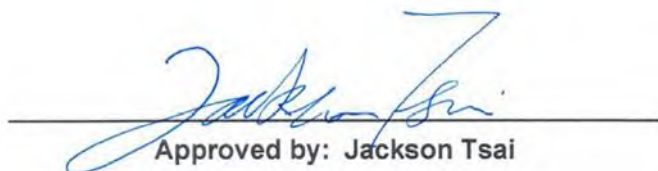


Antenna Composite Gain Test Report

Equipment	Wi-Fi 7 Wireless Access Point
Brand Name	Juniper
Model Name	AP66
Applicant	Juniper Networks, Inc. 1133 Innovation Way Sunnyvale, California 94089 USA
Manufacturer	Juniper Networks, Inc. 1133 Innovation Way Sunnyvale, California 94089 USA
Standard	KDB 662911 D03 v02
Sample Received	Jul. 26, 2025
Start Test Date	Jul. 26, 2025
Final Test Date	Jul. 27, 2025

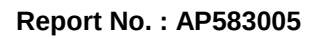

Approved by: Jackson Tsai**SPORTON INTERNATIONAL INC. Hsinhua Laboratory**

No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
1. Operation Mode and Antenna Information	4
2. Test Frequency	4
3. Testing Location.....	5
4. Test Facility and Configuration.....	5
5. Reference Calibration	6
6. Test Method	7
7. Measured Values and Calculation of Maximum Gain Positions.....	8
8. Summary of Test Result	9
9. Test Setup	10
10. Test Equipment and Calibration Data	11
11. Test Results	12

[illegible]

1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G Ant1	1	Juniper	AP66	PIFA	I-Pex	2.4GHz
2G Ant2	2	Juniper	AP66	PIFA	I-Pex	2.4GHz
5G Ant1	1	Juniper	AP66	PIFA	I-Pex	5GHz
5G Ant2	2	Juniper	AP66	Dipole	I-Pex	5GHz
6G Ant1	1	Juniper	AP66	Dipole	I-Pex	6GHz
6G Ant2	2	Juniper	AP66	PIFA	I-Pex	6GHz

Note:

2.4GHz Operation Mode (2TX/2RX)

2G Ant1~ 2G Ant2 could transmit/receive simultaneously.

5GHz Operation Mode (2TX/2RX)

5G Ant1~ 5G Ant2 could transmit/receive simultaneously.

6GHz Operation Mode (2TX/2RX)

6G Ant1~ 6G Ant2 could transmit/receive simultaneously.

2. Test Frequency

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

Band [MHz]	Test Frequency [MHz]
2400-2483.5	2450
5150-5250	5200
5250-5350	5300
5470-5725	5600
5725-5850	5785
5850-5895	5885
5925-6425	6175
6425-6525	6475
6525-6875	6695
6875-7125	6995

3. Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Wen 33rd.St.	ADD:	No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
	TEL:	886-3-318-0787	FAX:	886-3-318-0287
Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rofy Chen	23.5-24.5°C / 45-55%	26/Jul/2025~27/Jul/2025

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

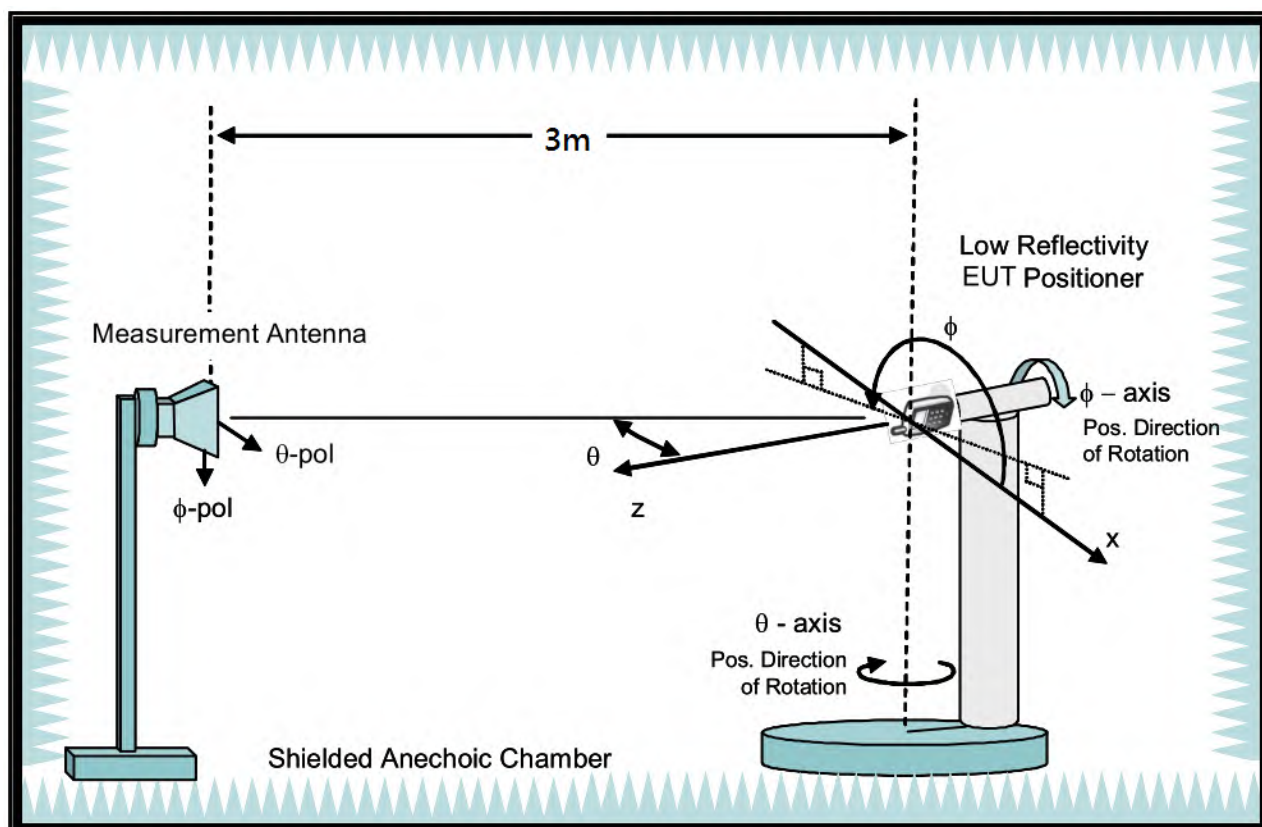
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

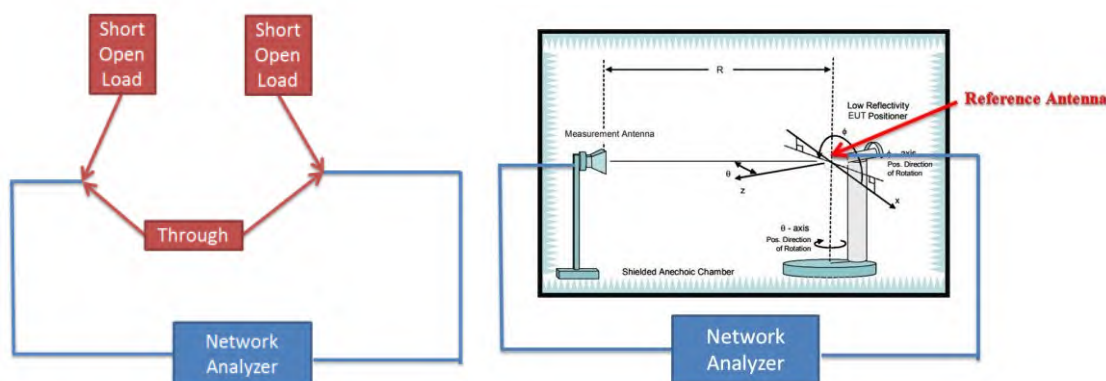
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



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	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.

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

6. Test Method

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

Directional Gain 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

Directional Gain_1SS max value position

Frequency (Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	2.67	3.67	3.84	4.71	4.32	-1.15	-2.85	-6.73	-6.27	-2.01	5.86
Ant. 2 (dBi)	4.84	5.74	5.32	-2.76	-1.76	3.32	4.49	5.67	5.04	3.97	-10.3
Directional Gain [1SS] (dBi)	6.83	7.78	7.62	1.75	1.8	1.37	1.57	4.53	4.12	4.5	4.11
Polarization	Theta	Theta	Theta	Phi	Phi	Theta	Theta	Theta	Theta	Theta	Phi
$\Theta(^{\circ})$	60	52.5	60	45	37.5	37.5	45	60	60	52.5	30
$\Phi(^{\circ})$	127.5	112.5	120	315	315	45	120	22.5	22.5	240	307.5

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

Directional Gain_1SS max value position calculation

Frequency (Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G
Ant. 1 [$10^{(G/20)}$]	$10^{(2.67/20)}$	$10^{(3.67/20)}$	$10^{(3.84/20)}$	$10^{(4.71/20)}$	$10^{(4.32/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(4.84/20)}$	$10^{(5.74/20)}$	$10^{(5.32/20)}$	$10^{(-2.76/20)}$	$10^{(-1.76/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.36	1.526	1.556	1.72	1.644
Ant. 2 [$10^{(G/20)}$] value	1.746	1.936	1.845	0.728	0.817
Sum All Antenna [Amax]	3.106	3.462	3.401	2.448	2.461
Directional Gain [$10 \cdot \log(A_{max}^2/N_{ant})$]	6.83	7.78	7.62	1.75	1.8

Frequency (Hz)	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(-1.15/20)}$	$10^{(-2.85/20)}$	$10^{(-6.73/20)}$	$10^{(-6.27/20)}$	$10^{(-2.01/20)}$	$10^{(5.86/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(3.32/20)}$	$10^{(4.49/20)}$	$10^{(5.67/20)}$	$10^{(5.04/20)}$	$10^{(3.97/20)}$	$10^{(-10.3/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.876	0.72	0.461	0.486	0.793	1.963
Ant. 2 [$10^{(G/20)}$] value	1.466	1.677	1.921	1.786	1.579	0.305
Sum All Antenna [Amax]	2.342	2.397	2.382	2.272	2.373	2.269
Directional Gain [$10 \cdot \log(A_{max}^2/N_{ant})$]	1.37	1.57	4.53	4.12	4.5	4.11

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

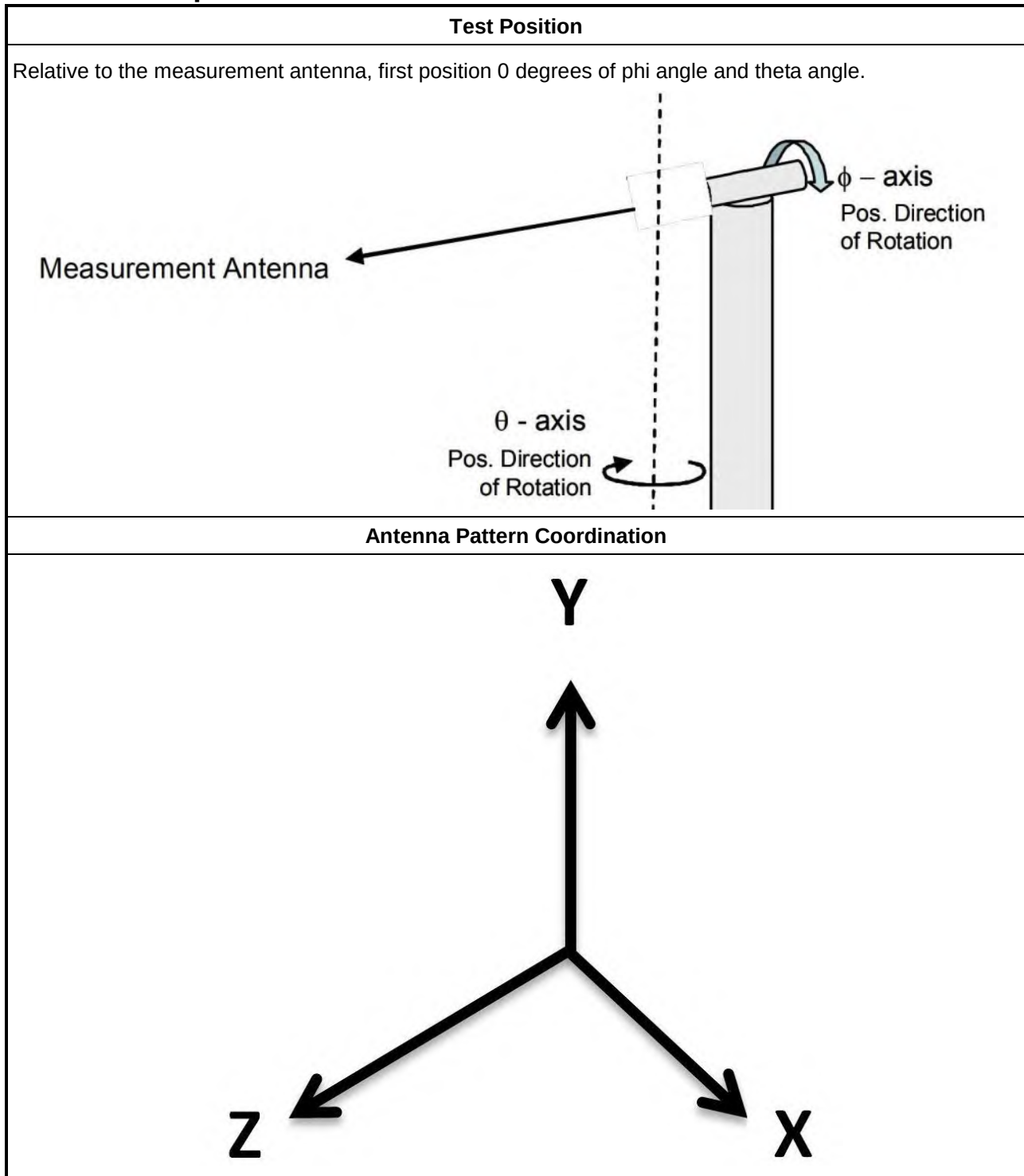
Freq(Hz)	2.4G	2.45G	2.4835G	5.2G	5.3G
Ant. 1 Max Gain (dBi)	4.47	4.74	5.61	5.02	4.81
Ant. 2 Max Gain (dBi)	4.84	5.77	5.32	4.58	4.5
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/45/97.5	Theta/45/75	Theta/45/67.5	Phi/37.5/345	Phi/37.5/337.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/127.5	Theta/52.5/120	Theta/60/120	Theta/60/105	Theta/67.5/135
Max Gain (dBi)	4.84	5.77	5.61	5.02	4.81
Directional Gain [1SS] (dBi)	6.83	7.78	7.62	4.76	4.81
Directional Gain [2SS] (dBi)	4.84	5.77	5.61	5.02	4.81

Freq(Hz)	5.6G	5.785G	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.78	4.86	4.43	5.23	4.57	5.86
Ant. 2 Max Gain (dBi)	5.92	5.25	6.38	5.32	5.01	4.66
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/52.5/7.5	Phi/45/7.5	Phi/52.5/142.5	Phi/22.5/307.5	Phi/22.5/307.5	Phi/30/307.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/135	Theta/52.5/120	Theta/75/172.5	Theta/75/22.5	Theta/67.5/142.5	Theta/60/157.5
Max Gain (dBi)	5.92	5.25	6.38	5.32	5.01	5.86
Directional Gain [1SS] (dBi)	4.38	4.58	4.53	4.12	4.5	4.11
Directional Gain [2SS] (dBi)	5.92	5.25	6.38	5.32	5.01	5.86

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	Jul. 30, 2024	Jul. 29, 2025
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

Appendix A –	Radiated Composite Gain of 2.4GHz.....	Page 13
Appendix B –	Radiated Composite Gain of 5GHz.....	Page 19
Appendix C –	Radiated Composite Gain of 6GHz.....	Page 26
Appendix D –	Antenna Pattern of 2.4GHz.....	Page 33
Appendix E –	Antenna Pattern of 5GHz.....	Page 36
Appendix F –	Antenna Pattern of 6GHz.....	Page 39
Appendix G –	Test Photos.....	Page 42



Freq(Hz)	2.4G	2.45G	2.4835G
Ant. 1 Max Gain (dBi)	4.47	4.74	5.61
Ant. 2 Max Gain (dBi)	4.84	5.77	5.32
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/45/97.5	Theta/45/75	Theta/45/67.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/127.5	Theta/52.5/120	Theta/60/120
Max Gain (dBi)	4.84	5.77	5.61
DG [1SS] (dBi)	6.83	7.78	7.62
DG [2SS] (dBi)	4.84	5.77	5.61





Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ(22.5°)	-0.920/0.04	0.610/0.77	0.590/0.21	-0.33/-1.16	-2.34/-4.04	-6.22/-8.56	-10.12/-10.04	-8.08/-5.37	-2.94/-1.19	0.11/1.02	1.61/1.86	1.75/1.2	0.23/-1.18	-2.59/-3.3	-3.23/-2.76	-2.32/-2.08	-2.04/-1.92	-1.71/-1.77	-2.39/-3.72	-5.69/-6.85	-6.27/-5.05	-3.85/-2.99	-2.42/-2.17	-2.14/-1.29
Θ(30°)	-0.76/0.36	0.97/1.02	0.66/0.06	-0.54/-1.18	-2.06/-3.35	-5.23/-7.85	-9.35/-10.04	-8.36/-6.22	-3.97/-2.17	-0.83/0.1	0.74/1.11	1.18/0.76	-0.23/-1.95	-4.25/-5.37	-5.33/-4.64	-3.56/-2.71	-2.2/-1.85	-1.54/-1.54	-2.12/-3.43	-5.55/-7.22	-5.65/-3.55	-2.15/-1.55	-1.43/-1.51	-1.66/-1.46
Θ(37.5°)	-0.98/0.06	0.52/0.53	0.18/-0.41	-0.94/-1.32	-1.72/-2.34	-3.4/-5.24	-7/-6.72	-5.1/-3.94	-2.91/-1.99	-1.31/-0.92	-0.62/-0.27	0.11/0.13	-0.72/-2.76	-4.9/-5.18	-4.66/-3.98	-3.38/-2.81	-2.07/-1.64	-1.55/-1.93	-2.89/-4.3	-6.13/-6.91	-4.76/-2.25	-0.75/-0.24	-0.56/-1.25	-1.77/-1.61
Θ(45°)	-1.31/-1.01	-0.88/-0.75	-0.95/-1.48	-1.94/-2.01	-1.77/-1.46	-1.57/-2.61	-4.34/-4.55	-3.14/-2.17	-1.68/-1.33	-1.17/-1.23	-1.26/-1.14	-0.66/-0.18	-0.68/-2.58	-4.23/-3.59	-2.66/-2.37	-2.59/-2.81	-2.55/-2.17	-2.18/-2.83	-4.19/-5.65	-6.52/-6.2	-3.89/-1.62	-0.19/0.36	-0.08/-1.17	-2.03/-1.85
Θ(52.5°)	-1.8/-2.38	-2.44/-1.63	-1.74/-2.77	-3.81/-3.83	-2.65/-1.12	-0.33/-0.95	-2.92/-3.92	-2.79/-1.92	-1.71/-1.37	-0.88/-0.85	-1.37/-1.89	-1.69/-1.09	-1.75/-3.75	-5.56/-3.85	-2.51/-2.38	-3.1/-3.57	-3.64/-3.87	-3.96/-4.68	-6.1/-3.33	-7.7/-6.31	-4.76/-2.93	-1.31/-0.32	-0.4/-1.32	-2.1/-1.94
Θ(60°)	-3.44/-3.82	-2.96/-1.61	-1.7/-3.34	-5.55/-6.21	-4.36/-1.7	-0.22/-0.52	-2.74/-4.71	-4.11/-3.25	-3.15/-2.31	-0.9/-0.5	-1.34/-2.85	-3.68/-3.26	-3.58/-5.55	-6.76/-4.63	-2.77/-2.71	-3.73/-4.77	-5.09/-4.92	-5.15/-6.28	-7.3/-8.57	-8.74/-7.44	-6.94/-5.83	-3.03/-1.08	-0.63/-1.43	-2.73/-3.62
Θ(67.5°)	-5.2/-4.98	-4.87/-3.17	-2.94/-4.88	-7.51/-8.8	-6.88/-3.04	-1.07/-1.17	-3.63/-6.39	-5.77/-4.88	-4.8/-3.42	-1.61/-1.36	-2.83/-5.52	-6.84/-5.74	-5.43/-6.73	-6.52/-4.39	-3.02/-3.55	-5.11/-5.96	-6.43/-5.61	-5.29/-6.38	-7.78/-9.73	-9.46/-7.58	-6.93/-6.21	-2.88/-0.77	-0.21/-1.07	-3.49/-6.15
Θ(75°)	-3.67/-4.45	-7.19/-5.93	-4.88/-6.88	-9.18/-10.22	-9.43/-4.47	-2/-1.93	-4.45/-8.64	-6.91/-4.77	-4.53/-4.01	-2.86/-2.91	-4.83/-8.48	-9.64/-7.29	-6.17/-6.94	-6.99/-5.85	-4.5/-5.26	-7.08/-7.55	-8.61/-6.01	-4.37/-5.38	-7.91/-10.69	-10.93/-7.39	-7.04/-7.82	-5.23/-2.93	-1.9/-2	-3.75/-3.97
Θ(82.5°)	-3.72/-4.78	-7.63/-6.08	-5.33/-7.79	-9.91/-10.92	-10.28/-4.74	-1.96/-2.06	-5.44/-11.26	-7.16/-4.65	-4.77/-5.05	-4/-4.61	-6.8/-11.21	-11.98/-8.71	-7.73/-9.12	-9.34/-7.2	-6.3/-8.37	-8.74/-9.33	-9.94/-6.05	-4.44/-5.9	-8.06/-10.2	-10.78/-8.4	-7.72/-10.14	-8.34/-5.15	-3.72/-3.06	-3.67/-3.69
Θ(90°)	-4.83/-6.58	-9.67/-7.14	-6.57/-9.86	-10.08/-8.71	-10.9/-7.88	-4.21/-4.17	-8.05/-13.86	-9.56/-6.84	-7.14/-7.4	-6.11/-5.45	-6.82/-9.88	-13.66/-10.86	-9.97/-10.48	-9.43/-7.97	-8.71/-10.54	-8.53/-8.8	-12.09/-7.87	-5.73/-7.25	-8.06/-9.55	-10.96/-8.72	-7.23/-9.77	-8.66/-5.77	-4.42/-3.47	-3.89/-4.32
Θ(97.5°)	-5.12/-7.15	-10.48/-7.26	-6.73/-10.37	-11.17/-9.35	-10.52/-8.63	-4.96/-4.4	-7.6/-14.2	-12.17/-9.08	-9.48/-8.98	-6.7/-5.7	-6.82/-10.68	-15.43/-13.61	-11.73/-11.57	-9.03/-7	-8.27/-9.69	-8.93/-10.72	-13.87/-8.26	-6.77/-9.86	-9.64/-10.26	-10.92/-9.75	-8.38/-10.26	-8.21/-5.39	-4.21/-3.56	-4.33/-4.71
Θ(105°)	-4.91/-6.73	-10.5/-8.47	-7.61/-10.31	-9.61/-8.67	-9.81/-8.73	-5.81/-5.58	-9.03/-13.45	-10.17/-7.99	-8.36/-8.14	-6.59/-6.27	-8.02/-13.23	-15.51/-12.41	-10.35/-10.52	-8.54/-6.9	-7.64/-10.61	-11.4/-12.49	-13.82/-8.79	-7.26/-10.64	-12.47/-12.68	-12.93/-10.04	-10.13/-12.99	-10.02/-7.01	-5.3/-4.09	-4.98/-4.5
Θ(112.5°)	-4.65/-6.44	-10.81/-10.8	-10.4/-11.17	-9.09/-8.59	-9.5/-7.41	-5.39/-6.17	-10.96/-14.56	-8.88/-6.22	-5.89/-5.99	-5.97/-6.93	-9.64/-13.47	-12.58/-9.37	-9.03/-10.07	-9.69/-8.95	-9.29/-11.16	-8.93/-10.06	-14.08/-11.78	-10.18/-12.9	-14.5/-14.06	-11.97/-11.61	-11.14/-11.84	-9.64/-7.72	-6.97/-5.3	-4.62/-4
Θ(120°)	-7.49/-12.11	-11.81/-7.91	-8.85/-13.07	-11.11/-8.89	-10.14/-9.34	-6.39/-6.95	-12.38/-15.23	-8.01/-5.78	-5.92/-6.44	-6.27/-6.16	-6.88/-8.46	-10.11/-9.88	-11.7/-13.29	-10.73/-8.62	-8.03/-8.78	-8.18/-8.82	-11.7/-13.51	-13.56/-15.85	-13.98/-9.81	-9.16/-11.59	-13.04/-11.32	-7.96/-6.4	-6.13/-5.37	-5.59/-5.59
Θ(127.5°)	-5.57/-8.98	-9.25/-6.83	-7.42/-12.06	-12.4/-8.66	-8.39/-9.38	-8.47/-8.47	-11.45/-13.43	-8.94/-6.74	-6.89/-7.24	-6.16/-5.57	-6.49/-8.95	-10.29/-10.9	-11.9/-10.16	-7.65/-6.72	-6.78/-8.4	-8.53/-9.41	-10.68/-11.41	-9.83/-10.54	-12.06/-11	-9.91/-12.16	-14.81/-11.41	-8.72/-8.32	-10.08/-9.51	-6.52/-4.38
Θ(135°)	-4.18/-6.41	-8.96/-8.29	-8.04/-10.11	-9.68/-7	-5.91/-5.58	-5.37/-6.03	-8.41/-12.31	-11.57/-9.09	-7.3/-6.46	-5.54/-5.27	-6.39/-7.71	-8.02/-7.29	-7.25/-7.35	-6.75/-5.22	-5.27/-5.95	-5.89/-6.78	-7.44/-8.19	-9.33/-10.49	-10.74/-8.04	-6.88/-7.27	-7.01/-5.3	-3.99/-3.97	-5.35/-6.63	-5.26/-3.72
Θ(142.5°)	-3.46/-4.76	-7.31/-10.05	-12.54/-13.16	-11.57/-8.76	-7.7/-4.57	-7.29/-8.53	-11.97/-12.45	-9.97/-7.42	-6.09/-5.37	-5.2/-5.96	-7.52/-8.02	-6.38/-6.6	-5.78/-5.63	-6.97/-6.73	-6.41/-6.59	-6.67/-8.06	-10.54/-10.51	-8.29/-6.66	-6.22/-6.33	-5.23/-3.56	-2.47/-2.41	-3.44/-4.76	-4.5/-3.45	
Θ(150°)	-3.94/-4.45	-5.62/-7.23	-9.52/-12.23	-12.81/-11.42	-11.26/-12.41	-13.37/-15.73	-15.59/-14.64	-10.09/-7.81	-6.96/-7.01	-7.67/-9.22	-9.39/-9.97	-6.98/-6.04	-6.62/-7.65	-9.53/-11.76	-12.41/-10.73	-8.74/-7.23	-6.77/-8.46	-9.14/-6.56	-5.29/-5.42	-5.94/-5.73	-2.35/-2.65	-4/-5.58	-5.41/-4.47	
Θ(157.5°)	-5.82/-4.53	-4.1/-4.53	-5.7/-7.29	-8.9/-9.21	-9.2/-9.62	-10.13/-10.7	-12.13/-14.62	-14.08/-13.8	-13.32/-12.98	-11.96/-11.24	-9.03/-6.51	-5.05/-4.65	-5.23/-6.81	-9.33/-11.63	-9.71/-7.27	-5.67/-5.16	-5.82/-7.46	-6.61/-4.96	-4.7/-5.4	-5.25/-4.29	-3.53/-2.95	-2.67/-3.63	-5.65/-8.47	-8.66/-7.87
Θ(165°)	-6.42/-4.67	-3.93/-3.97	-4.6/-5.68	-7.01/-8.45	-8.52/-8.76	-9.32/-9.69	-11.67/-13.24	-15.81/-15.92	-15.12/-15.33	-14.2/-11.05	-8.57/-6.79	-5.76/-5.39	-5.78/-6.7	-7.74/-7.72	-7.83/-6.68	-6.06/-6.1	-6.88/-7.2	-7.05/-6.82	-7.24/-7.24	-6.07/-5.11	-4.65/-4.67	-5.32/-6.74	-9.62/-12.82	-15.13/-10.18
Θ(172.5°)	-6.93/-5.62	-5.12/-5.35	-6.03/-7.01	-8.1/-8.82	-8.86/-8.8	-9.32/-10.69	-12.69/-15.15	-15.18/-14.85	-15.59/-14.89	-14.01/-11.73	-9.71/-8.11	-7.03/-6.44	-6.47/-6.93	-7.69/-8.56	-8.51/-8.51	-8.5/-8.44	-8.8/-9.4	-9.98/-10.57	-10.35/-9.37	-8.77/-8.8	-9.1/-9.79	-11.03/-13.01	-15.01/-14.42	-12.34/-9.24
Θ(180°)	-7.87/-7.29	-7.29/-7.87	-8.82/-9.85	-10.32/-10.2	-10.17/-10.38	-10.97/-11.9	-13.24/-14.12	-14.65/-15.09	-15.69/-15.76	-14.58/-13.29	-8.73/-8.01	-7.95/-8.35	-9.1/-9.72	-9.92/-10	-10.06/-10.17	-10.46/-10.92	-11.05/-11.03	-11.48/-12.36	-13.88/-15.32	-15.57/-15.17	-14.86/-14.58	-13.09/-11.59	-10.03/-8.61	
Freq(Hz)	2.4835GPol.	Theta-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.4/-3.66	-2.91/-2.01	-1.18/-0.54	-0.11/0.04	0/-0.2	-0.46/-0.64	-0.78/-0.69	-0.29/0.3	0.39/0.47	0.37/0.09	-0.41/-1.11	-1.99/-3.01	-4.13/-5	-4.2/-3.01	-2.13/-1.58	-1.23/-0.94	0.19/0.48	0.69/0.85	1.05/1.19	1.21/1.07	0.82/0.45	-0.09/-0.78	-1.63/-2.58	
Θ(7.5°)	-4.61/-6.08	-6.27/-4.7	-3.09/-1.71	-0.64/0.15	0.68/0.99	1.19/1.37	1.43/1.39	1.31/1.23	1.08/0.86	0.51/-0.02	-0.73/-1.51	-2.21/-2.71	-2.6/-1.83	-1.03/-0.42	-0.07/0.02	-0.12/-0.37	-0.63/-0.86	-1.14/-1.47	-1.36/-1.11	-0.46/0.05	0.38/0.52	0.43/0.16	-0.33/-1.06	-2.03/-1.18
Θ(15°)	-4.24/-5.59	-6.32/-5.16	-3.14/-1.29	0.17/1.22	1.84/2.2	2.4/2.54	2.63/2.56	2.37/2.1	1.71/1.27	0.72/0.06	-0.77/-1.63	-2.27/-2.33	-1.48/-0.35	0.52/0.97	1.13/1.07	0.90/0.7	0.7/0.8	0.97/1.19	1.38/1.51	1.61/1.56	1.46/1.27	0.89/0.32	-0.43/-1.27	-2.17/-3.21
Θ(22.5°)	-2.58/-3.71	-4.27/-3.45	-1.74/-0.03	1.43/2.5	3.14/3.5	3.68/3.8	3.85/3.79	3.55/3.17	2.68/2.07	1.31/0.43	-0.58/-1.49	-2.21/-2.38	-1.07/0.41	1.34/1.76	1.79/1.54	1.25/1.25	1.62/2.13	2.62/2.98	3.23/3.3	3.26/3.1	2.87/2.57	2.08/1.44	0.64/-0.18	-0.99/-1.88
Θ(30°)	-0.58/-1.71	-2.39/-1.89	-0.52/1.09	2.5/3.6	4.33/4.77	5.04/5.22	5.34/5.33	5.154/8.5	4.41/3.81	2.93/1.79	0.63/-0.31	-1.17/-2.06	-1.47/0.37	1.71/2.38	2.48/2.1	1.49/1.21	1.65/2.52	3.35/3.93	4.21/4.24	4.1/3.87	3.59/3.28	2.96/2.57	2.12/1.57	0.94/0.09
Θ(37.5°)	1.09/-0.21	-1.19/-1.06	0.21/86	3.36/4.58	5.42/6	6.356/56	6.69/6.7	6.616/43	6.115/48	4.36/2.78	1.19/0.32	-0.48/-1.42	-0.98/1.04	2.53/2.37	3.33/2.85	2.04/1.43	1.55/2.41	3.44/1.7	4.63/4.81	4.76/4.53	4.2/3.82	3.57/3.41	3.23/2.98	2.81/94
Θ(45°)	2.08/0.6	-0.73/-0.73	0.63/2.37	3.82/4.97	5.85/6.48	6.97/14	7.23/7.25	7.37/32	7.116/44	5.2/3.34	1.17/0.14	-0.24/-0.7	-0.16/1.48	2.86/3.5	3.6/3.25	2.59/1.95	1.73/2.15	2.89/3.72	4.47/5	5.18/4.96	4.46/3.85	3.42/3.33	3.36/3.46	3.68/3.05
Θ(52.5°)	2.67/1.03	-0.36/-0.23	1.3/23	4.17/4.94	5.55/5.96	6.37/6.67	6.81/6.88	7.15/7.49	7.53/6.93	5.55/3.43	0.62/-0.75	-0.37/-0.03	0.95/2.27	3.16/3.49	3.46/3.2	2.87/2.61	2.59/2.89	3.44/4.11	4.74/5.26	5.55/5.29	4.72/3.95	3.17/2.8	2.9/3.39	3.88/3.63
Θ(60°)	2.45/0.74	-0.44/0.26	2.12/3.69	4.61/4.95	4.97/4.88	4.93/5.17	5.39/5.64	6.25/7.11	7.62/7.29	6.05/3.91	0.91/-2.26	-1.69/-0.48	1.06/2.43	3.22/3.33	3.06/2.75	2.48/2.4	2.61/3.06	3.71/4.39	4.86/5.1	5.23/5.09	4.69/4.16	3.47/2.81	2.57/3.07	3.73/3.57
Θ(67.5°)	1.77/-0.19	-1.12/0.1	2.15/3.71	4.54/4.7	4.39/3.85	3.52/3.68	4.07/4.57	5.45/6.45	6.98/6.57	5.09/2.57	-0.96/-3.93	-2.23/-0.07	1.72/2.93	3.23/2.67	1.94/1.42	1/0.91	1.31/1.99	2.92/3.87	4.49/4.71	4.78/4.73	4.54/0.6	3.44/2.68	2.24/2.67	3.35/3.2
Θ(75°)	1/-1.27	-2.01/-0.58	1.35/2.64	3.29/3.34	2.88/2.28	1.93/2.17	2.73/3.36	4.26/5.26	5.85/5.51	4.08/1.59	-1.58/-3.63	-1.94/-0.17	1.26/2.12	1.95/0.99	0.27/-0.1	-0.59/-0.85	-0.5/0.38	1.74/3.13	4.11/4.44	4.36/4.12	3.64/2.99	2.37/1.88	1.78/2.32	2.99/2.75
Θ(82.5°)	-0.13/-2.61	-2.67/-0.63	1																					



Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ(22.5°)	1.25/1.5	1.49/1.15	0.48/0.51	-1.77/-3.41	-5.52/-8.49	-12.18/-16.06	-18.91/-19.17	-15.56/-10.7	-6.77/-4.05	-2.01/-0.5	0.61/1.38	1.72/1.59	1.01/-0.06	-1.53/-3.24	-5.02/-6.62	-7.99/-9.06	-9.83/-9.97	-9.69/-9.79	-10.69/-13.07	-17.22/-17.19	-12.37/-8.85	-6.38/-4.49	-2.77/-1.31	-0.150/7
Θ(30°)	1.31/1.54	1.420/94	0.15/-0.85	-1.96/-3.22	-4.87/-7.37	-11.15/-17.14	-18.83/-18.38	-13.12/-9.72	-7.07/-4.97	-3.2/-1.67	-0.330/69	1.28/1.31	0.72/-0.57	-2.68/-4.54	-8.8/-12.19	-14.24/-14.36	-13.37/-11.66	-9.92/-8.85	-8.89/-10.37	-14.47/-18.51	-11.93/-7.28	-4.85/-3.64	-2.72/-1.62	-0.380/7
Θ(35°)	1.23/1.37	1.10/49	-0.36/-1.3	-2.19/-3.06	-4.21/-6.07	-8.96/-13.81	-18.73/-14.98	-9.4/-6.71	-6.42/-4.82	-4.27/-3.25	-1.77/-0.26	0.79/1.12	0.58/-0.89	-3.23/-6	-6.67/-11.51	-15.33/-18.11	-15.89/-12.91	-10.42/-8.89	-8.53/-9.82	-14.33/-18.74	-11.45/-5.7	-3.03/-2.11	-2.06/-1.79	-0.680/54
Θ(45°)	0.690/79	0.43/-0.26	-1.14/-2.05	-2.94/-3.76	-4.59/-5.59	-6.98/-9.3	-12.57/-11.43	-7.39/-5.1	-4.32/-4.48	-4.85/-4.44	-2.82/-0.86	0.61/1.25	0.86/-0.48	-2.43/-4.1	-5.46/-7.65	-11.64/-17.06	-18.46/-15.39	-12.33/-10.26	-9.53/-10.67	-15.17/-18.6	-10.64/-4.85	-1.99/-1.03	-1.29/-1.67	-1.040/13
Θ(52.5°)	-0.46/-0.38	-0.69/-1.3	-2.23/-3.31	-4.54/-5.42	-6.72/-5.68	-9.96/-7.47	-10.33/-9.89	-6.62/-4.91	-4.64/-4.93	-4.88/-4.25	-3.12/-1.55	-0.20/-35	-3.99/-4.6	-5.36/-7.84	-13.09/-18.08	-19.08/-19.66	-16.33/-14.03	-12.79/-13.7	-19.15/-17.88	-12.14/-32.6	-2.96/-1.62	-1.73/-2.19	-1.77/-0.73	
Θ(60°)	-2.34/-1.95	-1.85/-2.18	-2.94/-4.15	-6.69/-6.99	-7.02/-6.33	-6.35/-8.14	-8.2/-6.52	-6.37/-6.02	-4.86/-4.07	-3.8/-3.48	-2.7/-2.14	-2.7/-4.45	-5.34/-4.25	-4.34/-7.01	-12.59/-18.83	-18.93/-16.61	-16.18/-18.87	-16.82/-16.65	-19.24/-19.01	-12.61/-12.24	-6.21/-3.82	-3.68/-4.2	-3.87/-2.98	
Θ(67.5°)	-5.46/-4.9	-4.19/-4.02	-4.32/-5.21	-6.67/-8.03	-7.91/-6.95	-6.9/-8.73	-14.48/-18.42	-11.95/-9.02	-7.96/-6.66	-5.24/-4.99	-6.06/-7.52	-6.77/-5.05	-4.87/-5.9	-5.11/-3.4	-3.87/-7.41	-14.29/-17.61	-16.51/-12.63	-13.04/-17.82	-18.31/-17.25	-17.54/-18.3	-18.94/-15.39	-6.9/-4.03	-3.6/-3.89	-4.26/-5.04
Θ(75°)	-6.27/-6.6	-6.27/-6.41	-6.53/-7.08	-8.56/-10.28	-10.07/-8.42	-7.3/-7.83	-11.24/-18.54	-13.05/-8.63	-7.2/-6.79	-6.56/-7.13	-9.2/-12.44	-10.65/-6.96	-5.8/-6.38	-5.88/-4.45	-5.19/-9.67	-18.41/-18.12	-18.31/-10.76	-9.44/-13.84	-18.79/-16.77	-19.12/-18.59	-17/-18.36	-9.59/-6.1	-4.94/-3.7	-3.11/-4.27
Θ(82.5°)	-7.39/-7.28	-6.69/-7.5	-8.05/-8.29	-9.46/-10.8	-10.03/-7.61	-6.09/-6.65	-10.75/-18.2	-10.06/-6.84	-6.83/-8.23	-9.13/-9.79	-11.88/-15.46	-12.06/-7.78	-6.83/-8.51	-8.66/-6.59	-7.73/-15.48	-18.68/-18.79	-18.55/-9.46	-8.25/-12.65	-14.16/-11.79	-16.42/-16.19	-14.07/-18.1	-12.48/-8.48	-7.52/-5.27	-3.86/-5.01
Θ(90°)	-9.65/-10.48	-9.18/-9.88	-10.48/-10.09	-10.7/-11.82	-11.11/-8.96	-7.54/-8.39	-13.25/-17.98	-11.59/-8.38	-8.86/-10.86	-10.97/-10.15	-10.81/-13.58	-15.5/-11.32	-9.84/-12.03	-10.47/-6.92	-7.91/-14.85	-12.86/-12.46	-17.41/-9.57	-8.51/-13.76	-12.26/-10.03	-16.4/-16.41	-11.98/-15.52	-12.37/-9.48	-9.22/-6.37	-4.49/-5.76
Θ(97.5°)	-9.9/-11.25	-10.12/-10.69	-11.25/-11.24	-12.39/-14.4	-14.06/-11.09	-8.57/-8.2	-17.65/-18.14	-16.08/-11.28	-11.41/-12.4	-11.23/-10.22	-11.06/-15	-17.91/-15.31	-13.21/-13.93	-8.72/-5.95	-7.51/-12.34	-10.04/-12.04	-16.54/-10.05	-9.97/-12.81	-13.12/-14.11	-10.07/-8.11	-8.49/-6.5	-4.91/-6.19		
Θ(105°)	-9.98/-11.42	-10.45/-10.99	-10.75/-10.39	-11.65/-13.64	-13.61/-11.41	-9.45/-9.49	-13.09/-18.64	-15.44/-11.52	-10.86/-10.65	-10.03/-10.23	-12.09/-18.05	-18.58/-13.13	-10.48/-10.52	-8.21/-5.91	-6.91/-12.07	-14.48/-15.29	-19.13/-11.51	-10.39/-18.75	-17.35/-13.35	-17.44/-13.93	-13.18/-16.36	-11.2/-9.25	-4.84/-5.33	-4.07/-5.96
Θ(112.5°)	-11.09/-11.99	-11/-12.22	-12.04/-10.99	-11.46/-12.17	-11.29/-9.57	-8.58/-9.45	-14.1/-18.79	-12.73/-8.75	-7.68/-8.03	-9.06/-10.71	-13.72/-17.35	-12.91/-8.96	-8.27/-9.86	-9.69/-8.13	-10.22/-18.38	-12.21/-11.16	-17.06/-16.45	-14.8/-18.57	-17.63/-16.48	-17.27/-17.55	-13.54/-12.19	-9.4/-9.3	-10.49/-6.8	-4.98/-6.92
Θ(120°)	-11.13/-15.2	-12.9/-13.56	-15.11/-14.34	-13.64/-13	-11.33/-9.5	-8.81/-10.51	-17.65/-18.51	-9.95/-7.24	-7.8/-15	-9.23/-9.21	-10.16/-9.68	-11.37/-18.85	-13.38/-8.71	-9.3/-11.9	-8.93/-8.2	-12.34/-17.3	-17.15/-18.73	-16.12/-12.44	-13.22/-18.22	-18.09/-12.81	-8.47/-7.86	-0.99/-6.73	-4.87/-6.32	
Θ(127.5°)	-8.83/-13.41	-13.66/-12.5	-12.97/-13.76	-13.88/-12.98	-11.61/-10.51	-10.32/-11.91	-15.68/-15.18	-11.19/-9.33	-9.04/-8.9	-7.8/-6.92	-7.19/-8.54	-9.8/-11.59	-15.74/-11.75	-5.51/-5.3	-7.49/-10.88	-9.40/-8.85	-12.79/-18.56	-14.47/-12.83	-12.37/-11.34	-11.21/-13.8	-17.88/-11.55	-7.84/-7.6	-9.92/-8.99	-6.11/-5.96
Θ(135°)	-7.72/-11.06	-15.41/-14.36	-11.94/-10.43	-8.26/-8.09	-7.11/-6.43	-6.36/-7.39	-10.37/-16.9	-17.44/-14.21	-10.52/-8.05	-6.14/-5.33	-5.74/-6.95	-8.11/-9.11	-9.55/-8.05	-6.18/-6.36	-9.37/-11.58	-8.45/-7.1	-8.26/-11.57	-14.13/-12.43	-10.7/-9.99	-10.55/-11.93	-10.13/-6.28	-4.21/-4.28	-6.53/-9.08	-8.06/-6.87
Θ(142.5°)	-5.47/-6.84	-10.27/-15.01	-17.34/-14.6	-11.95/-9.98	-8.77/-8.36	-8.86/-10.66	-14.81/-18.22	-16.95/-11.71	-9.49/-11.44	-5.38/-4.46	-6.52/-7.84	-8.21/-7.62	-6.78/-6.2	-7.73/-9.5	-15.91/-12.87	-8.29/-6.93	-8/-12.09	-18.9/-15.54	-10.46/-9.83	-9.49/-10.55	-8.51/-5.4	-3.91/-3.95	-6.66/-7.92	-7.47/-5.99
Θ(150°)	-4.19/-4.16	-5.46/-7.77	-10.36/-12.37	-13.15/-12.92	-12.72/-13.16	-14.88/-18.89	-18.59/-18.29	-14.55/-11.23	-9.03/-7.94	-7.77/-8.45	-9.09/-8.96	-6.86/-5.67	-5.49/-6.47	-9.18/-15.38	-12.67/-11.88	-10.81/-6.8	-8.15/-14.07	-18.88/-10.61	-6.85/-5.89	-6.61/-8.01	-7.79/-6.2	-5.32/-5.88	-8.2/-10.3	-8.77/-6.59
Θ(157.5°)	-4.75/-3.99	-4.33/-5.32	-6.66/-7.84	-8.54/-8.8	-8.87/-9.07	-9.68/-10.96	-13.16/-16.55	-17.56/-17.45	-14.88/-13.72	-12.98/-11.84	-9.93/-8.07	-6.84/-6.51	-7.24/-9.38	-13.65/-17.94	-12.65/-8.91	-7.43/-7.88	-11.01/-19.07	-15.25/-8.47	-5.53/-4.58	-4.96/-6.11	-7.14/-7.53	-7.88/-9.17	-12.74/-17.39	-11.88/-7.32
Θ(165°)	-7.54/-6.33	-5.97/-6.13	-6.53/-7.04	-7.44/-7.66	-7.74/-7.91	-8.41/-9.51	-11.61/-14.91	-18.63/-19	-17.96/-18.74	-18.11/-15.38	-13.1/-11.53	-10.69/-10.67	-11.81/-13.99	-18.27/-18.16	-19.19/-14.73	-13.17/-14.14	-17.9/-18.03	-13.95/-9.57	-7.2/-6.21	-6.25/-6.95	-7.92/-9.05	-10.39/-12.4	-16.5/-18.33	-17.29/-10.97
Θ(172.5°)	-11.4/-9.96	-9.35/-9.31	-9.42/-9.57	-9.76/-9.87	-9.98/-10.34	-11.1/-12.55	-14.69/-17.37	-18.05/-18.23	-18.41/-17.4	-19.07/-16.97	-15.02/-13.47	-12.45/-12.02	-12.34/-13.43	-15.3/-17.94	-17.83/-18.44	-18.91/-18.76	-18.12/-16.25	-13.54/-11.63	-10.61/-10.31	-10.74/-11.7	-12.76/-14	-15.53/-17.19	-19.02/-18.5	-17.96/-14.22
Θ(180°)	-12.74/-12.27	-12.26/-12.75	-13.41/-14.1	-14.45/-15	-15.63/-17.05	-18.29/-18.49	-19.03/-18.64	-17.64/-17.6	-18.53/-18.58	-16.64/-16.93	-13.49/-12.23	-11.11/-10.34	-10.25/-10.66	-11.65/-13.09	-14.59/-15.52	-15.32/-14.37	-13.28/-12.73	-12.71/-13.09	-14.14/-15.66	-17.17/-18.79	-18.31/-17.29	-16.9/-16.77	-16.51/-15.79	-14.51/-13.1
Freq(Hz)	2.4835GPol	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-15.02/-15.92	-11.52/-7.78	-5.08/-3.13	-1.71/-0.68	0.020/44	0.640/73	0.790/82	0.80/71	0.480/12	-0.45/-1.28	-2.47/-4.09	-6.22/-9.23	-13.64/-18.97	-14.55/-9.99	-6.34/-4.22	-2.63/-1.49	-0.540/21	0.70/97	1.05/1	0.860/58	0.14/-0.5	-1.4/-2.61	-4.15/-6	-8.3/-11.3
Θ(7.5°)	-12.81/-18.73	-18.14/-10.93	-6.63/-3.88	-2.04/-0.77	0.030/49	0.710/83	0.90/9	0.790/52	0.07/-0.5	-1.31/-2.43	-3.96/-6.07	-8.74/-11.84	-12.91/-10.54	-7.74/-5.51	-3.78/-2.53	-1.6/-0.93	-0.360/09	0.390/61	0.720/8	0.820/69	0.440/02	-0.59/-1.44	-2.59/-4.12	-6.19/-8.95
Θ(15°)	-6.73/-9.5	-11.26/-8.91	-5.52/-2.93	-1.180	0.670/98	1.06/106	1.06/105	0.960/73	0.29/-0.28	-1.08/-2.2	-3.86/-6.29	-9.59/-12.85	-11.76/-8.64	-5.97/-4.18	-1.28/-0.83	-0.53/-0.29	-0.13/-0.01	0.110/23	0.330/3	0.170/02	-0.18/-0.55	-1.18/-2.15	-3.42/-5.16	
Θ(22.5°)	-2.4/-4.24	-5.62/-5.02	-3.1/-1.2	0.341/44	2.092/36	2.352/23	2.13/21	2.041/89	1.591/13	0.84/-0.67	-2.32/-5.03	-2.66/-14.63	-11.84/-7.55	-5.01/-3.53	-2.69/-2.18	-1.86/-1.58	-1.24/-0.93	-0.67/-0.51	-0.44/-0.31	-0.090/14	0.210/06	-0.44/-1.41		
Θ(30°)	-0.45/-1.14	-2.6/-2.74	-1.610/03	1.522/71	3.493/88	3.953/84	3.693/62	3.57/53	3.350/06	2.551/66	0.22/-2.11	-5.78/-12.14	-13.7/-8.09	-4.88/-3.4	-2.8/-2.76	-2.94/-2.95	-2.58/-1.95	-1.32/-0.87	-0.67/-0.68	-0.85/-1.1	-1.25/-1.06	-0.390/51	1.371/86	1.861/24
Θ(37.5°)	2.120/64	-0.9/-1.56	-0.790/82	2.453/79	4.675/12	5.17/5	4.774/62	4.64/61	4.564/31	3.782/91	1.57/-0.52	-3.87/-9.41	-11.65/-6.8	-3.9/-2.57	-2.19/-2.37	-2.94/-3.54	-3.71/-3.23	-2.45/-1.69	-1.18/-0.89	-0.86/-1.14	-1.53/-1.62	-0.780/71	2.173/12	3.41/3
Θ(45°)	2.741/37	-0.53/-1.23	-0.51/25	3.4/39	5.275/61	5.495/11	4.684/46	4.54/66	4.724/48	3.92/1	1.26/-5.92	-7.56/-5.23	-3.15/-2.18	-1.76/-1.66	-1.96/-2.57	-3.34/-3.93	-4.16/-3.71	-2.77/-1.68	-1.1/-1.04	-1.74/-2.46	-1.95/-0.04	1.953/26	3.83/62	
Θ(52.5°)	2.631/4	-0.07/-0.64	0.221/81	3.374/59	5.295/41	5.4/29	3.583/22	3.363/79	4.134/03	3.482/7	1.730/39	-1.49/-3.5	-3.81/-2.72	-1.97/-1.72	-1.47/-1.04	-0.81/-0.99	-1.53/-2.22	-2.77/-3.03	-2.81/-1.87	-0.76/-3.04	-0.771/-178	-2.38/-1.31	0.662/23	3.193/3
Θ(60°)	1.720/68	-0.32/-0.14	0.942/21	3.464/42	4.834/61	3.812/71	1.691/32	1.92/99	3.843/96	3.412/43	1.19/-0.22	-1.79/-2.73	-2.21/-1.31	-1.07/-1.55	-1.92/-1.53	-0.99/-0.78	-0.93/-1.21	-1.27/-1.124	-1.55/-1.68	-0.9/-0.12	-0.11/-0.79	-1.69/-1.78	-0.760/63	1.812/32
Θ(67.5°)	0.16/-0.96	-1.34/-0.4	0.81/9	2.963/75	3.993/33	3.993/24	0.20/2	1.242/57	3.393/29	2.310/75	-0.92/-2.13	-2.64/-1.68	-0.56/-0.05	-0.77/-2.6	-3.7/-3.2	-2.56/-2.38	-2.45/-2.39	-1.71/-0.99	-1.1/-1.71	-1.55/-0.79	-1.83/-1.67	-1.43/-0.69	0.370/91	
Θ(75°)	-0.8/-2	-1.81/-0.54	0.41/07	1.912/56	2.571/99	1.050/09	-0.59/-0.81	-0.30/8	1.741/85	1.04/-0.35	-1.52/-1.94	-1.93/-1.46	-0.81/-0.81	-2.32/-5.04	-5.97/-4.87	-4.27/-4.21	-4.22/-3.83	-2.42/-1.07	-0.88/-1.7	-2.2				



