



Antenna Composite Gain Test Report

FCC ID	MSQ-RTAX4T00
Equipment	AXE7800 Tri Band WiFi Router, AXE6600 Tri Band WiFi Router
Brand Name	ASUS
Model Name	ET9, ET8, EBM69, AXE7800, AXE6600
Applicant	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou, Taipei City 112, Taiwan
Standard	KDB662911 D03 v01
Sample Received	Dec. 28, 2023
Start Test Date	Jan. 04, 2024
Final Test Date	Jan. 04, 2024

Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



Table of Contents

History of this test report.....	3
1. Operation Mode and Antenna Information	4
2. Table for Multiple Listing	4
3. Table for Components Source Information	4
4. Table for EUT supports functions	5
5. Test Frequency	5
6. Testing Location.....	5
7. Test Facility and Configuration.....	6
8. Reference Calibration	7
9. Test Method	8
10. Measured Values and Calculation of Maximum Gain Positions.....	9
11. Summary of Test Result	11
12. Test Setup	13
13. Test Equipment and Calibration Data	14
14. Test Results	15

History of this test report

[illegible]

1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G 5GAnt1	1	M.gear	C660-510551-A	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G 5GAnt2	2	M.gear	C660-510551-A	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
6G Ant1	1	M.gear	C660-510551-A	Dipole	I-PEX	6GHz UNII 5~8
6G Ant2	2	M.gear	C660-510551-A	Dipole	I-PEX	6GHz UNII 5~8
6G Ant3	3	M.gear	C660-510551-A	Dipole	I-PEX	6GHz UNII 5~8
6G Ant4	4	M.gear	C660-510551-A	Dipole	I-PEX	6GHz UNII 5~8

Note:

2.4GHz and 5GHz Operation Mode (2TX/2RX)

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

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

6GHz Operation Mode (4TX/4RX)

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

6G Ant1~4 could transmit/receive simultaneously.

2. Table for Multiple Listing

The equipment name/model names in the following table are all refer to the identical product.

Equipment Name	Model Name	Description
AXE7800 Tri Band WiFi Router, AXE6600 Tri Band WiFi Router	ET9	All the equipment names / models are identical, the difference equipment names / model served as marketing strategy.
	ET8	
	EBM69	
	AXE7800	
	AXE6600	

Note 1: From the above models, model: ET9 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

3. Table for Components Source Information

EUT	Source	DDR4 (Location: U5)
EUT 1	Main	Brand Name: Samsung
EUT 2	Second	Brand Name: Hynix

Note 1: From the above, EUT 1 was selected as representative EUTs for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.



4. Table for EUT supports functions

Function	Support Type	Supports Band
AP Router	Master	2.4GHz, 5GHz UNII1~3 and 6GHz UNII 5~8
Bridge	Slave without radar detection	2.4GHz, 5GHz UNII1~3
Repeater	Master	2.4GHz, 5GHz UNII1~3
Mesh	Master	2.4GHz or 5GHz UNII1~3 or 6GHz UNII 5~8

Note: The above information was declared by manufacturer.

5. Test Frequency

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

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

6. Testing Location

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	JunJie Hong	23.5-24.5 / 45-55	Jan. 04, 2024

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

7. Test Facility and Configuration

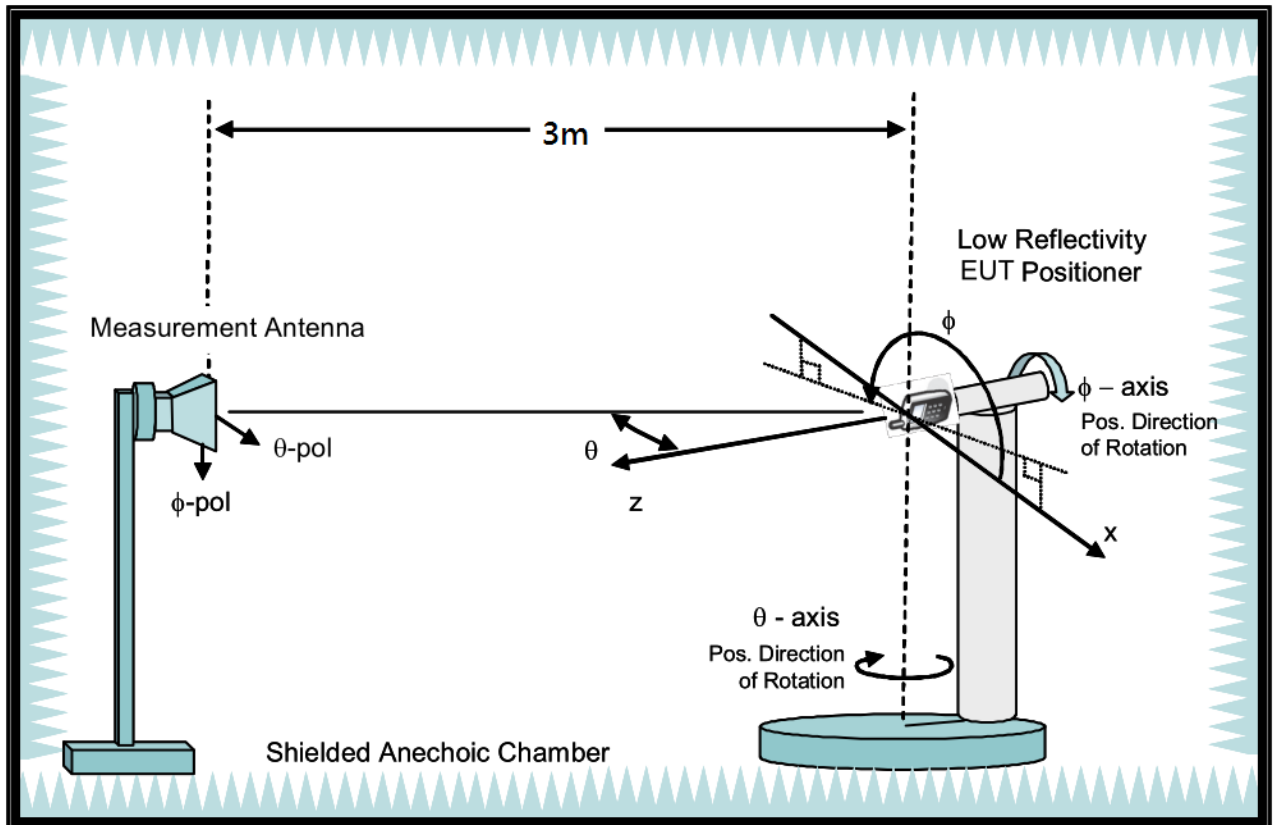
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

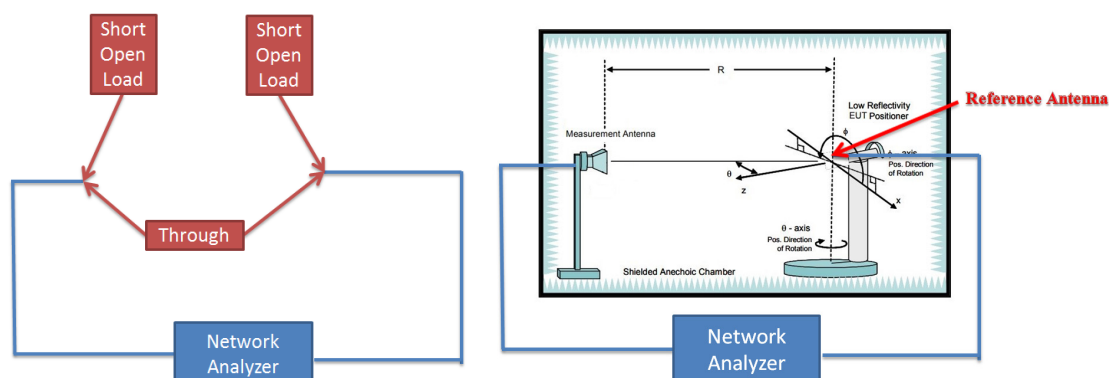
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



8. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.75	-33.64	-32.91	-32.21	-32.45	-32.33	-32.57	-32.94	-32.78	-33.35	-32.91	-33.81	-34.54	-35.64
G(phi) reading (dB)	-33.19	-32.12	-32.48	-32.51	-32.64	-31.68	-32.24	-32.45	-32.45	-32.85	-32.45	-33.62	-34.48	-35.24
Reference gain (dBi)	10	10.4	10.6	12.3	12.5	13.3	13.3	13.2	13.1	13	13.2	12.4	11.8	11.1
Factor(theta) (dB)	43.75	44.04	43.51	44.51	44.95	45.63	45.87	46.14	45.88	46.35	46.11	46.21	46.34	46.74
Factor(phi) (dB)	43.19	42.52	43.08	44.81	45.14	44.98	45.54	45.65	45.55	45.85	45.65	46.02	46.28	46.34

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.

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

9. Test Method

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

DG steps:

1. Each Phi and Theta polarization antenna gain are measured for all test angles.
2. Composite Phi and Theta antenna gain are computed, using formula in KDB662911 D01 d) (i) and e) (ii), for all angles.
3. Composite antenna gain are examined for all angles to determine max gain and Phi/Theta position. Max gain and phi/theta position are listed in section 10 tables.

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

10. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-1.49	5.33	0.86	4.95	4.45
Ant. 2 (dBi)	4.26	-1.78	4.03	1.01	2.03
DG [1SS] (dBi)	4.86	5.49	5.6	6.21	6.33
Polarization	Theta	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	105	82.5	82.5	97.5	97.5
$\Phi(^{\circ})$	75	180	352.5	157.5	157.5

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	-0.6	1.95	-2.21	-1.52
Ant. 2 (dBi)	0.66	-2.59	2.8	2.79
Ant. 3 (dBi)	0.81	-1.46	-0.66	-1.46
Ant. 4 (dBi)	-0.93	-0.06	-0.26	0.13
DG [1SS] (dBi)	6.04	5.65	6.14	6.19
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	82.5	97.5	97.5	90
$\Phi(^{\circ})$	97.5	187.5	292.5	292.5

Note: The DG 1SS max value position is the maximum value of section 14 table DG 1SS Result.

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [10 ^{^(G/20)}]	10 ^{^(-1.49/20)}	10 ^{^(5.33/20)}	10 ^{^(0.86/20)}	10 ^{^(4.95/20)}	10 ^{^(4.45/20)}
Ant. 2 [10 ^{^(G/20)}]	10 ^{^(4.26/20)}	10 ^{^(-1.78/20)}	10 ^{^(4.03/20)}	10 ^{^(1.01/20)}	10 ^{^(2.03/20)}
Ant. 1 [10 ^{^(G/20)}] value	0.842	1.847	1.104	1.768	1.669
Ant. 2 [10 ^{^(G/20)}] value	1.633	0.815	1.59	1.123	1.263
Sum All Antenna [Amax]	2.475	2.662	2.694	2.891	2.932
DG [10*log(Amax ² /Nant)]	4.86	5.49	5.6	6.21	6.33

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [10 ^{^(G/20)}]	10 ^{^(-0.6/20)}	10 ^{^(1.95/20)}	10 ^{^(-2.21/20)}	10 ^{^(-1.52/20)}
Ant. 2 [10 ^{^(G/20)}]	10 ^{^(0.66/20)}	10 ^{^(-2.59/20)}	10 ^{^(2.8/20)}	10 ^{^(2.79/20)}
Ant. 3 [10 ^{^(G/20)}]	10 ^{^(0.81/20)}	10 ^{^(-1.46/20)}	10 ^{^(-0.66/20)}	10 ^{^(-1.46/20)}
Ant. 4 [10 ^{^(G/20)}]	10 ^{^(-0.93/20)}	10 ^{^(-0.06/20)}	10 ^{^(-0.26/20)}	10 ^{^(0.13/20)}
Ant. 1 [10 ^{^(G/20)}] value	0.933	1.252	0.775	0.839
Ant. 2 [10 ^{^(G/20)}] value	1.079	0.742	1.38	1.379
Ant. 3 [10 ^{^(G/20)}] value	1.098	0.845	0.927	0.845
Ant. 4 [10 ^{^(G/20)}] value	0.898	0.993	0.971	1.015
Sum All Antenna [Amax]	4.008	3.832	4.053	4.079
DG [10*log(Amax ² /Nant)]	6.04	5.65	6.14	6.19

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*log(10^{^(G_{ant1}/20)}+10^{^(G_{ant2}/20)}+ +10^{^(G_{ant3}/20)} +10^{^(G_{ant4}/20)}+.....)^2/N_{ant})

11. Summary of Test Result

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.38	5.33	5.53	5.7	4.45
Ant. 2 Max Gain (dBi)	4.26	3.85	4.03	3.88	3.16
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/97.5/225	Theta/82.5/180	Theta/90/180	Theta/90/180	Theta/97.5/157.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/105/75	Theta/82.5/352.5	Theta/82.5/352.5	Theta/90/352.5	Theta/90/22.5
Max Gain (dBi)	4.26	5.33	5.53	5.7	4.45
DG [1SS] (dBi)	4.86	5.49	5.6	6.21	6.33
DG [2SS] (dBi)	4.26	5.33	5.53	5.7	4.45

Note:

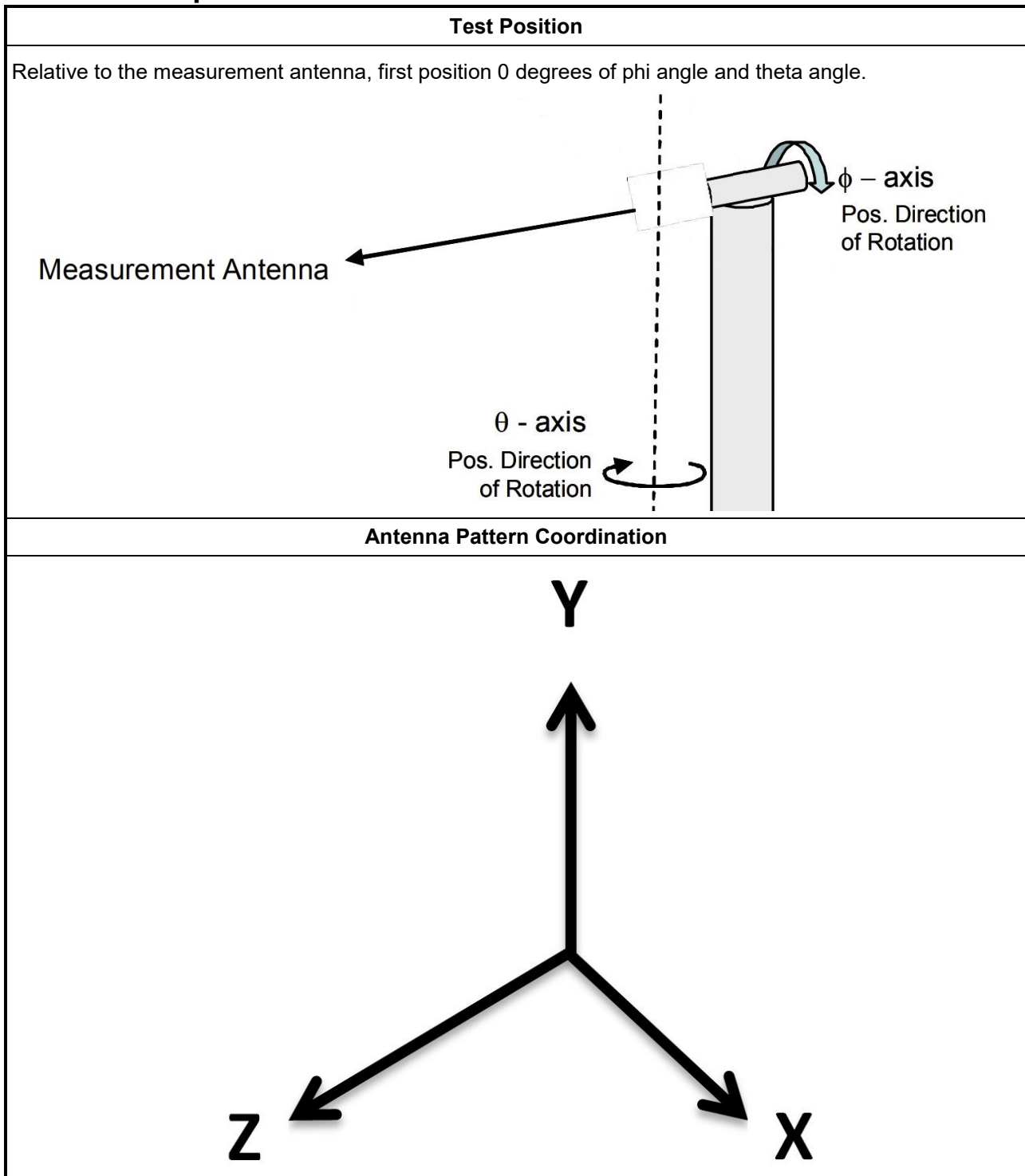
1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01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

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.14	3.66	3.92	4.79
Ant. 2 Max Gain (dBi)	5.2	5.2	5.91	5.81
Ant. 3 Max Gain (dBi)	4.96	3.16	4.67	5.52
Ant. 4 Max Gain (dBi)	3.14	2.67	2.29	4.15
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/52.5/7.5	Theta/45/15	Theta/45/30	Theta/135/195
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/142.5/292.5	Theta/135/292.5	Theta/142.5/300	Theta/135/292.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/52.5/187.5	Theta/52.5/187.5	Theta/60/187.5	Theta/60/195
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/150/82.5	Theta/60/225	Theta/112.5/97.5	Theta/157.5/105
Max Gain (dBi)	5.2	5.2	5.91	5.81
DG [1SS] (dBi)	6.04	5.65	6.14	6.19
DG [2SS] (dBi)	5.2	5.2	5.91	5.81
DG [4SS] (dBi)	5.2	5.2	5.91	5.81

Note:

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

12. Test Setup



Note:

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

**13. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1543	1GHz~18GHz	May 11, 2023	May 10, 2024
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Jul. 28, 2023	Jul. 27, 2024
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



14. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz, 5GHz UNII 1 ~ UNII 3.....	Page 16
Appendix B – Radiated Composite Gain of 6GHz UNII 5 ~ UNII 8.....	Page 25
Appendix C – Antenna Pattern of 2.4GHz, 5GHz UNII 1 ~ UNII 3.....	Page 36
Appendix D – Antenna Pattern of 6GHz UNII 5 ~ UNII 8.....	Page 40
Appendix E – Test Photos.....	Page 46



-

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.38	5.33	5.53	5.7	4.45
Ant. 2 Max Gain (dBi)	4.26	3.85	4.03	3.88	3.16
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/97.5/225	Theta/82.5/180	Theta/90/180	Theta/90/180	Theta/97.5/157.5
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/105/75	Theta/82.5/352.5	Theta/82.5/352.5	Theta/90/352.5	Theta/90/22.5
Max Gain (dBi)	4.26	5.33	5.53	5.7	4.45
DG [1SS] (dBi)	4.86	5.49	5.6	6.21	6.33
DG [2SS] (dBi)	4.26	5.33	5.53	5.7	4.45



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

DG 1SS Result

Freq(Hz)	2.450/Pol.	Phi-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+		
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.63/-3.03	-2.54/-2.18	-1.87/-1.62	-1.57/-1.55	-1.58/-1.65	-1.76/-1.9	-2.14/-2.38	-2.76/-32.7	-3.9/-4.4	-4.88/-5.28	-5.65/-5.88	-5.84/-5.4	-4.66/-3.85	-3.07/-2.4	-1.82/-1.36	-1.1/-1.05	-1.11/-1.22	-1.41/-1.76	-2.31/-2.92	-3.53/-4.1	-4.58/-4.96	-5.3/-5.66	-5.89/-5.72	-5/-4.23
Θ(7.5°)	-4.55/-2.67	-2.06/-1.16	-1.2/-0.92	-0.79/-0.74	-0.73/-0.75	-0.84/-1.03	-1.26/-1.6	-2.04/-2.51	-2.94/-3.33	-3.61/-3.97	-4.35/-4.78	-5.16/-5.18	-4.71/-4.24	-3.44/-2.89	-2.43/-2.11	-2/-2.03	-2.11/-2.22	-2.42/-2.85	-3.51/-4.9	-4.88/-5.42	-5.92/-6.32	-7.17/-7.69	-7.33/-6.67	-5.27/-4.22
Θ(15°)	-3.6/-2.55	-1.77/-1.17	-0.65/-0.3	-0.11/-0.01	0.04/0.05	-0.01/-0.2	-0.53/-1.01	-1.59/-2.13	-2.63/-3.04	-3.35/-3.66	-4.08/-4.66	-5.4/-5.79	-5.55/-5.19	-4.74/-4.23	-3.75/-3.35	-3.18/-3.11	-3.04/-3.04	-3.21/-3.69	-4.44/-5.27	-6.23/-7.21	-8.09/-9	-9.94/-9.65	-9.24/-8.16	-6.24/-4.59
Θ(22.5°)	-4.43/-3.16	-2.01/-1.13	-0.5/-0.02	0.26/0.45	0.59/0.64	0.55/0.21	-0.49/-1.34	-2.33/-3.18	-3.92/-4.38	-4.68/-5	-5.54/-5.97	-6.18/-6.56	-7.07/-7	-6.81/-6.36	-5.72/-5.06	-4.53/-4.11	-3.8/-3.56	-3.55/-3.83	-4.31/-5.01	-5.89/-6.92	-8.06/-8.51	-8.34/-8.43	-8.57/-7.73	-6.62/-5.28
Θ(30°)	-5.82/-4.27	-2.78/-1.53	-0.6/0.01	0.42/0.72	0.92/1.01	0.80/29	-0.66/-1.99	-3.65/-5.21	-6.26/-6.7	-6.9/-7.35	-7.31/-7.5	-7.28/-7.58	-8.19/-8.88	-9.43/-9.64	-9.07/-8.07	-7.03/-6.17	-5.4/-4.78	-4.31/-4.15	-4.34/-4.76	-5.48/-6.46	-6.75/-6.51	-6.58/-6.45	-6.51/-6.85	-6.96/-6.41
Θ(37.5°)	-8.05/-6.16	-4.36/-2.97	-1.83/-0.93	-0.19/0.46	0.91/0.7	-0.88/-2.74	-5.41/-8	-6.99/-8.43	-7.7/-7.01	-6.41/-6.38	-6.8/-7.69	-8.72/-9.14	-9.65/-9.98	-9.74/-10.21	-9.85/-8.68	-7.46/-6.34	-5.5/-5.03	-4.98/-5.31	-6.02/-6.35	-6.07/-5.67	-5.11/-5.17	-5.94/-7.34	-8.74/-8.82	
Θ(45°)	-9.78/-7.83	-6.09/-4.44	-3.26/-2.22	-1.02/-0.04	0.67/1.03	1.01/0.53	-0.6/-2.6	-5.58/-7.72	-7.52/-6.5	-5.67/-5.58	-5.77/-6.26	-6.92/-7.39	-7.83/-8.54	-8.56/-8.66	-9.01/-9.66	-10.21/-10.1	-9.19/-8.07	-7.13/-6.54	-6.25/-6.28	-6.58/-5.78	-4.86/-3.82	-3.56/-3.95	-5/-6.7	-8.51/-10.11
Θ(52.5°)	-8.48/-7.32	-6.15/-5.24	-4.03/-3.08	-2.15/-1.16	-0.15/0.56	0.85/0.56	-0.61/-2.76	-5.29/-5.55	-4.65/-4.08	-4.38/-5.05	-5.88/-6.57	-7.25/-8.05	-8.54/-9.04	-9.38/-9.54	-10.04/-10.91	-12.01/-11.55	-10.85/-10.32	-9.98/-9.92	-9.21/-9.04	-7.58/-6.73	-4.9/-4.06	-3.98/-4.51	-5.55/-6.68	-7.82/-8.07
Θ(60°)	-7.16/-5.74	-4.19/-3.33	-2.61/-2.18	-1.9/-1.95	-1.5/-0.73	-0.27/-0.58	-2.05/-4.65	-5.77/-4.47	-3.41/-3.06	-3.34/-3.87	-4.56/-5.07	-5.59/-6.27	-6.88/-7.16	-6.99/-6.64	-6.53/-6.84	-7.58/-8.36	-8.79/-8.72	-8.82/-6.84	-8.19/-9.99	-9.48/-9.99	-8.19/-6.69	-5.46/-5.31	-6.02/-7.53	-9.17/-9.95
Θ(67.5°)	-8.73/-6.25	-4.55/-3.1	-1.82/-1.01	-0.93/-1.34	-1.77/-1.36	-0.96/-1.4	-3.28/-6.46	-5.28/-3.18	-2.15/-2.04	-2.43/-2.95	-3.51/-4.1	-4.74/-5.24	-5.45/-5.28	-4.81/-4.52	-4.79/-5.75	-6.99/-7.88	-8.02/-7.71	-7.28/-7.08	-7.48/-6.67	-5.51/-3.76	-3.04/-3.07	-3.67/-4.85	-6.99/-9.81	-12.06/-11.08
Θ(75°)	-8.18/-7.46	-5.75/-4.52	-3.21/-1.91	-1.39/-1.71	-2.3/-2	-1.59/-1.95	-3.65/-5.58	-4.09/-2.38	-1.4/-1.27	-1.73/-2.4	-3.23/-4.3	-5.39/-6.34	-6.75/-6.51	-6.03/-6.03	-6.87/-8.41	-10.59/-13	-11.75/-11.22	-11.63/-9.79	-8.69/-6.72	-4.56/-3.17	-2.65/-2.83	-3.56/-4.64	-6.02/-7.21	-7.72/-8.08
Θ(82.5°)	-5.88/-5.67	-5.27/-4.46	-3.64/-2.52	-1.94/-2.13	-3.07/-3.12	-3.17/-4.27	-6.83/-5.66	-3.03/-1.13	-0.12/-0.02	-0.59/-1.58	-2.97/-4.69	-6.69/-8.31	-9.1/-8.93	-8.63/-8.87	-9.17/-9.39	-9.99/-10.96	-11.57/-12.19	-13.31/-11.91	-9.04/-6.78	-3.89/-2.46	-1.86/-1.93	-2.83/-4.65	-7.34/-8.34	-7.15/-6.14
Θ(90°)	-5.57/-5.1	-4.73/-3.91	-3.38/-2.26	-1.83/-2.3	-3.12/-3.74	-3.95/-5.83	-10.08/-7.48	-3.48/-1.27	-0.26/-0.23	-0.85/-1.93	-3.5/-5.42	-7.21/-8.53	-8.94/-8.73	-8.08/-7.14	-6.18/-6.36	-6.25/-11.32	-13.73/-13.94	-15.81/-15.37	-12.84/-7.2	-4.18/-2.7	-1.95/-1.65	-2.11/-3.64	-6.4/-8.62	-7.8/-6.35
Θ(97.5°)	-5.81/-4.77	-3.69/-2.99	-2.12/-1.22	-1/-2.02	-4.06/-3.58	-6.18/-8.41	-12.19/-7.47	-3.43/-1.44	-0.63/-0.67	-1.36/-2.51	-4/-5.4	-6.86/-7.74	-7.69/-7.2	-6.46/-5.62	-5.38/-4.67	-8.86/-11.39	-13.04/-12.95	-13.11/-11.02	-8.49/-5.31	-3.9/-3.68	-3.76/-3.76	-4.1/-5.19	-7.12/-8.35	-7.85/-6.78
Θ(105°)	-7.57/-5.63	-4.49/-3.43	-2.25/-1.16	-0.77/-1.68	-4.06/-6.66	-8.61/-11.18	-14.37/-9.1	-4.51/-1.83	-0.37/0.03	-0.28/-1.02	-1.99/-3.24	-4.82/-6.45	-7.1/-6.7	-6/-5.52	-5.64/-6.16	-7.2/-9.16	-12.9/-13.38	-13.07/-10.38	-7.68/-4.25	-4.8/-5.52	-6.32/-7.48	-8.34/-8.76	-8.39/-7.37	
Θ(112.5°)	-8.75/-7.46	-5.42/-3.68	-2.68/-2.12	-1.9/-2.64	-5.07/-8.51	-12.98/-14.63	-11.24/-8.29	-4.66/-1.63	0.06/0.55	0.15/-0.78	-1.95/-3.43	-5.29/-7.02	-7.07/-6.52	-6.42/-5.92	-4.46/-3.23	-3.1/-3.91	-5.43/-7.69	-10.9/-11.31	-8.21/-5.15	-4.3/-5.33	-6.12/-7.03	-7.88/-6.77	-9.88/-10.9	-10.29/-9.45
Θ(120°)	-9.86/-7.89	-5.4/-3.69	-3.03/-3.13	-3.54/-4.38	-5.57/-8.07	-10.23/-11.1	-9.15/-8.02	-5.62/-2.2	-0.35/-0.22	-0.14/-1.12	-2.39/-3.78	-5.19/-6.4	-6.19/-6.6	-6.49/-4.52	-2.41/-1.54	-2.03/-3.32	-5.21/-8.1	-10.35/-7.6	-1.99/-2.56	-3.92/-5.38	-6.43/-7.23	-8.21/-9.35	-10.31/-10.56	
Θ(127.5°)	-8.23/-7.26	-5.41/-3.69	-2.89/-3.31	-4.79/-6.75	-8.22/-10.07	-11.53/-11.31	-10.78/-8.88	-6.09/-3.12	-1.37/-0.75	-1.05/-1.92	-2.91/-3.63	-4.21/-4.97	-6.04/-6.88	-5.41/-3.08	-4.55/-6.73	-9.99/-12.63	-8.89/-5.64	-6.62/-1.84	-1.12/-1.5	-2.83/-3.95	-4.99/-5.56	-6.1/-6.7	-7.41/-8.2	
Θ(135°)	-5.81/-5.56	-4.1/-2.47	-1.58/-1.8	-3.14/-5.59	-8.16/-10.83	-13.14/-13.09	-11.94/-9.99	-7.36/-5.12	-3.84/-3.63	-4.05/-4.51	-4.54/-4.46	-4.83/-5.9	-7.14/-6.03	-3.21/-1.6	-1.44/-2.53	-4.32/-6.39	-8.79/-10.15	-7.43/-4.61	-3.08/-1.93	-1.22/-1.35	-2.15/-3.28	-4.26/-4.81	-4.95/-4.87	-4.85/-5.07
Θ(142.5°)	-4.01/-3.87	-3.14/-2.07	-1.34/-1.37	-2.21/-3.69	-5.87/-7.57	-9.32/-10.36	-10.1/-8.6	-6.19/-4.48	-3.7/-3.79	-4.34/-4.75	-4.81/-4.86	-5.26/-6.09	-5.93/-3.77	-2.13/-1.62	-2.06/-3.4	-4.53/-6.31	-7.72/-8.3	-8.62/-4.59	-3.12/-2.09	-1.55/-1.6	-2.21/-3.22	-4.34/-5.37	-5.78/-5.63	-4.22/-3.86
Θ(150°)	-3.39/-4.01	-4.63/-4.12	-1.42/-1.23	-1.63/-2.65	-3.99/-5.46	-6.96/-8.61	-9.99/-9.89	-13.26/-12.23	-11.23/-4.72	-3.94/-3.88	-4.99/-4.51	-3.25/-1.97	-1.09/-0.79	-1.04/-1.69	-2.66/-3.89	-5.11/-6.48	-6.89/-5.86	-4.73/-3.86	-3.54/-3.82	-4.75/-4.96	-7.05/-7.46	-5.89/-6.19	-8.89/-8.94	
Θ(157.5°)	-4.08/-3.58	-3.04/-2.44	-2.42/-1.1	-11.33/-12.37	-13.63/-14.29	-14.06/-14.18	-14.29/-13.51	-14.05/-14.46	-15.74/-9.88	-8.36/-7.24	-6.61/-5.23	-3.86/-2.55	-1.47/-0.73	-0.36/-0.39	-0.84/-1.58	-2.47/-3.47	-5.12/-7.2	-6.63/-8.33	-7.44/-6.87	-6.98/-7.88	-9.14/-9.26	-8.66/-7.82	-7.17/-6.35	-5.41/-4.61
Θ(165°)	-5.26/-5	-4.74/-4.35	-4.01/-3.99	-4.35/-3.15	-6.23/-15.98	-15.32/-15.9	-14.71/-15.58	-15.32/-15.9	-15.97/-15.72	-16.03/-14.97	-14.13/-13.21	-12.23/-11.35	-10.61/-10.35	-10.22/-10.17	-2.12/-2.41	-3.05/-3.94	-4.98/-6.1	-8.51/-8.05	-12.18/-11.81	-11.01/-10.77	-11.35/-12.82	-13.34/-13.44	-11.73/-10.77	-8.9/-7.94
Θ(172.5°)	-15.21/-14.96	-14.56/-15.65	-15.38/-14.49	-15.46/-15.54	-15.18/-15.27	-15.39/-14.57	-15.65/-15.08	-15.49/-15.22	-14.41/-12.97	-11.92/-11.2	-10.61/-10.01	-10.14/-10.45	-8.65/-6.35	-7.14/-8.12	-9.22/-10.21	-11.13/-12.06	-13.06/-13.64	-13.58/-12.88	-12.67/-13.53	-13.64/-15.16	-13.13/-14.15	-13.71/-11.49	-10.51/-9.14	-8.25/-8.47
Θ(180°)	-15.44/-14.62	-13.96/-13.72	-14.21/-13.98	-14.61/-13.96	-14.31/-15.42	-15.15/-16.05	-15.01/-15.71	-15.13/-15.92	-15.01/-14.32	-13.26/-12.86	-12.35/-12.14	-12.34/-12.59	-13.08/-13.59	-13.68/-12.13	-11.19/-10.57	-10.15/-10.22	-10.48/-10.9	-11.82/-12.54	-13.77/-14.23	-14.22/-14.09	-13.42/-12.42	-12.08/-11.94	-11.74/-11.09	-11.26/-10.95
Freq(Hz)	2.450/Pol.	Theta-	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.47/-4.89	-5.27/-4.54	-5.73/-5.88	-6.08/-6.25	-6.41/-6.49	-6.52/-6.33	-5.83/-5.12	-4.43/-3.83	-3.31/-2.94	-2.72/-2.59	-2.56/-2.5	-2.5/-2.63	-2.91/-3.38	-4.06/-4.86	-5.61/-6.24	-6.78/-7.14	-7.23/-6.99	-6.62/-6.26	-5.68/-4.93	-4.33/-3.85	-3.59/-3.48	-3.48/-3.6	-3.78/-3.91	-4.11/-4.39
Θ(7.5°)	-3.33/-3.93	-4.36/-4.69	-4.93/-5.09	-5.29/-5.5	-5.69/-5.64	-6.25/-6.5	-6.3/-7.2	-5.03/-4.46	-3.95/-3.68	-3.63/-3.8	-4.05/-4.35	-4.71/-5.2	-5.78/-6.56	-7.35/-7.88	-8.06/-8.15	-8.12/-9.37	-7.61/-6.95	-6.16/-5.42	-4.74/-4.09	-3.56/-3.13	-2.86/-2.69	-2.61/-2.64	-2.71/-2.84	-2.99/-3.22
Θ(15°)	-3.39/-4.01	-4.63/-4.12	-5.4/-5.49	-5.52/-5.42	-5.39/-5.35	-5.36/-5.47	-5.43/-5.39	-5.66/-5.67	-5.47/-5.47	-5.74/-6.37	-7.25/-8.4	-9.65/-10.76	-11.07/-11.38	-11.34/-10.81	-9.09/-6.3	-7.09/-6.3	-5.5/-4.85	-4.31/-3.9	-3.52/-3.22	-2.91/-2.66	-2.47/-2.36	-2.3/-2.34	-2.32/-2.88	
Θ(22.5°)	-2.66/-3.42	-4.5/-5.39	-5.98/-6.15	6/-5.66	-5.25/-4.81	-4.39/-4.24	-4.41/-4.92	-5.78/-6.3	-7.27/-7.99	-9.07/-10.37	-11.6/-13.26	-12.74/-11.95	-10.19/-8.43	-7.34/-6.76	-6.5/-6.35	-6.24/-6.01	-5.78/-5.44	-5.07/-4.66	-4.3/-3.97	-3.68/-3.42	-3.18/-2.97	-2.69/-2.4	-2.13/-1.94	-1.92/-2.19
Θ(30°)	-2.35/-3.02	-4.09/-4.58	-5.78/-5.64	-5.15/-4.58	-4.16/-3.55	-3.05/-2.82	-2.98/-3.59	-4.58/-5.84	-7.37/-8.85	-9.88/-10.01	-9.52/-8.56	-7.44/-6.13	-4.73/-5.32	-2.69/-3.28	-2.42/-2.73	-3.18/-3.68	-4.16/-4.53	-4.65/-4.34	-3.66/-3.31	-2.55/-4.23	-2.55/-2.83	-3.04/-3.02	-2.76/-2.32	-2.04/-2.05
Θ(37.5°)	-3.59/-4.07	-4.92/-5.72	-5.57/-4.69	-3.39/-3.37	-2.94/-2.39	-1.97/-1.87	-2.19/-2.9	-4.18/-5.95	-8.44/-10.57	-9.96/-8.05	-6.38/-4.98	-3.73/-2.54	-1.47/-0.59	-0.08/0.04	-0.22/-0.78	-1.66/-2.61	-3.62/-4.36	-4.49/-3.76	-2.73/-1.89	-1.46/-1.48	-3.29/-3.92	-4.15/-3.98	-4.53/-3.47	
Θ(45°)	-6.75/-7.14	-7.65/-6.44	-4.37/-2.85	-1.99/-1.54	-1.14/-0.69	-0.35/-0.34	-0.73/-1.53																	



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

Θ(22.5°)	-6.99/-7.38	-7.76/-8.67	-9.37/-9.12	-8.68/-8.77	-8.76/-9.38	-9.94/-7.41	-4.29/-3.2	-4.06/-6.1	-9.72/-13.64	-12.92/-9.98	-7.65/-6.38	-5.14/-4.21	-4.19/-4.47	-4.77/-5	-4.88/-5.09	-6.95/-9.66	-12.76/-12.63	-11.76/-10.83	-9.98/-9.17	-8.24/-7.32	-7.12/-7.26	-6.94/-6.28	-7.16/-8.8	-8.58/-7.12
Θ(30°)	-13.32/-12.45	-12.73/-11.1	-9.89/-8.88	-8.56/-8.51	-7.85/-8.45	-9.8/-8.06	-5.58/-5.07	-5.98/-8.03	-10.97/-11.49	-9.88/-9.43	-8.22/-7.19	-6.5/-6.05	-5.7/-4.99	-4.32/-3.53	-3.02/-3.23	-3.87/-5.02	-7.38/-11.02	-12.58/-10.03	-9.62/-11.37	-11.18/-9.24	-8.72/-8.78	-8.39/-8.63	-9.23/-10.14	-11.59/-12.25
Θ(37.5°)	-13.44/-10.9	-11.14/-6.7	-6.9/-6.15	-6.72/-7.7	-7.66/-8.57	-10.96/-10.55	-7.32/-7.02	-8.02/-11.75	-10.17/-10.54	-11.37/-15.23	-12.73/-11.03	-10.7/-8.02	-7.68/-8.05	-8.9/-8.16	-6.94/-4.58	-4.18/-4.2	-6.38/-10.63	-12.72/-11.87	-13.04/-13.95	-10.81/-9.82	-8.07/-8.97	-10.82/-14.1	-15.04/-14.53	-15.14/-15.31
Θ(45°)	-11.07/-7.95	-8.39/-8.53	-8.1/-7.6	-7.45/-8.93	-11.26/-12	-12.31/-10.4	-9.25/-9.12	-9.99/-8.47	-8.56/-10.61	-9.86/-9.19	-9.48/-10.6	-10.45/-8.7	-8.58/-8.82	-8.87/-9.13	-8.63/-8.37	-8.43/-6.72	-6.51/-7.57	-9.44/-11.83	-14.12/-15.63	-16.03/-11.54	-8.79/-8.23	-8.43/-7.09	-7.03/-9.06	-11.71/-11.55
Θ(52.5°)	-7.79/-9.72	-8.73/-7.01	-6.7/-7.9	-8.52/-8.27	-9.05/-10.79	-11.9/-15.22	-15.49/-15.26	-11.17/-9.21	-11.68/-10.19	-7.66/-8.59	-10.17/-10.98	-7.86/-9.72	-8.67/-8.11	-8.06/-8.38	-9.04/-8.1	-9.72/-11.2	-9.47/-8.15	-8.65/-11.04	-13.12/-11.74	-10.7/-7.52	-5.6/-5.32	-7.13/-8.76	-7.72/-7.16	-7.44/-6.88
Θ(60°)	-4.04/-5.45	-8.23/-11.01	-10.41/-8.78	-10.58/-13.92	-11.45/-11.2	-12.05/-10.91	-11.79/-15.88	-15.27/-15.36	-10.7/-5.9	-6.92/-10.99	-11.07/-7.82	-6.85/-9.45	-11.9/-8.72	-9.41/-9.71	-8.98/-7.56	-5.89/-6.78	-9.87/-11.4	-6.93/-7.81	-7.89/-6.18	-5.96/-8.04	-7.16/-4.97	-4.67/-4.3		
Θ(67.5°)	-8.92/-10.41	-12.79/-15.56	-13.99/-12.51	-9.41/-12.87	-14.94/-9.02	-7.39/-9.16	-13.21/-12.74	-14.22/-14.39	-10.53/-8.06	-10.85/-11.56	-9.56/-9.31	-11.17/-12.61	-11.45/-10.18	-9.42/-9.11	-8.66/-6.69	-7.13/-10.68	-13.19/-11.04	-9.58/-15.05	-7.06/-4.8	-5.62/-7.84	-7.28/-6.18	-7.07/-7.97	-7.2/-4.38	-4.82/-7.2
Θ(75°)	-8.47/-7.21	-7.06/-8.83	-9.19/-10.7	-12.79/-13.78	-14.73/-11.35	-5.82/-3.29	-6/-10.31	-15.31/-15.17	-12.77/-10.01	-11.99/-11.76	-10.25/-9.63	-10.87/-9.13	-8.94/-8.35	-8.36/-7.93	-7.96/-7.05	-6.68/-9.81	-13.51/-12.95	-12.39/-13.61	-9.35/-8.09	-9.66/-8.78	-9.22/-7.96	-8.35/-6.89	-6.26/-6.15	-6.41/-7.7
Θ(82.5°)	-7.85/-6.83	-6.91/-7.2	-6.65/-5.58	-5.75/-8.88	-12.09/-12.33	-6.5/-4.04	-5.78/-8.31	-9.49/-10.83	-11.06/-9.87	-11.05/-11.44	-13.08/-8.87	-7.27/-6.23	-6.51/-8.44	-8.8/-8.84	-9.87/-8.59	-4.98/-7.98	-10.5/-11.97	-11.09/-12.13	-7.02/-7.06	-7.73/-7.96	-8.62/-5.83	-5.26/-7.18	-7.88/-7.24	-6.68/-7.61
Θ(90°)	-7.02/-6.48	-8.75/-11.25	-9.44/-7.51	-7.86/-9.37	-7.41/-8.04	-11.23/-5.91	-7.18/-8.17	-9.91/-11.7	-11.54/-10.46	-11.95/-12.28	-13.24/-10.33	-9.42/-7.29	-6.16/-6.72	-6.82/-6.64	-8.78/-6.61	-7.02/-8.97	-11.05/-11.81	-12.22/-10.7	-11.75/-8.19	-8.07/-9.09	-8.08/-6.66	-5.76/-7.89	-8.57/-7.89	-7.33/-6.71
Θ(97.5°)	-7.4/-5.84	-8.8/-12.53	-11.73/-8.27	-7.75/-8.98	-8.1/-9.2	-8.79/-8.17	-8.04/-8.47	-7.77/-9.36	-11.97/-11.38	-10.27/-12.01	-12.77/-15.28	-13.82/-10.34	-9.27/-8.04	-6.83/-6.66	-8.46/-11.49	-12.4/-9.59	-11.3/-10.91	-13.71/-11.86	-11.86/-8.23	-5.94/-7.38	-7.12/-4.94	-5.6/-9.61	-9.25/-5.98	-4.54/-5.49
Θ(105°)	-9.57/-9.04	-9.59/-15.07	-15.68/-9.39	-7.92/-11.66	-10.11/-11.75	-10.32/-11.81	-15.84/-11.01	-10.98/-10.55	-9.81/-11.46	-12.08/-12.78	-12.14/-11.87	-11.79/-9.88	-9.74/-9.07	-7.07/-6.04	-6.8/-8.84	-10.19/-13.39	-15.7/-14.1	-12.89/-12.3	-14.39/-10.14	-4.71/-4.93	-4.96/-3.89	-6.27/-11.9	-12.04/-11.92	-11.32/-8.26
Θ(112.5°)	-14.11/-14.97	-12.69/-12.93	-14.16/-7.74	-7.15/-14.57	-13.57/-12.89	-15.28/-15.16	-13.46/-14.67	-14.74/-10.74	-8.07/-8.96	-9.58/-10.94	-10.17/-9.83	-12.07/-10.54	-7.57/-6.74	-8.06/-10.21	-10.99/-7.32	-8.85/-14.37	-15.29/-13.53	-12.05/-15.88	-13.04/-9.71	-6.58/-4.43	-6.89/-5.78	-6.3/-10.44	-11.95/-11.3	-12.06/-12.97
Θ(120°)	-12.49/-12.08	-11.09/-10.86	-8.86/-3.98	-2.35/-13.3	-11.76/-13.58	-11.24/-13.86	-15.51/-15.56	-10.87/-10.86	-10.91/-10.84	-9.88/-8.19	-7.54/-7.46	-7.13/-7.91	-6.77/-6.4	-7.49/-8.69	-12.67/-14.88	-11.72/-11.31	-9.5/-11.16	-9.97/-4.56	-6.15/-5.73	-6.51/-7.69	-8.95/-9.74	-13.77/-13.24		
Θ(127.5°)	-8.73/-7.43	-8.6/-10.16	-8.5/-6.4	-5.6/-7.28	-7.46/-10.01	-14.84/-12.03	-11.61/-11.92	-10.03/-10.85	-11.57/-9.51	-8.27/-8.26	-4.87/-6.23	-6.48/-6.85	-3.81/-4.25	-7.12/-10.15	-10.64/-14.72	-11.22/-6.73	-7.08/-9.3	-8.75/-4.88	-7.8/-6.62	-7.4/-6.93	-9.18/-8.71	-9.31/-10.19		
Θ(135°)	-1.8/-1.27	-3.17/-6.59	-5.99/-3.18	-3.28/-5.42	-7.51/-10.83	-13.33/-14.77	-12.97/-12.05	-10.94/-11.17	-12.04/-9.12	-6.41/-5.32	-4.55/-6.68	-5.13/-2.56	-2.77/-4.24	-3.32/-2.62	-3.75/-5.64	-8.47/-14.92	-11.54/-7.66	-8.38/-4.95	-3.4/-7.77	-7.87/-11.73	-10.35/-10.84	-6.62/-7.82	-7.82/-8.42	-3.31/-1.88
Θ(142.5°)	-6.67/-7.5	-6.45/-4.3	-3.76/-4.32	-4.89/-6.03	-7.23/-9.24	-13.19/-11.32	-7.33/-6.55	-7.34/-7.68	-7.73/-9.87	-11.25/-12.18	-10.57/-7.89	-7.81/-8.85	-8.87/-9.22	-9.55/-8.85	-9.77/-4.1	-11.51/-11.5	-9.69/-3.18	-3.08/-6.37	-6.62/-12	-11.03/-10.07	-5.26/-5.22	-5.94/-6.05	-7.41/-6.9	
Θ(150°)	-10.17/-10.68	-9.60/-7.13	-6.03/-5.31	-4.91/-4.66	-4.93/-5.98	-7.36/-8.64	-9.97/-10.59	-13.51/-11.67	-11.04/-11.44	-14.31/-15.19	-13.18/-10.43	-9.99/-10.48	-9.82/-9.71	-11.04/-10.63	-9.04/-9.76	-11.46/-13.95	-15.95/-14.87	-8.03/-4.28	-2.33/-4.28	-6.66/-11.16	-12.58/-11.14	-9.22/-8.02	-7.45/-7.85	-8.82/-10.05
Θ(157.5°)	-6.24/-6.91	-8.37/-8.59	-8.46/-8.92	-9.77/-10.63	-11.36/-11.87	-12.08/-13.33	-14.32/-14.89	-14.27/-14.44	-13.49/-10.6	-10.38/-10.29	-11.18/-11.81	-11.25/-11.8	-11.13/-11.38	-12.74/-14.08	-14.03/-14.35	-13.35/-11.47	-11.25/-13.62	-10.21/-5.76	-4.92/-6.27	-8.3/-10.81	-14.39/-13.53	-12.2/-9.66	-7.74/-6.93	-6.4/-6.22
Θ(165°)	-7.71/-7.75	-7.83/-7.99	-7.83/-7.15	-6.25/-5.28	-4.87/-8.14	-9.81/-12.62	-14.87/-14.96	-14.96/-15.08	-15.13/-14.98	-15.27/-13.94	-10.98/-8.82	-7.64/-7.7	-8.73/-9.88	-10.93/-12.89	-14.61/-14.83	-12.78/-11.01	-8.61/-6.74	-5.1/-4.33	-5.39/-8	-11.26/-13.25	-15.73/-14.61	-14.61/-13.7	-10.1/-8.54	-7.72/-7.56
Θ(172.5°)	-9.93/-10.81	-10.15/-8.67	-7.58/-7.2	-7.75/-8.34	-9.02/-10.7	-10.19/-9.53	-8.71/-8.25	-8.11/-8.23	-8.37/-8.48	-8.21/-7.64	-7.29/-7.51	-8.47/-10.3	-9.49/-7.83	-6.47/-5.61	-4.5/-3.98	-3.91/-4.46	-4.87/-6.23	-5.83/-6.44	-6.77/-7.25	-8.01/-8.14	-7.74/-7.8	-7.51/-7.63		
Θ(180°)	-14.81/-15.84	-15.42/-15.67	-15.63/-15.79	-15.39/-16.11	-13.82/-11.67	-10.47/-9.05	-9.38/-9.39	-9.63/-10.43	-11.17/-11.98	-12.62/-12.63	-13.85/-15	-16.01/-15.49	-15.41/-14.86	-14.93/-12.83	-12.33/-11.52	-10.66/-9.99	-9.14/-8.44	-8.54/-8.46	-8.4/-8.44	-8.41/-8.55	-6.77/-7.99	-7.64/-8.27	-9.16/-9.7	-10.56/-12.65
Freq(Hz)	5.3GPol	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°)	-6.65/-6.45	-6.86/-7.42	-8.4/-8.96	-9.12/-8.97	-8.68/-8.26	-7.46/-7.06	-7/-7.16	-7.28/-6.9	-6.99/-7.24	-7.69/-7.96	-7.73/-7.79	-8/-8.75	-9.17/-9.03	-8.31/-7.66	-7.15/-6.95	-6.9/-7.45	-7.64/-7.47	-7.16/-7.13	-7.35/-7.2	-6.83/-6.49	-6.6/-6.84	-6.81/-6.43	-6.18/-6.3	-6.81/-7
Θ(7.5°)	-7.86/-7.86	-7.86/-7.72	-8.11/-8.56	-9.33/-10.47	-11.02/-10.25	-8.74/-6.76	-6.82/-6.45	-6.36/-6.12	-6.07/-5.8	-5.5/-6.11	-7.23/-7.48	-6.93/-6.78	-7.58/-8.67	-9.12/-8.53	-7.8/-7.08	-6.94/-7.01	-6.75/-6.53	-6.53/-6.87	-7.33/-7.38	-7.32/-7.2	-7.21/-7.48	-8.29/-8.75	-8.73/-8.27	-8.26/-8.29
Θ(15°)	-5.65/-6.18	-6.07/-6.11	-6.32/-6.59	-7.24/-8.25	-8.77/-8.1	-5.46/-6.19	-5.48/-5.65	-6.02/-6.55	-6.75/-7.21	-7.61/-8.95	-9.67/-10.51	-10.12/-11.01	-12.98/-12.4	-11.4/-8.48	-7.67/-5.67	-4.18/-3.54	-3.29/-3.46	-4.18/-4.82	-5.38/-5.97	-6.12/-6.03	-5.68/-5.3	-5.22/-5.05	-4.77/-5.01	
Θ(22.5°)	-6.53/-6.71	-5.53/-4.51	-3.53/-2.72	-2.27/-2.74	-3.5/-4.32	-4.46/-4.33	-3.58/-3.43	-4.12/-5.04	-5.36/-4.65	-4.18/-4.06	-4.41/-5.3	-6.56/-7.32	-7.45/-7.27	-8.02/-8.74	-7.58/-6.64	-6.25/-5.65	-4.46/-3.21	-2.29/-1.86	-2.2/-2.88	-3.57/-4.11	-4.32/-4.1	-3.49/-3.04	-3.5/-4.51	-5.06/-5
Θ(30°)	-1.47/-1.94	-3.47/-3.86	-3.25/-2.64	-1.68/-1.21	-1.48/-2.28	-2.82/-2.34	-1.51/-1.29	-1.39/-1	-0.53/-0.56	-1.39/-2.54	-4.16/-4.97	-5.26/-5.16	-5.88/-7.7	-9.11/-8.75	-7.22/-5.43	-4.1/-3.77	-3.07/-2.05	-1.23/-0.7	-0.46/-0.7	-1.05/-1.37	-1.96/-2.55	-2.36/-1.7	-1.99/-2.63	-2.82/-2.13
Θ(37.5°)	0.680/3.1	0.470/0.8	-0.84/-0.92	-1.32/-0.88	-0.75/-1.14	-1.09/-0.35	0.11/-0.7	-0.43/-0.34	-0.01/-0.05	-0.65/-2.25	-4.54/-6.28	-5.99/-4.7	-5.13/-7.18	-7.35/-6.27	-6.49/-6.5	-4.56/-2.57	-1.13/-0.48	0.08/1.25	2.13/1.89	0.890/2.4	-0.05/-1.11	-2.54/-2.73	-1.54/-0.72	0.64/-0.48
Θ(45°)	1.91/2.62	2.42/0.6	-1.25/-1.22	-1.69/-2.74	-3.22/-2.99	-1.47/-0.03	0.86/0.7	0.69/0.9	0.55/-0.05	-0.59/-0.97	-1.57/-2.44	-2.18/-1.88	-2.16/-2.72	-3.26/-3.5	-4.36/-6.25	-6.9/-3.8	-1.140/28	1.32/2.31	2.52/1.89	1.010/48	0.720/46	-0.19/-0.16	0.49/0.84	1.07/1.71
Θ(52.5°)	1.21/0.76	1.09/1.01	-0.18/-0.62	-0.41/-1.36	-3.02/-3.9	-2.13/-0.36	0.62/1.05	1.56/1.4	0.41/-0.48	-1.53/-1.78	-2.71/-3.25	-2.73/-3.3	-3.92/-2.85	-2.15/-1.57	-1.71/-3.25	-5.26/-3.31	-1.09/-0	0.741/7.9	2.69/2.74	0.99/-0.77	0.23/-3.7	1.49/-2.7	0.930/25	0.56/-4.3
Θ(60°)	1.61/1.79	2.28/2.58	1.940/55	-0.39/-0.62	-1.2/-2.22	-3.91/-3.47	-0.540/74	1.240/96	0.17/-0.13	-0.42/-1.49	-2.84/-2.41	-0.92/-0.84	-0.94/-0.47	-0.88/-0.81	-1.45/-2.27	-1.84/-1.8	-1.37/-0.95	-1.75/-1.72	0.590/86	-0.88/-2.47	-0.640/3	-0.15/-0.18	0.30/69	1.12/-5.2
Θ(67.5°)	2.65/2.86	2.84/2.39	1.220/2.02	0.27/0.1	0.490/7.2	-0.27/-0.05	-2.76/-0.59	0.170/0.7	0.21/-0.1	-1.54/-3.47	-3.45/-2.7	-0.87/-0.95	-0.77/-0.22	-0.020/65	0.730/15	-0.85/-0.24	0.010/73	-0.73/-2.38	1.69/-0.88	-2.52/-1.1	-1.89/-1.37	0.810/26	0.688/19	
Θ(75°)	3.14/3.29	3.49/2.47	1.67/0.51	0.99/1.27	1.02/2.13	3.14/2.14	-1.28/-2.3	-1.9/-1.14	-0.260/37	0.46/-0.57	-2.21/-0.6	-0.01/-1.16	0.46/1.29	-0.11/-1.59	-0.57/-1.09	1.79/1.53	1.140/73	1.130/99	1.39/1.9					



