



Antenna Composite Gain Test Report

Equipment	Tri-Band AP
Brand Name	Q Fiber
Model Name	W1701K
Applicant	Gemtek Technology Co., Ltd. No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.
Manufacturer	Gemtek Technology Co., Ltd. No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.
Sample Received	Jun. 28, 2023
Start Test Date	Jul. 06, 2023
Final Test Date	Jul. 18, 2023


Approved by: Jackson Tsai

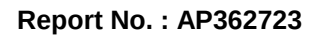
SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G5G Ant1	1	Gemtek	WREM-129AX_Dual_Ant1	PIFA	UFL	2.4G+5G
2G5G Ant2	2	Gemtek	WREM-129AX_Dual_Ant2	PIFA	UFL	2.4G+5G
2G5G Ant3	3	Gemtek	WREM-129AX_Dual_Ant3	PIFA	UFL	2.4G+5G
2G5G Ant4	4	Gemtek	WREM-129AX_Dual_Ant4	PIFA	UFL	2.4G+5G
6E Ant1	1	Gemtek	WREM-129AX_6E_Ant1	PIFA	UFL	6G
6E Ant2	2	Gemtek	WREM-129AX_6E_Ant2	PIFA	UFL	6G
6E Ant3	3	Gemtek	WREM-129AX_6E_Ant3	PIFA	UFL	6G
6E Ant4	4	Gemtek	WREM-129AX_6E_Ant4	PIFA	UFL	6G

Note:

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

2G5G Ant1, 2G5G Ant2, 2G5G Ant3 and 2G5G Ant4 could transmit/receive simultaneously.

6GHz Operation Mode (4TX/4RX)

6E Ant1, 6E Ant2, 6E Ant3, and 6E Ant4 could transmit/receive simultaneously.

2. Test Frequency

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

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



3. Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Wen 33rd.St.	ADD:	No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
	TEL: 886-3-318-0787	FAX: 886-3-318-0287		
Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rex Liao	23.5~24.5°C/40~50%	Jul. 06, 2023~Jul. 18, 2023

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

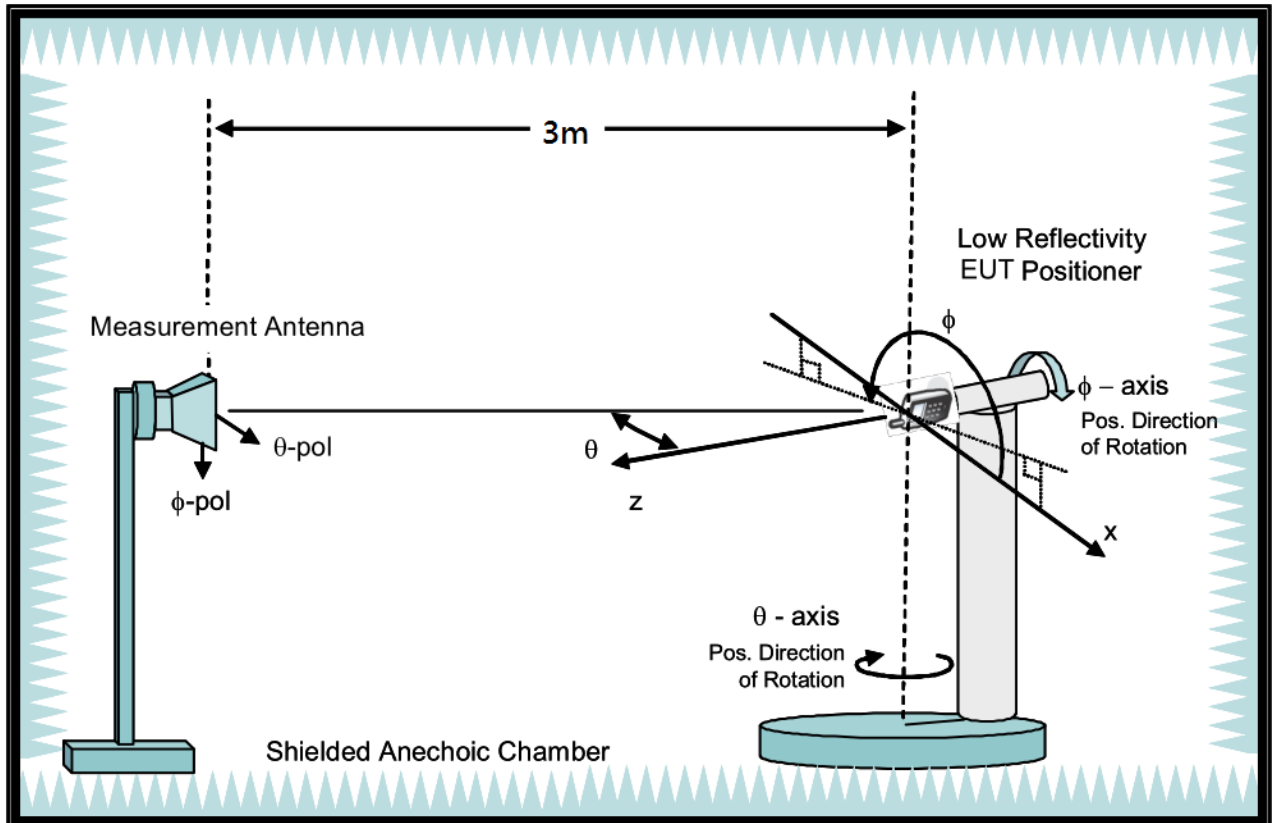
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

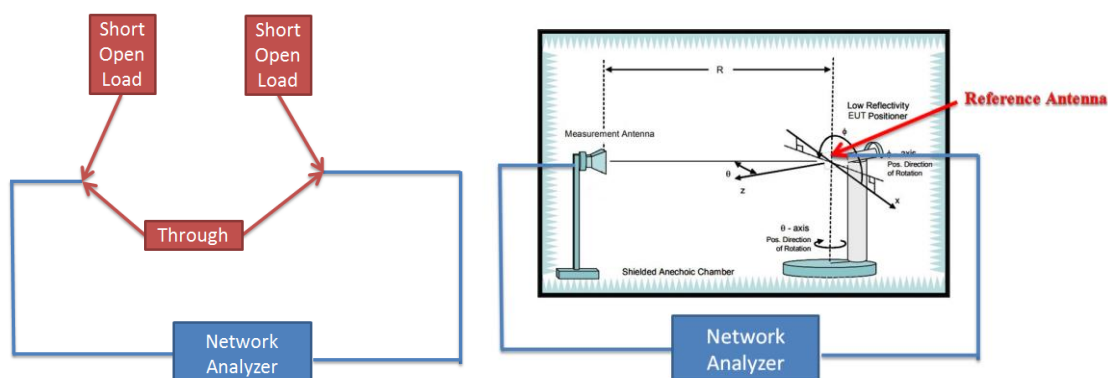
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



5. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.75	-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.

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



6. Test Method

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

DG steps:

1. Each Phi and Theta polarization antenna gain are measured for all test angles.
2. Composite Phi and Theta antenna gain are computed, using formula in KDB662911 D01 d) (i) and e) (ii), for all angles.
3. Composite antenna gain are examined for all angles to determine max gain and Phi/Theta position. Max gain and phi/theta position are listed in section 7 tables.

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

7. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-2.18	-1.79	-3.44	-1.65	-5.27
Ant. 2 (dBi)	-5.15	-1.06	-1.85	-4.88	-5.67
Ant. 3 (dBi)	-2.15	-1.75	-2.65	-4.06	2.14
Ant. 4 (dBi)	-2.13	1.11	0.91	0.64	-4.32
DG [1SS] (dBi)	3.21	5.23	4.42	3.81	3.39
Polarization	Phi	Phi	Phi	Phi	Theta
$\Theta(^{\circ})$	97.5	15	22.5	0	82.5
$\Phi(^{\circ})$	315	112.5	112.5	300	172.5

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

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(-2.18/20)}$	$10^{(-1.79/20)}$	$10^{(-3.44/20)}$	$10^{(-1.65/20)}$	$10^{(-5.27/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(-5.15/20)}$	$10^{(-1.06/20)}$	$10^{(-1.85/20)}$	$10^{(-4.88/20)}$	$10^{(-5.67/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(-2.15/20)}$	$10^{(-1.75/20)}$	$10^{(-2.65/20)}$	$10^{(-4.06/20)}$	$10^{(2.14/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(-2.13/20)}$	$10^{(1.11/20)}$	$10^{(0.91/20)}$	$10^{(0.64/20)}$	$10^{(-4.32/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.778	0.814	0.673	0.827	0.545
Ant. 2 [$10^{(G/20)}$] value	0.553	0.885	0.808	0.57	0.521
Ant. 3 [$10^{(G/20)}$] value	0.781	0.818	0.737	0.627	1.279
Ant. 4 [$10^{(G/20)}$] value	0.783	1.136	1.11	1.076	0.608
Sum All Antenna [Amax]	2.894	3.653	3.329	3.1	2.953
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	3.21	5.23	4.42	3.81	3.39

Note:

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

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

DG_1SS max value position

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	-3.89	-1.3	-1.27	-6.08
Ant. 2 (dBi)	1.7	-4.2	0.65	0.51
Ant. 3 (dBi)	-0.61	-2.47	-0.2	1.25
Ant. 4 (dBi)	-6.85	-0.89	-2.29	-2.45
DG [1SS] (dBi)	4.2	3.9	5.31	4.78
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	90	82.5	75	37.5
$\Phi(^{\circ})$	142.5	300	157.5	0

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

DG_1SS max value position calculation

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(-3.89/20)}$	$10^{(-1.3/20)}$	$10^{(-1.27/20)}$	$10^{(-6.08/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(1.7/20)}$	$10^{(-4.2/20)}$	$10^{(0.65/20)}$	$10^{(0.51/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(-0.61/20)}$	$10^{(-2.47/20)}$	$10^{(-0.2/20)}$	$10^{(1.25/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(-6.85/20)}$	$10^{(-0.89/20)}$	$10^{(-2.29/20)}$	$10^{(-2.45/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.639	0.861	0.864	0.497
Ant. 2 [$10^{(G/20)}$] value	1.216	0.617	1.078	1.06
Ant. 3 [$10^{(G/20)}$] value	0.932	0.752	0.977	1.155
Ant. 4 [$10^{(G/20)}$] value	0.454	0.903	0.768	0.754
Sum All Antenna [Amax]	3.242	3.133	3.687	3.466
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.2	3.9	5.31	4.78

