



Antenna Composite Gain Test Report

FCC ID	N89-RAP750EV1
Equipment	BE5000 Wireless Dual Band Outdoor Wall Mount Access Point
Brand Name	SonicFi
Model Name	RAP750E-S
Applicant	CyberTAN Technology Inc. No. 99, Park Avenue III Science-based Industrial Park Hsinchu Taiwan 308
Manufacturer	CyberTAN Technology Inc. No. 99, Park Avenue III Science-based Industrial Park Hsinchu Taiwan 308
Standard	KDB662911 D03 v02
Sample Received	Sep. 22, 2025
Start Test Date	Oct. 13, 2025
Final Test Date	Oct. 13, 2025

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 Ant1	1	Airgain	AP01CBARA	PCB	I-PEX	2.4GHz
2G Ant2	2	Airgain	AP01CBARA	PCB	I-PEX	2.4GHz
5G Ant1	1	GALTRONICS	02102142-07899	PCB	I-PEX	5GHz UNII 1~3
5G Ant2	2	GALTRONICS	02102142-07899	PCB	I-PEX	5GHz UNII 1~3

Note:

2.4GHz Operation Mode (2TX/2RX)

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

2G Ant1~2 could transmit/receive simultaneously.

5GHz Operation Mode (2TX/2RX)

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

5G Ant1~2 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	2400
	2450
	2483.5
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	Vivi Jiang	23.5-24.5 / 45-55	Oct. 13, 2025

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

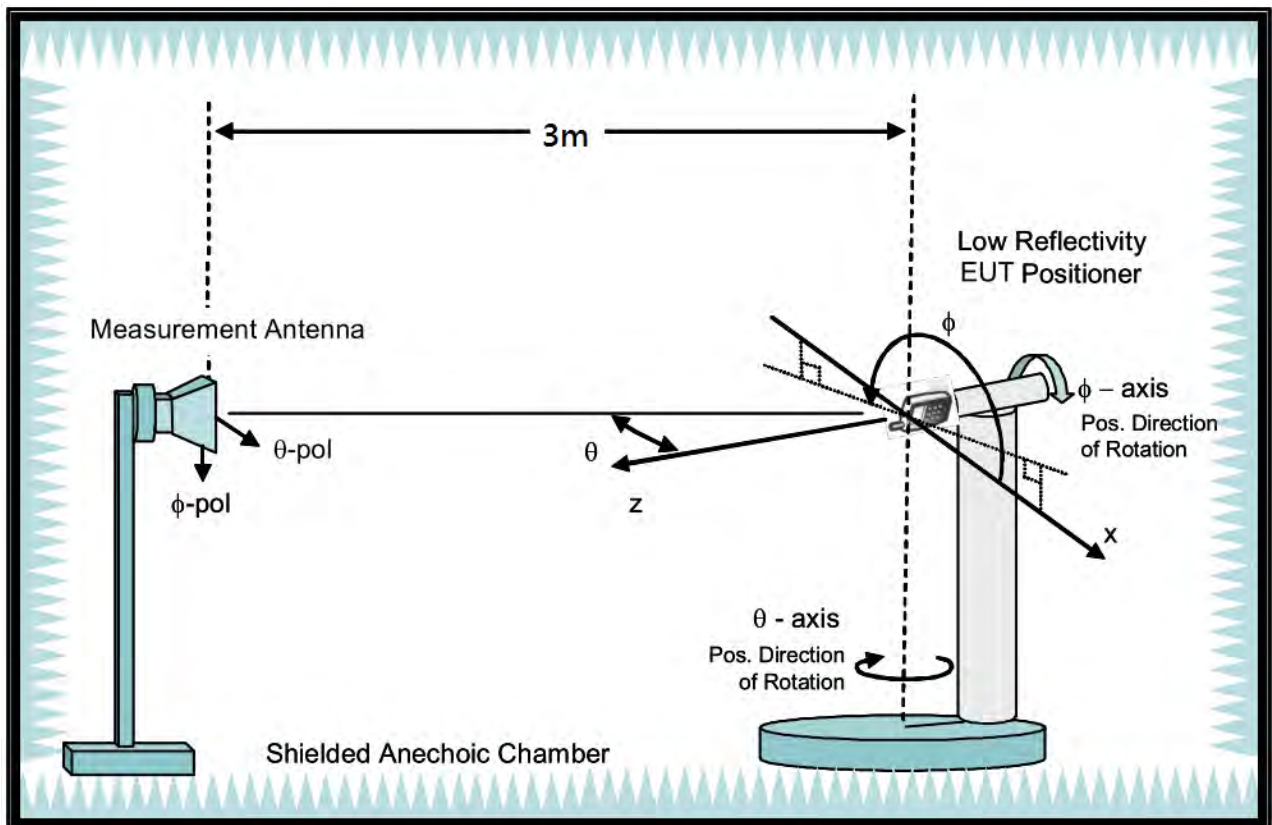
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

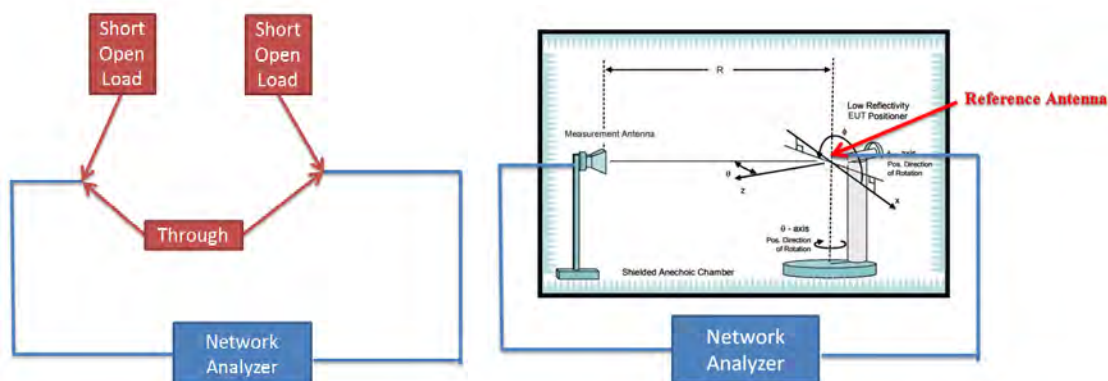
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



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)	-33.48	-33.18	-32.45	-32.78	-32.43	-32.85	-32.74	-32.13	-32.46	-33.46	-32.73	-33.41	-34.78	-35.31
G(phi) reading (dB)	-33.45	-32.13	-32.74	-32.43	-32.87	-31.78	-32.46	-32.37	-32.73	-32.87	-32.46	-33.68	-34.74	-35.08
Reference gain (dBi)	10.4	10.5	10.2	11.4	11.5	11.9	12.5	11.8	11.7	11.6	11.8	11.5	11.4	10.8
Factor(theta) (dB)	43.88	43.68	42.65	44.18	43.93	44.75	45.24	43.93	44.16	45.06	44.53	44.91	46.18	46.11
Factor(phi) (dB)	43.85	42.63	42.94	43.83	44.37	43.68	44.96	44.17	44.43	44.47	44.26	45.18	46.14	45.88

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.

Factor = gain factor + power gain conversion= (Reference antenna gain)-(G 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)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	5.7	5.88	6.04	6.95	7.96	6.71	6.92
Ant. 2 (dBi)	4.74	6.5	6.39	6.97	4.86	8.35	8.8
DG [1SS] (dBi)	8.24	9.21	9.23	9.97	9.56	10.58	10.92
Polarization	Phi	Phi	Phi	Phi	Phi	Theta	Phi
$\Theta(^{\circ})$	15	15	15	0	22.5	22.5	22.5
$\Phi(^{\circ})$	0	7.5	7.5	270	352.5	172.5	172.5

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)	2.4G	2.45G	2.4835G
Ant. 1 [$10^{(G/20)}$]	$10^{(5.7/20)}$	$10^{(5.88/20)}$	$10^{(6.04/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(4.74/20)}$	$10^{(6.5/20)}$	$10^{(6.39/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.928	1.968	2.004
Ant. 2 [$10^{(G/20)}$] value	1.726	2.113	2.087
Sum All Antenna [Amax]	3.653	4.081	4.091
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	8.24	9.21	9.23

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(6.95/20)}$	$10^{(7.96/20)}$	$10^{(6.71/20)}$	$10^{(6.92/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(6.97/20)}$	$10^{(4.86/20)}$	$10^{(8.35/20)}$	$10^{(8.8/20)}$
Ant. 1 [$10^{(G/20)}$] value	2.226	2.5	2.165	2.218
Ant. 2 [$10^{(G/20)}$] value	2.231	1.75	2.615	2.754
Sum All Antenna [Amax]	4.457	4.25	4.78	4.972
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	9.97	9.56	10.58	10.92

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

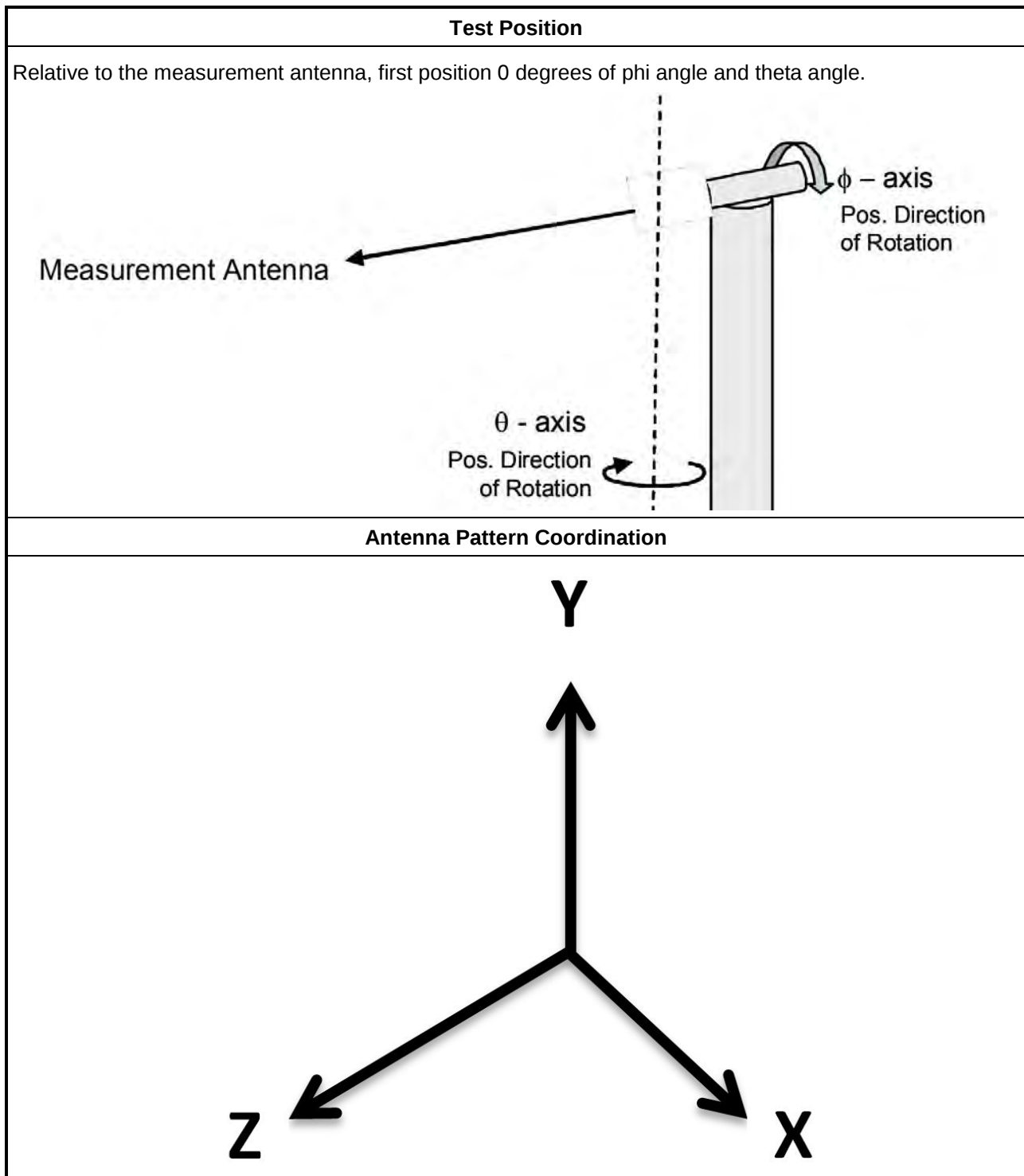
Freq(Hz)	2.4G	2.45G	2.4835G
Ant. 1 Max Gain (dBi)	8.06	8.25	8.6
Ant. 2 Max Gain (dBi)	7.39	8.33	8.98
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/0/315	Phi/0/322.5	Theta/7.5/52.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/7.5/45	Phi/7.5/45	Theta/7.5/142.5
Max Gain (dBi)	8.06	8.33	8.98
DG [1SS] (dBi)	8.24	9.21	9.23
DG [2SS] (dBi)	8.06	8.33	8.98

Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	8.3	8.3	8.64	8.19
Ant. 2 Max Gain (dBi)	9.13	8.62	9.45	9.53
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/0/300	Phi/15/142.5	Phi/30/345	Phi/0/322.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/0/232.5	Phi/0/225	Theta/7.5/135	Phi/22.5/187.5
Max Gain (dBi)	9.13	8.62	9.45	9.53
DG [1SS] (dBi)	9.97	9.56	10.58	10.92
DG [2SS] (dBi)	9.13	8.62	9.45	9.53

Note:

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

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-1531	1GHz~18GHz	Dec. 20, 2024	Dec. 19, 2025
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Aug. 06, 2025	Aug. 05, 2026
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

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Freq(Hz)	2.4G	2.45G	2.4835G
Ant. 1 Max Gain (dBi)	8.06	8.25	8.6
Ant. 2 Max Gain (dBi)	7.39	8.33	8.98
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/0/315	Phi/0/322.5	Theta/7.5/52.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/7.5/45	Phi/7.5/45	Theta/7.5/142.5
Max Gain (dBi)	8.06	8.33	8.98
DG [1SS] (dBi)	8.24	9.21	9.23
DG [2SS] (dBi)	8.06	8.33	8.98

DG 1SS Result

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Radiated Composite Gain Data_2.4GHz

Appendix A

Θ(22.5°)	8.75/8.9	8.77/8.33	7.61/6.6	5.44/3.5	4.64/8.6	5.03/5.2	5.35/5.1	5.65/5.74	5.79/5.8	5.86/0.1	6.55/7.15	7.59/7.73	7.59/7.16	6.45/5.52	4.31/2.99	1.8/1.1	0.65/0.34	0.07/-0.1	-0.13/0.08	0.54/1.16	1.78/2.38	3.04/4.02	5.32/6.56	7.59/8.31	
Θ(30°)	8.1/8.29	8.03/7.36	6.3/4.8	3.06/1.98	2.08/2	1.8/1.59	1.51/1.65	2.05/2.62	3.27/3.9	4.57/5.38	6.34/7.31	7.92/8.12	7.87/7.21	6.11/4.63	2.73/0.58	-1.38/-3.14	-5.25/-7.14	-8.41/-8.93	-8.78/-8.12	-6.85/-5.09	-3.33/-1.73	-0.36/1.14	3.07/4.96	6.45/7.5	
Θ(37.5°)	7.42/7.58	7.17/6.19	4.64/2.55	0.56/-0.66	-1.16/-1.57	-1.85/-2.07	-2.35/-2.45	-2.23/-1.4	-0.09/0.34	2.75/4.24	5.84/7.25	8.11/8.39	8.05/7.07	5.49/3.33	0.44/-2.52	-5.11/-8.48	-13.13/-15.04	-14.85/-14.75	-13.42/-12.28	-11.85/-11.31	-10.01/-6.85	-4.28/-1.78	0.85/3.43	5.42/6.7	
Θ(45°)	6.67/6.81	6.19/4.83	2.69/-0.21	-2.13/-3.75	-4.68/-4.7	-4.1/-3.43	-3.15/-3.4	-4.04/-4.57	-4.09/-2.56	-0.53/1.8	4.23/6.36	7.76/8.35	8.07/6.97	4.92/2.04	-1.82/-5.34	-9.6/-13.44	-11.18/-9.04	-7.84/-7.61	-7.8/-7.99	-8.51/-9.72	-10.63/-11.35	-9.23/-5.49	-2.1/1.6	4.25/8.7	
Θ(52.5°)	5.79/5.9	5.07/3.32	0.59/-2.59	-5.11/-6.42	-6.28/-5.5	-4.58/-3.75	-3.31/-3.26	-3.59/-4.26	-5.02/-5.17	-3.16/-0.58	2.46/5.36	7.15/7.89	7.55/6.11	3.56/-0.12	-4.61/-9.28	-13.61/-9.25	-6.3/-5.13	-5.03/-5.46	-5.82/-6.01	-6.38/-7.42	-8.73/-9.98	-12.01/-9.48	-4.77/-0.22	2.94/4.84	
Θ(60°)	4.82/4.89	3.86/1.78	-1.5/-4.91	-7.5/-7.83	-6.83/-6.23	-5.65/-5.01	-4.55/-4.3	-4.07/-3.91	-4.09/-5.19	-5.04/-3.23	-0.51/3.32	5.73/6.81	6.62/5.22	2.38/-1.65	-6.81/-12.8	-11.21/-6.49	-4.34/-3.66	-4.1/-5.09	-5.3/-4.91	-4.82/-5.53	-6.8/-8.07	-10.43/-13.59	-7.67/-2.08	1.51/3.75	
Θ(67.5°)	3.94/0.5	2.93/0.55	-3.06/-6.56	-7.8/-7.12	-6.65/-6.36	-6.59/-6	-5.62/-5.27	-4.74/-4.03	-3.82/-4.47	-5.34/-5.06	-2.38/1.62	4.37/5.61	5.45/3.88	0.89/-3.51	-8.8/-12.32	-8.5/-5.26	-3.53/-3.21	-4.05/-5.48	-5.96/-5.34	-4.84/-5.01	-5.73/-6.38	-7.9/-11.89	-8.85/-3.08	0.59/2.83	
Θ(75°)	2.6/2.79	1.61/-1.06	-5.1/-7.88	-7.88/-6.59	-6.34/-6.69	-7.26/-7.27	-6.93/-6.48	-5.84/-4.83	-4.19/-4.51	-5.69/-6.55	-4.76/-1.1	2.23/3.84	4.01/2.75	-0.22/-5.03	-10.13/-9.51	-6.18/-4.6	-3.65/-3.62	-4.76/-6.79	-7.21/-6.65	-6.22/-6.4	-6.97/-6.97	-7.89/-11.44	-12.41/-5.13	-1.02/1.44	
Θ(82.5°)	1.72/1.77	0.5/-2.26	-6.48/-9.68	-9.68/-7.94	-7.25/-7.54	-8.56/-8.47	-8.33/-7.88	-7.06/-5.87	-4.77/-4.64	-6.28/-8.38	-7.15/-2.79	0.57/2.2	2.39/1.06	-1.93/-7.17	-11.66/-7.69	-5.05/-4.32	-4.11/-4.44	-6.06/-8.9	-9.02/-7.46	-6.81/-7.04	-7.56/-7.4	-8.45/-11.71	-12.62/-6.06	-2.04/0.43	
Θ(90°)	0.55/0.72	-0.5/-3.17	-7.24/-10.51	-10.34/-8.69	-8.16/-8.29	-9.8/-9.66	-9.88/-9.66	-8.81/-7.06	-5.51/-5.26	-7.01/-10.2	-9.32/-5.19	-1.79/-0.07	0.4/-0.4	-2.9/-7.66	-13.92/-8.52	-5.68/-5.32	-5.34/-5.52	-7.38/-12.65	-13.15/-9.73	-8.33/-8.55	-7.88/-7.75	-8.45/-10.57	-12.22/-7.44	-3.84/-0.98	
Θ(97.5°)	-0.87/-0.59	-1.84/-4.63	-8.59/-11.15	-11.54/-10.2	-9.39/-10.12	-11.55/-11.72	-11.85/-11.62	-10.38/-8.2	-7.04/-7.3	-9.44/-12.55	-10.55/-6.72	-4.13/-2.41	-1.56/-2	-4.2/-9.01	-14.59/-8.84	-6.59/-7.28	-8.58/-9.34	-11.67/-14.57	-12.92/-10.35	-9.42/-9.05	-8.72/-8.55	-9.35/-11.52	-13.5/-9.15	-5.07/-2.33	
Θ(105°)	-2.24/-2.02	-3.06/-5.56	-9.27/-10.72	-11.67/-10.5	-10.84/-11.35	-12.87/-13.82	-13.32/-12.94	-11.62/-9.64	-8.73/-9.34	-11.4/-14.72	-11.79/-8.09	-7.15/-5.99	-4.26/-4.06	-5.63/-8.99	-14.88/-10.07	-10.66/-9.93	-11/-12.73	-12.71/-12.49	-14.04/-15.39	-14.08/-12.52	-9.33/-9.47	-9.78/-9.9	-11.24/-13.55	-14.16/-9.95	-5.85/-3.32
Θ(112.5°)	-3.78/-3.99	-4.99/-7.15	-10.47/-11.22	-11.26/-11.06	-11.02/-12.23	-13.95/-15.06	-14.14/-13.59	-12.56/-10.88	-10.04/-10.26	-12.46/-13.78	-11.84/-9.51	-8.8/-7.54	-5.96/-5.61	-6.34/-8.96	-13.81/-11.42	-8.08/-8.16	-10.35/-12.51	-13.92/-13.68	-13.65/-11.19	-9.99/-9.78	-9.65/-10.77	-13.03/-15.82	-15.29/-11.36	-7.02/-4.57	
Θ(120°)	-5.14/-5.7	-6.95/-8.41	-10.53/-11.84	-11.87/-11.19	-11.28/-11.69	-12.26/-13.72	-13.89/-13.03	-12.89/-11.66	-10.51/-10.96	-12.06/-12.45	-10.59/-9.84	-9.86/-9.05	-7.92/-7.41	-7.73/-9.24	-13.22/-13.45	-9.96/-9.1	-10.37/-11.95	-12.94/-13.27	-14.16/-14.56	-12.59/-11.16	-11.62/-12.95	-14.72/-15.8	-14.98/-12.07	-8.86/-5.99	
Θ(127.5°)	-6.63/-7.34	-9.31/-10.96	-11.51/-12	-12.37/-12.68	-12.64/-12.42	-12.75/-12.69	-12.82/-12.75	-13.6/-14.11	-15.66/-15.82	-15.45/-15.3	-14.45/-12.63	-12.12/-11.65	-11.64/-12.55	-14.66/-14.69	-14.58/-15.53	-14.82/-15.16	-15.85/-15.07	-14.04/-14.3	-14.04/-14.8	-15.32/-15.38	-15.03/-14.87	-15.49/-15.73	-15.77/-15	-14.89/-14.81	
Θ(135°)	-8.4/-8.67	-10.08/-11	-11.46/-11.56	-11.51/-11.9	-12.77/-12.62	-13.4/-13.4	-14.15/-14.27	-14.89/-14.75	-13.78/-12.99	-12.42/-12.61	-14.72/-15.02	-13.22/-11.07	-10.69/-10.57	-10.56/-11.58	-14.29/-14.83	-12.9/-12.29	-13.46/-15.75	-14.31/-13.46	-14.35/-14.56	-13.93/-14.15	-14.91/-15.86	-15.1/-16.06	-15.32/-12.77	-10.65/-9.22	
Θ(142.5°)	-12.95/-12.85	-12.93/-13.38	-13.13/-13.21	-13.56/-15.1	-15.91/-15.3	-15.29/-14.97	-14.72/-16.08	-15.25/-14.9	-15.02/-15.86	-14.85/-14.69	-13.86/-11.76	-10.68/-10.54	-11.03/-11.62	-12.73/-14.54	-15.39/-15.22	-14.66/-15.6	-15.74/-15.81	-15.28/-14.78	-15.59/-15.06	-14.51/-15.24	-14.56/-15.22	-15.4/-15.08	-15.26/-11.44	-12.96/-11.84	
Θ(150°)	-12.04/-11.95	-11.61/-11.71	-12.37/-12.68	-12.64/-12.42	-12.75/-12.69	-12.82/-12.75	-13.6/-14.11	-15.66/-15.82	-15.45/-15.3	-14.45/-12.63	-12.12/-11.65	-11.64/-12.55	-14.66/-14.69	-14.58/-15.53	-14.82/-15.16	-15.85/-15.07	-14.04/-14.3	-14.04/-14.8	-15.32/-15.38	-15.03/-14.87	-15.49/-15.73	-15.77/-15	-14.89/-14.81		
Θ(157.5°)	-12.6/-11.7	-11.29/-11.24	-11.69/-12.41	-11.75/-11.89	-11.98/-11.91	-11.97/-12.14	-13.31/-13.59	-14.43/-16.37	-15.47/-15.14	-15.21/-15.1	-15.3/-14.98	-15.62/-14.46	-14.11/-14.17	-13.95/-14.54	-15.15/-15.71	-15.81/-15.31	-15.17/-15.44	-14.7/-14.27	-14.72/-15.65	-14.93/-15.61	-14.79/-15.86	-14.97/-14.65	-15.32/-15.91	-14.93/-15.82	
Θ(165°)	-14.63/-13.69	-12.78/-12.47	-12.78/-13.6	-14.79/-15.12	-14.7/-15.13	-15.66/-16.12	-15.05/-14.99	-15.18/-15.49	-15.65/-15.44	-15.19/-14.91	-15.52/-15.9	-16.03/-15.6	-15.77/-15.95	-15.61/-15.3	-14.98/-15.3	-15.04/-15.76	-15.6/-15.05	-15.7/-15.77	-15.12/-15.41	-15.13/-15.18	-14.45/-14.76	-15.16/-14.83	-15.28/-15.9	-15.5/-14.63	
Θ(172.5°)	-15.09/-14.1	-13.69/-13.07	-13.21/-13.96	-15.05/-15.23	-14.93/-14.65	-14.33/-14.23	-13.55/-13.17	-13.35/-13.43	-13.65/-13.89	-14.72/-15.26	-15.11/-15.16	-15.34/-15.3	-15.5/-15.12	-15.66/-15.42	-15.94/-15.46	-15.72/-14.76	-14.77/-15.45	-16.02/-15.15	-15.26/-15.88	-15.82/-15.29	-15.93/-15.55	-15.23/-16.2	-15.19/-15.3	-14.97/-14.68	
Θ(180°)	-15.49/-14.87	-13.7/-13.81	-13.51/-13.74	-13.92/-13.84	-14.24/-13.82	-13.68/-13.77	-13.18/-13.69	-13.9/-14.46	-15.63/-16.05	-15.73/-15.93	-15.37/-15.32	-15.6/-15.45	-14.73/-15.09	-15.75/-15.88	-15.26/-14.79	-15.5/-14.9	-15.68/-15.29	-15.07/-15.08	-14.93/-15.07	-14.95/-14.89	-15.01/-15.86	-15.71/-15.39	-15.43/-14.9		
Freq(Hz)	2.4835G/Pol.	Theta/	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)	
Θ(0°)	8.4/8.47	8.4/8.17	7.79/7.31	6.77/6.56	7.03/7.66	8.11/8.47	8.73/8.9	8.94/8.76	8.37/7.86	7.17/6.58	6.74/7.34	7.84/8.16	8.36/8.41	8.31/8.06	7.64/7.1	6.61/6.75	7.37/7.99	8.48/8.82	8.37/7.76	9.03/9.12	9.06/8.82	8.37/7.76	7/6.49	7.86/8.19	
Θ(7.5°)	8.16/8.29	8.29/8.12	7.87/3.2	6.86/7.4	7.19/7.7	8.12/8.47	8.74/8.87	8.98/7.2	8.34/7.8	7.13/6.74	7.25/7.87	8.31/8.55	8.62/8.52	8.19/7.76	7.15/6.42	5.72/5.63	6.15/6.73	7.23/7.61	7.87/8.01	8.02/7.88	7.55/7.05	6.44/6	6.28/6.9	7.46/7.87	
Θ(15°)	7.98/0.9	8.17/9.1	7.49/6.98	6.34/5.97	6.11/6.34	6.59/6.84	7.11/7.32	7.45/7.43	7.22/6.88	6.56/6.2	7.41/8.16	8.67/8.95	8.95/8.71	8.23/7.53	6.58/5.49	4.32/3.48	3.43/7	4.06/4.34	4.56/4.76	4.95/5.04	4.99/4.85	4.64/4.64	5.23/6.11	6.97/4.9	
Θ(22.5°)	7.38/7.62	7.59/7.29	6.74/5.93	4.98/4.21	3.84/3.56	3.4/3.5	3.78/4.18	4.62/4.92	5.15/5.21	5.46/1.2	7.16/8.11	8.76/9.07	9.01/8.62	7.87/6.82	5.44/3.88	2.2/0.78	-0.25/-0.75	-1.08/-1.34	-1.4/-1.1	-0.53/0.1	0.67/1.21	1.77/2.57	3.79/5.05	6.11/6.88	
Θ(30°)	6.58/6.62	6.65/6.13	5.26/4.05	2.59/1.06	-0.17/-1.36	-2.46/-2.98	-2.68/-1.71	-0.46/0.65	1.65/2.59	3.62/4.85	6.24/7.5	8.41/8.91	8.91/8.41	7.38/5.93	4.03/1.88	-0.54/-2.9	-5.41/-7.83	-10.42/-13.45	-14.68/-15.6	-13.89/-10.57	-7.59/-5.04	-2.8/-0.69	1.43/3.38	4.86/5.95	
Θ(37.5°)	5.48/5.68	5.35/4.52	3.21/3.6	-0.89/-2.96	-5.09/-7.34	-9.04/-10.42	-11.5/-10.33	-7.43/-4.77	-2.53/-0.61	1.35/3.21	4.94/6.52	7.65/8.27	8.21/7.49	6.14/4.26	1.81/-1.02	-4.33/-8.02	-12.18/-15.31	-15.53/-11.71	-9.87/-9.77	-10.93/-12.98	-15.48/-12.84	-8.2/-4.45	-1.21/1.37	3.35/4.7	
Θ(45°)	3.95/4.11	3.52/2.28	0.35/-2.36	-4.7/-7.07	-8.39/-8.1	-6.77/-6.28	-6.78/-8.27	-9.29/-7.77	-6/-4.63	-2.39/0.34	2.57/4.5	6.01/6.91	6.91/6.11	4.42/2.07	-1.03/-4.75	-9.6/-13.5	-15.11/-13.68	-9.07/-6.51	-5.79/-5.74	-6.01/-6.72	-8.24/-11	-13.12/-8.98	-4.74/-1.41	1.14/2.98	
Θ(52.5°)	2.04/2.16	1.29/-0.49	-3.28/-5.98	-8.87/-10.09	-8.22/-5.9	-4.42/-3.98	-4.29/-5.46	-6.55/-6.42	-5.76/-5.92	-5.54/-2.65	0.17/2.44	4.27/5.33	5.33/4.26	2.26/-0.61	-4.21/-8.38	-12.66/-15.27	-15.08/-10.82	-7.17/-5.24	-4.7/-5.1	-5.48/-5.56	-5.96/-7.54	-10.58/-12.22	-8.07/-4.24	-1.22/0.9	
Θ(60°)	-0.17/-0.05	-1.23/-3.58	-6.53/-9.33	-11.87/-10.68	-7.82/-5.6	-4.44/-4.22	-4.92/-6.32	-7.28/-7.21	-6.11/-6.02	-6.95/-5.84	-2.61/-0.23	1.93/3.38	3.50/2.48	0.11/-3.22	-6.88/-10.23	-14.08/-15.12	-15.87/-12.56	-8.12/-5.78	-4.82/-5.25	-6.15/-6.34	-6.31/-7.25	-9.78/-13.24	-12.21/-7.76	-4.14/-1.55	
Θ(67.5°)	-2.35/-2.43	-3.96/-6.84	-9.76/-13.42	-14.78/-11.58	-8.88/-7.12	-6.73/-7.53	-8.91/-10.06	-9.93/-9.04	-7.44/-6.8	-7.83/-7.51	-4.63/-2.69	-0.62/0.98	1.14/-0.28	-3.1/-6.89	-10.11/-12.72	-14.79/-15.35	-15.19/-16.26	-11.04/-7.75	-6.62/-6.95	-7.89/-8.14	-7.95/-8.55	-10.68/-13.61	-13.44/-10.85	-6.69/-3.82	

