



Antenna Composite Gain Test Report

FCC ID	MSQ-RTAX6800
Equipment	AX6000 Dual Band Wi-Fi Router
Brand Name	ASUS
Model Name	RT-AX88U Pro
Applicant	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou, Taipei City 112, Taiwan
Manufacturer (1)	Compal Networking(KunShan) CO., LTD No.520,Nan Bang RD., Economic & Technical Development Zone, KunShan,JiangSu,China
Manufacturer (2)	Datamax Electronics (DongGuan) Co., Ltd. Niu Shan Foreign Economic Industrial Park, Dong Cheng District, Dong Guan City, Guang Dong, China
Manufacturer (3)	ARCADYAN TECHNOLOGY (VIETNAM) CO., LTD. Land plot No. D4-5-6, Thang Long Industrial Park (Vinh Phuc), Thien Ke Commune, Binh Xuyen District, Vinh Phuc Province, Vietnam
Manufacturer (4)	Lih Rong Electronic Enterprise Co.,Ltd. No. 486, Sec. 1, Wanshou Road, Guishan District, , Taoyuan City, Taiwan
Sample Received	Sep. 07, 2022
Start Test Date	Sep. 13, 2022
Final Test Date	Sep. 13, 2022



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory
No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan (R.O.C.)



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History of this test report

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1. Operation Mode and Antenna Information

Antenna Position	RF Port		Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	2G	5G					
2G 5GAnt1	2	1	PSA	RFDPA171300SBLB820	Dipole	Reversed-SMA	2.4GHz, 5GHz UNII 1~3
2G 5GAnt2	3	4	PSA	RFDPA171300SBLB820	Dipole	Reversed-SMA	2.4GHz, 5GHz UNII 1~3
2G 5GAnt3	1	2	PSA	RFDPA171300SBLB820	Dipole	Reversed-SMA	2.4GHz, 5GHz UNII 1~3
2G 5GAnt4	4	3	PSA	RFDPA171300SBLB820	Dipole	Reversed-SMA	2.4GHz, 5GHz UNII 1~3

Note:

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

2G 5GAnt1~4 can be used as transmitting/receiving antenna.

2G 5GAnt1~4 could transmit/receive simultaneously.

2. 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

3. Testing Location

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rex Liao	23.5-24.5 / 40-50	Sep. 13, 2022

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

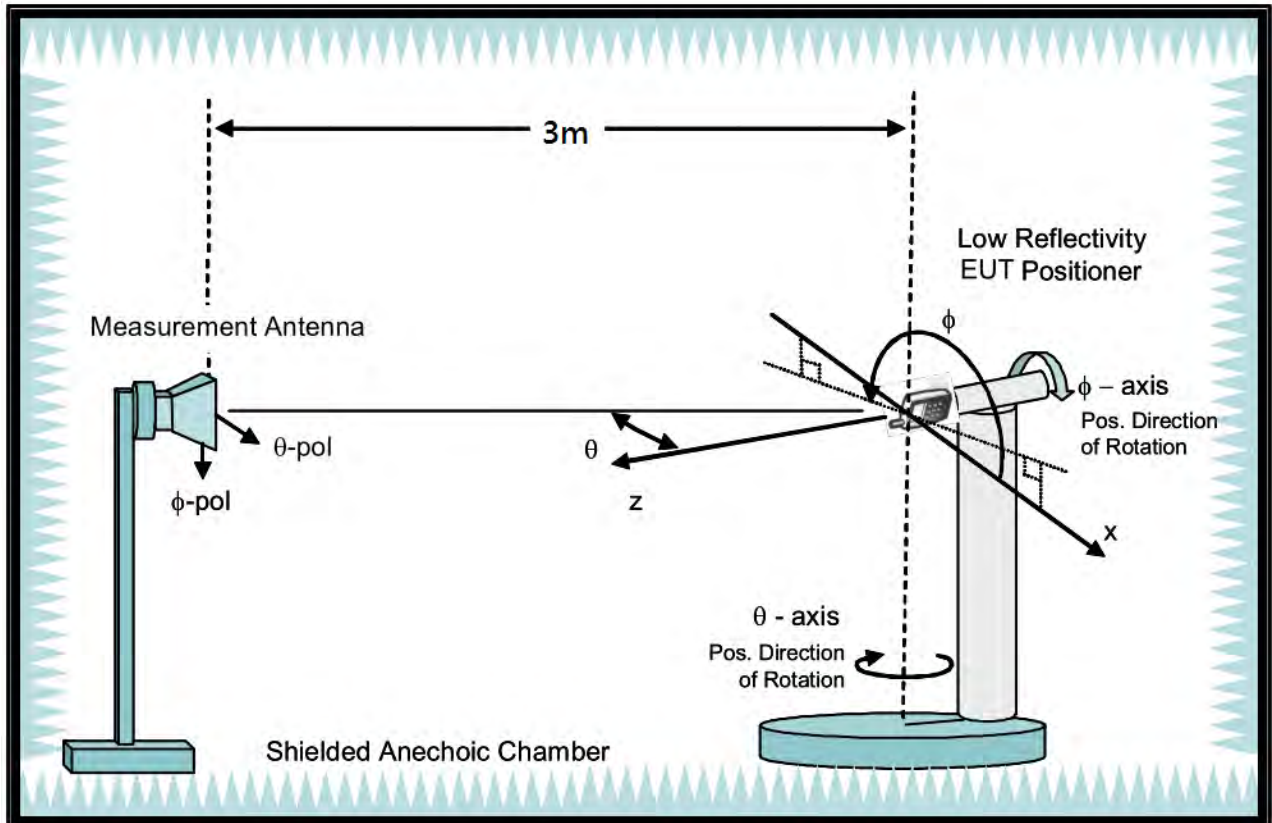
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

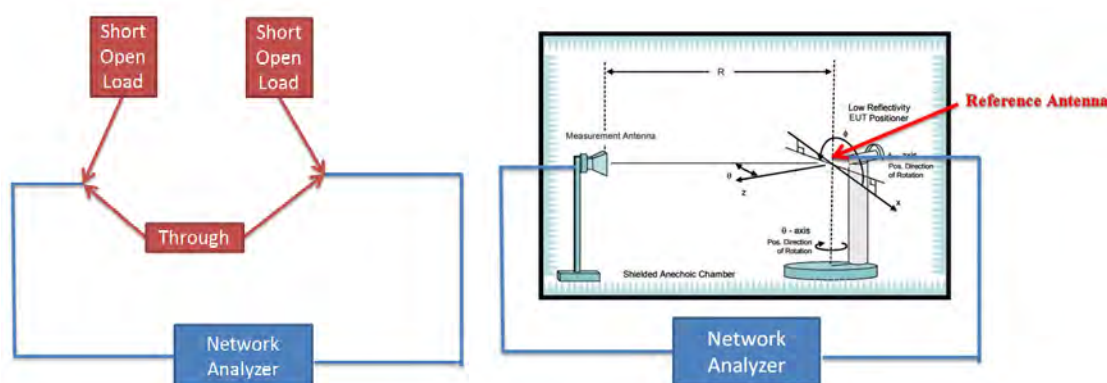
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



5. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.55	-33.27	-32.92	-32.91	-32.73	-32.02	-32.67	-32.82	-32.98	-33.18	-32.8	-33.92	-34.62	-35.57
G(phi) reading (dB)	-33.15	-32.7	-32.41	-32.61	-32.43	-31.72	-32.37	-32.51	-32.52	-32.66	-32.5	-33.62	-34.32	-35.48
Reference gain (dBi)	10.1	10.4	10.7	12.5	12.7	13.5	13.4	13.3	13.3	13.2	13.4	12.5	12.1	11.4
Factor(theta) (dB)	43.65	43.67	43.62	45.41	45.43	45.52	46.07	46.12	46.28	46.38	46.2	46.42	46.72	46.97
Factor(phi) (dB)	43.25	43.1	43.11	45.11	45.13	45.22	45.77	45.81	45.82	45.86	45.9	46.12	46.42	46.88

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.

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



6. 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 7 tables.

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

7. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-0.56	-1.92	0.2	0.29	-0.23
Ant. 2 (dBi)	1.13	0.23	-0.6	1.39	2.6
Ant. 3 (dBi)	0.99	-0.23	-0.04	-0.11	1.6
Ant. 4 (dBi)	-0.39	2.7	-0.05	-0.73	0.2
DG [1SS] (dBi)	6.35	6.38	5.9	6.27	7.14
Polarization	Theta	Theta	Theta	Theta	Theta
Θ (°)	90	90	67.5	75	75
Φ (°)	90	45	97.5	67.5	90

Note: The DG 1SS max value position is the maximum value of section 11 table DG 1SS Result.

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(-0.56/20)}$	$10^{(-1.92/20)}$	$10^{(0.2/20)}$	$10^{(0.29/20)}$	$10^{(-0.23/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(1.13/20)}$	$10^{(0.23/20)}$	$10^{(-0.6/20)}$	$10^{(1.39/20)}$	$10^{(2.6/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(0.99/20)}$	$10^{(-0.23/20)}$	$10^{(-0.04/20)}$	$10^{(-0.11/20)}$	$10^{(1.6/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(-0.39/20)}$	$10^{(2.7/20)}$	$10^{(-0.05/20)}$	$10^{(-0.73/20)}$	$10^{(0.2/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.938	0.802	1.023	1.034	0.974
Ant. 2 [$10^{(G/20)}$] value	1.139	1.027	0.933	1.174	1.349
Ant. 3 [$10^{(G/20)}$] value	1.121	0.974	0.995	0.987	1.202
Ant. 4 [$10^{(G/20)}$] value	0.956	1.365	0.994	0.919	1.023
Sum All Antenna [Amax]	4.153	4.167	3.946	4.114	4.548
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	6.35	6.38	5.9	6.27	7.14

Note:

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

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

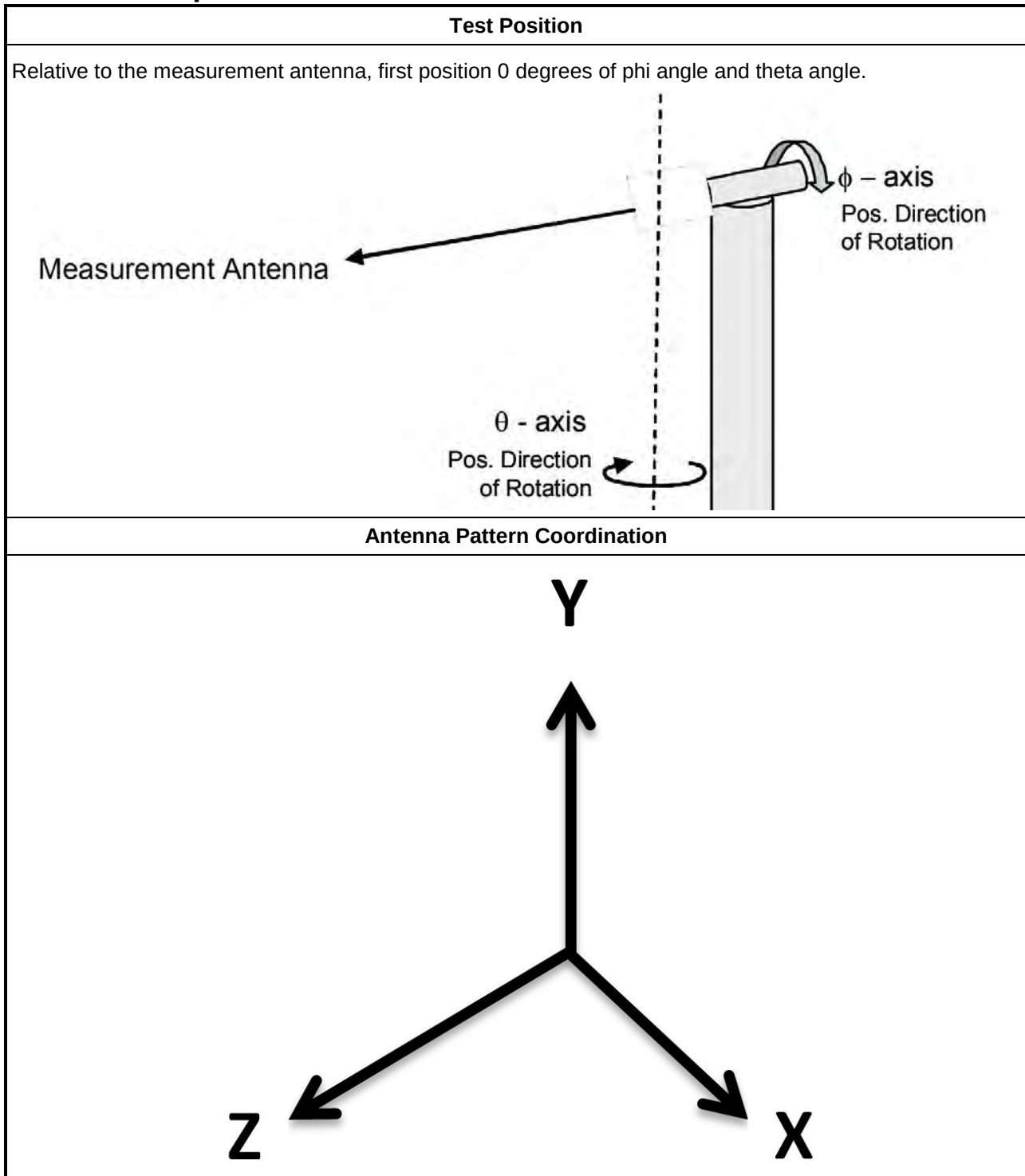
8. Summary of Test Result

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.01	2.66	2.74	3.53	3.93
Ant. 2 Max Gain (dBi)	1.25	1.8	1.59	2.37	2.6
Ant. 3 Max Gain (dBi)	1.61	2.05	1.47	2.32	2.49
Ant. 4 Max Gain (dBi)	1.81	2.7	1.47	3.17	3.83
Ant. 1 Polarization/ Θ ($^\circ$)/ Φ ($^\circ$)	Theta/60/180	Theta/90/217.5	Theta/90/135	Theta/97.5/217.5	Theta/97.5/217.5
Ant. 2 Polarization/ Θ ($^\circ$)/ Φ ($^\circ$)	Theta/90/82.5	Theta/90/75	Theta/97.5/225	Theta/75/60	Theta/75/90
Ant. 3 Polarization/ Θ ($^\circ$)/ Φ ($^\circ$)	Theta/60/112.5	Theta/90/105	Theta/97.5/37.5	Theta/75/105	Theta/67.5/37.5
Ant. 4 Polarization/ Θ ($^\circ$)/ Φ ($^\circ$)	Theta/97.5/37.5	Theta/90/45	Theta/97.5/352.5	Theta/97.5/330	Theta/97.5/322.5
Max Gain (dBi)	2.01	2.7	2.74	3.53	3.93
DG [1SS] (dBi)	6.35	6.38	5.9	6.27	7.14
DG [2SS] (dBi)	3.35	3.38	2.9	3.53	4.14
DG [4SS] (dBi)	2.01	2.7	2.74	3.53	3.93

Note :

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

9. Test Setup



Note:

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

**10. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1543	1GHz~18GHz	May. 31, 2022	May. 30, 2023
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419201	100kHz~8.5GHz	Feb. 21, 2022	Feb. 20, 2023
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.



11. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz and 5GHz U-NII 1~U-NII 3.....Page 13

Appendix B – Antenna Pattern of 2.4GHz and 5GHz U-NII 1~U-NII 3..... Page 27

Appendix C – Test Photos..... Page 34



Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.01	2.66	2.74	3.53	3.93
Ant. 2 Max Gain (dBi)	1.25	1.8	1.59	2.37	2.6
Ant. 3 Max Gain (dBi)	1.61	2.05	1.47	2.32	2.49
Ant. 4 Max Gain (dBi)	1.81	2.7	1.47	3.17	3.83
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/180	Theta/90/217.5	Theta/90/135	Theta/97.5/217.5	Theta/97.5/217.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/90/82.5	Theta/90/75	Theta/97.5/225	Theta/75/60	Theta/75/90
Ant. 3 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/112.5	Theta/90/105	Theta/97.5/37.5	Theta/75/105	Theta/67.5/37.5
Ant. 4 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/97.5/37.5	Theta/90/45	Theta/97.5/352.5	Theta/97.5/330	Theta/97.5/322.5
Max Gain (dBi)	2.01	2.7	2.74	3.53	3.93
DG [1SS] (dBi)	6.35	6.38	5.9	6.27	7.14
DG [2SS] (dBi)	3.35	3.38	2.9	3.53	4.14
DG [4SS] (dBi)	2.01	2.7	2.74	3.53	3.93



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

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°)	-2.44/-2.47	-2.86/-3.34	-3.53/-3.92	-4.68/-5.13	-5.51/-5.95	-6.24/-6.83	-6.67/-6.54	-6.16/-4.94	-3.98/-3.66	-3.22/-2.01	-2.96/-2.92	-2.74/-2.41	-2.28/-2.69	-3.4/-4.05	-4.33/-4.87	-5.77/-6.1	-6.55/-6.73	-6.67/-7	-6.93/-6.79	-6.47/-5.86	-4.93/-2.46	-3.57/-2.99	-2.73/-2.58	-2.43/-2.61
Θ(7.5°)	-3/-3.4	-3.92/-4.69	-5.27/-5.86	-6.34/-6.9	-7.09/-6.74	-6.95/-7.4	-7.58/-7.45	-7.08/-6.55	-6.09/-5.55	-5.18/-4.56	-4.27/-3.98	-3.35/-2.66	-2.45/-2.66	-2.89/-3.2	-3.31/-3.81	-4.51/-4.92	-5.52/-6.03	-6.61/-6.85	-7.22/-7.19	-6.68/-5.45	-4.43/-3.77	-3.51/-2.87	-2.81/-3.03	-2.72/-2.72
Θ(15°)	-5.18/-5.47	-6.39/-7.14	-7.9/-8.03	-8.72/-9.1	-8.72/-7.89	-7.82/-8.42	-8.48/-8.12	-8.53/-8.59	-7.79/-7.51	-7.48/-6.5	-5.64/-5.22	-4.88/-4.39	-3.71/-3.7	-3.13/-3.45	-3.9/-4.25	-4.72/-5.07	-5.76/-6.54	-7.55/-7.15	-7.42/-7.72	-7.29/-5.9	-4.91/-4.58	-4.27/-4.29	-4.1/-4.18	-4.55/-5.16
Θ(22.5°)	-7.59/-8.17	-8.24/-8.88	-8.41/-8.46	-8.86/-9.52	-10.1/-9.25	-9.28/-9.38	-9.62/-9.54	-9.73/-10.21	-9.65/-9.09	-8.29/-6.92	-5.74/-5.05	-5.02/-5.59	-5.32/-4.52	-4.35/-4.76	-5.24/-5.57	-5.71/-6.21	-6.65/-7.29	-7.48/-7.51	-8.1/-8.03	-7.69/-6.51	-5.51/-5.23	-5.34/-5.74	-5.14/-4.77	-5.41/-6.7
Θ(30°)	-8.45/-8.64	-8.4/-8.33	-8.48/-8.95	-9.01/-8.82	-8.89/-9.05	-8.93/-9.21	-8.57/-8.91	-9.51/-10.23	-10.07/-9.7	-8.24/-7	-5.82/-5.21	-5.2/-5.81	-6.01/-5.71	-5.85/-6.54	-7.22/-7.63	-7.73/-7.64	-6.99/-7.1	-7.26/-7.71	-8.26/-8.18	-8.15/-7.24	-7.12/-6.46	-6.3/-6.74	-6.27/-5.59	-5.65/-6.78
Θ(37.5°)	-7.17/-6.88	-6.72/-7.47	-8.57/-9.63	-10.39/-9.76	-8.1/-7.19	-7.13/-7.55	-8.07/-7.26	-7.18/-7.8	-8.41/-8.91	-7.7/-6.85	-6.26/-6.09	-6.04/-5.61	-5.28/-5.79	-7.07/-7.64	-8.17/-9.23	-9.37/-8.95	-8.42/-7.82	-7.47/-7.61	-8.8/-7.93	-7.03/-6.59	-7.13/-7.93	-7.84/-8.81	-7.95/-6.48	-5.55/-6.2
Θ(45°)	-5.43/-5.51	-6.1/-7.19	-8.48/-8.68	-9.41/-10.32	-8.9/-7.07	-5.84/-6.61	-6.88/-5.57	-5.08/-5.84	-7.09/-8.41	-8.74/-7.88	-7.45/-6.93	-6.53/-5.93	-5.46/-5.61	-7.48/-8.11	-9.07/-8.9	-9.07/-8.79	-9.48/-8.3	-8.13/-8.09	-8.08/-7.5	-6.43/-6.61	-7.23/-6.75	-9.43/-9.43	-8.95/-8.14	-6.5/-5.65
Θ(52.5°)	-5.64/-5.4	-5.78/-6.33	-7.37/-8.29	-8.61/-8.98	-8.83/-7.72	-6.19/-6.66	-7.48/-5.68	-4.85/-5.83	-7.75/-9.39	-9.62/-9.06	-7.92/-7.38	-7.31/-6.97	-7.07/-8.02	-7.99/-8.68	-9.38/-10.5	-10.69/-9.25	-8.04/-7.77	-7.24/-7.9	-8.43/-8.59	-8.41/-7.1	-7.5/-6.68	-9/-8.24	-7.41/-7.43	-7.39/-6.71
Θ(60°)	-8.08/-7.05	-6.62/-6.13	-6.32/-7.15	-9.02/-9.48	-4.9/-7.69	-5.44/-6.13	-7.75/-6.87	-6.31/-7.63	-10.36/-10.24	-10.37/-9.88	-8.68/-8	-8.05/-8.33	-8.64/-8.01	-7.01/-6.98	-10.77/-10.02	-12.79/-10.95	-8.67/-8.55	-8.14/-7.96	-8.62/-8.72	-8.29/-7.38	-7.86/-8.74	-8.06/-6.39	-5.11/-5.14	-6.88/-8.4
Θ(67.5°)	-7.92/-8.43	-7.88/-6.66	-5.46/-6.74	-8.23/-8.97	-9.48/-6.48	-4.17/-5.11	-7.87/-7.57	-6.79/-8.2	-9.73/-9.08	-9.99/-10.23	-9.07/-8.15	-8.47/-8.41	-8.69/-7.07	-5.94/-6.04	-7.04/-8.05	-9.97/-9.43	-8.92/-8.73	-9.17/-8.75	-8.38/-8.04	-7.05/-7.12	-8.9/-10.23	-8.55/-6.09	-4.37/-8.5	-4.87/-6.99
Θ(75°)	-7.17/-7.42	-7.48/-6.14	-4.81/-5.79	-8.47/-9.82	-6.89/-5.43	-4.31/-5.88	-7.5/-6.43	-6.16/-7.61	-9.05/-10.1	-10.76/-9.54	-8.19/-8.14	-8.5/-7.97	-7.78/-7.04	-6.26/-6.24	-7.4/-7.71	-8.59/-8.34	-8.95/-6.68	-7.53/-6.75	-8.02/-7.99	-6.85/-7.29	-9.08/-9.71	-8.97/-6.93	-5.33/-5.26	-5.5/-6.72
Θ(82.5°)	-9.47/-8.23	-7.99/-6.37	-4.75/-5.73	-7.17/-8.26	-6.64/-4.95	-5.16/-6.55	-5.25/-3.86	-4.41/-7.38	-6.62/-10.8	-9.31/-7.58	-6.95/-8.68	-8.45/-7.84	-7.52/-7.71	-7.05/-6.32	-7.82/-8.42	-7.31/-7.69	-9.74/-7.63	-5.75/-5.21	-6.89/-7.27	-6.89/-8.15	-8.29/-8.34	-7.98/-8.08	-8.93/-6.78	
Θ(90°)	-11.47/-9.87	-8.69/-6.95	-4.52/-4.96	-6.22/-7.59	-6.98/-5.39	-4.75/-5.01	-4.94/-4.77	-5.36/-6.56	-8.63/-8.88	-8.24/-7.17	-7.28/-9.1	-8.03/-6.63	-8.08/-8.96	-7.61/-7.48	-8.69/-8.36	-6.07/-5.17	-6.52/-6.88	-5.73/-4.98	-5.03/-4.65	-5.73/-10.59	-10.17/-7.66	-6.19/-6.99	-8.42/-9.93	-10.2/-10.61
Θ(97.5°)	-10.77/-9.92	-8.51/-7.09	-5.75/-6.1	-7.12/-7.39	-7.22/-5.5	-4.17/-5	-6.05/-5.23	-4.49/-5.54	-7.2/-8.24	-8.21/-7.38	-7.19/-7.97	-7.77/-7.5	-9.61/-9.98	-9.87/-10.16	-10.31/-8.59	-6.12/-6.05	-7.14/-7.25	-5.92/-4.56	-4.52/-5.3	-6.81/-10.79	-8.89/-7.09	-5.24/-5.53	-7.49/-9.1	-10.54/-10.31
Θ(105°)	-9.39/-8.94	-7.87/-9.69	-7.67/-9.61	-9.76/-8.72	-7.77/-6.31	-5.63/-6.01	-5.23/-4.55	-5.17/-6.7	-7.72/-7.35	-7.27/-7.33	-7.91/-7.69	-7.51/-7.59	-8.81/-10.76	-9.61/-8.43	-9.27/-8.93	-8.27/-9.08	-9.31/-7.14	-4.87/-3.88	-5.24/-6.09	-6.9/-9.25	-8.81/-7.24	-6.49/-6.57	-7.18/-7.79	-9.11/-9.58
Θ(112.5°)	-8.23/-6.34	-5.13/-5.21	-6.65/-9.59	-11.76/-9.92	-8.8/-6.34	-4.82/-4.74	-5.49/-5.88	-6.39/-6.35	-5.69/-6.36	-7.65/-8.92	-9.43/-7.34	-7.68/-6.57	-9.95/-11.64	-11.29/-9.38	-8.82/-8.49	-8.3/-8.74	-8.26/-8.05	-7.27/-5.13	-4.74/-4.38	-6.13/-8.3	-10.18/-9.15	-8.06/-9.71	-7.23/-7.04	-7.31/-8.24
Θ(120°)	-7.79/-7.78	-6.2/-5.82	-8.16/-11.17	-10.03/-7.96	-7.22/-4.85	-3.57/-5.13	-8.44/-7.16	-5.7/-5.25	-5.29/-7.1	-9.21/-10.92	-7.44/-5.66	-6.11/-7.81	-8.03/-9.65	-10.42/-9.01	-7.81/-8.3	-8.76/-9.91	-9.38/-7.45	-4.97/-3.9	-3.59/-3.5	-7.47/-6.93	-7.46/-7.47	-6.87/-7.12	-8.67/-7.86	-7.37/-7.74
Θ(127.5°)	-9.73/-7.38	-7.69/-8.03	-8.83/-8.28	-6.77/-6.41	-6.76/-5.49	-5.17/-6.94	-5.88/-6.62	-5.32/-6.62	-8.36/-9.92	-11.06/-10.68	-7.94/-6.4	-6.76/-7.1	-8.97/-6.88	-7.43/-10.23	-10.77/-12.49	-9.08/-9.07	-3.26/-2.96	-3.55/-4.22	-5.6/-6.6	-7.05/-6.94	-5.88/-6.19	-5.12/-8.16	-7.95/-8.3	
Θ(135°)	-7.02/-7.29	-8.27/-8.86	-8.42/-6.91	-6.73/-7.32	-7.39/-6.27	-6.25/-5.75	-3.95/-4.17	-6.02/-7.74	-7.94/-7.01	-6.14/-6.32	-7.71/-9.45	-9.17/-8.8	-7.61/-9.64	-9.34/-8.18	-9.3/-11.16	-11.22/-9.93	-6.01/-4.34	-3.26/-3.31	-4.29/-5.02	-4.87/-5.54	-7.49/-9.33	-7.85/-7.73	-7.84/-7.49	-7.87/-9.98
Θ(142.5°)	-7.11/-6.68	-7.87/-9.25	-8.6/-7.15	-6.03/-5.44	-5.35/-5.57	-8.62/-6.15	-5.98/-6.62	-6.99/-6.34	-5.96/-4.77	-4.88/-5.78	-7.66/-9.54	-9.45/-8.38	-9.6/-10.94	-12.47/-10.54	-8.38/-8.95	-7.31/-9.43	-7.31/-7.87	-4.26/-4.09	-4.3/-4.26	-4.4/-5.54	-6.84/-8.53	-9.38/-9.1	-9.09/-8.99	-9.24/-8.86
Θ(150°)	-7.05/-6.1	-6.33/-6.36	-5.9/-5.15	-6.02/-6.39	-6.93/-5.77	-4.71/-4.95	-5.55/-4.65	-5.15/-6.62	-5.45/-5.22	-5.89/-7.2	-8.38/-8.68	-7.79/-6.99	-7.97/-6.55	-6.22/-6.78	-7.27/-5.42	-3.72/-3.63	-4.54/-5.32	-7.15/-8.03	-8.9/-9.25	-10.04/-10.36	-9.14/-8.37			
Θ(157.5°)	-5.99/-5.45	-6.09/-6.52	-6.3/-6.44	-7.71/-7.48	-6.35/-5	-4.2/-3.96	-4.52/-6.18	-5.63/-5.98	-6.25/-5.88	-5.64/-5.73	-5.73/-5.51	-4.71/-5.39	-6.9/-9.96	-11.74/-11.21	-9.29/-5.85	-4.05/-3.09	-3.09/-3.38	-3.79/-3.67	-3.68/-4.04	-4.24/-5.18	-6.17/-7.48	-9.03/-9.52	-9.8/-9.93	-7.88/-7.23
Θ(165°)	-5.89/-6.05	-6.43/-6.22	-6.42/-6.88	-5.63/-4.54	-4.39/-4.9	-5.58/-5.56	-5.79/-6.49	-7.18/-8.08	-6.55/-8.05	-7.1/-6.41	-5.24/-4.38	-3.79/-4.58	-6.51/-8.94	-9.6/-8.48	-6.96/-5.89	-5.62/-5.03	-4.56/-4.5	-4.17/-4.25	-4.49/-4.67	-5.21/-5.76	-7.02/-8.31	-9.36/-10.7	-8.89/-9.46	-7.39/-6.12
Θ(172.5°)	-7.64/-7.25	-6.86/-6.09	-5.44/-5.54	-3.83/-3.73	-4.48/-5.76	-7.06/-7.87	-8.55/-5.88	-8.96/-9.88	-10.76/-10.87	-10.53/-9.2	-7.92/-7.21	-6.79/-7.34	-7.93/-8	-7.81/-7.09	-7.23/-7.8	-6.28/-7.27	-6.55/-6.79	-5.32/-5.28	-5.32/-5.86	-6.48/-7.14	-7.59/-8.4	-9.02/-8.99	-8.9/-8.05	-7.43/-7.31
Θ(180°)	-10.08/-9.64	-7.74/-6.29	-5.59/-5.07	-4.63/-4.63	-5.21/-6.33	-7.26/-7.29	-6.91/-6.87	-7.22/-7.85	-9.43/-10.87	-12.54/-12.38	-12.11/-11.12	-10.08/-9.89	-10.5/-10.4	-9.68/-9.57	-9.53/-9.26	-9.09/-8.42	-7.43/-6.99	-6.51/-6.7	-6.76/-7.11	-7.65/-8.13	-8.53/-8.16	-7.8/-7.85	-8.47/-9.19	-9.5/-10.23
Freq(Hz)	2.45GPol.	ThetaH	-	-	+	-	-	-	-	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-7.4/-8.11	-7.94/-6.49	-5.46/-5.16	-5.08/-5.25	-5.21/-4.67	-4/-3.77	-3.72/-4.1	-4.54/-5.36	-5.81/-6.09	-6.67/-8.79	-7.72/-7.37	-7.8/-8.84	-8.34/-6.78	-5.9/-6.05	-6.08/-5.71	-4.88/-4.43	-4.34/-4.2	-3.94/-3.59	-3.66/-4.11	-4.87/-5.16	-5.34/-5.3	-5.12/-5.76	-6.53/-7.09	-6.65/-6.67
Θ(7.5°)	-7.01/-6.25	-5.27/-4.16	-3.71/-3.7	-3.63/-3.26	-3.13/-2.98	-2.67/-2.51	-2.54/-2.9	-3.3/-3.58	-3.9/-4.19	-4.91/-5.59	-5.95/-5.55	-6.4/-8.58	-10.59/-9.53	-8.21/-8.1	-8.93/-8.51	-7.07/-6.26	-5.66/-5.57	-5.47/-4.96	-5.18/-5.69	-6.56/-6.9	-7.26/-7.27	-7.39/-7.91	-9.71/-10.2	-9.15/-7.58
Θ(15°)	-7.72/-7.28	-5.78/-4.7	-4.26/-4.08	-3.65/-3.01	-2.35/-2.27	-2.16/-2.21	-2.21/-2.57	-3.12/-3.54	-3.74/-4.22	-4.75/-5.19	-6.36/-5.53	-6.4/-7.93	-8.46/-8.34	-7.2/-6.96	-7.78/-8.3	-6.65/-6.93	-6.48/-6.31	-6.21/-6.53	-6.27/-5.69	-6.38/-6.98	-7.35/-7.34	-7.77/-8.55	-9.85/-10.11	-8.83/-7.81
Θ(22.5°)	-3.57/-4.53	-5.27/-5.46	-5.47/-5.85	-6.61/-5.86	-4.89/-4.25	-3.93/-3.53	-3.68/-4.69	-5.53/-6.2	-5.91/-6.18	-6.12/-5.1	-4.25/-3.74	-4.02/-4.24	-4.36/-4.08	-3.68/-3.76	-4.71/-4.88	-4.83/-4.89	-5.49/-5.58	-5.59/-4.68	-4.3/-4.81	-5.3/-5.02	-5.16/-5.07	-5.23/-5.39	-5.28/-4.94	-4.04/-3.27
Θ(30°)	-2.69/-2.96	-4.34/-5.93	-6.88/-6.69	-7.11/-8.85	-9.92/-9.05	-7.52/-5.5	-4.77/-5.82	-8.43/-8.62	-8.05/-8.28	-7.84/-6.8	-6.26/-4.81	-3.4/-2.46	-2.32/-2.63	-2.47/-2.02	-2.3/-2.81	-3.21/-3.27	-3.43/-3.83	-3.79/-3.12	-2.43/-3.17	-4.01/-3.18	-3.43/-2.81	-2.41/-2.03	-2/-2.24	-2.56/-2.54
Θ(37.5°)	-1.81/-1.01	-2.43/-2.68	-2.98/-2.59	-1.88/-1.97	-2.9/-3.8	-3.39/-1.64	-0.77/-1.94	-3.72/-2.72	-2.82/-3.53	-3.86/-3.77	-3.66/-3.48	-2.75/-1.87	-1.43/-1.62	-1.39/-0.98	-0.86/-1.28	-1.14/-1.12	-1.51/-2.21	-2.71/-1.97	-1.23/-2.36	-1.4/-0.69	-0.53/-0.24	-0.61/-1.08	-1.44/-1.62	
Θ(45°)	-0.380/0.43	1.19/1.61	1.87/2.01	1.94/1.74	1.32/1.33	1.78/2.52	3.09/2.49	1.76/1.94	1.49/0.66	0.99/1.19	1.12/1.04	0.91/0.47	-0.18/-1.05	-1.46/-1.04	-0.38/-0.14	0.24/								