Radiated Composite Gain Data of 2.4GHz

Appendix A

Θ(75°)	-6.05/8.07	-17.94/12.53	-9.62/13.66	-17.64/-18.11	-14.13/5.61	-2.16/-1.74	-3.74/-6.46	-5.69/4.62	-5.55/-6.77	-5.35/-4.3	-5.51/-9.22	-15.05/-18.6	-18.25/-18.29	-18.92/-16.19	-11.29/8.56	-7.8/-8.41	-9.03/-7.97	-6.51/6.73	-9.53/-11.91	-8.34/-6.55	-7/-8.32	-7.83/-5.69	-4.74/-6.74	-12.7/-8.88
Θ(82.5°)	-5.68/-8.23	-16.84/-9.17	-8.57/-14.61	-18.48/-17.69	-17.87/-1.21	-3.04/-2.74	-5.65/-10.13	-8.27/-6.52	-7.43/-8.26	-6.38/-5.26	-6.67/-10.82	-17.62/-17.96	-17.74/-18.36	-17.35/-14.77	-12.6/-10.89	-10.04/-10.09	-10.22/-8.99	-7.71/-8.27	-11.66/-13	-8.86/-7.6	-9/-11.45	-10.08/-6.68	-5.13/-6.84	-11.07/-8.32
Θ(90°)	-6.79/-9.73	-8.93/-8.18	-7.69/-15.83	-15.6/-10.61	-16.67/-12.62	-5.57/-4.47	-7.36/-13.4	-10.46/-8.34	-9.58/-10.64	-7.74/-5.99	-6.72/-9.43	-13.41/-17.06	-16.46/-14.04	-13.41/-15.91	-19.01/-13.76	-11.33/-12.09	-14.4/-12.69	-9.8/-9.54	-12.56/-14.19	-9.65/-8.18	-9.51/-11.96	-10.65/-7.06	-5.28/-6.66	-12.09/-9.85
Θ(97.5°)	-7.08/-10.34	-18.32/-8.01	-7.56/-15.88	-14.08/-9.13	-12.36/-12.76	-6.13/-5	-8.23/-15.34	-11.16/-9.03	-10.41/-11.23	-8.07/-6.31	-7.07/-10.22	-15.73/-17.61	-18.7/-16.62	-17.14/-19.29	-16.69/-13.52	-14.22/-18.43	-17.25/-12.25	-10.24/-11.1	-15.51/-15.3	-10.42/-9.45	-11.43/-14.78	-12.36/-7.76	-5.67/-7.06	-13.61/-10.48
Θ(105°)	-6.46/-9.43	-18.67/-10.81	-10.33/-18.2	-11.28/-8.21	-10.94/-14.18	-7.69/-6.19	-9.14/-14.03	-10.19/-8.63	-10.26/-11.58	-9.06/-7.49	-8.56/-12.24	-17.95/-19.11	-18.63/-18.7	-16.09/-16.68	-18.01/-16.83	-16.99/-18.61	-15.4/-11.79	-10.68/-12.22	-17.8/-17.17	-12.06/-11.57	-14.11/-17.57	-14.45/-9.45	-7.41/-9.68	-17.94/-9.34
Θ(112.5°)	-6.18/-9.08	-15.1/-11.09	-13.01/-18.55	-10.48/-8.57	-11.98/-13.19	-8.06/-7.45	-11.63/-16.08	-10.03/-8.29	-9.21/-9.77	-8.4/-7.94	-9.45/-12.05	-14.24/-17.7	-18.45/-18.9	-18.29/-17.2	-14.57/-12.88	-14.74/-18.68	-15.06/-11.1	-11.19/-15.34	-17.72/-14.99	-11.83/-13.1	-17.73/-18.32	-18.34/-12.04	-9.7/-11.71	-14.27/-7.89
Θ(120°)	-11.34/-18.69	-12.88/-7.39	-8.53/-18.51	-14.09/-10.15	-13.92/-16.12	-8.92/-7.31	-9.76/-14.57	-11.58/-9.61	-10.59/-10.75	-8.54/-7.42	-8.1/-9.89	-12.41/-17.36	-17.62/-18.54	-15.56/-14.59	-12.94/-12.8	-16.5/-18.33	-16.6/-13.15	-14.1/-18.57	-17.1/-12.55	-11.65/-14.16	-18.72/-18.07	-16.7/-11.22	-9.19/-11.17	-18.77/-13.44
Θ(127.5°)	-9.49/-13.13	-12.75/-8.67	-9.4/-15.72	-14.69/-11.27	-12.67/-14.01	-11.11/-9.88	-10.88/-11.82	-9.54/-7.95	-8.88/-11.35	-11.26/-9.9	-10.5/-13.35	-18.74/-17.76	-17.76/-17.15	-18.5/-17.98	-13.77/-12.12	-14.4/-18.2	-14.9/-11.43	-11.47/-14.35	-15.7/-12.73	-11.93/-14.51	-18.87/-18.17	-18.4/-17.78	-18.56/-19	-16.09/-9.66
Θ(135°)	-8.27/-10.52	-12.38/-11.22	-12.45/-18.21	-16.2/-12.65	-11.36/-9.73	-8.55/-9.35	-12.1/-12.54	-9.29/-7.4	-7.3/-8.61	-10.13/-11.05	-12.96/-17.33	-17.48/-13.06	-11.63/-12.98	-14.69/-10.87	-7.83/-7.58	-9.91/-14.06	-13.23/-10.54	-10.73/-13.65	-15.01/-12.06	-10.48/-10.87	-11.68/-11.62	-11.26/-10.97	-10.9/-10.86	-9.38/-7.64
Θ(142.5°)	-9.59/-11.1	-11.77/-11.94	-14.75/-19.01	-18.06/-12.33	-10.5/-9.54	-8.86/-9.28	-11.76/-13.18	-9.78/-7.89	-8.04/-9.53	-11.72/-14.58	-18.04/-18.46	-13.91/-11.68	-12.31/-14.8	-12.88/-9.08	-7.51/-8.2	-10.22/-12.4	-12.55/-11.58	-11.57/-12.28	-12.75/-12.27	-11.04/-9.76	-8.69/-7.69	-7.12/-6.92	-7.07/-7.57	-8.06/-8.51
Θ(150°)	-12.98/-14.19	-13.13/-12.8	-14.9/-18.42	-16.67/-11.92	-10.36/-10.96	-12.41/-13.54	-15.1/-15.28	-11.62/-9.35	-9.4/-11.41	-15.21/-18.53	-18.56/-13.92	-11.16/-10.52	-12.12/-16.97	-19.19/-18.52	-14.95/-14.5	-14.63/-15.17	-14.3/-11.54	-9.72/-9.54	-11.03/-13.04	-11.89/-8.92	-6.69/-5.44	-4.99/-5.17	-5.76/-6.8	-8.46/-11.05
Θ(157.5°)	-19.27/-15.45	-8.74/-8.1	-12.81/-16.13	-18.62/-15.42	-13.32/-13.81	-16.67/-18.67	-18.74/-18.33	-16.34/-14.35	-14.5/-16.21	-16.55/-13.59	-10.55/-8.38	-3.47/-3.33	-10.7/-9.41	-11.43/-14.06	-16.06/-15.81	-14.41/-12.52	-10.16/-8.29	-7.62/-8.49	-10.9/-13.82	-12.49/-8.94	-6.55/-5.34	-5.15/-6.1	-6.85/-8.93	-12.45/-19.37
Θ(165°)	-13.77/-10.92	-9.41/-9.19	-10.22/-12.64	-16.99/-17.85	-18.13/-18.33	-17.9/-17.7	-18.37/-19.29	-17.98/-17.5	-17.49/-14.65	-11.91/-9.59	-7.77/-6.44	-5.69/-5.5	-5.72/-6.23	-6.96/-7.78	-8.68/-9.41	-9.5/-8.88	-8.22/-8	-8.68/-10.48	-13.2/-15.58	-14.35/-11.47	-9.52/-8.83	-9.2/-10.59	-13.22/-17.83	-17.84/-18.64
Θ(172.5°)	-9.75/-8.49	-7.82/-7.85	-8.61/-10.08	-12.04/-14.46	-16.43/-17.03	-17.24/-18.5	-18.58/-18.29	-18.1/-18.06	-15.38/-13.01	-11.16/-9.58	-8.24/-7.14	-6.45/-6.19	-6.34/-6.17	-7.06/-4.73	-7.87/-8.17	-8.2/-8.45	-9.32/-10.89	-13.04/-15.37	-16.73/-16.91	-16.55/-15.99	-15.99/-17.16	-18.19/-18.41	-18.94/-16.77	-14.05/-11.7
Θ(180°)	-9.38/-8.76	-8.55/-8.72	-9.28/-10.15	-10.96/-11.51	-11.9/-12.28	-12.88/-14.11	-16.12/-18.04	-18.53/-18.07	-16.97/-15.5	-14.16/-12.88	-11.7/-10.66	-9.96/-9.57	-9.37/-9.13	-8.82/-8.59	-8.78/-9.35	-10.15/-11.27	-12.71/-14.01	-15.01/-15.97	-17.25/-19.06	-17.54/-18.14	-18.88/-18.62	-18.42/-16.16	-14.04/-12.68	-11.57/-10.45
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°)	-3.49/-3.81	-4.25/-4.8	-5.39/-5.89	-6.38/-7.21	-8.6/-10.62	-13.36/-16.55	-18.22/-17	-13.91/-10.91	-8.5/-6.94	-5.85/-4.94	-4.23/-3.69	-3.26/-2.96	-2.98/-3.19	-3.73/-4.61	-5.94/-7.51	-9.08/-10.19	-10.85/-11.12	-11.08/-10.61	-9.86/-9	-8.16/-7.25	-6.3/-5.37	-4.54/-3.89	-3.44/-3.24	-3.25/-3.41
Θ(7.5°)	-5.33/-5.54	-5.91/-6.46	-7.02/-7.38	-7.45/-7.46	-7.44/-7.39	-7.18/-6.67	-5.94/-5.4	-5.05/-4.76	-4.35/-3.99	-3.67/-3.28	-2.91/-2.58	-2.34/-2.19	-2.17/-2.28	-2.62/-3.21	-4.15/-5.37	-6.65/-7.81	-8.93/-10.3	-12.54/-15.97	-19.03/-19.28	-18.14/-12.91	-10.48/-8.61	-7.14/-6.08	-5.38/-5.06	-4.99/-5.01
Θ(15°)	-8.06/-7.66	-7.57/-7.79	-7.92/-7.55	-6.8/-5.85	-4.87/-4.06	-3.38/-2.73	-2.08/-1.67	-1.57/-1.72	-1.93/-2.2	-2.42/-2.51	-2.45/-2.38	-2.32/-2.16	-1.93/-1.76	-1.77/-2.07	-2.64/-3.27	-3.73/-3.89	-4.04/-4.27	-4.57/-4.79	-4.84/-4.83	-4.91/-5.16	-5.64/-6.31	-6.99/-7.44	-7.81/-8.09	-8.21/-9.4
Θ(22.5°)	-10.69/-9.38	-8.74/-8.41	-7.95/-7.21	-6.24/-4.95	-3.66/-2.55	-1.66/-0.92	-0.33/-0.13	0.25/-0.11	-0.22/-0.7	-1.32/-1.94	-2.47/-2.88	-2.93/-2.43	-1.67/-1.11	-0.97/-1.23	-1.76/-2.16	-2.06/-1.5	-0.92/-0.61	-0.49/-0.43	-0.38/-0.34	-0.44/-0.8	-1.17/-6.08	-4.5/-11.37	-8.5/-11.37	-12.91/-12.06
Θ(30°)	-9.81/-8.64	-8.19/-7.78	-7.18/-6.48	-5.62/-4.39	-3.08/-1.87	-0.820/-0.7	0.83/-1.43	1.79/-1.88	1.71/-1.26	0.39/-0.81	-2.02/-2.95	-3.15/-2.5	-1.5/-0.64	-0.14/-0.08	-0.44/-0.98	-1.08/-0.32	0.74/-1.49	1.86/-2	2.03/-1.98	1.83/-1.42	0.7/-0.39	-1.93/-4.04	-7.25/-11.98	-15.5/-12.46
Θ(37.5°)	-6.84/-6.18	-5.97/-5.62	-5.07/-4.57	-4.25/-3.64	-2.53/-1.2	0.31/-1.28	2.17/-2.84	3.36/-3.67	3.69/-3.21	2.08/-3.0	-2.52/-2.98	-3.25/-2.5	-1.45/-0.41	0.35/-0.69	0.51/-0.05	-0.35/-0.28	1.47/-2.48	3.07/-3.4	3.42/-3.6	3.12/-2.59	1.81/-0.75	-0.73/-2.92	-6.46/-11.2	-12.8/-9.5
Θ(45°)	-4.2/-4.14	-4.13/-3.71	-2.92/-2.35	-2.34/-2.59	-2.26/-1.11	0.04/-1.99	3.60/-3.78	4.42/-4.99	5.22/-4.8	3.57/-5.7	-0.79/-2.76	-3.5/-3.18	-2.19/-0.95	0.16/-0.76	0.81/-0.43	0.09/-0.46	1.62/-2.79	3.64/-0.6	4.29/-4.26	3.93/-1.7	2.19/-1.06	-0.44/-2.65	-6.05/-8.58	-7.03/-5.14
Θ(52.5°)	-2.51/-3.01	-3.16/-2.56	-1.46/-0.64	-0.66/-1.45	-2.22/-1.99	-0.55/-1.36	2.88/-3.88	4.82/-5.74	5.77/-5.72	4.51/-2.19	-0.61/-3.15	-4.77/-5.07	-3.91/-2.02	-0.39/-0.57	0.84/-0.62	0.34/-0.67	1.75/-2.93	3.82/-4.42	4.74/-4.72	4.21/-3.21	2.03/-0.91	-0.29/-2.03	-4.26/-4.68	-3.25/-2.49
Θ(60°)	-2.05/-2.93	-3.22/-2.35	-0.720/-4.9	0.67/-0.09	-1.28/-2.06	1.86/-2.34	1.46/-2.4	4.12/-5.4	5.67/-6.52	5.02/-2.79	0.02/-2.7	-5.13/-6.81	-5.85/-3.22	-0.96/-0.25	0.57/-0.25	-0.21/-0.02	1.13/-2.36	3.28/-3.94	4.36/-4.42	3.94/-2.9	1.7/-0.8	0.01/-1.3	-2.97/-2.91	-1.69/-3.12
Θ(67.5°)	-1.76/-3.14	-3.8/-3.05	-1.130/-2.9	0.57/-0.09	-1.18/-2.11	-2.5/-1.65	0.10/-1.73	3.28/-4.71	5.99/-8.4	4.64/-5.51	4.17/-1.8	-5.98/-4	-7.08/-3.8	-1.55/-0.58	-0.35/-1.22	-1.61/-1.04	0.29/-1.54	2.45/-3.13	3.72/-4.03	3.74/-2.81	1.56/-0.53	-0.17/-1.25	-2.42/-1.9	-0.64/-0.5
Θ(75°)	-2.73/-4.55	-5.39/-4.57	-2.42/-1.13	-3.12/-2.28	-3.18/-3.74	-4.09/-3.75	-1.850/-2.7	2.27/-3.93	4.94/-4.85	3.47/-0.84	-2.2/-4.64	-6.83/-9.12	-8.16/-5.15	-2.91/-1.93	-1.94/-2.44	-2.87/-2.52	-1.180/-3.3	1.41/-2.19	2.97/-3.49	3.32/-3.3	0.68/-0.5	-0.68/-1.07	-1.75/-1.39	-0.61/-1
Θ(82.5°)	-3.87/-5.66	-7.04/-6.45	-3.8/-2.25	-2.54/-3.66	-4.21/-4.45	-4.74/-5.1	-3.99/-1.8	0.632/-66	3.74/-53.7	2.08/-0.68	-4.13/-10.76	-9.33/-10.7	-8.22/-4.98	-2.94/-2.26	-2.59/-3.37	-4.25/-4.08	-2.43/-0.76	0.190/-95	1.94/-2.7	2.66/-1.6	-0.14/-1.22	-1.06/-1.26	-2/-2.02	-1.57/-2.07
Θ(90°)	-4.75/-6.62	-9.03/-10.17	-7.29/-5.29	-5.53/-6.94	-7.4/-6.83	-6.31/-6.1	-5.37/-3.55	-1.02/-1.16	2.38/-2.21	0.72/-1.97	-5.2/-7.91	-10.03/-11.54	-9.52/-6.17	-4.01/-3.56	-4.17/-5.2	-5.83/-5.32	-3.84/-2.56	-1.84/-0.89	0.51/-1.62	1.630/-36	-1.79/-3.11	-2.66/-2.4	-2.87/-3.02	-2.66/-3.07
Θ(97.5°)	-5.37/-7.1	-9.88/-12.31	-10.5/-8.49	-8.34/-9.61	-10.71/-10.33	-9.59/-8.62	-7.1/-4.88	-2.07/-0.26	1.380/-86	-1.24/-4.6	-8.42/-11.16	-12.18/-12.32	-10.21/-7.41	-5.95/-5.82	-6.06/-5.86	-5.67/-5.7	-5.29/-4.58	-3.8/-2.37	-0.61/-0.5	0.27/-1.27	-3.68/-5.19	-4.38/-3.85	-4.6/-4.94	-4.24/-4.11
Θ(105°)	-4.6/-7.53	-11.75/-14.64	-12.97/-10.64	-10.21/-13.3	-12.74/-11.94	-10.81/-10.55	-9.77/-14.3	-4.19/-1.5	-0.01/-0.15	-1.86/-4.87	-8.63/-12.28	-13.68/-12.57	-10.43/-8.59	-7.72/-7.3	-6.8/-5.87	-6.1/-7.26	-7.55/-6.19	-4.61/-3.15	-1.83/-1.14	-1.64/-3.37	-6.11/-7.65	-5.99/-5.12	-5.53/-4.94	-3.45/-3.12
Θ(112.5°)	-4.64/-8.59	-12.31/-13.38	-10.19/-7.21	-6.83/-8.77	-12.78/-16.23	-12.5/-10.24	-10.15/-9.92	-7.11/-4.26	-2.69/-2.59	-3.91/-6.33	-9.35/-12.33	-13.99/-12.79	-10.16/-8.27	-7.15/-6.06	-5.41/-6.93	-8.11/-1.24	-8.67/-6.26	-5.23/-4.75	-4.03/-3.5	-3.76/-5.02	-7.02/-7.72	-6.31/-5.9	-6.43/-5.07	-2.95/-2.71
Θ(120°)	-4.82/-8.8	-11.66/-13.49	-10.94/-6.95	-5.75/-6.8	-9.28/-13.6	-16.91/-11.95	-9.44/-9.37	-8.41/-5.84	-4.43/-4.87	-6.61/-5.58	-10.31/-12.58	-15.14/-15.53	-12.96/-10.24	-8.06/-6.69	-6.61/-8.22	-10.77/-10.58	-8.13/-6.42	-5.51/-5.03	-3.85/-3.18	-3.45/-4.82	-7.07/-8.49	-8.34/-6.4	-4.99/-5.4	-1.29/-2.75
Θ(127.5°)	-7.21/-10.75	-11.0																						



Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	5.02	4.81	4.78	4.86
Ant. 2 Max Gain (dBi)	4.58	4.5	5.92	5.25
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/37.5/345	Phi/37.5/337.5	Phi/52.5/7.5	Phi/45/7.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/105	Theta/67.5/135	Theta/60/135	Theta/52.5/120
Max Gain (dBi)	5.02	4.81	5.92	5.25
DG [1SS] (dBi)	4.76	4.81	4.38	4.58
DG [1SS] (dBi) Revised	5.02	4.81	5.92	5.25
DG [2SS] (dBi)	5.02	4.81	5.92	5.25

DG 1SS Result

[illegible]



Radiated Composite Gain Data of 5GHz

Appendix B

Θ(7.5°)	-2.09/-2.75	-3.34/-3.11	-4.07/-5.59	-6.97/-7.53	-8.55/-11.27	-11.97/-8.49	-6.34/-4.15	-2.55/-1.62	-0.51/0.07	0.29/0.36	0.19/-0.05	-0.67/-1.5	-2.06/-3.34	-5.1/-6.11	-7.32/-8.19	-9.43/-10.85	-10.4/-9.48	-8.38/-6.93	-5.87/-4.34	-3.3/-2.41	-1.35/-1.05	-0.92/-0.71	-1.07/-1.34	-1.4/-1.85
Θ(15°)	-0.9/-0.59	-0.79/-1.03	-1.21/-1.85	-3.08/-5.05	-7.3/-9.32	-11.72/-10.48	-6.8/-3.41	-1.54/-0.55	-0.07/-0.07	-0.31/-0.82	-1.5/-2.08	-2.49/-2.57	-2.71/-3.24	-4.05/-4.37	-4.72/-6.13	-8.23/-8.11	-6.82/-5.74	-4.89/-4.21	-3.53/-1.61	-0.29/0.59	1.17/1.49	1.51/37	1.01/0.55	-0.42/-0.89
Θ(22.5°)	0.55/-1.1	1.46/-1.37	0.77/0.02	-0.57/-1.29	-2.12/-2.77	-3.34/-4.29	-4.6/-3.22	-1.48/-0.31	-0.50/-0.48	-0.82/-0.87	-1.28/-2.17	-2.24/-1.73	-0.59/-0.24	-0.58/-1.49	-3.18/-4.39	-5.22/-4.86	-5.06/-4.81	-4.02/-3.53	-6.4/-2.34	-0.45/-23	2.93/4.9	3.33/17	2.72/3	1.59/0.56
Θ(30°)	0.63/0.86	0.78/0.21	0.03/0.14	0.26/0.69	0.92/0.86	0.73/0.48	-0.03/-1.4	-1.14/0.4	0.92/0.26	0.11/0.35	-0.27/-1.25	-2.1/-1.32	-1.5/-2.14	-3.16/-3.47	-3.5/-3.72	-3.76/-2.96	-3.02/-4.53	-4.56/-5.17	-6.53/-4.95	-1.67/0.98	2.38/3.21	3.53/5.15	2.59/2.47	1.99/1.06
Θ(37.5°)	0.59/0.72	0.99/0.77	-0.06/-0.67	-0.49/0.14	0.69/1.06	1.17/1.2	1.43/-0.11	-1.31/0.95	1.5/0.33	0.25/0.97	0.91/-0.39	-1.8/-1.34	-1.59/-0.71	-0.32/-1.6	-3.72/-6.35	-5.5/-2.31	-1.23/-1.88	-1.45/-1.12	-1.57/-1.58	0.76/0.62	3.32/3.41	3.25/2.87	2.74/2.85	2.66/1.85
Θ(45°)	0.81/1.8	2.77/2.82	2.05/1.6	1.5/0.96	-0.01/-0.41	-0.26/0.34	1.21/0.5	-0.82/-0.41	0.62/0.91	1.23/1.49	1.07/0.88	0.11/-0.17	0.05/0	0.99/-1.04	-3.45/-4	-1.69/0.4	0.51/-0.82	-1.88/-1.62	-0.9/-0.9	0.06/0.57	3.2/13	2.46/2.72	2.85/2.81	2.67/1.69
Θ(52.5°)	1.26/2.32	2.93/2.46	2.28/2.7	1.54/1.29	0.89/-0.24	0.47/1.46	2.29/1.85	0.9/0.22	1.15/1.75	0.81/0.07	0.84/1.91	2.3/1.86	1.17/-0.31	-2.33/-5.18	-3.16/-3.88	-2.89/-2.31	-1.38/-2.09	-1.97/-3.07	-0.54/0.22	1.51/3.04	2.93/2.28	1.72/2.34	2.4/2.83	2.72/1.58
Θ(60°)	0.38/1.22	1.68/1.81	2.73/0.33	1.67/1.48	1.86/0.43	1.21/1.39	1.12/0.99	1.13/0.93	0.44/1.41	0.43/1.13	0.41/1.27	2.28/2.69	1.85/1.78	-0.91/-2.57	-3.49/-8.21	-7.01/-7.36	-3.04/-3.14	-3.59/-3.52	0.27/1.41	2.27/2.35	2.07/1.94	1.25/1.37	1.87/3.32	3.09/1.36
Θ(67.5°)	-0.42/0.64	0.47/0.63	1.42/2.36	1.99/1.47	1.58/-0.1	-0.64/-0.08	0.88/0.84	-0.32/0.33	0.67/-0.62	-1.22/1.23	0.87/-0.84	1.56/0.95	1.61/1.66	0.37/-1.47	-1.61/-3.88	-1.81/-2.24	-0.99/-2.93	-0.04/0.01	0.73/1.11	2.45/1.48	1.69/1.89	0.66/0.14	1/2.77	1.21/-0.84
Θ(75°)	-1.78/-1.35	-2.39/-1.9	-0.23/0.82	0.84/0.22	0.07/-0.91	-1.55/-1.12	-0.81/0.28	-0.11/-0.59	-0.44/-2.57	-1.08/0.57	0.16/-1.84	-0.12/-0.52	-1.3/0.05	-0.88/-0.95	-1.23/-3.18	-0.8/0.44	-0.43/-1.97	0.96/0.38	-1.13/0.05	0.54/-0.66	0.66/0.71	-1.06/-1.57	-0.43/1.86	-0.04/-2.31
Θ(82.5°)	-3.35/-2.85	-3.76/-3	-2.28/-1.12	-0.95/-1.6	-1.58/-2.3	-3.02/-3.18	-1.94/-1.84	-1.98/-0.95	-1.54/-3.33	-1.49/-0.64	-0.39/-2.97	-4.15/-1.7	-3.94/-2.3	-2.41/-4.31	-3.09/-4.86	-2.21/0.4	-0.78/-1.93	-0.1/-1.6	-3.3/-1.72	-1.01/-1.18	-2.77/-3.66	-1.98/0.44	-6.74/-7.54	-1.81/-3.74
Θ(90°)	-4.38/-4.19	-5.48/-5.43	-4.46/-3.58	-3.27/-3.52	-3.41/-3.56	-2.97/-4.25	-4.22/-3.24	-3.19/-2.07	-4.4/-3.77	-2.51/-2.7	-2.5/-5.35	-4.08/-1.47	-5.97/-4.69	-2.97/-6.08	-3.72/-7.81	-4.76/0.09	-1.91/-3.98	-2.03/-3.54	-3.72/-2.64	-5.08/-4.12	-3.27/-3.23	-4.2/-4.82	-4.65/-1.9	-3.98/-4.87
Θ(97.5°)	-6.04/-6.29	-6.89/-7.28	-7.32/-5.34	-4.42/-6.09	-6.62/-6.06	-3.91/-5.28	-7.38/-5	-5.06/-4.11	-5.37/-5.53	-3.19/-4.12	-3.67/-6.48	-6.47/-3.47	-5.99/-8.7	-6.54/-7.57	-7.23/-6.81	-6.45/-2.32	-3.9/-5.57	-4.81/-4.47	-4.32/-3.43	-5.32/-6.09	-5.8/-6.04	-5.67/-6.56	-5.94/-5.69	-6.68/-6.39
Θ(105°)	-7.97/-7.92	-7.15/-7.97	-8.77/-7.44	-6.62/-7.79	-8.75/-7.96	-7.59/-7.2	-7/-7.96	-7.48/-6.84	-6.8/-7.73	-5.16/-3.88	-4.03/-6.32	-8.67/-4.63	-8.01/-9.75	-9.24/-8.95	-8.2/-6.87	-7.29/-9.7	-8.15/-5.69	-7.62/-5.28	-7.16/-6.95	-6.23/-9.41	-8.17/-9.05	-6.74/-7.54	-7.92/-7.64	-9.27/-6.8
Θ(112.5°)	-10.47/-10.53	-9.87/-8.84	-8.78/-7.51	-7.45/-8.82	-8.4/-9.28	-9.76/-10.26	-8.1/-7.73	-11.28/-9.26	-6.36/-9.69	-8.22/-6.58	-3.76/-5.89	-7.85/-10.92	-9.84/-11.29	-14.27/-7.07	-10.24/-7.68	-7.63/-12.52	-9.8/-10.27	-10.91/8.05	-10.85/-8.37	-6.71/-11.08	-5.96/-10.42	-4.56/-8.07	-9.07/-8.48	
Θ(120°)	-11.24/-11.01	-12.91/-10.81	-8.39/-7.93	-10.17/-10.14	-8.14/-10.51	-11.27/-12.18	-9.99/-9.31	-10.45/-13.62	-8.26/-11.18	-11.12/-6.23	-4.36/-4.57	-5.3/-5.4	-10.12/-8.83	-9.67/-11.95	-11.49/-9.26	-8.22/-7.78	-9.32/-14.79	-8.96/-15.42	-8.09/-9.49	-7.4/-8.84	-6.73/-7.36	-10.69/-12.88	-10.1/-9.73	-10.15/-10.72
Θ(127.5°)	-12.06/-6.95	-11.37/-13.52	-12.43/-9.27	-11.22/-9.42	-9.23/-12.75	-11.73/-13.86	-15.5/-14.12	-9.51/-10.31	-10.51/-9.32	-14.62/-9.99	-7.17/-6.38	-5.94/-6.79	-5.99/-9.38	-8.13/-12.23	-13.29/-8.37	-13.84/-15.67	-9.84/-12.61	-8.35/-9.43	-4.52/-6.88	-6.91/-9.04	-9.91/-8.04	-9.33/-12.46	-10.64/-11.35	-12.55/-12.63
Θ(135°)	-14.48/-14.25	-12.35/-11.46	-14.25/-13.04	-9.72/-8.19	-11.71/-11.86	-10.39/-10.41	-11.33/-14.98	-9.56/-7.01	-10.53/-10.5	-14.83/-13.65	-10.85/-12.97	-5.61/-6.77	-7.99/-11.75	-9.37/-11.62	-13.58/-13.96	-14.06/-14.39	-15.14/-14.09	-6.79/-5.05	-3.34/-4.6	-5.42/-8.04	-12.16/-13.7	-13.23/-14.24	-13.23/-11.17	-13.23/-12.64
Θ(142.5°)	-14.07/-13.17	-11.98/-11.58	-13.88/-14.91	-14.19/-10.58	-9.4/-9.03	-10.47/-10.61	-9.05/-10.33	-11.19/-10.04	-12.68/-10.52	-11.62/-12.1	-13.3/-13.39	-13.61/-10.8	-11.58/-12.02	-9.13/-12.69	-14.99/-15	-14.8/-12.23	-15.11/-14.07	-14.29/-11.73	-8.76/-9.68	-11.25/-13.92	-14.84/-14.81	-12/-11.75	-13.09/-13.88	-11.41/-12.7
Θ(150°)	-16.04/-14.33	-13.95/-14.66	-11.3/-9.05	-9.5/-10.39	-9.65/-7.92	-6.66/-6.37	-8.75/-10.74	-7.95/-6.89	-12.07/-11.97	-11.56/-15.37	-11.64/-12.94	-15.56/-11.42	-11.28/-12.93	-12.19/-10.88	-11.61/-13.85	-15.44/-10.06	-11.57/-11.85	-11.41/-14.39	-15.18/-15.08	-15.12/-15.36	-13.43/-11.08	-12.79/-13.54	-14.95/-15.28	-13.65/-14.02
Θ(157.5°)	-13.97/-13.26	-13.94/-13.43	-12.28/-11.67	-10.55/-10.02	-11.45/-12.03	-11.69/-11.38	-10.98/-9.33	-8.37/-8.16	-8.79/-10.23	-11.82/-12.86	-12.59/-11.08	-11.86/-14.72	-12.1/-9.95	-9.34/-9.12	-10.9/-12.66	-14.93/-13.92	-15.22/-13.9	-12.57/-13.6	-15.71/-15.57	-11.86/-13.68	-15.1/-15.57	-15.27/-13.29	-14.43/-14.69	-15.03/-13.87
Θ(165°)	-14.86/-15.94	-15.63/-13.66	-12.14/-12.5	-12.78/-11.3	-8.97/-8.18	-8.69/-10.57	-13.21/-13.43	-13.53/-14.7	-15.38/-14.23	-10.28/-9.44	-10.31/-11.83	-15.23/-14.81	-12.89/-13.89	-14.93/-15.66	-13.67/-13.22	-12.84/-15.46	-15.85/-13.48	-11.71/-11.33	-13.91/-14.55	-11.93/-10.22	-9.97/-11.43	-12.07/-12.1	-12.49/-13.38	-13.62/-12.89
Θ(172.5°)	-15.88/-15.07	-15.51/-14.47	-8.23/-7.9	-8.57/-9.03	-8.67/-9.23	-10.25/-12.44	-15.98/-15.78	-16.03/-14.07	-12.73/-13.88	-16.1/-15.54	-14.72/-15.05	-15.39/-15.29	-15.84/-13.67	-12.19/-11	-10.77/-10.66	-11.33/-10.39	-10.11/-10.22	-11.42/-12.57	-11.78/-10.74	-9.41/-8.45	-8.41/-8.71	-8.97/-8.84	-9.69/-11.07	-13.36/-15.24
Θ(180°)	-16.15/-13.13	-11.68/-12.67	-14.89/-15.27	-12.97/-11.44	-12.79/-13.65	-14.33/-14.25	-12.96/-12.82	-13.21/-12.77	-13.02/-13.77	-13.67/-13.99	-15.26/-15.25	-15.03/-15.3	-15.73/-15.98	-15.93/-15.05	-13.44/-13.91	-13.44/-12.98	-12.31/-11.8	-11.64/-12.05	-11.04/-11.04	-11.04/-10.96	-10.68/-11.58	-12.78/-12.53	-13.48/-15.57	-15.47/-15.46
Freq(Hz)	5.6GPol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-5.22/-3.46	-1.97/-1.37	-1.15/-0.95	-0.78/-0.39	-0.39/-0.49	-0.75/-1.58	-2.46/-3.15	-4.23/-5.33	-6.78/-8.5	-10.28/-13	-15.7/-14.7	-11.94/-8.68	-5.94/-0.05	-2.66/-2.53	-2.41/-1.78	-1.13/-0.68	-0.52/-0.79	-1.53/-1.89	-2.31/-2.6	-3.14/-4.07	-5.37/-7.09	-9.93/-12.5	-13.04/-11.89	-9.17/-5.99
Θ(7.5°)	-4.04/-3.36	-2.92/-2.37	-1.96/-1.67	-1.87/-1.68	-1.1/-0.87	-0.68/-0.98	-1.73/-2.45	-3.42/-4.25	-5.25/-6.51	-8.21/-10.18	-9.55/-7.22	-5.02/-2.73	-1.09/-0.13	0.41/0.71	0.46/0.43	0.79/0.73	0.69/0.11	-1.09/-1.8	-2.57/-3.32	-3.94/-5.26	-6.63/-8.34	-9.64/-13.48	-13.26/-11.43	-9.16/-6.54
Θ(15°)	-1.39/-0.87	-1.12/-1.87	-2.36/-2.78	-2.41/-1.7	-1.03/-0.19	0.23/-0.05	-0.67/-1.27	-1.95/-2.26	-2.83/-3.87	-5.59/-9.79	-7.48/-6.58	-4.38/-2.84	-1.44/-0.29	0.45/0.94	1.39/1.75	2.12/41	2.35/1.9	0.78/-0.56	-1.52/-2.63	-3.82/-5.35	-7.31/-8.84	-10.55/-10.12	-7.79/-5.73	-4.28/-2.81
Θ(22.5°)	1.47/1.91	1.69/1.47	1.61/1.78	1.66/1.25	0.97/0.88	0.76/0.38	3.27/3.08	3.18/3.64	3.48/2.85	3.5/0.66	-2.49/-5.08	-1.67/-0.31	0.41/0.68	0.8/0.96	0.85/0.88	1.33/1.83	2.41/2.41	1.58/0.28	-1.24/-2.5	-3.32/-4.46	-5.4/-6.13	-6.34/-4.87	-2.73/-1.51	-0.45/0.34
Θ(30°)	0.83/1.45	2.07/2.93	3.56/3.9	3.77/3.18	2.56/2.35	2.48/2.43	1.79/0.59	1.03/2.09	-0.31/-1.67	-2.83/-3.95	-3.99/-3.8	-2.14/-0.38	0.37/1.01	1.9/2.24	2.14/2.32	2.27/1.38	0.08/-1.41	-2.73/-3.37	-3.57/-3.14	-3.35/-3.62	-3.13/-2.52	-2.12/-1.98	-2.18/-3.05	-2.48/-0.5
Θ(37.5°)	0.72/0.72	1.27/2.29	3.33/4.18	4.38/4.19	3.8/3.06	2.28/2.46	2.98/2.39	1.78/2.03	1.54/1.06	1.1/-0.98	-3.54/-5.1	-2.62/-2.3	-1.69/0.17	1.33/1.6	1.36/1.2	1.18/0.81	0.21/-0.28	-1.97/-4.41	-3.84/-1.69	-0.72/-0.35	-0.04/-0.88	-2.6/-3.7	-4.49/-6.67	-1.81/0.32
Θ(45°)	-0.31/-0.51	0.65/1.8	2.64/3.89	4.18/3.13	2.15/2.02	2.18/2.85	3.27/3.08	3.18/3.64	3.48/2.85	3.5/0.66	-2.49/-5.08	-3.74/-2.11	-1.31/-1.27	-0.99/0.31	1.54/2.29	1.93/1.59	0.95/-0.17	-2.68/-2.51	-0.84/-0.08	0.46/1.15	1.28/-1.03	-6.64/-9.96	-7.38/-6.67	-4.9/-2.69
Θ(52.5°)	-2.23/-2.72	0.35/1.68	2.53/2.31	2.93/1.38	0.21/1.06	1.36/2.51	3.84/2.87	3.37/4.02	3.85/3.31	3.99/-0.15	-4.45/-6.58	-6.73/-2.73	-1.14/-2.6	-2.22/-0.37	2.01/2.09	0.45/0.79	0.38/-1.02	-3.05/0.15	1/0.27	0.3/0.55	-0.85/-1.69	-5.99/-5.29	-5.22/-7.39	-8.01/-4.9
Θ(60°)	-1.32/-1.61	0.83/1.46	2.83/2.59	1.46/0.53	-0.39/-1.2	1.51/1.43	3.12/2.39	2.67/2.95	2.79/3.38	3.59/1.15	-4.02/-6.55	-7.57/-5.38	-1.63/-1.68	-0.58/-2.73										

