.27	-6.63/-5.55	-3.41/-4.50	-2.89/-0.63	-1.47/-1.26	-0.81/-0.37	-0.17/1.25	1.63/1.49	1.75/1.15
Θ (75°)	-0.79/-3.87	-4.27/-3.29	-5.03/-3.67	-4.63/-3.59	-2.12/-1.69	-0.81/1.43	1.37/0.59	0.02/1.00	1.97/2.46	2.53/3.26	2.25/0.98	-1.10/-2.68	-3.20/-2.91	-5.41/-5.22	-6.04/-10.45	-11.68/-13.83	-5.97/-4.26	-2.80/-3.33	-1.41/0.10	-1.15/0.16	0.31/-0.45	-0.35/0.53	1.47/0.50	0.58/-1.26
Θ (82.5°)	-2.63/-4.70	-6.82/-5.41	-6.03/-5.85	-7.43/-5.00	-3.68/-4.44	0.51/1.21	0.44/-0.64	0.10/-0.28	1.03/1.40	1.84/2.38	1.98/0.47	-2.10/-3.93	-4.86/-4.06	-6.18/-5.84	-7.10/-13.79	-14.23/-13.47	-6.40/-3.13	-3.84/-3.04	-2.27/-0.82	-0.64/0.83	0.92/-0.44	-2.19/-0.67	0.39/-1.11	-0.89/-2.36
Θ (90°)	-3.88/-4.77	-6.66/-6.50	-7.21/-5.68	-9.02/-8.09	-5.76/-7.89	0.04/-0.88	-2.17/-1.75	-0.76/-1.78	-0.39/-0.57	0.85/1.19	0.87/-0.39	-2.41/-4.49	-7.72/-6.43	-7.33/-6.05	-8.65/-14.76	-15.31/-14.56	-7.38/-4.18	-5.00/-3.13	-4.88/-3.54	-1.22/0.66	0.62/-1.11	-4.31/-3.85	-1.02/-3.41	-2.41/-3.12
Θ (97.5°)	-5.36/-5.53	-7.04/-6.97	-7.78/-5.73	-7.83/-9.73	-7.63/-9.82	-1.89/-3.08	-3.63/-2.25	-1.39/-2.86	-1.44/-2.03	-0.75/-0.46	-0.70/-1.79	-2.35/-4.44	-8.17/-7.01	-6.70/-8.64	-11.77/-13.45	-12.24/-14.71	-9.50/-8.10	-7.53/-5.38	-9.22/-4.59	-3.38/-1.11	-1.17/-4.74	-6.37/-5.55	-2.81/-3.14	-3.43/-5.52
Θ (105°)	-9.72/-7.34	-6.24/-7.25	-9.73/-7.54	-10.54/-9.06	-13.28/-8.37	-3.76/-4.26	-4.36/-2.90	-3.08/-4.30	-2.59/-2.41	-2.24/-2.00	-1.72/-2.05	-2.75/-4.41	-6.05/-6.62	-6.10/-8.41	-11.38/-10.83	-10.19/-13.24	-12.16/-12.15	-11.84/-10.67	-15.71/-8.56	-10.78/-5.71	-4.35/-8.43	-8.04/-5.83	-4.61/-3.75	-4.01/-7.56
Θ (112.5°)	-15.42/-11.25	-8.45/-8.65	-8.84/-8.74	-11.54/-8.84	-12.07/-6.29	-5.78/-6.64	-7.68/-5.58	-5.33/-4.23	-4.43/-2.95	-3.67/-3.95	-2.92/-2.21	-3.21/-4.71	-4.83/-6.08	-6.87/-7.41	-8.94/-8.60	-12.75/-14.06	-15.15/-14.50	-12.25/-11.77	-11.10/-8.25	-9.88/-6.12	-5.50/-6.56	-10.60/-4.67	-5.80/-5.27	-6.98/-10.73
Θ (120°)	-15.63/-13.04	-12.09/-10.57	-10.16/-9.41	-13.04/-9.18	-6.77/-12.34	-4.73/-4.72	-6.13/-5.74	-4.64/-5.75	-4.99/-5.04	-4.76/-4.89	-4.14/-4.36	-5.07/-4.84	-4.92/-5.03	-8.06/-11.09	-8.04/-9.47	-9.92/-10.84	-15.46/-10.50	-9.83/-10.51	-5.25/-8.87	-10.44/-9.83	-7.71/-8.45	-6.80/-6.69	-7.75/-10.19	-13.74/-14.98
Θ (127.5°)	-14.88/-13.48	-9.39/-9.98	-9.33/-10.71	-14.90/-9.70	-7.64/-7.17	-10.18/-7.38	-7.55/-6.74	-6.30/-5.32	-5.62/-6.67	-5.63/-4.96	-6.45/-7.85	-7.81/-7.20	-6.27/-7.39	-12.87/-9.21	-8.99/-8.36	-8.63/-8.28	-11.73/-14.33	-8.79/-13.76	-11.34/-8.34	-13.12/-5.77	-9.15/-14.86	-4.51/-4.51	-14.38/-8.76	-14.18/-14.58
Θ (135°)	-12.36/-11.58	-9.24/-9.46	-8.99/-10.29	-13.12/-13.13	-9.84/-9.51	-9.96/-9.81	-10.20/-9.26	-7.46/-6.46	-5.96/-5.67	-5.38/-6.95	-8.28/-7.58	-9.27/-8.13	-10.06/-9.70	-10.49/-9.35	-8.65/-8.46	-15.66/-6.81	-11.38/-8.93	-10.05/-13.19	-9.40/-7.16	-13.74/-7.29	-5.87/-8.77	-15.63/-7.69	-11.77/-12.11	-15.66/-15.60
Θ (142.5°)	-14.37/-14.43	-11.43/-11.12	-11.55/-11.60	-10.98/-12.16	-11.39/-11.05	-11.24/-12.18	-11.09/-9.21	-7.38/-6.76	-5.87/-6.03	-6.13/-6.64	-6.68/-6.46	-7.20/-8.20	-8.16/-8.12	-11.12/-12.74	-11.97/-8.43	-12.45/-11.99	-11.28/-11.40	-6.49/-14.51	-10.89/-15.09	-11.17/-10.08	-10.61/-15.82	-13.25/-14.02	-12.00/-9.52	-13.78/-14.13
Θ (150°)	-13.78/-11.38	-11.65/-12.39	-11.84/-10.88	-10.85/-12.22	-13.93/-14.22	-14.72/-13.95	-14.49/-14.23	-13.35/-11.83	-10.24/-9.39	-9.04/-8.03	-6.87/-6.84	-7.71/-7.50	-10.17/-9.79	-12.31/-10.89	-9.45/-9.93	-13.59/-10.22	-12.70/-11.84	-11.18/-12.67	-15.42/-14.91	-14.56/-13.65	-13.58/-13.41	-13.06/-11.53	-13.04/-15.35	-12.62/-14.34
Θ (157.5°)	-15.58/-13.48	-11.21/-11.67	-11.70/-12.21	-12.87/-12.82	-12.97/-13.54	-14.69/-14.46	-13.05/-11.94	-11.24/-10.84																

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 $\Theta(0-180)\Phi(270)$





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

Appendix D

Total Gain Data