Gain Result

Freq(Hz)	2.4GPol.	PhiAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	5.34/07	2.480/48	-2.33/-66	-16.17/-13.73	-5.76/-16	1.17/-95	4.42/5.21	6.19/6.79	7.36/7.74	7.82/7.83	7.77/4	6.96/22	5.34/24.5	2.75/0	-2.04/-6.45	-16.09/-13.73	-5.45/-1.35	1.36/3.28	4.75/79	6.59/7.18	7.67/92	8.06/8.03	7.83/7.48	6.96/22
Θ(7.5°)	5.66/51	2.95/93	-1.92/-648	-15.95/-13.31	-5.44/-1.29	1.38/3.24	4.65/5.73	6.58/7.18	7.61/7.88	7.98/7.92	7.69/7.27	6.68/5.85	4.81/3.46	1.74/-0.52	-3.87/-9.23	-18.79/-11.88	-5.27/-1.72	0.71/2.52	3.91/5.03	5.88/6.57	7.08/7.47	7.73/7.83	7.76/7.54	7.14/6.53
Θ(15°)	5.71/61	3.04/95	-2.09/-706	-17.58/-12.33	-5.24/-1.45	0.99/2.72	4.06/5.09	5.91/6.55	7.07/7.45	7.68/7.73	7.62/7.26	6.64/5.75	4.54/2.99	0.91/-1.78	-5.69/-12.29	-18.62/-11.3	6.19/-3.34	-1.34/0.18	1.49/2.64	3.63/4.49	5.23/5.91	6.44/6.81	7.04/7.1	6.91/6.45
Θ(22.5°)	5.31/21.2	2.52/0.15	-3.43/-9.66	-19.24/-10.39	-4.94/-1.86	0.13/1.57	2.68/3.57	4.35/5.09	5.84/6.49	7.05/7.7	7.51/27	6.47/5.71	4.26/2.9	-2.68/-3.65	-17.27/-15.5	-17.3/-10.25	-6.9/-5.08	-4.02/-3.14	-2.18/-1.18	-0.12/2.01	2.15/3.26	4.27/5.13	7.06/7.13	6.2/5.95
Θ(30°)	4.63/53	1.68/-11	-5.65/-15.14	-18.38/-6.66	-5.09/-3.1	-1.85/-9.4	-0.17/0.54	1.33/2.29	3.41/4.55	5.65/6.56	7.13/7.33	6.95/6.02	4.45/2.2	-1.07/-5.41	-12.08/-18.6	-16.1/-109	-8.74/-9.27	-8.02/-8.35	-8.25/-7.73	-6.67/-5.11	-3.33/-1.38	0.54/2.24	3.64/6	5.12/5.13
Θ(37.5°)	3.81/2.71	0.69/-2.54	-8.3/-18.94	-13.06/-7.61	-5.44/-4.48	-4.08/-3.81	-3.43/-2.9	-2.11/-0.99	0.48/2.13	3.84/5.35	6.48/7.08	7.61/5	4.45/1.69	-2.37/-8.43	-18.13/-18.54	-15.58/-13.34	-12.13/-12.06	13.09/-13.05	-11.49/-9.63	-8.47/-8.22	-8.15/-6.92	-4.17/-1.27	1.14/2.83	3.84/4.16
Θ(45°)	2.91/1.84	-0.31/-3.85	-10.64/-18.34	-12.13/-7.92	-6.38/-5.77	-5.69/-5.69	-5.49/-5.11	-4.57/-3.84	-2.81/-1.28	0.77/0.35	5.6/29	6.74/2.62	4.61/7.8	-2.93/-10.35	-18.89/-18.49	-16.62/-17.37	-18.29/-17.57	-17.84/-12.56	-8.92/-6.32	-4.9/-4.75	-5.85/-8.4	-10.33/-6.76	-2.39/0.49	2.28/3.05
Θ(52.5°)	2.07/1.04	-1.23/-5.14	-12.6/-18.73	-12.32/-8.88	-7.44/-6.71	-6.6/-5.52	-6.13/-5.27	-4.53/-3.91	-3.68/-3.47	-2.12/0.64	3.37/5.28	6.02/5.59	3.93/6.57	-4.64/-14.04	-17.43/-16.16	-15.46/-17.88	-18.17/-19.21	-17.14/-10.65	-6.83/-4.36	-3.08/-2.83	-3.68/-5.89	-10.27/-12.07	-5.91/-16	0.84/-1.99
Θ(60°)	1.21/0.2	-2.27/-6.66	-15.75/-18.89	-12.78/-9.66	-8.75/-8.15	-8.21/-8.73	-6.92/-6.55	-4.21/-3.25	-3.05/-3.84	-4.77/-2.83	0.83/3.57	4.81/4.7	3.21/2.01	-5.14/-14.72	-18.63/-14.75	-13.74/-15.51	-17.58/-18.14	-17.22/-10.68	-6.18/-3.68	-2.36/-2.01	-2.49/-4.1	-7.36/-13.05	-9.74/-3.69	0.51/1.04
Θ(67.5°)	0.95/-1.08	-3.73/-8.72	-17.36/-18.12	-12.53/-10.61	-9.91/-10.2	-10.6/-9.84	-8.14/-6.59	-4.6/-3.3	-2.93/-3.67	-5.48/-5.02	-1.15/2.01	3.45/3.31	1.84/-1.44	-6.83/-16.75	-18.25/-12.74	-11.6/-13.4	-17.47/-17.85	-19.11/-14	-5.69/-3.9	-2.52/-2.09	-2.33/-1.58	-5.75/-10.5	-12.88/-5.6	-1.68/-0.01
Θ(75°)	-1.22/-2.46	-5.26/-10.33	-17.65/-18.31	-14.45/-12.06	-11.29/-12.01	-12.82/-11.19	-9.07/-5	-5.88/-4.37	-3.31/-3.36	-4.92/-7.07	-4.52/-6.05	1.32/1.62	0.43/-2.3	-7.49/-17.54	-18.66/-11.57	-10.41/-13.01	-17.92/-13.31	-18.22/-11.65	-7.19/-4.57	-3.3/-3.96	-3.27/-4.09	-6.17/-10.63	-15.02/-7.76	-3.36/-1.39
Θ(82.5°)	-2.26/-3.26	-5.82/-10.55	-19.41/-18.53	-16.15/-14.34	-13.12/-15.52	-16.27/-12.16	-10.57/-9.24	-7.51/-5.56	-4.09/-3.97	-5.98/-9.71	-7.12/-2.46	-0.39/-0.13	-1.25/-3.84	-8.59/-17.85	-16.27/-10.99	-9.98/-12.31	-17.68/-17.79	-18.69/-14.7	-8.75/-4.57	-4.06/-3.73	-4.02/-4.61	-6.26/-10.35	-15.9/-8.69	-4.29/-2.47
Θ(90°)	-3.52/-4.29	-6.73/-11.59	-19.45/-18.53	-16.22/-14.12	-14.06/-18.47	-18.03/-16.17	-13.74/-12.17	-9.72/-11.1	-5.41/-5.44	-7.66/-12.1	-9.52/-4.76	-2.8/-2.43	-3.1/-5.08	-9.06/-15.84	-15.74/-9.94	-9.97/-12.46	-18.86/-18.21	-18.78/-17.92	-12.36/-8.02	-5.54/-5.23	-5.56/-6.17	-7.71/-11.41	-10.97/-9.82	-5.6/-3.74
Θ(97.5°)	-4.93/-5.73	-7.92/-12.61	-19.07/-18.62	-17.54/-14.82	-14.85/-18.7	-18.89/-13.3	-16.61/-13.43	-10.27/-7.8	-6.79/-7.43	-10.32/-14.96	-10.82/-6.72	-5.02/-4.37	-4.7/-6.68	-10.64/-17.41	-13.93/-9.49	-9.25/-12.76	-18.95/-18.62	-16.54/-14.85	-12.83/-9.3	-7.08/-6.35	-6.74/-7.64	-9.65/-13.88	-16.73/-10.55	-6.74/-5.2
Θ(105°)	-6.16/-7.08	-8.77/-12.28	-18.77/-18.37	-18.98/-18.39	-16.61/-19.41	-17.48/-19.14	-18.74/-17.23	-12.87/-10.6	-9.76/-9.46	-12.07/-16.02	-12.86/-9.45	-7.94/-6.88	-7/-8.36	-11.03/-15.7	-15.91/-11.39	-10.12/-13.07	-19.39/-18.11	-15.94/-14.14	-14.68/-12.19	-9.38/-17.99	-8.34/-9.54	-11.54/-15.57	-17.04/-12.99	-8.42/-6.54
Θ(112.5°)	-7.26/-8.48	-10.62/-13.55	-19.45/-18.58	-19.19/-18.24	-18.26/-18.76	-17.43/-18.41	-19.2/-19.09	-12.80/-10.6	-9.69/-11.66	-17.34/-18.83	-13.3/-10.67	-9.13/-8.03	-8.04/-8.92	-10.78/-14.58	-16.78/-13.21	-12.15/-15.36	-19.39/-17.71	-14.38/-13.53	-16.32/-17.19	-12.31/-10.2	-10.66/-12.34	-10.97/-17.97	-17.06/-14.83	-10.69/-8.17
Θ(120°)	-9.21/-10.37	-13.03/-15.26	-17.99/-18.58	-18.84/-17.63	-18.87/-18.88	-18.44/-18.28	-19/-16.68	-12.76/-11.1	-11.71/-15.58	-18.83/-15.38	-11.77/-10.97	-10.32/-9.59	-9.73/-10.87	-13.29/-15.7	-17.43/-15.15	-14.07/-16.12	-18.13/-19.57	-14.75/-13.78	-16.19/-18.59	-17.97/-13.99	-14.12/-16.21	-18.61/-17.84	-18.51/-15.51	-12.29/-9.78
Θ(127.5°)	-11.6/-12.76	-16.77/-18.48	-18.53/-18.77	-18.27/-17.53	-18.06/-17.46	-17.56/-19.03	-17.91/-14.66	-12.49/-12.93	-16.83/-18.49	-18.55/-18.15	-18.25/-14.87	-11.18/-9.71	-9.94/-11.21	-13.25/-16.1	-18/-17.84	-16.4/-13.7	-17.62/-19.32	-18.59/-18.12	-17.95/-18.77	-17.27/-17.78	-17.2/-18.87	-17.2/-18.87	-13.96/-11.88	
Θ(135°)	-13.52/-14.78	-17.58/-18.84	-18.97/-18.94	-18.19/-18.43	-17.95/-19.1	-19.19/-18.3	-18.27/-15.87	-15.36/-16.98	-18.4/-18.42	-18.05/-18.47	-17.95/-13.06	-10.6/-10.25	-11.25/-12.85	-14.98/-17.46	-17.84/-18.95	-19.11/-17.92	-18.97/-18.94	-18.94/-18.55	-18.56/-17.84	-18.02/-18.3	-19.32/-18.67	-18.02/-18.37	-17.79/-18.35	-15.71/-14.53
Θ(142.5°)	-14.29/-15.77	-17.28/-18.7	-17.37/-18.64	-18.17/-18.4	-17.96/-17.8	-17.85/-18.4	-17.9/-18.57	-18.28/-17.89	-18.38/-17.9	-18.88/-16.24	-13.24/-11.02	-10.38/-11.1	-12.71/-15	-17.73/-18.02	-18.3/-18.8	-18.81/-18.6	-18.44/-17.09	-18.81/-19.07	-17.34/-17.92	-18.06/-19.12	-19.06/-17.61	-19.02/-18.66	-19.19/-18.79	-17.12/-16.38
Θ(150°)	-13.41/-13.41	-14.35/-18.59	-18.27/-18.38	-18.45/-18.15	-18.96/-18.13	-18.27/-17.8	-18/-19.3	-17.98/-18.43	-17.84/-18.36	-18.35/-17.34	-14.59/-12.85	-12.22/-12.45	-13.51/-15.5	-18.57/-18.46	-18.91/-17.93	-18.35/-18.73	-18.45/-18.37	-18.39/-18.07	-19.1/-18.96	-18.19/-18.12	-18.35/-19.56	-19.33/-18.83	-18.59/-18.73	-18.86/-16.63
Θ(157.5°)	-14.5/-14.13	-14.46/-15.46	-17.23/-18.71	-18.72/-18.17	-18.03/-18.47	-18.4/-18.18	-18.9/-18.86	-18.06/-19	-17.41/-18.58	-18.93/-17.41	-18.07/-18.47	-19.11/-18.44	-18.55/-17.41	-19.03/-19.2	-19.32/-18.55	-18.32/-18.19	-17.34/-19.02	-17.93/-18.57	-19.3/-18.73	-18.22/-18.21	-18.31/-17.76	-19.45/-17.87	-16.41/-15.54	-15.02/-14.83
Θ(165°)	-14.42/-13.82	-13.81/-15.44	-16.15/-18.88	-18.71/-19.46	-17.92/-18.97	-18.3/-18.63	-17.37/-18.84	-18.88/-18.91	-19.08/-18.92	-18.61/-18.36	-18.85/-18.12	-19.14/-19.03	-18.89/-18.07	-19.14/-18.57	-17.82/-17.59	-18.26/-17.94	-18.69/-18.41	-18.58/-18.53	-18.34/-18.94	-18.3/-18.56	-19.16/-17.44	-19.16/-17.07	-15.61/-14.57	-13.97/-13.62
Θ(172.5°)	-14.8/-14.17	-14.14/-14.91	-16.58/-19.38	-17.89/-17.62	-19.05/-17.75	-18.68/-19.38	-18.45/-18.04	-18.37/-18.65	-19.17/-17.57	-18.62/-18.03	-18.48/-17.56	-17.58/-18.91	-18.09/-18.35	-17.84/-18.01	-17.89/-18.67	-18.19/-17.96	-18.97/-17.92	-19.19/-17.31	-18.51/-19.13	-18.10/-18.7	-18.25/-18.55	-17.83/-17.53	-18.74/-18.58	-15.7/-15.91
Θ(180°)	-17.38/-16.82	-16.5/-16.79	-17.61/-18.3	-18.17/-17.63	-18.17/-17.63	-18.17/-17.63	-17.41/-18.25	-19.35/-17.91	-18.91/-17.59	-19.05/-17.79	-17.78/-17.5	-17.94/-18.27	-19.28/-17.8	-18.16/-18.07	-18.86/-19.02	-18.97/-17.22	-17.29/-19.31	-18.38/-17.9	-18.14/-17.51	-18.47/-18.58	-18.71/-17.88	-18.04/-18.08	-18.57/-18.99	-13.99/-18.98
Freq(Hz)	2.4GPol.	ThetaAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	4.26/5.37	6.2/6.78	7.18/7.45	7.59/7.56	7.51/7.23	5.38/4.17	2.64/0.71	1.83/-5.89	-1.87/-16.85	-7.25/-2.6	0.27/2.4	3.95/5.11	6.08/6.77	7.28/7.6	7.76/7.76	7.56/7.26	6.76/6.02	5.09/3.91	2.43/0.52	-2.1/-6.1	-14.57/-16.77	-6.64/-2.08	0.78/2.82	
Θ(7.5°)	4.23/5.43	6.34/6.95	7.38/7.62	7.72/7.71	7.67/3.5	6.93/6.29	5.37/4.1	2.42/0.32	-4.74/-15.46	-18.72/-12.49	-5.38/-1.5	0.97/2.83	4.14/5.17	5.92/6.45	6.79/6.96	6.96/6.87	6.59/6.21	5.69/5.01	4.16/3.1	1.77/0	-2.42/-6.2	-14.02/-17.37	-7.57/-2.68	0.45/2.58
Θ(15°)	4.07/5.31	6.21/6.78	7.11/7.24	7.19/7.01	6.73/6.33	5.76/4.99	3.92/3.52	2.73/-1.52	-2.83/-10.52	-18.9/-10.42	-4.47/-0.95	1.35/3.04	4.21/4.98	5.51/6.78	5.78/5.67	5.36/4.9	4.31/3.66	2.94/2.1	1.22/0.2	-1/-2.63	-4.89/-8.47	-15.93/-17.66	-8.02/-3.12	0.07/2.42
Θ(22.5°)	3.71/4.93	5.79/6.25	6.4/6.28	5.94/5.42	4.82/4.12	3.25/2.18	0.84/-0.77	-2.73/-5.15	-8.75/-15.05	-17.98/-8.68	-3.72/-0.46	1.83/3.4	4.33/4.87	5.04/4.89	4.45/3.82	2.99/2.01	0.8/-0.44	-1.75/-3.06	-6.46/-7.75	-9.55/-12.37	-16.22/-13.25	-7.44/-3.3	-0.27/2.03	
Θ(30°)	3.01/4.17	4.94/5.27	5.22/4.78	3.98/2.85	1.65/0.37	-0.97/-2.48	-4.22/-6.21	-8.53/-11.42	-15.13/-18.48	-14.76/-6.86	-4.39/-3.93	1.49/3.16	4.09/4.42	4.22/3.58	2.62/1.41	-0.15/-2.06	-4.4/-7.07	-10.38/-14.39	-18.18/-17.46	-17.94/-15.63	-14.21/-13.57	-12.97/-11.04	-7.49/-3.95	-0.97/1.34
Θ(37.5°)	2.02/3.1	3.78/3.98	3.72/8.5	1.43/-0.54	-2.71/4.81	-6.63/-8.14	-9.55/-11.19	-13.69/-18.03	-18.11/-18.29															