Note:

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

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

8. Summary of Test Result

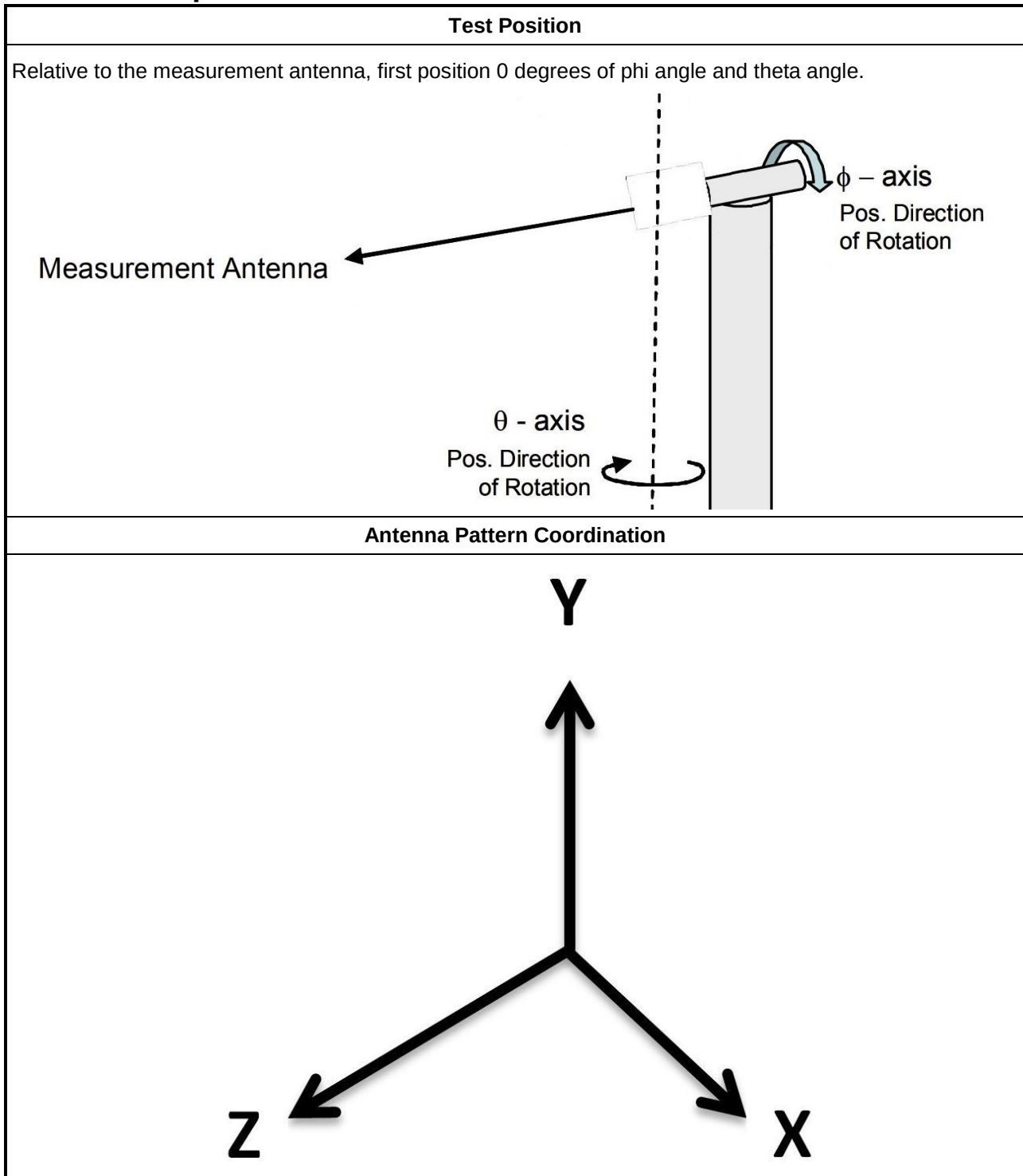
Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	1.01	1.21	1.19	1.05	1.43
Ant. 2 Max Gain (dBi)	1.06	1.17	1.33	1.16	2.06
Ant. 3 Max Gain (dBi)	1.09	1.39	1.23	1.31	2.81
Ant. 4 Max Gain (dBi)	1.03	2.58	2.22	1.79	1.37
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/135/127.5	Phi/22.5/165	Phi/22.5/165	Phi/15/345	Theta/7.5/247.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/45/172.5	Theta/135/270	Theta/60/75	Theta/0/330	Theta/60/90
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/82.5/225	Phi/7.5/150	Phi/37.5/165	Theta/67.5/135	Theta/127.5/330
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/337.5	Phi/15/270	Phi/30/262.5	Theta/45/277.5	Theta/82.5/277.5
Max Gain (dBi)	1.09	2.58	2.22	1.79	2.81
DG [1SS] (dBi)	3.21	5.23	4.42	3.81	3.39
DG [2SS] (dBi)	1.09	2.58	2.22	1.79	2.81
DG [4SS] (dBi)	1.09	2.58	2.22	1.79	2.81

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	1.39	1.29	2.84	1.02
Ant. 2 Max Gain (dBi)	4.01	1.25	2.29	2.91
Ant. 3 Max Gain (dBi)	1.03	1.22	1.35	3.03
Ant. 4 Max Gain (dBi)	1.08	1.09	1.68	1.06
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/82.5/277.5	Theta/75/97.5	Theta/67.5/90	Theta/105/195
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/127.5/337.5	Theta/135/0	Theta/127.5/330	Theta/67.5/105
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/307.5	Phi/112.5/285	Phi/120/315	Theta/82.5/285
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/330	Theta/45/120	Theta/45/135	Theta/45/127.5
Max Gain (dBi)	4.01	1.29	2.84	3.03
DG [1SS] (dBi)	4.2	3.9	5.31	4.78
DG [2SS] (dBi)	4.01	1.29	2.84	3.03
DG [4SS] (dBi)	4.01	1.29	2.84	3.03

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).

9. Test Setup



Note:

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

**10. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1543	1GHz~18GHz	May 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. 20, 2022	Jul. 19, 2023
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

Note: Calibration Interval of instruments listed above is one year. NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz&5GHz&6GHz	Page 15
Appendix B – Antenna Pattern of 2.4GHz&5GHz&6GHz	Page 40
Appendix C – Test Photos	Page 53

————THE END————



Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	1.01	1.21	1.19	1.05	1.43
Ant. 2 Max Gain (dBi)	1.06	1.17	1.33	1.16	2.06
Ant. 3 Max Gain (dBi)	1.09	1.39	1.23	1.31	2.81
Ant. 4 Max Gain (dBi)	1.03	2.58	2.22	1.79	1.37
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/135/127.5	Phi/22.5/165	Phi/22.5/165	Phi/15/345	Theta/7.5/247.5
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/45/172.5	Theta/135/270	Theta/60/75	Theta/0/330	Theta/60/90
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/82.5/225	Phi/7.5/150	Phi/37.5/165	Theta/67.5/135	Theta/127.5/330
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/60/337.5	Phi/15/270	Phi/30/262.5	Theta/45/277.5	Theta/82.5/277.5
Max Gain (dBi)	1.09	2.58	2.22	1.79	2.81
DG [1SS] (dBi)	3.21	5.23	4.42	3.81	3.39
DG [2SS] (dBi)	1.09	2.58	2.22	1.79	2.81
DG [4SS] (dBi)	1.09	2.58	2.22	1.79	2.81