Freq(Hz)	2.45GPol.	TotalAnt.1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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°)	-3.88/3.98	-4.07/4.11	-4.25/4.22	-4.11/4.12	-4.15/4.29	-3.69/4.14	-5.09/4.78	-4.38/4.15	-4.16/4.02	-3.98/3.94	-3.24/3.78	-3.54/3.33	-3.29/3.16	-3.17/3.50	-3.94/4.05	-3.17/3.50	-3.94/4.54	-4.75/4.81	-4.48/3.98	-3.64/3.47	-3.42/3.34	-3.34/3.45	-3.57/3.64	-3.66/3.74
Θ(7.5°)	-3.53/3.72	-3.94/4.06	-4.17/4.15	-4.06/3.99	-3.96/4.14	-4.62/4.99	-4.85/4.49	-4.20/4.02	-3.90/3.79	-3.63/3.48	-3.34/3.11	-2.78/2.55	-2.42/2.35	-2.21/2.24	-2.48/2.78	-3.11/3.47	-3.70/3.84	-3.94/4.01	-3.89/3.68	-3.46/3.25	-3.17/3.12	-3.03/3.03	-3.10/3.18	-3.31/3.42
Θ(15°)	-2.44/2.64	-2.85/3.01	-3.13/3.21	-3.22/3.25	-3.29/3.55	-3.92/4.07	-3.83/3.40	-3.07/2.88	-2.81/2.77	-2.66/2.52	-2.39/2.15	-1.83/1.55	-1.39/1.27	-1.25/1.34	-1.64/2.03	-2.38/2.80	-3.13/3.35	-3.50/3.61	-3.52/3.28	-3.09/2.98	-2.83/2.61	-2.40/2.24	-2.20/2.23	-2.29/2.36
Θ(22.5°)	-1.85/2.08	-2.21/2.28	-2.44/2.50	-2.51/2.59	-2.77/3.03	-3.19/2.98	-2.45/1.94	-1.53/1.20	-1.07/1.06	-1.11/1.15	-1.06/0.81	-0.47/0.18	0.02/0.07	-0.07/0.44	-0.81/1.30	-1.74/2.25	-2.59/2.89	-3.21/3.27	-3.16/2.97	-2.75/2.51	-2.22/1.91	-1.68/1.60	-1.63/1.66	-1.65/1.67
Θ(30°)	-1.56/1.68	-1.79/1.78	-1.77/1.86	-1.92/2.01	-2.19/2.52	-2.71/2.42	-1.74/1.06	-0.51/0.02	0.30/0.42	0.25/0.01	-0.02/0.22	0.59/0.87	1.07/1.07	0.78/0.30	-0.26/0.66	-1.13/1.36	-1.57/1.81	-2.08/2.21	-2.22/2.28	-2.25/2.00	-1.66/1.43	-1.40/1.51	-1.61/1.60	-1.54/1.50
Θ(37.5°)	-1.17/1.19	-1.32/1.48	-1.59/1.53	-1.49/1.55	-1.70/2.01	-2.33/2.18	-1.63/0.90	-0.25/0.32	0.82/1.02	0.82/0.58	0.63/0.99	1.42/1.75	1.90/1.77	1.32/0.73	0.15/0.35	-0.63/0.61	-0.48/0.49	-0.65/0.90	-1.25/1.61	-1.79/1.73	-1.56/1.50	-1.66/1.87	-1.94/1.79	-1.52/1.33
Θ(45°)	-1.04/1.04	-1.31/1.60	-1.63/1.50	-1.23/1.10	-1.27/1.14	-2.29/2.41	-2.10/1.53	-0.90/0.22	0.34/0.52	0.27/0.03	0.19/0.85	1.53/1.99	2.17/2.03	1.60/0.99	0.32/0.27	-0.42/0.13	0.38/0.57	0.32/0.23	-0.93/1.45	-1.76/1.83	-1.80/1.79	-1.92/2.05	-2.03/1.81	-1.57/1.29
Θ(52.5°)	-1.07/1.19	-1.46/1.46	-1.18/0.92	-0.66/0.41	-0.66/1.54	-2.78/3.36	-3.12/2.59	-1.92/1.08	-0.32/0.15	-0.72/1.27	-0.81/0.27	1.29/1.86	2.02/1.83	1.39/0.76	0.13/0.24	-0.03/0.51	0.99/1.04	0.52/0.39	-1.28/1.85	-2.11/2.11	-1.85/1.57	-1.38/1.28	-1.25/1.24	-1.20/1.15
Θ(60°)	-0.27/0.30	-0.51/1.16	-1.22/1.06	-0.75/0.36	-0.55/1.56	-3.33/4.84	-5.08/4.57	-3.95/2.95	-1.57/0.63	-0.79/1.53	-1.37/0.15	1.15/1.90	2.09/1.88	1.40/0.79	0.24/0.16	0.56/0.17	1.39/1.31	1.72/0.06	-0.83/1.51	-1.84/1.79	-1.44/1.09	-0.96/1.03	-1.10/0.94	-0.70/0.48
Θ(67.5°)	0.79/0.46	-0.75/1.75	-2.11/1.90	-1.50/0.85	-0.71/1.68	-3.35/5.14	-5.97/5.97	-5.95/5.42	-3.92/2.63	-2.58/3.18	-2.61/0.88	1.27/1.58	1.79/1.61	1.26/0.83	0.53/0.58	0.90/1.33	1.74/1.87	1.61/0.12	0.27/0.39	-0.84/1.04	-1.06/0.95	-1.01/1.15	-0.88/0.13	0.53/0.76
Θ(75°)	-0.10/0.47	-1.52/2.58	-2.39/1.60	-0.80/0.04	0.33/0.47	-2.30/4.27	-6.01/6.05	-5.45/4.21	-2.64/1.75	-2.28/3.51	-3.39/1.78	-0.45/0.16	0.21/0.08	0.17/0.44	0.74/1.06	1.25/1.52	2.04/2.25	2.01/1.32	0.61/0.15	-0.24/0.59	-0.67/0.47	-0.37/0.63	-0.83/0.49	-0.03/0.09
Θ(82.5°)	-0.29/0.33	-0.85/1.71	-2.03/1.57	-0.85/0.30	-0.32/1.48	-3.99/7.12	-8.91/7.84	-6.11/4.38	-2.62/1.75	-2.48/3.92	-3.53/1.52	-0.06/0.20	-0.32/0.90	-0.01/0.55	0.21/0.86	1.29/1.82	2.40/2.63	2.39/1.77	1.14/0.65	0.15/0.36	-1.04/1.57	-2.36/2.49	-1.62/0.74	-1.62/0.74
Θ(90°)	0.30/0.55	-2.09/3.87	-4.71/4.11	-2.80/1.96	-1.85/2.78	-4.98/6.77	-7.12/5.43	-3.52/2.20	-1.33/1.18	-2.66/5.15	-5.88/3.65	-0.98/0.15	-0.04/0.84	-1.45/1.29	-0.52/0.35	1.01/1.71	4.22/2.90	2.77/2.10	1.43/1.04	0.87/0.44	-0.45/1.25	-1.39/1.28	-1.35/1.07	-0.18/0.47
Θ(97.5°)	-0.69/1.49	-2.89/4.26	-4.48/3.53	-2.03/1.20	-1.55/2.97	-5.13/6.31	-5.51/4.16	-2.76/1.44	-0.32/0.11	-1.65/4.09	-4.91/4.01	-2.09/1.13	-1.68/3.02	-3.64/2.59	-1.17/0.21	0.42/1.23	2.10/2.67	2.29/1.35	0.71/0.68	0.82/0.44	-0.38/1.00	-1.03/1.04	-1.39/1.51	-0.96/0.49
Θ(105°)	-0.93/1.14	-2.37/3.94	-4.72/4.48	-3.12/1.94	-1.81/2.57	-3.68/4.48	-4.19/3.13	-2.04/1.17	-0.43/0.24	-1.58/3.16	-3.54/1.62	-1.61/0.57	-0.78/0.49	-1.74/0.54	-0.13/0.36	0.97/1.16	0.41/0.67	-0.96/0.46	0.23/0.53	0.46/0.16	-0.20/0.96	-2.30/3.45	-2.69/1.68	-2.69/1.68