Radiated Composite Gain Data 2.4GHz

Appendix A

Θ(22°S)	6.55/5.73	4.44/2.62	0.04/-3.79	-10.03/-18.39	-9.96/5.47	-2.93/-1.08	0.47/1.82	3.14/23	5.26/6.11	6.8/7.29	7.57/36	6.88/5.92	4.57/7.21	0.33/-2.63	-6.55/-11.16	-14.35/-12.67	-9.74/-7.36	-5.52/-4.03	-2.74/-1.52	-0.31/0.98	2.25/3.53	4.67/5.64	6.39/6.89	7.16/9.99
Θ(30°)	5.95/0.1	3.47/1.25	-1.96/-6.82	-15.6/-18.29	-10.57/-7.24	-5.5/-4.4	-3.37/-2.22	-0.70/98	2.65/4.15	5.49/6.58	7.28/7.57	7.25/6.36	4.84/2.7	-0.3/-4.09	-9.24/-15.64	-17.49/-15.67	-15.11/-14.98	-14.11/-12.5	-10.68/-8.99	-7.3/-5.27	-3.11/-0.88	1.22/3.02	4.46/5.53	6.16/6.27
Θ(35°)	5.17/4.11	2.23/-0.56	-4.71/-11.52	-18.72/-16.29	-11.43/-9.21	-6.97/-4.42	-6.97/-6.45	-5.15/-3.04	-0.49/1.88	3.93/5.62	6.81/7.42	7.31/6.43	4.72/7.17	-1.47/-6.39	-13.72/-19.33	-15.86/-14.91	-16.96/-18.44	-14.36/-12.97	-12.31/-11.49	-9.56/-6.16	-2.66/2.24	2.54/1.58	5.19/5.51	
Θ(45°)	4.34/3.16	0.88/-2.61	-8.16/-18.87	-17.81/-14.46	-12.66/-11.65	-10.48/-9.97	-7.6/-6.91	-6.68/-6.24	-4.32/-1.56	1.18/3.63	5.53/6.76	7.12/6.53	4.92/2.24	-2.05/-6.18	-17.63/-18.22	-16.24/-16	-16.44/-15.39	-12.9/-10.94	-9.6/-8.71	-8.45/-9.1	-10.61/-12.13	-8.93/-3.99	-0.11/2.45	4.06/4.67
Θ(52°S)	3.54/2.27	-0.33/-4.48	-11.27/-18.69	-17.58/-14.46	-14.02/-14.24	-12.81/-10.22	-7.96/-6.44	-5.41/-5.09	-4.67/-3.48	-1.23/1.54	4.11/5.93	6.61/6.12	4.43/1.26	-3.8/-11.6	-19.1/-17.66	-18.03/-15.09	-12.58/-11.3	-10.35/-9.72	-8.71/-7.47	-7.72/-10.25	-14.22/-9.68	-3.08/0.62	2.81/3.74	
Θ(60°)	2.75/1.44	-1.4/-5.89	-13.29/-17.81	-16.94/-15.7	-16.2/-17.06	-14.91/-11.38	-8.7/-6.92	-5.47/-4.39	-3.63/-3.57	-3.38/-1.41	1.71/4.3	5.51/5.28	3.64/0.46	-5.03/-12.51	-18.42/-19.14	-16.25/-12.03	-10.49/-9.77	-10.25/-10.92	-9.58/-7.54	-6.16/-5.77	-11.06/-15.26	-6.63/-1.3	1.52/7.99	
Θ(67°S)	1.89/0.61	-2.2/-6.89	-14.1/-17.42	-15.06/-15.13	-17.96/-18.08	-16.89/-12.04	-9.59/-8.4	-6.93/-5.09	-3.82/-3.27	-4.04/-3.56	-0.31/2.79	4.26/4.09	2.35/-1.28	-7.04/-14.91	-18.98/-17.61	-13.35/-10.37	-8.71/-8.57	-8.85/-11.24	-9.76/-7.43	-5.96/-5.24	-5.15/-5.69	-7.96/-13.94	-9.29/-2.73	0.55/1.97
Θ(75°)	0.64/-0.64	-3.67/-8.92	-16.98/-16.66	-14.76/-15.1	-18.16/-19.13	-17.84/-14.03	-11.41/-10.19	-8.87/-6.15	-4.43/-3.57	-3/-3.37	-3.20/39	2.36/2.5	1.01/-2.09	-7.53/-15.98	-19.12/-14.3	-10.85/-9.94	-9.36/-9.8	-11.85/-14.39	-11.53/-8.73	-7.11/-6.14	-5.84/-5.71	-7.07/-12.01	-15.04/-5.12	-0.97/0.68
Θ(82°S)	-0.39/-1.94	-5.26/-10.7	-18.59/-18.44	-17.58/-17.04	-17.51/-17.84	-18.38/-14.23	-12.17/-11.14	-9.96/-7.71	-5.19/-4.14	-4.94/-7.38	-6.05/-1.63	0.61/0.74	-0.71/-3.86	-9.07/-17.67	-19.15/-12.32	-12.88/-15.84	-9.18/-10.15	-12.88/-15.84	-13.2/-9.98	-7.66/-6.96	-6.46/-6.31	-7.57/-12.79	-17.04/-6.49	-2.21/-0.55
Θ(90°)	-1.66/-2.91	-5.88/-10.79	-17.78/-19.83	-18.16/-17.58	-18.6/-17.54	-18.65/-13.76	-12.38/-12.38	-12.35/-9.85	-6.68/-5.39	-6.49/-9.71	-8.62/-3.68	-1.21/-0.95	-2.18/-4.7	-9.12/-15.18	-18.21/-12.36	-9.75/-9.73	-10.1/-10.52	-12.93/-18.53	-13.94/-9.79	-8.44/-7.92	-7.24/-6.73	-7.81/-12.69	-17.05/-7.64	-3.63/-1.93
Θ(97°S)	-3.12/-4.17	-6.94/-11.93	-18.62/-18.82	-19.25/-19.16	-18.18/-18.48	-18.44/-15.12	-14.3/-15.24	-11.4/-11.08	-8.17/-7.41	-18.13/-135	-10.88/-5.54	-3.43/-3.33	-4.25/-6.47	-10.54/-17.28	-18.14/-11.14	-9.51/-10.72	-12.81/-15.84	-18.71/-18.43	-14.47/-10.12	-8.84/-8.57	-8.18/-7.92	-9.19/-14.28	-17.68/-8.44	-4.69/-3.25
Θ(105°)	-4.56/-5.58	-7.88/-12.16	-18.99/-17.75	-18.91/-17.15	-19.22/-18.23	-17.9/-16.62	-15.16/-15.99	-15.41/-12.07	-6.9/-5.92	-11.94/-16.67	-12.71/-7.53	-5.86/-5.68	-6/-7.62	-10.97/-15.36	-19.25/-12.2	-14.05/-18.09	-18.97/-18.45	-13.2/-9.98	-8.99/-9.13	-9.42/-9.66	-11.62/-17.79	-17.9/-9.35	-5.76/-4.49	
Θ(112°S)	-6.24/-7.55	-9.71/-13.26	-19.48/-17.95	-17.57/-18.4	-18.05/-18.6	-18.28/-17.93	-16.27/-16.52	-15.7/-12.81	-11.15/-12.1	-16.97/-18.31	-12.47/-8.98	-8.22/-8.04	-8.25/-9.71	-11.75/-15.35	-18.4/-13.49	-11.1/-11.97	-15.34/-17.66	-19.11/-17.12	-14.94/-11.72	-9.93/-9.67	-10.41/-11.36	-13.98/-18.76	-18.05/-11.34	-7.61/-6.13
Θ(120°)	-7.4/-8.77	-11.06/-13.41	-16.62/-18.29	-18.56/-18.77	-19.19/-18.76	-17.18/-17.86	-16.78/-17.86	-13.91/-16.23	-14.03/-15.84	-18.43/-16.93	-9.25/-9.19	-9.24/-10.25	-12.01/-13.91	-17.44/-15.11	-12.72/-13.27	-16.45/-18.27	-16.93/-14.92	-16.62/-10.77	-13.27/-11.64	-12.66/-13.99	-16.91/-18.77	-17.82/-12.79	-9.59/-11.61	
Θ(127°S)	-9.04/-10.65	-14.27/-17.57	-18.2/-19.94	-19.25/-18.8	-18.4/-18.16	-19.12/-18.81	-17.31/-18.35	-17.57/-16.14	-17.09/-17.49	-18.39/-15.34	-14.24/-16.35	-15.25/-12.48	-11.32/-11.1	-11.59/-13.77	-16.33/-14.52	-12.88/-13.32	-15.63/-16.83	-14.34/-13.31	-15.54/-18.09	-15.99/-13.69	-12.76/-18.1	-14.71/-18.82	-15.72/-12.19	-10.8/-27
Θ(135°)	-10.89/-12.12	-15.32/-17.56	-18.91/-18.9	-17.8/-17.89	-19.17/-17.51	-18.6/-18.01	-18.9/-17.73	-17.81/-17.79	-17.65/-17.76	-17.49/-17.29	-18.53/-18.24	-14.4/-12.46	-11.98/-11.83	-12.17/-13.82	-17.74/-18.15	-16.25/-16.34	-17.82/-18.54	-16.92/-15.31	-17.31/-19.06	-18.54/-18.63	-18.76/-18.83	-18.15/-19.13	-18.54/-14.51	-12.32/-11.07
Θ(142°S)	-13.53/-14.81	-16.68/-19.2	-18.52/-18.07	-17.39/-18.84	-18.91/-18.35	-18.87/-17.44	-17.46/-19.32	-18.44/-18.4	-18.65/-18.59	-17.6/-18.34	-15.29/-12.62	-10.62/-10.31	-10.89/-11.97	-13.73/-16.39	-17.97/-18.16	-17.77/-18.99	-19.01/-18.84	-18.26/-17.17	-18.61/-18.48	-17.91/-18.65	-17.76/-18.31	-17.77/-18.26	-18.53/-16.12	-13.76/-12.92
Θ(150°)	-12.92/-13.01	-13.59/-14.78	-16.91/-17.37	-19.14/-18.73	-19.11/-17.72	-17.83/-17.88	-18.1/-18	-18.28/-18.3	-18.03/-18.44	-18.19/-18.52	-16.52/-13.82	-12.87/-14.3	-17.02/-18.29	-17.54/-17.99	-18.94/-18.94	-18.4/-18.1	-18.16/-19.32	-17.47/-17.76	-17.73/-18.65	-18.33/-17.66	-18.19/-18.82	-18.83/-17.79	-18.49/-16.94	
Θ(157°S)	-14.21/-13.81	-14.01/-14.89	-16.73/-19.42	-18.1/-18.81	-18.9/-18.38	-18.7/-17.71	-19.62/-18.41	-18.2/-19.45	-18.56/-18.14	-17.7/-17.77	-18.15/-17.08	-18.94/-18.24	-18.63/-19.14	-18.31/-18.83	-18.93/-18.56	-18.66/-18.51	-17.64/-18.47	-18.42/-18.49	-18.59/-18.75	-17.99/-19.05	-18.34/-19.21	-18.21/-17.84	-18.14/-19.17	-18.47/-18.63
Θ(165°)	-16.63/-15.62	-15.07/-15.18	-15.94/-17.33	-19.2/-19.1	-17.84/-18.34	-18.84/-19.31	-19.03/-18.36	-17.84/-18.01	-18.33/-18.39	-18.5/-18.97	-18.79/-18.85	-18.56/-18.2	-18.21/-19.03	-19.02/-18.32	-18.19/-19.17	-17.78/-18.85	-18.92/-17.86	-18.73/-18.55	-18.39/-18.51	-18.11/-17.73	-17.05/-17.47	-18.52/-18.92	-18.35/-18.71	-18.51/-17.39
Θ(172°S)	-17.24/-15.81	-14.71/-14.36	-14.82/-16.09	-18.2/-18.98	-18.33/-17.6	-17.3/-18.72	-18.83/-18.91	-19.29/-18.76	-18.14/-17.64	-18.36/-18.52	-18.74/-18.15	-18.54/-18.15	-19.16/-19.37	-18.45/-18.43	-17.71/-18.61	-18.67/-18.01	-17.48/-18.26	-18.92/-18.01	-18.26/-18.56	-19.16/-18.36	-18.75/-17.78	-18.03/-19.13	-18.47/-17.66	-17.3/-16.82
Θ(180°)	-18.67/-17.07	-15.75/-15.23	-15.63/-16.88	-18.34/-18.61	-19.09/-17.52	-17.4/-18.66	-18.14/-19.28	-18.66/-18.48	-16.16/-19.37	-18.91/-18.89	-17.76/-17.7	-18.07/-17.74	-18.22/-18.96	-18.84/-19.14	-18.27/-17.66	-18.11/-18.02	-18.51/-17.9	-18.16/-19.07	-18.12/-19.09	-18.51/-17.92	-17.45/-17.62	-17.99/-19.36	-18.73/-18.39	-17.74/-18.37
Freq(Hz)	2.4835GPol.	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	4.215/47	6.477/21	7.77/8.2	8.42/8.45	8.38/8.2	7.79/7.29	6.67/5.9	4.86/3.38	1.26/-1.49	-5.58/-10.32	-7.95/-3.16	0.08/2.42	4.15/5.47	6.557/3.2	7.9/8.28	8.49/8.56	8.46/8.24	7.84/7.27	6.54/5.63	4.43/2.83	6.04/-2.43	-6.97/-10.85	-6.73/-2.43	0.48/2.64
Θ(7.5°)	4.06/5.4	6.48/7.29	7.92/8.34	8.56/8.6	8.45/8.14	7.77/7.16	6.55/6.3	4.45/2.84	0.5/-2.75	-7.71/-11.63	-6.32/-1.86	0.95/2.98	4.42/5.51	6.326/8.9	7.27/7.47	7.557/5.2	7.34/7.06	6.67/6.15	5.49/4.67	3.63/2.25	0.35/-2.36	-6.15/-9.7	-7.11/-9.29	0.12/2.33
Θ(15°)	3.82/5.18	6.27/7.06	7.627/7.92	7.977/7.77	7.35/6.78	6.135/5.4	4.773/88	2.73/1.16	-1.16/-4.54	-9.44/-10.42	-5.08/-1.09	1.513/33	4.595/4	5.938/17	6.16/6	7.56/5.3	4.82/4.32	3.893/17	2.49/1.76	0.94/-0.17	-1.73/-3.93	-6.95/-9.25	-7.18/-3.69	-0.22/0.35
Θ(22°S)	3.44/7.7	5.82/4.99	6.87/6.93	6.66/6.02	5.11/4.02	2.96/2.08	1.29/0.5	-0.47/-1.82	-3.85/-6.63	-9.65/-8.13	-3.82/-0.33	2.093/3.75	4.75/5.31	5.45/5.23	4.693/3.96	3.06/2.2	1.15/0.12	-0.96/-2.09	-3.04/-3.72	-4.22/-4.88	-5.95/-7.59	-9.54/-9.92	-7.21/-3.69	-0.71/6
Θ(30°)	2.61/3.95	4.86/5.34	5.4/5.05	4.29/2.98	1.29/-0.73	-2.81/-4.5	-5.47/-5.78	-5.85/-6.27	-7.2/-8.39	-9.11/-7.62	-4.13/-0.65	1.943/7.1	4.695/0.1	4.73/3.99	2.82/1.36	-0.41/-2.3	-4.48/-7.04	-10.4/-14.57	-17.78/-18.43	-16.85/-14.74	-13.46/-13.01	-12.78/-14.13	-8.29/-4.77	-1.71/0.78
Θ(37°S)	1.64/2.91	3.68/3.88	3.56/2.65	1.16/-0.97	-3.51/-6.22	-8.98/-12.08	-15.9/-16.94	-13.86/-11.75	-11.01/9.1	-10.16/-8.11	1.65/3.55	4.38/4.4	3.71/2.45	0.62/-1.58	-4.38/-7.81	-12.91/-17.84	-19.16/-15.72	-14.15/-14.74	-16.82/-18.29	-19.03/-17.75	-16.01/-13.61	-9.96/-6.15	-2.85/-0.27	
Θ(45°)	0.21/1.39	1.92/1.8	0.98/-0.65	-3.06/-6.04	-7.72/-7.35	-6.99/-7.76	-9.99/-13.99	-17.41/-15.13	-14.05/-15.37	-14.42/-10.53	-7.01/-3.17	0.182/39	3.32/23	2.16/0.4	-2.13/-5.14	-9.08/-15.12	-11.08/-8.8	-8.7/-9.21	-9.94/-10.88	-12.22/-13.95	-14.72/-13.81	-11.36/-8.02	-4.65/-1.78	
Θ(52°S)	-1.31/-0.22	0.06/-0.45	-1.91/-4.43	-7.96/-9.91	-7.89/-5.9	-5.22/-5.93	-7.64/-10.69	-12.92/-12.73	-12.54/-15.28	-18.86/-13.24	-9.02/-11.1	-1.41/11	2.05/1.74	0.28/-2.28	-5.55/-9.01	-13.53/-18.36	-17.74/-12.66	-9.12/-7.62	-7.58/-8.38	-8.98/-9.1	-9.53/-10.87	-12.54/-13.07	-1.78/-9.26	-6.16/-3.32
Θ(60°)	-3.16/-2.13	-2.11/-3.09	-5.15/-8.65	-12.78/-11.2	-7.62/-5.82	-5.57/-6.51	-8.67/-11.62	-12.7/-12.26	-11.48/-13.93	-17.48/-17.01	-11.72/-8.53	-4.17/-0.96	0.3/-0.08	-2.05/-5.48	-9.34/-11.99	-15.58/-17.47	-18.56/-14.45	-10.1/-8.22	-7.58/-8.51	-9.68/-9.73	-9.53/-10.38	-12.41/-13.94	-13.17/-10.85	-8.03/-5.22
Θ(67°S)	-5.31/-4.42	-4.64/-6.19	-9.21/-14.36	-17.3/-11.55	-6.19/-7.1	-7.9/-10.35	-13.94/-16.49	-14.96/-12.74	-11.87/-13.41	-17.83/-17.59	-13.01/-11.14	-6.64/-3.04	-1.87/-2.63	-5.19/-9.63	-13.35/-15.03	-17.91/-17.84	-18.51/-19.3							



Radiated Composite Gain Data 2.4GHz

Appendix A

Θ(75°)	-1.10/67	0.84/-0.71	-4.02/8.38	-8.78/-6.06	-4.55/-4.35	-5.13/-6.44	-7.7/-8.67	-9.5/-10.87	-13.24/-16.72	-18.37/-17.63	-19.38/-14.32	-6.24/-1.72	0.54/0.94	-0.42/-3.62	-9.06/-9.01	-5.34/-3.77	-3.29/-3.47	-4.51/-6.71	-9.43/-11.18	-13.06/-16.51	-19.15/-18.93	-18.96/-18.15	-13.8/-11.14	-8.14/-4.18
Θ(82.5°)	-1.67/0.05	0.13/-1.55	-5.02/-9.54	-9.96/-7.36	-6/-6.1	-7.47/-9.43	-10.87/-11.11	-10.81/-11.15	-12.29/-14.07	-17.82/-18.5	-19.05/-13.86	-7.79/-3.51	-1.4/-1.12	-2.52/-6.2	-11.94/-7.94	-4.6/-3.68	-3.75/-4.48	-6.45/-10.69	-14.96/-13.26	-13.53/-16.5	-19.47/-19.37	-18.82/-13.95	-11.31/-10.66	-8.88/-4.91
Θ(90°)	-3.34/-1.47	-1.51/-3.25	-6.57/-10.11	-9.88/-7.63	-6.7/-7.47	-9.76/-12.54	-13.76/-12.67	-10.98/-10.59	-11.73/-13.97	-17.28/-17.72	-18.49/-17.36	-12.11/-7.19	-4.1/-2.99	-15.45/-10.48	-6.32/-5.64	-5.49/-6.13	-8.18/-13.58	-18.21/-17.76	-16.91/-18.69	-18.89/-19.31	-17.52/-13.12	-11.87/-13.51	-13.44/-7.5	
Θ(97.5°)	-4.77/-2.83	-2.87/-4.76	-8.18/-11.69	-11.32/-9.17	-8.46/-9.74	-12.95/-16.82	-17.77/-15.04	-12.28/-11.62	-13.11/-15.98	-18.06/-18.37	-17.82/-18.05	-15.12/-10.01	-6.13/-4.58	-5.16/-6.33	-15.29/-11.58	-7.99/-7.86	-9.23/-10.98	-13.85/-18.54	-18.05/-17.19	-19.16/-17.64	-18.97/-18.42	-16.11/-13.09	-13.58/-18.37	-15.59/-8.77
Θ(105°)	-6.36/-4.65	-4.59/-6.26	-9.27/-12.26	-12.24/-10.4	-9.71/-11.03	-14.55/-18.57	-18.78/-17.64	-14.28/-13.2	-14.79/-18.04	-18.93/-19.29	-18.39/-18.34	-10.36/-7.62	-7.29/-9.35	-15.47/-12.91	-8.63/-8.32	-10.57/-14.26	-17.96/-18.64	-17.87/-18.13	-18.14/-17.05	-17.86/-19.11	-16.86/-14.6	-15.88/-17.91	-15.52/-9.5	
Θ(112.5°)	-7.24/-6.12	-5.95/-7.16	-9.65/-12.5	-12.91/-11.5	-10.89/-11.72	-13.52/-14.73	-15.54/-15.52	-14.24/-13.68	-14.09/-13.76	-14.03/-16.32	-17.95/-18.95	-17.75/-14.68	-10.53/-8.44	-7.99/-9.71	-14.92/-13.5	-9.25/-8.21	-9.08/-10.64	-12.21/-13.84	-15.71/-18.24	-17.98/-19.23	-16.71/-15.73	-15.67/-16.28	-18.72/-17.86	-14.23/-9.54
Θ(120°)	-9.48/-8.63	-8.45/-8.9	-10.39/-12.47	-13.51/-12.43	-11.67/-12.11	-13.68/-15.6	-16.93/-16.49	-14.52/-13.64	-13.67/-13.29	-13.62/-16.07	-18.31/-17.74	-17.35/-14.18	-12.3/-10.71	-9.97/-11.24	-15.56/-16.56	-11.97/-10.13	-10.28/-11.63	-13.93/-16.82	-18.1/-19.01	-17.99/-18.27	-18.36/-18.99	-18.2/-18.42	-18.76/-18.47	-17.24/-11.75
Θ(127.5°)	-11.15/-10.17	-9.96/-10.05	-10.42/-11.6	-13.4/-15	-16.25/-18.18	-17.31/-19.12	-17.44/-18.53	-17.64/-17.14	-18.62/-17.44	-15.56/-16.14	-19.21/-18.42	-13.72/-11.63	-11.23/-11.11	-11.31/-12.7	-15.22/-15.17	-12.58/-11.73	-13.03/-16.36	-18.03/-18.25	-18.53/-16.55	-16.88/-17.47	-18.52/-18.46	-18.39/-19.26	-18.48/-18.74	-17.08/-13.55
Θ(135°)	-14.83/-12.52	-10.99/-10.44	-10.46/-11.09	-12.01/-13.17	-13.65/-13.74	-13.72/-13.89	-14.53/-15.4	-17.13/-19.11	-17.6/-15.21	-14.08/-14.71	-18.17/-17.89	-17.96/-16.78	-16.45/-17.19	-17.88/-18.6	-18.06/-15.12	-13.01/-13.02	-15.39/-18.82	-17.62/-18.45	-17.78/-16.11	-15.67/-15.79	-17/-18	-18.44/-18.49	-18.91/-17.33	-19.07/-17.85
Θ(142.5°)	-17.67/-18.3	-15.14/-13.44	-12.83/-13.02	-13.68/-14.73	-15.73/-16.44	-16.54/-15.93	-15.59/-16.27	-18.77/-19.1	-17.79/-17.71	-18.47/-17.58	-17.89/-18.44	-18.64/-18.24	-18.36/-17.58	-18.95/-17.94	-18.84/-19.05	-18.31/-18.85	-17.73/-18.4	-18.83/-17.57	-17.04/-17.97	-18.25/-18.52	-18.53/-18.88	-18.86/-18.8	-17.92/-18.98	-18.12/-18
Θ(150°)	-14.43/-13.2	-12.51/-11.83	-11.02/-10.36	-9.95/-9.86	-10.08/-10.27	-10.28/-10.21	-10.37/-10.91	-12.04/-13.95	-17.08/-17.68	-18.47/-19.05	-18.81/-18.27	-17.68/-15.03	-13.86/-14.02	-15.42/-17.94	-17.88/-18.27	-18.99/-18.82	-19.43/-17.49	-15.53/-15.03	-16.24/-18.83	-18.54/-18.51	-18.81/-18.12	-17.23/-17.92	-18.24/-17.54	-18.43/-16.64
Θ(157.5°)	-14.37/-12.87	-12.01/-11.51	-11.10/-10.52	-10.2/-10.17	-10.39/-10.69	-11.17/-11.84	-12.83/-14.17	-15.94/-18.42	-18.51/-18.82	-17.17/-17.67	-17.8/-17.39	-17.15/-15.27	-14.31/-14.23	-14.92/-16.43	-18.84/-18.47	-18.84/-17.86	-18.01/-18.09	-19.17/-18.13	-18.67/-19.01	-19.2/-19.44	-18.26/-17.73	-17.95/-19.02	-18.96/-16.67	
Θ(165°)	-18.03/-16.51	-15.82/-15.77	-15.96/-15.89	-15.71/-15.58	-16.03/-17.42	-18.24/-17.02	-19.07/-18.82	-18.1/-17.62	-18.96/-18.6	-19.15/-18.82	-18.62/-18.09	-17.66/-17.27	-17.12/-17.04	-17.3/-17.73	-18.84/-18.74	-18.46/-19.28	-18.87/-17.27	-18.53/-18.05	-18.61/-19.12	-17.93/-18.47	-18.9/-17.94	-19.11/-18.23	-18.07/-18.84	-18.94/-18.88
Θ(172.5°)	-19.02/-19.17	-19.39/-18.69	-18.98/-18.95	-17.69/-18.4	-18.32/-18.66	-18.73/-16.75	-15.59/-15.22	-15.66/-16.4	-17.19/-17.86	-18.6/-19.35	-17.64/-18.89	-19.35/-17.87	-18.38/-18.64	-18.68/-17.61	-17.76/-17.82	-18.69/-18.71	-18.8/-18.12	-17.31/-18.14	-18.31/-17.72	-18.92/-18.19	-18.62/-17.14	-17.86/-17.56	-17.99/-18.84	-18.27/-18.02
Θ(180°)	-18.86/-18.59	-17.79/-18.16	-19.08/-18.76	-17.9/-19.06	-17.89/-18.55	-17.19/-16.28	-16.2/-16.74	-17.93/-18.62	-18.98/-19.42	-18.84/-18.86	-18.57/-19.19	-19/-17.86	-18.73/-18.91	-18.23/-18.56	-18.18/-18.86	-18.64/-17.69	-18.75/-18.27	-17.44/-19.13	-18.27/-17.81	-17.62/-18.01	-18.56/-18.7	-18.85/-18.96	-18.9/-19.06	-17.86/-19.12
Freq(Hz)	2.45GPol.	ThetaAnt. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	5.63/4.47	2.85/0.75	-2.06/-5.86	-10.07/-5.89	-4.25/-0.94	1.44/3.21	6.597/7.7	7.567/7.7	7.867/8	6.786/6.6	5.194/0.4	2.47/0.44	-2.48/-6.51	-10.27/-7.3	1.73/3.38	4.68/5.74	6.58/7.24	7.687/9.6	8.08/8.05	6.58/7.24	7.687/9.6	8.08/8.05	6.58/7.24	7.687/9.6
Θ(7.5°)	5.36/4.19	2.55/0.4	-2.52/-6.44	-9.86/-7.17	-3.25/-0.24	1.953/63	4.988/0.4	6.867/4.1	7.78/8	8.118/0.7	7.897/5.5	7.066/33	5.39/4.19	2.54/0.54	-2.34/-6.24	-10.42/-8.77	-4.71/-1.78	0.382/1.4	3.51/4.62	5.536/2.6	6.817/1.8	7.397/4.8	7.417/1.7	6.76/6.17
Θ(15°)	5.21/4.15	2.61/0.54	-2.31/-6.11	-9.07/-5	-4.16/-1.49	0.592/2.5	3.654/7.7	5.646/2.9	6.827/2.4	7.589/7.7	7.847/7	7.46/8.1	5.94/4.79	3.21/1.7	-1.57/-5.11	-9.43/-13.01	-8.28/-5.52	-3.39/-1.61	-0.13/-1.14	2.3/3.32	4.2/4.96	5.6/6.07	6.336/4.6	6.26/5.85
Θ(22.5°)	4.93/6.7	2.46/0.39	-2.44/-6.13	-9.51/-9.07	-6.41/-4.1	-2.26/-0.61	0.872/1.3	3.164/0.3	4.855/6.2	6.336/9.1	7.297/4.5	7.263/8.7	6.084/88	3.22/1.13	-9.5/-4.81	-8.36/-11.09	-11.48/-10.58	-9.5/-4.21	-6.81/-5.18	-3.45/-1.69	-0.05/-1.48	2.863/9.6	4.78/5.3	5.55/-3.6
Θ(30°)	4.34/3.43	1.81/-0.46	-3.71/-7.67	-12.16/-13.36	-11.07/-9.2	-7.61/-6.09	-4.4/-2.81	-1.360/0.1	1.392/7.3	4.075/2.4	6.096/5.9	6.766/5.5	5.844/6.3	2.80/4.1	-2.56/-5.76	-8.94/-11.62	-14.4/-17.87	-17.46/-18.92	-17.86/-18	-18.64/-13.38	-8.54/-4.73	-1.69/0.66	2.423/7.7	4.48/4.7
Θ(37.5°)	3.39/2.46	0.63/-2	-5.69/-10.47	-16.83/-18.86	-18.16/-16.46	-15.4/-13.86	-11.74/-9.28	-6.73/-4.61	-2.63/-0.7	1.293/0.4	4.345/2.1	5.66/4.7	4.73/3.27	1.08/-1.75	-6.13/-8.61	-12.08/-15.9	-18.65/-18.4	-17.6/-13.6	-11.41/-10.74	-11.54/-14.24	-18.21/-15.41	-8.06/-3.55	-0.45/-6.5	2.97/3.53
Θ(45°)	1.84/0.88	-1.23/-4.46	-8.88/-14.69	-19.19/-18.24	-17.82/-18.66	-15.66/-13.02	-11.52/-10.26	-8.46/-6.67	-5.39/-4.31	-2.63/-0.37	1.552/9.4	3.73/9.34	3.28/1.77	-0.73/-3.97	-7.79/-11.71	-16.6/-18.35	-18.09/-16.59	-12.31/-9.48	-7.76/-17.4	-7.26/-8	-9.88/-14.41	-18.08/-10.17	-4.77/-1.5	0.56/1.73
Θ(52.5°)	-0.42/-1.49	-4.04/-8.26	-14.29/-19.14	-19.27/-18.53	-19.49/-15.32	-11.73/-9.5	-8.43/-8.01	-7.46/-6.42	-5.5/-5.42	-5.37/-3.66	-1.19/0.7	1.832/1.6	1.53/-0.24	-2.95/-6.33	-9.98/-13.57	-18.59/-18.37	-18.36/-13.8	-10.27/-7.75	-6.34/-5.97	-6.22/-6.82	-7.86/-10.29	-16.17/-18.42	-9.72/-5.11	-2.29/-0.74
Θ(60°)	-2.69/-3.76	-6.71/-11.57	-18.29/-16.56	-19.09/-13.31	-18.55/-16.51	-12.03/-10.1	-9.48/-9.42	-9.07/-7.86	-6.56/-6.1	-6.88/-6.71	-4.14/-1.94	-0.57/0.09	-0.29/-1.9	-4.68/-7.87	-10.76/-13.37	-17.27/-17.74	-18.92/-15.03	-10.91/-8.32	-6.89/-6.34	-6.47/-7.11	-8.21/-10.22	-14.29/-18.48	-15.29/-9.21	-5.41/-3.22
Θ(67.5°)	-4.74/-6.13	-9.61/-15.22	-18.63/-17.58	-18.31/-18.08	-18.68/-18.09	-14.44/-12.52	-11.94/-11.59	-10.34/-10.28	-9.59/-7.35	-7.7/-8.16	-6.34/-4.66	-3.64/-2.69	-2.91/-4.8	-7.98/-10.47	-12.02/-13.47	-17.08/-19.07	-17.99/-16.67	-12.22/-9.71	-9.08/-9.66	-8.65/-8.66	-9.39/-18.5	-19.33/-13.26	-8.36/-5.58	
Θ(75°)	-7.29/-8.91	-13.18/-18.4	-18.12/-18.88	-18.68/-19.09	-18.06/-19.13	-15.18/-13.31	-13.27/-13.91	-14.8/-15.29	-13.38/-10.39	-9.17/-9.81	-8.96/-8.13	-7.85/-5.94	-5.39/-7.26	-11.07/-12.81	-11.69/-11.73	-14.39/-17.49	-18.07/-19.37	-14.06/-10.68	-9.54/-10.35	-12.26/-13.88	-15.54/-16.67	-15.51/-15.74	-18.82/-18.17	-13.21/-8.71
Θ(82.5°)	-10.83/-12.59	-18.55/-17.36	-18.8/-19.12	-18.98/-18.88	-19.02/-17.9	-16.76/-14.88	-15.55/-17.8	-17.13/-19.12	-19.26/-14.81	-11.75/-11.55	-10.54/-11.27	-12.81/-9.29	-8.96/-12.51	-17.48/-15.73	-12.11/-11.55	-13.65/-17.64	-18.89/-17.73	-15.81/-11.77	-10.88/-12.53	-15.8/-18.4	-18.98/-17.05	-14.68/-15.03	-18.12/-19.06	-17.03/-13.07
Θ(90°)	-15.71/-17.01	-18.25/-18.37	-17.64/-18.95	-17.54/-19.24	-18.04/-18.29	-16.6/-14.02	-13.78/-15.63	-17.78/-18.6	-19.35/-18.28	-17.02/-15.23	-13.66/-15.01	-18.06/-14.5	-14.35/-19.09	-18.02/-17.05	-14.78/-13.6	-15.26/-17.93	-17.96/-18.66	-19.22/-15.8	-15.15/-17.75	-18.94/-17.86	-18.75/-17.01	-14.73/-15.33	-17.66/-17.46	-18.44/-17.98
Θ(97.5°)	-17.92/-18.78	-18.74/-18.11	-19.33/-17.72	-17.64/-19.5	-17.84/-18.78	-18.39/-14.99	-14.63/-17.52	-17.51/-18.51	-17.82/-18.21	-18.76/-17.45	-13.98/-15.65	-13.93/-17.71	-17.78/-17.38	-17.55/-18.86	-18.7/-17.85	-18.78/-17.48	-18.48/-17.64	-18.84/-17.94	-18.25/-18.21	-18.87/-18.4	-18.11/-17.32	-15.52/-16.08	-17.86/-18.39	-17.74/-18.66
Θ(105°)	-18.87/-18.4	-18.21/-18.17	-17.47/-17.08	-17.7/-18.14	-17.28/-17.36	-17.51/-16.9	-17.34/-17.85	-18.84/-17.84	-17.49/-18.7	-18.61/-18.43	-15.15/-16.72	-17.63/-18.64	-16.86/-15.82	-17.25/-17.95	-17.64/-18.04	-17.96/-19.07	-17.79/-18.55	-18.7/-19.21	-17.4/-17.48	-18.01/-17.82	-17.27/-16	-15.79/-17.7	-17.61/-19.07	-18.66/-19.33
Θ(112.5°)	-17.45/-18.59	-19.03/-18.04	-18.98/-19.41	-18.67/-16.73	-14.51/-13.94	-14.81/-16.89	-19.03/-18.73	-18.4/-19.29	-18.09/-18.04	-19.13/-18.73	-18.86/-18.09	-18.59/-18.79	-19.04/-18.35	-17.96/-18.5	-18.85/-18.07	-18.27/-18.82	-19.09/-18.21	-18.21/-16.85	-16.96/-17.83	-18.42/-18.42	-18.68/-16.3			