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

Θ(75°)	-7.37/-8.75	-10.05/-9.74	-8.58/-8.36	-9.91/-11.31	-15.21/-13.99	-8.44/-9.56	-10.06/-7.59	-8.71/-8.65	-8.1/-7.23	-7.7/-7.85	-6.83/-8.11	-6.11/-6.27	-6.52/-6.39	-7.58/-8.06	-6.26/-4.52	-2.95/-4.49	-10.87/-8.24	-5.47/-6.37	-8.75/-8.23	-6.39/-7.87	-8.78/-8.67	-11.37/-9.07	-7.49/-6.65	-7.15/-6.6
Θ(82.5°)	-10.62/-10.79	-7.58/-7.09	-5.45/-6.4	-9.81/-12.85	-12.09/-15.72	-8.9/-9.35	-9.1/-7.77	-8.37/-8.27	-8.4/-8.53	-9.53/-7.52	-7.08/-8.77	-10.23/-12.37	-8.8/-5.07	-4.77/-6.97	-6.12/-5.11	-4.6/-5.84	-9.07/-7.22	-5.68/-5.85	-7.08/-11.58	-10.35/-11.49	-15.53/-11.17	-11.26/-10.04	-8.61/-7.07	-8.41/-10.26
Θ(90°)	-7.86/-10.77	-9.72/-10.5	-9.25/-7.64	-7.57/-9.79	-13.17/-15.04	-9.73/-7.14	-7.37/-7.44	-7.58/-9.67	-8.9/-8.61	-11.06/-10.31	-8.8/-11.52	-11.78/-8.58	-6/-4.85	-6.19/-6.6	-6.65/-6.1	-3.22/-2.48	-8.68/-10.18	-7.17/-9.02	-6.23/-14.61	-12.07/-10.46	-9.95/-7.52	-6.45/-7.15	-7.05/-7.02	-7.95/-9.03
Θ(97.5°)	-11.4/-10.48	-10.93/-11.16	-8.93/-7.2	-6.29/-8.69	-9.61/-11.16	-13.76/-10.74	-8.72/-6.43	-5.64/-6.84	-6.76/-9.48	-14.17/-13.63	-15.17/-13.35	-10.26/-6.51	-3.96/-3.62	-4.45/-5.01	-8.88/-11.78	-8.45/-7.17	-9.99/-9.31	-6.48/-8.02	-9.63/-12.67	-12.19/-15.73	-13.42/-14.52	-8.99/-8.02	-10.5/-11.54	-10.34/-10.44
Θ(105°)	-14.87/-14.5	-14.79/-12.84	-9.7/-7.08	-6.02/-5.86	-6.74/-6.35	-8.7/-10.51	-8.31/-6.19	-8.79/-7.95	-7.08/-8.7	-10.2/-12.11	-12.44/-11.36	-9.5/-6.66	-4.02/-3.71	-2.69/-3.48	-4.03/-7.58	-11.8/-8.27	-7.1/-10.73	-13.43/-13.74	-13.67/-14.76	-11.34/-11.9	-8.92/-11.62	-9.97/-8.57	-10.44/-10.27	-10.02/-11.33
Θ(112.5°)	-14.04/-15	-11.67/-6.25	-4.9/-6.61	-7.16/-8.12	-8.4/-13.39	-12.49/-11.59	-8.05/-8.4	-9.07/-8.61	-7.72/-7.29	-9.92/-11	-10.94/-9.19	-6.64/-6.86	-6.94/-3.22	-3.46/-5.67	-5.52/-4.51	-3.96/-4.16	-6.6/-10.44	-10.35/-8.84	-12.03/-9.53	-9.75/-9.35	-6.43/-6	-7.71/-8.53	-9.34/-12.52	-13.6/-11.58
Θ(120°)	-13.29/-11.25	-11.21/-9.5	-5.18/-2.28	-2.67/-4.87	-7.01/-13.09	-14/-10.7	-10.6/-9.15	-11.88/-9.75	-11.86/-10.55	-10.92/-9.39	-9.1/-10.24	-9.46/-8.44	-6.06/-6.25	-12.64/-9.87	-9.47/-6.23	-3.44/-4.54	-5.43/-10.22	-13.6/-3.82	-8.56/-7.26	-12.27/-6.08	-5.01/-2.02	-4.06/-5.16	-4.42/-7.51	-9.39/-8.94
Θ(127.5°)	-4.53/-4.32	-3.55/-3.42	-2.14/-2.61	-3.22/-5.77	-7.65/-13.13	-14.99/-11.01	-5.78/-6.13	-8.76/-10.43	-10.69/-9.5	-9.85/-8.5	-7.48/-6.19	-4.89/-8.13	-4.47/-3.86	-5.21/-8.52	-4.74/-3.66	-6.19/-6.95	-5.23/-11.68	-10.93/-3.13	-4.96/-5.92	-11.57/-6.84	-5.55/-4.56	-3.7/-1.97	-2/-1.56	-4.74/-5.14
Θ(135°)	-0.47/-0.87	-2.54/-3.79	-2.59/-0.58	-0.99/-2.03	-5.09/-13.97	-13.49/-10.24	-6.42/-5.05	-5.5/-6.11	-12.66/-14.93	-13.26/-7.3	-4.4/-2.17	-2.65/-2.82	-3.21/-5.17	-5.99/-4.95	-4.91/-5.88	-10.73/-11.1	-7.16/-5.54	-5.11/-0.76	-3.2/-8.33	-9.77/-8.15	-6.24/-0.6	-1.09/-1.08	-0.94/-1.18	-1.01/-0.6
Θ(142.5°)	-3.32/-4.72	-4.39/-4.12	-6.61/-6.39	-4.88/-5.64	-7.84/-9.54	-11.18/-10.59	-7.19/-7.34	-8.94/-10.09	-9.37/-9.82	-6.05/-5.42	-6.11/-6.43	-6.9/-5.94	-5.81/-6.34	-5.34/-6.76	-8.99/-10.97	-7.95/-6.16	-12.1/-10.37	-6.26/-1.93	-3.49/-12.8	-15.44/-6.99	-3.6/-3.65	-2.12/-3.01	-3.12/-4.39	-4.14/-2.7
Θ(150°)	-11.97/-14.4	-11.8/-8.53	-6.67/-6.24	-7.17/-8.04	-8.11/-9.7	-9.93/-11.55	-11.27/-10.59	-12.14/-10.8	-11.16/-8.86	-8.89/-8.56	-8.52/-6.24	-6.86/-7.41	-5.36/-5.88	-8.15/-10.97	-10.7/-11.31	-8.46/-11.22	-10.41/-7.19	-4.83/-2.25	-3.46/-8.09	-7.92/-10.61	-9.82/-8.76	-7.51/-6.1	-5.24/-5.65	-7.9/-10.51
Θ(157.5°)	-5.71/-6.21	-6.99/-6.95	-6.12/-7.06	-6.82/-7.27	-9.4/-11.88	-12.65/-11.79	-12.69/-12.87	-12.92/-12.45	-12.03/-6.82	-7.27/-8.36	-9.13/-8.47	-7.21/-5.78	-5.65/-6.88	-9.29/-11.8	-15.42/-13.48	-8.74/-6.57	-6.31/-7.7	-6.22/-3.76	-2.76/-4.3	-8.08/-11.03	-12.14/-8.46	-7.56/-7.91	-6.48/-5.5	-5.21/-5.78
Θ(165°)	-2.89/-3.53	-3.9/-3.8	-4.62/-5.97	-7.78/-9.25	-10/-9.83	-9.99/-11.2	-12.97/-13.27	-12.22/-11.41	-10.84/-11.17	-11.51/-10.53	-9.72/-9.5	-10.04/-10.74	-12.08/-14.55	-5.18/-5.4	-5.32/-4.59	-4.8/-6.55	-8.16/-7.17	-5.52/-4.19	-4.02/-5.59	-8.11/-10.36	-12.94/-15.19	-11.77/-10.43	-8.01/-6.9	-5.07/-3.5
Θ(172.5°)	-9.85/-11.29	-10.91/-8.83	-7.05/-6.27	-5.73/-5.31	-5.48/-6.01	-6.77/-8.42	-9.84/-12.33	-15.38/-16.01	-15.15/-14.54	-13.23/-12.13	-11.34/-11.86	-11.35/-10.84	-6.1/-6.69	-6.17/-5.3	-4.95/-5.5	-5.75/-4.94	-3.79/-3.19	-3.12/-3.31	-3.87/-5.08	-6.35/-6.96	-7.1/-7.33	-8.26/-9.22	-9.73/-9.46	-8.54/-8.27
Θ(180°)	-15.28/-13.04	-11.44/-10.9	-10.27/-10.26	-10.32/-11.15	-12.61/-14.91	-15.19/-15.89	-13.69/-12.57	-12.25/-11.88	-10.69/-11.01	-11.23/-10.15	-9.31/-8.32	-10.58/-11.74	-13.39/-7	-6.04/-5.22	-4.75/-4.55	-4.97/-5.96	-7.27/-7.31	-7.12/-7.6	-8.03/-8.22	-7.89/-7.3	-7.15/-8.93	-10.7/-11.7	-12.83/-13.56	
Freq(Hz)	5.785GPol.	Theta-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-7.44/-7.24	-5.73/-4.77	-4.12/-3.31	-2.71/-2.08	-1.81/-1.95	-2.02/-1.93	-1.84/-1.78	-1.87/-2.21	-2.83/-2.98	-3.15/-3.6	-4.42/-5.61	-6.3/-6.02	-5.91/-5.83	-4.44/-3.46	-3.07/-2.93	-2.74/-2.37	-1.91/-1.78	-1.83/-1.79	-1.62/-1.72	-1.81/-1.88	-1.9/-2.36	-3.06/-4.07	-5.1/-6.15	
Θ(7.5°)	-4.87/-5.27	-4.69/-3.77	-3.08/-2.82	-2.46/-1.99	-1.75/-1.85	-1.82/-1.96	-2.15/-2.23	-2.07/-1.91	-1.94/-2.6	-3.87/-4.77	-4.8/-5.71	-7.73/-8.69	-8.3/-7.47	-6.52/-5.57	-4.48/-3.45	-2.54/-1.84	-1.43/-1.04	-0.8/-0.5	-0.71/-1.17	-1.61/-2.03	-2.2/-2.5	-2.93/-3.38	-3.93/-4.3	-4.98/-4.97
Θ(15°)	-5.27/-5.61	-5.71/-5.29	-4.72/-4.13	-3.01/-1.78	-1.38/-1.28	-1.39/-1.72	-1.87/-1.83	-1.76/-1.85	-2.39/-3.26	-4.85/-6.82	-8/-7.11	-6.23/-6.06	-5.74/-5.48	-5.65/-5.36	-4.01/-2.76	-1.76/-1.02	-0.67/-0.44	0.01/0.06	-0.33/-1.1	-1.74/-2.01	-2.18/-2.36	-2.76/-3.2	-3.92/-4.29	-4.41/-5.15
Θ(22.5°)	-8.84/-8.76	-7.68/-6.02	-4.44/-3.62	-2.02/-0.66	0.03/0.35	0.12/-0.39	-0.84/-0.78	-1.18/-2.38	-4.34/-5.39	-6.24/-6.91	-6.58/-5.42	-4.39/-3.75	-3.49/-3	-3.25/-4.34	-4.91/-4.24	-2.1/-0.72	-0.29/0.36	0.9/0.96	0.17/-1.07	-1.39/-1.39	-1.79/-2.84	-3.43/-3.65	-4.81/-6.81	-7.75/-8.74
Θ(30°)	-4.53/-3.32	-2.5/-1.64	-0.98/-0.44	-0.13/0.48	1.12/1.83	1.83/2.05	1.74/0.65	-1.1/-2.9	-4.96/-6.96	-6.34/-4.2	-2.59/-1.37	-0.85/-0.67	-0.49/-0.33	-1.22/-3.22	-4.59/-4.2	-2.7/-2.21	-1.5/-0.49	-0.24/-0.8	-0.89/-0.62	-0.98/-2.02	-3.21/-4.19	-4.42/-5.67	-7.52/-6.94	-6.33/-6.52
Θ(37.5°)	-1.38/0.89	1.56/1.44	1.58/2.21	2.65/3.08	3.32/3.14	2.71/2.52	1.93/1.07	-0.03/-1.03	-2.69/-4.24	-3.33/-1.37	-0.12/0.11	0.51/1.49	1.51/0.78	0.16/-0.14	-0.58/-1.47	-4/-4.51	-1.38/0.14	0.81/1.92	2.19/1.57	0.84/-0.04	-1.18/-2.28	-2.9/-4.69	-7.64/-8.07	-6.55/-4.18
Θ(45°)	1.78/3.05	3.39/3.35	2.74/1.95	2.12/4.8	2.71/2.73	2.55/2.57	2.41/2.18	1.93/0.8	-0.71/-1.05	0.08/1.17	1.84/2.34	3.08/3.11	2.08/1.23	1.26/0.14	-1.44/-0.92	-1.13/-0.91	-0.6/-0.19	1.09/2.3	2.34/1.65	0.91/-0.02	-1.68/-3.01	-3.58/-4.16	-4.71/-3.36	-0.41/0.57
Θ(52.5°)	1.53/2.6	2.76/3.14	3.73/4.6	2.47/1.59	1.76/2.59	3.06/3.09	2.43/1.61	0.13/-2.44	-4.61/-3.12	-1.39/0.14	1.41/1.19	1.06/1.19	-0.34/-1.55	-0.97/0.48	0.75/0.25	-0.55/0.33	0.5/0.07	0.57/2.1	2.26/1.92	1.85/0.9	0.55/0.94	1.4/0.86	-0.4/-0.77	0.08/0.66
Θ(60°)	-0.08/-0.53	-2.05/-2.38	-0.05/-1.33	1.64/0.33	0.01/0.92	1/1.84	2.38/2.41	1.86/0.47	-1.73/-2.72	-5.3/-6.62	-4.36/-4.54	-0.85/0.38	0.19/0.6	0.08/-1.55	-2/-0.84	-1.13/-2.39	-2.11/-2.15	0.13/2.17	1.99/1.54	0.86/0.9	1.88/2.28	2.19/2.38	1.41/0.53	-0.67/-0.84
Θ(67.5°)	1.71/2.02	1.98/0.96	-1.9/-1.97	-1.1/-2.32	-3.06/-0.66	0.01/0.59	0.65/1.52	2.09/1.1	0.09/-0.99	-2.97/-2.91	-3.15/0.52	1.88/1.21	1.21/1.92	2.05/1.02	0.34/-0.75	-2.87/-3.52	-3.74/-3.88	-2.8/-1.87	-1.99/-1.8	-2.07/-0.84	1.94/1.88	0.52/-0.5	-0.38/1.47	2.23/1.89
Θ(75°)	3.37/3.35	3.76/3.72	1.14/0.52	1.59/0.14	-0.4/0.47	0.16/-0.48	-1.75/-0.37	1.1/1.1	0.2/-0.7	-3.26/-3.34	-2.44/0.64	2.74/3.07	2.24/1.46	1.54/1.43	1.63/1.69	1.12/-0.95	0.19/0.08	-2.71/-2.95	-2.15/-1.3	0.51/-1.3	-1.81/-0.19	-1.5/-0.19	1.41/3.74	4.28/3.26
Θ(82.5°)	3.56/3.73	4.6/-5.4	4.08/1.69	3/3.06	2.62/2.61	1.87/1.62	0.14/-1	0.64/0.14	0.31/-0.57	-2.01/-2.09	0.18/3.69	5.01/3.32	2.85/2.58	1.52/0.63	1.7/3.44	3.76/2.29	2.18/1.98	1.45/0.44	0.09/0.79	3.24/1.9	-1.13/1.35	1.14/0.7	2.05/3.98	5.09/4.48
Θ(90°)	3.79/4.47	4.5/-3.9	4.81/3.76	3.74/3.14	2.08/2.4	3.08/3.28	1.95/0.06	0.72/-0.47	-0.98/0.61	1.31/-2.11	-0.36/3.99	5.05/4.17	4.61/2.37	2.32/7.6	2.79/3.23	5.03/3.99	2.73/1.91	1.65/1.51	-0.44/1.74	2.09/0.72	-0.33/-0.27	-0.72/-0.92	2.11/4.75	6.13/6.07
Θ(97.5°)	1.64/2.25	3.58/3.64	3.33/3.3	4.29/3.81	2.25/1.88	1.42/1.93	1.53/-0.23	0.09/-2.25	-4.13/-1.66	1.33/-0.93	1.24/6.33	5.65/6.65	4.47/2.74	3.55/3.54	4.03/4.99	4.37/1.29	2.2/3.07	2.03/0.95	0.19/1.58	2.22/-0.25	1.41/-1.94	-2.65/-2.41	0.19/2.73	4.36/4.24
Θ(105°)	-3.86/-4.28	-0.64/0.68	1.46/1.6	2.64/3.72	2.91/1.87	1.61/1.69	0.62/-0.01	-0.23/-2.63	-1.22/-1.6	2.1/0.15	0.88/5.63	4.82/4.16	2.61/0.73	-1.33/-1.23	1.49/3.74	3.98/2.78	-0.88/0.19	3.07/-0.64	-1.34/-0.89	1.51/-0.12	0.14/-4.22	-4.57/-0.14	0.79/1.73	1.05/0.8
Θ(112.5°)	-2.76/-4.45	-2.77/-3.01	-2.61/-2.93	-1.34/1.68	2.19/0.24	0.4/0.75	-1.66/-0.33	-2.24/-4.52	-2.36/-2.86	1.78/3.14	1.57/1.68	2.62/2.92	-2.63/-7.4	-5.09/-6.7	-1.71/1.24	-0.11/-0.52	-3.27/-1.2	2.12/-3.19	-5.37/-2.7	-1.92/0.27	-4.55/-3.36	-6.51/-3.21	-4.32/-1.74	-1.45/-1.45
Θ(120°)	-3.87/-4.57	-4.82/-4.93	-6.15/-6.75	-5.49/-1.86	-2.14/-2.26	-1.07/-0.35	-1.59/-2.62	-0.71/-5.23	-7.17/-5.65	-0.14/1.92	1.45/-0.01	-0.97/-1.76	-7.07/-6.18	-3.37/-6.48	-8.84/-5.5	-2.1/-1.76	-9.91/-8.18	-0.92/-4.84	-8.15/-5.05	-6.72/-2.34	-4.51/-6.52	-3.94/-6.57	-4.14/-2.04	-2.03/-2.95
Θ(127.5°)	-2.5/-2.75	-3.65/-2.94	-4.92/-4.63	-4.16/-4.63	-5.04/-5.46	-4.22/-2.44	-3.89/-3.13	-1.91/-1.58	-6.02/-5.46	-4.39/-3.7	-2/-2.01	-1.09/-2.25	-4.75/-2.76	-6.46/-9.64	-5.37/-1.44	-0.53/-6.36	-11.72/-7.05	-0.48/-4.33	-6.27/-4.15	-3.38/0.04	-0.74/-2.45	-4.41/-3.63	-2.36/-0.2	1.07/-0.42
Θ(135°)																								

Gain Result

Freq(Hz)	2.45GPol.	PhiAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Θ(0°)Φ(75°)	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°)	-12.43/-10.93	-9.61/-8.43	-7.24/-6.23	-5.54/-5.02	-4.63/-3.47	-4.28/-4.19	-4.29/-4.39	-4.71/-5.28	-6.17/-7.14	-8.24/-9.84	-11.46/-13.43	-14.94/-14.79	-13.11/-11.14	-9.32/-7.85	-6.65/-5.67	-4.99/-4.55	-4.22/-3.89	-3.64/-3.67	-3.99/-4.49	-5.11/-5.92	-6.97/-8.26	-9.99/-12.41	-15.66/-17.67	-16.34/-14.1
Θ(75°)	-11.29/-8.98	-8.78/-7.95	-7.07/-6.31	-5.75/-5.12	-4.65/-4.26	-3.99/-3.8	-3.63/-3.56	-3.68/-4.04	-4.65/-5	-6.59/-8.25	-10.35/-12.99	-15.49/-15.92	-13.73/-11.12	-9.15/-7.61	-6.41/-5.57	-5.4/-5.63	-4.32/-4.03	-3.92/-4.15	-4.69/-5.35	-6.17/-7.13	-8.41/-10.03	-12.26/-15.28	-19.05/-19.27	-15.59/-12.85
Θ(15°)	-9.64/-8.49	-7.78/-7.23	-6.68/-6.12	-5.65/-5.22	-4.81/-4.4	-4.08/-3.75	-3.49/-3.34	-3.36/-3.57	-4.12/-4.92	-6.14/-7.84	-10.24/-13.44	-17.31/-18.18	-14.96/-11.96	-9.68/-8.07	-6.91/-6.1	-5.67/-5.36	-4.98/-4.67	-4.62/-5.03	-5.84/-6.79	-7.91/-9.29	-11.06/-13.62	-17.33/-18.09	-19.04/-17.72	-13.58/-10.94
Θ(22.5°)	-9.12/-8.4	-7.98/-7.64	-7.24/-6.78	-6.41/-6.02	-5.55/-5.05	-4.57/-4.2	-4.1/-3.7	-4.12/-4.5	-5.3/-6.47	-8.2/-10.76	-14.61/-18.18	-23.17/-18.15	-15.99/-12.75	-10.65/-9.18	-8.16/-7.43	-6.85/-6.3	-5.85/-5.5	-5.46/-5.97	-6.91/-8.26	-10.07/-12.47	-16.08/-18.35	-17.08/-18.12	-17.4/-13.92	-11.56/-9.87
Θ(30°)	-11.58/-11.06	-10.55/-9.92	-9.18/-8.54	-7.93/-7.3	-6.57/-5.8	-5.17/-4.8	-4.79/-5.11	-5.78/-6.82	-8.33/-10.4	-13.06/-16.84	-18.02/-18.64	-15.75/-14.19	-13.2/-12.28	-11.11/-10.06	-9.25/-8.67	-8.19/-7.69	-7.19/-6.77	-6.53/-6.79	-7.66/-9.23	-11.76/-16.08	-18.53/-18.28	-19.23/-17.51	-15.2/-13.76	-12.73/-11.8
Θ(37.5°)	-16.84/-16.68	-16.21/-15.18	-13.78/-12.53	-11.18/-9.69	-8.23/-6.84	-6.74/-5.21	-5.31/-6.16	-7.85/-10.59	-15.36/-19.06	-19.26/-15.67	-11.65/-9.25	-8.04/-7.79	-8.15/-7.83	-9.24/-9.57	-9.71/-9.77	-9.68/-13.98	-8.77/-7.98	-7.47/-7.38	-8.24/-10.21	-14.06/-18.09	-18.89/-17.84	-15.09/-14.21	-14.43/-15.35	-16.22/-16.77
Θ(45°)	-18.27/-17.73	-18.89/-17.78	-18.3/-18.6	-16.03/-13.08	-10.27/-7.97	-6.23/-5.26	-5.18/-6.08	-8.05/-11.3	-15.40/-16.24	-13.79/-11.21	-9.12/-7	-6.74/-6.51	-6.84/-7.51	-8.26/-9.5	-9.94/-10.84	-11.33/-11.11	-10.71/-11.91	-8.49/-8.64	-9.83/-12.61	-18.3/-18.8	-16.49/-12.81	-11.81/-12.5	-14.44/-17.64	-13.53/-18.97
Θ(52.5°)	-19.15/-18.06	-18.43/-19.21	-17.59/-17.96	-18.36/-16.04	-11.63/-8.29	-6.04/-4.8	-4.68/-5.57	-7.52/-9.93	-11.96/-12.52	-12.15/-11.23	-9.94/-6.62	-7.74/-7.37	-7.61/-8.36	-9.39/-10.64	-11.93/-12.79	-12.75/-12.06	-11.05/-10.22	-9.68/-9.99	-11.68/-16.27	-17.34/-18.99	-13.63/-11.57	-11.3/-12.49	-15.29/-17.84	-18.09/-17.75
Θ(60°)	-18.34/-19.03	-18.06/-19.24	-18.78/-19.17	-18.66/-18.76	-14.6/-10.2	-7.34/-5.95	-5.79/-6.73	-8.5/-10.42	-11.71/-12.29	-10.68/-9.34	-8.37/-8.08	-8.49/-9.4	-10.53/-11.44	-11.99/-12.12	-11.96/-11.39	-9.08/-9.99	-12.79/-18.82	-18.38/-16.14	-12.56/-11.08	-10.72/-11.27	-12.96/-15.78	-17.62/-17.66		
Θ(67.5°)	-18.54/-18.16	-18.78/-17.97	-16.23/-16.16	-18.34/-19.28	-17.62/-12	-8.6/-7.4	-6.19/-6.75	-8.9/-1	-9.65/-9.94	-9.98/-9.5	-8.68/-7.83	-7.33/-7.41	-8.22/-9.56	-11.04/-12.46	-13.81/-15.01	-15.05/-13.49	-11.28/-9.91	-9.82/-11.54	-16.43/-17.86	-16.37/-11.21	-9.02/-8.12	-7.74/-7.68	-8.17/-9.59	-12.39/-16.57
Θ(75°)	-13.62/-18.94	-18.94/-18.62	-17.85/-16.96	-18.09/-17.1	-17.35/-12.04	-8.43/-6.31	-5.52/-8.88	-6.92/-7.56	-7.48/-7.37	-7.52/-7.71	-7.96/-8.26	-8.66/-9.4	-10.46/-11.76	-13.06/-14.39	-15.54/-15.61	-14.69/-13.57	-12.57/-11.76	-11.78/-13.75	-18.09/-17.95	-12.12/-8.41	-6.55/-5.79	-5.57/-5.55	-5.62/-6.15	-7.44/-9.94
Θ(82.5°)	-10.91/-14.79	-19.95/-18.68	-18.47/-17.67	-18.64/-18.81	-19.08/-12.8	-8.89/-6.9	-6.42/-7.07	-7.82/-8.67	-7.86/-5.32	-5.83/-6.68	-8.19/-97	-11.92/-13.63	-14.95/-15.72	-16.35/-17.63	-17.81/-17.11	-16.52/-16.09	-15.27/-14.38	-14.12/-16.35	-19.25/-18.09	-11.21/-8.18	-6.63/-5.94	-6.04/-5.48	-7.76/-8.92	
Θ(90°)	-11.88/-14.81	-19.21/-18.19	-18.73/-15.78	-18.8/-17.79	-18.5/-16.89	-11.67/-9.79	-9.61/-9.74	-8.46/-6.68	-5.62/-5.55	-6.37/-5.9	-9.52/-11.71	-13.02/-13.19	-15.91/-12.7	-12.27/-11.06	-9.78/-99	-11.98/-15.77	-19.07/-17.52	-19.82/-18.23	-19.29/-11.27	-7.84/-6.37	-5.54/-4.91	-6.84/-5.48	-6.64/-6.01	-9.27/-10.62
Θ(97.5°)	-13.11/-16.16	-16.39/-13.92	-16.61/-13.69	-12.64/-14.03	-18.28/-16.68	-15.33/-12.98	-12.5/-11.98	-9.1/-7.1	-6.48/-6.48	-7.36/-8.85	-10.44/-11.36	-11.86/-12.07	-11.88/-14.9	-10.5/-8.9	-7.8/-8.31	-11.07/-16.55	-18.93/-17.5	-19.79/-19.06	-15.83/-9.34	-6.7/-6.13	-6.17/-5.94	-5.78/-6.02	-6.72/-7.5	-9.18/-11
Θ(105°)	-10.58/-13.91	-18.76/-18.59	-15.7/-12.79	-11.57/-12.43	-16.07/-16.79	-16.58/-16.98	-16.33/-14.98	-11.91/-8.66	-6.33/-5.39	-5.55/-6.27	-10.05/-12.57	-13.68/-12.66	-10.71/-8.68	-7.19/-6.82	-7.39/-10.28	-13.89/-15.66	-15.16/-19.19	-11.77/-8.69	-5.61/-5.21	-5.9/-5.66	-6.93/-7.22	-7.52/-7.88	-8.5/-9.53	
Θ(112.5°)	-13.11/-14.96	-15.33/-13.91	-12.45/-11.7	-11.42/-12.86	-16.63/-17.62	-17.48/-17.09	-16.65/-18.58	-13.71/-7.99	-8.82/-5.37	-3.57/-4.38	-5.66/-7.56	-10.63/-14.48	-14.15/-12.19	-10.9/-8.83	-6.52/-5.37	-5.66/-7.03	-3.87/-9.99	-10.73/-13.41	-12.85/-7.33	-5.57/-4.14	-4.92/-5.92	-6.89/-8.08	-9.72/-11.13	-11.95/-12.52
Θ(120°)	-14.71/-12.84	-11.27/-10.58	-10.75/-11.58	-13.15/-16.4	-17.58/-13.38	-13.2/-11.28	-12.46/-18.69	-17.82/-6.69	-4.93/-6.45	-3.88/-5.14	-7.1/-9.7	-12.93/-14.92	-14.47/-15.45	-12.94/-6.7	-5.67/-6.46	-5.32/-7.01	-8.76/-9.99	-11.03/-14.25	-10.34/-5.83	-3.17/-2.56	-3.22/-4.32	-5.38/-6.7	-8.75/-15.02	-14.46/-15.85
Θ(127.5°)	-15.89/-13.99	-11.92/-10.67	-10.49/-11.6	-11.42/-18.11	-18.47/-16.88	-12.71/-11.38	-12.63/-16.29	-13.25/-7.85	-5.03/-4.24	-5.02/-6.87	-8.89/-10.09	-10.65/-11.37	-12.73/-13.92	-10.84/-6.81	-5.02/-6.34	-7.35/-10.07	-12.32/-13.41	-13.82/-15.16	-13.36/-7.74	-4.44/-3.34	-3.59/-4.49	-5.61/-6.78	-8.47/-10.69	-13.59/-16.80
Θ(135°)	-11.4/-11.89	-10.54/-9.02	-8.49/-9.24	-11.42/-15.36	-17.92/-18.28	-16.85/-16.29	-18.5/-17.98	-13.59/-9.66	-7.66/-7.38	-8.26/-9.12	-8.8/-8.06	-8.24/-10.25	-12.72/-14.16	-8.39/-5.39	-4.63/-5.76	-8.69/-12.82	-15.64/-13.86	-11.91/-11.81	-12.21/-9.61	-6.47/-4.84	-4.52/-4.96	-5.64/-6.15	-8.4/-6.99	-7.73/-9.06
Θ(142.5°)	-7.96/-8.84	-8.9/-8.38	-8.26/-9.1	-10.79/-13.4	-16.48/-10.57	-17.56/-18.26	-19.36/-18.51	-13.98/-11.6	-10.11/-10.1	-10.11/-24	-8.05/-6.77	-8.82/-12.25	-11.47/-9.74	-6.3/-4.96	-5.33/-4.5	-11.43/-16.82	-16.73/-13.67	-12.13/-11.55	-10.84/-8.74	-6.37/-4.75	-4.08/-4.12	-4.5/-4.82	-5.06/-5.31	-5.83/-6.69
Θ(150°)	-8.33/-9.04	-9.27/-9.03	-8.85/-9.22	-10.41/-12.45	-14.51/-15.88	-16.71/-17.79	-18.32/-16.45	-14.09/-12.65	-11.96/-11.7	-11.29/-10.61	-10.18/-10.55	-12.09/-13.86	-11.72/-8.45	-6.46/-6.07	-7.22/-9.78	-13.74/-15.72	-14.23/-13.1	-11.55/-9.59	-7.44/-5.87	-5.17/-5.75	-5.79/-6.5	-7.12/-7.46	-7.73/-8.12	
Θ(157.5°)	-10.87/-11.3	-13.28/-10.97	-10.6/-10.77	-11.74/-13.29	-15.07/-16.19	-16.55/-16.36	-15.89/-15.43	-15.48/-16.48	-18.58/-19.42	-18.55/-17.98	-19.5/-17.09	-14.76/-12.31	-10.27/-8.98	-8.58/-9.15	-10.84/-13.23	-14.39/-13.59	-13.18/-13.73	-14.64/-14.73	-13.18/-12.1	-10.36/-9.08	-8.44/-4.88	-9.06/-9.9	-10.68/-11.01	-11.07/-11.26
Θ(165°)	-15.82/-17.19	-18.14/-17.6	-16.61/-16.29	-16.95/-17.81	-18.92/-19.59	-17.95/-19.36	-19.13/-19.12	-19.25/-18.28	-18.97/-17.79	-16.26/-14.1	-12.69/-11.32	-10.35/-9.84	-9.82/-10.14	-10.81/-11.76	-12.94/-13.97	-14/-14.06	-14.97/-16.72	-18.04/-18.27	-15.9/-15.14	-14.72/-14.72	-15.04/-15.71	-16.71/-17.49	-17.62/-17.59	
Θ(172.5°)	-18.1/-18.43	-17.76/-18.66	-18.51/-17.71	-19.09/-19.14	-17.98/-18.14	-17.81/-17.19	-18.41/-18.4	-18.24/-18.37	-16.16/-14.04	-12.45/-11.18	-10.3/-9.88	-9.91/-10.41	-11.63/-11.98	-12.76/-13.51	-14.21/-14.47	-14.69/-15.58	-17.63/-19.09	-19.2/-17.88	-17.88/-19.05	-17.61/-19.29	-18.83/-17.66	-19.07/-17.82	-18.68/-17.71	-18.15/-18.32
Θ(180°)	-18.68/-17.29	-15.81/-15.43	-15.76/-16.23	-16.34/-16.43	-17.02/-18.54	-17.61/-17.91	-18.88/-18.42	-18.19/-19.03	-17.55/-16	-14.6/-13.64	-12.92/-12.66	-9.27/-13.32	-13.94/-11.58	-15.34/-16.11	-16.76/-17.12	-17.31/-17.96	-18.26/-17.81	-18.08/-17.61	-17.81/-18.2	-18.04/-18.81	-18.52/-17.43	-17.89/-16.62	-18.78/-17.68	-19.12/-19.23
Freq(Hz)	2.45GPol.	ThetaAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Θ(0°)Φ(75°)	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°)	-5.37/-5.51	-5.89/-6.44	-7.29/-6.38	-9.73/-11.28	-12.87/-14.21	-14.93/-14.82	-13.72/-12.1	-10.63/-9.42	-8.33/-7.5	-6.97/-6.64	-6.39/-6.05	-5.79/-5.67	-5.71/-5.91	-6.34/-6.99	-7.91/-9.12	-10.8/-12.65	-14.44/-15.57	-16.47/-17.54	-17.29/-15.51	-13.65/-12.03	-10.78/-9.72	-8.83/-8.02	-7.28/-6.55	-5.95/-5.53
Θ(75°)	-5.85/-6.16	-6.88/-7.21	-9.87/-8.64	-9.66/-10.34	-12.37/-14.09	-16.16/-18.34	-18.61/-16.61	-13.89/-11.71	-9.81/-8.6	-7.79/-7.38	-6.98/-6.66	-6.45/-6.38	-6.14/-6.15	-7.23/-8.15	-9.15/-10.31	-14.26/-14.19	-13.54/-12.82	-11.94/-10.88	-9.79/-8.86	-8.12/-7.51	-6.74/-6.73	-6.46/-6.21	-5.93/-5.72	
Θ(15°)	-7.04/-7.62	-8.34/-8.99	-9.54/-10.1	-12.73/-13.16	-14.55/-16.63	-17.17/-18.12	-19.22/-17.83	-14.91/-12.99	-11.77/-11.3	-10.11/-9.29	-10.61/-10.6	-10.63/-10.61	-11.33/-11.63	-12.43/-11.1	-13.45/-13.42	-12.65/-11.8	-10.26/-10.25	-9.43/-8.76	-8.22/-7.54	-6.12/-5.67	-6.23/-6.16	-6.46/-6.21	-5.4/-5.61	
Θ(22.5°)	-6.86/-7.39	-8.16/-8.93	-9.73/-10.43	-11.01/-11.44	-11.55/-11.64	-11.89/-12.62	-13.91/-15.77	-18.41/-18.04	-19.23/-18.35	-18.46/-18.23	-17.57/-19.07	-17.89/-19.26	-18.52/-16.32	-14.76/-13.53	-12.24/-10.91	-9.6/-8.5	-7.71/-7.02	-6.45/-5.88	-5.48/-5.24	-5.13/-5.08	-5.15/-5.37	-5.63/-5.86	-6.06/-6.23	-6.38/-6.64
Θ(30°)	-6.66/-6.73	-6.92/-7.19	-7.58/-8.02	-8.48/-8.78	-8.79/-8.62	-8.44/-8.49	-8.85/-9.51	-10.49/-11.71	-13.21/-14.34	-14.77/-14.38	-13.46/-12.02	-10.57/-9.58	-8.52/-7.65	-6.99/-6.68	-5.91/-5.56	-5.08/-5.48	-4.05/-3.56	-3.14/-2.9	-2.92/-3.21	-3.74/-4.25	-5.23/-5.98	-6.52/-		