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

DG 1SS Result

Freq(Hz)	2.45GPol.	PhiL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-1.46/-1.28	-1.23/-1.28	-1.39/-1.35	-1.41/-1.37	-1.43/-1.66	-2.06/-2.5	-2.94/-3.26	-3.62/-3.74	-3.73/-3.5	-3.13/-2.57	-1.93/-1.51	-1.25/-0.97	-0.89/-0.94	-1.06/-1.28	-1.62/-1.79	-1.96/-2.28	-2.41/-2.62	-2.91/-3.22	-3.55/-3.76	-3.75/-3.64	-3.35/-3.3	-3.22/-3.02	-2.81/-2.44	-2.06/-1.67
Θ(7.5°)	-1.05/-1.04	-1.08/-1.21	-1.42/-1.14	-1.56/-1.8	-1.97/-2.38	-2.94/-3.52	-3.93/-4.28	-4.57/-4.38	-4.26/-3.68	-2.92/-2.39	-1.81/-1.42	-1.03/-1.07	-1.21/-1.39	-1.65/-1.83	-2.02/-2.28	-2.37/-2.65	-2.56/-2.68	-2.89/-3.18	-3.29/-3.48	-3.33/-3.03	-2.83/-2.74	-2.22/-1.72	-1.34/-1.14	
Θ(15°)	-0.59/-0.67	-0.83/-1.03	-1.37/-1.78	-2.09/-2.7	-2.96/-3.37	-3.8/-4.3	-4.83/-5.06	-5.25/-4.86	-3.88/-3.06	-2.38/-1.89	-1.6/-1.46	-1.23/-1.11	-1.06/-1.17	-1.36/-1.6	-1.84/-2.11	-2.35/-2.53	-2.57/-2.49	-2.4/-2.35	-2.49/-2.72	-2.88/-3.28	-3.21/-2.82	-2.56/-2	-1.44/-0.96	-0.65/-0.56
Θ(22.5°)	-0.21/-0.3	-0.47/-0.77	-1.29/-2.06	-2.88/-3.53	-4.05/-4.03	-4.14/-4.61	-5.39/-5.71	-5.35/-4.13	-3.05/-2.31	-1.85/-1.66	-1.62/-1.55	-1.32/-1.04	-0.96/-1.02	-1.26/-1.6	-2.02/-2.47	-2.8/-2.91	-2.25/-2.16	-2.28/-2.38	-2.68/-3.12	-3.48/-3.12	-2.4/-1.68	-1.06/-0.58	-0.3/-0.2	
Θ(30°)	-0.38/-0.29	-0.36/-0.65	-1.3/-2.24	-3.38/-4.12	-4.39/-3.95	-4.02/-4.63	-5.41/-5.64	-4.76/-3.6	-2.64/-2.06	-1.83/-1.91	-2.06/-1.97	-1.57/-1.12	-0.79/-0.64	-0.71/-1.06	-1.72/-2.59	-3.47/-3.94	-2.89/-2.64	-2.32/-2.45	-2.6/-2.96	-3.24/-3.07	-2.53/-1.85	-1.28/-0.89	-0.64/-0.49	
Θ(37.5°)	-1.13/-0.67	-0.47/-0.66	-1.31/-2.29	-3.36/-4.13	-4.24/-3.96	-3.93/-4.47	-4.96/-4.89	-3.89/-2.88	-2.07/-1.57	-1.38/-1.37	-1.41/-1.35	-1.21/-0.97	-0.64/-0.36	-0.32/-0.6	-1.28/-2.33	-3.6/-4.5	-4.9/-4.63	-4.25/-3.47	-3.09/-2.89	-2.68/-2.61	-2.58/-2.66	-2.62/-2.33	-2.02/-1.85	-1.75/-1.53
Θ(45°)	-1.93/-1.25	-0.81/-0.86	-1.35/-1.15	-2.97/-3.92	-3.98/-4.12	-4.08/-4.55	-5.06/-4.5	-3.38/-2.48	-1.66/-0.96	-0.52/-0.41	-0.56/-0.92	-1.34/-1.52	-1.3/-0.88	-0.53/-0.48	-0.82/-1	-1.58/-2.11	-3.07/-3.64	-3.8/-3.99	-3.88/-4	-4.1/-3.38	-2.84/-2.69	-1.56/-1.25	-2.26/-2.55	-2.77/-2.54
Θ(52.5°)	-1.59/-1.03	-0.67/-0.75	-1.32/-2.12	-2.94/-3.8	-4.23/-4.2	-4.21/-5.02	-5.59/-4.83	-3.62/-2.37	-1.21/-0.29	0.11/-0.07	-0.07/-0.71	-1.76/-2.76	-3.09/-1.92	-0.78/-0.4	0.49/0.78	0.55/-0.32	-1.75/-2.7	2.9/-3	-3.29/-3.88	-4.1/-3.3	-2.47/-1.99	-1.54/-1.46	-1.63/-2.02	-2.23/-1.93
Θ(60°)	-1.79/-1.29	-0.67/-0.46	-0.93/-1.95	-2.36/-3.62	-4.17/-3.16	-2.92/-3.83	-4.89/-5.14	-4.26/-2.42	-1.1/-0.26	-0.09/0.26	-0.69/-1.67	-1.92/-1.18	-0.74/-0.84	1.34/1.28	0.59/-0.63	-2.3/-3.61	-3.45/-2.7	-2.39/-2.64	-2.63/-1.74	-0.92/-0.23	0.13/-0.15	-0.99/-1.82	-2.32/-1.94	
Θ(67.5°)	-2.02/-1.57	-0.7/-0.19	-0.51/-1.49	-3.02/-4.63	-4.91/-2.9	-2.31/-3.47	-5.53/-6.57	-4.61/-1.79	-0.34/0.13	0.09/0.39	0.74/0.56	0.09/-0.24	-0.31/0.12	0.84/1.51	1.82/1.46	0.79/-0.17	-1.66/-3.18	-3.18/-2.27	-1.86/-2.34	-2.52/-1.43	-0.03/-2.22	1.71/1.33	0.24/-1.26	-2.58/-2.74
Θ(75°)	-1.71/-1.09	-0.19/0.31	0.14/-0.73	-2.12/-3.97	-5.07/-3.82	-2.86/-4.04	-6.39/-6.46	-3.04/-0.34	0.74/0.78	0.37/0.46	1.12/1.14	0.53/-0.32	-1.03/-0.98	0.16/1.44	2.19/2.09	1.84/1.36	-0.08/-1.95	-2.64/-1.6	-0.44/-0.64	-1.4/-0.94	0.02/1.27	1.97/1.79	0.68/-1.06	-2.87/-2.96
Θ(82.5°)	-2.83/-1.66	-0.66/0.04	0.04/-0.81	-2.18/-3.78	-5.3/-4.53	-3.45/-3.67	-4.34/-3.42	-2.26/-0.29	0.37/0.2	0.03/1	2.19/2.38	1.64/0.2	-1.36/-1.86	-0.28/-1.42	2.31/2.39	3.02/2.74	1.69/-0.09	-1.79/-2.02	-0.85/-0.66	-1.75/-1.3	0.12/0.65	2.49/2.45	1.46/-0.54	-3.35/-4.34
Θ(90°)	-3.43/-1.73	-0.11/0.63	0.38/-0.96	-3.27/-4.87	-6.14/-5.78	-4.56/-4.79	-5.22/-4.52	-1.98/-0.22	0.51/0.43	0.06/1.17	2.38/2.58	1.78/0.22	-1.41/-1.94	-0.61/-0.5	2.15/2.66	2.97/2.77	1.58/-0.28	-1.49/-1.84	-1.37/-1.21	-1.9/-1.43	0.37/2.13	2.96/2.86	1.94/0.31	-2.24/-3.47
Θ(97.5°)	-3.38/-1.77	-0.05/0.84	0.67/-0.99	-3.13/-5.83	-5.67/-4.54	-3.97/-4.54	-5.02/-4.02	-1.41/0.45	1.16/0.93	0.71/2	2.82/2.76	1.90/66	-0.28/-0.77	-0.21/1.01	2.07/2.41	2.05/1.71	0.58/-1.28	-2.58/-1.92	-1.01/-1.29	-2.11/-1.41	0.62/2.44	3.21/2.88	1.63/-0.15	-2.34/-3.88
Θ(105°)	-3.01/-2.12	-0.72/0.5	0.71/-0.29	-2.26/-4.69	-5.53/-3.46	-2.35/-2.7	-3.82/-3.88	-1.50/-3.7	10/66	0.68/1.76	2.48/2.47	1.83/0.96	-0.01/-0.97	-0.74/0.72	1.92/0.7	1.63/1.33	0.24/-1.69	-3/-1.37	0.21/0.15	-1.03/-0.76	0.16/1.82	2.95/2.98	1.91/0.05	-2.23/-3.52
Θ(112.5°)	-3.42/-2.31	-1.06/0.23	0.49/-0.76	-3.03/-4.97	-5.13/-3.03	-1.96/-2.25	-3.37/-4.37	-2.74/-0.75	-0.19/-0.43	-0.10/0.93	1.82/2	1.46/0.44	-0.9/-2.06	-1.26/0.56	1.62/1.67	1.91/1.8	0.59/-1.37	-2.82/-2.29	-0.57/-0.38	-1.73/-1.78	-0.57/0.88	2.05/2.39	1.58/-0.38	-3.33/-4.73
Θ(120°)	-4.47/-3.36	-1.99/-0.48	0.28/-0.52	-2.62/-4.31	-5.17/-4.53	-3.88/-4.16	-4.97/-5.2	-3.54/-1.98	-1.26/-1.04	-0.61/0.37	1.33/1.51	0.9/-0.27	-1.69/-2.41	-1.34/0.44	1.52/2.5	2.87/2.61	1.32/-0.72	-2.95/-2.75	-1.45/-1.31	-2.51/-3.56	-1.81/0.48	2.01/2.55	2.04/0.37	-2.57/-4.93
Θ(127.5°)	-3.65/-2.67	-1.84/-0.78	-0.08/-0.59	-2.36/-3.76	-4.02/-3.48	-3.25/-3.7	-4.75/-4.73	-3.46/-1.86	-1.26/-1.28	-0.94/0.15	0.86/0.79	0.19/-0.64	-1.33/-1.67	-1.48/-0.65	0.27/1.08	1.21/0.13	-2.12/-3.84	-3.44/-0.98	0.79/1.3	-1.3/-0.59	0.7/1.4	1.2/-0.14		
Θ(135°)	-3.21/-2.51	-2.05/-1.52	-0.64/-0.42	-0.89/-1.26	-1.41/-1.68	-2.37/-3.42	-4.29/-4.57	-3.66/-2.25	-1.16/0.1	-0.17/0.4	0.80/0.84	0.62/0.19	-0.34/-0.98	-1.61/-1.69	-0.97/-0.26	-0.54/-2.09	-3.45/-3.73	-3.01/-1.52	-0.14/0.28	-0.39/-1.96	-2.84/-2.26	-1.32/-0.81	-0.93/-1.88	-3.43/-3.83
Θ(142.5°)	-0.72/-0.31	-0.06/-0.08	-0.37/-0.55	-0.66/-0.75	-0.95/-1.52	-2.42/-3.42	-3.89/-3.48	-2.46/-2.66	-2.26/-2.18	-1.83/-1.53	-1.41/-1.14	-1.07/-1.27	-1.69/-2.13	-2.28/-1.86	-1.2/-1.08	-1.74/-2.93	-3.35/-3.32	-3.35/-2.99	-2.61/-2.66	-3.46/-4.4	-4.12/-3.08	-2.19/-1.79	-1.71/-1.69	-1.54/-1.19
Θ(150°)	-0.22/0.05	0.15/0.06	-0.29/0.8	-1.18/-1.27	-1.31/-1.49	-1.63/-1.16	-1.48/-1.39	-1.46/-1.84	-2.33/-2.94	-3.18/-2.83	-2.18/-1.72	-1.64/-1.81	-2.08/-2.23	-2.26/-2.26	-2.45/-3	-3.91/-4.62	-4.71/-4.55	-4.33/-4.18	-4/-4.02	-4.56/-4.4	-3.38/-2.12	-1.45/-1.23	-1.11/-0.88	
Θ(157.5°)	-1.48/-1.7	-1.86/-2.06	-2.49/-3.06	-3.49/-3.67	-3.64/-3.03	-2.34/-1.83	-1.62/-1.67	-1.94/-2.41	-2.89/-3.53	-3.65/-3.39	-2.53/-1.99	-1.79/-1.81	-1.93/-2.1	-2.32/-2.63	-3.12/-3.89	-4.98/-6.22	-6.9/-7.36	-7.42/-6.28	-5.32/-4.73	-4.93/-4.92	-4.77/-3.85	-3.07/-2.58	-2.28/-2.07	-1.79/-1.63
Θ(165°)	-4.43/-4.47	-4.82/-5.24	-5.84/-6.48	-6.65/-6.3	-5.46/-5.7	-4.03/-3.93	-4.25/-4.96	-5.48/-6.15	-6.66/-5.73	-4.83/-3.68	-2.88/-2.42	-2.29/-2.41	-2.77/-3.3	-3.86/-4.3	-5.04/-5.89	-7.23/-9.2	-11.49/-11.72	-11.13/-8.7	-6.94/-6.18	-6.05/-6.53	-7.19/-1.08	-6.87/-6.01	-5.47/-5.21	-5.04/-6.43
Θ(172.5°)	-7.63/-7.1	-7.29/-7.26	-7.29/-7.67	-6.49/-6.08	-5.64/-5.27	-5.36/-5.96	-7.08/-7.7	-7.65/-7.5	-6.33/-4.81	-3.73/-3.04	-2.69/-2.67	-2.97/-3.59	-4.33/-4.96	-5.68/-6.49	-7.94/-8.71	-9.61/-10.41	-10.89/-9.68	-8.57/-7.2	-6.4/-6.07	-6.16/-5.9	-7.23/-4.37	-9.8/-9.5	-9.36/-9.27	-8.93/-8.36
Θ(180°)	-6.76/-6.36	-6.07/-6.08	-6.29/-6.57	-6.22/-5.9	-5.61/-5.8	-5.84/-6.12	-6.54/-6.18	-5.56/-4.82	-4.15/-3.82	-3.53/-3.42	-3.51/-3.78	-4.23/-4.77	-5.34/-5.95	-6.71/-7.58	-8.16/-8.7	-8.66/-8.49	-7.63/-6.74	-6/-5.59	-5.54/-5.92	-6.58/-7.32	-7.91/-7.87	-7.69/-7.83	-8.04/-7.83	-7.57/-7.24
Freq(Hz)	2.45GPol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-3.98/-4.49	-5.21/-5.91	-5.89/-5.42	-4.96/-4.26	-3.81/-3.55	-3.31/-2.99	-2.72/-2.52	-2.43/-2.54	-2.6/-2.58	-2.76/-2.75	-2.69/-2.74	-2.87/-3.09	-3.39/-3.83	-4.33/-4.51	-4.67/-4.43	-4.25/-3.84	-3.66/-3.21	-2.99/-2.84	-2.61/-2.51	-2.56/-2.76	-3.08/-3.3	-3.7/-3.76	-3.7/-3.6	-3.55/-3.68
Θ(7.5°)	-2.76/-3.21	-3.7/-3.99	-4.02/-3.72	-3.6/-3.17	-2.83/-2.78	-2.65/-2.61	-2.52/-2.44	-2.47/-2.68	-3.03/-3.44	-3.68/-4.03	-4.11/-4.14	-4.17/-4.29	-4.57/-5.07	-5.67/-5.94	-5.85/-5.69	-5.17/-4.9	-4.31/-4.1	-3.7/-3.25	-2.89/-2.63	-2.53/-2.31	-2.2/-2.34	-2.3/-2.22	-2.16/-2.12	-2.2/-2.39
Θ(15°)	-1.37/-1.75	-2.17/-2.53	-2.27/-2.32	-1.59/-2.02	-1.88/-1.76	-1.82/-1.67	-2.03/-2.21	-2.29/-2.73	-3/-3.23	-3.38/-3.56	-3.93/-4.11	-4.41/-4.82	-5.13/-5.17	-5.4/-5.77	-4.54/-4.4	-4.31/-4.13	-3.8/-3.37	-3.81/-3.37	-1.89/-1.52	-1.12/-0.86	-0.71/-0.66	-0.68/-0.73	-0.85/-1.06	
Θ(22.5°)	-0.56/-0.91	-1.32/-1.66	-1.65/-1.54	-1.43/-1.23	-1.26/-1.1	-1.02/-1.05	-1.21/-1.49	-1.73/-2.18	-2.46/-2.48	-2.42/-2.39	-2.35/-2.31	-2.28/-2.34	-2.43/-2.5	-2.46/-2.36	-2.28/-2.36	-2.65/-3.06	-3.48/-3.71	-3.64/-3.23	-2.59/-1.85	-1.13/-0.49	-0.06/0.19	0.29/0.28	0.22/0.09	-0.09/-0.29
Θ(30°)	-0.6/-0.83	-1.11/-1.38	-1.38/-1.12	-1.22/-1.17	-0.95/-0.8	-0.74/-0.72	-0.75/-0.88	-1.16/-1.45	-1.56/-1.44	-1.25/-1.04	-0.84/-0.68	-0.57/-0.5	-0.44/-0.39	-0.34/-0.36	-0.53/-0.94	-1.63/-2.55	-3.53/-4.19	-4.33/-3.82	-2.92/-1.91	-0.93/-0.16	0.32/0.5	0.46/0.31	0.09/-0.13	-0.3/-0.43
Θ(37.5°)	-1.23/-1.32	-1.46/-1.52	-1.38/-1.12	-0.86/-0.8	-0.64/-0.51	-0.38/-0.1	-0.04/-0.26	-0.09/-1.07	-1.18/-1	-0.66/-0.31	-0.01/0.28	0.68/0.91	0.92/0.61	0.15/-0.12	-0.45/-0.96	-1.78/-2.86	-3.59/-5.09	-5.72/-5.08	-3.76/-2.37	-1.17/-0.29	0.21/0.32	0.22/-0.14	-0.6/-0.98	-1.17/-1.23
Θ(45°)	-1.27/-1.61	-1.7/-1.69	-1.45/-0.87	-0.49/-0.31	-0.33/-0.02	0.26/0.64	0.61/0.18	-0.54/-1.18	-1.43/-1.21	-0.82/-0.43	-0.13/0.49	0.97/1.42	1.37/0.87	0.09/-0.59	-0.96/-1.3	-1.66/-2.21	-3.15/-4.17	-4.98/-5.03	-3.64/-2.1	-0.88/-0.07	0.34/0.42	0.22/-0.22	-0.79/-	