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Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	8.3	8.3	8.64	8.19
Ant. 2 Max Gain (dBi)	9.13	8.62	9.45	9.53
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/0/300	Phi/15/142.5	Phi/30/345	Phi/0/322.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/0/232.5	Phi/0/225	Theta/7.5/135	Phi/22.5/187.5
Max Gain (dBi)	9.13	8.62	9.45	9.53
DG [1SS] (dBi)	9.97	9.56	10.58	10.92
DG [2SS] (dBi)	9.13	8.62	9.45	9.53



Sporton International Inc. Hsinchu Laboratory



Radiated Composite Gain Data 5GHz UNII 1~3

Appendix B

Θ(15°)	6.11/6.04	5.72/5.31	4.79/4.93	5.69/6.2	6.51/6.66	6.75/6.7	6.47/6.35	6.14/6.84	5.95/96	6.43/7.34	8.19/8.87	9.24/9.33	9.14/8.68	8.03/7.21	6.18/4.98	3.77/3.01	2.74/2.85	3.2/3.55	3.76/3.7	3.42/2.98	2.55/2.07	1.51/1.9	3.19/4.54	5.43/5.96
Θ(22.5°)	8.16/8.02	7.36/6.31	4.81/3.12	3.28/3.59	3.69/3.59	3.45/3.44	3.25/3.15	3.02/2.97	3.32/3.83	4.86/3.5	7.84/8.89	9.51/9.65	9.44/8.89	8.01/6.65	4.9/3.38	1.65/-0.49	-2.34/-3.23	-3.91/-4.51	-4.99/-5.49	-5.46/-4.57	-3.13/-1.35	0.62/3.8	4.09/5.76	7.03/7.96
Θ(30°)	8.59/8.48	7.78/6.56	4.63/2.41	1.36/0.17	-1.7/-3.62	-4.46/-4.21	-4.17/-4.23	-4.16/-3.32	-1.27/0.7	1.93/3.7	5.67/7.38		9.26/6.3	7.46/5.66	3.52/3.33	-1.88/-6.41	-11.54/-12.43	-11.58/-12.21	-12.83/-12.96	-15.46/-15.51	-11.22/-13.63	-2.24/9.1	3.49/5.31	7.02/8.09
Θ(37.5°)	7.16/7.17	6.48/5.05	2.44/0.14	-3.03/-9.16	-14.63/-10.44	-10.51/-12.01	-12.11/-10.3	-11.35/-11.76	-5.96/-1.96	-0.12/0.79	2.97/5.14	6.82/7.74	7.76/6.82	5.01/2.81	-0.28/-4.02	-8.99/-12.82	-15.17/-14.32	-12.53/-12.97	-13.91/-11.2	-9.42/-11.17	-13.91/-12.28	-6.73/-2.8	1.16/3.86	5.52/6.65
Θ(45°)	3.66/3.59	2.71/1.05	-1.07/-3.19	-9.46/-14.58	-7.54/-7.12	-9.39/-10.46	-7.12/-4.92	-5.17/-7.46	-7.44/-4.41	-2.13/-1.79	1.1/-1.5	3.98/5.46	5.59/4.76	3.95/1.16	-4.45/-10.64	-12.17/-14.5	-15.32/-12.38	-10.43/-9.95	-10.97/-10.71	-9.82/-11.11	-16.05/-15.17	-16.01/-10.8	-4.05/-0.03	2.85/3.8
Θ(52.5°)	0.53/-0.05	-1.49/-3.33	-4.93/-8.43	-13.02/-10.36	-9.18/-9.41	-9.83/-9.09	-6.47/-5.21	-6.19/-9.58	-12.09/-11.44	-7.36/-5.6	-4.85/-1.67	2.06/4.06	4.06/4.26	3.16/-1.55	-12.59/-11.71	-12.13/-13.46	-13.25/-11.07	-10.3/-9.21	-9.39/-8.52	-7.72/-9	-15.37/-13.32	-10.45/-16.05	-10.9/-5.18	-1.05/1.3
Θ(60°)	-2.06/-3.43	-5.43/-6.58	-8.17/-11.87	-10.23/-9.59	-13.14/-11.34	-7.07/-6.63	-6.39/-6.9	-8.83/-11.22	-10.67/-10.93	-13.39/-12.3	-8.83/-4.77	-0.32/2.14	2.59/2.99	1.59/-3.92	-15.57/-12.21	-11.44/-12.74	-12.59/-13.6	-13.69/-13.77	-12.86/-12.27	-10.43/-10.55	-13.68/-14.45	-7.41/-10.35	-15.18/-9.72	-2.83/-0.81
Θ(67.5°)	-2.95/-4.43	-6.77/-9.84	-13.49/-14.32	-14.4/-13.38	-16.21/-9.84	-7.37/-8.43	-10.48/-13.07	-14.68/-14.03	-10.02/-9.43	-12.63/-12.63	-11.15/-8.34	-2.58/-0.38	0.07/0.83	-0.8/-1.73	-15.36/-13.63	-13.71/-14.88	-15.11/-15.38	-15.58/-14.22	-15.36/-14.08	-15.6/-13.78	-13.87/-15.87	-8.53/-10.36	-15.16/-8.9	-3.05/-1.13
Θ(75°)	-2.66/-4.69	-6.56/-10.96	-15.04/-15.08	-15.89/-14.91	-15.46/-11.71	-11.10/-69	-13.43/-12.91	-14.42/-15.8	-12.24/-10.63	-11.25/-11.8	-11.66/-10.79	-5.74/-3.39	-2.5/-1.31	-3.1/-8.71	-15.22/-15.43	-15.1/-13.77	-14.08/-15.65	-14.91/-12.78	-12.88/-16.03	-15.53/-15.83	-13.54/-14.98	-10.03/-10.7	-15.23/-9.51	-2.72/-0.66
Θ(82.5°)	-2.7/5.19	-7.17/-11.08	-15.45/-14.49	-15.58/-15.48	-15.14/-11.04	-10.84/-12.02	-12.93/-13.75	-15.57/-14.22	-14.13/-12.7	-13.12/-13.06	-11.95/-12.02	-8.75/-6.78	-5.15/-3.59	-5.36/-10.66	-16.04/-15.46	-15.5/-13.72	-13.53/-15.74	-15.55/-13.95	-13.92/-15.57	-15.11/-14.04	-11.88/-12.47	-12.08/-13.63	-15.58/-9.26	-2.63/-0.71
Θ(90°)	-3.17/-6.79	-8.98/-12.04	-14.98/-14.76	-15.08/-15.61	-15.91/-13.12	-12.82/-15.76	-13.43/-14.3	-15.78/-13.53	-14.79/-14.35	-14.2/-14.11	-13.23/-12.62	-13.2/-9.21	-7.42/-5.05	-7.15/-11.76	-15.3/-15.28	-15.91/-13.88	-13.07/-15.8	-15.39/-15.03	-13.06/-14.6	-14.86/-12.76	-10.17/-9.74	-12.29/-15.76	-15.17/-10.75	-4.07/-1.39
Θ(97.5°)	-4.1/-8.82	-12.32/-13.07	-14.63/-14.04	-16.2/-14.59	-14.18/-14.5	-12.18/-15.96	-15.74/-15.88	-15.56/-14.68	-14.24/-14.19	-13.84/-14.93	-14.91/-13.55	-15.5/-10.94	-10.77/-7.17	-9.47/-14.32	-16.43/-15.7	-14.37/-15.69	-15.55/-15.03	-15.2/-15.03	-15.03/-15.72	-11.2/-10.16	-13.45/-14.91	-15.81/-12.11	-5.05/-2.47	
Θ(105°)	-6.05/-10.81	-14.45/-15.74	-14.61/-13.52	-15.47/-14.31	-13.18/-15.13	-13.49/-14.82	-15.28/-13.64	-15.26/-15.31	-14.11/-14.74	-13.56/-15.03	-15.55/-15.56	-15.89/-12.23	-10.92/-9.03	-11.71/-15.45	-15.12/-15.85	-15.71/-14.97	-15.08/-15.86	-16.3/-12.75	-14.12/-15.29	-14.11/-15.31	-11.35/-10.29	-14.54/-15.55	-15.4/-13.56	-7.05/-4.35
Θ(112.5°)	-6.89/-10.52	-13.89/-15.33	-15.49/-16.06	-16.25/-13.95	-14.6/-15.66	-12.63/-15.32	-14.6/-15.54	-14.21/-14.97	-13.41/-14.86	-15.16/-15.85	-14.69/-15.16	-15.69/-12.35	-9.67/-12.51	-13.05/-14.61	-15.02/-14.52	-15.33/-15.03	-15.32/-15.99	-15.01/-13.48	-15.29/-11.34	-12.57/-15.54	-12.41/-11.82	-15.1/-16.1	-14.93/-12.89	-7.68/-6.54
Θ(120°)	-10.67/-11.75	-14.36/-15.42	-15.33/-14.29	-16.12/-12.92	-12.29/-14.02	-15.54/-15.45	-15.92/-15.28	-13.29/-12.12	-13.87/-12.82	-13.46/-14.74	-15.96/-16.03	-15.41/-13.76	-11.19/-13.58	-14.18/-15.37	-15.36/-15.69	-15.52/-15.71	-14.37/-15.69	-15.55/-15.03	-15.2/-15.03	-15.03/-15.72	-11.2/-10.16	-13.45/-14.91	-15.81/-12.11	-5.05/-2.47
Θ(127.5°)	-13.08/-12.18	-14.2/-15.37	-14.46/-15.84	-16.04/-14.37	-12.89/-14.11	-14.43/-13.37	-15.16/-15.91	-14.95/-14.24	-15.14/-13.7	-14.26/-14.18	-14.34/-14.83	-15.08/-14.93	-15.24/-16.29	-15.61/-16.14	-14.84/-15.39	-15.63/-15.83	-15.29/-15.74	-14.42/-13.92	-15.23/-15.11	-15.15/-15.57	-14.79/-14.4	-15.09/-14.77	-15.4/-13.39	-11.07/-9.9
Θ(135°)	-12.37/-14.43	-15.08/-15.5	-15.81/-13.2	-15.04/-15.92	-14.91/-14	-12.58/-13.42	-15.17/-14.81	-15.37/-12.92	-15.2/-14.2	-13.39/-12.58	-15.27/-15.39	-15.43/-15.1	-15.43/-15.18	-15.54/-15.89	-15.65/-16.03	-15.68/-15.56	-13.7/-15.39	-15.43/-15.33	-16/-15.5	-14.93/-14.15	-13.65/-15.36	-15.81/-16.74	-14.74/-13.71	-13.1/-11.07
Θ(142.5°)	-11.65/-15.33	-15.02/-15.3	-15.05/-15.53	-15.74/-15.97	-15.44/-16.67	-15.2/-15.4	-15.41/-14.64	-15.28/-15.56	-14.94/-14.64	-13.89/-12.57	-15.28/-15.31	-16.18/-15.47	-14.88/-15.17	-15.41/-15.08	-15.83/-15.69	-14.81/-15.56	-15.83/-15.61	-15.56/-14.35	-14.72/-15.48	-15.58/-15.51	-14.94/-15.63	-15.06/-15.76	-15.71/-15.59	-13.93/-10.69
Θ(150°)	-15.42/-15.83	-14.59/-15.63	-15.92/-15.81	-15.55/-15.58	-14.06/-13.53	-15.22/-14.4	-15.28/-14.67	-15.16/-15.47	-15.1/-15.69	-15.58/-15.45	-16.41/-15.63	-15.13/-15.51	-15.24/-15.09	-16.05/-15.18	-15.84/-15.75	-15.15/-15.29	-15.38/-15.62	-15.12/-15.5	-14.87/-15.11	-15.45/-14.94	-15.94/-15.37	-15.87/-14.68	-14.73/-15.14	-15.48/-14.73
Θ(157.5°)	-15.45/-15.84	-15.25/-15.83	-15.14/-15.86	-14.69/-15	-15.26/-15.37	-14.12/-15.11	-15.24/-15.34	-15.45/-15.29	-15.16/-15.48	-15.21/-14.92	-14.31/-14.72	-14.19/-15.78	-15.57/-15.73	-15.35/-15.1	-15.71/-15.43	-14.78/-14.99	-15.67/-15.17	-15.49/-15.6	-15.04/-14.78	-15.7/-15.34	-15.92/-15.55	-15.5/-15.87	-14.61/-14.84	-15.28/-15.51
Θ(165°)	-15.47/-15.93	-15.69/-15.4	-14.81/-15.98	-15.53/-15.4	-15.2/-15.18	-15.27/-15.1	-15.5/-15.41	-14.76/-14.91	-15.81/-15.61	-14.81/-15.75	-15.34/-15.15	-16.17/-15.1	-15.54/-15.13	-14.59/-14.98	-15.2/-15.11	-14.9/-14.4	-13.99/-13.75	-14.69/-15.22	-15.14/-15.17	-14.56/-15.15	-15.19/-14.98	-15.67/-15.5	-15.88/-16.17	-15.42/-15.81
Θ(172.5°)	-16.89/-14.98	-16.22/-15.86	-15.01/-14.93	-15.29/-15.99	-15.97/-15.99	-15.74/-14.71	-13.91/-12.7	-12.67/-13.04	-12.83/-13.03	-13.45/-13.65	-14.92/-15.1	-15.53/-15.05	-15.67/-16.23	-15.13/-15.14	-15.53/-15.38	-15.29/-14.43	-13.93/-15.54	-15.2/-15.81	-15.11/-14.64	-15.71/-15.53	-15.86/-15.49	-15.27/-15.22	-15.39/-15.09	-15.44/-15.54
Θ(180°)	-15.04/-14.31	-14.07/-15.41	-14.7/-15.43	-14.75/-14.58	-14.43/-14.62	-14.01/-14.3	-15.07/-15.13	-15.38/-15.73	-14.67/-15.56	-15.82/-15.05	-14.68/-15.16	-14.96/-15.32	-15.07/-15.31	-15.97/-15.36	-15.08/-15.6	-16.26/-15.92	-15.95/-15.27	-15.62/-15.41	-15.37/-15.33	-16.03/-15.41	-15.21/-14.81	-14.96/-15.41	-14.67/-15.25	-14.7/-15.31
Freq(Hz)	5.66GPol.	Theta/°	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DG(ΘB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	98.78	8.49/8.13	7.67/7.24	7.08/7.31	7.74/8.09	8.37/8.53	8.61/8.64	8.63/8.62	8.38/8.12	7.99/8.06	8.35/8.6	8.74/8.85	8.84/8.67	8.48/0.4	7.58/7.19	6.77/6.78	7.2/7.7	8.11/8.38	8.59/8.65	8.66/45	8.38/8.16	8.12/8.33	8.62/8.88	9.05/9.23
Θ(7.5°)	8.99/8.8	8.44/8.03	7.33/6.69	6.28/6.32	6.88/7.3	7.87/8.36	8.78/8.76	8.9/8.65	7.81/8.06	8.52/8.87	9.03/9.04	8.93/8.64	8.13/7.61	7.82/6.68	6.54/6.57	6.79/6.94	6.98/6.93	6.92/6.86	6.74/6.69	6.69/6.84	7.21/7.69	8.17/8.65	9.02/9.22	
Θ(15°)	8.75/8.62	8.37/86	7.26/6.44	5.57/5.11	5.18/5.36	5.59/5.83	6.05/6.22	6.38/6.36	6.42/6.33	6.82/8	9.05/9.77	10.09/10.09	9.72/8.99	7.93/6.58	5.144/1.17	4.16/4.3	4.18/3.77	3.35/3.04	2.79/2.61	2.45/2.26	2.31/2.88	3.86/4.9	6.04/7.21	8.07/8.62
Θ(22.5°)	8.79/8.75	8.21/7.36	6.06/4.8	3.49/2.35	1.73/1.23	0.74/0.38	0.29/0.55	1.11/1.71	2.19/2.83	4.65/6.88	8.69/7.3	10.37/10.58	10.26/9.37	7.99/5.89	3.44/1.19	0.34/-0.38	-1.82/-3.43	-5/-6.55	-7.74/-6.23	-4.75/-2.94	-1.81/-1.18	-0.81/-0.19	1.99/4.75	6.98/8.36
Θ(30°)	8.51/8.42	7.8/6.67	5.123/5.06	0.43/-1.21	-1.86/-2.18	-2.84/-4.12	-6.19/-7.44	-7.04/-5.5	-4.26/-2.34	1.45/4.68	6.88/7.94	8.82/9.27	9.04/8.22	6.574/26	0.95/-3.46	-7.48/-10.53	-11.97/-13.93	-13.99/-11.92	-9.51/-8.59	-8.85/-8.92	-7.23/-5.41	-4.67/-4.77	-4.39/1.04	5.38/7.65
Θ(37.5°)	7.537/4.7	6.514/9.1	2.01/-2.04	-5.4/-6.08	-5/-5.34	-7.01/-10.47	-15.03/-15.14	-11.82/-10.61	-10.72/-8.53	-2.23/2.25	4.86/34	7.59/8.13	7.53/5.85	3.27/0.37	-3.63/-10.22	-15.17/-12.77	-8.9/-9.06	-10.45/-8.13	-5.89/-4.94	-5.75/-7.99	-1.39/-11.37	-7.56/-6.97	-7.59/-3.81	2.86/6.16
Θ(45°)	5.19/5.22	3.82/1.33	-3.51/-9.17	-8.3/-4.06	-4.75/-8.03	-11.79/-11.73	-9.65/-8.85	-8.57/-8.58	-10.5/-14.75	-9.47/-1.85	1.85/4.23	6.07/7.3	6.91/4.56	0.14/-4.12	-7.87/-10.22	-9.1/-8.9	-9.71/-12.02	-15.13/-11.9	-7.33/-5.79	-6.74/-9.63	-14.32/-15.62	-7.84/-5.2	-6.85/-8.15	-1.64/-1.1
Θ(52.5°)	2.93/3.48	1.31/-3.5	-11.94/-10.65	-4.66/-3.54	-7.06/-8.79	-8.5/-7.76	-6.33/-8.52	-6.29/-7.7	-10.16/-11.9	-13.34/-8.61	-2.78/1.75	5.03/6.76	6.64/4.12	-2.25/-4.83	-8.08/-11.5	-10.93/-11.98	-11.94/-15.38	-14.55/-8.25	-7.02/-7.05	-8/-10.98	-14.63/-14.78	-7.94/-4.88	-4.73/-7.83	-5.71/-0.06
Θ(60°)	1.32/2.62	-0.37/-9	-13.64/-8.7	-5.07/-5.3	-12.22/-14.87	-11.8/-9.48	-7.37/-6.14																	

Gain Result

[illegible]