Gain Result

S29P	Pol.	Phi/Ant.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	0.25/-1.02	-2.02/-3.32	-5.26/-6.81	-8.56/-9.91	-10.18-9.3	-7.16/-5.53	-4.07/-2.72	-1.42/-0.41	0.42/0.95	1.32/1.57	1.57/1.29	0.86/0.23	-0.38/-0.98	-1.67/-2.66	-4.26/-6.5	-9.83/-14.92	-18.66/-16.68	-11.12/-7.51	-4.76/-2.85	-1.57/-0.62	0.02/0.44	0.72/0.88	0.97/0.82	0.56/0.18
Θ(7.5°)	0.80/3.1	-0.24/-1.07	-2.64/-4.58	-7.09/-10.45	-14.71/-16.66	-11.64/-8	-5.6/-3.9	-2.41/-1.18	-0.28/0.31	0.69/0.84	0.85/0.74	0.53/0.27	-0.15/-0.61	-1.14/-1.75	-2.57/-3.72	-5.16/-22	-6.93/-6.53	-5.42/-3.82	-2.23/-1.04	-0.06/0.61	0.95/1.13	1.28/1.37	1.44/1.38	1.26/1.1
Θ(15°)	0.54/0.17	-0.13/-0.43	-1.06/-1.95	-3.11/-4.56	-6.15/-7.55	-8.89/-9.21	-7.74/-5.97	-4.44/-3	-1.66/-0.68	0.03/0.65	1.19/1.63	2.01/2.29	2.13/-1.27	1.82/-1.22	0.31/-0.92	-2.09/-2.84	-3/-2.41	-1.65/-0.71	0.05/0.66	1.25/1.62	1.73/1.72	1.66/1.64	1.63/1.47	1.19/0.91
Θ(22.5°)	1.72/1.47	1.38/1.18	0.68/-0.23	-1.74/-3.75	-5.44/-6.15	-5.47/-4.06	-3.01/-2.32	-1.68/-0.88	0.11/0.77	1.21/1.49	1.56/1.66	1.91/2.1	1.92/1.38	0.48/-0.55	-1.74/-2.75	-3.48/-3.67	-3.58/-3.46	-3.19/-2.6	-1.98/-1.31	-0.59/0.04	0.55/1.08	1.71/2.29	2.59/2.52	2.15/1.74
Θ(30°)	3.28/2.93	2.81/2.69	2.38/1.65	0.47/-0.62	-1.07/0.55	0.34/0.93	0.92/0.69	0.62/0.98	1.66/2.13	2.05/1.48	0.82/0.31	0.36/0.59	0.44/-0.01	-0.61/-1.44	-2.96/-3.15	-6.62/-6.44	-5.15/-4.42	-4.03/-3.56	-2.87/-1.73	-0.57/0.16	0.85/1.64	2.41/2.26	3.93/1.49	3.96/3.53
Θ(37.5°)	3.85/3.63	3.47/3.14	2.68/2.31	2.02/2.11	2.06/1.91	2.09/2.45	2.72/66	2.51/2.19	1.81/1.68	1.54/1.42	1.08/0.35	0.45/-0.17	0.31/0.09	0.27/-1.63	-4.91/-5.64	-3.67/-2.25	-1.40/-0.91	-0.42/-0.25	0.51/1.6	2.63/52	3.96/4.2	4.54/9	5.024.52	
Θ(45°)	3.17/3.37	3.57/3.27	2.72/3	2.52/2.63	2.65/2.69	2.93/31	3.26/32	3.33/95	2.12/1.55	1.77/1.91	1.44/0.59	0.33/1.11	1.48/0.17	-1.93/-4.2	-0.50/-3.04	-1.41/-0.03	0.93/0.53	-1/-1.95	-2.07/-1.77	-0.58/1.63	4.71/4.84	4.68/4.73	54.12	
Θ(52.5°)	2.94/3.21	3.58/2.78	1.74/0.47	0.42/0.6	0.68/1.32	2.18/2.38	2.27/2.63	2.84/2.53	1.78/0.49	0.73/1.3	1.33/0.74	0.62/1.58	0.96/-1.43	-4.07/-5.87	-5.11/-4.33	-4.05/-3.22	-2.31/-2.48	-4.73/-5.22	-3.12/-1.4	-0.27/1.71	3.22/4.2	4.13/4.4	4.44/3.2	4.55/3.78
Θ(60°)	2.33/35	3.41/2.18	1.18/0.89	0.69/-0.01	-0.35/-0.06	0.91/63	1.71/62	1.63/0.98	0.68/0.25	0.79/-0.61	0.92/-0.43	0.57/0.32	-0.24/-1.97	-2.81/-2.3	-1.52/-2.33	-5.22/-6.43	-5.46/-3.6	-1.79/0.21	1.04/2.37	3.22/3.85	3.53/4.11	4.22/3.53	3.88/2.93	
Θ(67.5°)	1.92/2.75	2.96/2.04	0.64/0.48	0.55/-0.36	-0.91/-0.96	-0.06/0.75	1.24/1.38	1.34/0.66	-0.24/-1.01	-0.62/-0.42	-0.76/-1.83	-1.31/-0.45	-0.65/-1.87	-1.99/-1.56	0.54/0.75	-2.23/-4.66	-4.32/-2.21	-1.34/-0.03	1.14/1.91	2/2.12	1.39/2.33	3.07/2.72	2.73/2.69	
Θ(75°)	1.01/1.52	1.03/1.01	0.2/0.15	0.07/-0.12	-1.99/-2.32	-1.99/-1.21	-0.37/-0.68	-1.56/-2.27	-2.57/-2.3	-2.42/-2.79	-2.09/-2.68	-2.43/-2.23	-1.15/-1.48	-1.05/-2.39	-3.27/-2.75	0.05/0.98	-2.15/-4.54	-4.22/-1.96	-0.98/0.6	-0.35/0.55	0.5/0.07	-1.15/0.31	1.61/1.26	0.81/1.38
Θ(82.5°)	-0.81/-1.05	-0.98/-1.11	-1.83/-2.75	-1.99/-2.03	-2.19/-2.9	-2.94/-2.35	-1.93/-2.22	-2.74/-2.39	-2.85/-3.32	-2.81/-3.42	-3.49/-5.58	-4.75/-9.43	-3.83/-3.49	-2.33/-3.39	-4.21/4	-1.19/-0.91	-4.17/-4.79	-4.73/-3.38	-2.46/-1.73	-3.21/-3.82	-2.21/8.7	-3.76/-2.6	-1.77/-1.07	-1.04/-0.49
Θ(90°)	-3.85/-2.86	-4.04/-3.77	-3.03/-3.64	-3.61/-3.4	-3.23/-3.59	-4.73/-4.73	-3.44/-4.15	-4.56/-4.42	-4.28/-4.89	-5.15/-7.36	-5.96/-5.55	-6.88/-7.94	-6.64/-7.4	-5.15/-5.83	-7.77/-5.9	-6.43/-2.86	-4.81/-5.31	-4.86/-5.25	-4.74/-2.92	-1.65/-2.3	-2.21/8.32	-2.84/-2.76	-3.9/-3.2	-2.84/-2.76
Θ(97.5°)	-6.34/-7.8	-5.26/-7.1	-5.61/-6	-7.8/21	-7.2/-5.21	-4.07/-4.71	-5.78/-6.86	-7.71/8.01	-7.59/-6.61	-5.6/-8.52	-8.13/-7.37	-7.79/-9.14	-8.65/-10.39	-9.45/-8.21	-13.48/-11.57	-8.36/-5.12	-6.05/-7.46	-8.49/-10.41	-7.74/-6.37	-4.65/-5.09	-4.8/-6.73	-9.63/-5.72	-4.87/-4.5	-4.38/-5.26
Θ(105°)	-6.12/-6.63	-6.62/-8.51	-9.45/-9.45	-9.5/-9.57	-10.48/-10.2	-10.39/-7.98	-6.86/-10.8	-8.8/-10.2	-9.71/-8.81	-10.11/-11.2	-10.22/-11.36	-11.65/-8.19	-9.52/-10.9	-10.4/-11.4	-19.17/-14.16	-10.15/-7.99	-12.62/-13.19	-8.67/-8.02	-8.62/-10.16	-8.7/-6.56	-7.59/-6.81	-8.13/-5.08	-4.98/-6.52	
Θ(112.5°)	-9.29/-8.7	-7.69/-10.05	-10.44/-10.19	-10.32/-10.69	-11.59/-11.6	-10.88/-8.74	-6.96/-10.03	-12.69/-12.33	-13.95/-13.1	-12.09/-14.21	-12.02/-11.04	-9.68/-15.86	-11.85/-13.24	-11.91/-13.57	-18.85/-11.06	-13.82/-18.35	-12.81/-14.51	-15.78/-12.2	-11.61/-11.75	-15.87/-17.57	-16.01/-10.03	-8.63/-7.27	-8.53/-7.62	-6.54/-7.94
Θ(120°)	-10.01/-13.02	-7.71/-6.88	-8.7/9.73	-8.71/-9.33	-10.32/-10.12	-10.36/-10.36	-10.4/-12.75	-14.85/-13.24	-12.05/-11.65	-13.65/-16.96	-12.65/-14.14	-11.76/-14.08	-14.01/-11.98	-12.93/-14.16	-18.37/-19.19	-18.62/-16.62	-14.79/-15.47	-14.65/-13.38	-16.27/-18.56	-19.19/-18.9	-17.44/-15.8	-9.59/-7.82	-11.61/-11.89	-9.13/-9.03
Θ(127.5°)	-9.98/-13.78	-14.97/-10.16	-8.54/-8.54	-11.05/-11.17	-10.31/-13.76	-18.1/7.63	-13.88/-16.67	-18.64/-13.17	-13.19/-12.58	-13.85/-12.47	-16.07/-17.95	-10.7/-12.13	-14.14/-18.11	-17.09/-18.33	-18.45/-12.7	-13.87/-17.86	-19.15/-18.55	-18.52/-17.23	-15.87/-12.41	-16.3/-18.85	-11.52/-8.9	-12.38/-18.4	-13.76/-11.5	
Θ(135°)	-14.21/-10.32	-13.63/-18.71	-17.53/-13.96	-11.79/-12.13	-11.44/-10.32	-10.2/-10.56	-12.48/-13.93	-15.05/-17.51	-15.62/-16.92	-13.43/-12.14	-11.06/-15.08	-17.61/-18.76	-19.29/-15.3	-10.27/-10.56	-18.57/-11.23	-10.67/-17.2	-18.04/-18.28	-19.65/-18.84	-17.71/-17.47	-16.87/-13.31	-15.68/-18.13	-13.19/-9.52	-10.26/-15.96	-18.19/-17.14
Θ(142.5°)	-18.85/-13.5	-12.73/-18.64	-19.36/-16.76	-12.09/-10.58	-11.34/-13.94	-15.02/-13.52	-14.1/-17.06	-17.89/-18.48	-18.62/-16.26	-19.23/-18.06	-18.71/-13.62	-18.19/-18.02	-18.74/-18.45	-14.6/-16.36	-17.94/-19.1	-15.68/-12.39	-15.6/-18.41	-18.5/-16.64	-16.26/-16.78	-18.06/-17.73	-16.99/-16.47	-17.9/-17.9	-16.68/-18.47	-18.71/-17.3
Θ(150°)	-17.04/-18.08	-15.26/-10.78	-10.99/-14.61	-12.64/-16.16	-18.01/-14.48	-14.73/-16.94	-18.01/-14.38	-19.14/-18.17	-17.38/-18.69	-18.62/-13.33	-18.51/-15.64	-16.11/-17.81	-18.92/-17.4	-12.03/-11.71	-14.23/-18.14	-18.67/-18.32	-19.25/-18.89	-18.16/-18.12	-18.37/-18.65	-16.34/-18.85	-17.69/-15.47	-18.22/-19.02	-15.76/-15.23	-15.69/-17.45
Θ(157.5°)	-16.68/-18.75	-17.74/-17.66	-15.01/-14.17	-13.94/-14.63	-15.48/-16	-14.78/-18.78	-19.41/-18.04	-18.3/-18.26	-19.44/-19.02	-17.57/-19.29	-17.67/-16.79	-17.22/-18.55	-18.97/-17.19	-18.27/-17.96	-18.36/-18.2	-18.56/-17.4	-18.74/-18.71	-18.61/-18.13	-19.37/-18.29	-17.77/-17.49	-17.77/-18.36	-17.64/-19.27	-17.71/-17.98	-18.22/-17.96
Θ(165°)	-17.26/-15.05	-14.37/-14.72	-14.52/-14.29	-14.39/-15.44	-14.67/-13.94	-12.86/-12.37	-12.79/-13.34	-13.79/-13.78	-13.8/-13.93	-13.61/-13.52	-15.45/-19	-18.34/-18.11	-17.39/-13.13	-17.45/-18.17	-17.45/-18.88	-18.43/-18.5	-18.8/-18.74	-17.99/-18.8	-18.21/-18.49	-18.05/-18.59	-18.81/-19.2	-18.44/-19.03	-17.61/-18.11	-18.09/-18.19
Θ(172.5°)	-15.56/-14.83	-13.86/-12.32	-12.14/-13.07	-14.12/-14.88	-15.37/-15.9	-17.02/-19.16	-18.47/-18.37	-19.11/-18.04	-17.58/-19.28	-18.49/-19.14	-19.18/-19.19	-17.78/-19.28	-18.98/-19.24	-17.31/-18.29	-19.35/-17.75	-18.14/-18.48	-18.48/-18.74	-19.08/-18.49	-18.62/-18.07	-17.93/-17.6	-17.91/-18.87	-18.39/-18.3	-18.41/-18.94	-17.95/-17.58
Θ(180°)	-18.95/-17.81	-17.48/-18.31	-18.5/-18.59	-18.67/-18.33	-17.93/-18.05	-17.02/-18.65	-18.47/-18.72	-17.22/-18.01	-18.94/-18.47	-17.59/-15.78	-17.47/-16.48	-18.64/-18.5	-18.05/-18.44	-17.64/-18.01	-18.54/-18.36	-17.42/-19.27	-17.82/-17.43	-18.52/-17.63	-18.62/-18.63	-17.84/-18.39	-18/-18.34	-18.59/-17.21	-18.61/-18.65	-17.97/-18.4
Freq(Hz)	5.25GPol.	Theta/Ant.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ(0°)	-6.13/-4.9	-3.14/-1.66	-0.81/0.02	-0.08/-0.48	-0.64/-0.11	0.4/0.45	-0.06/-0.88	-1.86/-3.12	-4.82/-6.7	-9.27/-13.24	-18.9/-17.49	-13.18/-9.25	-6.89/-5.43	-4.12/-2.71	-1.29/-0.14	0.55/0.66	0.38/0.19	0.02/-0.25	-0.63/-1.25	-2.14/-3.25	-4.68/-6.49	-9.39/-13.97	-18.13/-17.7	-13.26/-9.02
Θ(7.5°)	-9.07/-6.1	-4.65/-2.83	-1.09/0.21	0.65/0.30	-0.16/0.13	0.98/1.9	0.92/-0.2	-1.79/-3.65	-5.83/-2.55	-10.68/-12.95	-13.56/-13.23	-10.56/-8.86	-7.38/-6.05	-4.72/-3.29	-1.79/-0.46	0.4/0.66	0.03/-0.17	-0.14/-0.33	-0.77/-1.47	-2.31/-3.28	-4.64/-6.34	-8.66/-11.81	-15.46/-17.42	-13.96/-10.43
Θ(15°)	-9.37/-7.1	-6.19/-4.01	-1.97/-0.52	0.21/0.37	0.15/0.29	0.56/1.55	1.49/0.79	-0.25/-1.63	-3.27/-5.26	-7.61/-9.92	-11.14/-11.76	-11.41/-11.06	-9.71/-8.07	-5.85/-4.1	-2.38/-0.96	0.15/0.47	-0.03/-0.02	-1.73/-1.23	-2.44/-3	-3.95/-5.47	-7.15/-10.69	-14.83/-19	-17.88/-15.28	-13.32/-11.56
Θ(22.5°)	-9.18/-8.72	-7.18/-5.17	-3.39/-1.94	-0.95/-0.42	-0.12/0.32	1.05/1.35	1.0/22	-0.76/-1.72	-2.8/-4.24	-6.3/-8.85	-11.94/-12.93	-12.79/-14.6	-12.56/-7.29	-3.56/-1.56	-0.44/0.04	0.06/-0.53	-1.92/-3.81	-5.33/-5.97	-5.8/-5.61	-6.13/-7.68	-10.1/-13.84	-18.55/-17.84	-15.09/-11.53	-10.07/-9.26
Θ(30°)	-9.78/-9.8	-7.85/-5.9	-4.08/-2.45	-1.06/-0.77	-0.37/-0.42	0.03/0.46	0.61/0.17	-1.03/-2.3	-2.82/-4.77	-7.68/-13.7	-14.27/-11.79	-10.48/-14.22	-13.98/-6.68	-3.18/-1.65	-0.76/-0.26	-1.40/-0.54	-6.23/-4.78	-6.28/-5.29	-6.08/-8.82	-13.45/-15.83	-18.95/-17.85	-13.36/-9.95	-8.29/-8.39	
Θ(37.5°)	-7.32/-8.1	-6.75/-4.54	-3.44/-2.64	-1.86/-1.75	-2.03/-1.78	-0.86/-0.06	0.23/-0.05	-1.12/-23	-3.66/-3.86	-7.75/-13.15	-16.59/-13.75	-13.18/-18.96	-13.48/-8.5	-6.33/-3.82	-2.2/-1.6	-1.58/-2.02	-2.93/-4.19	-5.22/-5.19	-6.48/-5.89	-5				



Radiated Composite Gain Data of 5GHz

Appendix B

Θ(22.5°)	2.31/98	1.460/77	-0.4/-179	-2.98/-394	-4.35/-4.4	-4.38/-4.27	-3.39/-2.21	-1.34/-0.67	-0.10/2	0.420/47	0.15/-0.28	-0.290/37	0.951/04	0.45/-0.54	-1.7/-2.85	-3.88/-4.01	-3.61/-3.24	-2.94/-2.7	-2.25/-1.43	-0.181/37	2.62/3.1	3.58/3.6	3.33/2.95	2.54/2.43
Θ(30°)	2.71/2.75	2.24/1.24	0.14/-0.59	-0.58/-0.19	0.09/-0.1	-0.26/-0.3	-0.58/-0.95	-0.810/-0.9	0.871/1.7	1.49/-1.6	0.98/0.33	-0.030/-33	0.58/-0.08	-1.27/-1.7	-1.56/-1.99	-2.74/-2.81	-2.61/-2.76	-3.87/-5.18	-5.35/-4.08	-1.680/-65	2.32/3.27	3.58/3.72	3.88/3.93	3.52/2.9
Θ(37.5°)	2.93/0.1	2.95/2.71	2.16/1.51	1.21/33	1.160/67	0.40/89	1.21/0.7	0.28/1.16	2.19/2.32	2.51/2.42	1.91/0.95	0.180/57	0.490/51	0.740/0.5	-1.71/7	-8.15/-5.65	-2.09/-1.44	0.5/2.04	2.99/3.47	3.6/3.93	4.17/4.3	3.6/3.93	3.97/3.14	
Θ(45°)	3.18/4.16	4.4/74	3.42/2.97	2.49/1.78	1.32/1.03	0.52/0.87	1.35/1.11	0.63/1.09	2.42/97	3.26/3.07	2.57/1.92	0.87/0.63	1.21/51	0.71/-0.7	-3.33/-2.32	0.02/1.24	1.37/0.78	0.17/-0.42	-1.32/-0.51	1.38/2.5	3.29/3.62	3.83/4.61	4.67/4.65	4.05/2.82
Θ(52.5°)	3.65/4.78	4.51/3.63	3.14/3.06	2.86/2.49	2.41/2.01	1.52/1.88	1.82/0.99	1.36/2.54	3.07/3.03	2.75/2.42	2.64/2.1	1.56/1.17	1.07/-0.19	-2.77/-3.73	-3.39/-2.08	-1.2/-0.25	0.49/-0.11	-1.82/-3.52	-4.34/-3.27	-0.16/1.73	2.93/36	3.86/4.64	4.54/-4.5	4.01/3.3
Θ(60°)	2.64/3.54	3.17/2.76	2.62/91	2.78/2.6	2.74/2.7	1.9/1.43	1.25/0.37	0.82/35	2.67/2.53	2.31/1.88	2.56/2.53	1.81/72	1.83/1.53	0.03/-1.63	-5.22/-2.74	-7.74/-6.19	-3.33/-3.58	-6.19/-7.45	-4.14/-1.47	-0.330/81	1.97/2.94	3.17/3.72	3.68/3.83	3.19/2.49
Θ(67.5°)	1.69/2.4	1.85/1.71	1.7/12	2.19/2.23	2.2/2.01	1.15/0.75	0.38/-1.14	-0.35/1.59	1.96/1.14	0.94/1.14	1.56/1.29	1.11/0.41	1.97/2.49	1.57/-0.9	-4.68/-2.49	-0.37/-0.36	-1.77/-3.08	-2.22/-1.58	-0.56/0.81	0.71/0.89	1.29/2.23	2.33/2.4	2.53/2.86	1.54/1.32
Θ(75°)	0.18/0.79	-0.49/0.26	0.87/0.58	0.91/1.19	0.86/0.6	0.24/0.13	-0.99/-2.76	-1.77/0.26	0.19/-0.65	-0.69/-0.02	0.23/0.26	-0.49/-1.16	0.19/1.6	1.3/-0.49	-3.93/-1.54	1.1/1.62	-0.2/-1.31	0.42/0.63	0.13/0.72	0.27/0.14	-0.12/0.52	0.46/0.26	0.45/1.33	0.01/-0.34
Θ(82.5°)	-1.49/-1.04	-2.06/-1.36	-0.71/-1.17	-0.64/-0.28	-0.57/-0.82	-1.22/-1.66	-3.16/-4.34	-3.37/-1.6	-1.68/-2.23	-1.67/-1.84	-1.9/-2.04	-3.71/-4.31	-2.2/-0.68	-1.04/-2.8	-5.41/-3.41	-0.22/0.67	-1.11/-1.21	-0.01/-0.42	-1.44/-1.07	-1.19/-1.02	-1.87/-1.73	-1.82/-1.75	-0.82/0.09	-1.44/-2.02
Θ(90°)	-2.79/-2.48	-3.85/-3.82	-2.81/-2.76	-2.23/-2.23	-2.7/-3.04	-2.85/-3.31	-5.88/-6.66	-5.29/-3.3	-4.07/-4.04	-4.22/-4.3	-3.86/-3.72	-5.15/-5.44	-4.95/-3.52	-3.94/-4.61	-7.23/-7.64	-3.05/-0.55	-2.07/-2.76	-1.92/-3.36	-5.14/-3.45	-3.57/-2.99	-3.84/-4.4	-4.46/-4.34	-2.98/-2	-3.29/-3.55
Θ(97.5°)	-4.58/-5.01	-5.52/-4.66	-6/-4.18	-3.27/-4.59	-5.24/-4.64	-4.32/-5.5	-8.97/-9.02	-7.76/-1.67	-17.1/-6.61	-5.3/-6.19	-5.84/-6.03	-7.54/-9.97	-6.17/-7.95	-7.69/-7.49	-11.03/-10.58	-5.81/-3.56	-5.4/-5.47	-7.41/-4.02	-4.86/-5.3	-7.12/-9.17	-6.57/-6.07	-4.78/-4.44	-5.49/-5.72	
Θ(105°)	-6.92/-7.14	-7.14/-7.03	-8.22/-6.24	-5.53/-6.24	-7.71/6.91	-6.43/-8.27	-9.74/-9.91	-9.34/-8.96	-8.97/-1.4	-8.71/-8.47	-7.75/-7.28	-8.4/-9.02	-7.78/-10.55	-11.03/-9.05	-12.81/-11.4	-9.05/-7.86	-8.57/-12.96	-11.09/-5.73	-7.36/-8.49	-9.88/-15.77	-19.29/-8.69	-5.55/-6.33	-6.79/-8.01	
Θ(112.5°)	-10.2/-10.29	-9.89/-8.71	-8.62/-7.35	-7.36/-8.11	-7.6/-8.87	-9.41/-9.99	-9.73/-10.91	-13.38/-12.72	-10.34/-9.34	-12.13/-11.79	-10.17/-9.48	-9.23/-10.78	-7.22/-12.24	-11.91/-11.38	-18.73/-12.69	-13.23/-14.44	-15.42/-13.19	-15.16/-18.19	-13.15/-9.41	-13.02/-13.53	-10.52/-16.85	-14.25/-10.01	-7.9/-7.46	-8.4/-9.62
Θ(120°)	-11.35/-11.11	-13.86/-11.29	-9.13/-10.08	-10.42/-9.98	-9.63/-10.9	-12.3/-13.01	-12.53/-13.87	-16.88/-15.05	-12.02/-11.81	-14.1/-12.01	-11.57/-10.92	-11.24/-10.53	-10.83/-12.25	-13.67/-15.11	-18.78/-15.18	-12.63/-18.14	-17.48/-17.03	-17.95/-18.15	-17.99/-14.73	-16.81/-15.02	-10.79/-13.07	-18.04/-14.1	-9.67/-9.09	-9.8/-10.92
Θ(127.5°)	-12.43/-10.83	-11.59/-14.86	-13.95/-12.19	-11.31/-10.04	-11.1/-13.99	-15.94/-17.05	-18.2/-10.87	-16.4/-12.89	-11.82/-14	-16.63/-13.45	-12.23/-18.89	-14.21/-11.52	-12.34/-13.29	-12.15/-18.52	-17.15/-12.75	-16.01/-18.47	-17.99/-18.35	-18.57/-16.68	-18.15/-9.3	-19.14/-17.56	-14.52/-11.94	-13.73/-19.72	-11.51/-12.07	-13.34/-13.16
Θ(135°)	-16.48/-15.58	-13.98/-16.2	-16.31/-14.43	-12.17/-11.35	-12.75/-13.8	-14.82/-18.68	-19/-18.2	-15.41/-13	-14.57/-16.19	-18.01/-15.39	-15.4/-16.41	-14.36/-15.96	-16.94/-18.14	-14.88/-13.05	-19.1/-16.75	-17.84/-18.01	-19.29/-18.55	-18.18/-12.42	-11.23/-12.05	-14.21/-18.19	-18.34/-14.89	-11.92/-16.97	-14.17/-11.79	-14.44/-13.79
Θ(142.5°)	-15.59/-17.22	-17.78/-16.61	-19.63/-17.61	-16.12/-14.56	-13.6/-11.9	-11.7/-14.11	-18.35/-18.54	-18.38/-18.67	-18.53/-18.51	-18.96/-16.34	-14.3/-17.22	-16.3/-17.87	-17.66/-17.07	-18.92/-19.43	-18.44/-17.36	-17.39/-17.6	-18.5/-16.4	-15.24/-18.09	-18.87/-18.71	-17.4/-16.83	-13.18/-15.44	-18.13/-15.71	-14.37/-18.17	
Θ(150°)	-18.95/-17.38	-16.54/-16.49	-16.19/-16.34	-18.04/-18.41	-18.72/-16.28	-13.56/-13.41	-16.5/-19.18	-17.15/-18.01	-19.1/-17.41	-19.3/-18.47	-16.12/-14.89	-15.87/-15.09	-18.07/-18.37	-18.96/-15.01	-15.88/-19.04	-17.96/-18.12	-17.37/-18.92	-18.13/-18.98	-18.77/-18.56	-17.69/-18.3	-17.92/-15.69	-17.64/-19.17	-17.92/-19.17	
Θ(157.5°)	-15.32/-14.27	-16.15/-18.25	-19.33/-18.94	-17.6/-16.62	-17.86/-17.97	-17.9/-18.53	-18.81/-19.31	-18.14/-17.95	-19.14/-18.31	-18.7/-17.22	-19.35/-17.61	-17.17/-18.23	-19.01/-17.5	-15.46/-14.38	-17.8/-17.56	-17.57/-17.41	-18.54/-19.21	-18.49/-18.05	-18.53/-13.42	-16.12/-18.85	-18.17/-18.83	-18.11/-16.68	-17.53/-17.84	-19.07/-18.36
Θ(165°)	-18.78/-18.89	-19.38/-19.52	-17.73/-18.77	-18.19/-18.5	-18.36/-18.73	-18.02/-18.62	-18.07/-16.52	-16.05/-16.7	-18.26/-19.43	-17.73/-18.11	-18.83/-17.33	-18.04/-17.2	-17.72/-18.63	-17.76/-18.16	-16.68/-19.25	-18.18/-18.84	-18.69/-17.32	-18.03/-17.96	-17.7/-17.7	-18.37/-18.96	-17.54/-17.8	-18.52/-19.03	-18.77/-18	-18.85/-18.41
Θ(172.5°)	-18.5/-17.22	-19.03/-18.07	-19.62/-18.44	-17.66/-18.67	-17.82/-18.42	-18.03/-18.07	-18.88/-18.59	-19.08/-18.67	-17.97/-18.61	-19.34/-18.15	-17.99/-18.73	-18.5/-18.78	-18.86/-18.07	-18.49/-17.98	-19.08/-17.54	-18.62/-18.82	-18.6/-17.78	-18.91/-18.6	-18.25/-19.3	-19.11/-18.78	-18.95/-17.63	-18.89/-17.83	-18.38/-18.06	-18/-19.02
Θ(180°)	-15.49/-17.62	-15.38/-15.3	-16.86/-18.26	-17.45/-16.37	-15.53/-15.56	-16.48/-17.37	-17.95/-17.99	-18.67/-19.24	-18.97/-17.91	-17.78/-18.06	-17.41/-18.74	-17.6/-18.1	-18.35/-18.98	-18.77/-18.87	-18.75/-19.08	-18.04/-18.17	-18.36/-18.74	-17.99/-19.98	-18.49/-18.73	-18.68/-17.88	-17.62/-18.7	-19.31/-18.24	-18.8/-18.48	-19.14/-16.57
Freq(Pol)	5.6GPol	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°)	-4.99/-3.08	-1.59/-0.64	-0.41/-0.05	0.15/0.52	0.71/0.59	0.11/-0.59	-1.44/-2.28	-3.31/-4.4	-5.74/-7.68	-10.31/-14.23	-18.71/-17.38	-12.08/-7.9	-5.08/-3.29	-2.08/-1.67	-1.39/-0.65	0.43/1.13	1.32/1.06	0.80/1.7	-0.19/-0.58	-1.21/-2.34	-3.90/-6.16	-9.37/-15	-18.46/-16.21	-10.46/-7.21
Θ(7.5°)	-6.13/-4.24	-2.79/-1.04	-1.11/-0.48	-0.030/-39	0.95/1.29	1.42/1.12	0.33/-0.6	-1.49/-2.5	-3.93/-6.24	-10.08/-17.45	-18.93/-12.01	-7.39/-4.32	-2.41/-0.5	-3.38/-0.18	-0.2/-0.23	0.090/58	0.89/0.65	-0.1/-1.1	-1.93/-2.6	-3.35/-4.52	-6.18/-8.3	-11.29/-17.8	-19/-18.47	-12.37/-8.92
Θ(15°)	-6.37/-4.56	-3.04/-2.08	-1.45/-1.06	-0.44/0.31	0.91/1.5	1.82/1.98	1.63/0.86	-0.21/-1.55	-3.43/-6.51	-10.29/-16.6	-15.39/-6.51	-1.17/-0.5	1.57/1.64	-0.22/-0.2	0.070/09	0.53/1.15	1.57/1.64	1.15/0.36	-0.56/-1.78	-3.5/-5.93	-9.04/-13	-18.94/-18.72	-16.97/-13.11	-10.87/-8.32
Θ(22.5°)	-6.42/-4.24	-2.52/-1.25	-0.17/0.58	0.95/1.03	1.19/1.38	1.52/1.47	1.26/1.04	0.38/-1.14	-3.67/-7.05	-12.9/-18.28	-12.4/-6.98	-3.68/-2.24	-2.11/-1.99	-1.26/-0.22	0.54/0.78	0.7/0.64	0.59/0.24	-0.66/-1.74	-2.59/-3.46	-4.63/-6.59	-9.62/-13.92	-18.61/-16.95	-11.67/-9.22	-8.47/-8.36
Θ(30°)	-6.84/-5.4	-1.71/0.04	0.68/0.86	0.75/0.55	0.62/0.95	1.41/1.61	1.32/0.8	0.22/0.78	-3.02/-5.66	-10.51/-17.91	-13.93/-8.1	-4.55/-3.77	-5/-4.02	-1.4/0.17	0.86/0.92	0.25/-1.07	-2.61/-3.4	-5.61/-6.15	-6.65/-6.81	-6.96/-7.77	-9.14/-12.21	-15.91/-15.38	-11.89/-11.84	-10.78/-8.32
Θ(37.5°)	-8.63/-4.97	-2.12/-1	-0.61/-0.65	-1.15/-1.24	-0.9/-0.62	-0.27/0.31	0.52/-0.49	-1.95/-2.49	-3.87/-5.79	-8.07/-13.84	-17.98/-10.64	-6.81/-7.89	-6.4/-2.4	-0.97/-0.45	0.25/0	-1.43/-3.03	-3.93/-4.23	-4.78/-5.91	-6.68/-5.86	-5.44/-5.85	-6.82/-12.22	-18.61/-16.31	-10.42/-14.09	-11.49/-8.01
Θ(45°)	-8.14/-6.46	-4.96/-3.49	-2.6/-2.69	-3.57/-3.25	-2.76/-2.72	-2.49/-1.98	-1.55/-1.92	-3.01/-3.98	-4.68/-8.48	-9.09/-18.27	-15.19/-12.42	-8.78/-9.98	-7.78/-4.13	-3.03/-1.76	-0.29/-0.44	-1.72/-3.59	-5.64/-6.98	-5.92/-5.01	-6.58/-6.03	-4.71/-4.7	-5.99/-10.73	-18.08/-17.47	-14.41/-18.49	-17.32/-14.04
Θ(52.5°)	-11.92/-10.76	-5.82/-4.79	-5.81/-8.02	-7.76/-5.73	-5.4/-6.36	-7.45/-5.78	-3.93/-4.8	-5.76/-6.5	-6.06/-10.52	-11.22/-18.65	-14.9/-17.78	-12.21/-12.71	-10.09/-9.01	-5.67/-2.6	-0.95/-1.64	-3.45/-5.6	-11.23/-17.19	-9.94/-4.62	-3.8/-3.92	-2.65/-3.01	-4.51/-10.18	-18.15/-18.62	-18.59/-18.2	-16.09/-19.14
Θ(60°)	-18.17/-13.8	-6.84/-6.02	-7.1/-10.96	-11.02/-9.55	-9.4/-8.71	-10.54/-11.58	-7.28/-6.9	-7.66/-7.68	-8.48/-10.44	-15.8/-13.63	-17.53/-18.85	-11.4/-13.05	-10.74/-11.48	-8.39/-6.22	-4.51/-6.43	-6.61/-9.18	-18.04/-12.71	-9.28/-5.85	-4.4/-4.94	-3.58/-3.39	-4.55/-9.62	-16.11/-19.04	-18.48/-17.21	-15.54/-18.72
Θ(67.5°)	-18.08/-14.11	-9.99/-8.99	-8.95/-15.37	-15.17/-16.63	-13.83/-10.31	-9.83/-13.78	-11.75/-10.64	-10.55/-9.3	-11.18/-13.38	-19.33/-17.4	-16.72/-16.2	-10.49/-15.01	-10.41/-11.88	-10.81/-11.92	-9.46/-8.15	-7.46/-9.94	-17.35/-12.5	-12.62/-13.58	-8.45/-7.95	-6.21/-6.05	-7.96/-18.2	-15.54/-18.46	-16.49/-18.45	
Θ(75°)	-17.97/-17.52	-13.82/-11.24	-13.38/-18.22	-19.74/-18.11	-15.49/-11.74	-10.1/-12.22	-15.47																	



Radiated Composite Gain Data of 5GHz

Appendix B

Θ(75°)	-15.08/-15.53	-17.05/-8.1	-5.61/-4.52	-5.05/-9.72	-16.88/-13.94	-9.51/-7.87	-6.35/-6.5	-13.13/-18.05	-15.31/-12.65	-17.96/-12.37	-10.73/-12.5	-9.13/-8.02	-15.01/-17.48	-14.76/-13.15	-10.94/-11.49	-18.29/-14.93	-10.67/-5.17	-7.67/-6.22	-4.76/-5.71	-5.9/-6.83	-8.37/-19.07	-13.69/-17.18	-17.19/-18.64	-18.05/-19.46
Θ(82.5°)	-17.72/-15.57	-17.79/-7.19	-5.16/-5.95	-6.27/-9.25	-15.08/-18.52	-16.95/-12.43	-7.29/-7.3	-11.04/-16.42	-17.56/-14.44	-14.1/-12.12	-9.57/-14.55	-8.36/-7.21	-13.93/-18.52	-11.44/-17.47	-15.15/-16.68	-18.75/-17.55	-12.88/-7.06	-8.37/-8.66	-7.7/-10.08	-7.22/-11.62	-16.33/-18.16	-17.69/-18.16	-18.32/-19	-18.05/-18.47
Θ(90°)	-14.41/-15.78	-18.31/-12.41	-9.49/-7.87	-6.66/-11.99	-18.42/-18.21	-10.31/-11.53	-8.35/-8.62	-11.68/-11.79	-19.02/-16.99	-11.43/-11.58	-8.95/-17.93	-10.54/-6.42	-11.38/-19.05	-18.69/-18.35	-14.32/-17.59	-12.86/-6.61	-11.33/-10.74	-11.29/-17.89	-12.29/-14.89	-13.81/-12.83	-10.96/-17.23	-18.58/-19.03	-18.02/-17.42	
Θ(97.5°)	-12.59/-13.8	-18.64/-10.9	-8.6/-8.86	-8.82/-13.03	-18.69/-18.5	-19.07/-16.38	-8.47/-7.85	-12.82/-19.05	-17.73/-18.44	-15.5/-12.43	-8.39/-10.6	-11.65/-10.71	-11.25/-19.06	-10.97/-15.39	-17.3/-16.18	-16.71/-11.8	-14.05/-9.14	-18.4/-13.71	-13.69/-18.9	-9.95/-10.36	-8.28/-10.71	-18.37/-13.37	-12.73/-18.59	-19.12/-15.83
Θ(105°)	-16.81/-17.44	-16.68/-15.41	-13.69/-14.04	-14.05/-18.4	-19.08/-17.15	-17.71/-18.34	-11.57/-8.35	-9.71/-15.63	-18.84/-17.68	-14.79/-11.5	-7.6/-10.22	-11.96/-8.65	-13.5/-17.84	-17.7/-15.08	-17.79/-12.44	-18.73/-13.02	-17.84/-12.31	-18.48/-16.86	-10.92/-15.59	-9.66/-9.4	-6.89/-7.1	-13.69/-11.31	-13.07/-17.72	-18.32/-18.01
Θ(112.5°)	-14/-15.13	-16.51/-16.71	-16.11/-13.97	-14.19/-18.98	-18.63/-18.49	-18.73/-18.79	-16.75/-16	-14.55/-14.83	-16.09/-19.15	-14.37/-9.18	-7.3/-8.3	-9.75/-11.71	-11.56/-18.94	-13.42/-18.02	-18.28/-18.95	-18.61/-15.36	-19/-16.86	-17.87/-14.8	-7.13/-11.39	-9.59/-9.55	-7.63/-8.74	-14.03/-8.38	-8.92/-19.12	-18/-17.83
Θ(120°)	-18.34/-17.39	-14.21/-11.24	-12.06/-11.63	-10.77/-11.96	-17.93/-18.67	-15.98/-17.91	-18.98/-18.23	-18/-15.36	-18.36/-18.39	-15.25/-12.03	-9.04/-5.38	-8.79/-11.93	-9.59/-17.92	-13.27/-17.56	-11.28/-19.14	-18.62/-19.13	-18.28/-16.88	-17.84/-8.73	-8.89/-8.03	-8.92/-9.3	-10.66/-15.49	-12.7/-10.78	-9.99/-18.76	-18.14/-18.59
Θ(127.5°)	-18.38/-16.17	-19.11/-15.01	-11.85/-14.26	-12.73/-9.63	-10.04/-12.63	-15.93/-8.92	-7.37/-10.72	-11.83/-14.9	-15.5/-16.83	-17.97/-14.44	-8.26/-8.57	-7.26/-10.08	-11.66/-14.44	-12.75/-13.13	-12.58/-17.75	-16.72/-13.56	-15.34/-18.99	-19.06/-9.96	-11.59/-7.28	-10.75/-9.67	-15.87/-17.65	-14.29/-13.13	-13.95/-18.98	-13.17/-16.32
Θ(135°)	-14.6/-18.17	-15.84/-17.92	-13.51/-13.54	-19.44/-15.82	-11.34/-10.07	-13.28/-18.01	-13.42/-14.51	-10.5/-13.41	-12.64/-11.81	-18.59/-16.66	-11.97/-5.97	-5.96/-15.78	-10.65/-15.28	-11.42/-18.96	-10.25/-19.09	-9.66/-16.16	-19.12/-13.25	-16.2/-6.67	-9.17/-5.87	-7.41/-8.81	-10.59/-19.02	-12.82/-10.93	-13.6/-18.76	-15.16/-13.35
Θ(142.5°)	-18.12/-17.97	-18.19/-18.5	-16.54/-10.42	-8.44/-9.89	-14.09/-15.73	-12.75/-9.99	-11.45/-9.58	-7.66/-8.49	-8.69/-9.7	-8.77/-12.59	-13.7/-13.99	-15.54/-7.1	-10.73/-17.5	-8.82/-11.09	-18.93/-12.29	-12.37/-11.9	-12.46/-14.29	-13.48/-15.38	-9.39/-7.98	-13.77/-10.94	-10.65/-18.44	-17.84/-17.86	-18.98/-17.5	-17.9/-19.63
Θ(150°)	-18.42/-18.8	-11.88/-9.88	-11.98/-16.58	-17.03/-10.47	-12.61/-10.17	-10.74/-15.87	-16.16/-10.48	-9.61/-8.64	-6.25/-5.34	-7.26/-11.44	-4.44/-6.97	-10.86/-8.09	-10.28/-18.79	-7.67/-8.5	-15.67/-15.24	-13.14/-12.47	-16.65/-15.77	-10.63/-15.58	-16.55/-10.14	-14.71/-19.36	-13.27/-13.43	-11.82/-13.22	-15.62/-15.82	-16.19/-17.6
Θ(157.5°)	-17.25/-18.71	-18.99/-14.54	-10.96/-9.72	-11.04/-12.8	-13.03/-14.58	-15.31/-12.24	-9.41/-8.03	-7.13/-7.49	-6.69/-8.85	-8.43/-8.7	-11.29/-18.52	-12.62/-8.69	-10.21/-17.15	-18.86/-16.45	-17.03/-17.97	-18.42/-18.84	-17.02/-15.93	-14.24/-12.22	-11.63/-14.33	-17.89/-16.48	-11.63/-14.33	-8.97/-17.55	-18.49/-18.69	-18.95/-15.17
Θ(165°)	-13.91/-14.62	-15.03/-13.72	-12.39/-10.97	-9.58/-8.5	-8.55/-9.63	-10.2/-9.4	-8.32/-8.16	-9.45/-14.49	-17.52/-14.01	-11.33/-13.61	-18.71/-18.73	-14.5/-14.19	-15.4/-17.4	-18.68/-15.64	-11.79/-11.44	-15.97/-18.34	-19.89/-13.47	-11/-9.7	-9.5/-10.25	-10.39/-9.62	-9.49/-10.38	-11.96/-13.73	-17.13/-18.15	-19.16/-15.66
Θ(172.5°)	-8.75/-8.37	-9.26/-8.28	-8.66/-8.11	-7.45/-6.84	-7.64/-9.51	-11.42/-13.07	-14.44/-17.12	-18.76/-18.17	-18.42/-18.1	-19.3/-18.79	-15.77/-13.59	-13.95/-14.97	-14.39/-14.42	-14.06/-13.12	-11.55/-10.59	-9.7/-9.38	-9.63/-6.99	-9.87/-9.78	-9.44/-9.8	-10.57/-10.98	-11.58/-12.26	-12.14/-11.6	-12.24/-13.39	-14.62/-13.5
Θ(180°)	-15.02/-14.59	-13.46/-12.53	-11.4/-10.71	-10.58/-10.49	-10.48/-10.08	-9.88/-9.53	-8.81/-9.19	-10.43/-11.5	-12.97/-14.34	-15.46/-15.08	-13.74/-13.21	-15.12/-15.38	-13.48/-11.25	-9.72/-8.46	-7.28/-6.42	-6.74/-7.51	-8.48/-9.99	-11.5/-12.38	-12.08/-13.01	-14.94/-16.78	-18.21/-18.15	-19/-18.16	-13.58/-13.09	-13.81/-15.48
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°)	-6.91/-6.87	-7.21/-7.22	-8/-8.84	-10.59/-10.11	-9.56/-9.88	-10.93/-11.51	-12.88/-12.97	-12.18/-13.31	-14.69/-15.75	-16.44/-15.95	-15.34/-16.16	-16.89/-16.01	-12.82/-13.5	-14.49/-11.13	-11.11/-11.01	-11.51/-13.12	-12.54/-11.89	-13.05/-13.68	-13.41/-12.74	-11.28/-10.32	-9.39/-7.79	-7.36/-7.64	-7.39/-6.84	
Θ(7.5°)	-11.66/-10.69	-11.41/-12.48	-12.68/-12.74	-13.33/-13.08	-12.93/-13.77	-14.59/-14.44	-14.41/-13.9	-12.17/-11.18	-9.96/-8.58	-7.87/-6.77	-6.45/-6.19	-6.03/-6.04	-5.77/-5.21	-5.01/-5.27	-5.88/-6.9	-8.38/-9.15	-9.85/-11.37	-11.18/-10.32	-10.77/-12.05	-12.86/-13.33	-14.8/-18.79	-17.84/-18.38	-18.26/-14.67	-13.16/-13.22
Θ(15°)	-7.9/-7.48	-7.4/-7.89	-8.78/-10.49	-12.78/-14.59	-15.5/-18.49	-14.33/-15.13	-15.36/-13.12	-10.75/-9.53	-9.1/-9.1	-9.37/-9.82	-10.44/-11.12	-12.17/-13.99	-16.1/-13.36	-9.07/-9.61	-5.75/-5.74	-6.79/-7.44	-7.48/-7.92	-9.23/-9.27	-9.33/-10.8	-11.23/-10.57	-10.36/-10.97	-11.36/-11.02	-9.34/-8.04	-7.43/-7.55
Θ(22.5°)	-0.41/-0.34	-1.32/-2.93	-4.64/-6.4	-8.33/-11.82	-16.23/-16.83	-14.04/-12.93	-10.58/-7.93	-6.04/-5.38	-5.58/-5.74	-5.39/-4.86	-4.44/-4.13	-9.12/-8.22	-6.82/-9.16	-5.9/-7.9	-6.72/-6.74	-5.76/-5.12	-4.94/-4.74	-5.25/-5.43	-4.56/-3.54	-2.58/-0.81	0.50/-66	0.44/-43	-0.42/-1.27	-2.29/-1.45
Θ(30°)	2.36/2.35	1.730.84	-0.46/-1.99	-3.43/-4.92	-6.05/-6.7	-6.82/-6.22	-5.49/-4.37	-3.21/-2.65	-2.56/-2.06	-1.21/-1.06	-1.61/-2.34	-3.09/-3.96	-5.76/-9.13	-9.8/-7.19	-4.46/-2.15	-0.8/-1.07	-2.46/-3.84	-4.34/-3.15	-3.12/-5.01	-5.89/-5.22	-5.02/-5.16	-4.17/-2.1	-0.580.31	0.92/1.72
Θ(37.5°)	1.95/1.9	1.27/1.18	1.28/0.81	-0.18/-0.87	-0.66/0.2	0.81/0.78	-0.22/-1.15	-0.49/0.35	0.61/0.63	0.60/0.1	-1.12/-1.78	-1.45/-1.84	-3.63/-4.16	-11.64/-9.18	-4.17/-0.82	0.89/1.08	0.49/-1.06	-2.94/-2.98	-2.79/-3.71	-3.31/-1.85	-1.22/-1.61	-1.26/0.07	0.68/0.26	-0.10/-0.83
Θ(45°)	1.92/1.95	1.31/1.83	2.26/2.04	2.12/6	2.88/2.65	2.57/2.89	2.43/1.73	2.02/2.45	2.21/2.34	1.94/0.35	-0.72/-1.73	-1.56/-0.88	-1.13/-2.43	-4.73/-5.39	-1.69/1.34	1.28/0.13	-2.15/-4.53	-4.56/-3.54	-2.58/-0.81	0.50/-66	0.44/-43	-0.42/-1.27	-2.12/0.2	
Θ(52.5°)	1.54/1.11	1.18/2.61	2.69/2.19	2.73/3.34	3.14/2.47	2.63/4.1	3.54/3.17	3.35/3.14	2.31/3.44	3.11/0.02	-0.92/-3.38	-3.56/-2.62	-2.02/-1.87	-2.09/-2.12	-0.31/1.75	1.95/1.16	0.96/-0.06	-2.99/-6.99	-8.64/-6.29	-3.6/-0.83	1.55/2.29	1.80/7.6	0.07/0.45	0.44/0.67
Θ(60°)	0.55/-0.02	0.62/0.09	1.75/-1.67	1.97/1.35	1.24/2.04	2.65/3	2.7/3.19		3.17/3.5	3.60/99	-0.46/-5.37	-3.04/-1.15	-1.42/-0.95	-1.08/-1.66	-1.76/-0.28	0.57/-0.12	-0.25/-0.21	-2.81/-9.2	-10.39/-7.64	-5.33/-2.38	1.37/2.83	2.49/0.98	0.54/0.44	-0.77/-0.84
Θ(67.5°)	-1.45/-0.9	0.27/1.09	0.23/1.47	2.24/1.81	0.97/0.94	1.73/2.67	2.12/44	3.94/3.14	4.36/4.11	4.05/0.82	-2.65/-5.55	-0.41/0.64	0.31/1.5	0.39/-0.81	-1.34/-1.22	0.59/0.24	-1.66/-1.09	-2.34/-9.13	-2.85/-1	1.59/2.61	2.03/0.67	0.84/0.22	-2.02/-2.07	
Θ(75°)	-1.32/-0.47	0.65/0.94	0.17/1.61	1.69/0.85	0.32/0.47	1.37/2.02	1.56/1.86	3.26/3.67	3.97/3.2	2.14/0.55	-4.15/-7.23	-0.06/2.1	1.68/3.19	1.97/0.06	-0.39/-0.32	1.08/0.68	-0.19/0.41	-0.14/-5.14	-5.31/-3.45	-2.12/0.15	2.23/3.21	1.97/0.48	0.4/-0.42	-2.53/-2.72
Θ(82.5°)	-0.83/-1.43	-0.23/-0.92	-1.41/0.58	0.39/-0.02	-0.45/-0.65	-0.22/0.94	0.64/0.93	2.37/3.1	3.71/3.03	0.11/-2.18	-7.71/-7.03	-0.83/0.18	1/2.28	-0.65/-2.66	-2.63/-1.58	1.03/1.51	0.89/0.43	-0.68/-7.51	-4.42/-4.33	-1.80/7.8	2.2/2.52	1.23/0.57	-0.18/-0.73	-3.43/-1.79
Θ(90°)	-1.95/-2.44	-0.23/-1.75	-2.16/-0.29	-0.85/-1.84	-2.03/-1.74	-1.03/-0.03	-0.06/-0.65	0.18/0.52	1.42/1.49	-3.2/-2.87	-8.65/-10.23	-2.89/-0.1	0.14/0.86	-1.36/-4.24	-4.8/-3.07	0.71/1.07	-0.47/-0.09	-1.68/-7.48	-5.83/-3.42	-2.8/-0.75	0.42/0.79	0.29/-0.74	-0.83/-0.77	-4.63/-2.44
Θ(97.5°)	-3.55/-3.66	-1.77/-3.59	-3.57/-1.6	-2.14/-2.65	-3.11/-3.82	-3.42/-1.89	-2.15/-2.79	-2.07/-1.48	-0.9/-0.51	-5.6/-4.38	-10.94/-8.93	-3.13/-3.73	-2.06/-2.26	-5.91/-7.78	-8.86/-5.23	-0.45/-1.84	-4.64/-4.28	-3.99/-9.7	-5.95/-5.09	-4.42/-4.51	-3.90/-3.23	-1.72/-1.2	-1.28/-1.46	-6.91/-0.06
Θ(105°)	-5.14/-4.77	-2.76/-3.72	-2.87/-3.03	-4.53/-3.87	-3.83/-4.86	-5.32/-4.26	-3.73/-4.38	-5.09/-4.28	-3.76/-2.21	-7.97/-5.82	-17/-10.1	-6.55/-3.69	-4.35/-5.38	-6.78/-9.21	-9.26/-5.08	-3.51/-5.82	-7.87/-5.78	-5.93/-13.3	-9.63/-9.35	-6.38/-7.8	-6.98/-6.66	-4.87/-4.29	-1.73/-2.39	-5.96/-4.94
Θ(112.5°)	-8.72/-6.77	-3.46/-5.75	-6.21/-5.16	-6.57/-4.16	-3.82/-4.62	-3.72/-3.94	-3.91/-4.34	-6.04/-6.99	-5.31/-4.27	-7.11/-1.82	-12.99/-14.04	-6.77/-14.2	-5.27/-5.12	-17.53/-14.49	-7.99/-9.62	-5.96/-5.99	-6.86/-13.76	-10.81/-9.96	-8.39/-5.1	-10.89/-9.4	-7.92/-5.28	-2.97/-3.03	-5.91/-6.88	
Θ(120°)	-7.77/-11.02	-7.1/-16.28	-8.43/-8	-6.31/-6.02	-7.49/-9.43	-9.7/-5.92	-7.15/-9.12	-8.46/-6.32	-11.67/-4.7	-11.89/-10.31	-13.89/-16.06	-7.7/-7.39	-6.3/-5.66	-18.16/-14.69	-11.97/-15.27	-6.52/-6.19	-6.36/-5.38	-10.74/-16.33	-9.73/-8.91	-7.16/-5.62	-9.07/-10.01	-6.53/-8.51	-7.8/-	