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(22.5°)	1.45/1.3	1.08/0.99	0.87/0.67	0.39/0.16	-0.36/0.1	1.2/2.48	3.56/4.09	4.33/4.42	4.42/4.28	4.13/4.03	3.95/3.67	3.62/7.4	2.06/1.34	0.84/0.73	0.87/0.98	1.08/1.28	1.67/2.35	2.84/3.03	3.08/2.93	2.72/5.3	2.34/2.18	2.13/2.2	2.14/1.83	1.73/1.62
Θ(30°)	-0.07/-0.65	-0.56/-0.28	-0.36/-0.84	-1.29/-1.72	-1.28/-0.14	0.98/2.12	2.57/2.73	2.99/3.1	3.3/3.35	3.43/3.58	3.53/3.08	2.37/1.73	1.15/0.58	-0.13/-0.63	-0.91/-0.99	-0.84/-0.6	0.09/1.07	2.27/3.34	3.58/3.26	3.03/3.08	3.09/2.59	1.84/1.36	1.16/0.87	0.68/0.56
Θ(37.5°)	0.27/0.18	-0.32/-0.87	-1.79/-2.91	-3.01/-1.94	-0.84/-0.08	0.52/0.79	0.66/1.18	1.85/2.12	2.25/2.49	2.77/3	2.92/2.72	2.69/1.84	0.84/0.19	-0.34/-1.35	-2.11/-1.77	-1.09/-0.81	0.05/0.95	1.86/2.46	2.9/3.23	3.03/2.54	2.43/2.42	1.89/1.37	1.17/0.9	0.68/0.57
Θ(45°)	-0.69/-0.23	-0.01/-0.28	-1.09/-2.12	-2.1/-1.2	0.13/1.43	1.91/1.72	1.43/1.74	2.31/2.59	2.32/1.71	1.17/1.27	1.48/1.62	1.5/1.03	0.79/0.79	0.13/-1.31	-2.85/-3.27	-1.81/-0.69	-0.3/-0.11	0.45/1.42	2/1.88	1.53/1.26	1.11/0.92	0.41/0	-0.14/-0.28	-0.62/-0.71
Θ(52.5°)	-0.74/-0.22	-0.37/-0.42	-0.94/-2.95	-4.59/-3.9	-1.85/0.5	1.44/1.21	0.57/0.75	1.26/1.52	1.5/1.02	0.36/-0.1	0.02/0.49	0.35/0.24	-0.83/-1.23	-1.66/-3.05	-4.34/-0.42	-2.72/-2.2	-1.74/-1.04	-0.06/0.98	1.36/1.16	0.64/-0.04	-0.25/-0.31	-0.59/-0.85	-0.91/-0.75	-1.07/-1.07
Θ(60°)	-0.41/-0.5	-0.57/-0.37	-1.05/-2.76	-4.77/-4.03	-1.28/0.8	1.25/0.75	0.62/1.26	1.57/1.36	0.75/-0.15	-0.99/-1.34	-0.95/-0.3	-0.01/-0.33	-0.67/-0.05	-0.65/-2.26	-3.63/-4.59	-3.47/-2.17	-1.61/-1.31	-0.87/-0.54	0.13/0.4	0.42/-0.13	-0.95/-0.6	-0.62/-1.28	-1.26/-1.39	-1.35/-0.89
Θ(67.5°)	-2.19/-2.33	-1.68/-1.22	-2.67/-5.66	-7.91/-6	-2.51/-0.52	0.53/0.61	-0.08/0.23	0.99/1.15	0.75/-0.05	-1.03/-1.83	-1.68/-0.92	-0.93/-1.14	-1.6/-1.55	-1.91/-2.89	-4.89/-5.94	-4.46/-3.03	-1.72/-0.26	0.31/0.65	0.46/-0.35	-0.63/-1.15	-2.28/-1.6	-0.79/-1.41	-2.56/-3.49	-2.79/-2.48
Θ(75°)	-2.47/-2.86	-3.18/-2.06	-2.32/-4.48	-6.72/-5.57	-2.89/-0.81	-0.22/-0.69	-0.74/-0.41	-0.53/-0.04	0.15/-0.34	-1.63/-2.78	-3.08/-1.88	-1.82/-1.14	-0.16/-0.37	-1.45/-3.27	-4.74/-4.95	-4.5/-3.09	-1.45/-0.34	0.15/0.61	-0.09/-1.01	-0.38/-0.41	-1.16/-0.33	-0.97/-1.99	-1.92/-2.25	-2.23/-1.95
Θ(82.5°)	-3.42/-2.98	-3.98/-3.01	-3.27/-5.2	-6.96/-5.35	-2.91/-1.38	-0.85/-1.53	-1.44/-0.74	-0.38/0.5	0.18/-1.08	-2.25/-2.73	-2.77/-1.09	-1.51/-1.51	-1.27/-0.92	-2.46/-3.63	-3.67/-3.73	-3/-1.23	-1.42/-0.59	0.06/0.11	-0.58/-2.46	-0.84/-0.56	-0.42/-0.58	-1.48/-1.89	-2.15/-2.38	-3.62/-4.14
Θ(90°)	-4.16/-2.59	-3.08/-2.37	-2.2/-3.64	-5.42/-4.07	-2.5/-0.98	-0.91/-1.37	-1.35/-0.91	-1.61/-0.32	0.17/0.9	-3.13/-4.17	-2.94/-1.35	-1.71/-2.15	-0.92/-0.29	-2.19/-3.38	-2.25/-2.4	-1.85/-1.84	-2.22/-1.18	-1.38/-0.33	-0.44/-2.58	-1.57/-2.08	-1.67/-0.94	-2.35/-2.06	-1.77/-1.83	-2.93/-4.92
Θ(97.5°)	-4.77/-3.89	-3.71/-2.17	-1.5/-3.11	-4.39/-2.72	-1.56/-0.57	-0.61/-1.69	-0.99/-0.8	-0.83/0.41	0.08/-2.53	-5.58/-5.41	-3.53/-1.17	-2.01/-3.41	-1.93/-1.11	-2.31/-3.67	-3.59/-3.29	-2.13/-2.61	-5.01/-2.8	-2.08/-3.42	-1.43/-2.54	-1.51/-0.93	-2.14/-2.11	-1.16/-2.44	-3.67/-5.07	
Θ(105°)	-4.47/-3.63	-2.47/-1.91	-2.25/-4.32	-3.76/-1.18	-0.68/0.45	0.73/0.25	-1.53/-2.4	-0.09/0.11	0.04/-1.82	-3.66/-4.49	-2.03/-0.77	-2.33/-4.84	-2.39/-1.35	-2.19/-3.95	-3.3/-1.75	-1.99/-4.26	-5.85/-4.32	-1.65/-3.36	-2.35/-3.18	-2.61/-2.89	-2.41/-1.34	-2.92/-2.45	-2.67/-3.1	-2.94/-3.3
Θ(112.5°)	-2.42/-1.72	-0.73/-0.07	-1.72/-3.9	-3.03/-1.15	-1.2/-0.61	0.34/-0.17	-0.71/-1.91	-1.48/-0.42	-0.6/-3.21	-5.33/-4.66	-2.81/-1.45	-2.92/-5	-2.77/-0.15	-1.07/-2.43	-2.85/-2.32	-1.61/-2.05	-3.72/-4.81	-1.94/-2.1	-1.64/-1.71	-0.87/-1.57	-3.07/-2.28	-1.92/-2.66	-1.87/-2.95	-2.41/-3.9
Θ(120°)	-1.88/-1.07	-0.25/-1.15	0.25/-1.51	-2.15/-1.17	-0.59/0.17	0.41/0.09	-1.93/-2.45	-3.66/-1.29	-1.71/-3.92	-6.31/-5.19	-3.65/-1.79	-3.44/-4.43	-1.99/-0.45	-1.95/-5.78	-5.74/-1.74	-1.38/-3.99	-3.27/-3.1	-1.47/-2.3	-2.26/-1.28	-4.28/-1.04	-3.44/-3.47	-4.26/-5.17	-2.8/-2.41	
Θ(127.5°)	-0.47/-0.92	-1.25/-0.46	-1.99/-2.71	-1.36/-1.01	-1.81/-0.36	0.81/0	-1.2/-2.12	-1.78/-0.94	-1.35/-2.41	-4.51/-6.25	-5.3/-4.98	-5.66/-7.92	-4.86/-1.9	-2.37/-4.42	-2.45/-1.51	-5.93/-4.19	-2.07/-4.19	-1.98/-1.24	-1.79/-1.98	-2.03/-0.64	-2.14/-0.96	-1.13/-3.76	-4.35/-4.16	-3.05/-2.41
Θ(135°)	-3.78/-1.97	-2.36/-2.25	-2.52/-2.9	-2.49/-1.99	-1.37/-0.26	0.16/-0.6	-1.69/-1.79	-0.88/-1.2	-2.63/-4.54	-8.31/-9.2	-7.56/-7.24	-6.97/-8.3	-5.33/-2.53	-2.91/-4.46	-2.79/-5.03	-4.97/-3.86	-2.58/-4.48	-1.91/-1.63	-1.73/-3.24	-2.67/-1.49	-0.75/-3.93	-4.37/-5.2	-6.32/-5.23	-3.62/-4.49
Θ(142.5°)	-4.48/-3.23	-3.28/-3.65	-2.82/-1.83	-1.38/-1.24	-0.4/0.64	0.94/0.01	-1.91/-2.33	-1.89/-2.06	-3.3/-5.68	-7.16/-7.91	-8.48/-8.15	-7.25/-6.47	-4.57/-3.88	-4.8/-5.28	-6.2/-6.55	-5.77/-5.52	-8.53/-7.5	-5.34/-4.86	-4.9/-6.71	-6.73/-4.93	-2.88/-2.97	-4.35/-2.47	-4.46/-6.19	-6.65/-5.96