Θ(112.5°)	-3.55/2.45	-2.08/2.35	-3.41/5.06	-3.47/1.98	-2.27/2.98	-2.20/2.80	-4.15/5.09	-4.68/3.32	-1.92/0.98	-0.64/1.20	-2.66/3.49	-3.33/3.21	-0.98/8.98	-8.18/6.77	-4.31/2.62	-0.39/0.21	0.60/1.63	0.08/0.79	-0.72/0.05	0.98/1.39	1.12/0.42	-0.37/1.53	-3.59/6.45	-7.41/5.57
Θ(120°)	-4.54/2.74	-1.76/1.84	-2.87/4.43	-4.66/3.55	-3.02/3.67	-4.66/4.97	-4.60/4.21	-3.92/3.49	-3.25/4.00	-5.36/6.63	-7.51/7.04	-5.86/5.48	-5.16/4.61	-4.60/5.11	-5.29/4.32	-2.81/1.80	-1.59/2.09	-2.94/3.39	-2.92/1.76	-0.58/0.09	-0.25/0.71	-1.11/1.40	-2.06/3.69	-6.07/6.61
Θ(127.5°)	-6.72/4.85	-2.97/1.65	-1.31/1.77	-2.44/2.65	-2.80/3.39	-4.33/4.81	-5.06/5.52	-6.07/5.66	-5.18/4.50	-4.27/5.26	-8.31/11.13	-9.24/7.46	-6.94/7.18	-7.11/5.68	-3.36/1.18	0.15/0.40	-0.39/1.88	-3.35/3.89	-3.22/1.80	-0.29/0.84	1.34/1.13	0.43/0.46	-1.57/3.42	-5.84/7.19
Θ(135°)	-4.36/3.25	-2.04/1.19	-1.14/1.97	-3.48/4.82	-5.45/6.04	-6.98/8.22	-8.64/9.24	-9.80/8.29	-7.13/5.71	-4.98/5.13	-6.71/9.91	-9.98/9.35	-8.72/8.46	-7.52/6.73	-3.58/1.73	-0.83/0.53	-1.30/2.49	-3.36/3.50	-2.93/1.81	-0.54/0.50	0.78/0.16	-1.24/3.17	-4.94/6.05	-5.97/5.24
Θ(142.5°)	-2.80/2.16	-1.71/1.61	-1.98/3.00	-4.57/6.02	-6.58/6.63	-7.09/7.90	-8.74/10.90	-9.34/9.11	-8.13/7.36	-7.16/6.94	-7.16/7.91	-8.58/8.34	-7.16/5.62	-3.89/2.37	-4.43/1.17	-1.60/2.70	-4.05/5.03	-5.36/5.58	-5.66/5.07	-3.95/2.87	-2.32/2.47	-1.15/4.34	-5.33/5.28	-4.46/3.59
Θ(150°)	-3.08/2.92	-2.92/3.19	-3.74/4.68	-5.73/6.33	-6.19/5.73	-5.40/5.50	-5.94/6.46	-6.37/6.25	-6.14/6.40	-6.93/7.23	-7.28/7.49	-7.66/7.49	-6.76/5.49	-3.93/2.54	-1.59/1.22	-1.47/1.22	-3.08/3.64	-4.00/4.48	-4.89/4.95	-4.37/3.32	-2.28/1.50	-1.26/1.55	-2.21/2.89	-3.32/3.34
Θ(157.5°)	-5.34/5.87	-6.45/7.05	-7.64/8.11	-7.75/6.54	-5.81/5.00	-4.15/3.32	-3.25/3.47	-3.85/4.23	-4.75/5.48	-6.29/7.02	-7.86/8.89	-9.70/9.65	-8.81/7.54	-6.21/5.10	-4.25/3.75	-3.65/3.83	-3.99/3.99	-4.01/4.09	-4.05/3.81	-3.35/2.62	-1.95/1.34	-1.17/1.46	-2.05/2.92	-3.95/4.81
Θ(165°)	-11.44/12.16	-12.35/13.06	-12.04/10.25	-8.17/6.50	-5.43/4.82	-4.24/3.71	-3.47/3.72	-4.08/4.88	-5.71/6.56	-7.36/8.19	-9.26/10.61	-12.39/12.73	-12.69/11.82	-10.77/9.93	-8.07/8.45	-6.21/8.14	-7.93/7.56	-7.20/6.87	-6.55/6.37	-6.03/5.77	-5.63/5.23	-5.23/5.54	-6.15/7.23	-8.71/10.22
Θ(172.5°)	-14.02/13.72	-13.93/13.26	-12.50/11.22	-9.29/8.01	-7.35/7.11	-7.05/6.97	-7.15/7.40	-7.80/8.68	-9.71/11.15	-12.10/12.94	-13.32/14.10	-15.42/14.63	-14.86/14.75	-14.43/14.25	-14.35/14.07	-13.49/13.23	-12.96/12.75	-12.59/12.61	-12.16/12.45	-12.91/13.62	-14.20/13.77	-14.52/15.53	-15.67/15.05	-15.60/14.75
Θ(180°)	-10.66/10.44	-11.68/12.56	-12.87/12.59	-11.63/10.95	-10.89/10.99	-11.90/12.39	-13.99/15.01	-15.70/15.53	-15.48/15.57	-14.99/14.62	-15.96/14.66	-14.49/14.88	-14.83/14.60	-14.58/14.69	-14.59/15.57	-13.74/13.71	-13.67/14.18	-14.81/15.89	-16.03/15.16	-15.33/14.51	-12.73/11.38	-10.75/10.73	-11.05/10.66	-10.15/9.87
Freq(Hz)	5.2GPol.	TotalAnt.1	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
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°)	-9.94/9.81	-10.23/9.56	-9.85/9.80	-10.57/11.03	-11.29/10.75	-10.08/9.90	-10.10/10.41	-11.22/10.53	-9.79/9.90	-9.31/9.45	-10.25/10.49	-10.68/10.74	-10.85/11.02	-11.23/11.97	-12.03/11.03	-9.65/10.17	-10.43/9.42	-8.95/10.43	-10.35/9.93	-8.31/8.89	-9.15/9.90	-8.22/7.73	-7.86/8.20	-8.29/9.14
Θ(7.5°)	-4.18/4.78	-6.16/6.69	-6.50/5.32	-5.81/5.87	-5.70/5.79	-6.68/6.22	-6.52/6.85	-7.19/8.02	-7.70/6.88	-6.68/6.49	-7.07/7.83	-8.48/8.98	-8.76/8.67	-9.12/9.46	-8.81/7.76	-6.63/6.61	-6.27/5.43	-4.48/4.43	-4.32/3.89	-2.79/2.30	-2.21/2.61	-2.77/2.82	-2.74/3.24	-2.93/3.58
Θ(15°)	-3.86/5.11	-5.87/4.59	-3.34/2.13	-2.02/2.04	-2.05/2.43	-2.84/4.60	-4.96/5.28	-5.14/5.58	-5.70/5.49	-5.41/5.32	-5.34/5.45	-5.49/5.66	-6.19/6.45	-6.57/6.30	-5.44/4.76	-3.81/3.35	-3.73/3.06	-2.42/2.58	-2.42/2.48	-1.95/1.86	-1.63/1.56	-1.72/1.78	-1.98/2.85	-2.98/3.14
Θ(22.5°)	-6.45/4.64	-5.48/4.66	-4.34/3.27	-2.72/2.66	-2.80/4.14	-5.46/7.26	-9.30/11.31	-12.62/11.61	-10.76/8.48	-7.26/5.86	-4.81/4.74	-5.11/5.48	-5.89/5.67	-5.01/4.81	-4.50/3.35	-3.57/2.24	-0.87/0.39	-0.57/1.21	-1.80/1.22	-2.02/1.82	-1.71/1.34	-1.36/2.42	-3.26/5.02	-3.26/5.02