Radiated Composite Gain Data 5GHz UNII 1~3

Appendix B

Θ(22°5')	5.944.41	2.15/-1.11	-7.25/-18.77	-10.32/-4.64	-2.14/-0.66	0.39/-1.7	1.47/-0.85	2.37/-0.7	4.17/-5.24	6.25/-7.11	7.58/-7.33	6.59/-5.21	3.28/-0.73	-2.74/-8.21	-15.45/-13.79	-10.83/-9.5	-8.42/-7.38	-6.68/-6.48	-6.83/-7.24	-6.5/-4.46	-2.01/-0.56	2.85/-4.78	6.27/-7.15	7.32/-7.16
Θ(30°)	7.74/-6.17	3.67/-0.05	-6.42/-16.95	-12.92/-9.62	-8.66/-7.54	-6.42/-5.6	-5.24/-5.1	-4.82/-3.41	-0.71/-1.88	3.65/-4.72	5.35/-5.1	5.25/-4.35	2.6/-0.06	-4.12/-9.87	-12.89/-10.29	-9.42/-11	-13.72/-16.92	-11.86/-12.56	-13.81/-15.04	-18.36/-19.35	-11.48/-5.28	-0.48/-3	6.02/-7.7	8.64/-8.6
Θ(37.5°)	7.55/-8	2.62/-2.34	-12.88/-18.15	-15.3/-19.14	-17.38/-14.44	-16.56/-19.11	-17.14/-12.98	-16.14/-19.02	-7.61/-2.16	0.81/-4.29	3.03/-3.39	3.49/-2.29	-0.63/-5.73	-12.9/-14.09	-12.08/-10.43	-18.48/-14.08	-18.41/-16.87	-13.12/-13.51	-12.35/-12.74	-15.91/-14.66	-0.90/-0.89	3.55/-3.3	7.88/-2	
Θ(45°)	5.74/-3.75	-0.51/-8.01	-18.16/-14.27	-15.65/-16.6	-11.89/-11.05	-12.63/-14.67	-10.41/-7.55	-8.01/-12.53	-12.53/-6.28	-2.37/-0.38	0.32/-0.72	1.04/-0.38	-5.85/-17.11	-11.1/-10.74	-13.93/-13.53	-12.81/-16.32	-18.09/-12.94	-10.15/-10.43	-14.96/-18.01	-16.41/-15.89	-19.35/-17.98	-19.37/-10.98	-2.33/-2.24	4.79/-6.01
Θ(52.5°)	2.82/-6.2	-4.86/-15.21	-18.05/-12.32	-14.07/-18.13	-16.5/-12.02	-11.3/-13.05	-10.44/-8.57	-9.21/-13.51	-17.84/-18.05	-9.54/-5.2	-3.29/-1.69	-6.78/-7.46	-6/-9.85	-18.28/-15.46	-16.37/-19.5	-16.98/-11.74	-10.32/-12.46	-16.75/-13.84	-11.21/-12.57	-18.54/-14.75	-10.97/-18.99	-11.16/-3.58	0.79/-2.95	
Θ(60°)	-0.36/-3.07	-9.83/-18.89	-18.3/-12.59	-14.01/-18.2	-18.46/-11.95	-9.9/-10.91	-10.54/-9.83	-10.61/-12.39	-12.11/-13.94	-18.24/-13.4	-8.18/-5.24	-2.55/-2.59	-7.42/-7.52	-6.3/-10.9	-18.92/-17.15	-17.55/-18.82	-17.77/-15.64	-15.4/-17.6	-18.03/-17.65	-18.98/-11.8	-9.82/-11.85	-18.34/-9.43	-2.40/-22	
Θ(67.5°)	-1.19/-5.02	-12.85/-18.65	-18.32/-16.06	-19.06/-18.75	-19.35/-14.13	-13.14/-13.82	-13.95/-14.84	-16.39/-15.66	-13.18/-13.23	-16.56/-14.74	-11.04/-7.71	-5.01/-6.21	-11.86/-9.45	-8.59/-13.42	-17.89/-18.5	-17.55/-19.4	-18.47/-18.47	-18.63/-17.77	-18.65/-18.03	-18.63/-15.3	-16.39/-19.36	-11.22/-13	-17.17/-8.14	-2.19/-0.02
Θ(75°)	-1.2/-11.51	-11.25/-18.6	-18.14/-17.6	-18.76/-17.86	-19.16/-17.78	-17.33/-15.22	-14.95/-14.65	-15.94/-18.97	-17.19/-16.59	-16.04/-13.6	-12.69/-10.58	-8.19/-9.84	-17.49/-12.69	-11.07/-14.58	-19.19/-18.16	-18.28/-15.36	-16.2/-19.33	-18.5/-18.57	-17.12/-19.17	-18.2/-18.68	-14.84/-18.4	-13.8/-13.98	-18.61/-8.97	-2.33/-0.1
Θ(82.5°)	-1.64/-5.15	-11.59/-18.22	-17.9/-17.25	-18.95/-18.04	-18.27/-18.76	-16.86/-14.88	-14.73/-15.82	-18.96/-18.93	-19.17/-18.89	-16.51/-14.08	-13.14/-12.22	-11.76/-15.65	-19.19/-14.83	-13.08/-15.15	-19.22/-18.97	-18/-15.13	-15.12/-18.34	-18.79/-17.79	-18.22/-18.33	-18.22/-18.77	-12.43/-13.3	-15.7/-17.64	-18.1/-9.25	-2.52/-0.42
Θ(90°)	-2.76/-6.12	-13.03/-18.91	-18.42/-17.71	-17.55/-19.12	-19.75/-17.71	-19.16/-18.33	-14.98/-16.52	-18.68/-17.87	-19.01/-17.48	-15.78/-16.24	-15.11/-13.96	-15.5/-19.46	-18.98/-14.13	-14.77/-16.16	-19.4/-18.62	-19.41/-16.37	-15.01/-18.99	-18.49/-18.49	-18.54/-16.98	-17.96/-15	-10.99/-11.59	-16.22/-18.04	-18.31/-11.14	-4.19/-1.51
Θ(97.5°)	-4.63/-8.34	-14.98/-19.11	-18.15/-18.62	-19.07/-14.24	-17.95/-18.61	-18.69/-19.34	-19.55/-18.57	-18.29/-18.87	-18.62/-17.97	-15.29/-17.52	-17.06/-16.16	-18.14/-17.95	-17.62/-13.76	-16.32/-16.67	-19.1/-18.76	-19.88/-18.76	-16.49/-19.1	-18.18/-17.3	-17.49/-17.97	-17.6/-18.48	-11.79/-11.39	-15.45/-17.97	-16.84/-12.94	-5.71/-3.29
Θ(105°)	-6.4/-10.88	-16.89/-18.05	-18.57/-18.39	-19.1/-18.38	-17.71/-19.4	-17.49/-18.75	-18.75/-19.29	-17.67/-19.05	-16.61/-19.04	-16.1/-18.46	-18.29/-18.73	-18.93/-18.19	-16.66/-12.41	-18.49/-18.69	-18.03/-18.87	-18.59/-17.89	-18.01/-19	-19.11/-16.4	-16.28/-18.4	-18.83/-18.7	-12.32/-11.61	-17.31/-18.02	-18.24/-15.62	-7.52/-5.67
Θ(112.5°)	-8.2/-12.02	-18.26/-18.97	-18.72/-18.37	-18.2/-18.07	-19.14/-17.67	-17.88/-19.38	-18.48/-16.91	-18.86/-18.2	-17.26/-17.63	-17.38/-18.92	-17.73/-18.51	-19.12/-18.54	-15.9/-15.29	-18.2/-17.89	-18.25/-17.71	-18.77/-18.44	-17.67/-18.58	-18.9/-14.98	-17.63/-15.37	-15.68/-18.14	-13.24/-13.34	-16.58/-19.13	-17.97/-14.26	-8.4/-7.98
Θ(120°)	-12.68/-14.03	-18.55/-17.61	-18.57/-13.37	-19.4/-18.43	-18.97/-17.99	-18.23/-18.54	-16.68/-18.23	-19.1/-18.52	-18.2/-13.61	-14.36/-17.35	-18.98/-19.68	-17.88/-18.27	-16.72/-13.47	-18.19/-13.44	-18.26/-18.88	-18.52/-18.9	-18.36/-19.16	-18.54/-17.7	-18.25/-18.97	-17.34/-17.99	-16.31/-14.3	-16.18/-18.11	-17.38/-18.48	-10.39/-8.85
Θ(127.5°)	-15.1/-15.33	-18.32/-18.41	-17.75/-18.51	-19.17/-19.03	-17.89/-18.18	-18.54/-18.89	-18.57/-18.65	-17.94/-18.97	-18.74/-18.51	-18.81/-17.98	-18.24/-18.42	-18.92/-18.15	-18.33/-19.07	-17.29/-19.31	-18.71/-18.96	-18.41/-18.76	-16.66/-16.89	-18.22/-18.15	-17.19/-18.68	-17.5/-18.5	-17.66/-18.33	-18.12/-14.08	-11.47/-10.77	
Θ(135°)	-13.21/-19.47	-18.74/-18.67	-18.75/-18.39	-18.02/-18.61	-17.88/-19.36	-18.5/-18.91	-18.11/-17.96	-17.98/-19.24	-18.12/-17.26	-15.95/-15.57	-18.09/-18.07	-17.87/-17.44	-19.27/-19.42	-18.78/-18.67	-18.38/-18.31	-18.23/-18.1	-18.44/-19.58	-18.94/-17.79	-19.18/-18.38	-17.48/-18.75	-17.63/-18.14	-19.21/-18.05	-17.28/-15.65	-13.95/-12.41
Θ(142.5°)	-13.76/-18.15	-17.48/-17.88	-17.66/-16.06	-18.61/-10.2	-17.96/-18.96	-17.54/-18.35	-17.32/-17.92	-17.61/-18.33	-17.19/-16.55	-16.69/-19.68	-17.66/-18.97	-19.23/-18.72	-18.68/-17.9	-18.36/-18.28	-18.12/-19.01	-18.39/-18.61	-19.02/-17.43	-17.33/-18.63	-18.68/-18.43	-18.66/-18.55	-19.12/-18.81	-18.43/-16.22	-18.34/-13.21	
Θ(150°)	-17.84/-18.48	-17.86/-19.31	-19.12/-18.61	-18.48/-18.85	-19.02/-17.46	-18.52/-17.61	-17.29/-17.93	-18.81/-18.43	-18.53/-17.86	-18.25/-18.87	-19.19/-18.36	-17.19/-18.93	-19.1/-18.17	-18.82/-18.21	-18.34/-18.54	-18.46/-18.32	-17.49/-18.09	-17.96/-18	-18.94/-17.98	-18.94/-17.98	-19.19/-17.41	-18.87/-17.98	-19.22/-17.71	-18.13/-17.51
Θ(157.5°)	-18.83/-19.2	-18.34/-18.77	-17.77/-18.69	-17.94/-17.93	-17.35/-19.09	-17.66/-18.97	-17.84/-19.12	-18.49/-18.6	-19.17/-18.95	-18.38/-17.75	-19.46/-19.58	-18.91/-18.97	-19.05/-18.17	-18.44/-18.36	-19.38/-17.74	-18.11/-18.09	-18.84/-19.02	-18.61/-17.64	-18.03/-18.71	-18.83/-18.17	-17.97/-19.2	-17.78/-17.13	-17.45/-18.76	
Θ(165°)	-18.52/-18.66	-18.74/-18.54	-18.19/-10.2	-18.74/-19.27	-18.62/-18.47	-17.66/-18.14	-18.69/-18.14	-17.29/-17.21	-18.62/-19.22	-18.29/-13.32	-17.86/-17.44	-19.4/-18.2	-18.48/-18.85	-18.75/-18.85	-18.55/-19.18	-18.86/-17.98	-18.22/-17.68	-18.43/-18.53	-17.4/-18.26	-18.05/-17.92	-18.45/-17.38	-19.02/-18.9	-18.93/-18.98	-18.79/-16.69
Θ(172.5°)	-18.13/-18.48	-19.45/-18.6	-17.82/-17.86	-18.09/-19.38	-18.59/-19.02	-18.28/-18.64	-18.3/-18.13	-18.54/-19.13	-17.95/-17.6	-18.52/-18.21	-19.18/-17.99	-18.87/-18.48	-19.32/-14.74	-17.99/-14.83	-18.49/-18.03	-18.91/-17.46	-17.56/-18.83	-17.24/-17.21	-18.34/-17.99	-17.58/-18.73	-18.67/-17.38	-18.95/-17.56	-18/-18.1	
Θ(180°)	-18.67/-18.5	-18.07/-19.19	-17.79/-18.7	-18.12/-18.59	-18.8/-18.82	-17.74/-18.8	-19.37/-18.35	-18.33/-18.65	-17.15/-17.84	-18.65/-18.47	-17.78/-18.3	-18.16/-18.98	-18.09/-17.55	-19.44/-18.59	-17.4/-18.21	-19.15/-19.11	-18.92/-17.73	-18.3/-18.12	-17.79/-18.87	-18.95/-18.28	-17.98/-18.84	-17.1/-18.45	-18.02/-17.99	
Freq(Hz)	5.6GPol	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	5.71/-6.44	7.11/-7.63	8.8/-7	8.25/-8.23	8.13/-7.72	7.12/-6.33	5.43/-4.49	3.33/-0.23	0.36/-1.13	-1.84/-1.29	0.33/-1.94	3.34/-6	5.62/-6.36	6.96/-7.43	7.77/-8.08	8.03/-8.2	7.54/-7.18	6.68/-6	5.22/-4.25	2.98/-1.29	-0.49/-1.96	-2.36/-1.3	0.42/-2.15	3.56/-5.09
Θ(7.5°)	5.59/-6.22	6.65/-6.06	7.11/-7.2	7.27/-7.19	7.16/-5.2	6.05/-5.4	4.83/-3.98	2.77/-0.74	-1.61/-4.27	-5.87/-3.87	-0.74/-1.78	3.66/-5.09	6.17/-6.96	7.39/-7.73	7.95/-7.95	7.77/-7.3	6.86/-6.28	5.52/-4.27	3.54/-2.27	0.74/-0.86	-2.25/-2.73	-1.98/-0.57	1.02/-2.6	3.99/-5.2
Θ(15°)	5.61/-6.28	6.73/-7.12	7.31/-7.21	6.91/-6.52	6.03/-5.33	4.59/-3.83	2.98/-1.97	0.64/-1.34	-3.97/-0.85	-8.68/-3.43	0.47/-3.14	4.88/-6.03	6.69/-6.89	6.86/-6.62	6.23/-5.72	5.17/-4.56	3.85/-2.86	1.64/-0.26	-1.34/-3.37	-6.13/-9.48	-12.47/-11.05	-7.25/-4.07	-1.26/-1.38	3.34/-7.7
Θ(22.5°)	5.57/-6.46	6.83/-6.85	6.26/-6.5	5.154/-3.2	3.42/-2.4	1.350/-2.5	-0.7/-1.48	-2.53/-4.12	-6.59/-11.26	-8.68/-2.77	1.19/-3.81	5.57/-6.71	7.15/-7	6.42/-6.19	3.91/-2.57	1.25/-0.15	-1.77/-3.59	-6.19/-9.84	-16.12/-17.68	-15.13/-13.85	-11.32/-10.1	-10.4/-11.94	-8.27/-2.74	1.44/-22
Θ(30°)	5.56/-35	6.58/-6.31	5.594/-3.1	2.49/-0.45	-1.1/-2	-2.78/-3.89	-5.3/-6.61	-7.28/-8.59	-11.46/-14.37	-8.86/-3.69	-0.52/-1.69	3.54/-87	5.43/-5.22	4.13/-2.53	0.24/-2.65	-6.28/-10.49	-12.23/-15.73	-18.11/-13.71	-10.19/-9.6	-10.08/-9.96	-9.15/-7.78	-6.99/-8.6	-17.9/-8.18	-0.46/-5.2
Θ(37.5°)	4.635/-5.7	5.46/-4.7	2.61/-0.41	-5.14/-9.38	-8.4/-7.98	-9.29/-13.05	-18.87/-18.81	-12.3/-10.29	-11.7/-14.7	-9.05/-4.24	-1.22/-0.2	3.11/-4.5	4.69/-6.38	1.29/-1.96	-5.95/-10.86	-19.36/-14.7	-10.84/-13.06	-18.96/-13.06	-8.53/-7.47	-8.93/-12.1	-14.32/-11.34	-8.33/-7.51	-11.03/-16.38	-3.24/-1.99
Θ(45°)	2.993/-7.5	2.93/-2.6	-2.04/-7.84	-12.47/-5.48	-4.81/-7.25	-14.25/-17.91	-12.05/-9.32	-7.8/-7.65	-10.28/-16.67	-12.53/-6.88	-3.23/-0.18	2.19/-3.98	4.37/-5.27	-1.74/-7.77	-15.19/-15.07	-14.59/-10.87	-9.27/-13.77	-18.66/-12.57	-8.71/-7.91	-9.68/-14.06	-18.68/-18.07	-12.63/-9.57	-9.93/-14.25	-6.94/-0.22
Θ(52.5°)	0.651/-14	-1.07/-4.97	-12.22/-15.14	-6.28/-4.12	-6/-10.93	-17.24/-19.18	-13.39/-9.75	-7.68/-7.3	-10.27/-17.16	-17.58/-11.19	-6.34/-1.49	2.12/-4.34	4.44/-1.97	-4.59/-13.95	-13/-17.47	-17.03/-12.39	-12.11/-17.79	-17/-11.96	-11.97/-13	-13.59/-14.88	-16.47/-13.45	-15.17/-12.97	-11.33/-13	-10.39/-2.88
Θ(60°)	-1.8/-1.03	-4.47/-12.49	-19.06/-12.37	-7.31/-7.53	-12.55/-16.38	-17.54/-18.96	-17.53/-14.23	-8.82/-8.64	-11.08/-19.87	-18.46/-17.99	-13.11/-4.81	0.162/-7.3	3.62/-1.19	-5.79/-14.35	-11.46/-18	-18.94/-18.29	-15.65/-16.78	-12.72/-11.85	-13.83/-15.88	-18.67/-18.4	-16.58/-14.48	-16.83/-16.73	-11.68/-11.93	-13.6/-5.82
Θ(67.5°)	-3.89/-2.3	-6.18/-13.25	-17.91/-15.24	-12.29/-14.17	-18.45/-18																			



Radiated Composite Gain Data 5GHz UNII 1~3

Appendix B

Θ(60°)	-6.09/3.96	-4.28/17.71	-14.97/18.44	-18.07/15.03	-15.05/17.08	-18.54/17.26	-16.2/15.25	-10.82/8.95	-11.13/18.53	-18.55/19.77	-19.07/12.95	-4.67/0.7	0.75/0.99	0.58/2.88	-13.16/18.41	-17.79/18.18	-17.68/18.4	-18.98/16.1	-11.04/9.81	-13.22/18.17	-19.1/18.11	-19.16/18.45	-19.29/18.38	-19.06/11.16
Θ(67.5°)	-6.17/5.6	-7.72/13.94	-18.82/18.04	-18.55/18.45	-18.65/18.45	-18.28/18.64	-16.23/14.35	-12.47/12.56	-18.29/18.76	-18.76/18.23	-18.19/13.72	-6.98/-2.7	-1.61/1.67	-2.2/-6.4	-18.14/18.32	-18.97/19.64	-19.36/16.63	-17.9/-17.74	-13.11/12.7	-14.64/18.49	-18.11/18.93	-18.29/17.47	-18.62/19.23	-16.48/10.05
Θ(75°)	-7.49/6.87	-8.36/13.11	-18.05/17.64	-18.05/18.62	-19.17/17.23	-18.01/19.26	-18.83/17.51	-14.88/15.45	-19.25/18.42	-15.52/17.68	-17.88/18.84	-11.15/5.35	-3.81/4.55	-5.08/-8.3	-18.81/18.91	-18.86/19.63	-17.87/16.36	-16.57/18.81	-17.05/15.11	-16.66/17.85	-17.84/17.96	-19.77/18.53	-18.17/19.07	-17.94/13.32
Θ(82.5°)	-9.51/7.53	-7.8/10.35	-17.13/18.23	-17.65/17.94	-17.29/18.95	-18.24/17.75	-17.88/17.67	-18.82/18	-17.58/17.22	-16.12/17.43	-17.97/19.4	-14.38/7.98	-5.76/6.96	-8.11/11.38	-18.18/18.37	-17.62/17.08	-19.41/16.39	-18.26/18.1	-15.2/19.73	-18.12/17.51	-18.83/17.71	-19.38/18.15	-19.23/18.99	-18.25/13.91
Θ(90°)	-10.44/-8.42	-8.96/11.63	-18.53/17.63	-18.84/17.04	-17.17/17.1	-18.52/18.67	-19.19/17.74	-19.07/19.09	-18.68/18	-18.44/18.65	-18.08/17.9	-18.82/11.81	-7.88/9.45	-12.43/12.92	-18.37/19.77	-17.92/18.31	-17.65/19.42	-19.08/18.1	-14.73/14.13	-18.26/18.69	-18.07/18.99	-18.38/19.08	-18.8/18.36	-18.09/13.82
Θ(97.5°)	-13.9/12.52	-12.97/15.43	-17.55/15.46	-18.32/17.34	-18.63/17.26	-18.57/18.44	-16.58/17.63	-18.65/19.06	-19.04/17.45	-18.9/17.6	-18.69/19.25	-18.14/18.2	-11.23/11.84	-14.71/17.99	-19.01/17.92	-17.78/18.19	-18.74/17.88	-18.2/17.32	-17.43/18.04	-18.88/18.12	-18.88/19.1	-17.95/19	-18.47/17.22	
Θ(105°)	-14.85/14.02	-16.41/17.19	-17.83/16.82	-18.04/17.63	-18.45/17.96	-18.28/18.91	-19.15/18.96	-18.92/17.38	-16.37/17.88	-19.13/19.02	-19.01/18.82	-18.57/18.05	-16.54/14.39	-19.25/18.15	-18.68/18.31	-19.06/18.66	-17.65/16.81	-18.42/18.54	-15.72/17.49	-18.49/17.64	-18.75/17.73	-17.97/18.92	-17.82/19.16	-18.98/18.76
Θ(112.5°)	-18.61/16.87	-15.2/17.33	-19.04/18.99	-18.64/19.03	-17.91/19.04	-17.64/19.31	-18.07/18.79	-18.8/18.86	-17.93/17.26	-18.82/17.88	-18.99/18.9	-19.06/19.08	-18.5/18.39	-18.34/19.09	-19.31/18.18	-19.09/19.17	-18.99/19.19	-18.14/17.47	-17.38/18.74	-18.23/17.75	-17.93/19.12	-19.17/18.68	-18.11/18.92	-18.33/18.94
Θ(120°)	-16.7/14.48	-11.86/15.06	-19.07/18.12	-18.6/19.1	-17.47/18.4	-19.26/18.47	-18.97/18.01	-18.48/18.55	-18.21/17.43	-17.77/17.71	-18.62/18.2	-17.74/16.49	-18.32/18.7	-18.53/18.16	-18.73/18.79	-17.45/18.84	-19.2/17.74	-17.79/18.38	-17.67/18.46	-18.32/18.35	-17.61/18.33	-18.59/17.35	-19.1/18.07	-17.69/15.65
Θ(127.5°)	-18.54/15.86	-13.04/18.44	-18.2/17.73	-17.63/19.38	-18.71/18.82	-17.92/18.27	-18.55/18.09	-17.71/18.76	-18.73/19.03	-17.45/19.07	-19.07/17.94	-17.48/17.89	-18.72/18.09	-18.85/18.4	-18.25/18.68	-17.5/18.63	-19.24/18.96	-18.01/19.22	-18.59/18.16	-18.75/17.88	-19.42/18.71	-18.3/17.72	-17.62/18.45	-18.33/17.64
Θ(135°)	-17.87/18.73	-16.55/19.18	-18.44/17.19	-17.95/19.02	-18.27/18.3	-17.63/18.05	-19.24/17.28	-17.58/15.82	-18.75/18.66	-18.97/19.17	-18.03/17.67	-18.92/18.6	-17.58/17.82	-17.8/18.24	-18.39/18.3	-18.79/18.95	-18.09/19.11	-18.3/18.74	-18.56/18.58	-17.59/19.44	-17.73/18.17	-18.06/18.16	-18.04/18.24	-17.89/19.1
Θ(142.5°)	-18.97/16.83	-18.66/18.22	-19.01/18.56	-17.94/17.91	-18.53/17.95	-17.14/17.81	-19.17/18.14	-18.13/19.02	-17.42/18.65	-18.66/19.16	-18.43/18.77	-18.59/19.43	-17.66/18.27	-18.03/17.78	-17.69/17.57	-17.67/18.97	-18.24/17.99	-18.49/18.11	-17.57/18.57	-18.67/18.2	-17.91/15.16	-18.16/18.53		
Θ(150°)	-18.44/18.85	-19.08/18.31	-18.12/19.09	-16.94/16.84	-18.9/17.87	-18.26/19.23	-18.48/18.13	-19.25/18.83	-19.11/18.46	-18.35/18.18	-17.26/17.44	-18.35/18.02	-18.01/17.76	-17.18/18.66	-19.03/18.71	-18.83/18.24	-17.91/18.58	-18.96/17.32	-17.01/16.99	-17.31/17.45	-19.09/17.89	-18.83/18.04	-18.76/19.2	-18/19.13
Θ(157.5°)	-19.15/16.36	-18.21/18.03	-17.35/18.14	-18.65/16.79	-18.13/18.46	-17.44/16.76	-15.8/15.47	-16.14/17.41	-18.11/18.13	-18.16/18.64	-17.7/18.61	-17.99/18.19	-19.88/18.92	-17.8/18.98	-17.4/19	-17.37/17.54	-17.34/19.01	-19.4/17.4	-17.34/19.05	-19.17/17.49	-17.55/18.34	-17.94/18.38	-18.56/18.18	-18.99/18.53
Θ(165°)	-17.77/18.13	-17.96/17.9	-18.91/18.37	-18.78/17.78	-18.85/18.06	-18.09/18.64	-17.87/17.38	-18.65/18.82	-19.07/19.08	-18.83/18.91	-18.41/18.36	-18.22/18.68	-17.87/18.62	-16.31/15.47	-15.89/17	-17.79/18.06	-18.15/18.72	-19.55/18.53	-17.2/16.87	-17.25/17.84	-18.84/18.66	-18.74/17.87	-18.79/19.22	
Θ(172.5°)	-17.27/17.94	-18.84/18.14	-18.87/18.69	-18.62/17.75	-17.22/17.04	-18.07/18.96	-18.62/18.31	-17.85/19.39	-18.95/18.29	-17.74/18.35	-19.06/18.02	-18.3/17.75	-18.27/18.51	-17.39/17.97	-19.02/18.4	-18.14/18.86	-18.15/18.42	-17.87/18	-18.74/17.8	-18.31/19.05	-18.7/18.78	-18.49/18.91	-18.43/18.21	-18.31/18.99
Θ(180°)	-17.69/18.31	-18.65/18.52	-18.77/18.01	-18.2/18.03	-18.99/18.67	-19.15/19.05	-17.93/19.22	-17.57/16.69	-16.11/16.19	-16.27/16.4	-17.52/18.64	-18.91/17.61	-17.96/18.2	-17.95/19.2	-17.7/17.6	-18.94/18.89	-17.75/18.38	-17.38/18.83	-19.23/18.06	-19.07/18.54	-17.08/19.15	-18.46/17.63	-18.23/17.92	-17.99/19.03
Freq(Hz)	5.2GPol.	ThetaAnt. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	6.03051	3.74222	0.05/1.39	-8.34/16.9	-9.62/4.06	-0.68/1.67	3.44/4.72	5.76/6.71	7.41/7.93	8.23/8.26	8.28/8.11	7.84/7.38	6.69/5.76	4.49/2.92	0.84/-1.99	-6.81/18.97	-11.43/-4.2	-0.32/24	3.92/5.31	6.38/7.07	7.57/8.2	8.05/8.14	8.06/7.85	7.46/6.84
Θ(7.5°)	7.04/6.14	4.91/4.2	1.43/1.32	-5.56/14.4	-13.92/5.9	-1.71/1.12	3.17/4.59	5.77/6.67	7.67/7.43	6.93/6.23	5.13/3.81	2.17/0.12	-6.29/6.43	-11.73/18.39	-6.18/-2.56	-0.04/18.9	3.34/4.59	5.65/6.46	7.06/7.54	8.05/8.4	8.52/8.48	8.05/8.4	8.23/7.72	
Θ(15°)	6.83/6.62	4.04/2.19	0.07/2.55	-5.87/9.8	-10.48/-7.69	-4.73/-2.4	-0.29/1.56	3.28/4.68	5.9/6.71	7.32/7.59	7.64/7.5	7.22/6.7	5.69/4.17	1.94/-1.06	-5.25/-11.51	-15.49/-9.71	-5.84/-3.61	-2.04/-0.75	0.35/1.36	2.3/3.36	4.36/5.35	6.29/7.1	7.66/7.92	7.97/7.61
Θ(22.5°)	5.85/4.54	2.7/0.52	-2.11/5.43	-9.73/13.54	-11.64/-9.46	-7.73/-5.69	-3.62/0.23	-0.37/1.4	3.14/4.55	5.72/6.49	7/7.3	7.35/7.11	6.18/4.46	1.89/-1.87	-8.06/17.7	-14.66/-9.02	-6.64/-5.63	-5.09/-4.5	-3.73/-3.05	-2.3/-1.19	0.02/1.79	3.45/4.86	5.93/6.58	6.81/6.61
Θ(30°)	3.88/2.61	0.97/1.09	-4/7.63	-11.94/15.96	-18.22/17.59	-17.76/13.4	-10.54/8.52	-6.42/4.49	-2.32/-0.35	1.62/3.38	4.78/5.9	6.54/6.64	6.02/4.37	1.54/-2.66	-9.26/13.48	-9.98/8.39	-9.02/-9.82	-8.96/-6.73	-9.42/-9.9	-10.17/9.77	-8.25/5.04	-1.69/0.84	2.61/3.74	4.41/4.48
Θ(37.5°)	1.74/0.85	-0.47/2.58	-6.82/12.85	-18.24/19.13	-17.99/19.11	-17.93/19.12	-17.43/17.49	-18.25/17.28	-12.97/9.7	-4.22/-1.08	1.63/73	4.98/5.19	4.46/2.78	-0.54/-5.95	-13.71/13.38	-10.57/11.51	-14.38/16.09	-15.71/10.18	-8.09/8.48	-11.66/16.17	-17.21/15.46	-13.29/5.23	-1.29/0.52	1.37/1.8
Θ(45°)	-0.3/-0.7	-2.52/6.67	-14.3/18.65	-16.9/18.9	-19.06/15.76	-15.1/14.66	-14.4/-14.7	-18.22/18.33	-14.68/13.47	-10.58/6.12	-1.91/1.34	3.39/4.21	3.86/2.4	-1.01/-6.72	-16.32/18.59	-17.32/18.86	-18.83/14.48	-10.61/9.29	-8.45/-9.4	-11.75/13.85	-9.32/7.93	-12.54/18.48	-7.58/-3.99	-2.17/0.99
Θ(52.5°)	-2.15/-2.41	-4.79/7.88	-13.99/15.59	-14.13/15	-11.83/11.49	-13.62/15.04	-13.75/13.43	-17.54/16.55	-11.49/11.23	-12.12/11.51	-6.15/-1.14	1.79/3.22	3.08/1.4	-2.21/-9.43	-18.75/17.44	-19.7/18.44	-18.17/12.89	-9.43/-9.99	-12.55/12.5	-14.14/17.79	-9.94/-6.03	-6.49/12.53	-17.61/8.68	-4.52/2.98
Θ(60°)	-1.89/3.72	-7.01/10.26	-12.39/13.03	-13.4/16.27	-11.97/11.56	-12.68/-14.46	-13.21/13.9	-14.89/18.32	-12.26/10.87	-13.35/15.67	-18.81/13.99	0.03/2.22	2.68/1.28	-2.06/8.98	-17.37/17.78	-17.28/17.56	-17.85/13.36	-14.25/14.67	-17.66/18.97	-19.06/15.86	-7.25/3.95	-3.93/7.08	-9.75/7.13	-3.61/-4.49
Θ(67.5°)	-2.86/5.11	-8.68/13.03	-16.69/15.87	-18.15/17.01	-11.18/8.28	-7.19/9.31	-17.02/17.93	-18.53/18.77	-11.68/9.06	-9.81/11.3	-12.63/-8.4	-2.78/0.38	1.09/-0.86	-5.03/15.26	-19.58/14.37	-18.81/19.17	-14.41/11.61	-14.98/18.71	-15.36/15.94	-16.88/17.96	-12.73/5.59	-4.71/7.23	-10.5/8.6	-3.81/1.78
Θ(75°)	-5.15/6.09	-8.53/12.2	-15.64/14.27	-17.01/16.53	-14.79/9.92	-7.64/8.84	-14.51/15.45	-15.98/18.36	-17.55/14.96	-12.78/14.2	-5.76/-1.86	-0.19/1.5	-5.88/15.23	-17.54/13.04	-16.92/13.31	-16.02/12.57	-18.96/16.87	-12.63/11.73	-11.56/15.84	-18.02/8.29	-6.81/8.96	-13.31/10.91	-6.5/4	
Θ(82.5°)	-5.86/5.49	-8.58/11.26	-17.03/18.71	-19.02/15.57	-14.16/9.34	-6.88/10.38	-14.47/15.14	-18.04/17.74	-17.95/18.05	-15.92/15.55	-18.86/13.38	-7.59/3.26	-1.34/2.54	-17.74/12.81	-15.77/15.25	-11.59/9.79	-17.52/16.77	-13.83/11.34	-9.6/11.36	-18.07/13.38	-10.87/14.68	-18.17/11.88	-17.71/5.21	
Θ(90°)	-7.52/6.93	-9.73/10.55	-16.86/17.78	-18.39/15.55	-13.82/10.17	-11.34/13.22	-13.73/14.37	-19.45/18.7	-19.1/18.75	-18.78/15	-18.65/17.04	-10.39/6.37	-3.65/3.82	-8.03/12.35	-18.42/19.01	-17.66/14.78	-10.83/10.36	-14.68/19.11	-16.55/12.06	-10.15/11.81	-17.36/17.55	-17.12/19.26	-17.77/16.2	-10.62/6.76
Θ(97.5°)	-6.27/6.74	-8.63/18.8	-18.87/15.55	-15.33/13.22	-13.9/11.23	-13.75/19.1	-15.5/14.39	-17.89/18.9	-18.65/17.4	-19.03/17.91	-18.84/17.93	-12.48/8.78	-6.14/-9.55	-9.29/12.44	-18.75/19	-18.4/19.21	-12.97/13.12	-16.74/18.65	-18.07/17.51	-14.33/14				