Θ(150°)	-3.56/-3.57	-6.66/-4.66	-5.63/-4.11	-2.77/-2.15	-1.01/-1.83	-2.07/-2.17	-1.97/-1.97	-1.59/-2.39	-3.68/-5.69	-7.54/-8.35	-7.57/-7.22	-7.52/-7.29	-5.6/-5.05	-5.54/-6.53	-5.86/-5.81	-6.39/-7.94	-7.81/-4.4	-3.29/-4	-5.18/-6.08	-5.84/-4.66	-3.9/-4.37	-2.68/-6.85	-5.54/-4.19	-3.66/-2.98
Θ(157.5°)	-2.09/-2.68	-3.8/-4.97	-5.66/-6	-5.35/-3.97	-2.8/-1.85	-1.5/-1.43	-1.35/-1.2	-1.51/-2.12	-3.08/-3.99	-5.06/-6.15	-6.47/-6.54	-6.08/-4.7	-3.87/-3.71	-3.63/-3.6	-4.43/-5.91	-6.65/-5.85	-5.2/-5.45	-6.43/-7.44	-8.76/-10.34	-10.29/-9.37	-7.83/-7.57	-7.88/-7.42	-5.77/-3.82	-2.49/-2.09
Θ(165°)	-1.64/-1.95	-2.7/-3.8	-4.68/-6.65	-4.1/-3.84	-3.52/-3.05	-3.09/-2.97	-2.78/-3.01	-3.54/-4.31	-5.37/-6.25	-7.17/-8.21	-9.26/-9.75	-10.03/-9.44	-8.75/-8.03	-7.42/-6.55	-5.74/-5.39	-5.72/-6.27	-7.09/-7.3	-7.62/-8.47	-9.4/-8.64	-7.43/-6.31	-5.28/-4.73	-4.32/-3.77	-3.32/-2.79	-2.17/-1.66
Θ(172.5°)	-8.37/-8.86	-8.24/-7.33	-6.5/-5.5	-5.32/-4.71	-4.45/-4.79	-5.41/-5.94	-5.92/-5.74	-5.41/-5.24	-4.91/-4.71	-4.55/-4.55	-4.58/-4.55	-4.56/-4.84	-5.44/-6.34	-7.03/-7.43	-7.87/-8.25	-8.88/-8.85	-8.24/-7.36	-7.04/-7.84	-8.79/-8.66	-9.45/-8.8	-7.83/-6.93	-6.26/-6.12	-6.57/-7.41	-7.85/-8.01
Θ(180°)	-9.64/-8.59	-8.35/-8.13	-8.17/-7.76	-7.13/-6.88	-6.81/-6.76	-6.82/-6.66	-6.38/-6.14	-6.15/-6.07	-6.06/-6.43	-6.81/-7.36	-8.05/-8.46	-8.69/-8.61	-8.09/-7.76	-7.33/-6.84	-6.36/-5.99	-5.71/-5.53	-5.82/-6.1	-6.61/-7.24	-8.16/-9.53	-10.57/-10.33	-11.09/-11.09	-12.1/-11.59	-12.76/-12.18	-11.95/-11.53
Freq(Hz)	5.36GPol.	Theta-L	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	2.26/2.75	3.13/3.35	3.48/3.69	3.66/3.42	3.06/2.6	2.09/1.57	1.26/1.1	0.98/0.95	0.96/0.99	0.98/0.61	0.4/0.61	0.91/1.15	1.72/2.45	2.98/3.16	3.21/3.33	3.42/3.41	3.19/2.8	2.35/1.85	1.38/1.03	0.93/0.95	0.9/0.74	0.63/0.35	0.01/-0.03	0.64/1.5
Θ(7.5°)	1.09/1.77	2.37/2.79	3.07/3.29	3.42/3.28	3.15/3.03	2.86/2.62	2.16/1.77	1.39/1.01	0.67/0.44	0.32/0.17	-0.09/0.51	1.38/1.84	2.33/3.11	3.63/6.7	3.53/2.6	3.17/2.99	2.65/2.12	1.59/1.12	0.85/0.83	1.12/1.32	1.35/-1.28	1.19/1.14	0.81/0.47	0.02/0.27
Θ(15°)	0.68/1.59	2.45/2.94	3.33/4.7	3.47/3.25	3.09/3.05	2.94/2.54	1.82/1.09	0.78/0.97	0.99/0.88	0.95/0.96	0.74/0.54	0.62/0.97	1.33/1.91	2.53/2.92	2.99/2.88	2.75/2.48	2.24/1.85	1.25/0.9	0.68/0.82	1.34/1.84	2.18/2.1	1.81/3.9	0.93/0.38	-0.28/-0.12
Θ(22.5°)	1.35/2.28	3.26/3.91	4.18/4.08	3.62/3.46	2.99/2.47	1.74/0.98	0.22/-0.05	0.29/0.79	1.05/1.16	1.12/1.14	0.82/-0.12	-0.58/-0.12	0.74/1.57	2.23/2.65	2.79/2.8	2.68/2.49	2.15/1.54	0.81/0.48	0.2/0.28	0.83/1.22	1.18/0.77	0.18/-0.45	-0.67/-0.48	0.02/0.55
Θ(30°)	0.33/0.81	1.62/4.8	2.97/2.84	2.45/2.17	1.76/1.16	0.73/0.41	-0.06/-0.52	-0.65/-0.34	0.09/0.24	0.36/0.48	0.24/-0.43	-0.47/0.25	1.06/1.7	2.15/2.6	2.99/3.05	2.64/2.03	1.08/0.37	0.04/0.02	0.09/-0.31	-1.08/-1.79	-2.41/-2.74	-2.71/-2.42	-2.38/-1.99	-1.14/-0.3
Θ(37.5°)	-2.02/-0.69	0.04/0.37	0.56/0.64	0.78/1.27	1.24/0.91	0.44/-0.33	-1.17/-1.55	-1.68/-1.76	-1.82/-1.72	-1.41/-1.03	-0.46/0.06	-0.22/-0.02	0.84/1.32	1.89/2.23	2.74/3.04	2.84/2.02	0.68/0.07	-0.39/-0.7	-0.36/-0.13	-0.4/-1.7	-3.34/-2.9	-4.57/-4.27	-4.29/-4.3	-3.65/-3.12
Θ(45°)	-3.41/-2.15	-0.5/0.04	0.28/-0.26	-0.28/0.6	1.23/1.23	0.75/0.2	-0.28/-0.85	-1.49/-2.07	-2.65/-2.99	-2.65/-2.3	-1.45/-1.39	-2.02/-1.5	-0.12/-0.78	0.01/0.42	1.06/2.1	2.42/1.63	0.44/-0.46	-1.54/-1.57	-1.51/-1.19	-1.17/-1.76	-2.98/-3	-2.99/-3.12	-3.11/-3.22	-3.36/-3.41
Θ(52.5°)	-1.21/-0.6	-0.52/-0.53	-0.59/-1.13	-0.45/0.41	0.97/1.27	1.16/0.61	-0.26/-0.73	-1.09/-1.08	-2.14/-2.2	-2.47/-1.97	-1.06/-1.48	-1.14/-1.12	-0.68/0.96	1.37/1.17	0.79/0.63	0.36/-0.43	-0.61/-1.61	-2.29/-2.68	-2.18/-1.83	-2.23/-2.98	-3.01/-2.95	-2.99/-2.86	-1.67/-0.35	-0.44/-1.26
Θ(60°)	-0.33/0.49	0.53/0.25	0.14/-0.58	-0.39/-0.07	1.01/1.52	1.66/0.83	0.29/0.35	0.71/0.89	-0.54/-0.74	-0.76/-1.66	-2.29/-2.92	-1.68/-0.22	0.81/1.74	1.81/67	0.63/-0.51	-1.02/-0.97	-0.61/-1.39	-1.75/-2.04	-1.78/-1.59	-1.51/-2.05	-3.38/-3.38	-2.38/-0.79	0.41/0.8	0.03/-0.55
Θ(67.5°)	-0.19/0.37	-0.56/-0.16	-0.59/-1.07	-0.9/-0.37	0.83/0.89	0.71/1.04	0.62/0.71	1.46/1.85	0.93/-0.17	-0.49/-1.3	-0.78/-0	0.66/1.75	1.38/1.49	2.25/2.04	1.91/1.17	-0.49/-1.41	-1.14/-0.86	-0.74/-1.03	-0.57/0.21	0.37/-0.85	-2.53/-2.37	-1.42/-0.69	0.57/1.04	0.13/-0.02
Θ(75°)	0.29/0.71	0.86/0.54	0.33/0.18	-0.68/-0.23	0.15/0.15	0.95/1.06	0.2/0.43	1.49/1.76	1.17/0.03	-0.44/-0.08	0.18/0.58	0.75/2.21	1.63/1.73	1.91/1.2	1.51/-29	0.76/-0.11	-0.79/-0.73	0.03/0.11	0.89/1	1.74/1.31	-0.49/-1.41	-0.64/-0.18	-0.06/-0.35	-0.52/0.43
Θ(82.5°)	0.95/1.62	1.47/1.54	1.24/1.34	-0.43/-0.5	-0.02/-0.06	0.57/1.02	0.7/0.6	1.12/1.47	1.48/-0.11	-0.49/0.33	0.95/0.96													