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ(22.5°)	-8.52/-7.88	-7.64/-7.66	-6.72/-6.23	-5.92/-7.05	-8.5/-9.52	-8.97/-9.73	-11.12/-11.62	-11.87/-11.15	-9.64/-6.88	-6.03/-5.83	-6.35/-7.13	-7.46/-7.72	-8.19/-8.52	-8.84/-8.71	-8.06/-8.83	-8.37/-7.62	-8.33/-10.12	-10.71/-9.64	-8.22/-8.56	-9.06/-7.99	-5.29/-4.89	-6.72/-7.99	-8.25/-6.28	-6.04/-6.74
Θ(30°)	-11.08/-10.28	-9.15/-7.44	-5.48/-5.13	-5.03/-5.39	-7.53/-8.61	-7.65/-8.72	-10.34/-8.76	-8.26/-8.12	-6.77/-4.93	-5.55/-6.8	-6.92/-8.66	-9.59/-10.08	-10.91/-12.18	-10.44/-10.1	-8.27/-8.77	-8.71/-8.47	-7.14/-7.47	-9.18/-8.15	-7.58/-9.36	-9.16/-6.69	-5.87/-6.37	-8.72/-8.19	-8.94/-7.53	-8.65/-10.25
Θ(142.5°)	-12.18/-10.51	-10/-8.59	-7.74/-6.53	-6.66/-5.64	-5.62/-6.24	-5.16/-6.57	-9.35/-6.25	-5.96/-6.1	-4.83/-5.01	-6.94/-7.14	-8.36/-8.97	-9.17/-10.17	-10.93/-8.92	-6.91/-7.68	-7.76/-10.07	-5.39/-10.3	-7.69/-5.94	-6.71/-6.98	-5.45/-7.18	-4.87/-4.29	-6.56/-7.85	-9.61/-9.44	-9.03/-8.03	-9.04/-11.31
Θ(45°)	-10.52/-10.08	-10.18/-9.57	-9.36/-7.88	-7.71/-7.47	-4.71/-7.04	-8.53/-8.19	-9.83/-6.39	-6.13/-5.74	-4.76/-6.4	-6.74/-8.72	-10.24/-9.48	-9.53/-8.3	-8.34/-8.04	-6.67/-6.89	-9.69/-10.4	-11.59/-9.12	-10.92/-7.97	-7.34/-7.12	-7/-7.73	-6.95/-8.08	-8.2/-8.35	-8.31/-7.38	-9.44/-8.17	-8.62/-8.77
Θ(52.5°)	-11.63/-12.78	-10.36/-10.05	-9.4/-6.67	-7.06/-8.09	-6.84/-8.1	-8.59/-9.18	-12.35/-9.38	-8.25/-9.25	-8.72/-8.51	-8.38/-11.2	-11.17/-11.01	-10.2/-14.3	-8.85/-8.57	-6.68/-8.1	-10.03/-8.07	-7.3/-6.39	-6.63/-7.11	-8.14/-7.7	-6.18/-8.69	-7.09/-8.54	-6.66/-6.24	-6.25/-7.54	-9.16/-8.77	-8.67/-11.37
Θ(60°)	-9.92/-10.8	-10.11/-10.92	-8.14/-7.69	-8.74/-9.94	-9.84/-8.68	-8.57/-8.94	-9.93/-9.33	-9.59/-10.4	-8.35/-10.38	-8.95/-8.61	-10.17/-11.93	-10.08/-10.31	-10.16/-9.28	-10.73/-11.35	-9.58/-7.6	-7.77/-10.62	-9.96/-8.32	-9.79/-8.41	-10.1/-12.39	-10.13/-7.99	-8.75/-7.2	-9.12/-8.41	-7.04/-10.3	
Θ(67.5°)	-9.68/-9.23	-11.17/-11.54	-10.72/-10.26	-8.94/-8.18	-9.94/-8.07	-9.07/-9.47	-10.47/-10.33	-8.76/-8.28	-9/-9.63	-7.66/-7.36	-9.88/-10.12	-8.07/-8.21	-9.08/-9.27	-7.42/-9.05	-12.72/-9.75	-8.77/-5.82	-7.95/-6.64	-11.87/-11.3	-11.9/-7.99	-10.47/-9.4	-10.44/-8.36	-8.98/-8.3	-8/-7.2	-9.43/-8.95
Θ(75°)	-11.32/-10.64	-11.81/-11.15	-11.87/-10.81	-11.07/-11.22	-8.49/-8.67	-9/-10.2	-11.44/-10.97	-8.72/-8.79	-7.58/-9.42	-10.24/-8.83	-9.78/-9.83	-8.84/-9.91	-10.55/-10.2	-10.55/-8.21	-7.35/-8.84	-7.35/-5.12	-8.26/-7.13	-10.71/-10.8	-11.13/-9.72	-9.38/-8.76	-8.03/-7.26	-6.85/-8.8	-8.4/-11.22	-10.77/-10.54
Θ(82.5°)	-10.31/-10.32	-9.31/-9.97	-9.63/-8.01	-8.97/-9.18	-11.05/-11.7	-10.97/-10.7	-12.51/-10.28	-8.58/-8.93	-10.79/-10.79	-11.59/-11.92	-12.09/-9.24	-10.62/-9.84	-8.85/-7.34	-10.52/-9.55	-10.29/-10.52	-7.64/-5.98	-9.46/-8.51	-10.7/-9.16	-9.29/-10.94	-10.69/-8.17	-8.15/-7.58	-8.21/-10.42	-11.11/-11.97	-8.45/-7.92
Θ(90°)	-9.07/-9.06	-9.13/-10.86	-11.23/-12.14	-9.56/-9.14	-7.08/-7.15	-8.82/-10.42	-10.13/-11.27	-9/-11	-8.1/-10.87	-12.19/-10.17	-11.59/-9.88	-9.77/-11.79	-9.97/-8.2	-9.79/-11.67	-8.44/-6.7	-6.42/-6.69	-7.26/-9.18	-11.31/-12.25	-10.85/-8.89	-11.93/-10.66	-8.81/-8.2	-6.6/-9.74	-6.6/-7.17	-7.06/-6.4
Θ(97.5°)	-8.52/-7.88	-8.47/-8.81	-12.06/-11.04	-9.48/-9.27	-8.7/-9.1	-11.06/-10.1	-11.27/-8.73	-9.92/-7.83	-9.16/-9.6	-9.51/-9.74	-9.63/-10.99	-8.67/-8.47	-9.06/-7.46	-7.02/-7.56	-7.33/-8.76	-10.32/-8.05	-11.4/-11.89	-12.25/-9.54	-6.46/-8.69	-9.01/-9.15	-8.51/-8.35	-6.73/-8.95	-7.67/-8.47	-7.72/-7.12
Θ(105°)	-8.06/-9.72	-9.59/-11.54	-10.68/-11.03	-9.56/-11.01	-10.18/-11.13	-11.27/-8.51	-8.93/-11.2	-10.17/-8.35	-9.18/-9.28	-10.48/-11.04	-9.15/-9.1	-8.99/-9.46	-8.93/-7.63	-9.82/-11.07	-9.03/-8.68	-10.34/-7.47	-8.62/-10.86	-9.81/-7.65	-9.43/-9.23	-12.96/-12.13	-10.31/-10.53	-10.39/-10.74	-8.48/-7.97	-5.12/-6.39
Θ(112.5°)	-9.31/-9.62	-8.85/-9.51	-10/-10.15	-8.99/-8.3	-8.52/-7.96	-11.23/-10.3	-11.81/-8.95	-7.78/-6.66	-6.41/-7.15	-6.99/-8.2	-9.36/-10	-9.11/-10.51	-9.84/-9.49	-12.33/-8.69	-8.53/-10.02	-8.44/-7.37	-11.6/-9.6	-9.14/-9.27	-10.31/-10.3	-11.97/-8.04	-7.17/-6.78	-6.61/-7.23	-8.57/-10.12	-8.56/-7.45
Θ(120°)	-9.18/-9.65	-8.44/-8.76	-7.65/-7.87	-8.28/-7.37	-9.34/-9.72	-10.14/-10.43	-10.14/-10.43	-7.93/-7.77	-7.99/-8.48	-7.44/-6.1	-5.56/-6.49	-7.48/-10.12	-10.14/-11.38	-10.28/-8.44	-9.34/-9.54	-9.55/-9.83	-10.34/-10.72	-10.03/-11.23	-11.01/-9.41	-8.86/-6.24	-8.18/-9.81	-9.13/-7.9	-9.08/-11.04	-9.78/-9
Θ(127.5°)	-7.46/-8.33	-8.25/-8.49	-7.17/-7.87	-7.02/-4.97	-8.54/-9.14	-9.04/-12.29	-8.47/-9.34	-8.68/-8.63	-5.71/-5.05	-6.63/-4.42	-4.86/-9	-9.18/-9.35	-8.81/-9.35	-10.73/-10.91	-10.05/-12.81	-8.73/-11.17	-10.56/-8.83	-6.95/-11.36	-11.79/-8.42	-9.22/-8.96	-10.3/-12.12	-9.93/-8.67	-7.67/-6.67	-5.12/-6.39
Θ(135°)	-9.44/-9.97	-11.7/-9.48	-9.72/-7.25	-8.39/-7.38	-8.29/-9.45	-6.03/-6.52	-7.28/-7.72	-9.44/-6.77	-4.25/-6.46	-5.36/-5.73	-9.93/-10.6	-10.8/-9.64	-8.82/-7.17	-6.85/-7.3	-7.78/-6.55	-8.68/-10.26	-11.55/-8.55	-8.64/-9.69	-8.6/-6.88	-7.18/-9.53	-9.97/-10.73	-9.68/-6.19	-7.94/-8.27	-8.07/-10.7
Θ(142.5°)	-7.96/-7.61	-7.93/-8.72	-7.74/-6.88	-7.26/-5.3	-3.13/-4.1	-5.83/-8.24	-8.77/-7.59	-7.93/-7.77	-7.98/-8.32	-7.54/-6.18	-7.34/-9	-9.23/-9.06	-7.87/-9.74	-9.56/-8.73	-8.06/-5.02	-4.67/-6.81	-10.06/-8.47	-10.07/-8.93	-8.23/-7	-7.12/-8.4	-6.91/-6.34	-7.7/-6	-8.35/-7.24	-8.36/-7.79
Θ(150°)	-11.22/-11.47	-8.4/-5.11	-3.57/-1.71	-0.71/-1.93	-3.95/-3.26	-4.29/-6.83	-7.17/-7.64	-7.95/-7.17	-6.63/-6.26	-6.81/-8.3	-7.99/-9.91	-9.81/-9.46	-9.57/-11.05	-12.49/-10.33	-7.44/-5.2	-8.61/-6.61	-9.58/-7.77	-6.18/-7.66	-10.25/-8.16	-5.3/-4.06	-7.21/-8.06	-6.78/-5.52	-6.05/-6.93	-8.59/-10.01
Θ(157.5°)	-9.16/-7.66	-5.66/-3.87	-4.46/-4.91	-6.17/-5.45	-4.59/-5.44	-8.1/-6.51	-4.68/-5.75	-8.07/-7.79	-6.24/-6.44	-5.97/-5.94	-6.31/-6.68	-7.63/-8.48	-9.18/-8.46	-7.66/-6.43	-4.8/-4.05	-6.48/-7.57	-6.03/-6.62	-7.98/-9.14	-8.56/-8.56	-7.79/-6.37	-7.41/-6.61	-9.25/-8.38	-7.7/-7.64	-9.7/-8.68
Θ(165°)	-8.44/-7.36	-8.71/-8.7	-8.36/-9.12	-8.51/-6.56	-6.09/-6.03	-7.04/-6.84	-5.69/-6.28	-6.88/-6.24	-6.25/-8.07	-9.2/-9.64	-9.69/-10.1	-10.08/-9.62	-9.71/-8.6	-8.56/-7.38	-9.35/-9.51	-6.47/-6.1	-6.42/-8.03	-10.23/-9.46	-7.89/-8.75	-9.16/-9.37	-7.44/-6.19	-5.6/-5.59	-6.22/-6.83	-7.44/-8.03
Θ(172.5°)	-8.1/-7.94	-7.81/-7.09	-7.25/-7.72	-6.48/-7.22	-6.83/-7.02	-7.16/-7.91	-8.39/-7.98	-8.84/-7.94	-8.43/-9.7	-10.06/-10.02	-10.44/-11.2	-11.11/-11.72	-9.94/-8.51	-7.86/-7.47	-6.49/-5.99	-6.42/-6.52	-7.94/-8.23	-7.47/-6.72	-8.86/-6.51	-7.05/-7.64	-7.47/-7.93	-7.66/-7.2	-6.81/-7.76	-7.72/-7.81
Θ(180°)	-7.24/-6.69	-6.69/-6.15	-5.6/-5.33	-5.36/-5.64	-6.38/-7.97	-7.78/-7.82	-7.41/-6.86	-7.47/-6.72	-6.07/-6.47	-6.19/-6.07	-6.93/-7.27	-8.55/-7.96	-7.95/-7.56	-7.24/-6.88	-6.61/-6.5	-6.01/-6.82	-7.09/-7.36	-7.01/-7.85	-8.96/-9.48	-8.84/-7.91	-7.35/-7.28	-7.57/-7.71	-8.24/-8.36	-7.76/-7.16
Freq(Hz)	5.30Pol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-10.17/-9	-7.77/-7.71	-8.05/-7.31	-7.12/-6.68	-5.39/-4.49	-4.31/-4.47	-4/-4.31	-4.55/-4.49	-4.57/-4.6	-5.14/-5.6	-6.46/-6.65	-6.3/-7.45	-7.74/-8.72	-9.23/-9.19	-9.66/-8.98	-8.64/-7.92	-6.74/-5.94	-5.53/-5.87	-6/-6.83	-5.68/-5.89	-6.25/-6.97	-8.61/-8.51	-9.79/-9	-11.14/-10.11
Θ(7.5°)	-7.65/-10.21	-10.53/-11.44	-11.49/-10.56	-12.13/-10.91	-8.56/-7.97	-8.2/-8.59	-8.91/-8.48	-8.37/-8.19	-10.09/-10.65	-12.3/-11.96	-12.03/-12.83	-11.38/-10.95	-10.88/-10.04	-8.8/-8.12	-6.95/-9.37	-7.1/-5.84	-5.2/-5.13	-4.16/-3.88	-3.96/-3.77	-3.37/-3.97	-3.17/-3.03	-3.73/-4.24	-4.14/-4.65	-4.44/-4.08
Θ(15°)	-5.97/-5.33	-4.94/-6.65	-3.17/-7.28	-1.79/-1.9	-1.97/-2.71	-3.17/-3.62	-3.82/-3.32	-2.47/-1.5	-1.49/-1.55	-2.12/-2.97	-4.82/-4.75	-9.21/-8.7	-7.49/-6.27	-7.22/-6.59	-5.82/-6.12	-4.55/-3.03	-2.43/-2.83	-4.44/-5.73	-5.03/-4.72	-4.28/-4.67	-4.75/-4.68	-4.38/-4.71		
Θ(22.5°)	-0.29/-0.02	0.34/-0.14	0.29/-0.29	-0.98/-0.24	-0.68/-1.91	-2.58/-2.71	-2.1/-1.75	-0.98/-0.45	-0.27/-0.21	0.27/-0.44	0.35/-0.75	-0.15/-1.21	-2.03/-2.82	-3.02/-3.24	-2.47/-1.87	-2.42/-1.54	-0.36/-1.41	-2.85/-1.81	-0.48/-1.06	-1.49/-0.81	-0.95/-1.94	-3.09/-2.95	-2.11/-1.4	-1.19/-0.56
Θ(30°)	1.71/-16	1.130/-49	-0.21/-0.25	-1.53/-1.4	-2.29/-2.58	-1.85/-2.73	-2.3/-2.9	-3.34/-4.76	-3.08/-1.34	-1.83/-2.67	-1.82/-0.16	1/1.61	1.551/-37	0.46/-0.37	-1.42/-0.85	-0.280.84	0.870/-77	-0.26/-1.25	0.350/-0.3	0.410/-46	0.020/-97	0.56/-0.79	-1.120/-4	1.171/-57
Θ(37.5°)	2.31/-14	0.63/-0.03	-1.08/-2.02	-2.82/-0.07	0.69/-0.55	1.830/-77	0.170/-94	1.760/-47	0.76/-9.04	-2.03/-0.54	-0.220/-32	2.832/-87	2.962/-16	1.210/-64	-0.030/-6	1.891/-48	2.061/-55	0.471/-81	3.552/-58	2.1/-57	1.691/-71	2.032/-71	2.552/-31	
Θ(45°)	-2.21/-1.68	-1.22/-0.54	-1.31/-0.52	0.510/-76	0.80/-96	2.22/-86	3.32/-44	2.52/-1.62	2.071/-09	-0.54/-0.7	-0.150/-79	0.71/-0.26	0.880/-66	2.412/-58	2.681/-22	1.381/-31	2.652/-71	2.811/-52	1.171/-73	1.251/-93	1.590/-64	1.462/-01	2.922/-33	0.57/-0.89
Θ(52.5°)	-0.68/-0.38	1.91/-08	1.022/-49	2.11/-75	1.831/-44	-1.430/-0.1	-0.95/-1.08	-0.181/-7	2.362/-91	2.531/-83	0.550/-47	0.71/-0.1	-0.57/-2.23	-2.42/-0.45	0.91/-71	2.020/-19	0.221/-51	2.70/-51	-0.41/-1.18	1.51/-58	1.21/-62	1.161/-41	1.590/-7	-1.771/-71
Θ(60°)	3.45/-0.1	5.15/-38	4.599/-36	3.38/-35	3.542/-93	2.983/-16	2.842/-34	1.652/-13	2.542/-63	3.554/-88	4.414/-94	3.12/-65	2.272/-22	3.53/-83	3.12/-35	0.962/-23	1.10/-62	0.321/-46	2.152/-37	1.742/-51	2.021/-75	1.931/-63	2.217/-37	
Θ(67.5°)	4.514/-8	4.44/-2	2.373/-15	3.84/-39	3.854	4.835/-06	5.635/-69	5.134/-34	3.082/-72	3.764/-57	3.234/-49	4.154/-68	4.865/-22	5.414	4.373/-56	4.793/-35	3.434/-29	3.573/-68	2.424/-17	0.022/-63	3.644/-19	4.494/-2		
Θ(75°)	3.572/-6	2.492/-29	2.485/-48	5.775/-07	5.214/-79	4.44/-36	4.344/-76	4.584/-8	4.74/-29	4.665	2.682/-78	2.543/-53	3.973/-36	3.583/-62	2.242/-18	2.392/-14	33/-85	4.163/-04	2.582/-01	3.383/-14	3.133/-68	2.382/-94	2.512/-42	3.63/-59
Θ(82.5°)	3.34/-17	3.713/-1	1.583/-8	2.140/-95	1.571/-47	0.820/-96	0.281/-23	2.061/-47	1.521/-49	0.723/-43	1.613/-21	2.350/-91	1.71/-1.35	-0.670/-92	0.871/-7	0.								



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ(75°)	-10.45/-9.65	-9.65/-10.46	-8.92/-9.69	-11.74/-10.11	-11.6/-9.33	-9.23/-9.84	-8.42/-9.51	-9.07/-11.34	-11.96/-11	-11.63/-10	-11.03/-10.42	-6.93/-7.93	-9.52/-9.9	-7.48/-7.81	-9.29/-9.66	-9.27/-8.36	-10.76/-12.52	-11.38/-11.34	-11.53/-9.16	-9.43/-11.77	-12.59/-8.4	-9.91/-9.85	-10.69/-9.25	-7.36/-10.98
Θ(82.5°)	-9.27/-7.47	-9/-9.78	-8.61/-8.51	-12.14/-10.02	-10.87/-11.16	-11.83/-10.66	-8.79/-10.29	-10.6/-7.47	-9.95/-10.93	-10.07/-9.07	-11.21/-10.62	-9.54/-10.81	-10.32/-8.16	-8.88/-8.73	-8.08/-6	-8.49/-7.92	-9.92/-9.64	-10.44/-10.98	-10.12/-11.82	-8.79/-6.96	-8.56/-6.48	-8.53/-5.42	-4.88/-7.66	-8.82/-10.72
Θ(90°)	-10.81/-10.51	-10.25/-11.97	-11.02/-10.95	-8.35/-8.73	-9.39/-8.69	-12.29/-10.82	-12.22/-9.42	-10.14/-9.99	-9.92/-8.36	-10.76/-11.29	-11.49/-9.85	-9.85/-9.14	-9.53/-7.09	-10.44/-9.41	-7.77/-6.76	-10.07/-7.38	-8.64/-11.92	-10.24/-10.69	-11.45/-10.64	-9.28/-9.8	-9.12/-6.85	-9.75/-9.51	-8.88/-7.57	-7.26/-8.95
Θ(97.5°)	-8.12/-7.95	-6.65/-8.43	-9.99/-11.3	-9.61/-7.62	-7.94/-8.97	-11.62/-8.56	-11.09/-9.28	-9.11/-8.07	-9.66/-10.71	-9.04/-9.95	-9.55/-9.24	-7.23/-8.64	-7.82/-8.36	-8.51/-6.07	-6.76/-5.83	-6.61/-9.18	-11.91/-10.97	-10.49/-9.76	-10.79/-10.27	-8.67/-8.11	-7.36/-5.67	-7.45/-7.09	-5.71/-7.44	-6.87/-7.79
Θ(105°)	-9.77/-10.55	-7.6/-7.5	-7.42/-9.97	-10.01/-7.49	-11.49/-11.31	-9.59/-12.03	-11.53/-8.61	-11.4/-7.97	-8.02/-6.72	-6.57/-8.56	-11.27/-12.62	-9.98/-8.69	-7.61/-9.61	-9.39/-9.23	-8.18/-6.79	-9.34/-9.4	-11.85/-10.78	-11.79/-12.32	-12.14/-11.3	-8.56/-10.21	-10.14/-7.13	-8.4/-8.07	-7.54/-8.51	-8.07/-9.48
Θ(112.5°)	-7.41/-9.72	-7.89/-8.89	-9.15/-7.26	-5.35/-7.29	-8.97/-10.58	-10.87/-10.85	-8.18/-11.89	-8.63/-6.15	-6.5/-7.05	-10.49/-12.43	-9.65/-8.28	-6.68/-6.68	-8.81/-7.7	-8.48/-10.84	-10.05/-8.14	-10.62/-8.8	-8.19/-9.23	-6.87/-11.39	-10.23/-11.19	-6.05/-8.73	-5.61/-5.1	-6.52/-8.34	-8.01/-7.46	-7.06/-10.69
Θ(120°)	-9.96/-9.02	-7.6/-7.89	-6.81/-7.57	-3.42/-6.62	-11.62/-8.04	-7.9/-10.96	-10.56/-9.95	-6.86/-6.09	-8.71/-6.7	-5.34/-9	-10.03/-7.89	-9.54/-11.4	-9.21/-8.16	-8.98/-7.61	-8.94/-9.89	-8.86/-8.23	-9.65/-12.39	-11.33/-11.37	-10.51/-12.34	-8.71/-9.67	-6.4/-6.9	-7.83/-9.26	-7.78/-8.46	-8.48/-7.34
Θ(127.5°)	-6.8/-8.36	-10.93/-8.39	-7.74/-6.2	-5.24/-5.09	-6.84/-7.09	-8.77/-7.58	-8.27/-11.09	-6.42/-4.34	-6.2/-5.21	-5.73/-7.44	-7.56/-8.57	-11.73/-10.09	-8.46/-9.96	-10.26/-8.85	-10.34/-10.71	-10.76/-11.87	-11.42/-9.43	-11.95/-10.68	-12.12/-11.06	-8.43/-8.7	-10.09/-10.55	-11.37/-9.88	-6.77/-7.79	-6.92/-6.98
Θ(135°)	-7.15/-8.49	-7.97/-7.78	-9.23/-6.95	-7.59/-8.42	-7.11/-8.47	-8.44/-6.4	-5.7/-6.42	-10.45/-9.52	-6.25/-6.99	-9.99/-8.03	-7.09/-9.34	-8.67/-9.79	-11.24/-10.3	-11.24/-8.78	-8.19/-8.24	-8.51/-8.58	-9.66/-6.27	-9.73/-7.13	-7.69/-10.85	-10.04/-6.71	-7.8/-10.19	-10.06/-6.47	-4.54/-6.9	-7.19/-7.31
Θ(142.5°)	-9.49/-10.13	-7.23/-7.94	-8.62/-5.18	-5.17/-5.54	-6.16/-4.67	-4.07/-7.95	-12.31/-6.46	-6.27/-6.97	-6.09/-8.32	-9.21/-7.93	-6.51/-9.1	-9.5/-12.11	-12.33/-8.85	-7.36/-6.69	-6.93/-6.29	-7.01/-9.76	-8.55/-8.53	-8.4/-7.5	-10.17/-12.2	-7.38/-4.37	-6.84/-9.14	-7.11/-5.62	-5.31/-5.48	-7.5/-10.79
Θ(150°)	-10.12/-9.7	-7.44/-5.48	-6.89/-6.64	-5.05/-2.03	-3.14/-4.88	-5.53/-8.91	-9.94/-5.8	-5.22/-6.44	-7.18/-6.94	-7.11/-8.08	-9.32/-8.56	-8.27/-6.56	-6.48/-7.14	-5.55/-4.98	-4.44/-3.73	-4.26/-3.9	-6.45/-8.11	-8.35/-9.2	-10.51/-7.79	-6.85/-7.29	-7.53/-9.41	-10.15/-10.38	-10.88/-11.68	-10.57/-10.25
Θ(157.5°)	-8.54/-7.85	-6.96/-5.39	-4.17/-3.2	-3.74/-4.32	-5.88/-6.49	-7.09/-7.45	-9.27/-7.47	-7.45/-10.06	-10.42/-9.64	-9.16/-10.01	-8.75/-8.81	-9.08/-9.4	-10.13/-9.93	-8.97/-8.54	-8.55/-5.85	-6.69/-7.75	-7/-5.29	-5.47/-6.86	-8.33/-7.26	-6.22/-6.13	-7.44/-7.48	-7.86/-8.51	-7.71/-8.84	-8.95/-9.01
Θ(165°)	-9.32/-9.77	-9.67/-9.25	-8.65/-8.15	-6.87/-5.32	-5.1/-5.71	-5.86/-6.05	-6.05/-6.29	-7.45/-9.91	-11.4/-10.01	-10.97/-10.92	-11.02/-11.5	-12.14/-11.33	-10.16/-9.6	-8.25/-6.01	-4.43/-5.57	-7.52/-8.3	-7.55/-6.46	-6.35/-7.73	-7.55/-7.02	-6.77/-7.61	-7.19/-6.92	-7.28/-6.67	-7.23/-6.46	-7.09/-8.06
Θ(172.5°)	-11.64/-11.02	-9.29/-7.6	-6.65/-5.52	-5.55/-6.43	-7.17/-7.66	-6.96/-6.24	-6.5/-6.31	-6.76/-6.55	-6.75/-6.78	-7.24/-7.63	-7.56/-7.79	-8.33/-7.88	-8.4/-7.84	-7.58/-8.7	-10.98/-9.59	-8.42/-6.44	-5.09/-4.98	-5.45/-6.02	-5.94/-6.08	-5.84/-5.25	-4.69/-4.97	-5.74/-6.99	-9.2/-9.93	-12.39/-11.99
Θ(180°)	-9.94/-9.98	-7.46/-7.21	-6.81/-7.05	-6.65/-6.77	-6.99/-6.92	-7.6/-8.51	-8.84/-8.54	-9.22/-9	-8.75/-8.39	-8.69/-8.24	-7.62/-7.8	-8.07/-7.85	-7.54/-8.53	-7.77/-7.7	-7.28/-6.86	-6.12/-5.65	-5.84/-6.38	-6.88/-7.62	-7.52/-7.95	-7.62/-7.09	-7.43/-7.66	-8.4/-9.33	-10.47/-11.99	-10.42/-10.78
Freq(Hz)	5.785GPol.	Theta-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-10.74/-10.97	-10.35/-9.32	-8.59/-8.68	-7.48/-8.13	-8.44/-7.93	-6.61/-5.65	-5.6/-5.31	-5.9/-5.96	-6.98/-6.88	-5.87/-6.18	-6.51/-7.35	-8.69/-7.96	-9.14/-9.84	-10.01/-10.74	-10.49/-8.66	-9.2/-9.77	-9.68/-8.87	-8.5/-8.14	-8.59/-8.95	-9.18/-8.3	-7.06/-8.45	-8.81/-8.61	-9.44/-9.19	-9.52/-9.55
Θ(7.5°)	-7.57/-8.25	-8.82/-8.57	-7.96/-7.72	-8.21/-7.26	-7.39/-7.39	-7.58/-8.28	-8.24/-8.72	-9.38/-9.93	-9.05/-8.75	-8.21/-8.42	-7.94/-7.98	-8.65/-8.86	-8.31/-8.3	-6.8/-6.5	-5.9/-5.63	-4.54/-4.87	-4.94/-4.55	-4.39/-4.51	-4.68/-4.4	-4/-4.41	-4.62/-4.21	-3.9/-3.93	-4.47/-4.82	-5.41/-7.35
Θ(15°)	-3.01/-3.65	-3.93/-4.96	-5.51/-5.68	-6.46/-7.81	-5.99/-5.7	-6.68/-6.63	-5.02/-4.62	-4.99/-5.69	-6.21/-5.46	-4.99/-4.56	-4.22/-4.99	-5.3/-5.47	-5.42/-5.71	-5/-3.64	-2.88/-2.91	-2.29/-2.08	-3.01/-3.36	-3.39/-3.34	-3.88/-3.78	-4/-3.97	-3.49/-3.12	-2.42/-1.55	-1.58/-1.76	-1.88/-2.27
Θ(22.5°)	-2.15/-2.84	-2.41/-3.52	-5.38/-8.63	-8.8/-6.53	-7.06/-6.53	-3.88/-2.73	-2.44/-3.41	-4.63/-4.97	-4.73/-4.99	-4.88/-6.1	-5.86/-4.43	-3.81/-3.32	-4.09/-3.53	-4.01/-2.71	-2.63/-2.94	-1.35/-0.77	-1.21/-1.68	-3.1/-4.03	-3.94/-4.5	-5.61/-3.12	-2.11/-1.95	-3.16/-3.99	-4.23/-3.73	-3.18/-2.56
Θ(30°)	-3.49/-5.42	-6.6/-7.04	-5.21/-6.39	-7.56/-7.83	-4.48/-4.45	-4.16/-3.1	-3.3/-2.79	-3.74/-3.51	-4.53/-6.48	-7.75/-7.06	-7.62/-9.12	-11.15/-6.18	-3.28/-2.99	-3.41/-2.7	-2.88/-4.91	-3/-2.44	-2.44/-2.42	-4/-5.68	-5.33/-5	-4.62/-4.09	-4.72/-5.87	-7.57/-7.5	-6.25/-3.16	-3.3/-3.51
Θ(37.5°)	-6.94/-5.37	-4.51/-5.33	-6.25/-4.31	-3.25/-2.01	-2.18/-4.71	-4.73/-4.73	-5.05/-4.66	-4.65/-3.26	-2.37/-1.81	-3.94/-6.16	-6.5/-4.46	-3.86/-5.61	-7.05/-7.04	-6.9/-6.39	-6.24/-3.31	-3.68/-2.96	-2.26/-5.01	-3.57/-2.39	-4.71/-3.54	-4.8/-5.02	-4.31/-3.5	-2.59/-4.66	-9.52/-10.16	-9.52/-8.89
Θ(45°)	1.28/2.25	2.33/2.82	2.85/2.82	0.90/7.8	1.1/-1.39	-3/-2.28	-2.45/-1.22	-2.58/-2.17	-0.90/2.3	2.58/3.15	2.98/2.07	1.94/2.04	2.010/3.1	-0.22/-1.41	-1.96/-0.39	-2.35/-1.32	-0.490/3.7	0.57/-1.03	-1.38/-2.54	-1.55/0.28	-0.45/-0.2	0.820/59	-0.33/-0.29	
Θ(52.5°)	3.55/3.47	3.36/2.51	1.070/19	-0.78/1.86	0.080/38	2.173/53	3.634/08	0.640/72	0.330/92	-1.680/73	2.57/3.52	3.012/68	3.444/42	3.322/64	3.093/49	3.043/45	1.58/-0.35	1.32/36	2.75/1.93	1.09/1.06	1.57/2.14	1.51/2.78	3.35/3.19	3.97/4.41
Θ(60°)	0.63/-0.13	0.03/-0.76	0.78/3.48	2.74/2.68	2.56/2.77	1.81/3.06	3.07/2.54	2.85/3.73	2.14/2.16	2.45/1.83	-1.04/-0.53	-0.14/0.75	1.59/1.49	1.4/-1.2	0.20/33	-0.08/1.65	-0.460/13	-0.620/96	0.45/1.79	-0.87/1.47	0.070/2	0.26/1.75	1.11/1.42	0.59/-0.02
Θ(67.5°)	3.92/3.53	3.77/3.64	5.194/75	2.74/2.56	3.42/2.6	0.830/67	1.2/-0.19	-0.03/1.65	3.69/1.97	2.88/3.99	3.95/2.53	2.98/2.4	2.632/38	1.14/2.23	1.670/87	-1.69/-0.17	0.61/16	2.09/2.65	1.57/2.69	2.02/1.74	1.09/0.6	0.520/47	1.532/14	2.83/3.17
Θ(75°)	4.67/4.6	5.78/4.78	3.94/4.78	4.17/4.34	5.54/5.93	5.98/6.46	7.14/6.72	5.97/5.93	4.69/3.34	2.79/3.42	4.93/6.25	5.09/4.1	3.98/5.28	3.46/3.61	5.24/5.39	3.58/2.46	4.62/4.49	4.41/5.9	3.93/5.18	4.67/4.83	4.39/2.73	3.69/4.07	3.84/4.65	5.27/4.88
Θ(82.5°)	4.53/5.01	3.44/3.41	4.95/5.87	4.94/5.09	6.43/4.92	4.54/4.89	5.33/5.07	4.73/5.54	5.99/4.69	5.25/4.48	2.98/3.7	4.27/5.15	4.01/4.9	3.65/1.67	2.41/4.35	4.16/3.46	4.64/3.61	3.97/3.39	2.82/3.14	2.44/4.93	4.63/1.2	4.03/2.55	2.89/3.19	5.04/5.57
Θ(90°)	0.33/1.89	3.57/3.81	0.92/3.8	2.01/2.91	3.82/3.68	3.44/3.28	3.8/3.26	3.29/3.3	2.73/1.23	0.61/3.27	2.33/3.6	2.440/84	2.39/2.51	2.39/2.65	1.89/1.59	1.76/3.37	4.02/4.68	3.53/4.7	3.27/3.7	1.15/5.49	2.77/2.46	4.15/3.82	3.12/3.17	3.86/1.37
Θ(97.5°)	2.34	4.76/5.15	6.03/6.29	5.42/6.69	5.99/5.89	5.025/06	5.86/5.14	5.21/5.75	5.52/5.36	4.88/6.07	5.12/5.21	3.66/3.41	2.964/74	3.53/3.3	5.87/6.22	3.96/2.58	5.96/5.22	5.74/5.3	2.67/3.58	5.34/6.29	5.22/3.55	4.2/5.34	4.57/3.97	3.62/4.07
Θ(105°)	-0.030/93	-0.98/-1.76	0.410/59	0.610/98	1.89/1.61	-2.13/-3.21	-6.07/-2.8	-1.21/1.05	0.71/1.62	0.91/2.42	0.56/-1.25	-0.5/-1.17	-1.3/-1.05	-0.67/-2.22	-2.33/0.51	-1.42/-0.88	0.43/1.79	-0.61/-2.89	-4.32/-4.55	-1.27/1.92	1.09/-2.54	0.750/56	-1.95/-3.74	-0.060/24
Θ(112.5°)	-1.29/-2.83	-3.13/-2.6	-1.73/-0.57	-4.34/-4.64	-0.72/-0.8	2.52/1.81	1.622/05	0.72/-0	-2.98/-6.27	-4.7/-4.28	-2.56/-0.88	-1.450/38	-2.49/-1.66	-2.71/-3.45	-3.48/-1.43	-4.42/-4.59	-3.28/-3.73	-0.48/-4.18	-3.06/-4.81	-3.21/-1.16	-3.09/-6.08	-3.7/-2.29	-6.7/-2.22	0.14/2.05
Θ(120°)	0.08/-3.31	-2.43/-2.85	-1.90/88	0.41/-1.27	1.460/75	1.922/79	2.95/3.32	1.81/83	0.57/-1.1	1.39/-0.14	-0.5/-2.15	-3.48/-1.23	1.31/1.41	-2.1/-0.78	-2.28/-1.61	-2.71/-2.34	-2.46/-0.51	1.1/-0.52	-3.07/-1.13	-2.22/2.61	0.49/-3.15	-2.35/-1.05	1.38/-1.25	-0.39/1.29
Θ(127.5°)	-5.99/-8.49	-7.09/-5.24	-5.67/-4.44	-3.48/-3.63	-3.16/-1.29	-2.17/-2.51	-0.81/-3.56	-0.78/-3.01	-4.06/-1.54	-1.76/-2.64	-4.36/-5.83	-11.24/-8.83	-3.93/-4.43	-3.72/-2.67	-2.04/-1.1	-2.91/-4.09	-4.23/-1.39	-0.27/-3.98	-12.54/-6.91	-4.390/31	-1.75/-6.59	-6.82/-3.68	-6.12/-6.68	-3.77/-4.74
Θ(135°)	-5.45/-5.58	-4.02/-1.78	-3.91/-1.76	-3.91/-4.96																				





Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ (22.5°)	-10.65/-8.86	-8.26/-8.08	-8.65/-8.61	-9.18/-10.3	-11.79/-14.8	-12.67/-13.08	-14.19/-18.33	-18.09/-17.86	-17.8/-17.45	-18.86/-18.34	-17.09/-18.96	-14.64/-11.74	-10.83/-9.68	-9.79/-10.12	-10.69/-15.74	-14.14/-11.12	-13.87/-18.95	-14.72/-13.19	-12.32/-14.15	-18.37/-19.15	-15.4/-16.36	-17.11/-18.85	-17.49/-13.35	-13.15/-12.94
Θ (30°)	-18.29/-16.2	-12.5/-10.44	-9.95/-9.67	-9.81/-8.93	-12.57/-16.3	-10.79/-11.3	-15.1/-12.75	-10.76/-11.1	-15.41/-13.57	-11.86/-14.33	-14.9/-17.3	-17.52/-18.8	-18.76/-19.04	-15.37/-10.12	-15.88/-18.56	-19.73/-15.26	-14.01/-12.88	-11.33/-10.78	-11.5/-15.07	-16.54/-19.31	-17.95/-19.46	-18.73/-17.91	-17.86/-13.4	-14.58/-14.4
Θ (37.5°)	-18.59/-17.88	-17.91/-13.45	-14.3/-10.95	-11.1/-8.01	-7.78/-9.71	-9.35/-11.97	-14.41/-14.96	-10.95/-13.96	-13.9/-12.68	-12.96/-18.79	-18.74/-17.39	-18.36/-18.16	-17.11/-11.32	-10.86/-13.65	-16.04/-17.38	-17.3/-18.75	-13.78/-19.7	-9.51/-9.74	-8.44/-14.9	-10.02/-10.58	-18.65/-18.39	-15.88/-12.7	-10.2/-10.08	-13.05/-17.41
Θ (45°)	-17.58/-15.42	-16.64/-15.65	-12.61/-10.65	-9.15/-9.1	-7.08/-10.3	-12.17/-11.35	-15.28/-11.5	-15.99/-17.97	-13.96/-16.55	-18.26/-18.98	-17.01/-18.15	-17.6/-17.92	-18.33/-14.63	-10.11/-10.63	-15.84/-16.07	-17.82/-18.38	-19.14/-18.53	-11.11/-12.63	-12.84/-17.72	-13.99/-11.63	-14.51/-16.17	-14.22/-10.36	-12.46/-11.41	-11.76/-16.11
Θ (52.5°)	-17.47/-19.07	-19.18/-17.45	-15.96/-12.22	-9.51/-9.6	-9.11/-12.5	-11.44/-11.71	-18.67/-18.88	-17.74/-19.15	-19.21/-16.47	-17.77/-18.13	-15.6/-16.68	-17.49/-17.92	-15.87/-13.64	-8.78/-11.25	-14.47/-14.57	-16.32/-13.84	-18.59/-19.02	-9.86/-4.99	-8.67/-18.07	-12.11/-15.55	-18.54/-11.69	-11.21/-14.01	-13.67/-13.4	-12.65/-18.29
Θ (60°)	-15.98/-17.8	-18.21/-18.43	-16.12/-17.45	-13.26/-11.2	-12.35/-9.58	-9.09/-12.63	-18.42/-17.8	-18.59/-16.29	-18.05/-19.26	-17.76/-14.57	-14.45/-16.13	-17.22/-18.42	-14.79/-13.75	-15.71/-14.99	-18.05/-19.32	-18.55/-18.96	-14.01/-12.24	-19.18/-14.29	-18.06/-18.96	-10.66/-15.53	-15.51/-10.06	-10.11/-12.97	-13.05/-17.93	
Θ (67.5°)	-15.21/-13.78	-15.96/-18.13	-14.91/-18.43	-14.44/-11.66	-11.93/-8.84	-10.25/-10.66	-17.53/-18.72	-19.15/-18.4	-17.16/-17.96	-18.12/-13.65	-17.89/-13.13	-15.24/-13.89	-19.08/-18.71	-10.29/-12.27	-17.88/-11.3	-18.29/-14.45	-18.95/-12.54	-17.38/-14.66	-18.45/-15.05	-12.95/-16.52	-18.39/-18.7	-19.16/-16.11	-15.44/-14.34	-17.19/-14.74
Θ (75°)	-16.71/-17.82	-17.91/-18.42	-17.79/-18.86	-18.92/-14.17	-9.43/-10.49	-12.2/-12.33	-18.99/-16.37	-18.25/-19.07	-15.6/-16.52	-18.62/-15.34	-17.05/-19.17	-19.12/-12.27	-17.6/-16.19	-19.6/-11.83	-10.83/-10.13	-14.18/-9.64	-11.86/-11.07	-17.96/-16.2	-14.86/-18.99	-11.69/-12.53	-14.02/-17.49	-15.64/-18.65	-18.65/-18.5	-18.65/-14.85
Θ (82.5°)	-18.61/-17.72	-14.35/-17.16	-12.27/-9.44	-10.04/-9.73	-17.79/-18.16	-13.79/-12.81	-19.34/-18.48	-12.81/-13.93	-17.9/-18.84	-14.99/-18.39	-18.3/-11.92	-15.71/-14.99	-10.43/-8.05	-15.52/-13.1	-16.28/-14.69	-13.57/-11.08	-19.11/-16.68	-12.99/-18.11	-16.27/-14.3	-10.96/-18.18	-15.31/-18.87	-18/-16.2	-17.35/-17.9	
Θ (90°)	-17.82/-18.05	-16.8/-14.34	-19.25/-17.8	-18.15/-18.95	-13.11/-8.26	-10.51/-13.8	-11.17/-15.82	-14.63/-18.34	-11.78/-18.51	-18.56/-14.34	-18.24/-11.13	-10.96/-18.28	-11.51/-8.79	-16.14/-17.42	-15.19/-9.61	-12.47/-14.58	-16.67/-18.75	-19.11/-18.92	-18.12/-15.68	-18.17/-14.53	-19.24/-15.01	-11.36/-16.67	-14.11/-13.44	-15.3/-15.19
Θ (97.5°)	-18.3/-16.32	-19.12/-17.58	-17.73/-11.99	-11.71/-9.16	-11.83/-11.2	-12.54/-14.3	-18.99/-14.62	-17.74/-19.08	-17.67/-17.74	-16.97/-11.4	-10.6/-13.71	-8.45/-10.61	-13.09/-11.36	-6.9/-7.82	-9.46/-14.29	-11.73/-11.83	-14.46/-17.88	-19.42/-11.64	-11.15/-16.2	-18.89/-18.87	-16.99/-17.85	-18.14/-16.29	-17.72/-18.42	
Θ (105°)	-18.24/-18.13	-17.86/-17.38	-17.29/-15.83	-18.35/-12.65	-14.78/-17.89	-15.19/-16.99	-14.24/-16.92	-18.62/-16.51	-14.38/-15.93	-12.92/-15.84	-12.67/-18.44	-8.6/-7.75	-15.05/-14.13	-9.77/-8.26	-14.72/-10.06	-8.89/-14.37	-16.24/-13.92	-16.27/-17.67	-16.91/-19.04	-15.79/-16.09	-19.12/-19.04	-17.33/-16.98	-16.24/-15.49	
Θ (112.5°)	-17.41/-18.05	-18.29/-18.59	-17.29/-18.82	-18.15/-17.47	-18.37/-18.82	-14.58/-14.19	-19.19/-13.63	-11.58/-7.21	-9.66/-19.15	-13.48/-13.78	-13.75/-12.68	-9/-12.79	-10.9/-11.3	-18.06/-15.71	-11.78/-12.13	-12.64/-9.96	-16.96/-15.13	-11.39/-11.74	-18.94/-18.7	-18.05/-16.81	-16.3/-16.12	-18.55/-15	-15.51/-15.28	-13.98/-12.67
Θ (120°)	-15.75/-17.98	-16.83/-15.6	-13.62/-17.13	-16.6/-19.29	-17.61/-17.85	-14.45/-14.73	-14.48/-17.03	-10.3/-11.73	-15.04/-8.97	-14.81/-9.93	-9.81/-9.03	-10.59/-16.71	-14.14/-16.61	-17.36/-13.4	-12.44/-18.74	-18.87/-14.54	-18.65/-17.54	-12.12/-13.98	-14.37/-18.28	-18.66/-13.87	-18.48/-10.53	-16.6/-13.23	-11.69/-18.96	-17.72/-18.42
Θ (127.5°)	-18/-18.93	-18.05/-18.38	-15.65/-17.13	-13.23/-11.9	-13.78/-18.06	-18.96/-17.27	-14.2/-18.32	-15.15/-18.3	-9.25/-7.52	-12.38/-9.96	-8.34/-16.98	-15.68/-16.19	-12.5/-17.83	-18.91/-15.77	-12.64/-19.66	-13.89/-16.55	-17.33/-12.61	-8.66/-18.24	-17.6/-13.21	-15.98/-18.85	-15.93/-13.81	-16.18/-15.93	-14.21/-18.23	
Θ (135°)	-17.88/-18.71	-19.02/-15.83	-14.13/-12.98	-18.33/-16.78	-16.78/-15.94	-10.6/-13.43	-14.26/-11.52	-17.77/-9.98	-7/-11.02	-9.54/-8.56	-15.06/-15.69	-18.57/-18.45	-14.66/-17.66	-19.01/-18.38	-12.97/-9.52	-13/-14.79	-18.11/-11.74	-10.49/-12.78	-14.53/-15.01	-18.35/-17.98	-16.45/-15.37	-17.37/-12.7	-11.44/-10.33	-10.9/-17.53
Θ (142.5°)	-17.42/-18.42	-18.02/-18.88	-18.44/-16.28	-18.45/-16.78	-8.63/-8.08	-12.16/-12.42	-12.17/-15.66	-11.3/-10.39	-18.31/-12.31	-9.73/-9.27	-11.12/-13.45	-18.31/-18.2	-18.55/-18.73	-17.16/-14.34	-18.6/-12.52	-12.02/-10.86	-13.19/-9.2	-13.49/-17.83	-15.03/-9.63	-12.87/-18.1	-11.66/-9.47	-13.42/-12.96	-13.29/-13.22	-11.75/-13.79
Θ (150°)	-17.97/-19.13	-18.09/-12.12	-12.44/-8.65	-7.09/-8.73	-14.88/-10.19	-9.2/-11.57	-10.16/-9.03	-15.93/-12.51	-14.6/-18.56	-14.02/-18.81	-18.59/-18.6	-18.99/-18.59	-18.99/-19.37	-18.75/-15	-16.44/-12.85	-10.71/-10.46	-15.06/-16.84	-19.11/-11.68	-9.04/-10.96	-17.35/-13.28	-9.28/-12.99	-7.62/-8.7	-11.64/-15.42	
Θ (157.5°)	-17.04/-15.45	-12.75/-9.36	-13.07/-16.74	-18.32/-11.93	-8.19/-8.16	-10.62/-7.81	-7.04/-9.38	-14.08/-15.55	-14.87/-18.46	-18.21/-16.89	-16.78/-17.94	-18.48/-17.99	-17.05/-15.57	-11.5/-11.77	-11.88/-13.5	-14.1/-12.68	-15.82/-18.88	-17.48/-15.13	-18.41/-17.36	-16.14/-12.02	-9.25/-9.1	-10.68/-12.09	-11.9/-11.87	-13.49/-15.28
Θ (165°)	-18.77/-17.23	-16.68/-18.84	-17.44/-18.51	-16.05/-18.72	-12.83/-8.84	-7.71/-7.63	-9.84/-14.24	-17.25/-12.52	-11.13/-15.05	-18.52/-17.53	-15.35/-16.96	-16.49/-17.9	-18.4/-18.4	-18.32/-18.19	-18.93/-16.01	-12.07/-16.35	-18.1/-18.82	-18.15/-17.42	-17.87/-18.05	-18.76/-18.57	-13.81/-10.39	-8.79/-8.3	-9.41/-11.49	-12.65/-17.93
Θ (172.5°)	-18.5/-19.23	-18.3/-16.64	-14.94/-12.76	-11.67/-12.68	-11.01/-11.43	-11.61/-14.24	-19.47/-19.23	-18.01/-12.78	-10.96/-13.92	-18.23/-17.56	-16.38/-14.93	-15.51/-18.75	-17.71/-18.13	-19.77/-17.88	-19.06/-17.87	-17.12/-17.91	-17/-15.91	-17.34/-18.36	-18.4/-18.57	-18.91/-18.04	-17.97/-16.71	-17.88/-18.59	-19.07/-17.93	
Θ (180°)	-16.75/-14.76	-15.04/-14.99	-14.51/-13.31	-13.26/-13.7	-15.7/-18.38	-16.14/-14.06	-11.29/-10.79	-18.08/-10.66	-11.47/-16.1	-18.34/-18.7	-19.23/-19.1	-18.02/-16.49	-14.96/-14.34	-14.07/-13.47	-12.65/-11.54	-11.02/-11.37	-13.32/-10.83	-12.07/-12.91	-13.27/-14.25	-13.71/-14.34	-14.61/-16.16	-17.03/-18.75	-18.38/-18.82	-17.1/-14.81
Freq(Hz)	5.3GPol.	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°)	-12.14/-11.32	-10.67/-11.25	-12.9/-12.13	-11.68/-10.85	-9.22/-8.63	-9.63/-10.77	-10.46/-11.21	-11.53/-11.02	-10.58/-10.04	-10.81/-11.81	-14.06/-12.14	-10.93/-12.68	-11.48/-13.25	-12.66/-12.47	-13.95/-12.18	-12.95/-14.08	-12.41/-10.57	-11.47/-12.81	-11.78/-12.31	-11.54/-11.45	-12.32/-12.58	-13.89/-15.35	-16.63/-16.22	-17.3/-12.82
Θ (7.5°)	-10.32/-11.59	-12.87/-14.48	-14.14/-12.35	-11.7/-16.12	-11.66/-10.5	-10.79/-11.42	-12.34/-12.16	-11.76/-18.45	-14.35/-14.62	-13.78/-18.48	-17.59/-19.04	-18.34/-18.54	-18.47/-19.39	-18.25/-16.76	-13.96/-13.25	-11.06/-10.13	-10.71/-9.91	-9.11/-9.62	-9.8/-13.04	-10.58/-10.75	-12/-10.49	-10.96/-14.03	-10.2/-9.01	-8.24/-9.37
Θ (15°)	-15.41/-12.61	-17.68/-17.91	-19.29/-18.91	-14.28/-17.56	-18.63/-18.66	-13.99/-12.5	-14.26/-10.77	-16.26/-5.65	-4.72/-5.07	-6.37/-8.01	-8.62/-6.62	-8.72/-11.58	-14.95/-16.42	-19.2/-12.59	-14.75/-12.25	-12.92/-12.59	-12.18/-13.21	-9.23/-7.06	-6.71/-7.99	-10.53/-13.24	-10.84/-8.78	-7.88/-7.19	-7.89/-5.66	-9.26/-10.19
Θ (22.5°)	-5.69/-6.61	-5.21/-4.86	-5.09/-6.36	-8.86/-8.33	-11.5/-15.2	-12.68/-8.8	-6.68/-7.02	-5.46/-4.04	-4.89/-8.12	-10.02/-9.07	-8.38/-8.02	-8.85/-9.29	-9.06/-7.94	-6.77/-7.56	-7.72/-9.78	-14.7/-12.8	-7.44/-7.46	-11.53/-8.86	-5.88/-6.08	-6.32/-7.08	-8.18/-8.81	-8.92/-8.34	-6.96/-6.89	-8.39/-6.93
Θ (30°)	-6.79/-7.73	-5.94/-5.43	-4.92/-6.46	-5.31/-4.31	-7.1/-7.49	-5.41/-5.92	-4.92/-5.5	-4.58/-6.1	-5.67/-6.46	-6.2/-9.64	-11.54/-9.95	-8.79/-9.27	-8.51/-6.75	-6.67/-5.69	-8.19/-10.02	-9.3/-8.22	-11.61/-7.48	-6.14/-6.73	-4.12/-7.2	-3.28/-5.14	-7.02/-4.71	-4.64/-7.82	-9.3/-7.22	-6.75/-6.73
Θ (37.5°)	-4.08/-4.34	-4.95/-5.58	-3.66/-3.78	-9.11/-3.23	-3.84/-5.2	-3.61/-3.62	-3.32/-3.25	-2.85/-3.33	-3.03/-5.97	-6.21/-5.79	-5.83/-4.89	-3.21/-2.63	-4.02/-4.83	-5.15/-6.48	-7.4/-6.22	-6.31/-9.92	-7.81/-11.68	-6.1/-5.77	-8.63/-5.41	-2.05/-3.4	-3.88/-3.75	-4.06/-5.48	-7.82/-5.72	-4.66/-5.17
Θ (45°)	-8.43/-6.84	-5.37/-4.86	-4.98/-4.9	-7.61/-5.08	-4.27/-4.54	-4.04/-3.23	-3.63/-4.73	-5.24/-9.16	-7.32/-8.03	-4.58/-4.05	-2.74/-3.48	-4.29/-4.05	-4.58/-4.13	-3.49/-4.86	-4.94/-5.9	-4.29/-2.66	-3.18/-5.36	-7.32/-8.58	-5.9/-5.27	-7.96/-3.35	-3.03/-5.56	-5.51/-5.62	-5.43/-7.24	-8.92/-8.8
Θ (52.5°)	-7.91/-6.32	-5.04/-4.88	-7.96/-4.48	-6.38/-5.5	-2.66/-4.08	-5.67/-5.71	-6.15/-7.65	-8.6/-3	-4.48/-2.17	-3.2/-5.41	-6.86/-6.38	-4.22/-3.81	-4.04/-4.86	-4.83/-4.95	-5.32/-3.6	-3.05/-3.66	-4.24/-4.87	-2.09/-7.25	-5.61/-9.51	-3.07/-4.44	-5.98/-3.07	-5.48/-4.11	-3.95/-4.73	-7.39/-8.1
Θ (60°)	-1.33/-4.06	-0.69/-1.94	-2.04/-1.48	-0.23/-3.3	-5.55/-3.25	-0.87/-1.48	-0.93/-0.86	-1.35/-2.07	-2.89/-1.55	-2.19/-2.52	-3.65/-3.7	-0.59/-3.17	-4.52/-3.56	-3.67/-3.2	-4.44/-4.62	-3.34/-2.1	-2.87/-0.18	-2.11/-5.27	-2.5/-2.44					



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ(75°)	-17.71/-19.16	-17.88/-14.94	-14.14/-11.02	-18.05/-18.28	-17.51/-11.47	-12.35/-14.4	-18.54/-17.96	-17.34/-17.94	-18.78/-15.24	-18.39/-11.25	-14.26/-18.31	-15.75/-10.87	-15.14/-15.38	-13.09/-17.89	-18.98/-17.3	-16.88/-15.18	-16.05/-19.01	-17.53/-18.16	-15.1/-11.25	-14.18/-15.69	-19.06/-15.65	-18.17/-17.67	-17.9/-18.15	-17.5/-16.02
Θ(82.5°)	-15.41/-13.95	-13.64/-14.06	-10.18/-13.41	-17.64/-18.74	-15.61/-14.67	-16.73/-16.4	-18.78/-19.18	-17.78/-18.66	-17.99/-18.89	-16.25/-12.71	-15.29/-17.7	-11.91/-13.14	-14.28/-9.72	-16.78/-17.77	-17.84/-14.6	-16.25/-12.25	-13.23/-11.82	-18.68/-13.96	-18.36/-16.62	-13.36/-13.53	-18.02/-13.22	-18.22/-12.71	-8.23/-10.42	-15.77/-17.81
Θ(90°)	-18.41/-17.91	-18.74/-18.18	-17.47/-17.34	-11.66/-14.55	-17.46/-19	-18.38/-18.27	-18.49/-14.35	-18.11/-14.25	-18.31/-11.78	-17.17/-59	-18.15/-11.16	-10.89/-12.93	-12.02/-6.78	-11.97/-15.34	-17.66/-11.74	-15.67/-12.57	-12.79/-17.77	-16.61/-16.07	-18.9/-18.5	-14.92/-13.02	-18.76/-16.81	-10.59/-12.02	-14.82/-18.22	
Θ(97.5°)	-18.83/-16.85	-13.51/-12.43	-11.06/-15.11	-16.67/-17.97	-16.11/-16.47	-16.67/-13.57	-14.96/-18.82	-16.01/-19.22	-15.14/-16.99	-18.59/-17.94	-17.86/-14.64	-8.7/-11.55	-9.13/-7.66	-12.44/-10.48	-14.02/-9.78	-9.78/-14.09	-16.11/-13.67	-18.31/-18.55	-15.29/-14.12	-11.26/-14.1	-18.67/-15.6	-19.02/-16.78	-10.75/-14.91	-18.39/-18.13
Θ(105°)	-18.84/-13.96	-15.14/-12.44	-13.16/-12.96	-16.32/-13.91	-18.89/-15.45	-17.54/-18.02	-18.5/-15.1	-18.81/-17.2	-19.35/-12.54	-13.39/-15.71	-18.19/-18.35	-13.24/-9.52	-8.26/-10.8	-14.3/-15.29	-13.27/-12.9	-12.97/-12.5	-16.19/-12.86	-19.11/-18.35	-15.99/-16.22	-13.92/-16.22	-18.01/-13.45	-14.41/-17.22	-11.49/-13.48	-15.81/-18.06
Θ(112.5°)	-18.18/-16.87	-17.7/-17.14	-15.89/-18.36	-16.85/-12.64	-15.14/-17.78	-15.31/-17.89	-19.1/-18.18	-18.01/-11.88	-8.1/-9.86	-17.58/-18.55	-17.09/-14.01	-8.81/-8.06	-8.92/-8.62	-13.63/-15.49	-14.12/-13.8	-13.36/-12.19	-15.02/-17.57	-7.76/-16.49	-15.47/-18.9	-13.68/-19.59	-11.61/-10.45	-10.61/-13.74	-10.59/-12.02	-14.82/-18.22
Θ(120°)	-18.6/-16.61	-17.61/-18.07	-13.61/-12.85	-11.76/-16.53	-18.39/-17.2	-12.02/-17.56	-19.04/-17.02	-11.31/-12.62	-18.17/-13.77	-8.49/-13.79	-11.47/-8.77	-11.29/-18.31	-11.93/-12.71	-19.08/-18.03	-18.78/-19.01	-11.33/-13.32	-18.58/-17.95	-13.98/-14.4	-14.83/-18.73	-16.94/-14.45	-17.67/-17.71	-14.84/-15.74	-10.42/-11.76	-11.38/-12.94
Θ(127.5°)	-13.96/-17.65	-18.71/-18.73	-19.48/-15.02	-12.23/-10.33	-11.17/-16.89	-18.83/-18.35	-13.39/-13.87	-16.02/-19.3	-19.17/-7.43	-7.98/-9.54	-6.31/-11.67	-18.39/-19.04	-11/-17.74	-17.52/-18.59	-18.86/-18.35	-15.01/-18.97	-18.16/-14.64	-17.46/-17.51	-18.62/-18.53	-18.7/-17.29	-18/-18.11	-17.25/-11.11	-8.1/-13.74	-13.92/-14.44
Θ(135°)	-17.51/-18.26	-12.98/-12.63	-11.86/-9.62	-15.52/-19.21	-14.12/-18.51	-19.07/-11.86	-14.83/-11.44	-18.74/-17.43	-10.43/-8.68	-14.44/-14.51	-17.08/-19.39	-18.92/-18.11	-18.49/-15.6	-18.43/-18.05	-14.76/-15.11	-18.18/-18.47	-18.14/-19.34	-17.83/-13.9	-13.3/-17.73	-18.87/-13.29	-13.31/-18.94	-16.63/-11.71	-10.68/-11.74	-10.78/-14.87
Θ(142.5°)	-18.42/-17.81	-15.7/-16.6	-19.84/-17.91	-11.04/-12.06	-19/-13.34	-8.17/-11.77	-16.82/-12.96	-17.04/-12.6	-10.18/-14.29	-17.4/-18.98	-14.69/-15.09	-13.16/-17.42	-18.68/-19.22	-16.61/-15.38	-13.4/-10.96	-11.85/-18.16	-13.02/-9.9	-14.97/-19.09	-12.16/-17.26	-16.07/-10.13	-11.48/-16.44	-17.34/-17.93	-10.12/-9.12	-10.89/-16.24
Θ(150°)	-15.4/-15.43	-18.24/-18.16	-18.72/-18.63	-17.67/-10.48	-9.52/-10.53	-11.23/-14.13	-13.42/-10.25	-11.47/-17.4	-18.71/-16.61	-13.22/-15.69	-17.93/-15.78	-17.01/-18.09	-10.92/-17.94	-12.99/-11.86	-10.13/-10.02	-12.11/-9.15	-10.21/-12.91	-13.66/-16.22	-18.98/-13.3	-17.8/-16.2	-10.5/-9.66	-12.6/-15.63	-19.02/-18.06	-14.9/-17.47
Θ(157.5°)	-14/-10.73	-18.86/-14.81	-10.78/-8.82	-8.64/-12.53	-17.12/-10.06	-8.97/-10.7	-12.11/-9.27	-12.1/-18.72	-18.51/-18.36	-17.63/-19.08	-14.26/-15.23	-18.14/-18.06	-19/-18.89	-17.14/-19.19	-14.89/-12.97	-12.81/-13.6	-14.09/-19.71	-7.94/-10.57	-12.87/-17.46	-14.27/-10.52	-9.8/-8.16	-7.67/-8.24	-11.11/-15.08	-14.88/-14.84
Θ(165°)	-17.28/-18.29	-18.46/-18.27	-18.1/-17.11	-13.69/-9.75	-10.23/-11.87	-13.18/-15.15	-11.99/-10.41	-12.81/-16.94	-18.48/-16.38	-16.54/-15.47	-14.26/-15.76	-17.79/-17.84	-19.79/-15	-14.08/-13.69	-13.55/-16.46	-18.05/-16.61	-11.23/-9.12	-7.93/-8.02	-8.01/-9.48	-9.47/-9.35	-8.92/-8.6	-8.78/-8.56	-8.74/-9.34	-11.83/-14.55
Θ(172.5°)	-18.83/-17.61	-18.84/-17.79	-18.09/-14.26	-17.29/-17.95	-18.08/-16	-13.69/-12.53	-13.52/-14.28	-16.46/-17.37	-19.08/-18.95	-18.74/-18.57	-18.07/-18.85	-17.9/-18.46	-19.16/-19.19	-18.06/-18.76	-18.14/-14.24	-10.98/-9.31	-10.08/-11.09	-9.87/-9.18	-9.34/-9.65	-8.75/-10.81	-12.05/-11.57	-11.6/-14.23	-15.67/-15.78	-17.59/-19.09
Θ(180°)	-17.69/-19.05	-18.9/-18.47	-17.12/-18.48	-15.09/-14.26	-13.23/-10.45	-11.2/-14.1	-16.23/-18.78	-19.29/-18.05	-17.95/-18.71	-17.72/-14.87	-13.88/-13.6	-12.78/-13.43	-11.73/-15.15	-13.41/-17.91	-17.54/-18.41	-19.27/-18.87	-19.23/-18.59	-17.69/-18.8	-16.29/-16.25	-15.35/-15.02	-15.64/-15.67	-14.1/-15.67	-18.72/-19.03	-17.32/-18.84
Freq(Hz)	5.785GPol.	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°)	-18.26/-18.93	-17.73/-19.35	-16.25/-16.81	-12.99/-16.51	-18.01/-19.6	-15.52/-13.09	-13.3/-13.5	-14.52/-15.07	-15.61/-13.93	-11.35/-10.37	-10.34/-12.54	-14.12/-12.29	-12.78/-14.24	-13.03/-16.41	-16.99/-15.83	-17.18/-18.41	-18.95/-18.88	-17.89/-19.04	-19.16/-19.93	-17.82/-16.4	-15.76/-16.56	-14.29/-13.87	-17.47/-17.83	-18.51/-17.69
Θ(7.5°)	-11.69/-11.03	-12.06/-13.01	-13.8/-13.67	-18.46/-13.95	-13.56/-13.62	-17.49/-17.47	-15.29/-14.62	-18.08/-16.29	-15.19/-17.88	-16.53/-14.54	-17.36/-18.25	-15.79/-14.33	-13.93/-16.58	-16.01/-17.1	-17.69/-18.5	-17.55/-18.86	-16.99/-15.87	-14.12/-13.71	-10.58/-10.5	-9.57/-9.31	-9.56/-8.7	-8.99/-8.67	-9.05/-11.82	
Θ(15°)	-7.84/-8.4	-8.44/-10.56	-9.39/-9.8	-10.6/-16.5	-13.12/-10.54	-11.71/-12.94	-9.43/-10.07	-11.55/-13.47	-15.93/-15.37	-16.76/-14.78	-13.47/-17.42	-18.77/-19.07	-18.65/-19.08	-16.28/-16.02	-14.08/-17.24	-16.06/-18.8	-17.99/-18.02	-15.41/-14.41	-8.01/-7.16	-6.97/-7.71	-7.34/-5.66	-5.32/-5.31	-4.88/-5.82	
Θ(22.5°)	-4.86/-8.05	-5.68/-7.38	-8.85/-11.75	-9.39/-11.29	-12.49/-12.92	-9.07/-8.4	-8.66/-10.63	-11.17/-11.12	-11.55/-10.93	-8.83/-9.42	-8.43/-8.58	-8.86/-9.53	-10.29/-7.9	-11.34/-11.5	-12.51/-16.36	-19.12/-18.25	-12/-14.94	-18.6/-15.44	-16.09/-15.62	-14.54/-9.55	-7.75/-5.66	-7.24/-7.19	-8.39/-10.39	-11.65/-9.49
Θ(30°)	-8.98/-10.42	-9.84/-12.24	-9.84/-12.75	-16.99/-18.38	-9.76/-12.65	-11.4/-8.62	-9.89/-9.62	-9.2/-9.38	-12.27/-14.42	-15.23/-18.33	-19.47/-18.47	-15.52/-11.9	-10.07/-9.74	-9.85/-8.41	-9.47/-12.93	-7.76/-7.06	-15.32/-17.57	-15.26/-19.19	-18.08/-17.92	-16.05/-11.98	-11.01/-13.27	-15.09/-14.36	-19.12/-13.71	-13.54/-12.2
Θ(37.5°)	-16.92/-19.57	-18.32/-13.41	-18.29/-13.04	-18.98/-8.23	-5.85/-13.01	-10.08/-11.75	-19.18/-16.56	-16.91/-11.27	-7.91/-4.73	-7.52/-8.69	-6.04/-8.22	-8.2/-9.54	-8.5/-7.71	-11.47/-9.2	-10.18/-8.61	-6.03/-6.37	-8.91/-9.71	-17.11/-10.95	-17.43/-11.34	-8.15/-11.1	-6.7/-9.8	-14.84/-16	-16.61/-15.35	
Θ(45°)	-6.03/-3.96	-2.92/-1.6	-1.96/-1.9	-5.8/-2.16	-2.46/-9.41	-10.29/-14	-5.2/-2.66	-4.51/-3.84	-5.03/-4.68	-2.58/-4.24	-4.04/-3.97	-5.07/-2.57	-2.69/-5.01	-6.34/-7.97	-7.26/-9.13	-9.39/-11.69	-8.03/-5.02	-4.31/-1.74	-4.32/-8.06	-8.73/-8.09	-8.21/-3.11	-2.06/-2.79	-1.23/-3.16	-4.35/-6.2
Θ(52.5°)	-0.44/-0.71	0.08/-1.1	-2.76/-1.22	-2.1/-0.72	-4.4/-5.9	-4.77/-3.18	-1.85/-0.54	-5.41/-4.55	-4.9/-5.9	-16.24/-5.85	-4.14/-5.27	-6.11/-11.84	-8.69/-2.26	-3.26/-5.48	-6.62/-4.09	-3.33/-2.55	-7.42/-9.02	-2.88/-1.61	-3.56/-5.76	-6.05/-4.83	-5.68/-4.7	-4.03/-1.5	-1.47/-1.92	-0.240/-7.2
Θ(60°)	-3.37/-6.66	-3.41/-4.83	-7.23/-5.28	-5.27/-5.62	-6.59/-4.41	-4.78/-4.21	-3.88/-3.98	-4.78/-4.98	-6.79/-6.16	-3.88/-3.98	-7.13/-5.74	-3.64/-3.83	-2.29/-7.17	-7.1/-6.44	-5.06/-3.93	-2.5/-3.9	-6.44/-6.12	-6.43/-2.34	-9.32/-4.14	-10.06/-9.35	-6.72/-5.57	-8.48/-8.3	-6.79/-3.87	
Θ(67.5°)	-4.74/-5.46	-6.02/-4.62	-6.53/-2.33	-3.77/-4.73	-3.63/-2.7	-2.36/-3.38	-6.86/-2.64	-2.78/-2.19	-0.59/-5.35	-3.75/-5.26	-1.87/-5.35	-2.31/-1.14	0.08/-0.64	-1.52/-3.73	-6.91/-7.9	-8.63/-3.89	-3.39/-5.57	-3.14/-7.57	-4.31/-1.57	-2.15/-0.39	-3.16/-2.71	-3.63/-7.51	-2.86/-2.23	-1.47/-4.21
Θ(75°)	0.34/-0.24	0.75/-0.29	0.45/-1.93	-0.03/-0.9	-0.7/-0.15	-0.51/-1.33	-0.23/-0.14	-0.46/-1.28	-0.93/-2.36	-2.17/-0.36	0.60/-8.1	-1.87/-2.93	-4.72/-3.75	-3.36/-3.16	-1.08/-0.99	-4.78/-5.93	-1.69/-1.85	-1.94/-0.58	-2.15/-1.58	-1.19/-0.54	-1.06/-0.6	0.38/-0.26	-0.360/-55	1.38/-0.28
Θ(82.5°)	-2.49/-2.82	-1.14/-1.31	-1.2/-1.76	-4/-2.95	-0.98/-4.39	-0.97/-2.37	-3.01/-1.23	-3.05/-4.26	0.48/-1.58	1.080/-56	0.09/-1.65	1.44/-8.3	-1.71/-9.2	-0.26/-4.62	-2.12/-1.93	-0.15/-5.14	0.87/-1.79	-0.51/-2.44	-3.2/-2.4	-7.55/-3.01	-1.62/-2.35	-1.11/-7.3	-3.31/-1.79	-3.35/-2.21
Θ(90°)	-5.64/-7.1	-3.79/-3.2	-6.06/-3.44	-0.14/-1.28	-3.2/-2.73	-1.97/-1.72	-2.77/-1.71	-2.49/-2.25	-0.19/-4.29	-9.33/-1.76	-6.17/-2.38	-3.36/-9.34	-10.47/-6.38	-2.09/-2.81	-5.67/-5.53	-4.9/-2.05	0.177/-37	-1.26/-1.04	-2.64/-2.92	-9/-1.78	-5.13/-4.35	1.18/-0.49	-1.41/-2.3	-2.96/-6.34
Θ(97.5°)	-2.93/-1.21	-0.54/-0.22	-0.39/-1.85	-1.79/-0.28	-3.5/-1.07	-1.94/-1.73	-1.78/-0.39	-2.42/-3.28	0.610/-67	0.66/-1.4	1.677/-47	0.13/-197	-2.810/-81	-3.45/-2.55	1.56/-3.93	0.23/-1.29	2.75/-0.63	1.61/-3.75	-3.44/-3.11	-0.44/-0.75	-2.13/-3.48	-3.26/-5.7	-2.62/-0.7	-3.2/-2.23
Θ(105°)	-10.41/-5.55	-6.98/-7.33	-8.36/-5.95	-7.33/-6.93	-4.87/-4.51	-5.34/-6.31	-11.45/-4.91	-7.05/-1.74	-4.59/-2.49	-4.78/-1.84	-5.91/-1.71	-9.19/-3.19	-2.78/-1.02	-0.75/-5.63	-18.66/-5.51	-1.47/-18.13	-1.66/-10.83	-7.86/-10.85	-11.66/-12.25	-4.76/-11.74	-4.1/-8.65	-6.64/-5.29	-7.33/-1.58	
Θ(112.5°)	-9.32/-10.91	-8.82/-7.21	-5.71/-3.57	-13.68/-8.4	-5.78/-9.62	-8.58/-7.33	-6.47/-5.88	-4.06/-8.16	-15.32/-10.01	-5.95/-4.39	-6.53/-6.59	-7.98/-6.5	-13.29/-13.99	-10.16/-9.97	-5.38/-2.96	-6.53/-16.46	-7.8/-2.77	-7.23/-11.83	-7.91/-10.89	-11.3/-9.12	-8.96/-8.38	-7.59/-2.04	-16.15/-7.63	-4.56/-4.44
Θ(120°)	-6.01/-6.69	-4.69/-7.53	-9.7/-5.19	-7.27/-11.32	-6.36/-7.2	-3.53/-8.41																		