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

Θ(22.5°)	-11.43/-10.7	-11.31/-13.76	-15.26/-13.29	-10.62/-9.52	-9.93/-13.08	-17.11/-12.2	-7.27/-5.46	-6.21/-8.18	-12.66/-19.08	-17.53/-12.72	-9.54/-7.9	-6.7/-6.56	-7.6/-8.52	-9.18/-10.2	-10.38/-10.95	-13.5/-16.29	-19.43/-18.93	-18.18/-17.17	-15.47/-13.13	-10.65/-8.62	-7.11/-6.16	-5.63/-6.18	-7.55/-9.46	-10.84/-11.53
Θ(30°)	-19.32/-19.4	-19.4/-17.58	-17.68/-14.72	-11.46/-9.47	-8.77/-10.46	-14.03/-11.61	-7.86/-7.12	-8.42/-11.63	-13.5/-13.21	-9.85/-9.2	-10.1/-10.96	-11.33/-11.69	-11.66/-10.15	-8.74/-7.64	-6.57/-6.33	-6.74/-8.44	-11.91/-17.1	-18.52/-13.99	-12.08/-11.99	-11.35/-10.12	-9.09/-8.5	-8.72/-9.68	-11.22/-14.41	-17.53/-18.1
Θ(142.5°)	-15.91/-12.51	-12.89/-12.58	-12.73/-13.13	-12.99/-11.7	-10.32/-12.09	-12.91/-13.73	-9.65/-9.94	-14.39/-19.11	-12.03/-10.08	-11.43/-18.36	-18.69/-12.74	-11.75/-14.02	-19.23/-16.26	-9.08/-6	-5.36/-6.46	-10.21/-16.72	-19.13/-16.77	-17.01/-15.06	-11.88/-9.69	-8.01/-8.4	-10.76/-13.67	-17.46/-17.3	-14.76/-17.3	-11.88/-17.65
Θ(45°)	-12.11/-9.45	-8.98/-8.76	-10.08/-11.86	-13.64/-18.25	-19.05/-16.36	-17.77/-11.82	-8.59/-9.95	-14.81/-12.57	-10.68/-11.69	-9.46/-8.76	-11.19/-17.59	-18.77/-13.55	-10.74/-10.11	-9.35/-10.1	-10.87/-11.62	-10.95/-9.58	-9.69/-10.52	-14.32/-18.57	-17.98/-19.08	-19.21/-11.89	-9.71/-10.6	-12.32/-11.53	-10.54/-11.48	-15.05/-14.67
Θ(52.5°)	-12.7/-14.94	-16.81/-10.5	-8.92/-9.59	-10.35/-12.43	-13.06/-10.4	-12.36/-17.86	-18.5/-18.58	-12.08/-9.2	-13.41/-9.74	-6.63/-6.06	-13.81/-16.65	-9.36/-8.38	-10.41/-10.6	-10.72/-11.25	-12.14/-11.82	-13.83/-14.66	-12.19/-14.03	-18.34/-18.93	-18.74/-14.31	-12.36/-7.46	-6.31/-7.77	-11.43/-19.5	-8.44/-7.86	-8.38/-9.1
Θ(60°)	-6.52/-8.09	-12.2/-16.74	-15.29/-12.24	-12.25/-15.37	-16.39/-18.42	-12.23/-19.83	-18.46/-18.64	-16.45/-7.36	-6.42/-11.46	-18.43/-13.74	-8.53/-9.41	-12.72/-11.67	-13.82/-16.62	-15.64/-11.71	-11.13/-11.77	-12.04/-14.34	-11.66/-13.85	-14.97/-11.81	-10.93/-57.2	-13.31/-28.3	-8.25/-7.58	-6.65/-6.03	-5.88/-6.25	
Θ(67.5°)	-8.19/-10.51	-13.99/-19.23	-17.92/-16.76	-15.05/-17.82	-19.13/-10.02	-8.37/-9.75	-14.11/-17.81	-19.01/-17.35	-12.08/-8.08	-11.02/-12.43	-11.21/-11.95	-14.39/-18.22	-18.64/-18.47	-19.4/-18.84	-15.17/-11.28	-12.73/-17.88	-18.44/-18.54	-15.65/-18.05	-8.91/-8.01	-7.86/-6.87	-9.67/-10.77	-10.16/-8.64	-7.54/-5.75	-5.77/-7.05
Θ(75°)	-7.76/-7.87	-11.25/-16.03	-15.25/-10.94	-14.92/-19.25	-17.53/-12.29	-8.15/-4.82	-5.94/-10.7	-17.66/-18.15	-13.81/-9.3	-12.33/-11.93	-11.57/-11.92	-14.83/-12.49	-16.14/-17.72	-18.55/-16.66	-14.49/-12.64	-12.22/-13.5	-16.35/-17.7	-15.77/-14.75	-9.22/-4.74	-9.19/-9.27	-12.6/-9.1	-7.31/-6.11	-5.47/-5.05	-5.31/-6.64
Θ(82.5°)	-8.8/-6.18	-6.94/-8.17	-10/-8.13	-7.15/-9.7	-13.02/-13.22	-9.89/-6.38	-5.69/-7.42	-9.14/-11.26	-10.92/-11.75	-15.97/-14.21	-16.41/-11.62	-11.14/-10.92	-13.47/-18.4	-18.08/-17.48	-18.82/-10.02	-8.14/-10.2	-14.17/-13.67	-11.26/-15.68	-7.51/-5.93	-6.81/-7.3	-10.56/-6.46	-5.19/-7.45	-7.29/-6.1	-5.57/-6.38
Θ(90°)	-9.2/-8.25	-10.47/-13.04	-12.6/-7.84	-6.82/-9.14	-7.92/-9.57	-10.87/-6.28	-7.22/-8.09	-9.72/-12.21	-12.23/-13.16	-17.44/-18.77	-19.14/-13.88	-15.43/-14.66	-14.23/-17.93	-18.41/-15.02	-17.71/-11.06	-8.78/-10.29	-17.96/-14.52	-12.8/-14.61	-12.68/-7.22	-6.96/-8.55	-7.71/-5.74	-4.43/-7.03	-7.78/-7.06	-6.25/-7.05
Θ(97.5°)	-7.86/-8.68	-14.11/-18.37	-12/-8.45	-8.78/-11.43	-11.16/-10.08	-8.6/-7.31	-7.01/-7.45	-6.96/-9.08	-15.63/-18.41	-17.5/-12.33	-14.3/-17.82	-18.42/-17.68	-13.44/-10.91	-13.41/-17.83	-16.43/-11.7	-14.29/-13.43	-8.65/-12.48	-12.79/-7.6	-4.78/-6.4	-6.19/-4.2	-5.35/-9.57	-8.91/-6.72	-6.12/-7.28	
Θ(105°)	-11.58/-10.06	-12.21/-19.32	-18.35/-12.31	-8.9/-14.27	-12.62/-18.65	-13.09/-14.12	-19.24/-11.7	-10.63/-10.37	-18.04/-15.58	-14.62/-13.43	-13.65/-13.95	-15.9/-15.44	-10.9/-7.94	-9.63/-13.64	-11.57/-17.39	-19.07/-16.07	-15.45/-15.58	-17.59/-13.06	-4.34/-4.16	-4.11/-13.18	-0.65/-12.28	-12.32/-13	-11.48/-9.68	
Θ(112.5°)	-17.36/-17.76	-13.63/-13.74	-18.68/-10.9	-8.87/-17.22	-19.18/-16.26	-18.78/-18.16	-17.91/-18.18	-16.77/-11.23	-8.79/-11.51	-10.62/-13	-13.18/-13.5	-18.81/-17.54	-12.81/-11.37	-14.7/-17.84	-17.91/-9.54	-10.17/-16.79	-18.35/-19.17	-12.26/-18.73	-15.61/-9.38	-5.49/-3.37	-5.88/-4.27	-5.96/-10.23	-13.82/-13.2	-13.79/-16.01
Θ(120°)	-17.43/-14.21	-14.41/-11.88	-14.16/-7.99	-4.67/-6.57	-13.58/-17.83	-13.35/-18.85	-17.97/-17.29	-19.2/-18.65	-12.12/-13.86	-13.98/-15.21	-19.31/-17.45	-18.06/-19.2	-16.47/-14.99	-10.79/-10.2	-15.04/-16.99	-17.72/-12.61	-13.53/-18.63	-17.22/-12.61	-9.39/-11.45	-4.74/-7.29	-5.14/-7.9	-9.3/-10.88	-15.63/-18.5	
Θ(127.5°)	-8.64/-7.84	-9.04/-9.92	-8.07/-5.93	-3.71/-7.75	-6.43/-10.02	-17.84/-15.98	-18.41/-12.58	-9.54/-11.16	-17.88/-17.2	-14.72/-15.04	-14.91/-12.33	-14.31/-16.68	-15.34/-15.94	-7.53/-7.28	-12.21/-13.25	-13.54/-18.94	-19.01/-6.64	-6.23/-9.67	-10.33/-4.75	-6.97/-5.42	-4.73/-8.86	-14.07/-10.39	-10.23/-10.86	
Θ(135°)	-3.41/-2.18	-2.44/-5.2	-6.47/-4.84	-4.81/-7.29	-9.36/-11.47	-14.54/-17.52	-18.18/-15.61	-10.74/-11.34	-17.56/-18.44	-12.04/-8.47	-7.23/-10.41	-9.96/-6.48	-7.29/-10.2	-7.89/-5.46	-9.05/-13.46	-12.98/-17.88	-16.63/-11.5	-15.19/-7.71	-4.77/-10.01	-8.84/-12.3	-10.62/-11.29	-6.01/-6.84	-7/-10.79	-4.68/-2.95
Θ(142.5°)	-7.82/-8.93	-6.66/-5.05	-5.68/-6.67	-6.69/-6.1	-7.97/-11.04	-17.6/-18.23	-18.08/-18.79	-18.37/-14.26	-12.23/-14.1	-11.46/-12.02	-17.62/-19.52	-14.94/-9.91	-10.14/-13.1	-11.2/-14.01	-17.1/-12.97	-18.77/-10.67	-16.82/-14.94	-12.12/-13.43	-2.73/-6.98	-8.63/-18.7	-12.88/-11.4	-4.49/-4.16	-5.26/-7.12	-10.51/-7.7
Θ(150°)	-9.97/-10.86	-10.61/-10.02	-9.24/-8.48	-8.27/-8.25	-9.37/-13.01	-17.08/-15.73	-15.05/-16.21	-14.82/-17.12	-16.78/-12.4	-16.03/-17.52	-17.39/-12.81	-11.63/-13.48	-14.24/-14.54	-18.55/-18.18	-13.23/-16.09	-18.76/-16.46	-17.71/-10.46	-9.23/-8.53	-2.77/-5.44	-9.81/-18.41	-14.29/-11.35	-9.45/-7.13	-7.83/-9.48	-10.14/-10.3
Θ(157.5°)	-7.26/-7.19	-7.95/-7.53	-7.6/-8.26	-9.17/-10.44	-11.48/-12.11	-12.68/-14.34	-16.17/-17.09	-16.43/-16.16	-16.4/-15.57	-15.5/-15.96	-18.56/-19.15	-18.49/-15.47	-14.22/-14.34	-16.15/-18.35	-18.03/-18.18	-18.45/-18.71	-17.35/-18.56	-15.03/-9.16	-7.42/-8.09	-9.78/-12.72	-18.8/-19.36	-18.01/-12.71	-8.89/-9.25	-8.86/-7.53
Θ(165°)	-6.81/-6.62	-6.89/-7.02	-6.77/-6.11	-5.82/-5.82	-6.14/-7.3	-9.6/-13.44	-17/-18.32	-17.83/-18.13	-17.27/-17.4	-18.47/-15.81	-11.39/-7.92	-5.56/-6.67	-8.02/-9.32	-11.1/-13.88	-17.59/-19.03	-18.91/-17.02	-12.7/-9.58	-6.86/-5.49	-6.11/-6.12	-11.29/-14.86	-18.92/-17.77	-17.33/-17.55	-12.75/-10.42	-8.88/-7.7
Θ(172.5°)	-9.91/-10.31	-10.12/-8.05	-6.56/-6.23	-6.72/-7.39	-8.36/-9.58	-9.91/-9.21	-8.27/-7.33	-7.33/-7.45	-7.44/-7.58	-7.15/-6.47	-6.06/-6.42	-7.83/-9.84	-12.77/-16.61	-17.85/-17.2	-18.84/-13.13	-9.99/-8.05	-5.85/-4.54	-3.72/-3.37	-3.28/-3.72	-4.44/-5.07	-5.44/-6.73	-6.91/-7.31	-6.99/-7.25	-7.57/-8.24
Θ(180°)	-17.35/-19.03	-19.25/-18.4	-18.52/-18.48	-16.66/-18.99	-15.68/-12.4	-10.3/-8.85	-8.91/-9.1	-9.59/-10.45	-11.32/-12.37	-12.34/-14.05	-15.29/-17.66	-19.1/-18.37	-18.17/-17.92	-18.54/-18.34	-17.45/-15.08	-12.97/-11.62	-10.08/-8.75	-8.37/-6.88	-7.45/-7.59	-7.61/-7.61	-7.75/-6.32	-8.74/-9.48	-11.13/-8.6	
Freq(Pol)	5.3GPol	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°)	-10.57/-9.41	-8.94/-8.79	-9.44/-10.04	-10.32/-10.36	-10.34/-10.45	-10.73/-10.66	-10.61/-10.66	-11.1/-11.08	-12.19/-13.65	-16.38/-18.59	-18.27/-18	-18.19/-18.73	-18.19/-17.13	-14.73/-12.2	-10.23/-9.88	-8.19/-8.22	-8.22/-8.17	-9.82/-9.32	-10.72/-11.61	-12.13/-12.31	-13.12/-13.74	-13.41/-12.7	-11.83/-11.29	-10.76/-10.34
Θ(7.5°)	-14.07/-13.83	-13.24/-11.8	-11.11/-13.73	-11.26/-12.07	-12.09/-11.07	-10.06/-9.72	-9.93/-10.1	-10.51/-10.62	-10.97/-11.27	-11.08/-13.92	-16.09/-14.52	-11.63/-9.62	-8.85/-8.43	-8.45/-8.63	-8.29/-7.74	-7.55/-9.76	-8.36/-8.85	-9.49/-10.48	-11.67/-12.24	-13.45/-14.66	-15.84/-16.92	-18.35/-18.88	-18.61/-18.74	-18.81/-16.62
Θ(15°)	-7.15/-6.7	-5.79/-5.45	-5.59/-6.15	-6.99/-7.69	-8.11/-7.39	-6.41/-5.98	-6.27/-6.96	-8.39/-9.56	-16.41/-13.8	-15.08/-19.31	-17.44/-18.76	-16.17/-17.84	-18.56/-16.99	-14.8/-13.15	-11.57/-9.77	-8.88/-8.63	-7.58/-7.59	-7.78/-8.1	-9.31/-10.06	-10.57/-11.76	-12.51/-11.47	-18.77/-17.72	-9.07/-8.6	-7.88/-7.22
Θ(22.5°)	-9.53/-9.95	-5.16/-4.52	-3.77/-2.96	-3.02/-3.73	-4.31/-4.44	-3.85/-3.28	-3.31/-4.63	-7.58/-11.39	-14.24/-12.32	-10.64/-9.4	-8.84/-8.47	-8.84/-10.27	-11.07/-9.43	-8.07/-7.8	-8.06/-8.81	-9.59/-9.71	-9.23/-8.49	-7.79/-7.31	-7.55/-7.89	-8.58/-9.43	-10.16/-10.51	-9.67/-8.71	-8.92/-10.14	-10.56/-9.36
Θ(30°)	-4.52/-5.46	-5.9/-6.13	-4.84/-3.25	-2.41/-2.45	-2.89/-3.38	-2.84/-2.1	-1.78/-2.31	-3.17/-3.38	-2.85/-2.47	-3.17/-4.84	-7.5/-8.2	-8.1/-7.8	-8.51/-10.07	-10.9/-10.73	-10.09/-8.93	-7.24/-6.55	-6.21/-6.26	-6.4/-5.77	-5.08/-5.27	-5.22/-4.85	-5.59/-7.4	-8.54/-8.29	-8.34/-7.56	-6.52/-5.45
Θ(37.5°)	-0.15/-0.57	-1.57/-2.6	-3.43/-3.09	-2.31/-2.28	-3.18/-3.83	-2.93/-1.64	-1.06/-1.23	-1.46/-1.36	-1.24/-1.52	-2.73/-5.28	-8.53/-10.77	-10.92/-9.27	-8.06/-7.78	-8.44/-9.77	-11.93/-14.09	-10.46/-7.7	-6.15/-5.61	-4.59/-2.47	-0.92/-0.88	-1.95/-3.05	-4.27/-6.72	-10.22/-10.67	-6.9/-4.18	-2.88/-1.94
Θ(45°)	2.542/95	2.50/77	-1.32/-2.29	-3.15/-4.89	-7.06/-7.76	-5.82/-2.24	-0.89/-0.91	-0.41/-0.15	-0.95/-2.39	-3.72/-4.28	-4.62/-4.97	-4.17/-3.51	-3.53/-4.51	-5.84/-6.75	-8.48/-12.62	-15.48/-9.83	-5.69/-3.73	-2.45/-1.05	-0.46/-1.28	-2.76/-3.72	-3.69/-4.6	-5.51/-4.42	-2.2/-0.81	0.51/-77
Θ(52.5°)	-0.110/28	0.860/55	-0.110/06	-0.02/-1.78	-5.08/-7.06	-5.33/-3.32	-2.45/-1.47	-0.22/-0.63	-2.36/-3.86	-5.04/-5.19	-6.38/-6.12	-4.37/-5.06	-5.82/-4.44	-3.6/-3.76	-5.2/-8.32	-12.07/-9.97	-6.26/-5.15	-4/-1.1	0.68/-0.48	-3.27/-6.06	-4.57/-3.6	-3.38/-2.65	-2.08/-2.52	-2.15/-0.55
Θ(60°)	-1.5/-0.68	0.170/12	-0.35/-0.84	-1.11/-1.58	-2.37/-3.62	-6.25/-7.51	-4.86/-2.47	-0.61/-0.67	-1.79/-3.1	-4.19/-5.94	-7.22/-4.53	-2.39/-2.63	-2.31/-1.61	-1.76/-2.99	-4.65/-5.8	-7.58/-6.66	-8.51/-6.23	-7.34/-6.29	-3.61/-3.55	-5.14/-8.55	-4.85/-3.35	-3.78/-3.11	-2.76/-2.72	-2.09/-1.63
Θ(67.5°)	0.260/89	0.79/-0.68	-2.14/-2.53	-2.44/-1.58	-0.81/-1.07	-1.07/-1.99	-4.06/-3.59	-2/-1.32	-0.41/-2.74	-4.62/-7.85	-7.96/-3.89	-1.17/-1.06	-2.28/-1.8	-1.17/-1.06	-1.49/-2.32									



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

Θ(75°)	-7.47/-9.34	-14.81/-18.17	-18.67/-18.82	-18.57/-13.67	-18.2/-15.98	-7.76/-8.94	-11.34/-6.31	-8.45/-13.56	-13.44/-9.79	-8.62/-6.96	-5.68/-7.55	-7.67/-11.51	-16.63/-16.75	-18.25/-18.2	-12.42/-7.43	-4.61/-6.33	-13.47/-9.12	-8.25/-11.9	-9.57/-8.33	-5.66/-7.21	-7.93/-8.28	-11.58/-9.45	-8.67/-9.1	-9.05/-8.15
Θ(82.5°)	-10.49/-10.57	-10.05/-15.89	-17.62/-18.16	-18.47/-13.97	-12.36/-18.45	-10.75/-8.82	-8.3/-8.84	-11.38/-14.4	-17.26/-13.29	-12.52/-8.94	-7.83/-8.6	-10.06/-19.82	-19.32/-12.03	-11.28/-16.8	-11.57/-7.21	-6.53/-8.95	-10.66/-7.82	-6.95/-9.32	-7.55/-11.63	-11.09/-13.62	-18.21/-11.57	-11.41/-11.02	-10.99/-8.66	-8.9/-9.93
Θ(90°)	-9.16/-14.18	-12.08/-16.12	-16.69/-17.49	-16.91/-18.13	-18.72/-18.13	-12.15/-8.82	-6.19/-8.59	-8.74/-17.96	-17.97/-19.16	-13.25/-12.88	-11.29/-12.07	-13.25/-18.76	-18.25/-18.09	-17.97/-14.84	-17.14/-8.84	-9.52/-9.85	-6.95/-11.89	-8.11/-16.35	-12.35/-11.41	-13.02/-8.88	-9.71/-9.96	-8.99/-6.94	-7.83/-10.42	-17.27/-10.42
Θ(97.5°)	-18.14/-16.56	-16.06/-18.55	-14.39/-18.22	-14.49/-14.95	-12.65/-11.39	-15.42/-12.42	-9.98/-8.35	-6.99/-11.18	-14.57/-16.09	-17.91/-15.5	-17.63/-15.17	-17.84/-17.06	-10.12/-10.52	-11.56/-9.6	-16.82/-18.63	-10.39/-10.09	-11.46/-10.01	-7.63/-14.51	-11.98/-13.66	-13.12/-19.43	-15.18/-16.69	-9.96/-11.2	-11.19/-12.64	-10.97/-14.08
Θ(105°)	-18.17/-18.67	-17.89/-15.43	-16.86/-19	-12.66/-10.78	-13.7/-9.78	-8.66/-10.41	-11.14/-8.93	-11.47/-12.58	-9.98/-12.1	-14.48/-18.56	-17.18/-18.72	-18.34/-19.16	-10.75/-9.84	-5.62/-6.55	-6.39/-9.6	-18.61/-11.82	-9.73/-15.83	-14.53/-16.26	-18.06/-16.7	-11.72/-12.1	-8.3/-11.97	-10.74/-7.63	-11.03/-10.54	-9.99/-11.9
Θ(112.5°)	-15.29/-10.73	-10.82/-6.27	-9.66/-10.11	-7.63/-9.94	-12.19/-18.08	-13.54/-14.2	-10.91/-12.35	-12.78/-11.1	-12.53/-12.02	-18.79/-17.51	-18.12/-17.71	-13.58/-14.41	-13.81/-6.09	-6.73/-10.34	-9.43/-5.8	-4.18/-16.16	-6.19/-10.63	-15.28/-9.88	-12.31/-9.97	-9.87/-9.37	-6.66/-7.54	-6.73/-9.14	-9.18/-13.84	-15.15/-12.3
Θ(120°)	-14.99/-11.64	-12.44/-10.01	-6.17/-3.23	-2.61/-4.99	-10.54/-18.76	-18.59/-12.31	-11.78/-11.12	-17.61/-14.22	-18.37/-14.85	-18.2/-17.77	-17.69/-17.76	-13.58/-10.71	-6.09/-6.71	-17.46/-15.67	-9.29/-6.54	-5.27/-5.55	-5.11/-10.05	-18.03/-5.64	-9.86/-6.32	-12.62/-5.7	-3.74/-3.32	-5.28/-4	-2.82/-6.33	-8.58/-10.23
Θ(127.5°)	-6.44/-7.15	-5.97/-3.34	-0.76/-1.46	-2.51/-5.18	-7.39/-13.96	-17.65/-12.21	-6.31/-18.9	-12.93/-15.97	-16.3/-11.6	-15.99/-17.01	-15.89/-10.5	-8.31/-12.28	-8.25/-6.12	-8.32/-12.13	-7.32/-7.68	-12.7/-8.41	-6.32/-10.95	-17.34/-3.16	-6.87/-5.57	-12.12/-6.76	-4.9/-2.81	-4.91/-2	-1.56/-1.07	-3.44/-3.71
Θ(135°)	-2.18/-1.23	-1.93/-4.15	-2.97/-1.56	-2.51/-2.98	-5.83/-15.83	-15.2/-17.39	-10.01/-6.49	-6.4/-5.58	-13.94/-18.08	-15.88/-11.03	-7.28/-5.44	-7.34/-8.82	-11.59/-16.75	-17.85/-8.32	-6.41/-10.47	-16.91/-11.69	-11.32/-12.46	-18.51/-2.94	-5.55/-7.93	-11.56/-8.17	-4.77/-1.56	0/-0.55	-1.11/-2.61	-1.61/-1.82
Θ(142.5°)	-7.87/-7.17	-4.47/-5.39	-9.07/-9.02	-5.43/-4.83	-6.73/-8.95	-11.05/-10.65	-9.74/-11.8	-13.67/-14.78	-13.82/-18.4	-10.33/-10.92	-18.12/-18.53	-15.37/-11.61	-9.83/-11.1	-8.94/-9.08	-14.67/-18.76	-10.23/-7.96	-17.91/-16.14	-5.36/-0.95	-3.58/-16.09	-18.52/-6.05	-2.52/-1.94	-0.11/-2.25	-3.02/-6.39	-7.63/-5.82
Θ(150°)	-12.58/-15.81	-14.06/-10.35	-8.03/-7.2	-7.69/-8.47	-10.07/-16.58	-17.51/-17.76	-17.62/-17.71	-12.84/-11.1	-17.13/-14.56	-18.65/-18.33	-19.32/-13.49	-16.92/-17.74	-11.44/-14.12	-18.96/-19.17	-15.8/-18.65	-10.04/-11.3	-16.86/-10.26	-5.64/-3.66	-6.61/-16.47	-12.59/-17.4	-12.34/-9.01	-6.28/-4.83	-4.76/-5.3	-7.66/-10.26
Θ(157.5°)	-4.86/-5.18	-5.94/-5.88	-5.53/-5.76	-7.68/-6.27	-9.88/-12.68	-13.41/-12.84	-13.54/-14.23	-13.64/-12.9	-12.28/-11.61	-11.71/-14.29	-17.71/-18.4	-15.73/-11.02	-10.54/-12.71	-16.22/-16.92	-18.3/-18.92	-17.96/-16.81	-18.49/-19.21	-8.71/-5.65	-6.32/-10.29	-17.71/-18.87	-16.94/-9.66	-7.82/-7.19	-5.87/-5.07	-4.63/-4.86
Θ(165°)	-4.17/-4.03	-3.71/-3.39	-3.94/-4.85	-6.89/-9.14	-9.88/-9.3	-9.5/-11.13	-13.88/-14.57	-12.79/-11.49	-11.01/-11.74	-11.69/-10.48	-9.3/-8.97	-9.47/-10.74	-12.67/-16.24	-18.11/-17.9	-15.99/-12.71	-12.17/-13.96	-14.92/-12.28	-9.15/-7.14	-6.91/-8.78	-12.36/-15.78	-18.45/-17.27	-12.36/-10.23	-8/-6.79	-5.68/-4.49
Θ(172.5°)	-9.85/-11.9	-11.15/-8.33	-5.77/-5.03	-4.41/-3.94	-4.03/-4.49	-5.62/-7.56	-9.89/-13.13	-18.11/-18.76	-17.47/-16.53	-14.91/-12.85	-12.17/-12.09	-11.41/-11.22	-12.11/-12.31	-10.69/-9.16	-8.69/-9.34	-8.98/-7.61	-6.11/-4.77	-3.86/-3.22	-2.97/-3.45	-4.89/-6.01	-5.94/-63	-7.63/-9.27	-10.31/-10.07	-9.06/-8.24
Θ(180°)	-18.88/-14.16	-11.69/-10.68	-10.27/-10.15	-10.49/-11.19	-13.45/-18.35	-18.39/-19.37	-16.29/-13.6	-13.08/-11.97	-11.11/-11.2	-11.13/-10.03	-8.6/-7.3	-6.88/-7.97	-15.17/-17.52	-15.17/-13.16	-10.55/-8.29	-7/-6.46	-6.4/-6.28	-7.08/-7.13	-7.01/-7	-7.23/-9.88	-11.06/-14.22	-11.06/-14.22	-18.38/-18.42	
Freq(Hz)	5.785GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-10.26/-11.22	-11.59/-11.33	-10.48/-9.43	-8.5/-7.62	-6.96/-6.47	-6.22/-6	-5.74/-5.61	-5.11/-4.86	-4.69/-4.64	-4.64/-4.67	-4.82/-5.01	-5.24/-5.62	-6.13/-6.9	-7.86/-8.85	-9.4/-9.38	-8.89/-8.21	-7.42/-6.64	-5.85/-5.11	-4.46/-3.96	-3.73/-3.64	-3.78/-4.14	-4.65/-5.39	-6.32/-7.31	-8.47/-9.8
Θ(7.5°)	7.3/-7.8	-8.12/-8.35	-8.01/-7.6	-7.12/-6.62	-6.15/-5.75	-5.46/-5.22	-4.92/-4.67	-4.57/-4.63	-4.79/-5.12	-5.62/-6.28	-7.15/-8.12	-9.21/-10.53	-12.13/-13.76	-15.06/-14.92	-13.53/-11.97	-10.43/-9.14	-8.06/-7.13	-6.25/-5.53	-4.93/-4.48	-4.22/-4.08	-4.09/-4.2	-4.44/-6.9	-5.04/-5.5	-6.08/-6.77
Θ(15°)	-5.81/-6.45	-7.17/-7.21	-7.41/-7.15	-6.77/-6.22	-5.75/-5.28	-4.8/-4.35	-4.03/-3.93	-4.05/-4.33	-4.82/-5.53	-6.49/-7.89	-9.75/-12.2	-15.26/-18.3	-18.58/-18.45	-16.88/-14.6	-14.12/-12.11	-11.22/-10.34	-9.32/-8.46	-7.67/-7.04	-6.51/-6.12	-5.79/-5.55	-5.28/-5.03	-4.79/-4.64	-4.53/-4.54	-4.76/-5.22
Θ(22.5°)	-4.63/-5.56	-6.91/-7.9	-8.31/-8.06	-7.38/-6.58	-5.88/-5.17	-4.46/-3.96	-3.75/-3.88	-4.34/-5.04	-5.97/-7.08	-8.44/-10.28	-12.4/-14.16	-14.04/-12.1	-9.93/-8.33	-7.44/-7.16	-7.43/-8.05	-8.91/-9.58	-10.03/-10.7	-10.08/-9.92	-9.62/-9.16	-8.6/-8.02	-7.37/-6.63	-5.78/-4.99	-4.3/-3.84	-3.68/-3.97
Θ(30°)	-4.23/-5.39	-7.29/-9.32	-10.2/-9.32	-7.86/-6.55	-5.81/-4.7	-4.19/-3.8	-3.85/-4.43	-5.42/-6.7	-8.3/-9.9	-11.34/-11.85	-11.69/-11.4	-10.17/-8.72	-7.03/-5.53	-4.58/-4.27	-4.51/-5.28	-6.48/-7.98	-9.94/-12.07	-13.94/-14.23	-12.72/-10.92	-9.36/-8.44	-7.86/-7.5	-6.95/-6.09	-5.08/-4.17	-3.67/-3.71
Θ(37.5°)	-6.12/-7.49	-9.94/-12.61	-12.32/-9.73	-7.16/-6.15	-5.17/-4.37	-3.93/-3.97	-4.5/-5.54	-7.29/-9.94	-14.34/-19	-16.38/-12.29	-10.1/-8.83	-7.81/-6.6	-5.24/-3.99	-3.21/-9.32	-3.13/-9.36	-5.31/-1.72	-17.97/-13.21	-16.41/-16.04	-13.51/-11.2	-9.53/-8.59	-8.31/-8.45	-8.54/-8.3	-7.67/-6.81	-6.95/-9.96
Θ(45°)	-11.21/-13.32	-17.04/-14.64	-9.82/-6.96	-5.42/-4.44	-3.63/-3.06	-2.98/-3.47	-4.48/-5.9	-8.1/-11.55	-17.88/-17.65	-11.57/-8.02	-6.15/-5.07	-4.45/-4	-3.46/-2.82	-2.16/-1.78	-1.89/-2.6	-3.86/-5.7	-8.3/-11.64	-15.77/-18.31	-18.92/-16.53	-14.24/-12.71	-11.87/-14.21	-10.72/-10.45	-10.69/-11.12	-10.94/-10.94
Θ(52.5°)	-14.53/-17.61	-19.44/-11.48	-7.02/-4.58	-3.33/-2.42	-1.51/-0.86	-0.84/-1.56	-2.93/-4.93	-7.86/-12.04	-14.28/-9.71	-5.57/-3.08	-1.66/-1.07	-1.05/-1.41	-1.74/-1.88	-1.2/-0.75	-0.78/-1.1	-2.71/-4.56	-7.31/-11.06	-17.15/-18.38	-17.51/-17.38	-18.23/-19	-19.24/-15.93	-12.41/-10.66	-10.3/-10.99	-11.71/-12.48
Θ(60°)	-10.25/-12.47	-14.62/-10.48	-4.64/-4.4	-3.41/-2.31	-0.79/-0.42	0.79/-0.37	-0.82/-2.74	-5.77/-10.62	-16.28/-9.91	-8.43/-2.02	-0.38/-0.09	-2.68/-1.06	-1.79/-1.83	-1.21/-0.74	-0.86/-1.65	-3.13/-5.23	-8.33/-13.35	-19.05/-18.97	-14.28/-13.68	-15.47/-18.18	-16.94/-13.16	-10.32/-8.74	-8.25/-8.48	-8.81/-8.95
Θ(67.5°)	-7.38/-8.01	-7.28/-4.69	-2.55/-1.91	-2.29/-2.27	-0.91/-0.45	0.96/-0.73	-0.12/-1.68	-4.18/-8.16	-15.53/-11.86	-5.64/-2.43	-0.9/-0.4	-0.82/-1.52	-2.06/-1.94	-1.67/-1.73	-2.17/-2.83	-3.72/-5.19	-7.89/-13.12	-19.04/-15.68	-11.01/-9.3	-8.67/-8.39	-8.1/-7.69	-7.25/-6.99	-7.13/-4.47	-7.44/-7.15
Θ(75°)	-5.97/-6.11	-5.48/-2.92	-0.71/-0.15	-0.82/-0.89	0.041/-4.4	14.09/-82	-0.26/-1.9	-4.36/-7.93	-12.87/-10.54	-5.58/-2.59	-1.09/-0.74	-1.09/-1.76	-2.21/-2.05	-2.12/-19	-2.16/-1.8	-6.72/-12.35	-18.75/-9.7	-5.76/-4.05	-3.26/-3.12	-3.32/-3.68	-4.14/-4.89	-6.08/-7.2	-7.39/-6.57	
Θ(82.5°)	-5.09/-4.66	-3.98/-1.83	0.380/-9.3	-0.21/-0.72	1.052/-54	2.72/-95	-0.62/-1.22	-4.4/-8.9	-16.04/-9.93	-4.7/-2.12	-1.03/-0.97	-1.42/-1.9	-1.71/-1.3	-1.41/-1.76	-1.74/-1.63	-2.3/-3.82	-6.82/-14.54	-17.66/-1.54	-3.96/-2.23	-1.39/-1.27	-2.75/-3.46	-4.55/-5.79	-6.4/-5.77	
Θ(90°)	-5.57/-4.47	-3.11/-0.91	1.312/-17	1.370/-3	1.372/-8	3.122/-49	1.320/-12	-1.98/-4.66	-9.7/-18.34	-10.84/-5.7	-3.08/-1.76	-1.36/-1.12	-0.97/-1.49	-2.84/-4.34	-4.43/-3.64	-3.21/-3.78	-6.55/-14.54	-17.25/-7.6	-4.01/-2.15	-1.48/-1.87	-3.01/-4.31	-4.96/-5.13	-5.73/-6.84	-7.35/-6.52
Θ(97.5°)	-8.08/-7.31	-4.69/-1.57	0.81/-85	1.671/-56	2.693/-8	3.872/-93	1.671/-0.8	-1.59/-2.65	-4.47/-6.77	-7.02/-4.71	-2.69/-1.94	-2.19/-2.83	-4.23/-6.53	-8.14/-7.49	-5.29/-3.49	-2.97/-4.7	-8.84/-10.7	-13.28/-6.44	-3.37/-1.9	-1.71/-2.6	-4.05/-5.21	-5.78/-6.22	-6.9/-9.72	-8.28/-7.9
Θ(105°)	-7.85/-8	-8.04/-3.49	-0.730/-0.7	-0.160/-61	2.573/-97	4.263/-49	1.367/-0.88	-3.12/-3.79	-3.99/-4.77	-5.42/-3.81	-3.28/-3.77	-7.32/-7.12	-8.55/-1.92	-6.81/-5.87	-4.35/-3.41	-4.32/-8.11	-16.87/-18.44	-9.12/-4	-2.24/-1.46	-1.65/-2.39	-2.99/-3.33	-4.15/-9.3	-8.72/-10.45	-8.94/-7
Θ(112.5°)	-8.29/-10.5	-12.06/-6.03	-2.55/-1.98	-3.07/-2.07	0.832/-76	3.362/-89	1.39/-1.12	-4.33/-6.59	-6.93/-6.88	-7.08/-7.48	-8.49/-10.27	-11.63/-11.19	-9.03/-7.44	-6.72/-6.22	-5.55/-6.53	-10.86/-15.54	-13.96/-13.13	-7.94/-0.01	-2.34/-1.77	-1.68/-1.63	-1.45/-1.3	-1.76/-3.29	-7.03/-14.82	-15.38/-9.11
Θ(120°)	-10.38/-12.26	-18.39/-10.83	-5.65/-4.48	-6.09/-6.71	-2.89/-0.06	1.121/-1	-1.31/-1.74	-4.25/-5.65	-7.9/-8.8	-8.05/-8.1	-8.27/-8.03	-7.4/-6.76	-6.21/-5.99	-5.78/-5.44	-6.11/-8.96	-12.63/-11.47	-13.32/-10.42	-7.19/-3.63	-2.13/-1.51	-1.25/-1.1	-0.96/-0.86	-1.15/-2.26	-4.77/-9.38	-16.09/-12.76
Θ(127.5°)	-9.55/-10.1	-18.																						



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

Θ(127.5°)	-16.76/-17.14	-18.06/-18.59	-18.25/-11.96	-12.91/-16.76	-17.93/-18.09	-19.13/-15.75	-12.56/-13.33	-18.09/-18.82	-17.89/-14.32	-11.46/-10.46	-8.27/-6.09	-5.94/-6.45	-6.53/-8.49	-8.88/-10.5	-10.28/-12.49	-11.75/-17.58	-16.05/-16.42	-11.95/-13.62	-18.62/-18.28	-16.62/-14.88	-18.55/-18.85	-18.56/-14.07	-12.56/-12.93	-14.75/-15.21
Θ(135°)	-7.9/-8.53	-12.64/-19.12	-16.29/-10.32	-10.48/-13.74	-15.13/-14.5	-14.43/-14.27	-13.07/-13.33	-15.8/-18.37	-19.02/-14.68	-10.32/-13.3	-11.41/-9.1	-7.45/-7.13	-9.23/-9.42	-8.23/-8.44	-9.25/-12.27	-13.64/-16.9	-17.55/-13.84	-8.99/-9.3	-10.31/-16.26	-17.81/-18	-17.53/-18.92	-16.34/-18.05	-17.45/-14.36	-12.1/-10.02
Θ(142.5°)	-12.95/-17.06	-18.45/-11.23	-9.7/-10.73	-12.17/-15.43	-18.29/-15.86	-13.65/-10.45	-17.04/-5.84	-6.57/-7.99	-9.51/-10.43	-10.02/-9.3	-10.02/-12.59	-15.43/-14.72	-12.29/-12.78	-15.75/-13.44	-8.24/-11.94	-11.94/-12.64	-16.87/-16.8	-12.81/-12.7	-12.54/-12.12	-12.41/-14.24	-16.4/-18	-16.52/-14.6	-14.18/-13.9	
Θ(150°)	-18.82/-19.07	-14.19/-10.44	-9.27/-9.37	-9.22/-8.63	-7.93/-7.26	-7/-8	-9.49/-11.29	-18.06/-19.25	-18.5/-18.07	-18.28/-18.89	-17.95/-18.18	-15.85/-12.66	-12.46/-14.09	-13.93/-14.31	-15.01/-14.1	-17.42/-19.15	-19.2/-15.18	-13.68/-12.99	-13.19/-12.86	-12.35/-12.63	-15.32/-18.25	-18.72/-17.77	-19.06/-17.74	-16.19/-16.78
Θ(157.5°)	-13.24/-18.87	-18.88/-18.33	-18.04/-17.74	-17.65/-18.72	-18.8/-18	-18.35/-18.12	-18.21/-18.36	-17.34/-17.99	-17.59/-13.16	-12.65/-12.5	-12.54/-10.3	-12.97/-13.1	-14.25/-17.04	-17.34/-14.74	-14.07/-16.03	-18.32/-16.22	-16.62/-18.16	-15.08/-12.39	-12.38/-12.82	-13.62/-15.43	-18.79/-17.3	-16.17/-15.3	-14.69/-13.36	-12.43/-12.47
Θ(165°)	-12.8/-16.69	-18.16/-18.26	-17.99/-18.43	-16.89/-13.14	-10.47/-19.18	-18.69/-18.19	-18.5/-18.18	-18.18/-18.91	-16.35/-18.21	-18.16/-18.36	-17.98/-14.729	-19.01/-18.53	-18.31/-19.33	-15.91/-12.68	-11.5/-11.4	-11.62/-12.07	-11.95/-11.83	-12.04/-12.89	-14.88/-15.6	-18.01/-18.56	-15.81/-15.43	-16.29/-13.93	-11.25/-10.7	
Θ(172.5°)	-18.19/-17.93	-18.89/-18.33	-19.19/-18.7	-18.31/-17.74	-18.08/-18.03	-18.63/-18.61	-18.66/-17.94	-17.53/-18.53	-17.92/-19.22	-18.46/-19.06	-18.43/-18.22	-18.07/-18.08	-10.67/-10.12	-9.13/-8.43	-8.13/-8.49	-9.23/-10.27	-11.57/-13.01	-14.59/-16.33	-17.65/-18.44	-17.27/-18.44	-18.02/-18.63	-17.62/-17.08	-18.33/-16.41	-13.8/-12.33
Θ(180°)	-18.54/-18.84	-19.04/-17.63	-19.13/-17.81	-18.56/-17.74	-17.66/-17.68	-18.27/-18.61	-18.51/-18.04	-18.29/-17.96	-18.2/-18.38	-19.23/-17.61	-18.38/-18.18	-19.12/-18.19	-18.26/-17.71	-19.09/-15.45	-14.39/-14.64	-15.42/-17.12	-18.9/-19.4	-18.06/-18.68	-18.12/-17.94	-19.08/-19.17	-18.23/-17.89	-15.71/-15.38	-16.06/-15.53	-14.89/-14.75
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°)	-7.54/-8.3	-9.22/-10.12	-10.9/-11.99	-13.43/-14.98	-16.72/-18.98	-17.47/-17.91	-14.84/-12.57	-10.72/-9.38	-8.53/-7.85	-7.13/-5.62	-5.99/-6.14	-6.38/-6.65	-7.25/-7.78	-8.61/-9.73	-11.34/-13.93	-16.75/-18.13	-18.58/-18.63	-19.29/-16.32	-13.33/-11.61	-10.44/-10	-9.74/-8.94	-7.77/-7.36	-8.11/-8.59	-8.5/-7.92
Θ(7.5°)	-7.15/-7.97	-9.21/-10.48	-11.24/-12.45	-14.13/-15.75	-17.77/-17.88	-19.26/-18.89	-9.39/-8.26	-2.74/-3.86	-2.74/-3.86	-2.74/-3.86	-6.63/-6.85	-7.55/-8.02	-8.46/-8.98	-10.13/-11	-12/-12.42	-12.38/-12.13	-12.41/-12.79	-12.57/-12.3	-11.74/-10.4	-9.37/-8.94	-8.92/-8.25	-7.25/-6.74	-6.5/-7.24	-7.72/-7.22
Θ(15°)	-9.2/-10.83	-13.15/-15.29	-15.77/-15.46	-14.85/-14.11	-15.08/-17.22	-19.31/-19.05	-14.84/-12.89	-10.22/-6.35	-6.96/-6.56	-6.76/-7.21	-7.26/-8.03	-5.99/-11.89	-12.81/-12.52	-12.47/-12.35	-12.19/-11.03	-9.58/-8.66	-8.44/-6.36	-8.65/-8.85	-9.31/-9.19	-8.47/-6.63	-6.79/-6.17	-5.81/-5.51	-5.65/-6.35	-7.43/-8.24
Θ(22.5°)	-7.26/-8.29	-11.03/-14.31	-12.59/-11.84	-11.81/-11.58	-12.15/-12.59	-13.06/-13.35	-11.58/-8.85	-6.56/-5.2	-4.59/-4.58	-5.24/-6.54	-7.88/-9.09	-10.66/-13.09	-15.1/-14.9	-14.1/-14.1	-12.9/-10.31	-8.23/-7.04	-6.6/-6.14	-5.93/-6.19	-6.61/-6.62	-5.96/-5.1	-4.42/-4.21	-4.47/-4.63	-4.82/-4.54	-6.36/-7.05
Θ(30°)	-7.13/-7.06	-8.22/-9.72	-9.77/-9.04	-8.87/-8.36	-8.27/-9.1	-9.09/-9.92	-9.66/-7.99	-6.53/-5.42	-4.46/-4.23	-5.32/-6.27	-7.13/-8.67	-10.69/-12.75	-14.02/-14.89	-15.37/-13.48	-10.88/-9.24	-8.03/-6.92	-5.47/-4.76	-4.35/-4.13	-4.12/-4.77	-5.42/-5.38	-4.31/-3.77	-4.64/-4.34	-4.84/-5.64	-6.86/-7.95
Θ(37.5°)	-6.06/-6.58	-7.43/-8.27	-8.94/-8.29	-8.07/-7.65	-5.8/-4.6	-4.57/-4.84	-5.02/-5.08	-5.66/-5.86	-5.52/-6.08	-6.81/-7.15	-7.39/-8.35	-10.64/-12.71	-13.35/-13.19	-12.66/-11.07	-8.52/-6.64	-6.24/-5.49	-4.59/-3.98	-3.1/-2.5	-2.96/-4.14	-4.12/-3.17	-2.61/-2.36	-2.62/-3.26	-3.95/-4.85	-5.8/-6.01
Θ(45°)	-8.28/-8.29	-7.95/-6.88	-7.24/-8.85	-7.99/-7.7	-7.31/-6.72	-4.56/-3.38	-2.71/-2.53	-3.01/-3.61	-3.86/-4.55	-5.77/-6.72	-6.45/-6.51	-7.07/-8.42	-10.3/-9.6	-8.62/-8.96	-8.15/-6.36	-5.03/-4.12	-3.74/-3.18	-2.14/-1.6	-1.9/-2.43	-2.53/-2.45	-2.23/-2.38	-2.74/-3.28	-4.06/-5.4	-7.37/-8.47
Θ(52.5°)	-3.66/-3.9	-5.94/-8.26	-7.13/-9.62	-6.93/-6.27	-6.59/-7.4	-6.94/-5.8	-2.59/-2.22	-2.61/-2.83	-2.74/-3.86	-5.91/-6.98	-7.51/-9.1	-8.34/-9.91	-9.89/-7.66	-6.24/-5.62	-5.29/-5.06	-4.25/-3.81	-3.76/-3.1	-2.61/-2.33	-1.55/-0.74	-1.4/-2.17	-2.01/-1.9	-2.08/-2.21	-1.99/-2.22	-3.66/-4.72
Θ(60°)	-3.09/-3.12	-3.46/-4.7	-4.24/-5.13	-8.02/-6.76	-5.78/-6.79	-8.24/-10.21	-5.67/-3.33	-3.63/-4.61	-4.85/-5.54	-6.29/-6.26	-6.74/-8.16	-9.91/-10.65	-8.15/-5.97	-4.87/-4.52	-3.62/-3.52	-4.7/-5.93	-4.53/-3.23	-2.98/-2.96	-1.95/-2.22	-3.29/-3.09	-2.49/-2.21	-3/-3.95	-3.46/-2.38	-1.99/-3.02
Θ(67.5°)	-2.36/-3.38	-3.25/-3.54	-4.24/-4.53	-4.51/-4.63	-5.68/-6.71	-6.2/-6.68	-6.02/-6.68	-6.22/-6.84	-6.7/-6.7	-6.85/-6.97	-6.57/-6.73	-6.66/-5.79	-7.75/-6.7	-5.28/-5.41	-4.05/-3.68	-5.16/-5.55	-4.17/-3.25	-3.92/-2.91	-3.41/-5.46	-6.89/-7.54	-6.32/-4.56	-4.38/-4.39	-3.11/-1.54	-0.45/-0.98
Θ(75°)	0.47/-0.92	-2.18/-3.04	-2.21/-4.62	-4.86/-3.97	-4.43/-3.36	-3.47/-3.88	-7.04/-6.94	-8.61/-6.55	-8.74/-6.51	-3.82/-4.2	-1.36/-2.49	-3.56/-4.56	-5.29/-4.93	-2.49/-4.12	-2.06/-3.24	-2.24/-2.34	-3.39/-4.49	-6.64/-10.7	-11.98/-10.65	-7.94/-6.32	-3.76/-1.52	-0.76/-1.52	-0.10/-0.51	
Θ(82.5°)	2.62/1.75	0.7/-1.79	-0.47/-2.08	-3.61/-2.81	-2.6/-2.48	-3.1/-3.41	-5.11/-5.92	-5.23/-5.58	-4.87/-2.95	-0.75/-0.26	-0.31/-0.72	-0.76/-0.91	-1.78/-2.87	-2.44/-0.81	-0.09/-1.64	-1.89/-1.47	-1.72/-1.5	-0.83/-0.91	-1.04/-1.12	-4.67/-6.01	-6.76/-16.55	-19.04/-17.49	-4.68/0.22	2.36/3.85
Θ(90°)	1.33/0.65	0.85/-0.79	-1.36/-2.1	-1.35/-1.05	-1.38/-1.8	-2.55/-5.29	-6.71/-5.08	-3.96/-3.82	-3.54/-1.85	0.20/0.7	0.47/-0.02	-1.34/-0.86	-2.27/-2.51	-2.58/-1.4	-0.07/-1.85	-1.74/-0.9	-1.5/-1.1	0.37/-0.2	0.02/-1.09	-4.58/-3.66	-3.44/-9.31	-17.93/-9.26	-6.67/-2.06	-0.86/-0.81
Θ(97.5°)	-1.24/-3.69	-3.77/-5.94	-4.76/-2.7	-1.09/-1.46	-1.36/-2.46	-2.76/-4.52	-5.75/-5.12	-4.3/-4.55	-4.69/-4.22	-0.61/-1.15	-1.21/-0.27	-3.39/-4.39	-6.05/-3.06	-2.32/-1.18	-1.64/-2.92	-0.89/-3.37	-3.41/-2.07	-0.84/-2.1	-1.79/-2.07	-5.05/-4.25	-2.73/-4.96	-13.67/-7.81	-6.68/-4.6	-2.45/-0.83
Θ(105°)	-1.88/-3.75	-8.79/-9.55	-7.88/-5.26	-2.58/-1.22	-2.16/-3.25	-2.79/-2.71	-3.32/-3.07	-2.99/-3.35	-3.65/-2.1	-0.48/-0.81	-1.23/-2.86	-4.18/-4.03	-7.47/-3.66	-3.26/-2.55	-2.72/-2.76	-2.84/-4.94	-8.13/-4.32	-3.54/-7.63	-4.11/-4.54	-9.07/-7.79	-4.97/-14.21	-8.59/-3.74	-3.17/-2.55	-2.36/-2.63
Θ(112.5°)	-7.97/-6.35	-9.02/-7.3	-8.29/-5.24	-4.18/-2.04	-2.58/-3.82	-4.66/-3.96	-3.35/-2.17	-2.28/-2.42	-2.04/-1.5	-1.07/-1.08	-1.27/-3.52	-6.27/-7.11	-8.04/-5.55	-4.25/-3.38	-2.84/-3.32	-7.22/-11.21	-8.57/-0.8	-8.71/-17.76	-15.02/-17.89	-18.48/-13.69	-10.38/-16	-8.03/-3.05	-3.61/-4.89	-5.89/-11.41
Θ(120°)	-11.02/-7.62	-9.36/-8.86	-11.95/-6.83	-5.03/-4.14	-3.33/-4.94	-8.79/-7.77	-5.09/-3.78	-3.41/-3.49	-3.16/-2.99	-3.72/-3.95	-4.15/-5.37	-10.09/-12.09	-11.68/-13.99	-9.43/-9.29	-5.96/-6.79	-9.82/-17.46	-15.18/-9.87	-11.48/-16.76	-17.17/-19.1	-19.09/-16.87	-14.77/-12.06	-16.77/-19.94	-14.39/-18.04	-14.32/-17.46
Θ(127.5°)	-11.08/-11.66	-18.01/-9.79	-7.69/-8.24	-7.08/-6.2	-6.57/-8.45	-16.71/-13.93	-8.03/-5.81	-5.17/-5.88	-6.37/-6.07	-6.91/-9.32	-9.32/-7.56	-7.87/-8.22	-7.49/-10.19	-14.18/-12.72	-13.95/-15.4	-18.41/-18.18	-18.85/-10.99	-14.55/-12.03	-15.83/-14.78	-10.98/-13.41	-17.85/-9.05	-7.63/-11.93	-9.79/-8.9	-8.99/-9.4
Θ(135°)	-13.16/-11.71	-11.34/-8.12	-8.19/-9.1	-9.74/-11.09	-12.45/-15.8	-13.41/-9.43	-9.33/-10.12	-11.78/-14.26	-16.92/-16.19	-13.62/-12.27	-10.91/-9.72	-8.92/-7.29	-7.45/-8.7	-8.54/-9.25	-8.75/-12.53	-18.77/-19.4	-16.52/-18.18	-16.44/-18.44	-19.22/-16.02	-9.58/-10.3	-10.44/-10.92	-10.85/-9.73	-9.64/-10.78	-14.26/-17.4
Θ(142.5°)	-15.98/-16.95	-19.28/-18.63	-12.19/-8.97	-8.08/-7.54	-8.07/-9.53	-13.81/-18.19	-17.8/-16.16	-16.82/-13.23	-11.67/-10.37	-8.79/-8.32	-9.81/-11.92	-11.35/-11.94	-12.47/-12.35	-10.85/-8.75	-9.04/-9.47	-9.53/-12.94	-15.87/-13.35	-11.28/-11.66	-10.48/-12.32	-12.32/-10.67	-11.15/-10.65	-10.19/-9.27	-10.37/-10.5	-12.83/-17.58
Θ(150°)	-8.3/-9.02	-11.94/-17.01	-15.94/-14.31	-14.89/-16.16	-18.67/-18.26	-17.83/-14.77	-10.54/-17.6	-18.67/-18.99	-18.27/-18.49	-18.33/-18.73	-18.65/-19.16	-16.75/-18.19	-16.07/-13.54	-13.25/-13.8	-14.37/-14.42	-14.06/-13.17	-16.28/-16.73	-16.52/-14.14	-14.61/-14.12	-14.51/-12.27	-11.43/-11.76	-11.48/-10.44	-10.65/-9.46	
Θ(157.5°)	-18.86/-18.27	-18.61/-16.89	-16.59/-18.43	-18.77/-18.96	-18.32/-18.24	-18.89/-16.65	-19.18/-18.7	-18.19/-18.7	-19.29/-18.5	-18.11/-18.94	-16.75/-14.98	-14.67/-14.81	-15.38/-15.15	-14.2/-13.24	-13.69/-17.11	-17.28/-19.42	-17.21/-14.41	-12.07/-10.97	-12.09/-15.18	-16.14/-14.96	-14.55/-15.1	-18.5/-18.74	-18.61/-18.07	-18.09/-19.15
Θ(165°)	-15.55/-18.95	-18.75/-18.37	-18.91/-18.85	-19.44/-18.63	-18.94/-18.88	-18.04/-18.23	-18.83/-18.36	-17.78/-17.98	-18.4/-18.61	-19.07/-18.92	-19.11/-17.97	-18.07/-17.37	-15.75/-13.93	-11.86/-8.9	-8.57/-8.22	-9.15/-10.87	-12.94/-15.65	-19.01/-19.05	-17.07/-13.96	-12.73/-11.91	-11.76/-12.18	-13.27/-14.24	-13.98/-13.95	
Θ(172.5°)	-18.48/-18.9	-18.25/-18.62	-19.06/-19.14	-19.02/-18.68	-17.29/-17.47	-19.17/-1.99	-18.14/-18.72	-18.58/-18.28	-18.81/-18.35	-17.71/-17.64	-18.6/-18.35	-19.01/-18.96	-18.47/-18.57	-16.19/-										