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(75°)	-2.08/-2.4	-3.91/-4.71	-6.26/-5.64	-5.05/-4.52	-3.22/-2.52	-1.150/-48	1.150/-53	-0.44/-1.2	-2.74/-1.63	-0.43/-0.81	-1.67/-2.35	-1.98/-1.67	-1.04/-1.59	-3.33/-4.59	-5.06/-4.78	-4.86/-4.42	-3.54/-3.07	-1.51/-0.11	0.21/0.09	0.45/-1.29	-3.64/-3.81	-3.12/-3.97	-4.96/-3.88	-2.54/-2.19
Θ(82.5°)	-2.09/-2.83	-4.59/-4.38	-4.68/-3.75	-4.65/-4.5	-3.3/-2.1	-1.150/-05	-0.52/-1.06	-0.54/-1.68	-2.51/-0.86	0.04/-1.07	-1.94/-1.55	-2.16/-2.24	-2.03/-2.1	-3.28/-4.95	-5.93/-4.79	-4.37/-4.9	-2.89/-2.77	-1.8/-0.16	-0.96/-0.35	-1.25/-1.88	-3.06/-3.75	-2.91/-4.16	-4.89/-4.42	-3.56/-2.94
Θ(90°)	-2.86/-2.98	-3.33/-3.49	-4.36/-4.14	-4.84/-5.72	-5.09/-3.15	-2.88/-1.61	-1.25/-0.98	-0.16/-1.63	-3.89/-1.7	-0.51/-1.83	-2.49/-1.54	-1.74/-1.22	-1.28/-2.28	-3.96/-5.29	-6.05/-6.22	-4.89/-3.95	-4.3/-4.66	-3.84/-2.28	-2.79/-2.77	-1.52/-2.02	-2.91/-4.05	-2.99/-4.03	-3.71/-2.83	-2.92/-3.48
Θ(97.5°)	-2.8/-2.67	-2.68/-2.79	-3.7/-2.94	-3.05/-5.3	-3.88/-2.43	-2.79/-2.27	-2.86/-1.69	-0.9/-2.81	-4.4/-2.1	-0.8/-2.33	-3.25/-2.48	-1.99/-1.49	-1.55/-2.47	-3.32/-4.81	-5.97/-5.27	-4.37/-6.71	-5.19/-5.02	-5.24/-1.97	-3.59/-3.97	-4.45/-3.99	-3.66/-4.98	-4.37/-2.61	-2.38/-2.86	-2.55/-3.56
Θ(105°)	-1.45/-2.67	-2.98/-3.86	-3.77/-3.11	-3.45/-5.3	-2.52/-0.54	-1.14/-1.59	-1.77/-1.7	-1.72/-3.31	-6.24/-3.13	-1.66/-3.18	-4.28/-2.74	-3.17/-2.64	-2.74/-2.94	-3.55/-6.14	-7.58/-6.94	-4.19/-5.74	-9.63/-6.17	-4.46/-3.4	-4.21/-4.42	-4.03/-3.45	-5.14/-5.54	-4.58/-3.54	-2.16/-2.55	-2.71/-2.18
Θ(112.5°)	-2.12/-3.71	-3.1/-3.45	-3.7/-3.35	-4.06/-5.7	-2.28/-1.86	-2.41/-1.66	-1.19/-1.48	-1.51/-4.18	-7.19/-3.46	-3.05/-3.84	-3.3/-2.09	-2.76/-3.24	-3.22/-1.34	-3.23/-6.06	-6.32/-3.76	-2.84/-6.68	-8.43/-5.76	-4.47/-1.58	-1.27/-2.77	-2.14/-3.05	-3.69/-4.58	-2.9/-1.43	-1.96/-2.32	-2.12/-3.12
Θ(120°)	-4.4/-4.36	-2.78/-3.15	-2.42/-2.77	-4.04/-3.79	-0.76/-0.26	-1.9/-2.36	-2.79/-3.23	-1.79/-2.05	-6.03/-6.92	-3.99/-4.51	-4.29/-4.49	-4.02/-3.78	-2.58/-0.13	-3.16/-7.29	-10.81/-4.39	-1.73/-6.5	-7.2/-3.32	-2.85/-3.35	-2.39/-2.15	-1.96/-1.53	-3.9/-3.55	-3.9/-2.67	-3.2/-3.25	-3.81/-4.65
Θ(127.5°)	-4.05/-3.56	-1.86/-2.95	-2.42/-2.37	-3.58/-2.85	0.01/-0.07	-1.14/-1.03	-0.85/-1.85	-3.13/-4.02	-7.16/-8.25	-5.51/-4.86	-6.86/-5	-7.37/-7.99	-5.78/-3.89	-6.86/-7.23	-5.7/-2.4	-3.36/-8.43	-3.95/-3.32	-4.89/-2.74	-0.31/-1.2	-1.59/-0.75	-4.23/-3.85	-5.45/-5.14	-3.92/-6.81	-4.78/-6.17
Θ(135°)	-4.27/-2.58	-1.01/-0.52	-1.96/-2.71	-1.41/0.35	0.46/-0.46	-3.57/-3.03	-2.05/-1.64	-1.09/-2.36	-6.76/-8.12	-6.03/-6.07	-5.68/-5.35	-5.62/-5.79	-7.15/-6.39	-8.82/-8.22	-5.45/-2.47	-8.03/-7.11	-1.5/-0.82	-2.4/-2.25	-2.02/-3.39	-2.83/-1.48	-1.43/-4.41	-2.24/-4.22	-3.76/-5.12	-7.98/-9.19
Θ(142.5°)	-1.45/-2.36	-3/-3.93	-4.82/-3.95	-1.69/0.56	0.58/0.38	-0.78/-0.19	-0.55/-2.73	-3.71/-2.74	-3.99/-7.41	-8.8/-8.57	-7.86/-8.29	-8.47/-7.13	-5.28/-5.54	-4.51/-3.3	-3.89/-6.27	-6.11/-5.41	-3.77/-4.35	-4.15/-3.79	-4.11/-4.28	-2.63/-2.03	-2.22/-4.34	-6.03/-5.38	-6.53/-7.5	-5.33/-2.36
Θ(150°)	-1.61/-2.52	-3.21/-3.29	-3.07/-2.39	-0.73/0.65	0.66/-0.26	-1.22/-1.91	-2.61/-3.34	-4.21/-4.79	-5.58/-7.06	-7.99/-7.78	-7.43/-9.02	-9.41/-6.89	-5.27/-5.37	-5.78/-7.49	-7.39/-5.9	-7.08/-5.48	-4.81/-5.2	-4.32/-3.28	-3.68/-5.71	-5.86/-5.53	-5.84/-7.44	-8.21/-7.62	-7.43/-6.41	-4.29/-1.93
Θ(157.5°)	-2.48/-4.08	-4.38/-3.13	-1.89/-1.49	-1.28/-1.3	-1.11/-0.81	-0.56/-0.39	-0.45/-0.96	-2.17/-3.81	-5.53/-6.94	-7.78/-7.73	-8.17/-8.55	-7.3/-6.72	-5.71/-4.33	-3.57/-3.3	-4.53/-5.89	-4.47/-2.84	-2.77/-4.07	-4.79/-5.28	-6.16/-6.71	-5.77/-4.61	-4.28/-4.46	-4.43/-4.09	-3.62/-2.99	-2.34/-1.98
Θ(165°)	-2.42/-2.67	-3.18/-3.23	-3.26/-3.46	-3.05/-1.97	-1.62/-0.85	-0.51/-0.31	-0.5/-1.06	-2.08/-3.58	-5.46/-7.9	-10.42/-11.44	-10.95/-10.17	-8.53/-7.79	-7.59/-7.21	-6.86/-5.9	-4.86/-3.71	-3.22/-3.76	-4.65/-5.58	-5.73/-6.73	-7.58/-7.88	-7.24/-6.14	-5.05/-3.93	-3.18/-3.04	-2.92/-2.53	-2.44/-2.35
Θ(172.5°)	-5/-4.39	-3.61/-2.6	-2.15/-1.45	-1.18/-1.27	-1.69/-2.17	-2.88/-3.81	-4.65/-5.87	-7.2/-8	-8.8/-8.99	-9.61/-10.57	-10.18/-10.02	-10.31/-9.78	-8.13/-7.47	-6.92/-6.39	-5.83/-5.39	-4.79/-4.19	-3.86/-4.02	-4.72/-5.82	-6.22/-6.5	-6.15/-5.67	-4.88/-4.34	-4.24/-3.81	-4.15/-4.76	-5.44/-5.22
Θ(180°)	-7.11/-6.59	-6.53/-6.99	-6.38/-5.6	-5.32/-5.46	-6.01/-6.26	-6.61/-6.39	-6.62/-7.81	-8.7/-8.39	-7.97/-7.39	-7.34/-7.36	-7.72/-7.87	-8.32/-8	-7.45/-6.91	-6.03/-5.34	-4.76/-4.94	-5.15/-5.26	-5.49/-5.68	-6.09/-6.31	-6.04/-5.72	-5.63/-6.43	-6.77/-7.31	-8.31/-8.91	-9.07/-8.48	-8.22/-7.54
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°)	0.81/-1.49	1.95/-2.27	2.4/-2.38	2.3/-2.1	1.86/-1.64	1.34/-1.12	0.74/0.33	-0.14/-0.68	-1.01/-1	-0.83/-0.89	-1.23/-1.07	-0.65/0.12	0.91/0.66	1.94/-2.12	2.25/-2.27	2.17/-1.91	1.59/-1.29	1.31/-1.29	0.99/0.5	0.11/-0.02	-0.39/-0.62	-0.82/-1.01	-0.91/-1.16	-0.7/-0.14