Radiated Composite Gain Data of 5GHz

Appendix B

Θ(120°)	-18.63/-18.42	-18.62/-17.4	-14.47/-11.89	-17.24/-18.19	-12.99/-17.28	-16.86/-18.12	-13.5/-11	-11.02/-18.57	-10.58/-17.47	-14.16/-17.14	-4.55/-5.17	-6.13/-6.71	-16.28/-11.44	-11.79/-14.82	-11.65/-10.1	-10.03/-6.87	-9.12/-18.64	-8.46/-18.71	-7.31/-10.73	-6.76/-9.53	-8.8/-8.32	-10.82/-18.16	-18.9/-19.15	-18.71/-17.9
Θ(127.5°)	-18.89/-14.99	-18.52/-18.6	-17.24/-12.37	-18.67/-15.23	-13.56/-17.98	-13.68/-16.7	-18.83/-16.28	-9.85/-13.78	-15.64/-10.93	-18.75/-12.57	-8.53/-4.96	-5.7/-8.37	-5.84/-11.57	-10.24/-12.86	-15.53/-10.19	-17.77/-18.6	-8.42/-13.55	-7.48/-9.61	-2.92/-6.36	-5.55/-8.69	-11.57/-10.24	-11.15/-13.24	-16.51/-17.48	-17.74/-19.13
Θ(135°)	-18.63/-19.35	-17.01/-13.03	-18.33/-18.05	-13.33/-11.06	-15.89/-16.1	-13.09/-10.17	-11.33/-17.78	-10.44/-7.8	-12.62/-11.47	-17.68/-18.16	-12.55/-15.58	-4.96/-7.42	-7.51/-13.66	-16.36/-16.83	-17.15/-15.86	-5.62/-5.17	-3.25/-4.69	-4.99/-7.18	-12.85/-19.01	-17.5/-17.55	-18.97/-17.5	-18.74/-18.01		
Θ(142.5°)	-18.87/-15.25	-12.88/-12.95	-16.86/-18.24	-18.44/-12.71	-11.55/-12.18	-15.71/-13.16	-8.45/-10.11	-11.39/-9.66	-13.56/-10.39	-11.76/-14.03	-18.92/-15.65	-18.17/-11.06	-12.46/-12.71	-8.79/-14.52	-17.16/-16.79	-17.22/-13.54	-18.92/-16.59	-16.25/-13.35	-9.3/-9.38	-11.26/-15.45	-18.32/-18.94	-17.32/-14.97	-14.45/-18.26	-14.47/-13.65
Θ(150°)	-19.16/-17.31	-17.41/-19.04	-12.77/-9.2	-9.16/-10.24	-9.12/-7.65	-7/-6.4	-8.71/-10.44	-7.38/-8.08	-12.39/-13.08	-11.53/-18.31	-13.4/-13.98	-18.47/-13.81	-11.67/-14.05	-12.58/-12.89	-13.51/-15.12	-18.97/-9.9	-12.15/-12.91	-12.2/-16.1	-18.26/-17.29	-17.54/-18.18	-15.34/-11.27	-14.09/-17.51	-18.29/-17.5	-15.66/-15.32
Θ(157.5°)	-19.03/-18.87	-17.83/-14.94	-12.54/-11.83	-10.82/-10.5	-12.03/-12.86	-12.37/-11.6	-10.91/-8.52	-7.63/-7.41	-7.88/-10.06	-12.17/-14.71	-12.99/-11.6	-13.05/-17.25	-12.43/-9.99	-10.07/-10.35	-11.24/-14.12	-18.32/-16.48	-17.93/-15.09	-13.4/-15.37	-18.99/-15.96	-13.78/-14.96	-18.06/-18.33	-18.46/-15.94	-17.36/-17.57	-17.12/-15.61
Θ(165°)	-17.05/-19.02	-17.96/-14.53	-13.16/-13.15	-13.91/-11.5	-8.34/-7.21	-8.08/-10.41	-14.89/-16.37	-17.05/-18.86	-18.52/-15.5	-10.37/-9.05	-9.98/-12.91	-18.44/-18.49	-14.4/-15.46	-18.12/-19.21	-15.06/-13.99	-13.54/-18.11	-19.03/-15.72	-12.33/-11.79	-16.21/-17.42	-12.49/-9.81	-10/-12.03	-12.62/-12.42	-13.13/-15.03	-14.87/-13.95
Θ(172.5°)	-19.3/-19.03	-18.04/-10.49	-7.05/-6.94	-8.04/-8.32	-8.12/-8.66	-10.2/-13.44	-19.1/-19	-19.01/-15.73	-13.97/-15.45	-18.88/-18.97	-17.48/-18.29	-18.3/-17.85	-18.85/-15.49	-12.82/-11.3	-10.51/-11	-11.49/-10.09	-9.79/-10.26	-11.49/-13.35	-12.32/-10.39	-8.69/-7.55	-7.45/-8.24	-8.18/-8.34	-9.3/-11.36	-15/-17.55
Θ(180°)	-18.85/-14.87	-14.06/-16.08	-19.08/-18.31	-14.73/-12.88	-16.07/-17.93	-18.75/-17.16	-14.36/-14.1	-14.31/-13.31	-13.84/-15.66	-15.71/-16.05	-19.23/-17.81	-18.5/-18.52	-18.17/-19	-19.11/-17.32	-14.63/-15.2	-15.1/-14.25	-13.08/-12.12	-12.26/-12.37	-11.13/-11.03	-11.05/-11.28	-10.99/-11.81	-13.3/-13.48	-14.66/-18.69	-17.86/-18.38
Freq(Hz)	5.6GPol.	ThetaAnt. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-13.44/-12.12	-10.6/-11.1	-10.92/-11.27	-11.18/-10.76	-11.49/-11.5	-10.9/-12.22	-13.2/-13.39	-14.63/-16.75	-17.62/-18.54	-17.87/-18.26	-18.72/-18.06	-19.27/-18.55	-16.13/-13.88	-11.9/-12.7	-13.16/-12.97	-14.39/-15.43	-15.51/-15.85	-18.79/-18.59	-19.55/-18.94	-18.77/-18.33	-17.85/-17.53	-19.09/-16.06	-14.16/-13.77	-11.97/-11.25
Θ(7.5°)	-8.09/-9.19	-11.04/-11.47	-12.1/-13.13	-16.88/-18.49	-17.67/-18.43	-17.76/-18	-18.38/-17.49	-19.01/-18.62	-17.26/-14.85	-12.54/-10.35	-8.92/-8.75	-8.72/-7.43	-6.21/-5.9	-5.58/-5.11	-5.79/-5.8	-5.39/-6.56	-7.46/-8.99	-11.73/-11.42	-11.99/-13	-13.22/-15.02	-15.46/-16.08	-14.26/-15.85	-14.2/-11.7	-11.98/-10.24
Θ(15°)	-2.79/-3.25	-5.32/-9.05	-12.73/-16.99	-18.34/-17.98	-16.75/-14.18	-13.54/-16.48	-19.72/-18.55	-16.29/-11.92	-9.2/-7.84	-7.18/-10.71	-7.38/-8.87	-11.03/-11.38	-9.8/-7.45	-5.78/-4.58	-3.51/-2.87	-2.65/-2.8	-3.66/-5.17	-7.84/-10.93	-12.05/-12.78	-12.29/-11.75	-11.83/-10.84	-10.26/-9.76	-7.23/-6.85	-5.04/-3.88
Θ(22.5°)	1.56/-1.2	-0.26/-1.84	-2.83/-3.53	-4.49/-5.91	-7.25/-8.11	-9.08/-10.67	-12.78/-15.46	-6.52/-5.75	-5.61/-5.42	-5.08/-5.79	-5.82/-4.52	-3.12/-2.68	-3.28/-4.38	-6.11/-6.54	-4.96/-3.49	-1.99/-1.53	-2.28/-3.84	-6.31/-8.19	-8.45/-8.41	-9.35/-6.07	-4.97/-3.54	-2.25/-1.49	-0.30/-74	
Θ(30°)	0.820/65	-0.23/-0.2	0.420/9.1	0.77/-0.23	-1.67/-2.63	-3.02/-3.51	-4.82/-7.6	-7.75/-5.21	-3.64/-3.56	-2.82/-2.27	-3.2/-5.68	-5.79/-3.02	-0.79/-0.36	-0.83/-1.83	-3.04/-2.67	-1.86/-2.22	-3.26/-4.51	-5.87/-6.61	-6.51/-5.54	-5.8/-5.63	-3.91/-1.8	-0.46/-0.39	-1.45/-2.62	-2.23/-0.43
Θ(37.5°)	1.34/-0.25	-1.37/-0.44	1.162/67	3.323/0.7	2.20/67	-1.22/-1.51	-0.62/-0.76	-0.560/-3.1	0.410/7.1	1.66/1.16	-1.78/-6.16	-4.6/-3.32	-3.28/-3.3	-2.46/-2.5	-4.08/-4.1	-1.8/-2.45	-5.19/-9.26	-7.03/-3.67	-2.31/-1.43	-0.070/-28	-0.62/-2.91	-5.32/-4.03	-1.090/-58	
Θ(45°)	-0.24/-1.33	-0.370/-6	1.4/3.4	4.22/2.54	0.690/45	0.57/1	1.751/69	2.493/62	3.684/0.1	4.942/95	-1.04/-5.22	-5.11/-2.02	-1.86/-4.44	-5.1/-3.75	-2.83/-1.02	-0.480/-32	0.46/-0.54	-5.47/-6.06	-1.78/-0.9	-8.20/-2.08	1.12/-0.31	-5.24/-10.02	-7.66/-5.4	-3.5/-1.53
Θ(52.5°)	-1.51/-2.56	-0.35/-1.13	2.84/3.4	3.931/14	-0.810/96	1.78/2.76	3.89/2.87	3.924/98	4.634/97	5.86/2.1	-3.51/-5.45	-9.31/-1.92	-0.66/-3.17	-4.81/-4.23	-1.08/-0.26	-1.750/21	1.60/98	-3.39/-1.4	-0.52/-1.71	-2.78/-1.94	-0.31/-1.36	-4.65/-3.72	-3.64/-6.36	-7.84/-3.17
Θ(60°)	0.76/-0.26	0.83/-3.8	3.62/-4.2	2.87/-3.6	0.12/-1.98	2.832/-94	4.052/-99	3.573/-94	3.94/50.4	5.923/-1	-2.41/-4.1	-8.83/-5.38	-1.09/-0.93	-0.52/-5.28	-3.79/-2.04	-6.11/-1.79	1.62/-1.2	-4.37/-2.09	-2.2/-3.64	-2.68/-2.64	-0.64/-0.19	-0.55/-1.41	-3.22/-3.42	-2.660/-58
Θ(67.5°)	1.77/-1.53	2.131/-8.1	3.923/47	2.092/37	0.24/-1.51	3.494/-0.1	4.1/2.7	2.52/-1.86	2.424/347	5.094/17	-0.15/-5.47	-10.40/-1.99	-0.120/-91	-7.13/-9.96	-2.73/-0.5	-3.97/-1.07	2.25/-1.47	-4.48/-4.98	-3.97/-3.27	0.030/29	1.632/22	1.32/-6.78	-2.24/-1.91	-1.42/-1.59
Θ(75°)	1.84/-1.7	1.99/-1.56	4.01/-2.4	0.93/-2.08	0.050/-99	2.853/87	4.323/34	1.44/-0.57	0.013/-4.1	4.074/4	0.48/-6.12	-7.32/-1.95	0.050/83	0.81/-1.71	-2.78/-0.69	-1.560/8	3.44/-1.49	-3.27/-6.72	-2.28/-1.24	2.032/19	3.053/32	2.56/-0.18	-1.49/-0.89	-1.67/-1.62
Θ(82.5°)	2.692/-2.4	1.140/-89	3.43/-0.3	-0.350/-97	-0.770/-5	1.893/-28	3.412/-75	0.25/-2.72	-2.052/-18	3.393/53	-1.03/-0.87	-3.68/-0.79	0.070/-95	0.59/-1.82	-2.31/-0.95	-0.65/-1.92	3.66/-7.8	-2.38/-5.45	-1.780/-59	2.882/64	3.242/62	1.84/-1.08	-1.04/-1.11	-2.57/-1.88
Θ(90°)	2.182/65	1.11/-0.07	1.44/-0.45	-0.65/-1.25	-2.95/-0.21	0.761/-49	1.881/-5	-0.73/-4.9	-5.1/-0.4	1.32/-11	-1.84/-7.34	-4.7/-2.22	-1.490/-58	-1.39/-3.15	-4.24/-1.84	-0.520/-2	2.511/64	-1.05/-2.71	-1.940/-06	2.261/65	1.780/29	0.28/-2.28	-2.21/-3.13	-3.96/-1.83
Θ(97.5°)	1.932/-1	-0.62/-1.05	-0.7/-2.99	-3.32/-1.92	-3.65/-0.96	-1.320/-15	0.33/-0.33	-3.75/-7.63	-6.04/-2.38	-1.1/-1.22	-4.29/-11.98	-3.92/-4.43	-5.84/-2.19	-1.54/-6.37	-8.49/-4.91	-0.98/-2.07	-0.05/-0.19	-2.43/-3.57	-3.31/-0.8	1.410/53	-0.59/-2.87	-1.75/-3.16	-3.85/-6.12	-3.96/-1.06
Θ(105°)	0.060/-25	-2.03/-2.69	-1.79/-2.41	-2.97/-0.42	-4.22/-1.78	-2.41/-1.27	-2.34/-3.47	-6.72/-10.04	-7.23/-6.12	-4.8/-2.68	-5.76/-16.42	-5.39/-5.95	-5.29/-2.62	-3/-7.24	-13.8/-9.04	-2.91/-4.45	-5.72/-5.12	-6.53/-4.56	-7.31/-6.12	-0.71/-1.2	-2.59/-7.66	-4.23/-4.37	-8.86/-9.7	-7.42/-5.08
Θ(112.5°)	0.26/-0.13	-5.42/-8	-4.91/-2.03	-3.64/-5.55	-5.13/-2.62	-4.42/-3.16	-3.56/-5.87	-9.05/-14.79	-14.76/-9.27	-7.34/-4.08	-12.45/-11.48	-7.22/-5.95	-6.96/-8.92	-6.84/-8.8	-7.39/-8.53	-8.34/-0.7	-8.06/-11.68	-10.29/-8.82	-10.61/-7.13	-4.71/-6.38	-6.84/-6.63	-44/-13	-8.64/-9.95	-8.12/-1.9
Θ(120°)	-2.14/-2.03	-5.92/-9.92	-7.38/-4.91	-4.31/-5.93	-6.78/-4.1	-4.56/-5.52	-6.08/-5.77	-7.67/-18.24	-14.86/-12.08	-8.89/-8.74	-14.97/-13.81	-12.77/-7.98	-6.3/-9.71	-13.01/-17.48	-14.91/-11.94	-9.55/-9.97	-8.92/-12.47	-10.84/-8.85	-8.38/-15.07	-8/-6.79	-14.52/-6.95	-7.14/-6.76	-7.74/-8.61	-8.92/-4.65
Θ(127.5°)	-5.09/-4.74	-4.35/-6.53	-10.23/-9.6	-6.89/-6.32	-7.43/-6.67	-7.81/-5.45	-5.97/-5.92	-14.06/-15.02	-10.98/-9.38	-8.22/-9.83	-11.19/-18.52	-9.57/-11.49	-12.11/-6.23	-10.71/-13.14	-18.32/-10.18	-3.44/-14.47	-14.67/-16.14	-11.32/-17.19	-9.8/-16.44	-8.7/-10.45	-17.36/-8.85	-6.99/-9.64	-10.91/-9.01	-11.7/-6.39
Θ(135°)	-7.29/-6.6	-7.64/-10.84	-13.86/-12.5	-9.4/-11.93	-9.19/-8.32	-9.04/-7.89	-8.24/-8.95	-11.16/-14.91	-14.16/-16.85	-12.5/-15.9	-10.82/-17.72	-10.42/-14	-11.96/-11.74	-9.68/-17.08	-10.65/-14.51	-18.63/-14.12	-14.05/-15.87	-12.75/-10.79	-15.88/-17.32	-16.28/-10.03	-9.89/-10.49	-17.88/-18.59	-9.14/-7.8	
Θ(142.5°)	-6.44/-6.68	-7/-8.89	-11.05/-12.82	-15.36/-16.36	-10.74/-11.63	-13.84/-8.84	-7.76/-9.1	-9.22/-11.54	-17.09/-17.61	-15.76/-18.83	-10.41/-12.11	-18.86/-17.55	-17.09/-18.85	-17.33/-11.86	-6.56/-9.61	-18.55/-18.58	-19.45/-19.01	-17.52/-13.62	-11.4/-15.64	-19.15/-15.68	-14.71/-12.97	-14.55/-16.58	-12/-9.97	-6.94/-6.9
Θ(150°)	-9.88/-9.25	-9.36/-10.5	-12.05/-14.3	-15.61/-13.09	-13.79/-16.58	-12.36/-12	-12.67/-10.88	-12.26/-14.5	-15.62/-13.23	-10.97/-14.37	-18.33/-12.73	-15.59/-19.13	-12.02/-4.92	-10.45/-17.48	-17.69/-11.52	-13.13/-17.68	-17.53/-13.92	-12.34/-18.69	-18.76/-17.71	-19.3/-18.92	-18.64/-18.48	-15.41/-13.95	-16.57/-18.08	-16.37/-12.68
Θ(157.5°)	-8.47/-8.98	-10.86/-12.21	-14.01/-16.43	-18.89/-15.01	-14.94/-15.35	-13.92/-10.62	-9.3/-11.2	-12.88/-10.87	-9.6/-13.54	-17.77/-15.79	-14.4/-16.13	-19.59/-17.62	-17.78/-18.74	-17.8/-14.09	-12.29/-13.83	-19.11/-17.9	-13.76/-13.41	-19.15/-18.57	-17.52/-16.47	-19.06/-19.08	-16.64/-18.58	-18.37/-19.05	-14.12/-15.18	-18.19/-17.55
Θ(165°)	-9.98/-9.65	-9.44/-10.68	-13.24/-17.54	-16.77/-17.8	-17.18/-14.25	-13.63/-12.86	-13.15/-11.28	-9.12/-8.77	-9.93/-13.77	-18.37/-17.76	-18.82/-17.61	-19.34/-17.89	-6.67/-1.3	-10.13/-13.45	-13.16/-13.76	-13.21/-11.79	-10.22/-9.45	-11.12/-13.99	-17.31/-18.17	-18.67/-18.11	-17.84/-15.49	-14.71/-16.98	-14.04/-10.5	-8.67/-



Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.43	5.23	4.57	5.86
Ant. 2 Max Gain (dBi)	6.38	5.32	5.01	4.66
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/52.5/142.5	Phi/22.5/307.5	Phi/22.5/307.5	Phi/30/307.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/75/172.5	Theta/75/22.5	Theta/67.5/142.5	Theta/60/157.5
Max Gain (dBi)	6.38	5.32	5.01	5.86
DG [1SS] (dBi)	4.53	4.12	4.5	4.11
DG [1SS] (dBi) Revised	6.38	5.32	5.01	5.86
DG [2SS] (dBi)	6.38	5.32	5.01	5.86

DG 1SS Result

Freq(Hz)	6.175GPol.	PhiL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.45-6	-8.05/-10.42	-13.17/-14.91	-15.73/-13.04	-10.19/-8.21	-6.81/-5.46	-4.56/-3.66	-2.73/-2.42	-2.03/-2.21	-1.44/-1.54	-1.34/-1.56	-1.21/-2.55	-3.39/-4.37	-5.66/-7.76	-9.75/-11.62	-10.78/-9.29	-9.04/-7.62	-6.24/-4.21	-4.22/-2.92	-2.47/-1.75	-1.16/-1.45	-1.65/-1.8	-1.79/-2.12	-3.01/-3.74
Θ(7.5°)	-1.74/-2.33	-3.68/-5.45	-6.68/-8.16	-9.28/-9.68	-8.81/-7.52	-6.38/-4.92	-3.82/-2.63	-1.74/-1.08	-0.45/-2.07	-0.25/-3.06	-0.47/-0.9	-1.28/-1.73	-2.39/-3.01	-4.21/-6.58	-9.12/-11.96	-12.41/-11.28	-8.63/-6.57	-6.15/-5.78	-5.06/-4	-3.35/-2.64	-2.12/-1.61	-1.09/-0.93	-0.79/-1.13	-1.99/-2.33
Θ(15°)	-0.39/-1.12	-1.69/-2.31	-2.86/-3.27	-3.75/-4.21	-4.74/-6	-4.41/-6.82	-3.79/-2.45	-1.93/-0.57	-0.78/-0.66	0.310/-71	0.820/-61	-0.04/-1.5	-2.53/-2.38	-2.24/-3.05	-5.25/-6.61	-10.49/-9.23	-11.68/-8.1	-6.63/-4.82	-4.07/-3.15	-1.43/-0.84	-0.29/-0.26	0.110/-35	0.170/-08	-0.17/-0.39
Θ(22.5°)	-1.58/-3.28	-5.07/-5.77	-6.49/-7.34	-7.27/-5.88	-4.77/-3.91	-4.22/-3.63	-1.99/-0.28	0.160/-23	-0.24/-3.32	-1.22/-1.47	-1.57/-1.89	-2.59/-3.72	-4.38/-3.05	-2.03/-2.13	-3.48/-3.37	-10.41/-2.5	-1.75/-2.92	-3.31/-2.1	-1.29/-0.56	0.490/-73	0.280/-04	0.050/-04	-0.52/-0.27	-0.4/-0.48
Θ(30°)	1.09/-1.93	-4.55/-3.6	-2.43/-2.59	-2.77/-3.57	-4.85/-5.2	-3.98/-2.99	-2.19/-1.52	-1.28/-0.32	1.292	1.01/-1	1.79/-1.64	0.83/-0.39	-1.03/-1.2	-0.59/-0.47	-1.01/-0.27	0.15/-0.69	-2.24/-3.33	-2.56/-1.6	-0.59/-0.31	-0.72/-0.66	-0.43/-0.05	0.560/-66	0.81/-97	3.192/-87
Θ(37.5°)	1.29/-0.97	-3.07/-3.21	-2.8/-3.01	-2.03/-3.03	-4.51/-3.95	-2.94/-1.74	-0.580/-27	0.081/-63	2.743/-04	2.982/-39	1.661/-23	0.941/-44	0.75/-1.31	0.210/-62	0.39/-0.03	-1.11/-2.21	-3.19/-3.81	-2.12/-1.63	-2.62/-3.73	-2.610/-21	2.123/-2	3.653/-49	2.551/-2	1.081/-72
Θ(45°)	0.5/-1.43	-0.51/-1.45	0.13/-2.07	-1.04/-1.85	-1.23/-0.84	-0.48/-1.9	-0.550/-01	0.931/-67	1.441/-64	2.94/-02	3.341/-01	0.32/-0	0.74/-1.25	-0.73/-1.4	1.35/-0.06	-0.870/-28	-1.63/-1.61	-0.39/-0.04	-0.92/-0.77	0.681/-06	1.051/-03	1.752/-35	2.475/-05	2.481/-83
Θ(52.5°)	2.27/-3.32	-1.451/-86	0.79/-0.32	0.090/-07	0.69/-1.12	-0.83/-1.2	-1.190/-84	2.270/-93	0.31/-05	1.592/-23	2.511/-39	-0.660/-1	1.741/-13	1.212/-06	1.61/-0.51	-0.360/-2	-1.1/-0.53	-0.7/-0.69	-1.48/-0.42	0.762/-01	3.032/-66	2.732/-95	1.211/-88	2.290/-65
Θ(60°)	0.11/-0.22	-2.89/-1	-0.40/-25	-0.94/-0.1	0.01/-1.78	-0.17/-1.72	-0.770/-84	1.2/-0.51	-0.03/-0.3	1.632/-34	2.921/-19	0.95/-0.3	1.612/-81	2.412/-3	1.29/-0.47	0.221/-06	-0.44/-0.97	-0.26/-3.65	-4.68/-5.69	-5.55/-1.7	0.22/-1.36	1.101/-54	-1.31/-1.99	-1.44/-0.91
Θ(67.5°)	0.431/-16	-2.79/-1.57	-0.1/-1.68	-0.950/-01	-0.13/-1.64	-2.29/-2.91	-1.26/-0.6	-1.94/-1.4	-0.84/-1.04	-0.281/-92	3.871/-66	1.06/-0.19	1.9/-2	3.682/-2	1.33/-0.7	-0.511/-2	0.36/-0.63	0.81/-1.7	-1.32/-4.02	-6.39/-3.96	-6.52/-2.7	-3.73/-0.99	-1.41/-1.77	-1.1/-2.85
Θ(75°)	-2.181/-05	-1.59/-267	-1.73/-1.34	-1.63/-0.43	-0.52/-1.28	-3.12/-4.1	-0.67/-0.29	-3.41/-2.57	-1.850/-11	-1.940/-18	3.051/-61	0.33/-1.98	0.981/-57	1.891/-53	0.55/-1.17	-0.990/-15	-0.69/-0.89	1.51/-0.37	-1.09/-0.6	-1.44/-1.93	-0.830/-12	-1.360/-02	-1.14/-2.03	0.64/-1.84
Θ(82.5°)	-3.63/-0.01	-1.28/-4.61	-2.48/-4.22	-3.11/-2.44	-2.54/-5.05	-3.01/-2.58	-1.23/-3.08	-3.05/-3.58	-3.03/-1.71	-4.07/-0.61	1.4/-0.34	-1.67/-2.79	-0.08/-0.2	1.290/-26	-1.1/-2.13	-2.96/-2.37	-2.39/-1.84	1.24/-1.15	-1.04/-0.66	-1.1902	0.811/-14	-1.5/-1.5	-3.28/-2.88	0.65/-1.8
Θ(90°)	-3.91/-2.65	-3.45/-6.01	-4.45/-6.18	-4.71/-4.05	-3.98/-6.64	-4.16/-2.87	-2.87/-4.32	-3.48/-4.63	-4.21/-2.71	-5.24/-1.8	-0.87/-3.16	-1.83/-3.47	-1.02/-2.17	-0.08/-1.21	-3.83/-3.17	-4.64/-6.76	-4.63/-3.65	-1.41/-2.76	-2.81/-2.79	-0.99/-0.98	0.315/-23	-2.58/-3.81	-6.82/-5.23	-0.74/-3.38
Θ(97.5°)	-5.39/-37	-5.43/-7.09	-7.19/-8.23	-8.43/-3.73	-5.78/-7.27	-5.3/-4.08	-5.48/-6.59	-5.35/-5.42	-5.67/-4.73	-5.93/-3.09	-4.49/-2.66	-1.67/-3.27	-2.45/-2.55	-0.7/-2.15	-4.72/-4.73	-6.56/-8.73	-7.65/-6.35	-4.71/-9.4	-4.52/-4.25	-2.75/-3.43	-3.6/-2.97	-2.99/-4.89	-6.55/-6.26	-2.95/-7.27
Θ(105°)	-7.45/-4.29	-7.88/-8.31	-8.3/-10.29	-10.54/-8.41	-6.65/-7.68	-10.34/-7.36	-6.41/-9.64	-6.07/-9.37	-7.57/-11.7	-6.64/-4.82	-7.39/-4.22	-3.48/-5.77	-4.09/-3.16	-4.04/-4.98	-6.29/-6.96	-8/-10.2	-10.42/-8.4	-8.23/-7.82	-7.96/-6.63	-5.71/-5.53	-5.28/-6.63	-8.33/-5.2	-4.46/-10.16	-4.35/-9.68
Θ(112.5°)	-12.24/-7.71	-8.32/-11.63	-11.63/-11.41	-10.83/-10.53	-7.6/-6.69	-9.48/-12.28	-9.94/-8.47	-6.27/-10.38	-5.58/-10	-7.87/-6.48	-9.27/-6.98	-4.43/-5.6	-5.45/-5.21	-5.94/-6.37	-8.83/-8.66	-9.83/-9.36	-15.08/-11.12	-11.57/-10.38	-10.94/-9.24	-11.74/-8.77	-7.46/-8.37	-7.61/-9.7	-8.61/-7.77	-6.36/-9.68
Θ(120°)	-8.82/-9.06	-8.12/-11.06	-8.02/-13.5	-10.01/-11.69	-8.39/-9.29	-8.45/-13.19	-9.81/-13.28	-10.29/-11.11	-10.05/-14.06	-6.69/-10.35	-7.2/-8.89	-6.83/-11.75	-11.68/-9.32	-9.74/-8.8	-9.7/-10.68	-13.49/-10.31	-14.81/-12.84	-13.33/-13.09	-10.91/-10.94	-10.89/-11.79	-12.28/-8.61	-4.86/-8.45	-11.55/-14.33	-9.53/-8.68
Θ(127.5°)	-11.96/-14.32	-13.16/-15.33	-11.13/-14.59	-9.46/-14.05	-9.61/-12.4	-9.77/-12.81	-11.13/-6.87	-9.47/-14.86	-10.12/-9.89	-10.25/-11.8	-10.54/-9.98	-9.94/-6.64	-8.47/-5.67	-5.8/-7.08	-10.05/-10.91	-12.18/-9.84	-15.23/-15.03	-13.37/-13.02	-9.77/-11.61	-10.9/-12.83	-6.29/-10.01	-15.14/-10.81	-6.88/-8.36	-6.88/-8.36
Θ(135°)	-10.02/-10.08	-13.04/-14.23	-14.59/-14.14	-14.76/-14.74	-9.29/-13.4	-8.77/-10.56	-6.72/-12.39	-8.06/-10.32	-13.32/-12.89	-11.6/-85	-8.28/-10.12	-10.54/-8.05	-8.57/-6.88	-10.38/-9.55	-14.1/-12.85	-8.44/-13.89	-12.49/-14.18	-15.41/-11.93	-12.74/-12.36	-8.84/-14.34	-14.4/-13.93	-13.02/-12.38	-13.83/-8.64	-7.21/-10.93
Θ(142.5°)	-13.71/-12.81	-15.11/-11.33	-8.41/-11.35	-14.12/-13.41	-14.58/-12.83	-11.44/-15.09	-9.5/-14.76	-13.56/-13.73	-12.6/-2.96	-8.81/-10.12	-12.49/-11.59	-10.96/-9.96	-11.73/-14.96	-14.8/-8.91	-9.92/-14.36	-13.99/-11.12	-9.77/-10.77	-14.63/-14.43	-14.99/-11.12	-11.99/-12.86	-14.93/-13.56	-13.83/-12.48	-11.58/-9.9	-15.45/-12.35
Θ(150°)	-15/-11.14	-9.91/-11.35	-15.55/-13.24	-16.03/-13.55	-14.61/-12.77	-14.84/-15.18	-11.14/-10.83	-12.69/-15.19	-8.69/-6.45	-9/-12.72	-12.49/-11.64	-14.77/-15.12	-14.85/-15.42	-15.56/-15.3	-15.52/-14.32	-15.38/-15.2	-12.85/-13.71	-15.27/-16.13	-13.42/-12.08	-11.48/-11.72	-14.16/-13.88	-15.19/-13.48	-9.5/-8.53	-11.37/-15.47
Θ(157.5°)	-8.19/-11.97	-13.07/-14.32	-15.44/-15.14	-14.99/-15.02	-15.96/-9.47	-11.16/-15.82	-11.57/-10.25	-9.07/-12.39	-15.03/-15.18	-13.61/-9.77	-9.25/-11.5	-11.57/-83	-8.26/-11.3	-12.9/-71	-13.83/-12.39	-13.83/-15.28	-14.56/-12.27	-13.93/-15.29	-16.03/-12.63	-10.17/-13.75	-12.75/-11.38	-13.61/-14.87	-10.94/-7.32	-10.94/-7.32
Θ(165°)	-9.55/-9.93	-11.28/-15.42	-16.01/-15.36	-12.45/-11.19	-10.83/-12.21	-15.15/-15.36	-10.82/-13.21	-8.58/-9.37	-11.42/-13.29	-13.94/-13.67	-9.89/-8.06	-7.24/-8.66	-13.02/-13.48	-11.12/-10.49	-12.4/-12.77	-12.87/-12.36	-14.33/-15.1	-15.38/-15.99	-14.84/-15.07	-15.31/-15.34	-16.04/-15.09	-14.28/-11.77	-10.71/-8.86	-8.63/-4.98
Θ(172.5°)	-14.63/-15	-15.47/-15.24	-15.46/-15.72	-15.26/-15.11	-14.94/-15.51	-13.93/-11.84	-13.02/-14.27	-15.59/-14.38	-11.26/-9.39	-8.24/-8.4	-8.35/-9.88	-13.02/-14.06	-11.79/-9.39	-8.85/-9.31	-9.63/-10.26	-12.22/-12.55	-14.15/-13.78	-15.36/-15.4	-13.93/-13.83	-12.71/-13.64	-12.56/-12.7	-12.5/-12.02	-10.71/-13.08	-15.6/-14.7
Θ(180°)	-12.62/-12.74	-12.68/-12.97	-12.34/-12.28	-12.09/-12.19	-13.49/-13.45	-12.94/-14.74	-15.78/-14.55	-15.36/-15.2	-13.82/-11.86	-13.45/-11.41	-10.62/-9.56	-10.88/-8.57	-11.97/-8.25	-8.23/-8.06	-9.31/-10.75	-12.02/-12.44	-12.76/-12.26	-13.42/-13.26	-15.36/-13.59	-15.18/-14.06	-12.95/-11.81	-11.08/-10.97	-10.76/-13.38	-13.87/-13.38
Freq(Hz)	6.175GPol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.85/-2.81	2.29/-2.08	-1.89/-1.48	-1.33/-1.39	-1.64/-1.6	-1.71/-2.29	-3.39/-4.38	-5.46/-6.67	-8.26/-9.76	-9.85/-10.3	-9.77/-8.56	-6.59/-5.14	4.14/-4.3	-3.15/-2.54	-2.3/-2.09	-2.07/-1.94	-1.97/-2.45	-3.72/-4.02	-4.72/-6.52	-7.42/-9.14	-11.73/-14.7	-14.87/-11.46	-9.43/-7.42	-5.87/-5.12
Θ(7.5°)	-4.34/-3.07	-2.59/-2.22	-1.99/-1.94	-1.065/-1.91	-2.03/-2.26	-2.83/-3.66	-4.45/-5.59	-7.12/-8.93	-11.87/-13.4	-13.63/-14.47	-12.45/-13.5	-7.35/-5.51	-3.97/-3.18	-2.52/-1.52	-0.81/-0.37	-0.19/-0.27	-0.65/-1.2	-1.98/-2.21	-2.93/-3.62	-3.55/-4.04	-4.82/-5.67	-7.21/-8.28	-8.67/-11.5	-7.18/-6.62
Θ(15°)	-4.172/-89	-1.81/-1.07	-0.290/-01	1.0501	0.030/-19	-1.01/-1.02	-2.49/-3.55	-7.32/-7.82	-6.73/-6.82	-8.48/-7.97	-12.41/-11.9	-7.61/-5.15	-2.76/-1.78	-1.04/-0.09	0.430/-42	0.210/-4	-0.85/-1.9	-0.88/-1.5	-1.83/-2.14	-2.94/-3.1	-3.86/-5.09	-6.53/-9.51	-12.91/-123	-8.59/-6.13
Θ(22.5°)	-3.15/-0.8	0.81/-64	1.881/-34	1.290/-41	-0.13/-0.79	-1.79/-3.16	-4.9/-7.55	-10.15/-10.54	-11.21/-11.99	-15.91/-15.42	-10.98/-9.57	-7.69/-4.05	-1.81/-1.11	-1.4/-1.2	-0.67/-0.65	-0.570/-35	1.21/-124	0.650/-35	0.780/-9	0.530/-05	-1.85/-5.3	-8.83/-11.8	-11.61/-8.1	-6.45/-5.79
Θ(30°)	-2.56/-1.47	0.31/-91	2.812/-9	2.411/-51	0.990/-62	0.710/-29	-1.28/-2.7	-2.04/-1.75	-3.4/-6.2	-10.73/-10.1	-5.05/-2.14	-1.41/-1.62	-1.110/-27	-0.41/-0.96	-0.51/-0.2	0.380/-54	1.789/-24	1.430/-82	-0.64/-0.82	-2.25/-3.06	-5.87/-10.02	-12.53/-10.84	-9.99/-7.35	-6.53/-5.25
Θ(37.5°)	-0.120/-71	-0.32/-0.53	0.140/-34	0.960/-77	-1.35/-1.42	-0.55/-1.24	-2.21/-12	-0.04/-0.62	-1.72/-2.49	-4.74/-152	0.180/-24	0.510/-14	-0.45/-1.18	0.431/-83	2.382/-2	0.050/-68	3.063/-52	2.670/-68	-0.63/-68	-4.81/-4.05	-5.45/-7.61	-11.88/-9.64	-6.15/-5.38	-5.63/-5.25
Θ(45°)	0.591/-23	1.121/-09	0.140/-01	2.061/-05	-2.15/-0.01	-0.8/-2.65	-2.090/-18	1.31/-0.48	-2.71/-4.02	-4.31/-1.74	0.491/-53	1												