Radiated Composite Gain Data_2.4GHz, 5GHz

Appendix A

Θ(180°)	-17.04/-17.85	-18.58/-19.1	-18.75/-17.9	-18.85/-18.41	-18.72/-18.53	-18.52/-18.22	-18.76/-18.65	-19.38/-18.26	-18.53/-18.48	-18.26/-19	-19.04/-19.24	-17.56/-17.99	-18.67/-18.5	-18.99/-6.54	-6.98/-7.31	-7.62/-8.32	-9.83/-12.24	-15.44/-19.36	-17.98/-18.71	-18.83/-18.47	-17.8/-16.69	-15.46/-18.05	-17.83/-17.69	-14.66/-14.2
Freq(Hz)	5.6GPol.	Theta/Ant.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.27/-5.61	-6.05/-6.89	-7.91/-8.63	-8.74/-8.72	-9.1/-9.45	-9.64/-9.26	-8.17/-6.91	-5.9/-5.33	-4.94/-4.46	-3.88/-3.26	-3.12/-3.26	-3.56/-3.37	-3.27/-3.9	-5.07/-6.15	-7.09/-7.97	-8.57/-8.87	-9.17/-9.41	-8.98/-7.9	-7.01/-5.86	-4.75/-3.98	-3.83/-4.12	-4.58/-4.56	-4.19/-4.23	-4.8/-5.31
Θ(7.5°)	-3.88/-4.75	-5.5/-5.99	-6.67/-7.26	-7.43/-8	-8.72/-8.78	-8.77/-8.7	-8.18/-7.16	-5.73/-4.47	-4.01/-4.18	-4.79/-4.93	-4.12/-3.73	-4.91/-6.07	-6.32/-6.52	-7.53/-8.88	-9.99/-10.51	-10.36/-9.84	-9.32/-9.23	-8.56/-7.86	-7.27/-6.48	-5.9/-5.36	-4.79/-4.23	-3.81/-3.6	-3.99/-4.17	-4.05/-3.8
Θ(15°)	-8.88/-10.28	-11.25/-11.19	-10.92/-10.5	-9.43/-8.47	-7.59/-6.73	-6.16/-5.66	-5.7/-5.92	-5.69/-5.25	-4.67/-4	-3.74/-4.15	-4.68/-4.84	-5.45/-6.8	-7.97/-8.7	-9.56/-11	-12.19/-13.15	-12.56/-9.89	-7.7/-6.96	-6.81/-7.11	-7.32/-6.63	-5.37/-4.8	-4.16/-3.94	-3.99/-4.18	-4.84/-6.06	-7.8/-8.48
Θ(22.5°)	-17.88/-18.99	-15.47/-14.39	-13/-11.61	-10.71/-9.62	-8.27/-6.78	-5.89/-5.88	-6.2/-6.39	-6.06/-5.33	-4.5/-4.14	-4.28/-4.81	-5.39/-5.74	-6.16/-7.72	-9.94/-11.23	-14.01/-18.96	-14.42/-10.36	-8.6/-6.71	-5.27/-5.43	-6.63/-6.89	-5.42/-4.06	-3.74/-4.21	-5.05/-5.61	-6.26/-6.76	-7.59/-9.55	-14.07/-16.61
Θ(30°)	-9.9/-6.65	-6.19/-7.71	-9.59/-8.83	-7.25/-5.72	-4.66/-3.78	-4.03/-4.33	-4.92/-5.14	-4.77/-4.22	-4.15/-3.89	-3.69/-3.4	-3.31/-3.29	-3.33/-3.85	-4.06/-4.29	-6.16/-9.72	-12.46/-10.95	-8.1/-5.68	-4.33/-4.74	-4.3/-2.52	-1.76/-2.19	-2.5/-2.73	-3.25/-3.76	-5.01/-7.26	-10.66/-12.17	-13.13/-14.87
Θ(37.5°)	-5.67/-3.62	-2.8/-2.6	-3.03/-4.23	-4.94/-4.18	-2.74/-2.27	-2.37/-2.63	-3.02/-3.04	-2.76/-3	-3.83/-4.14	-4.16/-3.62	-2.45/-1.59	-1.74/-2.54	-2.73/-2.44	-3.4/-5.58	-7.62/-9.35	-6.86/-3.91	-3.35/-2.94	-2.1/-1.74	-1.7/-1.42	-1.45/-2.42	-3.97/-4.8	-4.82/-5.93	-8.94/-11.89	-9.4/-7.6
Θ(45°)	-5.67/-3.64	-2.41/-2.27	-1.84/-2.47	-2.91/-1.96	-0.020/0.15	-1.47/-2.81	-3.18/-2.69	-2.08/-2.58	-4.52/-6.22	-6.55/-6.06	-4.5/-2.76	-2.05/-2.94	-4.35/-3.94	-3.53/-3.87	-3.93/-5.23	-5.01/-3.59	-2.71/-1.24	-0.350/4.7	0.64/0.44	-0.24/-1.6	-2.34/-1.71	-1.4/-2.34	-4.42/-7.14	-7.8/-6.27
Θ(52.5°)	-15.36/-17.79	-13.61/-11.31	-7.4/-6	-3.64/-2.99	-0.51/-0.3	0.06/-1.86	-2.98/-3.37	-3.06/-3.65	-4.43/-3.74	-3/-3.09	-3.74/-4.17	-4.58/-4.57	-4.73/-4.91	-3.53/-3.11	-3.67/-4.69	-4.19/-2.96	-2.16/-1.9	-0.60/8.7	0.73/0.33	0.05/-0.63	-0.85/-0.85	-1.16/-1.69	-3.58/-8.45	-18.42/-15.04
Θ(60°)	-3.08/-2.22	-3.51/-5.11	-12.58/-18.75	-8.68/-5.83	-3.72/-1.98	-2.25/-2.27	-1.65/-2.74	-3.62/-4.9	-5.94/-4.44	-3.05/-3.52	-4.43/-4.98	-6.36/-6.29	-5.44/-5.1	-3.56/-3.51	-3.2/-2.7	-2.8/-3.96	-4.33/-3.67	-1.12/-0.88	-1.46/-0.55	-0.63/-2.28	-1.74/0.47	0.58/-1.12	-3.54/-5.4	-5.68/-5.81
Θ(67.5°)	0.311/9	1.46/0.75	-2.4/-5.55	-6.98/-7.73	-7.42/-6.05	-7.22/-4.58	-2.32/-4.88	-5.62/-4.38	-4.06/-3.62	-3.57/-4.53	-4.97/-4.96	-6.24/-4.64	-4.96/-3.09	-2.34/-3.99	-5.32/-3.88	-2.87/-3.76	-4.18/-3.18	-1.93/-2.55	-2.5/-1.46	-2.97/-4.73	-3.17/-1.14	-2.69/-5.27	-3.94/-0.68	0.69/-0.18
Θ(75°)	-0.022/0.15	1.67/1.23	-3.03/-4.67	-2.05/-2.1	-2.97/-4.07	-7.82/-7.57	-4.42/-7.31	-8.41/-4.39	-3.75/-4.45	-4.31/-5.03	-5.72/-5.31	-6.37/-4.93	-6.12/-2.97	-1.24/-2.23	-4.71/-3.11	-1.43/-1.65	-2.04/-2	-1.62/-0.89	-1.26/-3.44	-5.04/-6.33	-4.53/-2.7	-3.17/-3.08	-0.66/-1.29	2.14/0.41
Θ(82.5°)	0.20/63	1.09/1.59	-0.62/-4.36	-3.66/-2.63	-1.63/-0.95	-3.18/-5.61	-4.87/-8.93	-8.12/-4.04	-3.71/-3.54	-3.46/-3.79	-4.98/-4.63	-5.3/-5.19	-5.51/-1.35	0.1/-1.75	-4.02/-1.98	-0.98/-1.42	0.01/-0.97	0.68/1.25	-1.1/-2.85	-3.76/-7.68	-5.43/-4.35	-3.57/-7.55	-3.85/0.77	2.99/2.43
Θ(90°)	2.21/1.51	2.24/2.38	0.86/-1	-1.44/-2.39	-2.41/-0.44	-3.26/-3.35	-2.31/-7.03	-8.45/-4.55	-3.66/-2.52	-0.46/-0.09	-0.49/-0.09	-2.75/-2.82	-3.61/-1.36	1.050/7.7	-1.11/-2	0.76/0.97	-0.22/0.32	1.322/0.3	0.36/-0.41	-4.67/-5.78	-4.99/-10.96	-12.61/-16.84	-2.43/1.22	2.76/3.88
Θ(97.5°)	-4.06/-3.45	-0.36/0.72	0.22/0.8	1.71/0.16	-0.4/-0.11	-2.89/-2.83	-2.39/-5.98	-5.99/-2.63	-2.8/-1.58	-0.09/-1.2	1.07/0.1	-1.04/-2.08	-3.23/-0.12	0.33/-0.9	-1.76/-2.34	0.67/-1.1	-1.03/-1.01	0.23/0.9	0.43/-1.78	-7.02/-4.16	-1.81/-9.4	-16.46/-8.52	-4/-1.99	-0.32/-1.3
Θ(105°)	-7.42/-18.45	-9.2/-4.98	-3.7/-2.04	0.79/1.29	-1.6/-0.74	-1.45/-5.12	-1.52/-6.06	-6.4/-5.46	-2.97/-2.13	-0.98/-0.74	0.93/1.12	-0.98/-2.9	-4.43/-3.48	-1.89/-2.63	-4.23/-3.24	-3.63/-3.67	-3.4/-5.2	-4.47/-2.79	-5.09/-6.1	-10.67/-5.85	-0.95/-9.11	-17.46/-6.17	-4.11/-1.84	-3.29/-5.24
Θ(112.5°)	-12.62/-12.6	-16.9/-16.93	-9.19/-6.91	-4.24/-2.02	0.34/-0.32	-0.93/-0.02	-1.6/-3.73	-4.79/-3.35	-2.88/-2.15	-0.7/-0.38	-0.94/-2.35	-3.8/-5.91	-7.46/-7.16	-4.17/-6.74	-10.51/-7.5	-4.45/-7	-9.53/-6.39	-7/-8.98	-11.53/-15.53	-14.77/-17.92	-15.19/-18.85	-12.8/-5.96	-7.55/-9.81	-8.11/-6.09
Θ(120°)	-15.32/-12.33	-8.33/-8.75	-9/-9.24	-7.72/-3.33	-2.2/-2.97	-3.34/-2.33	-2.96/-5.43	-3.06/-2.58	-3.09/-2.59	-2.55/-1.49	-1.23/-2.67	-3.5/-5.82	-7.56/-8.88	-7.31/-7.95	-17.34/-9.06	-6.74/-5.67	-8.77/-13.98	-10.42/-18.05	-16.82/-17.7	-11.98/-10.1	-17.01/-10.98	-18.71/-17.45	-13.91/-17.75	-16.94/-19.04
Θ(127.5°)	-8.14/-7.29	-6.91/-7.47	-9.54/-6.22	-5.36/-3.62	-3.15/-5.03	-4.96/-2.98	-3.46/-3.7	-3.36/-2.77	-3.6/-5.51	-5.56/-4.66	-4.67/-3.95	-3.75/-8.18	-8.99/-8.87	-7.18/-10.91	-14.28/-9.48	-10.56/-18.28	-11.93/-6.87	-6.25/-7.99	-10/-13.51	-8.76/-4.4	-4.71/-4.52	-7.14/-6.64	-8.81/-13.29	-6.39/-9.11
Θ(135°)	-8.69/-7.17	-8.89/-6.44	-5.15/-3.47	-2.82/-3.43	-5.68/-5.6	-5.32/-5.44	-6.57/-8.18	-6.05/-5.41	-6.48/-6.77	-5.61/-5.07	-5.05/-4.95	-6.59/-7.35	-6.84/-8.52	-9.08/-10.06	-9.46/-8.81	-12.51/-17.7	-17.84/-10.97	-8.21/-4.55	-4.69/-11.66	-13.78/-6.55	-6/-8.53	-6.42/-7.22	-5.33/-8.38	-10.66/-16.08
Θ(142.5°)	-10.06/-6.47	-6.72/-8.05	-2.92/-3.17	-3.86/-3.48	-4.72/-4.77	-5.33/-8.25	-6.28/-5.96	-7.5/-9.14	-9.25/-8.6	-7.58/-6.79	-8.76/-9.81	-10.65/-10.42	-10.02/-11.79	-12.01/-10.04	-9.58/-13.08	-17.98/-14.42	-4.84/-6.48	-4.56/-6.67	-7.06/-6.58	-5.53/-6.21	-6.59/-9.73	-7.38/-9.74	-12.92/-15.34	
Θ(150°)	-5.17/-6.24	-10.45/-11.92	-8.94/-7.83	-7/-6.23	-5.08/-4.35	-5.48/-9.31	-14.44/-18.03	-17.5/-18.2	-18.44/-13.87	-13.14/-11.63	-9.88/-8.28	-8/-8.29	-8.17/-8.02	-7.9/-9.2	-12.63/-17.24	-14.52/-11.34	-8.53/-8.58	-8.85/-8.3	-8.22/-10.03	-11.78/-11.38	-11.76/-14.65	-14.38/-8.98	-5.12/-4.81	-7.09/-6.56
Θ(157.5°)	-11.33/-9.84	-8.62/-7.94	-9.03/-18.24	-18.36/-17.5	-18.47/-19.04	-18.32/-18.89	-18.53/-17.78	-18.34/-18.86	-19.02/-11.63	-10.33/-10.85	-11.93/-12.57	-12.09/-12.06	-13.39/-14.29	-13.88/-11.49	-9.08/-7.91	-9.15/-12.05	-14.01/-16.33	-18.8/-16.58	-15.35/-14.21	-10.92/-10.32	-13.11/-19.01	-17.63/-16.68	-11.47/-11.63	-18.03/-15.79
Θ(165°)	-17.66/-15.27	-12.8/-11.84	-11.57/-10.33	-8.3/-7.47	-7.5/-18.48	-18.45/-18.68	-18.43/-17.7	-17.89/-19.2	-18.32/-19.09	-18.75/-19.02	-18.23/-18.84	-18.33/-17.34	-18.21/-19.2	-17.42/-13.31	-11.9/-12.95	-16.5/-18.13	-18.42/-19.59	-17.79/-16.54	-15.08/-12.94	-9.92/-8.75	-8.59/-9.42	-10.25/-11.1	-11.56/-11.98	-13.83/-17.89
Θ(172.5°)	-18.61/-15.7	-18.52/-18.05	-18.7/-17.53	-17.67/-17.87	-18.19/-17.98	-17.66/-16.58	-17.75/-18.07	-18.52/-19.16	-18.96/-18.66	-17.97/-18.23	-18.49/-18.34	-13.91/-13.58	-14.32/-15.99	-18.33/-18.58	-18.91/-17.72	-16.32/-16.28	-17.01/-17.69	-17.63/-16.24	-15.22/-13.92	-13.53/-12.6	-11.61/-11.71	-11.71/-12.06	-12.21/-15.37	
Θ(180°)	-18.5/-18.33	-18.15/-17.69	-19.15/-18.36	-18.55/-19.09	-19.14/-18	-18.04/-19.06	-18.01/-17.53	-18.99/-18.15	-17.89/-18.49	-18.91/-18.23	-19.18/-18.96	-17.64/-18.81	-18.71/-18.1	-17.5/-18.14	-18.03/-19	-15.72/-14.34	-14.11/-14.32	-14.57/-15	-15.92/-17.15	-16.53/-14.69	-13.61/-13.74	-14.3/-13.94	-13.4/-13.22	-12.33/-11.38
Freq(Hz)	5.785GPol.	Phi/Ant.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.47/-5.85	-5.94/-5.83	-5.66/-6.06	-6.72/-6.92	-6.86/-6.56	-5.86/-5.37	-5.4/-5.61	-6.2/-6.96	-7.35/-7.27	-7.35/-7.34	-7.82/-9.21	-10.48/-10.81	-10.38/-9.77	-9.07/-8.92	-8.86/-8.41	-7.88/-7.28	-6.74/-6.38	-6.66/-6.46	-6.59/-7.14	-7.45/-7.24	-6.65/-6.31	-6.09/-6.03	-6.12/-5.84	-5.23/-5.07
Θ(7.5°)	-14.12/-12.33	-10.69/-9.4	-8.67/-8.13	-7.88/-8.67	-6.26/-6.11	-5.87/-5.75	-6.12/-6.09	-6.44/-7.28	-7.98/-8.6	-9.18/-8.3	-6.38/-5.73	-6.21/-5.94	-4.89/-4.44	-4.69/-5.01	-5.27/-5.6	-5.96/-6.43	-7.21/-7.83	-8.02/-7.54	-7.22/-7.16	-6.98/-6.76	-6.61/-7.03	-7.77/-8.7	-9.71/-10.52	-12.09/-13.74
Θ(15°)	-15.22/-11.8	-10.6/-9.74	-9.41/-8.64	-8.47/-0.9	-6.15/-5.75	-5.49/-5.48	-5.62/-5.65	-7.07/-8.37	-9.14/-8.91	-9.03/-9.81	-9.5/-7.45	-6.12/-5.15	-4.36/-4.14	-4.61/-5.31	-6.29/-6.94	-7.79/-8.99	-10.52/-11.72	-11.22/-10.55	-10.13/-9.85	-10.61/-12.74	-15.65/-17.76	-11.57/-19.04	-18.2/-16.63	
Θ(22.5°)	-15.44/-13.6	-17.65/-17.87	-17.62/-17.85	-19.56/-14.14	-10.94/-9.16	-7.47/-6.7	-5.91/-6.1	-6.71/-8.31	-11.1/-13.98	-13.66/-13.6	-13.81/-10.13	-6.57/-5.21	-4.96/-4.24	-3.89/-4	-4.85/-5.53	-6/-6.45	-7.31/-9.13	-12.46/-16.38	-17.28/-17.78	-18.95/-18.15	-18.35/-19.26	-17.58/-17.84	-17.72/-16.94	-15.99/-16.12
Θ(30°)	-15.54/-14.09	-17.19/-18.44	-19.32/-18.98	-16.55/-16.51	-18.23/-18.87	-16.64/-13.34	-11.36/-8.51	-6.82/-8.63	-8.49/-12.15	-16.04/-18.12	-19.08/-18.94	-14.03/-10.09	-7.64/-5.74	-4.54/-3.81	-4.37/-5.64	-6.03/-4.72	-4.76/-6.41	-8.97/-10.94	-14.05/-17.84	-17.98/-18.26	-1			



-

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	3.14	3.66	3.92	4.79
Ant. 2 Max Gain (dBi)	5.2	5.2	5.91	5.81
Ant. 3 Max Gain (dBi)	4.96	3.16	4.67	5.52
Ant. 4 Max Gain (dBi)	3.14	2.67	2.29	4.15
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/52.5/7.5	Theta/45/15	Theta/45/30	Theta/135/195
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/142.5/292.5	Theta/135/292.5	Theta/142.5/300	Theta/135/292.5
Ant. 3 Polarization/Θ(°)/Φ(°)	Theta/52.5/187.5	Theta/52.5/187.5	Theta/60/187.5	Theta/60/195
Ant. 4 Polarization/Θ(°)/Φ(°)	Theta/150/82.5	Theta/60/225	Theta/112.5/97.5	Theta/157.5/105
Max Gain (dBi)	5.2	5.2	5.91	5.81
DG [1SS] (dBi)	6.04	5.65	6.14	6.19
DG [2SS] (dBi)	5.2	5.2	5.91	5.81
DG [4SS] (dBi)	5.2	5.2	5.91	5.81



Radiated Composite Gain Data_6GHz

Appendix B

Θ(22.5°)	0.31/0.62	1.32/1.91	1.59/0.91	1.19/1.1	0.99/0.5	-0.19/0.03	0.67/1.63	2.38/2.88	2.74/2.35	2.06/1.76	1.24/0.61	0.07/-0.8	-0.77/0.09	0.52/0.89	1.46/1.49	0.94/-0.02	-0.61/-0.81	-0.82/-1.16	-0.94/-1.38	-2.05/-2.39	-1.83/-1.75	-1.53/-0.71	0.04/0.4	0.51/0.18
Θ(30°)	31.98	1.24/1.68	2.49/2.23	1.45/1.75	2.39/2.27	1.39/0.02	-0.51/0.24	1.64/2.25	2.03/1.55	0.81/-0.39	-1.62/-2.9	-3.07/-2.37	-1.15/-0.02	0.64/1.02	1.64/2.01	1.98/1.5	0.56/-0.52	-1.38/-1.98	-2.51/-2.35	-2.2/-2.29	-1.89/-0.4	0.91/34	1.54/1.69	2.36/2.79
Θ(37.5°)	2.98/2.71	2.39/2.01	1.27/0.25	-0.67/-1.07	-0.88/0.03	0.02/-0.17	-0.17/-0.12	0.61/1.33	1.39/1.29	0.64/-0.57	-0.41/-0.13	0.91/1.36	1.05/0.82	0.43/0.11	0.99/1.81	0.67/-0.66	-1.16/-1.5	-2.36/-2.16	-2.45/-2.75	-2.96/-2.78	-2.01/-0.72	0.74/1.71	2.68/2.87	2.74/2.82
Θ(45°)	1.32/0.92	0.76/0.89	1.12/1.38	1.22/0.38	-1.09/-0.68	0.65/1.38	1.41/0.63	0.28/0.31	0.57/0.67	0.49/-0.49	-1.42/-0.97	0.37/1.89	2.14/1.08	0.32/-0.24	0.43/1.75	2.72/2.72	2.17/1.12	0.04/-2.41	-3.86/-2.47	-1.22/-1.24	-0.6/-0.15	0.63/0.91	1.77/2.24	1.74/1.3
Θ(52.5°)	-3.97/-3.67	-3.21/-1.28	0.51/07	0.45/-0.24	-1.69/-2.56	-1.58/-0.42	0.25/-0.58	-0.75/-0.51	-0.61/-1.17	-0.44/0.66	1.56/1.61	1.49/1.33	0.21/-0.82	-0.52/0.15	0.99/1.61	1.21/0.72	0.34/-0.88	-2.05/-2.73	-2.7/-2.79	-2.54/-1.79	-1.72/-1.34	-0.04/0.62	0.14/-1.54	-2.17/-1.4
Θ(60°)	-0.88/-0.23	-1.53/-0.96	0.11/1.16	1.24/-0.78	-1.44/-3.35	-3.44/-1.43	-0.21/-1.37	-0.12/1.55	1.44/-0.07	-1.16/0.45	1.34/2.06	-0.21/-1.02	-0.61/1.3	2.06/1.7	0.32/-0.55	-1.2/-2.34	-2.47/-3.65	-4.67/-4.54	-1.88/-1.59	-2.17/-2.95	-1.24/-1.62	-0.65/-1.26	-1.51/-2.04	
Θ(67.5°)	-1.47/-0.86	-0.27/-0.31	-0.15/0.98	1.42/0.35	-2.09/-2.67	-2.55/-1.57	-0.33/-1.15	-0.38/0.08	0.57/0.25	0.06/0.07	-0.2/-0.11	-0.37/-0.81	-0.6/0.44	0.96/1.66	0.9/0.33	-0.6/-1.59	-1.37/-1.74	-3.35/-2.19	-4.65/-4.32	-2.46/-2.74	-3.52/-1.42	-0.95/-0.85	0.49/0.01	-0.76/-0.78
Θ(75°)	-2.12/-0.47	-0.91/-0.32	-1.04/-0.31	0.52/0.91	-2.08/-0.94	-1.59/-1.36	-0.51/-1.31	-0.41/-0.38	-1.09/-1.49	-0.6/-0.18	-0.12/-0.31	-1.99/-2.42	-1.34/-0.55	-0.31/-0.1	0.54/0.06	0.51/-0.81	-0.65/-0.53	-1.53/-2.04	-2.48/-3.11	-2.75/-3.21	-2.33/-0.62	-0.04/-1.35	1.19/0.18	-0.64/-1.78
Θ(82.5°)	-1.63/-0.22	-0.17/-1.36	-4.82/-1.6	-0.45/-0.04	-2.78/-1.55	-1.58/-0.19	-0.04/0.5	-0.64/-1.92	-1.43/-1.57	-1.12/0.44	0.91/-0.52	-2.08/-2.14	-1.06/-0.8	-0.45/-0.9	-2.12/-0.61	0.2/0.13	0.58/-0.08	-0.83/-1.81	-2.43/-0.98	-0.95/0.64	0.92/-1.04	-1.82/-2.84	-2.12/-1.38	
Θ(90°)	-1.53/-1.81	-1.14/-3.18	-3.36/-1.78	-1.24/-0.24	-1.85/-0.48	-0.28/-2.08	-1.45/-2.2	-1.83/-3.93	-2.21/-1.78	-3.83/-2.57	-0.52/-1.02	-2.02/-1.8	-1.01/0.86	-0.83/-3.96	-5.59/-2.71	0.42/1.25	1.3/0.56	0.79/0.82	-0.31/-0.97	-1.94/-1.01	0.06/0.18	0.49/0.95	-1.92/-2.17	-5.31/3
Θ(97.5°)	-2.89/-2.97	-2.67/-2.5	-1.9/-0.77	-0.68/-1.02	-1.3/1.2	0.22/-0.68	-0.47/-0.49	-0.96/-1.43	-2.57/-0.66	-2.54/-1.39	-0.27/-2.3	-5.08/-3.14	-0.99/-0.39	-3.5/-4.62	-6.18/-6.3	-3.22/-1.21	1.41/-1	-1/-1.56	-0.66/-1.97	-1.46/-0.18	0.35/-0.17	-1.48/-1.74	-2.9/-5.25	-8.52/-7.22
Θ(105°)	-5.95/-2.18	-2.64/-1.32	-3.55/-2.56	-3.96/-0.79	-0.76/-0.61	-0.97/-0.12	0.53/0.79	0.7/0.16	-0.82/0.91	-1.79/-0.68	-0.86/-2.29	-4.88/-5.72	-2.8/-0.98	-1.84/-1.89	-2.67/-3.51	-5.03/-0.89	0.97/-3.19	-0.82/-1.85	-1.29/-0.86	-1.29/-0.26	-2.88/-3.77	-2.23/-4.37	-3.56/-4.24	
Θ(112.5°)	-5.15/-3.2	-4.87/-3.19	-4.28/-3.07	-3.09/-1.21	-1.48/-1.72	-2.93/-5.11	-4/-3.16	-1.73/-0.7	-0.88/-0.22	-1.48/-1.17	-0.81/-2.16	-3.97/-4.77	-3.02/-1.57	-3.66/-1.28	-4.4/-6.26	-3.36/-0.64	-3.91/-4.25	-2.94/-1.71	-1.38/-1.22	-0.75/0.64	-3.32/-2.31	-2.03/-3.84	-3.52/-4.28	-2.46/-3.34
Θ(120°)	-2.24/-5.6	-4.84/-1.93	-1.33/-1.89	-1.14/-1.14	-0.07/0.43	-0.57/-1.23	-6.69/-3.4	-2.43/-1.23	-0.57/-1.23	-1.48/-1.95	-3.19/-3.38	-3.19/-2.41	-0.06/-1.64	-1.37/-1.64	-2.45/-4.07	-1.89/-4.61	-7.85/-4.95	-2.64/-1.78	-0.72/-3.73	-1.45/1.21	-1.79/-1.02	-1/-3.51	-4.32/-3.51	-1.69/-0.23
Θ(127.5°)	-0.76/-2.42	0.51/-1.7	-0.4/0.99	1.19/1.08	0.02/-2.43	-3.35/-4.72	-1.41/0.48	-1.31/-1.93	-1.61/-1.92	-1.47/-0.35	-0.76/-1.45	-1.12/-0.39	0.76/1.48	1.86/-0.36	-1.05/-2.87	-1.87/-1.76	-1.59/-8.53	-6.71/-2.28	-1.42/-2.71	-2.29/-2.99	-3.45/-5.38	-3.2/-6.2	-6.7/-3.78	-5.21/-3.7
Θ(135°)	-0.14/0.34	1.34/1.75	1.38/-0.02	-0.76/-0.29	-1.15/-1.79	-4.31/-4.85	-1.82/-1.6	-1.51/-1.88	-2.44/0.23	1.24/1.5	1.3/-2.53	-2.86/-1.59	-0.9/0.36	-0.26/0.1	1.57/-0.34	0.33/-0.89	-1.98/-0.83	-5.75/-5.58	-2.62/-2.38	-3.96/-1.39	-2.43/-5.56	-4.78/-1.68	-4.74/-7.27	-3.5/-1.52
Θ(142.5°)	-1.26/-0.22	-0.6/-0.16	0.01/-1.58	-2.89/-2.31	-1.63/-1.59	-3.31/-5.19	-4.52/-3.76	-2.87/-1.51	-3.4/-0.25	1.41/0.15	-2.26/-1.15	-0.91/-3.2	-0.84/-1.29	1.56/2.72	2.66/0.94	-0.98/-0.47	0.08/0.31	-5.27/-5.94	-1.2/-2.81	-1.32/0.46	2.02/0.62	-4.03/-4.12	-3.48/-8.13	-4.98/-3.7
Θ(150°)	-0.98/-1.6	-2.27/-1.85	-1.14/-1.1	-1.03/-1.33	-1.71/-1.42	-1.74/-2.46	-3.11/-3.06	-1.57/0.9	1.41/0.88	0.12/-0.11	-0.77/-2.14	-4.28/-5.5	-2.46/-0.36	-0.43/-1.1	-1.18/0.13	-0.22/0.62	0.61/-3.37	-9.39/-8.48	-3.53/-0.97	-0.76/-1.27	-2.37/-1.71	-2.37/-1.71	-1.85/-2.75	-2.62/-1.52
Θ(157.5°)	-5.38/-5.75	-5.84/-3.58	-1.75/-1.49	-2.79/-4.99	-4.9/-4.16	-3.31/-2.17	-1.36/-2.19	-2.62/-2.85	-2.69/-1.38	-0.49/-0.43	-1.65/-3.49	-4.7/-6.4	-4.57/-1.97	-1.66/-1.54	-1.31/-2.29	-2.25/-0.53	-1.42/-4.52	-4.44/-3.73	-3.46/-2.98	-2.62/-2.5	-2.66/-1.64	-0.31/0.5	0.71/-0.4	-2.02/-3.22
Θ(165°)	-2.72/-3.15	-4.28/-2.76	-6.51/-1.19	-7.39/-5.64	-3.76/-2.1	-0.35/0.3	0.1/-0.7	-2.31/-2.62	-2.21/-3.31	-0.37/-0.31	-0.71/-1.92	-3.34/-4.44	-4.3/-2.49	-1.11/0.32	0.75/0.13	-1.42/-3.02	-3.63/-0.44	-0.54/-6.04	-6.4/-6.84	-6.28/-5.58	-4.12/-3.06	-1.75/-1.17	-1.08/-1.29	-1.78/-2.73
Θ(172.5°)	-5.76/-0.77	-6/-5.6	-5.29/-4.97	-6.57/-7.7	-8.27/-7.63	-6.29/-5.03	-4.18/-4.76	-4.89/-3.69	-2.66/-1.71	-0.95/-0.66	-0.84/-1.02	-1.46/-2.17	-3.06/-3.79	-4.2/-4.48	-5.14/-5.53	-5.95/-5.89	-5.83/-5.89	-5.19/-4.69	-4.47/-4.28	-3.96/-3.65	-3.54/-3.67	-3.95/-4.49	-5.19/-4.9	-4.92/-5.12
Θ(180°)	-3.59/-2.69	-1.89/-2.07	-3/-3.27	-3.37/-3	-3.08/-3.36	-3.29/-3.12	-3.09/-2.54	-2.14/-2.22	-2.2/-1.94	-1.84/-1.82	-2.02/-2.52	-2.29/-3.31	-2.75/-3.04	-3.75/-3.5	-3.76/-3.71	-4.05/-4.97	-5.73/-5.95	-6.02/-6.09	-5.84/-5.41	-5.29/-5.56	-4.52/-3.67	-3.31/-3.36	-3.57/-4.38	-3.94/-3.45
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°)	0.91/0.21	-0.09/-0.59	-0.94/-1.15	-1.37/-1.73	-2.06/-1.82	-1.5/-0.84	-0.28/0.48	1.21/1.79	2.21/2.59	2.72/2.72	2.48/2.17	1.91/1.87	1.93/1.45	0.72/0.1	-0.46/-0.62	-0.77/-1.14	-1.29/-1.32	-1.05/-0.67	0.36/1.01	1.79/2.28	2.74/2.88	2.61/2.38	2.03/2.05	2.13/1.83
Θ(7.5°)	1.12/0.55	0.11/-0.16	-0.22/0.03	0.01/0.69	-1.26/-1.65	-2.06/-1.95	-1.22/-0.36	0.64/-1.2	1.77/2.12	2.28/2.29	2.41/1.95	1.91/1.72	1.26/0.68	0.17/-0.29	-0.66/-1.1	-1.57/-1.91	-2.22/-1.76	-1.03/-2.03	0.16/0.54	1.07/1.73	2.25/2.4	2.28/2.38	2.37/2.14	1.92/1.75
Θ(15°)	1.33/0.96	0.83/0.52	0.05/0.27	0.76/0.22	-1.26/-2.55	-3.34/-3.63	-2.85/-1.69	-0.57/0.07	0.64/1.14	1.41/1.42	0.98/0.54	-0.06/-0.83	-1.31/-1.63	-1.38/-1.29	-1.11/-1.41	-1.44/-1.01	-0.55/0.06	0.46/0.88	0.95/1.31	1.84/2.36	2.71/3.01	3.12/2.96	2.91/2.38	
Θ(22.5°)	0.66/0.77	0.87/0.59	-0.22/-0.39	-0.05/0.21	-0.08/-0.46	-0.71/-1.17	-0.9/0.12	0.56/0.72	0.21/-0.13	0.1/0.52	0.7/0.33	-0.65/-1.31	-1.34/-1.38	-1.18/-0.95	-1.08/-0.95	-0.22/0.21	0.22/0.46	0.85/1.44	1.72/1.44	1.35/1.21	1.32/1.44	1.58/1.96	2.16/1.78	1.58/1.26
Θ(30°)	-2.12/-2.31	-2.12/-1.09	-0.05/0.12	0.09/0.47	0.59/0.36	-0.01/-0.17	0.09/0.72	1.25/0.97	0.42/-0.06	0.48/0.69	0.39/0.39	-0.58/-0.92	-0.23/-0.32	-1.31/-1.86	-1.68/-1.07	-0.32/-0.32	0.33/1.45	1.78/1.71	1.92/1.7	1.82/1.33	1.72/1.5	2.46/2.41	1.66/0.71	0.14/-0.64
Θ(37.5°)	1.91/1.44	0.83/1.38	2.12/2.28	1.75/1.33	0.37/-0.39	-0.02/0.86	1.82/2.13	1.71/1.82	2.17/2.25	2.21/1.41	0.6/0.08	-0.79/-1.36	-0.14/0.57	0.34/-0.1	-0.55/-1.48	-2.04/-1.63	-1.1/-0.54	0.01/0.79	1.73/1.85	1.82/92	3.82/3.83	3.16/2.61	1.71/0.84	0.39/0.76
Θ(45°)	2.51/32	1.92/62	3.29/2.73	1.26/0.81	0.58/0.82	1.65/2.83	3.51/2.83	1.14/-0.38	-0.08/0.78	1.05/0.48	0.25/0.21	1.07/0.86	1.65/2.26	2.39/1.93	0.95/-0.45	-1.2/-0.96	-0.15/0.29	1.03/1.81	1.36/0.89	0.79/0.78	0.59/0.93	1.67/2.21	2.34/2.16	2.12/81
Θ(52.5°)	-0.53/0.62	0.51/1.49	2.21/2.94	1.74/-0.22	-0.63/0.03	0.05/1	2.56/3.43	1.94/0.2	0.16/1.43	2/1.39	1.31/95	2.21/82	2.03/32	3.63/3.55	3.16/2.05	0.95/0.49	-0.07/-0.62	-1.06/0.35	0.62/0.42	0.01/0.53	0.29/0.63	0.76/1.31	1.81/82	0.82/-0.43
Θ(60°)	0.3/0.42	0.83/2	2.67/3.05	2.73/1.46	-0.2/0.07	-0.3/0.62	1.64/3.08	2.13/-0.42	-0.25/0.69	1.11/1.39	1.822/3.5	2.71/2.15	2.35/2.77	2.54/2.78	4.63/3.22	2/0.09	-0.63/-0.82	-0.71/-0.4	0.62/0.13	0.53/0.67	1.06/1.58	0.52/0.34	1.56/1.67	0.49/-0.04
Θ(67.5°)	2.19/3.15	3.26/2.92	2.93/3.82	3.35/1.3	-0.65/0.49	1.2/-0.42	1.44/3.73	2.91/0.88	0.83/1.42	1.21/1.9	2.74/3.06	3.07/2.7	2.62/15	1.69/2.18	3.3/63	2.11/1.8	0.72/0.52	0.22/0.67	0.94/0.29	0.29/0.42	-0.06/-0.43	0.05/-0.49	2.39/3.02	1.88/2.6
Θ(75°)	3.63/4.13	4.02/3.72	3.21/4.15	4.22/2.9	-0.11/0.51	0.98/0.39	6.62/3.02	2.61/99	2.02/1.61	1.31/0.36	1.67/1.75	2.35/1.45	2.63/3.69	3.73/95	3.81/27	2.6/-0.01	1.11/1.51	0.79/0.01	2.46/1.03	1.48/1.36	0.54/-0.02	0.34/1.68	3.73/0.4	2.13/2
Θ(82.5°)	4.11/4.83	3.95/3.87	3.55/3.83	3.63/2.11	1.01/1.59	2.02/2.13	1.69/2.98	1.66/1.34	1.59/0.47	0.69/1.01	2.23/2.67	2.81/1.54	2.93/4.34	3.16/3.01	2.72/2.51	3.2/2.1	1.83/2.88	-0.14/0.53						



Radiated Composite Gain Data_6GHz

Appendix B

Θ(22.5°)	-11.55/-12.2	-13.32/-12.43	-11/-9.56	-7.07/-4.45	-2.79/-2.59	-3.01/-2.46	-1.91/-1.21	-0.53/-0.64	-1.41/-2.7	-3.91/-4.76	-5.83/-7.62	-8.57/-9.53	-9.36/-8.21	-6.89/-5.11	-3.33/-2.41	-1.97/-1.87	-1.57/-1.41	-1.37/-2.32	-2.41/-2.78	-3.59/-4.57	-5.06/-6.09	-6.4/-6.18	-6.73/-8.12	-9.47/-11.29
Θ(30°)	-10.39/-13.4	-18.85/-18.07	-9.52/-5.22	-3.23/-2.5	-1.37/-0.97	-1.35/-1.23	-1.33/-1.21	-1.23/-0.94	-1.73/-3.33	-5.31/-4.76	-9.6/-13.42	-17/-17.83	-19.13/-15.8	-9.43/-6.68	-5.08/-4.29	-3.37/-2.24	-1.5/-0.78	-0.39/-0.71	-2.09/-3.04	-3.74/-4.4	-5.37/-5.72	-5.39/-5.36	-6.4/-5.72	-8.28/-9.77
Θ(142.5°)	-6.78/-8.43	-12.01/-13.83	-14.48/-11.3	-8.38/-6.46	-4.81/-3.17	-2.62/-2.13	-2.52/-2.57	-2.09/-1.81	-2.13/-3.49	-4.88/-7.76	-12.83/-18.93	-18.3/-14.2	-12.03/-8.47	-5.74/-3.91	-2.89/-3.39	-4.42/-4.1	-3.75/-3.49	-3.73/-4.83	-6.14/-7.76	-8.02/-6.88	-5.71/-5.88	-6.71/-7.06	-12.74/-12.93	
Θ(45°)	-13.16/-16.73	-15.27/-9.9	-7.81/-5.47	-4.71/-4.74	-5.61/-4.97	-2.61/-0.47	0/-0.97	-2.3/-3.19	-4.07/-5.58	-6.71/-8.71	-12.05/-13.88	-13.02/-12.5	-14.07/-16.51	-12.58/-7.92	-5.25/-3.78	-2.87/-2.32	-1.86/-2.25	-2.53/-4.05	-5.01/-3.87	-2.44/-3.15	-4.66/-4.15	-3.02/-2.64	-2.79/-4.43	-9.2/-15.13
Θ(52.5°)	-12.28/-11.41	-9.24/-5.85	-4.68/-4.5	-4.51/-5.22	-5.21/-5.56	-4.7/-2.29	-1.93/-2.88	-3.9/-6.39	-4.16/-5.59	-4.87/-5.98	-7.2/-8.92	-9.22/-3.8	-9.3/-8.12	-7.8/-5.61	-4.83/-4.22	-4.53/-3.54	-3.48/-3.78	-4.11/-5.68	-7.48/-6.41	-6.44/-7.8	-9.05/-9.78	-6.71/-4.45	-5.51/-9.41	-12.9/-15.07
Θ(60°)	-11.05/-8.12	-6.99/-4.61	-2.98/-2.38	-2.54/-6	-6.36/-8	-6.82/-2.98	-1.79/-3.3	-3.28/-1.38	-1.38/-3.42	-4.82/-5	-5.44/-5.08	-6.98/-7.56	-9.4/-8.86	-4.68/-3.03	-5.34/-5	-5.74/-7.72	-5.24/-4.1	-4.13/-5.27	-6.12/-8.03	-11.7/-12.7	-8.1/-8.07	-6.61/-9.78	-12.74/-12.93	
Θ(67.5°)	-16.02/-9.53	-6.84/-5.5	-4.6/-3.03	-4.03/-7.8	-7.88/-5.87	-6.36/-8.13	-4.25/-4.35	-5.86/-3.41	-1.43/-3.16	-4.97/-5.32	-4.35/-5.34	-7.46/-7.5	-7.72/-8.39	-6.76/-5.38	-5.56/-6.07	-5.35/-4.35	-4.84/-5.24	-5.44/-4.25	-6.12/-8.98	-8.47/-13.67	-18.53/-7.51	-7.25/-6.77	-7.01/-10.78	-13.54/-16.13
Θ(75°)	-18.03/-13.05	-9.51/-7.94	-8.39/-7.66	-9.21/-11.73	-12.37/-7.45	-6/-5.52	-3.23/-4.82	-6.49/-4.96	-2.4/-3.96	-6.67/-5.52	-6.09/-6.78	-10.73/-12.87	-14.86/-13.89	-13.28/-7.96	-6.57/-5.88	-3.31/-3.54	-4.7/-4.1	-4.43/-9.24	-10.08/-16.05	-12.16/-8.57	-4.99/-8.37	-5.64/-9.1	-13.87/-17.9	
Θ(82.5°)	-18.55/-11.96	-12.4/-11.24	-15.21/-15.36	-15.76/-14.75	-13.67/-6.2	-5.26/-4.46	-3.71/-2.45	-2.04/-4.22	-4.07/-6.84	-10.82/-7.32	-7.92/-13.04	-17.52/-11.83	-13.74/-18.24	-8.78/-8.87	-11.34/-7.63	-2.48/-0.95	-0.98/-0.38	-0.71/-0.46	-6.93/-7.76	-8.5/-3.47	-2.73/-9.93	-13.9/-18.94	-13.34/-12.12	
Θ(90°)	-14.48/-18.26	-17.39/-17.77	-18.7/-18.61	-18.85/-11.61	-10.9/-5.52	-3.93/-6.95	-7.97/-4.37	-3.02/-7.78	-6.53/-6.79	-15.7/-19.16	-13.76/-18.4	-17.96/-12.6	-12.93/-11.73	-11.7/-13.22	-14.73/-8.84	-4.01/-1.19	1.10/-39	-0.64/-0.96	-0.65/-2.71	-6.32/-5.49	-4.59/-3.99	-2.27/-7.12	-18.85/-18.26	-14.35/-16.16
Θ(97.5°)	-14.61/-18.04	-17.81/-17.94	-18/-13.95	-10.66/-11.7	-8.26/-4.5	-4.38/-7.11	-10.57/-5.1	-3.26/-7.84	-7.05/-6.82	-16.29/-17.88	-14.86/-17.03	-18.97/-12.14	-8.38/-6.97	-17.49/-15.59	-9.35/-9.8	-8.05/-1.65	-0.89/-2.72	-2.71/-2.23	-1.96/-4.08	-5.86/-6.84	-4.07/-5.21	-6.1/-9.78	-18.21/-15.79	-18.37/-17.24
Θ(105°)	-15.54/-12.6	-13.75/-10.65	-14.5/-9.74	-8.92/-5.57	-3.62/-5.11	-3.36/-3.98	-4.38/-2.76	-0.73/-2.59	-4.52/-5.04	-12.01/-12.1	-18.24/-19.18	-19.19/-15.05	-11.82/-11.29	-15.06/-16.26	-16.54/-11.81	-7.52/-3.34	-3.66/-3.21	-2.9/-2.61	-2.74/-4.43	-7.34/-8.28	-7.8/-6.38	-11.18/-11.16	-10.41/-12.13	-15.38/-19.02
Θ(112.5°)	-15.25/-15.64	-11.79/-12.12	-9.47/-6.07	-3.78/-3.08	-3.25/-4.84	-7.96/-7.65	-6.46/-9.52	-9.64/-8.94	-4.06/-6.77	-13.9/-13.04	-17.81/-17.44	-19.29/-16.89	-9.34/-10.4	-14.42/-16.96	-17.84/-12.42	-7.91/-9.93	-10.13/-4.51	-4.11/-5.28	-2.31/-2.15	-6.77/-7.46	-14.28/-16.2	-13.17/-16.5	-15.95/-9.02	-15.55/-16.75
Θ(120°)	-14/-18.2	-19.4/-13.08	-8.56/-7	-7.85/-4.8	-3.94/-4.45	-4.93/-8.75	-13.85/-12.12	-10.63/-7.81	-6.21/-18.2	-16.91/-16.9	-18.97/-12.14	-8.38/-6.97	-9.66/-13.26	-8.65/-6.6	-7.5/-17.84	-18.16/-15.3	-3.61/-3.89	-1.44/-1.5	-3.69/-6.9	-16.61/-18.4	-18.59/-12.28	-11.05/-9.49	-6.36/-10.38	
Θ(127.5°)	-10.31/-14.19	-13.74/-19.08	-11.76/-7.82	-7.31/-6.6	-6.62/-12.52	-18.74/-9.99	-3.53/-4.23	-7.4/-6.88	-10.06/-17.48	-10.97/-10	-8.94/-14.67	-11.29/-9.62	-4.51/-2.59	-3.47/-3.3	-5.16/-5.42	-4.04/-1.59	-5.97/-11.17	-8.06/-9.68	-9.63/-7.75	-11.97/-17.74	-13.77/-19.07	-8.65/-12.94	-12.75/-11.42	-10.73/-6.63
Θ(135°)	-11.8/-12.97	-8.72/-12.05	-13.59/-12.6	-8.88/-11.36	-9.02/-6.96	-10.62/-14.02	-8.66/-8.16	-9.65/-9.92	-15.73/-8.5	-5.94/-4.32	-5.67/-10.16	-11.98/-14.67	-9.31/-5.07	-1.57/-1.67	-6.62/-7.37	-2.84/-0.37	-1.36/-3.71	-7.06/-14.22	-5.26/-2.83	-10.6/-15.94	-8.85/-11.42	-16.38/-10.07	-15.23/-19.05	-10.01/-8.15
Θ(142.5°)	-12.81/-10.08	-15.47/-18.31	-14.01/-10.97	-7.85/-6.88	-11.09/-7.38	-16.88/-16.1	-16.88/-16.1	-7.98/-5.24	-5.54/-6	-13.43/-17.05	-16.66/-13.64	-11.61/-6.92	-9.28/-1.97	-2.29/-5.06	-4.07/-0.34	-0.56/-1.63	-9.56/-11.53	-2.16/-0.7	-3.01/-11.09	-5.85/-1.6	-6.44/-9.67	-7.37/-19.68	-18.23/-19.32	
Θ(150°)	-13.97/-10.87	-16.61/-16.31	-16.11/-9.94	-8.88/-6.86	-8.7/-9.48	-11.17/-14.02	-18.39/-18.04	-10.53/-9.61	-5.86/-7.07	-8.78/-11.55	-16.68/-16.26	-17.14/-14.22	-14.49/-11.39	-5.61/-3.38	-2.98/-2.24	-0.90/-1.06	0.65/-3.93	-15.88/-12.73	-1.79/-1.4	0.38/-5.07	-12.51/-5.33	-5.66/-14.58	-11.91/-16.17	-14.45/-14.55
Θ(157.5°)	-10.21/-11.14	-15.34/-17.26	-13.68/-10.51	-12.95/-18.73	-13.95/-12.57	-17.92/-18.45	-12.62/-10.87	-9.04/-7.47	-8.39/-11.14	-11.23/-10.45	-11.86/-13.66	-14.92/-17.34	-13.6/-8.39	-5.26/-4.47	-4.35/-4.4	-4.46/-4.3	-5/-7.86	-9.06/-5.38	-2.13/-0.89	-1.44/-3.45	-4.9/-4.03	-4.21/-7.04	-10.82/-14.6	-16.84/-11.37
Θ(165°)	-14.19/-12.82	-12.39/-11.89	-14.33/-16.86	-17.44/-11.86	-11.49/-14.16	-9.02/-8.1	-8.87/-12.57	-18.89/-19.1	-18.79/-18.3	-13.08/-12.15	-12.55/-13.4	-14.71/-15.68	-12.67/-7.44	-4/-1.75	-1.81/-3.35	-5.74/-8.85	-12.27/-15.49	-15.11/-1.45	-8.04/-6.25	-5.54/-4.44	-5.38/-5.66	-6.56/-8.36	-1.84/-16.3	-18.98/-19
Θ(172.5°)	-17.99/-17.79	-19.38/-18.45	-17.52/-14.28	-14.53/-15.12	-18.34/-18.83	-18.22/-18.13	-17.06/-18.94	-15.03/-11.01	-9.02/-8.08	-7.1/-6.68	-6.87/-7.53	-8.5/-10.64	-14.23/-18.4	-19.16/-14.59	-10.94/-10.4	-12.29/-16.85	-18.38/-18.99	-12.86/-8.61	-6.04/-4.94	-4.1/-3.6	-4.03/-5.59	-7.44/-10.73	-15.67/-18.66	-19.07/-17.65
Θ(180°)	-10.51/-10.9	-8.79/-8.07	-8.74/-7.91	-7.79/-8.51	-7.93/-7.9	-7.28/-6.74	-6.6/-6.23	-6.31/-6.3	-6.33/-6.59	-7.56/-6.63	-10.12/-12.96	-16.33/-18.07	-18.77/-18.88	-17.49/-13.04	-12.21/-11.5	-12.25/-13.44	-14.14/-12.84	-9.96/-7.88	-6.22/-5.59	-5.66/-6.46	-4.03/-10.41	-11.65/-11.83	-11.97/-12.64	-11.91/-11.15
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°)	-2.31/-2.49	-2.36/-2.45	-2.63/-3.12	-3.41/-3.84	-4.55/-5.07	-5.88/-5.54	-5.14/-4.72	-4.19/-3.64	-2.94/-2.12	-1.34/-0.61	-0.010.17	0.260.52	0.720.58	0.14/-0.16	-0.5/-3.31	-2.53/-3.73	-4.16/-4.9	-6.03/-6.7	-6.22/-5.82	-4.54/-3.61	-2.65/-1.95	-1.78/-1.74	-1.77/-1.45	-1.61/-1.79
Θ(7.5°)	0.02/-0.01	-0.24/-0.34	-0.88/-1.34	-1.58/-2.32	-3.56/-4.78	-5.99/-6.78	-6.97/-6.57	-5.68/-4.69	-3.65/-2.87	-2.37/-2	-1.83/-1.76	-1.75/-1.86	-1.93/-2.43	-2.93/-3.5	-4.19/-4.83	-5.33/-5.97	-6.38/-6.14	-5.75/-5.19	-4.71/-4.27	-4.03/-3.1	-1.86/-1.1	-0.75/-0.41	-0.080.05	0.270.32
Θ(15°)	-0.09/-0.77	-1.21/-1.22	-1.4/-1.3	-1.45/-2.18	-3.67/-4.41	-6.91/-8.01	-8.43/-7.58	-6.53/-5.45	-4.59/-4.08	-4.38/-5.34	-4.49/-4.71	-6.31/-4.94	-8.32/-6.83	-8.52/-9.92	-10.78/-12.61	-13.26/-11.33	-9.91/-8.5	-6.59/-4.78	-3.88/-3.02	-1.96/-0.97	-0.580.04	0.30.8	0.610.08	0.070.04
Θ(22.5°)	0.80.54	0.21/-0.76	-1.95/-2.8	-3.18/-4.3	-5.77/-7.8	-8.47/-7.24	-5.73/-5.37	-6.05/-7	-8.39/-10.13	-11.96/-12.6	-12.01/-11.88	-11.97/-11.2	-10.42/-9.39	-9.29/-9.16	-11.95/-15.91	-17.85/-17.16	-14.34/-9.47	-6.01/-4.03	-3.23/-2.95	-2.8/-2.66	-1.92/-1.2	-0.360.55	0.620.93	1.321.46
Θ(30°)	-0.46/-0.66	-0.670.19	0.26/-0.43	-1.52/-3.28	-5.41/-13	-9.15/-8.79	-7.91/-6.83	-5.48/-6.88	-11.22/-16.56	-14.11/-13.94	-17.82/-14.36	-12.69/-10.25	-8.9/-8.16	-8.13/-8.06	-10.51/-14.56	-15.36/-18.72	-17.51/-19.92	-6.54/-4.74	-4.37/-4.07	-3.87/-2.59	-1.03/-0.08	0.951.66	1.271.24	1.340.79
Θ(37.5°)	2.412.52	2.532.94	3.312.37	0.67/-1.38	-3.9/-5.8	-6.18/-4.91	-4.48/-5.35	-6.48/-6.31	-7.83/-9.48	-10.82/-11.32	-13.22/-13.24	-13.86/-18.17	-10.13/-8.26	-8.41/-7.23	-18.19/-11.61	-18.19/-17.69	-5.97/-4.75	-3.5/-3.26	-1.86/-0.32	0.880.99	0.37/-0.05	-0.5/-0.68	-0.02/-1.1	
Θ(45°)	3.1713.4	3.4713.54	3.923.2	0.91/-1.56	-3.97/-5.07	-6.31/-2.53	-1.99/-2.3	-5.39/-7.98	-7.92/-9.99	-10.21/-11.8	-9.1/-8.87	-10.11/-18.41	-13.61/-18.2	-17.88/-18.07	-19.66/-13.27	-10.51/-11.03	-9.88/-7.14	-4.9/-3.05	-2.45/-2.16	-2.38/-1.81	-1.37/-1.12	-1.89/-2.5	-1.180.08	0.691.98
Θ(52.5°)	0.922.07	3.142.85	2.341.28	-1.03/-3.22	-4.54/-4.15	-3.71/-4.12	-3.07/-3.65	-1.53/-9.62	-7.46/-7.09	-9.42/-16.65	-18.9/-18.17	-18.34/-15.21	-13.44/-12.87	-12.64/-13.21	-17.59/-13.18	-7.25/-5.63	-8.16/-9.52	-6.11/-2.55	-2.78/-5.36	-8.13/-7.09	-2.93/-2.76	-3.15/-2.89	-1.170.4	0.650.94
Θ(60°)	0.20.3	1.531.41	0.23/-1.65	-3.54/-5.28	-7.28/-6.4	-5.02/-4.45	-2.63/-1.55	-3.74/-7.06	-6.7/-7.65	-10.57/-16.04	-12.93/-11.58	-17.18/-18.95	-17.4/-13.27	-11.49/-8.78	-9.3/-13.26	-12.24/-7.9	-7.14/-8.23	-4.22/-2.26	-2.11/-4.22	-5.1/-7.33	-6.29/-5.18	-7.43/-5.23	-1.120.75	0.800.41
Θ(67.5°)	0.311.28	1.74/-0.02	-0.67/-1	-2.19/-4.88	-7.79/-10.81	-8.52/-8.62	-2.46/-0.26	-1.9/-3.54	-5.26/-6.29	-10.94/-13.72	-10.44/-9.39	-11.45/-9.55	-8.99/-11.87	-13.27/-8.62	-6.91/-7.91	-19.24/-6.39	-5.28/-6.76	-4.74/-3.52	-1.98/-2.37	-5.21/-8.99	-11.72/-6.76	-6.44/-7.24	-1.350.17	-0.190.51
Θ(75°)	-0.54/-1.1	0.42/-0.9	-1.72/-0.63	-1.31/-3.67	-7.4/-12.95	-8.21/-4.92	-3.66/-6.63	-1.52/-5.36	-3.76/-5.21	-8.8/-6.7	-5.09/-8.36	-12.22/-6.72	-3.53/-4.93	-7.09/-5.96	-3.87/-3.07	-8.26/-11.27	-4.01/-5.57							