Θ(7.5°)	1.37/-1.96	2.4/-2.8	2.83/-2.74	2.59/-2.32	1.91/-1.39	1.16/-1.2	1.16/0.91	0.36/0.31	0.2/-0.02	-0.32/-0.34	-0.34/-0.6	-0.34/0.38	0.98/-1.46	2.06/-2.51	2.69/-2.67	2.48/-2.18	1.81/-1.59	0.8/0.17	-0.33/-0.61	-0.65/-0.69	-0.84/-0.98	-1.13/-1.27	-1.22/-0.66	0.02/0.68
Θ(15°)	1.33/-2.12	2.65/-3.04	3.28/-3.21	3.01/-2.78	2.31/-1.68	1.41/-1.29	0.92/0.52	0.32/0.51	0.48/0.63	0.48/0.17	-0.06/-0.07	0.2/0.78	1.34/-1.84	2.32/-67	2.84/-2.9	2.91/-2.78	2.41/-1.84	1.08/0.05	-0.89/-1.34	-1.53/-1.91	-2.49/-2.47	-2.09/-1.71	-1.45/-0.68	-0.15/0.63
Θ(22.5°)	0.1/0.78	1.49/-2.18	2.63/-2.85	2.59/-2.31	2.06/-1.83	1.81/-15	0.06/-0.59	-1.03/-1.26	-1.57/-1.87	-1.79/-1.6	-0.92/-0.43	0.09/0.53	1.12/-141	1.51/-1.61	1.71/-92	2.28/-2.33	2.12/-17	1.14/0.47	-0.27/-0.83	-1.52/-2.38	-3.21/-3.78	-3.39/-2.71	-2.79/-2.16	-1.66/-0.76
Θ(30°)	-2.36/-1.13	0.45/-1.49	1.75/-1.2	0.79/0.66	0.81/-1.14	1.52/-1.15	0.23/-1.04	-2.39/-3.57	-4.14/-3.78	-3.15/-1.72	-0.38/0.62	1.22/-1.63	1.94/-1.79	1.51/-1.17	0.84/0.62	0.6/0.39	0.03/0.44	0.86/0.28	-0.59/-0.67	-0.3/-0.49	-1.7/-2.88	-3.54/-3.8	-3.46/-2.84	-3.02/-2.8
Θ(37.5°)	-3.77/-2.14	-0.78/0.41	1.25/-1.37	1.19/0.77	0.38/0.45	0.97/0.88	0.36/-0.35	-1.47/-2.37	-2.83/-3.41	-2.98/-1.26	-0.27/0.53	1.42/-1.53	1.23/-1.42	1.51/-1.12	0.65/0.49	0.27/-1.3	-2.81/-2.38	-1.44/-0.11	0.47/-0.08	-1.21/-1.43	-2.06/-3.03	-3.19/-2.57	-1.71/-1.65	-2.6/-3.97
Θ(45°)	-3.72/-2.64	-1.35/-0.13	0.25/0.34	1.03/-1.6	1.91/-91	1.82/-1.42	1.27/-1.45	0.7/-0.49	-1.41/-1.97	-2.8/-3.13	-1.84/0.6	2.16/-2.27	2.29/-2.56	2.15/-1.51	1.21/0.67	0.1/-1.18	-3.04/-3.83	-2.28/-1.37	-1.22/-1.16	-1.72/-1.92	-1.11/-0.08	0.07/-0.44	-1.1/-1.54	-2.91/-4.06
Θ(52.5°)	-3.81/-3.25	-2.6/-1.08	-0.36/0.2	1.31/-9	2.02/-1.85	1.61/-33	1.53/-2.13	2.01/-1.43	1.08/0.64	0.64/0.17	0.38/-1.67	2.17/-1.65	1.96/-2.11	1.75/0.41	-0.41/-0.72	-0.31/-1.25	-3.97/-6.56	-4.38/-1.13	-0.44/-1.8	-2.13/-2.07	-1.88/-1	-0.7/-0.75	-0.75/-0.92	-2.27/-3.99
Θ(60°)	-2.71/-3.2	-3.16/-1.4	-1.17/-0.75	0.81/-2.21	2.34/-2.32	2.45/-2.32	2.34/-2.52	2.72/-38	2.47/-2.26	2.06/-1.25	0.98/-1.75	2.45/-2.56	2.86/-2.15	2.21/05	-0.83/-2.73	-1.38/-0.93	-1.7/-3.77	-3.17/-1.79	-1.54/-1.97	-2.92/-2.89	-1.23/-0.06	-0.01/-0.19	0.55/0.8	-0.44/-1.31
Θ(67.5°)	-2.34/-1.92	-2.57/-0.87	-1.74/-1.2	0.67/-2.08	2.11/2.08	2.27/-2.32	2.26/-2.38	2.68/-2.44	2.41/-2.13	1.72/-1.33	1.94/-2.41	2.92/-83	2.63/-2.39	2.53/-2	0.2/-2.05	-2.21/-0.5	-1.24/-3.84	-5.1/-1.71	-0.79/-2.43	-3.18/-1.6	-1.19/-0.56	-0.16/-0.45	0.2/0.34	-0.6/-1.07
Θ(75°)	-1.59/-0.73	-2.31/-0.99	-1.45/-0.87	0.05/-1.84	2.03/-1.6	1.71/-1.84	1.83/-1.38	2.18/-1.95	2.01/-2.14	1.06/0.85	2/3.37	3.37/3.37	2.58/-2.96	2.24/-2.4	1.08/-0.49	-3.3/-1.48	0.03/-1.67	-3.76/-2.57	0.42/-0.64	-2.55/-0.19	0.42/0.21	-0.21/-0.68	0.0/0.7	0.41/0
Θ(82.5°)	-1.5/-1.3	-2.26/-0.83	-0.79/-0.58	0.44/-1.58	1.55/-1.74	1.73/-1.21	0.58/0.66	1.46/0.67	0.27/-1.08	0.27/0.9	1.3/-2	3.23.39	2.71/-2.42	1.8/0.95	1.15/0.07	-2.94/-1.7	-0.72/-2.34	-1.87/-1.47	0.59/0.73	-0.16/-1.52	2.19/0.58	0.22/-0.47	-0.28/0	-1.13/-0.78
Θ(90°)	-2.01/-2.36	-1.33/-0.27	-1.08/-0.66	0.17/-1.16	1.61/-1.41	1.35/-1.13	-0.21/-0.97	0.62/0.14	-0.94/-0.24	-0.97/0.25	0.59/-2.4	2.27/-1.83	1.51/-07	0.45/-1.12	-0.69/-1.39	-2.71/-1.76	-2.27/-3.42	-1.29/-2.15	-0.59/0.32	-0.55/-1.52	1.62/0.47	0.33/-0.62	-1.42/-0.79	-1.82/-1.3
Θ(97.5°)	-2.17/-1.51	-1.36/-0.42	-1.24/-1.11	-0.46/0.76	0.99/0.8	1.1/0.14	-0.88/-1.39	-0.74/-1.28	-3.32/-2.48	-3.75/-2.27	-1.84/-0.24	-0.22/-0.93	-1.07/-2.25	-1.85/-2.85	-2.71/-3.1	-2.96/-1.6	-5.02/-5.42	-2.42/-3.38	-2.25/-1.43	-1.32/-0.57	0.35/-1.24	-1.29/-1.99	-2.67/-3.36	-3.47/-2.4
Θ(105°)	-2.88/-2.23	-2.19/-1.29	-2.29/-2.73	-2.42/-1.26	-0.4/-0.35	0.09/0.18	-0.42/-0.86	-1.22/-2.46	-3.5/-3.32	-3.72/-4.33	-3.25/-1.69	-0.89/-2.14	-2.05/-3.7	-5.23/-5.31	-5.72/-5.24	-3.35/-2.94	-4.59/-6.73	-2.59/-3.84	-5.05/-3.34	-2.78/-1.87	-2.53/-3.1	-2.72/-2.46	-2.99/-3.08	-2.76/-1.28
Θ(112.5°)	-1.02/-1.74	-3.35/-3.37	-3.69/-3.91	-4.26/-2.29	-0.45/-0.44	-0.36/-0.81	-0.95/-1.59	-3.74/-3.66	-3.56/-4.78	-3.85/-2.3	-2.22/-1.63	-1.02/-0.86	-1.15/-1.96	-3.69/-4.34	-5.98/-4.98	-2.47/-3.97	-4.16/-6.35	-3.39/-2.32	-4/-4.61	-3.22/-3.9	-2.57/-2.17	-2.57/-1.5	-2.12/-1.48	-0.85/0.55
Θ(120°)	-3.18/-3.34	-4.32/-5.22	-4.99/-4.62	-4.13/-2.78	-2.37/-1.17	-0.24/-0.38	-0.94/-2.09	-2.92/-2.62	-2.17/-3.11	-2.41/-2.14	-1.36/-1.23	-1.25/-1.8	-2.81/-2.42	-4.61/-5.13	-5.72/-3.81	-3.06/-3.64	-6.52/-6.83	-2.17/-0.75	-2.75/-5.08	-1.38/-3.33	-1.77/-0.46	-0.01/0.69	0.2/-0.57	-0.7/-0.4
Θ(127.5°)	-2.87/-3.41	-1.71/-3.38	-4.66/-4.63	-4.29/-3.45	-3.27/-2.69	-1.17/-0.85	-1.65/-1.82	-3.49/-2.31	-1.45/-2.13	-1.94/-0.25	-0.61/-1.84	-1.61/-3.12	-3.76/-2.41	-3.6/-5.78	-5.4/-2.73	-1.16/-4.01	-2.84/-6.27	-1.6/-0.9	-1.4/-5.19	-0.65/-1.92	-1.76/-0.6	-0.11/-1.34	1.46/0.33	-0.26/-0.43
Θ(135°)	-2.04/-3.79	-3.73/-3.7	-4.9/-3.54	-2.56/-2.81	-3.02/-2.63	-1.89/-3.38	-4.59/-5.4	-5.47/-2.51	-1.17/-1.32	-1.67/-1.41	-1.12/-0.81	-1.06/-1.21	-0.99/-1.75	-3.46										