Radiated Composite Gain Data of 6GHz

Appendix C

Θ(22.5°)	0.990/1.2	-1.37/-2.96	-4.2/-5.45	-6.58/-8.04	-11.58/-11.56	-9.27/-7.02	-6.06/-4.8	-3.67/-2.56	-0.27/-1.01	0.63/-0.42	-0.68/-0.66	-2.08/-3.83	-2.73/-3.14	-5.57/-7.83	-5.19/-3.38	-2.8/-2.61	-3.05/-3.34	-2.7/-2.04	-1.62/-0.51	1.07/2.44	3.11/3.38	3.09/2.45	1.45/1.69	2.08/2.07
Θ(30°)	-0.8/-1.9	-3.06/-2.32	-2.26/-2.87	-3.44/-3.42	-4.66/-7.79	-5.52/-4.39	-2.98/-1.71	-3.1/-3.77	-1.43/-1.68	-2.1/-0.45	-0.43/-2.75	-2.8/-2.41	-3.44/-5.06	-9/-6.37	-2.78/-2.11	-2.23/-1.87	-1.93/-2.79	-2.47/-0.66	1.79/2.55	2.33/1	0.83/1.91	3.37/2.42	3.43/1.59	1.38/0.31
Θ(37.5°)	-0.34/-1.29	-3.58/-4.18	-2.92/-3.01	-3.99/-2.63	-2.39/-4.56	-5.55/-3	-1.18/-1.56	-3.49/-1.42	0.93/1.33	1.65/1.68	0.05/-1.69	-2.17/-3.17	-3.5/-4.27	-3.48/-1.85	-1.87/-3.3	-2.15/-0.87	0.18/-1.71	-2.73/-0.08	0.41/1.49	1.45/1.25	2.99/4.03	3.91/2.45	1.84/1.09	
Θ(45°)	-0.02/-1.82	-2.43/-4.12	-1.66/-2.47	-2.59/-2.39	-2.78/-3.58	-2.46/-0.23	0.05/-1.85	-2.2/-1.4	-0.89/0.61	2.59/2.37	0.1/-1.22	0.07/-2.34	-1.1/-1.27	1.28/0.89	-1.08/-2.35	-1.53/-0.7	0.3/-2.39	-3.1/-1.03	-2.91/-2.76	-1.64/0.91	1.59/2.14	2.46/2.13	1.87/0.38	2.39/2.63
Θ(52.5°)	-3.04/-2.97	-0.67/-0.38	0.16/-2.16	0.73/-1.2	-2.46/-2.56	-1.85/-0.02	-0.92/-1.47	-1.21/-1.05	-0.72/-0.87	1.03/-0.72	0.81/06	0.14/-2.29	0.47/1.08	3.15/1.74	1.09/0.42	-1.22/-0.42	-0.35/-1.95	-0.66/-2.54	-2.85/-1.91	-0.75/-1.38	-0.98/1.68	2.74/1.71	1.52/0.58	-0.31/-0.85
Θ(60°)	0.6/-0.84	-2.05/-1.21	-1.25/-1.93	0.63/-0.6	-1.1/-1.84	-2.05/0.31	-1.38/-0.65	-1.89/-3.85	-2.03/-1.31	-2.11/0.22	0.78/1.18	0.03/-3.15	0.87/-0.24	2.89/1.3	1.82/0.79	-0.18/-0.47	-1.41/-1.76	-1.47/-5.16	-6.22/-3.15	-2.8/-1.35	-0.38/-0.52	1.2/1.13	0.64/-2.85	-5.95/-3.68
Θ(67.5°)	1.51/0.38	-4.85/-3.77	-2.61/-2.05	-1.95/-0.28	-1.97/-1.8	-2.94/-1.19	-0.75/-1.47	-2.32/-3.5	-1.87/-0.15	-1.35/0.08	-0.07/-0.13	-1.25/-3.02	-1.31/-1.54	0.5/-0.57	-0.51/1	-0.32/-0.62	-2.77/-2.5	-2.35/-3.5	-3.78/-9.18	-7.46/-7.77	-15.58/-12.67	-8.26/-2.13	-0.48/-4.79	-6.67/-5.78
Θ(75°)	1.17/-1.39	-4.43/-6.23	-4.64/-3.45	-2.96/-1.74	-3.89/-0.24	-4.54/-3.11	-1.68/-3.41	-3.18/-3.49	-3.62/-0.65	-2.25/-1.2	-0.66/0.05	-1.32/-2.65	-0.36/-2.48	1.45/-1.64	-2.18/-0.68	-0.72/-2.22	-4.04/-3.15	-1.74/-1.34	-1.62/-4.59	-5.7/-6.52	-2.4/-1.27	-3.21/-2.87	-2.09/-3.97	-3.04/-0.96
Θ(82.5°)	0.73/-4.59	-5.91/-6.57	-6.7/-6.39	-4.04/-3.69	-4.58/-1.62	-3.61/-2.95	-2.04/-4.56	-5.11/-3.44	-3.71/-2.5	-3.74/-1.92	-1.61/-0.63	-2.78/-1.84	-2.03/-2.54	-0.93/-2.85	-3.6/-1.44	-2.25/-5.27	-5.39/-4.26	-2.29/-2	-0.84/-4.28	-3.22/-2.73	-0.7/-0.56	-2.3/-2.79	-4.57/-6.18	-2.68/-1.93
Θ(90°)	-1.73/-3.47	-6.48/-8.69	-7.29/-10.01	-5.99/-5.84	-5.35/-4.02	-4.45/-3.7	-4.02/-4.16	-6.27/-3.84	-3.94/-4.06	-4.96/-3.05	-2.67/-3.4	-4.32/-2.09	-2.45/-3.45	-1.59/-4.91	-5.17/-2.57	-3.41/-6.22	-8.39/-4.84	-3.9/-3.1	-0.77/-6.89	-2.43/-2.87	-1.45/-1.29	-2.16/-3.07	-4.54/-9.28	-3.81/-8.38
Θ(97.5°)	-5.91/-3.77	-6.7/-7.13	-9.62/-9.92	-6.42/-7.34	-4.57/-9.65	-5.23/-4.88	-4.94/-5.86	-7.51/-6	-5.85/-6.99	-6.4/-3.59	-5.31/-7.38	-6.32/-2.61	-5.92/-4.85	-4.96/-6.57	-7.12/-5.25	-10.41/-6.75	-6.6/-6.05	-3.86/-9.18	-3.66/-6.56	-3.59/-2.75	-2.75/-5.85	-5.93/-8.83	-4.67/-9.46	
Θ(105°)	-8.6/-5.11	-9.83/-6.89	-11.6/-9.58	-7.15/-8.39	-5.49/-11.5	-6.83/-6.73	-6.81/-5.84	-9.68/-7.46	-7.57/-7.79	-8.01/-4.38	-7.33/-9.26	-5.02/-4.11	-7.34/-3.54	-6.67/-3.3	-9.77/-6.91	-7.4/-6.7	-10.84/-10.2	-10.47/-10.04	-9.09/-7.85	-7.35/-10.83	-5.97/-11.05	-10.3/-7.55	-3.26/-6.76	
Θ(112.5°)	-10.52/-6.53	-11.36/-8.5	-11.59/-12.2	-9.68/-7.3	-11.63/-10.51	-8.52/-9.25	-9.1/-7.78	-12.33/-7.45	-9.05/-7.93	-9.8/-5.48	-9.35/-9.59	-6.18/-7.3	-8.85/-8.28	-10.75/-8.72	-13.02/-6.99	-7.28/-9.28	-10.12/-13.18	-13.01/-11.27	-14.7/-6.87	-13.56/-11.46	-7.77/-8.46	-10.39/-10.79	-13.25/-6.83	-5.12/-6.49
Θ(120°)	-9.85/-11.18	-9.57/-12.76	-12.59/-15.38	-12.24/-8.18	-12.61/-11.1	-12.68/-9.31	-12.45/-10.21	-13.82/-11.26	-10.54/-11.77	-11.98/-8.04	-9.72/-7.61	-10.38/-53	-8.74/-9.06	-9.79/-13.81	-11.5/-15.4	-15.15/-10.36	-12.71/-7.87	-15.09/-12.73	-11.69/-11.74	-10.78/-9.87	-9.87/-8.52	-9.43/-6.31		
Θ(127.5°)	-11.22/-14.2	-13.01/-14.12	-12.62/-16.07	-11.81/-12.78	-12.61/-11.83	-14.5/-13.24	-11.03/-9.3	-11.22/-14.8	-10.22/-8.92	-8.05/-10.9	-11.84/-10.24	-10.79/-12.66	-8.39/-10.93	-8.89/-10.02	-13.87/-13	-13.26/-10.42	-14.43/-15.23	-14.53/-13.69	-10.34/-11.24	-11.9/-15.58	-15.84/-11.96	-10.23/-7.68	-8.95/-11.66	-13.95/-8.67
Θ(135°)	-11.35/-11.94	-15.38/-14.62	-12.82/-14.66	-10.95/-13.2	-13.43/-14.22	-13.74/-11.8	-12.07/-12.51	-10.02/-12.98	-9.86/-8.46	-12.18/-7.83	-9.13/-7.08	-10.96/-8.25	-7.53/-7.75	-6.01/-8.92	-9.71/-13.46	-13.63/-7.69	-10.06/-16.18	-12.48/-14.94	-11.93/-14.63	-8.3/-14.94	-14.59/-12.72	-12.12/-15.75	-15.71/-8.84	-12.43/-12.37
Θ(142.5°)	-15.68/-12.76	-11.73/-12.55	-11.19/-12.01	-15.32/-9.29	-15.87/-12.51	-15.10/-9.77	-9.29/-11.25	-10.23/-13.62	-15.97/-10.67	-8.15/-15.31	-10.49/-13.37	-9.51/-12.11	-8.84/-9.21	-9.13/-12.42	-13.24/-13.16	-11.69/-13.03	-12.83/-12.47	-15.48/-11.78	-9.23/-11.83	-12.06/-13.6	-15.49/-15.17	-11.3/-9.85	-13.92/-14.78	
Θ(150°)	-11.5/-12.71	-9.88/-14.54	-15.35/-15.58	-15.37/-11.32	-14.71/-9.24	-7.32/-15.09	-11.81/-10.15	-10.11/-12.97	-8.92/-11.34	-13.16/-14.14	-13.36/-8.36	-9.43/-8.17	-8.45/-7.1	-7.16/-9.52	-11.86/-11.03	-11.6/-12.22	-15.42/-15.62	-16.03/-14.02	-13.7/-8.96	-9.91/-12.02	-13.5/-15.39	-13.95/-13.02	-14.52/-9.91	-7.34/-9.17
Θ(157.5°)	-6.77/-5.95	-10.67/-15.12	-14.86/-15.89	-14.84/-13.2	-15.37/-9.47	-8.29/-14.16	-12.55/-8.75	-10.39/-15.28	-12.93/-13.2	-14.8/-14.37	-12.94/-13.75	-11.81/-12.2	-13.85/-15.19	-14.77/-12.66	-13.1/-10.93	-13.1/-10.92	-10.75/-12.71	-15.66/-15.21	-15.18/-12.99	-13.33/-16.13	-12.66/-13.55	-14.97/-13.62	-12.9/-10.5	-8.6/-7.82
Θ(165°)	-13.92/-12.5	-12.56/-12.74	-15.45/-15.49	-14.98/-13.94	-12.94/-12.27	-14.31/-15.11	-12.72/-12.3	-12.1/-13.73	-15.03/-15.51	-14.46/-10.65	-7.86/-7.05	-8.94/-12.68	-9.8/0.1	-8.52/-10.4	-10.35/-9.22	-8.92/-11.32	-14.27/-15.8	-15.63/-15.5	-14.75/-15.01	-15.26/-14.65	-13.57/-14.39	-14.47/-13.85	-10.37/-9.47	-9.88/-11.52
Θ(172.5°)	-10.18/-12.46	-14.12/-15.03	-14.87/-15.06	-15.44/-14.93	-15.17/-15.11	-15.55/-13.36	-12.72/-14.97	-14.71/-13.34	-12.64/-12.77	-11.04/-11.58	-11.79/-8.77	-7.66/-7.99	-8.06/-8.72	-10.44/-11.56	-11.17/-11.41	-12.41/-15.69	-15.4/-15.01	-14.88/-13.88	-11.4/-12.14	-11.57/-11.81	-11.55/-9.67	-9.33/-9.97	-10.06/-10.13	
Θ(180°)	-14.96/-15.86	-15.32/-14.87	-15.69/-15.01	-15.63/-15.65	-15.61/-14.76	-14.88/-14.55	-14.43/-15.44	-15.19/-13	-11.17/-10.22	-9.03/-8.68	-8.46/-8.13	-7.9/-6.78	-6.52/-6.71	-7.75/-8.33	-9.55/-11.4	-13.2/-15.22	-15.12/-15.5	-14.1/-12.6	-10.83/-9.95	-10.12/-8.36	-8.56/-8.65	-8.14/-7.59	-7.95/-9.59	-12.47/-15.57
Freq(Hz)	6.995GPol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-1.82/-0.48	0.45/1.24	1.77/2.13	2.25/2.38	2.19/1.95	1.43/1.22	0.41/-0.61	-2.12/-4.35	-6.33/-10.2	-15.52/-14.69	-12.79/-9.4	-6.59/-4.56	-2.91/-1.53	-0.79/-0.1	0.57/1.04	1.23/1.01	0.54/0.48	0.29/-0.37	-1.51/-2.42	-3.8/-5.58	-10.89/-10.13	-14.42/-15.72	-10.42/-7.25	-14.74/-3.06
Θ(7.5°)	-4.87/-3.39	-3.03/-2.76	-2.42/-2.04	-1.97/-1.82	-1.83/-1.95	-2.13/-2.69	-3.28/-4.07	-4.93/-6.49	-8.42/-10.83	-12.17/-10.81	-7.47/-4.55	-2.87/-1.57	-0.41/0.6	1.25/1.82	2.19/2.45	2.62/4.5	2.13/1.72	1.37/0.77	0.11/-1.16	-2.49/-6.42	-6.93/-8.82	-13.16/-12.97	-10.98/-9.25	-6.95/-6.7
Θ(15°)	-4.39/-2.82	-1.49/-1.95	-2.56/-3.02	-3.26/-3.55	-3.76/-3.76	-4.07/-5.08	-5.65/-5.9	-5.44/-5.44	-7.06/-8.12	-9.54/-9.43	-5.08/-3.97	-2.71/-1.69	-0.65/0.5	1.35/1.9	1.97/1.45	0.57/-0	0.62/1.61	1.87/1.82	1.4/0.75	-0.54/-2.28	-3.97/-6.04	-8.71/-11.75	-10.86/-9.31	-7.83/-9.52
Θ(22.5°)	-5.14/-3.73	-1.95/-0.89	-0.34/-0	-0.03/-0.3	-0.42/-0.55	-1.27/-2.36	-3.06/-3.87	-5.58/-5.8	-7.8/-9.8	-7.82/-5.72	-3.9/-2.38	-0.72/-0.34	-0.45/0.6	2.41/3.21	2.71/1.77	0.79/-0.06	0.32/0.94	0.97/0.57	0.68/0.41	-0.03/-0.89	-2.32/-4.48	-7.71/-11.46	-11.08/-7.98	-6.95/-6.77
Θ(30°)	-4.21/-4.15	-3.11/-1.3	-0.7/-0.02	-0.86/-1.38	-0.25/0.04	-1.27/-2.51	-1.93/-0.91	-1.94/-7.2	-9.03/-8.21	-4.76/-4.89	-4.98/-3.75	-2.25/-1.19	-1.38/-1.48	0.38/1.68	1.56/1.03	2.06/2.35	2.15/1.38	-0.06/-0.24	-0.61/-1.7	-2.33/-2.1	-3.03/-5.97	-9.42/-13.62	-9.51/-5.68	-5.06/-4.29
Θ(37.5°)	-2.5/-2.16	0.15/0.8	0.41/0.82	-2.21/-4.34	-0.28/-0.33	-2.73/-3.65	-1.97/-0.27	-0.06/-1.22	-4.23/-5.33	-5.93/-5.44	-3.75/-1.26	0.16/0.62	-0.01/-0.12	-0.26/0.66	1.81/1.28	3.27/2.19	0.94/1.03	1.12/0.4	2.39/-0.44	-5.77/-6.69	-3.38/-2.34	-5.26/-9.52	-9.15/-7	-7.36/-4.28
Θ(45°)	-0.49/-0.86	0.79/0.23	-0.77/-0.46	-3.47/-3.27	-0.96/-3.41	-3.48/-2.83	-0.93/-0.29	-2.55/-3.1	-3.48/-4.66	-3.22/-2.25	-1.06/1.41	2.08/1.85	0.2/-0.03	-0.81/-0.91	0.50/85	2.82/1.92	3.49/2.93	1.13/13	2.76/-1.41	-2.51/-0.37	-1.78/-2.78	-6.37/-9.16	-7.81/-8.46	-6.98/-2.78
Θ(52.5°)	1.33/0.32	-0.19/0.23	0.88/0.68	-0.54/0.35	-0.81/-1.39	-1.79/-0.36	1.06/0.39	0.4/-0.33	-0.48/-1.35	-0.65/0.18	0.69/2.77	2.95/2.05	-1.94/-0.5	-1.78/-2.62	-1.25/1.76	2.48/2.5	4.5/0.3	3.13/86	0.99/-0.2	1.97/2.02	-1.32/-2.37	-2.07/-3.06	-3.2/-6.88	-11.43/-2.81
Θ(60°)	-0.20/8.1	0.91/1.56	0.85/1.25	0.57/-0.13	-1.14/-0.6	-2.91/-0.88	-0.76/-3.15	-0.39/-0.31	-1.86/-1.42	-1.58/1.16	1.14/2.85	2.96/2.14	-1.2/-1.72	-3.55/-3.12	-0.49/1.4	1.17/0.88	2.12/1.48	2.04/1.37	-2.76/-0.64	0.55/0.59	-1.46/-1.7	1.42/0.19	-0.76/-2.78	-8.14/-4.31
Θ(67.5°)	-2.47/0.8	2.13/2.76	-0.3/-0.41	-0.27/-1.42	0.04/0.29	-0.38/-0.74	-1.19/-2.15	-0.92/0.55	-1.44/-0.23	-0.58/2.64	1.94/1.63	2.81/66	-1.25/-2.33	-2.98/-2.04	0.65/0.03	-0.03/-0.42	-0.12/-0.25	1.0/-0.84	-1.21/-2.19	-1.53/-1.97	-1.17/-0.61	1.98/0.4	-0.09/-0.71	-8.14/0.27
Θ(75°)	-4.68/0.23	2.42/5.4	-1.75/-23.3	-0.01/-2.94	0.46/0.62	-3.37/-0.87	1.06/0.74	0.33/-1.58	0.56/-1.42	0.82/33	2.47/0.27	1.34/-1.59	-0.29/-1.75	-5.1/-1.35	0.4/-1.87	0.2/-1.49	-1.98/-2.52	-1.88/-0.12	-0.45/-1.48	-3.				



Sporton International Inc.



Radiated Composite Gain Data of 6GHz

Appendix C

Θ(22.5°)	1.36/0.84	0.21/-0.03	-2.91/-5.86	-8.65/-10.25	-11.92/-11.79	-10.71/9.32	-7.64/-4.96	-2.81/-1.16	0.13/0.76	0.56/0.38	0.32/-0.03	-0.87/-2.03	-3.19/-5.26	-8.05/-9.8	-11.15/-11.02	-9.03/-6.62	-4.36/-2.83	-1.88/-0.91	0.21/1.42	2.5/3.43	4.21/4.57	4.45/5.91	3.37/2.8	2.27/0.04
Θ(30°)	-0.56/-1.8	-3.16/-3.74	-4.58/-6.06	-8.31/-7.17	-5.85/-6.66	-7.34/-6.4	-4.85/-3.15	-2.32/-1.94	-1.9/-2.3	-2.2/-1.11	-0.41/-0.84	-1.39/-1.27	-1.67/-1.4	-8.42/-8.16	-6.21/-4.9	-3.96/-3.62	-1.81/-0.9	-0.46/0.93	2.63/2.27	3.29/3.05	3.17/3.73	4.16/4.23	3.91/3.39	2.17/0.46
Θ(37.5°)	0.24/-1.43	-4.24/-4.72	-3.91/-2.92	-3.31/-1.87	-0.73/-2.79	-4.34/-3.73	-3.39/-2.5	-1.63/-1.28	-0.68/0.53	1.54/-1.7	0.11/-0.75	-1.88/-2.32	-1.83/-2.4	-5.27/-6.44	-4.03/-3	-2.78/-2.02	-0.34/-1.27	-1.80/-35	1.92/2.04	1.34/-1.52	1.87/2.24	2.95/2.22	3.25/3.21	2.55/-3.2
Θ(45°)	-0.46/-1.12	-2.89/-4.99	-3.39/-2.16	-0.79/-0.34	-0.84/-1.67	-1.01/-0.74	-0.67/-0.59	-1.23/-1.55	-0.38/-1.49	2.17/1.33	0.42/0.31	-0.14/-0.72	-0.14/0.16	-0.65/-2.33	-3.05/-0.74	-0.39/-0.09	0.97/-2.01	-1.81/-0.33	-0.98/-2.28	-0.65/-1.83	2.57/2.02	1.65/-1.47	1.28/1.11	1.20/-7.1
Θ(52.5°)	-7.02/-4.12	-0.95/-0.58	-1.97/-0.59	0.92/0.17	-0.54/-0.52	-0.66/0.27	0.17/-0.7	-1.54/-0.72	0.63/-1.35	1.15/-1.13	1.87/2.24	1.09/-0.31	0.08/0.6	0.95/0.2	0.14/-1.39	0.91/0.82	1.35/-0.82	-0.77/-0.93	-1.71/-0.9	0.87/0.65	0.98/2.09	1.90/-7.9	1.15/-1.53	-0.03/-3.32
Θ(60°)	-2.48/-2.98	-3.67/0.1	-1.37/-0.52	1.4/-0.22	-0.17/-0.79	-1.09	-0.09/-0.49	-1.74/-2.01	-0.39/0.09	0.01/0.47	0.91/1.8	0.84/-1.31	-0.43/-0.38	0.92/0.62	1.52/0.06	1.66/0.76	0.68/-0.01	-2.18/-3.8	-2.39/-0.19	1.29/1.59	1.54/-0.02	-1.44/-4.25	-5.8/-5.81	
Θ(67.5°)	-1.42/-0.01	-5.75/-2.63	-1.33/-1.16	0.01/-0.38	-1.22/-1.37	-1.18/-0.17	-1.04/0.25	-0.68/-1.76	-0.29/0.2	0.14/0.13	-0.56/-1.23	-0.95/-1.84	-1.73/-0.89	-0.21/-0.06	0.88/-1.9	1.47/0.56	-0.75/-0.5	-1.59/-2.46	-5.04/-15.17	-9.72/-6.89	-18.46/-14.13	-7.52/-1.65	-0.97/-4.06	-7.72/-4.57
Θ(75°)	-1.77/-2.19	-4.05/-6.38	-3/-2.94	-1.13/-1.38	-3.36/-0.89	-3.73/-1.31	-3.46/-1.7	-2.03/-1.58	-1.83/-0.52	-0.51/-0.89	-2.03/-2.52	-2.52/-1.6	-1.84/-2.69	-0.03/-0.96	-0.55/0.72	0.58/-0.85	-2.18/-1.24	-1.11/0.11	-2.76/-5.98	-0.66/-0.05	-0.57/0.66	-1.78/-1.11	-2.08/-2.15	-1.08/-1.91
Θ(82.5°)	-1.14/-6.68	-6.31/-6.72	-6.13/-6.26	-2.3/-2.8	-4.07/-3.11	-4.53/-1.14	-3.98/-2.88	-3.9/-2.72	-2.47/-2.07	-1.99/-2.65	-4.76/-3.39	-3.58/-2.93	-3.79/-2.81	-2.36/-1.76	-1.85/-0.77	-1.54/-3.58	-3.89/-2.93	-1.58/-0.39	-1.55/-3.2	-1.71/-0.86	1.19/-1.24	-0.77/-1.46	-7.02/-4.77	-0.81/-3.75
Θ(90°)	-4.03/-6.83	-8.3/-9.3	-6.28/-9.73	-5.22/-4.87	-3.76/-5.98	-6.03/-2.8	-4.15/-3.46	-6.12/-3.92	-3.15/-3.62	-3.51/-3.52	-5.11/-4.85	-4.84/-4.01	-4.06/-5.55	-3.75/-3.17	-3.68/-2.92	-3.36/-4.76	-7.89/-5.46	-2.23/-1.13	-1.14/-5.64	-0.46/-0.99	-0.03/0.25	-0.85/-1.65	-5.93/-8.56	-3.24/-8.54
Θ(97.5°)	-11.04/-6.53	-9.34/-10	-8.97/-9.78	-7.86/-6.9	-4.34/-11.08	-5.69/-5.13	-4.71/-5.04	-6.75/-7	-5.13/-5.86	-5.64/-4.55	-5.96/-6.71	-7.08/-4.43	-7.76/-6.3	-6.11/-5.16	-5.97/-5.21	-6.14/-6.4	-11.31/-8.29	-5.21/-4.67	-4.78/-8.71	-2.63/-5.44	-2.32/-0.86	-1.4/-4.42	-7.18/-7.95	-5.71/-12.16
Θ(105°)	-15.87/-8.7	-11.03/-10.66	-13.42/-8.98	-10.76/-8.18	-7.25/-12.05	-5.45/-7.09	-6.29/-6.26	-10.11/-9.62	-6.78/-6.9	-8.06/-6.93	-7.12/-8.99	-10.1/-7.5	-8.91/-6.57	-9.12/-6.39	-13.29/-11.49	-12.79/-10.16	-11.59/-7.77	-8.67/-11.05	-5.83/-3	-4.76/-11.22	-9.99/-7.42	-6.9/-13		
Θ(112.5°)	-12.65/-10.99	-13.11/-9.95	-12.57/-12.61	-13.1/-8.32	-14.59/-10.28	-7.55/-8.83	-8.63/-8.55	-13.07/-8.15	-8.22/-9.44	-10.85/-10.1	-8.69/-9.16	-10.16/-10.13	-9.55/-11.43	-11.46/-7.92	-14.22/-7.61	-8.83/-14.93	-10.29/-14.51	-18.16/-10.98	-17.14/-8.99	-17.26/-11.43	-8.66/-7.74	-11.55/-17.82	-15.13/-9.49	-10.05/-13.1
Θ(120°)	-10.22/-12.87	-12.69/-13.34	-13.4/-17.94	-12.69/-11.47	-14.08/-11.04	-13.41/-8.81	-14.93/-10.13	-15.77/-11.5	-10.36/-14.81	-12.86/-12.7	-13.4/-13.15	-16.8/-9.62	-16.29/-13.13	-13.77/-12.23	-13.43/-10.68	-15.54/-19.32	-11.85/-18.23	-15.86/-11.1	-17.24/-13.9	-12.25/-12.18	-14.04/-19.28	-17.11/-18.47	-17.32/-10.6	
Θ(127.5°)	-13.09/-15.79	-13.08/-15.91	-13.32/-19.02	-13.63/-18.98	-13.52/-13.46	-16.81/-14.62	-14.49/-12.06	-13.52/-17.34	-12.43/-11.6	-10.95/-12.06	-13.34/-13.09	-10.87/-18.31	-13.09/-16.74	-17.1/-14.87	-15.81/-14.01	-15.95/-12.52	-16.32/-18.2	-16.46/-15.65	-11.94/-16.85	-12.53/-19.3	-18.73/-14.2	-9.73/-11.51	-16.48/-18.14	-17.65/-9.2
Θ(135°)	-12.51/-18.17	-17.88/-18.15	-14.2/-16.65	-16/-14.58	-17.78/-15.68	-18.71/-14.21	-12.75/-13.25	-10.97/-14.55	-15.55/-14.42	-14.94/-14.61	-14.31/-15.14	-15.52/-12.21	-17.07/-17.19	-18.16/-18.58	-17.87/-14.54	-17.87/-14.52	-12.38/-19.36	-18.45/-17.86	-13.57/-17.79	-8.41/-17.46	-18.19/-13.14	-14.4/-18.67	-19.16/-12.96	-18.39/-13.44
Θ(142.5°)	-19.23/-14.34	-12.3/-15.9	-18.11/-14.68	-18.88/-14.26	-18.6/-15.86	-14.42/-14.51	-13.91/-17.13	-17.08/-17.81	-19.14/-16.48	-18.16/-18.55	-17.1/-17.89	-16.21/-17.68	-19.32/-17.63	-18.5/-28.9	-14.38/-17.43	-12.81/-17.2	-18.4/-14.74	-14/-13.6	-18.93/-13.53	-15.51/-18.99	-15.59/-15.15	-18.1/-18.71	-13.06/-19.7	-16.19/-18.14
Θ(150°)	-17.83/-14.39	-12.97/-19.9	-18.64/-14.81	-17.71/-14.43	-19.28/-13.77	-11.57/-18.01	-18.16/-18.62	-13.71/-13.45	-15.84/-15.79	-14.13/-16.02	-15.73/-12.11	-11.75/-15.66	-19.11/-16.21	-14.41/-12.88	-15.04/-18.77	-17.84/-19.19	-19.32/-18.06	-15.97/-14.35	-15.31/-14.75	-17.18/-19.2	-18.64/-17.03	-16.51/-17.65	-18.06/-18.88	
Θ(157.5°)	-17.37/-13.05	-16.48/-17.74	-17.6/-18.75	-17.52/-16.66	-18.72/-17.72	-16.47/-16.26	-18.41/-19.7	-18.57/-18.26	-16.71/-17.41	-17.91/-18.02	-17.17/-15.42	-13.93/-16.77	-17.51/-17.4	-18.06/-17.72	-15/-15.55	-18.87/-17.93	-17.11/-18.61	-19.23/-17.15	-17.9/-17.73	-19.27/-18.85	-18.61/-17.61	-18.85/-15.64	-14.34/-16.08	-18.08/-18.29
Θ(165°)	-17.71/-17.89	-18.81/-17.64	-18.4/-18.02	-18.47/-19.11	-18.48/-16.52	-16.85/-18.57	-17.95/-16.46	-17.71/-17.71	-17.84/-18.77	-17.93/-18.74	-19.09/-18.04	-17.88/-16.39	-16.76/-19.41	-17.81/-17.44	-18.95/-18.05	-15.99/-16.63	-19.19/-19.1	-18.13/-18.57	-18.02/-18.23	-18.18/-18.23	-19.12/-18.03	-16.46/-15.25	-13.83/-14.62	-17.48/-18.15
Θ(172.5°)	-13.88/-14.64	-15.92/-17.7	-17.09/-17.7	-18.24/-18.39	-18.29/-18.45	-18.23/-18.92	-17.47/-17.62	-16.34/-14.63	-13.69/-13.75	-14.26/-15.35	-16.9/-18.2	-18.97/-17.92	-18.07/-16.51	-18.42/-18.03	-18.48/-19.39	-17.31/-17.59	-18.02/-18.27	-18.42/-18.33	-18.02/-16.66	-14.89/-14.99	-16.89/-18.24	-18.49/-19.02	-18.72/-16.32	-17.44/-15.1
Θ(180°)	-17.71/-19.03	-18.64/-17.82	-19.29/-18.32	-18.74/-19.05	-18.51/-17.95	-18.11/-19	-17.87/-19.26	-18.9/-18.06	-18.24/-19.2	-18.21/-17.59	-17.21/-17.83	-19.23/-18.35	-17.2/-16.75	-18.73/-18.18	-18.59/-19.11	-18.33/-16.67	-18.22/-18.72	-17.78/-19.07	-18.37/-17.74	-18.11/-17.73	-18.68/-18.2	-18.65/-19.23	-17.75/-17.91	-18.23/-18.77
Freq(Hz)	6.995GPol.	ThetaAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-2.52/-0.76	0.16/0.97	1.62/06	2.22/2.5	2.14/1.86	1.460/9.99	0.08/-0.91	-2.2/-4	-7.01/-11.44	-18.48/-17.46	-14.11/-8.9	-5.86/-3.87	-2.11/-0.89	-0.16/0.4	0.76/1.08	1.32/1.3	1.08/0.87	0.58/0	-0.76/-1.69	-3.18/-5.01	-7.12/-10.22	-16.33/-19.45	-13/-9.25	-5.86/-3.89
Θ(7.5°)	-3.59/-2.3	-1.63/-0.93	-0.33/0.05	0.18/0.24	0.12/0.06	-0.17/0.76	-1.51/-2.32	-3.56/-6.96	-9.9/-15.19	-18.02/-15.73	-10.52/-6.55	-4.16/-2.52	-1.16/-0.07	0.71/-1.25	1.68/2.14	2.43/2.51	2.32/2.03	1.67/1.01	0.1/-1.17	-2.91/-5.5	-8.24/-11.37	-16.95/-14.63	-11.06/-8.77	-5.84/-2.47
Θ(15°)	-3.07/-1.64	-0.56/-0.29	-0.53/-1.19	-1.48/-1.9	-2.32/-2.66	-3.03/-4.68	-4.11/-4.73	-6.07/-8.63	-13.73/-18.46	-18.03/-19.49	-7.6/-5.28	-3.58/-2.36	-1.3/-0.39	0.56/-1.31	1.82/2.16	2.25/2.15	2.14/2.23	2.05/1.36	0.41/-0.82	-2.3/-3.8	-5.47/-7.89	-10.46/-12.88	-10.8/-8.59	-7.16/-4.52
Θ(22.5°)	-4.24/-1.94	-0.01/0.56	0.24/-0.27	-0.75/-1.27	-1.5/-1.83	-3.24/-5.24	-5.45/-4.98	-5.49/-7.88	-12.95/-19.24	-12.14/-10.75	-4.59/-2.8	-0.99/-0.13	-1.73/0.39	1.46/2.61	2.88/2.49	1.84/-1.23	0.97/1.25	1.59/-1.53	1.12/0.29	-0.63/-1.72	-2.94/-4.85	-7.59/-11.64	-14.88/-11.81	-8.82/-6.54
Θ(30°)	-9.63/-6.1	-2.26/-0.69	-0.54/-0.81	-1.93/-2.61	-1.23/-1.02	-3.63/-6.62	-4.54/-2.68	-2.85/-5.05	-10.94/-18.6	-11.97/-8.18	-5.75/-6.31	-2.19/-1.29	-0.4/-0.13	0.21/-55	2.38/2.46	2.75/2	0.58/0.46	0.51/0.54	0.08/0.64	-1.26/-1.67	-3.11/-5.7	-9.89/-16.85	-18.18/-12.72	-10.74/-10.34
Θ(37.5°)	-8.05/-5.91	-4.68/-3.31	-2.79/-1.81	-3.15/-5.7	-1.71/-1.66	-5.39/-7.75	-5.74/-4.38	-5.1/-8.76	-16.1/-18.76	-16.37/-11.66	-7.53/-4.46	-2.76/-2.17	-1.78/-0.64	1.83/-14	1.87/1.01	-0.21/-0.49	-0.79/0.38	0.39/-1.88	-6.2/-8.33	-7.04/-5.85	-7.38/-10.84	-16/-18.19	-14.65/-10.83	
Θ(45°)	-7.76/-4.98	-3.41/-3.33	-4.84/-3.32	-4.52/-6.89	-3.76/-4.93	-8.06/-9.88	-6.78/-5.36	-7.41/-9.96	-13.42/-18.75	-16.09/-10.86	-7.54/-4.6	-3.64/-3.26	-2.16/-1.52	-1.97/-3.72	-0.36/-0.93	-1.45/-2.1	-0.67/-1.41	-2.39/-0.1	-0.39/-5.25	-7.21/-6.18	-7.08/-8.77	-13.58/-10.51	-15.56/-18.77	-14.83/-8.96
Θ(52.5°)	-5.34/-4.95	-4.15/-6.61	-8.88/-5.08	-5.15/-5.91	-6.62/-6.63	-11.54/-11.8	-8.01/-8.3	-8.64/-9.23	-14.23/-18.16	-13.24/-13.02	-14.15/-9.68	-6.51/-5.32	-5.41/-2.44	-3.01/-4.39	-5.69/-5.58	-5.88/-4.86	-2.01/-4.35	-5.53/-1.75	-4.81/-6.3	-5.23/-10.68	-18.87/-17.82	-18.54/-16.32	-15.07/-17.96	-18.12/-9.98
Θ(60°)	-9.03/-6.2	-5.51/-6.99	-12.02/-4.24	-5.78/-7.62	-10.38/-9.7	-14.62/-13.23	-12.35/-12.96	-10.56/-8.73	-13.74/-18.45	-17.17/-15.57	-19.39/-14.14	-12.78/-8.62	-8.55/-5.21	-5.59/-6.02	-11.98/-8.59	-9.62/-10.03	-6.15/-9.76	-9.19/-4.32	-8.13/-5.43	-8.34/-11.81	-19.41/-18.35	-17.49/-19.71	-18.73/-17.92	-13.18/-12.83
Θ(67.5°)	-12.9/-8.8	-6.86/-9.12	-13.3/-4.98	-7.02/-8.8	-15.06/-10.72	-13.08/-12.01	-15.59/-13.46	-13.46/-8.8	-13.42/-19.46	-16.97/-17.25	-19.06/-13.39	-13.84/-10.32	-13.22/-7.75	-9.69/-10.42	-18.24/-10.26	-15.22/-15.89	-13.71/-18.39	-12.71/-9.78	-11.01/-8.74	-10.38/-19.34	-18.95/-18.34	-15.86/-13.63	-17.15/-17.62	-11.07/-6.68
Θ(75°)	-5.9/-10.34	-9.98/-12.																						



Radiated Composite Gain Data of 6GHz

Appendix C

Θ(75°)	-15.64/-4.4	-11.95/-9.36	-8.61/-18.49	-9.4/-6.31	-7.54/-13.19	-17.86/-17.98	-8.33/-9.23	-14.76/-16.74	-18.66/-9.79	-18.76/-6.15	-1.55/-6.88	-8.89/-13.03	-3.84/-3.07	-3.62/-3.52	-7.77/-18.19	-7.2/-6.67	-10.25/-10.2	-5.2/-13.28	-16.54/-13.21	-13.19/-15.55	-19.02/-14.09	-15.96/-8.29	-11.33/-17.92	-8.31/-18.55
Θ(82.5°)	-13.89/-3.27	-7.89/-10.46	-6.69/-16.05	-12.66/-8.41	-9.77/-18.81	-16.39/-19.16	-7.97/-12.63	-11.84/-19.02	-19.27/-9.8	-17.92/-5.01	-3.69/-11.98	-11.31/-8.83	-4.59/-4.18	-3.02/-5.19	-9.14/-14.67	-10.32/-11.57	-9.45/-11.03	-6.22/-17.9	-13.9/-13.27	-11.25/-11.64	-11.96/-9.43	-13.68/-10.67	-13.31/-11.18	-5.21/-16.88
Θ(90°)	-11.02/-4.24	-8.71/-12.66	-7.36/-14.33	-14.68/-11.51	-10.69/-17.25	-13.52/-10.46	-8.18/-11.49	-9.91/-18.07	-18.94/-10.41	-18.96/-6.43	-6.34/-18.27	-18.62/-19.74	-8.63/-4.74	-4.95/-6.52	-11.79/-17.09	-13.16/-14.5	-11.23/-16.24	-11.67/-17.09	-13.16/-14.5	-11.42/-10.78	-11.23/-9.9	-17.42/-17.44	-16.61/-16.76	-5.38/-12.13
Θ(97.5°)	-10.87/-4.95	-9.58/-13.14	-10.34/-17.33	-19.23/-12.88	-12.95/-19.44	-11.36/-9.27	-9.94/-13.18	-11.75/-15.82	-18.76/-13.92	-18.96/-8.15	-14.47/-9.29	-5.84/-5.62	-4.4/-4.31	-3.2/-6.8	-10.99/-16.18	-14.33/-14.73	-17.17/-18.7	-16.67/-17.78	-14.32/-11.08	-12.81/-12.37	-10.11/-14.42	-12.96/-14.15	-11.73/-10.87	-7.14/-13.58
Θ(105°)	-11.71/-6.13	-12.18/-10.77	-12.82/-18.74	-18.16/-18.19	-12.04/-18.83	-18.78/-11.86	-8.67/-12.01	-10.42/-17.86	-18.18/-13.88	-15.09/-9.02	-18.31/-9.74	-7.12/-7.6	-5.52/-4.24	-6.87/-9.38	-13.4/-18.94	-16.98/-15.79	-18.19/-18.95	-16.04/-17.7	-17.27/-9.22	-14.13/-16.94	-10.59/-16.01	-13.4/-15.95	-12.81/-10.9	-7.42/-11.95
Θ(112.5°)	-17.55/-12.01	-14.08/-18.69	-17.79/-17.96	-19.08/-16	-10.23/-17.76	-16.54/-18.31	-18.76/-14.31	-11.45/-18.63	-14.13/-18.58	-12.29/-9.11	-15.89/-12.48	-7.12/-7.22	-6.67/-5.33	-7.29/-10.72	-16.41/-14.15	-18.32/-19.02	-16.68/-18.91	-17.56/-16.58	-18.32/-12.09	-14.97/-11.38	-11.51/-13.61	-10.13/-12.95	-12.12/-13.29	-8.97/-13.57
Θ(120°)	-11.93/-13.3	-10.45/-12.49	-11.77/-15.88	-12.65/-17.44	-10.17/-13.14	-13.05/-13.65	-15.25/-17.91	-14.99/-19.18	-14.65/-18.28	-15.35/-19.23	-11.22/-15.76	-10.44/-18.64	-15.92/-10.49	-12.45/-11.9	-14.77/-18.34	-19.19/-18.69	-18.52/-19.23	-18.35/-18.66	-18.95/-17.39	-10.79/-15.4	-18.73/-9.23	-4.86/-8.41	-11.95/-17.72	-14.55/-8.62
Θ(127.5°)	-15.62/-18.11	-16.73/-17.77	-16.68/-16.1	-11.83/-19.54	-10.37/-14.72	-11.33/-17.06	-15.57/-11.69	-10.06/-17.66	-10.79/-12.23	-14.5/-18.8	-13.05/-11.78	-12.86/-8.55	-8.53/-5.07	-5.91/-8.89	-9.7/-15.45	-18.12/-18.2	-17.95/-17.56	-18.12/-18.81	-18.24/-17.48	-13.76/-17.59	-17.69/-13.17	-6.39/-10.88	-18.98/-10.87	-9.58/-13.58
Θ(135°)	-18.55/-9.97	-14.56/-16.32	-18.77/-15.85	-17.12/-19.19	-10.47/-18.71	-8.74/-12.9	-6.61/-14.78	-8.59/-12.96	-16.46/-18.2	-17.32/-8.96	-11.74/-14.39	-15.57/-14.7	-8.35/-5.99	-10.11/-9.63	-16.31/-10.62	-10.88/-16.68	-15.08/-16.74	-18.15/-12.68	-17.73/-15.14	-13.01/-17.45	-15.97/-17.68	-18.12/-18.41	-13.69/-8.12	-6.55/-12.03
Θ(142.5°)	-14.65/-13.59	-18.91/-12.29	-8.22/-11.62	-16.9/-16.8	-18.87/-15.51	-11.6/-18.6	-9.71/-17.31	-14.45/-15.36	-14.12/-9.19	-9.53/-13.46	-18.48/-18.65	-13.36/-11.86	-18.9/-18.91	-17.07/-11.42	-12.53/-17.78	-16.6/-11.65	-12.71/-14.24	-18.21/-17.78	-17.73/-11.79	-13.58/-13.94	-17.7/-17.81	-18.61/-13.96	-11.69/-10.79	-18.84/-12.82
Θ(150°)	-18.36/-12.37	-10/-11.37	-19.1/-14.75	-19.12/-15.67	-18.47/-14.02	-17.25/-18.89	-13.33/-19.39	-9.59/-7.06	-10.64/-18.07	-18.47/-14.88	-13.95/-18.83	-17.73/-18.45	-18.92/-18.3	-18.27/-18.6	-18.9/-17.56	-14.43/-15.87	-18/-18.99	-18.52/-16.52	-11.71/-12.32	-18.92/-18.38	-17.8/-15.32	-10.29/-8.95	-11.73/-18.02	
Θ(157.5°)	-7.08/-16.5	-13.95/-16.02	-18.96/-18.46	-18.34/-17.99	-18.95/-9.33	-11.14/-18.76	-12.42/-10.73	-10.42/-15.34	-18.37/-18.93	-15.9/-10.72	-9.64/-12.43	-12.14/-7.5	-12.95/-9.46	-13.11/-19	-12.66/-13.07	-17.24/-17.66	-17.91/-16.38	-17.66/-17.64	-18.89/-13.03	-10.64/-19.07	-12.62/-12.61	-15.19/-17.85	-10.81/-6.05	
Θ(165°)	-9.23/-9.47	-12.03/-17.86	-19.01/-17.69	-13.45/-11.27	-10.87/-13.31	-18.3/-19.43	-11.12/-12.99	-7.95/-9.23	-12.84/-16.24	-17.21/-15.4	-9.9/-6.96	-6.06/-7.85	-14.15/-15.25	-10.9/-10.42	-13.13/-14.34	-13.61/-13.45	-15.32/-18.74	-18.53/-19.11	-17.92/-18.19	-17.9/-18.71	-18.66/-17.31	-17.35/-13.04	-10.45/-8.51	-7.84/-8.7
Θ(172.5°)	-16.62/-18.26	-18.97/-17.47	-18.66/-18.22	-18.93/-19.14	-17.63/-18.16	-14.4/-12.14	-14.7/-15.59	-19.01/-16.55	-14.65/-11.39	-8.5/-8.83	-7.66/-9.46	-14.1/-16.57	-11.7/-9.18	-8.37/-8.31	-9.02/-10.28	-12.65/-13.68	-16.32/-15.87	-18.11/-18.47	-16.27/-15.39	-14.07/-18.75	-13.18/-13.48	-13.6/-12.69	-12.2/-13.93	-18.31/-17.24
Θ(180°)	-13.89/-13.9	-14.08/-13.68	-13.16/-12.79	-12.43/-13.14	-14.61/-14.95	-14.37/-16.69	-18.56/-17.82	-17.57/-18.05	-18.62/-18.65	-14.52/-11.78	-10.33/-9.99	-8.31/-7.87	-7.14/-7.24	-7.26/-7.37	-8.76/-10.73	-12.97/-13.15	-13.28/-12.79	-15.61/-14.48	-18.07/-14.72	-17.77/-15.65	-13.94/-12.19	-11.01/-10.78	-11.04/-12.11	-15.92/-14.98
Freq(Hz)	6.175GPdL	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°)	-16.38/-14.88	-15.11/-15.17	-14.86/-14.39	-13.51/-10.57	-12.91/-11.27	-10.01/-10.02	-11.16/-11.93	-11.67/-11.77	-12.68/-14.18	-18.36/-19.3	-14.44/-17.01	-18.32/-18.83	-18.36/-19.74	-18.59/-16.43	-16.66/-16.7	-16.64/-17.01	-13.75/-14.13	-16.82/-15.41	-14.79/-18.55	-16.8/-17.01	-17.43/-18.05	-18.28/-16.77	-16.22/-15.41	-14.44/-16.47
Θ(7.5°)	-18.29/-17.75	-18.9/-17.35	-18.74/-18.91	-17.07/-18.05	-17.01/-16.42	-16.1/-16.86	-17.45/-18.94	-18.56/-17.68	-19.23/-15.87	-15.16/-16.71	-18.84/-18.54	-18.65/-18.66	-17.77/-19.25	-17.94/-12.65	-10.18/-95	-8.34/-8.31	-8.65/-9.12	-9.68/-8.69	-9.66/-10.9	-9.6/-9.7	-10.16/-10.93	-13.58/-14.95	-15.67/-16.52	-17.06/-17.4
Θ(15°)	-18.11/-17.56	-14.53/-11.85	-8.46/-17.4	-6.84/-9.65	-6.89/-5.9	-5.48/-6.48	-8.94/-15.73	-17.78/-14.35	-8.98/-7.02	-7.75/-5.56	-13.96/-13.98	-14.49/-10.38	-9.19/-8.52	-8.32/-6.89	-6.52/-7.47	-8.89/-8.63	-8.95/-8.15	-8.1/-8.72	-10.07/-12.43	-18.45/-18.4	-18.39/-17.59	-15.53/-15.75	-18.15/-18.76	-18.23/-17.92
Θ(22.5°)	-7.61/-5.6	-13.95/-23.1	-2.31/-2.64	-1.94/-3.09	-4.69/-7.11	-10.01/-12.54	-13.86/-15.57	-17.18/-16.85	-19.47/-17.46	-18.76/-17.84	-16.27/-18.17	-18.12/-11.24	-8.4/-8.15	-9.34/-8.77	-8.55/-10.15	-14.55/-9.94	-6.74/-4.42	-1.42/-2.25	-3.74/-4.39	-6.79/-7.91	-12.33/-12.81	-13.32/-11.11	-11.76/-11.96	-11.77/-11.74
Θ(30°)	-6.31/-4.29	-1.89/-0.47	-0.28/-0.1	0.35/-0.23	-1.62/-4.04	-4.49/-3.71	-3.35/-2.88	-2.71/-3.63	-6.01/-8.75	-11.09/-10.85	-7.11/-4.19	-4.07/-6.28	-7.38/-6.11	-7.19/-10.24	-9.26/-8.75	-8.83/-7.01	-4.25/-2.25	-2.91/-3.83	-7.49/-7.34	-9.86/-9.9	-14.3/-19.09	-16.7/-12.52	-12.69/-11.39	-11.57/-13.32
Θ(37.5°)	-2.27/-1.07	-3.23/-3.35	-3.05/-5.75	-2.53/-1.61	-4.9/-9.11	-0.86/-6.21	-4.64/-2.45	-1.62/-6.32	-3.77/-14.3	-3.11/-0.94	1.25/-1.58	-9.01/-2.01	-5.34/-7.39	-5.75/-3.79	-2.06/-2.82	-4.92/-2.73	0.54/-1.43	-0.52/-5.43	-18.73/-18.62	-10.59/-7.77	-6.59/-5.88	-4.91/-6.47	-12.42/-9.53	-7.11/-17.85
Θ(45°)	-0.540/-0.82	-0.740/-0.95	-1.66/-3.03	0.630/-18	-3.54/-2.83	-4.95/-9.19	-4.28/-0.63	0.93/-1.56	-3.2/-2.46	-2.55/-0.39	2.51/-3.1	1.71/-0.8	-3.06/-5.45	-4.24/-1.05	1.150/-44	-0.81/-6.09	0.261/-56	2.50/-71	-2.24/-2.26	-2.97/-2.24	-0.79/-2.84	-9.37/-19.07	-10.57/-6.4	
Θ(52.5°)	-0.71/-1.29	1.93/-15	3.86/-0.02	1.55/-0.02	-2.29/-0.13	-2.57/-5.73	-4.8/-1.57	1.16/-0.55	-2.03/-0.92	-1.26/-0.26	2.45/-2.3	3.79/-1.48	-0.58/-6.47	-6.49/-0.31	2.86/-3.53	1.860/-53	0.03/-2.92	4.54/-1.97	-0.59/-0.2	0.11/-0.35	-0.280/-46	1.560/-33	-4.64/-8.51	-5.22/-3.16
Θ(60°)	-1.77/-0.56	3.825/-67	5.47/-1.34	0.66/-1.82	-2.630/-44	-0.36/-3.62	-6.12/-3.42	-0.52/-0.02	-1.94/-1.07	-0.8/-1.19	2.23/-5.45	5.14/-6	-3.01/-5.26	-7.24/-0.16	2.92/-4.53	3.892/-3	0.542/-83	3.492/-38	1.82/-81	1.680/-62	1.050/-74	1.242/-61	1.44/-0.69	-2.01/-1.91
Θ(67.5°)	-4.22/-2.47	3.63/-5	4.520/-63	1.460/-5	-1.89/-1.2	-0.23/-2.02	-1.89/-1.3	0.861/-57	0.730/-11	0.34/-96	1.73/-16	6.06/-12	1.54/-10.68	-10.83/-71	3.44/-95	3.722/-3	0.032/-54	3.517/-35	1.981/-17	7.242/-14	2.132/-59	0.552/-38	3.091/-67	-0.83/-1.56
Θ(75°)	-7.89/-3.68	3.395/-12	3.07/-0.14	2.53/-2.3	-2.26/-3.07	-1.07/-1.73	-0.88/-1.97	1.432/-36	2.190/-62	1.40/-59	1.482/-16	4.65/-6.38	1.7/-9.08	-11.45/-0.53	3.03/-5.03	2.26/-2.3	-0.52/-1.76	2.783/-51	-0.56/-1.07	3.4/-3.7	0.73/-19	2.012/-37	3.16/-1.5	-1.68/-1.94
Θ(82.5°)	-9.14/-3.43	3.874/-29	0.82/-2.73	2.081/-87	-2.74/-94	-3.53/-3.12	-1.06/-1.6	2.11/-1.6	1.78/-0.39	0.21/-1.53	0.780/-36	3.415/-61	0.14/-18.79	-9.850/-26	2.05/-13	-2.42/-1.81	-2.340/-07	0.82/-1.74	-6.6/-2.98	2.88/-0.17	-1.77/-1.8	1.51/-1.97	2.05/-2.04	-0.88/-1.55
Θ(90°)	-7.78/-2.21	4.053/-02	-2.87/-6.8	0.21/-0.19	-3.47/-5.06	-4.62/-5.65	-2.540/-66	1.84/-01	-0.02/-1.93	-1.40/-91	0.4/-0.89	2.424/-19	-0.8/-14.19	-9.78/-1.72	-0.980/-75	-6.88/-4.88	-3.34/-2.91	-1.10/-19	-10.51/-2.88	1.61/-2.44	-5.05/-0.92	0.460/-87	0.2/-1.38	-0.75/-3.8
Θ(97.5°)	-7.28/-1.39	2.87/-0.06	-7.94/-12.37	-2.23/-0.05	-6.6/-5.51	-4.36/-4.39	-2.740/-8	-0.44/-0.29	-1.6/-4.69	-1.79/-0.11	-2.88/-1.78	0.721/-63	-3/-17.83	-9.42/-1.72	-3.71/-18	-15.61/-4.97	-3.93/-5.08	-2.31/-2.23	-6.33/-1.79	0.45/-3.27	-7.02/-4.57	-1.42/-0.35	-1.76/-3.87	-3.88/-10.23
Θ(105°)	-10.29/-2.83	0.32/-1.3	-11.07/-14.71	-5.14/-4.32	-12.93/-4	-7.92/-5.82	-4.34/-3.15	-2.32/-2.9	-2.25/-92	-3.79/-2.44	-7.38/-4.46	-1.220/-38	-4.2/-1.67	-15.68/-4.1	-4.83/-6.61	-11.17/-13.5	-4.31/-5.66	-3.3/-4.9	-3.13/-1.34	0.32/-3.17	-6.07/-6.53	-2.59/-1.98	-3.68/-6.73	-10.1/-18.96
Θ(112.5°)	-17.94/-6.8	-3.39/-3.46	-12.46/-15.43	-6.74/-3.67	-10.22/-13.15	-10.02/-12.61	-8.07/-5.27	-2.13/-5.78	-4.42/-5.62	-6.88/-9.82	-10.85/-4.85	-2.25/-6.33	-9.24/-14.24	-13.94/-4.84	-6.93/-8.66	-10.32/-5.63	-4.21/-4.46	-4.14/-43	-4.38/-2.41	-3.6/-4.84	-9.29/-7.67	-3.24/-2.58	-5.42/-9.06	-18.66/-17.66
Θ(120°)	-12.63/-13.66	-7.02/-4.7	-7.64/-17.42	-13.2/-8.28	-8.98/-10.63	-8.03/-8.93	-12.77/-8.84	-4.25/-5.5	-10.14/-9.28	-7.89/-15.22	-9.25/-6.95	-4.41/-5.27	-11.61/-10.94	-16.15/-11.19	-13.78/-18.95	-19								