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ (112.5°)	-18.4/-18.7	-18.72/-15.62	-14.37/-9.95	-10.95/-9.97	-11.14/-13.19	-15.24/-18.12	-17.97/-18.13	-18.05/-18.89	-12.71/-10.46	-13.92/-17.81	-17.55/-18.02	-18.08/-18.16	-17.41/-18.76	-13.69/-13.82	-15/-17.69	-11.97/-11.62	-12.15/-18.72	-19.73/-18.8	-19/-19.01	-18.5/-17.25	-17.54/-18.01	-11.65/-13.47	-14.35/-19.24	-18.23/-17.26
Θ (120°)	-17.74/-16.04	-16.34/-17.52	-18.22/-12.06	-15.15/-12.81	-14.28/-16.47	-16.08/-16.04	-12.67/-17.15	-19.03/-18.79	-12.31/-17.18	-8.84/-9.16	-7.04/-7.35	-7.43/-8.43	-10.36/-13.19	-17.62/-18.12	-18.98/-17.7	-17.64/-18.5	-17.4/-19.05	-18.52/-18.49	-19/-19.93	-15.49/-13.79	-15.81/-18.8	-15.65/-18.27	-18.64/-19.15	-18.39/-18.69
Θ (127.5°)	-12.94/-11.95	-17.25/-18.92	-18.62/-18.09	-15.97/-13.79	-13.72/-17.21	-17.72/-19.07	-14.25/-13.89	-17.83/-17.23	-15.86/-11.69	-15.66/-18.18	-10.21/-11.19	-9.54/-10.25	-14.53/-11.83	-13.18/-18.72	-17.62/-18.07	-18.8/-18.21	-16.73/-15.26	-18.69/-18.91	-19.1/-19.04	-18.02/-11.25	-19.32/-19.26	-11/-11.22	-13.57/-10.22	-8.61/-10.43
Θ (135°)	-18.77/-17.66	-12.54/-10.67	-13.14/-12.55	-12.92/-15.74	-15.14/-11.92	-11.77/-13.75	-15.56/-15.23	-11.99/-7.27	-6.11/-9.33	-12.93/-14.97	-19.23/-18.69	-16.77/-17.78	-10.34/-8.15	-11.76/-19.09	-18.53/-18.63	-13.85/-12.72	-13.2/-14.09	-17.86/-18.65	-15.66/-12.74	-13.43/-15.8	-19.24/-16.3	-18.22/-18.28	-18.23/-14.04	-13.95/-18.22
Θ (142.5°)	-12.2/-9.83	-11.26/-13.89	-14.51/-19.41	-14.95/-11.2	-10.06/-10.42	-12.43/-13.79	-17.76/-13.79	-11.01/-9.46	-9.48/-14.68	-17.58/-14.58	-15.75/-18.4	-15.6/-13.96	-18.58/-18.51	-16.61/-18.03	-15.81/-7.15	-6.31/-12.12	-19.24/-18.16	-18.28/-17.13	-18.6/-19.35	-13.37/-14.58	-18.59/-14.21	-16.67/-16.13	-12.13/-9.58	-9.74/-12.2
Θ (150°)	-18.92/-17.59	-10.14/-6.33	-4.67/-3.5	-2.87/-3.35	-4.72/-6.22	-7.55/-10.34	-16.31/-17.74	-18.58/-14.84	-11.15/-10.7	-11.53/-12.9	-16.12/-18.06	-13.63/-10.72	-11.61/-15.11	-17.64/-18.09	-9.62/-5.51	-4.96/-8.07	-12.41/-10.7	-8.52/-8.41	-12.45/-18.02	-17.92/-15.48	-19.67/-18.97	-18.98/-16.82	-13.71/-14.4	-13.95/-18.84
Θ (157.5°)	-11.6/-8.63	-6.31/-5.33	-4.53/-4.6	-5.94/-8.08	-10.4/-12.85	-16.38/-18.2	-18.32/-17.66	-13.18/-9.5	-7.5/-7.52	-8.03/-8.2	-8.13/-7.99	-8.33/-8.64	-8.72/-9.42	-10.61/-11.2	-9.17/-8.26	-9.65/-13.73	-18.83/-16.38	-12.54/-9.98	-10.64/-14.45	-19.15/-19.15	-19.33/-18.75	-18.68/-17.7	-15.44/-15.18	-13.83/-13.7
Θ (165°)	-11.88/-9.82	-9.19/-8.7	-9.28/-11.13	-13.55/-14.68	-16.94/-19.14	-18.11/-18.22	-17.86/-15.62	-14.12/-12.21	-10.86/-10.76	-11.32/-11.55	-12/-12.99	-13.74/-17.23	-17.88/-16.46	-14.19/-13.5	-14.14/-16.72	-17.76/-17.96	-17.87/-17.25	-16.93/-13.54	-13.56/-15.18	-14.5/-14.34	-12.74/-11.41	-10.62/-10.03	-10.28/-11.62	-12.05/-11.86
Θ (172.5°)	-13.75/-14.52	-14.6/-14.09	-17.38/-18.53	-19.3/-18.78	-17.43/-18.47	-16.64/-15	-13.88/-12.82	-14.02/-16.63	-18.28/-17.1	-14.99/-13.7	-13.6/-15.98	-19.28/-18.39	-18.17/-15.7	-13.56/-12.98	-16.99/-17.14	-17.51/-18.16	-14/-12.65	-11.89/-12.24	-11.54/-11.62	-10.72/-10.38	-10.02/-9.61	-9.41/-9.87	-10.96/-12.26	
Θ (180°)	-10.19/-9.48	-9.81/-9.58	-9.65/-9.53	-9.45/-10.07	-11.17/-12.81	-15.63/-16.89	-17.62/-18.73	-18.72/-14.68	-12.09/-9.74	-8.86/-8.71	-9.11/-10.54	-11.87/-13.2	-15.25/-15.95	-15.28/-13.89	-12.65/-12.32	-13.18/-14.06	-15.84/-17.67	-17.94/-19.12	-17.6/-17.76	-17.42/-17.59	-16.9/-15.58	-14.92/-14.43	-13.87/-12.43	-11.82/-10.85
Freq(Hz)	5.2G/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°)	-18.62/-18.96	-18.55/-17.04	-14.9/-12.94	-11.58/-11.37	-11.06/-10.12	-10.06/-9.59	-8.15/-7.86	-7.99/-8.76	-9.17/-9.97	-10.01/-11.11	-10.34/-11.98	-14.29/-17.47	-18.39/-18.47	-18.42/-19.35	-18.04/-18.57	-17.66/-15.56	-13.74/-12.15	-11.27/-10.47	-9.97/-10.81	-11.41/-12.98	-14.49/-16.42	-17.79/-18.37	-18.09/-18.67	-19.13/-18.62
Θ (7.5°)	-13.48/-13.4	-17.07/-18.5	-17.36/-14.1	-12.4/-11.37	-9.84/-9.09	-9.35/-10.03	-11.52/-11.95	-13.14/-14.04	-15.44/-16.58	-17.89/-17.55	-17.48/-17.43	-14.56/-13.68	-14.03/-14.23	-14.95/-16.39	-15.14/-14.15	-13.59/-12.3	-12.04/-10.74	-9.68/-10.5	-8.6/-7.75	-7.62/-7.2	-8.05/-8.31	-8.73/-9.58	-9.85/-10.56	-11.36/-12.76
Θ (15°)	-8.47/-7.84	-7.66/-7.97	-8.57/-8.53	-8.37/-7.29	-6.07/-6.3	-6.56/-6.6	-6.18/-5.55	-4.88/-4.68	-5.04/-6.14	-7.71/-10.27	-12.83/-13.88	-12.08/-10.99	-9.71/-9.17	-9.24/-8.69	-8.61/-8.61	-6.91/-7.2	-7.4/-8.96	-9.16/-9.75	-10.26/-10.98	-11.34/-11.29	-11.36/-10.25			
Θ (22.5°)	-6.73/-4.59	-3.86/-3.99	-4.73/-5.04	-4.99/-4.68	-5.48/-7.11	-9.83/-12.12	-13.58/-13.95	-11.59/-8.61	-6.36/-5.17	-4.72/-4.38	-4.21/-4.02	-4.92/-6.13	-7.85/-9.04	-9.09/-9.17	-8.34/-6.95	-5.71/-5.32	-4.67/-4.43	-4.48/-4.92	-5.2/-4.44	-5.21/-6.72	-7.79/-7.96	-8.24/-8.01	-8.22/-8.59	-8.23/-6.88
Θ (30°)	-4.12/-4.77	-5.4/-6.53	-9.22/-12.11	-12.97/-10.81	-12.84/-18.86	-12.92/-9.21	-11.25/-13.62	-14.75/-14.64	-13.83/-16.67	-18.06/-18.96	-15.51/-8.13	-4.95/-4.2	-4.18/-4.05	-4.34/-5.13	-5.56/-4.99	-3.61/-3.04	-2.93/-3.05	-3.43/-5.01	-5.23/-3.79	-3.6/-5.02	-6.72/-6.2	-5.5/-4.97	-4.51/-4.41	-3.81/-4.78
Θ (37.5°)	-5.71/-7.69	-10.03/-13.92	-15.46/-11.16	-9.09/-8.54	-9.99/-8.76	-3.2/-4.19	-4.08/-3.6	-3.85/-4.2	-3.75/-4.75	-6.79/-4.23	-8.25/-8.8	-9.39/-8.29	-6.91/-4.71	-2.87/-2.47	-3.39/-3.31	-2.23/-2.58	-2.46/-3.2	-3.81/-4.09	-3.66/-2.85	-2.06/-2.19	-3.29/-4.8			
Θ (45°)	-15.2/-10.12	-5.74/-5.3	-4.45/-2.45	-1.86/-2.26	-1.6/-2.19	-2.9/-2.51	-1.08/-1.46	-2.74/-4.02	-4.15/-3.61	-4.14/-5.96	-6.84/-5.35	-5.06/-7.33	-11.57/-14.49	-7.61/-3.99	-2.49/-1.74	-1.36/-3.97	-5.33/-3.42	-2.17/-2.32	-2.68/-2	-1.49/-2.05	-3.77/-5.45	-4.87/-2.91	-2.13/-4.48	-9.96/-13.85
Θ (52.5°)	-4.02/-1.53	-0.33/-0.75	-0.99/-0.8	-2.26/-2.41	-6.77/-9.07	-7.6/-6.69	-9.87/-11.02	-7.52/-6	-5.36/-5.33	-5.39/-3.49	-4.08/-3.74	-5.05/-5.07	-4.1/-4.53	-7.09/-8.51	-7.23/-9.53	-4.72/-5.1	-5.3/-6.25	-5.59/-7.12	-6.8/-6.14	-5.41/-3.92	-4.1/-6.5	-7.76/-6.34		
Θ (60°)	0.61/24	0.13/-1.98	-3.4/-4.73	-5.59/-4.9	-6.7/-3.14	-2.34/-4.04	-5.53/-4.38	-6.84/-8.28	-6.75/-4.06	-3.75/-2.28	-1.07/-1.76	-0.68/-3.71	-5.33/-4.33	-3.81/-6.21	-8.99/-6.45	-3.77/-5.92	-11.22/-6.72	-3.69/-4.27	-6.7/-6.29	-3.57/-5.38	-6.67/-4.52	-4.48/-3.81	-4.45/-2.74	-0.8/-13
Θ (67.5°)	-2.64/-4.95	-6.38/-4.47	-2.010	0.930/22	-0.89/1.17	1.530/39	-0.11/69	1.74/-0.47	-3.05/-3.11	-3.6/-9.57	-6.67/-2.85	-2.35/-3.02	-2.55/-2.03	-1.41/-2.5	-2.92/-4.83	-2.05/-2.37	-8.35/-5.82	-2.12/-3.57	-5.16/-4.29	-1.44/-2.31	-3.23/-0.84	-1.02/-1.19	-0.850/-14	1.01/-0.52
Θ (75°)	-4.34/-6.22	-3.81/-2.1	-1.020/53	0.02/-1.13	-0.920/53	0.960/38	-0.820/-14	1.080/89	0.290/52	1.310/-16	-2.89/-4.92	-12.21/-8.02	-2.06/-2.98	-2.9/-2.57	-1.56/-2.09	-3.22/-3.31	-9.26/-2.78	0.67/-0.42	-1.8/-1.82	0.02/-0.51	-3.36/-2.14	-3.92/-4.82	-4.82/-3.02	-1.76/-2.95
Θ (82.5°)	-3.41/-3.28	-1.64/-2.99	-4.22/-4.69	-4.53/-5.82	-6.49/-5.21	-3.84/-4.53	-7.46/-3.27	-2.75/-4.36	-6.34/-4.74	-1.680/67	-2.27/-1.16	-6.68/-8.59	-3/-2.83	-4.28/-4.02	-3.74/-1.41	-5.71/-3.53	-3.96/-2.1	0.75/-1.73	-4.58/-2.62	-0.41/-3.48	-5.77/-4.21	-3.17/-3.72	-5.68/-2.09	-1.23/-0.25
Θ (90°)	-3.98/-2.98	-2.26/-3.03	-4/-1.53	0.230/1	0.51/145	1.80/02	-1.49/-0.33	0.540/3	-0.6/-1.3	-1/-0.24	-3.51/-0.55	-3.55/-2	-1.87/-2.33	-2.85/-2.54	-2.42/-0.64	-0.3/-2.71	-6.19/-3.01	0.18/-3.03	-3.7/-4.19	-1.65/-3.79	-3.05/-0.19	-1.24/-5.86	-3.78/-1.39	-0.99/-1.5
Θ (97.5°)	-6.33/-7.1	-7.86/-8.31	-8.4/-4.22	-3.45/-3.21	-0.93/-145	-3.02/-4.85	-3.45/-4.16	-4.69/-2.81	-1.64/-2.89	-0.72/-0.33	-4.9/-1.24	-5.46/-1.28	-1.39/-2.73	-11.07/-8.37	-6.53/-3.31	0.31/-1.3	-3.99/-6.71	-4.29/-7.34	-5/-2.29	-2.97/-6.36	-5.34/-2.29	-4.93/-3.82	-10.33/-6.65	-5.11/-4.41
Θ (105°)	-7.86/-14.96	-13.33/-10.36	-9.94/-10.06	-10.68/-15.2	-15.43/-10.08	-7.28/-11.17	-18.36/-6.98	-6.81/-11.24	-17.81/-11.05	-17.28/-17.57	-14.54/-6.81	-6.14/-9	-3.04/-4.82	-7.29/-6.33	-6.33/-8.14	-7.34/-104	-5.97/-39	-3.81/-8.15	-11.21/-7.36	-3.18/-7.34	-9.27/-7.77	-5.11/-11.2	-9.71/-6.56	-4.65/-5.84
Θ (112.5°)	-7.72/-10.92	-9.84/-8.91	-7.28/-3.98	-2.19/-2.3	-1.51/-0.99	-0.91/-2.07	-0.99/-1.08	0.57/-1.15	-3.98/-4.86	-4.71/-11.05	-14.34/-18.81	-11.64/-18.79	-6.54/-5.83	-7.98/-9.09	-5.95/-3.14	-6.14/-11.95	-12.24/-6.65	-3.64/-10.78	-12.7/-18.42	-5.48/-11.93	-7.71/-4.55	-7.1/-9.36	-8.81/-5.08	-5.47/-6.41
Θ (120°)	-14.56/-13.22	-10.79/-9.59	-7.58/-5.2	-4.11/-15.9	-4.24/-6.5	-5.72/-6.51	-3.68/-4.51	-4.55/-5.1	-6.47/-12.52	-12.36/-9.02	-5.21/-6.04	-13.22/-18.75	-8.72/-4.34	-4.39/-3.86	-3.35/-3.84	-8.14/-15.95	-18.76/-8.6	-6.39/-18.02	-14.35/-13.14	-13.27/-14.8	-10.94/-7.18	-9.56/-9.97	-9.21/-8.91	-10.62/-11.89
Θ (127.5°)	-8.71/-7.19	-7.1/-5.13	-4.21/-5.04	-6.59/-10.59	-8.74/-8.48	-7.47/-8.5	-10.03/-6.28	-5.76/-6.6	-8.73/-8.55	-7.21/-11.42	-17.53/-15.92	-18.39/-17.87	-14.18/-6.07	-8.39/-11.79	-10.02/-7.29	-9.78/-14.86	-15.41/-15.07	-17.92/-17.53	-17.78/-11.02	-10.71/-16.02	-12.13/-18.11	-17.11/-17.16	-16.65/-18.48	-18.67/-14.15
Θ (135°)	-14.19/-11.31	-11.43/-11.85	-11.58/-9.98	-8.63/-8.05	-6.45/-9.4	-6.25/-5.28	-5.28/-4.44	-5.56/-9.34	-1.11/-9.85	-8.86/-10.88	-13.14/-13.32	-18.63/-11.6	-9.42/-19.07	-16.15/-14.45	-18.92/-17.37	-12.23/-10.29	-9.95/-14.15	-15.43/-10.3	-13.44/-16.87	-9.35/-9.8	-14.76/-11.01	-9.45/-12.57	-12.52/-15.58	-11.07/-9.58
Θ (142.5°)	-17.37/-17.21	-13.64/-9.73	-7.5/-6.67	-4.63/-4.45	-5.18/-5.93	-6.95/-8.62	-10.69/-8.74	-6.94/-7.89	-10.64/-8.43	-7.27/-7.26	-6.82/-6.03	-6.83/-8.94	-9.21/-8.52	-11.31/-9.14	-15.77/-14.51	-1.136/-6.77	-5.79/-1.15	-8.96/-13.05	-14.94/-13.57	-10.44/-8.27	-8.71/-7.64	-6.42/-7.41	-8.79/-9.99	-10.01/-11.36
Θ (150°)	-8.91/-12.02	-11.34/-8.02	-5.95/-5.23	-5.74/-6.66	-8.4/-9.1	-7.72/-7.3	-7.52/-6.99	-5.54/-5.48	-5.01/-6.11	-8.98/-12.55	-14.75/-9.93	-5.56/-4.96	-6.28/-6.65	-13.22/-10.85	-11.02/-11.41	-11.45/-11.54	-9.54/-6.3	-5.31/-7.66	-11.94/-13.98	-11.07/-6.66	-8.18/-8.32	-7.24/-7.05	-7.05/-6.44	-5.91/-6.79
Θ (157.5°)	-6.1/-7.18	-8.08/-7.82	-6.91/-6.04	-5.69/-5.21	-5.99/-6.48	-7.25/-8.72	-11.72/-14.97	-16.49/-16.07	-15.67/-12.81	-12.68/-13.57	-14.98/-14	-12.05/-15.2	-16.66/-11.78	-7.09/-6.53	-13.92/-8.51	-6.58/-6.89	-8.42/-7.28	-8.66/-10.59	-12.35/-12.54	-11.89/-8.88	-8.49/-8.46	-7.87/-6.89	-6.09/-5.91	-5.



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ (165°)	-18.32/-19.17	-14.86/-13.03	-11.43/-12.47	-12.53/-11.72	-11.81/-11.39	-12.61/-14.16	-14.47/-13.85	-16.38/-17.84	-18.71/-16.76	-12.34/-10.65	-12.36/-19.3	-18.96/-14.36	-19.05/-18.81	-17.84/-17.21	-18.51/-18.01	-17.67/-18.65	-18.32/-17.71	-14.95/-16.1	-16.31/-17.58	-17.69/-15.21	-14.41/-17.26	-18.59/-18.18	-18.05/-17.51	-18.39/-17.63
Θ (172.5°)	-17.32/-18.52	-18.27/-14.88	-12.47/-11.79	-10.84/-10.08	-10.72/-11.11	-12.76/-15.28	-16.1/-16.63	-14.97/-12.1	-9.44/-8.54	-7.75/-8.46	-9.3/-9.21	-9.71/-11.04	-12.54/-12.46	-12.18/-13.76	-17.64/-17.63	-19.35/-14.97	-10.49/-9.24	-8.12/-7.85	-8.63/-8.58	-9.22/-9.22	-8.44/-8.64	-9.1/-9.1	-10.91/-15.11	-19.5/-18.5
Θ (180°)	-18.25/-15.62	-15.05/-13.12	-11.65/-11.92	-12.41/-12.95	-16.67/-19.42	-19.16/-18.92	-18.36/-19.19	-16.53/-13.78	-11.23/-10.35	-9.58/-9.13	-8.93/-4.73	-9.41/-10.95	-11.98/-12.93	-13.28/-11.89	-10.72/-10.04	-9.37/-8.73	-8.27/-6.7	-8.63/-7.59	-8.44/-8.92	-9.63/-10.26	-10.71/-1.53	-13.81/-14.7	-17.49/-18.4	-18.89/-18.89
Freq(Hz)	5.6GPol.	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°)	-17.52/-18.75	-18.89/-18.35	-15.76/-14.22	-12.51/-12.34	-11.79/-11.1	-10.69/-11.41	-12.31/-12.34	-12.19/-12.7	-12.89/-12.31	-18.02/-18.73	-17.96/-18.06	-18.43/-18.55	-18.29/-19.24	-18.16/-17.52	-18.16/-17.52	-18.27/-12.39	-14.78/-13.59	-13.27/-12.39	-12.96/-12.62	-12.21/-12.29	-12.88/-13.85	-15.91/-16.08	-15.96/-19.63	-19.54/-18.15
Θ (7.5°)	-18.04/-19.3	-17.98/-17.71	-16.16/-15.23	-14.87/-13.81	-12.88/-13.98	-13.37/-12.43	-11.67/-12.53	-12.41/-12.63	-12.41/-12.67	-11.89/-11.17	-11.47/-13.1	-14.56/-17.02	-18.52/-17.15	-14.65/-13.99	-13.02/-12.21	-11.18/-10.77	-10.31/-9.55	-8.91/-8.73	-8.73/-8.84	-8.71/-9.24	-9.57/-10.42	-11.57/-12.22	-14.02/-13.37	-14.17/-14.76
Θ (15°)	-11.16/-12.36	-13.44/-13.64	-13.99/-12.97	-14.95/-17.97	-17.1/-13.37	-10.7/-9.94	-9.54/-10.79	-12.8/-12.65	-6.9/-7.42	-7.66/-9.75	-11.86/-15.55	-17.76/-17.81	-14.7/-13.1	-11.35/-10.62	-10.9/-10.14	-11.57/-12.37	-12.92/-12.01	-12.83/-12.68	-13.33/-13.53	-14.16/-13.26	-12.54/-11.35	-12.04/-10.71	-9.97/-10.68	
Θ (22.5°)	-10.6/-11.8	-13.06/-13.06	-14.42/-16.86	-17.66/-15.55	-10.43/-7.5	-5.27/-4.52	-5.57/-6.64	-5.81/-4.92	-4.97/-4.88	-4.83/-5.23	-6.2/-8.06	-9.59/-9.65	-11.09/-11.25	-12.53/-14.01	-16.73/-14.47	-11.06/-9.89	-9.51/-10.77	-11.1/-10.13	-9.71/-9.77	-11.09/-11.57	-11.41/-12.13	-14.75/-16.84	-14.36/-10.99	-10.14/-10.08
Θ (30°)	-10.48/-7.67	-8.06/-10.62	-10.74/-9.07	-9.17/-8.42	-9.96/-11.4	-11.99/-15.82	-18.23/-16.85	-15.66/-18.21	-17.3/-14.5	-7.65/-4.2	-2.93/-3.18	-4.37/-4.61	-6.01/-7.46	-9.56/-12.57	-18.66/-18.03	-17.39/-16.61	-18.88/-17.83	-18.12/-18.99	-18.39/-18.87	-18.09/-16.27	-15.54/-13.37	-16.94/-17.33	-17.73/-17.2	-15.36/-12.91
Θ (37.5°)	-3.67/-3.34	-5.67/-7.75	-6.73/-5.9	-7.37/-10.28	-16.26/-15.87	-12.77/-12.8	-11.33/-8.55	-8.47/-6.24	-5.35/-6.65	-6.9/-7.47	-10.74/-11.82	-7.65/-6.89	-3.87/-5.1	-5.72/-9.11	-14.47/-18	-16.88/-12.04	-11.41/-13.72	-19.31/-17.98	-13.26/-14.2	-13.48/-13.13	-11.22/-11.14	-11.32/-11.44	-10.61/-9.16	-8.56/-6.36
Θ (45°)	-1.45/-3.13	-6.3/-6	-4.99/-7.06	-10.24/-7.94	-8.93/-6.68	-5.33/-4.73	-5.87/-10.36	-12.77/-8.6	-9.3/-12.4	-8.81/-4.04	-3.04/-4.75	-6.7/-8.98	-4.13/-2.69	-2.42/-3.96	-8.1/-6.32	-4.96/-4.91	-3.48/-5.66	-10.14/-15.66	-4.58/-4.24	-7.55/-9.24	-6.48/-4.21	-4.48/-5.09	-4.27/-2.11	
Θ (52.5°)	-5.72/-9.76	-10.03/-10.15	-11.22/-5.84	-3.4/-4.6	-5.42/-6.85	-5.87/-4.51	-2.97/-2.32	-2.62/-4.35	-6.92/-7.06	-6.97/-12.06	-9.76/-6.27	-3.87/-3.91	-4.95/-3.41	-2.01/-2.23	-3.89/-6.02	-3.25/-4.59	-5.63/-6.16	-6.34/-6.14	-7.47/-8.59	-5.52/-4.86	-4.62/-6.52	-4.41/-1.74	-2.5/-3.93	-4.04/-4.44
Θ (60°)	-0.96/-4.44	-3.09/-1.67	-1.26/-2.05	-2.88/-2.99	-1.91/-2.99	-3.3/-4.74	-2.52/-5.17	-4.01/-1.2	-0.21/-3.21	-3.20	-2.36/-5.86	-7.16/-9.47	-11.62/-10.02	-4.38/-3.68	-5.49/-8.51	-8.59/-6.85	-9.18/-16.05	-17.41/-11.05	-7.85/-6.27	-6.65/-5.08	-5.78/-8.15	-4.95/-3.46	-5.08/-6.02	-4.39/-6.47
Θ (67.5°)	0.550/-0.49	-0.76/-1.58	-2.64/-4.16	-5.77/-5.95	-4.7/-9.63	-9.33/-8.52	-6.71/-5.75	-7.03/-7.4	-4.89/-7.99	-4.68/-9.1	-0.34/-1.58	-3.44/-4.6	-2.19/-2.2	-7.27/-6.96	-5.24/-3.76	-6.17/-6.15	-3.04/-4.62	-5.82/-4.74	-1.43/-2.7	-4.33/-4.78	-2.83/-2.11	-1.68/-1.72	-3.61/-1.89	-0.84/-1.15
Θ (75°)	-1.31/-2.61	-4.39/-5.06	-2.31/-2.72	-0.830/-28	2.371/39	1.750/6	-0.250/-7	0.210/96	-0.45/-1.46	-2.02/-2.9	-6.76/-4.68	-2.66/-3.65	0.030/29	-1.57/-4.85	-8.2/-3.23	0.24/-1.66	-1.18/-2.26	4.47/-5.44	-0.97/-1.6	-2.37/-1.03	0.27/-0.18	-0.04/-3.29	-3.190/-46	0.91/-0.27
Θ (82.5°)	-2.87/-1.64	-1.69/-2.46	-1.87/-3.61	-3.28/-2.05	-0.61/-2.73	-2.46/-2.58	-0.58/-1.3	-3.370/-2.4	0.53/-0.56	-0.580/-17	-4.74/-4.09	-5.05/-3.94	1.94/-4.85	-6.75/-5.12	-5.74/-9.3	-1.55/-1.94	-1.99/-1.36	-5.12/-8.26	-4.93/-2.84	-4.24/-1.26	-2.63/-2.02	-2.78/-4.47	-4.23/-2.44	-1.29/-1.8
Θ (90°)	-4.28/-3.01	0.01/-1.8	-1.25/-3.9	-2.66/-1.45	-0.15/-1.49	0.19/-0.63	-1.71/-0.95	-1.67/-2.29	-4.82/-3.44	-3.67/-4.07	-5.67/-3.49	-3.66/-2.73	0.95/-3.17	-3.84/-4.99	-6.32/-3.42	-4.160/-32	-1.23/-0.24	-0.51/-3.97	-3.82/-1.46	-1.930/-34	-0.9/-3.6	-3.82/-4.2	-4.68/-2.64	1.0/-0.4
Θ (97.5°)	-6.86/-2.11	0.12/-2.35	-0.86/-2.39	-1.710/-5.2	1.9/0.74	0.760/94	-0.89/-1.12	0.060/76	-2.150/-15	-1.11/-68	-2.12/-2.8	-4.7/-13	-3.71/-2.27	-4.22/-4.06	-3.89/-0.9	-1.05/-1.69	-3.650/-67	0.960/5.07	-1.57/-1.53	-1.32/-0.43	0.67/-1.52	-1.57/-6.45	-7.12/-1.39	-0.12/-4.37
Θ (105°)	-4.2/-5.36	-5.68/-7.95	-10.09/-17.86	-10.85/-6.52	-6.6/-10.74	-18.89/-13.68	-11.12/-18.3	-8.59/-5.73	-7.83/-3.96	-1.99/-2.11	-5.41/-5.4	-2.72/-5.65	-3.88/-7.54	-15.12/-22	-8.7/-2.86	-3.93/-4.85	-17.14/-5.44	-6.85/-15.77	-7.47/-8.68	-9.19/-7.73	-3.66/-9.04	-8.7/-10.4	-15.82/-6.95	-7.67/-9.3
Θ (112.5°)	-7.55/-12.01	-9.06/-9.82	-7.28/-6.1	-6.35/-5.78	-6.64/-6.63	-3.41/-6.63	-3.25/-0.4	-2.06/-4.77	-6.38/-15.32	-1.67/-3.102	-6.16/-6.33	-5.15/-6.97	-9.75/-12.76	-18.51/-18.48	-5.85/-7.32	-11.96/-9.7	-4.56/-18.19	-9.4/-9.79	-3.9/-8.9	-9.45/-10.1	-9.95/-18.66	-6.98/-4.87	-3.49/-2.4	
Θ (120°)	-9.91/-14.36	-12.49/-7.82	-4.03/-2.67	-1.49/-1.24	-0.69/-3.52	-2.95/-3.15	-1.35/-1.75	-1.44/-1.96	-4.28/-10.48	-6.33/-4.26	-7.32/-7.72	-8.71/-6.77	-3.33/-5.01	-6.87/-7.18	-7.7/-6.68	-3.12/-8.59	-10.75/-5.29	-5.51/-16.99	-8.78/-6.7	-9.67/-7.09	-8.62/-8.35	-7.2/-4.9	-6.75/-6.28	-6.89/-7.23
Θ (127.5°)	-14.66/-13.06	-7.2/-6.44	-6.31/-4.57	-3.74/-4.23	-5.64/-6.47	-8.18/-13.65	-14.24/-8.98	-6.59/-9.3	-17.26/-14.7	-10.15/-9.2	-8.05/-5.66	-11.61/-12.31	-7.57/-6.84	-7.13/-10.15	-9.38/-6.3	-9.74/-16.69	-10.6/-4.03	-5.91/-7.5	-18.17/-8.8	-10.53/-5.38	-6.83/-14.9	-14.36/-13.24	-9.04/-12.23	-12.79/-18.05
Θ (135°)	-17.67/-10.67	-7.7/-8.02	-5.93/-4.56	-5.56/-6.5	-7.73/-7.99	-6.87/-5.68	-4.71/-4.11	-3.42/-4.56	-6.38/-5.58	-7.56/-14.44	-12.73/-9.15	-10.98/-18.85	-13.49/-9.01	-7.36/-10.19	-9.51/-8.76	-17.15/-14.82	-17.74/-9.81	-8.19/-11.22	-18.36/-15.6	-14.25/-17.64	-11.58/-12.67	-13.03/-9.69	-9.85/-15.3	-18.39/-18.35
Θ (142.5°)	-16.43/-17.66	-19.17/-17.51	-15.5/-11.72	-11.04/-6.91	-5.64/-5.98	-5.75/-5.35	-4.65/-4.82	-6.7/-8.2	-11.6/-11.26	-12.8/-18.4	-16.26/-15.82	-11.57/-5.9	-4.82/-8.26	-10.88/-10.83	-18.06/-17.35	-18.17/-10.16	-8.35/-6.9	-7.2/-13.69	-18.56/-13.16	-7.25/-8.03	-12.08/-16.59	-13.55/-13.98	-18.52/-17.75	-16.43/-14.9
Θ (150°)	-6.37/-7.32	-8/-7.76	-6.18/-3.76	-1.96/-0.65	-0.7/-0.2	-4.5/-5.89	-6.56/-7.08	-6.86/-6.68	-9.16/-14.75	-13.31/-16.43	-18.47/-19.29	-18.07/-10.08	-9.01/-7.72	-6.44/-5.61	-5.8/-8.24	-9.17/-7.35	-5.72/-5.6	-10.85/-10.5	-7.81/-6.73	-8.4/-6.77	-4.94/-3.83	-4.13/-4.75	-6.35/-6.39	
Θ (157.5°)	-6.57/-6.87	-8.05/-8.69	-9.02/-8.85	-10.18/-10.52	-8.61/-7.68	-7.41/-6.83	-6.76/-6.99	-11.78/-11.78	-11.42/-11.15	-10.56/-11.72	-11.11/-11.23	-8.87/-6.29	-4.84/-4.59	-5.56/-6.21	-10.33/-13.13	-12.37/-11.04	-10.6/-11.63	-12.36/-14.38	-18.8/-18.09	-16.88/-16.73	-14.39/-12.65	-11.6/-9.43	-9.2/-7.81	-7.7/-6.9
Θ (165°)	-9.78/-10.84	-11.41/-10.99	-9.9/-8.43	-7.14/-5.43	-4.69/-5.87	-4.86/-12.17	-18.85/-19.53	-18.34/-17.88	-13.44/-9.89	-9.91/-9.72	-11.73/-12.16	-11.78/-9.63	-9.04/-9.27	-8.78/-8.58	-8.34/-8.34	-6.81/-7.17	-7.33/-8.27	-8.87/-8.42	-8.08/-7.92	-7.87/-7.85	-7.66/-7.85	-7.36/-7.47	-8.4/-9.26	
Θ (172.5°)	-4.73/-4.18	-4.6/-4.93	-5.17/-5.66	-6.46/-7.77	-10.82/-14.9	-16.48/-15.06	-13.25/-14	-18.31/-18.6	-18.95/-18.02	-18.42/-19.07	-14.48/-11.45	-9.35/-7.66	-7.42/-7.03	-6.25/-5.84	-5.28/-4.82	-4.71/-5.02	-6.67/-9.36	-10.45/-13.38	-15.31/-16.62	-15.17/-17.73	-18.95/-17.84	-17.53/-12.99	-10.26/-8.2	-6.71/-5.43
Θ (180°)	-8.49/-9.18	-11.55/-14.58	-17.34/-17.39	-18.88/-17.44	-17.78/-15.82	-12.86/-11.23	-10.33/-12.04	-14.29/-15.77	-18.03/-15.15	-11.14/-10.58	-10/-10.3	-10.41/-11.19	-11.86/-12.12	-11.47/-11.24	-11.92/-12.08	-11.79/-12.69	-13.44/-16.34	-16.62/-17.76	-17.89/-16.5	-13.24/-10.8	-9.42/-8.6	-7.4/-6.56	-6.41/-7.01	-7.37/-7.86
Freq(Hz)	5.785GPol.	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°)	-10.25/-11.18	-11.36/-11.44	-11.8/-12.56	-13.98/-17.04	-18.32/-18.06	-17.72/-18.24	-18.38/-13.97	-13.12/-18.81	-10.73/-10.61	-10.94/-10.84	-10.2/-10.2	-10.87/-9.66	-10.28/-10.78	-11.24/-13.3	-13.18/-13.96	-15.91/-16.86	-18.95/-18.5	-18.52/-18.39	-18.47/-18.71	-18.98/-18.48	-18.04/-18.99	-17.87/-13.72	-12.37/-11.28	-10.73/-10.31
Θ (7.5°)	-13.33/-15.53	-14.97/-15.93	-18.05/-19.16	-18.63/-17.56	-19.04/-17.33	-18.29/-19.32	-18.49/-18.26	-19.07/-18.04	-18.95/-18.43	-17.65/-18	-14.72/-11.35	-9.43/-8.17	-7.99/-8.67	-7.81/-7.91	-9.17/-10.91	-12.7/-14.4	-18.36/-17.51	-17.41/-18.47	-17.39/-16.92	-15.41/-14.43	-14.41/-14.25	-12.54/-10.69	-9.31/-10.21	-10.83/-11.35
Θ (15°)	-19.22/-19.13	-18.19/-17.54	-18.53/-1																					



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ(15°)	-9.27/-9.03	-9.19/-9.09	-8.81/8.65	-8.38/-8.12	-7.59/-7.61	-7.56/-8.7	-8.69/-9.1	-9.21/-9.4	-10.03/-11.22	-11.71/-11.85	-12.28/-14.18	-16.16/-17.4	-17.15/-15.55	-14.91/-14.04	-12.72/-12.5	-12.1/-11.34	-10.9/-10	-9.12/-8.05	-7.43/-7.74	-8.64/-9.48	-10.66/-11.95	-13.49/-15.76	-15.79/-14.5	-12.08/-10.38
Θ(22.5°)	-7.2/-7.99	-9.52/-10.7	-10.75/-10.83	-11.68/-11.12	-10.61/-10.4	-10.02/-10.15	-10.46/-11.13	-10.83/-11.37	-11.61/-11.98	-11.2/-10.78	-11.13/-11.27	-11.23/-10.95	-10.49/-10.19	-10.03/-10.05	-9.99/-10.01	-10.63/-11.43	-11.67/-10.97	-10.24/-8.93	-8.28/-8.09	-8.67/-8.94	-9.13/-9.22	-9.12/-9.63	-9.26/-8.97	-8.5/-7.42
Θ(30°)	-7.62/-9.66	-13.16/-17.49	-17.92/-18.91	-18.03/-19.05	-18.42/-15.21	-12.9/-11.66	-11.53/-12.38	-13.12/-14.43	-15.01/-14.47	-12.75/-11.63	-10.85/-11.81	-8.73/-8.25	-8.1/-8.46	-8.86/-8.66	-9.81/-11.11	-11.83/-12.09	-11.64/-10.52	-12.44/-8.8	-8.22/-7.58	-6.85/-6.86	-5.93/-6.42	-6.76/-6.75	-6.67/-6.77	
Θ(37.5°)	-11.12/-14.35	-14.26/-11.4	-8.71/-7.29	-6.66/-6.72	-6.9/-7.32	-7.12/-6.61	-6.38/-6.91	-7.83/-8.38	-9.55/-11.25	-12.8/-13.25	-12.21/-9.94	-8.63/-7.74	-8.1/-8.62	-8.43/-7.9	-7.59/-7.63	-8.11/-9.03	-10.03/-10.58	-10.33/-9.88	-9.08/-8.69	-7.72/-6.21	-5/-5.56	-4.94/-5.77	-6.82/-7.51	-8.24/-9.14
Θ(45°)	-9.95/-7.47	-4.89/-3.16	-2.27/-1.81	-1.79/-1.67	-1.91/-2.2	-2.11/-1.78	-1.6/-1.52	-1.8/-1.25	-2.52/-3.69	-5.36/-7.45	-7.84/-6.78	-5.58/-5.58	-6.4/-7.64	-7.83/-7.04	-6.32/-5.94	-6.23/-6.91	-7.57/-8.13	-8.71/-9.06	-9.68/-9.94	-8.91/-7.39	-5.84/-4.78	-4.97/-6.14	-7.91/-9.24	-10.35/-10.95
Θ(52.5°)	-5.71/-3.25	-1.39/-0.47	-0.2/-0.44	-0.68/-0.67	-0.87/-1.1	-0.7/-0.09	0.36/-0.73	0.91/-0.87	0.45/-0.46	-2.01/-3.24	-3.71/-3	-2.19/-2.08	-3.31/-5.28	-6.41/-6.03	-5.39/-5.2	-6.12/-7.03	-7.73/-7.86	-7.31/-6.89	-6.06/-4.17	-2.96/-2.61	-3.52/-5.89	-9.06/-11.21	-10.52/-8.4	
Θ(60°)	-2.84/-1.31	-0.17/-0.43	0.43/-0.2	-0.84/-1.19	-1.55/-1.91	-1.8/-0.6	0.22/-0.73	1.24/-1.61	1.25/-0.18	-0.91/-1.68	-2.12/-1.53	-0.67/-0.55	-1.72/-3.55	-4.92/-5.23	-5.1/-5.04	-5.04/-5.08	-4.95/-4.92	-4.71/-4.37	-4.43/-4.86	-4.52/-3.19	-2.25/-2.47	-4.42/-8.25	-11.01/-8.09	-6.21/-4.76
Θ(67.5°)	-1.89/-1.25	-0.54/-0.15	-0.42/-0.95	-1.14/-1.48	-2.06/-2.87	-2.58/-1.07	-0.14/-0.07	0.49/-0.76	0.07/-1.24	-2.15/-2.53	-2.6/-2.34	-1.48/-1.02	-1.72/-2.93	-3.61/-3.56	-3.7/-3.27	-3.29/-3.28	-2.69/-2.2	-1.98/-2.01	-2.43/-3.86	-3.91/-3.21	-1.57/-2.38	-4.87/-6.2	-4.44/-2.81	-2.17/-2.29
Θ(75°)	-4.37/-4.18	-2.29/-2.1	-2.28/-3.05	-2.58/-2.05	-2.58/-3.57	-3.5/-1.66	-0.04/-0.1	0.23/-0.08	-0.92/-2.67	-3.77/-3.9	-3.93/-3.86	-3.23/-2.26	-2.09/-2.33	-2.36/-2.38	-2.01/-1.58	-1.63/-1.66	-1.24/-0.59	-1.11/-1.43	-1.86/-3.12	-2.54/-0.82	-0.39/-1.1	-2.77/-2.87	-1.71/-1.34	-1.89/-3.35
Θ(82.5°)	-8.18/-6.19	-3.04/-1.27	-1.06/-2.65	-2.69/-1.45	-1.28/-1.68	-1.94/-1.09	0.29/-0.22	0.18/-0.2	-0.69/-2.07	-3.04/-3.14	-3.18/-3.44	-3.55/-3.22	-3.12/-3.19	-3.02/-2.22	-1.6/-1.39	-1.36/-1.28	-0.68/-0.41	-1.01/-0.67	-0.64/-1.93	-1.49/-0.16	0.29/-0.83	-1.92/-1.2	-0.58/-1.57	-3.81/-6.72
Θ(90°)	-12.87/-8.39	-3.92/-1.37	-0.86/-2.31	-2.66/-0.91	-0.28/-0.33	-0.57/-0.03	0.99/-0.99	0.77/-0.72	-0.42/-1.81	-2.42/-2.13	-2.14/-2.24	-2.78/-3.42	-3.81/-3.72	-1.21/-1.26	-1.21/-1.18	-1.03/-0.88	-1.31/-0.64	-0.69/-1.95	-1.84/-0.51	-0.24/-1.26	-1.84/-6.09	-4.76/-8.28	-13.84/-18.45	-7.25/-12.03
Θ(97.5°)	-10.75/-7.65	-3.97/-1.93	-1.82/-2.99	-4.07/-2.43	-1.91/-2.12	-2.21/-1.34	0.02/-0.63	0.90/-86	-0.24/-1.74	-2.05/-1.83	-1.89/-2.13	-2.54/-3.14	-3.3/-3.07	-2.58/-2.39	-3.15/-3.39	-2.99/-2.69	-1.74/-0.52	-0.52/-1.46	-1.54/-1.11	-1.75/-3.46	-3.71/-2.35	-2.89/-5.87	-10.56/-12.65	
Θ(105°)	-11.81/-8.84	-5.73/-3.98	-3.8/-5.04	-5.53/-4.55	-4.63/-4.68	-4.76/-4.23	-2.77/-1.95	-1.03/-0.6	-1.62/-3.26	-3.3/-2.97	-2.84/-2.76	-2.34/-1.89	-1.88/-2.24	-2.94/-4.03	-5.43/-4.94	-4.13/-2.94	-2.65/-2.09	-1.71/-1.37	-1.44/-2.4	-3.42/-4.33	-6.18/-7.07	-4.49/-2.7	-3.46/-6.71	-11.59/-14.56
Θ(112.5°)	-16.89/-16.16	-10.79/-8.27	-8.46/-11.92	-13.28/-18.04	-9.01/-7.02	-6.94/-7.5	-6.42/-5.51	-3.9/-3.14	-4.18/-6.41	-7.1/-6.65	-6/-5.71	-5.09/-4.45	-4.03/-4.69	-6.19/-8.04	-7.89/-5.68	-3.87/-3.1	-3.46/-3.86	-3.97/-2.89	-2.05/-2.59	-7.41/-9.67	-4.53/-5.32	-4.76/-8.28	-13.84/-18.45	-10.52/-8.4
Θ(120°)	-16.8/-12.49	-8.83/-7.06	-7.8/-6.5	-11.39/-11.31	-7.92/-5.75	-5.64/-7.41	-9.44/-11.08	-10.19/-9.4	-11.32/-13.94	-13.69/-11.79	-9.55/-7.93	-7.35/-7.65	-7.89/-8.57	-8.34/-6.89	-4.96/-3.2	-2.23/-2.48	-3.59/-4.89	-2.55/-4.18	-5.81/-6.03	-5.98/-5.58	-4.41/-3.57	-4.11/-6.37	-10.43/-17.29	
Θ(127.5°)	-18.41/-14.93	-13.85/-12.02	-10.25/-9.58	-9.5/-9.04	-7.74/-6.47	-6.56/-8.02	-9.74/-12.05	-13.46/-14.91	-16.03/-16.96	-18.98/-18.16	-12.74/-9.17	-8.25/-8.73	-8.51/-8.35	-7.89/-7.57	-6.28/-4.64	-4.13/-4.97	-6.71/-7.22	-5.94/-4.75	-4.85/-6.02	-5.03/-4.13	-4.37/-5.15	-5.43/-5.44	-6.16/-8.47	-13.83/-19.2
Θ(135°)	-17.75/-17.25	-17.23/-11.51	-7.77/-6.07	-5.43/-5.31	-5.22/-4.98	-5.37/-6.38	-8.36/-11.4	-13.7/-12.9	-10.68/-10.46	-10.97/-11.04	-6.82/-8.23	-8.04/-8.35	-10.56/-11.45	-9.86/-9.65	-5.29/-4.18	-4.41/-5.59	-7.08/-6.88	-6.98/-6.57	-5.61/-5.29	-5.95/-6.65	-6.72/-5.68	-6.96/-7.84	-12.06/-17.55	
Θ(142.5°)	-14.56/-13.35	-11.09/-9.01	-7.15/-6	-5.53/-5.59	-5.73/-5.81	-5.96/-6.06	-6.77/-7.87	-13.75/-14.97	-16.06/-9.06	-15.86/-19.23	-11.67/-18.11	-18.57/-16.74	-15.82/-15.07	-16.56/-17.12	-17.54/-17.33	-17.86/-18.27	-19.39/-18.03	-18.29/-16.56	-15.92/-17.32	-19.37/-17.25	-15.93/-14.68	-13.11/-16.39	-10.6/-10.29	-9.99/-12.83
Θ(150°)	-15.11/-14.14	-12.79/-12.23	-11.18/-11.09	-11.5/-12.19	-12.32/-12.23	-12.17/-11.11	-10.14/-10.27	-10.56/-10.86	-11.1/-11.08	-10.11/-10.89	-11.99/-13.16	-14.3/-13.67	-12.02/-10.29	-8.43/-8.33	-9.44/-11.74	-6.84/-17.5	-16.24/-13.49	-12.11/-11	-10.22/-10.08	-9.82/-9.28	-8.79/-7.85	-6.87/-7.11	-7.8/-9.75	-12.08/-14.35
Θ(157.5°)	-16.1/-14.99	-15.37/-15.14	-15.43/-16.77	-18.78/-17.04	-18.54/-18.74	-18.86/-10.8	-18.34/-17.6	-16.12/-15.56	-15.01/-14.2	-12.82/-11.8	-12.31/-13.88	-17.09/-17.83	-17.08/-18.63	-18.57/-17.55	-18.3/-18.66	-13.4/-10.25	-8.15/-4.45	-7.51/-4.84	-9.8/-11.19	-11.96/-12.09	-11.21/-10.26	-9.74/-10.43	-11.71/-13.57	-14.55/-16.9
Θ(165°)	-17.38/-16.17	-16.27/-15.61	-14.95/-16.16	-15.31/-16.01	-15.56/-14.95	-15.39/-15.02	-15.7/-16.41	-15.65/-15.17	-14.17/-13.27	-12.15/-11.8	-10.59/-10.55	-11.18/-12.37	-13.22/-14.21	-14.6/-14.12	-12.96/-11.1	-9.54/-8.28	-7.51/-7.45	-7.89/-9.15	-11.16/-13.1	-16.22/-17.27	-18.78/-17.85	-16.98/-17.21	-18.18/-18.87	-19.41/-18.5
Θ(172.5°)	-17.74/-18.94	-17.65/-18.77	-17.02/-16.68	-16.15/-16.11	-15.4/-15.03	-14.66/-14.37	-13.07/-13.11	-12.54/-12.76	-12.6/-11.85	-11.58/-11.01	-10.65/-10.39	-10.34/-11.06	-11.85/-12.18	-12.02/-11.53	-11.4/-11.07	-11.02/-10.76	-10.87/-11.56	-12.6/-14.63	-18.28/-18.93	-17.83/-16.65	-18.07/-19.43	-18.87/-18.71	-17.87/-18.79	-18.79/-19.3
Θ(180°)	-18.82/-18.18	-17.4/-18.68	-18.09/-18.72	-17.9/-19.3	-19.3/-17.89	-18.75/-18.75	-18.5/-17.6	-16.04/-15.95	-15.1/-14.18	-13.75/-12.86	-12.49/-12.09	-11.75/-12.59	-13.58/-13.81	-14.82/-15.06	-15.4/-16.21	-16.13/-17.44	-18.48/-18.76	-18.81/-17.34	-15.49/-14.37	-13.41/-13.01	-12.92/-12.43	-12.93/-13.32	-14.08/-15.48	-16.62/-18.62
Freq[Hz]	5.20/Pol.	Phi/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-15.31/-13.26	-12.67/-14.84	-16.78/-17.65	-15.54/-13.4	-15.28/-18.82	-18.9/-18.42	-19.05/-17.41	-18.29/-14.14	-11.74/-10.54	-8.79/-10.28	-12.02/-11.82	-10.91/-8.8	-8.54/-9.39	-15.89/-13.39	-12.84/-14.36	-13.89/-17.96	-19.26/-17.5	-17.81/-18.18	-18.9/-18.1	-19.11/-18.73	-18.31/-16.39	-15.3/-15.1	-16.8/-16.5	
Θ(7.5°)	-11.67/-10.9	-10.08/-9.85	-11.81/-13.17	-13.98/-12.71	-13.75/-14.97	-16.06/-9.06	-15.86/-19.23	-11.67/-18.11	-18.57/-16.74	-15.82/-15.07	-16.56/-17.12	-17.54/-17.33	-17.86/-18.27	-19.39/-18.03	-18.29/-16.56	-15.92/-17.32	-19.37/-17.25	-15.93/-14.68	-13.11/-16.39	-10.6/-10.29	-9.99/-12.83			
Θ(15°)	-11.76/-12.37	-11.58/-11.48	-12.7/-16.74	-18.85/-18.03	-18.3/-18.06	-18.7/-19.16	-18.52/-18.98	-18.82/-18.23	-19.13/-18.38	-18.46/-19.02	-18.54/-17.89	-15.38/-14.27	-14.41/-13.4	-12.22/-11.89	-10.76/-11.44	-12.93/-15.52	-18.97/-18.82	-18.79/-18.23	-17.79/-15.72	-14.13/-13.89	-14.37/-15.26	-18.48/-18.57	-17.77/-18.52	-14.73/-12.09
Θ(22.5°)	-8.1/-11.11	-13.44/-15.25	-18/-18.42	-16.21/-14.38	-15.71/-17.2	-19.14/-18.2	-19.23/-18.69	-19.1/-18.11	-18.64/-18.23	-14.68/-13.73	-12.89/-11.93	-12.09/-13.86	-16.85/-16.78	-13.52/-10.57	-8.81/-7.65	-8.02/-10.73	-13.76/-14.84	-14.47/-18.19	-18.23/-14.07	-11.53/-12.32	-11.82/-13.54	-18.46/-18.41	-17.41/-13.66	-12.03/-9.66
Θ(30°)	-12.59/-12.75	-13.47/-16.55	-14.95/-12.78	-12.84/-14.11	-15.6/-15.9	-14.61/-13.75	-14.41/-16.26	-18.78/-17.45	-15.09/-11.44	-13.28/-10.95	-13.02/-15.04	-17.13/-18.97	-18.67/-17.36	-18.83/-16.02	-12.57/-10.14	-8.55/-9.14	-11.82/-13.91	-18.64/-17.97	-18.12/-17.14	-18.33/-16.67	-13.92/-13.98	-16.63/-17.18	-19.19/-19.08	-11.74/-11.67
Θ(37.5°)	-17.22/-12.73	-12.27/-13.52	-11.05/-10.97	-11.51/-12.82	-13.02/-12.72	-14.17/-15.32	-17.78/-17.17	-18.36/-13.31	-10.33/-10.65	-11.24/-12.76	-15.11/-15.98	-15.72/-19.3	-18.23/-17.75	-18.88/-18.66	-19.3/-18.28	-12.99/-11.68	-13.89/-16.74	-17.52/-18.25	-18.57/-18.19	-17.13/-16.18	-14.99/-17.11	-18.24/-18.27	-18.21/-12.04	-8.66/-9.3
Θ(45°)	-15.1/-13.61	-19.04/-13.66	-16.06/-18.1	-17.94/-17.99	-15.9/-13.29	-16.16/-17.94	-18.58/-18.2	-14.63/-9.78	-8.9/-10.91	-11.69/-11.76	-16.57/-10.98	-16.85/-18.46	-18.51/-18.06	-14.91/-15.28	-17.97/-15.07	-12.55/-11.22	-10.73/-15.91	-19.15/-15.15	-14.07/-13.72	-14.76/-16.24	-16.47/-15.4	-13.49/-17.28	-16.02/-15.11	-15.11/-13.19
Θ(52.5°)	-17.82/-19.09	-11.3/-9.83	-15.18/-17.23	-18.58/-18.2	-16.69/-11.9	-11.05/-12.84	-18.07/-18.57	-17.54/-14.97	-13.85/-15.5	-13.03/-11.27	-14.45/-14.87	-16.19/-18.61	-17.93/-17.6	-14.07/-14.68	-16.78/-12.39	-10.22/-13.49	-13.46/-17.37	-18.54/-18.07	-18.23/-15.06	-12.82/-10.6	-8.17/-9.81	-10.69/-13.28	-17.46/-17.47	-18.77/-13.9
Θ(60°)	-15.58/-13.22	-13.08/-13.56	-16.84/-13.41	-11.47/-16.95	-17.46/-13.5	-12.03/-15.8	-18.17/-17.76	-18.71/-19.49	-18.71/-18.04	-17.39/-15.71	-14.94/-11.07	-11.56/-12.95	-13.06/-17.11	-12.33/-14.44	-17.29/-18									