Radiated Composite Gain Data_6GHz

Appendix B

Θ(75°)	0.381/4.3	1.63/-1.04	-6.15/-4.37	-3.54/-4.38	-8.54/-18.66	-13.52/-17.69	-18.95/-10.91	-7.54/-7.1	-6.43/-5.48	4.08/-3.24	-2.45/-3.16	-3.47/-2.59	-2.84/-3.48	-3.66/-4.87	-5.42/-5.8	4.05/-5.01	-12.91/-12.46	-9.84/-9.95	-17.69/-18.69	-18.71/-14.51	-18.74/-14.93	8.07/-4.82	-2/-1.23	-0.48/-0.18
Θ(82.5°)	-0.120/9.3	1.46/-4.33	-9.78/-9.94	-7.68/-7.65	-7.58/-16.15	-17.82/-17.56	-17.56/-12.11	-8.86/-7.48	-7.74/-5.3	-3.59/-2.77	-2.5/-3.26	-2.67/-2.05	-1.36/-0.54	-0.96/-2.47	-5.17/-6.38	-6.64/-9.17	-14.17/-15.28	-12.64/-10.21	-9.04/-8.94	-10.98/-10.81	-18.33/-11.76	4.56/-2.68	-2.35/-4.17	-5.72/-0.44
Θ(90°)	-0.39/-0.6	-0.39/-4.31	-10.11/-16.79	-11.77/-9.81	-10.33/-15.47	-17.39/-12.41	-15.27/-17.06	-8.95/-5.52	-5.24/-6.23	-4.72/-4.01	-3.32/-4.23	-6.11/-5.77	-6.36/-5.51	-2.84/-2.12	-1.89/-4.51	-4.93/-5.54	-13.39/-9.84	-6.47/-4.36	-8.67/-8.95	-12.21/-18.17	-14.46/-7.62	-4.36/-2.07	-3.09/-9.51	-1.41/-13.92
Θ(97.5°)	-6.28/-3.12	-4.7/-3.4	-14.97/-15.87	-17.2/-13.11	-12.61/-17.9	-11.96/-14.35	-17.66/-17.72	-12/-5.75	-6.47/-5.43	5.02/-6.43	-4.09/-4.1	-4.67/-4.49	-3.59/-3.22	-2.77/-0.84	-1.75/-5.22	5.53/-7.79	-11.77/9.82	-7.99/-9.59	-11.69/-8.17	-9.89/-11.66	-18.3/-6.23	-2.98/-1.9	-4.65/-11.04	-14.37/-13.7
Θ(105°)	-8.86/-3.68	-4.3/-4.4	-7.09/-9.25	-13.62/-18.65	-17.9/-14.74	-15.36/-17.9	-18.19/-18.66	-6.82/-4.4	-5.19/-5.14	-3.85/-4.32	-4.69/-4.18	-3.71/-4.3	-4.99/-3.3	-3.99/-1.64	-2.47/-3.91	-5.37/-7.51	-18.26/-13.79	-14.16/-13.8	-10.33/-12.78	-10.34/-9.63	-8.47/-4.52	-2.29/-6	-9.27/-8.64	-7.63/-17.76
Θ(112.5°)	-10.88/-3.1	-6.21/-8.79	-11.07/-12.43	-13.59/-12.61	-5.49/-8.43	-12.33/-19.19	-18.21/-9.7	-10.58/-10.52	-6.84/-6.65	-4.37/-4.92	-6.18/-4.45	-5.63/-10.36	-6.72/-7.01	-6/-6.59	-5.52/-9.81	-12.32/-18.98	-19.05/-15.35	-6.95/-6.38	-4.34/-7.72	-10.72/-6.2	-4.17/-3.94	-1.93/-5.23	-3.9/-3.82	
Θ(120°)	-2.5/-4.42	-8.62/-12.11	-5.99/-9.45	-18.24/-15.58	-10.97/-11.74	-13.66/-17.74	-18.17/-10.75	-10.98/-7.42	-7.42/-8.95	-5.72/-5.05	-5.48/-4.32	-5.53/-4.51	-8.47/-9.57	-4.35/-3.15	-2.77/-4.44	-6.53/-17.91	-14.82/-18.28	-12.67/-15.28	-8.51/-7.07	-4.97/-5.12	-5.8/-7.12	-2.75/-1.38	-3.01/-5.41	-0.47/-1.74
Θ(127.5°)	-1.18/-9.06	-7.82/-9.28	-8.84/-7.73	-9.79/-8.38	-10.11/-15.79	-17.54/-18.42	-17.74/-16.41	-10.19/-13.02	-11.32/-17.4	-7.06/-8.54	-3.24/-2.18	-1.81/-10.08	-1.05/-0.96	-1.56/-5.74	-9.6/-2.57	-5.74/-7.49	-9.95/-14.82	-8.31/-13.04	-8.81/-5.45	-6.55/-5.98	-3.68/-5.63	-7.75/-5.83	-6.42/-6.53	-6.72/-3.34
Θ(135°)	-3.08/-7.44	-12.65/-6.37	-5.91/-10.1	-11.41/-10.04	-7.8/-11.45	-9.33/-13.39	-17.74/-17.33	-16.48/-10.69	-7.71/-11.78	-6.87/-13.34	-5.34/-5.15	-0.72/-3.03	-3.35/-1.09	-3.92/-0.28	-1.83/-0.55	-5.02/-18.26	-10.24/-4.62	-7.22/-5.22	-6.27/-4.65	-6.52/-6.22	-3.43/-4.65	-6.61/-0.87	-2.68/-18.32	-7.35/-2.73
Θ(142.5°)	-3.32/-1.2	-5.44/-13.38	-12.25/-14.42	-12.45/-16.42	-17.27/-15.73	-12.04/-14.11	-18.53/-18.06	-19.54/-18.63	-19.16/-8.48	-7.2/-10.1	3.44/-1.5	0.94/-1.2	3.83/3.35	0.68/-1.51	2.5/-1.01	-13.99/-14.01	-3.66/-1.93	-5.25/-7	-12.19/-7.64	-6.71/-3.43	-0.99/-5.82	-17.37/-16.53	-5.67/-11.79	-18.61/-13.58
Θ(150°)	-5.79/-6.7	-6.28/-7.87	-9.11/-7.42	-7.03/-9.74	-14.71/-18.29	-18.66/-17.83	-13.89/-10.15	-10.26/-12.24	-8.8/-6.55	-3.36/-0.62	-0.98/-3.61	-4.53/-0.4	0.98/-0.55	-2.89/-1.97	-4.18/-7.57	-5.13/-5.67	-4.43/-6.09	-14.65/-17.44	-11.25/-6.86	-2.81/-3.89	-10.72/-11.77	-3.88/-2.87	-4.29/-5.04	
Θ(157.5°)	-18.15/-14.74	-12.73/-14.08	-10.47/-7.45	-7.15/-9.41	-11.11/-11.3	-11.15/-15.54	-18.04/-19.66	-17.08/-15.2	-11.92/-9.81	-8.05/-7.77	-8.47/-7.45	-6.8/-8.39	-11.57/-15.24	-1.61/-18.67	-2.21/-9.3	-3.78/-4.26	-4.43/-7.83	-17.55/-18.66	-17.47/-13.06	-7.75/-6.41	-7.33/-6.62	-3.96/-4.33	-9.13/-18.46	
Θ(165°)	-11.92/-8.77	-8.65/-11.14	-14.88/-14.14	-13.27/-13.27	-13.96/-12.67	-11.51/-13.56	-12.31/-9.88	-7.73/-7	-6.4/-5.63	-4.6/-3.82	-3.02/-2.21	-1.89/-1.54	-0.84/-0.11	0.320/63	0.63/-0.06	-1.67/-4.04	-5.69/-5.76	-6.67/-9.8	-14.67/-18.07	-14.71/-11.02	-8.43/-6.11	-5/-4.53	-3.92/-4.45	-7.71/-12.76
Θ(172.5°)	-12/-10.12	-7.31/-6.66	-6.57/-5.11	-6.4/-9.25	-11.59/-14.36	-15.8/-17.32	-16.58/-13.8	-8.08/-6.93	-5.34/-3.9	-2.59/-1.65	-1.24/-0.96	-0.81/-0.82	-0.88/-0.91	-1.17/-1.92	-2.25/-2.35	-2.6/-3.32	-4.51/-6.48	-9.35/-12.9	-16.14/-18.93	-17.37/-18.02	-16.82/-19.41	-19.03/-17.92	-17.11/-12.05	-8.71/-8.55
Θ(180°)	-19.05/-11.8	-8.84/-9.69	-14.11/-13.54	-13.18/-13.09	-12.72/-16.16	-18.18/-19.09	-17.87/-13.2	-10.37/-7.66	-5.85/-4.6	-3.31/-2.26	-1.55/-0.88	-0.37/-0.13	-0.09/-0.48	-1.01/-1.45	-1.83/-3	4.8/-6.8	-8.87/-10.53	-11.85/-12.71	-12.71/-11.81	-10.35/-8.4	-6.75/-5.54	-5.28/-5.41	-5.26/-5.38	-8.55/-15.78
Freq(Hz)	6.175GPol.	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-19.17/-14.41	-11.66/-9.24	-7.84/-6.66	-4.75/-3.49	-6.03/-7.77	-6.37/-2.14	-2.37/-2.14	-2.45/-2.68	-3.1/-3.53	-4.01/-5.38	-6.37/-8.03	-10.51/-13.13	-16.07/-17.69	-18.44/-13.32	-6.89/-8.14	-6.29/-9.35	-3.33/-2.69	-1.98/-1.79	-1.49/-1.27	-2.95/-3.97	-4.34/-4.79	-5.32/-6.95	-10.16/-15.47	-17.95/-18.37
Θ(7.5°)	-17.09/-14.59	-11.52/-9.67	-8.61/-7.32	-5.83/-3.67	-2.41/-1.61	-1.29/-1.66	-1.91/-2.16	-2.47/-2.64	-3.44/-4.62	-6.41/-9.19	-12.17/-16.04	-17.83/-18.82	-18.03/-14.59	-11.47/-9.53	-7.61/-5.53	-3.8/-2.98	-2.51/-2.2	-2.1/-1.92	-2.12/-2.57	-3.32/-3.88	-4.1/-4.21	-4.99/-6.43	-8.81/-10.26	-13.16/-15.73
Θ(15°)	-18.22/-18.97	-13.97/-9.94	-7.21/-6.39	-6.23/-4.91	-3.16/-2.17	-1.45/-0.68	-0.51/-0.49	-0.34/-0.1	-0.71/-4.6	-2.96/-4.77	-7.21/-9.91	-12.36/-16.88	-18.41/-19.07	-18.62/-14.15	-12.72/-12.43	-9.74/-7.12	-4.95/-3.75	-2.93/-1.23	-2.01/-2.84	-3.62/-3.78	-3.58/-3.25	-3.85/-4.1	-4.76/-5.41	-10.11/-14.86
Θ(22.5°)	-19.15/-14.74	-9.99/-8.26	-7.74/-7.22	-6.37/-4.71	-2.92/-2.14	-1.82/-0.48	-0.61/-1.54	2.15/2.25	1.72/-0.66	-1.19/-4.15	-7.6/-10.19	-11.86/-12.74	-13.07/-15.24	-18.18/-18.67	-19.13/-18.3	-12.61/-10.7	-6.22/-6.86	-5.71/-8.89	-8.06/-8.31	-6.19/-4.65	-4.03/-4.11	-5.06/-6.33	-9.71/-6.69	-10.66/-14.79
Θ(30°)	-12.3/-10.89	-8.41/-7.56	-8.43/-6.21	-3.43/-1.8	-0.66/-0.35	-0.150/5.1	1.11/-1.5	0.980/9.5	1.010/-76	-0.38/-1.81	-2.48/-2.42	-2.94/-4.14	-6.64/-10.68	-15.88/-17.85	-15.23/-12.13	-12.97/-17.03	-18.94/-10.99	-6.87/-5.54	-5.17/-5.23	-5.9/-7.2	-7.69/-7.85	-8.66/-11.64	-11.65/-8.1	-9.94/-13.29
Θ(37.5°)	-3.74/-4.64	-4.6/-2.95	-2.27/-2.55	-3.25/-1.78	-0.050/7.3	1.24/-1.76	2.06/-1.96	2.462/-4.5	1.80/-59	-0.26/-0.28	0.580/9.7	0.41/-1.49	-16.69/-18.25	-14.74/-12.57	-14.06/-15.35	-12.52/-13.37	-16.21/-25.15	-10.39/-8.72	-7.49/-4.98	-4.63/-5.14	-6.26/-9.2	-13.34/-9.47	-6.14/-6.1	
Θ(45°)	-4.05/-4.06	-4.81/-2.67	2.24/-2.9	2.55/-9.26	2.11/-0.19	0.370/5.2	1.28/-1.93	2.32/7.3	2.27/0.85	-0.070/8.7	1.53/-4.2	0.21/-2.18	-5.85/-10.72	-18.81/-14.56	-12.47/-12.15	-12.13/-8.41	-7.41/-9.99	-14.64/-17.84	-12.38/-11.03	-15.24/-18.97	-9.87/-7.56	-7.68/-9.22	-11.02/-9.31	-7.36/-6.09
Θ(52.5°)	-6.98/-6	-6.25/-5.41	-3.91/-3.33	-3.32/-2.68	-3.78/-1.92	-4.09/-4.0	0.320/4.8	0.080/4.2	0.91/-0.13	-0.97/-0.34	-0.01/-0.07	-1.8/-5.7	-11.16/-18.74	-18.07/-16.93	-8.95/-8.35	-6.19/-5.26	-5.38/-10.42	-17.83/-14.47	-18.44/-14.33	-13.14/-11.04	-8.44/-8.41	-12.71/-12.02	-6.61/-5.62	-18.77/-8.55
Θ(60°)	-7.24/-4.36	-3.8/-4.99	-3.81/-2.52	-1.74/-2.84	-3.27/-1.67	-0.34/-0.35	-1.040/2.2	0.520/-9.5	0.071/-6.6	-2.63/-0.28	-0.71/-9.03	-4.07/-5.85	-8.36/-14.07	-14.99/-8.67	-8.93/-10.66	-6.54/-6.49	-4.26/-7.36	-15.7/-16.5	-14.99/-7.83	-5.13/-3.27	-4.99/-5.48	-7.07/-11.91	-8.34/-5.54	-4.44/-5.8
Θ(67.5°)	-3.09/-0.74	-0.26/-0.76	-0.12/-1.65	-0.58/-1.93	-3.1/-2.54	-1.11/-10.2	-0.43/-0.58	-0.23/-0.26	-1.21/-1.5	-2.59/-3.59	-3.78/-3.69	-4.25/-6.91	-8.44/-8.12	-7.93/-6.1	-4.15/-4.54	-5.48/-8.74	-7.23/-11.4	-18.13/-10.97	-6.87/-5.46	-3.19/-3.09	-5.66/-6.26	-8.37/-8.95	-7.13/-5.38	-3.59/-3.46
Θ(75°)	-2.65/-1.61	-0.43/-0.11	-0.06/-1.23	-1.58/-1.42	-0.89/-0.84	-0.64/-0.17	-0.18/-1.15	-1.02/-0.64	-1.61/-1.17	-1.52/-2.47	-4.54/-4.16	-3.57/-8.09	-8.33/-9.42	-8.91/-4.48	-4.37/-4.03	-5.14/-6.6	-6/-8.34	-15.02/-3.81	-0.02/-4.4	-1.57/-4.33	-3.9/-2.15	-6.17/-15.02	-9.43/-3.69	-12.2/-2.22
Θ(82.5°)	-3.88/-4.9	-0.99/-2.57	-0.150/5.1	-1.2/-2.92	-1.75/-0.85	0.140/-89	0.870/-66	-1.41/-2.97	-3.38/-1.68	-0.86/-2.56	-5.35/-4.15	-4.8/-7.3	-4.54/-4.82	-5.3/-3.22	-3.33/-1.93	-3.33/-4.66	-3.43/-7.26	-6.31/-4.1	-3.45/-3.92	0.49/-0.08	-0.26/-0.26	-8.11/-7.27	-2.22/-1.85	-2.34/-1.7
Θ(90°)	-1.37/-8.11	-4.4/-8.25	-1.60/-17	-1.83/-5.28	-5.9/-5.68	-3.31/-1.73	-1.07/-3.34	-3.07/-4.46	-4.44/-2.49	-1.21/-3.24	-5.97/-3.81	-5.37/-5.82	4.88/-0.81	-6.78/-4.99	-2.15/-1.85	-2.56/-2.69	-0.96/-1.91	-3.13/-0.18	-1.99/-2.35	0.350/-43	-0.88/-2.33	-4.47/-1.57	-0.87/-2.88	-5.32/-4.53
Θ(97.5°)	-0.46/-4.46	-4.62/-17.76	-6.33/-3.07	-5.42/-6.06	-4.4/-4.06	-2.64/-3.53	-0.32/-8.33	-7.02/-9.14	-5.66/-3.02	-2.56/-4.21	-4.68/-4.02	-6.4/-6.72	-7.22/-8.61	-7.69/-3.82	-0.04/-1.6	-1.49/-2.96	-0.010/-0.23	-2.79/-0.62	-2.12/-1.83	-0.33/-0.61	-1.70/-22	-2.07/-0.61	0.2/-4.1	-8.6/-2.3
Θ(105°)	-5.16/-4.43	-4.72/-10.34	-8.24/-7.57	-9.88/-10.7	-9.21/-10.43	-7.49/-5.99	-6.24/-8.45	-9.88/-17.55	-10.24/-5	-4.21/-4.83	-8.88/-7.66	-7.62/-9.43	-10.79/-10.1	-11.25/-2.33	-0.64/-1.93	-0.57/-1.99	0.261/-32	-1.31/-0.78	-1.99/-3.87	-0.170/-9	-2.07/-0.35	-0.99/-3.5	-3.06/-5.98	-8.31/-15.93
Θ(112.5°)	-1.82/-0.58	-3.69/-7.89	-18.76/-9.07	-8.18/-14.59	-12.86/-17.77	-14.16/-9.51	-10.79/-13.39	-18.67/-14.99	-18.18/-10.58	-8.24/-8.07	-10.38/-8.44	-11.19/-11.84	-9.11/-13.69	-10.01/-3.85	-2.57/-12.68	-0.23/-1.1	0.980/-1	0.470/8.1	-1.27/-2.04	-1.860/-11	-5.89/-10.39	-4.48/-8	-4.78/-14.6	-10.41/-16.05
Θ(120°)	-12.44/-12.22	-13.23/-15.01	-8.19/-7.55	-8.52/-8.89	-7.65/-10.99	-13.71/-13.12	-18.23/-17.81	-16.85/-16.88	-11.68/-6.09	-10.62/-13.54	-10.6/-8.75	-9.43/-13.4	-12.05/-12.92	-8.02/-4.03	-0.73/-0.68	-0.53/-2.75	-2.880/-1	-0.64/-2.42	-4.32/-0.64	-12.64/-12.69	-5.78/-3.63	-7.13/-7.49	-1.73/-4.9	-8.98/-6.03
Θ(127.5°)	-8.38/-13.31	-12.31/-14.44	-9.93/-9.86	-14.48/-12.16	-5.35/-3.44	-6.36/-11.58	-15.25/-18.63	-15.55/-14.19	-17.13/-17.92	-18.74/-13.29	-10.45/-18.8													



Radiated Composite Gain Data_6GHz

Appendix B

Θ(120°)	-2.84/-10.83	-10.03/-4.48	-6.68/-10.36	-8.81/-14.27	-11.19/-9.29	-14.93/-13.3	-15.05/-9.18	-6.34/-5.48	-6.7/-7	-7.69/-6.81	-8.4/-7.87	-8.11/-9.28	-5.06/-7.54	-4.6/-4.31	-4.57/-5.05	-8.58/-18.79	-15.58/-14.79	-11.38/-12.14	-16.22/-18.67	-5.11/-1.85	-6.5/-3.25	0.24/-3.26	-9.23/-12.41	-5.83/-0.16
Θ(127.5°)	-2.44/-9.56	-4.64/-17.45	-16.02/-7.03	-7.98/-8.62	-7.29/-9.38	-12.89/-17.57	-17.71/-10.94	-9.65/-10.32	-7.3/-10.88	-11.19/-7.5	-8.34/-4.64	-5.25/-4.06	-3.34/-7.26	-0.94/-3.27	-7.1/-8.9	-9.49/-9.26	-11.57/-13.16	-16.05/-18.53	-10.22/-17.47	-4.93/-2.26	-7.53/-8.05	-4.42/-9.07	-17.5/-9.31	-10.24/-4.45
Θ(135°)	-5.43/-6.82	-11.41/-7.64	-6.52/-7.82	-9.4/-7.1	-13.44/-12.37	-12.05/-17.76	-18.64/-18.85	-13.41/-13	-11.47/-5.71	-6.58/-7.27	-3.35/-6.55	-5.62/-4.6	-7.71/-3.33	-3.35/-3	1.96/-1.2	-2.03/-12.83	-12.54/-9.25	-11.9/-10.64	-5.81/-12.07	-7.29/-2.02	-3.79/-6.96	-2.35/-0.77	-6.78/-12.65	-10.21/-8.62
Θ(142.5°)	-2.82/-2.8	-6.1/-5.82	-6.62/-12.45	-18.28/-18.71	-15.84/-11.77	-12.71/-18.54	-18.57/-17.99	-17.49/-12.16	-13.01/-12.88	-5.04/-4.39	-7.5/-1.82	0.06/-3.08	0.67/-1.61	-0.190.97	1.190.07	-8.75/-14.53	-14.21/-5.95	-8.17/-9.83	-10.61/-14.76	-8.64/-0.65	-0.85/-5.09	-11.16/-3.9	-5.66/-19.32	-6.64/-3.95
Θ(150°)	-3.1/-8.66	-15.5/-13.96	-11.24/-15.36	-18.24/-17.47	-18.44/-18.83	-19.16/-17.2	-17.8/-10.7	-18.55/-10.49	-5.82/-6.6	-7.91/-6.37	-3.34/-2.57	-4.71/-7.22	-3.1/-1.86	-3.51/-5.22	-6.9/-4.86	-6.72/-8.8	-10.97/-10.93	-13.55/-16.35	-12.63/-9.48	-3.42/-5.5	-9.31/-5.63	-3.18/-3.05	-2.72/-1.83	
Θ(157.5°)	-18.53/-18.29	-15.2/-9.92	-8.25/-9.67	-12.65/-17.18	-15.3/-13.62	-14.67/-17.65	-18.55/-18.66	-13.81/-13.33	-13.42/-12.01	-10.94/-12.07	-14.92/-19.41	-18.44/-12.92	-7.81/-7.31	-9.6/-0.1	-3.41/-4.63	-8.1/-7.02	-6.78/-8.37	-8.29/-10.6	-15.55/-18.15	-19.05/-12.18	-9.21/-8.55	-6.59/-3.1	-1.7/-2.96	-5.16/-9.01
Θ(165°)	-11.53/-10.41	-13.19/-18.63	-17.34/-16.08	-16.37/-17.07	-15.2/-14.13	-13.06/-15.66	-18.23/-19.15	-16.56/-12.52	-9.74/-8.54	-7.4/-6.35	-5.55/-5.21	-4.69/-4.3	-4.19/-3.34	-2.19/-1.35	-0.94/-1.07	-1.58/-3.01	-5.69/-8.15	-10.78/-14.82	-18.29/-18.84	-18.43/-17.38	-12.58/-9.27	-5.23/-4.28	-4.84/-5.81	-8.1/-12
Θ(172.5°)	-9.52/-9.32	-7.29/-6.51	-6.35/-6	-8.43/-10.71	-12.76/-14.99	-16.27/-15.53	-11.68/-10.3	-9.37/-8.27	-6.92/-5.67	-4.52/-3.53	-2.64/-1.83	-1.35/-1.34	-1.73/-2.21	-3.08/-4.79	-7.2/-8.52	-9.41/-10.14	-10.92/-11.8	-12.81/-14.77	-18.21/-17.87	-17.9/-18.05	-18.1/-18.81	-19.13/-18.63	-17.93/-12.6	-10.69/-8.73
Θ(180°)	-11.6/-6.75	-5.12/-5.86	-6.94/-6.55	-8.35/-7.07	-7.81/-9.59	-11.57/-14.14	-15.39/-12.11	-9.57/-8.15	-6.7/-5.05	-3.92/-2.99	-2.39/-2.03	-2.04/-1.55	-0.77/-0.67	-0.98/-1.58	-2.06/-2.75	-3.68/-4.79	-6.01/-7.63	-18.16/-18.2	-19.21/-18.54	-11.57/-8.61	-8.9/-08	-10.1/-13.71	-13.15/-10.57	
Freq(Hz)	6.895GPol.	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°)	-11.76/-15.01	-11.81/-11.86	-10.37/-8.51	-7.77/-7.86	-7.45/-7.22	-6.76/-5.78	-5.45/-5.06	-5.07/-4.92	-4.99/-3.57	-6.37/-7.08	-8.66/-10.19	-12.01/-13	-12.27/-10.58	-12.24/-11.4	-10.09/-7.93	-5.81/-5.09	-4.72/-4.63	-4.31/-3.74	-2.29/-2.19	-2.36/-2.93	-3.52/-4.45	-5.27/-5.4	-7.05/-7.83	-7.55/-6.69
Θ(7.5°)	-12.33/-15.12	-13.12/-10.79	-8.84/-5.87	-4.36/-5.14	-5.24/-4.84	-4.66/-4.02	-3.46/-3.18	-2.42/-2.46	-2.92/-3.54	-4.14/-4.67	-5.82/-7.49	-8.65/-9.81	-11.31/-11.05	-11.16/-10.56	-9.94/-8.92	-7.99/-7.02	-7.73/-7.16	-6.19/-5.14	-4.74/-4.97	-4.54/-4.97	-5.95/-7.33	-8.41/-8.39	-9.1/-11.73	-12.71/-12.48
Θ(15°)	-14.81/-12.42	-8.97/-8.42	-8.86/-7	-3.86/-3.8	-5.24/-5.16	-4.14/-3.57	-2.76/-2.4	-1.89/-1.87	-2.28/-2.67	-3.19/-4.25	-5.82/-7.53	-8.79/-10.41	-12.18/-12.77	-12.84/-12.23	-11.93/-11.23	-10.47/-9.9	-8.76/-8.33	-8.45/-7.5	-7.13/-6.19	-6.69/-6.25	-5.09/-4.7	-4.8/-5.64	-6.51/-7.06	-7.05/-10.33
Θ(22.5°)	-18.85/-13.71	-9.8/-7.84	-6.19/-5.08	-4.1/-3.19	-3.15/-2.34	-1.39/-1.23	-0.91/-0.46	-0.26/-0.79	-2.33/-3.32	-4.06/-4.44	-5.11/-6.5	-8.48/-10.24	-18.12/-17.76	-14.66/-10.86	-8.5/-7.59	-7.68/-7.72	-8.44/-8.49	-7.79/-6.81	-4.87/-3.94	-3.87/-4.52	-6.05/-7.1	-7.37/-9.94	-11/-14.2	
Θ(30°)	-15.81/-12.99	-9.51/-6.89	-5.73/-5.53	-4.92/-2.61	-1.3/-0.53	0.010.82	1.21/-1.43	0.74/-0.31	-1.71/-2.61	-2.58/-2.49	-2.71/-3.48	-5.77/-8.57	-10.18/-12.47	-15.63/-16.78	-14.45/-11.69	-10.98/-12.59	-12.17/-10.27	-9.16/-9.1	-7.74/-6.47	-6.55/-7.93	-7.91/-7.21	-12.8/-7.77	-9.35/-10.37	-11.98/-12.62
Θ(37.5°)	-8.96/-7.78	-6.54/-3.77	-1.41/-1.18	-2.19/-1.11	-1.01/-1.19	-0.35/-0.41	1.74/-2.63	1.89/-0.39	-0.35/-0.39	-0.26/-0.88	-1.88/-3.59	-6.63/-10.45	-13.19/-14.34	-13.99/-14.82	-14.03/-11.53	-11.74/-13.93	-12.76/-11.28	-12.22/-15.41	-13.01/-11.22	-13.84/-8.55	-5.89/-5.11	-5.47/-6.9	-8.67/-11.51	-12.45/-9.88
Θ(45°)	-6.3/-9.87	-5.88/-2.64	-0.91/-0.02	-0.46/-0.02	-0.29/-0.24	0.43/-1.7	2.25/-2.46	2.41/-1.44	0.12/-0.14	-0.57/-1.13	-2.2/-2.87	-4.5/-8.57	-11.9/-12.71	-10.35/-10.51	-10.33/-11.22	-17.73/-17.59	-15.23/-16	-18.82/-17.63	-15.96/-14.89	-14.56/-16.22	-16.54/-13.91	-8.69/-6.46	-7.33/-10.79	-10.06/-7.03
Θ(52.5°)	-9.44/-6.38	-7.58/-3.1	-2.09/-0.41	0.41/-0.02	-0.95/-0.98	-0.71/-0.09	1.24/-2.56	1.62/-0.3	-1.73/-0.56	0.53/-0.78	0.07/-0.64	-3.69/-12.21	-18.44/-14.69	-12.24/-10.92	-8.6/-11.07	-12.09/-12.54	-10.41/-12.86	-18.5/-19.07	-18.08/-12.43	-10.81/-9.18	-17.53/-12.69	-8.57/-8.07	-8/-9.54	-13.52/-13.85
Θ(60°)	-8.07/-5.38	-7.68/-2.37	-1.12/-0.15	0.50/-3	-0.94/-1.37	-1.48/-0.36	-1.04/-0.86	0.69/-1.17	-1.93/-1.5	-0.09/-0.24	-0.77/-1.9	-12.48/-8.69	-11.51/-9.71	-9.5/-9.19	-5.77/-5.24	-7.87/-10.77	-8.61/-11.29	-13.01/-15.35	-12.61/-18.77	-13.4/-10.13	-7.13/-6.88	-7.14/-6.82	-9.23/-8.51	-10.12/-4.1
Θ(67.5°)	-2.53/-0.08	0.53/-0.2	-0.56/-5.17	0.92/-1.2	-2.19/-1.55	-0.82/-1.85	-3.01/-0.11	-0.28/-2.64	-2.46/-2.01	-2.36/-1.54	-1.05/-2.06	-3.25/-6.74	-8.26/-6.59	-6.11/-7.83	-5.64/-5.93	-4.21/-7.57	-7.42/-6.22	-11.41/-15.34	-10.84/-15.57	-7.06/-3.26	-5.06/-7.19	-10.14/-17.35	-8.04/-3.41	-3.85/-2.4
Θ(75°)	-1.37/-0.6	0.68/-1.59	1.21/-2.01	2.21/-2.01	-3.29/-2.77	-1.94/-2.49	-4.28/-1.43	-0.99/-2.01	-2.17/-2.64	-4.85/-1.49	-0.83/-1.62	-1.2/-6.6	-6.66/-6.59	-6.14/-3.46	-3.3/-5.89	-1.87/-4.84	-6.77/-3.53	-6.64/-7.9	-3.58/-7.34	-4.83/-1.89	-3.54/-4.39	-7.57/-7.73	-2.68/-2.08	-3.93/-2.6
Θ(82.5°)	-2.25/-0.32	-0.84/-1.25	1.89/-0.65	-0.35/-1.63	-1.96/-1.98	-1.15/-1.17	-0.69/-1.93	-2.45/-2.98	-1.38/-2.49	-0.84/-3.86	-1.74/-3.3	-3.64/-12.63	-7.72/-7.24	-7.88/-3.82	-2.1/-4.5	-1.29/-2.19	-6.76/-9.05	-6.64/-4.99	-3.63/-7.99	-2.63/-0.45	-2.37/-7.2	-4.2/-1.99	-5.97/-3.5	
Θ(90°)	0.07/-2.84	-2.86/-2.05	0.18/-1.08	-1.49/-7.12	-4.3/-3.04	-3.35/-2.94	-5.16/-1.53	-5.24/-4.07	-1.33/-5.11	-8.71/-8.45	-2.93/-5.02	-6.21/-7.19	-10.58/-11.43	-8.15/-3.85	-1.27/-3.48	-4.18/-1.61	-2.52/-0.46	-1.92/-3.01	-0.98/-3.16	0.61/-2.76	-0.76/-2.07	-1.89/-2.13	1.14/-0.99	-5.74/-3.53
Θ(97.5°)	-1.49/-2.33	-3.95/-8.66	-4.66/-2.73	-4.37/-7.65	-5.92/-4.54	-5.06/-7.06	-6.87/-3.59	-7.74/-6.55	-2.05/-6.54	-7.87/-5.14	-5.74/-7.58	-6.52/-7.63	-9.67/-9.44	-6.21/-3.59	-1.47/-4.59	-3.05/-0.09	-0.63/-0.95	1.37/-0.84	0.28/-2.27	-7.04/-2.8	-1.69/-0.31	-1.37/-0.02	0.36/-2.26	-7.81/-3.05
Θ(105°)	-4.93/-3.39	-11.14/-5.79	-5.39/-7.07	-15.19/-13.65	-9.22/-7.26	-8.43/-6.21	-16.18/-10.25	-11.49/-9.28	-4.74/-10.29	-9.03/-5.74	-6.94/-8.68	-11.26/-14.71	-12.97/-8.64	-12.91/-7.16	-1.66/-5.81	-1.17/-7.26	-2.14/-3.04	0.71/-0.2	-1.31/-2.5	-6.91/-7.2	-4.02/-2.23	0.18/-6.1	-10.82/-3.53	
Θ(112.5°)	-14.24/-8.97	-6.51/-5.87	-10.07/-14.03	-17.33/-16.06	-18.08/-14.01	-11.16/-16.2	-18.04/-19.34	-17.39/-9.45	-8.27/-14.76	-10.47/-10.48	-7.59/-12.04	-7.43/-15.49	-7.16/-6.74	-10.95/-3.23	-2.78/-1.93	0.04/-1.87	-2.63/-0.98	0.95/-0.39	-2.24/-6.21	-1.22/-2.05	-1.09/-4.7	-7.74/-6.23	-1.69/-3.35	-4.05/-9.51
Θ(120°)	-3.66/-13.75	-17.92/-14.86	-10.9/-8.87	-9.79/-10.64	-12.84/-8.85	-12.65/-14.32	-13.58/-15.44	-8.51/-6.81	-18.64/-18.65	-16.35/-14.79	-15.49/-10.29	-13.49/-8.71	-6.98/-16	-6.66/-5.08	-3.14/-2.88	-0.45/-1.29	-3.61/-1.66	2.35/-0.02	-5.62/-5.07	-0.88/-0.07	-9.13/-10.29	-5.49/-11.03	-10.18/-4.56	-1.82/-1.35
Θ(127.5°)	-2.12/-5.64	-10.02/-11.25	-13.51/-9.18	-10.28/-14.11	-5.66/-7.48	-11.72/-9.89	-13.24/-9.98	-12.71/-11.9	-13.62/-16.17	-18.26/-13.39	-16.88/-10.5	-14.53/-12.28	-5.3/-9.38	-5.14/-1.1	0.17/-4.07	-4.92/-1.1	4.59/-0.6	0.36/-3.67	-0.53/-8.1	-2.51/-5.55	-2.66/-1.53	-7.94/-4.46	-6.26/-6.16	
Θ(135°)	-4.96/-8.49	-9.72/-8.33	-7.52/-13.35	-14.24/-17.93	-16.66/-13.98	-11.11/-10.66	-11.34/-12.52	-12.71/-15.4	-13.2/-12.61	-17.45/-12.34	-15.37/-8.74	-16.62/-9.74	-12.08/-12.43	-0.26/-0.05	-0.71/-4.78	-2.42/-1.97	4.01/-0.64	0.48/-9.09	1.32/-5.36	2.28/-8.06	-3.13/-2.13	-6.98/-9.24	-4.83/-6.15	
Θ(142.5°)	-8.96/-14.47	-12.72/-12.45	-19.15/-15.88	-15.71/-10.59	-10.16/-18.08	-13.88/-11.97	-15.04/-15.45	-15.44/-16.32	-18.02/-14.49	-15.72/-16.81	-10.08/-10.94	-18.17/-11.32	-13.87/-8.61	-16.67/-8.12	-1.96/-0.57	-3.8/-17.93	-10.07/-0.5	-0.04/-2.32	-2.36/-16.27	0.04/-5.55	5.91/-1.87	-11.22/-2.7	-3.46/-18	-11.66/-10.69
Θ(150°)	-3.61/-6.7	-12.72/-14.95	-18.92/-13.02	-12.1/-16.41	-10.18/-15.07	-17.71/-18.86	-16.93/-8.65	-5.63/-6.72	-12.37/-12.89	-10.19/-8.54	-11.38/-17.44	-15.61/-5.41	-18.79/-19.12	-18.34/-15.21	-11.91/-8.01	-2.88/-10.29	-4.64/-4.67	-2.85/-8.07	-8.89/-6.54	0.88/-4.94	-0.96/-1.33	-17.97/-9.39	-5.06/-5.05	-8.06/-5.28
Θ(157.5°)	-13.39/-15.72	-18.95/-17.49	-18.09/-18.86	-18.54/-17.32	-14.66/-11.86	-11.31/-12.77	-14.57/-18.89	-17.59/-10.82	-9.03/-7.91	-9.19/-12.91	-14.71/-12.3	-10.05/-10.17	-12.59/-16.08	-18.09/-17.74	-8.16/-5.33	-9.67/-9.42	-5.43/-5.54	-3/-1.77	-4.76/-9.47	-5.47/-0.95	0.27/-1.18	-3.63/-4.17	-4.61/-9.53	-19.15/-18.19
Θ(165°)	-15.18/-17.83	-19.55/-13.7	-13.15/-89	-15.49/-14.96	-14.59/-13.12	-11.47/-10.21	-8.05/-6.63	-5.72/-5.3	-5.27/-5	-10.38/-13.89	-17.92/-18.46	-15.91/-13.68	-11.06/-9.63	-9.33/-6.6	-7.55/-53	-5.04/-7.38	-2.61/-1.8	-2.54/-4.64	-5.16/-5.1	-4.75/-5.36	-3.48/-5.1	-7.56/-7.32	-8.71/-14.57	
Θ(172.5°)	-1.73/-19.1	-13.02/-9.2	-6.68/-8.51	-6.46/-6.4	-8.33/-11.94	-12.14/-11.92	-10.62/-18.82	-12.07/-11.25	-10.16/-8.92	-8.48/-9.03	-10.63/-12.													



Radiated Composite Gain Data_6GHz

Appendix B

Θ(165°)	-5.97/-6.77	-6.8/-6.67	-6.25/-6.21	-5.77/-5.8	-5.93/-5.88	-5.06/-3.72	-2.97/-2.97	-3.49/-4.42	-5.69/-6.41	-6.66/-6.57	-6.59/-6.36	-5.97/-5.43	-4.79/-4.44	-4.67/-5.7	-6.7/-7.12	-7.4/-8.09	-8.28/-7.76	-7.74/-8.99	-11.55/-13.01	-10.92/-8.66	-7.2/-6.79	-7.67/-8.46	-8.57/-8.21	-8.09/-7.26
Θ(172.5°)	-10.57/-11.72	-12.5/-13.67	-14.06/-12.26	-10.08/-8.7	-7.94/-7.32	-6.51/-5.65	-4.59/-3.55	-2.83/-2.6	-2.8/-3.24	-4.03/-5.08	-7.17/-11.16	-16.55/-18.37	-18.31/-15.46	-14.68/-16.24	-18.29/-18.7	-16.9/-13.16	-10.85/-9.79	-9.59/-10.33	-12.04/-13.57	-13.15/-10.97	-9.21/-8.18	-7.45/-6.54	-6.54/-6.87	-7.89/-9.27
Θ(180°)	-10.96/-13.91	-15.64/-19.56	-17.99/-17.7	-18.82/-13.19	-10.49/-8.89	-7.6/-6.65	-5.74/-4.75	-4.39/-4.68	-5.44/-6.92	-8.82/-10.29	-11.32/-13.81	-17.74/-19.23	-17.67/-16.62	-18.17/-15.82	-13.63/-12.5	-11.6/-11.48	-11.02/-10.78	-10.53/-9.52	-8.14/-7.02	-6.29/-6.08	-6.13/-6.19	-5.92/-6.54	-5.99/-6.53	-7.38/-8.75
Freq(Hz)	6.175GPol.	ThetaAnt.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-2.48/-2.06	-1.66/-1.29	-1.21/-1.18	-1.15/-1.38	-1.8/-1.7	-2.46/-3.31	-4.78/-7.11	-10.4/-14.79	-18.16/-15.29	-11.12/-8.11	-5.89/-3.97	-2.73/-1.88	-1.16/-0.81	-0.63/-0.47	-0.58/-0.89	-1.35/-1.98	-2.8/-3.71	-4.9/-6.41	-8.14/-10.62	-13.37/-14.78	-12.66/-9.93	-7.57/-6.25	-4.99/-3.88	-3.14/-2.66
Θ(7.5°)	-1.19/-1.46	-1.55/-1.58	-1.81/-2.19	-2.5/-3.15	-3.6/-3.78	-4.27/-5.46	-7.17/-9.6	-11.42/-11.92	-10.7/-8.72	-7.31/-6.02	-4.31/-3	-2.21/-1.56	-1.2/-1.03	-0.84/-0.77	-0.85/-0.84	-0.93/-1.22	-1.79/-2.39	-3.28/-2.48	-5.78/-7.48	-9.52/-12.88	-15.05/-12.65	-9.18/-9.65	-4.86/-3.65	-2.56/-2.15
Θ(15°)	-1.04/-1.21	-1.5/-2.19	-3.4/-4.59	-5.29/-6.09	-6.96/-8.04	-9.82/-10.36	-9.48/-8.33	-7.34/-7.15	-6.46/-5.04	-3.26/-1.56	-0.380/-28	0.570/55	0.33/-0.12	-0.69/-1.72	-2.6/-3.02	-3.1/-2.76	-2.52/-2.43	-2.55/-3.07	-4.2/-5.32	-6.75/-8.81	-11.15/-12.07	-9.59/-7.12	-4.75/-3.2	-2.02/-1.3
Θ(22.5°)	-5.24/-5.31	-5.4/-5.04	-5.11/-5.86	-6.79/-7.78	-9.24/-11.88	-13.51/-11.72	-9.52/-8.61	-8.4/-8.05	-6.97/-5.18	-2.95/-1.01	0.060/51	0.82/1	0.950/42	-0.47/-1.46	-1.8/-1.2	-0.96/-1.29	-2.17/-2.62	-2.27/-1.55	-1.46/-2.14	-3.9/-6.3	-9.59/-14.62	-17.72/-15.18	-11.8/-8.81	-5.92/-5.23
Θ(30°)	-8.12/-7.19	-6.14/-5.72	-6.55/-8.31	-9.28/-9.5	-11.82/-17.91	-18.41/-14.77	-10.32/-7.01	-4.41/-3.03	-2.43/-1.97	-1.11/-0.23	0.531/-19	2.293/06	2.82/04	1.681/69	1.81/83	1.28/-0.03	-0.88/-1.21	-1.51/-1.76	-1.85/-2.3	-3.42/-6.27	-9.3/-11.48	-15.32/-18.76	-17.9/-16.21	-10.78/-8.75
Θ(37.5°)	-18.08/-18.59	-18.42/-19.05	-18.84/-18.12	-18.21/-17.43	-14.37/-17.1	-16.73/-11.96	-6.74/-3.23	-1.11/-0.44	-0.4/-0.38	-0.590/-38	1.461/62	2.493/18	2.642	2.011/9	1.370/93	0.63/-0.27	-1.62/-2.53	-2.72/-2.86	-3.43/-4.68	-5.28/-5.69	-8.45/-13.22	-18.13/-18.48	-18.39/-18.18	-18.35/-17.44
Θ(45°)	-10.7/-9.89	-10.76/-10.1	-10.61/-11.57	-14.39/-14.75	-10.19/-6.98	-5.85/-6.36	-6.97/-5.16	-2.160/03	1.131/45	0.920/46	1.071/05	2.222/77	2.993/71	3.63/04	1.590/69	0.23/-0.91	-1.33/-2.68	-3.59/-2.68	-1.97/-2.64	-5.02/-7.68	-9.03/-11.72	-15.51/-13.98	-12.08/-12.06	-11.33/-10.63
Θ(52.5°)	-8.27/-5.89	-6.2/-5.88	-5.77/-7.01	-8.62/-11.68	-9.64/-6.33	-4.11/-3.36	-3.94/-7.41	-3.84/-1.68	0.02/1	0.990/24	0.390/98	3.04/87	4.14/96	3.612/42	-0.11/-0.93	-1.83/-3.94	-5.43/-4.58	-4.84/-4.91	-3.81/-2.79	-2.95/-4.55	-7.45/-7.24	-8.91/-9.75	-9.75/-10.67	-7.57/33
Θ(60°)	-8.19/-7.97	-7.54/-8.46	-8.16/-7.69	-6.91/-8.67	-9.45/-7.06	-4.95/-3.4	-3.33/-5.21	-5.5/-2.5	-0.52/-0.11	-0.56/-1.81	-1.78/-0.36	1.862/58	3.333/78	2.882/28	0.24/-0.87	-2.54/-5.2	-6.03/-4.75	-2.4/-2.55	4.97/-4.59	-5.19/-9.22	-11.2/-13.96	-11.09/-9.73	-7.71/-9.17	-8.7/-7.66
Θ(67.5°)	-3.41/-4.61	-5.33/-7.37	-6.96/-5.68	-7.16/-8.26	-7.18/-5.83	-4.32/-1.68	-1.2/-2.25	-3.65/-3.75	-2.34/-2.14	-3.58/-4.47	-3.92/-1.3	-0.51/51	2.4/3	3.232/77	-1.34/-2.76	-5.93/-6.68	-7.04/-7.38	-4.89/-4.51	-3.94/-3.79	-5.95/-8.4	-10.63/-10.39	-5.63/-2.79	-1.87/-1.36	-1.77/-3.1
Θ(75°)	-1.17/-2.04	-4.28/-5.49	-3.73/-2.59	-3.28/-4.35	-4.6/-4.54	-4.16/-1.58	0.25/-0.5	-2.38/-3.16	-4.21/-6.66	-7.31/-4.26	-2.66/-0.76	-0.23/-1.59	2.272/88	2.21/48	-1.77/-3.18	-6.89/-8.37	-10.99/-8.85	-6.04/-4	-1.87/-1.73	-5/-6.55	-7.13/-6.09	-3.02/-1.49	-0.640/24	-0.38/-0.13
Θ(82.5°)	-1.32/-1.16	-2.63/-3.64	-2.78/-4.03	-1.03/-3.64	-5.33/-6.23	-5.49/-1.59	0.350/81	-0.71/-7.35	-5.4/-4.8	-3.26/-1.92	-3.58/-2.94	-1.130/25	1.030/16	0.38/-0.17	-3.51/-5.31	-12.53/-9.78	-9.17/-6.3	-7.44/-3.34	-2.45/-2.62	-6.84/-6.95	-8.8/-5.23	-4.08/-2.93	-3.03/-9.87	-0.560/-17
Θ(90°)	-0.38/-0.5	-1.4/-4.75	-0.20/-1.01	-0.37/-0.11	-2.21/-2.94	-4.51/-2.96	-0.51/-0.82	-1.37/-3.16	-5.02/-4.66	-5.27/-6.55	-8.49/-7.71	-3.85/-1.61	-1.04/-1.08	0.10/-0.54	-3.93/-4.14	-15.61/-12.98	-6.11/-3.92	-6.18/-4.8	-0.99/-2.52	-8.38/-12.53	-8.74/-3.9	-3.63/-3.31	-3.82/-2.42	-1.85/-1.17
Θ(97.5°)	0.580/5	0.14/-0.95	-2.02/-0.78	1.04/-0.08	-1.09/-4.05	-5.7/-6.19	-4.06/-3.27	-3.65/-5.43	-9.65/-12.21	-11.73/-9.03	-6.66/-5.45	-3.47/-2.74	-2.36/-4.05	-3.5/-5.32	-9.33/-7.81	-11.6/-14.72	-7.95/-7.08	-12.21/-8.17	-3.27/-3.08	-6.94/-6.17	-8.21/-8.66	-4.64/-6	-3.25/-1.06	-0.890/46
Θ(105°)	0.971/23	1.740/6	0.130/42	0.610/23	-1.49/-3.19	-4.75/-3.88	-2.34/-3.23	-4.86/-12.38	-12.28/-8.19	-5.88/-4.73	-5.22/-6.25	-4.74/-7.02	-10.75/-18.09	-6.57/-7.33	-9.53/-11.34	-13.72/-14.13	-9.8/-8.69	-18.19/-11.2	-4.32/-6.61	-17.76/-10.88	-15.61/-15.94	-5.99/-5.92	-5.07/-6.27	-0.760/96
Θ(112.5°)	0.250/12	-0.39/-1.61	-0.680/8	1.570/5	-4.73/-5.64	-8.11/-7.88	-5.46/-3.6	-4.78/-9.16	-1.71/-4.1	-2.72/-4.67	-8.37/-11.07	-8.13/-7.26	-9.17/-11.61	-10.57/-11.73	-13.56/-17.29	-3.92/-13.48	-15.19/-15.36	-5.29/-7.82	-8.4/-18.86	-16/-7.6	-8.99/-7.88	-3.46/-2.43	-1.33/-4.09	
Θ(120°)	-3.75/-0.19	0.07/-0.57	-2.11/-1.56	-0.58/-1.61	-2.09/-3.44	-5.31/-9.03	-8.47/-6.38	-7.48/-9.55	-9.79/-8.48	-7.61/-8.18	-11.94/-10.83	-7.5/-5.47	-5.82/-5.75	-7.02/-8.27	-7.32/-11.74	-16.71/-16.79	-10.93/-11.38	-18.47/-10.11	-5.51/-10.32	-10.06/-5.65	-7.79/-11.01	-5.77/-8.78	-5.3/-4.82	-5.75/-4.57
Θ(127.5°)	-0.710/91	1.19/-0.26	-1.37/-2.25	-2.58/-3.18	-6.49/-8	-6.32/-6.8	-11.86/-14.62	-14.66/-16.94	-15.07/-12.38	-12.04/-16.55	-18.99/-17.42	-12.05/-8.1	-7.18/-5.59	-7.89/-8.25	-10.83/-10.89	-8/-8.37	-10.87/-12.71	-8.04/-7.3	-4.21/-13.04	-8.66/-18.98	-13.76/-6.28	-8.85/-5.06	-1.61/-6.01	-5.07/-6.05
Θ(135°)	-1.35/-0.94	-1.14/-0.62	-2.33/-3.94	-3.73/-3.72	-4.37/-5.88	-6.38/-6.85	-6.77/-7.73	-1.09/-9.87	-8.47/-6.45	-13.03/-11.23	-14.91/-11.73	-9.92/-10.58	-9.39/-11.3	-9.76/-6.53	-6.34/-4.07	-5.71/-10.92	-17.86/-18.84	-14.09/-12.16	-5.62/-13.82	-9.02/-10.19	-5.39/-6.63	-1.51/-8.9	-9.46/-13.47	-10.15/-9.32
Θ(142.5°)	-3.33/-1.96	-1.46/-0.57	-1.53/-2.29	-1.7/-1.97	-3.14/-5.36	-6.6/-7.04	-9.86/-15.98	-18.52/-12.69	-7.2/-5.37	-5.15/-5.2	-5.89/-7.99	-19.8/-8.62	-5.74/-4.1	-1.98/-3.23	-3.95/-6.68	-15.04/-14.85	-11.72/-15.8	-17.67/-19.2	-9.47/-13.43	-5.97/-8.62	-7.93/-3.63	-2.72/-2.24	-4.19/-4.38	-8.36/-6.55
Θ(150°)	-2.61/-3.7	-1.580/28	1.471/29	2.031/13	-0.75/-2.49	-4.31/-6.28	-7.29/-5.81	-4.67/-5.25	-6.66/-7.59	-8.28/-9.63	-12.29/-14.02	-8.85/-7.72	-7.25/-10.3	-17.14/-18.22	-13.97/-12.61	-8.18/-11.73	-18.99/-18.62	-12.19/-12.29	-13.06/-13.48	-14.84/-4.05	-0.461/43	1.99/21	-0.360/87	
Θ(157.5°)	0.36/-0.29	-0.51/-0.58	-0.30/-0.92	-0.12/-1.62	-3.92/-4.38	-7.93/-7.98	-7.69/-8.24	-8.38/-7.73	-7.76/-8.3	-7.93/-9.71	-10.35/-15.42	-17.8/-18.16	-16.38/-10.27	-8.92/-10.52	-13.05/-11.2	-12.91/-13.13	-11.17/-11.18	-18.15/-15.5	-14.64/-17.97	-16.22/-22.8	-3.62/-2.28	-0.991/07	2.07/167	
Θ(165°)	-3.05/-3.16	-4.3/-5.46	-4.75/-3.68	-3.37/-3.81	-4.72/-5.37	-6.04/-7.19	-8.98/-12.03	-17/-18.84	-17.49/-14.96	-12.21/-10.54	-9.86/-9.65	-9.16/-7.89	-6.27/-5.47	-6.33/-9.6	-17.01/-19.08	-12.69/-9.13	-8.11/-8.34	-8.04/-6.88	-6.39/-7.71	-9.04/-11.02	-14.05/-12.94	-7.13/-4.7	-4.51/-4.67	-4.21/-3.48
Θ(172.5°)	-6.78/-6.36	-5.95/-5.85	-6.16/-7.57	-5.19/-5.14	-5.82/-6.25	-6.45/-7.5	-8.69/-9.77	-10.59/-12.24	-13.78/-14.22	-12.88/-11.62	-11/-11.43	-16.05/-18.07	-18.23/-15.58	-12.94/-8.48	-6.08/-4.86	-6.06/-8.07	-10.2/-12.54	-14.22/-14.05	-13.02/-13.12	-13.78/-16.61	-17.56/-13.15	-11.28/-9.51	-7.58/-6.54	
Θ(180°)	-6.86/-5.77	-5.32/-4.59	-5.66/-5.93	-6.44/-6.83	-7.03/-6.92	-6.97/-7.95	-9.83/-12.83	-17.19/-17.86	-17.88/-18.49	-18.48/-17.43	-19.08/-18.14	-17/-15.25	-14.4/-13.68	-12.97/-13.33	-13.59/-14.25	-14.72/-14.73	-14.81/-14.65	-14.64/-14.33	-13.89/-13.14	-12.71/-13	-13.6/-13.4	-13.53/-14.05	-13.39/-10.82	-8.15/-7.17
Freq(Hz)	6.475GPol.	PhiAnt.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-5.69/5	-4.89/-4.5	-3.83/-2.79	-2.21/-1.5	-1.03/-0.79	-0.89/-0.37	0.03/-0.06	-0.14/-0.35	-0.21/-0.36	-1.28/-2.88	-3.75/-4.87	-5.71/-6.04	-6.57/67	-4.9/-3.71	-2.65/-1.8	-1.23/-0.7	-0.12/-0.54	-0.15/-0.54	-1.14/-1.66	-2.13/-2.56	-3.23/-4.31	-5.19/-5.16	-5.05/-5.45	
Θ(7.5°)	-5.98/-6.08	-5.71/-4.75	-3.85/-2.54	-1.96/-1.43	-0.82/-0.32	-0.10/0.1	-0.35/-0.69	-0.85/-0.82	-1.17/-1.71	-2.31/-3.56	-5.09/-7.42	-9.37/-9.44	-9.08/-7.86	-5.94/-4.49	-3.81/-3.15	-2.31/-1.68	-1.41/-1.07	-0.73/-0.47	-0.29/-0.24	-0.45/-0.99	-1.49/-2.01	-2.7/-3.68	-4.56/-5.26	-5.73/-6.26
Θ(15°)	-17.23/-18.7	-18.5/-13.17	-8.28/-5.77	-4.51/-3.44	-2.37/-1.48	-0.91/-0.25	0.070/26	0.240/27	0.170/0.3	-1.07/-2.17	-3.47/-5.32	-7.8/-12.25	-19.07/-17.78	-14.09/-10.68	-8.43/-7.1	-6.51/-6.48	-6.51/-6.21	-5.54/-6.6	-3.65/-3	-2.83/-3.08	-3.56/-6.35	-5.59/-6.81	-8.11/-10.27	-12.33/-16.41
Θ(22.5°)	-10.42/-15.07	-17.98/-18.45	-10.54/-7.13	-5.48/-4.43	-2.96/-1.29</																			