Radiated Composite Gain Data 5GHz UNII 1~3

Appendix B

Θ(112.5°)	-12.02/-15.36	-15.73/-17.76	-18.28/-15.94	-18.32/-15.98	-13.16/-19.05	-17.35/-18.02	-18.04/-12.69	-15.85/-17.77	-15.66/-18.11	-19.04/-18.81	-17.67/-17.85	-18.3/-13.04	-10.34/-15.76	-14.35/-17.36	-17.82/-17.35	-17.84/-17.65	-19.04/-19.44	-17.22/-18.31	-19.03/-13.44	-15.48/-18.99	-18.35/-16.63	-19.97/-19.1	-17.92/-17.92	-13.81/-11.48
Θ(120°)	-14.8/-15.56	-16.33/-19.33	-18.11/-16.34	-18.86/-13.99	-12.73/-16.17	-18.88/-18.38	-19.18/-18.35	-14.18/-12.7	-15.74/-18.81	-19.25/-18.16	-18.96/-18.44	-19/-15.49	-11.57/-15.48	-16.29/-18.42	-18.49/-18.53	-17.99/-19.01	-19.23/-17.02	-18.17/-18.1	-18.45/-16.69	-18.29/-18.1	-18.72/-16.46	-17.9/-17.53	-18.04/-17.98	-14.79/-14.35
Θ(127.5°)	-17.2/-15.05	-16.23/-18.36	-17.2/-19.21	-18.93/-15.99	-14.27/-16.17	-16.47/-14.43	-17.79/-19.19	-17.99/-15.82	-17.6/-15.22	-15.97/-16.46	-16.61/-17.46	-17.94/-17.48	-17.63/-19.45	-18.92/-19.24	-18.45/-17.57	-18.57/-18.72	-18.2/-18.75	-16.35/-16.98	-18.26/-18.1	-18.54/-18.48	-18.12/-19.38	-18.57/-17.27	-18.72/-19.58	-17.82/-15.75
Θ(135°)	-18.28/-15.8	-17.48/-18.35	-18.9/-18.27	-18.09/-19.26	-17.96/-15.17	-13.41/-14.5	-18.25/-17.69	-18.79/-18.64	-18.3/-17.17	-17.97/-16.06	-18.47/-18.75	-19.04/-18.83	-17.68/-17.12	-18.32/-19.13	-18.95/-19.83	-19.2/-19.07	-15.27/-17.37	-17.96/-18.93	-18.85/-18.64	-18.42/-15.82	-15.79/-18.6	-18.44/-18.67	-18.25/-17.94	-18.99/-16.14
Θ(142.5°)	-15.66/-18.53	-18.61/-18.77	-18.49/-18.05	-18.9/-18.95	-18.96/-18.41	-18.94/-18.48	-18.62/-17.39	-19.04/-18.82	-18.79/-18.91	-18.05/-17.61	-18.97/-17.81	-19.16/-18.24	-17.2/-17.32	-18.16/-17.44	-18.72/-19.14	-17.54/-18.42	-19.32/-18.63	-18.15/-17.29	-18.14/-18.35	-18.51/-18.62	-17.84/-18.74	-18.03/-18.73	-19.03/-18.96	-15.73/-14.23
Θ(150°)	-19.06/-19.21	-17.35/-18.17	-18.74/-19.04	-18.64/-18.34	-15.48/-15.7	-17.95/-17.22	-19.42/-16.75	-17.59/-18.54	-17.71/-19.63	-18.95/-18.07	-19.65/-18.93	-18.38/-18.13	-17.47/-18.32	-19.3/-18.18	-19.4/-18.99	-17.88/-18.28	-19.4/-19.08	-17.69/-18.96	-17.81/-18.25	-17.79/-18.52	-18.96/-18.81	-18.67/-18.23	-18.29/-18.61	-18.87/-17.98
Θ(157.5°)	-18.1/-18.52	-18.18/-18.91	-18.55/-19.05	-17.47/-18.09	-19.3/-17.72	-16.63/-17.35	-18.68/-17.64	-18.43/-18.01	-17.27/-18.05	-18.07/-18.12	-15.6/-15.06	-15.78/-18.61	-18.13/-19.35	-18.29/-18.05	-18.11/-19.21	-17.48/-17.91	-17.93/-18.12	-18.18/-18.22	-17.53/-17.95	-19.45/-18	-19.04/-18.96	-19.08/-18.57	-17.47/-18.64	-19.23/-18.29
Θ(165°)	-18.44/-19.23	-18.66/-18.28	-17.47/-18.96	-18.34/-17.63	-17.81/-17.92	-18.95/-18.08	-18.33/-18.71	-18.27/-18.69	-19.03/-18.05	-17.42/-18.23	-18.86/-18.95	-18.96/-18.03	-18.62/-17.48	-16.59/-17.21	-17.9/-17.18	-17.05/-16.89	-15.93/-15.93	-17.03/-17.95	-18.97/-18.11	-17.12/-18.49	-17.96/-18.64	-18.35/-17.88	-18.86/-19.38	-18.09/-18.95
Θ(172.5°)	-18.66/-17.53	-19.01/-19.15	-18.23/-18.03	-18.52/-18.63	-19.39/-18.98	-19.24/-16.88	-15.73/-13.82	-13.54/-13.78	-14.14/-14.71	-14.79/-15.35	-16.84/-18.24	-18.23/-17.66	-18.08/-19.08	-18.3/-17.88	-18.6/-18.77	-18.12/-17.43	-17.83/-18.5	-18.91/-18.82	-19.09/-18.11	-19.12/-19.13	-18.58/-18.28	-17.91/-19.18	-17.88/-18.68	-18.92/-19.03
Θ(180°)	-17.47/-16.28	-16.2/-17.72	-17.64/-18.59	-17.41/-16.7	-16.27/-16.59	-16.35/-16.04	-16.95/-17.93	-18.46/-18.83	-18.24/-19.37	-19.02/-17.67	-17.61/-18.05	-17.78/-17.73	-18.07/-19.17	-18.55/-18.15	-18.85/-19.02	-19.39/-18.75	-19.01/-18.87	-18.97/-18.73	-19.01/-17.84	-18.99/-19.05	-17.55/-17.38	-17.96/-18.02	-18.3/-18.08	-17.41/-18.67
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°)	6.275/0.4	3.471/5.7	-0.85/-3.2	-4.27/-3.08	-9.92/1.28	3.184/6.3	5.766/6.3	7.438/1.4	8.528/7	8.758/6.68	8.58/15	7.66/9.2	6.034/8.9	3.461/7	-0.57/-3.1	-4.99/-4.05	-1.34/1.18	3.184/6.68	5.926/8.4	7.68/2.4	8.73/9	9.078/0.3	8.838/4.7	7.967/2.2
Θ(7.5°)	6.365/3.4	4.012/3.4	0.17/-3.2	-4.36/-3.88	-1.33/-2.9	3.485/1.6	6.477/4.1	8.188/7.6	9.169/3.8	9.459/3.6	9.118/6.3	7.876/8.8	5.664/0.6	2.04/-0.34	-2.95/-5.11	-5.08/-3.13	-1.03/0.69	2.083/2.1	4.275/19	5.976/6.5	7.177/5.2	7.787/9.3	7.957/8.9	7.647/1.2
Θ(15°)	5.874/9	3.561/7.8	0.51/-3.43	-6.56/-7.36	-4.97/-2.23	-0.05/1.68	3.094/2.9	5.446/3.8	7.348/0.08	8.739/1.8	9.419/3.1	8.838/0.1	6.724/9.6	2.42/-1.18	-5.89/-9	-6.56/-4.03	-2.72/-2.02	-1.19/-0.21	0.77/1.81	2.893/5.1	4.976/3.9	5.896/3.2	6.536/3.8	
Θ(22.5°)	5.994/9.5	3.2/0.81	-2.1/-5.88	-10.32/-13.55	-12.28/-10.15	-8.6/-6.97	-5.38/-3.56	-1.31/0.82	2.744/5.3	6.227/5.9	8.498/9	8.848/3.5	7.345/6.6	3.26/-0.28	-5.48/-11.14	-10.01/-8.62	-9.61/-10.72	-10.31/-9.28	-7.45/-5.04	-3.16/-1.88	-1.15/-0.7	-0.12/1.07	2.884/6.68	5.956/3.5
Θ(30°)	5.494/3.6	2.53/-0.16	-3.78/-8.68	-16.22/-15.05	-11.69/-10.3	-10.65/-12.37	-16.47/-17.49	-14.15/-8.43	-4.45/-1.02	2.354/9.6	6.487/2.8	7.63/4.5	6.595/2	2.96/-0.26	-5.19/-13.45	-18.98/-18.27	-19.04/-18.34	-16.02/-16.35	-15.71/-14.2	-14.1/-14.49	-11.48/-11.1	-8.44/-7.03	-2.78/1.61	4.55/6.3
Θ(37.5°)	4.4/3.19	0.96/-2.25	-7.28/-15.69	-13.71/-8.81	-7.63/-8.73	-10.82/-13.94	-17.29/-17.54	-18.43/-19.09	-16.38/-9.53	-2.61/7.2	4.025/16	5.835/7.5	4.351/9	-0.91/-3.37	-7.39/-16.5	-17.14/-17.01	-13.14/-11.18	-10.12/-9.57	-9.29/-8.45	-6.64/-10.03	-14.46/-19.11	-13.63/-13.44	-10.2/-2.38	2.134/1.7
Θ(45°)	1.290/3.4	-2.01/-6.17	-16.29/-17.98	-10.28/-9.02	-12.25/-17.93	-15.38/-12.43	-13.31/-15.48	-18.41/-19.01	-18.7/-19.01	-12.43/-3.22	0.512/4.2	3.854/5.9	3.41/0.4	-4.23/-5.76	-8.01/-11.71	-10.19/-13.09	-18.54/-16.51	-17.65/-18.13	-12.34/-9.79	-9.82/-11.42	-16.23/-19.22	-9.37/-7.04	-9.79/-8.89	-2.840/3.8
Θ(52.5°)	-0.88/-0.25	-2.37/-8.38	-18.95/-12.4	-9.33/-9.95	-17.96/-12.76	-8.09/-6.58	-6.59/-9.7	-11.35/-19.24	-18.47/-18.17	-15.28/-12.07	-5.27/-10.3	1.913/12	2.730/15	-5.99/-9.5	-9.53/-12.3	-11.67/-18.71	-19.2/-19.04	-18.59/-10.62	-8.44/-7.87	-9.03/-13.8	-18.99/-19.4	-8.12/-4.71	-5.21/-9.12	-7.32/-2.37
Θ(60°)	-1.590/2	-2.42/-15.56	-14.76/-11.09	-8.83/-9.16	-19.12/-17.42	-12.73/-8.82	-6.51/6.77	-9/-12.5	-15.31/-17.88	-18.25/-19.08	-11.63/-3.39	0.742/0.9	2.441/26	-3.48/-10.93	-13.94/-13.98	-11.73/-15.17	-15.78/-16.82	-17.73/-16.64	-12.48/-9.6	-9.55/-12.09	-12.5/-15.36	-9.95/-5.88	-6.18/-13.39	-13.83/-5.48
Θ(67.5°)	-0.630/6.1	-3.45/-12.26	-11.36/-12.17	-12.15/-12.37	-18.78/-18.39	-13.15/-8.52	-7.68/-10.75	-13.09/-14.79	-13.88/-13.96	-18.59/-18.06	-18.58/-5.56	-0.530/7.8	1.41/-0.15	-5.12/-13.09	-17.7/-17.77	-14.78/-17.21	-15/-16.54	-19.08/-19.23	-18.42/-15.46	-12.99/-15.01	-12.3/-11.64	-9.3/-6.71	-7.48/-13.92	-10.93/-4.55
Θ(75°)	-2.04/-0.48	-5.27/-12.08	-13.96/-15.2	-14.21/-13.06	-19.44/-18.09	-11.11/-17.8	-7.21/-13.28	-12.82/-12.99	-15.15/-14.35	-18.75/-16.34	-18.09/-9.26	-1.95/-0.54	-0.15/-1.63	-6.18/-13.72	-18.17/-18.68	-17.62/-18.59	-16.26/-16.41	-18.17/-19.09	-15.05/-18.91	-18.13/-17.62	-8.96/-10.47	-9.76/-7.43	-8.38/-12.47	-10.59/-4.39
Θ(82.5°)	-4.25/-2.25	-6.28/-14.79	-18.4/-18.66	-13.43/-11.55	-16.03/-15.54	-10.8/-8.93	-9.52/-17	-11.3/-15	-13.36/-12.97	-18.16/-18.83	-18.65/-11.07	-3.28/-1.12	-1.172/-8.89	-8.9/-16.38	-10.74/-18.14	-18.29/-17.33	-18.52/-18.37	-19.37/-18.93	-13.26/-12.2	-15.53/-16.3	-19.42/-16.5	-11.78/-9.94	-10.96/-13.43	-12/-6
Θ(90°)	-7.57/-3.83	-7.45/-15.81	-19.52/-19.21	-14.57/-12.84	-18.01/-16.2	-11.78/-11.36	-10.41/-17.57	-13.5/-12.96	-15.12/-14.59	-18.08/-19.03	-17.34/-17.95	-6.38/-2.66	-2.65/-4.59	-9.23/-17.36	-18.67/-15.59	-18.45/-18.18	-18.53/-17.61	-13.9/-19.16	-10.6/-9.46	-13.32/-16.95	-11.33/-14.19	-13/-11.4	-11.38/-13.2	-13.22/-8.51
Θ(97.5°)	-8.02/-5.28	-8.67/-17.46	-17.27/-18.73	-15.27/-14.4	-15.98/-16.13	-13.04/-13.82	-12.57/-10.68	-12.29/-12.29	-16.14/-15.37	-18.62/-16.1	-17.12/-14.73	-8.72/-6.44	-4.66/-6.74	-8.52/-14.05	-18.5/-17.15	-18.45/-17.86	-18.21/-18.79	-14.41/-18.13	-12.42/-10.14	-14.53/-18.14	-15.57/-17.53	-18.37/-14.54	-11.04/-10.45	-13.43/-11.14
Θ(105°)	-8.4/-6.8	-12.75/-16.12	-18.16/-18.66	-17.62/-19.2	-14.79/-15.42	-13.32/-12.97	-14.74/-18.66	-14.24/-13.82	-18.29/-16.67	-18.99/-18.21	-17.94/-18.25	-11.28/-5.31	-5.06/-9.09	-10.29/-15.62	-17.38/-18.32	-18.51/-19	-18.71/-18.38	-15.61/-15.54	-14.43/-12.08	-13.83/-18.25	-18/-17.8	-13.81/-17.24	-12.5/-16.08	-18.26/-15
Θ(112.5°)	-10.17/-9.7	-15.53/-14.54	-17.96/-18.97	-18.49/-17.99	-18.3/-17.01	-12.55/-10.19	-12.68/-18.8	-16.19/-15.07	-18.38/-19.71	-18.64/-18.04	-17.96/-17.65	-10.57/-6.11	-6.1/-9.73	-12.02/-13.26	-19.44/-17.29	-18.17/-18.78	-18.13/-15.83	-14.62/-18.14	-17.73/-16.4	-12.98/-18.49	-18.71/-19.23	-19.28/-18.85	-15.17/-18.28	-18.45/-15.99
Θ(120°)	-14.94/-14.3	-12.51/-12.27	-17.59/-18.57	-18.86/-18.45	-17.44/-17.29	-17.19/-14.49	-15.22/-11.1	-18.66/-17.05	-18.73/-17.74	-17.44/-18.39	-19.03/-19.14	-14.45/-8.62	-6.53/-9.4	-11.66/-13.13	-16.79/-19.08	-18.39/-18.26	-18.59/-16.81	-15.89/-19.44	-18.44/-15.61	-13.81/-18.23	-18.3/-19.22	-18.24/-16.07	-19.12/-17.53	-18.69/-17.94
Θ(127.5°)	-13.34/-11.83	-9.69/-11.39	-17.99/-14.98	-19.07/-19.05	-14.7/-12.36	-17.48/-19.17	-18.23/-18.72	-17.94/-18.21	-18.14/-18.2	-17.24/-18.34	-17.95/-17.51	-18.02/-15.31	-11.41/-13.54	-15.54/-12.67	-14.4/-18.26	-17.38/-17.91	-15.08/-12.52	-11.75/-13.1	-14.78/-18.11	-17.57/-14.26	-17.82/-19.04	-15.43/-14.61	-18.92/-19.15	-19.08/-15.75
Θ(135°)	-13.33/-11.83	-12.64/-18.85	-15.67/-13.67	-18.4/-17.95	-16.3/-14.4	-13.68/-17.54	-17.65/-18.39	-18.55/-17.88	-17.81/-17.97	-17.23/-16.56	-17.44/-18.34	-18.13/-13.71	-13.67/-12.22	-14.87/-13.44	-17.17/-17.88	-19.23/-19.14	-15.29/-14.65	-17.14/-19.13	-18.47/-17.52	-15.88/-16.65	-16.83/-18.9	-18.11/-18.25	-18.07/-15.22	-16.82/-15
Θ(142.5°)	-13.78/-13.6	-18.39/-18.13	-12.96/-13.12	-17.97/-18.17	-16.63/-15.48	-17.3/-17.7	-18.89/-19.23	-17.08/-15.56	-16.32/-18.36	-16.48/-15.28	-18.5/-18.35	-18.18/-16.27	-15.17/-14.73	-17.82/-17.82	-19.01/-16.5	-16.24/-18.63	-18.64/-18.62	-18.17/-18.12	-17.62/-17.45	-18.22/-18.07	-17.83/-17.24	-17.37/-15.63	-14.41/-18.97	-17.61/-17.12
Θ(150°)	-18.12/-19.06	-19.29/-19.01	-18.32/-18.67	-19.49/-13.65	-13.68/-18.07	-19.17/-18.93	-18.48/-19.29	-17.77/-16.56	-15.4/-15.25	-15.75/-15.31	-13.92/-13.06	-11.96/-11.25												