Radiated Composite Gain Data of 6GHz

Appendix C

Θ(120°)	-16.66/-15.74	-12.33/-19.15	-18.56/-18.87	-18.91/-10.92	-17.5/-18.91	-18.79/-18.3	-16.03/-18.07	-18.04/-18.37	-18.65/-14.75	-17.83/-9.66	-18.21/-18.84	-10.06/-11.76	-11.09/-10.2	-10.11/-11.92	-13.87/-10.31	-15.87/-14.88	-18.37/-18.6	-17.76/-17.57	-15.59/-10.66	-19.05/-18.09	-18.12/-18.41	-13.55/-9.24	-9.76/-9.13	-9.34/-8.21
Θ(127.5°)	-15.54/-18.92	-17.2/-19.09	-18.8/-19.14	-16.19/-13.46	-18.39/-16.49	-18.28/-18.27	-13.62/-12.56	-15/-18.3	-14.12/-12.28	-11.17/-16.27	-16.69/-13.41	-18.24/-13.65	-9.98/-11.83	-8.39/-11.51	-18.11/-18.62	-16.61/-14.44	-18.72/-18.29	-18.78/-17.9	-15.03/-12.25	-18.21/-17.94	-18.97/-18.65	-19.24/-9.84	-9/-12.2	-16.33/-15.18
Θ(135°)	-16.74/-12.61	-18.93/-17.14	-17.85/-18.83	-12.31/-18.22	-15.28/-19.12	-15.16/-15.45	-18.28/-18.6	-15.74/-17.72	-10.82/-9.27	-15.45/-8.22	-10.41/-6.92	-12.65/-10.41	-6.85/-7.11	-4.67/-8.21	-9.51/-18.96	-15.57/-8.05	-13.83/-19.02	-16.56/-17.49	-17.05/-18.05	-15.71/-18.46	-17.05/-19.45	-15.92/-18.85	-18.3/-10.86	-13.25/-17.87
Θ(142.5°)	-18.18/-17.49	-18.16/-15.24	-11.52/-15.38	-17.81/-10.71	-19.18/-15.19	-12.08/-11.34	-10.94/-12.11	-10.58/-15.6	-18.83/-11.57	-7.33/-18.09	-10.68/-15.1	-9.94/-13.15	-7.89/-8.81	-8.51/-12.77	-18.64/-15.07	-13.81/-17.15	-12.11/-17.56	-18.19/-17.89	-18.08/-16.26	-13.05/-12.05	-14.58/-18.36	-18.93/-17.68	-15.76/-15.29	-17.73/-17.46
Θ(150°)	-12.11/-17.28	-12.81/-16.31	-18.08/-18.37	-18.01/-14.23	-16.39/-10.96	-9.25/-18.2	-12.42/-9.84	-12.58/-19.4	-9.25/-13.12	-18.84/-16.45	-17.06/-10.68	-13.2/-8.24	-7.46/-9.97	-7.34/-12.2	-12/-12.85	-14.2/-12.72	-18.94/-19.09	-18.77/-16.11	-17.52/-10.1	-11.05/-15.32	-15.88/-17.66	-15.56/-15.14	-18.69/-9.87	-6.33/-8.44
Θ(157.5°)	-5.79/-6.19	-11.56/-18.54	-18.14/-19.05	-18.2/-15.78	-18.05/-9.23	-8.08/-18.19	-13.42/-7.68	-10.18/-18.32	-15.23/-15.16	-17.32/-16.48	-14.88/-18.34	-18.24/-13.89	-16.26/-16.99	-17.5/-14.02	-11.9/-12.59	-14.02/-11.2	-11.35/-13.55	-18.15/-19.44	-18.49/-14.56	-14.15/-19.45	-13.48/-15.63	-17.19/-17.74	-17.84/-11.53	-7.95/-6.88
Θ(165°)	-16.22/-13.65	-13.22/-14.2	-18.53/-19.01	-17.53/-15.23	-14/-14.19	-17.81/-17.69	-13.97/-13	-13.12/-15.87	-18.24/-18.28	-17.03/-10.48	-6.72/-5.97	-8.46/-15.05	-8.96/-6.83	-7.92/-10.44	-9.99/-8.77	-9.18/-12.52	-15.72/-18.52	-19.18/-18.45	-17.5/-17.81	-18.36/-17.12	-14.61/-16.82	-18.63/-18.85	-12.96/-10.77	-9.91/-11.99
Θ(172.5°)	-12.56/-16.38	-18.53/-18.85	-18.76/-18.45	-18.66/-17.51	-18.08/-17.8	-18.91/-14.4	-14.28/-18.36	-18.1/-18.5	-18.18/-18.44	-13.84/-13.17	-15.22/-18	-12/-8.22	-6.73/-7.03	-7.15/-8.12	-10.29/-11.49	-11.88/-12.1	-13.42/-19.15	-18.4/-17.73	-17.76/-17.12	-13.96/-15.32	-12.75/-12.37	-11.87/-9.06	-8.7/-9.7	-10.17/-11.54
Θ(180°)	-18.24/-18.72	-17.76/-17.94	-18.14/-17.74	-18.55/-18.29	-18.74/-17.6	-17.68/-16.33	-17.55/-14.36	-11.42/-9.46	-8.47/-8.21	-8.05/-7.4	-6.74/-5.56	-5.52/-5.89	-6.67/-7.56	-9.05/-11.38	-14.5/-17.82	-18.05/-18.3	-16.48/-13.15	-10.88/-9.89	-10.1/-7.74	-7.22/-9.37	-7.19/-6.36	-7.2/-9.33	-13.4/-18.4	
Freq(Hz)	6.995GPdL	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°)	-7.99/-5.5	-6.54/-5.79	-5.49/-5.36	-5.3/-4.97	-5.36/-5.48	-6.3/-5.89	-6.5/-7.58	-9.59/-9.9	-12.53/-15.43	-18.59/-17.95	-17.89/-18.41	-16.31/-14.14	-12.88/-10.62	-10.17/-9.1	-7.55/-6.73	-6.63/-7.4	-8.58/-8.2	-8.1/-8.98	-11.28/-12.15	-13.17/-14.77	-17.76/-17.57	-18.7/-17.47	-13.88/-11.41	-10.15/-8.99
Θ(7.5°)	-16.7/-14.41	-15.43/-17.69	-19.35/-18.97	-19.52/-18.54	-17.63/-18.22	-18.55/-18.28	-17.81/-18.66	-17.21/-15.56	-13.28/-12.67	-13.05/-12.25	-10.44/-8.7	-8.03/-7.28	-6.49/-5.94	-5.24/-4.6	-4.36/-4.5	-4.67/-5.34	-6.01/-6.75	-7.07/-7.5	-7.53/-8.78	-9.21/-10.45	-12.05/-12.39	-15.46/-17.44	-18.43/-18.19	-17.92/-18.29
Θ(15°)	-16.4/-14.22	-14.4/-15.74	-18.95/-17.93	-17.87/-17.32	-16.35/-14.85	-14.93/-18.54	-18.81/-17.26	-11.74/-8.27	-7.5/-7.21	-7.05/-7.79	-8.61/-9.09	-8.56/-7.91	-6.9/-5.33	-4.65/-4.47	-5.33/-8.2	-13.34/-17.5	-12.42/-7.76	-6.25/-4.81	-4.24/-3.98	-5.01/-7.1	-8.8/-10.4	-13.17/-17.17	-18.66/-19	-17.35/-18.36
Θ(22.5°)	-15.46/-18.34	-17.68/-13.56	-9.57/-7.05	-5.98/-5.97	-5.91/-5.72	-5.46/-5.5	-6.73/-9.32	-13.45/-9.86	-9.09/-9.15	-8.69/-10.81	-10.08/-9.1	-7.75/-8.53	-3.32/-3.14	-5.38/-7.93	-10.09/-11.94	-9.15/-7.52	-8.38/-9.98	-8.14/-6.97	-6.39/-6.82	-8.64/-11.3	-15.62/-18.7	-13.36/-10.25	-11.28/-15.02	
Θ(30°)	-5.33/-8.37	-13.24/-10.62	-8.75/-6.03	-6.37/-6.62	-5.92/-5.5	-4.99/-4.54	-5.35/-5.36	-7.61/-11.64	-13.31/-7.29	-4.95/-7.62	-11.02/-11.76	-10.06/-8.6	-12/-13.67	-6.84/-5.68	-8.47/-11.56	-7.55/-4.51	-2.6/-4.38	-9.26/-10.15	-10.18/-12.63	-13.28/-10.89	-10.5/-14.33	-16.04/-16.1	-9.12/-5.95	-6.03/-5.05
Θ(37.5°)	-3.55/-4.49	-1.36/-1.24	-2.41/-2.58	-7.94/-9.4	-5.24/-5.43	-6.1/-5.7	-4.28/-2.31	-1.42/-1.27	-2.95/-3.76	-4.99/-6.27	-6.06/-4.08	-2.95/-2.62	-4.46/-6.64	-6.49/-4.38	-5.89/-6.68	-1.72/-3.13	-4.44/-3.78	-3.19/-2.56	-1.77/-5.38	-12.48/-11.34	-5.78/-4.87	-9.26/-14.62	-9.5/-5.87	-17.51/-7.48
Θ(45°)	-0.66/-2.89	-1.17/-2.27	-2.84/-3.63	-11.66/-4.09	-4.18/-2.22	-6.76/-3.19	-1.81/-1.64	-4.04/-3.77	-2.68/-2.95	-1.73/-1.89	-1.60/-63	1.130/53	-3.52/-4.89	-6.18/-4.13	-5.38/-3.6	0.91/-0.19	1.51/0.8	-1.450/33	-0.11/-3.67	-4.1/-1.27	-2.87/-3.57	-6.56/-8.55	-6.79/-7.56	-6.93/-4.8
Θ(52.5°)	0.86/-0.9	-2.34/-0.65	1.62/-0.25	-2.2/-0.3	-1.7/-2.63	-1.050/82	1.580/79	0.920/14	1.170/72	0.791/73	3.61/93	-4.52/-4.72	-7.02/-7.08	-3.041/63	2.752/37	3.972/91	3.472/85	0.09/-0.94	1.783/47	0.83/-0.46	-0.04/-1.5	-1.92/-5.78	-11.86/-3.02	
Θ(60°)	0.250/53	0.341/91	2.340/17	-0.04/-0.2	-0.56/-0.06	-1.660/5	0.46/-2.39	0.47/-0.01	-0.580/67	0.343/23	3.554/94	4.9/3.16	-1.33/-4.27	-7.65/-6.24	0.712/21	2.21/94	2.362/62	3.180/41	-3.92/-2.17	1.021/98	0.740/36	3.72/56	1.44/-0.92	-9.5/-3.98
Θ(67.5°)	-2.921/49	2.634/05	1.21/-2.1	0.11/-1.13	1.91/37	-3.440/4.1	0.56/-1	0.51/-1.6	-0.382/08	1.455/0.71	4.393/48	4.852/97	0.06/-3.45	-3.4/-1.76	2.930/92	2.271/49	1.51/96	1.58/-0.36	-0.46/-2.7	-1.080/17	0.421/56	4.162/84	2.011/38	-4.01/-4.51
Θ(75°)	-9.96/-1.2	3.794/41	-1.64/-4.55	-0.03/-2.68	2.72/0.24	-2.690/94	2.882/02	1.922/88	1.743/76	3.014/76	4.942/09	2.743/3	1.08/-1.67	-4.89/-0.17	2.71/-0.55	2.50/44	-0.11/-0.61	0.242/11	1.771/-1.8	-2.820/19	0.690/48	2.871/19	1.11/98	-2.08/-9.5
Θ(82.5°)	-7.62/-0.14	3.724/06	-3.91/-7.31	-2.12/-5.14	1.70/9	-2.430/57	2.492/11	1.680/77	2.613/15	2.354/18	4.3/-1.12	0.582/55	0.63/-5.38	-5.02/-0.73	1.91/-0.49	2.871/-1.32	-0.89/-2.96	-0.661/33	1.62/-0.76	-3.22/-0.84	-0.73/-1.75	-0.17/-0.89	-0.590/42	-4.11/-14.85
Θ(90°)	-7.58/-1.89	2.773/22	-3.92/-7.64	-4.6/-8.72	-0.08/-1.59	-4.53/-0.74	1.411/16	1.073/13	2.110/86	0.652/41	3.41/-1.55	-2.44/-1.49	-0.72/-1.48	-6.1/-0.91	1.24/-1.91	1.13/-2.92	-2.18/-3.08	-1.44/-0.01	0.52/-0.85	-4.18/-1.82	-1.72/-5.26	-2.75/-4.39	-3.53/-2.05	-9.72/-12.41
Θ(97.5°)	-9.46/-3.68	1.040/7	-5.71/-8.08	-10.61/-9.26	-1.58/-5.29	-5.96/-1.75	0.180/07	0.150/96	0.41/-1.97	-2.180/58	0.15/-3.24	-2.270/31	-3.43/-7.27	-7.01/-3.26	-1.32/-2.43	-0.64/-4.34	-3.52/-1.11	-1.8/-2.03	0.15/-1.33	-4.07/-3.07	-2.37/-5.57	-4.66/-8.64	-6.99/-3.34	-10.32/-18.35
Θ(105°)	-14.48/-5.51	-3/-2.35	-6.25/-11.65	-18.99/-7.99	-3.69/-6.08	-1.59/-3.23	-1.06/-0.98	-1.79/-2.68	-3.3/-1.68	-2.37/-3.79	-2.31/-0.38	-10.25/-9	-4.62/-2.72	-3.47/-5.5	-3.01/-1.72	-2.59/-3.08	-0.73/-1.72	-4.89/-5.22	-3.28/-4	-5.76/-7.96	-4.76/-5.18	-10.38/-16.35		
Θ(112.5°)	-18.06/-8.76	-5.07/-4.46	-5.75/-17.97	-18.95/-9.53	-8.55/-8.04	-8.01/-5.3	-3.76/-3.3	-2.95/-1.64	-2.42/-6.38	-5.2/-4.2	-7.83/-3.93	-2.96/-0.44	-12.75/-10.62	-6.13/-6.4	-8.93/-9.98	-6.63/-1.49	-5.65/-3.05	-4.4/-5.3	-2.96/-2.52	-5.42/-7.4	-3.6/-8.42	-8.27/-4.61	-2.76/-4.47	-9.03/-15.46
Θ(120°)	-11.74/-10.67	-5.99/-3.43	-6.13/-17.87	-19.64/-11.51	-13.29/-12.14	-9.19/-6.2	-5.56/-4.64	-6.22/-3.44	-4.36/-8.84	-8.02/-8.38	-7.97/-3.57	-4.28/-5.04	-17.78/-11.62	-8.86/-7.17	-8.47/-12.12	-6.12/-8.72	-7.29/-4.91	-4.49/-7.05	-2.64/-7.23	-8.33/-3.88	-8.1/-14.31	-13.65/-5.28	-3.5/-5.38	-11.1/-13.1
Θ(127.5°)	-12.01/-12.47	-8.88/-13.66	-5.93/-18.96	-19.31/-12.37	-9.55/-12.45	-13.49/-9.33	-9.69/-8.79	-8.03/-6.23	-6.6/-8.42	-9.03/-11.52	-14.67/-7.85	-7.65/-16.58	-17.07/-9.54	-10.37/-11.54	-12.67/-11.54	-12.67/-11.54	-9.04/-8.72	-4.97/-5.01	-7.32/-9.76	-8.35/-14.27	-16.33/-14.27	-14.3/-13.62	-8.5/-14.04	-18.91/-18.41
Θ(135°)	-18.19/-18.9	-11.49/-11.67	-7.19/-13.31	-16.18/-18.87	-14.76/-15.26	-9.73/-8.52	-11.07/-10.41	-7.67/-8.08	-7.9/-11.02	-12.43/-14.5	-17.63/-18.65	-17.47/-11.33	-10.16/-8.13	-9.39/-15.83	-17.35/-17.56	-12.69/-13.18	-9.37/-6.42	-7.07/-9.99	-7.9/-6.69	-8.23/-11.09	-8.79/-12.73	-12.98/-10.43	-12.45/-16.54	-14.32/-16.45
Θ(142.5°)	-17.98/-18.17	-19.22/-17.93	-18.65/-11.28	-12.43/-18.37	-14.16/-14.03	-12.98/-11.96	-13.28/-10.41	-9.07/-8.56	-11.7/-18.66	-18.6/-17.69	-14.29/-10.71	-10.11/-13.06	-13.86/-14.58	-18.57/-19.31	-17.33/-18.1	-11.96/-5.31	-6.25/-13.77	-12.28/-7.5	-8.09/-7.96	-7.94/-7.73	-10.38/-18.21	-18.2/-17.31	-13.7/-14.69	-15.56/-18.1
Θ(150°)	-16.57/-18.94	-16.33/-11.89	-18.53/-15.82	-17.42/-18.64	-17.9/-16.21	-13.08/-14.11	-12.56/-12.9	-13.62/-18.09	-17.91/-18.78	-12.48/-10.06	-13.67/-11.66	-10.8/-11.18	-11.37/-14.73	-12.96/-11.21	-8.98/-11.33	-12.46/-11.44	-12.67/-7.91	-5.39/-5.9	-8.64/-15.71	-12.72/-12.03	-18.33/-17.76	-14.3/-13.62	-15.72/-17.33	
Θ(157.5°)	-18.33/-18.13	-18.23/-19	-18.63/-18.54	-14.65/-18.66	-18.47/-16.56	-14.23/-13.15	-12.25/-10.32	-10.88/-17.99	-18.2/-13.03	-12.33/-14.02	-17.29/-17.73	-14.55/-12.17	-12.29/-14.13	-17.69/-18.44	-16.72/-14.52	-13.03/-8.16	-8.22/-16.9	-17.23/-12.67	-18.01/-12.97	-7.51/-8.75	-17.24/-17.48	-15.45/-16.99	-18.64/-12.27	-13.28/-16.51
Θ(165°)	-18.15/-18.88	-18.56/-17.58	-18.34/-13.34	-11.09/-12.1	-13.14/-15	-12.72/-12.26	-10.39/-9.83	-10.11/-10.64	-15.11/-18.53	-17.7/-16.86	-16.75/-18.7	-18.2/-14.21	-12.29/-10.85	-9.06/-10.63	-12.21/-9.21	-8.57/-11.15	-16.96/-17.67	-15.31/-13.47	-15.75/-15.23	-10.13/-0.73	-8.1/-12.54	-18.13/-18.73	-14.8/-18.15	-18.85/-



Antenna Pattern of 2.4GHz

Appendix D

Total Gain Data

Freq(Hz)	2.4GPol.	TotalAnt. 1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)		
Θ(0°)	-0.86/0.84	-0.91/1.04	-1.21/-1.32	-1.42/-1.52	-1.60/-1.60	-1.53/-1.39	-1.23/-1.10	-1.05/-1.13	-1.26/-1.41	-1.56/-1.69	-1.71/-1.71	-1.76/-1.72	-1.61/-1.51	-1.70/-1.65	-1.58/-1.47	-1.33/-1.21	-1.12/-1.08	-1.08/-1.13	-1.35/-1.27	-1.13/-0.95	-0.67/-0.77	-0.88/-0.90				
Θ(7.5°)	-1.20/-0.90	-0.84/-0.64	-0.83/-0.66	-0.66/-0.64	-0.53/-0.35	-0.150/0.05	0.240/0.39	0.480/0.47	0.410/0.28	0.17/-0.02	-0.23/-0.45	-0.67/-0.91	-1.13/-1.41	-1.68/-1.95	-2.22/-2.40	-2.52/-2.61	-2.67/-2.74	-2.85/-3.02	-3.27/-3.49	-3.58/-3.49	-3.23/-2.88	-2.51/-2.28	-2.13/-1.94	-1.77/-1.51		
Θ(15°)	-0.61/-0.18	0.050/0.18	0.200/0.18	0.160/0.24	0.390/0.61	0.850/1.03	1.231/1.44	1.531/1.55	1.531/1.44	1.311/1.12	0.820/0.47	0.089/-0.34	-0.81/-1.27	-1.83/-2.41	-2.99/-3.40	-3.70/-3.90	-4.08/-2.43	-4.46/-4.78	-5.17/-5.56	-5.89/-5.26	-4.47/-3.76	-3.11/-2.46	-1.81/-1.17			
Θ(22.5°)	1.371/64	1.651/50	1.230/99	0.830/82	0.951/121	1.150/177	2.072/35	2.492/54	2.482/35	2.151/91	1.801/22	0.820/35	-0.16/-0.81	-1.56/-2.39	-3.27/-4.12	-4.92/-5.44	-5.65/-5.63	-5.47/-5.37	-5.43/-5.72	-6.44/-7.44	-5.26/-3.55	-2.14/-1.02	-0.100/65			
Θ(30°)	3.323/39	3.172/71	2.141/63	1.311/24	1.401/72	2.132/58	3.003/32	3.463/43	3.253/00	2.702/43	2.181/91	1.621/20	0.690/08	-0.59/-1.29	-2.20/-3.39	-4.88/-6.33	-7.20/-7.05	-6.30/-5.53	-5.13/-5.25	-6.19/-7.63	-7.95/-6.61	-3.82/-1.58	0.071/27	2.152/81		
Θ(37.5°)	4.494/48	4.123/48	2.712/00	1.601/58	1.912/40	2.973/53	3.944/18	4.183/96	3.553/13	2.812/70	2.692/67	2.461/96	1.280/59	0.10/-0.37	-1.15/-2.43	-4.27/-6.43	-8.38/-9.24	-8.62/-7.44	-6.58/-6.38	-7.05/-7.67	-7.35/-4.74	-1.890/23	1.772/85	3.634/18		
Θ(45°)	4.774/76	4.383/72	2.882/11	1.711/84	2.322/95	3.544/05	4.384/50	4.374/00	3.492/99	2.742/84	3.133/34	3.232/64	1.690/73	0.11/-0.21	-0.81/-1.93	-3.52/-5.25	-7.00/-8.31	-8.50/-7.65	-6.52/-5.75	-5.32/-5.06	-4.77/-3.23	-1.100/69	2.033/04	3.884/52		
Θ(52.5°)	3.934/00	3.713/20	2.572/00	1.762/00	2.523/10	3.543/83	3.994/08	4.033/80	3.392/96	2.712/85	3.163/39	3.262/59	1.530/53	0.130/01	-0.60/-1.88	-3.52/-4.92	-5.73/-5.68	-4.90/-3.80	-2.80/-2.19	-2.05/-2.34	-2.93/-2.82	-1.56/-0.18	0.881/80	2.763/62		
Θ(60°)	2.282/42	2.251/98	1.641/34	1.301/62	2.172/67	3.043/27	3.463/64	3.773/73	3.473/00	2.462/19	2.342/69	2.832/48	1.630/65	0.12/-0.00	-0.68/-2.34	-4.51/-6.13	-6.44/-5.37	-3.81/-2.22	-0.90/-0.18	-0.22/-0.86	-1.95/-2.64	-1.91/-0.79	-0.080/46	1.242/05		
Θ(67.5°)	1.110/94	0.720/59	0.430/29	0.441/00	1.692/25	2.572/73	2.762/80	2.812/79	2.572/04	1.411/28	1.862/56	2.822/53	1.660/39	-0.55/-1.04	-2.10/-4.17	-6.37/-7.63	-7.52/-5.42	-3.37/-1.81	-0.620/01	-0.077/-0.99	-2.05/-2.89	-2.22/-1.19	-0.59/-0.05	0.731/33		
Θ(75°)	0.01/-0.35	-0.51/-0.33	-0.30/-0.36	0.000/77	1.451/78	1.851/81	1.681/55	1.521/63	1.601/19	0.570/59	1.382/06	2.231/98	1.06/-0.67	-2.33/-2.63	-3.23/-4.98	-6.38/-7.35	-7.22/-5.00	-2.58/-0.98	0.040/32	-0.31/-1.46	-3.02/-4.28	-3.59/-2.48	-2.27/-1.86	-0.640/24		
Θ(82.5°)	-1.73/-2.45	-2.62/-1.87	-1.38/-1.31	-0.94/-0.23	0.270/38	0.230/07	0.030/00	0.080/25	0.21/-0.24	-0.75/-0.31	0.571/02	1.110/97	-0.04/-2.44	-4.54/-4.15	-4.63/-6.78	-8.14/-9.03	-8.81/-5.80	-3.75/-2.25	-0.88/-0.48	-1.52/-3.27	-5.16/-6.45	-5.40/-3.50	-3.11/-3.28	-2.43/-1.55		
Θ(90°)	-2.76/-3.73	-4.59/-3.71	-2.62/-2.40	-2.24/-1.61	-1.00/-0.83	-1.08/-1.39	-1.42/-1.48	-1.48/-1.13	-0.87/-0.99	-1.02/-0.42	0.080/06	-0.04/-0.30	-1.86/-5.19	-5.86/-3.67	-4.07/-6.53	-7.32/-7.45	-7.31/-5.37	-4.81/-5.06	-3.57/-2.73	-4.14/-6.79	-9.27/-10.22	-7.63/-4.48	-3.27/-3.25	-2.00/-4.24		
Θ(97.5°)	-3.57/-4.33	-5.39/-3.15	-3.64/-2.68	-2.29/-1.74	-1.16/-0.96	-1.31/-1.95	-2.50/-2.71	-2.67/-2.09	-1.63/-1.51	-1.35/-1.11	-1.23/-1.62	-1.75/-2.32	-4.41/-6.98	-4.91/-3.25	-4.45/-6.86	-6.97/-6.79	-6.56/-5.16	-5.47/-6.80	-5.29/-4.01	-5.23/-8.34	-11.52/-14.25	-9.75/-5.82	-3.78/-2.76	-2.44/-2.74		
Θ(105°)	-5.03/-5.51	-5.59/-5.69	-4.62/-3.31	-2.83/-2.97	-2.33/-3.52	-4.02/-4.70	-4.96/-4.77	-4.78/-2.66	-1.88/-1.53	-1.54/-2.00	-3.04/-0.45	-4.55/-5.38	-6.92/-7.19	-4.72/-3.56	-4.81/-7.32	-7.41/-6.30	-6.06/-5.98	-7.54/-11.98	-11.23/-7.81	-6.98/-7.07	-7.87/-10.23	-11.01/-10.51	-8.35/-5.05	-3.29/-3.61		
Θ(112.5°)	-6.87/-9.36	-8.34/-7.52	-6.81/-5.25	-4.02/-3.64	-3.83/-4.08	-4.17/-4.21	-3.97/-3.57	-2.93/-2.43	-2.33/-2.73	-3.79/-5.69	-8.24/-8.64	-6.51/-4.74	-4.13/-4.03	-3.68/-3.99	-6.13/-8.47	-6.39/-4.67	-4.96/-7.07	-11.13/-14.71	-11.26/-8.51	-7.10/-6.19	-6.60/-7.83	-7.78/-7.87	-8.72/-6.42	-4.00/-4.08		
Θ(120°)	-4.64/-7.82	-9.17/-8.24	-8.06/-7.43	-5.62/-4.13	-4.53/-3.67	-4.15/-4.63	-4.69/-4.51	-3.98/-3.59	-3.55/-3.92	-4.72/-5.74	-6.34/-5.88	-4.60/-3.68	-3.83/-4.26	-4.32/-4.46	-6.39/-8.34	-6.53/-5.21	-6.22/-9.31	-12.56/-11.38	-9.15/-7.55	-6.32/-6.02	-7.24/-9.49	-10.44/-9.32	-8.56/-5.90	-3.20/-2.76		
Θ(127.5°)	-4.31/-6.39	-8.59/-8.09	-7.23/-6.83	-5.80/-4.38	-3.41/-3.03	-3.11/-3.41	-3.80/-4.04	-4.06/-4.05	-4.22/-4.59	-5.17/-5.63	-5.57/-4.97	-4.32/-4.40	-5.21/-5.22	-4.24/-3.43	-6.16/-7.94	-7.95/-7.67	-9.62/-14.43	-13.38/-10.54	-8.79/-7.97	-7.24/-7.20	-8.50/-9.54	-8.43/-7.97	-9.10/-8.59	-5.44/-3.65		
Θ(135°)	-3.97/-4.98	-7.02/-8.32	-8.10/-7.54	-6.98/-6.10	-4.86/-3.67	-2.85/-2.44	-2.43/-2.65	-3.04/-3.69	-4.22/-4.47	-4.46/-4.46	-4.43/-4.19	-3.93/-4.01	-4.64/-5.39	-5.88/-6.61	-7.64/-8.55	-7.96/-7.45	-8.22/-10.58	-12.72/-11.57	-9.95/-9.39	-10.21/-12.55	-12.09/-8.25	-5.63/-4.86	-5.45/-6.06	-5.25/-3.92		
Θ(142.5°)	-4.05/-4.27	-5.32/-6.68	-7.58/-7.44	-6.75/-6.09	-5.43/-4.66	-3.85/-3.29	-3.04/-3.14	-3.64/-4.12	-4.49/-4.59	-4.69/-4.99	-5.21/-5.07	-4.75/-4.81	-5.64/-7.33	-9.23/-11.00	-10.26/-8.36	-7.09/-6.88	-8.11/-11.65	-15.13/-14.31	-9.65/-7.52	-7.46/-8.82	-9.08/-6.74	-4.86/-4.54	-5.31/-5.95	-8.98/-8.46		
Θ(150°)	-5.11/-4.38	-4.32/-4.78	-5.50/-5.90	-5.63/-5.02	-4.62/-4.55	-4.70/-5.01	-5.36/-5.59	-5.99/-6.03	-5.89/-5.79	-5.89/-6.00	-5.89/-4.93	-4.25/-3.94	-4.79/-5.64	-9.00/-9.49	-8.85/-7.02	-6.01/-5.85	-6.53/-7.86	-8.42/-7.76	-6.14/-5.14	-4.93/-5.34	-5.58/-5.12	-4.66/-5.10	-5.58/-8.26	-8.07/-6.45		
Θ(157.5°)	-6.91/-5.50	-4.71/-4.43	-4.53/-4.75	-4.74/-4.47	-4.08/-3.82	-3.80/-4.02	-4.44/-4.93	-5.19/-5.34	-5.57/-5.67	-5.73/-5.56	-5.12/-4.58	-4.18/-4.15	-4.53/-5.16	-5.72/-5.97	-5.91/-5.85	-6.03/-6.29	-6.35/-5.90	-4.97/-3.96	-3.33/-3.18	-3.39/-3.66	-3.85/-4.03	-4.45/-5.56	-7.53/-4.07	-11.30/-9.24		
Θ(165°)	-6.97/-5.98	-5.29/-4.91	-4.74/-4.86	-5.15/-5.23	-5.10/-4.94	-4.91/-5.13	-5.54/-6.01	-6.41/-6.67	-6.79/-6.91	-6.92/-6.85	-6.65/-6.33	-5.99/-5.73	-5.55/-5.42	-5.37/-6.02	-6.76/-7.93	-5.95/-10.72	-10.11/-8.21	-6.29/-4.85	-4.11/-3.99	-4.22/-4.46	-4.48/-4.50	-6.79/-5.58	-6.87/-8.24	-8.98/-8.46		
Θ(172.5°)	-6.98/-6.59	-6.27/-6.15	-6.19/-6.46	-6.85/-7.43	-8.15/-8.57	-8.88/-9.28	-8.75/-10.23	-10.68/-11.14	-11.59/-11.80	-11.69/-11.95	-11.84/-11.59	-11.31/-10.92	-10.72/-10.53	-10.59/-10.98	-11.97/-13.52	-15.09/-15.16	-13.03/-10.83	-9.13/-7.98	-7.48/-7.42	-7.62/-7.65	-7.36/-6.86	-6.57/-6.63	-7.04/-7.47	-7.69/-7.55		
Θ(180°)	-9.04/-8.52	-8.07/-7.91	-7.99/-8.42	-9.22/-10.38	-11.63/-12.69	-13.25/-13.24	-13.05/-12.87	-12.71/-12.86	-13.21/-13.72	-14.36/-14.53	-14.38/-13.57	-12.79/-11.96	-11.56/-11.43	-11.68/-12.13	-12.47/-12.41	-11.91/-10.99	-10.06/-9.36	-9.03/-9.22	-9.82/-10.65	-11.47/-11.71	-11.26/-10.34	-9.55/-9.27	-9.39/-9.64	-9.66/-9.37		
Freq(Hz)	2.450Pol.	TotalAnt. 1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)		
Θ(0°)	0.820/80	0.840/89	0.900/90	0.920/91	0.830/64	0.380/10	-0.11/-0.12	0.080/39	0.660/81	0.850/85	0.810/73	0.660/62	0.680/77	0.910/98	0.970/87	0.730/60	0.510/44	0.420/47	0.620/76	0.810/79	0.790/84	0.941/06	1.131/13	1.050/91		
Θ(7.5°)	1.141/16	1.181/29	1.381/42	1.411/33	1.211/03	0.840/63	0.420/35	0.470/74	1.011/16	1.211/17	1.070/93	0.800/63	0.710/74	0.750/72	0.630/48	0.310/15	0.03/-0.09	-0.17/-0.16	-0.060/05	0.110/16	0.240/39	0.620/87	1.091/21	1.231/19		
Θ(15°)	1.951/90	1.921/97	2.002/00	1.901/71	1.491/25	1.040/85	0.690/65	0.680/91	1.181/34	1.411/38	1.261/07	0.880/71	0.560/42	0.270/08	-0.16/-0.40	-0.56/-0.69	-0.76/-0.78	-0.78/-0.75	-0.70/-0.70	-0.70/-0.64	-0.45/-0.13	0.340/84	1.291/60	1.781/86		
Θ(22.5°)	3.333/14	2.932/75	2.632/55	2.462/30	2.091/88	1.681/52	1.431/44	1.441/57	1.711/82	1.831/77	1.591/32	1.000/63	0.27/-0.16	-0.67/-1.25	-1.81/-2.19	-2.32/-2.20	-1.89/-1.51	-1.17/-0.92	-0.90/-1.10	-1.41/-1.54	-1.24/-0.48	0.521/46	2.212/73	3.073/20		
Θ(30°)	4.684/28	3.723/21	2.902/81	2.893/03	3.133/11	3.022/92	2.652/89	2.922/95	2.902/74	2.492/20	1.901/59	1.250/87	0.43/-0.09	-0.82/-1.64	-2.94/-3.20	-3.24/-2.45	-1.63/-1.04	-0.86/-1.13	-1.71/-2.20	-1.97/-0.75	0.902/30	3.344/03	4.484/65			
Θ(37.5°)	5.494/96	4.143/31	2.762/71	3.073/61	4.074/31	4.324/22	4.154/12	4.154/11	3.863/39	2.802/30	2.011/90	1.791/56	1.170/63	0.02/-0.54	-1.15/-1.90	-2.82/-3.58	-3.90/-3.60	-2.91/-2.23	-1.82/-1.76	-2.06/-2.36	-2.150/-5.07	1.455/06	4.204/96	5.445/61		
Θ(45°)	5.544/98	4.043/04	2.352/37	3.013/84	4.504/84	4.844/64	4.434/36	4.414/39	4.073/41	2.622/03	1.912/12	2.342/33	1.981/38	0.720/28	-0.18/-0.86	-1.64/-2.38	-3.08/-3.70	-4.01/-3.90	-3.26/-2.66	-2.16						