Radiated Composite Gain Data_6GHz

Appendix B

Θ(15°)	-5.13/-4.62	-4.03/-3.58	-3.66/-3.96	-4.75/-5.91	-7.84/-11	-15.01/-17.83	-14.07/-9.82	-6.98/-5.47	-4/-2.83	-1.76/-0.59	0.04/0.41	0.4/0.02	-0.45/-0.8	-0.63/-0.63	-1.02/-1.61	-2.34/-2.75	-3.19/-3.68	-4.56/-6.19	-7.68/-9.53	-12.25/-14.73	-13.99/-12.66	-10.58/-8.93	-7.5/-7	-6.34/-5.46
Θ(22.5°)	-12.19/-9.81	-7.77/-6.35	-6.08/-6.08	-5.84/-5.9	-6.24/-7.38	-9.87/-14.72	-14.71/-9.82	-7.68/-6.19	-5.49/-4.57	-3.02/-1.69	-0.36/0.36	-0.06/-0.58	-0.5/-0.31	-0.48/-1.29	-2.61/-3.18	-2.46/-2.24	-2.69/-3.38	-3.7/-4.2	-5.62/-8.55	-12.3/-16.94	-17.8/-18.19	-18.37/-17.81	-16.96/-18.16	-18.39/-15.57
Θ(30°)	-19.07/-17.78	-18.55/-15.3	-12.2/-11.89	-11.68/-10.24	-9.17/-9.67	-11.31/-11.97	-10.05/-9.67	-6.49/-5.73	-4.55/-2.87	-1.71/-1	-0.17/0.32	-0.47/-0.37	0.79/0.72	-0.65/-1.79	-1.95/-1.96	-2.05/-2.2	-1.58/-1.53	-2.65/-4.47	-5.46/-6.67	-6.76/-8.67	-9.79/-9.85	-10.18/-11.24	-13.71/-16.29	-17.98/-18.17
Θ(37.5°)	-12.55/-17.82	-18.64/-16.78	-18.39/-13.7	-9.98/-8.31	-8.41/-8.62	-7.51/-6.48	-7.07/-8.35	-8.35/-5.27	-2.42/-0.41	0.45/-0.28	-0.45/-0.23	-0.16/-1.06	1.54/-1.55	1.07/0.25	-0.78/-3.29	-4.05/-3.23	-3.16/-3.02	-2.76/-2.31	-2.65/-3.81	-4.13/-3.49	-3.85/-4.63	-5.47/-6.27	-8.99/-7.56	-10.14/-12.63
Θ(45°)	-9.56/-13.78	-17.76/-18.87	-17.96/-19.21	-19.09/-12.44	-9.83/-9.02	-8.63/-6.34	-5.4/-9.33	-13.27/-15.42	-7.85/-3.28	-1.16/-1.24	-1.93/-2.42	0.19/0.05	2.78/3.96	3.62/3.24	1.97/-0.82	-3.29/-5.17	-5.39/-5.13	-2.65/-2.52	-4.9/-6.82	-5.04/-4.48	-4.41/-5.35	-5.08/-5.43	-6.39/-5.91	-6.83/-7.82
Θ(52.5°)	-10.1/-13.43	-18.54/-17.63	-14.36/-11.09	-11.56/-18.6	-11.85/-9.1	-10.15/-6.24	-5.39/-3.63	-6.13/-9.37	-6.27/-2.88	-1.82/-1.97	-1.52/0.22	2.04/-1.6	3.64/0.02	3.78/3.1	1.72/-1.25	-4.53/-5.87	-6.32/-6.21	-8.76/-5.59	-4.69/-6.77	-7.18/-5.99	-5.36/-6.05	-7.76/-6.56	-6.15/-6.13	-6.51/-8.93
Θ(60°)	-10.04/-13.91	-18.59/-13.3	-8.94/-6.94	-6.89/-8.2	-6.77/-5.08	-7.47/-6.9	-3.41/-2.17	-3.58/-7.57	-6.93/-2.29	-1.45/-1.35	-1.77/0.27	2.44/3.52	4.45/4.67	4.24/2.7	2.66/-1.22	-3.89/-9.85	-12.56/-10.48	-10.43/-10.81	-7.08/-4.85	-4.84/-4.85	-5.49/-6.77	-7.62/-6.94	-4.9/-6.2	-7.32/-8.41
Θ(67.5°)	-5.32/-6.58	-10.65/-11.43	-9.21/-7.28	-5.17/-4.68	-5.2/-3.08	-4.4/-8.25	-4.88/-2.58	-1.28/-3.07	-5.59/-2.1	-1.84/-1.46	-1.29/0.34	1.43/2.64	2.98/2.65	1.76/1.41	-0.11/-1.78	-4.72/-6.34	-9.09/-12.68	-10.36/-4.48	-5.63/-6.61	-7.63/-7.46	-9.94/-10.27	-6.73/-5.04	-5.34/-7.63	-8.96/-5.73
Θ(75°)	-0.56/-1.2	-4.63/-10.52	-11.26/-7.48	-5.82/-4.37	-4.63/-1.26	-2.39/-5.58	-5.37/-3.86	-3.2/-3.98	-7.53/-5.3	-3.6/-1.79	-5.18/-2.31	-0.67/-1.03	0.24/2.25	1.95/-1.84	-0.36/-4.77	-8.4/-12.59	-6.69/-9.07	-6.83/-6.54	-4.08/-5.92	-6.12/-6.92	-9.19/-8.91	-6.54/-4.54	-3.88/-7.27	-4.68/-1.88
Θ(82.5°)	2.02/1.8	-1.16/-4.69	4.84/-2.88	-2.51/-3.28	-3.2/-0.69	-2.26/-4.7	-3.47/-2.81	-3.62/-8.05	-15.3/-8.95	-5.76/-6.19	-3.36/-2.49	-2.98/-2.38	-1.42/1.06	-0.67/-0.8	-4.96/-7.68	-13.75/-7.57	5.51/-5.76	-5.02/-3.73	-3.6/-6.35	-6.33/-4.6	-8.71/-9.07	-5.73/-5.52	-3.32/-1.22	-0.58/1.86
Θ(90°)	2.09/2.01	-0.39/-2.68	-2.22/-0.28	-1.58/-3.56	-2.39/-0.45	-3.11/-5.14	-5.81/-2.83	-2.16/-5.15	-6.31/-6.99	-4.69/-3.42	-2.97/-3.83	-4.92/-7.71	-6.83/-3.22	-1.14/-1.74	-5.19/-4.71	-16.47/-8.04	-4.2/-3.31	-4.07/-2.83	-5.26/-7.82	-6.18/-5.41	-8.91/-10.11	-7.63/-5.89	-4.87/-1.1	0.26/2.47
Θ(97.5°)	2.79/1.94	0.05/-2.77	-4.03/-1.66	-1.74/-2.19	-1.48/-1.9	-2.94/-3.34	-5.55/-3.48	-2.13/-5.6	-6.75/-3.4	-4.61/-5.67	-3.99/-9.62	-6.14/-5.26	-3.59/-8.71	-5.88/-13.15	-15.09/-9.03	-6.65/-3.29	-2.78/-6.29	-7.36/-11.48	-4.68/-0.66	-9.49/-15.14	-9.15/-5.55	-4.76/-4.78	-1.22/-1.27	
Θ(105°)	1.91/1.55	1.52/0.18	-1.3/-1.38	-1.57/-2.76	-2.73/0.09	-3.62/-4.69	-6.72/-6.59	-4.29/-5.62	-9.33/-17.38	-6.69/-3.68	-3.89/-2.56	-3.11/-5.64	-12.09/-17.91	-18.98/-10.25	-9.89/-12.3	-10.36/-17.02	-10.25/-7.36	-8.28/-8.46	-11.55/-18.82	-6.86/-5.9	-15.47/-18.5	-7.69/-3.01	-2.96/-3.11	-3.06/-0.15
Θ(112.5°)	1.41/0.2	0.49/-0.08	0.06/0.89	-0.44/-2.63	-2.99/-0.89	-2.92/-17.9	-8.74/-8.01	-0.06/-9.51	-1.89/-8.98	-4.21/-2.4	-4.03/-5.17	-8.01/-10.83	-18.9/-18.34	-10.27/-13.39	-18.09/-19.02	-11.46/-10.22	-8.57/-10.72	-13.02/-11.23	-16.53/-13.39	-5.17/-13.15	-19.42/-17.77	-6.86/-4.07	-3.19/-1.53	-0.74/0.82
Θ(120°)	-0.94/-1.08	-0.56/-2.3	-2.61/-2.45	-2.51/-1.43	-2.72/-4.29	-9.67/-14.19	-15.13/-11.06	-4.08/-6.74	-11.42/-12.7	-5.88/-5.87	-11.09/-9.63	-7.98/-6.06	-7.62/-9.55	-12.87/-9.55	-7.13/-9.1	-18.6/-8.07	-14.48/-6.08	-15.8/-12.25	-8.84/-3.37	-7.17/-7.79	-4.74/-9.09	-8.8/-6.7	-7.43/-2.17	
Θ(127.5°)	-0.33/0.06	-1.65/-2.23	-3.64/-4.13	-3.93/-6.12	-4.74/-2.89	-4.35/-10.05	-17.42/-16.35	-12.94/-11.76	-15.49/-19.25	-13.97/-9.58	-8.85/-8.91	-9.06/-6.4	-6.76/-5.23	-8.71/-5.64	-10.95/-10.91	-5.73/-10.97	-9.83/-19.45	-6.03/-9.1	-11.61/-12.85	-9.32/-18.49	-14.98/-9.6	-5.83/-4.57	-2.91/-1.35	-2.23/-1.59
Θ(135°)	-2.66/-0.71	-0.63/-1.11	-1.24/-1.25	-2.33/-2.92	-4.45/-4.36	-4.31/-3.77	-4.56/-6.46	-8.61/-13.94	-17.53/-17.94	-18.79/-18.48	-17.99/-17.33	-17.41/-17.43	-11.02/-14.38	-14.46/-14	-9.38/-5.52	-3.95/-9.09	-10.68/-15.17	-16.63/-8.09	-5.75/-12.76	-7.03/-3.91	-9.55/-3.66	-8.06/-7.4	-10.04/-7.36	-7.98/-2.47
Θ(142.5°)	-2.41/-1.6	0.14/-0.46	-1.05/-1.24	-1.61/-2.56	-7.67/-1.96	-7.13/-7.28	-6.69/-6.32	-6.32/-5.84	-6.21/-8.12	-9.89/-11.15	-11.51/-14.07	-11.26/-11.23	-7.21/-7.27	-6.43/-6.02	-11.89/-9.26	-17.71/-17.87	-11.42/-11.92	-11.15/-12.87	-5.67/-12	-7.71/-13.65	-2.86/-3.69	-1.45/-3.56	-4.35/-4.29	
Θ(150°)	-0.98/0.53	1.14/-2.15	2.32/-1.92	1.07/0.04	-1.55/-3.12	-4.8/-6.12	-7.88/-9.3	-8.56/-6.81	-5.56/-4.43	-5.17/-5.73	-9.17/-17.8	-16.35/-7.78	-7.37/-7.63	-4.65/-7.33	-13.38/-17.81	-9.91/-9.47	-4.84/-4.31	-9.71/-12.28	-7.26/-9.22	-15.39/-17.22	-6.17/-1.42	1.21/2.24	2.79/-1.77	0.63/-1.51
Θ(157.5°)	-0.2/-1.41	-2.36/-1.42	-0.01/0.37	0/-1.31	-2.69/-3.83	-4.74/-5.97	-8.07/-10.2	-12.11/-14.92	-17.48/-15.19	-13.45/-11.59	-9.55/-9.07	-10.45/-14.7	-18.65/-14.27	-8.62/-6.02	-4.55/-5.55	-8.62/-11.01	-10.43/-10.87	-18.14/-11.87	-9.72/-17.17	-16.15/-11.67	-15.51/-7.26	-3.6/-0.9	1.82/2.3	1.52/1
Θ(165°)	-2.14/-2.33	-1.41/-0.74	-0.88/-1.38	-1.8/-1.57	-1.25/-0.95	-0.78/-1.31	-3.07/-6.02	-10.24/-13.96	-12.77/-10.79	-9.69/-8.49	-6.88/-5.62	-5.2/-6.37	-7.71/-6.55	-4.74/-4.9	-7.68/-12.66	-9.28/-6.81	-6.94/-7.76	-7.47/-6.26	-6.27/-7.69	-8.94/-12.13	-16.55/-11.25	-7.9/-7.28	-5.17/-2.99	-1.96/-2.01
Θ(172.5°)	-6.32/-5.2	-4.5/-3.34	-2.77/-2.94	-3.43/-3.59	-3.88/-4.49	-5.83/-7.1	-8.45/-10.68	-13.31/-18.29	-18.65/-18.4	-9.67/-15.53	-15.32/-18.34	-19.4/-18.26	-9.15/-18.51	-12.18/-7.66	-4.71/-3.1	-2.55/-3.46	-5.44/-7.91	-9.72/-10.77	-10.99/-10.42	-9.57/-9.65	-11.05/-14.55	-18.4/-18.04	-17.69/-12.74	-10.49/-9
Θ(180°)	-9.04/-8.15	-7.95/-6.42	-5.46/-4.84	-4.9/-5.5	-5.94/-5.88	-5.71/-6.13	-7.44/-8.54	-10.54/-13.84	-16.3/-16.42	-15.72/-15.07	-18.17/-19.17	-18.99/-17.94	-15.82/-13.59	-11.55/-10.14	-9.67/-9.96	-10.04/-10.55	-10.46/-10.2	-10.22/-10.42	-9.72/-9.2	-9.58/-9.59	-10.48/-12.42	-12.82/-11.81	-10.74/-11.2	-11.27/-10.5
Freq(Hz)	6.995/GPol.	Phi/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-18.03/-11.96	-7.7/-5.8	-4.92/-4.43	-2.83/-1.79	-1.12/-0.7	-0.67/-0.97	-0.79/-0.62	-1.36/-2.2	-3.31/-4.2	-5.56/-7.63	-10.76/-13.56	-17.33/-17.99	-18.14/-12.32	-1.67/-6.67	-4.92/-3.57	-2.29/-1.39	-0.49/-0.19	0.04/0.28	0.3/0.13	-0.27/-0.93	-1.62/-2.72	-4.44/-6.8	-6.58/-12.1	-19.21/-18.17
Θ(7.5°)	-18.56/-15.38	-10.78/-7.6	-6.48/-4.79	-3.16/-1.86	-0.87/0.15	-0.40/0.49	0.51/0.30	-0.17/0.76	-1.34/-2.1	-3.27/4.84	-7.26/-10.98	-12.78/-9.37	-6.08/-4.8	-3.94/-2.69	-2.24/-1.5	-1.05/-0.95	-0.84/-1.14	-1.84/-2.38	-2.54/-2.82	-3.03/-3.65	-5.08/-6.58	-8.13/-10.5	-14.93/-19.11	
Θ(15°)	-9.61/-11.77	-11.89/-9.03	-9.08/-6.23	-4.42/-3.35	-2.23/-1.31	-0.96/-0.81	-0.82/-1.08	-1.53/-1.38	-1.35/-1.63	-2.25/-2.78	-4.1/-4.14	-9.35/-13.51	-18.73/-16.15	-9.35/-6.39	-4.55/-3.39	-3.2/-5.7	-3/-3.8	-5.38/-7.19	-8.09/-8.55	-8.84/-8.24	-7.78/-7.13	-6.84/-6.1	-5.87/-6.48	-7.59/-8.69
Θ(22.5°)	-8.5/-7.34	-6.81/-7.67	-7.03/-6.69	-7.4/-6.8	-4.95/-3.67	-2.59/-2.58	-2.74/-2.91	-2.08/-1.31	-1.15/-1.58	-2.09/-2.46	-3.35/-5.6	-8.58/-10.17	-10.33/-8.45	-6.68/-6.68	-5.28/-5.93	-6.84/-8.27	-6.93/-9.08	-7.48/-8.53	-4.37/-3.73	-3.97/-5.2	-5.82/-5.72	-5.42/-4.89	-4.61/-5.21	-6.59/-7.4
Θ(30°)	-4.99/-4.42	-4.04/-4.14	-4.99/-6.23	-7.35/-7.24	-7.47/-6.36	-4.3/-3.58	-2.78/-1.69	-1/-0.69	-0.5/-0.77	-2.31/-3.81	-5.37/-8.49	-12.73/-18.98	-17.77/-16.67	-11.73/-7.4	-4.92/-3.65	-3.73/-4.37	-5.3/-5.52	-5.32/-5.33	-4.98/-4.01	-3.33/-3.99	-5.56/-6.93	-7.47/-7.53	-6.93/-6.11	-5.11/-6.7
Θ(37.5°)	-3.04/-2.83	-3.06/-3.02	-2.17/-1.41	-2.32/-4.45	-8/-8.49	-7.73/-5.73	-3.68/-2.42	-1.15/-0.69	-0.62/-1.56	-3.96/-7.25	-11.64/-17.14	-12.54/-9.3	-8.87/-11.96	-18.23/-10.49	-8.48/-3.23	-3.48/-4.29	-5.3/-6.58	-6.99/-9.51	-5.72/-6.11	-6.57/-8.73	-11.06/-10.66	-9.21/-6.75	-5.96/-5.46	-5.2/-3.83
Θ(45°)	-5.09/-4.78	-5.25/-4.06	-3.5/-2.75	-2.81/-4.32	-6.63/-7.76	-6.83/-5.32	-4.34/-3.38	-2.12/-1.69	-2.61/-4.5	-6.49/-8.63	-8.43/-7.94	-5.22/-4.88	-5.32/-7.21	-10.66/-14.28	-7.62/-8.24	-1.78/-1.94	-1.78/-2.55	-4.71/-3.86	-2.32/-2.7	-4.28/-4.02	-4.09/-4.31	-5.78/-5.98	-5.72/-4.64	-3.32/-3.71
Θ(52.5°)	-11.8/-12.64	-13.39/-9.33	-7.46/-5.1	-2.69/-2.28	-4.12/-7.55	-8.33/-5.25	-3.77/-3.23	-2.3/-1.3	-1.8/-3.72	-7.45/-8.63	-6.01/-4.31	-3.44/-6.55	-8.52/-14.62	-16.89/-10.28	-2.99/-1.98	-1.62/-2.1	-3.44/-2.5	-4.2/-8.25	-9.08/-5.21	-3.44/-3.65	-5.93/-5.54	-4.44/-3.62	-4.73/-7.79	-9.31/-11.95
Θ(60°)	-15.53/-15.35	-16.58/-16.26	-14.92/-9.2	-5.18/-3.31	-5.52/-6.33	-5.11/-6.06	-4.53/-3.79	-2.25/-1.32	-2.08/-5.17	-10.79/-10.88	-5.16/-3.91	-4.08/-7.42	-12.15/-17.66	-15.2/-9.3	-5.15/-3.36	-3.73/-4.61	-3.67/-4.48	-4.44/-5.84	-4.93/-4.81	-3.59/-4.15	-4.98/-4.79	-3.34/-3.46	-4.19/-7.88	-14.64/-17.98
Θ(67.5°)	-18.56/-18.98	-17.95/-17.22	-14.33/-11.87	-9.54/-8.51	-3.48/-2.33	-1.27/-1.66	-4.28/-4.39	-1.99/-3.05	-1.17/-5.79	-13.04/-18.89	-14.73/-12.25	-16.05/-19.33	-17.3/-11.64	-8.31/-9.15	-6.67/-7.68	-3.55/-11.72	-5.34/-3.57	-3.96/-7.6						



Radiated Composite Gain Data_6GHz

Appendix B

Θ(60°)	-5.3/-6.74	-9.22/-13.12	-14.26/-11.8	-9.75/-9.42	-8.58/-7.16	-9.29/-14.7	-15.26/-18.14	-17.51/-13.01	-9.75/-5.75	-3.98/-2.51	-1.72/-1.48	-1.97/-3.78	-4.18/-4.97	-5.83/-3.5	-2.29/-0.11	1.95/2.09	1.70/7.2	-0.04/-0.38	-0.8/-1.16	-0.39/-0.47	0.07/0.69	-0.43/-0.86	-1.47/-2.84	-5.32/-5.58
Θ(67.5°)	-3.98/-4.62	-6.41/-9.68	-11.04/-7.48	-5.29/-4.57	-4.16/-4.71	-8.1/-11.16	-8.63/-9.85	-8.53/-3.3	-3.39/-1.74	-1.89/-3.76	-4.86/-5.8	-8.57/-8.83	-8.09/-7.09	-6.48/-4.37	-2.21/-0.78	0.33/-0.29	-0.93/-1.79	-3.13/-2.71	-2.64/-3.94	-2.14/-1.26	-1.16/-2.19	-1.39/-1.15	-2.33/-3.55	-4.24/-3.75
Θ(75°)	-5.99/-6.51	-7.98/-8.3	-7.43/-5.2	-4.53/-5.45	-5.13/-4.46	-8.95/-8.02	-5.13/-4.46	-2.86/-1.29	-0.11/-2.09	-0.42/-3.48	-5.85/-5	-6.09/-3.48	-3.81/-2.95	-3.85/-5.21	-4.07/-1.51	0.53/-0.51	-2.3/-5.3	-6.83/-5.3	-2.98/-2.93	-1.61/-1.54	-1.35/-1.63	-2.91/-4.37	-7.01/-5.68	
Θ(82.5°)	-4.64/-5.58	-5.36/-5.84	-3.04/-1.7	-0.76/-2.38	-3.31/-2.97	-6.67/-6.19	-2.27/-0.93	-0.04/-1.59	1.68/0.91	-1.07/-6.39	-5.09/-3.07	-5.9/-3.91	-5.48/-2.48	-3.81/-3.86	-3.95/-2.15	-0.69/-0.6	-3.25/-8.65	-4.48/-2.03	-2.85/-1.37	-2.56/-3.04	-1.46/-2.61	-3.36/-3.16	-3.85/-5.55	-6.32/-6.29
Θ(90°)	-6.75/-7.6	-8.21/-6.49	-3.93/-1.39	0.09/-1.19	-1.41/-0.71	-3.27/-5.66	0.50/59	1.32/2.46	1.41/1.24	0.18/-8.52	-7.81/-6.31	-8.32/-5.7	-5.96/-6.06	-3.29/-5.42	-1.98/-0.43	-2.43/-4.44	-11.61/-14.81	-7.87/-3.28	4.32/-2.64	-0.98/-1.73	-1.02/-2.53	-5.55/-4.07	-4.36/-6.87	-8.74/-7.37
Θ(97.5°)	-12.78/-11.03	-10.18/-7.16	-4.51/-1.6	0.47/-0.48	-2.21/-1.43	-2.09/-1.45	0.84/0.71	1.02/1.71	-0.42/-3.48	-5.58/-13.76	-5.01/-2.17	-8.65/-5.56	-2.33/-0.85	-5.96/-9.69	-3.76/-2.33	-4.85/-12.05	-10.64/-8.63	-6.53/-3.38	4.12/-2.43	-1.83/-1.99	-0.68/-2.76	-3.96/-3.21	-3.99/-5.92	-17.08/-10.53
Θ(105°)	-9.12/-9.6	-5.44/-4.04	-1.22/-0.72	0/-0.64	-1.34/-0.6	-1.28/-1.06	0.34/0.55	0.89/2.44	-0.47/-2.69	-4.49/-7.51	-3.22/-1.56	-6.57/-7.14	-3.95/0.07	-5.23/-15.85	-8.12/-6.27	-10.84/-18.2	-11.43/-11.92	-9.52/-5.6	-7.76/-5.62	-4.18/-5.35	-4.56/-6.18	-5.22/-5.29	-4.91/-7.33	-12.14/-13.45
Θ(112.5°)	-12.84/-11	-6.13/-4.56	-1.45/-0.23	0.37/0.31	0.17/-0.72	-0.48/-1.13	1.82/0.71	1.32/2.11	-1.26/-1.9	-2.31/-10.27	-2.62/-0.96	-5.49/-11.73	-9.09/-6.04	-12.63/-11.41	-13.29/-14.47	-9.33/-8.16	-18.83/-12.42	-7.7/-14.73	-12.35/-9.41	-7.79/-8.58	-5.48/-9.45	-7.94/-4.97	-6.92/-10.83	-14.14/-18.48
Θ(120°)	-12.21/-8.83	-6.71/-3.12	-0.81/-1.4	0.89/0.25	0.19/0.42	0.79/1.62	1.30/59	0.57/0.31	-2.58/-3.99	-3.7/-7.7	-5.19/-2.04	-3.55/-13.18	-11.99/-4.59	-3.47/-10.85	-11.29/-6.35	-14.49/-12.1	-18.39/-11.62	-5.37/-12.21	-17.28/-10.53	-8.06/-4.8	-6.89/-7.42	-8.5/-5.78	-8.09/-13.97	-14.64/-13.7
Θ(127.5°)	-12.74/-7.33	-6.3/-2.82	-1.99/-1.27	-0.62/-0.27	1.23/2.03	1.51/35	1.55/0.42	0.71/-1.47	-3.81/-2.97	-1.18/-2.48	-1.92/-2.42	-2.58/-7.1	-10.02/-12.6	-18.82/-10.39	-8.81/-11.68	-12.82/-10.53	-10.19/-8.66	-5.86/-7.21	-8.28/-6.91	3.56/-3.31	-6.52/-18.92	-11.35/-6.66	-6.78/-11.55	-17.31/-11.06
Θ(135°)	-10.34/-11.26	-5.84/-5.41	-2.47/-2.55	-1.60/-4.8	1.31/1.07	0.97/0.87	0.48/0.18	0.14/-0.18	-2.02/-1.49	-0.3/-1.66	-6.78/-2.38	-1.17/0.29	-1.58/-7.27	-13.83/-12.25	-9.81/-13.58	-7.06/-4	-6.97/-7.5	-8.81/-14.83	-10.8/-17.01	-18.12/-8.92	-15.32/-18.38	-15.27/-7.87	-9.73/-15.66	-18.59/-12.7
Θ(142.5°)	-1.184/-9.6	-6.42/-5.6	-4.6/-1.11	0.45/1.5	2.43/2.56	1.84/0.85	-0.14/-1.42	-2.35/-1.98	-0.34/0.52	0.75/0.7	-1.62/-4.19	-4.78/-5.24	-8.89/-8.56	-18.03/-17.61	-6.99/-6.25	-7.46/-18.19	-11.72/-18.4	-10.67/-12.45	-16.77/-18.87	-16.62/-14.11	-9.37/-17.97	-12.63/-11.87	-18.99/-15.72	
Θ(150°)	-11.89/-13.61	-18.94/-17.76	-9.8/-4.96	-1.85/-0.03	0.99/1.9	2.85/3.14	2.82/2.25	1.98/1.45	-0.04/-2.49	-3.05/-0.48	-0.58/-3.21	-6.3/-17.87	-6.95/-2.87	-2.66/-5.37	-10.49/-10.92	-7.78/-8.35	-13.77/-11.92	-8.3/-8.68	-8.81/-11.98	-18.86/-17.43	-11.6/-11.09	-14.13/-12.95	-11.14/-9.39	-8.47/-10.7
Θ(157.5°)	-12.02/-12.17	-12.41/-9.84	-4.99/-2.92	-2.28/-2.66	-2.61/-2.66	-2.43/-2.38	-2.64/-2.41	-1.98/-1.93	-2.71/-3.98	-4.39/-3.49	-4.02/-6.44	-9.22/-13.37	-17.84/-8.08	-7.3/-13.43	-19.08/-14.62	-13.31/-10.39	-11.44/-12.73	-17.2/-17.76	-16.33/-12.1	-11.25/-10.87	-9.82/-9.24	-9.19/-11.23	-14.84/-12.72	
Θ(165°)	-14.13/-11.47	-10.02/-8.44	-8.92/-7.25	-4.99/-3.4	-2.23/-1.69	-1.98/-2.66	-2.92/-2.57	-1.95/-1.32	-0.98/-1.43	-2.45/-3.71	-4.81/-7.05	-11.33/-10.3	-16.65/-16.81	-14.21/-10.65	-9.85/-11.87	-14.9/-14.21	-13.44/-14.25	-17.42/-18.42	-18.99/-17.9	-18.82/-14.85	-12.09/-11.39	-11.4/-11.15	-12.22/-13.1	-12.63/-11.82
Θ(172.5°)	-9.79/-8.51	-6.94/-5.49	-4.45/-3.63	-3.3/-3.36	-3.56/-3.8	-3.89/-4.22	-4.47/-4.47	-4.46/-4.59	-4.73/-5.32	-6.53/-7.74	-8.5/-8.79	-9.74/-11.36	-11.43/-10.98	-10.96/-11.44	-12.79/-13.54	-14.78/-15.68	-14.54/-12.98	-13.31/-14.87	-15.88/-15.38	-15.77/-14.58	-16.3/-18.2	-18.12/-17.99	-18.48/-16.23	-14.35/-11.06
Θ(180°)	-7.42/-6.33	-6.51/-7.26	-7.36/-7.37	-7.33/-7.86	-8.72/-9.88	-10.98/-12.83	-14.61/-16.91	-17.86/-18.5	-19.24/-18.38	-19.15/-18.9	-15.7/-12.47	-10.65/-9.09	-8.27/-7.48	-6.77/-6.62	-6.89/-7.4	-8.39/-10.11	-11.64/-12.36	-11.97/-11.98	-12.62/-14.23	-15.12/-14.87	-14.24/-13.66	-13.38/-12.62	-11.36/-10.06	-9.14/-8.03
Freq(Hz)	6.475GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-7.84/-8.7	-8.64/-9.26	-11.33/-12.49	-12.45/-13	-13.02/-13.94	-15.44/-18.9	-17.9/-14.82	-14.4/-12.22	-10.51/-9.13	-7.71/-6.56	-6.04/-5.7	-5.53/-5.12	-5.69/-6.16	-5.63/-5.52	-5.87/-6.91	-8.71/-11.43	-16.33/-18.64	-17.57/-19.11	-18.14/-16	-12.98/-10.35	-8.48/-7.57	-7.1/-7.24	-7.07/-6.34	-6.12/-6.44
Θ(7.5°)	-4.09/-4.09	-4.03/-4.16	-4.46/-5.77	-8.29/-11.1	-14.55/-17.89	-17.63/-18.92	-17.48/-13.3	-17.31/-10.19	-7.75/-6.76	-6.24/-5.97	-6.16/-7.1	-7.21/-7.19	-7.12/-9.12	-10.18/-12.17	-12.56/-12.3	-12.71/-13.6	-15.09/-14.19	-12.67/-11.45	-11.66/-13.29	-15.43/-13.66	-10.97/-12.44	-8.66/-8.16	-6.8/-5.2	-4.45/-4.15
Θ(15°)	-2.42/-2.14	-1.37/-1.52	-2.72/-4.87	-8.22/-13.21	-18.06/-18.06	-16.05/-16.69	-17.1/-14.12	-11.53/-9.37	-7.59/-6.49	-5.85/-4.75	-3.85/-3.54	-3.43/-2.86	-2.5/-2.47	-2.73/-3.66	-4.92/-6.31	-8.5/-12.82	-18.07/-18.77	-17.16/-14.2	-12.97/-13.07	-14.26/-13.83	-12.32/-10.76	-9.22/-7.38	-5.65/-4.17	-3.56/-2.88
Θ(22.5°)	-0.73/-0.2	0.25/0.35	-0.73/-2.95	-6.13/-10.1	-16.36/-18.04	-17.94/-18.48	-18.86/-16.97	-12.27/-8.99	-8.4/-8.98	-9.49/-8.42	-6.59/-5.7	-4.78/-3.4	-1.97/-1.2	-1.34/-1.64	-1.9/-2.97	-4.95/-7.8	-12.34/-18.71	-18.59/-18.94	-17.82/-17.63	-16.23/-18.95	-16.37/-17.58	-10.54/-10.66	-7.49/-4.32	-2.58/-1.63
Θ(30°)	-1.82/-1.74	-1.83/-2.22	-2.64/-2.6	-3.18/-5.04	-8.23/-11.88	-16.36/-19.12	-15.56/-13.13	-11.72/-10.85	-10.65/-11	-9.45/-13.91	-15.21/-11.78	-8.48/-5.47	-3.39/-2.27	-1.61/-1.11	-3.31/-3.82	-2.66/-5.91	-11.14/-18.2	-17.44/-18.53	-18.45/-16.59	-15.34/-16.22	-16.67/-14.04	-10.52/-8.75	-5.51/-3.96	-2.94/-2.34
Θ(37.5°)	-1.12/-1.68	-1.9/-1.19	-2.17/-3.53	-4.34/-5.76	-8.63/-10.44	-13.87/-16.71	-12.93/-8.67	-7.98/-10.03	-10.64/-11.14	-10.64/-8.03	-4.59/-2.8	-2.68/-1.51	-1.51/-2.41	-1.48/-0.51	-0.63/-0.59	-1.08/-3.07	-6.8/-14.15	-18.29/-18.44	-18.03/-15.22	-10.83/-9.79	-12.58/-12.53	-7.6/-4.95	-2.57/-1.57	-1.6/-1.07
Θ(45°)	-2.19/-1.67	-1.93/-1.95	-3.08/-2.58	-6.32/-6.23	-6.58/-8.09	-12.11/-11.79	-9.16/-9.49	-13.8/-18.63	-13.83/-18.25	-13.42/-8.14	-4.22/-4.34	-0.91/-1.5	-0.54/-0.84	-1.32/-3.61	-4.33/-3.99	-4.79/-6.34	-9.27/-15.62	-18.18/-18.87	-17.7/-17.62	-14.8/-13.02	-10.77/-10.49	-6.77/-4.2	-1.86/-8.01	-0.73/-1.49
Θ(52.5°)	-4.47/-3.83	-3.93/-4.13	-4.15/-4.34	-4.97/-6.69	-6.45/-10.48	-16.76/-17.26	-10.71/-10.4	-12.96/-9.63	-7.28/-6.34	-6.49/-5.04	-2.32/0.1	-0.2/-0.99	-3.28/-3.66	-4.28/-5.72	-5.98/-5.23	-4.99/-7.77	-14.4/-7.19	-17.46/-18.36	-19.61/-13.98	-13.72/-14.12	-7.01/-4.04	-6.65/-1.29	-2.03/-2.79	-2.97/-3.51
Θ(60°)	-9.06/-7.77	-5.63/-3.91	-2.66/-2.36	-3.02/-5.77	-8.81/-14.44	-18.61/-19.01	-14.59/-19.04	-15.27/-9.25	-8.78/-9.67	-5.34/-3	-1.56/-1.6	-1.91/-3.76	-6.16/-9.89	-10.27/-7.31	-3.57/-3.21	-6.47/-5.85	-8.33/-18.66	-19.24/-18.72	-19.21/-16.09	-11.18/-8.94	-7.07/-4.42	-2.03/-1.84	-3.35/-5.95	-6.37/-7.85
Θ(67.5°)	-12.39/-10.23	-8.89/-9.53	-4.36/-3.62	-4.33/-6.19	-8.47/-13.1	-17.77/-18.54	-13.36/-11.27	-8.4/-7.54	-7.13/-8.04	-7.56/-8.92	-7.89/-6.01	-4.45/-5.72	-5.52/-13.3	-4.07/-2.57	-2.04/-1.3	-4.28/-10.38	-11.76/-12.96	-17.27/-19.23	-14.98/-8.09	-8.97/-5.73	-3.38/-2.43	-1.96/-2.44	-4.17/-8.14	-10.95/-10.91
Θ(75°)	-10.06/-10.64	-8.15/-6.81	-5.43/-3.32	-2.15/-3.99	-10.08/-12.99	-16.76/-18.18	-11.01/-9.94	-8.18/-8.45	-9.95/-8.61	-7.11/-7.09	-7.17/-4.47	-3.31/-1.43	0.11/0.77	0.49/-0.99	-1.57/-2.25	-2.62/-7.05	-18.89/-17.3	-15.81/-14.32	-14.95/-9.49	-8.29/-3.11	-5.1/-2.1	-0.92/-1.73	-4.16/-7.69	-9.92/-10.52
Θ(82.5°)	-4.92/-5.25	-4.06/-2.84	-2.12/-1.15	-1.54/-3.41	-9.13/-11.31	-11.38/-15	-11.58/-6.5	-3.58/-6.29	-14.02/-9.35	-10.98/-8.24	-2.43/-1.46	-1.02/-0.05	0.68/-1.88	1.56/-1.3	-3.23/-2.85	-2.71/-7.57	-18.81/-18.8	-11.05/-9.39	-11.01/-11.1	-6.87/-3.6	-4.47/-3.2	-3.14/-3.94	-5.89/-7.61	-5.73/-4.94
Θ(90°)	-5.87/-4.78	-4.07/-3.01	-2.44/-1.98	-3.1/-5.91	-8.84/-8.56	-10.79/-18.54	-13.21/-7.27	-5.7/-8.56	-14.67/-1.53	-9.71/-12.88	-5.98/-4.9	-5.35/-2.39	-0.84/-1.58	-0.03/-4.21	-7.67/-4.9	-1.89/-3.71	-8.93/-17.55	-12.74/-10.94	-14.89/-8.43	-4.5/-3.84	-2.03/-4.05	-4.35/-5.76	-5.73/-6.24	-7.07/-5.45
Θ(97.5°)	-5.87/-6.17	-4.99/-3.49	-4.27/-4.89	-7.97/-8.28	-13.08/-11.1	-10.66/-17.32	-10.23/-12.62	-11.54/-14.68	-9.44/-5.42	-11.61/-10.92	-6.25/-8.39	-11.23/-4.7	-2.87/-1	-3.21/-6.3	-14.37/-11.34	-6.71/-13.46	-8.39/-12.73	-12.32/-13.46	-14.14/-10.03	-6.24/-2.96	-2.26/-4.89	-6.01/-5.27	-5.41/-6.82	-7.55/-7.66
Θ(105°)	-6.93/-7.15	-6.32/-9.05	-10.06/-11.34	-15.2/-11.89	-12.07/-16.59	-12.25/-12.12	-17.72/-9.28	-5.63/-8.2	-15.32/-7.38	-12.85/-9.81	-5.42/-7.42	-14.21/-15.32	-5.38/-2.06	-1.11/-2.35	-5.19/-17.39	-10.33/-5.37	-6.46/-11.31	-11.14/-6.39	-11.75/-18.59	-11.59/-4.38	-4.5/-6.83	-6.83/-6.25	-5.97/-9.33	-10.8/-44
Θ(112.5°)	-12.56/-9.39	-8.64/-8.05	-7.26/-7.57	-9.3/-12.48	-6.85/-8.2	-9.62/-18.61	-11.05/-4.78	-3.38/-8.6																