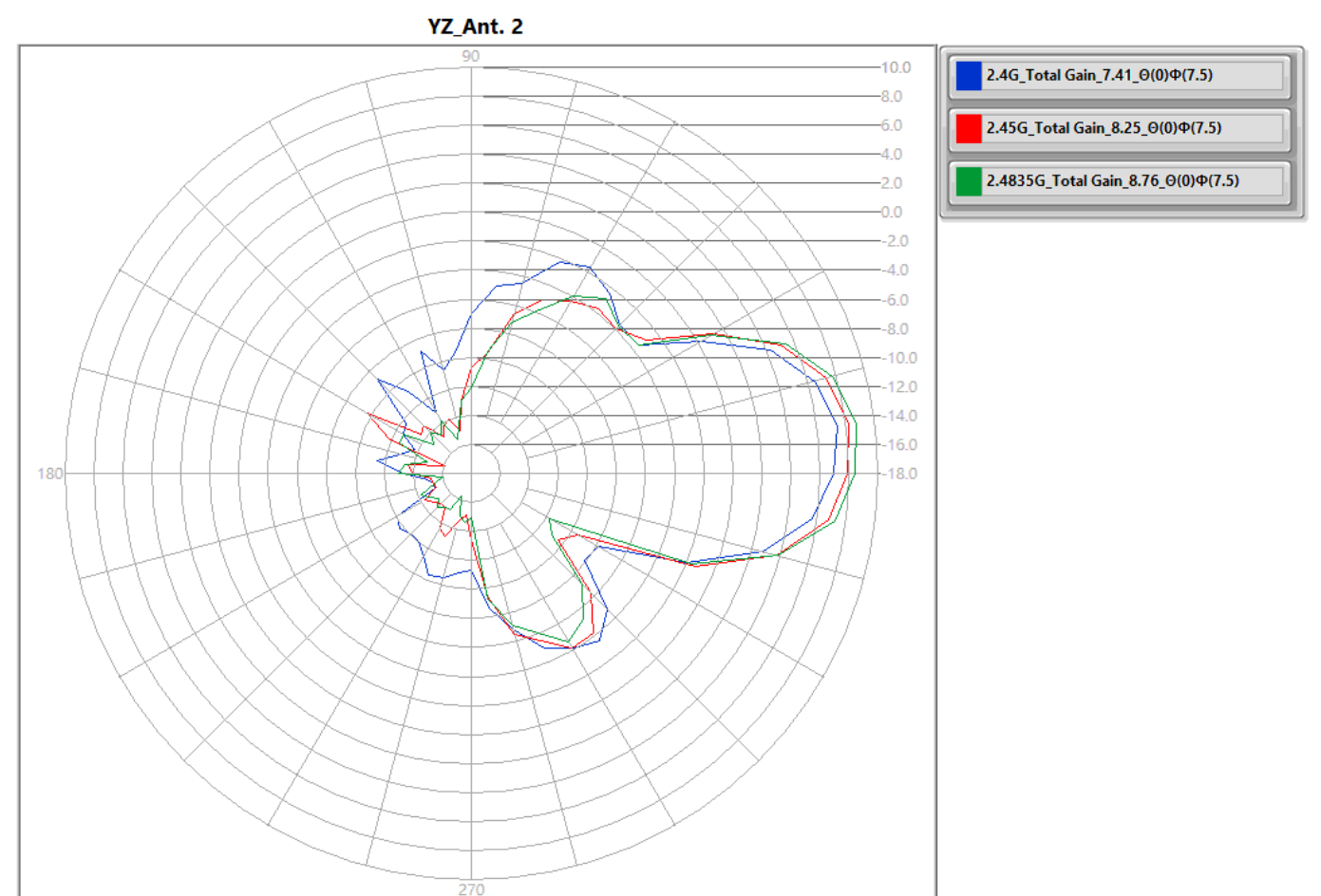
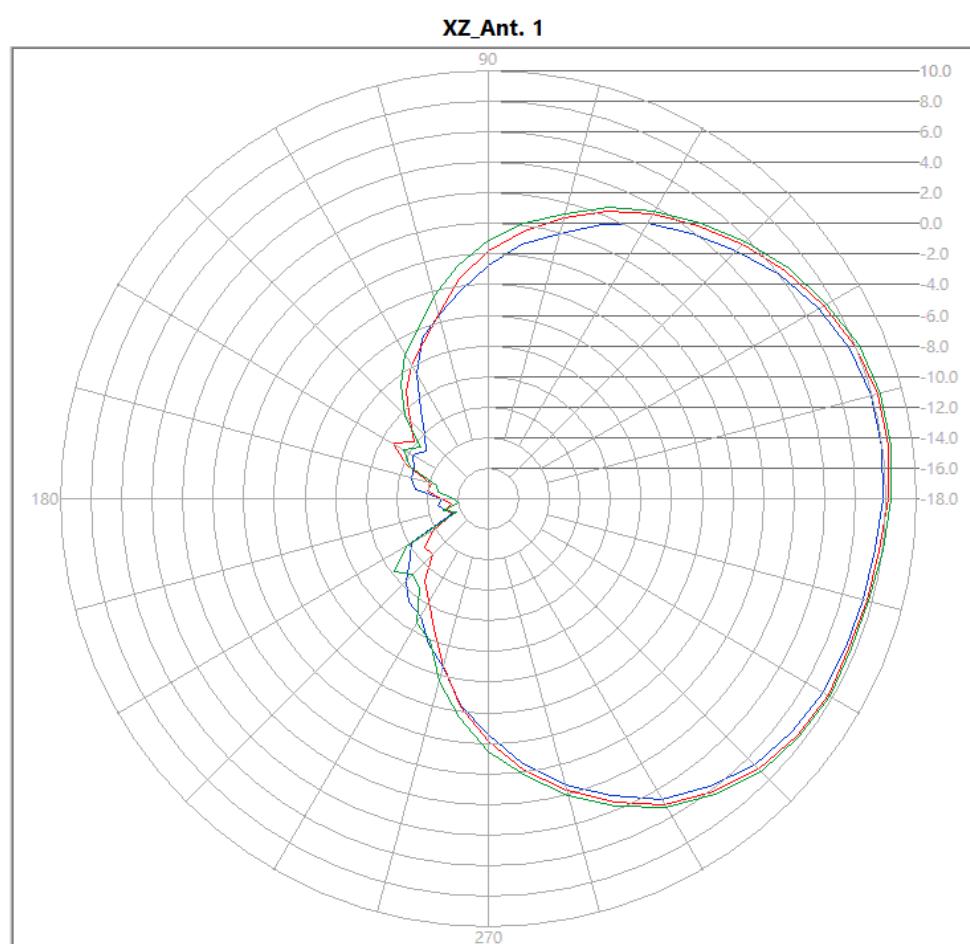
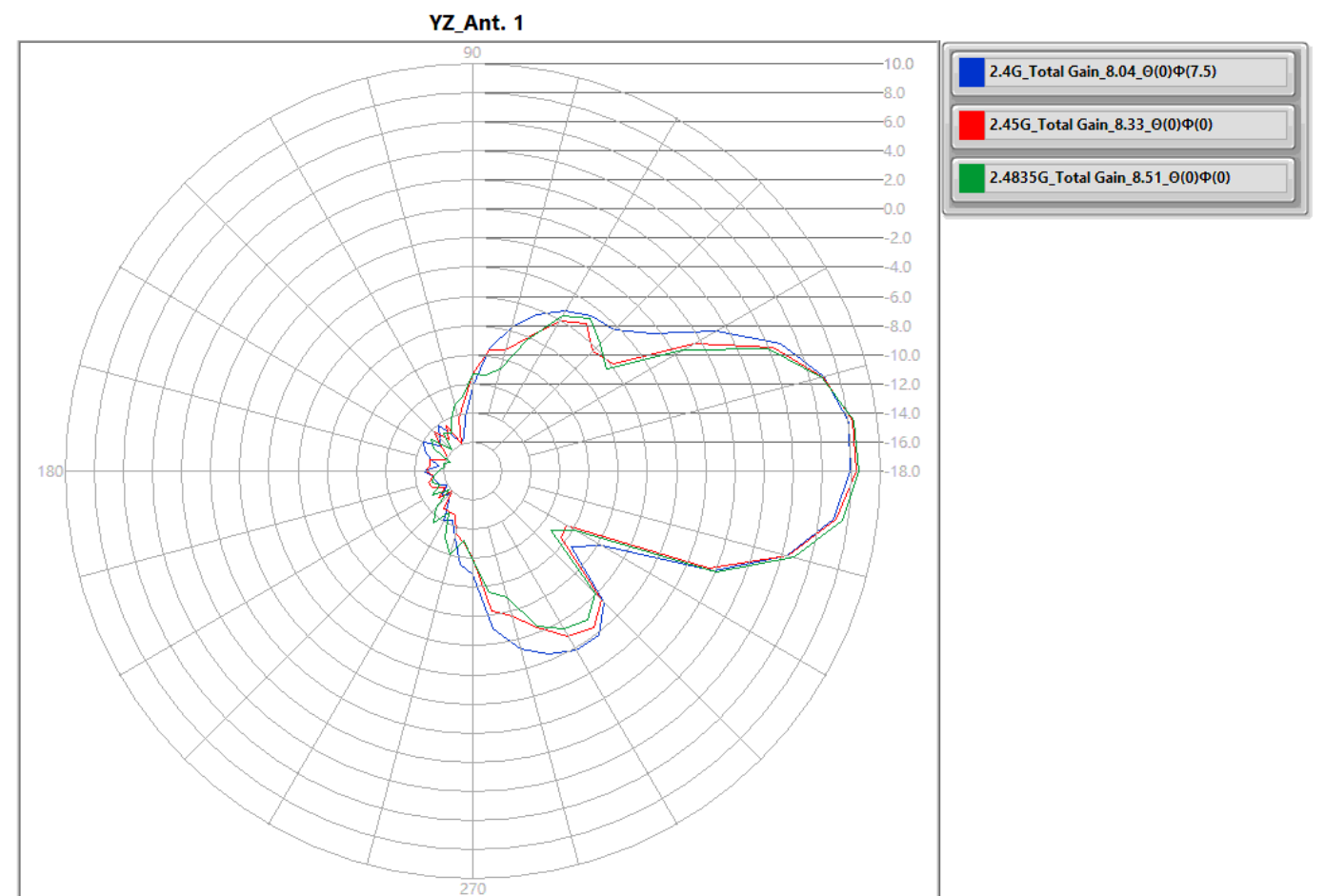
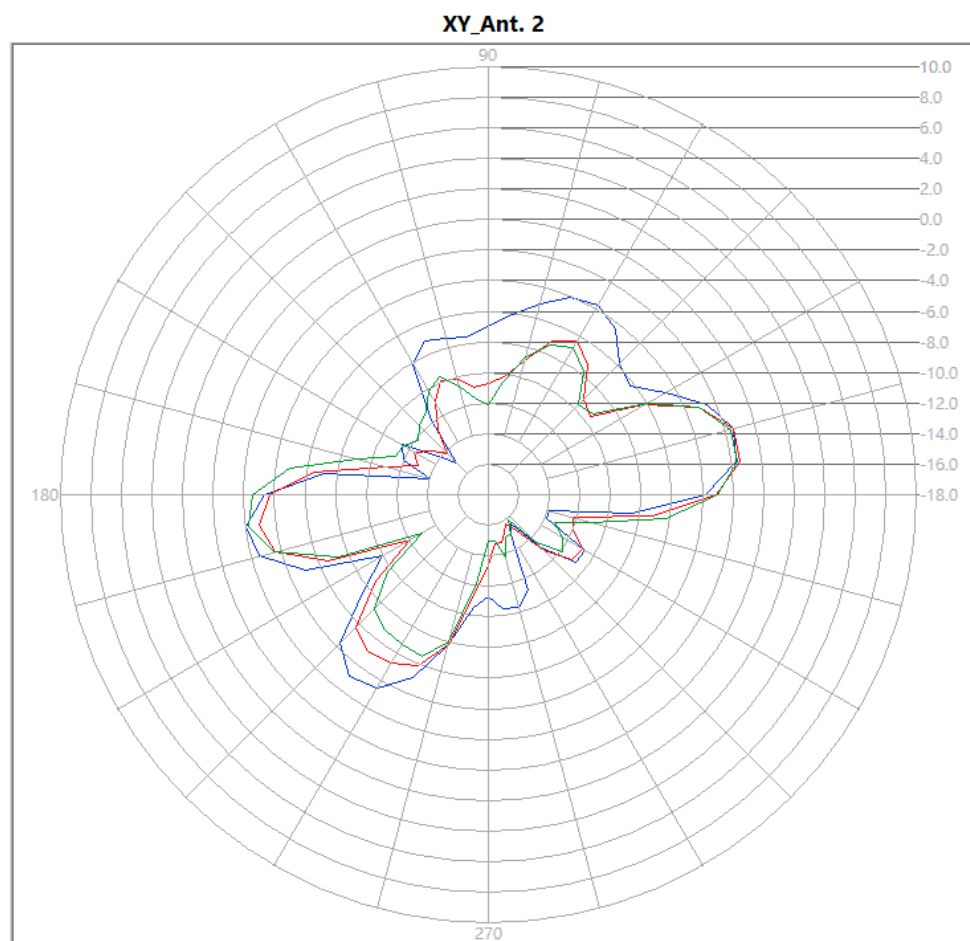
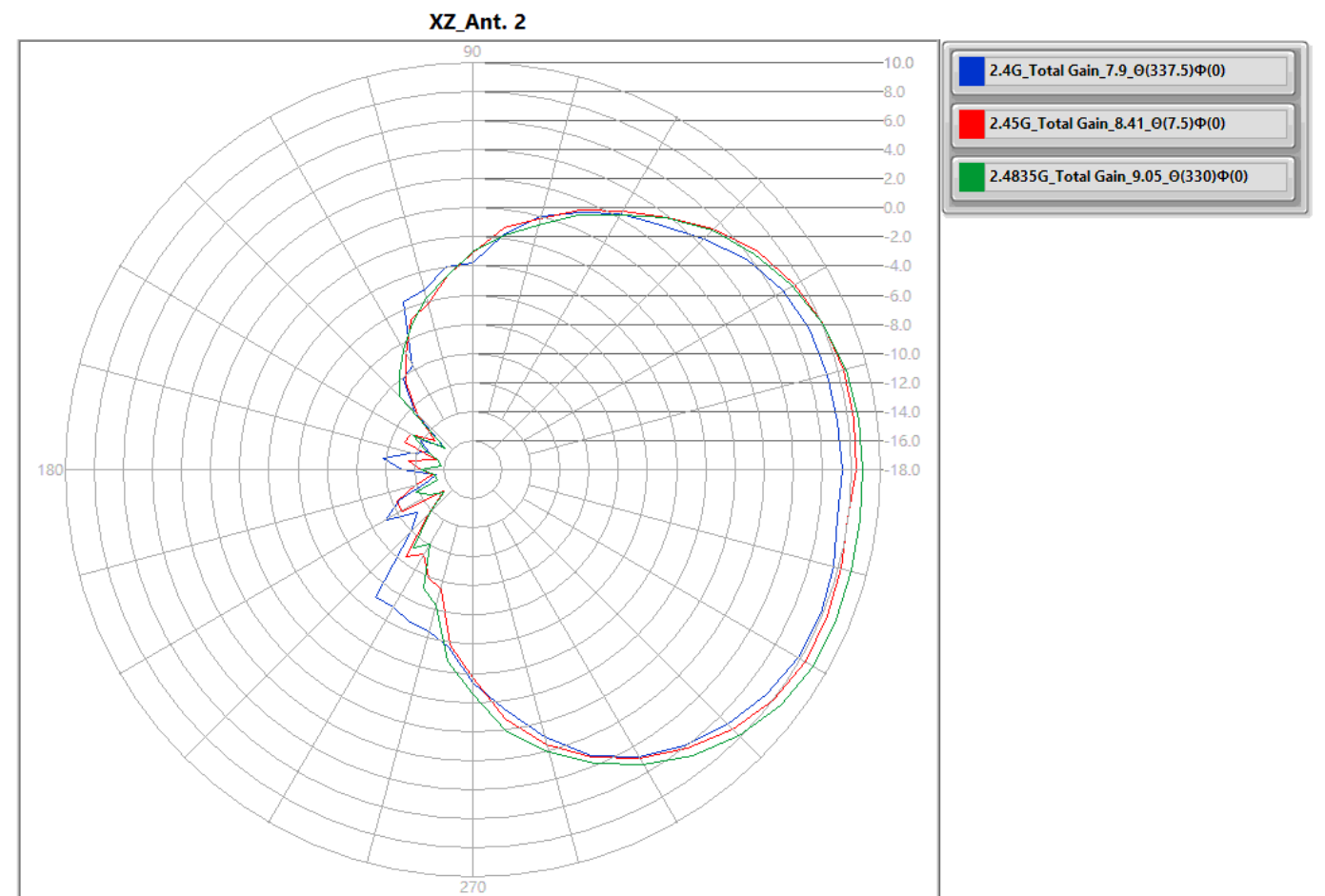
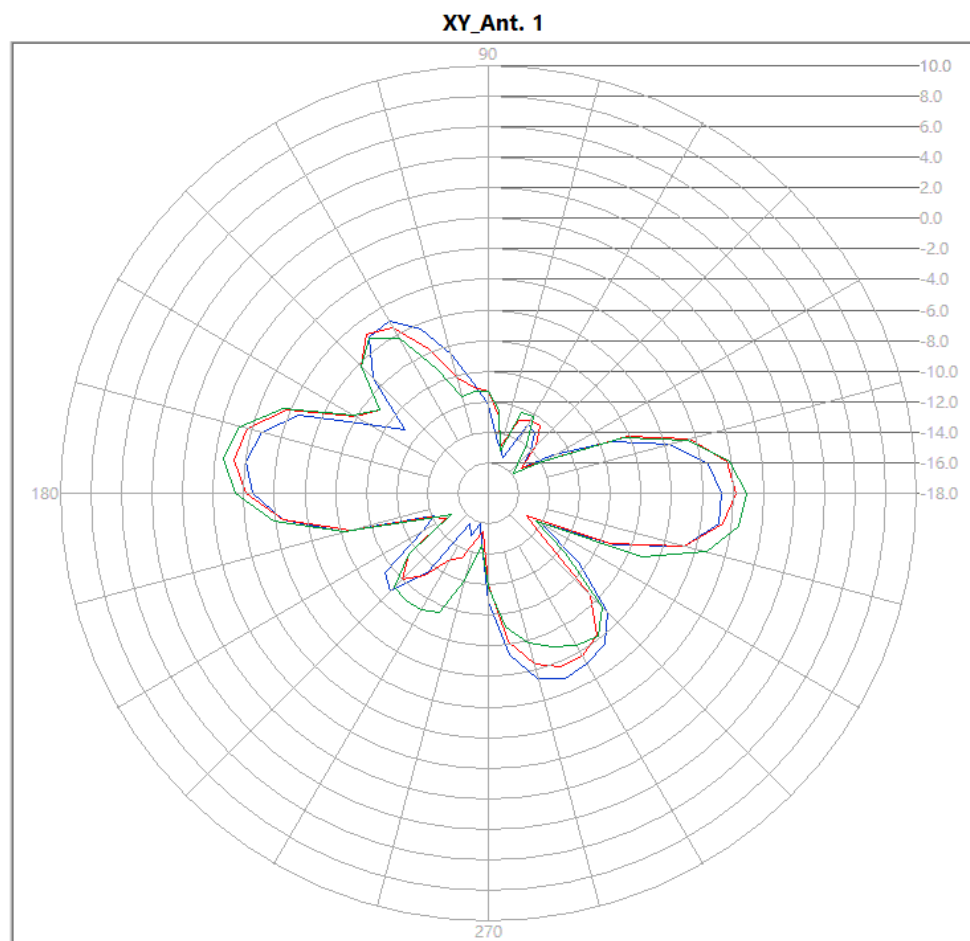
Total Gain Data

[illegible]



Θ (15°)	8.36/8.49	8.52/8.48	8.46/8.37	8.25/8.07	7.85/7.64	7.48/7.35	7.29/7.28	7.29/7.33	7.41/7.54	7.73/7.92	8.08/8.20	8.28/8.30	8.19/8.01	7.74/7.41	6.99/6.54	6.04/5.59	5.17/4.77	4.37/4.00	3.77/3.73	3.89/4.23	4.68/5.20	5.77/6.32	6.82/7.30	7.73/8.08
Θ (22.5°)	8.09/8.36	8.42/8.31	8.10/7.81	7.44/7.00	6.49/5.97	5.53/5.25	5.09/5.08	5.11/5.28	5.59/6.02	6.54/7.08	7.56/7.99	8.28/8.42	8.37/8.11	7.62/7.00	6.16/5.20	4.10/2.98	1.87/0.92	0.01/-0.78	-1.33/-1.48	-1.15/-0.33	0.73/1.90	3.12/4.23	5.26/6.18	6.98/7.60
Θ (30°)	7.54/7.93	7.95/7.71	7.26/6.62	5.90/4.99	4.03/3.06	2.21/1.56	1.23/1.14	1.23/1.63	2.33/3.26	4.36/5.46	6.42/7.23	7.88/8.32	8.40/8.12	7.43/6.38	4.94/3.22	1.17/-1.05	-3.48/-5.75	-7.37/-8.79	-9.52/-10.23	-10.74/-9.31	-6.66/-3.83	-1.31/0.89	2.78/4.50	5.81/6.87
Θ (37.5°)	6.69/7.20	7.23/6.84	6.05/4.97	3.66/2.17	0.69/-0.63	-1.69/-2.43	-2.88/-2.95	-2.85/-2.47	-1.62/-0.22	1.55/3.26	4.75/6.07	7.12/7.83	8.02/7.64	6.66/5.14	2.95/0.18	-3.29/-7.30	-10.96/-12.15	-11.99/-11.08	-10.50/-9.97	-10.67/-12.82	-14.10/-12.08	-7.32/-3.43	-0.24/2.30	4.30/5.72
Θ (45°)	5.47/6.12	6.13/5.53	4.35/2.68	0.72/-1.39	-2.98/-3.65	-3.68/-3.69	-3.92/-4.23	-4.32/-4.28	-4.36/-4.00	-2.52/-0.26	1.89/3.87	5.53/6.76	7.22/6.90	5.72/3.75	0.78/-3.23	-8.58/-10.95	-9.02/-7.52	-6.53/-6.20	-6.32/-6.74	-7.00/-7.66	-9.18/-11.74	-13.02/-9.58	-4.58/-0.88	1.98/4.15
Θ (52.5°)	3.88/4.67	4.62/3.72	2.05/-0.31	-2.96/-4.98	-5.20/-4.25	-3.54/-3.37	-3.65/-4.13	-4.49/-4.47	-4.62/-5.23	-5.12/-3.50	-0.94/1.75	3.99/5.58	6.17/5.72	4.27/1.76	-2.21/-7.86	-11.46/-7.60	-5.25/-4.18	-3.87/-3.89	-4.13/-4.71	-5.54/-6.54	-7.43/-9.39	-12.41/-14.44	-9.01/-4.21	-0.41/2.21
Θ (60°)	2.57/3.48	3.33/2.13	-0.11/-3.10	-5.89/-6.24	-4.89/-3.82	-3.42/-3.66	-4.30/-5.08	-5.58/-5.50	-5.33/-5.76	-6.61/-6.42	-3.97/-1.04	1.80/3.94	4.94/4.73	3.29/0.55	-3.86/-9.51	-9.51/-5.84	-3.99/-3.27	-3.24/-3.68	-4.12/-4.45	-5.03/-6.09	-7.56/-9.37	-11.99/-14.60	-13.22/-7.20	-2.65/0.59
Θ (67.5°)	1.32/2.41	2.20/0.69	-2.02/-5.47	-7.07/-5.45	-3.86/-3.28	-3.48/-4.16	-5.04/-5.81	-6.47/-6.90	-6.90/-6.79	-7.28/-7.84	-6.12/-3.66	-0.59/2.12	3.40/3.22	1.61/-1.38	-5.94/-8.99	-6.78/-4.43	-3.22/-2.97	-3.27/-4.24	-5.51/-6.53	-7.31/-8.31	-9.71/-11.08	-12.34/-13.66	-13.01/-8.80	-4.39/-0.96
Θ (75°)	-0.16/1.12	1.01/-0.64	-3.85/-8.01	-8.36/-5.84	-4.36/-4.21	-4.72/-5.63	-6.64/-7.53	-8.38/-9.53	-10.30/-9.48	-8.68/-9.15	-8.58/-7.19	-3.96/-0.33	1.53/1.55	-0.06/-3.13	-7.17/-7.15	-4.83/-3.59	-3.15/-3.36	-4.05/-5.25	-6.47/-7.73	-9.63/-11.99	-13.97/-14.64	-13.89/-13.77	-12.61/-10.35	-6.96/-2.87
Θ (82.5°)	-1.17/0.28	0.19/-1.44	-4.84/-9.09	-9.45/-7.06	-5.79/-5.82	-6.99/-8.34	-9.60/-10.27	-9.91/-10.51	-11.49/-11.41	-10.79/-10.75	-9.97/-9.36	-6.60/-2.49	-0.70/-0.82	-2.38/-5.74	-9.01/-6.37	-4.09/-3.51	-3.62/-4.28	-5.97/-8.19	-9.45/-9.87	-11.51/-14.34	-16.21/-15.05	-13.26/-11.45	-10.49/-10.07	-8.26/-4.29
Θ (90°)	-3.10/-1.35	-1.42/-3.12	-6.24/-9.58	-9.19/-7.34	-6.39/-7.12	-8.94/-10.21	-10.76/-10.89	-10.16/-9.95	-11.04/-12.60	-14.14/-13.29	-12.43/-13.02	-11.13/-6.45	-3.71/-2.88	-3.56/-6.68	-12.08/-8.76	-5.80/-5.11	-5.25/-5.89	-7.85/-11.54	-13.41/-14.74	-14.80/-15.24	-15.81/-15.00	-12.89/-11.08	-10.85/-12.03	-12.25/-7.13
Θ (97.5°)	4.56/-2.72	-2.76/-4.56	-7.86/-10.72	-10.41/-8.79	-7.99/-9.23	-11.86/-12.80	-12.91/-13.10	-11.14/-10.81	-11.85/-13.94	-15.39/-14.88	-12.48/-13.68	-13.49/-9.33	-5.84/-4.36	-4.92/-7.96	-13.81/-10.66	-7.58/-7.52	-8.74/-10.13	-12.65/-15.22	-15.14/-14.66	-16.00/-14.99	-15.51/-14.82	-12.79/-11.32	-12.20/-15.37	-13.52/-8.35
Θ (105°)	-6.12/-4.47	-4.41/-5.99	-8.66/-11.02	-11.15/-9.72	-9.01/-10.12	-12.77/-14.64	-14.99/-14.73	-12.98/-11.92	-12.92/-15.35	-15.76/-15.83	-13.46/-14.44	-15.24/-15.72	-9.48/-7.01	-6.87/-8.79	-13.41/-11.75	-8.15/-7.97	-9.82/-12.89	-15.30/-15.91	-14.62/-14.78	-15.06/-14.41	-14.54/-14.27	-13.28/-12.87	-13.65/-15.44	-13.80/-9.07
Θ (112.5°)	-6.84/-5.88	-5.74/-6.82	-9.17/-11.69	-11.89/-10.36	-9.32/-9.68	-11.11/-12.67	-13.93/-13.68	-12.83/-12.63	-12.63/-12.39	-12.86/-14.35	-15.37/-15.49	-15.14/-13.26	-9.96/-8.02	-7.57/-9.19	-13.44/-12.20	-8.74/-7.85	-8.67/-9.94	-11.24/-12.08	-13.28/-15.02	-15.18/-15.80	-14.57/-13.01	-12.18/-12.91	-15.36/-15.55	-13.11/-8.96
Θ (120°)	-8.89/-8.10	-7.81/-8.15	-9.42/-11.10	-12.01/-11.01	-9.87/-9.61	-10.39/-11.95	-14.16/-14.53	-13.10/-12.28	-12.05/-12.33	-12.35/-13.65	-15.04/-15.29	-14.93/-12.70	-11.30/-10.10	-9.34/-10.37	-13.51/-14.60	-10.87/-9.63	-9.60/-10.90	-12.59/-13.24	-13.58/-15.68	-15.46/-15.08	-15.03/-16.01	-15.43/-15.23	-15.34/-15.90	-14.58/-10.71
Θ (127.5°)	-10.41/-9.46	-9.41/-9.59	-9.69/-10.93	-12.19/-13.13	-14.02/-15.56	-14.67/-15.86	-14.82/-15.20	-14.77/-14.55	-14.43/-13.92	-13.92/-14.33	-16.05/-15.71	-12.47/-10.94	-10.49/-10.33	-10.55/-11.72	-13.20/-13.66	-11.51/-11.01	-11.69/-14.24	-14.83/-14.65	-15.07/-14.44	-14.13/-14.66	-14.02/-13.83	-13.80/-13.90	-13.72/-14.22	-13.78/-11.90
Θ (135°)	-12.59/-11.44	-10.28/-9.75	-9.89/-10.31	-11.35/-12.02	-12.34/-12.38	-12.44/-12.73	-13.37/-13.68	-14.19/-14.78	-14.07/-12.93	-12.46/-13.34	-15.51/-15.48	-15.35/-14.69	-13.75/-13.89	-14.85/-15.34	-15.29/-13.44	-11.94/-12.02	-13.45/-15.74	-14.89/-15.63	-15.07/-14.07	-13.51/-14.06	-14.00/-13.64	-13.07/-12.52	-12.45/-12.40	-13.93/-9.61
Θ (142.5°)	-14.70/-15.38	-13.00/-12.30	-11.72/-11.98	-12.22/-13.26	-13.84/-14.55	-13.92/-13.63	-13.58/-14.50	-15.36/-16.15	-14.93/-15.10	-15.20/-15.33	-15.47/-15.21	-15.96/-15.18	-15.52/-15.05	-15.36/-14.55	-15.58/-15.94	-15.65/-15.31	-14.81/-15.87	-15.67/-14.84	-14.69/-15.40	-15.21/-15.40	-14.69/-14.07	-13.89/-13.86	-13.75/-14.68	-15.17/-15.47
Θ (150°)	-13.12/-12.16	-11.38/-11.00	-10.37/-9.78	-9.27/-9.24	-9.50/-9.55	-9.60/-9.54	-9.73/-10.13	-11.09/-12.26	-14.51/-14.81	-15.11/-16.19	-15.69/-15.54	-15.09/-13.21	-12.36/-12.73	-13.55/-15.23	-14.55/-14.36	-14.70/-15.28	-16.10/-14.73	-13.60/-13.28	-14.31/-15.97	-15.14/-13.43	-12.46/-12.15	-12.43/-13.51	-14.41/-14.71	-15.51/-14.62
Θ (157.5°)	-12.96/-11.84	-11.22/-10.81	-10.17/-9.89	-9.58/-9.52	-9.66/-9.92	-10.28/-10.76	-11.89/-13.01	-14.05/-15.21	-15.06/-15.65	-14.52/-15.21	-15.39/-14.54	-13.96/-12.80	-12.33/-12.56	-13.39/-14.05	-15.87/-15.40	-15.61/-15.61	-15.17/-15.35	-15.43/-15.56	-15.40/-15.34	-14.64/-14.23	-14.34/-14.97	-15.62/-14.87	-14.91/-15.59	-16.00/-14.47
Θ (165°)	-15.44/-14.42	-13.90/-13.62	-13.99/-13.92	-13.91/-13.70	-14.01/-14.88	-14.83/-14.27	-16.09/-15.23	-15.22/-15.11	-15.59/-15.78	-15.97/-15.81	-15.14/-14.38	-13.97/-13.76	-13.96/-14.36	-14.79/-15.19	-15.18/-15.55	-15.14/-15.98	-15.93/-14.69	-15.76/-14.66	-15.31/-15.78	-15.01/-14.99	-15.41/-15.55	-15.70/-15.55	-15.34/-15.64	-16.08/-15.82
Θ (172.5°)	-13.57/-13.88	-14.30/-14.24	-14.38/-14.43	-14.26/-15.11	-15.45/-15.88	-15.74/-14.69	-13.62/-13.33	-13.56/-14.44	-14.41/-15.23	-15.40/-16.26	-14.97/-15.32	-15.34/-14.75	-15.16/-15.62	-15.26/-15.34	-15.07/-15.36	-15.00/-15.11	-15.83/-15.39	-14.69/-14.75	-15.17/-15.00	-15.39/-14.85	-15.92/-15.02	-14.77/-14.44	-15.26/-14.90	-14.00/-13.41
Θ (180°)	-14.48/-14.32	-13.95/-14.16	-14.66/-14.94	-15.15/-15.85	-14.97/-15.70	-15.11/-14.52	-13.90/-14.65	-15.41/-15.34	-15.22/-15.62	-15.93/-15.03	-15.70/-15.77	-15.49/-14.94	-15.31/-15.26	-14.85/-14.90	-14.78/-15.36	-15.71/-14.81	-15.68/-15.43	-14.82/-15.96	-15.36/-15.08	-14.42/-15.31	-15.61/-15.91	-15.75/-16.15	-15.97/-15.85	-14.75/-14.85
Freq(Hz)	2.4835GPol.	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°)	8.79/8.79	8.76/8.68	8.59/8.52	8.46/8.42	8.39/8.36	8.37/8.39	8.44/8.49	8.57/8.63	8.67/8.72	8.75/8.77	8.79/8.82	8.83/8.78	8.73/8.67	8.59/8.52	8.47/8.45	8.47/8.48	8.47/8.47	8.48/8.51	8.56/8.65	8.73/8.80	8.81/8.79	8.75/8.72	8.70/8.72	8.73/8.75
Θ (7.5°)	8.77/8.84	8.89/8.89	8.85/8.81	8.79/8.77	8.76/8.72	8.71/8.73	8.67/8.62	8.68/8.95	9.01/9.05	9.07/9.09	9.10/9.08	9.05/9.95	8.83/8.66	8.37/8.13	7.93/7.75	7.64/7.52	7.42/7.30	7.22/7.20	7.26/7.36	7.50/7.64	7.75/7.86	7.96/8.09	8.21/8.36	8.59/8.62
Θ (15°)	8.59/8.75	8.83/8.80	8.69/8.62	8.51/8.37	8.17/7.99	7.87/7.81	7.80/7.85	7.96/8.11	8.27/8.46	8.66/8.85	9.02/9.14	9.19/9.14	8.96/8.68	8.29/7.83	7.29/6.75	6.19/5.68	5.19/4.72	4.32/4.04	3.93/4.02	4.31/4.68	5.06/5.51	6.00/6.50	7.02/7.50	7.94/8.29
Θ (22.5°)	8.06/8.33	8.43/8.33	8.11/7.77	7.40/6.98	6.54/6.09	5.73/5.53	5.43/5.52	5.77/6.09	6.50/6.99	7.51/8.03	8.50/8.88	9.12/9.18	9.03/8.65	8.04/7.29	6.33/5.25	4.08/2.89	1.73/0.67	-0.32/-1.12	-1.61/-1.55	-0.95/-0.06	0.94/2.01	3.12/4.18	5.24/6.19	7.00/7.61
Θ (30°)	7.32/7.71	7.76/7.51	7.02/6.26	5.41/4.48	3.63/2.78	1.98/1.36	1.02/1.13	1.59/2.33	3.26/4.30	5.42/6.50	7.47/8.24	8.80/9.11	9.05/8.64	7.84/6.69	5.16/3.33	1.11/-1.37	-4.17/-6.71	-8.83/-10.70	-11.75/-12.75	-11.89/-9.43	-6.72/-4.11	-1.72/0.48	2.46/4.23	5.58/6.63
Θ (37.5°)	6.41/6.92	6.93/6.48	5.62/4.39	2.92/1.31	-0.20/-1.49	-2.36/-2.96	-3.52/-3.65	-3.45/-2.52	-0.94/0.92	2.87/4.61	6.07/7.26	8.12/8.62	8.64/8.12	7.06/5.46	3.20/0.34	-3.42/-8.28	-13.59/-15.20	-14.19/-12.38	-11.04/-10.45	-10.95/-12.82	-15.38/-12.23	-7.70/-3.74	-0.56/2.01	4.02/5.44
Θ (45°)	5.33/5.97	5.94/5.25	3.95/2.11	-0.12/-2.62	-4.35/-4.79	-4.20/-3.63	-3.65/-4.26	-5.18/-5.48	-4.74/-3.16	-0.88/1.54	3.59/5.32	6.68/7.62	7.85/7.36	6.07/4.00	0.99/-3.16	-9.50/-14.49	-11.32/-9.05	-7.74/-7.30	-7.25/-7.30	-7.56/-8.33	-9.73/-12.41	-14.71/-9.84	-5.00/-1.03	1.88/4.03
Θ (52.5°)	3.85/4.65	4.58/3.67	1.95/-0.54	-3.58/-5.99	-5.87/-4.51	-3.38/-2.82	-2.83/-3.38	-4.53/-5.33	-5.43/-5.12	-3.83/-1.56	1.00/3.32	5.18/6.42	6.75/6.11	4.55/1.99	-1.95/-7.96	-13.68/-9.50	-6.64/-5.43	-5.06/-5.07	-5.36/-6.10	-6.90/-7.53	-8.12/-9.41	-12.30/-15.16	-9.84/-4.35	-0.43/2.18
Θ (60°)	2.22/3.19	3.07/1.94	-0.18/-3.29	-6.50/-7.28	-5.77/-4.49	-3.82/-3.63	-3.88/-4.61	-5.71/-6.42	-6.23/-5.94	-5.77/-4.52														