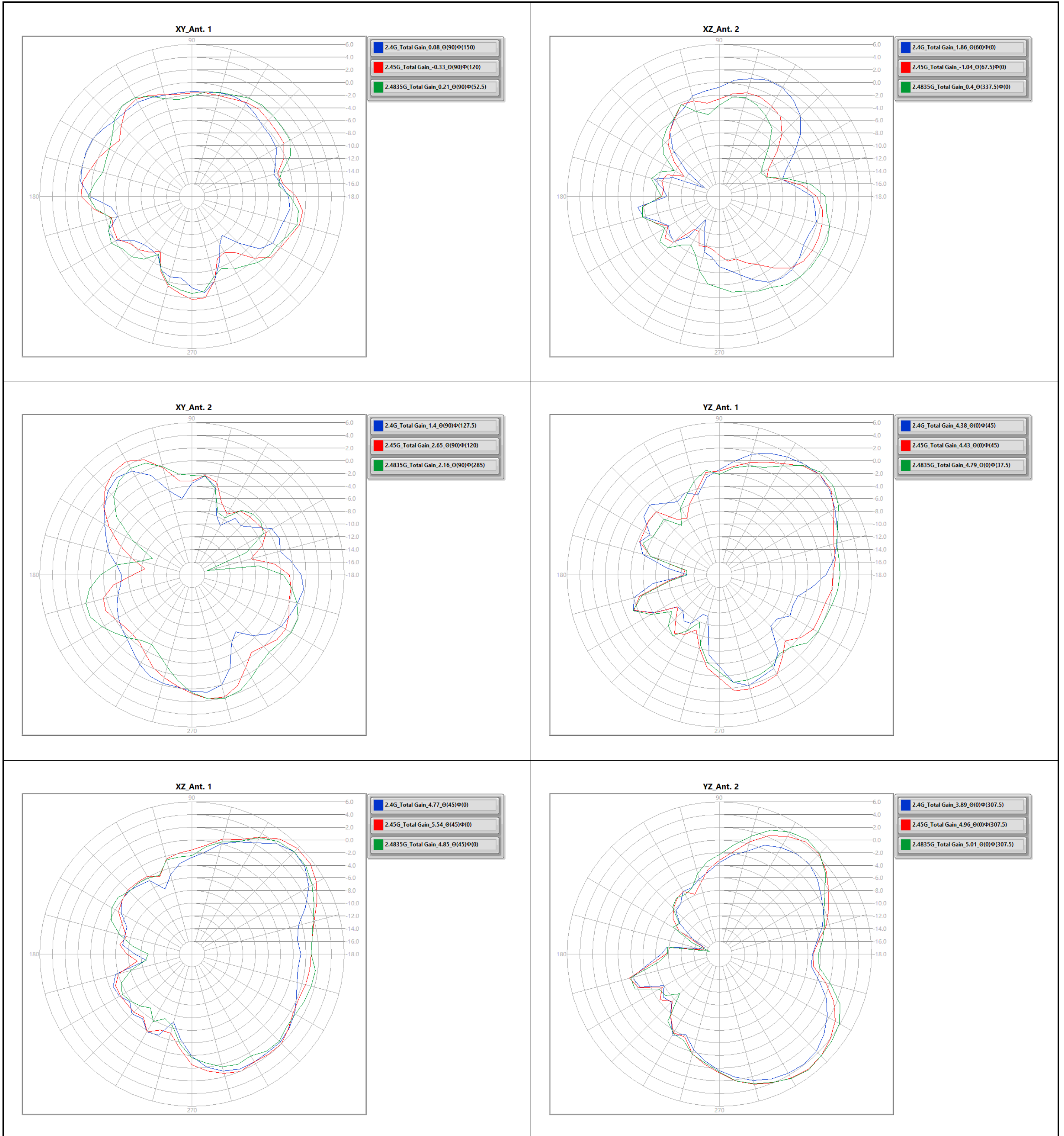


Antenna Pattern of 2.4GHz

Appendix D

Θ (15°)	-7.68/-6.84	-5.88/-5.16	-4.52/-3.82	-3.11/-2.49	-1.96/-1.48	-1.07/-0.79	-0.57/-0.41	-0.40/-0.50	-0.65/-0.89	-1.11/-1.24	-1.21/-1.18	-1.20/-1.23	-1.22/-1.24	-1.33/-1.57	-1.88/-2.07	-1.96/-1.62	-1.15/-0.71	-0.45/-0.42	-0.60/-0.97	-1.49/-2.07	-2.66/-3.20	-3.76/-4.44	-5.43/-6.60	-7.60/-7.53
Θ (22.5°)	-9.88/-7.92	-6.17/-4.98	-4.13/-3.46	-2.79/-2.05	-1.34/-0.66	-0.08/0.35	0.64/0.84	0.83/0.64	0.35/-0.02	-0.49/-0.94	-1.29/-1.53	-1.61/-1.42	-1.06/-0.81	-0.84/-1.07	-1.32/-1.29	-0.78/-0.04	0.71/1.29	1.63/1.72	1.58/1.34	0.97/0.53	0.03/-0.57	-1.32/-2.38	-3.91/-6.09	-8.71/-10.34
Θ (30°)	-9.00/-7.20	-5.44/-4.07	-3.12/-2.57	-2.15/-1.56	-0.81/0.01	0.78/1.39	1.88/2.28	2.48/2.43	2.16/1.71	0.93/-0.13	-1.18/-1.95	-2.12/-1.71	-1.05/-0.47	-0.07/-0.02	-0.09/-0.09	0.30/1.13	2.06/2.76	3.13/2.22	2.65/2.26	1.77/1.16	0.37/-0.72	-2.44/-4.87	-7.85/-9.86	
Θ (37.5°)	-6.53/-5.69	-4.55/-3.33	-2.30/-1.71	-1.43/-0.97	-0.10/0.98	1.98/2.74	3.30/3.80	4.23/4.40	4.25/3.71	2.64/1.05	-0.83/-2.35	-2.72/-2.12	-1.25/-0.36	0.41/0.79	0.91/0.95	1.29/2.03	2.93/3.63	4.01/4.10	4.05/3.93	3.68/3.25	2.66/1.94	1.07/0.14	-2.05/-4.67	-7.30/-7.98
Θ (45°)	-3.99/-3.96	-3.68/-2.62	-1.49/-0.86	-0.72/-0.58	0.24/1.61	2.88/3.76	4.25/4.71	5.28/5.73	5.79/5.32	4.20/2.42	0.16/-2.06	-3.18/-3.00	-2.08/-0.88	0.22/0.94	1.31/1.45	1.73/2.32	3.19/3.95	4.42/4.59	4.65/4.61	4.35/3.77	2.92/1.99	0.96/-0.30	-2.15/-4.24	-5.18/-4.73
Θ (52.5°)	-2.16/-2.89	-3.04/-1.92	-0.59/0.15	0.13/-0.29	-0.06/1.29	2.77/3.77	4.33/4.81	5.59/6.38	6.30/6.18	5.13/3.18	0.65/-2.14	-4.37/-4.90	-3.76/-1.94	-0.30/0.87	1.47/1.70	1.83/2.22	3.03/3.88	4.48/4.81	4.96/4.94	4.57/3.74	2.65/1.63	0.81/-0.07	-1.27/-2.18	-2.16/-1.98
Θ (60°)	-1.52/-2.67	-3.06/-1.82	-0.06/0.94	1.01/0.35	-0.10/0.75	2.03/2.93	3.41/3.91	4.86/5.98	6.14/6.02	5.55/3.76	1.40/-1.42	-4.41/-6.41	-5.53/-3.07	-0.87/0.46	1.11/1.22	1.13/1.36	2.17/3.15	3.88/4.34	4.58/4.60	4.25/3.41	2.32/1.53	1.17/0.76	0.04/-0.56	-0.72/-0.85
Θ (67.5°)	-1.04/-2.54	-3.64/-2.57	-0.56/0.53	0.66/-0.01	-0.72/-0.03	1.21/1.89	2.19/2.78	4.02/5.28	6.01/5.82	4.74/2.93	0.68/-2.03	-5.16/-7.79	-6.67/-3.69	-1.47/-0.40	-0.13/-0.23	-0.28/0.13	1.11/2.18	3.03/3.56	3.95/4.18	4.03/3.33	2.24/1.34	1.05/0.83	0.38/-0.04	-0.16/-0.21
Θ (75°)	-1.07/-2.95	-5.16/-3.93	-1.66/-0.89	-1.22/-2.17	-2.84/-1.56	-0.01/0.38	0.32/1.11	2.91/4.50	5.31/5.14	4.01/2.00	-0.54/-3.34	-6.22/-8.66	-7.75/-4.94	-2.80/-1.77	-1.46/-1.49	-1.66/-1.52	-0.52/0.93	2.06/2.71	3.21/3.61	3.61/2.83	1.36/0.16	0.09/0.22	0.02/-0.28	-0.35/-0.34
Θ (82.5°)	-1.67/-3.68	-6.61/-4.77	-2.55/-2.00	-2.43/-3.49	-4.03/-2.60	-0.80/-0.75	-1.73/-1.20	1.16/3.16	4.06/3.85	2.67/0.62	-2.21/-5.53	-8.73/-9.95	-7.76/-4.79	-2.79/-2.02	-2.18/-2.66	-3.23/-3.11	-1.76/-0.15	0.84/1.44	2.13/2.82	2.96/2.09	0.39/-0.83	-0.55/-0.16	-0.28/-0.73	-1.11/-1.15
Θ (90°)	-2.64/-4.89	-8.38/-6.05	-4.48/-4.92	-5.12/-5.39	-6.91/-5.81	-2.91/-2.20	-3.24/-3.12	-0.55/-1.62	2.65/2.43	1.30/-0.52	-2.88/-5.59	-8.39/-10.47	-8.72/-5.51	-3.54/-3.31	-4.03/-4.63	-4.75/-4.49	-3.47/-2.16	-1.20/-0.33	0.72/1.73	1.94/0.93	-1.11/-2.58	-2.02/-1.12	-0.90/-1.46	-2.19/-2.24
Θ (97.5°)	-3.13/-5.41	-9.39/-6.64	-5.78/-7.76	-7.31/-6.35	-8.45/-8.37	-4.51/-3.43	-4.62/-4.51	-1.57/0.74	1.66/1.12	-0.42/-2.36	-4.68/-7.65	-10.59/-11.19	-9.63/-6.92	-5.63/-5.63	-5.70/-5.17	-5.10/-5.47	-5.02/-3.89	-2.91/-1.82	-0.47/0.61	0.63/-0.66	-3.01/-4.74	-3.74/-2.37	-2.09/-2.86	-3.76/-3.21
Θ (105°)	-2.42/-5.37	-10.95/-9.31	-8.44/-9.94	-7.70/-6.49	-8.74/-9.91	-5.97/-4.83	-6.43/-6.57	-3.22/-0.73	0.38/0.15	-1.10/-2.98	-5.58/-9.25	-12.30/-11.70	-9.82/-8.19	-7.13/-6.83	-6.30/-5.54	-5.76/-6.95	-6.89/-5.13	-3.65/-2.64	-1.72/-1.03	-1.26/-2.76	-5.47/-7.23	-5.41/-3.76	-3.36/-3.68	-3.30/-2.19
Θ (112.5°)	-2.33/-5.82	-10.47/-9.08	-8.36/-6.90	-5.27/-5.66	-9.34/-11.44	-6.73/-5.61	-7.82/-8.98	-5.32/-2.81	-1.82/-1.83	-2.59/-4.05	-6.39/-9.18	-11.10/-11.57	-9.56/-7.91	-6.83/-5.74	-4.91/-5.13	-7.25/-9.66	-7.77/-5.03	-4.25/-4.39	-3.85/-3.20	-3.13/-4.39	-6.67/-7.36	-6.05/-4.95	-4.75/-4.22	-2.64/-1.56
Θ (120°)	-3.95/-8.38	-9.22/-6.44	-6.56/-6.66	-5.16/-5.15	-8.00/-11.67	-8.25/-6.03	-6.59/-8.22	-6.70/-4.32	-3.49/-3.87	-4.46/-4.95	-6.06/-8.02	-10.55/-13.34	-11.68/-9.64	-7.35/-6.04	-5.69/-6.92	-9.74/-9.91	-7.55/-5.58	-5.20/-4.84	-3.65/-2.70	-2.84/-4.34	-6.78/-8.04	-5.82/-4.73	-2.80/-2.39	
Θ (127.5°)	-5.19/-8.77	-8.81/-6.95	-7.61/-8.46	-6.98/-6.34	-7.38/-8.76	-8.72/-7.89	-7.04/-6.77	-6.06/-4.74	-4.30/-5.46	-7.50/-8.29	-8.49/-9.70	-11.97/-12.51	-11.44/-8.77	-6.73/-5.81	-6.00/-7.27	-9.70/-11.10	-8.93/-6.67	-6.06/-6.07	-5.48/-4.54	-4.29/-5.16	-6.46/-7.23	-8.02/-9.19	-9.22/-6.44	-4.26/-3.56
Θ (135°)	-6.65/-8.65	-9.42/-9.08	-10.60/-13.04	-11.94/-10.41	-9.58/-8.23	-7.13/-7.22	-7.71/-7.23	-5.96/-5.06	-5.02/-6.08	-8.11/-10.21	-11.29/-11.36	-10.20/-8.63	-7.68/-7.20	-6.59/-5.78	-5.53/-6.77	-9.25/-12.77	-10.99/-8.87	-8.68/-9.04	-7.54/-5.28	-3.96/-3.78	-4.24/-5.08	-6.48/-5.40	-6.66/-8.15	-6.12/-5.32
Θ (142.5°)	-8.98/-10.42	-10.97/-11.25	-13.66/-15.64	-15.33/-11.07	-9.81/-8.97	-8.25/-8.00	-8.82/-9.41	-8.09/-8.93	-7.17/-8.67	-10.88/-13.31	-14.26/-12.24	-9.25/-7.53	-7.24/-7.59	-7.45/-6.90	-6.91/-7.73	-8.19/-8.11	-7.85/-7.36	-6.96/-6.61	-6.19/-5.67	-5.25/-5.06	-5.07/-5.22	-5.78/-6.44	-6.79/-6.84	-6.84/-7.41
Θ (150°)	-11.59/-11.90	-10.55/-10.12	-11.51/-14.17	-14.62/-11.06	-9.72/-9.86	-10.80/-11.08	-10.68/-10.04	-8.98/-8.38	-8.97/-10.57	-13.66/-14.40	-12.37/-10.11	-8.65/-8.18	-8.69/-9.86	-10.54/-11.92	-12.41/-11.93	-10.14/-8.95	-8.13/-6.92	-6.16/-6.42	-7.65/-9.21	-9.32/-7.61	-5.78/-4.62	-4.17/-4.31	-4.88/-6.91	-7.57/-10.01
Θ (157.5°)	-9.04/-8.21	-7.06/-6.60	-7.06/-8.48	-10.56/-12.33	-12.27/-12.52	-13.91/-15.80	-15.33/-14.51	-13.19/-12.35	-12.97/-14.18	-13.50/-10.94	-8.64/-7.05	-6.39/-6.50	-7.15/-8.36	-10.45/-12.85	-14.10/-13.66	-10.68/-8.33	-6.13/-4.51	-3.76/-3.82	-4.21/-4.45	-4.21/-3.63	-3.12/-2.92	-3.11/-3.66	-4.61/-5.98	-7.71/-9.16
Θ (165°)	-8.65/-7.20	-6.06/-5.54	-5.68/-6.40	-7.61/-8.90	-10.64/-12.97	-15.22/-15.30	-15.46/-15.70	-14.68/-14.00	-13.15/-11.32	-9.59/-7.98	-6.65/-5.69	-5.23/-5.24	-5.44/-5.94	-6.62/-7.48	-7.73/-7.61	-7.00/-5.89	-4.65/-3.73	-3.32/-3.27	-3.34/-3.39	-3.40/-3.53	-3.94/-4.78	-5.94/-7.32	-8.81/-10.17	-10.15/-10.01
Θ (172.5°)	-9.14/-7.68	-6.75/-6.45	-6.70/-7.46	-8.44/-9.65	-10.59/-11.00	-11.01/-10.85	-10.10/-9.27	-8.59/-8.41	-8.02/-7.65	-7.25/-6.73	-6.09/-5.58	-5.37/-5.49	-5.87/-6.27	-6.57/-6.68	-6.69/-6.58	-6.31/-6.10	-6.21/-6.63	-7.17/-7.50	-7.53/-7.47	-7.59/-8.20	-9.44/-11.52	-13.95/-15.88	-15.79/-14.54	-12.63/-10.84
Θ (180°)	-8.91/-8.35	-8.13/-8.25	-8.80/-9.51	-10.28/-10.63	-10.28/-9.79	-9.48/-9.52	-9.57/-9.23	-8.43/-7.93	-7.84/-8.04	-8.31/-8.37	-8.17/-7.93	-7.92/-8.15	-8.43/-8.52	-8.44/-8.11	-8.25/-8.94	-9.41/-10.43	-10.87/-11.08	-11.14/-11.15	-11.18/-11.16	-10.54/-10.41	-10.28/-10.00	-9.85/-9.57	-9.45/-9.57	-9.71/-9.59
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°)	-1.20/-1.27	-1.30/-1.12	-1.11/-1.04	-1.18/-1.59	-2.04/-2.36	-2.50/-2.44	-2.36/-2.36	-2.44/-2.48	-2.53/-2.64	-2.88/-3.09	-3.24/-3.34	-3.37/-3.19	-2.86/-2.44	-2.04/-1.80	-1.85/-2.13	-2.57/-2.76	-2.65/-2.32	-1.96/-1.78	-1.72/-1.70	-1.56/-1.39	-1.28/-1.27	-1.26/-1.16	-1.06/-0.99	-1.02/-1.12
Θ (7.5°)	-3.46/-3.41	-3.33/-3.11	-2.68/-2.20	-1.87/-1.76	-1.78/-1.85	-1.88/-1.75	-1.55/-1.42	-1.32/-1.19	-1.07/-1.04	-1.12/-1.29	-1.47/-1.59	-1.53/-1.28	-0.99/-0.70	-0.58/-0.59	-0.79/-1.21	-1.78/-2.19	-2.32/-2.17	-1.96/-1.96	-2.13/-2.52	-2.83/-3.12	-3.34/-3.53	-3.69/-3.72	-3.68/-3.56	-3.41/-3.26
Θ (15°)	-6.98/-6.32	-5.61/-4.77	-3.75/-2.73	-1.87/-1.34	-1.09/-1.01	-1.01/-0.97	-0.83/-0.76	-0.72/-0.64	-0.58/-0.60	-0.69/-0.81	-0.92/-0.97	-0.79/-0.37	0.01/0.30	0.36/0.23	-0.09/-0.35	-0.56/-0.60	-0.51/-0.27	0.02/0.20	0.13/-0.20	-0.71/-1.33	-1.94/-2.60	-3.49/-4.64	-5.94/-6.84	-7.00/-7.01
Θ (22.5°)	-10.05/-8.28	-6.47/-5.02	-3.79/-2.64	-1.61/-0.90	-0.56/-0.43	-0.37/-0.27	-0.16/-0.22	-0.46/-0.69	-0.84/-0.99	-1.20/-1.40	-1.52/-1.34	-0.83/-0.14	0.40/0.76	0.89/0.85	0.71/0.58	0.61/0.86	1.25/1.73	2.23/2.53	2.56/2.31	1.90/1.40	0.91/0.26	-0.77/-2.27	-4.36/-6.96	-9.51/-9.92
Θ (30°)	-10.43/-7.97	-5.63/-4.05	-2.93/-2.03	-1.17/-0.47	-0.04/0.29	0.60/0.93	1.18/1.17	0.81/0.35	-0.09/-0.55	-1.18/-1.91	-2.38/-2.13	-1.35/-0.46	0.25/0.82	1.29/1.62	1.77/1.73	1.73/1.89	2.34/2.94	3.51/3.84	3.87/3.67	3.35/3.03	2.68/2.17	1.29/-0.07	-2.07/-4.75	-8.01/-10.54
Θ (37.5°)	-9.21/-8.06	-6.12/-4.31	-2.83/-1.77	-0.89/-0.06	0.64/1.38	2.10/2.64	3.04/3.15	2.94/2.54	2.02/1.25	-0.04/-1.90	-3.66/-3.60	-2.21/-0.80	0.24/1.16	2.01/2.58	2.77/2.65	2.50/2.58	2.98/3.58	4.09/4.37	4.42/4.34	4.20/4.05	3.83/3.41	2.64/1.35	-0.57/-3.15	-6.29/-8.58
Θ (45°)	-7.00/-8.37	-7.76/-5.31	-3.15/-1.83	-1.05/-0.25	0.78/2.06	3.21/3.98	4.39/4.54	4.58/4.44	4.00/3.13	1.60/-0.89	-4.19/-5.65	-3.74/-1.60	-0.08/1.10	2.10/2.76	3.03/2.90	2.67/2.63	2.94/3.52	4.09/4.49	4.74/4.85	4.85/4.69	4.40/3.92	3.07/1.78	-0.08/-2.27	-4.32/-5.86
Θ (52.5°)	-4.39/-7.25	-8.14/-5.24	-2.74/-1.52	-1.22/-1.08	-0.20/1.50	3.22/4.32	4.79/4.97	5.27/5.53	5.34/4.49	2.80/-0.06	-4.56/-8.12	-5.27/-2.29	-0.44/0.93	1.89/2.50	2.70/2.52	2.32/2.30	2.57/3.18	3.88/4.53	5.01/5.24	5.16/4.76	4.20/3.56	2.76/1.69	0.35/-0.83	-1.73/-2.87
Θ (60°)	-3.32/-6.53	-7.35/-4.19	-1.68/-0.55	-0.53/-1.20	-1.24/0.29	2.30/3.67	4.20/4.34	4.77/5.41	5.63/5.08	3.68/1.16	-3.00/-8.70	-7.96/-3.91	-1.44/0.19	1.37/1.98	2.15/1.93	1.61/1.44	1.69/2.35	3.19/4.00	4.62/4.92	4.76/4.25	3.66/3.23	2.81/2.21	1.47/0.86	0.11/-1.35
Θ (67.5°)	-2.42/-5.36	-7.33/-4.55	-1.73/-0.37	-0.11/-0.95	-1.80/-0.75	1.20/2.61	3.18/3.41	3.91/4.55	4.77/4.24	2.84/0.32	-3.88/-9.15	-8.22/-4.39	-1.84/-0.03	1.15/1.55	1.38/0.84	0.25/-0.03	0.28/1.12	2.15/3.09	3.85/4.31	4.36/				

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



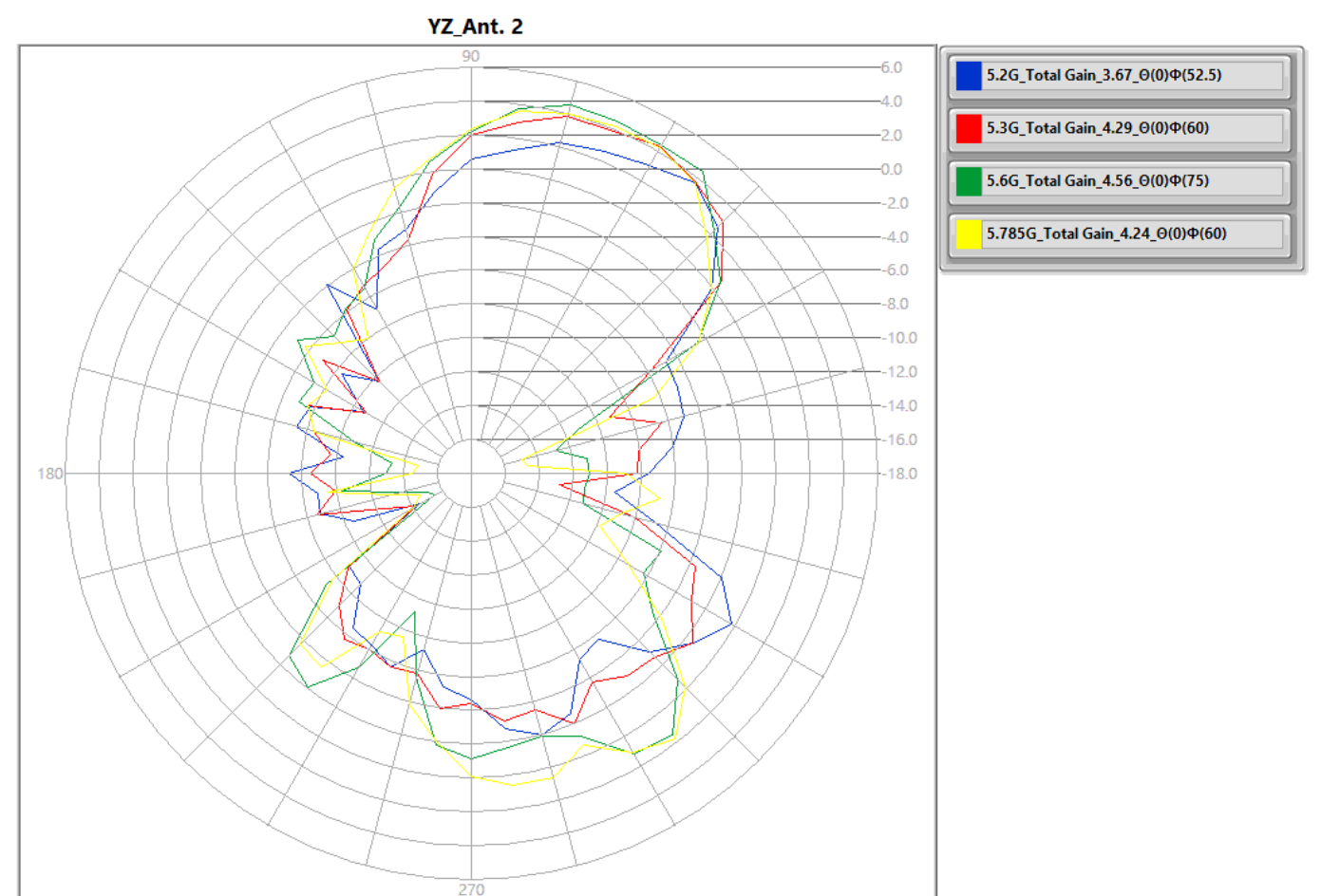
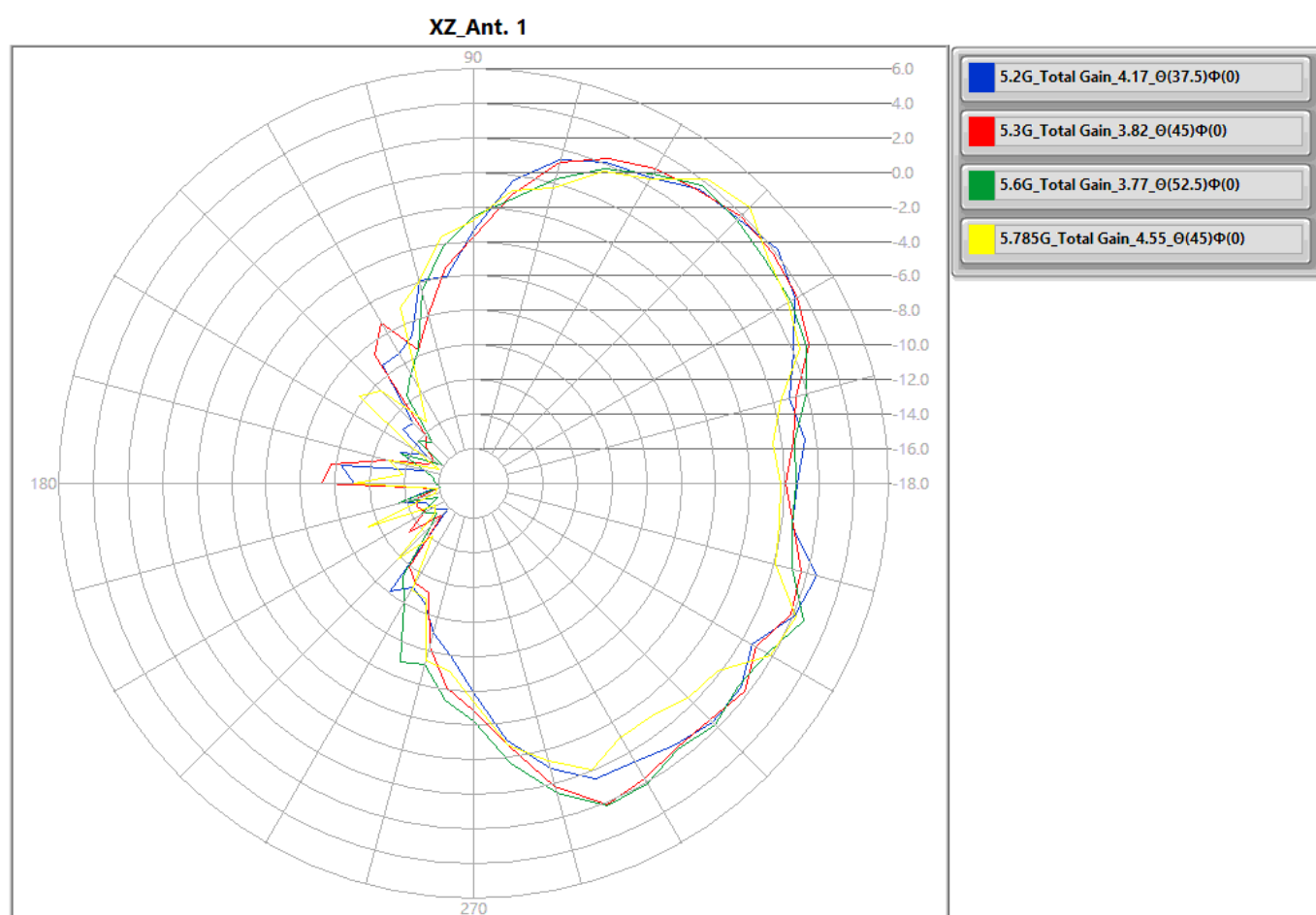
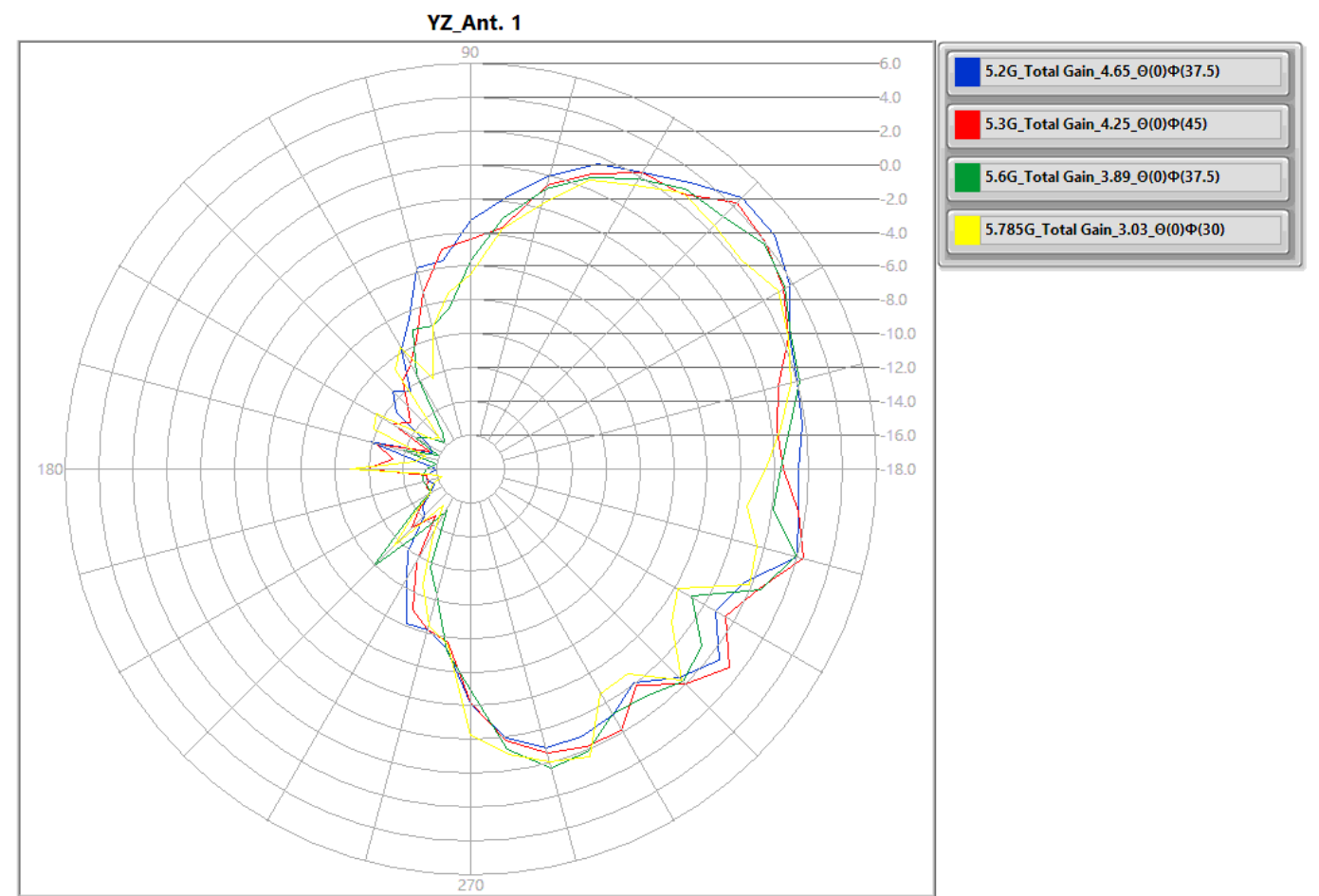
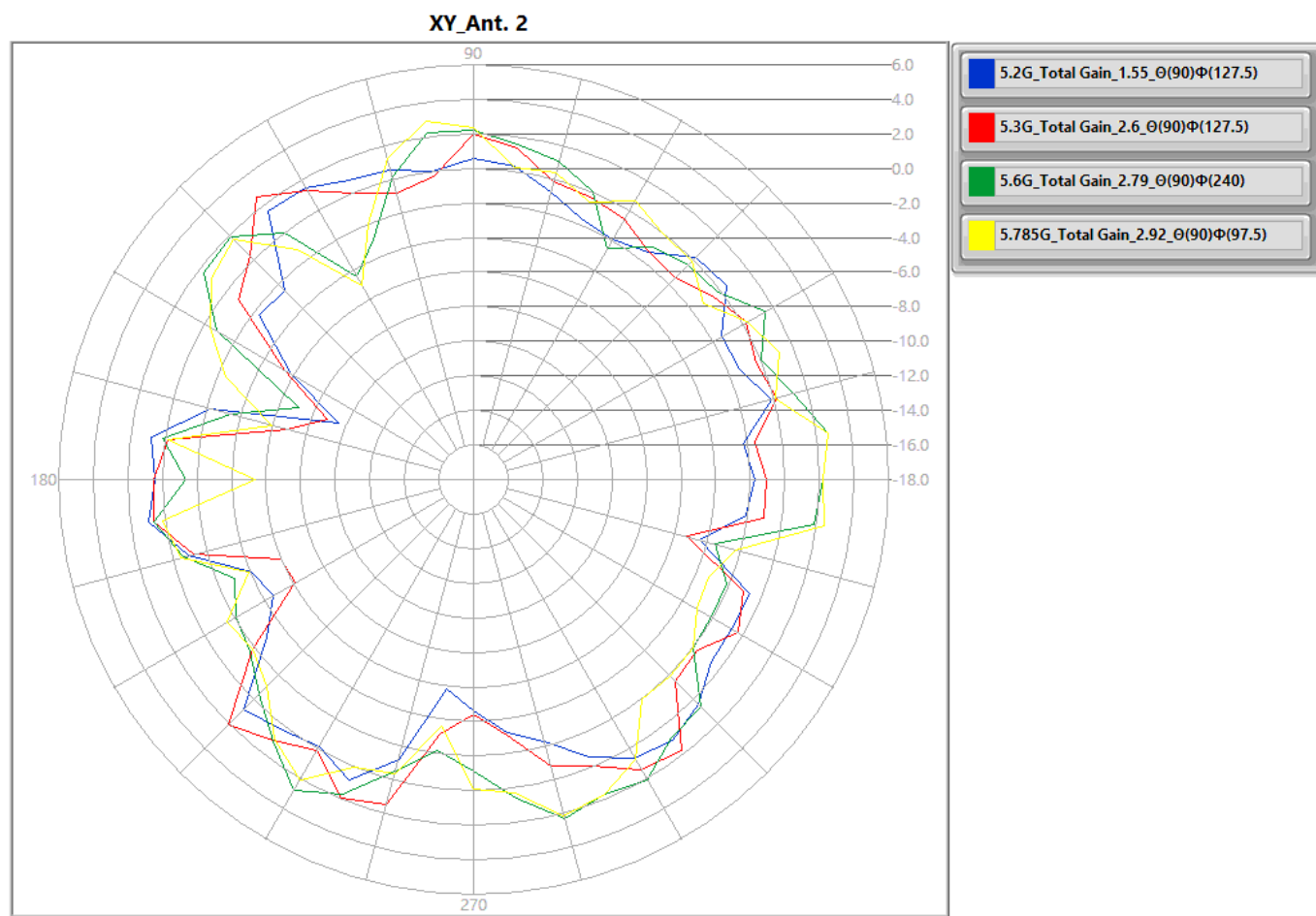
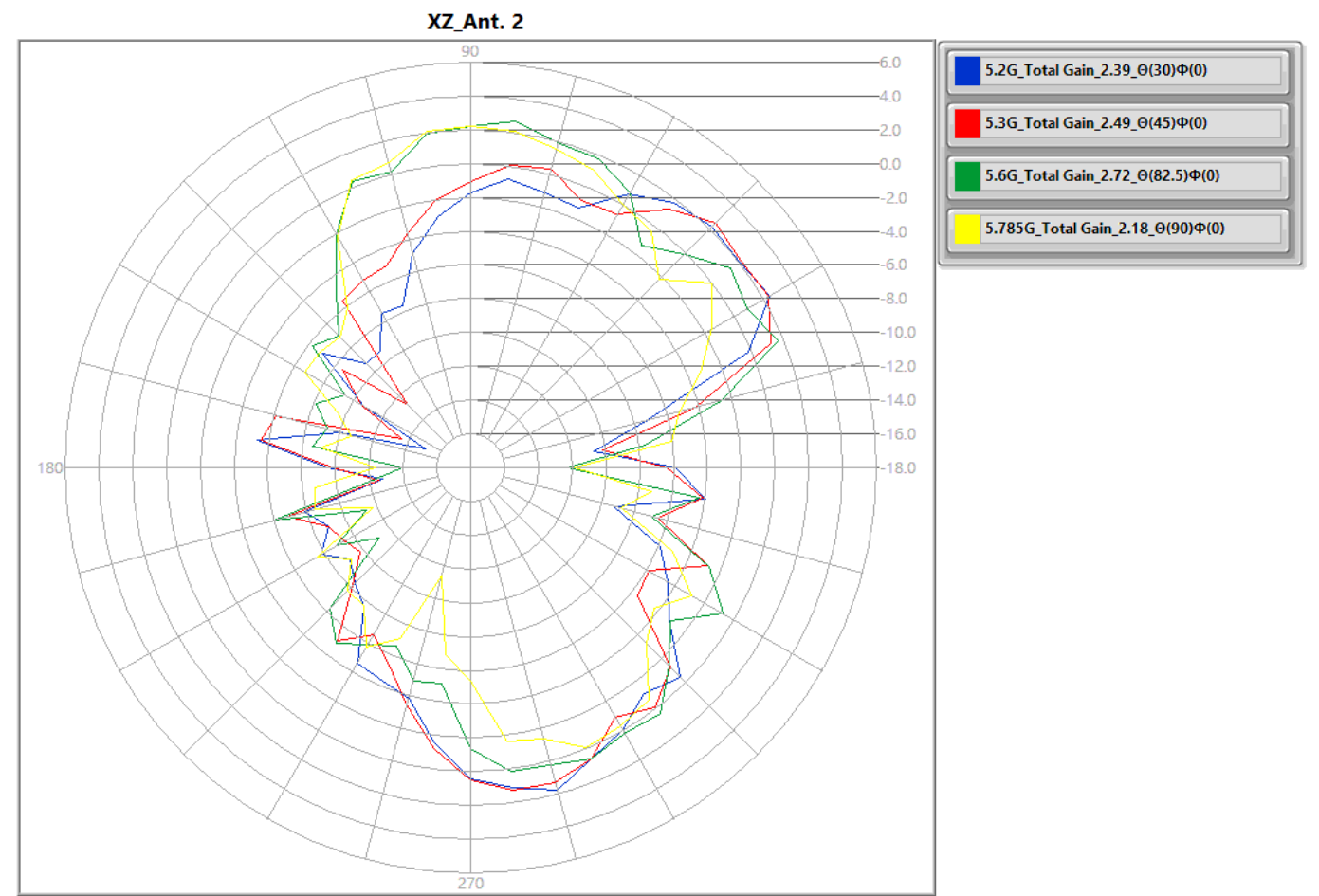
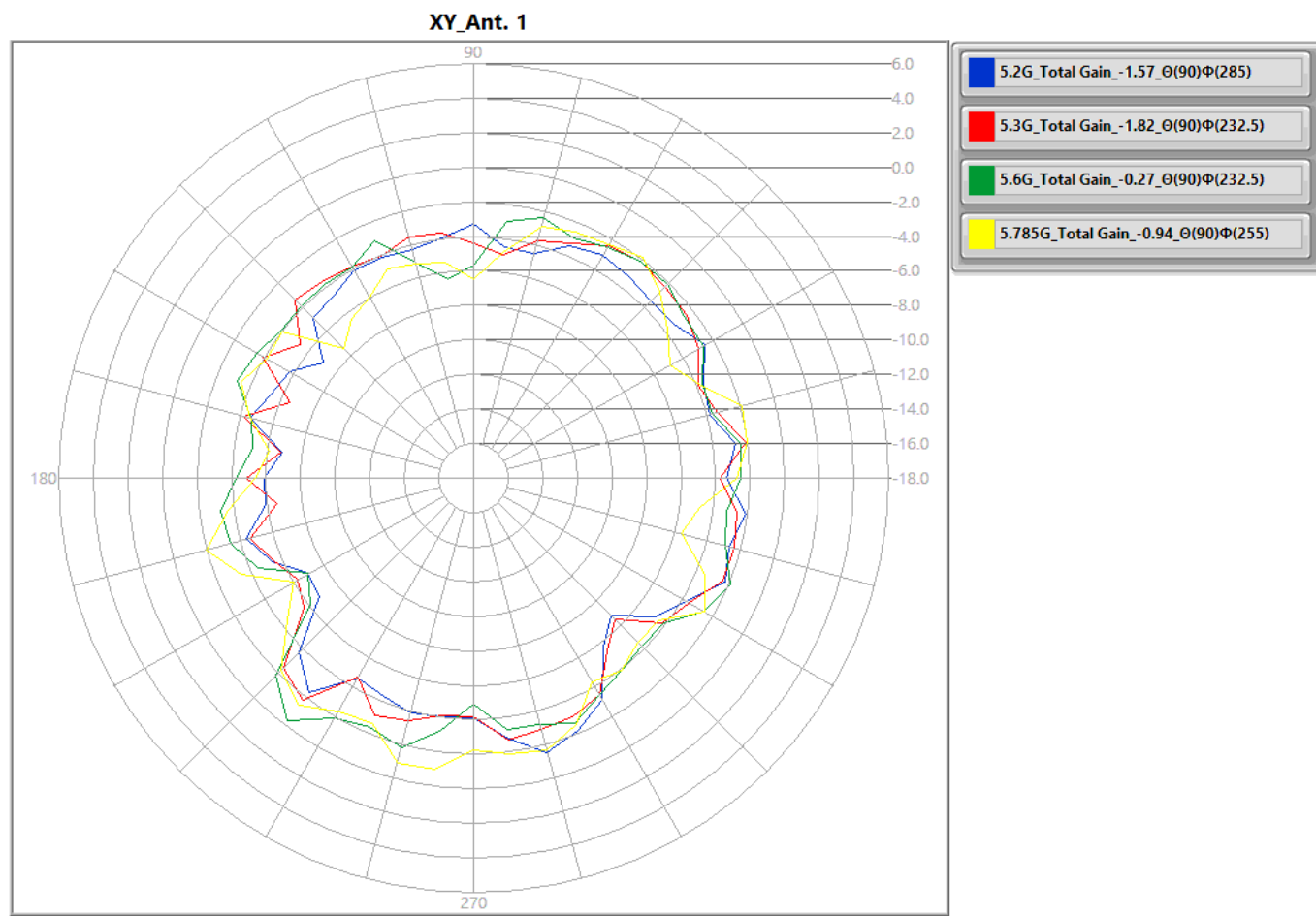