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ (67.5°)	-0.83/-1.89	-1.19/-0.1	-3.59/-7.83	-4.52/-3.41	-4.24/-2.55	-0.08/-0.02	-0.72/-0.04	0.67/-0.14	-1.97/-1.88	-2.12/-2.48	-5.71/-3.99	-1.83/-0.58	0.01/0	-0.94/-2.13	-1.35/-1.74	-1.03/-1.08	-1.25/-3.42	-3.31/-5.3	-6.79/-3.09	-1.39/-2.22	-7.98/-2.98	-3.24/-3.6	-3.49/-3.23	-1.66/-2.73
Θ (75°)	-4.76/-12.32	-10.04/-6.78	-4.45/-0.18	1.41/0.25	-0.37/-0.2	1.09/-0.18	-1.08/-0.1	0.96/-0.7	-0.31/-0.65	-0.2/-0.73	-1.63/-4.1	-5.34/-4.88	-3.33/-1.45	-0.99/-1.72	-2.86/-4.91	-4.84/-4.6	-0.55/-1.38	-1.55/-3.81	-5.69/-4.7	-1.57/-0.97	-3.08/-2.01	-3.85/-2.76	-2.66/-3.29	-4.16/-3.57
Θ (82.5°)	-3.85/-5.05	-5.15/-1.62	-1.83/-0.71	-2.33/-5.53	-8.09/-6.51	-5.54/-7.69	-11.9/-7.41	-5.31/-7.14	-8.25/-8.56	-8.94/-5.97	-2.71/-2.25	-3.23/-5.29	-6/-4.38	-3.29/-4.24	-5.55/-4.25	-5.07/-4.9	-4.21/-3.27	-0.41/-0.1	-1.66/-3.74	-2.39/-4.08	-3.63/-2.38	-5.54/-3.27	-4.02/-5.07	-5.67/-4.25
Θ (90°)	-2.34/-5.47	-3.42/-0.56	-4.08/-1.5	-1.03/-0.67	-1.83/-2.61	-2.31/-1.78	-1.29/0.28	1.05/0.47	-0.98/-1.04	-1.78/-4.22	-5.32/-4.4	-2.28/-2.74	-3.87/-3	-1.53/-6.4	-4.59/-5.03	-1.82/-1.17	-1.85/-3.02	-1.55/-0.18	-2.81/-3.96	-2.21/-1.93	-2.2/-2.62	-1.89/-2.15	-3.43/-3.73	-3.04/-2.13
Θ (97.5°)	-4.8/-5.72	-6.63/-1.66	-3.1/-4.7	-1.96/-3.25	-4.32/-5.91	-5.09/-2.79	-2.77/-3.34	-2.58/-1.38	-1.31/-1.11	-1.82/-3.79	-6.62/-6.68	-5.64/-5.06	-5.37/-4.02	-1.44/-5.21	-8.33/-9.7	-5/-2.94	-2.27/-6.54	-5.78/-3.8	-3.44/-6.36	-4.8/-3.98	-7.1/-2.47	-0.81/-1.06	-3.88/-8.07	-16.99/-11.38
Θ (105°)	-6.14/-10.67	-8.25/-5.22	-12.72/-8.43	-7.96/-10.16	-13.43/-8.96	-9.39/-14.16	-18.55/-11.91	-10.81/-17.92	-14.48/-13.49	-18.18/-15.81	-18.91/-17.83	-14.17/-7.49	-7.26/-6.38	-17.85/-15.64	-12.56/-14.77	-7.45/-7.44	-9.52/-9.4	-10.72/-4.66	-6.64/-10.95	-10.18/-10.07	-16.16/-8.39	-11.16/-8.39	-11.16/-8.39	-11.16/-8.39
Θ (112.5°)	-4.9/-16.92	-11.39/-18.33	-16.96/-11.79	-3.39/-5.86	-4.24/-1.69	0.04/-1.19	-4.09/-4.42	-1.75/-3.9	-4.67/-8.05	-9.33/-7.77	-12.12/-11.35	-13.04/-13.16	-9.45/-5.68	-4.04/-6.95	-6.71/-8.95	-10.66/-17.13	-8.73/-10.08	-6.84/-18.37	-13.98/-14.42	-7.93/-5.01	-10.87/-8.19	-10.42/-5.51	-6.86/-11.34	-7.81/-4.17
Θ (120°)	-7.26/-14.17	-17.53/-7.82	-7.05/-9.26	-9.67/-9.62	-6.4/-4.86	-4.85/-2.77	-2.49/-5.26	-6.01/-5.5	-3.61/-3.65	-4.47/-5.1	-7.98/-10.9	-10.53/-13	-13.27/-10.33	-10.19/-8.61	-6.72/-7.26	-10.4/-11.17	-9.51/-7.06	-6.17/-11.07	-13.13/-19.14	-13.36/-5.92	-7.82/-7.63	-9.23/-4.85	-2.5/-5.5	-5.78/-4.58
Θ (127.5°)	-10.68/-17.46	-18.09/-11.98	-10.93/-18.26	-11.39/-9.35	-7.96/-7.22	-8.77/-8.87	-8.75/-6.09	-8.19/-10.09	-10.58/-8.22	-6.24/-6.02	-7.47/-13.21	-13.93/-18.71	-16.23/-12.54	-16.18/-14.99	-14.11/-14.74	-18.3/-8.67	-13.81/-8.4	-18.06/-11.06	-10.21/-13.87	-14.51/-9.33	-13.42/-18.65	-16.63/-11.4	-10.04/-18.08	-10.05/-6.51
Θ (135°)	-17.61/-16.05	-18.81/-14.94	-10.88/-8.71	-6.28/-6.11	-8.75/-6.09	-5.29/-6.09	-6.13/-5.67	-6.44/-6.33	-7.19/-10.03	-11.52/-10.73	-10.47/-12.09	-11.88/-14.51	-13.73/-12.52	-18.78/-19	-13.46/-9.36	-15.05/-19.35	-15.4/-15.12	-11.21/-14.24	-13.68/-11.74	-12.82/-15.45	-15.22/-13.87	-14.2/-18.87	-18.41/-19.13	-18.41/-18.35
Θ (142.5°)	-19.33/-16.43	-16.02/-8.96	-8.19/-8.15	-6.74/-8.38	-9.89/-8.22	-9.22/-8.86	-6.24/-6.68	-7.8/-7.25	-7.55/-8.4	-9.48/-10.61	-13.39/-17.87	-12.31/-17.79	-12.29/-9.84	-9.25/-10.24	-18/-16.81	-12.33/-10.01	-7.93/-6.62	-7.72/-12.2	-14.79/-13.89	-15.72/-12.85	-6.84/-7.38	-5.45/-7.57	-9.03/-12.94	-19.18/-18.46
Θ (150°)	-8.43/-11.15	-18.31/-18.16	-17.99/-10.55	-8.38/-7.62	-6.46/-5.85	-8.88/-7.78	-6.97/-5.22	-3.71/-3.57	-3.83/-5.21	-5.57/-5.84	-6.75/-6.76	-10.4/-9.13	-7.04/-6.88	-7.87/-9.2	-9.29/-7.68	-6.11/-7.28	-8.77/-7.46	-5.9/-4.78	-4.91/-5.36	-6.8/-8.06	-8.32/-8.2	-11.49/-14.86	-12.43/-10.94	-8.97/-7.58
Θ (157.5°)	-17.75/-15.87	-18.22/-17.75	-19.13/-18.44	-18.98/-17.71	-17.4/-15.89	-12.23/-8.29	-5.93/-3.79	-2.54/-2.09	-2.08/-2.3	-3.44/-4.85	-6.31/-7.2	-8.01/-7.64	-7.22/-6.87	-7.69/-8.63	-8.04/-6.74	-7.27/-9.2	-11.62/-13.49	-16.44/-19	-18.35/-18.81	-18.09/-12.18	-8.99/-8.62	-9.93/-11.35	-11.69/-10.55	-13.29/-16.68
Θ (165°)	-15.8/-13.18	-12.59/-13.8	-14.64/-15.86	-16.24/-18.82	-18.04/-17.8	-18.35/-14.72	-11/-8.59	-7.34/-5.63	-4.49/-3.93	-3.97/-3.88	-4.11/-4.03	-4.26/-4.64	-4.43/-4.8	-7.1/-6.83	-8.03/-8.58	-12.84/-14.13	-12.7/-9.58	-6.57/-7.47	-4.22/-4.92	-7.55/-10.96	-15.23/-17.58	-18.17/-17.37	-18.17/-17.37	-18.17/-17.37
Θ (172.5°)	-16.81/-18.26	-18.96/-18.1	-15.71/-13.84	-14.61/-17.11	-19.06/-18.88	-17.66/-19.31	-18.14/-15.06	-12.73/-10.4	-9.51/-8.59	-8.08/-8.39	-8.25/-8.58	-9.26/-10	-10.65/-10.86	-11.15/-11.55	-12.89/-14.42	-16.74/-18.93	-18.64/-17.98	-18.46/-18.61	-17.5/-16.52	-13.21/-11.8	-12.03/-12.99	-13.95/-14.55	-15.13/-13.82	-13.44/-14.51
Θ (180°)	-13.87/-11.93	-8.75/-9.23	-8.93/-8.98	-9/-9.21	-10.49/-12.56	-13.7/-15.5	-17.37/-18.83	-19.19/-19.06	-18.61/-18.35	-18.58/-16.13	-14.26/-12.58	-11.83/-11.47	-11.71/-11.67	-11.61/-10.76	-10.43/-9.77	-8.64/-9.72	-9.55/-10.32	-11.17/-11.9	-14.38/-16.88	-18.89/-17.68	-19.14/-17.45	-16.93/-18.76	-18.03/-17.59	-18.35/-16.68
Freq(Hz)	5.6GPol.	PhiAnt. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-15.45/-16.72	-13.51/-11.59	-13.14/-14.5	-15.31/-13.85	-14.09/-16.08	-16.89/-16.97	-18.88/-18.53	-18.05/-18	-18.25/-19.04	-18.6/-18.6	-15.37/-14.1	-14.07/-14.87	-18.65/-19.5	-15.3/-11.97	-13.22/-16.53	-18.96/-18.74	-18.12/-17.41	-19.51/-18.46	-18.69/-17.72	-18.04/-19	-17.37/-18.41	-18.92/-17.73	-14.34/-12.14	-13.47/-14.1
Θ (7.5°)	-12.09/-13.19	-19.02/-17.41	-19.22/-18.66	-18.73/-18.37	-18.75/-18.66	-17.52/-19.33	-17.79/-18.83	-19.41/-18.56	-18.68/-18.96	-17.65/-17.97	-17.24/-16.88	-15.5/-15.32	-15.68/-11.89	-13.25/-17.71	-18.79/-15.72	-14.53/-17.73	-18.1/-18.97	-18.52/-18.18	-16.33/-14.11	-14.06/-17.37	-13.72/-12.99	-15.33/-12.34	-15.33/-12.34	-15.33/-12.34
Θ (15°)	-8.93/-10.66	-12.68/-13.46	-17.82/-18.56	-14.88/-14.53	-13.77/-15.27	-18.12/-17.73	-18.71/-18.66	-14.21/-14.43	-15.09/-17	-17.88/-18.34	-18.38/-18.76	-17.52/-18.23	-18.28/-19.25	-17.57/-14.15	-12.35/-13.63	-17.17/-17.99	-18.36/-15.27	-15.09/-15.93	-16.41/-17.32	-15.03/-12.89	-12.62/-12.08	-10.68/-13.7	-7.75/-7.47	-7.75/-7.47
Θ (22.5°)	-17.76/-13.05	-10.91/-11.28	-11.43/-11.81	-10.99/-11.79	-12.93/-16.34	-19.04/-18.99	-18.71/-17.71	-14.1/-13.14	-12.44/-12.73	-16.25/-18.1	-18.34/-19.25	-19/-18.89	-17.64/-18.88	-15.43/-12.12	-9.59/-9.15	-11.54/-15.37	-18.64/-19.27	-17.28/-14.14	-11.38/-10.22	-9.4/-9.17	-9.05/-9.28	-11.04/-15.65	-18.03/-17.5	-13.38/-17.54
Θ (30°)	-16.65/-14.05	-15.55/-10.29	-9.38/-9.3	-9.71/-13.44	-12.83/-17.37	-15.31/-12.13	-13.18/-15.29	-18.3/-16.57	-18.35/-17.8	-12.71/-9.91	-8.4/-8.27	-10.02/-14.67	-18.27/-15.13	-16.47/-16.5	-10.78/-12.32	-17.52/-19.23	-14.78/-14.78	-15.46/-17.38	-17.91/-19.14	-15/-8.62	-14.03/-11.14	-11.59/-10.77	-9.42/-14.69	-18.35/-19.27
Θ (37.5°)	-12.49/-9.94	-9.38/-8.37	-9.71/-13.44	-12.83/-17.37	-15.31/-12.13	-13.18/-15.29	-18.3/-16.57	-18.35/-17.8	-12.71/-9.91	-8.4/-8.27	-10.02/-14.67	-18.27/-15.13	-16.47/-16.5	-10.78/-12.32	-17.52/-19.23	-14.78/-14.78	-15.46/-17.38	-17.91/-19.14	-15/-8.62	-14.03/-11.14	-11.59/-10.77	-9.42/-14.69	-18.35/-19.27	-16.39/-17.43
Θ (45°)	-11.23/-12.08	-8.62/-8.2	-10.91/-15.43	-19.06/-17.89	-13.32/-10.17	-13.13/-18.61	-18.62/-17.64	-14.34/-14.35	-12.29/-11.62	-12.38/-11.83	-14.24/-18.78	-12.81/-13.04	-16.59/-18.21	-16.96/-17.67	-17.23/-12.87	-10.57/-12.88	-18.21/-16.82	-19.27/-13.96	-11.5/-11.04	-9.36/-8.79	-9.86/-11.43	-19.15/-15.12	-19.4/-18.86	-15.82/-16.29
Θ (52.5°)	-11.77/-18.81	-9.42/-15	-18.91/-18.57	-18.14/-18.79	-18.36/-14.97	-12/-16.5	-17.28/-15.64	-11.72/-15.63	-16.82/-17.66	-17.34/-16.19	-17.36/-18.66	-17.4/-15.6	-17.74/-19.03	-14.32/-15.66	-12.25/-9.06	-8.15/-10.2	-19.07/-19	-15.38/-10.08	-10.51/-15.14	-11.22/-10.52	-9.15/-10.65	-18.55/-17.88	-17.7/-17.55	-13.35/-15.22
Θ (60°)	-16.73/-19.05	-10.25/-14.32	-16.84/-17.07	-17.9/-18	-18.92/-17.48	-15/-15.61	-16.9/-17.73	-18.3/-18.4	-19.16/-18.74	-13.39/-19.48	-15.37/-17.61	-18.56/-13.06	-13.32/-17.61	-12.84/-16.65	-15.83/-11.8	-8.89/-8.81	-13.92/-12.75	-11.12/-11.69	-11.86/-15.42	-17.39/-15.44	-12.19/-10.34	-14.33/-18.79	-17.44/-16.3	-18.81/-18.39
Θ (67.5°)	-17.99/-18.99	-14.12/-17.29	-18.72/-19.34	-19.18/-12.2	-18.77/-15.05	-14.88/-17.9	-15.01/-19	-18.13/-18.69	-17.76/-19.04	-19.06/-18.81	-17.06/-18.54	-18.62/-18.11	-14.24/-18.48	-16.38/-17.59	-14.24/-18.49	-16.77/-14.88	-14.44/-12.84	-14.97/-12.49	-13.7/-18.04	-19.07/-18.67	-11.57/-13.5	-13.2/-13.08	-14.11/-12.37	-15.64/-18.4
Θ (75°)	-17.59/-17.81	-19/-19.04	-18.68/-18.65	-19.1/-17.97	-18.38/-18.72	-18.8/-16.99	-17.71/-18.82	-18.68/-18.98	-17.23/-19.25	-18.86/-19.02	-16.2/-19.38	-18.65/-16.68	-17.1/-16.05	-17.87/-14.72	-16.16/-17.47	-17.22/-16.38	-17.87/-17.78	-15.69/-18.52	-18.06/-18.23	-13.97/-16.28	-18.83/-13.35	-14.91/-13.44	-12.38/-17.29	-15.88/-17.55
Θ (82.5°)	-16.75/-14.55	-18.08/-18.27	-17.11/-16.68	-15.86/-18.29	-16.77/-18.21	-18.47/-18.84	-15.66/-16.69	-16/-14.99	-13.49/-16.7	-17.82/-17.88	-17.68/-17.54	-18.66/-10.82	-18.64/-18.63	-18.58/-12.83	-12.66/-12.52	-13.25/-12.98	-15.49/-16.21	-19.36/-19.13	-17.22/-18.16	-11.18/-11.21	-18.09/-15.65	-13.06/-10.17	-8.86/-14.23	-16/-16.89
Θ (90°)	-18.96/-18.49	-18.43/-17.69	-18.91/-18.52	-19.22/-18.3	-17.57/-12.88	-17.77/-18.86	-18.38/-19.17	-16.5/-17.5	-18.88/-15.38	-13.32/-18.83	-18.68/-18.5	-17.46/-17.31	-18.11/-17.38	-18.28/-16.82	-18.07/-17.6	-12.07/-9.05	-18.53/-16.11	-18.92/-13.92	-16.26/-17.68	-14.34/-14.29	-15.96/-16.08	-15.76/-14.21	-16.81/-17.82	-13.86/-13.97
Θ (97.5°)	-16.56/-14.37	-18.28/-16.65	-19.05/-18.34	-12.4/-13.84	-12.63/-15.18	-17.43/-17.89	-17.8/-18.78	-18.07/-18.31	-13.51/-13.69	-14.48/-18.77	-16.77/-17.78	-14.19/-13.65	-13.88/-17.77	-19.01/-17.45	-18.68/-12.06	-15.25/-17.2	-18.25/-18.07	-18.4/-18.16	-17.3/-18.35	-14.48/-15.24	-17.14/-10.24	-10.51/-9.89	-7.6/-15.37	-12.9/-18.44
Θ (105°)	-18/-13.6	-14.71/-15.64	-16.66/-16.53	-11.4/-13.22	-16.14/-19.5	-13.42/-18.66	-16.12/-16.9	-17.06/-17.97	-15.1/-17.93	-17.26/-14.18	-13.36/-18.48	-19.2/-18.3	-18.53/-18.83	-14.37/-16.1	-17.95/-14.84	-17.18/-19	-16.86/-17.77	-17.78/-17.67	-16.84/-15.87	-12.95/-15.62	-18.06/-8.91	-10.37/-15.36		



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ (120°)	-4.66/-7.65	-9.09/-12.12	-9.39/-17.79	-10.94/-9.41	-4.34/-3.94	-3.37/-1.75	-1.86/-1.63	-2.97/-2.76	-3.01/-2.48	-2.91/-4.42	-6.59/-11.25	-10.62/-7.46	-3.81/-4.44	-3.84/-3.57	-6.32/-14.52	-14.07/-10.42	-6.88/-10.47	-9.04/-8.13	-8.84/-9.82	-6.53/-2.62	-5.42/-13.41	-10.41/-13.25	-8.36/-6.03	-6.33/-5.66
Θ (127.5°)	-10.15/-15.63	-12.07/-8.04	-13.31/-14.76	-13.95/-14.57	-10.18/-7.12	-7.36/-9.76	-9.63/-7.86	-5.54/-3.61	-4.5/-2.45	-6.38/-8.61	-10.42/-14.53	-18.18/-17.53	-11.01/-11.03	-12.95/-5.77	-4.26/-6.92	-9.17/-13.44	-15.32/-10.47	-8.53/-12.51	-19.53/-17.68	-13.09/-5.66	-6.97/-8.89	-11.94/-12.87	-17.74/-16.88	-8.31/-9.14
Θ (135°)	-13.31/-18.55	-18.96/-11.28	-9.79/-11.94	-13.21/-10.73	-5.75/-3.32	-3.42/-6.77	-2.61/-4.5	-5.63/-5.82	-8.16/-7.14	-6.84/-8.09	-9.67/-12.57	-14.21/-16.78	-11.71/-18.28	-17.47/-12.17	-7.97/-8.39	-17.31/-18.92	-15.18/-12.84	-13.27/-9.77	-16.56/-18.39	-17.65/-12.99	-17.19/-10.75	-16.59/-15.4	-15.35/-15.7	-10.1/-10.07
Θ (142.5°)	-7.85/-9.78	-17.85/-16.89	-11.77/-8.93	-8.72/-10.82	-10.44/-9.56	-7.03/-4.68	-4.14/-5.64	-6.96/-6.89	-6.86/-8.42	-9.49/-9.63	-12.47/-18.5	-15.2/-14.64	-15.99/-15.96	-10.25/-11.54	-18.24/-17.65	-19.14/-16.23	-14.56/-14.34	-7.75/-7.48	-8.4/-8.43	-6.85/-5.99	-7.83/-11.8	-13.24/-12.17	-9.97/-	-9.07/-10.27
Θ (150°)	-8.39/-10.7	-15.45/-18.53	-11.38/-7.19	-6.41/-6.8	-9.51/-12.88	-13.12/-9.18	-4.09/-2.25	-2.31/-2.5	-3.2/-3.5	-6.92/-8.48	-14.24/-17.65	-18/-17.02	-14.71/-20.28	-8.06/-8.24	-10.8/-12.78	-11.64/-8.38	-8.8/-8.19	-10.59/-13.88	-11.85/-9.47	-8.47/-6.31	-4.01/-3.46	-4.92/-6.74	-7.46/-8.07	-7.61/-9.31
Θ (157.5°)	-15.68/-17.35	-17.4/-12.2	-10.39/-8.36	-7.09/-8.16	-10.72/-11.97	-9.77/-8.21	-6.94/-7.1	-2.45/-2.83	-1.59/-3.7	-4.53/-3.06	-3.71/-4.44	-5.15/-4.84	-1.71/-2.49	-5.19/-8.54	-5.59/-8.59	-6.32/-6.02	-5.71/-6.8	-8.32/-8.67	-7.95/-7.69	-7.02/-10.28	-18.86/-16.45	-18.17/-15.75	-12.74/-13.29	
Θ (165°)	-14.99/-14.46	-13.34/-14.31	-14.03/-11.75	-10.45/-10.75	-11.61/-14.43	-13.84/-10.34	-9.49/-9.24	-7.77/-6.61	-5.63/-6	-6.18/-5.81	-6.01/-6.81	-7.9/-8.75	-7.92/-6.77	-5.93/-6.44	-6.21/-6.31	-6.3/-7.7	-10.26/-13.26	-19.01/-18.28	-18.89/-16.64	-14.74/-12.66	-10.19/-9.54	-9.56/-9.55	-10.22/-10.69	-11.45/-13.05
Θ (172.5°)	-12.65/-13.27	-13.48/-12.3	-11.34/-5.97	-8.61/-8.34	-9.42/-10.82	-12.31/-13.51	-14.35/-13.11	-13.58/-12.96	-12.32/-12.98	-12.6/-12.56	-12/-10.91	-10.03/-10.03	-11.32/-11.21	-9.94/-10.6	-13.32/-18.54	-18.23/-17.77	-14.83/-12.29	-10.78/-8.5	-7.62/-7.17	-6.36/-6.05	-6.43/-6.82	-7.24/-7.61	-8.14/-9.03	-10.06/-11.25
Θ (180°)	-11.09/-10.71	-11.95/-11.1	-12.32/-12.37	-12.25/-12.41	-13.54/-16.81	-17.58/-18.37	-18.52/-18.04	-18.21/-17.83	-17.32/-13.88	-11.2/-10.13	-8.74/-8.87	-8.66/-9.05	-8.92/-10.04	-10.25/-10.85	-9.77/-9.56	-10.61/-11.61	-13.84/-14.64	-13.94/-12.52	-11.18/-12.51	-12.5/-11.6	-12.01/-14.02	-15.74/-14.29	-12.78/-12.03	-12.71/-11.71
Freq(Hz)	2.45GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-10.81/-9.89	-9.16/-4.87	-8.07/-8.29	-8.72/-9.03	-9.65/-10.09	-10.77/-11.53	-12.57/-13.85	-15.29/-15.29	-15.7/-17.25	-18.31/-17.46	-17.4/-17.73	-16.34/-13.4	-10.92/-10.35	-11.3/-11.91	-11.07/-10.36	-10.42/-11.16	-12.04/-11.52	-12.24/-12.41	-12.96/-13.66	-14.18/-17.8	-17.92/-17.77	-17.2/-15.37	-15.64/-14.36	-12.41/-11.56
Θ (7.5°)	-13.71/-13.9	-12.51/-8.09	-10.66/-10.55	-10.6/-10.84	-10.5/-10.49	-10.8/-11.52	-12.67/-14.06	-14.98/-16.39	-18.68/-18.29	-18.19/-15.81	-14.63/-17.3	-11.72/-9.97	-8.66/-8.52	-9.58/-10.2	-9.34/-8.79	-9.31/-10.46	-11.62/-11.58	-11.86/-11.45	-11.97/-12.5	-13.25/-14.08	-16.77/-17.37	-18.96/-16.67	-18.17/-19.76	-15.39/-13.51
Θ (15°)	-15.8/-15.78	-16.85/-15.75	-14.54/-14.82	-16.07/-16.27	-15.21/-14.6	-14.22/-14.43	-14.91/-15.21	-17.33/-18.85	-18.1/-17.22	-19.39/-15.34	-12.46/-10.65	-10.32/-9.91	-8.54/-8.21	-9.31/-11.18	-11.62/-10.75	-10.42/-11	-11.89/-12.39	-12.67/-12.3	-12.83/-13.22	-13.39/-12.96	-14.04/-17.27	-17.83/-19.25	-18.49/-17.75	-19.19/-18.43
Θ (22.5°)	-13.5/-12.77	-12.89/-13.93	-14.62/-16.09	-17.71/-18.87	-19.16/-19.18	-18.99/-18.72	-19.47/-18.91	-18.11/-18.52	-17.94/-17.79	-18.78/-14.39	-10.98/-9.34	-9.09/-9	-9.53/-9.37	-11.1/-14.19	-16.88/-19.97	-14.05/-13.78	-12.61/-12.54	-12.51/-13.24	-13.95/-15.02	-15.04/-13.33	-12.41/-12.44	-13.55/-15.88	-14.22/-12.55	-13.73/-15.15
Θ (30°)	-13.87/-12.54	-12.52/-12.71	-13.81/-15.49	-15.73/-13.38	-12.26/-12.53	-14.69/-18.08	-18.22/-17.79	-17.95/-18.2	-17.86/-17.66	-13.86/-11.23	-9.61/-9.44	-9.89/-10.76	-10.99/-11.09	-13.86/-19.17	-18.67/-18.45	-18.72/-18.47	-13.51/-11.42	-11.37/-12.63	-15.88/-19	-17.17/-13.9	-12.81/-11.58	-11.92/-14.06	-13.81/-11.23	-10.81/-12.46
Θ (37.5°)	-14.98/-15.72	-15.01/-14.85	-15.99/-18.74	-17.62/-12.49	-9.42/-8.5	-9.74/-12.68	-15.83/-15.93	-16.99/-19.11	-18.27/-17.48	-11.81/-9.74	-9.36/-11.08	-12.43/-11.31	-9.98/-11.85	-18.02/-18.85	-19.27/-18.87	-18.17/-18.79	-15.8/-11.62	-10.85/-12.18	-17.61/-18.65	-13.1/-11.06	-11.96/-13.61	-14.23/-17.29	-16.39/-11.8	-10.8/-12.23
Θ (45°)	-12.92/-15.44	-17.8/-18.73	-17.47/-19.05	-17.15/-15.13	-11/-8.77	-8.5/-10.28	-11.84/-11.95	-14.13/-18.38	-19.08/-18.95	-15.17/-12.04	-11.56/-12.27	-13.71/-14.38	-11.58/-12.56	-17.88/-18.25	-19.01/-16.1	-13.28/-14.35	-16.67/-14.44	-11.97/-11.74	-11.79/-9.86	-11.07/-15.99	-18.9/-13.71	-15.37/-14.77	-13.52/-12.25	
Θ (52.5°)	-12.11/-13.18	-16.54/-17.29	-17.99/-17.37	-15.04/-12.6	-11.72/-10.83	-10.32/-11.76	-12.31/-11.33	-12.29/-15.24	-18.38/-18.37	-16.54/-14.94	-14.53/-13.95	-13.49/-14.42	-15.99/-19.11	-18.45/-19.01	-15.59/-15.22	-15.3/-14.92	-16.07/-17.66	-13.33/-10.61	-12.66/-17.92	-15.78/-13.06	-14.17/-18.21	-18.67/-13.86	-11.43/-11.74	-13.46/-13
Θ (60°)	-13.25/-14.31	-17.12/-17.66	-18.27/-18.27	-17.8/-12.17	-11.47/-11.25	-11.17/-13.35	-14.51/-12.32	-12.33/-14.5	-18.14/-18.17	-16.92/-18.08	-17.83/-14.76	-14/-16.31	-18.84/-18.74	-15.87/-16.26	-16.37/-18	-18.78/-15.92	-13.89/-16.98	-15.35/-11.62	-14/-18.16	-14.6/-12.8	-16.8/-17.86	-16.6/-11.2	-14.88/-7.73	-8.83/-10.62
Θ (67.5°)	-11.72/-15.15	-17.77/-18.08	-14.52/-18.5	-17.76/-14.47	-12.48/-10.56	-9.63/-12.02	-15.61/-15.31	-14.28/-14.91	-18.22/-18.72	-19.06/-18.35	-18.34/-15.47	-16.58/-18.95	-18.66/-14.85	-12.92/-15.15	-18.12/-18.09	-18.97/-13.61	-12.16/-16.13	-18.5/-12.91	-14.49/-18.53	-11.75/-12.38	-18.74/-17.28	-10.97/-8.06	-6.84/-6.26	-6.88/-8.68
Θ (75°)	-11.28/-13.33	-18.5/-15.54	-11.52/-12.34	-15.81/-13.57	-12.34/-9.89	-8.53/-9.97	-11.56/-13.53	-16.1/-19.05	-19.1/-18.21	-18.05/-19	-19.03/-17.85	-18.59/-18.42	-15.42/-13.37	-12.23/-13.77	-18.52/-17.32	-18.4/-14.5	-12.75/-16.87	-18.41/-10.52	-10.73/-15.1	-10.85/-12.47	-19.07/-13.89	-9.02/-6.96	-6.71/-6.9	-7.62/-9.37
Θ (82.5°)	-13.98/-14.56	-17.96/-15.7	-11.02/-12.68	-11.56/-10.6	-9.34/-8.49	-8.81/-10.79	-9.2/-8.99	-12.33/-19.97	-17.86/-18.01	-19.08/-19.16	-16.55/-19.23	-13.28/-13.05	-18.97/-18.85	-17.74/-16.49	-12.27/-11.94	-13.51/-9.9	-9.72/-13.09	-17.14/-11.65	-8.86/-8.09	-8.32/-9.27	-10.87/-13.1	-	-	-
Θ (90°)	-16.36/-16.51	-17.67/-18.39	-10.16/-7.93	-8.87/-10.4	-9.07/-6.85	-6.92/-11.51	-9.49/-8.25	-9.3/-12.64	-18.24/-19.48	-18.09/-15.82	-12.61/-15.29	-18.87/-17.19	-18.82/-14.94	-12.26/-13.77	-18.81/-17.91	-16.29/-13.04	-9.05/-9.15	-12.92/-11.27	-11.29/-9.64	-8.57/-14.37	-16.29/-10.02	-8.38/-7.92	-9.17/-10.98	-12.96/-14.92
Θ (97.5°)	-13.38/-14.63	-18.53/-18.11	-12.33/-8.67	-8.2/-8.65	-9.91/-8.23	-7.15/-9.95	-10.53/-9.58	-10.02/-12.77	-16.65/-16.92	-17.76/-15.9	-12.86/-17.47	-18.71/-18.75	-18.71/-14.47	-15.22/-17.94	-19.06/-15.63	-11.13/-10.1	-10.44/-12.9	-12.14/-8.77	-9.02/-11.38	-11.96/-18.03	-11.38/-14	-7.8/-6.77	-8.67/-10.62	-12.13/-12.28
Θ (105°)	-11.11/-12.61	-17.02/-18.34	-15.35/-12.85	-8.89/-9.28	-9.06/-11.94	-11.36/-9.9	-10.43/-13.07	-16.9/-17.87	-18.86/-18.68	-16.52/-12.9	-18.78/-16.25	-18.62/-18.23	-17.22/-16.24	-18.84/-15.52	-11.84/-14.26	-14.28/-10.67	-8.38/-8.53	-12.36/-14.53	-11.08/-12.17	-11.91/-11.38	-11.62/-10.95	-10.19/-10.15	-10.29/-10.76	
Θ (112.5°)	-9.7/-10.36	-11.96/-17.59	-17.17/-15.18	-17.45/-11.73	-10.71/-10.42	-10.01/-13.28	-15.81/-11.51	-11.57/-15.1	-17.03/-17.45	-18.74/-18.93	-13.97/-14.1	-18.73/-17.25	-16.82/-18.78	-19.03/-19.54	-18.16/-13.82	-12.16/-13.08	-13.11/-14.09	-13.67/-10.99	-9.97/-9.92	-9.48/-10.78	-16.45/-18.79	-19.26/-15.98	-13.63/-10.83	-8.79/-8.41
Θ (120°)	-9.07/-9.22	-8.94/-12.63	-18.54/-17.85	-16.29/-12.06	-12.83/-13.07	-11.99/-14.52	-14.28/-12.47	-12.97/-15.68	-16.82/-16.7	-17.93/-19.08	-13.12/-15.2	-16.56/-18.74	-14.63/-16.57	-18.11/-18.15	-18.38/-14.04	-11.79/-13.05	-18.55/-18.69	-8.54/-5.42	-5.36/-7.08	-9.23/-10.48	-13.69/-18.85	-15.75/-14.74	-15.45/-12.62	-9.07/-7.75
Θ (127.5°)	-8.51/-8.63	-10.91/-12.94	-18.45/-17.93	-13.68/-11.66	-12.18/-13.07	-14.07/-16.28	-12.42/-10.17	-10.82/-13.04	-13.9/-14.05	-14.95/-15.41	-13.97/-14.59	-18.15/-19.23	-14.21/-18.51	-17.83/-14.89	-15.89/-14.97	-13.94/-18.04	-19.1/-9.36	-5.13/-3.71	-4.88/-9.83	-12.39/-11.03	-13.23/-15.59	-12.34/-11.83	-13.13/-11.54	-8.99/-8.77
Θ (135°)	-7.43/-7.71	-9.54/-13.31	-18.63/-15.83	-13.51/-11.68	-10.37/-10.52	-13.36/-17.02	-11.66/-9.66	-9.88/-11.3	-11.82/-10.96	-10.68/-11.26	-13.13/-16.03	-15/-12.38	-13.42/-18.19	-17.44/-14.59	-16.47/-15.61	-18.36/-15.53	-8.89/-6.41	-5.86/-6.42	-9.52/-13.18	-10.34/-9.57	-12.82/-17.76	-13.15/-12.28	-12.62/-11.25	-9.15/-8.73
Θ (142.5°)	-7.36/-7.38	-10.21/-14.63	-14.83/-13.3	-10.79/-9.04	-8.05/-8.8	-12/-15.1	-12.17/-10.08	-10.16/-11.75	-13.71/-13.79	-13.37/-12.89	-13.32/-12.63	-12.2/-13.68	-18.56/-17.99	-19.22/-16.04	-12.24/-12.42	-11.93/-8.84	-7.44/-8.44	-9.36/-9.38	-10.1/-9.71	-8.03/-8.86	-12.19/-18.8	-17.72/-13.72	-13.42/-13.79	-12.59/-6.94
Θ (150°)	-9.93/-9.75	-11.32/-12.6	-11.52/-10.8	-9.18/-7.75	-7.36/-8.79	-11.45/-12.66	-10.67/-9.08	-8.91/-10.13	-11.51/-12.8	-13.42/-14.46	-15.21/-16.8	-18.98/-17.52	-16.38/-19.15	-17.22/-13.9	-12.79/-12.92	-9.79/-8.55	-9.2/-9.77	-8.87/-7.82	-7.86/-8.18	-8.07/-8.74	-11.2/-16.31	-15.52/-19.34	-18.59/-17.53	-14.82/-11.71
Θ (157.5°)	-10.88/-10.2	-10.44/-9.82	-8.51/-8.12	-7.92/-8.52	-9.96/-12.02	-13.62/-11.71	-9.75/-8.18	-8.17/-8.9	-9.84/-9.92	-10.28/-10.97	-12.18/-12.46	-11.97/-14.14	-17.25/-19.27	-18.02/-17.31	-14.38/-10.02	-9.31/-9.68</								