Θ(30°)	-3.40/3.07	-3.44/4.22	-4.33/3.67	-2.46/1.91	-1.42/1.96	-2.94/4.57	-7.92/6.68	-9.98/8.99	-9.84/9.58	-8.79/10.58	-8.68/6.09	-3.25/2.76	-4.18/3.97	-3.65/2.71	-2.21/1.80	-1.49/0.93	-1.05/1.46	-1.54/1.01	-0.32/0.19	-0.44/1.03	-1.92/2.86	-4.64/1.03	-1.92/2.86	-4.64/1.03
Θ(37.5°)	-2.75/2.43	-1.73/1.32	-1.89/3.58	-3.03/2.06	-1.53/2.55	-4.48/6.35	-8.62/10.93	-11.27/10.62	-10.79/10.28	-8.17/7.81	-9.06/5.31	-2.59/1.75	-2.43/3.48	-3.77/3.77	-4.57/5.29	-4.53/2.94	-2.52							



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

Appendix D

Θ(22.5°)	-5.13/6.98	-8.84/-10.10	-9.27/-8.41	-7.87/-6.65	-4.95/-4.05	-4.26/-4.70	-5.55/-6.48	-7.01/-6.48	-5.56/-3.83	-2.56/-2.15	-1.48/-1.33	-1.32/-1.71	-1.98/-1.95	-1.96/-1.89	-1.91/-2.00	-1.93/-1.93	-1.93/-1.90	-1.64/-1.50	-1.22/-1.51	-1.79/-1.68	-1.65/-1.81	-1.95/-1.98	-2.35/-2.59	-3.60/-4.29
Θ(30°)	-5.55/-5.92	-6.89/-7.75	-8.41/-9.76	-10.94/-7.98	-4.47/-3.64	-4.41/-4.95	-5.54/-5.62	-5.39/-5.25	-4.32/-2.98	-1.75/-1.30	-0.91/-0.50	-0.21/-0.83	-1.69/-2.08	-2.12/-2.04	-1.89/-1.25	-0.85/-0.44	-0.97/-1.76	-2.44/-2.86	-2.83/-2.74	-2.06/-1.64	-1.84/-1.94	-1.73/-1.54	-2.18/-2.91	-4.05/-4.55
Θ(142.5°)	-4.17/-4.59	-4.90/-5.62	-6.06/-6.21	-11.13/-7.97	-6.11/-6.13	-5.73/-7.40	-4.61/-5.71	-6.84/-6.68	-6.10/-5.26	-4.34/-3.47	-1.67/-0.67	-0.26/-1.06	-1.98/-1.84	-1.48/-1.59	-1.82/-1.19	-0.49/-0.23	-0.51/-1.35	-2.27/-3.43	-2.94/-2.34	-2.01/-2.34	-2.01/-2.25	-2.26/-1.95	-2.22/-2.97	
Θ(45°)	-2.94/-3.28	-4.05/-4.65	-5.45/-7.48	-8.35/-5.40	-4.10/-4.08	-3.22/-2.50	-3.07/-3.90	-4.87/-5.05	-4.74/-3.37	-2.12/-1.63	-1.70/-1.66	-1.40/-1.45	-2.27/-1.62	-0.22/-0.43	-1.84/-2.11	-1.59/-1.67	-1.56/-1.31	-1.72/-2.34	-2.65/-2.66	-2.76/-3.27	-3.54/-4.51	-5.23/-3.92	-2.69/-2.68	-3.05/-2.92
Θ(52.5°)	-4.07/-3.49	-2.88/-3.97	-4.13/-4.93	-7.91/-5.73	-6.02/-5.10	-4.53/-4.62	-3.59/-3.63	-4.36/-4.76	-4.37/-2.87	-1.67/-0.75	-1.01/-1.28	-1.30/-2.51	-2.94/-1.55	0.14/0.34	-0.58/-1.93	-2.45/-4.29	-3.18/-3.29	-2.57/-2.84	-3.08/-4.16	-5.87/-5.80	-4.43/-4.74	-5.94/-5.63	-3.12/-2.00	-1.81/-2.91
Θ(60°)	-4.27/-3.59	-2.70/-3.69	-4.89/-4.34	-6.33/-7.19	-7.52/-7.13	-5.66/-2.54	-0.55/-0.82	-1.77/-2.36	-2.57/-2.35	-1.85/-1.02	-0.83/-2.00	-2.72/-3.62	-1.37/-0.32	0.15/1.08	-0.58/-3.58	-1.99/-2.04	-3.28/-2.59	-2.85/-3.46	-4.02/-4.38	-4.08/-3.47	-2.31/-3.40	-6.50/-4.67	-3.18/-3.20	-2.55/-3.08
Θ(67.5°)	-4.67/-4.62	-2.02/-2.98	-4.03/-4.26	-5.84/-7.21	-8.08/-7.77	-7.42/-2.97	-0.47/-0.60	-1.67/-1.27	-1.34/-1.66	-2.73/-3.13	-2.69/-2.67	-2.73/-3.15	-1.19/0.52	0.94/0.64	-2.01/-2.53	-0.58/-1.44	-2.93/-2.65	-1.54/-3.04	-3.94/-2.82	-2.54/-3.48	-2.47/-2.34	-4.46/-3.43	-2.55/-1.95	-0.82/-1.77
Θ(75°)	-3.94/-4.31	-2.28/-4.86	-5.03/-4.84	-7.14/-8.30	-8.98/-10.45	-9.42/-2.58	-0.13/-1.05	-1.42/-0.33	-0.23/-1.84	-3.99/-5.97	-4.04/-3.35	-1.33/-3.60	-1.78/-1.05	0.88/0.15	-1.07/-0.75	0.58/-0.63	-1.74/-2.47	-1.60/-1.02	-1.67/-2.68	-2.06/-1.56	-0.71/-0.37	-3.32/-3.07	-2.37/-1.55	-0.58/-1.09
Θ(82.5°)	-3.32/-5.01	-2.51/-6.63	-6.07/-5.70	-7.89/-9.82	-9.36/-11.06	-9.73/-4.31	-3.10/-3.13	-2.17/-1.05	-1.81/-4.66	-6.04/-7.17	-4.67/-4.14	-0.99/-4.42	-1.24/-1.35	-0.01/-1.56	-0.61/0.15	0.83/0.42	-0.20/-3.08	-1.30/-3.30	-1.25/-1.79	-1.86/-0.30	0.07/0.67	-0.85/-1.52	-2.29/-2.12	-1.36/-0.04
Θ(90°)	-5.96/-5.46	-2.83/-6.57	-4.87/-5.61	-12.58/-9.75	-11.75/-11.46	-8.55/-6.26	-7.27/-8.39	-4.75/-2.95	-3.25/-8.04	-6.43/-7.44	-3.96/-4.82	-1.31/-3.74	-1.79/0.07	-0.27/-2.34	-0.96/-0.57	-1.49/0.48	-0.05/-3.54	-0.80/-0.46	-1.19/0.27	-1.14/-0.15	0.40/-0.16	0.10/-1.46	-2.91/-2.80	-1.75/-0.88
Θ(97.5°)	-7.34/-5.60	-3.02/-7.64	-4.43/-6.62	-13.14/-10.79	-9.08/-9.48	-7.24/-9.59	-13.85/-10.73	-6.46/-7.04	-10.25/-11.27	-7.89/-6.73	-5.08/-4.32	-4.54/-0.66	-1.34/-3.75	-3.05/-5.11	-2.98/-0.51	-2.02/-4.00	-1.65/-2.03	-1.27/0.07	-1.96/-2.26	-0.39/-1.29	-0.98/-1.22	-3.82/-2.45	-1.12/-1.79	