Antenna Pattern of 5GHz

Appendix E

Θ(22.5°)	-0.19/-0.06	-0.74/-1.72	-2.55/-3.35	-4.06/-4.93	-6.09/-8.56	-11.28/-9.48	-4.79/-2.16	-1.58/-2.25	-3.92/-5.46	-5.20/-3.88	-3.32/-3.33	-3.59/-4.11	-5.86/-8.18	-8.62/-7.87	-7.10/-6.38	-6.43/-6.44	-4.82/-3.25	-1.91/-1.12	-1.96/-4.29	-6.70/-8.20	-8.15/-6.88	-5.73/-5.03	-4.04/-2.99	-1.86/-1.15
Θ(30°)	2.39/2.52	2.25/-1.70	0.84/-0.00	-0.70/-1.64	-2.69/-3.79	-5.48/-5.97	-4.70/-2.38	-0.97/-0.91	-1.78/-1.95	-0.67/-0.03	-0.66/-1.97	-2.64/-2.92	-4.50/-8.43	-9.28/-6.61	-4.06/-2.07	-0.66/-0.43	-0.95/-2.16	-2.60/-0.83	-0.21/-2.02	-4.91/-5.05	-3.90/-3.13	-1.80/-0.50	0.16/0.60	1.10/-1.78
Θ(37.5°)	2.02/-1.94	1.41/-1.50	1.83/-1.65	0.89/-0.17	0.21/-1.06	1.58/-1.28	-0.09/-0.86	0.89/-1.92	1.61/-0.98	1.16/-1.22	0.19/-0.93	-0.73/-0.97	-3.20/-6.83	-8.39/-7.97	-3.90/-0.45	1.39/-0.02	1.92/-0.47	-2.07/-2.40	-1.51/-2.33	-3.18/-1.10	0.36/0.48	1.25/-1.87	1.50/0.59	0.25/-0.05
Θ(45°)	2.13/-0.05	1.38/-1.91	2.35/-2.14	2.18/-2.76	3.26/-3.30	3.14/-3.21	2.63/-1.88	2.69/-3.34	2.97/-2.70	2.14/-0.83	0.16/-0.82	-0.95/-0.16	-0.48/-2.09	-3.61/-5.21	-1.31/-1.72	2.24/-1.93	1.62/-0.82	-1.08/-3.88	-3.12/-1.70	-2.07/-0.54	2.23/-2.11	2.14/-1.63	0.08/-0.88	-0.83/-0.52
Θ(52.5°)	1.75/-1.29	1.35/-2.81	2.84/-2.27	2.78/-3.45	3.43/-2.97	3.02/-3.58	3.67/-3.31	3.53/-3.44	2.78/-3.89	3.25/-3.32	-0.43/-1.83	-1.52/-1.04	-1.12/-1.40	-1.65/-2.01	0.56/-0.07	1.99/-1.22	1.08/-0.72	-1.67/-5.41	-5.62/-1.78	-1.59/-0.78	3.04/-3.20	3.00/-1.80	0.66/-0.75	0.57/-0.90
Θ(60°)	0.74/-0.13	0.86/-2.48	2.12/-2.11	2.25/-1.39	1.35/-2.39	3.14/-3.37	3.00/-3.40	4.67/-4.57	3.38/-3.82	3.67/-1.04	-0.39/-3.72	-1.24/-0.25	-0.04/-0.32	-0.90/-1.39	0.25/-0.99	0.69/-0.12	0.25/-0.99	-1.17/-1.38	-5.26/-2.17	-1.52/-0.08	2.79/-3.35	3.03/-1.36	0.79/-0.52	-0.66/-0.63
Θ(67.5°)	-1.36/-0.82	0.46/-1.67	1.38/-2.54	2.98/-1.96	1.12/-1.24	1.98/-2.86	2.56/-2.93	4.00/-4.37	4.41/-4.23	4.08/-0.95	-2.50/-4.58	0.44/-1.42	0.69/-1.28	0.46/-0.40	-0.49/-0.84	0.67/-0.39	-0.75/-0.76	-0.55/-4.28	-2.60/-0.94	-0.45/-0.63	2.48/-2.80	2.31/-0.83	0.92/-0.28	-1.91/-2.00
Θ(75°)	-1.14/-0.34	0.72/-1.45	1.19/-2.56	2.52/-1.22	0.40/-0.62	1.71/-2.44	2.21/-2.45	3.36/-3.70	4.02/-3.31	2.18/-0.77	-3.29/-6.10	0.45/-2.50	1.77/-3.23	2.06/-2.06	-0.02/-0.00	1.13/-0.80	0.18/-1.47	0.57/-2.64	-2.02/-1.42	-0.60/-0.94	2.59/-3.24	2.09/-0.55	0.47/-0.36	-2.41/-2.63
Θ(82.5°)	-0.74/-1.27	-0.15/-0.00	0.12/-1.45	1.24/-0.47	-0.30/-0.58	-0.13/-1.14	1.29/-1.54	2.56/-3.15	3.74/-3.11	0.27/-1.76	-5.53/-6.32	-0.12/-0.91	1.14/-2.32	-0.30/-2.52	-2.39/-1.45	1.08/-1.56	1.07/-1.14	0.00/-5.04	-2.75/-2.58	-0.70/-1.02	2.26/-2.56	1.29/-0.49	-0.11/-0.67	-3.28/-1.70
Θ(90°)	-1.71/-2.24	-0.16/-1.39	-1.42/-0.41	0.16/-1.44	-1.93/-1.64	-0.77/-0.27	0.54/-0.01	0.56/-0.77	1.46/-1.55	-2.59/-2.32	-5.79/-9.55	-2.20/-0.81	0.40/-0.95	-0.95/-4.10	-4.63/-2.94	0.84/-0.24	-0.19/-0.78	-1.22/-5.80	-4.59/-3.27	-2.34/-0.59	0.58/-0.97	0.34/-0.64	-0.76/-0.71	-4.45/-2.11
Θ(97.5°)	-3.04/-3.26	-1.68/-2.85	-2.38/-0.85	-1.30/-2.27	-2.99/-3.67	-3.30/-1.74	-1.23/-1.61	-1.72/-1.40	-0.81/-0.44	-5.18/-3.75	-6.47/-6.67	-2.56/-2.94	-1.57/-2.17	-4.73/-7.09	-8.28/-4.89	-0.35/-1.42	-4.17/-3.05	-3.84/-8.25	-5.27/-4.91	-3.35/-3.51	-1.94/-2.52	-1.63/-0.94	-0.98/-1.38	-6.66/-3.78
Θ(105°)	-4.85/-4.54	-2.59/-3.44	-2.52/-2.70	-4.07/-3.71	-3.70/-4.61	-5.08/-4.09	-3.07/-2.92	-3.80/-3.97	-3.63/-2.09	-7.15/-4.78	-7.13/-7.15	-5.45/-2.49	-3.85/-5.14	-6.39/-8.21	-8.69/-4.35	-3.38/-4.50	-7.45/-6.32	-10.70/-11.71	-7.22/-8.42	-4.71/-5.52	-3.92/-3.86	-4.33/-1.95	-1.42/-2.26	-5.71/-4.73
Θ(112.5°)	-7.59/-6.18	-3.25/-5.42	-5.79/-4.92	-5.88/-4.02	-3.68/-4.45	-3.59/-3.78	-3.69/-4.05	-5.47/-6.33	-4.96/-4.13	-6.36/-5.65	-6.26/-7.27	-5.00/-3.42	-4.35/-4.94	-12.00/-12.90	-7.60/-9.14	-10.00/-7.19	-5.75/-5.65	-6.53/-11.24	-5.58/-7.61	-5.94/-3.77	-5.95/-6.05	-6.97/-3.55	-1.99/-2.92	-5.65/-6.54
Θ(120°)	-7.42/-10.12	-6.33/-5.08	-6.87/-6.44	-4.98/-5.03	-7.11/-9.84	-8.78/-7.14	-6.87/-6.62	-8.00/-5.81	-5.92/-7.13	-10.24/-8.68	-7.81/-5.02	-5.20/-6.08	-4.63/-6.25	-7.01/-12.88	-10.41/-13.78	-6.26/-6.97	-6.09/-5.08	-9.97/-8.03	-6.28/-5.44	-4.94/-4.07	-6.78/-8.93	-5.59/-6.49	-5.75/-7.19	-5.53/-7.15
Θ(127.5°)	-9.26/-9.52	-10.12/-9.35	-7.63/-8.52	-7.78/-5.76	-5.53/-5.99	-7.49/-5.64	-3.96/-6.63	-8.16/-9.80	-10.02/-11.89	-9.42/-11.02	-6.42/-8.48	-7.59/-8.58	-10.15/-9.23	-8.55/-7.32	-4.30/-7.02	-8.83/-12.44	-15.80/-9.50	-6.48/-5.31	-6.22/-5.95	-10.24/-12.23	-9.19/-9.13	-7.92/-11.55	-6.33/-5.76	
Θ(135°)	-9.27/-12.69	-11.49/-10.27	-9.65/-10.56	-10.61/-8.71	-7.18/-7.35	-9.22/-10.16	-10.36/-11.76	-7.88/-9.65	-10.27/-8.46	-11.65/-10.31	-8.69/-5.38	-3.36/-7.79	-8.36/-7.47	-7.52/-13.35	-7.50/-13.56	-7.19/-14.22	-15.35/-11.59	-11.85/-6.40	-8.75/-5.66	-6.52/-6.49	-9.79/-12.76	-8.91/-8.55	-9.35/-11.75	-10.95/-6.95
Θ(142.5°)	-6.93/-6.44	-7.32/-9.13	-11.29/-9.40	-8.00/-8.87	-10.28/-9.80	-7.92/-6.69	-8.36/-8.32	-6.98/-7.04	-6.36/-6.92	-6.77/-6.53	-6.89/-10.10	-11.74/-6.36	-12.25/-15.32	-8.32/-10.33	-12.25/-6.13	-6.54/-9.84	-7.30/-8.35	-11.31/-13.41	-8.92/-1.48	-11.77/-9.91	-9.58/-13.49	-9.71/-7.67	-9.71/-14.65	-10.88/-7.14
Θ(150°)	-10.69/-14.22	-10.22/-6.67	-8.46/-9.04	-9.96/-8.56	-6.67/-6.40	-7.79/-10.66	-10.66/-8.32	-3.82/-3.87	-5.98/-5.08	-6.94/-10.49	-7.12/-6.55	-7.79/-13.70	-7.79/-13.20	-7.37/-8.07	-14.18/-11.21	-10.84/-8.26	-8.00/-9.44	-8.65/-13.75	-14.46/-8.77	-11.25/-12.95	-9.65/-9.27	-9.16/-9.25	-9.34/-11.44	-13.25/-11.20
Θ(157.5°)	-15.13/-14.92	-15.30/-12.82	-10.28/-9.16	-9.05/-8.93	-9.39/-10.56	-10.05/-8.46	-7.73/-7.46	-6.60/-6.98	-9.07/-8.74	-6.58/-5.95	-7.75/-11.85	-10.26/-7.55	-8.91/-13.02	-12.73/-12.47	-14.86/-14.12	-12.93/-14.20	-14.64/-14.29	-12.44/-11.23	-10.53/-10.22	-10.92/-10.92	-8.97/-8.57	-9.12/-9.68	-10.01/-10.66	-11.31/-11.26
Θ(165°)	-9.98/-10.27	-10.91/-11.22	-11.47/-10.19	-9.07/-8.09	-8.11/-9.14	-9.65/-8.67	-7.34/-6.76	-7.14/-8.98	-10.23/-10.46	-9.48/-10.73	-11.78/-10.62	-8.67/-7.79	-7.84/-8.43	-9.98/-10.97	-10.00/-10.28	-13.57/-15.73	-15.69/-11.05	-9.55/-8.74	-8.75/-8.28	-9.23/-8.39	-7.88/-7.94	-8.55/-9.13	-10.12/-10.63	-10.63/-10.73
Θ(172.5°)	-5.29/-4.97	-6.24/-7.47	-7.39/-7.29	-7.15/-6.55	-7.28/-8.57	-9.46/-9.80	-10.39/-12.04	-14.08/-15.49	-15.56/-15.59	-15.21/-15.92	-13.85/-12.02	-12.71/-12.26	-11.46/-11.27	-10.88/-10.05	-9.14/-8.72	-9.12/-9.12	-8.84/-9.32	-9.93/-10.26	-9.82/-8.62	-7.87/-8.96	-6.39/-7.71	-7.45/-7.10		
Θ(180°)	-9.53/-10.77	-11.47/-10.74	-9.98/-9.97	-9.98/-9.86	-9.84/-9.52	-9.11/-8.25	-7.22/-7.30	-7.81/-7.92	-8.15/-8.38	-8.55/-7.79	-6.52/-5.80	-5.91/-6.24	-6.30/-6.23	-6.35/-6.19	-5.96/-5.91	-6.49/-7.15	-8.00/-8.85	-10.19/-10.88	-10.38/-11.05	-12.62/-13.45	-13.31/-12.08	-12.44/-11.95	-10.49/-10.15	-10.89/-12.06
Freq(Pol)	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°)	-6.44/-5.64	-5.10/-5.66	-5.88/-5.85	-5.66/-5.67	-6.31/-6.68	-7.03/-7.87	-8.19/-8.79	-9.20/-9.29	-9.38/-9.34	-9.68/-9.92	-9.77/-9.37	-9.55/-10.40	-11.35/-11.33	-10.76/-11.02	-10.89/-9.92	-9.19/-8.59	-7.93/-8.00	-7.90/-6.60	-9.15/-8.15	-7.24/-6.57	-6.66/-6.47	-5.44/-5.39	-5.48/-5.35	-5.57/-5.71
Θ(7.5°)	-10.15/-10.91	-11.07/-10.20	-10.61/-11.52	-11.50/-11.44	-10.72/-8.84	-8.32/-8.76	-8.02/-7.00	-6.53/-5.64	-5.19/-4.72	-4.52/-4.41	-4.23/-3.90	-3.60/-7.30	-4.13/-6.44	-4.74/-4.71	-4.84/-4.85	-4.71/-5.02	-6.05/-7.12	-8.92/-11.71	-12.73/-11.99	-11.43/-11.91	-10.75/-9.51	-8.66/-7.67	-7.78/-7.89	-10.33/-7.14
Θ(15°)	-4.25/-4.66	-5.29/-6.68	-8.46/-9.04	-8.84/-9.48	-10.87/-12.22	-10.27/-8.13	-6.40/-4.81	-3.88/-3.44	-4.64/-3.77	-4.92/-6.17	-6.81/-6.89	-7.07/-6.97	-6.55/-6.69	-7.15/-6.31	-3.49/-3.43	-3.85/-3.88	-4.22/-5.74	-6.09/-5.02	-3.94/-3.32	-3.54/-3.98	-5.04/-5.44			
Θ(22.5°)	1.26/0.79	0.18/-0.89	-2.07/-3.19	-4.02/-4.86	-6.75/-9.95	-12.75/-11.73	-9.17/-5.61	-3.22/-2.64	-2.87/-3.68	-4.13/-3.88	-3.87/-4.14	-4.02/-3.35	-2.78/-2.76	-3.24/-3.98	-5.04/-5.39	-4.50/-3.74	-3.57/-2.71	-2.12/-2.57	-3.68/-5.36	-7.23/-6.78	-4.62/-2.69	-1.27/-0.36	0.28/0.60	0.70/0.77
Θ(30°)	2.33/-2.33	1.90/-1.54	1.33/-0.79	0.01/-0.31	-0.46/-1.00	-2.89/-5.81	-5.76/-3.49	-1.60/-0.97	-1.05/-0.65	0.30/0.87	-0.03/-1.87	-3.03/-4.12	-5.84/-5.38	-3.43/-2.99	-3.41/-3.21	-1.39/-0.32	0.28/-1.26	-2.64/-2.65	-2.99/-4.90	-6.23/-3.47	-1.54/-0.04	1.03/-1.45	1.75/-1.91	2.20/2.57
Θ(37.5°)	2.18/-2.18	2.12/-2.57	2.55/-1.90	1.10/-1.11	1.76/-2.25	1.96/-1.41	0.64/-0.23	0.16/-1.20	1.80/-1.82	1.53/-1.11	-0.17/-1.63	-2.08/-2.79	-5.54/-7.74	-7.07/-7.06	-3.55/-0.73	0.95/-2.46	2.71/-1.36	-0.43/-1.56	-1.55/-2.81	-3.08/-0.20	0.94/-1.35	1.83/-1.38	0.38/-0.43	0.18/-1.52
Θ(45°)	2.49/-2.13	2.23/-0.00	2.80/-2.02	1.75/-2.31	3.21/-3.36	2.93/-3.04	3.06/-1.77	1.87/-2.53	2.59/0.60	-0.51/-1.23	-1.80/-1.41	-1.28/-1.61	-2.12/-3.72	0.02/-2.66	2.22/-1.76	2.16/-1.52	-0.56/-3.66	-2.67/-1.95	-2.57/-0.61	2.18/-2.15	1.87/-0.26	-1.35/-1.68	-0.29/-1.37	
Θ(52.5°)	1.30/0.85	1.52/-2.57	1.97/-1.65	2.18/-2.57	3.17/-2.25	3.23/-4.27	3.72/-3.43	3.44/-4.40	2.72/-3.99	3.89/-0.16	-2.20/-3.55	-2.74/-1.08	-0.11/-0.05	-0.97/-1.34	0.73/-2.13	1.11/-0.12	0.98/-1.28	-0.68/-4.63	-2.88/-0.21	-1.34/-1.16	3.08/-3.12	2.20/-2.44	-1.48/-0.83	-0.13/-0.66
Θ(60°)	-0.69/-0.34	1.72/-2.68	1.48/-2.31	2.52/-1.51	1.52/-2.21	3.14/-4.26	4.29/-3.06	3.38/-3.73	2.68/-3.30	4.03/-0.46	-1.61/-4.71	-4.40/-2.83	-0.93/-0.43	-0.37/-1.92	-0.35/-0.13	0.63/-0.34	1.02/-2.10	-0.00/-3.11	-3.75/-0.71	-0.81/-0.98	2.90/-2.97	1.44/-1.44	-1.51/-1.58	-1.27/-1.28
Θ(67.5°)	-0.84/-0.23	1.90/-2.73	1.98/-0.34	2.11/-0.27	1.24/-2.24	2.30/-3.39	3.88/-2.94	3.33/-3.31	3.54/-3.94	4.53/-6.22	-3.26/-7.10	-3.25/-2.08	0.69/-1.34	0.95/-0.63	-1.06/-0.50	1.77/-0.89	1.04/-2.26	-2.28/-2.90	-2.02/-1.08	0.16/-1.53	3.51/-2.08	1.14/-0.97	-0.48/-1.69	-2.72/-3.23
Θ(75°)	0.30/-0.28	2.08/-2.97	2.01/-2.20	1.34/-0.68	1.71/-1.72	1.73/-3.53	3.86/-2.10	1.72/-2.19	3.51/-4.11	3.64/-1.84	-3.99/-6.95	-4.26/-1.27	1.32/-1.76	1.11/-1.01	-0.55/-0.95	2.54/-1.53	0.95/-2.37	1.79/-3.62	-3.50/-2.38	0				

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





Antenna Pattern of 6GHz

Appendix F

Total Gain Data

Freq(Hz)	6.1750Pol.	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°)	0.360.28	0.13/-0.09	-0.20/0.09	0.08/-0.00	-0.06/0.03	0.00/-0.00	-0.05/0.02	0.10/0.08	0.04/-0.12	-0.03/-0.04	0.07/0.21	0.43/0.55	0.49/0.41	0.15/0.03	-0.05/-0.03	-0.06/-0.10	-0.06/-0.06	-0.08/-0.12	-0.05/-0.04	-0.12/0.04	0.41/0.49	0.27/0.02	0.05/0.05	-0.10/-0.14
Θ(7.5°)	1.97/1.98	1.65/1.02	0.93/0.64	0.51/0.30	0.18/0.17	0.05/0.11	-0.02/0.28	0.35/0.41	-0.36/0.34	0.39/0.56	0.63/0.69	0.72/0.80	0.89/0.89	0.68/0.32	0.10/0.07	0.08/0.01	-0.07/-0.16	-0.40/-0.49	-0.39/-0.16	0.00/0.40	0.88/1.15	1.23/1.09	1.15/1.19	0.96/1.10
Θ(15°)	2.06/2.32	2.28/1.99	1.54/1.08	0.63/0.36	0.27/0.07	-0.35/-0.65	-0.84/-1.06	-1.22/-1.12	-0.85/-0.54	-0.28/-0.24	-0.20/-0.03	0.20/0.44	0.40/0.47	0.59/0.71	0.82/0.90	0.97/1.09	1.00/0.40	-0.29/-0.52	0.11/1.00	1.89/2.59	2.96/3.03	2.85/2.47	2.02/1.76	1.90/2.11
Θ(22.5°)	-1.34/-0.34	0.53/0.93	1.09/0.26	-0.43/-0.89	-0.37/0.40	0.81/0.77	0.35/-0.30	-0.58/-0.25	0.37/0.56	0.37/0.12	0.17/0.22	0.09/0.09	0.42/0.65	0.38/0.26	0.67/1.14	1.81/2.38	2.47/1.96	1.57/1.87	2.61/3.39	4.00/4.15	3.84/3.25	2.52/1.65	0.72/0.13	-0.50/-1.44
Θ(30°)	1.50/0.17	-0.20/0.47	1.80/1.97	1.07/0.10	-0.21/0.89	1.62/1.11	-0.39/-0.81	0.65/2.47	3.53/3.74	3.36/2.84	2.67/2.81	2.83/2.68	2.36/2.43	2.42/2.25	2.32/2.30	2.07/2.38	2.64/2.44	2.94/1.71	0.43/-0.08	0.84/1.82	2.54/3.20	3.38/2.48		
Θ(37.5°)	1.30/0.55	0.08/-0.67	-0.02/1.62	2.26/0.98	-0.57/1.20	2.06/0.81	0.06/1.22	2.48/3.09	2.91/2.35	2.31/2.58	2.56/2.61	3.25/3.73	3.09/1.98	2.96/3.86	3.66/3.45	1.91/1.35	1.64/1.84	2.57/2.62	1.10/-0.95	-0.77/1.15	2.54/3.06	3.26/3.13	2.51/1.79	1.44/1.34
Θ(45°)	0.15/-0.01	1.32/1.64	0.37/1.01	1.74/1.15	0.82/1.94	1.57/0.65	0.89/1.93	2.55/2.60	2.43/2.56	3.18/3.94	3.85/3.14	2.82/2.77	2.41/0.92	1.53/2.98	2.98/3.01	2.74/2.79	1.70/2.12	3.51/2.64	0.42/1.56	2.66/1.49	-0.01/-0.58	-0.49/0.06	0.97/1.72	1.60/0.85
Θ(52.5°)	-2.12/-1.92	0.34/2.36	1.66/0.77	1.15/1.74	2.12/1.13	0.29/0.83	1.54/2.09	2.33/2.13	2.63/3.40	3.98/4.46	3.89/2.40	2.03/2.61	2.80/1.47	0.52/0.88	2.16/2.14	2.30/3.38	1.91/2.27	2.70/1.03	-0.03/2.77	3.12/2.12	2.52/2.90	2.52/2.10	0.86/-0.35	-0.41/-0.64
Θ(60°)	-0.04/-0.35	-0.63/0.99	1.13/1.00	0.88/1.91	1.43/0.31	0.37/0.53	1.11/1.95	2.07/1.61	2.24/3.15	3.26/2.87	2.96/2.33	1.99/2.09	2.71/2.59	2.00/0.25	3.61/1.96	1.54/2.92	1.77/1.19	1.21/-1.59	-2.55/-2.45	-3.09/-1.54	-0.45/-0.47	-0.74/-0.47	-0.02/-3.03	-5.30/-2.49
Θ(67.5°)	1.54/0.64	-0.64/-0.39	-0.05/-0.08	-0.16/0.95	0.26/0.44	-0.34/-0.80	-0.18/0.16	0.19/0.93	1.38/1.91	2.01/1.41	2.55/2.66	1.85/1.06	1.69/1.80	2.23/0.92	1.80/1.49	-0.38/1.72	1.40/0.42	0.93/-0.15	-0.86/-2.94	-5.23/-7.80	-5.88/-3.51	-2.84/-1.39	-0.41/0.02	-0.48/-1.20
Θ(75°)	0.16/0.12	-0.46/-2.40	-1.98/-1.15	-1.23/-1.06	-0.70/-1.01	-1.25/-0.43	-0.48/-1.90	-2.16/-0.65	0.33/0.32	0.19/-0.36	1.43/2.53	0.94/-0.65	-0.27/0.20	0.90/0.38	0.85/0.98	-1.56/-0.15	0.04/-0.22	1.14/1.18	0.88/0.83	-0.12/-0.16	1.43/1.88	0.48/0.35	-0.21/0.12	1.20/0.45
Θ(82.5°)	-2.22/-2.51	-1.56/-4.82	-4.27/-2.73	-1.97/-3.01	-2.61/-3.29	-1.31/-0.46	-1.52/-2.14	-2.52/-1.40	-0.90/-1.43	-2.31/-2.32	0.17/0.95	-0.89/-3.29	-1.67/-2.20	-0.42/-0.58	-0.88/-0.64	-2.84/-1.72	-2.52/-1.18	1.20/0.96	0.51/0.91	0.96/1.67	2.33/2.16	-0.60/-0.86	-2.36/-2.27	-0.02/-0.13
Θ(90°)	-3.72/-0.00	-4.52/-6.10	-7.27/-5.60	-3.35/-3.92	-4.26/-5.45	-3.36/-2.76	-3.92/-4.18	-3.88/-2.81	-2.25/-2.56	-3.43/-3.32	-1.80/-1.22	-1.65/-3.92	-4.26/-5.41	-1.30/-2.06	-3.27/-1.59	-3.99/-5.38	-4.70/-2.08	-0.41/-0.93	-1.81/-1.44	0.02/-0.04	-0.45/0.60	-0.66/-2.07	-5.32/-6.06	-1.93/-2.84
Θ(97.5°)	-6.04/-8.55	-7.15/-7.38	-9.36/-7.21	-6.61/-5.73	-5.75/-5.70	-5.81/-5.18	-6.92/-6.75	-5.69/-4.32	-3.96/-3.93	-4.25/-4.26	-3.53/-2.99	-3.51/-6.72	-6.38/-6.68	-3.93/-3.30	-4.86/-3.16	-6.17/-7.22	-6.65/-4.76	-3.28/-3.24	-3.62/-4.44	-1.81/-2.68	-3.78/-1.67	-2.10/-4.12	-7.44/-7.47	-4.56/-7.54
Θ(105°)	-8.46/-8.17	-9.22/-7.58	-9.02/-9.72	-9.98/-7.29	-7.47/-6.27	-9.45/-8.67	-9.54/-7.92	-7.53/-8.65	-6.32/-5.66	-5.99/-6.45	-6.04/-5.11	-5.67/-9.62	-8.46/-8.27	-6.84/-5.84	-5.89/-4.97	-7.02/-10.00	-9.35/-6.99	-7.46/-6.59	-6.79/-9.43	-7.46/-7.81	-6.91/-4.37	-4.78/-8.28	-9.63/-5.78	-7.20/-13.12
Θ(112.5°)	-12.12/-9.06	-8.69/-11.17	-10.63/-11.08	-10.02/-10.98	-10.36/-7.72	-9.19/-11.71	-8.84/-8.88	-7.24/-9.49	-9.14/-9.00	-9.19/-9.32	-9.30/-7.70	-7.44/-9.76	-10.08/-11.55	-9.87/-7.67	-7.05/-9.22	-7.95/-8.09	-13.25/-10.74	-10.64/-10.38	-9.42/-11.38	-12.67/-11.22	-9.05/-8.30	-10.44/-12.08	-10.35/-8.45	-9.17/-11.04
Θ(120°)	-10.82/-10.37	-11.13/-14.30	-9.81/-14.78	-12.19/-11.61	-11.73/-10.65	-9.52/-15.90	-10.23/-13.00	-10.99/-10.12	-10.73/-9.65	-10.06/-9.24	-8.79/-8.79	-8.85/-11.13	-12.32/-13.26	-11.31/-10.84	-9.45/-9.93	-11.74/-9.37	-12.92/-12.21	-13.21/-11.90	-9.98/-9.35	-14.97/-12.90	-11.72/-12.44	-11.71/-14.07	-14.21/-14.89	-10.20/-10.70
Θ(127.5°)	-12.87/-14.27	-13.76/-15.41	-11.19/-16.31	-12.07/-13.49	-13.64/-14.21	-12.92/-13.03	-11.67/-10.84	-13.65/-15.32	-14.04/-12.21	-10.99/-11.14	-12.62/-12.92	-11.90/-10.17	-13.95/-13.48	-15.32/-11.08	-12.14/-10.83	-15.58/-14.36	-13.25/-12.50	-9.00/-10.39	-12.48/-13.74	-11.84/-11.97	-12.38/-13.01	-15.09/-15.36	-13.02/-16.12	
Θ(135°)	-11.66/-15.56	-15.31/-15.34	-14.42/-15.24	-14.20/-14.34	-13.05/-13.28	-14.11/-12.63	-13.18/-14.26	-13.27/-12.02	-13.27/-12.67	-10.80/-10.21	-10.23/-11.00	-11.13/-14.77	-14.15/-14.60	-15.13/-14.67	-13.67/-13.20	-10.18/-12.34	-12.88/-15.21	-15.23/-14.91	-12.54/-12.72	-10.22/-15.00	-15.75/-13.15	-12.32/-11.98	-15.49/-14.59	-14.43/-13.96
Θ(142.5°)	-14.78/-15.07	-14.96/-14.63	-14.03/-15.31	-15.22/-13.51	-14.19/-14.43	-14.82/-15.07	-14.60/-15.47	-15.91/-15.81	-14.73/-14.61	-13.26/-11.92	-12.26/-13.57	-13.20/-12.74	-14.81/-14.60	-15.68/-11.09	-11.97/-14.86	-13.92/-15.01	-11.77/-12.07	-14.82/-14.58	-15.37/-15.36	-14.57/-15.69	-15.22/-13.65	-13.83/-14.52	-15.37/-13.27	-14.79/-15.89
Θ(150°)	-15.82/-13.96	-15.57/-15.45	-15.48/-14.87	-15.11/-15.40	-15.67/-14.94	-15.08/-15.95	-14.46/-14.32	-12.53/-13.70	-14.91/-15.30	-15.09/-13.75	-14.34/-14.88	-14.81/-15.47	-15.26/-14.91	-15.30/-14.20	-15.12/-15.78	-15.24/-15.33	-14.12/-15.40	-15.06/-12.58	-14.46/-15.81	-15.57/-15.80	-14.37/-13.26	-13.36/-14.32	-14.98/-14.97	-15.88/-15.48
Θ(165°)	-15.72/-15.52	-15.87/-15.68	-15.46/-15.97	-14.86/-15.43	-15.19/-15.10	-14.88/-14.28	-14.58/-15.37	-15.08/-14.88	-14.30/-14.13	-14.17/-14.93	-15.10/-15.97	-14.80/-15.45	-15.48/-14.76	-15.55/-15.54	-15.93/-14.69	-15.93/-15.11	-15.15/-14.96	-15.57/-15.36	-15.50/-14.92	-15.73/-15.18	-16.27/-15.69	-15.00/-14.61	-16.01/-14.28	-15.67/-16.16
Θ(172.5°)	-15.79/-14.89	-15.38/-15.05	-15.38/-15.89	-15.04/-15.43	-14.83/-15.45	-15.13/-15.35	-15.33/-15.53	-15.27/-14.96	-15.51/-16.04	-15.68/-14.78	-15.54/-15.30	-14.65/-15.40	-14.80/-14.62	-15.42/-15.32	-15.63/-15.33	-15.00/-14.16	-15.07/-15.74	-15.52/-15.95	-15.05/-15.02	-15.84/-15.71	-14.71/-15.49	-15.84/-15.15	-14.87/-15.18	
Θ(180°)	-14.99/-14.90	-14.72/-15.34	-15.24/-16.05	-15.61/-15.33	-15.30/-14.91	-15.35/-15.49	-15.67/-14.64	-16.18/-15.51	-15.96/-14.93	-15.34/-14.98	-15.19/-15.55	-15.36/-15.50	-15.24/-15.80	-15.93/-15.16	-15.59/-15.04	-14.80/-15.93	-16.15/-15.75	-14.44/-15.53	-15.75/-16.00	-15.67/-15.72	-14.83/-15.74	-15.95/-15.73	-15.16/-14.58	-15.48/-15.46
Freq(Hz)	6.4750Pol.	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°)	1.24/1.16	1.10/1.19	1.06/1.02	0.96/0.88	0.82/0.98	0.85/0.72	0.74/0.87	1.34/1.61	1.60/1.61	1.72/1.60	1.53/1.59	1.57/1.44	1.18/1.10	1.08/0.88	0.54/0.33	0.09/-0.08	-0.02/0.16	0.38/0.54	0.81/1.00	1.34/1.72	1.92/1.92	1.87/1.87	1.71/1.72	2.09/1.96
Θ(7.5°)	2.02/1.64	1.09/0.26	-0.04/-0.33	-0.48/-0.62	-0.64/-0.38	-0.24/-0.14	0.05/0.26	0.51/0.88	1.22/1.52	1.57/1.46	1.49/1.78	1.90/1.81	1.78/1.89	1.92/1.83	1.66/1.48	1.19/1.36	1.37/1.55	1.52/1.62	1.95/2.12	2.16/2.18	2.35/2.60	2.53/2.26	2.15/2.25	2.21/2.08
Θ(15°)	4.18/4.18	3.94/3.28	2.28/1.02	0.35/-0.26	-0.47/-0.71	-1.23/-1.75	-2.00/-2.12	-1.85/-1.52	-1.21/-1.10	-0.85/-0.42	-0.48/-0.73	-0.51/-0.21	-0.14/-0.19	0.70/1.26	1.37/1.24	1.29/1.34	1.80/1.96	1.96/1.85	2.04/2.54	3.08/3.54	3.85/4.00	4.07/4.34	4.56/4.33	
Θ(22.5°)	1.25/1.68	2.33/2.37	1.83/0.58	-0.11/-0.07	0.23/0.03	-0.56/-1.58	-2.32/-2.16	-1.09/0.21	1.30/1.73	1.94/2.27	2.49/2.24	1.97/1.76	1.48/1.52	1.73/1.82	1.61/1.25	0.81/1.18	2.00/2.48	2.61/2.47	2.49/3.03	3.91/4.92	5.59/5.64	4.80/3.75	2.89/2.24	2.05/2.09
Θ(30°)	0.21/-0.93	0.29/1.37	1.85/1.12	-0.40/-0.92	0.09/0.69	-0.20/-2.20	-1.91/-0.05	1.24/1.75	1.84/1.81	2.05/2.50	2.66/2.54	2.56/2.57	2.01/1.23	1.70/2.50	2.97/3.43	3.13/2.18	2.13/2.64	2.58/2.85	4.01/4.83	4.59/3.53	2.55/2.14	2.58/3.27	3.67/3.65	3.15/1.77
Θ(37.5°)	2.20/0.78	-0.36/-0.97	-0.02/1.59	1.01/-1.51	0.79/1.87	0.27/0.94	1.44/1.64	1.44/1.35	1.69/2.24	2.65/2.41	1.71/1.62	1.99/1.00	-0.26/2.13	3.00/3.12	3.08/2.15	2.17/1.24	1.68/2.80	3.32/1.39	0.96/2.95	3.88/3.74	4.43/4.18	2.69/2.64	2.74/2.62	
Θ(45°)	0.96/1.03	0.86/0.66	-0.25/1.06	1.71/0.74																				



Antenna Pattern of 6GHz

Appendix F

Θ(22.5°)	-3.36/-3.71	-3.14/-2.18	-2.21/-2.51	-1.73/-2.49	-3.63/-5.55	-9.04/-11.34	-9.23/-5.53	-4.85/-5.33	-6.71/-9.22	-13.00/-12.94	-12.24/-13.47	-14.21/-10.50	-7.86/-5.74	-4.01/-3.59	-5.15/-5.74	-4.63/-3.46	-3.34/-3.47	-3.78/-3.74	-3.31/-3.85	-5.18/-6.09	-7.01/-10.75	-11.47/-9.05	-8.81/-6.46	-4.11/-3.31
Θ(30°)	-2.61/-3.37	-1.80/-0.15	0.21/-0.22	0.60/0.05	-1.40/-3.89	-4.26/-3.34	-2.53/-5.03	-2.35/-3.46	-5.30/-6.86	-10.31/-8.71	-4.26/-2.57	-3.19/-5.74	-6.28/-4.55	-3.98/-5.02	-5.48/-3.52	-2.60/-3.24	-3.12/-2.05	-2.74/-3.68	-7.10/-7.04	-9.22/-7.21	-6.41/-6.26	-6.98/-8.28	-9.74/-6.84	-3.12/-2.05
Θ(142.5°)	0.13/-0.18	-2.73/-2.49	-2.10/-5.44	-2.41/-1.50	-4.57/-8.59	-7.49/-4.46	-2.58/-1.29	-1.30/-1.73	-0.82/-0.44	-0.12/-0.43	1.74/-1.85	1.02/-1.52	-3.73/-6.08	-3.44/-2.30	-1.09/-1.62	-3.60/-3.20	0.74/-1.47	-0.35/-4.54	-10.97/-11.42	-8.19/-5.14	-2.73/-1.64	-0.83/-1.58	-4.18/-5.63	-4.02/-10.0
Θ(45°)	1.20/-1.25	0.00/-1.08	0.13/-2.54	0.88/0.28	-3.09/-2.37	-3.28/-6.01	-3.11/-0.26	1.32/-0.40	-2.00/-1.51	-0.68/-1.40	3.14/-3.17	1.77/-0.72	-1.89/-3.94	-2.48/0.69	1.98/0.76	-1.71/-0.29	0.51/-1.61	2.58/-1.07	-1.35/-3.45	-1.88/-0.60	0.55/-1.04	1.65/0.97	-1.51/-1.80	-2.13/-0.94
Θ(52.5°)	0.12/-1.51	2.14/-4.71	4.19/-0.52	2.01/-0.26	-1.70/-0.31	-1.80/-5.06	-4.61/-0.82	2.18/-0.06	-1.94/-0.84	-1.18/-0.14	2.72/-5.51	3.82/-1.60	0.46/-2.74	-1.58/-2.39	3.46/-3.58	1.93/-0.58	0.10/-2.95	4.58/-2.22	-0.21/-0.26	0.32/-0.82	1.45/-1.48	2.56/-2.03	-2.05/-1.05	0.47/-0.32
Θ(60°)	-0.44/-0.41	3.86/-5.74	5.56/-1.74	0.83/-1.64	-2.14/-0.51	-0.03/-3.45	-4.50/-2.37	0.14/-0.07	-1.84/-0.93	-0.47/-0.17	3.04/-3.66	5.26/-4.63	1.02/-1.14	-2.10/-2.14	3.41/-4.55	4.05/-2.48	0.66/-2.68	3.68/-2.44	1.90/-1.87	1.73/-1.04	1.85/-1.01	1.62/-3.31	1.78/-0.16	0.38/0.04
Θ(67.5°)	-2.86/-0.55	3.67/-5.61	4.69/-0.75	1.55/-1.28	-1.04/-1.11	-0.15/-1.93	-1.63/0.80	0.92/-1.63	0.78/0.61	0.39/0.62	3.53/-3.42	6.21/-6.20	2.56/-1.82	-0.64/-0.03	3.75/-4.97	3.99/-2.75	0.45/-2.72	3.93/-3.88	2.02/-1.36	2.80/-2.22	2.24/-2.62	0.71/-2.80	3.23/-1.74	-0.36/-1.23
Θ(75°)	-7.22/-1.01	3.52/-5.27	3.36/-0.08	2.80/-2.86	-1.13/-2.67	-0.98/-1.63	-0.16/-2.29	1.53/-2.41	2.23/-1.19	1.44/-1.42	3.23/-2.50	4.84/-6.43	2.77/-2.10	-2.96/-1.24	3.38/-5.05	2.73/-1.88	-0.08/-2.03	3.42/-3.60	-0.45/-0.76	3.49/-2.44	0.75/-2.27	2.08/-2.73	3.31/-1.55	-0.83/-1.85
Θ(82.5°)	-7.89/-0.34	4.15/-4.43	1.53/-2.53	2.22/-2.26	-1.92/-4.77	-3.31/-3.01	-0.25/-1.76	2.28/-1.64	1.81/-0.08	2.10/-1.61	3.55/-5.76	1.40/-4.03	-2.20/-1.35	2.37/-2.22	-1.77/-1.37	-1.57/-0.39	1.60/-1.79	-5.86/-2.59	3.04/-0.13	-1.37/-2.12	1.64/-2.20	2.17/-0.10	0.48/-1.42	
Θ(90°)	-6.09/-0.10	4.27/-3.14	-1.55/-6.09	0.35/0.12	-2.72/-4.81	-4.09/-4.41	-1.49/-0.92	1.93/-1.06	0.04/-1.35	-1.32/-1.65	1.23/-0.81	2.68/-4.36	1.02/-4.27	-3.72/-0.48	-0.64/0.85	-5.95/-4.67	-2.75/-2.71	-0.74/-0.10	-8.63/-2.59	1.82/-1.85	-4.11/-0.40	0.53/0.93	0.26/-0.91	0.54/-3.20
Θ(97.5°)	-5.70/-0.20	3.11/-0.15	-5.97/-11.17	-2.14/-2.62	-5.69/-5.34	-3.56/-3.17	-1.98/-0.56	-0.13/-0.17	-1.52/-4.20	-1.71/-0.52	1.59/-2.38	-0.63/-4.12	-2.27/-0.55	-2.96/-2.97	-1.19/-4.53	-3.73/-4.90	-2.15/-2.11	-5.69/-1.31	0.65/-2.77	-5.29/-4.14	-1.13/-0.17	-1.34/-3.08	-2.20/-8.58	
Θ(105°)	-7.93/-1.16	0.54/-1.99	-8.85/-12.89	-4.93/-4.15	-9.45/-7.66	-7.58/-4.85	-2.98/-2.62	-1.69/-2.76	-2.09/-5.28	-3.48/-1.58	-7.04/-3.33	-0.23/-1.02	-1.80/-3.86	-6.33/-3.21	-4.26/-6.36	-10.16/-4.77	-4.14/-5.46	-3.07/-1.39	-2.97/-0.68	0.47/-2.99	-2.24/-1.81	-3.18/-5.32	-5.55/-1.16	
Θ(112.5°)	-14.73/-5.66	-3.03/-3.33	-11.34/-13.50	-6.49/-3.42	-7.21/-11.86	-9.15/-11.57	-7.73/-2.29	-1.65/-5.56	-3.98/-5.41	-7.11/-6.44	-9.67/-4.16	-1.03/-1.33	-4.76/-4.80	-6.36/-3.84	-6.47/-7.83	-9.68/-5.44	-4.06/-4.27	-3.95/-4.05	-4.21/-1.97	-0.21/-3.97	-7.25/-6.68	-2.51/-2.14	-4.58/-7.67	-8.53/-12.14
Θ(120°)	-9.26/-10.47	-5.39/-0.43	-6.22/-13.57	-9.91/-7.78	-6.52/-8.70	-6.84/-7.67	-10.83/-6.51	-3.90/-5.32	-8.82/-8.77	-7.17/-13.77	-7.11/-6.41	-3.44/-5.07	-10.24/-7.60	-10.91/-8.52	-11.24/-15.62	-16.09/-7.17	-5.76/-8.79	-4.47/-4.56	-7.16/-2.53	-15.10/-7.09	-1.52/-2.30	-4.80/-9.36	-12.25/-6.78	
Θ(127.5°)	-13.75/-15.30	-8.77/-5.32	-5.99/-11.66	-10.78/-16.59	-7.20/-11.91	-9.62/-10.59	-11.25/-8.19	-6.07/-6.62	-4.85/-9.50	-12.64/-12.63	-7.13/-7.31	-5.03/-6.13	-7.65/-3.45	-4.53/-5.84	-7.40/-13.35	-11.81/-6.47	-7.11/-13.89	-5.48/-4.88	-6.34/-3.32	-3.36/-7.49	-13.91/-10.81	-3.24/-6.08	-8.81/-7.93	-7.44/-11.48
Θ(135°)	-13.55/-9.25	-9.24/-11.11	-11.28/-9.75	-14.46/-12.75	-9.83/-13.80	-6.66/-10.98	-6.30/-9.73	-4.99/-8.12	-8.31/-10.03	-14.68/-8.48	-9.34/-9.33	-11.65/-5.67	-6.90/-5.17	-8.41/-7.05	-15.00/-13.17	-9.01/-10.55	-8.44/-9.23	-9.41/-6.76	-4.99/-5.35	-6.01/-6.25	-8.29/-12.42	-14.42/-15.16	-12.04/-6.97	-5.67/-11.28
Θ(142.5°)	-13.00/-12.24	-14.82/-10.11	-6.23/-8.93	-14.49/-13.78	-15.57/-13.08	-9.95/-15.19	-9.02/-12.30	-9.53/-8.34	-8.46/-8.55	-8.99/-11.16	-13.19/-10.96	-9.27/-10.11	-15.94/-15.46	-14.44/-9.17	-9.82/-15.32	-12.16/-9.80	-10.54/-8.10	-6.61/-5.88	-5.35/-5.20	-5.28/-6.94	-9.14/-11.22	-15.19/-12.80	-10.80/-10.12	-16.00/-11.56
Θ(150°)	-14.25/-11.02	-9.41/-10.71	-14.02/-13.02	-14.31/-12.92	-14.93/-13.16	-10.32/-9.58	-9.91/-11.47	-8.00/-6.48	-10.03/-12.66	-12.66/-11.34	-10.16/-11.98	-14.75/-15.71	-15.39/-15.48	-14.68/-15.79	-15.81/-15.09	-8.37/-6.61	-16.93/-15.26	-15.23/-9.91	-4.51/-5.89	-10.62/-13.17	-15.60/-13.54	-9.74/-8.51	-10.87/-14.84	
Θ(157.5°)	-6.78/-11.63	-12.53/-13.70	-15.53/-11.87	-11.75/-11.07	-9.36/-5.96	-6.78/-11.59	-9.12/-7.92	-7.10/-10.03	-15.62/-14.17	-11.35/-9.10	-10.68/-7.03	-6.93/-10.87	-11.06/-7.12	-9.77/-15.87	-9.55/-8.92	-7.47/-8.49	-14.09/-13.01	-12.04/-12.90	-9.57/-6.71	-8.45/-15.71	-13.97/-11.61	-13.16/-15.37	-10.19/-5.84	
Θ(165°)	-7.61/-7.95	-10.41/-15.07	-15.52/-12.94	-11.73/-9.92	-9.71/-12.21	-15.53/-11.90	-6.86/-6.40	-5.72/-7.60	-8.02/-9.35	-10.48/-11.23	-9.32/-6.64	-5.63/-6.73	-10.25/-8.66	-8.08/-7.80	-10.11/-10.63	-8.68/-8.49	-8.88/-8.01	-6.55/-4.78	-5.00/-6.93	-9.34/-10.26	-12.34/-12.16	-12.24/-11.81	-9.77/-8.13	-7.51/-8.21
Θ(172.5°)	-13.73/-12.07	-11.06/-10.72	-9.26/-9.66	-13.35/-13.49	-13.18/-14.72	-11.76/-9.82	-11.07/-9.39	-7.72/-6.43	-5.19/-5.15	-5.08/-5.57	-6.11/-8.23	-12.80/-14.40	-10.78/-8.67	-7.98/-7.63	-7.66/-7.78	-8.60/-7.90	-6.45/-5.24	-3.57/-3.73	-4.56/-5.10	-5.03/-5.34	-6.08/-7.71	-8.97/-9.15	-9.47/-11.43	-14.98/-14.36
Θ(180°)	-12.45/-12.46	-12.86/-12.32	-12.22/-11.77	-10.87/-10.20	-10.67/-9.76	-8.46/-8.61	-8.76/-9.28	-8.23/-9.91	-10.96/-10.10	-9.84/-9.10	-9.00/-8.36	-6.87/-6.76	-6.34/-5.89	-5.96/-6.17	-6.26/-6.49	-7.25/-6.50	-6.35/-6.01	-6.20/-5.79	-6.81/-7.90	-8.99/-8.79	-9.27/-9.73	-10.32/-11.17	-14.33/-13.27	
Freq(Hz)	6.475/6.50	Total/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°)	-11.48/-12.13	-12.02/-10.50	-9.82/-9.72	-10.46/-10.54	-9.75/-9.18	-9.99/-9.13	-10.56/-9.62	-11.31/-11.79	-10.99/-11.80	-12.06/-12.50	-12.46/-11.57	-11.68/-12.55	-13.20/-12.99	-13.28/-13.36	-13.30/-13.62	-14.11/-15.28	-13.96/-12.89	-13.06/-14.65	-14.11/-13.34	-14.51/-14.90	-14.52/-13.66	-13.21/-12.04	-11.31/-10.04	-10.29/-10.92
Θ(7.5°)	-12.43/-12.73	-14.82/-15.78	-15.48/-15.54	-14.81/-15.85	-15.08/-13.58	-12.45/-10.84	-10.48/-8.87	-11.07/-9.80	-10.02/-10.81	-12.80/-14.11	-14.55/-12.99	-11.37/-8.76	-6.98/-5.98	-5.50/-5.36	-5.44/-6.20	-6.58/-6.29	-6.94/-7.43	-8.17/-8.80	-8.51/-10.67	-11.34/-12.41	-13.57/-12.74	-13.69/-14.89	-15.89/-14.75	-14.81/-16.35
Θ(15°)	-5.59/-8.39	-10.38/-9.79	-10.03/-10.83	-9.99/-9.11	-8.41/-8.22	-9.53/-8.19	-8.44/-6.71	-5.84/-4.08	-4.23/-3.18	-2.77/-3.74	-4.64/-7.08	-10.92/-12.35	-8.75/-5.48	-4.59/-4.80	-5.19/-5.90	-5.34/-5.02	-4.57/-3.37	-2.72/-2.95	-2.43/-2.84	-3.69/-4.57	-6.63/-7.81	-9.69/-9.66	-7.79/-7.47	-6.88/-6.71
Θ(22.5°)	-5.64/-5.07	-3.91/-4.23	-1.96/-2.33	-3.86/-4.87	-5.82/-5.94	-6.04/-5.01	-4.39/-4.13	-3.83/-3.88	-7.06/-5.46	-3.77/-4.10	-6.22/-8.17	-9.26/-9.32	-10.95/-9.31	-6.93/-5.12	-3.15/-1.61	-1.99/-3.89	-5.91/-4.91	-5.02/-5.06	-4.54/-4.56	-4.10/-4.48	-4.37/-9.42	-6.73/-9.22	-6.61/-6.58	-7.03/-10.18
Θ(30°)	-4.08/-3.87	-1.88/-0.92	-0.08/-0.70	-1.90/-1.71	-2.39/-4.93	-7.23/-5.74	-5.42/-2.46	-2.35/-3.46	-4.31/-4.70	-4.68/-3.12	-1.97/-4.67	-9.48/-7.95	-7.02/-9.95	-14.94/-9.16	-3.05/-1.62	-2.53/-2.03	-0.64/-1.45	-6.00/-15.42	-10.93/-9.65	-15.45/-14.62	-7.99/-7.08	-6.31/-7.44	-15.65/-13.85	-8.72/-9.41
Θ(37.5°)	-0.91/-0.47	1.09/-0.42	2.68/-4.48	-7.49/-3.04	-3.10/-6.86	-8.98/-3.46	-0.79/-0.46	-1.68/-2.18	-1.07/-0.33	-0.23/-0.68	0.80/0.81	-1.09/-3.78	-3.75/-5.57	-5.49/-2.20	0.36/-2.35	-1.67/-1.04	1.07/-0.53	-0.81/-2.15	-3.57/-3.45	-5.82/-4.75	-3.22/-2.38	-1.00/-1.47	-5.46/-5.91	-2.17/-1.83
Θ(45°)	-0.83/-1.20	1.89/0.33	1.93/-2.89	-4.20/-0.29	-2.96/-7.35	-4.04/-1.34	-0.63/-0.51	-0.41/-2.11	-1.43/-0.76	0.58/2.21	1.59/0.79	-1.19/0.41	-0.87/-5.92	-1.78/-3.30	2.25/-1.50	-0.32/-0.92	-0.63/-1.44	-0.59/-0.36	-0.06/-2.05	-3.84/-3.39	-0.91/-1.21	-0.71/-0.19	-1.29/-2.25	0.52/-0.38
Θ(52.5°)	0.02/-1.14	1.33/-3.89	4.65/0.85	4.01/-3.44	-1.53/-1.72	0.24/-1.16	-2.22/0.03	2.24/0.98	1.21/-1.47	-0.31/-0.46	0.82/-2.49	2.77/-1.96	0.55/-1.67	-1.02/-1.83	3.24/0.91	2.64/0.87	1.76/-2.74	1.37/-2.12	0.95/-2.66	-1.52/0.13	0.39/0.59	-1.09/0.91	1.84/-4.64	-0.59/-0.67
Θ(60°)	-0.63/-0.52	0.58/5.21	3.99/-0.42	0.42/0.88	-0.92/-0.47	-0.56/-0.91	-2.59/-1.91	1.15/-0.60	-0.84/-2.19	0.58/-1.63	2.07/-2.82	4.96/-3.21	1.47/-5.94	-0.32/-1.67	2.79/-2.97	3.56/-1.46	2.30/-3.47	4.45/-3.94	-0.02/-2.25	2.06/-3.32	1.48/-2.22	2.33/-2.26	3.62/-1.57	-4.23/-2.13
Θ(67.5°)	-0.74/-0.05	1.51/-5.04	1.06/-1.56	-1.29/-0.16	0.71/0.54	-0.70/-1.22	1.26/-0.06	1.04/-0.97	2.65/-2.74	3.23/-2.44	0.42/-3.78	-0.42/0.85	3.16/-3.69	2.94/-0.74	0.24/-1.34	3.42/0.75	3.42/0.75	-3.17/-1.41	2.13/-1.84	-0.88/-2.58	3.46/-6.60	4.20/-0.63	-4.40/-1.23	
Θ(75°)	-2.56/-0.39	2.98/-3.7	-0.89/-3.86	-2.52/-0.94	1.71/-1.35	-0.81/-1.81	3.24/-1.48	1.47/-2.59	1.83/-3.89	3.98/-3.43	4.51/-1.38	4.22/-4.17</												

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