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





Freq(Hz)	5.2GPol.	TotalAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)				
Θ(0°)	7.517/37	7.357/37	7.437/46	7.477/44	7.571/57	7.627/69	7.807/84	7.827/81	7.717/63	7.557/48	7.437/38	7.317/26	7.237/23	7.277/39	7.537/73	7.797/84	7.988/08	8.178/28	8.418/46	8.438/38	8.338/26	8.188/10	7.987/91	7.707/78				
Θ(7.5°)	7.787/77	7.707/83	7.847/82	7.827/81	7.927/73	7.737/85	7.938/03	8.028/01	8.038/09	8.178/16	8.388/28	8.187/96	7.767/53	7.126/86	6.706/49	6.336/25	6.206/18	6.096/09	6.226/41	6.626/90	7.137/36	7.587/78	7.938/08	8.178/42				
Θ(15°)	8.798/68	8.478/54	8.257/93	7.527/15	6.836/54	6.336/82	6.386/57	6.796/77	7.137/44	7.798/10	8.308/42	8.388/24	7.957/48	6.836/09	5.274/32	3.442/75	2.131/60	1.151/06	1.241/66	2.313/15	4.115/10	6.026/91	7.698/53	8.949/12				
Θ(22.5°)	8.708/61	8.477/31	6.796/05	5.244/33	3.063/13	2.290/88	2.973/16	3.483/97	4.675/39	6.327/07	9.108/33	8.888/31	7.856/99	6.536/20	2.190/26	-1.58/-3.18	-4.75/-5.98	-6.51/-6.21	-5.30/-4.10	-5.24/-1.29	0.342/1.29	4.226/1.32	6.737/73	8.419/10				
Θ(30°)	7.767/20	6.325/33	4.182/69	0.88/-1.16	-2.79/-3.36	-3.07/-3.29	-3.36/-3.60	-3.70/-3.25	-1.95/-0.06	2.033/99	5.596/66	7.237/25	6.695/60	3.831/54	-1.28/-3.92	-5.74/-6.86	-8.64/-11.78	-13.49/-14.72	-11.47/-9.91	-8.90/-7.36	-5.34/-2.67	0.092/67	4.746/26	7.367/78				
Θ(37.5°)	6.145/40	3.97/2.37	0.52/-0.23	-5.27/-8.87	-9.25/-8.72	-7.60/-8.74	-11.16/-13.64	-14.96/-14.79	-12.66/-8.00	-3.510/2.7	3.285/40	6.346/45	5.874/58	2.08/-0.90	-4.75/-7.16	-7.45/-8.34	-11.12/-13.78	-13.34/-9.52	-8.35/-8.94	-9.80/-10.84	-11.02/-8.92	-4.86/-1.13	1.803/9.1	5.376/09				
Θ(45°)	4.113/15	1.18/-1.38	-4.74/-6.68	-12.74/-11.22	-8.19/-7.60	-6.73/-12.03	-15.27/-15.38	-10.10/-10.33	-10.60/-11.54	-8.90/-4.80	-0.112/9.7	4.274/52	4.082/77	-0.28/-3.55	-9.18/-11.67	-11.50/-13.47	-15.84/-15.14	-12.11/-10.39	-9.58/-10.14	-12.77/-13.35	-11.22/-12.88	-12.77/-13.35	-3.010/1.5	2.513/9.1				
Θ(52.5°)	1.560/28	-2.53/-6.08	-10.75/-13.78	-13.43/-10.42	-8.23/-8.76	-10.81/-13.53	-12.04/-9.89	-8.65/-8.80	-10.22/-12.08	-12.79/-10.06	-3.800/66	2.432/80	2.240/59	-2.82/-8.16	-15.07/-14.42	-13.71/-15.36	-15.11/-15.78	-13.85/-12.06	-12.18/-13.11	-15.17/-13.79	-12.75/-12.02	-12.01/-9.94	-7.02/-3.11	0.011/57				
Θ(60°)	-0.92/-2.92	-6.48/-10.40	-14.69/-14.14	-14.77/-11.05	-9.78/-11.00	-12.30/-12.50	-10.41/-9.25	-9.68/-11.75	-14.41/-14.27	-12.46/-12.33	-10.15/-3.25	-0.320/6.3	0.30/-1.49	-5.46/-11.85	-15.48/-13.95	-14.59/-15.12	-15.33/-15.28	-14.59/-12.40	-11.64/-13.96	-14.82/-15.85	-15.15/-12.34	-11.13/-10.22	-9.69/-6.49	-2.52/-4.06				
Θ(67.5°)	-1.84/-4.41	-7.58/-10.94	-16.33/-15.16	-14.38/-11.74	-11.22/-13.61	-12.30/-12.56	-10.36/-9.50	-10.57/-14.00	-14.48/-14.93	-12.07/-12.95	-14.95/-6.70	-2.270/7.48	-1.51/-3.62	-8.14/-14.40	-15.71/-13.24	-14.45/-14.56	-15.52/-15.68	-14.18/-13.36	-1									



Antenna Pattern 5GHz UNII 1~3

Appendix D

Θ(22.5°)	8.66/8.71	8.62/8.39	8.05/4.74	6.66/5.61	4.42/3.27	2.34/1.65	1.45/1.45	1.84/2.59	3.64/4.69	5.74/6.60	7.37/8.06	8.61/9.05	9.12/8.85	8.28/7.49	6.42/5.14	3.67/2.25	0.91/-0.17	-1.00/-1.40	-1.55/-1.61	-1.48/-0.81	0.26/1.82	3.48/4.93	6.19/7.15	7.89/8.41
Θ(30°)	6.98/7.16	7.22/7.04	6.44/5.42	3.80/1.45	-1.36/-4.00	-7.14/-7.84	-6.73/-5.54	-4.36/-3.14	-1.63/-0.13	1.66/3.46	5.12/6.62	7.81/8.67	9.07/8.79	7.91/6.35	4.33/1.62	-1.97/-5.42	-8.65/-9.29	-8.29/-8.29	-8.99/-9.41	-9.54/-9.27	-7.88/-4.82	-1.46/-1.19	3.19/4.64	5.74/6.52
Θ(142.5°)	4.62/5.05	6.30/5.26	4.28/2.35	-0.84/-6.34	-13.85/-15.98	-11.01/-9.78	-10.26/-11.53	-12.45/-11.48	-9.29/-6.87	-4.05/-1.00	1.93/4.53	4.64/7.63	8.03/7.75	6.47/4.14	-0.68/-4.32	-9.30/-10.62	-8.34/-6.92	-4.53/-6.20	-9.66/-12.22	-12.67/-13.13	-10.48/-4.57	-0.58/1.52	2.76/3.77	
Θ(45°)	2.09/2.87	2.68/1.95	-0.39/-4.13	-10.71/-15.81	-12.68/-8.59	-7.05/-7.13	-9.00/-11.23	-11.82/-11.10	-10.52/-10.90	-9.92/-5.83	-1.64/2.14	4.86/6.57	7.21/7.03	5.74/2.75	-2.59/-10.35	-14.89/-11.22	-9.01/-6.92	-5.02/-4.42	-4.40/-5.95	-9.47/-12.23	-8.18/-7.23	-11.28/-15.71	-6.94/-3.19	-1.01/0.64
Θ(52.5°)	0.26/1.50	1.05/-0.77	-5.16/-12.14	-12.67/-9.81	-8.21/-7.40	-7.31/-7.65	-9.25/-11.26	-10.84/-9.46	-9.09/-10.06	-11.19/-10.81	-5.86/-0.53	3.12/5.22	5.80/5.38	3.71/-0.25	-7.94/-14.77	-15.35/-14.88	-12.53/-10.08	-7.46/-6.49	-6.10/-6.46	-9.93/-14.60	-9.40/-5.77	-6.17/-11.69	-15.17/-7.77	-3.42/-1.48
Θ(60°)	-0.49/-0.83	-2.42/-5.79	-10.48/-11.93	-12.13/-12.60	-10.23/-10.49	-11.68/-12.63	-11.44/-10.25	-9.38/-8.47	-8.65/-10.18	-12.20/-14.24	-10.21/-3.47	1.30/4.01	4.83/4.15	2.47/-1.93	-11.76/-15.08	-14.52/-14.85	-14.75/-12.18	-11.58/-12.32	-10.18/-9.31	-12.21/-13.85	-6.98/-3.79	-3.80/-6.77	-9.29/-6.82	-3.94/-1.05
Θ(67.5°)	-1.20/-2.34	-5.16/-10.45	-14.62/-13.81	-15.34/-14.73	-10.46/-7.88	-6.86/-8.83	-13.60/-12.77	-11.51/-11.63	-10.82/-8.65	-9.29/-10.50	-11.56/-7.88	-1.38/2.12	2.96/1.76	-0.38/-5.89	-15.79/-12.90	-15.88/-16.39	-13.20/-10.42	-13.19/-15.19	-11.08/-11.01	-12.61/-15.21	-11.62/-5.77	-4.52/-6.83	-9.88/-8.24	-3.58/-1.18
Θ(75°)	-3.15/-3.45	-5.43/-9.62	-13.67/-12.63	-13.49/-14.44	-13.44/-9.18	-7.05/-8.46	-13.14/-13.35	-12.38/-13.66	-15.31/-12.92	-10.93/-12.59	-14.87/-11.30	-4.66/-0.25	1.38/0.25	-2.45/-7.50	-15.11/-12.04	-14.67/-15.99	-13.84/-11.05	-14.59/-14.72	-11.29/-10.09	-10.79/-13.72	-14.71/-7.85	-6.60/-9.15	-12.07/-10.29	-6.20/-3.26
Θ(82.5°)	-4.30/-3.38	-5.05/-1.77	-14.07/-15.45	-15.27/-13.58	-12.44/-8.89	-8.22/-9.65	-12.84/-13.21	-15.40/-14.86	-14.75/-14.60	-13.01/-13.38	-15.15/-12.41	-6.76/-2.00	-0.00/-1.20	-4.66/-9.27	-14.93/-11.74	-13.59/-13.06	-10.93/-8.93	-14.86/-15.41	-11.45/-10.75	-9.03/-10.42	-15.39/-12.02	-10.30/-13.16	-15.66/-11.11	-7.34/-4.66
Θ(90°)	-5.73/-4.60	-6.32/-8.05	-14.60/-14.69	-15.60/-13.22	-12.11/-9.47	-10.58/-12.13	-12.64/-12.73	-16.25/-15.88	-15.87/-15.35	-15.60/-13.44	-15.35/-14.44	-9.81/-5.28	-2.27/-2.77	-6.68/-10.05	-15.38/-16.36	-14.78/-13.19	-10.01/-9.85	-13.33/-15.57	-12.54/-9.96	-9.53/-11.00	-14.69/-15.20	-14.69/-16.16	-15.24/-14.14	-9.90/-5.98
Θ(97.5°)	-5.58/-5.72	-7.27/-8.26	-15.15/-13.37	-13.56/-11.80	-12.64/-10.26	-12.51/-15.75	-13.00/-12.70	-15.24/-15.97	-15.83/-14.41	-15.95/-14.74	-15.75/-15.53	-11.44/-8.31	-4.97/-4.99	-8.19/-11.37	-15.87/-15.42	-15.07/-15.66	-11.95/-11.11	-14.40/-14.92	-10.87/-11.48	-12.60/-13.09	-15.75/-14.91	-15.80/-15.92	-15.38/-12.84	-8.48/-5.38
Θ(105°)	-8.50/-9.50	-10.67/-12.06	-15.53/-13.09	-13.79/-14.44	-14.44/-11.43	-12.23/-15.40	-16.22/-16.01	-15.54/-14.77	-14.08/-15.39	-15.07/-16.11	-15.60/-15.79	-13.05/-10.21	-7.63/-6.28	-11.25/-14.37	-15.56/-15.53	-15.80/-15.79	-15.02/-14.85	-15.57/-12.58	-12.96/-15.20	-15.64/-15.19	-15.38/-14.82	-15.61/-15.46	-15.34/-14.77	-10.71/-7.21
Θ(112.5°)	-10.66/-10.79	-10.85/-14.32	-16.14/-15.66	-15.83/-14.86	-13.40/-12.79	-12.39/-16.28	-14.98/-15.18	-15.06/-15.86	-14.73/-14.50	-15.50/-14.94	-16.10/-16.00	-14.20/-13.14	-10.02/-8.73	-11.45/-15.78	-15.60/-15.01	-15.21/-15.57	-14.94/-15.97	-15.17/-14.14	-14.96/-15.61	-14.90/-15.26	-14.94/-15.17	-13.55/-12.46	-13.77/-15.07	-11.42/-9.27
Θ(120°)	-14.96/-12.82	-10.53/-13.52	-16.15/-14.70	-15.69/-15.51	-15.01/-15.84	-15.79/-15.20	-15.31/-15.72	-15.79/-15.37	-15.57/-15.47	-15.20/-13.71	-12.71/-10.83	-14.87/-15.23	-15.14/-15.45	-15.46/-15.34	-15.04/-15.28	-13.70/-15.33	-14.70/-14.28	-15.12/-15.40	-14.87/-15.34	-15.24/-15.12	-14.70/-15.32	-16.09/-15.67	-14.38/-13.32	
Θ(127.5°)	-18.13/-13.78	-12.01/-15.15	-15.18/-14.87	-15.07/-16.22	-15.23/-15.99	-15.33/-15.67	-15.63/-14.94	-14.90/-13.90	-14.12/-15.64	-15.27/-15.72	-15.77/-15.06	-13.75/-12.39	-12.38/-10.41	-12.01/-15.68	-15.42/-15.59	-14.65/-15.97	-15.89/-15.51	-15.24/-13.59	-14.51/-15.07	-15.39/-15.45	-15.62/-15.35	-15.77/-13.31	-14.22/-15.60	-15.52/-14.53
Θ(135°)	-12.88/-13.27	-12.16/-13.09	-14.65/-15.04	-15.25/-15.25	-15.34/-15.50	-14.68/-15.43	-15.98/-15.02	-14.95/-13.27	-13.79/-13.82	-13.49/-13.97	-14.47/-13.79	-11.02/-8.95	-8.20/-7.66	-9.51/-13.29	-15.24/-15.05	-15.54/-15.58	-15.04/-15.98	-14.98/-15.67	-15.75/-15.25	-14.82/-16.24	-15.06/-15.62	-15.32/-15.40	-15.31/-15.17	-14.78/-15.62
Θ(142.5°)	-15.42/-14.67	-14.93/-14.91	-15.30/-15.51	-15.24/-15.42	-15.22/-14.96	-14.79/-14.13	-13.45/-13.95	-15.40/-15.91	-15.04/-15.73	-15.65/-16.02	-15.09/-15.18	-16.04/-15.94	-13.62/-12.64	-14.92/-14.05	-12.72/-13.49	-15.25/-13.99	-15.30/-14.73	-15.73/-15.81	-14.97/-15.06	-15.87/-15.34	-14.87/-15.16	-15.24/-15.12	-15.28/-14.32	-13.76/-15.37
Θ(150°)	-15.62/-15.47	-15.93/-15.43	-15.16/-15.51	-15.40/-14.46	-15.57/-15.20	-15.67/-15.60	-15.41/-15.73	-15.32/-15.88	-15.06/-15.48	-15.68/-14.58	-14.90/-15.09	-15.43/-15.30	-15.33/-15.28	-14.70/-14.62	-13.86/-14.97	-15.66/-15.18	-14.82/-15.40	-15.71/-15.24	-14.68/-14.90	-15.03/-14.69	-15.97/-14.98	-15.88/-15.26	-15.42/-16.23	-14.85/-15.76
Θ(157.5°)	-15.92/-16.15	-15.48/-15.38	-14.48/-15.33	-15.47/-15.06	-15.50/-15.61	-15.41/-14.90	-13.78/-13.40	-13.77/-14.61	-15.32/-15.09	-15.25/-15.91	-15.12/-14.32	-12.70/-12.43	-13.14/-15.13	-15.07/-15.82	-15.13/-15.61	-14.74/-14.96	-14.57/-15.32	-16.16/-14.80	-14.41/-15.25	-15.83/-14.82	-14.71/-15.36	-14.90/-15.45	-15.24/-14.11	-14.35/-14.85
Θ(165°)	-15.14/-15.06	-15.02/-15.32	-15.28/-14.94	-15.24/-15.07	-15.67/-15.01	-15.34/-15.40	-15.39/-15.50	-15.23/-14.94	-15.06/-15.99	-15.87/-15.78	-15.15/-15.44	-14.97/-13.42	-12.66/-13.13	-13.73/-15.30	-14.01/-13.24	-14.02/-14.89	-15.43/-14.99	-15.45/-15.48	-15.99/-15.82	-15.11/-14.25	-15.08/-15.40	-15.83/-15.54	-15.28/-14.70	-14.94/-16.27
Θ(172.5°)	-14.37/-14.80	-15.82/-14.86	-15.22/-15.72	-15.66/-15.42	-14.51/-15.00	-14.75/-15.31	-15.12/-15.45	-15.18/-15.23	-15.88/-15.75	-14.78/-15.86	-15.29/-14.15	-14.15/-13.65	-13.73/-13.75	-13.59/-13.75	-14.28/-14.79	-15.40/-16.00	-15.31/-15.55	-15.07/-15.59	-15.77/-15.30	-15.14/-15.45	-15.24/-15.37	-15.54/-16.07	-15.57/-15.01	-15.17/-15.72
Θ(180°)	-15.48/-15.12	-15.70/-15.34	-15.75/-15.51	-15.19/-15.57	-15.44/-15.57	-15.82/-15.86	-15.43/-15.61	-15.18/-14.12	-14.04/-13.72	-14.02/-14.58	-14.29/-15.10	-14.78/-13.84	-13.28/-12.82	-12.40/-12.79	-13.19/-14.50	-16.07/-15.40	-15.12/-15.12	-16.40/-15.35	-15.64/-15.27	-14.19/-15.86	-15.25/-14.86	-15.66/-14.86	-14.79/-15.48	
Freq(Hz)	5.3GPol	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°)	8.70/8.67	8.67/8.69	8.64/8.60	8.45/8.29	8.17/8.10	8.02/7.96	7.94/7.99	8.09/8.15	8.19/8.25	8.35/8.54	8.60/8.67	8.69/8.71	8.79/8.85	8.84/8.84	8.84/8.83	8.78/8.76	8.67/8.59	8.45/8.32	8.24/8.12	8.08/8.10	8.26/8.40	8.46/8.53	8.57/8.59	8.64/8.68
Θ(7.5°)	8.93/8.92	8.82/8.78	8.73/8.70	8.53/8.37	8.28/8.11	8.05/7.96	7.93/8.01	8.18/8.30	8.45/8.57	8.73/8.94	9.05/9.10	9.12/9.29	9.11/9.71	8.97/8.85	8.66/8.44	8.32/8.27	8.11/7.91	7.93/7.69	7.46/7.40	7.43/7.60	7.91/8.96	8.19/8.45	8.59/8.67	8.82/8.88
Θ(15°)	9.45/9.41	9.28/9.02	8.64/8.18	7.69/7.09	6.48/5.94	5.57/5.41	5.52/5.87	6.37/6.83	7.42/7.89	8.38/8.82	9.16/9.40	9.60/9.76	9.82/9.74	9.46/8.98	8.42/7.74	7.05/6.46	5.81/5.24	4.72/4.33	4.18/4.19	4.37/4.84	5.44/6.14	6.87/7.62	8.21/8.69	9.09/9.35
Θ(22.5°)	9.07/9.09	9.03/8.87	8.53/7.88	6.93/5.67	4.27/3.09	2.21/1.88	1.82/2.08	2.58/3.29	4.22/5.22	6.29/7.31	8.20/8.97	9.55/9.91	9.96/9.61	9.89/8.04	6.77/5.27	3.79/2.29	0.72/-0.45	-1.00/-0.98	-0.82/-0.65	-0.40/-0.02	0.83/1.99	3.36/4.89	6.32/7.51	8.36/8.83
Θ(30°)	7.26/7.27	7.44/7.54	7.04/5.88	3.95/1.13	-2.31/4.78	-6.34/-6.90	-7.00/-6.79	-6.18/-4.83	-2.62/-0.27	1.86/3.89	5.89/7.59	8.83/9.57	9.72/9.26	8.32/6.82	4.79/2.06	-1.33/-5.58	-10.25/-9.15	-8.17/-8.79	-8.72/-8.95	-8.62/-8.24	-7.31/-5.82	-3.12/-0.25	2.32/4.45	6.09/6.96
Θ(37.5°)	4.62/4.66	5.16/5.68	4.82/2.32	-1.83/-9.92	-13.87/-10.74	-8.29/-8.56	-11.12/-14.13	-15.40/-14.70	-11.62/-6.88	-3.27/-0.16	3.05/5.82	7.65/8.64	8.78/8.31	7.16/5.17	1.89/-2.50	-8.02/-15.45	-12.29/-8.93	-4.66/-2.36	-2.05/-3.13	-6.04/-11.12	-12.30/-12.53	-11.43/-6.30	-2.17/1.06	3.11/4.26
Θ(45°)	1.48/2.43	3.40/3.42	0.91/-4.32	-15.14/-11.14	-8.05/-6.46	-5.73/-6.34	-8.06/-11.16	-12.82/-12.32	-12.91/-12.08	-8.90/-4.94	-0.50/3.39	6.12/7.68	8.13/7.65	6.20/3.36	-1.32/-7.54	-15.94/-13.92	-10.02/-6.33	-4.83/-2.58	-1.61/-2.90	-6.43/-12.40	-9.60/-6.84	-9.31/-14.42	-10.64/-4.29	-6.88/0.74
Θ(52.5°)	-1.51/0.61	1.43/0.28	-3.93/-14.39	-12.12/-7.51	-5.35/-1.17	-7.12/-8.86	-9.21/-10.10	-10.69/-10.54	-7.12/-12.97	-14.09/-11.08	-5.18/0.03	3.97/6.03	6.57/5.72	3.70/-0.15	-6.77/-14.50	-15.22/-15.25	-13.60/-13.40	-8.35/-7.82	-7.10/-7.18	-10.63/-14.22	-6.63/-3.71	-4.10/-7.31	-10.71/-10.34	-5.08/-3.46
Θ(60°)	-0.58/0.36	-0.61/-5.08	-10.32/-13.20	-14.51/-10.01	-6.13/-6.97	-10.50/-14.33	-12.58/-9.15	-8.13/-9.15	-10.90/-10.94	-13.05/-12.92	-8.95/-4.45	0.78/4.21	5.45/4.27	1.82/-3.31	-13.37/-12.79	-10.92/-11.62	-13.68/-9.81	-9.18/-10.01	-8.44/-8.29	-9.84/-13.08	-10.35/-5.32	-5.23/-8.84		

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