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ (165°)	-7.67/-10.16	-9.21/-7.12	-5.84/-3.5	-2.83/-4.03	-4.53/-6.06	-7.95/-9.57	-9.74/-8.87	-7.02/-7.36	-9.7/-13.46	-18.49/-16.69	-14.86/-13.81	-13.68/-13.69	-17.38/-16.2	-14.36/-13.55	-15.87/-12.09	-7.28/-9.44	-14.78/-9.47	-7.11/-7.95	-10.08/-8.4	-9.23/-9.26	-9.6/-9.94	-10.46/-8.87	-8.08/-7.39	-5.95/-6.61
Θ (172.5°)	-7.15/-9.49	-5.03/-4.93	-4.89/-5.94	-6.81/-6.64	-7.1/-7.83	-9.84/-13.23	-15.81/-19.06	-18.42/-18.89	-18.45/-18.04	-16.81/-18.46	-18.63/-18.72	-17.93/-18.72	-18.15/-18.91	-16.84/-17.82	-16.45/-16.56	-18.41/-12.06	-7.18/-6.78	-8.03/-8.93	-10.89/-11.54	-13.45/-17.26	-15.03/-10.19	-7.02/-6.09	-7.1/-7.55	-7.84/-7.67
Θ (180°)	-9.12/-10.9	-11.65/-13.33	-13.34/-12.56	-13.43/-14.56	-15.81/-15.05	-15.33/-15.93	-14.52/-13.39	-13.49/-13.32	-13.49/-13.44	-16.4/-16.98	-15.79/-15.56	-13.36/-13.92	-15.64/-18.91	-16.47/-13.65	-11.26/-12.68	-17.61/-13.65	-14.89/-11.68	-18.32/-18.92	-15.85/-13.55	-11.14/-10.96	-11.14/-10.96	-12.58/-9.03	-8.96/-8.7	-9.61/-8.7
Freq(Hz)	5.3GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-10.78/-11.94	-12.93/-13.05	-12.11/-14.04	-12.29/-10.54	-12.82/-15.17	-13.8/-14.9	-15.66/-13	-12.45/-12.37	-12.51/-13.19	-12.36/-10.51	-11.19/-9.32	-10.37/-10.25	-9.69/-10.34	-9.76/-11.27	-10.15/-10.15	-10.82/-9.39	-9.42/-10.76	-11.27/-11.08	-10.54/-11.48	-13.27/-12.68	-10.99/-9.26	-9.05/-11.39	-11.02/-10.94	-10.1/-11.24
Θ (7.5°)	-12.43/-11.5	-13.26/-13.14	-10.43/-11	-11.03/-9.27	-10.92/-11.54	-11.36/-13.59	-17.35/-17.98	-18.76/-15.15	-13.36/-12.63	-13.77/-13.78	-13.54/-15.93	-16.67/-17.91	-17.3/-17.94	-18.81/-17.61	-17.92/-19.12	-18.56/-19.01	-15.2/-13.5	-12.49/-12.33	-11.41/-11.03	-12.82/-15.84	-13.62/-11.29	-10.59/-9.77	-10.81/-11.02	-11.14/-10.15
Θ (15°)	-19/-18.36	-17.49/-18.49	-18.91/-19.15	-19.08/-17.75	-17.71/-14.96	-13.06/-17.25	-19.06/-18.27	-17.02/-15.42	-12.35/-9.57	-10.35/-12.2	-11.21/-13.83	-14.66/-14.94	-15.41/-16.32	-19.05/-15.3	-15.02/-14.82	-15.19/-15.4	-15.34/-17.59	-17.46/-12.91	-11.85/-12.13	-13.55/-18.28	-18.79/-17.45	-18.74/-19.3	-19.16/-17.78	-17.64/-19.37
Θ (22.5°)	-18.86/-19.04	-17.54/-18.32	-15.63/-16.07	-12.59/-13.7	-16.79/-13.9	-12.43/-14.11	-18.25/-15.94	-17.42/-18.28	-17.72/-12.78	-12.77/-13.55	-15.68/-15.48	-15.65/-17.24	-17.69/-18.64	-17.99/-17.98	-17.56/-17.15	-17.5/-15.01	-19.19/-13.93	-10.82/-12.94	-19/-19.02	-10.6/-8.37	-13.68/-18.75	-18.96/-16.16	-15.86/-15.33	-15.86/-15.33
Θ (30°)	-19.09/-18.77	-18.46/-18.2	-16.88/-17.21	-15.3/-13.87	-10.5/-9.39	-9.98/-11.86	-15.16/-12.09	-13.49/-16.67	-12.8/-12.83	-16.89/-19.08	-17.94/-18.23	-17.83/-18.68	-17.77/-17.95	-18.41/-16.16	-12.81/-12.66	-14.16/-17.93	-12.69/-11.51	-18.24/-13.58	-14.97/-11.77	-15.45/-15.26	-17.95/-13.48	-14.33/-12.14	-16.01/-18.3	-16.01/-18.3
Θ (37.5°)	-18.64/-17.62	-17.82/-18.49	-17.18/-17.09	-13.47/-13.09	-13.4/-11.78	-7.67/-7.06	-11.93/-9.95	-10.36/-15.55	-12.37/-13.86	-17.6/-15.81	-18.24/-19.06	-17.98/-17.32	-15.5/-15.65	-14.52/-12.41	-11.56/-17.46	-12.32/-16.29	-12.45/-11.14	-10.86/-9.85	-6.76/-8.8	-7.04/-7.13	-11.72/-14.95	-18.85/-19.23	-18.77/-17.88	-17.33/-17.13
Θ (45°)	-17.4/-17.89	-17.77/-18.4	-15.72/-16.67	-18.59/-14.98	-11.03/-14.9	-13.78/-11.56	-13.38/-11.16	-10.1/-10.7	-8.89/-12.73	-13.97/-19.09	-19.18/-16.52	-17.32/-14.69	-14.81/-15.86	-15.89/-12.84	-14.96/-16.32	-18.18/-12.45	-16.85/-8.39	-11.17/-11.54	-11.62/-14.13	-14.83/-18.72	-18.69/-17.58	-18.25/-17.73	-18.58/-14.86	-15.75/-12.52
Θ (52.5°)	-18.81/-18.67	-18.92/-18.37	-18.05/-15.63	-18.91/-19.33	-18.06/-19.78	-18.49/-18.17	-17.5/-15.15	-11.71/-11.67	-8.48/-10.36	-10.99/-18.71	-18.5/-13.92	-15.01/-16.36	-18.6/-18.35	-19/-18.84	-18.89/-17.19	-18.83/-18.55	-15.52/-11.39	-18.08/-16.22	-10.52/-10.76	-11.9/-16.78	-15.61/-19.16	-13.57/-18.7	-13.75/-12.18	-12.71/-15.39
Θ (60°)	-18.08/-17.45	-17.77/-17.48	-11.83/-12.35	-18.33/-18.46	-16.01/-18.55	-18.41/-18.55	-18.06/-16.66	-14.34/-13.84	-11.32/-14.16	-12.44/-16.87	-18.03/-17.51	-17.77/-16.95	-18.97/-18.61	-18.01/-17.42	-17.55/-19.31	-19.12/-17.98	-15/-16.9	-18.96/-18.2	-14.36/-10.39	-14.45/-18.99	-18.26/-17.83	-19/-19.11	-12.65/-15.78	-11.02/-15.66
Θ (67.5°)	-19.05/-17.29	-17.68/-16.87	-17.64/-15.61	-18.52/-16.91	-17.9/-17.46	-17.71/-17.61	-13.87/-14.27	-10.89/-11.83	-14.14/-13.68	-12.7/-15.03	-16.15/-17.47	-14.16/-15.54	-18.3/-14.95	-19.12/-16.67	-15.47/-12.5	-14.17/-13.49	-17.17/-31	-16.51/-8.58	-18.61/-10.88	-18.25/-19.32	-18.07/-19.19	-16.75/-14.07	-18.58/-17.7	-18.58/-17.7
Θ (75°)	-18.86/-13.9	-16.26/-15.16	-16.6/-16.71	-18.66/-18.42	-15.19/-17.98	-18.06/-18.56	-17.71/-14.34	-8.95/-11.12	-17.83/-16.24	-17.6/-18.46	-17.6/-17.69	-14.77/-17.16	-17.83/-18.45	-18.99/-17.93	-17.87/-19.3	-17.49/-12.01	-18.42/-10.39	-15.73/-17.9	-17.99/-16.11	-11.67/-12.33	-10.55/-13.32	-11.58/-16.81	-14.07/-18.94	-14.07/-18.94
Θ (82.5°)	-11.93/-12.28	-12.58/-11.45	-18.49/-17.54	-18.47/-17.51	-17.17/-19.22	-18.65/-17.96	-17.97/-17.2	-11.49/-10.86	-13.85/-14.02	-18.21/-17.44	-18.97/-17.66	-17.13/-19.17	-17.43/-18.56	-18.73/-14.66	-19.03/-18.43	-18.19/-14.66	-14.66/-17.8	-17.28/-17.27	-16.25/-16.47	-17.02/-10.05	-13.98/-13.25	-19.13/-17.65	-18.01/-18.5	-8.07/-8.94
Θ (90°)	-10.77/-11.39	-10.71/-16.27	-17.48/-17.73	-11.45/-16.15	-18.71/-15.99	-18.88/-16.39	-12.22/-14.65	-14.67/-13.72	-17.79/-17.74	-18.75/-18.78	-16.87/-15.31	-13.75/-11.15	-12.59/-14.78	-16.76/-18.84	-17.6/-15.83	-15.98/-18.68	-13.89/-10.64	-17.93/-17.41	-10.92/-16.98	-13.45/-15.71	-10.91/-11.43	-10.97/-16.36	-10.97/-16.36	-10.97/-16.36
Θ (97.5°)	-10.6/-8.9	-8.13/-9.32	-18.32/-17.62	-15.56/-19.61	-19.12/-18.46	-14.22/-14.86	-18.9/-10.44	-12.72/-10.8	-16.04/-18.72	-18.52/-19.11	-18.61/-18.51	-18.9/-17.32	-18.74/-13.12	-16.3/-18.95	-16.55/-18.97	-19.6/-12.2	-19.11/-18.46	-18.77/-14.64	-10.57/-17.41	-19.65/-12.8	-8.04/-10.14	-10.37/-9.45	-10.37/-9.45	-10.37/-9.45
Θ (105°)	-9.86/-16.03	-13.44/-18.32	-13.47/-18.75	-13.54/-18.19	-18.2/-15.47	-17.73/-10.44	-14.57/-16.35	-12.1/-10.96	-16.36/-18.24	-18.23/-16.55	-17.47/-12.41	-14.3/-17.51	-18.11/-18.11	-17.67/-17.58	-17.6/-19.05	-18.95/-18.67	-18.01/-18.62	-13.61/-8.71	-10.51/-10.43	-19.15/-16.19	-16.09/-18.85	-18.18/-15.06	-13.52/-14.75	-14.39/-12.5
Θ (112.5°)	-10.82/-12.08	-10.47/-11.89	-13.21/-15.32	-15.83/-10.93	-12.89/-11.73	-18.06/-16.46	-19.76/-13.71	-13.67/-17.5	-14.5/-16.02	-18.16/-17.61	-15.63/-14.96	-18.66/-19.06	-19.01/-18.66	-18.62/-14.78	-17.51/-18.74	-19.14/-16.66	-17.91/-14.57	-16.69/-17.53	-12.3/-12.35	-18.3/-8.66	-7.23/-9	-14.26/-15.61	-15.51/-18.61	-14.55/-13.26
Θ (120°)	-12.21/-10.8	-10.91/-11.23	-15/-8.79	-12.37/-9.15	-10.14/-11.75	-14.89/-16.82	-18.24/-17.97	-17.8/-17.42	-19.33/-14.97	-18.91/-18.02	-15.75/-17.95	-18.77/-18.52	-17.98/-18.36	-12.03/-10.53	-17.38/-14.45	-18.36/-13.22	-12.81/-15.32	-16.92/-18.37	-17.99/-11.07	-13.62/-13.67	-13.72/-14.56	-17.09/-12.52	-17.52/-18.45	-15.47/-15.81
Θ (127.5°)	-17.71/-18.21	-15.74/-12.17	-12.8/-9.38	-9.87/-17.24	-17.03/-10.52	-8.74/-18.31	-12.3/-13.88	-17.8/-16.48	-15.14/-16.8	-19.71/-15.48	-18.76/-18.09	-18.98/-15.27	-16/-19.37	-17.83/-19.05	-14.04/-13.22	-11.01/-14.74	-16.21/-10.83	-9.74/-14.73	-13.58/-17.61	-18.72/-17.31	-12.11/-14.8	-10.94/-14.72	-10.94/-14.72	-10.94/-14.72
Θ (135°)	-18.38/-18.3	-19.06/-14.99	-15.36/-12.28	-13.44/-10.45	-12.88/-16.47	-9.77/-14.9	-11.09/-11.65	-12.79/-18.06	-18.93/-19.05	-16.55/-15.41	-13.77/-14.47	-13.87/-18.7	-18.42/-19.43	-11.09/-11.68	-19.25/-13.74	-18.91/-19.31	-17.62/-15.88	-18.57/-18.6	-11.29/-7.92	-18.52/-19.03	-17.53/-15.25	-18.2/-16.77	-19.16/-18.37	-19.16/-18.37
Θ (142.5°)	-18.24/-18.47	-14.48/-12.28	-9.42/-9.98	-13.33/-12.77	-10.91/-11.92	-10.03/-11.12	-12.56/-10.65	-12.41/-10.61	-18.04/-17.49	-17.26/-14.57	-13.22/-15.45	-15.04/-13.18	-10.46/-14.74	-16.27/-13.91	-15.38/-17.41	-18.26/-18.75	-16.32/-11.5	-9.23/-11	-10.22/-13.08	-17.97/-17.98	-18.98/-14	-17.35/-14.23	-18.28/-18.5	-18.28/-18.5
Θ (150°)	-16.28/-19.05	-17.48/-18.13	-17.94/-11.46	-8.31/-12.41	-12.85/-9.82	-8.57/-9.52	-9.26/-12.61	-13.22/-10.69	-10.75/-14.06	-14.69/-16.14	-14.88/-18.62	-16.36/-19.48	-18.24/-17.27	-19.27/-18.89	-16.67/-14.61	-8.51/-11.71	-14.6/-17	-8.28/-9.93	-13.86/-14.27	-11.39/-13.16	-15.8/-18.03	-16.87/-17.99	-17.44/-18.55	-17.34/-15.88
Θ (157.5°)	-16.66/-18.28	-18.33/-17.53	-17.24/-10.43	-17.21/-11	-7.51/-8.65	-11.52/-10.81	-6.37/-7.5	-11.54/-13.95	-15.35/-18.96	-18.97/-18.04	-19.45/-18.99	-18.1/-16.07	-14.06/-11.87	-11.83/-9.17	-6.75/-6.06	-10.71/-10.78	-4.55/-3.32	-10.52/-18.8	-14/-10.75	-13.84/-10.33	-14.3/-17.62	-16.6/-13.11	-10.66/-11.31	-11.44/-14.19
Θ (165°)	-14.87/-12.97	-16.63/-14.93	-13.44/-13.64	-10.3/-6.59	-6.12/-8.56	-11.81/-13.44	-9.34/-9.28	-8.95/-9.93	-10.57/-13.68	-15.17/-16.64	-17.96/-18.33	-15.88/-12.14	-12.07/-10.18	-10.44/-9.03	-13.33/-11.88	-6.58/-4.48	-7.4/-8.89	-18.35/-17.1	-12.59/-17.44	-18.33/-11.61	-11.03/-14.15	-11.17/-14.72	-13.69/-13.03	-14.92/-13.77
Θ (172.5°)	-13.53/-13.94	-14.85/-13.31	-13.41/-11.87	-10.1/-10.21	-10.71/-10.33	-9.75/-11.25	-10.92/-11.25	-11.98/-12.1	-13.26/-13.56	-13.91/-17.16	-17.02/-18.71	-16.98/-16.06	-12.02/-11.04	-9.39/-9	-6.84/-8.1	-12.46/-19.07	-15.15/-11.18	-9.77/-12.52	-17.17/-18.2	-14.22/-12.16	-10.13/-12.24	-12.28/-12.81	-12.28/-12.81	-12.28/-12.81
Θ (180°)	-13.96/-12.99	-11.78/-10.44	-9.35/-9.69	-9.54/-9.25	-9.24/-9.35	-8.89/-10.43	-11.99/-12.44	-14.02/-14.77	-14.8/-15.33	-14.47/-15.82	-17.17/-16.02	-16.1/-13.67	-13.96/-13.13	-13.46/-12.89	-12.83/-12.92	-11.87/-15.78	-17.83/-18.06	-12.95/-12.33	-15.31/-18.63	-15.38/-11.19	-9.96/-9.89	-12.17/-13.21	-15.55/-16.25	-15.23/-14.54
Freq(Hz)	5.3GPol.	ThetaAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-17.88/-14.18	-13.71/-14.11	-13.07/-11.54	-12.45/-12.17	-11.27/-10.17	-9.6/-10.03	-9.61/-9.62	-10.01/-9																



Radiated Composite Gain Data (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix A

Θ(7.5°)	-9.18/-9.87	-10.19/-11.08	-9.28/-9.09	-11.41/-11.17	-11.12/-11.25	-12.31/-11.89	-13.16/-11.6	-11.18/-11.09	-12.67/-12.02	-10.51/-11.56	-11.73/-14.01	-13.03/-15.62	-15.79/-18.08	-19.04/-17.98	-19.48/-14.04	-13.55/-13.34	-11.42/-11.22	-9.68/-9.67	-10.35/-11.18	-12/-11.99	-14.14/-17.83	-14.96/-15.68	-18.3/-16.66	-15.54/-13.7
Θ(15°)	-10.58/-10.59	-10.48/-9.93	-10.89/-10.5	-8.46/-8.74	-8.86/-7.83	-8.67/-8.78	-9.55/-10.8	-12.87/-13.49	-11.36/-11.97	-11.24/-11.12	-14.2/-13.12	-14.98/-16.04	-18.42/-18.82	-19.05/-14.47	-18.42/-18.97	-18.94/-18.04	-17.75/-13.59	-9.4/-8.81	-8.61/-9.28	-9.94/-10.61	-12.66/-16.28	-18.65/-19.15	-19.19/-17.27	-14.64/-14.46
Θ(22.5°)	-15.99/-18.13	-18.52/-18.81	-16.3/-15.06	-12.19/-11.43	-11.03/-10.36	-10.12/-8.27	-8.69/-9.3	-13.45/-13.47	-10.68/-10.87	-17.62/-18.88	-14.22/-18.14	-12.48/-16.33	-15.63/-18.72	-18.23/-17.83	-17.33/-13.38	-15.79/-11.64	-12.49/-10.54	-11.07/-12.85	-11.82/-10.36	-11.17/-14.56	-12.08/-13.73	-16.29/-18.86	-17.93/-17.64	-15.99/-16.11
Θ(30°)	-15.28/-18.25	-18.41/-17.38	-17.94/-19.08	-17.59/-13.58	-9.87/-10.79	-11.62/-11.73	-10.4/-10.01	-9.82/-10.54	-11.3/-13.66	-14.59/-15.38	-16.68/-18.67	-19.26/-17.74	-11.85/-14.53	-14.36/-18.05	-17.67/-18.26	-12.91/-10.68	-11.85/-12.5	-10.42/-13.35	-15.62/-11	-14.52/-18.77	-13.17/-13.19	-18.07/-17.46	-18.28/-17.81	-18.79/-18.27
Θ(37.5°)	-17.86/-18.95	-18.83/-17.85	-18.06/-11.93	-16.44/-18.76	-16.77/-16.11	-13.04/-17.14	-13.19/-11.6	-11.81/-14.88	-13.29/-15.6	-19.4/-17.7	-18.7/-19.23	-17.28/-18.22	-18.02/-15.39	-18/-18.07	-13.1/-17.87	-19.14/-15	-13.24/-16.37	-14.88/-14.37	-17.22/-11.9	-18.37/-13.53	-15.01/-18.61	-17.01/-19.11	-19.28/-16.54	-13.86/-11.89
Θ(45°)	-14.28/-18.66	-17.39/-18.43	-16.21/-14.69	-11.71/-12.3	-13.04/-17.18	-15.33/-13.69	-13.88/-11.37	-9.87/-10.94	-11.24/-19.31	-19.04/-17.43	-19.03/-18.6	-18.47/-18.06	-18.5/-18.17	-18.91/-18.11	-16.2/-17.32	-15.85/-18.53	-18.92/-18.77	-13.26/-10.38	-14.75/-12.59	-13.81/-10.96	-13.79/-13.58	-13.65/-17.13	-16.63/-16.2	-10.61/-13.52
Θ(52.5°)	-18.81/-17.67	-18.49/-17.15	-18.02/-18.22	-16.22/-16.82	-17.54/-14.93	-17.86/-11.82	-12.77/-10.38	-8.24/-10.23	-12.89/-16.54	-17.75/-15.35	-18.39/-15.42	-18.17/-17.92	-18.31/-18.76	-16.09/-18.79	-14.38/-15.82	-11.49/-17.65	-17.48/-18.5	-11.66/-14.16	-13.5/-8	-11.28/-18.26	-18.49/-18.69	-18.74/-18.44	-18.46/-12.44	-9.97/-10.99
Θ(60°)	-18.09/-18.73	-13.87/-15.95	-16.83/-19.22	-13.41/-13.46	-17.96/-17.84	-14.01/-17.67	-18.44/-12.08	-9.67/-10.21	-13.74/-18.51	-18.71/-16.56	-14.72/-17.13	-18.21/-17.98	-18.14/-16.24	-16.63/-14.8	-15.82/-18.6	-15.81/-16.87	-17.32/-17.16	-12.56/-12.59	-11.49/-10.26	-11.6/-17.77	-17.21/-18.94	-18.3/-14.77	-17.85/-10.36	-7.54/-10.93
Θ(67.5°)	-13.47/-18.66	-14.77/-18.39	-10.09/-15.27	-13.51/-17.17	-19.05/-16.18	-17.87/-18.7	-18.37/-15.64	-16.26/-17.72	-18.05/-18.95	-17.04/-16.99	-17.79/-18.74	-18.89/-17.71	-18.79/-18.38	-17.35/-13.75	-15.37/-19.06	-17.71/-18.03	-15.93/-18.94	-17.56/-15.34	-12.97/-14.11	-17.91/-16.6	-18.42/-17.68	-18.02/-18.34	-17.41/-10.91	-8.95/-12.21
Θ(75°)	-13.53/-14.06	-18.85/-17.21	-11.01/-18.1	-18.83/-15.63	-17.44/-15.28	-14.38/-13.46	-12.05/-10.35	-13.58/-17.55	-19.14/-18.34	-16.9/-19.37	-19.02/-15.53	-14.79/-14.62	-18.31/-17.99	-10.2/-9.66	-11.2/-14.9	-19/-13.81	-15.15/-18.79	-18.23/-17.65	-17.9/-18.95	-12.87/-18.75	-18.99/-15.43	-18.95/-17.98	-19.09/-14.61	-10.38/-18.16
Θ(82.5°)	-13.81/-8.66	-12.04/-13.52	-14.82/-10.59	-17.58/-18.28	-19.44/-17.89	-18.9/-19.23	-14.81/-11.59	-13.62/-9.34	-19.13/-18.28	-17.53/-13.21	-19.31/-18.33	-17.81/-18.98	-18.77/-17.86	-11.94/-12.6	-15.48/-11.67	-18.27/-12.45	-18.43/-18.27	-14.1/-19.39	-11.72/-16.98	-17.3/-10.2	-13.14/-8.01	-12.55/-11.75	-19.04/-18.65	-12.73/-19.2
Θ(90°)	-13.51/-13.67	-15.88/-19.72	-18.19/-18.04	-18.75/-12.96	-19.26/-15.12	-17.47/-13.89	-18.87/-14.5	-12.12/-14.7	-18.77/-18.61	-17.31/-15.59	-15.11/-17.88	-18.85/-15.03	-18.39/-18.14	-18.65/-13.61	-10.39/-13.67	-17.94/-15.57	-15.77/-19.12	-18.59/-18.09	-18.38/-18.12	-17.77/-12.93	-17.51/-15.13	-17.72/-14.97	-18.46/-14.91	-10.84/-8.9
Θ(97.5°)	-8.83/-9.78	-8.74/-17.37	-18.78/-17.95	-14.63/-10.58	-15.22/-13.44	-18.02/-13.15	-18.23/-9.72	-15.15/-18.28	-19.05/-16.45	-15.23/-13.92	-14.19/-14.76	-12.74/-12.15	-14.62/-19.02	-12.59/-9.05	-8.68/-17.32	-15.28/-15.42	-19.23/-18.85	-12.43/-12.41	-18.8/-16.66	-15.28/-11.36	-9.36/-7.93	-14.21/-16.61	-12.32/-8.23	-8.98/-7.61
Θ(105°)	-10.98/-16.33	-10.81/-18.96	-18.12/-18.01	-19.04/-13.14	-18.52/-18.26	-17.56/-18.09	-16.54/-11.35	-19.19/-12.48	-12.99/-13.33	-17.16/-18.72	-18.78/-18.67	-18.66/-19.06	-18.05/-19.23	-13.22/-11.31	-15.57/-15.33	-19.02/-14.77	-18.82/-19.19	-15.52/-19.1	-17.86/-19.22	-18.16/-15.5	-16.46/-14.61	-15.07/-11.06	-17.59/-15.99	-15.75/-14.11
Θ(112.5°)	-7.36/-15.45	-10.37/-11.05	-19.08/-15.71	-11.34/-17.68	-13.95/-17.9	-18.9/-19.66	-12.04/-17.25	-15.85/-10.61	-19.13/-18.7	-17.77/-18.64	-12.76/-12.61	-12.21/-14.21	-17.29/-17.61	-10.98/-13.61	-18.52/-13.82	-18.18/-18.7	-18.7/-17.89	-18.67/-19.08	-19.03/-13.37	-8.18/-17.38	-13.25/-8.07	-10.03/-10.57	-16.45/-18.83	-12.92/-13.93
Θ(120°)	-14.75/-13.65	-10.89/-10.68	-11.49/-18.82	-6.96/-10.24	-17.09/-11.91	-16.08/-18.29	-15.43/-19.23	-14/-18.2	-18.67/-17.98	-19.05/-18.83	-18.43/-14	-16.31/-18.35	-17.39/-15.46	-15.97/-12.73	-18.6/-10.8	-17.7/-17.97	-13.59/-19.34	-18.56/-18.83	-14.41/-17.36	-9.77/-17.58	-11.06/-12.1	-17.93/-18.32	-18.48/-16.15	-14.13/-14.21
Θ(127.5°)	-5.54/-17.31	-19.02/-13.17	-11.47/-10.59	-8.84/-10.79	-16.61/-10.21	-15.26/-13.89	-15.5/-18.14	-15.31/-11.37	-11.1/-18.31	-15.14/-14.46	-18.38/-16.79	-19.07/-18.13	-17.62/-17.83	-17.76/-12.15	-14.96/-18.77	-16.16/-18.52	-19.84/-11.96	-17.74/-13.53	-18.63/-15.29	-12.14/-15.47	-11.76/-17.19	-18.76/-18.43	-14.61/-18.8	-11.58/-16.64
Θ(135°)	-18.94/-18.23	-13.21/-15.41	-14.85/-12.25	-9.68/-12.63	-14.89/-12.87	-11.58/-12.65	-11.95/-10.77	-17.84/-16.62	-13.84/-15.42	-14.79/-14.24	-9.41/-15.48	-14.6/-18.57	-18.72/-19.18	-18.75/-13.54	-11.15/-10.32	-18.28/-10.78	-14.24/-18.85	-16.46/-11.93	-13.14/-17.44	-18.97/-7.46	-11.54/-16.99	-18.56/-14.14	-12.38/-13.34	-18.68/-15.53
Θ(142.5°)	-16.07/-19.51	-16.12/-16.19	-16.62/-9.62	-8.92/-11.59	-12.1/-11.82	-13.11/-15.7	-19.15/-8.1	-8.93/-17.79	-15.58/-15.72	-13.91/-17.53	-14.12/-18.39	-13.81/-17.87	-18.05/-12.24	-10.26/-8.01	-9.98/-16.02	-11.3/-16.01	-11.57/-16.67	-11.84/-8.88	-18.88/-18.7	-10.47/-8.27	-15.86/-17.35	-18.72/-17.96	-16.59/-18.99	-18.88/-18.3
Θ(150°)	-18.73/-18.28	-17.66/-13.69	-16.42/-12.51	-11.03/-7.61	-12.06/-14.08	-10.76/-14.45	-17.11/-11.1	-9.05/-11.48	-13.03/-14.33	-17.92/-18.47	-19.28/-17.68	-18.55/-18.48	-18.27/-17.28	-14.05/-12.4	-13.78/-18.54	-12.42/-7.79	-12.14/-14.8	-10.29/-11.62	-17.72/-17.21	-13.58/-14.02	-14.75/-19.28	-19.18/-18.59	-18.13/-18.12	-17.87/-19.2
Θ(157.5°)	-19.39/-18.21	-17.93/-18.46	-18.48/-12.3	-9.79/-7.7	-8.72/-13.53	-12.58/-9.59	-13.84/-12.78	-11.03/-12.76	-15.65/-17.77	-17.38/-17.94	-17.96/-19.19	-19.04/-17.44	-18.21/-17.53	-19.02/-15.47	-6.09/-7.62	-9.23/-11.61	-9.16/-9.55	-11.81/-14.88	-18.02/-13.33	-14.72/-16.41	-15.48/-14.54	-18.87/-18.31	-15.62/-19.32	-18.54/-17.82
Θ(165°)	-12.73/-12.87	-13.68/-14.04	-12.01/-11.4	-8.6/-7.8	-10.16/-13.47	-13.19/-11.09	-10.44/-10.26	-10.71/-12.77	-14.29/-13.68	-18.09/-18.92	-17.9/-18.2	-17.8/-17.59	-15.24/-15.26	-11.81/-8.01	-8.57/-10.58	-12.82/-12.71	-12.41/-16.16	-15.06/-12.81	-13.14/-18.11	-18.8/-16.39	-16.49/-12.59	-13.14/-11.42	-11.44/-10.2	
Θ(172.5°)	-15.33/-14.04	-12.52/-12.22	-12.13/-10.59	-9.66/-11.17	-10.93/-12.32	-14.41/-13.76	-16.75/-16.79	-18.17/-17.89	-18.2/-17.43	-18.95/-18.06	-19.22/-18.95	-18.83/-14.96	-16.69/-14.15	-14.48/-16.61	-18.43/-14.68	-13.02/-11.89	-11.28/-11.42	-14.45/-16.34	-14.21/-14.23	-14.2/-13.41	-10.65/-11.7	-11.22/-13.4	-16.76/-15.01	-18.7/-16.83
Θ(180°)	-13.27/-15.61	-11.94/-12.83	-12.16/-11.44	-12.6/-12.34	-12.37/-15.03	-16.32/-15.45	-16.19/-17.63	-16.35/-17.26	-18.12/-18.07	-18.5/-18.26	-17.33/-18.14	-16.83/-12.65	-12.19/-11.3	-11.37/-10.9	-11.93/-11.18	-12.64/-15.14	-18.28/-18.75	-18.52/-18.63	-19.1/-19.33	-17.82/-15.19	-14.47/-13.75	-17.29/-18.72	-17.2/-18.79	-14.41/-16.3
Freq(Hz)	5.785GPol.	Theta/Ant. 4	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-14.05/-13.82	-12.68/-11.22	-11.98/-12.3	-13.67/-14.44	-16.87/-16.34	-17.24/-17.8	-18.41/-17.79	-17.39/-14.82	-16.36/-16.84	-14.56/-16.32	-16.65/-14.17	-15.23/-14.47	-17.11/-16.04	-16.96/-15.21	-16.12/-19.34	-18.86/-17.51	-18.59/-18.28	-18.22/-15.14	-12.18/-16.93	-18.96/-15.02	-13.44/-11.63	-11.31/-11.87		
Θ(7.5°)	-12.9/-14.67	-19.02/-19.14	-19.32/-18.41	-17.45/-18.76	-17.9/-17.9	-14.71/-15.3	-16.39/-18.04	-18.11/-17.32	-13.32/-14.22	-13.77/-11.72	-11.27/-10.16	-10/-9.76	-9.38/-9.81	-8.51/-9.48	-8.66/-9.51	-7.75/-9.04	-11.46/-12.9	-12.58/-13.88	-15.6/-14.31	-15.29/-18.15	-17.87/-12.23	-10.11/-10.12	-11.23/-12.04	-13.35/-13.46
Θ(15°)	-14.42/-15.58	-15.18/-15.13	-17.42/-16.52	-17.12/-16.37	-11.4/-11.76	-11.32/-11.53	-10.22/-9.1	-8.68/-10.06	-10.38/-9.05	-7.34/-7.62	-7.4/-7.73	-7.41/-8	-8.07/-8.35	-8.17/-6.61	-6.88/-7.6	-5.85/-5.84	-10.4/-12.39	-12.38/-12.39	-13.91/-15.16	-18.19/-19.06	-18.79/-17.33	-16.05/-14.45	-16.89/-18.45	-18/-17.13
Θ(22.5°)	-12.17/-15.85	-14.35/-13.34	-11.49/-14.89	-18.88/-15.49	-14.28/-15.43	-13.08/-10.05	-9.59/-9.77	-12.03/-12.9	-10.2/-9.39	-9.3/-11.4	-10.23/-7.75	-8.24/-7.39	-10.15/-9.64	-13.62/-9.72	-11.2/-11.82	-4.42/-3.71	-7.93/-8.78	-12.55/-14.84	-10.89/-11.75	-19.87/-14.39	-13.84/-15.16	-18.76/-18.28	-19.16/-19.43	-14.99/-13.39
Θ(30°)	-8.7/-10.75	-10.22/-11.63	-14.96/-16.5	-13.2/-18.12	-14.37/-11.66	-13.64/-13.65	-13.19/-8.77	-14.03/-13.91	-12.93/-15.82	-17.14/-14.32	-15.78/-14.79	-15.79/-12	-9.95/-10.26	-16.29/-15.66	-16.8/-14.56	-6.32/-9.11	-8.74/-8.75	-12.54/-14.01	-16.3/-18.01	-14.52/-11.52	-11.92/-11.19	-11.16/-16.34	-15.1/-11.51	-10.11/-9.31
Θ(37.5°)	-12.53/-16.23	-14.14/-15.26	-16.86/-11.48	-8.27/-8.25	-9.38/-13.95	-18.67/-17.28	-13.32/-12.12	-10.24/-9.59	-9.31/-9.93	-13.27/-15.19	-14.71/-19.18	-17.31/-16.5	-17.64/-14.59	-12.68/-12.35	-12.37/-9.06	-11.05/-9.69	-8.37/-18.04	-11.26/-9.84	-12.35/-11.14	-11.13/-11.65	-9.03/-8			