Θ(105°)	-6.95/-5.65	-4.92/-7.38	-4.32/-5.77	-16.84/-13.63	-10.88/-8.36	-8.03/-7.71	-5.94/-4.98	-5.13/-6.50	-8.68/-8.38	-7.49/-9.98	-6.47/-5.69	-6.55/-5.29	-3.32/-1.89	-2.25/-5.17	-5.46/-3.78	-5.34/-2.18	-4.21/-4.22	-2.58/-2.35	-0.29/0.51	-1.04/-1.33	-0.83/-4.47	-5.26/-3.13	-0.25/-1.43	
Θ(112.5°)	-6.64/-5.35	-4.90/-7.68	-7.67/-10.33	-11.01/-11.41	-8.64/-9.37	-11.91/-8.19	-4.90/-3.68	-3.82/-4.76	-3.74/-5.38	-9.10/-8.77	-6.46/-5.29	-5.66/-4.90	-5.56/-4.32	-3.50/-5.31	-5.74/-5.35	-3.41/-3.54	-3.83/-3.55	-4.75/-0.33	1.40/-1.15	-2.90/-1.66	-0.39/0.12	-1.09/-4.63	-6.16/-2.69	-1.15/-3.03
Θ(120°)	-7.18/-5.87	-6.68/-6.66	-6.34/-10.23	-11.31/-13.06	-15.74/-13.69	-14.63/-8.08	-5.60/-6.29	-5.34/-4.07	-4.71/-8.57	-11.43/-10.35	-7.61/-6.17	-5.12/-3.31	-3.21/-10.72	-7.82/-8.05	-3.35/-4.52	-2.00/-3.79	-8.46/0.21	2.69/-3.14	-2.88/0.25	-0.15/0.77	-2.81/-7.66	-12.50/-14.8	0.28/-4.16	
Θ(127.5°)	-5.96/-7.74	-8.03/-13.87	-11.24/-8.88	-7.70/-9.54	-15.62/-14.75	-11.89/-11.67	-12.32/-16.07	-12.81/-13.40	-15.77/-15.13	-13.65/-10.83	-9.59/-7.39	-7.09/-6.80	-6.76/-6.58	-5.88/-7.76	-12.29/-2.39	-4.14/-4.25	-0.13/-5.35	-7.89/0.88	0.69/-6.64	-4.79/0.15	-2.73/-0.46	-10.33/-4.93	-0.96/-1.56	
Θ(135°)	-4.81/-8.73	-7.94/-10.84	-14.62/-15.69	-12.46/-14.64	-15.09/-12.66	-12.77/-13.91	-11.61/-10.83	-11.23/-10.45	-6.98/-8.16	-6.22/-6.41	-8.60/-10.39	-12.45/-12.84	-7.51/-7.46	-12.19/-11.31	-4.68/-5.35	-8.96/-1.59	-1.40/-10.87	-6.47/1.59	1.21/-9.73	-9.54/-1.79	-1.01/-4.00	-1.12/-4.57	-15.64/-7.11	-6.69/-4.82
Θ(142.5°)	-6.42/-10.26	-13.93/-10.98	-7.19/-9.63	-7.31/-9.15	-11.51/-12.18	-13.62/-12.18	-8.28/-5.69	-5.73/-6.44	-6.15/-6.34	-8.73/-10.72	-10.57/-8.77	-7.79/-6.89	-8.58/-9.06	-10.75/-9.39	-5.71/-4.44	-8.91/-12.60	-2.41/-1.38	-0.13/-7.73	-14.49/-6.57	-3.77/-5.33	-7.62/-9.73	-9.94/-7.32	-4.62/-4.78	
Θ(150°)	-4.35/-5.36	-4.92/-7.68	-6.65/-6.91	-7.89/-9.82	-10.78/-13.43	-13.96/-12.33	-12.06/-12.68	-11.71/-11.20	-9.91/-9.94	-10.85/-11.79	-11.28/-10.21	-9.25/-8.07	-7.16/-6.34	-6.01/-6.51	-7.63/-6.83	-8.42/-9.89	-12.22/-9.58	-4.72/-2.37	-2.25/-4.81	-8.11/-8.81	-3.08/-5.69	-6.70/-5.69	-4.11/-3.80	-4.58/-4.48
Θ(157.5°)	-4.57/-5.81	-7.99/-10.76	-9.81/-7.90	-9.54/-13.60	-15.69/-15.21	-15.44/-12.17	-9.78/-8.03	-8.10/-10.04	-11.72/-11.77	-10.83/-9.73	-9.82/-11.14	-12.14/-9.40	-7.25/-6.44	-6.94/-8.31	-11.59/-15.00	-15.05/-14.71	-10.39/-8.06	-6.37/-5.63	-5.73/-7.34	-9.17/-10.72	-10.03/-8.47	-6.74/-6.06	-5.65/-5.19	-4.20/-3.65
Θ(165°)	-6.97/-9.84	-13.30/-14.26	-11.95/-11.97	-12.23/-12.05	-12.10/-12.31	-11.65/-11.48	-12.27/-14.61	-16.08/-14.24	-13.81/-13.39	-12.58/-12.88	-14.60/-15.32	-14.29/-12.26	-10.07/-8.50	-7.40/-7.57	-8.49/-8.16	-6.24/-4.94	-3.37/-2.58	-2.10/-2.48	-3.75/-5.90	-6.97/-4.72	-7.55/-7.04	-6.02/-3.96	-3.32/-3.57	-3.59/-5.08
Θ(172.5°)	-15.71/-13.49	-11.19/-9.77	-10.38/-11.46	-12.78/-13.17	-13.62/-13.86	-14.07/-12.03	-10.65/-9.49	-8.13/-6.66	-5.31/-4.32	-3.55/-3.31	-3.20/-3.26	-3.26/-2.89	-2.83/-2.42	-2.60/-2.70	-3.01/-3.30	-3.38/-3.20	-3.09/-3.33	-3.38/-3.55	-3.84/-4.37	-4.63/-4.97	-5.85/-6.42	-6.68/-6.75	-7.71/-9.42	-12.43/-15.70
Θ(180°)	-7.33/-8.08	-9.20/-9.15	-9.06/-8.08	-6.32/-4.93	-4.60/-4.26	-4.14/-4.21	-4.11/-4.21	-3.99/-4.04	-4.23/-4.75	-4.92/-4.95	-5.19/-5.06	-4.74/-4.65	-4.77/-4.81	-4.94/-5.36	-5.13/-4.66	-4.11/-3.78	-3.54/-3.30	-2.99/-3.10	-3.63/-4.10	-4.70/-5.19	-6.21/-7.25	-7.45/-7.67	-7.72/-7.32	
Freq(Hz)	2.45GPol	TotalAnt.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	6.206/17	6.085/96	5.825/71	5.655/60	5.605/58	5.585/58	5.585/59	5.665/54	5.795/78	5.725/65	5.615/58	5.575/59	5.645/69	5.715/70	5.685/68	5.675/65	5.635/62	5.615/58	5.555/50	5.475/42	5.425/46	5.545/67	5.805/95	6.076/17
Θ(7.5°)	6.116/10	6.025/89	5.745/65	5.585/54	5.545/50	5.445/37	5.525/59	5.315/36	5.395/37	5.305/22	5.315/36	5.295/37	5.425/44	5.495/54	5.465/51	5.615/60	5.605/59	5.555/53	5.515/48	5.435/50	5.645/79	5.966/06		
Θ(15°)	5.695/70	5.655/52	5.405/32	5.275/27	5.265/23	5.145/05	4.954/86	4.824/81	4.814/77	4.724/66	4.654/61	4.614/70	4.794/89	4.975/06	5.155/24	5.335/37	5.415/38	5.335/29	5.255/24	5.235/18	5.115/02	4.965/01	5.125/31	5.485/62