Radiated Composite Gain Data_6GHz

Appendix B

Θ(112.5°)	-17.7/-14.33	-7.43/-4.88	-2.99/-2.96	-2.16/-3.34	-2.38/-0.66	-1.71/-1.05	0.76/-2.29	1.21/-1.27	-0.16/-2.89	-0.63/-2.46	-5.92/-2.57	-5.67/-16.92	-4.48/-3.23	-8.66/-18.45	-18.85/-14.4	-8.19/-7.67	-12.78/-8.21	-13.14/-15.82	-15.97/-8.96	-5.19/-7.21	-16.65/-6.59	-4.36/-8.79	-11.02/-14.86	-14.45/-18.85
Θ(120°)	-8.05/-8.66	-4.39/-4.28	-2.51/-1.4	-0.57/-0.24	-0.74/-1.06	-0.77/-0.4	0.69/-1.59	0.65/-0.7	1.47/-0.81	-3.51/-6.14	-8.59/-10.2	-8.6/-13.46	-17.18/-9.12	-9.35/-12.83	-12.2/-6.9	-12.13/-18.2	-18.96/-11.52	-9.19/-18.24	-13.39/-10.26	-4.8/-6.25	-6.71/-13.08	-8.06/-6.71	-18.1/-18.63	-18.69/-17.7
Θ(127.5°)	-15.82/-10.54	-8.34/-3.7	-2.29/-0.4	0.44/-0.09	-1.18/-1.2	-0.68/-0.8	0.11/-0.55	0.40/-0.3	1.05/-1.2	-4.81/-7.62	-11.62/-5.63	-3.96/-3.62	-7.41/-4.63	-10.04/-18.88	-17.38/-9.22	-12.73/-9.47	-12.37/-10.75	-8.38/-9.28	-13.25/-7.35	-5.48/-8.16	-10.21/-16.83	-9.26/-7.25	-14.37/-18.18	-16.66/-17.95
Θ(135°)	-14.99/-7.51	-5.9/-2.27	-0.21/-0.24	-0.36/-2.52	-1.97/-1.26	-2.01/-3.41	-1.92/-1.12	1.81/-1.51	0.69/-1.85	-4.51/-4.57	-5.36/-17.12	-7.53/-2.74	-0.91/-2.7	-9.79/-18.34	-17.61/-17.64	-9.02/-8.35	-9.11/-6.26	-14.11/-9.85	-13.97/-18.44	-12.3/-9.45	-8.37/-17.79	-18.62/-13.22	-17.48/-12.04	-12.06/-18.13
Θ(142.5°)	-13.24/-9.65	-6.85/-6.04	-4.54/-3.93	-3.21/-2.42	-2.27/-2.49	-4.01/-3.76	-0.18/-1.57	1.47/-0.68	0.64/-0.45	-2.36/-5.1	-5.36/-10.78	-8.4/-6.66	-6.12/-7.91	-10.77/-11.83	-16.17/-16.53	-10.22/-11.12	-12.71/-11.41	-17.28/-18.03	-15.74/-18.33	-12.32/-13.64	-17.82/-17.47	-13.82/-13.69	-13.22/-17.82	-13.29/-11.7
Θ(150°)	-8.47/-7.76	-7.25/-5.16	-3.29/-2.48	-1.84/-1.36	-2.19/-4.24	-4.45/-1.8	0.55/-1.38	0.79/-0.66	0.6/-0.41	-2.17/-4.51	-3.28/-3.27	-5.15/-8.31	-17.7/-8.62	-5.19/-5.65	-11.07/-15.12	-17.58/-18.34	-18.91/-14.4	-9.17/-12.37	-19.15/-18.96	-17.67/-17.98	-17.82/-9.88	-9.04/-10.19	-11.01/-9.78	-9.1/-8.54
Θ(157.5°)	-11.85/-12.28	-8.76/-5.63	-4.09/-3.17	-2.23/-1.39	-0.97/-0.72	-0.33/-0.65	1.522/-0.4	2.11/-1.86	0.72/-0.74	-2/-4.44	-8.47/-9.91	-12.48/-19	-18.82/-14.48	-10.53/-13.68	-18.16/-17.98	-16.83/-12.71	-10.49/-8.32	-7.23/-8.83	-12.89/-13.6	-10.31/-6.71	-5.38/-5.85	-7.61/-8.72	-10.64/-14.14	-16.51/-13.07
Θ(165°)	-18.05/-15.3	-13.22/-11.06	-10.15/-10.28	-10.21/-10.01	-9.99/-9.25	-7.59/-6.43	-5.31/-4.26	-3.65/-3.78	-4.18/-4.48	-5.1/-6.66	-8.93/-9.76	-9.56/-10.99	-10.41/-11.05	-12.61/-12.1	-11.71/-13.89	-17.98/-16.24	-12.58/-10.13	-9.33/-10.26	-11.77/-12.98	-14.79/-14.18	-13.2/-14.89	-12.97/-12.01	-13.72/-18.51	-18.36/-15.56
Θ(172.5°)	-13.14/-10.74	-9.85/-8.77	-7.4/-6.94	-7.29/-7.73	-7.47/-6.77	-6.18/-5.21	-4.6/-4.28	-3.89/-3.5	-3.25/-3.42	-3.72/-4.79	-6.13/-7.63	-9.33/-11.3	-12.61/-13.7	-14.01/-16.09	-17.73/-18.46	-18.92/-18.95	-18.67/-18.18	-16.72/-15.18	-13.27/-11.59	-11.84/-12.54	-13.61/-14.43	-14.07/-15.71	-16.01/-14.14	-13.1/-12.33
Θ(180°)	-16.88/-16.69	-16.93/-16.04	-15.14/-15.41	-15.77/-15.52	-15.23/-14.37	-12.79/-11.43	-11.76/-11.71	-11.3/-10.64	-10.22/-9.86	-9.94/-11.14	-12.41/-13.01	-12.77/-11.88	-11.69/-11.05	-10.06/-9.32	-9.36/-10.58	-12.91/-15.11	-16.83/-17.72	-17.45/-17	-16.84/-17.27	-18.25/-19.06	-19.09/-18.8	-18.05/-18.05	-19.39/-18.96	-18.12/-18.5
Freq(Hz)	6.995GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-3.81/-3.46	-2.82/-2.57	-2.23/-2.22	-2.64/-3.48	-4.6/-5.31	-6.09/-7.16	-9.01/-10.47	-13.32/-18.34	-15.39/-11.02	-8.67/-7.62	-6.58/-5.32	-3.89/-3.23	-2.98/-2.27	-1.74/-1.42	-1.45/-1.66	-1.77/-2.36	-3.05/-3.68	-5.3/-7.66	-10.46/-13.06	-16.47/-17.67	-18.08/-15.73	-12.43/-10.24	-8.18/-6.94	-5.96/-4.94
Θ(7.5°)	-3.82/-2.99	-2.03/-1.21	-0.58/-0.93	-1.46/-2.06	-2.32/-2.6	-3.33/-4.4	-5.75/-8.25	-12.72/-18.64	-16.41/-11.71	-9.36/-7.77	-7.3/-5.88	-4.71/-4.45	-4.29/-4.11	-4.12/-4.4	-4.8/-4.94	-5.01/-4.91	-5.43/-6.94	-9.05/-12.01	-15.24/-17.28	-15.08/-12.95	-11.95/-11.17	-10.43/-9.5	-8.46/-7.57	-6.42/-5.04
Θ(15°)	-2.14/-1.83	-1.13/-0.79	-1.01/-1.48	-2.26/-2.95	-3.03/-2.9	-4.39/-6.61	-8.96/-11.27	-16/-18.27	-17.88/-17.65	-15.13/-14.43	-16.82/-18.63	-17.46/-16.64	-14.81/-12.13	-9.54/-6.69	-5.83/-4.69	-3.95/-3.66	-4.68/-6.71	-9.44/-12.68	-18.52/-17.41	-7.49/-6	-4.61/-3.57	-4.61/-3.57	-3.33/-3.06	
Θ(22.5°)	-1.54/-1.54	-1.25/-1.47	-1.97/-1.66	-1.49/-1.74	-2.88/-5.03	-7.24/-8.05	-8.48/-10.61	-15.05/-16	-13.4/-11.78	-10.97/-8.69	-8.01/-5.03	-4.06/-3.24	-2.91/-3.53	-5.49/-7.13	-8.2/-7.32	-6.14/-5.76	-6.52/-8.19	-11.41/-13.16	-13.17/-12.7	-15.22/-18.43	-13.18/-7.33	-4.33/-2.53	-1.33/-1.02	-0.88/-1.29
Θ(30°)	-1.51/-1.42	-1.6/-1.81	-2.21/-3.17	-3.81/-4.64	-5.17/-6.45	-6.54/-6.96	-8.55/-9.94	-12.3/-13.41	-11.71/-8.65	-6.21/-4.31	-3.27/-3.45	-3.29/-3.08	-3.13/-3.51	-4.16/-4.82	-7.97/-9.75	-6.4/-6.59	-9.79/-18.76	-14.58/-9.85	-11.5/-9.34	-5.12/-3.91	-3.69/-3.58	-2.76/-2.01	-1.16/-0.81	
Θ(37.5°)	-1.07/-2.1	-2.19/-2.65	-3.79/-4.39	-4.46/-5.09	-6.1/-5.83	-5.87/-8.62	-13.43/-16.68	-19.08/-18.17	-18.4/-12.64	-7.86/-5.06	-4.51/-3.3	-2.77/-1.86	-0.45/-0.16	1.11/-0.4	-2.41/-1.77	-11.21/-9.9	-13.59/-17.27	-16.61/-16.23	-11.88/-9.53	-6.73/-4.84	-5.5/-4.8	-2.83/-2.07	-1.37/-0.75	
Θ(45°)	0.55/-0.36	-1.51/-2.44	-3.1/-3.91	-5.61/-7.68	-10.14/-8.87	-8.45/-10.67	-11.51/-12.85	-18/-18.66	-11.55/-8.54	-6.61/-3.21	-1.590/-28	0.31/-24	1/0.37	1.17/-1.67	0.94/-1.18	-3.44/-6.71	-9.86/-11.87	-18.95/-13.29	-16.02/-19.04	-11.67/-8.13	-6.19/-5.2	-5.45/-4.41	-2.62/-1.05	-0.43/-0.11
Θ(52.5°)	-0.31/-1.69	-2.38/-2.39	-2.6/-2.84	-3.79/-4.86	-7.05/-7.42	-7.22/-10.24	-14.08/-13.21	-16.71/-17.4	-10.51/-6.38	-5.63/-4.55	-3.77/-2.11	-1.42/-1.28	-2.46/-2.83	-3.8/-5.3	-5.57/-3.2	-1.9/-2.16	-5.27/-9.34	-18.72/-13.4	-13.88/-16.65	-18.84/-12.09	-7.74/-4.18	-2.76/-2.2	-0.93/-0.65	1.18/-0.58
Θ(60°)	-1.13/-1.97	-2.08/-2.06	-1.74/-2.35	-4.92/-4.4	-9.89/-17.34	-14.85/-12.96	-13.78/-11.97	-17.82/-18.3	-12.14/-7.08	-5.34/-5.22	-4.03/-2.65	-2.44/-3.01	-3.65/-4.44	-3.38/-5.91	-6.01/-8.22	-7.74/-5.37	-5.35/-10.58	-18.87/-14.68	-9.88/-15.26	-6.65/-4.1	-2.64/-0.86	0.11/-1.19	1.14/-0.33	
Θ(67.5°)	-2.95/-4.22	-4.3/-3.49	-3.25/-2.23	-1.96/-3.7	-6.82/-13.3	-17.02/-12.49	-9.51/-10.8	-17.94/-14.24	-11.21/-11.36	-7.96/-5.58	-4.37/-4.03	-3.35/-3.36	-1.31/-1.37	-0.7/-1.13	-2.52/-3.7	-10.25/-8.2	-6.12/-7.77	-18.05/-17.49	-11.98/-13.25	-16.9/-13.25	-4.5/-2.75	-2.67/-1.74	0.13/-0.24	-0.59/-1.47
Θ(75°)	-10/-7.28	-6.53/-4.83	-4.43/-2.89	-3.32/-4.31	-5.99/-12.77	-17.85/-10.07	-8.88/-11.39	-18.52/-14.29	-8.33/-10.98	-8.71/-9.91	-6.47/-3.65	-3.42/-3.79	-1.05/-1.36	2.53/-0.28	-2.86/-2.32	-4.92/-9.77	-5.84/-6.11	-17.73/-18.11	-11.41/-9.63	-9.7/-12.33	-5.12/-4.5	-3.55/-1.89	-1.71/-1.2	-2.84/-5.19
Θ(82.5°)	-11.51/-13.67	-11.46/-11.32	-9.76/-4.99	-2.8/-3.67	-4.24/-11.17	-18.02/-10.01	-6.42/-8.91	-18.23/-19.06	-11.11/-8.46	-9.49/-11.52	-7.92/-5.25	-4.49/-3.24	-0.51/-9	1.09/-2.95	-5.35/-2.65	-1.91/-7.03	-7.41/-8.84	-18.76/-18.14	-12.22/-10.55	-8.88/-6.8	-6.8/-5.22	-5.54/-3.14	-2.69/-4.14	-5.89/-8.29
Θ(90°)	-10.26/-12.14	-14.32/-13.52	-8.06/-3.76	-0.93/-0.35	-1.26/-1.96	-18.36/-12.99	-7.8/-6.35	-10.85/-8.1	-8.39/-9.71	-7.56/-11	-6.65/-4.91	-7.48/-11.98	-4.78/-0.09	-0.31/-6.71	-15.32/-4.91	-0.7/-3.09	-9.57/-10.44	-10.34/-13.53	-8.17/-12.02	-5.92/-5.52	-5.6/-4.02	-5.9/-4.99	-4.6/-8.46	-9.77/-10.5
Θ(97.5°)	-8.61/-9.57	-10.12/-9.16	-5.66/-2.47	-0.76/-2.04	-4.34/-13	-9.67/-13.3	-7.43/-6.06	-8.67/-8.3	-8.3/-16.13	-7/-1.9	-4.42/-6.46	-19.19/-6.74	-2.52/-0.74	-3.47/-5.37	-13.56/-11.31	-5.35/-3.8	-6.78/-9.37	-7.24/-7.81	-4.79/-8.76	-4.2/-6.53	-5.87/-6.1	-3.99/-6.11	-1.23/-0.12	
Θ(105°)	-11.56/-9.76	-8.21/-6.57	-5.65/-4.84	-4.11/-6.01	-10.02/-5.76	-8.48/-18.7	-8.89/-6.94	-12.28/-13.14	-7.62/-4.74	-5.33/-7.26	-4.54/-3.32	-5.26/-16.5	-8.27/-3.69	-1.44/-0.83	-1.75/-63	-13.19/-3.94	-7.64/-12.03	-9.4/-10.43	-7.53/-11.38	-6.79/-5.87	-6.83/-9.32	-7.99/-3.85	-3.91/-4.46	-7.74/-9.35
Θ(112.5°)	-8.7/-5.91	-4.4/-4.24	-7.39/-10.16	-11.55/-10.78	-17.5/-11.15	-7.93/-12.92	-17.58/-12.48	-9.75/-8.73	-10.52/-4.05	-3.6/-1.62	-2.95/-2.08	-2.77/-3.68	-5.51/-1.83	-1.95/-0.21	-2.32/-9.34	-5.97/-2.69	-10.31/-17.08	-11.04/-7.55	-11.64/-10.33	-10.33/-11.08	-6.26/-9.42	-8.99/-5.33	-6.01/-7.98	-8.55/-9.54
Θ(120°)	-7.36/-4.98	-3.89/-4.5	-8.89/-15.51	-13.99/-15.64	-7.15/-5.64	-5.31/-8.82	-17.54/-8.32	-8.04/-11.98	-11.34/-7.35	-2.83/-2.08	-0.99/-3.18	-3.17/-1.94	-0.6/-2.29	-2.15/-2.67	-14.24/-5.57	-6.3/-4.7	-15.85/-18.34	-15.25/-9.39	-12.11/-10.53	-10.87/-10.56	-9.49/-11.94	-17.23/-19.61	-10.83/-13.04	-13.08/-7.35
Θ(127.5°)	-3.51/-2.56	-2.45/-3.05	-3.98/-4.07	-4.54/-3.93	-2.29/-1.02	-4.3/-14.21	-11.14/-7.08	-7.02/-15.77	-8.14/-5.64	-4.73/-2.6	-2.56/-3.12	-1.87/-0.98	-1.94/-1.39	-2.18/-17.72	-19.13/-13.14	-6.87/-8.1	-7.15/-19.33	-18.49/-10.39	-15.44/-14.26	-11.27/-9.77	-7.87/-1.04	-18.61/-19.14	-10.96/-7.99	-7.31/-5
Θ(135°)	-1.91/-1.78	-0.78/-1.12	-0.97/-1.5	-1.57/-2.63	-3.14/-3.68	-8.01/-17.91	-7.82/-4.46	-6.66/-8.41	-9.93/-5.43	-3.31/-2.55	-2.89/-6.19	-18.28/-1.14	-3.9/-2.31	-15.07/-9.75	-7.76/-13.49	-4.69/-10.93	-16.46/-6.87	-12.24/-6.44	-13.71/-14.62	-9.96/-11.78	-11.22/-19.09	-14.14/-10.72	-7.28/-5.42	-4.59/-2.1
Θ(142.5°)	-1.52/-1.82	-1.95/-1.23	-1.11/-1.94	-1.79/-0.3	-0.59/-2.27	-4.83/-10.78	-13.43/-10.22	-6.43/-8.39	-5.41/-3.35	-3.17/-5.63	-5.55/-6.94	-5.68/-8.29	-14.48/-6.34	-4.37/-7.84	-6/-7.98	-8.5/-10.63	-17.14/-7.39	-14.6/-12.74	-10.79/-12.17	-15.88/-8.25	-7.69/-12.32	-18.46/-14.95	-5.93/-3.2	-2.3/-1.84
Θ(150°)	-4.7/-2.65	-1.39/-1.43	-1.94/-2.52	-4.04/-5.07	-4.84/-5.38	-7.25/-7.7	-7.48/-9.12	-12.08/-15.04	-13.93/-11.81	-6.68/-4.32	-3.1/-3.87	-5.97/-9.23	-8.94/-4.82	-3.85/-6.23	-11.01/-19.17	-18.95/-13.88	-14.02/-15.82	-19.13/-17.91	-18.87/-17.92	-19.25/-18.26	-19.46/-19.18	-13.76/-10.59	-8.55/-8.87	-9.47/-6.76
Θ(157.5°)	-12.2/-12.19	-9.97/-7.84	-6.38/-6.37	-6.74/-7.7	-9.19/-13.12	-15.17/-11.08	-8.66/-8.49	-10.78/-15.8	-17.16/-10.15	-6/-4.04	-3.6/-4.97	-6.78/-6.68	-6.69/-4.56	-3.47/-5.49	-8.18/-10.6	-11.08/-13.65	-18.35/-15.57	-10.55/-11.32	-16.05/-14.78	-10.11/-8.02	-8.19/-7.97	-7.65/-9.08	-10.42/-10.65	
Θ(165°)	-2.3/-3.81	-5.61/-6.95	-8.08/-11.33	-16.51/-17.32	-12.97/-9.29	-7.76/-7.99	-10.75/-18.54	-18.75/-15																

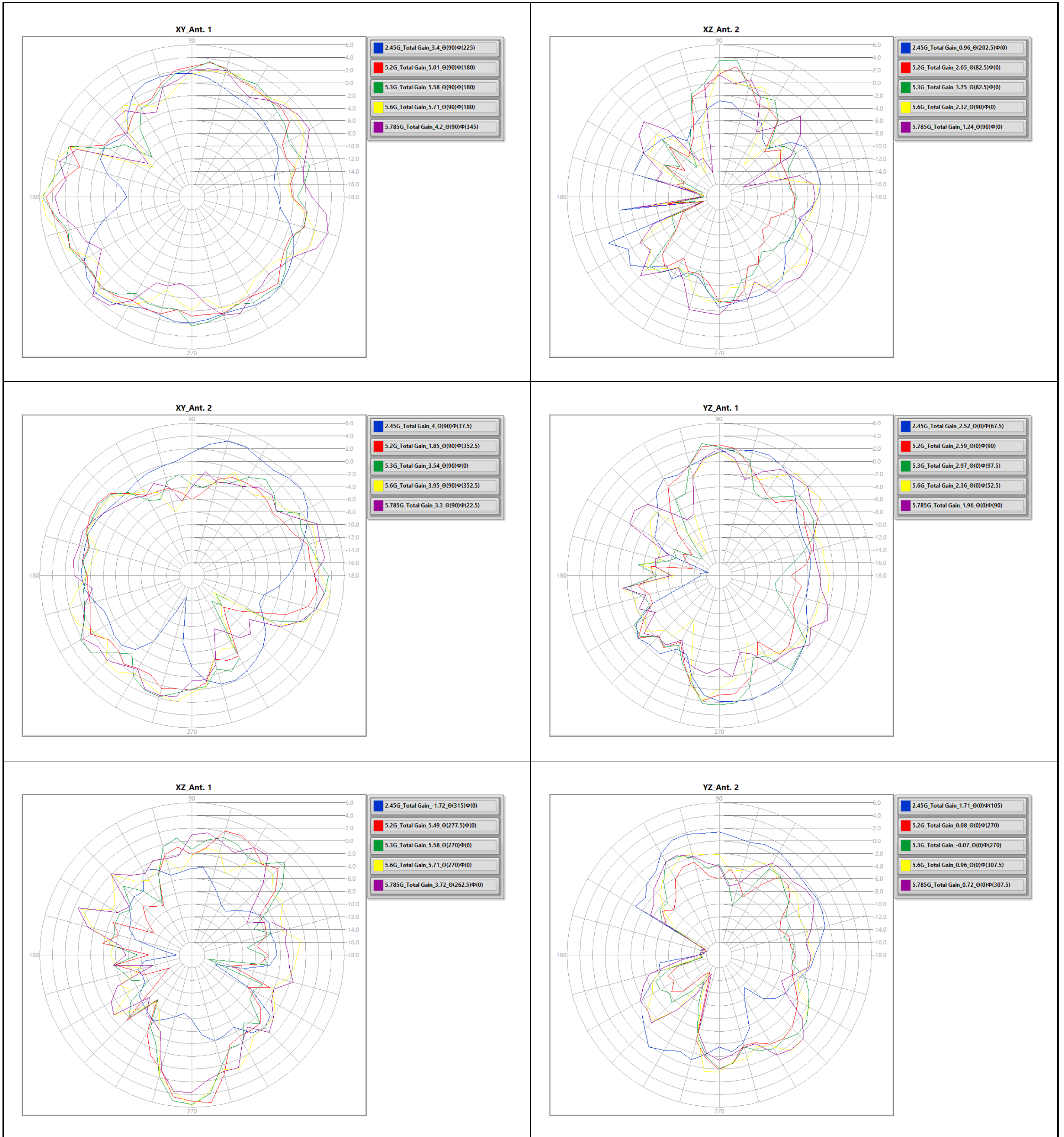


Antenna Pattern_2.4GHz, 5GHz

Appendix C

Θ(22.5°)	-4.48/-4.86	-4.33/-3.44	-3.46/-4.30	-4.22/-3.97	-3.80/-2.68	-2.14/-1.88	-1.98/-1.96	-2.51/-3.90	-5.01/-4.71	-4.58/-5.02	-6.28/-6.74	-6.14/-4.97	-4.03/-2.82	-2.22/-2.28	-2.06/-1.55	-0.86/-0.13	0.31/0.86	0.89/0.83	0.47/-0.22	-0.83/-1.42	-1.79/-2.27	-2.60/-3.07	-3.61/-4.15	-4.39/-4.50
Θ(30°)	-7.94/-8.63	-6.62/-4.63	-4.12/-3.72	-2.88/-2.24	-1.62/-0.41	0.12/0.20	-0.08/-1.07	-2.65/-4.58	-5.21/-5.04	-4.86/-5.17	-5.83/-5.86	-5.42/-4.50	-3.52/-2.83	-2.71/-3.06	-3.05/-2.47	-1.69/-1.21	-0.26/-0.29	-0.60/-0.97	-1.47/-1.70	-2.28/-3.13	-3.80/-4.06	-4.28/-5.05	-4.90/-5.14	-5.62/-6.96
Θ(37.5°)	-6.24/-3.92	-2.99/-2.61	-1.99/-1.48	-1.53/-1.22	-0.40/-0.77	1.34/-1.11	0.28/-1.03	-1.68/-2.45	-2.96/-3.80	-4.26/-4.66	-4.94/-4.82	-3.94/-2.10	-1.78/-3.23	-2.41/-1.91	-1.19/-1.23	-1.84/-2.93	-3.87/-2.57	-0.81/-0.18	0.00/-0.48	-1.21/-2.47	-3.43/-3.96	-4.24/-5.77	-7.94/-8.54	-0.97/-2.39
Θ(45°)	-2.13/-1.22	-1.08/-0.56	-0.55/-1.08	-1.58/-2.48	-2.75/-0.97	0.77/-1.57	1.75/-1.70	1.07/-0.68	-2.86/-4.71	-5.19/-3.31	-1.57/-0.52	0.25/0.09	-0.81/-1.66	-2.37/-3.10	-3.41/-2.33	-0.97/-0.71	-2.00/-3.01	-1.63/-1.15	-1.58/-2.17	-3.01/-3.25	-4.31/-6.27	-5.84/-4.61	-3.93/-3.65	-3.02/-3.51
Θ(52.5°)	1.63/3.26	2.19/-1.52	1.20/0.64	-0.79/-2.94	-4.21/-2.22	0.63/-1.66	1.52/-1.26	-0.59/-3.64	-5.70/-7.61	-8.91/-5.02	-1.50/-1.01	-0.86/-1.15	-3.65/-6.02	-5.99/-4.02	-1.36/-0.74	-1.39/-1.23	-2.23/-3.35	-4.41/-1.56	-1.89/-3.22	-3.10/-2.85	-2.83/-3.69	-3.47/-2.69	-1.56/-0.41	0.07/0.45
Θ(60°)	1.57/0.63	-0.63/-0.41	0.67/0.76	-0.38/-3.92	-7.65/-5.79	-2.60/0.07	1.33/-1.93	1.26/-0.89	-4.47/-7.29	-13.22/-12.74	-6.70/-6.26	-3.32/-2.53	-2.61/-1.08	-2.77/-2.28	-3.94/-6.22	-4.89/-4.56	-4.80/-2.30	-1.86/-3.75	-5.16/-3.86	-1.91/-2.74	-3.69/-1.67	-0.65/-1.31	1.59/-3.11	
Θ(67.5°)	-0.52/-1.92	-1.86/-1.89	-1.41/-0.81	-1.06/-2.49	-4.77/-3.97	-2.55/-1.51	-0.34/0.94	0.49/-1.79	-2.86/-1.75	-3.41/-2.00	-2.07/0.34	1.34/0.56	1.21/1.80	0.46/-1.70	-2.71/-2.48	-3.89/-6.49	-6.79/-6.67	-7.66/-5.35	-4.66/-6.63	-6.51/-3.99	-0.05/-1.53	-3.45/-1.79	-1.04/0.14	0.46/0.31
Θ(75°)	0.36/-1.82	-0.95/0.66	0.35/0.40	-0.44/-1.95	-1.28/0.82	0.81/-1.15	-2.40/-0.10	-0.08/-1.12	-1.49/-1.20	-3.24/-2.74	-2.22/-0.75	1.39/-1.32	0.97/-1.60	0.26/-1.88	-1.22/-0.10	0.15/-1.06	-3.24/-4.29	-7.06/-8.32	-5.46/-3.57	0.37/-0.97	-2.69/-2.96	-6.23/-2.71	-0.85/0.75	0.51/0.02
Θ(82.5°)	1.42/0.27	0.82/0.40	3.15/2.14	1.56/-1.21	0.69/2.15	2.16/-6.22	0.68/0.24	-0.36/-1.86	-1.48/-1.34	-4.28/-4.11	-1.42/-1.60	3.66/0.84	1.82/3.11	-0.07/-4.19	-2.07/-1.23	-2.72/-1.03	-0.85/-2.43	-2.59/-3.46	-1.97/-0.00	2.43/2.43	-1.94/-1.54	-2.66/-0.90	1.17/3.16	3.34/2.06
Θ(90°)	0.93/-0.26	0.23/1.60	3.37/3.20	2.34/-1.29	0.11/0.95	2.59/2.39	1.96/0.48	-0.15/-3.50	-2.79/-0.83	-0.74/-9.32	-6.08/-1.64	3.60/2.08	3.59/2.97	0.87/0.19	-1.54/0.81	4.07/3.54	0.90/-3.38	-3.44/-4.31	-3.38/-0.91	1.28/1.90	0.39/-0.23	-0.89/-0.24	0.79/3.21	4.20/3.34
Θ(97.5°)	-2.15/-2.46	-0.46/-0.29	1.08/-0.00	0.36/0.43	-0.32/0.22	-0.18/0.19	0.73/0.09	-1.17/-6.38	-10.83/-7.12	-3.07/-12.94	-5.01/-4.50	3.32/3.94	3.72/2.80	2.73/2.34	2.11/3.57	3.10/-0.23	-0.34/-0.27	-1.52/-3.18	-2.38/-0.69	2.34/-0.43	-0.42/-0.72	-0.77/-0.16	-0.13/-0.20	2.70/2.64
Θ(105°)	-2.32/-4.58	-2.05/-2.35	-1.40/-2.05	-2.90/-0.79	-1.12/-1.04	-0.79/-0.72	-1.83/-1.07	-1.75/-6.48	-3.78/-6.52	-3.05/-13.77	-9.46/0.04	2.74/-1.87	0.77/-0.06	-1.51/-3.21	-0.34/0.08	3.14/-1.83	-0.90/-1.42	-1.80/-3.41	-2.92/-2.58	1.89/0.36	-2.05/-4.69	-2.73/-1.41	-0.18/-0.01	0.88/-2.99
Θ(112.5°)	-1.93/-3.24	-0.70/-1.31	-3.60/-5.90	-4.69/-3.08	-2.60/-6.74	-5.20/-5.22	-7.49/-4.65	-6.69/-7.06	-4.67/-10.20	-1.66/-0.18	-4.04/-3.87	-1.32/-1.24	-4.94/-4.31	-4.76/-8.50	-2.96/-1.71	1.75/-1.53	-2.58/-2.43	2.25/-1.67	-3.57/-1.19	-0.87/-1.17	-1.61/-2.33	-5.10/-3.60	-4.50/-0.37	-0.41/-0.25
Θ(120°)	-3.18/-4.55	-3.71/-3.49	-3.50/-2.31	-2.44/-3.95	-7.77/-8.83	-8.14/-6.85	-7.89/-8.16	-5.82/-10.10	-13.42/-13.03	-5.76/-2.06	-3.60/-8.71	-8.03/-5.71	-5.87/-3.66	-2.96/-8.37	-6.37/-3.58	-0.24/0.37	-4.37/-7.92	-0.45/-2.68	-6.25/-1.89	-5.22/-0.37	-0.25/-1.13	-2.46/-2.01	-0.39/0.69	0.44/-2.38
Θ(127.5°)	-2.20/-2.09	-4.00/-4.66	-2.21/-1.01	-2.05/-4.96	-9.62/-9.79	-13.33/-8.11	-5.68/-5.36	-5.66/-5.28	-11.31/-9.71	-11.61/-14.89	-14.03/-9.36	-5.52/-6.96	-6.26/-2.01	-5.14/-9.99	-3.31/-0.21	0.96/-3.44	-0.06/-1.40	-4.20/-1.27	-2.96/-0.29	-0.17/-1.23	-2.62/-1.63	0.32/2.12	1.70/0.02	
Θ(135°)	0.12/0.86	-0.04/-1.45	-0.23/0.34	-1.01/-1.89	-4.26/-8.70	-7.94/-5.02	-2.13/-3.41	-2.87/-1.24	-3.54/-7.23	-11.12/-6.29	-2.35/-1.78	-3.66/-3.74	-8.54/-11.19	-6.03/-3.12	-2.80/-0.11	-1.00/-8.03	-10.64/-3.52	-1.03/-2.69	-4.36/-5.48	-6.41/-4.29	0.12/2.35	0.82/0.09	1.16/2.59	2.69/-1.24
Θ(142.5°)	-5.59/-4.03	-7.00/-5.72	-6.14/-5.72	-2.40/-0.61	-1.01/-3.95	-4.53/-1.78	-1.16/-1.49	-6.88/-0.48	-2.26/-5.43	-6.79/-4.07	-4.04/-5.41	-2.85/-1.96	-3.24/-3.36	-3.64/-6.54	-7.64/-3.25	-4.55/-7.25	-13.24/-4.37	-1.43/-0.77	-2.98/-1.00	-8.20/-4.58	-0.81/-0.26	0.57/-1.70	-0.77/-0.22	0.19/-2.15
Θ(150°)	-4.56/-10.01	-9.00/-6.95	-6.30/-5.79	-5.54/-5.08	-5.31/-6.08	-3.64/-1.49	-1.74/-3.64	-5.53/-5.14	-4.66/-9.90	-8.77/-6.12	-6.71/-7.31	-3.30/-1.46	-2.18/-2.95	-2.02/-3.79	-8.38/-8.15	-9.71/-5.35	-4.92/-2.86	-6.34/-14.07	-11.55/-8.64	-5.30/-4.19	-2.93/-0.71	-0.19/-0.32	-0.35/-1.39	
Θ(157.5°)	1.46/-1.37	0.57/0.05	0.41/0.96	1.31/0.80	-1.07/-3.66	-5.52/-7.01	-9.51/-11.71	-11.93/-11.82	-11.45/-10.79	-10.65/-9.17	-6.85/-5.85	-6.38/-5.78	-5.26/-6.43	-10.04/-14.76	-15.11/-13.30	-13.20/-14.82	-9.74/-5.52	-2.74/-2.50	-4.29/-7.76	-11.00/-9.19	-6.49/-4.21	-3.43/-1.99	0.02/0.70	0.98/-1.23
Θ(165°)	-1.02/-1.05	-1.16/-1.32	-1.99/-3.23	-5.78/-8.43	-8.40/-7.02	-6.24/-6.79	-7.59/-7.25	-6.11/-6.12	-7.06/-9.26	-10.81/-9.92	-6.68/-7.94	-8.59/-10.14	-11.60/-14.31	-15.52/-15.25	-13.61/-11.49	-11.38/-10.92	-8.57/-6.87	-5.27/-5.08	-5.96/-3.88	-11.42/-13.99	-15.42/-13.58	-9.32/-6.49	-3.76/-2.21	-1.13/-0.49
Θ(172.5°)	-6.59/-7.60	-7.96/-6.36	-4.37/-3.10	-2.48/-2.24	-2.70/-3.48	-4.76/-6.73	-7.89/-7.69	-6.91/-6.75	-6.57/-6.63	-6.63/-6.35	-6.11/-5.86	-5.27/-5.09	-5.48/-5.75	-4.56/-4.88	-4.52/-4.62	-4.10/-3.31	-2.70/-2.40	-2.42/-2.50	-2.77/-3.31	-4.61/-5.35	-4.91/-4.55	-4.79/-4.97	-5.03/-5.01	-4.94/-5.06
Θ(180°)	-7.61/-7.56	-7.75/-7.69	-7.40/-7.24	-8.64/-10.42	-12.20/-15.78	-15.12/-12.72	-10.39/-9.19	-9.50/-9.70	-9.71/-10.03	-9.73/-8.39	-7.05/-5.61	-4.67/-4.54	-4.86/-4.61	-4.34/-3.98	-3.88/-3.84	-4.03/-3.93	-3.84/-4.18	-4.53/-5.24	-5.46/-6.09	-4.46/-6.13	-5.84/-5.19	-4.78/-4.71	-4.65/-5.36	-6.72/-7.36
Freq(Hz)	2.450Pol.	TotalAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-2.42/-2.33	-2.26/-2.26	-2.30/-2.34	-2.47/-2.52	-2.59/-2.64	-2.74/-2.84	-2.91/-2.92	-2.93/-2.94	-2.93/-2.92	-2.85/-2.71	-2.59/-2.44	-2.26/-2.16	-2.14/-2.21	-2.31/-2.39	-2.36/-2.29	-2.26/-2.30	-2.39/-2.48	-2.54/-2.54	-2.50/-2.42	-2.42/-2.41	-2.45/-2.55	-2.62/-2.70	-2.68/-2.62	-2.55/-2.54
Θ(7.5°)	-1.89/-1.65	-1.43/-1.24	-1.08/-1.00	-1.03/-1.12	-1.22/-1.34	-1.49/-1.71	-1.93/-1.92	-2.48/-2.75	-2.92/-3.05	-3.10/-3.07	-3.02/-2.97	-3.05/-3.26	-3.55/-3.83	-4.04/-4.10	-4.04/-3.95	-3.92/-3.92	-3.90/-3.84	-3.74/-3.58	-3.44/-3.30	-3.21/-3.08	-2.99/-2.88	-2.78/-2.69	-2.52/-2.39	-2.20/-2.05
Θ(15°)	-2.02/-1.64	-1.22/-0.83	-0.45/-0.21	-0.11/-0.06	-0.09/-0.14	-0.23/-0.44	-0.79/-1.31	-1.93/-2.47	-2.94/-3.33	-3.52/-3.61	-3.59/-3.60	-3.79/-4.23	-4.73/-5.36	-5.61/-5.87	-5.75/-5.55	-4.52/-5.31	-5.17/-5.05	-4.91/-4.81	-4.72/-4.65	-4.60/-4.52	-4.28/-3.98	-3.66/-3.37	-2.96/-2.76	-2.48/-2.20
Θ(22.5°)	-2.27/-1.93	-1.38/-0.73	-0.18/0.27	0.57/0.79	0.90/0.91	0.78/0.40	-0.36/-1.28	-2.37/-3.36	-4.20/-4.69	-4.77/-4.57	-4.28/-4.15	-4.28/-4.64	-4.94/-5.12	-5.17/-5.19	-5.27/-5.38	-5.57/-5.72	-5.81/-5.81	-5.80/-5.73	-5.58/-5.41	-5.21/-4.98	-4.63/-4.14	-3.59/-3.13	-2.80/-2.54	-2.33/-2.20
Θ(30°)	-2.30/-1.99	-1.43/-0.61	0.17/0.79	1.26/-1.58	1.70/-1.70	1.40/0.80	-0.21/-1.65	-3.38/-5.00	-6.18/-6.50	-6.07/-5.53	-5.20/-5.14	-5.27/-5.37	-5.11/-4.55	-4.11/-4.01	-4.23/-4.78	-5.49/-6.22	-6.87/-7.23	-7.17/-6.71	-5.95/-5.17	-4.43/-3.89	-3.50/-3.22	-2.94/-2.70	-2.55/-2.41	-2.29/-2.21
Θ(37.5°)	-3.80/-3.19	-2.27/-1.28	-0.25/0.70	1.47/2.04	2.30/2.25	1.81/0.92	-0.48/-2.43	-5.06/-7.62	-8.33/-7.16	-6.07/-5.59	-5.69/-6.16	-6.42/-6.03	-5.01/-3.82	-3.08/-2.81	-3.03/-3.83	-5.08/-6.44	-7.94/-8.94	-8.93/-8.01	-6.73/-6.41	-4.31/-3.49	-3.05/-2.90	-2.92/-3.10	-3.51/-3.99	-4.23/-4.11
Θ(45°)	-7.24/-6.13	-4.37/-2.58	-0.82/0.63	1.75/2.47	2.85/2.83	2.34/-1.35	-0.23/-2.50	-5.59/-7.89	-7.15/-5.49	-4.53/-4.23	-4.14/-4.15	-4.03/-3.81	-3.33/-2.72	-2.02/-1.60	-1.67/-2.36	-3.58/-5.29	-7.45/-9.52	-10.61/-9.89	-8.32/-6.44	-4.80/-3.68	-3.02/-2.67	-2.59/-2.78	-3.45/-4.72	-6.27/-7.24
Θ(52.5°)	-6.71/-5.99	-4.63/-2.95	-1.12/0.41	1.56/2.40	2.97/3.19	2.90/-1.95	0.21/-2.41	-5.45/-6.10	-4.34/-2.79	-1.88/-1.20	-0.74/-0.61	-0.83/-1.31	-1.66/-1.59	-1.09/-0.59	-0.59/-1.23	-2.59/-4.37	-6.95/-10.30	-14.72/-14.86	-11.54/-8.60	-6.54/-5.18	-4.35/-3.84	-3.52/-3.46	-3.73/-4.47	-5.49/-6.19
Θ(60°)	-4.64/-3.57	-2.26/-0.86	0.39/-1.28	1.75/2.09	2.65/3.16	3.19/2.46	0.78/-1.76	-4.10/-4.17	-2.94/-1.76	-0.67/-0.22	0.84/0.87	0.30/-0.61	-1.35/-1.33	-0.61/-0.02	-0.03/-0.76	-7.19/-11.12	-13.75/-13.08	-10.11/-8.12	-6.70/-5.78	-5.38/-5.43	-5.75/-6.25	-6.56/-6.49	-6.13/-5.24	
Θ(67.5°)	-6.66/-3.21	-1.49/0.35	1.87/2.70	2.81/2.57	2.69/3.07	3.11/2.40	0.80/-1.40	-2.84/-2.60	-2.01/-1.52	-0.76/-1.00	0.58/0.57	-0.09/-0.83	-1.21/-0.81	-0.16/0.15	-0.09/-0.83	-1.99/-3.65	-6.09/-9.29	-10.18/-8.02	-5.54/-4.01	-3.06/-2.54	-2.46/-2.75	-3.42/-4.47	-5.98/-7.08	-7.14/-5.96
Θ(75°)	-4.31/-3.18	-1.78/0.16	1.96/2.91	3.00/2.81	3.01/3.33	3.11/2.11	0.42/-1.54	-2.57/-2.28	-1.80/-1.44	-0.85/-0.06	0.45/0.29	-0.31/-1.06	-1.39/-1.01	-0.63/-0.61	-0.79/-1.05	-1.85/-3.56	-6.39/-11.92	-15.84/-7.67	-3.64/-1.74	-0.87/-0.71	-1.01/-1.64	-2.56/-3.82	-5.53/-6.86	-6.84/-5.57
Θ(82.5°																								

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





Appendix D

Freq(Hz)	6.175GPa	Total/Ant.1	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -	+ -				
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-0.29/-0.24	-0.33/-0.50	-0.46/-0.37	-0.72/-0.37	-0.07/-0.01	0.23/0.30	0.36/0.23	0.40/0.29	0.14/-0.14	0.03/0.07	0.16/0.16	0.09/0.00	-0.10/-0.25	-0.34/-0.44	-0.39/-0.35	-0.43/-0.29	-0.19/-0.11	0.04/-0.03	0.12/0.33	0.27/0.23	0.39/0.38	0.09/-0.25	-0.33/-0.31	-0.28/-0.11
Θ(7.5°)	0.25/-0.02	-0.31/-0.36	-0.59/-0.81	-0.39/-0.66	-0.23/-0.09	0.01/0.20	0.36/0.46	0.74/0.88	0.80/0.94	0.81/0.68	0.62/0.53	0.58/0.45	0.02/-0.19	-0.52/-0.29	-0.08/-0.12	0.06/0.44	0.72/0.62	0.07/-0.40	-0.34/-0.22	-0.18/-0.22	0.27/0.43	0.53/-0.48	-0.41/-0.72	0.62/0.45
Θ(15°)	0.63/0.57	0.62/0.11	-0.32/-0.65	-0.40/0.04	0.53/0.86	1.03/1.32	1.64/1.93	2.28/2.38	2.40/2.22	1.94/1.50	1.18/0.74	0.47/0.25	-0.01/-0.18	-0.29/-0.33	-0.23/0.29	0.65/0.72	0.51/0.40	0.05/0.04	-0.30/-0.33	-0.53/-0.38	0.32/0.04	1.69/1.95	2.12/2.03	1.73/1.41
Θ(22.5°)	-0.99/-0.92	-0.68/-0.14	0.11/0.10	0.64/1.25	1.71/2.01	1.93/1.77	1.76/1.79	1.63/1.48	1.30/0.88	0.07/0.80	-1.58/-1.93	-2.00/-1.92	-2.04/-1.34	-2.01/-1.62	-0.91/-0.41	-0.10/-0.37	-0.60/-0.43	-0.07/0.52	1.01/1.12	0.90/0.83	1.04/1.38	1.75/1.83	1.73/0.85	0.11/-0.84
Θ(30°)	1.73/1.75	1.54/1.54	2.02/2.24	2.05/1.85	1.60/1.49	1.19/1.34	1.68/1.51	0.93/-0.18	-1.24/-2.00	-2.38/-2.78	-2.63/-3.18	-2.50/-2.47	-5.00/-6.17	-5.18/-3.48	-2.07/0.53	0.52/0.99	1.02/0.65	-0.16/-0.93	-1.09/0.11	2.06/3.45	3.49/2.81	2.00/1.25	0.53/0.00	0.69/1.69
Θ(37.5°)	2.47/2.51	1.98/2.07	2.73/3.13	2.90/2.33	1.06/-0.11	-0.53/-0.18	0.27/0.21	-0.16/-1.67	-4.24/-6.64	-5.97/-5.19	-5.99/-6.12	-5.96/-6.42	-7.21/-8.69	-8.19/-5.23	-2.01/0.00	1.74/2.53	2.18/1.68	1.32/0.97	0.98/1.84	2.02/1.89	1.86/1.39	0.62/0.05	0.39/0.61	1.39/2.02
Θ(45°)	0.60/1.42	0.63/0.05	0.86/1.31	0.98/0.89	1.11/0.18	-1.04/-1.23	-1.21/-0.47	-0.57/-1.84	-3.09/-3.87	-4.82/-5.87	-7.56/-8.13	-6.65/-4.75	-6.05/-5.95	-5.84/-4.18	-1.65/-0.05	1.71/2.32	1.88/1.02	-0.48/-1.09	-0.00/1.29	2.85/2.48	1.60/0.67	0.24/0.16	0.82/0.95	0.45/-0.13
Θ(52.5°)	1.40/2.41	1.38/1.17	0.83/0.17	-1.28/-3.15	-2.89/-1.25	-0.36/-1.11	-0.23/-0.30	0.59/-0.08	-0.29/-0.35	-3.07/-4.12	-8.40/-4.69	-6.00/-5.61	-5.15/-2.40	-3.13/-1.28	0.28/1.21	0.75/0.40	0.50/0.59	1.02/1.70	0.55/-0.54	-0.99/-0.05	0.89/0.65	-0.15/-0.06	0.27/0.45	0.70/-0.13
Θ(60°)	2.14/2.67	2.59/1.82	1.28/1.03	0.03/-1.15	-2.18/-2.90	-2.37/-1.74	-1.32/-0.62	-0.14/-0.07	0.46/0.80	-0.13/-1.53	-2.44/-3.57	-3.81/-3.89	-4.71/-3.66	-2.53/-2.91	-3.47/-5.09	-2.98/-0.54	-0.82/-1.09	0.17/1.22	1.24/1.33	-0.50/-3.10	-2.95/-1.42	-1.70/-2.55	-0.90/-0.24	1.08/1.54
Θ(67.5°)	2.32/2.31	1.93/0.97	0.63/1.12	0.83/-0.27	-1.50/-2.27	-1.69/-2.78	-3.18/-0.92	0.76/0.65	0.34/0.11	-0.39/-1.21	-1.17/-1.97	-3.23/-4.09	-3.02/-2.08	1.17/0.71	-0.31/-2.01	-2.85/-2.00	-2.06/-0.98	-0.12/-0.36	1.54/1.10	-0.61/-3.03	-4.61/-4.37	-1.80/-0.95		