Antenna Pattern (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix B

Θ(22.5°)	-7.54/-7.68	-5.50/-7.11	-8.12/-10.44	-6.55/-7.78	-9.99/-9.56	-7.46/-6.63	-6.50/-8.48	-10.27/-10.46	-9.68/-9.07	-8.03/-9.04	-8.05/-8.21	-8.37/-8.99	-9.56/-9.23	-10.44/-10.61	-11.28/-11.70	-12.08/-11.98	-10.18/-10.37	-7.94/-8.22	-9.94/-10.16	-10.91/-9.06	-7.24/-6.03	-6.57/-6.82	-7.75/-9.42	-10.60/-8.91
Θ(30°)	-7.78/-9.77	-9.21/-11.03	-9.29/-11.37	-12.65/-10.00	-7.34/-7.86	-7.70/-5.66	-6.11/-8.65	-8.24/-8.08	-9.61/-12.85	-13.33/-13.63	-11.98/-14.37	-13.34/-10.98	-9.49/-9.26	-8.84/-7.61	-8.47/-11.08	-7.09/-5.74	-11.59/-12.35	-9.26/-9.97	-10.45/-9.81	-11.10/-11.23	-9.85/-12.24	-13.01/-9.86	-11.80/-9.79	-10.33/-9.30
Θ(37.5°)	-13.84/-15.67	-15.08/-12.45	-10.51/-11.85	-11.36/-6.54	-4.91/-8.81	-7.41/-7.73	-12.41/-13.81	-12.36/-9.83	-7.54/-4.23	-6.62/-8.05	-9.78/-7.77	-7.83/-9.10	-8.02/-6.99	-7.85/-10.70	-12.21/-8.71	-9.25/-8.20	-5.37/-4.57	-6.70/-6.22	-12.58/-7.49	-10.85/-10.55	-7.73/-6.62	-6.32/-8.44	-8.21/-8.30	-11.72/-13.23
Θ(45°)	-5.81/-3.82	-2.80/-1.52	-1.87/-1.81	-5.24/-1.69	-1.84/-7.11	-7.01/-6.47	-5.02/-2.55	-4.34/-3.72	-4.73/-4.18	-2.47/-4.06	-3.87/-3.81	-4.37/-2.31	-2.54/-4.66	-5.38/-6.14	-6.44/-8.46	-8.65/-10.74	-7.85/-4.49	-3.80/-1.41	-4.15/-3.60	-7.48/-7.65	-7.82/-3.01	-1.73/-2.44	-1.02/-2.81	-4.18/-5.92
Θ(52.5°)	-0.38/-0.67	0.15/-0.55	-2.66/-1.11	-2.01/-0.61	-3.29/-3.87	-3.62/-2.52	-1.73/-0.47	-5.13/-4.36	-4.75/-6.69	-14.40/-5.62	-3.62/-4.82	-5.38/-10.03	-7.99/-1.63	-2.32/-3.99	-6.30/-3.93	-3.22/-4.25	-7.03/-7.65	-2.36/-0.45	-3.41/-5.48	-5.39/-6.40	-4.91/-4.18	-3.61/-3.19	-1.37/-1.78	-0.180/-77
Θ(60°)	-3.26/-6.39	-4.03/-4.46	-6.38/-5.05	-4.96/-5.06	-4.98/-3.27	-3.62/-4.04	-4.69/-6.88	-8.74/-4.77	-6.51/-5.92	-3.73/-3.82	-6.75/-5.27	-3.49/-3.70	-1.74/-5.45	-5.17/-4.89	-4.64/-3.39	-2.41/-3.77	-6.09/-7.90	-9.47/-4.47	-5.87/-2.24	-7.58/-4.01	-9.13/-6.01	-4.77/-5.19	-8.02/-7.98	-6.19/-3.72
Θ(67.5°)	-4.53/-5.05	-6.79/-4.25	-5.46/-2.77	-3.59/-4.57	-3.48/-2.08	-2.11/-3.26	-6.61/-2.54	-2.68/-2.09	-0.53/-5.16	-3.44/-4.88	-1.47/-5.14	-2.16/-0.92	0.53/-0.21	-1.33/-3.35	-6.64/-7.47	-8.79/-3.73	-3.02/-3.43	-2.65/-6.28	-3.66/-1.33	-2.04/-0.33	-2.99/-2.29	-3.27/-6.38	-2.73/-2.12	-1.37/-4.08
Θ(75°)	0.41/-0.18	0.81/-0.14	0.60/-0.14	0.04/-0.82	-0.61/-0.16	-0.23/-1.12	-0.17/-0.07	-0.37/-1.19	-0.86/-2.14	-2.07/-0.02	0.74/-0.86	-1.70/-2.28	-4.34/-3.46	-2.92/-3.02	-1.01/-0.89	-4.52/-5.44	-1.53/-1.77	-1.82/-0.50	-1.94/-1.14	-0.98/-0.64	-0.99/-0.47	0.44/-0.18	-0.28/-0.61	1.44/-0.17
Θ(82.5°)	-2.27/-2.50	-0.90/-1.09	-0.68/-1.47	-3.82/-2.84	-0.83/-4.00	-0.86/-2.20	-2.90/-2.05	-2.91/-4.08	0.54/-1.50	1.16/-0.76	0.21/-1.54	1.64/-3.89	1.86/-2.21	-0.16/-4.46	-2.01/-1.70	-0.04/-3.47	1.04/-1.38	-0.44/-2.14	-6.54/-0.11	-1.52/-2.01	-1.03/-6.06	-2.10/-1.23	-1.20/-2.31	
Θ(90°)	6.27/-4.51	-3.65/-3.06	-5.45/-3.27	0.16/-1.08	-3.04/-2.63	-1.87/-1.62	-2.86/-1.48	-2.37/-1.98	-0.08/-3.58	-8.64/-1.65	-5.90/-1.84	-2.65/-7.76	-8.17/-3.57	-1.87/-2.57	-5.40/-4.60	-4.55/-1.68	0.38/-1.42	-1.14/-0.91	-2.54/-2.69	-7.49/-1.69	-4.70/-3.80	1.22/-0.39	-0.81/-1.83	-2.49/-6.11
Θ(97.5°)	-2.82/-1.09	-0.33/-0.03	-0.03/-1.65	-1.65/-1.97	-3.27/-0.95	-1.80/-1.45	-1.58/-0.33	-2.23/-2.29	0.72/-0.74	0.71/-1.46	1.72/-1.58	0.66/-2.16	-1.90/-1.39	-2.93/-1.90	1.68/-4.11	0.64/-1.07	2.81/-0.42	1.65/-3.61	-3.17/-2.78	-3.29/-0.55	-2.03/-3.22	-3.15/-5.37	-2.00/-0.54	-3.07/-2.12
Θ(105°)	-0.83/-4.96	-6.36/-6.16	-7.12/-5.16	-6.81/-6.14	-7.40/-4.17	-5.09/-6.06	-10.67/-4.51	-7.67/-1.62	-4.45/-2.08	-4.22/-1.67	-5.65/-10.80	-7.75/-2.28	-1.70/-0.59	-0.51/-5.18	-12.17/-4.70	-6.34/-11.45	-3.05/-1.74	-3.07/-9.08	-7.58/-9.74	-9.63/-2.08	-4.56/-9.50	-5.71/-8.08	-5.41/-4.68	-6.75/-10.70
Θ(112.5°)	-8.79/-9.93	-9.16/-6.79	-5.31/-3.43	-11.97/-7.01	-5.30/-9.00	-7.73/-6.96	-6.24/-5.63	-3.89/-6.62	-7.35/-6.92	-5.66/-4.23	-6.16/-5.87	-5.36/-4.20	-7.57/-7.51	-9.22/-9.40	-4.84/-2.62	-5.71/-10.81	-7.05/-2.63	-4.48/-10.55	-7.21/-10.25	-9.32/-8.75	-7.08/-6.28	-5.83/-1.94	-9.52/-6.28	-4.17/-4.26
Θ(120°)	-5.78/-5.35	-4.44/-7.16	-8.22/-4.47	-5.95/-10.18	-6.09/-6.83	-2.95/-4.59	-2.81/-2.08	-5.01/-6.32	-6.28/-7.00	-1.40/-4.39	-2.44/-2.49	-6.03/-7.77	-2.21/-0.98	-6.82/-10.59	-6.95/-3.65	-5.05/-4.13	-3.13/-4.13	-9.16/-5.44	-9.33/-3.06	-6.72/-8.86	-5.42/-10.30	-6.81/-7.30	-10.10/-5.12	
Θ(127.5°)	-10.84/-11.80	-12.71/-13.70	-12.41/-9.97	-8.86/-9.67	-6.85/-6.25	-4.80/-5.73	-1.65/-8.72	-7.07/-10.74	-9.13/-2.55	-3.35/-4.44	-3.47/-8.38	-14.52/-12.99	-8.16/-12.52	-5.79/-6.97	-8.31/-1.68	-5.07/-7.21	-6.66/-11.26	-7.89/-9.52	-15.44/-8.51	-8.06/-6.48	-7.25/-15.29	-9.38/-8.59	-7.63/-12.15	-8.55/-9.18
Θ(135°)	-9.74/-15.01	-11.96/-10.96	-10.64/-6.96	-10.05/-13.40	-9.78/-8.58	-11.95/-8.52	-9.32/-10.27	-15.91/-11.88	-8.18/-8.29	-10.77/-6.94	-11.23/-10.90	-12.54/-14.77	-11.74/-4.89	-8.61/-14.73	-10.70/-6.12	-3.04/-4.26	-10.58/-7.81	-14.65/-12.43	-11.87/-11.08	-8.09/-12.59	-12.00/-10.84	-9.38/-9.66	-9.05/-5.98	-7.78/-7.48
Θ(142.5°)	-4.62/-4.22	-4.67/-4.74	-7.72/-11.41	-9.38/-8.13	-13.75/-12.45	-7.82/-6.94	-9.96/-10.48	-14.68/-8.67	-6.44/-11.94	-14.77/-15.92	-10.50/-11.01	-12.13/-12.57	-7.79/-9.59	-6.82/-10.59	-9.06/-6.89	-7.53/-12.43	-9.07/-8.96	-12.00/-10.36	-9.50/-13.55	-14.41/-9.74	-8.61/-14.20	-12.00/-10.89	-7.58/-8.44	-9.47/-7.16
Θ(150°)	-5.06/-5.99	-5.60/-6.58	-6.69/-6.91	-9.56/-9.91	-7.44/-6.31	-7.13/-9.20	-5.33/-4.48	-4.80/-5.34	-11.79/-12.58	-10.13/-9.74	-6.32/-8.08	-8.43/-10.97	-10.06/-17.33	-5.02/-6.70	-4.32/-5.74	-9.13/-11.61	-9.10/-6.55	-9.44/-8.87	-5.38/-5.86	-5.97/-5.39	-4.56/-3.20	-4.56/-3.20	-3.90/-4.36	
Θ(157.5°)	-3.39/-2.60	-2.77/-3.06	-3.38/-3.44	-3.47/-5.45	-7.46/-6.39	-3.44/-2.23	-3.68/-5.92	-4.70/-5.32	-5.34/-7.96	-7.11/-7.17	-7.55/-6.05	-5.07/-5.46	-4.45/-2.88	-0.82/-0.51	-1.89/-3.54	-5.47/-4.87	-4.34/-3.97	-5.02/-4.92	-5.08/-6.45	-8.74/-7.51	-3.47/-2.00	-1.73/-4.87	-7.79/-8.09	-5.88/-4.50
Θ(165°)	-12.51/-12.44	-11.36/-10.97	-9.72/-5.86	-6.92/-5.39	-7.02/-6.51	-4.05/-4.62	-8.37/-5.52	-5.09/-4.96	-5.70/-7.59	-8.74/-9.83	-10.33/-12.20	-9.66/-4.74	-5.65/-3.96	-4.25/-4.23	-4.72/-4.60	-3.49/-3.14	-3.40/-5.49	-4.97/-4.18	-4.06/-3.79	-3.57/-5.49	-5.52/-6.94	-7.24/-6.92	-6.63/-6.65	-8.29/-10.4
Θ(172.5°)	-7.90/-8.84	-8.80/-9.60	-11.44/-11.04	-13.77/-11.28	-10.30/-10.41	-10.35/-7.48	-5.12/-4.83	-6.30/-8.25	-9.17/-11.74	-13.83/-15.24	-12.59/-8.65	-6.04/-5.70	-6.37/-7.62	-7.57/-8.65	-7.96/-6.50	-6.62/-5.97	-6.94/-6.86	-5.36/-5.83	-7.35/-8.45	-8.01/-7.53	-6.96/-6.29	-5.14/-5.15	-6.32/-6.67	-6.69/-7.54
Θ(180°)	-13.42/-13.96	-13.10/-12.98	-14.25/-15.15	-13.57/-10.98	-9.94/-8.77	-9.84/-10.94	-11.38/-14.75	-15.54/-15.08	-11.57/-10.45	-10.49/-11.41	-11.24/-11.45	-11.15/-12.23	-10.83/-11.55	-10.03/-10.25	-9.71/-10.53	-11.70/-11.75	-10.33/-13.79	-14.55/-13.85	-13.36/-13.47	-13.86/-13.84	-12.79/-12.57	-14.47/-14.50	-12.96/-12.88	
Freq(Hz)	2.450GHz	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°)	-6.49/-6.26	-6.02/-6.01	-6.28/-6.52	-6.74/-6.88	-7.20/-7.53	-7.55/-7.87	-7.70/-7.58	-7.30/-6.96	-6.73/-6.37	-6.11/-6.15	-5.78/-5.84	-5.98/-6.35	-6.35/-6.25	-6.45/-6.67	-6.74/-6.79	-6.68/-6.84	-6.80/-6.72	-6.68/-6.80	-7.24/-7.76	-7.71/-7.22	-6.70/-6.48	-6.50/-6.91	-7.08/-7.00	-6.64/-6.89
Θ(7.5°)	-6.85/-6.08	-5.77/-5.80	-5.87/-6.05	-6.04/-5.99	-6.28/-6.36	-6.41/-6.66	-6.54/-6.42	-5.93/-5.72	-5.49/-5.50	-5.50/-5.52	-5.32/-5.32	-5.64/-6.00	-6.37/-6.16	-5.99/-6.85	-6.20/-6.47	-6.52/-6.83	-7.13/-7.15	-7.40/-7.25	-7.88/-8.15	-8.60/-8.33	-7.23/-7.32	-7.90/-8.32	-8.49/-8.11	-7.58/-7.15
Θ(15°)	-9.13/-8.46	-7.83/-7.13	-6.67/-6.14	-5.96/-5.75	-5.58/-5.58	-5.78/-6.27	-6.10/-6.03	-5.73/-5.59	-5.44/-5.66	-5.20/-5.07	-4.80/-4.70	-4.64/-5.07	-5.30/-5.42	-5.30/-5.63	-5.75/-6.10	-6.39/-6.81	-7.14/-7.51	-7.99/-7.21	-7.23/-7.89	-8.15/-8.24	-7.53/-7.70	-8.97/-9.42	-10.16/-9.94	-9.64/-9.31
Θ(22.5°)	-8.90/-9.26	-9.36/-9.64	-8.92/-8.54	-7.86/-7.50	-7.52/-7.73	-8.47/-9.37	-9.58/-9.63	-9.11/-9.11	-8.62/-8.28	-7.83/-6.94	-6.13/-5.40	-4.85/-4.76	-4.74/-4.39	-4.09/-4.34	-4.65/-4.93	-5.29/-5.65	-6.17/-6.55	-6.95/-6.99	-7.35/-8.08	-8.01/-7.83	-7.76/-7.97	-8.55/-9.09	-9.23/-8.78	-8.47/-8.27
Θ(30°)	-6.44/-6.77	-7.79/-9.41	-11.25/-11.84	-11.32/-10.46	-10.93/-11.44	-13.35/-15.84	-15.38/-15.37	-15.36/-15.13	-13.96/-12.86	-12.71/-12.02	-11.22/-9.29	-7.41/-6.30	-5.06/-4.16	-3.62/-3.35	-3.51/-3.71	-3.81/-4.16	-4.75/-5.69	-6.37/-7.24	-7.86/-8.04	-8.14/-8.20	-8.23/-9.36	-7.98/-7.86	-7.39/-6.55	-6.44/-6.12
Θ(37.5°)	-5.10/-5.20	-6.80/-9.40	-12.63/-12.71	-10.35/-8.12	-6.95/-6.51	-6.53/-6.49	-6.21/-6.29	-6.98/-7.71	-7.30/-6.44	-6.32/-7.16	-8.51/-9.86	-9.51/-9.07	-7.38/-6.04	-4.59/-3.83	-3.65/-3.80	-3.58/-3.65	-4.19/-5.17	-6.12/-7.16	-8.08/-8.27	-8.24/-8.09	-8.07/-7.03	-6.45/-6.13	-5.73/-5.45	-5.30/-5.09
Θ(45°)	-3.99/-3.72	-4.72/-6.91	-8.16/-5.91	-3.90/-2.60	-1.98/-1.70	-1.64/-1.52	-1.31/-1.52	-2.09/-2.44	-2.38/-1.93	-1.49/-1.61	-2.06/-2.80	-3.81/-5.25	-6.82/-7.84	-6.98/-5.71	-4.71/-4.13	-3.80/-3.66	-4.07/-4.80	-5.75/-6.65	-7.25/-7.41	-7.66/-7.30	-6.23/-4.86	-4.14/-3.70	-4.33/-4.88	-5.20/-5.46
Θ(52.5°)	-2.63/-1.75	-2.32/-3.78	-4.15/-2.59	-1.03/-0.00	0.44/-0.58	0.53/-0.34	0.24/-0.26	-0.86/-1.33	-1.14/-0.75	-0.31/-0.04	0.36/-0.30	-0.60/-1.90	-3.66/-6.52	-8.75/-8.75	-6.86/-4.82	-3.33/-2.76	-2.98/-3.72	-4.40/-4.85	-5.00/-4.55	-5.75/-5.11	-4.26/-3.22	-2.62/-2.66	-3.50/-4.43	-4.94/-4.04
Θ(60°)	-1.82/-0.90	-1.51/-2.74	-3.18/-2.24	-1.28/-0.32	0.31/-0.48	0.12/-0.34	-0.65/-1.42	-2.40/-2.47	-1.81/-1.33	-0.97/-0.64	0.11/-0.47	-0.08/-1.23	-2.51/-4.01	-5.94/-8.02	-8.92/-6.46	-3.46/-2.27	-2.58/-3.47	-4.19/-3.46	-2.94/-3.25	-3.30/-3.11	-2.63/-2.07	-1.55/-1.79	-2.49/-3.59	-4.34/-3.51
Θ(67.5°)	-2.76/-2.44	-3.26/-3.85	-3.59/-3.30	-2.77/-2.00	-0.90/-0.38	-0.70/-0.90	-1.38/-2.73	-3.79/-3.27	-2.17/-1.73	-2.09/-2.46	-1.71/-1.06	-1.66/-2.59	-2.99/-2.79	-2.81/-3.65	-5.65/-5.94	-3.40/-1.78	-1.92/-2.36	-4.04/-2.70	-1.53/-1.56	-1.78/-1.84	-1.60/-1.11	-0.55/-0.60	-1.18/-2.58	-3.63/-3.68
Θ(75°)	-4.75/-3.83	-3.52/-3.14	-2.65/-3.09	-3.38/-2.63	-1.33/-0.69	-0.62/-0.22	-0.61/-2.09	-3.22/-2.76	-2.03/-2.15	-3.44/-4.64	-3.57/-2.63	-3.27/-5.03	-5.46/-4.01	-2.31/-1.69	-2.66/-3									



Antenna Pattern (2.4GHz and 5GHz UNII 1~UNII 5)

Appendix B

Θ(75°)	-1.22/-2.47	-4.18/-4.81	-2.21/-2.62	-0.71/0.35	2.41/-1.44	1.85/0.76	-0.14/0.75	0.27/1.05	-0.24/-1.36	-1.89/-2.77	-6.44/-4.33	-2.14/-3.37	0.22/0.42	-1.35/-4.32	-6.79/-2.75	0.45/-1.59	-1.07/-2.14	-4.29/-5.19	-0.90/-1.52	-2.19/-0.95	0.34/-0.08	0.02/-3.17	-3.00/-0.52	0.96/-0.19
Θ(82.5°)	-2.70/-1.55	-1.57/-2.36	-1.79/-3.68	-3.15/-1.65	-0.43/-2.57	-2.33/-2.48	-0.29/-1.18	-3.22/-3.9	0.64/-0.4	-0.46/-0.23	-4.58/-3.92	-4.85/-3.76	1.74/-4.42	-6.49/-4.82	-4.38/-3.81	-0.91/-1.68	-1.87/-1.28	-4.91/-7.77	-4.74/-2.69	-4.10/-1.17	-2.30/-1.70	-2.68/-4.27	-3.50/-2.05	-1.22/-1.71
Θ(90°)	-3.88/-2.81	0.19/-1.59	-1.16/-3.62	-2.53/-1.33	0.13/-1.19	0.28/-0.56	-1.61/-0.86	-1.77/-3.94	-0.48/-3.32	-2.53/-0.41	-5.43/-3.29	-3.54/-2.39	1.40/-1.09	-3.43/-4.55	-5.83/-3.07	-4.00/-4.03	-1.14/-0.14	-0.45/-3.72	-2.62/-2.95	-3.18/-3.87	-4.14/-2.06	-1.41/-2.06	-1.14/-2.06	-1.12/-0.91
Θ(97.5°)	-6.38/-1.94	0.20/-2.27	-0.72/-3.20	-1.63/-0.67	2.04/0.83	0.88/1.06	-0.80/-1.03	0.26/1.01	-1.97/0.21	-0.90/1.76	-2.01/-2.69	-3.83/-6.78	-3.56/-2.14	-4.03/-3.62	-3.12/-0.39	-0.68/-1.59	-3.51/0.73	1.00/-4.57	-1.46/-1.43	-1.19/-0.31	0.86/-1.32	-1.44/-5.44	-5.20/-1.18	-0.06/-4.19
Θ(105°)	-3.77/-5.08	-4.85/-7.3	-9.08/-14.80	-10.11/-6.21	-6.26/-10.05	-15.47/-12.20	-9.41/-15.67	-8.23/-4.74	-6.09/-3.31	-1.27/-1.57	-5.09/-5.45	-2.60/-4.55	-3.66/-7.29	-13.56/-11.00	-6.88/-2.07	-2.73/-3.91	-14.78/-5.18	-6.57/-13.92	-6.85/-8.00	-8.54/-7.30	-3.28/-7.88	-8.22/-9.68	-10.21/-7.46	-6.10/-2.34
Θ(112.5°)	-6.45/-10.37	-7.59/-9.26	-5.87/-4.96	-5.27/-5.15	-3.48/-6.37	-3.24/-4.40	-3.05/-0.29	-1.77/-3.94	-4.80/-7.95	-7.26/-8.83	-7.23/-5.64	-4.85/-5.76	-4.10/-4.50	-8.10/-9.80	-15.11/-15.78	-5.55/-6.61	-9.84/-5.72	-3.88/-15.18	-8.78/-8.30	-8.78/-8.50	-7.50/-5.26	-9.40/-15.91	-6.57/-4.48	-3.11/-2.08
Θ(120°)	-8.19/-12.11	-8.78/-7.42	-3.75/-2.20	-1.25/-1.10	-0.61/-3.35	-2.84/-2.93	-1.20/-1.55	-1.25/-1.50	-3.90/-7.78	-4.47/-3.84	-6.99/-7.35	-8.22/-6.49	-3.20/-4.82	-5.90/-5.96	-6.78/-5.30	-2.88/-7.62	-9.75/-5.05	-5.28/-14.85	-8.22/-6.42	-9.03/-6.73	-7.52/-7.19	-6.66/-4.72	-6.18/-6.01	-6.31/-6.31
Θ(127.5°)	-12.58/-11.81	-6.89/-6.13	-5.96/-3.86	-3.52/-3.68	-4.80/-5.39	-6.32/-11.08	-12.79/-8.29	-4.78/-7.05	-13.33/-10.52	-6.66/-7.39	-7.42/-5.37	-10.89/-11.55	-7.24/-6.39	-6.59/-9.07	-8.50/-5.65	-8.93/-12.50	-8.89/-3.89	-5.70/-14.75	-15.13/-7.40	-9.75/-4.72	-6.47/-11.01	-10.99/-13.09	-8.51/-11.16	-11.46/-15.02
Θ(135°)	-8.32/-8.48	-7.32/-7.63	-5.74/-4.09	-4.95/-5.91	-7.00/-7.57	-6.03/-4.40	-3.18/-3.90	-3.21/-4.09	-4.82/-4.84	-7.13/-12.01	-9.98/-7.56	-8.33/-10.52	-9.93/-7.44	-6.89/-9.10	-9.01/-8.18	-9.00/-9.55	-10.74/-6.87	-7.48/-9.20	-14.74/-12.66	-12.69/-15.31	-10.10/-10.56	-9.47/-8.20	-8.06/-8.86	-9.11/-8.84
Θ(142.5°)	-14.56/-13.68	-8.49/-10.34	-11.55/-8.86	-9.75/-5.83	-4.09/-3.61	-3.78/-4.84	-4.46/-4.66	-5.37/-5.30	-7.78/-9.51	-10.13/-8.12	-6.57/-8.76	-7.99/-4.90	-5.10/-7.22	-9.59/-9.18	-12.70/-7.86	-8.94/-9.07	-7.95/-6.63	-6.91/-11.11	-14.91/-12.19	-6.90/-7.68	-11.03/-14.43	-9.34/-7.48	-9.16/-10.31	-11.02/-12.99
Θ(150°)	-6.12/-7.01	-6.90/-6.65	-4.95/-2.20	-0.35/0.74	0.31/-1.25	-3.84/-5.67	-6.32/-6.46	-6.48/-6.50	-8.41/-13.01	-12.11/-14.32	-13.44/-12.28	-8.32/-5.49	-6.60/-7.28	-5.52/-4.52	-4.02/-3.74	-4.42/-5.53	-5.26/-5.38	-4.72/-6.81	-9.69/-9.84	-7.37/-7.18	-7.98/-6.47	-4.74/-3.67	-3.81/-4.03	-5.40/-5.77
Θ(157.5°)	-5.80/-6.18	-6.87/-6.60	-5.51/-4.91	-5.21/-6.01	-6.32/-6.99	-7.04/-6.36	-6.45/-8.14	-8.33/-10.07	-10.50/-10.43	-9.84/-9.89	-10.28/-10.41	-8.43/-5.97	-4.47/-4.14	-5.04/-6.67	-7.17/-8.29	-9.83/-10.22	-7.72/-10.91	-11.18/-10.26	-10.12/-12.16	-13.24/-11.62	-11.88/-11.60	-10.93/-8.57	-7.84/-6.14	-6.38/-6.02
Θ(165°)	-9.21/-10.24	-8.79/-8.88	-7.59/-6.99	-6.04/-4.51	-3.92/-4.80	-7.05/-10.04	-13.12/-12.81	-14.24/-14.85	-12.31/-9.08	-7.62/-7.15	-9.02/-11.39	-11.02/-9.08	-8.63/-8.81	-8.27/-8.02	-7.94/-7.90	-7.08/-6.75	-6.51/-6.80	-6.64/-7.61	-8.15/-7.87	-7.63/-7.18	-7.00/-7.38	-7.51/-7.47	-7.00/-7.06	-7.99/-8.67
Θ(172.5°)	-4.50/-4.02	-4.42/-4.51	-4.43/-4.71	-5.11/-5.76	-7.76/-9.59	-11.22/-12.16	-11.43/-12.11	-13.32/-11.30	-8.98/-8.08	-7.39/-8.10	-8.15/-7.18	-6.52/-6.03	-6.26/-5.64	-5.26/-5.19	-5.03/-4.60	-4.56/-4.60	-5.11/-5.55	-6.12/-6.78	-7.79/-7.80	-8.24/-8.65	-8.07/-8.15	-8.52/-7.61	-7.56/-7.39	-6.48/-5.22
Θ(180°)	-8.05/-8.29	-9.95/-10.78	-10.61/-10.84	-11.53/-11.63	-14.18/-14.25	-11.93/-10.55	-9.70/-11.27	-12.26/-11.65	-9.99/-9.11	-7.29/-6.80	-6.48/-6.43	-6.87/-8.06	-8.91/-9.50	-9.27/-8.54	-8.27/-7.93	-7.40/-7.26	-7.06/-7.12	-7.99/-7.19	-7.97/-8.22	-8.08/-7.51	-7.00/-6.81	-6.51/-5.94	-6.08/-6.71	-7.07/-7.53
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°)	-9.74/-10.35	-10.43/-9.59	-9.52/-9.51	-9.18/-9.57	-8.62/-8.24	-7.63/-7.30	-7.62/-7.06	-8.13/-8.41	-8.86/-9.00	-9.91/-9.30	-7.62/-10.95	-9.71/-10.08	-10.95/-10.37	-9.66/-9.43	-9.225/-9.47	-9.95/-10.08	-10.57/-10.58	-11.00/-11.13	-12.07/-11.60	-10.84/-11.77	-11.95/-12.94	-10.81/-10.46	-9.91/-9.73	
Θ(7.5°)	-10.58/-12.44	-11.37/-11.29	-11.13/-10.89	-10.33/-9.59	-10.60/-10.03	-9.83/-10.09	-9.71/-10.19	-10.79/-11.05	-11.24/-10.91	-10.33/-10.67	-10.25/-8.95	-8.43/-7.55	-7.49/-8.04	-6.66/-5.86	-6.01/-6.38	-6.14/-5.90	-6.10/-6.67	-6.79/-7.15	-6.98/-7.40	-7.52/-8.00	-9.10/-10.75	-10.36/-9.40	-8.50/-8.83	-8.94/-9.51
Θ(15°)	-8.15/-8.37	-9.42/-11.20	-13.10/-12.98	-11.45/-10.45	-9.08/-5.57	-5.99/-9.16	-9.36/-9.24	-9.44/-9.41	-10.08/-9.38	-8.61/-7.65	-7.35/-6.70	-6.69/-6.17	-4.99/-4.77	-4.13/-4.06	-4.19/-3.87	-3.96/-3.98	-4.22/-4.75	-5.16/-5.35	-5.62/-6.16	-6.58/-7.52	-7.85/-7.54	-7.79/-7.95	-7.80/-7.81	-7.51/-7.64
Θ(22.5°)	-6.87/-6.57	-6.17/-7.04	-9.05/-12.61	-13.43/-10.57	-8.72/-8.22	-7.25/-7.27	-7.22/-8.13	-8.50/-7.59	-7.52/-7.35	-7.55/-8.46	-9.28/-9.35	-7.77/-6.25	-5.28/-6.21	-6.31/-4.47	-3.34/-2.77	-3.83/-3.62	-4.06/-4.24	-4.53/-6.13	-7.92/-6.63	-5.35/-5.42	-6.89/-8.19	-8.51/-8.08	-7.31/-7.41	
Θ(30°)	-10.74/-12.74	-14.03/-11.37	-10.03/-10.04	-9.27/-7.11	-6.53/-6.54	-6.40/-5.88	-6.08/-7.08	-8.18/-9.70	-10.49/-10.33	-8.73/-5.88	-5.90/-8.63	-11.86/-14.09	-9.57/-5.96	-4.51/-4.95	-5.92/-7.71	-8.01/-6.85	-6.11/-5.93	-6.12/-6.33	-6.45/-6.67	-7.23/-9.72	-10.35/-10.71	-13.33/-14.02	-11.78/-7.71	-7.52/-8.81
Θ(37.5°)	-13.14/-9.65	-6.63/-7.71	-7.35/-3.17	-4.13/-6.25	-7.91/-5.97	-10.48/-1.68	-6.44/-4.89	-4.90/-5.09	-5.78/-7.47	-9.05/-11.82	-12.08/-8.39	-6.80/-6.83	-8.73/-9.87	-10.56/-10.32	-7.84/-6.05	-6.41/-5.59	-7.44/-6.57	-6.00/-5.96	-7.67/-9.33	-7.40/-7.52	-8.55/-9.39	-9.69/-10.85	-11.27/-11.14	-11.40/-14.73
Θ(45°)	-4.45/-2.86	-2.17/-2.89	-4.21/-4.19	-4.57/-6.74	-7.34/-7.94	-7.84/-10.26	-14.56/-10.64	-10.20/-8.19	-7.85/-5.53	-2.25/-0.11	-0.43/-2.80	-4.86/-4.81	-3.32/-3.80	-5.96/-7.29	-7.02/-7.36	-6.65/-4.38	-6.02/-6.94	-6.72/-3.99	-3.82/-5.60	-6.72/-8.04	-6.66/-5.80	-7.20/-6.95	-5.97/-5.72	-6.39/-6.08
Θ(52.5°)	-1.06/-2.03	-3.59/-5.09	-6.96/-6.67	-4.79/-4.92	-7.71/-6.09	-3.57/-1.76	-1.89/-1.13	-2.05/-4.00	-7.53/-7.19	-10.25/-9.98	-3.88/-2.54	-3.07/-3.28	-2.78/-2.53	-2.94/-2.65	-4.36/-3.74	-4.27/-1.67	-3.26/-2.60	-4.47/-3.84	-2.88/-2.76	-6.38/-4.20	-2.43/-3.47	-4.05/-2.98	-2.25/-2.29	-3.68/-1.84
Θ(60°)	-9.93/-6.88	-6.55/-6.67	-2.24/-0.02	-1.48/-1.30	-1.40/-1.26	-1.54/-1.88	-2.10/-1.15	-0.68/-0.69	-1.73/-1.91	-1.55/-2.42	-7.86/-10.29	-5.64/-7.41	-6.65/-4.47	-1.94/-3.37	-6.18/-6.92	-3.51/-3.70	-7.26/-4.28	-2.60/-3.55	-5.36/-4.60	-5.22/-4.46	-4.34/-6.09	-5.69/-2.39	-2.64/-3.48	-4.87/-5.98
Θ(67.5°)	-1.45/0.42	0.35/0.40	0.35/-0.88	-5.38/-2.95	-4.64/-6.42	-10.26/-7.81	-6.48/-6.39	-9.76/-7.87	-4.68/-3.73	-7.71/0.01	-1.15/-2.72	-3.42/-6.07	-3.38/-7.00	-7.84/-3.32	-2.50/-5.22	-7.17/-8.50	-5.48/-1.63	-2.63/-1.61	-4.18/-4.39	-5.16/-6.02	-4.43/-3.03	-4.05/-3.12	-3.08/-3.29	
Θ(75°)	1.43/0.25	-0.91/-2.92	-7.14/-3.34	-0.84/1.01	1.06/0.64	0.08/1.02	2.75/-1.87	1.29/-0.28	-5.35/-10.24	-6.43/-7.02	-2.50/5.55	0.25/-5.22	-2.67/-0.82	-7.22/-7.39	-2.33/-4.44	-8.00/-5.25	-2.80/-1.95	-0.88/-0.08	-0.24/0.75	-0.31/-1.08	-1.44/-1.69	-1.85/-1.35	-1.07/0.62	0.91/1.21
Θ(82.5°)	-3.29/-3.43	-3.45/-1.37	-1.14/-1.06	-1.76/-0.06	1.11/-1.16	0.02/-0.06	1.56/-0.19	0.71/-2.73	1.90/-0.46	1.06/-0.44	-7.47/-2.66	-0.99/-3.52	-3.67/-3.40	-3.92/-4.47	-4.32/-1.71	0.40/-3.23	-3.44/-2.33	-2.59/-4.73	-3.26/-2.60	-2.94/-1.50	0.44/-1.51	-2.79/-3.42	-1.82/-1.75	-0.92/-0.75
Θ(90°)	-3.57/-2.78	0.18/-1.09	-3.00/-2.73	-4.45/-2.33	-1.77/-1.08	-2.53/-4.73	-1.85/-3.51	-4.04/-5.01	-5.67/-5.75	-2.83/-1.65	-5.64/-3.27	-4.42/-4.65	-2.00/-2.68	-4.98/-4.10	-3.17/-3.20	-1.71/-1.63	-1.78/-2.40	-2.03/0.05	-2.19/-1.62	-1.97/-5.43	-4.48/-1.01	-0.78/-1.93	1.30/0.10	
Θ(97.5°)	-5.00/-4.29	-0.49/-2.27	-1.00/-0.83	-0.71/-1.56	1.85/-2.12	1.62/-1.89	1.49/-1.66	0.27/-1.56	-1.06/-0.88	0.13/-1.82	-2.28/-0.77	-3.24/-7.28	-5.00/-3.60	-3.16/-3.05	-0.21/-0.67	-1.21/-4.42	-3.28/-1.11	0.62/-1.40	-0.96/-0.52	-0.21/-0.68	-3.47/-0.82	-2.18/-3.01	-0.81/-1.85	
Θ(105°)	-8.87/-7.81	-4.46/-7.15	-5.14/-8.13	-7.04/-3.67	-4.48/-6.70	-8.14/-9.81	-8.90/-8.12	-5.55/-4.60	-3.91/-1.83	-1.56/-0.19	-2.33/-3.53	-3.36/-7.85	-8.97/-8.69	-9.88/-9.87	-3.64/-1.63	-3.74/-7.99	-15.43/-4.32	-6.33/-13.94	-12.23/-12.64	-10.94/-6.76	-2.31/-4.60	-5.85/-6.17	-9.29/-9.42	-6.85/-5.25
Θ(112.5°)	-5.63/-7.30	-10.17/-11.52	-7.70/-4.58	-5.41/-7.57	-5.60/-6.05	-3.37/-3.39	-1.27/-0.84	-1.75/-3.54	-3.87/-9.00	-9.83/-12.87	-7.52/-3.08	-3.77/-5.73	-7.38/-6.25	-14.41/-11.78	-15.57/-12.74	-9.50/-8.49	-9.84/-6.76	-4.81/-10.37	-7.86/-7.81	-13.41/-12.85	-6.92/-12.94	-16.14/-10.92	-4.79/-4.39	-3.77/-1.84
Θ(120°)	-8.79/-10.89	-10.25/-9.75	-5.42/-8.86	-2.34/-1.70	-1.88/-2.24	-2.33/-2.40	-1.16/-1.56	-1.17/-0.91	-3.44/-6.20	-4.14/-3.99	-6.60/-5.93	-7.65/-7.35	-5.42/-7.22	-9.30/-6.16	-8.58/-11.93	-6.01/-9.10	-10.34/-5.77	-4.83/-9.10	-10.06/-6.27	-10.77/-6.54	-8.12/-6.25	-8.88/-7.35	-3.34/-4.30	-6.82/-4.74
Θ(127.5°)	-11.19/-11.67	-10.18/-7.27	-5.90/-5.17	-5.19/-4.62	-3.81/-4.39	-6.18/-8.42	-9.60/-7.78	-6.46/-8.85	-12.15/-9.71	-7.19/-8.40	-10.09/-7.23	-13.29/-9.68	-4.85/-4.48	-6.09/-4.74	-9.63/-7.93	-								