Θ(22.5°)	4.914/93	4.894/80	4.734/74	4.774/80	4.794/72	4.574/44	4.304/16	4.063/99	3.963/94	3.933/94	3.913/89	3.893/95	4.054/16	4.284/42	4.584/73	4.844/93	4.954/90	4.824/74	4.674/62	4.564/49	4.384/26	4.164/15	4.264/43	4.644/84
Θ(30°)	3.944/04	4.054/03	4.074/13	4.194/21	4.113/97	3.723/51	2.942/82	2.752/73	2.842/92	2.962/95	3.063/20	3.263/55	3.743/91	4.074/21	4.264/20	4.083/94	3.813/67	3.563/43	3.293/12	2.962/88	2.973/15	3.433/74		
Θ(37.5°)	2.923/16	3.303/38	3.473/53	3.563/52	3.323/03	2.632/31	1.981/69	1.421/22	1.051/07	1.241/47	1.601/65	1.651/65	1.721/86	2.102/34	2.582/82	3.063/26	3.353/33	3.203/04	2.852/66	2.482/29	2.121/94	1.741/54	1.561/74	2.162/63
Θ(45°)	1.872/25	2.462/64	2.712/75	2.722/65	2.422/11	1.651/24	0.810/39	-0.04/-0.47	-0.75/-0.78	-0.67/-0.57	-0.53/-0.57	-0.74/-0.82	-0.70/-0.44	-0.10/0.22	0.560/97	1.441/88	2.122/14	1.971/70	1.461/27	1.080/90	0.730/54	0.29/-0.00	-0.04/0.17	0.701/37
Θ(52.5°)	0.480/99	1.381/70	1.942/06	2.201/88	1.541/15	0.640/09	-0.55/-1.21	-1.82/-2.34	-2.60/-2.52	-2.33/-2.19	-2.30/-2.78	-3.39/-3.61	-3.36/-3.08	-2.93/-2.82	-2.47/-1.68	-0.61/0.39	0.961/07	0.740/23	-0.25/-0.50	-0.64/-0.79	-1.92/-1.22	-1.52/-1.84	-1.95/-1.70	-0.99/-1.07
Θ(60°)	-1.26/-0.56	-0.01/0.45	0.750/83	0.610/16	-0.46/-1.09	-1.76/-2.50	-3.30/-4.04	-4.63/-4.90	-4.77/-4.40	-3.99/-3.61	-3.28/-3.67	-4.41/-4.70	-4.64/-4.70	-5.09/-5.45	-5.35/-4.29	-2.50/-0.92	0.060/35	0.11/0.44	-0.99/-1.40	-1.70/-1.97	-2.35/-3.01	-3.80/-4.43	-4.99/-4.51	-3.44/-2.23
Θ(67.5°)	-3.21/-6.69	-2.02/-1.45	-1.09/-1.07	-1.35/-1.77	-2.27/-2.80	-3.49/-4.16	-4.88/-5.48	-5.84/-6.39	-6.68/-6.48	-6.23/-5.94	-5.68/-5.67	-6.22/-6.44	-6.50/-6.64	-6.93/-7.19	-6.78/-5.04	-3.71/-2.02	-1.01/-0.67	-0.81/-1.11	-1.35/-1.59	-1.92/-3.23	-2.95/-3.95	-5.42/-7.14	-8.11/-7.77	-6.44/-8.46
Θ(75°)	-6.40/-4.85	-3.67/-2.77	-2.29/-2.20	-2.52/-3.07	-3.78/-4.58	-5.78/-6.98	-8.33/-9.68	-10.34/-11.05	-11.54/-11.17	-10.28/-9.84	-9.68/-9.14	-9.33/-8.69	-8.19/-7.98	-8.13/-8.54	-8.32/-6.97	-1.51/-1.32	-1.84/-2.54	-2.82/-2.73	-2.76/-3.10	-3.67/-4.71	-6.46/-8.99	-11.08/-11.87	-10.51/-8.07	
Θ(82.5°)	-8.04/-6.39	-5.15/-3.98	-3.20/-2.95	-3.27/-4.01	-4.90/-5.68	-6.40/-7.13	-7.51/-8.18	-9.04/-10.62	-12.43/-12.54															



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

Appendix D

Θ(67.5°)	-9.56/-8.38	-6.33/-5.15	-5.26/-4.87	-4.69/-4.83	-3.49/-2.84	-3.59/-4.29	-3.83/-2.37	-0.76/-0.31	-0.91/-1.67	-1.26/-1.19	-1.75/-1.92	-3.23/-4.29	-2.82/-1.44	0.22/0.51	0.27/0.66	1.03/1.50	1.38/1.32	1.32/-0.07	-1.33/-1.52	-2.61/-4.35	-7.63/-4.28	-5.95/-5.82	-5.94/-7.20	-10.03/-11.00
Θ(75°)	-8.54/-8.66	-6.76/-4.79	-5.14/-5.97	-4.94/-4.21	-4.21/-4.24	-5.24/-6.68	-7.88/-6.01	-3.40/-1.92	-2.63/-3.16	-3.23/-2.92	-4.38/-4.66	-5.80/-6.39	-5.61/-3.04	-1.02/-1.18	-1.58/-0.55	0.45/1.41	1.63/1.16	1.53/0.55	-1.03/-0.90	-1.81/-3.50	-6.36/-5.56	-7.43/-8.26	-8.57/-9.64	-11.61/-10.22
Θ(82.5°)	-10.40/-8.50	-6.53/-5.62	-5.98/-7.72	-6.73/-5.76	-5.71/-5.74	-6.72/-8.34	-11.34/-10.71	-7.06/-4.48	-5.40/-5.81	-4.77/-4.10	-5.77/-7.68	-8.68/-8.37	-8.56/-4.27	-2.93/-3.61	-3.14/-1.62	-0.86/0.79	1.21/0.74	1.30/0.49	-0.90/-0.85	-1.89/-3.35	-4.83/-5.29	-7.72/-10.07	-10.54/-12.20	-13.13/-11.32
Θ(90°)	-10.63/-8.15	-7.39/-7.46	-6.89/-7.28	-6.37/-6.21	-6.87/-7.01	-7.41/-9.35	-13.43/-14.91	-10.67/-7.44	-6.98/-7.45	-6.97/-5.28	-6.84/-10.13	-12.68/-9.17	-10.75/-5.89	-5.04/-7.59	-6.23/-4.12	-2.46/-0.26	0.81/-0.29	0.14/-0.14	-1.91/-1.43	-2.91/-4.48	-5.13/-6.32	-7.90/-10.34	-12.47/-13.74	-13.31/-9.02
Θ(97.5°)	-13.43/-10.00	-6.64/-7.06	-8.13/-9.73	-8.69/-9.37	-9.04/-8.09	-7.72/-10.19	-15.19/-16.03	-12.75/-9.48	-8.32/-8.75	-7.94/-6.99	-7.53/-12.58	-13.97/-10.83	-12.41/-8.25	-8.78/-11.18	-11.39/-7.30	-5.60/-2.76	-1.21/-2.27	-1.62/-2.43	-4.58/-3.80	-5.41/-6.18	-6.44/-7.41	-10.59/-13.42	-13.46/-11.28	-9.74/-10.71
Θ(105°)	-11.29/-10.20	-7.63/-7.93	-9.69/-11.85	-8.60/-8.80	-9.86/-9.16	-8.34/-10.13	-14.25/-13.21	-13.47/-14.32	-11.51/-9.67	-8.93/-11.29	-10.56/-14.88	-15.66/-11.93	-12.84/-10.52	-9.83/-13.04	-16.05/-10.34	-9.16/-6.14	-5.04/-5.16	-3.73/-4.14	-7.02/-5.56	-8.37/-9.15	-9.19/-8.62	-11.83/-12.07	-11.16/-8.83	-10.02/-10.14