Antenna Pattern_6GHz

Appendix D

Θ(22.5°)	-2.67/-1.38	-0.61/-1.23	-2.36/-3.16	-3.13/-2.14	-1.18/-0.81	-0.66/-0.04	0.89/-1.70	2.35/2.56	2.22/1.43	-0.01/-2.02	-3.51/-3.63	-3.13/-3.24	-3.22/-2.88	-2.40/-2.07	-2.48/-2.99	-3.39/-4.20	-4.91/-4.54	-3.71/-4.20	-6.24/-7.15	-5.75/-4.46	-3.61/-2.77	-2.13/-1.88	-1.78/-2.49	-3.36/-3.50
Θ(30°)	-2.92/-1.74	-1.02/-1.11	-1.68/-1.73	-0.93/-0.34	0.31/0.24	0.35/0.77	1.20/-1.19	1.03/1.11	1.31/1.32	0.61/-0.18	-0.27/-0.31	0.71/0.91	0.81/-0.48	0.40/-0.28	-0.01/-0.68	-2.34/-4.87	-6.27/-4.00	-2.70/-3.40	-4.23/-4.63	-5.53/-6.76	-6.87/-6.47	-5.82/-5.81	-4.87/-3.19	-2.08/-2.47
Θ(142.5°)	-1.87/-1.73	-0.75/-0.07	0.44/0.31	-0.60/-0.14	1.03/0.88	1.55/-1.99	2.11/2.10	2.72/2.69	2.11/1.64	2.05/0.25	2.63/2.77	2.51/1.55	0.36/-0.83	-1.89/-2.82	-2.59/-2.62	-3.99/-6.24	-8.33/-8.31	-8.18/-8.40	-6.78/-6.76	-7.06/-4.79	-4.04/-4.00	-1.81/-3.99	-4.05/-2.57	-1.22/-1.07
Θ(45°)	-3.92/-3.87	-3.70/-1.05	-0.24/-0.40	-0.42/-0.92	-0.67/0.07	0.43/0.73	1.46/2.32	2.72/2.94	2.53/1.66	1.59/2.49	2.93/2.92	2.21/0.78	-1.13/-2.90	-3.81/-2.92	-1.69/-1.69	-3.12/-3.63	-4.74/-7.45	-7.21/-6.97	-6.43/-6.81	-12.52/-15.94	-9.32/-6.97	-6.26/-5.53	-6.87/-8.11	-6.72/-5.51
Θ(52.5°)	-5.19/-2.56	-2.89/-3.77	-2.09/-0.60	-0.70/-0.94	-2.52/-1.53	-0.43/-0.16	0.63/-1.39	1.07/0.81	1.34/-1.29	1.43/-1.71	1.41/-1.44	0.74/-0.85	-2.98/-4.00	-5.64/-7.24	-4.19/-4.05	-3.56/-3.33	-4.04/-4.64	-7.31/-7.75	-9.37/-12.49	-12.18/-10.07	-7.56/-8.04	-10.61/-9.77	-6.27/-5.39	-7.43/-6.83
Θ(60°)	-4.21/-1.24	1.71/-1.49	0.01/-0.99	-0.41/-1.39	-2.85/-1.56	-0.28/-0.30	-0.53/-1.22	1.25/-1.28	0.65/-0.25	-0.56/-0.47	0.92/-1.45	-3.08/-4.79	-4.77/-3.73	-3.65/-5.37	-7.21/-7.55	-11.21/-7.43	-4.83/-3.11	-8.80/-4.91	-6.71/-10.40	-5.28/-1.30	-4.61/-3.99	-4.05/-2.57	-0.42/-1.01	
Θ(67.5°)	1.56/4.41	4.33/2.72	1.76/0.80	1.43/-0.16	-2.38/-2.41	-1.04/0.18	-0.36/-0.14	0.16/0.25	-0.11/-0.04	-0.25/-0.08	0.30/0.02	-0.69/-2.57	-4.22/-4.51	-3.25/-1.32	-0.14/-0.93	-2.07/-4.51	-5.89/-5.97	-5.78/-5.16	-6.25/-5.29	-2.72/-2.52	-5.47/-7.91	-7.28/-4.82	-2.77/-2.37	-0.01/-1.44
Θ(75°)	2.13/-1.38	3.73/2.46	0.90/0.49	0.56/0.36	-0.20/-0.77	-0.42/-0.09	-0.12/-0.71	-0.15/0.24	-0.37/0.20	0.40/-0.17	-0.36/-0.62	-1.31/-1.51	-1.76/-2.49	-2.53/-1.66	-1.85/-1.82	-1.55/-2.72	-5.19/-6.92	-8.69/-2.86	-3.84/-4.24	-1.49/-3.93	-3.76/-1.93	-4.01/-4.42	-1.28/0.72	1.79/2.15
Θ(82.5°)	1.41/-1.94	3.42/-0.35	0.30/0.98	-0.32/-1.66	-0.74/-0.72	0.21/0.95	0.93/0.88	-0.69/-1.53	-2.02/-0.11	1.00/0.35	-0.68/-0.15	-0.60/-0.92	0.35/0.84	0.40/0.04	-1.14/-0.60	-1.67/-3.34	-3.08/-6.62	-5.40/-0.87	-2.39/-2.73	0.79/0.27	-1.90/-0.04	-2.97/-1.38	0.73/0.15	-2.02/-2.22
Θ(90°)	2.16/0.11	1.06/-2.84	-1.03/0.26	-1.41/-3.97	-4.55/-5.25	-3.14/-1.37	-0.91/-3.16	-2.07/-1.95	-1.81/-0.96	0.39/-0.60	-1.44/-1.00	-2.71/-2.78	-2.55/-3.57	-1.37/-0.31	0.99/0.03	-0.57/-0.87	-0.72/-1.26	-1.48/-1.22	-1.15/-1.49	0.58/0.49	-0.50/-1.20	-1.40/-1.20	1.17/-2.03	-4.36/-1.20
Θ(97.5°)	0.55/-0.73	-1.65/-3.24	-5.77/-2.85	-5.14/-5.28	-3.79/-3.88	-2.16/-3.18	-2.87/-7.86	-5.82/-4.11	-3.04/-1.05	-0.61/-1.40	-1.36/-1.05	-2.44/-2.45	-2.03/-2.12	-1.56/0.93	2.20/-0.03	-0.05/-1.73	0.31/0.46	-1.64/0.02	-1.67/-0.92	0.13/-0.24	-1.61/-1.11	0.51/-1.80	1.43/-3.30	-7.72/-3.75
Θ(105°)	-3.62/-2.65	-1.49/-3.41	-4.62/-5.32	-8.35/-10.05	-8.66/-9.06	-6.83/-5.72	-5.97/-8.05	-5.08/-4.19	-4.01/-2.06	-1.02/-1.56	-2.21/-2.54	-2.23/-3.14	-3.98/-2.48	-3.21/-1.04	1.55/0.20	0.67/-0.92	0.32/-1.45	-1.09/-0.57	-1.40/-3.05	0.23/-1.27	1.17/-1.57	1.42/-1.56	-2.13/-4.10	-4.95/-13.74
Θ(112.5°)	-1.31/-1.35	-1.76/-5.31	-10.39/-7.42	-7.08/-10.48	-4.76/-7.95	-10.14/-9.07	-10.07/-8.15	-9.95/-9.19	-7.22/-3.66	-2.88/-3.21	-4.78/-2.99	-4.56/-8.03	-4.74/-6.17	-4.55/-2.00	-1.64/-1.05	0.90/-0.55	1.18/0.15	0.52/0.91	-0.23/-0.68	0.08/0.77	-4.66/-4.80	-1.31/-2.50	-0.11/-1.65	-3.02/-3.57
Θ(120°)	-2.08/-3.75	-7.23/-10.31	-3.94/-5.39	-8.08/-8.05	-5.99/-8.34	-10.67/-11.83	-15.19/-9.97	-9.98/-7.12	-6.04/-6.01	-4.50/-4.47	-4.32/-2.98	-4.05/-2.94	-6.89/-7.92	-2.80/-5.66	0.44/-2.62	-2.61/0.16	0.30/-0.50	0.02/-1.14	-1.62/0.68	-4.82/-6.06	-1.00/0.65	-1.59/-3.32	1.25/2.13	
Θ(127.5°)	-4.27/-7.67	-6.50/-8.12	-6.87/-5.66	-6.52/-6.86	-4.10/-3.19	-6.04/-10.76	-13.31/-14.37	-9.08/-8.83	-10.31/-6.79	-6.77/-7.29	-2.48/-2.08	-1.46/0.42	-1.71/-0.07	-0.15/-2.60	-2.41/-1.89	-3.90/-3.99	1.96/0.66	2.49/-1.59	0.93/3.69	0.73/-1.10	-0.11/0.57	-1.52/-1.89	-0.37/-1.04	
Θ(135°)	-2.11/-7.14	-11.30/-6.10	-4.91/-7.61	-9.27/-8.79	-7.06/-9.92	-8.71/-11.89	-14.04/-14.16	-14.61/-9.97	-7.12/-9.35	-7.46/-3.18	-5.10/-3.16	0.44/-2.58	-0.97/0.44	-3.21/2.04	4.03/2.41	-1.09/-5.93	-1.54/-0.15	0.34/3.57	1.97/-2.22	2.01/5.04	2.62/-1.34	-4.21/2.64	0.10/-14.58	-2.02/-0.10
Θ(142.5°)	-0.91/-0.32	-5.23/-11.11	-11.41/-12.76	-9.59/-13.92	-11.05/-10.60	-9.27/-8.96	-10.43/-15.25	-11.04/-10.19	-13.21/-8.09	-6.85/-7.27	-2.38/-1.38	1.15/2.18	4.80/4.04	1.90/3.38	4.59/-5.13	-12.19/-8.09	-0.63/0.07	1.30/2.38	-3.46/-5.07	1.01/5.76	5.86/-1.46	-6.65/-5.59	-1.47/-7.33	-15.43/-6.73
Θ(150°)	-2.04/-2.71	-3.22/-6.43	-6.93/-7.06	-6.70/-9.21	-13.18/-15.22	-15.14/-15.15	-12.66/-9.34	-7.07/-5.36	-4.51/-4.97	-2.92/-0.31	-0.65/-2.83	-3.14/0.34	1.53/-0.02	-1.81/0.18	1.79/-1.56	-2.19/-4.82	-0.48/0.42	3.07/2.53	4.54/2.18	-3.62/-9.21	-1.66/3.87	-0.05/-10.61	-1.09/-0.69	-3.25/-3.54
Θ(157.5°)	-12.64/-10.42	-11.61/-12.66	-9.92/-6.80	-6.13/-7.90	-9.50/-9.39	-9.46/-10.95	-12.84/-16.22	-14.54/-8.70	-5.87/-4.92	-4.34/-4.52	-5.31/-4.95	-4.57/-6.18	-9.79/-11.55	-7.85/-4.84	-3.38/-2.67	-0.03/0.85	-0.54/-0.87	0.26/-1.41	-6.97/-7.49	-2.62/-1.18	2.03/-0.16	-4.84/-6.14	-3.81/-4.17	-6.04/-9.14
Θ(165°)	-11.08/-8.28	-8.16/-9.93	-10.55/-9.04	-7.92/-7.79	-9.46/-9.67	-10.12/-12.28	-11.43/-9.00	-6.34/-4.98	-4.10/-3.33	-2.78/-2.69	-2.56/-2.11	-1.80/-1.45	-0.67/0.13	0.63/0.17	1.43/-1.25	0.51/-0.76	-0.62/0.61	0.85/-0.15	-2.02/-3.85	-4.62/-3.85	-2.24/-0.68	-0.30/-1.16	-2.39/-3.78	-7.31/-11.87
Θ(172.5°)	-11.16/-9.39	-6.97/-5.06	-4.41/-3.43	-3.67/-4.39	-5.79/-6.77	-8.01/-9.03	-8.59/-8.59	-7.04/-5.57	-4.54/-3.63	-2.48/-1.57	-1.06/-0.60	-0.26/-0.03	0.14/0.41	0.66/0.66	0.96/-1.07	1.25/-1.42	1.37/0.68	-0.83/-3.02	-5.99/-10.65	-14.03/-15.19	-14.55/-15.25	-15.64/-12.72	-11.78/-9.96	-7.63/-8.12
Θ(180°)	-2.67/-6.91	-5.02/-4.98	-5.50/-4.20	-3.07/-2.41	-2.21/-2.39	-2.61/-3.22	-3.26/-3.32	-3.43/-3.01	-2.38/-2.02	-1.67/-1.26	-0.99/-0.65	-0.29/-0.07	0.00/-0.15	-0.35/-0.35	-0.13/-0.43	-1.02/-1.96	-3.54/-4.92	-6.05/-7.47	-8.22/-7.71	-7.02/-6.60	-6.09/-5.19	-5.05/-5.23	-4.97/-4.74	-6.03/-7.18
Freq(Hz)	6.475GPol.	TotalAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.73/-3.44	-4.49/-5.00	-5.06/-4.71	-4.21/-4.14	-4.95/-4.98	-4.86/-4.81	-4.97/-4.88	-4.50/-4.71	-4.66/-4.64	-4.80/-4.39	-3.97/-3.37	-2.95/-3.03	-3.33/-3.90	-3.99/-3.91	-3.45/-3.45	-3.91/-4.26	-4.54/-4.67	-4.45/-4.89	-5.85/-5.58	-5.58/-5.57	-4.80/-4.16	-3.75/-3.89	-3.17/-2.84	-3.80/-3.79
Θ(7.5°)	-1.91/-1.86	-1.76/-2.00	-3.37/-4.53	-3.88/-2.45	-2.95/-3.66	-3.46/-3.89	-4.52/-4.42	-4.03/-3.82	-3.63/-4.20	-4.42/-4.54	-4.21/-3.77	-3.33/-3.00	-3.43/-4.23	-4.95/-4.53	-4.41/-4.64	-5.01/-3.58	-5.63/-6.05	-6.36/-9.96	-6.22/-5.49	-5.17/-4.69	-2.66/-2.41	-2.88/-3.44	-2.86/-3.79	
Θ(15°)	-3.08/-2.12	-0.65/-0.28	-0.03/0.03	-0.83/-0.78	-0.68/-1.16	-1.27/-1.03	-1.48/-2.22	-2.69/-2.47	-2.41/-2.68	-2.94/-3.05	-3.29/-3.30	-2.97/-2.45	-2.03/-2.32	-2.95/-4.33	-3.29/-4.06	-4.89/-5.46	-5.82/-6.29	-6.45/-6.25	-5.82/-4.82	-3.21/-2.47	-2.14/-1.93	-1.68/-1.32	-0.84/-1.18	-1.88/-1.71
Θ(22.5°)	-0.19/-1.11	-1.67/-1.49	-0.07/0.80	0.51/-0.08	0.49/0.63	0.46/0.20	-0.98/-0.60	-0.42/-0.83	-1.40/-1.69	-1.78/-1.29	-0.92/-0.32	-0.18/-0.71	-1.95/-2.61	-2.46/-3.54	-5.64/-6.84	-7.86/-1.02	-11.60/-8.56	-5.24/-3.59	-3.86/-4.55	-4.64/-3.72	-2.14/-1.07	-0.35/0.07	0.18/0.49	
Θ(30°)	-1.76/-1.30	-0.40/-0.44	-0.64/-0.94	-0.67/-1.34	-0.59/-0.25	0.53/0.37	0.11/-0.02	-0.64/-1.09	-1.40/-1.11	-0.68/-0.39	-0.59/-0.70	-0.77/-1.40	-2.09/-2.69	-3.94/-4.62	-4.31/-4.59	-6.88/-11.09	-9.93/-7.23	-5.93/-6.70	-7.63/-6.64	-4.92/-3.17	-2.36/-1.67	-2.55/-3.09	-3.07/-1.48	
Θ(37.5°)	2.13/-1.56	0.96/0.33	1.07/-1.22	0.47/0.30	-0.08/0.16	0.40/-1.28	1.92/-1.93	1.82/-1.56	-0.10/-1.21	-0.60/-0.19	-0.07/-0.81	-2.08/-2.39	-2.69/-3.73	-4.78/-4.36	-3.22/-3.60	-3.86/-4.45	-5.87/-8.86	-11.82/-10.16	-11.85/-15.13	-11.55/-9.61	-6.70/-4.74	-4.59/-4.50	-3.67/-1.91	-0.35/0.85
Θ(45°)	-2.43/-3.89	4.34/-2.98	-2.58/-0.54	-0.21/0.00	-0.08/0.86	1.62/0.95	0.98/0.99	1.19/0.39	0.10/-0.50	-0.01/0.06	0.38/-0.09	-1.45/-3.04	-3.47/-3.59	-3.83/-4.79	-4.71/-4.26	-4.16/-4.57	-6.00/-8.35	-14.48/-13.32	-11.52/-10.84	-14.24/-11.73	-8.67/-5.05	-4.31/-5.75	-5.47/-1.49	-3.14/-2.47
Θ(52.5°)	-2.95/-2.67	-3.37/-1.49	-1.44/-1.45	-0.09/-0.50	-0.02/-1.43	-1.37/-1.10	0.73/0.28	0.62/-1.31	-2.10/-2.88	-0.42/0.91	0.95/0.14	-2.92/-1.01	-2.47/-2.30	-2.59/-3.29	-4.86/-4.29	-7.13/-11.80	-15.91/-13.52	-11.05/-8.63	-11.05/-8.63	-6.73/-5.58	-5.43/-5.23	-6.73/-7.55	-3.94/-4.75	
Θ(60°)	-0.31/2.57	1.21/-0.35	-0.62/1.06	0.94/-0.63	-0.42/-0.73	-1.05/-0.84	-0.15/-1.55	-0.50/-0.17	-0.78/-1.97	-1.05/0.41	0.90/-0.15	-1.41/-3.15	-4.16/-5.06	-5.32/-3.57	-1.94/-2.62	-3.44/-3.18	-4.61/-9.18	-11.78/-11.97	-10.42/-13.77	-8.72/-8.61	-6.77/-5.41	-6.81/-6.36	-3.27/-3.37	-2.58/-0.46
Θ(67.5°)	3.83/-0.45	3.61/2.40	1.83/-1.58	1.38/0.58	-2.49/-2.31	-1.90/-1.74	-1.43/-1.90	-0.77/-0.16	-1.58/-2.21	-1.03/-0.07	-0.09/0.11	-0.46/-2.30	-3.26/-3.66	-5.10/-6.20	-3.91/-2.11	-1.79/-2.34	-2.90/-5.51	-10.60/-9.99	-9.20/-9.09	-5.41/-3.92	-7.49/-6.33	-6.66/-6.05	-3.32/0.43	1.86/3.23
Θ(75°)	3.05/4.04	3.73/2.21	2.69/2.14	2.74/-1.85	-1.19/-2.06	-1.12/-0.21	-1.35/-2.28	-1.22/-1.21	-0.15/-0.58	0.91/-0.57	1.08/-4.09	-0.50/-2.15	-3.96/-4.03	-3.86/-2.60	-1.36/-2.04	-2.18/-2.61	-7.87/-4.30	-4.40/-5.09	-2.74/-1.11	-3.22/-3.39	-3.97/-3.09	-1.07/-1.90	-0.55/-2.82	
Θ(82.5°)	3.11/3.																							



Antenna Pattern_6GHz

Appendix D

Θ(67.5°)	-3.08/-4.25	-4.69/-6.71	-6.29/-4.87	-5.12/-3.67	-1.39/-0.29	-0.12/-1.37	2.70/2.52	0.94/-0.53	-1.11/-0.72	-0.60/-1.27	-1.20/0.06	0.33/1.70	2.43/3.63	3.33/3.36	0.66/0.10	-0.45/-0.61	-2.13/-3.73	-3.37/-4.05	-2.76/-2.07	-3.18/-3.21	-1.61/-1.73	-2.06/-1.03	-0.93/-0.69	-1.58/-2.93
Θ(75°)	-1.00/-1.71	-3.60/-4.86	-3.39/-2.44	-2.76/-2.86	-1.72/-1.25	-0.73/-1.53	3.45/3.23	1.84/-0.12	-1.53/-3.99	-3.05/-1.10	-1.05/-0.17	0.07/1.71	2.30/2.92	2.32/2.08	-0.78/-1.17	-3.74/-1.87	-3.30/-4.95	-2.74/-2.88	-1.00/-0.60	-2.87/-1.57	-0.68/-1.19	-1.16/-0.02	0.09/0.71	-0.27/-0.03
Θ(82.5°)	-1.05/-0.99	-1.86/-2.53	-1.39/0.17	-0.83/-3.37	-2.74/-1.17	0.70/1.98	2.99/3.51	2.64/-0.14	-3.02/-3.64	-1.64/-0.81	-3.05/-2.82	-1.07/0.31	1.08/0.41	0.58/0.32	-2.95/-4.79	-8.91/-2.52	-3.19/-0.32	-0.13/-0.59	-1.46/-1.59	-1.47/-1.30	-2.90/-2.12	-2.59/-0.26	-0.17/-0.29	
Θ(90°)	-0.25/-0.31	-0.85/-3.44	-2.89/-0.31	0.73/0.02	-1.16/-0.63	1.86/1.97	2.30/2.16	2.08/-0.19	-1.81/-2.93	-2.77/-3.11	-6.29/-7.34	-3.66/-1.22	-0.78/-0.94	0.17/-0.43	-3.80/-8.62	-10.88/-5.46	-1.29/-0.28	-1.02/-5.78	0.65/-0.73	-3.00/-3.45	-3.08/-2.36	-2.54/-2.56	-3.58/-2.29	-1.74/-1.10
Θ(97.5°)	0.62/0.57	0.23/-0.68	-1.51/-4.09	1.34/-0.03	-0.95/-1.83	1.02/0.51	-0.05/0.09	0.32/-1.98	-1.46/-1.90	-1.78/-3.13	-4.44/-5.13	-3.36/-2.62	-2.23/-3.69	-1.91/-3.44	-6.79/-7.45	-8.89/-8.24	-3.00/-2.52	-2.66/-3.66	-0.23/-0.67	-3.02/-3.36	-5.14/-6.50	-3.38/-5.23	-3.12/-0.98	-8.10/-5.02
Θ(105°)	1.10/1.32	1.91/1.02	0.70/0.79	0.70/-0.12	-1.25/-3.06	-4.16/-3.28	-2.04/-1.96	-2.79/-4.34	-1.34/-0.97	1.00/-0.10	-1.79/-4.43	-4.06/-5.84	-0.88/-15.25	-5.75/-3.10	-6.36/-10.30	-12.15/-5.24	-6.05/-3.18	-8.94/-3.03	2.33/-0.39	-2.98/-4.11	-5.64/-9.13	-4.33/-4.66	-4.89/-2.56	-0.51/-1.20
Θ(112.5°)	0.41/0.18	-0.28/-0.95	0.10/1.43	2.07/1.38	-2.39/-3.50	-7.27/-7.55	-5.18/-2.96	-3.13/-3.12	-2.03/0.45	1.36/-0.57	-2.88/-6.02	-6.15/-6.37	-7.79/-10.67	-9.87/-8.84	-6.44/-14.60	-8.65/-5.95	-3.30/-6.21	-8.34/-7.11	-3.43/-4.69	-2.54/-5.90	-9.41/-6.37	-7.02/-6.72	-2.40/-1.42	-0.91/-0.16
Θ(120°)	-2.91/-0.07	0.19/0.39	-0.09/0.58	0.74/-0.07	-0.20/-0.95	-0.92/-3.72	-5.07/-2.69	-2.50/-3.33	-3.67/-2.59	-2.67/-2.72	-5.01/-7.57	-6.85/-4.82	-4.98/-5.39	-6.73/-7.02	-5.78/-9.30	-8.97/-7.68	-7.28/-7.49	-11.73/-2.86	-0.53/-3.62	-5.95/-2.23	-4.35/-6.93	-4.43/-6.23	-4.65/-3.67	-5.15/-3.81
Θ(127.5°)	-0.65/0.98	1.49/0.97	1.20/1.32	1.37/1.24	-0.36/-2.92	-3.32/-2.55	-4.30/-5.82	-4.44/-5.47	-6.44/-6.19	-5.41/-6.22	-8.04/-9.34	-9.17/-6.41	-6.85/-4.38	-6.67/-7.48	-9.56/-9.40	-6.52/-4.66	-5.73/-11.14	-6.54/-3.83	-1.58/-4.38	-4.46/-11.88	-10.50/-5.54	-6.01/-4.69	-0.70/-0.42	-4.69/-0.59
Θ(135°)	-1.28/-0.69	1.81/0.72	0.13/-0.24	0.32/0.36	0.45/-0.29	-0.40/-0.47	-1.35/-3.34	-5.81/-4.73	-2.96/-1.44	-1.61/-2.01	-2.97/-3.91	-6.68/-8.37	-8.09/-7.18	-6.74/-4.92	-5.51/-3.93	-3.71/-6.10	-8.81/-8.01	-12.68/-11.25	-5.37/-9.60	-6.67/-9.45	-5.16/-8.16	-3.03/-9.76	-6.76/-9.15	-7.86/-3.35
Θ(142.5°)	-2.82/-1.01	0.18/-1.57	1.19/0.77	0.92/0.65	0.14/-0.68	-1.43/-1.42	-1.14/-1.15	-1.49/-2.03	-2.41/-2.78	-3.06/-3.62	-4.99/-7.57	-12.03/-6.77	-3.80/-2.62	-1.66/-3.11	-3.71/-5.99	-12.66/-6.68	-2.29/-8.38	-10.93/-10.09	-5.93/-12.21	-4.92/-4.31	-1.22/-0.94	-0.95/-0.95	-3.49/-3.69	-7.15/-6.12
Θ(150°)	-1.22/-1.71	-0.19/-1.68	2.87/3.45	3.71/3.24	2.09/-2.7	0.51/-0.27	-0.96/-0.78	-0.28/-0.52	-1.35/-1.75	-2.34/-3.71	-6.29/-9.15	-7.22/-6.57	-7.11/-4.93	-4.69/-4.79	-14.62/-7.62	-6.11/-10.87	-12.28/-9.49	-7.81/-7.43	-6.98/-5.61	-2.91/-1.32	0.61/-2.22	2.37/-5.1	0.19/0.11	
Θ(157.5°)	1.16/0.48	0.38/0.62	1.15/1.60	1.19/-0.03	-1.48/-1.91	-0.94/-0.21	0.56/-0.09	-0.98/-1.32	-1.38/-2.06	-3.67/-5.86	-7.53/-10.37	-11.60/-9.92	-6.90/-5.21	-4.67/-5.52	-9.66/-9.32	-5.44/-5.28	-7.00/-9.02	-13.61/-12.58	-7.67/-7.53	-9.63/-6.95	-4.95/-4.33	-2.56/-1.33	-0.20/-1.74	2.73/2.38
Θ(165°)	-1.26/-1.59	-2.36/-2.84	-2.43/-1.75	-1.40/-1.68	-2.27/-2.61	-2.51/-2.11	-2.00/-2.46	-3.30/-4.27	-5.41/-5.84	-5.59/-5.11	-4.91/-4.69	-4.27/-3.48	-2.46/-1.91	-2.41/-2.22	-6.31/-6.85	-6.27/-5.57	-5.18/-5.05	-4.88/-6.47	-5.23/-6.59	-6.67/-6.67	-6.38/-5.85	-4.38/-3.17	-3.07/-0.38	-2.72/-1.96
Θ(172.5°)	-5.26/-5.25	-5.08/-5.19	-5.51/-4.89	-3.97/-3.55	-3.74/-3.74	-3.47/-3.47	-1.62/-2.62	-2.16/-2.15	-2.47/-2.91	-3.50/-4.22	-5.67/-9.14	-15.26/-12.51	-10.15/-7.81	-5.83/-4.68	-4.25/-4.35	-4.82/-5.04	-6.87/-8.29	-9.98/-10.79	-10.07/-8.92	-7.91/-7.60	-7.05/-6.58	-5.28/-4.98	-4.72/-4.68	
Θ(180°)	-5.43/-5.15	-4.93/-5.32	-5.41/-5.65	-6.20/-5.93	-5.41/-4.78	-4.26/-4.24	-4.31/-4.09	-4.17/-4.48	-5.19/-6.63	-8.37/-9.49	-10.65/-12.45	-14.34/-13.79	-12.73/-12.21	-11.82/-11.39	-10.60/-10.28	-9.88/-9.80	-9.50/-9.29	-9.11/-8.28	-7.12/-6.07	-5.40/-5.28	-5.41/-5.43	-5.23/-5.05	-5.26/-5.16	-4.74/-4.88
Freq(GHz)	6.475GPol.	TotalAnt. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-0.43/-0.37	-0.32/-0.29	-0.23/0.21	0.48/0.67	0.78/0.84	0.83/0.94	1.20/1.17	1.22/1.17	1.02/0.64	0.03/-0.11	-0.28/-0.32	-0.29/-0.43	-0.52/-0.70	-0.65/-0.41	-0.24/0.04	0.39/0.56	0.70/0.71	0.72/0.59	0.69/0.52	0.25/0.19	0.23/0.23	0.13/0.01	-0.16/-0.01	0.03/-0.23
Θ(7.5°)	-1.11/-1.40	-1.33/-1.17	-1.11/-0.62	-0.36/-0.05	0.19/0.46	0.55/0.62	0.40/0.23	0.19/0.36	0.38/0.23	0.19/-0.21	-0.46/-0.72	-1.02/-0.97	-0.70/-0.64	-0.41/-0.22	0.05/0.45	0.91/1.20	1.26/1.33	1.28/1.17	1.13/0.99	0.78/0.47	0.22/0.03	-0.33/-0.68	-0.93/-0.92	-0.83/-1.11
Θ(15°)	-4.30/-4.42	-4.22/-4.16	-3.37/-4.29	-2.06/-1.74	-1.33/-0.76	-0.34/0.24	0.63/0.95	1.15/1.38	1.50/1.30	0.91/0.24	-0.51/-1.20	-1.77/-2.09	-1.97/-1.95	-1.80/-1.69	-1.64/-1.27	-0.95/-0.92	-0.99/-1.04	-0.96/-0.92	-0.86/-0.94	-1.25/-1.93	-2.55/-3.21	-3.88/-4.12	-4.09/-4.36	-4.37/-4.31
Θ(22.5°)	-5.45/-5.81	-5.85/-5.01	-3.50/-2.61	-2.28/-2.24	-1.56/-0.50	-0.19/-0.05	-0.02/0.02	0.29/0.84	1.09/1.12	0.68/0.00	-0.85/-1.96	-2.89/-2.49	-1.80/-1.27	-1.43/-2.16	-2.69/-2.77	-2.55/-2.26	-1.49/-0.70	-0.14/0.04	-0.18/-0.68	-1.87/-3.46	-5.29/-6.87	-8.65/-9.50	-8.23/-6.89	-5.46/-5.20
Θ(30°)	-3.76/-5.70	-6.39/-5.31	-4.94/-4.27	-3.11/-1.88	-1.09/-0.88	-0.92/-0.49	0.17/0.80	1.15/-1.57	1.68/-1.58	0.93/0.41	0.73/0.74	0.52/0.77	1.11/1.49	-0.81/-1.49	-1.56/-1.46	-1.28/-1.02	-0.99/-0.76	-0.27/0.20	0.17/-0.63	-1.80/-2.43	-3.22/-3.23	-2.77/-2.59	-2.68/-2.89	-2.72/-1.96
Θ(37.5°)	-3.54/-0.59	-6.86/-6.68	-5.14/-5.95	-4.50/-3.09	-2.03/-1.33	-0.35/-0.42	0.73/0.75	0.81/1.38	2.39/2.72	1.79/0.13	-0.58/0.10	1.21/2.69	3.17/2.51	1.56/1.20	0.11/0.95	-1.38/-1.48	-1.17/-1.05	-0.91/-0.54	-0.57/-0.80	-1.51/-2.30	-2.50/-3.06	-2.59/-2.11	-2.30/-2.64	-3.10/-3.44
Θ(45°)	-10.06/-9.54	-10.24/-10.33	-9.28/-8.19	-6.42/-4.26	-1.93/-0.73	-0.85/-0.90	-0.82/-1.03	-0.66/0.18	0.30/-0.32	-0.44/-1.25	-0.67/0.98	2.15/3.11	3.32/3.56	3.35/2.35	1.11/-0.19	-0.71/-0.38	0.15/1.20	0.78/-0.55	-0.87/-1.17	-1.16/-0.77	-1.06/-1.73	-3.31/-3.19	-4.14/-5.81	-6.92/-9.93
Θ(52.5°)	-5.98/-7.53	-9.50/-9.97	-7.54/-5.42	-4.76/-4.12	-3.76/-3.19	-2.17/-1.00	-0.68/-1.64	-1.09/0.13	0.56/-0.45	-1.17/-0.91	0.52/1.76	3.27/3.57	3.61/3.24	2.79/3.38	-0.11/-0.97	-0.64/-0.44	0.02/-1.02	-3.31/-2.13	-0.71/-0.63	-1.80/-2.43	-6.28/-6.59	-4.38/-3.17	-2.72/-2.89	-2.72/-1.96
Θ(60°)	-9.92/-11.15	-13.38/-15.48	-10.25/-5.72	-4.39/-3.57	-3.08/-2.51	-2.14/0.74	0.01/-0.40	-1.72/-2.35	-1.80/-0.71	-0.09/-0.25	-1.06/0.53	1.10/2.40	2.33/3.05	2.33/3.37	2.62/1.11	-0.01/-2.49	-2.90/-3.26	-4.71/-4.10	-2.03/-2.45	-3.27/-2.18	-1.78/-2.74	-4.48/-5.37	-6.89/-5.80	-7.08/-4.51
Θ(67.5°)	-10.33/-9.62	-11.66/-15.26	-12.61/-7.66	-4.75/-2.08	-1.12/-0.87	-0.30/0.98	1.65/0.77	-1.07/-0.40	-5.41/-3.68	-3.10/-1.92	-0.74/0.80	1.10/0.79	0.70/0.44	-0.49/1.47	1.04/0.50	-1.57/-3.90	-2.80/-3.35	-1.12/-1.57	-3.61/-3.95	-3.79/-3.79	-3.60/-6.06	-4.10/-6.11	-5.00/-5.62	-9.90/-11.67
Θ(75°)	-4.54/-3.77	-4.40/-4.61	-9.88/-6.69	-3.62/-1.56	-0.50/-2.46	1.50/-1.91	2.01/-0.62	0.07/-2.46	-6.09/-6.63	-7.34/-3.93	-3.83/-2.34	-2.25/-1.61	0.05/-0.03	0.19/0.80	-0.67/-1.65	-5.05/-6.62	-4.37/-3.59	-2.76/-1.26	-2.79/-3.33	-2.76/-2.98	-3.30/-5.15	-4.02/-4.35	-4.12/-4.59	-6.83/-5.23
Θ(82.5°)	-0.43/0.34	-1.23/-3.71	-4.20/-2.42	-1.48/-1.40	-1.53/0.74	-0.03/0.53	-0.28/-1.18	-1.53/-2.59	-8.99/-6.95	-4.45/-2.08	-1.61/-3.26	-5.97/-3.32	-0.90/-1.10	-2.89/-1.43	-3.60/-4.71	-7.71/-3.62	-3.35/-2.79	-1.96/-1.26	0.44/-1.90	-3.30/-1.30	-1.88/-3.18	-4.58/-3.71	-4.29/-4.83	-5.72/-1.85
Θ(90°)	0.73/0.91	-0.73/-3.55	-4.26/-1.79	-0.71/-1.64	-2.78/0.52	0.28/-0.25	-1.17/-1.68	-1.62/-1.77	-7.21/-2.62	-1.48/-0.58	-0.14/-2.38	-9.17/-10.06	-2.70/-1.12	-0.35/-0.85	-3.80/-5.59	-9.26/-3.33	-1.27/-2.16	-2.11/-0.92	-1.29/-2.81	-0.57/-0.38	-3.78/-4.18	-5.72/-5.19	-5.52/-4.52	-4.00/-0.13
Θ(97.5°)	0.76/0.67	1.03/-1.53	-2.01/-0.51	-0.32/-2.37	-3.41/-1.12	0.41/0.05	0.75/-0.48	-1.43/-1.55	-1.73/-3.98	-1.67/-0.90	-1.92/-5.13	-14.23/-8.12	-2.40/-0.75	-3.07/-5.76	-6.29/-12.25	-11.37/-6.74	-3.90/-2.80	-3.97/-5.41	-4.67/-7.28	-6.51/-1.74	-5.64/-9.09	-1.01/-5.42	-3.49/-4.21	-2.87/-1.62
Θ(105°)	1.48/1.40	0.86/-0.51	-0.01/1.01	0.48/-1.22	-3.50/-1.64	-1.14/-2.12	-0.16/-1.17	-2.88/-3.60	-7.67/-4.95	-3.23/-2.92	-3.17/-4.93	-9.64/-8.66	-9.02/-7.51	-14.30/-9.57	-7.36/-7.03	-8.88/-10.49	-5.10/-6.91	-6.43/-7.80	-1.55/-4.43	-4.44/-3.42	-4.04/-7.93	-10.53/-5.88	-3.07/-1.81	-0.77/0.06
Θ(112.5°)	1.60/0.59	0.43/-1.43	-0.60/0.58	1.15/-2.25	-4.66/-5.28	-3.91/-6.34	-5.05/-2.66	-2.88/-7.83	-7.78/-6.35	-2.81/-2.57	-2.91/-5.28	-10.99/-12.65	-6.92/-9.78	-8.75/-11.02	-9.36/-10.64	-7.66/-7.02	-6.27/-6.72	-9.85/-8.90	-4.48/-6.66	-3.45/-4.59	-7.42/-6.95	-8.33/-8.54	-2.41/-2.64	-1.81/0.26
Θ(120°)	-1.18/0.13	-0.83/-1.85	-2.02/-2.45	-1.76/-0.96	-1.40/-1.94	-5.77/-6.04	-3.82/-2.90	-3.99/-5.13	-5.92/-6.46	-6.80/-8.81	-8.65/-8.98	-7.99/-10.75	-13.72/-5.60	-10.04/-2.65	-12.17/-7.91	-2.53/-7.01	-6.03/-9.43	-10.24/-2.65	-12.17/-7.91	-6.03/-9.43	-3.20/-4.39	-6.04/-7.91	-5.01/-4.38	-6



Antenna Pattern_6GHz

Appendix D

Θ(112.5°)	-10.73/-8.64	-4.26/-2.30	0.28/1.21	1.61/1.52	1.14/0.73	0.03/1.23	1.87/1.01	1.87/2.38	-0.39/-0.53	-1.18/-1.54	-1.39/-0.15	-4.20/-8.22	-3.44/-1.74	-4.21/-4.28	-10.65/-10.87	-8.09/-6.07	-15.96/-9.54	-7.28/-6.79	-9.56/-8.88	-5.83/-5.36	-3.04/-6.05	-7.53/-4.57	-6.55/-9.17	-11.26/-14.81
Θ(120°)	-4.05/-3.59	-2.89/-1.02	1.00/2.88	3.21/2.89	2.35/1.38	1.03/1.78	1.65/1.06	1.14/0.65	-1.54/-1.31	-0.60/-1.24	0.19/1.12	-0.27/-2.96	-4.81/-3.17	-1.29/-3.99	-6.29/-1.82	-9.30/-9.82	-9.25/-7.51	-4.90/-9.46	-10.11/-9.05	-5.81/-3.52	-3.79/-4.74	-6.50/-5.06	-5.49/-4.84	-4.70/-4.24
Θ(127.5°)	-2.05/-2.00	-0.85/0.91	1.62/1.79	2.24/2.59	2.95/2.89	1.82/1.61	1.70/0.85	0.28/-0.39	-1.05/-0.16	-1.75/1.36	1.07/0.13	-1.49/-4.45	-5.30/-1.56	-2.10/-5.43	-4.23/-8.93	-6.44/-9.88	-2.96/-7.13	-5.45/-4.86	-5.72/-4.77	-1.01/-0.72	-4.08/-7.90	-7.76/-3.67	-1.50/-2.02	-2.99/-3.68
Θ(135°)	0.58/0.30	0.09/-0.14	0.54/1.33	1.95/3.02	3.15/1.95	1.52/1.36	0.69/0.33	0.58/0.40	-0.94/0.79	1.85/0.46	-1.14/-2.17	-0.40/1.51	0.89/-3.71	-11.74/-11.11	-8.59/-11.42	-5.83/-1.31	-2.00/-7.07	-7.83/-11.36	-7.08/-3.36	-6.25/-3.86	-8.51/-12.56	-11.26/-5.78	-4.05/-1.45	-1.01/-0.26
Θ(142.5°)	-6.76/-5.30	-3.64/-2.43	-1.31/0.90	2.20/2.26	2.66/2.89	2.38/1.46	0.57/-0.50	-1.44/-1.82	-0.14/-1.15	2.21/2.74	1.50/-0.56	-3.52/-4.36	-2.79/-0.65	-2.17/-2.17	-7.21/-7.55	-5.87/-3.79	-7.65/-6.09	-6.61/-14.99	-5.37/-2.55	-5.68/-5.57	-9.95/-7.13	-11.21/-8.19	-6.14/-6.75	-7.24/-8.48
Θ(150°)	-9.16/-7.71	-6.09/-4.58	-3.43/-2.40	-0.65/0.91	1.65/2.27	3.19/3.51	1.65/2.27	3.19/3.51	0.01/-1.99	-1.59/0.35	0.13/-1.72	-3.99/-7.68	-3.05/-0.65	-1.71/-5.06	-8.08/-4.13	-4.70/-6.91	-11.05/-8.97	-7.59/-8.20	-8.28/-10.56	-15.86/-10.30	-8.72/-8.95	-9.54/-10.56	-6.49/-7.36	-6.77/-9.08
Θ(157.5°)	-6.30/-6.14	-6.35/-5.20	-3.12/-2.05	-1.97/-2.03	-2.22/-2.13	-1.93/-1.81	-2.12/-2.17	-1.89/-1.79	-2.24/-2.85	-2.71/-1.96	-2.59/-4.93	-7.43/-6.58	-5.38/-5.12	-6.88/-12.46	-14.96/-10.48	-8.42/-6.39	-6.47/-7.01	-6.55/-6.43	-7.19/-8.08	-9.91/-9.97	-9.89/-9.85	-8.86/-7.08	-5.35/-5.02	-5.44/-6.46
Θ(165°)	-4.37/-3.56	-3.44/-3.81	-4.03/-3.35	-2.11/-1.49	-1.10/-1.02	-1.51/-2.26	-2.50/-2.08	-1.38/-0.71	-0.15/-0.28	-0.93/-2.04	-3.38/-5.58	-8.99/-12.88	-13.64/-14.54	-12.93/-9.99	-9.36/-10.87	-13.40/-12.93	-11.01/-11.34	-14.67/-15.47	-15.84/-14.74	-13.44/-10.09	-7.59/-6.54	-6.02/-5.53	-5.56/-5.93	-5.85/-5.42
Θ(172.5°)	-3.88/-4.03	-3.93/-3.41	-3.07/-2.67	-2.62/-2.89	-3.19/-3.44	-3.51/-3.77	-3.94/-3.93	-3.88/-3.92	-3.94/-4.33	-5.34/-6.58	-7.41/-7.38	-7.51/-7.84	-7.55/-7.76	-8.14/-8.50	-9.38/-10.36	-12.15/-14.00	-13.11/-11.21	-10.46/-9.86	-9.45/-8.92	-8.84/-8.30	-8.41/-8.50	-8.09/-7.55	-7.01/-6.40	-5.51/-4.64
Θ(180°)	-6.19/-5.46	-5.76/-6.90	-7.00/-7.07	-7.04/-7.39	-7.79/-8.37	-8.82/-9.25	-8.89/-8.94	-9.11/-8.99	-8.59/-8.17	-8.14/-8.19	-7.87/-7.52	-7.48/-7.16	-7.10/-6.92	-6.51/-6.30	-6.53/-6.73	-7.35/-8.00	-7.69/-7.37	-7.21/-7.43	-7.88/-8.16	-7.26/-6.30	-6.04/-6.39	-7.00/-7.82	-8.23/-8.01	-7.54/-6.83
Freq(Hz)	6.475GPol.	TotalAnt.	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-6.50/-6.92	-6.61/-5.95	-6.01/-6.16	-6.47/-6.65	-6.62/-6.72	-6.59/-5.92	-5.45/-5.24	-5.37/-5.31	-5.46/-5.34	-5.06/-5.02	-5.03/-5.17	-5.25/-4.90	-5.38/-5.66	-5.19/-4.89	-5.06/-5.58	-6.24/-6.66	-7.17/-7.59	-7.87/-8.48	-8.71/-9.13	-9.13/-8.36	-7.29/-6.84	-6.80/-6.96	-6.76/-6.06	-5.81/-6.05
Θ(7.5°)	-3.94/-3.92	-3.87/-3.89	-4.11/-4.98	-6.59/-8.07	-9.46/-10.26	-10.57/-11.95	-12.27/-10.94	-9.87/-9.11	-7.36/-6.49	-5.98/-5.62	-5.84/-6.07	-5.89/-5.31	-5.44/-6.16	-6.66/-6.69	-6.46/-6.05	-6.07/-6.26	-6.19/-5.57	-4.62/-3.71	-3.46/-3.83	-4.42/-4.07	-3.76/-3.67	-4.10/-4.63	-4.52/-4.12	-4.04/-4.02
Θ(15°)	-1.85/-1.96	-1.30/-1.43	-2.61/-4.08	-5.60/-7.33	-8.89/-11.34	-13.86/-14.70	-14.91/-11.58	-8.94/-7.10	-5.46/-4.46	-3.86/-3.08	-2.59/-2.44	-2.33/-1.75	-1.37/-1.28	-1.45/-2.07	-2.79/-3.24	-3.85/-4.63	-4.53/-3.94	-3.42/-3.12	-3.05/-2.86	-2.56/-1.96	-1.79/-1.61	-1.56/-1.34	-1.69/-1.80	
Θ(22.5°)	0.81/0.97	1.13/1.01	-0.44/-2.82	-5.62/-8.81	-11.86/-13.93	-15.53/-12.66	-8.67/-6.64	-4.90/-3.74	-4.30/-4.74	-4.68/-3.98	-3.43/-3.25	-2.97/-2.49	-1.72/-1.09	-1.21/-1.21	-0.90/-1.09	-1.56/-2.23	-3.18/-3.95	-4.44/-4.50	-3.79/-3.14	-2.82/-2.97	-2.44/-1.50	-0.88/-0.13	0.46/1.03	1.20/0.97
Θ(30°)	-0.07/-0.49	-0.98/-1.68	-2.36/-2.49	-3.07/-4.76	-6.95/-8.30	-9.95/-9.66	-9.82/-9.92	-8.88/-7.66	-7.88/-8.65	-9.16/-10.91	-12.82/-10.64	-7.92/-5.27	-3.24/-2.16	-1.53/-0.97	-0.81/-0.64	-0.68/-0.83	-1.55/-2.77	-3.18/-2.76	-2.06/-1.40	-1.00/-1.65	-2.37/-1.81	-1.38/-1.59	0.29/0.45	0.22/-0.02
Θ(37.5°)	-0.55/-1.39	-1.57/-1.09	-2.05/-3.28	-3.97/-5.58	-8.24/-9.20	-11.33/-13.21	-11.50/-7.68	-6.58/-7.77	-8.21/-8.08	-7.03/-6.27	-4.07/-2.57	-1.36/-2.30	-1.17/0.12	-0.17/0.36	0.31/-0.45	-1.79/-3.47	-4.15/-3.09	-2.44/-2.15	-1.73/-0.76	-0.72/-0.79	-0.32/0.17	0.75/0.42	-0.14/-0.03	
Θ(45°)	-0.28/-0.15	-0.88/-0.91	-2.33/-4.88	-5.76/-5.45	-5.97/-7.44	-10.58/-9.43	-6.57/-5.89	-6.67/-7.86	-8.15/-8.04	-6.44/-4.83	-2.87/-1.51	-0.13/0.60	0.77/1.33	1.28/0.34	-0.19/-0.12	-0.25/0.55	1.04/0.47	-0.99/-3.28	-5.16/-4.74	-2.43/-1.36	-0.53/-0.16	-0.20/0.24	0.43/0.76	0.68/-0.07
Θ(52.5°)	-3.00/-2.45	-2.44/-2.09	-1.97/-2.75	-3.46/-5.38	-7.41/-9.12	-13.23/-15.22	-10.01/-9.87	-11.89/-9.05	-6.98/-6.09	-5.22/-3.16	-0.94/-0.16	0.83/0.35	-0.62/-4.54	-1.50/-0.62	1.11/2.19	2.28/0.31	-2.05/-1.68	-1.95/-2.76	-3.39/-1.27	-0.35/0.09	0.04/0.60	0.91/0.59	-0.32/-1.04	-1.29/-2.31
Θ(60°)	-5.57/-5.42	-4.45/-2.97	-1.52/-1.24	-2.14/-5.21	-8.16/-10.38	-11.72/-15.27	-13.06/-15.81	-13.37/-7.53	-6.59/-6.39	-2.36/-3.08	0.84/0.02	1.10/-0.02	-1.42/-3.14	-4.41/-2.52	1.76/3.10	3.17/1.86	0.12/-1.50	-2.40/-3.07	-3.84/-2.41	-1.06/-0.52	-0.05/-0.01	0.78/0.14	-0.69/-1.66	-1.63/-3.58
Θ(67.5°)	-7.17/-6.98	-6.39/-4.00	-2.65/-1.66	-1.97/-3.65	-4.86/-5.43	-9.34/-15.46	-10.42/-8.89	-5.70/-2.21	-2.06/-3.54	-3.22/-3.92	-3.20/-2.31	-1.08/-1.81	-1.47/-1.81	-0.65/0.57	1.42/2.19	2.49/1.04	-0.50/-1.30	-3.24/-6.25	-6.73/-3.39	-1.49/-1.14	0.95/1.34	1.15/-0.10	-0.83/-2.77	-3.74/-5.39
Θ(75°)	-4.35/-5.03	-5.72/-4.74	-4.13/-1.48	0.03/-1.31	-4.93/-4.32	-5.71/-11.13	-13.86/-14.70	-6.13/-2.14	-1.27/-0.88	-1.68/-5.54	-4.65/-2.71	-1.39/-0.32	1.20/2.39	2.53/1.59	1.11/1.14	2.66/1.55	-1.09/-3.35	-4.94/-7.28	-6.06/-4.25	-1.40/0.18	-0.42/0.53	1.10/0.06	-0.69/-1.21	-1.45/-2.54
Θ(82.5°)	-3.25/-3.12	-2.83/-1.88	-1.52/0.21	0.77/-1.39	-5.10/-4.45	-5.48/-9.47	-5.98/-3.38	-0.67/0.51	-0.53/-0.97	-1.77/-4.51	-0.52/0.84	0.71/1.04	1.39/0.24	2.97/0.48	-0.89/1.00	-0.89/1.92	-2.29/-6.08	-4.19/-4.20	-6.50/-2.98	-2.79/-0.79	0.02/0.74	0.58/0.40	-1.10/-1.55	-2.48/-2.42
Θ(90°)	-4.08/-2.40	-1.78/-0.78	-0.42/0.64	0.84/-1.42	-2.48/-2.21	-4.91/-7.58	-2.37/-1.08	0.19/2.18	1.86/0.83	0.42/-3.30	-3.75/-1.34	-1.87/-1.29	-0.16/3.61	2.62/-0.64	-1.66/-0.16	1.03/0.81	-3.83/-1.55	-6.27/-5.06	-6.57/-1.35	-0.65/-1.41	0.58/-0.50	-0.71/-1.82	-1.42/-2.86	-4.60/-3.56
Θ(97.5°)	-5.47/-4.25	-3.53/-2.73	-2.60/-1.87	-1.84/-2.75	-2.81/-1.56	-3.05/-2.72	-0.76/-1.01	-1.07/0.14	0.82/-0.64	-2.93/-7.17	-3.73/-4.13	-10.23/-3.41	0.17/2.51	-0.75/-3.65	-2.97/-1.41	-2.90/-2.43	-7.32/-11.22	-8.82/-7.19	-8.49/-1.15	-0.33/-0.18	-0.21/-3.29	-2.51/-1.75	-0.76/-2.23	-5.09/-4.26
Θ(105°)	-6.09/-5.72	-5.48/-5.50	-4.60/-2.27	-1.48/-2.45	-2.73/-0.88	-2.37/-2.35	-0.33/-0.51	-0.70/0.15	-0.71/-1.45	-2.70/-6.16	-2.84/-1.98	-5.94/-6.96	-1.43/2.30	0.61/-1.58	-1.59/3.15	-6.56/-5.10	-4.69/-6.77	-9.04/-4.41	-10.86/-4.53	-1.57/-0.91	-0.12/-0.36	-0.41/-2.43	-2.71/-4.32	-8.60/-5.20
Θ(112.5°)	-7.78/-6.48	-3.92/-3.49	-1.35/-0.24	0.02/-0.26	-0.82/-0.10	-1.09/-2.53	0.97/1.75	1.93/2.29	1.35/-0.85	0.15/-2.72	-3.28/-2.13	-5.37/-1.38	-4.48/-1.91	-3.99/-3.04	-5.75/-6.90	-4.97/-3.15	-10.06/-8.88	-6.56/-6.20	-11.08/-15.28	-4.99/-1.90	-2.51/-10.38	-5.06/-4.32	-6.62/-9.86	-13.62/-9.29
Θ(120°)	-4.64/-3.85	-2.00/-0.65	-0.32/0.42	0.45/0.39	0.17/-0.16	-2.29/-2.80	-0.00/-1.72	1.96/2.51	1.09/-0.74	-1.93/-1.29	-1.98/-0.47	0.11/-0.53	-1.70/-4.80	-2.56/-2.60	-4.89/-0.10	-4.48/-9.05	-15.43/-10.96	-7.08/-4.83	-9.33/-12.68	-5.63/-4.03	-2.61/-1.77	-13.13/-11.45	-15.43/-12.93	-9.12/-7.70
Θ(127.5°)	-2.96/-2.20	-0.16/0.76	1.31/1.63	0.62/-0.09	-0.27/-0.66	-2.27/-2.25	0.67/1.42	1.83/1.94	1.40/-0.19	-0.33/-0.76	-0.36/0.54	0.10/-1.03	-2.50/-0.28	-0.49/-6.99	-6.58/-10.97	-6.29/-7.74	-3.76/-6.04	-6.53/-8.78	-11.43/-8.03	-4.34/-3.82	-5.18/-11.29	-15.00/-9.96	-7.73/-4.09	-4.57/-4.72
Θ(135°)	0.22/-0.04	0.06/0.62	0.55/-0.54	-0.68/0.27	0.28/-0.50	-1.67/-1.12	-0.20/0.15	0.73/0.92	0.66/0.85	1.80/1.18	-2.34/-6.31	-2.63/0.90	2.02/-0.48	-8.21/-15.07	-10.37/-12.65	-5.87/-2.06	-4.72/-6.03	-12.95/-7.54	-5.82/-6.59	-7.74/-5.78	-7.56/-14.27	-10.91/-11.50	-7.08/-2.96	-0.78/-1.24
Θ(142.5°)	-5.71/-5.85	-4.84/-4.38	-4.36/-2.87	-1.90/-0.92	-0.34/-1.68	-1.97/-1.04	0.09/0.23	-0.40/-0.42	0.09/1.11	0.01/0.25	0.05/-1.42	-2.86/-4.12	-3.46/-1.24	-1.59/-2.06	-4.17/-9.53	-7.29/-7.73	-12.07/-5.74	-12.73/-13.36	-4.23/-5.64	-7.25/-4.49	-5.18/-7.63	-13.67/-8.83	-8.05/-5.41	-6.55/-6.27
Θ(150°)	-7.19/-5.66	-4.29/-2.40	-1.64/-1.51	-1.72/-2.71	-3.87/-4.34	-3.22/-0.95	0.38/0.36	0.64/-1.49	1.21/0.19	-0.41/-0.55	-0.73/-2.80	-5.48/-6.80	-4.73/-1.58	-1.54/-4.38	-13.02/-7.57	-10.04/-15.14	-14.68/-12.90	-8.99/-10.60	-10.80/-10.90	-9.53/-10.20	-13.98/-13.09	-11.06/-11.84	-13.16/-10.96	-9.51/-9.27
Θ(157.5°)	-4.94/-4.87	-4.34/-3.12	-1.50/-0.45	-0.08/0.00	0.20/0.53	1.16/1.73	1.61/1.06	0.52/-0.40	-1.90/-2.58	-2.35/-2.26	-2.44/-4.26	-7.85/-7.70	-5.15/-4.48	-6.34/-12.24	-13.42/-11.70	-11.25/-8.10	-7.31/-6.75	-5.50/-5.91	-7.99/-10.39	-9.60/-6.22	-5.11/-5.19	-5.62/-5.39	-4.95/-5.34	-3.35/-5.68
Θ(165°)	-3.75/-4.06	-5.35/-7.32	-8.98/-8.76	-7.66/-6.63	-5.46/-4.32	-4.20/-4.99	-6.10/-6.59	-6.32/-5.33	-3.58/-2.21	-1.72/-2.02	-2.60/-3.97	-6.37/-9.27	-12.00/-12.09	-9.53/-8.36	-8.65/-9.77	-12.10/-9.35	-7.41/-7.74	-9.51/-11.35	-13.					

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