Antenna Pattern (2.4GHz and 5GHz UNII 1~UNII 5)

Appendix B

Θ (127.5°)	-7.08/-10.18	-12.02/-8.80	-7.44/-12.69	-9.20/-7.37	-7.02/-6.77	-8.34/-8.46	-8.31/-5.88	-7.78/-9.05	-7.89/-6.29	-4.78/-5.33	-6.96/-11.96	-12.73/-14.23	-14.09/-11.10	-14.25/-13.26	-12.96/-13.08	-10.17/-7.89	-12.30/-7.96	-15.39/-10.33	-9.64/-12.48	-12.97/-9.14	-12.15/-15.31	-14.49/-9.77	-7.19/-8.64	-7.48/-5.12
Θ (135°)	-11.87/-9.92	-12.96/-12.94	-10.11/-7.55	-5.29/-4.97	-6.79/-5.59	-5.02/-5.83	-5.59/-5.23	-6.04/-6.16	-6.33/-8.42	-7.41/-7.82	-9.64/-11.09	-11.13/-9.36	-8.80/-9.71	-10.08/-8.60	-7.48/-7.21	-11.30/-16.24	-13.44/-13.12	-9.82/-6.13	-12.55/-11.02	-11.85/-12.01	-10.27/-12.29	-10.86/-5.74	-10.68/-15.98	-15.32/-15.16
Θ (142.5°)	-9.54/-11.35	-14.16/-8.48	-7.07/-6.06	-4.73/-4.86	-5.88/-6.76	-7.99/-8.45	-5.95/-5.84	-6.67/-6.29	-6.59/-7.35	-7.42/-7.74	-10.27/-11.62	-9.71/-10.76	-8.71/-7.92	-7.38/-7.46	-9.64/-8.59	-8.84/-9.46	-7.34/-11.37	-12.95/-11.75	-12.97/-9.18	-4.40/-2.85	-3.94/-4.32	-7.89/-10.40	-11.01/-11.20	
Θ (150°)	-8.04/-10.16	-11.91/-8.81	-7.24/-7.00	-6.79/-5.71	-4.74/-4.55	-6.18/-7.48	-6.65/-4.99	-3.46/-3.07	-3.00/-3.75	-3.84/-4.26	-5.20/-4.64	-7.82/-7.72	-6.09/-6.24	-7.43/-7.82	-6.78/-6.41	-5.82/-6.91	-8.20/-7.15	-5.63/-4.60	-4.70/-4.78	-4.79/-4.16	-4.51/-5.85	-8.03/-8.26	-10.10/-9.65	-8.55/-7.21
Θ (157.5°)	-14.15/-11.78	-11.57/-10.28	-11.33/-12.37	-12.57/-14.33	-15.10/-13.89	-11.42/-7.83	-5.69/-3.54	-2.29/-1.79	-1.51/-1.52	-1.94/-2.90	-3.87/-4.58	-5.81/-6.52	-6.84/-6.56	-7.38/-6.26	-7.70/-6.11	-6.57/-8.13	-10.95/-12.15	-13.83/-14.98	-12.16/-9.24	-8.97/-8.30	-7.77/-7.96	-9.18/-14.09	-10.96/-9.85	-12.13/-14.78
Θ (165°)	-14.07/-11.86	-11.70/-12.72	-13.12/-14.16	-13.84/-15.26	-14.70/-14.90	-15.68/-13.32	-6.66/-7.38	-6.45/-5.10	-4.23/-3.72	-3.65/-3.53	-3.84/-3.84	-4.11/-4.46	-4.26/-4.59	-5.16/-5.28	-6.43/-8.19	-6.59/-8.13	-8.35/-8.98	-11.28/-12.88	-11.05/-9.82	-4.02/-4.70	-7.16/-10.16	-13.75/-15.21	-15.69/-14.88	
Θ (172.5°)	-11.73/-10.72	-10.08/-9.77	-10.11/-10.22	-11.51/-13.42	-15.57/-15.61	-15.19/-14.03	-12.45/-10.47	-9.91/-8.96	-8.75/-8.14	-7.71/-7.92	-7.89/-8.21	-8.79/-9.49	-9.78/-9.93	-10.39/-10.46	-10.63/-10.52	-10.49/-10.12	-10.66/-10.71	-12.30/-12.88	-11.97/-10.66	-9.08/-9.00	-9.74/-11.81	-12.57/-13.18	-13.61/-12.60	-11.81/-11.70
Θ (180°)	-10.31/-9.98	-9.04/-8.72	-8.48/-8.58	-8.51/-8.71	-9.75/-11.68	-11.78/-11.57	-12.04/-11.32	-11.56/-10.85	-10.79/-10.65	-10.75/-10.60	-10.53/-10.08	-10.88/-10.63	-10.92/-10.51	-10.24/-9.54	-9.93/-9.14	-8.95/-8.68	-8.48/-9.06	-9.81/-10.89	-12.26/-12.55	-12.83/-12.04	-11.72/-10.42	-9.27/-9.39	-9.84/-10.07	-10.53/-10.74
Freq(Hz)	5.6GPol.	TotalAnt.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-13.69/-14.70	-12.30/-10.57	-12.28/-13.00	-13.00/-12.08	-11.25/-11.45	-11.49/-11.81	-11.99/-13.45	-13.21/-13.10	-12.87/-13.06	-13.42/-13.14	-12.45/-12.45	-12.51/-13.31	-15.49/-16.38	-13.63/-11.07	-12.07/-14.20	-15.78/-15.28	-14.41/-13.96	-16.29/-15.07	-14.21/-13.11	-11.85/-12.07	-12.57/-14.36	-15.83/-14.28	-12.27/-11.30	-12.18/-12.42
Θ (7.5°)	-9.81/-10.22	-11.12/-10.56	-12.15/-12.00	-12.05/-11.40	-13.16/-15.04	-15.81/-14.94	-15.22/-15.91	-15.22/-15.10	-16.16/-15.18	-15.35/-15.76	-14.89/-15.13	-14.80/-12.85	-13.75/-13.60	-13.61/-12.98	-10.77/-12.06	-12.25/-10.73	-9.53/-9.79	-9.09/-10.09	-9.59/-9.02	-8.71/-8.25	-6.84/-8.93	-7.47/-9.73	-10.87/-9.85	
Θ (15°)	-7.60/-8.69	-8.84/-9.10	-10.42/-10.44	-9.80/-11.51	-12.21/-11.40	-11.29/-10.51	-11.36/-11.12	-11.04/-11.85	-12.54/-13.61	-15.12/-15.24	-15.46/-15.05	-15.24/-14.60	-14.27/-14.19	-13.76/-13.03	-11.44/-10.99	-10.40/-9.62	-10.46/-10.56	-11.65/-11.22	-10.76/-10.27	-8.99/-10.04	-9.19/-7.73	-6.53/-6.30	-6.13/-5.34	-5.66/-6.38
Θ (22.5°)	-4.98/-7.15	-5.74/-6.30	-6.59/-6.59	-6.36/-5.97	-5.54/-5.51	-5.76/-5.64	-6.25/-6.08	-6.61/-7.08	-7.63/-8.80	-10.25/-12.49	-12.26/-14.85	-14.44/-15.53	-14.40/-15.35	-13.45/-11.48	-8.93/-7.62	-8.59/-8.83	-9.89/-11.91	-14.68/-12.64	-10.49/-8.98	-8.08/-7.96	-7.97/-8.02	-9.20/-11.51	-10.60/-9.71	-8.41/-9.83
Θ (30°)	-3.31/-3.00	-2.78/-2.88	-3.41/-3.38	-6.36/-6.64	-5.38/-5.77	-14.07/-14.94	-12.90/-10.47	-8.72/-7.85	-6.25/-5.45	-6.11/-6.48	-10.78/-11.87	-9.81/-10.95	-11.99/-13.86	-11.25/-10.40	-10.72/-12.94	-13.43/-14.78	-15.90/-13.67	-9.49/-7.68	-6.91/-7.29	-8.75/-8.07	-6.43/-10.97	-15.44/-14.75	-9.66/-7.41	
Θ (37.5°)	-2.03/-1.51	-3.58/-6.08	-6.98/-6.04	-5.35/-5.76	-5.65/-7.44	-9.20/-9.40	-13.35/-13.83	-15.37/-14.97	-11.78/-8.70	-5.95/-4.93	-5.48/-5.16	-3.42/-4.08	-6.28/-8.98	-7.42/-9.05	-12.66/-11.01	-9.29/-10.51	-12.33/-15.27	-15.41/-15.41	-13.32/-14.00	-12.75/-9.27	-8.41/-7.90	-7.70/-10.43	-12.38/-11.69	-8.16/-4.99
Θ (45°)	-2.93/-2.92	-2.18/-2.14	-4.07/-9.56	-9.83/-9.27	-6.22/-5.06	-6.78/-7.67	-5.95/-3.32	-4.74/-5.65	-6.96/-6.88	-9.31/-8.32	-8.84/-7.13	-3.81/-8.11	-2.64/-4.03	-3.94/-4.70	-5.71/-4.03	-3.25/-4.50	-9.94/-7.95	-5.22/-6.11	-6.92/-4.03	-2.97/-5.53	-6.77/-9.41	-5.65/-4.20	-2.82/-3.84	
Θ (52.5°)	-6.40/-5.65	-4.99/-8.22	-11.27/-10.79	-6.85/-4.85	-5.38/-4.09	-2.78/-2.22	-3.92/-5.89	-4.42/-4.53	-5.18/-5.37	-4.90/-7.19	-8.82/-8.58	-8.72/-5.17	-7.26/-3.97	-4.77/-3.61	-4.15/-4.00	-3.98/-4.53	-4.31/-3.12	-4.49/-3.81	-4.57/-6.53	-4.04/-4.42	-3.64/-3.95	-2.85/-2.01	-1.91/-2.73	-4.54/-7.25
Θ (60°)	-8.05/-12.08	-5.02/-3.02	-2.07/-0.81	-2.59/-1.97	-1.30/-2.64	-4.25/-3.44	-2.44/-3.72	-3.75/-2.01	-1.40/-1.90	-2.00/-1.82	-2.95/-6.42	-6.27/-8.88	-8.48/-8.14	-8.79/-6.60	-4.39/-4.57	-6.01/-7.76	-7.76/-4.21	-3.85/-4.68	-4.43/-5.84	-7.14/-9.64	-6.25/-5.69	-6.92/-6.25	-4.98/-3.93	-5.31/-7.02
Θ (67.5°)	-3.74/-4.11	-0.70/-0.46	0.21/-0.32	-7.07/-7.40	-3.74/-7.24	-4.72/-7.47	-6.97/-8.60	-4.88/-7.98	-7.65/-7.87	-7.42/-3.24	-2.19/-3.52	-1.78/-2.05	-3.72/-1.64	-3.48/-4.44	-3.52/-4.36	-4.06/-5.18	-4.39/-4.69	-7.49/-3.81	-2.83/-4.77	-7.90/-5.53	-4.65/-6.71	-5.69/-5.10	-5.32/-5.60	-2.93/-1.08
Θ (75°)	-2.14/-3.65	-4.38/-5.13	-5.93/-6.08	-1.98/-0.01	-0.83/-0.05	1.92/-7.70	0.31/-3.99	2.35/-1.97	0.36/-0.23	1.21/-0.94	-5.09/-3.72	-2.04/-0.88	-0.50/-0.39	0.03/-1.53	-1.30/-0.73	-0.86/-0.21	-3.76/-2.63	-4.37/-0.93	-3.26/-3.09	-3.90/-3.54	-1.17/-1.75	-4.47/-3.40	-0.95/-4.00	
Θ (82.5°)	-4.29/-8.26	-8.46/-3.38	-4.19/-0.38	-1.93/-1.43	-0.84/-1.06	-0.23/-1.60	-2.41/-3.72	-2.32/-1.83	-1.30/-0.65	-2.58/-2.63	-3.26/-3.09	-3.58/-3.17	-2.58/-2.45	-0.01/-1.15	-2.80/-4.47	-3.55/-1.57	0.32/-2.17	-4.27/-3.74	-5.48/-6.42	-3.44/-0.88	-3.57/-0.91	-1.10/-2.12	-1.55/-4.02	-4.99/-5.35
Θ (90°)	0.07/-1.82	-3.12/-1.57	-3.93/-1.02	-6.43/-2.14	-3.36/-1.56	-0.52/-3.32	-3.46/-9.03	-0.30/-3.75	-1.52/-1.50	-3.69/-2.82	-2.91/-1.35	-1.00/-1.28	-0.24/-1.7	-0.01/-1.29	-0.01/-1.79	-2.74/-3.63	-2.28/-1.58	-2.92/-1.13	-2.67/-4.49	-1.18/-0.74	-3.68/-0.63	-1.49/-2.70	-4.02/-3.17	-2.37/-1.81
Θ (97.5°)	-2.04/-7.28	-6.06/-1.90	-2.27/-0.21	-1.33/-0.75	-0.56/-0.60	-0.53/-2.26	-1.62/-0.46	1.17/-0.10	0.31/-0.56	-1.69/-1.88	-1.38/-1.48	-1.55/-2.81	-2.78/-1.13	-1.62/-2.08	-0.88/-1.71	-5.71/-4.31	-0.76/-1.20	-1.55/-0.79	-3.27/-4.15	-0.78/-0.95	-3.22/-1.76	-0.75/-3.57	-1.54/-3.51	-3.59/-1.22
Θ (105°)	-5.92/-5.59	-5.11/-4.88	-6.72/-3.64	-4.71/-7.22	-7.48/-9.24	-12.08/-15.55	-14.45/-13.64	-12.97/-8.14	-5.32/-6.71	-8.81/-8.21	-4.15/-4.62	-3.86/-2.81	-4.52/-5.67	-2.66/-6.97	-9.75/-4.73	-6.89/-3.28	-3.86/-9.15	-5.62/-3.11	-8.53/-9.20	-4.75/-5.17	-13.90/-3.83	-2.87/-5.48	-9.59/-10.03	-11.02/-9.69
Θ (112.5°)	-5.74/-14.33	-7.68/-12.04	-15.21/-11.82	-7.61/-1.18	-4.29/-2.49	0.31/-1.30	-3.48/-3.77	-2.87/-6.65	-7.70/-6.89	-7.21/-8.34	-11.96/-10.12	-5.50/-4.16	-2.84/-3.81	-4.86/-5.32	-6.16/-7.12	-14.99/-10.49	-7.95/-10.23	-7.74/-5.96	-6.32/-11.64	-5.20/-5.01	-9.30/-6.60	-4.10/-5.64	-10.57/-8.98	-11.38/-9.69
Θ (120°)	-2.17/-9.12	-11.83/-11.20	-7.95/-7.96	-6.41/-6.60	-4.73/-2.69	-1.23/-2.33	-6.88/-4.09	-2.08/-1.83	-1.49/-2.46	-2.38/-3.28	-5.52/-7.92	-7.92/-7.35	-5.92/-6.39	-5.08/-4.84	-5.10/-10.32	-6.09/-7.99	-7.43/-9.75	-5.92/-8.88	-9.29/-15.56	-6.52/-2.65	-6.54/-7.46	-6.86/-4.41	-3.65/-4.39	-3.63/-1.48
Θ (127.5°)	-4.05/-8.25	-8.13/-5.47	-7.06/-9.26	-9.51/-7.99	-8.86/-9.52	-9.41/-8.20	-10.02/-8.13	-6.31/-3.59	-4.14/-4.63	-4.54/-5.99	-8.29/-9.50	-13.08/-12.48	-11.64/-10.89	-8.88/-3.98	-4.39/-6.86	-10.13/-5.44	-10.71/-7.47	-7.14/-9.99	-11.45/-10.17	-8.34/-4.12	-6.19/-8.87	-13.71/-11.42	-11.08/-11.79	-7.97/-4.33
Θ (135°)	-13.08/-11.27	-11.56/-12.71	-11.77/-11.00	-6.83/-6.09	-5.87/-3.72	-3.02/-2.38	-3.73/-5.38	-5.68/-4.84	-6.15/-7.36	-6.81/-5.63	-6.63/-10.44	-10.01/-11.79	-14.24/-14.91	-12.90/-13.87	-7.63/-7.64	-15.29/-14.86	-10.65/-9.47	-12.08/-10.40	-13.56/-10.29	-8.79/-7.03	-6.70/-8.76	-13.14/-8.96	-7.81/-13.83	-14.87/-13.53
Θ (142.5°)	-7.08/-9.44	-12.78/-12.52	-8.48/-5.67	-4.56/-6.90	-7.82/-7.20	-6.04/-0.47	-4.26/-5.17	-4.52/-3.44	-6.66/-8.77	-8.40/-10.21	-13.09/-12.33	-12.83/-14.34	-14.80/-12.75	-8.04/-8.04	-12.44/-10.35	-10.57/-15.30	-9.20/-5.87	-5.20/-7.87	-13.52/-11.71	-7.49/-5.98	-5.95/-7.40	-6.62/-5.90	-6.87/-5.82	-7.34/-8.67
Θ (150°)	-6.96/-8.06	-9.47/-8.81	-10.71/-8.59	-7.66/-7.01	-5.09/-5.65	-5.10/-4.89	-5.11/-5.41	-4.92/-3.47	-3.03/-3.25	-3.14/-4.43	-6.28/-10.66	-15.35/-11.86	-8.40/-6.58	-5.38/-6.42	-7.56/-9.84	-10.54/-9.27	-7.70/-7.17	-6.90/-7.36	-6.00/-3.56	-3.25/-3.81	-6.49/-8.76	-10.21/-8.63	-10.72/-6.26	
Θ (157.5°)	-14.88/-14.24	-12.81/-11.29	-9.52/-9.81	-7.94/-8.47	-11.73/-10.71	-7.15/-5.08	-4.30/-4.99	-3.90/-3.11	-2.83/-3.33	-3.65/-4.20	-5.11/-5.94	-6.36/-6.46	-5.01/-3.66	-2.62/-3.23	-4.31/-5.54	-6.79/-7.75	-7.86/-4.67	-6.19/-8.81	-11.31/-10.25	-8.16/-8.08	-8.44/-10.78	-13.69/-14.98	-14.73/-10.76	-9.61/-11.24
Θ (165°)	-11.03/-10.73	-12.16/-12.66	-11.53/-10.15	-9.82/-10.86	-13.89/-15.67	-11.95/-8.36	-6.91/-6.11	-5.44/-6.63	-3.60/-4.41	-5.48/-5.59	-5.43/-6.49	-7.00/-7.52	-7.69/-6.74	-5.96/-4.97	-4.61/-5.06	-7.56/-10.84	-11.25/-9.91	-10.22/-12.16	-10.62/-9.62	-8.39/-7.57	-6.87/-6.15	-7.49/-9.03	-11.76/-12.35	-14.14/-14.80
Θ (172.5°)	-11.37/-12.74	-12.17/-9.29	-9.28/-8.99	-8.33/-9.51	-11.76/-13.17	-12.17/-10.01	-8.08/-7.24	-7.43/-7.25	-7.43/-9.51	-11.40/-12.02	-12.35/-12.93	-11.36/-12.57	-11.31/-8.93	-9.48/-12.26	-14.97/-15.65	-15.27/-12.25	-10.60/-9.35	-8.45/-8.03	-7.29/-7.01	-7.08/-6.52	-6.00/-6.76	-7.72/-8.02	-8.8	



Antenna Pattern (2.4GHz and 5GHz UNII 1~UNII 3)

Appendix B

Θ (180°)	-8.54/-9.79	-9.64/-10.23	-8.96/-7.83	-7.98/-8.34	-7.73/-7.62	-8.45/-10.37	-10.18/-10.29	-10.69/-10.81	-10.61/-11.13	-12.92/-12.93	-12.48/-12.68	-10.85/-12.14	-10.78/-13.27	-12.07/-11.13	-10.09/-10.47	-12.78/-11.99	-10.14/-10.38	-10.09/-9.54	-9.83/-14.49	-13.45/-9.69	-7.73/-7.85	-8.33/-10.08	-10.77/-8.53	-8.57/-8.29
Freq(Hz)	5.3G/Pol.	Total/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-10.01/-9.91	-10.29/-10.54	-9.55/-9.60	-9.36/-8.48	-8.97/-8.98	-8.20/-8.81	-8.65/-7.98	-8.05/-7.91	-7.73/-8.07	-8.17/-7.37	-7.78/-6.83	-7.41/-7.68	-7.65/-8.32	-8.21/-9.52	-8.87/-8.92	-8.97/-7.43	-7.12/-8.04	-7.80/-7.83	-7.86/-8.65	-8.24/-7.94	-7.24/-7.09	-7.84/-8.84	-9.22/-7.80	-8.87/-9.84
Θ (7.5°)	-11.04/-10.79	-12.11/-12.04	-9.87/-10.36	-10.44/-8.21	-9.14/-9.69	-9.85/-11.38	-13.90/-13.95	-14.75/-13.18	-12.04/-11.71	-12.63/-12.30	-12.34/-14.34	-12.92/-12.83	-13.07/-13.06	-11.45/-12.15	-10.95/-12.38	-12.55/-10.21	-8.34/-8.89	-8.13/-7.76	-7.48/-7.18	-7.41/-6.82	-6.57/-6.22	-7.16/-7.65	-8.25/-9.99	-9.48/-9.16
Θ (15°)	-11.48/-9.70	-7.32/-5.81	-5.47/-4.63	-4.02/-3.83	-4.56/-6.36	-8.50/-12.17	-14.77/-14.86	-14.85/-13.26	-11.47/-8.53	-8.72/-10.27	-8.98/-12.77	-13.03/-12.82	-12.71/-12.62	-13.33/-11.50	-10.35/-8.32	-10.66/-10.16	-9.19/-10.52	-9.79/-6.76	-5.98/-7.01	-8.93/-12.71	-12.96/-11.41	-10.38/-11.47	-12.31/-10.04	-11.01/-11.79
Θ (22.5°)	-10.69/-9.04	-10.41/-12.27	-9.56/-8.67	-7.86/-5.55	-4.77/-5.38	-6.22/-6.78	-7.78/-8.36	-10.20/-12.25	-11.11/-7.35	-4.90/-5.36	-6.24/-5.00	-6.64/-7.25	-7.84/-7.42	-7.38/-7.68	-7.16/-6.63	-8.13/-5.76	-3.59/-5.00	-6.72/-4.82	-3.50/-6.19	-8.12/-5.92	-4.80/-5.67	-8.82/-8.53	-8.15/-7.35	-7.86/-8.06
Θ (30°)	-7.08/-9.18	-9.42/-10.27	-9.18/-10.11	-7.20/-7.74	-5.73/-4.03	-3.84/-6.34	-5.97/-4.44	-5.17/-6.65	-5.79/-3.24	-4.28/-5.55	-4.28/-4.23	-4.90/-5.06	-5.66/-4.21	-4.06/-4.99	-5.21/-4.29	-6.07/-4.55	-3.17/-3.89	-5.91/-4.40	-3.42/-6.92	-5.43/-4.47	-6.89/-5.65	-5.72/-6.44	-6.98/-5.79	-5.78/-6.00
Θ (37.5°)	-4.09/-4.57	-4.29/-4.47	-7.29/-6.47	-5.81/-6.25	-4.68/-4.41	-1.22/-2.41	-5.80/-4.10	-2.52/-6.93	-4.60/-5.03	-5.39/-2.73	-2.51/-2.43	-2.15/-2.21	-1.83/-3.09	-3.70/-5.09	-5.76/-3.83	-4.00/-4.12	-3.32/-2.40	-1.51/-1.40	-1.12/-3.76	-5.70/-7.24	-6.42/-5.13	-4.97/-7.06	-8.22/-5.84	
Θ (45°)	-6.10/-5.79	-6.96/-5.16	-6.80/-4.88	-5.76/-7.16	-6.50/-9.48	-6.01/-5.12	-3.59/-5.07	-3.40/-3.87	-2.79/-5.34	-8.19/-6.99	-7.00/-6.12	-5.82/-6.22	-6.63/-6.36	-5.17/-5.08	-5.23/-10.28	-6.78/-6.27	-4.41/-3.17	-1.85/-3.65	-4.38/-6.12	-8.06/-8.61	-7.21/-6.90	-6.37/-5.66	-4.11/-3.74	-3.17/-3.75
Θ (52.5°)	-2.73/-4.37	-2.83/-6.31	-4.17/-4.27	-2.25/-1.77	-3.09/-2.61	-10.08/-3.63	-8.28/-6.18	-3.69/-3.64	-1.81/-2.12	-3.65/-3.63	-6.32/-6.30	-5.68/-6.69	-6.87/-10.27	-10.48/-9.40	-7.42/-6.37	-3.21/-5.19	-5.28/-3.71	-3.60/-5.16	-5.96/-7.11	-4.23/-4.63	-3.60/-3.57	-4.81/-5.38	-4.55/-4.77	-5.59/-4.89
Θ (60°)	-3.34/-2.05	-3.43/-0.68	-1.12/-3.35	-1.80/-0.82	-2.00/-0.19	0.44/-0.18	-1.39/-2.03	-4.70/-2.95	-1.40/-1.31	0.21/-0.15	-2.39/-1.34	-1.77/-1.85	-2.63/-2.01	-0.74/-1.71	-0.06/-0.47	-3.33/-1.60	-5.06/-0.67	-2.16/-1.88	-5.01/-1.20	-3.63/-2.06	-2.04/-2.85	-3.58/-4.36	-3.06/-3.03	-4.23/-3.38
Θ (67.5°)	-4.42/-1.21	-2.10/-1.02	-3.52/-0.77	-3.01/-3.54	-3.35/-2.54	-0.87/-0.68	0.43/-0.11	-0.87/-0.28	-1.29/-2.40	-1.01/-0.22	-0.56/-0.36	-0.53/-0.28	0.42/-0.14	0.93/-0.89	-1.09/-1.15	-0.62/-2.05	-4.41/-1.58	-3.76/-1.64	-0.59/-0.77	-2.80/-1.50	-4.15/-2.84	-3.34/-3.80	-3.30/-1.75	-2.73/-4.42
Θ (75°)	0.09/-1.22	0.56/-1.14	-1.87/-0.78	0.67/-1.34	-1.83/-2.88	-4.79/-5.03	-4.51/-1.74	-2.36/-3.09	-4.87/-5.07	-6.34/-3.88	-6.18/-2.65	-3.14/-2.35	-3.46/-6.90	-5.14/-3.01	-4.33/-3.87	-4.33/-4.57	-5.33/-4.84	-2.89/-2.15	-4.12/-3.71	-3.95/-3.86	-3.83/-3.79	-1.53/-2.53	-5.36/-5.59	-1.82/-1.23
Θ (82.5°)	-1.88/-0.96	-0.42/-3.12	-8.37/-5.18	-5.69/-3.41	-2.10/-1.07	-3.84/-2.07	-3.62/-3.97	-3.83/-3.92	-2.42/-1.86	-4.24/-2.31	-5.36/-4.43	-2.77/-5.19	-2.49/-5.86	-5.88/-3.46	-7.30/-6.33	-4.16/-3.63	-2.43/-2.25	-3.00/-1.85	-5.28/-3.34	-4.40/-0.88	-3.86/-1.77	-2.19/-3.26	-4.74/-7.20	-6.17/-3.33
Θ (90°)	-1.02/-0.62	-2.02/-1.13	-1.23/-2.72	1.32/-2.20	-5.00/-1.56	-2.35/-0.99	-2.63/-2.23	-5.00/-4.33	-2.95/-3.76	-3.71/-1.42	-2.40/-2.38	-2.15/-3.45	-3.84/-4.24	-4.99/-3.02	-2.86/-4.29	-3.13/-4.70	-1.89/-1.57	-1.91/-5.45	-7.10/-2.22	0.31/-1.31	-2.78/-6.22	-2.62/-1.36	-1.34/-5.32	-3.55/-1.15
Θ (97.5°)	0.46/-1.26	0.12/-0.29	-2.41/-1.37	1.26/-2.60	-8.03/-2.22	-6.78/-6.81	-4.71/-7.07	-8.44/-6.47	-7.04/-5.88	-11.17/-10.80	-9.19/-8.12	-6.49/-8.03	-8.19/-10.25	-10.25/-7.97	-5.13/-7.11	-3.82/-5.70	-5.82/-6.22	-5.19/-5.00	-8.84/-3.09	-0.83/-0.29	0.37/-1.62	0.99/-0.56	1.62/-1.84	-1.32/-1.81
Θ (105°)	-5.70/-7.06	-11.61/-13.55	-12.44/-13.69	-10.02/-12.76	-7.50/-7.32	-6.18/-8.24	-6.83/-10.92	-8.85/-10.17	-11.43/-9.38	-8.94/-8.73	-7.82/-7.36	-6.38/-8.32	-7.88/-13.29	-12.08/-6.95	-7.54/-12.88	-11.49/-10.69	-9.41/-10.20	-10.54/-7.31	-8.64/-5.71	-11.67/-6.75	-8.85/-6.15	-5.57/-12.36	-7.80/-13.24	-9.51/-4.42
Θ (112.5°)	-10.03/-9.99	-6.34/-4.09	-8.35/-3.06	-7.58/-3.74	-11.99/-10.04	-13.61/-5.85	-9.65/-5.72	-5.67/-9.58	-9.15/-8.59	-12.46/-8.95	-6.60/-5.00	-6.11/-6.08	-6.04/-7.82	-14.97/-6.77	-12.54/-10.88	-12.02/-6.95	-10.15/-6.01	-10.15/-9.26	-5.22/-2.52	-4.27/-8.21	-8.67/-6.56	-9.33/-11.35	-9.14/-9.06	
Θ (120°)	-1.85/-4.02	-5.06/-9.77	-6.58/-3.48	-6.46/-3.04	-9.23/-9.57	-13.24/-4.90	-6.98/-9.18	-9.26/-8.03	-7.92/-8.54	-9.38/-12.04	-13.25/-12.01	-11.71/-13.49	-11.63/-13.60	-11.24/-8.76	-7.53/-13.04	-10.47/-6.83	-6.92/-5.40	-5.63/-6.43	-9.30/-7.81	-4.25/-4.72	-1.93/-6.42	-6.33/-2.30	-3.16/-7.47	-8.89/-1.98
Θ (127.5°)	-9.17/-8.67	-8.91/-6.99	-11.58/-8.54	-8.85/-4.60	-8.60/-9.91	-7.21/-11.58	-7.62/-7.19	-14.96/-9.36	-8.36/-12.68	-14.87/-13.16	-9.97/-11.72	-15.32/-10.71	-14.73/-13.22	-12.56/-11.33	-9.77/-8.76	-9.81/-11.31	-8.45/-4.48	-3.64/-7.42	-12.20/-8.83	-7.69/-10.50	-8.07/-10.08	-9.28/-9.15	-11.23/-11.60	-9.78/-10.26
Θ (135°)	-5.69/-5.08	-4.60/-3.82	-8.45/-7.86	-8.45/-8.00	-11.79/-12.58	-9.08/-7.71	-10.27/-8.94	-11.89/-14.33	-11.99/-12.14	-14.26/-13.55	-12.38/-13.10	-11.01/-12.04	-7.66/-11.24	-8.50/-8.48	-15.56/-10.27	-8.61/-11.13	-14.18/-9.38	-10.66/-10.61	-10.61/-7.20	-6.42/-10.55	-11.76/-7.08	-6.92/-13.65	-9.40/-5.10	-8.02/-8.94
Θ (142.5°)	-15.14/-14.96	-5.70/-4.31	-2.27/-4.18	-5.84/-6.18	-8.13/-10.61	-7.89/-7.02	-6.92/-7.32	-8.56/-9.69	-8.41/-7.89	-6.72/-7.93	-7.89/-8.00	-8.45/-7.60	-8.57/-10.32	-10.41/-9.65	-13.54/-11.12	-11.48/-7.49	-11.85/-11.52	-13.00/-8.51	-5.54/-5.66	-7.57/-11.15	-9.56/-7.13	-10.63/-10.61	-7.67/-7.53	-9.67/-15.24
Θ (150°)	-7.13/-7.88	-8.10/-5.36	-3.90/-3.64	-3.46/-6.88	-5.37/-5.37	-4.76/-9.49	-4.37/-3.77	-5.38/-7.25	-7.06/-6.19	-4.30/-3.55	-3.94/-4.77	-4.60/-4.74	-3.97/-3.19	-2.89/-3.87	-4.59/-7.52	-3.89/-3.20	-6.04/-3.58	-6.72/-3.43	-5.35/-9.72	-10.35/-6.76	-8.35/-10.12	-10.33/-14.46	-12.50/-10.60	-10.39/-9.56
Θ (157.5°)	-2.63/-4.85	-5.59/-5.20	-2.90/-1.20	-2.62/-4.37	-3.34/-4.58	-4.50/-2.70	-2.31/-4.83	-5.82/-4.39	-4.67/-5.72	-9.00/-13.11	-10.91/-7.85	-6.96/-7.62	-7.18/-5.83	-5.76/-4.39	-1.75/-0.89	-3.46/-6.23	-2.35/-3.39	-5.26/-4.90	-6.46/-11.06	-6.58/-3.41	-4.84/-10.41	-11.90/-7.89	-4.80/-3.18	-2.17/-2.26
Θ (165°)	-7.44/-7.54	-7.29/-4.61	-2.82/-2.53	-2.14/-1.53	-2.25/-4.70	-6.65/-6.59	-4.56/-5.15	-2.59/-7.00	-8.73/-12.23	-12.74/-11.90	-11.03/-11.17	-11.03/-9.28	-9.79/-8.57	-8.47/-7.07	-11.89/-9.85	-3.60/-2.23	-6.50/-5.89	-6.60/-5.89	-6.67/-8.11	-8.25/-6.10	-5.58/-7.02	-5.52/-6.03	-5.92/-6.03	-5.84/-6.06
Θ (172.5°)	-5.62/-4.97	-4.83/-4.30	-4.62/-5.15	-5.05/-5.51	-5.63/-5.94	-6.74/-8.67	-9.03/-10.02	-10.74/-10.00	-11.21/-11.65	-12.48/-14.68	-14.83/-15.09	-14.66/-14.36	-11.91/-10.23	-8.85/-8.23	-6.08/-6.15	-6.60/-7.46	-6.23/-5.46	-6.26/-5.81	-5.71/-7.75	-10.16/-13.92	-11.34/-7.66	-6.01/-5.46	-5.43/-6.49	-6.50/-8.62
Θ (180°)	-8.46/-9.08	-8.72/-8.14	-7.85/-8.32	-8.52/-8.00	-8.51/-8.66	-8.08/-9.19	-10.58/-10.76	-11.09/-11.52	-11.93/-11.35	-11.00/-12.93	-12.62/-10.99	-11.37/-8.93	-10.61/-11.74	-12.13/-10.43	-8.11/-8.94	-8.95/-9.06	-8.30/-8.70	-10.11/-11.18	-13.44/-15.27	-12.79/-8.41	-6.34/-6.24	-8.30/-9.87	-9.67/-8.21	-7.24/-8.09
Freq(Hz)	5.6G/Pol.	Total/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-11.98/-11.23	-11.89/-13.26	-12.27/-12.59	-15.10/-12.04	-11.83/-10.70	-12.25/-13.82	-13.42/-13.79	-11.83/-10.57	-12.34/-13.17	-11.54/-10.95	-12.00/-9.58	-10.55/-10.21	-10.98/-10.80	-9.75/-10.12	-8.40/-10.00	-10.54/-9.33	-8.88/-9.69	-9.98/-10.18	-8.42/-8.85	-10.26/-11.33	-10.38/-9.96	-9.97/-11.49	-13.28/-11.99	-11.68/-10.79
Θ (7.5°)	-10.85/-8.46	-8.92/-7.44	-10.31/-8.41	-8.82/-9.56	-9.45/-10.81	-13.32/-12.94	-11.81/-12.61	-12.49/-11.46	-10.07/-11.97	-9.49/-10.65	-10.58/-9.54	-11.16/-8.91	-9.74/-8.32	-8.68/-9.62	-8.82/-8.59	-8.35/-9.78	-9.59/-8.18	-8.59/-9.81	-9.51/-8.46	-7.87/-10.71	-10.14/-9.51	-10.51/-10.09	-10.29/-10.00	-13.10/-11.39
Θ (15°)	-9.92/-9.33	-10.07/-9.65	-11.13/-11.78	-13.41/-14.15	-13.04/-11.88	-10.87/-10.98	-9.84/-10.54	-10.73/-12.43	-13.87/-11.56	-10.66/-9.35	-9.21/-9.73	-10.32/-10.48	-10.73/-11.68	-10.13/-11.31	-12.49/-10.85	-10.74/-11.04	-9.39/-8.35	-9.41/-9.67	-9.88/-10.36	-11.70/-12.57	-15.68/-14.35	-15.09/-15.28	-13.79/-13.11	-12.39/-10.41
Θ (22.5°)	-11.71/-10.79	-10.52/-12.43	-13.72/-11.96	-13.19/-11.24	-9.32/-9.29	-10.57/-10.40	-11.33/-9.88	-11.17/-15.56	-15.40/-12.34	-11.82/-14.63	-15.30/-12.01	-13.44/-11.49	-12.13/-13.24	-14.29/-15.33	-14.44/-8.37	-8.81/-12.06	-8.80/-8.34	-11.91/-12.24	-11.00/-9.16	-12.92/-15.21	-14.43/-14.69	-14.92/-12.82	-15.24/-14.39	-13.93/-10.70
Θ (30°)	-9.46/-9.90	-13.01/-12.87	-13.09/-10.68	-15.50/-15.69	-9.41/-7.82																			

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