Θ(112.5°)	-10.87/-9.28	-7.88/-8.99	-10.68/-9.90	-8.76/-9.48	-11.81/-10.97	-9.24/-10.78	-12.07/-13.32	-15.10/-14.94	-10.65/-8.14	-10.80/-13.44	-14.46/-15.73	-15.48/-13.34	-12.91/-10.57	-10.78/-14.42	-15.47/-11.26	-7.90/-8.66	-7.46/-6.97	-4.90/-5.01	-7.49/-6.54	-10.17/-10.56	-9.19/-7.64	-9.79/-13.76	-11.98/-8.43	-9.83/-13.48
Θ(120°)	-14.68/-11.03	-11.83/-12.76	-12.42/-10.23	-9.62/-10.03	-11.17/-11.43	-11.20/-12.19	-14.38/-14.16	-13.53/-11.67	-10.53/-9.76	-10.28/-11.57	-15.22/-14.09	-16.40/-15.12	-12.02/-9.08	-13.32/-16.05	-11.42/-8.31	-5.42/-5.08	-5.18/-6.32	-6.13/-5.55	-8.64/-7.76	-9.39/-12.75	-9.77/-8.63	-8.74/-11.77	-10.08/-9.85	-11.07/-15.24
Θ(127.5°)	-15.54/-11.62	-12.56/-15.29	-14.81/-12.48	-11.79/-12.23	-10.79/-9.42	-10.35/-10.44	-10.94/-11.39	-10.11/-11.65	-11.67/-11.43	-10.14/-9.73	-13.07/-12.10	-12.89/-14.86	-9.71/-9.90	-11.76/-8.49	-7.98/-8.23	-7.53/-8.14	-8.13/-7.50	-11.68/-12.42	-10.00/-15.02	-13.82/-15.19	-11.65/-11.33	-8.17/-7.35	-8.88/-13.01	
Θ(135°)	-13.91/-14.72	-13.45/-11.24	-9.59/-10.60	-12.20/-12.92	-12.78/-12.12	-11.54/-12.77	-12.70/-12.79	-12.98/-12.71	-15.67/-15.08	-15.40/-12.65	-10.30/-12.35	-13.55/-15.12	-11.32/-11.45	-12.88/-13.49	-12.17/-11.08	-11.65/-10.78	-9.46/-9.38	-9.40/-9.94	-13.60/-15.41	-9.57/-11.02	-11.90/-14.89	-10.14/-12.59	-10.48/-8.69	-9.39/-10.46
Θ(142.5°)	-12.23/-16.00	-15.35/-15.54	-15.73/-15.64	-15.54/-14.78	-14.54/-14.66	-13.28/-11.51	-11.41/-13.75	-14.11/-15.21	-13.31/-13.61	-13.86/-15.18	-15.72/-14.62	-14.20/-11.10	-12.67/-15.65	-13.89/-15.95	-14.65/-13.84	-12.49/-11.31	-9.88/-9.49	-9.96/-11.15	-14.33/-14.98	-12.14/-11.65	-10.16/-11.48	-13.30/-10.82	-13.19/-15.12	-15.17/-13.01
Θ(150°)	-11.77/-12.89	-12.50/-12.26	-13.55/-13.98	-12.59/-11.53	-11.46/-12.50	-14.26/-15.44	-15.25/-15.20	-15.73/-15.41	-15.73/-15.11	-15.89/-15.88	-14.04/-13.72	-15.62/-14.74	-12.70/-15.89	-13.80/-12.61	-12.47/-14.41	-16.12/-15.34	-12.12/-12.70	-15.39/-14.83	-15.39/-14.73	-15.71/-15.68	-15.66/-12.15	-13.70/-14.21	-13.48/-13.96	-13.96/-12.29
Θ(157.5°)	-10.56/-11.72	-13.75/-15.12	-15.43/-15.19	-14.67/-14.62	-14.85/-14.51	-15.19/-15.44	-15.69/-15.21	-15.28/-15.66	-14.74/-15.37	-14.89/-15.27	-15.25/-15.82	-14.62/-15.97	-15.41/-14.84	-15.41/-16.06	-15.92/-15.42	-15.99/-14.69	-15.25/-15.57	-15.16/-15.70	-15.83/-15.43	-14.41/-15.61	-13.95/-10.70	-9.42/-8.61	-9.77/-11.63	-10.32/-9.81
Θ(165°)	-15.17/-15.20	-15.70/-15.73	-14.93/-14.96	-15.55/-15.22	-16.11/-15.13	-15.15/-15.54	-15.57/-15.42	-15.31/-15.02	-15.73/-15.30	-15.42/-14.84	-13.66/-13.79	-14.85/-13.98	-13.25/-12.91	-12.28/-12.76	-14.08/-15.55	-15.12/-16.06	-14.93/-15.60	-14.51/-15.27	-15.05/-15.10	-16.08/-15.17	-15.08/-15.12	-12.88/-11.61	-13.34/-14.63	-14.11/-14.27
Θ(172.5°)	-15.52/-15.32	-15.31/-14.40	-13.71/-13.85	-13.90/-14.59	-16.11/-15.61	-16.38/-15.44	-15.72/-15.60	-13.74/-13.63	-13.88/-14.27	-14.38/-15.32	-15.51/-15.84	-15.45/-14.52	-14.84/-15.09	-14.98/-15.55	-15.32/-15.70	-15.49/-15.96	-15.13/-15.78	-14.90/-15.84	-15.54/-14.69	-14.93/-15.45	-15.63/-15.05	-15.22/-15.05	-15.10/-15.31	-14.90/-14.76
Θ(180°)	-15.58/-15.14	-14.84/-14.81	-14.81/-15.43	-15.24/-15.02	-13.36/-12.40	-13.60/-14.23	-15.57/-15.89	-15.53/-15.66	-15.44/-15.02	-15.93/-15.38	-14.90/-15.71	-15.36/-14.98	-14.77/-13.96	-14.72/-14.94	-15.12/-15.66	-15.23/-14.69	-15.05/-15.04	-15.84/-16.15	-15.58/-15.83	-14.55/-15.38	-14.67/-15.27	-14.37/-15.20	-15.51/-15.90	-14.48/-15.54
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°)	5.07/5.05	5.33/5.39	5.36/5.34	5.35/5.32	5.39/5.40	5.45/5.45	5.47/5.40	5.30/5.44	5.41/5.65	5.51/5.35	5.38/5.45	5.51/5.60	5.33/5.23	5.10/5.07	5.13/5.14	5.14/5.08	5.03/4.96	4.96/5.06	5.16/5.35	5.46/5.41	5.40/5.42	5.48/5.43	5.49/5.65	5.70/5.66
Θ(7.5°)	4.26/4.32	4.39/4.41	4.47/3.75	3.87/3.81	3.59/3.98	4.24/4.70	4.92/4.89	4.89/5.10	5.39/5.87	5.96/5.68	5.87/5.75	5.61/5.38	4.95/4.70	4.64/4.49	4.40/4.41	4.45/4.41	4.39/4.37	4.53/4.56	4.62/4.78	4.94/5.05	5.10/5.19	5.22/5.00	4.68/4.40	4.60/4.57
Θ(15°)	3.51/3.44	3.70/3.81	3.85/3.79	3.87/3.66	3.66/3.81	4.10/4.44	4.77/4.91	4.96/5.02	5.15/5.38	5.54/5.40	4.44/4.30	3.98/3.77	3.47/3.49	3.62/3.71	3.71/3.72	3.56/3.57	3.68/3.86	4.03/4.24	4.33/4.37	4.54/4.63	4.70/4.62	4.25/3.93	3.74/3.73	
Θ(22.5°)	2.35/1.91	2.32/2.63	2.62/2.38	2.29/2.04	2.10/2.24	2.68/3.18	3.95/4.31	4.38/3.79	4.11/4.30	4.20/4.10	4.21/4.16	3.85/3.27	3.15/3.21	3.32/3.22	2.82/2.36	2.00/1.37	1.01/1.17	1.72/2.39	2.85/3.11	3.05/2.91	2.92/2.86	2.91/3.36	3.72/3.87	3.29/3.04
Θ(30°)	1.83/1.51	0.99/0.43	0.51/0.82	0.97/1.03	1.10/1.32	1.94/2.56	2.93/2.99	3.61/4.01	4.19/4.72	4.36/3.99	4.08/4.13	3.26/1.89	2.46/3.27	3.33/2.60	1.73/1.38	1.52/1.79	1.75/1.53	1.17/1.36	1.85/2.21	2.01/1.48	1.05/0.94	1.31/2.23	2.87/2.92	2.43/2.16
Θ(37.5°)	0.58/-0.33	-1.11/-1.09	-0.81/-0.37	0.38/0.66	0.23/-0.00	0.49/0.89	1.22/1.94	2.94/3.79	3.94/3.88	3.63/2.94	3.26/3.69	2.98/2.64	2.67/2.38	1.98/1.77	2.02/2.35	2.84/3.28	3.24/2.67	2.05/1.89	1.81/1.57	1.17/0.45	-0.00/-0.04	0.30/1.20	1.55/1.46	1.30/1.24
Θ(45°)	-3.00/-2.86	-2.70/-3.63	-4.54/-3.50	-1.97/-1.53	-1.82/-1.61	-0.80/-0.35	0.03/1.24	2.46/2.84	2.72/2.16	2.31/1.62	1.77/2.32	2.35/2.16	2.42/2.10	1.66/2.17	2.83/2.98	3.29/3.71	3.40/2.38	1.27/0.97	0.75/0.19	0.00/-0.71	-1.03/-1.19	-1.78/-0.39	0.48/0.37	-0.05/-1.66
Θ(52.5°)	-5.17/-6.09	-6.01/-5.71	-6.30/-4.45	-2.60/-2.64	-2.98/-2.06	-1.10/-1.10	-0.90/0.35	1.78/1.98	0.91/-0.19	0.62/0.88	0.74/0.77	0.64/1.22	2.20/1.75	1.71/2.53	2.83/2.61	2.21/1.81	1.87/1.66	0.85/-0.21	-0.88/-1.59	-2.52/-2.85	-2.72/-2.77	-3.61/-1.74	-1.04/-1.72	-2.66/-3.89
Θ(60°)	-9.74/-9.62	-6.52/-5.12	-5.45/-4.93	-3.45/-4.02	-4.72/-3.16	-2.34/-2.90	-3.10/-1.25	0.42/0.71	-0.34/-1.01	-0.46/0.46	0.51/0.16	-1.28/-0.91	0.45/1.00	1.43/1.53	1.73/1.67	0.91/0.84	0.94/0.84	0.67/-0.01	-1.14/-2.24	-2.60/-3.68	-3.93/-3.21	-5.22/-3.54	-3.45/-3.57	-4.76/-7.33
Θ(67.5°)	-10.73/-10.57	-7.94/-6.79	-5.97/-5.57	-4.53/-5.18	-5.18/-3.97	-3.94/-4.80	-4.88/-2.80	-1.04/-0.40	-1.72/-2.65	-2.12/-0.96	-0.82/-1.30	-2.18/-2.93	-1.18/0.04	0.11/0.22	0.26/1.01	1.49/1.35	1.28/1.57	1.74/0.66	-0.32/-0.97	-2.18/-3.42	-6.67/-5.06	-8.69/-6.73	-5.43/-6.30	-8.45/-9.21
Θ(75°)	-11.18/-9.91	-7.53/-6.14	-4.64/-3.96	-4.06/-5.37	-6.48/-5.72	-6.44/-7.85	-7.59/-5.94	-4.04/-2.66	-3.30/-4.04	-4.22/-3.50	-3.26/-3.49	-3.95/-5.26	-3.38/-1.54	-0.60/-1.40	-2.44/-0.53	0.86/1.92	1.87/1.73	2.22/1.25	-0.14/-1.20	-2.44/-3.39	-7.82/-7.67	-11.59/-9.54	-7.53/-9.42	-12.85/-13.48
Θ(82.5°)	-12.51/-8.67	-7.59/-6.68	-5.87/-5.57	-5.36/-5.74	-5.98/-6.11	-7.77/-8.16	-8.89/-7.68	-6.32/-5.17	-4.94/-6.17	-6.26/-5.69	-5.67/-6.21	-6.58/-6.13	-6.08/-3.61	-2.98/-4.06	-4.42/-2.46	0.10/1.54	1.55/1.63	1.94/0.90	-0.82/-1.21	-2.89/-3.93	-7.03/-8.92	-12.61/-14.12	-10.12/-10.49	-14.38/-12.52
Θ(90°)	-9.13/-7.18	-7.08/-6.92	-6.02/-5.51	-5.70/-6.96	-8.43/-9.34	-10.48/-10.36	-11.51/-11.91	-9.60/-8.01	-6.43/-7.40	-7.64/-6.01	-6.37/-6.87	-8.76/-6.94	-8.17/-5.36	-4.30/-7.48	-8.22/-4.46	-1.75/1.11	1.49/0.35	0.64/-0.69	-1.99/-1.53	-3.22/-5.50	-6.82/-8.99	-11.32/-12.19	-11.59/-11.14	-8.71/-8.92
Θ(97.5°)	-8.55/-5.94	-6.53/-6.59	-7.24/-6.98	-6.46/-7.72	-9.25/-9.81	-9.93/-10.71	-13.02/-13.56	-12.18/-11.09	-9.14/-10.17	-8.85/-6.50	-6.53/-9.29	-9.58/-8.76	-11.97/-7.66	-7.56/-11.53	-12.09/-8.72	-4.80/-1.26	-0.77/-2.59	-1.38/-3.10	-6.24/-5.08	-4.40/-6.91	-8.61/-9.04	-11.68/-11.51	-11.49/-9.72	-9.67/-10.10
Θ(105°)	-8.12/-7.28	-8.12/-8.50	-8.83/-8.98	-7.75/-9.39	-11.48/-12.45	-12.57/-14.47	-16.02/-14.84	-14.69/-14.15	-11.52/-13.38	-10.18/-9.58	-8.84/-11.38	-12.71/-10.65	-14.88/-11.41	-7.47/-12.38	-14.70/-11.28	-8.65/-5.38	-5.00/-7.28	-3.41/-4.73	-10.48/-8.61	-7.35/-7.32	-8.51/-12.07	-13.78/-11.49	-10.97/-10.68	-6.70/-7.92
Θ(112.5°)	-6.40/-8.30	-9.98/-10.76	-9.51/-10.98	-9.96/-10.96	-11.33/-9.86	-10.54/-14.03	-15.38/-15.35	-15.66/-14.87	-14.04/-10.32	-11.41/-12.54	-11.62/-12.50	-13.												

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 $\Theta(0-180)\Phi(270)$