Sporton International Inc.



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(22.5°)	-1.8/-1.87	-2.61/-3.94	-5.29/-6.7	-8.5/-11.49	-14.25/-14.58	-11.65/-8.04	-5.81/-4.54	-3.82/-3.44	-2.6/-1.9	-0.97/-0.14	0.40/0.39	1.19/0.06	-0.41/-1.35	-2.65/-4.2	-6.17/-9.12	-14.08/-19.3	-19.3/-13.83	-10.76/-9.86	-9.2/-8.28	-7.23/-5.76	-4.13/-2.49	-1.21/-0.57	-0.58/-0.94	-1.37/-1.69	
Θ(30°)	-1.8/-2.3	-3.31/-4.75	-6.8/-8.93	-11.49/-14.97	-15.78/-13.29	-10.31/-7.58	-6.63/-6.55	-6.14/-5.42	-4.27/-3.22	-2.08/-0.79	0.17/0.4	0.06/-0.41	-0.79/-1.58	-3.37/-5.79	-8.06/-10.4	-14.34/-18.94	-19.31/-14.33	-10.88/-8.76	-8.54/-8.83	-7.22/-5.14	-3.97/-3.74	-3.71/-3.73	-3.35/-2.59	-1.81/-1.5	
Θ(37.5°)	-1.81/-1.6	-2/-3.29	-4.6/-10.24	-13.36/-13.03	-11.4/-9.42	-4.39/-7.77	-0.89/-8.13	-7.43/-6.07	-4.66/-3.57	-2.57/-1.5	-0.58/-0.04	0.06/-0.36	-1.08/-1.9	-4.37/-4.76	-11.18/-13.34	-14.83/-18.41	-19.16/-17.97	-11.41/-9.09	-8.1/-6.54	-5.34/-4.37	-3.59/-3.53	-4.15/-4.47	-4.34/-3.84	-2.94/-2.11	
Θ(45°)	-1.94/-1.84	-2.16/-2.51	-4.49/-7.72	-10.36/-10.89	-9.14/-7.13	-6.29/-6.62	-7.46/-7.6	-7.05/-5.68	-4.46/-3.82	-3.43/-2.78	-1.92/-1.26	-0.87/-0.79	-1.43/-2.49	-4.03/-6.82	-11.65/-18.63	-18.94/-18.36	-18.82/-14.6	-9.61/-7.04	-6.82/-8.42	-8.65/-6.62	-5.96/-6.68	-8.18/-7.24	-4.77/-3.49	-3.36/-2.71	
Θ(52.5°)	-3.36/-2.62	-2.87/-3.18	-4.84/-4.89	-10.65/-10.63	-8.77/-6.57	-5.37/-5.21	-5.31/-5.39	-6.04/-5.24	-4.32/-4.13	-4.66/-4.05	-2.6/-1.59	-1.48/-1.69	-2.32/-3.3	-4.89/-9.74	-13.19/-14.7	-18.46/-18.85	-18.87/-18.79	-13.52/-9.36	-8.36/-8.7	-8.26/-7.59	-8.91/-11.25	-8.32/-5.44	-4.74/-4.17	-3.57/-3.7	
Θ(60°)	-3.85/-3.88	-4.48/-5.12	-7.81/-13.36	-17.68/-13.42	-8.23/-4.79	-4.27/-5.79	-6.56/-6.06	-5.88/-5.29	-4.81/-5.26	-6.14/-5.8	-4.13/-2.71	-2.25/-2.5	-2.6/-2.76	-4.13/-6.04	-9.01/-13.83	-15.72/-17.36	-16.27/-18.89	-15.29/-11.7	-10.97/-10.57	-9.16/-7.71	-9.50/-10.81	-9.1/-6.85	-5.71/-5.83	-5.37/-4.37	
Θ(67.5°)	-5.08/-4.8	-6.3/-7.33	-12.45/-18.16	-19.07/-13.84	-8.83/-5.55	-4.64/-5.21	-6.23/-6.89	-6.23/-5.12	-5.15/-5.99	-6.36/-5.81	-4.56/-3.47	-2.94/-3.16	-4.22/-5.32	-6.96/-8.91	-11.64/-16.39	-17.98/-17.72	-19.01/-17.72	-14.09/-8.75	-7.91/-10.59	-10.3/-8.77	-10.01/-8.96	-6.39/-6.73	-8.17/-8.08	-6.38/-5.16	
Θ(75°)	-6.97/-6.4	-9.52/-10.57	-12.87/-11.48	-14.02/-10.63	-8.65/-5.09	-3.78/-3.47	-4.86/-5.56	-6.33/-5.27	-5.56/-7.39	-8.41/-7.65	-6.33/-5.39	-4.41/-3.32	-3.94/-5.03	-6.23/-6.77	-8.38/-12.92	-16.44/-19.67	-18.1/-17.68	-16.85/-11.01	-9.17/-11.96	-9.74/-9.38	-9.55/-6.3	-6.4/-9.69	-12.38/-10.37	-6.85/-6.18	
Θ(82.5°)	-7.71/-6.56	-9.1/-10.27	-11.03/-11.46	-8.95/-4.44	-8.55/-6.3	-4.8/-5.52	-6.67/-7.48	-7.07/-5.41	-5.26/-7.69	-8.52/-6.44	-5.55/-6.57	-5.18/-4.43	-4.87/-6.1	-9.05/-9.35	-9.81/-11.8	-18.31/-18.33	-17.76/-17.73	-18.63/-12.73	-10.22/-12.54	-8.99/-9.18	-11.53/-7.56	-7.29/-10.76	-10.32/-8.78	-7.79/-6.53	
Θ(90°)	-8.68/-7.2	-9.33/-10.57	-6.81/-5.43	-5.94/-7.29	-7.3/-4.28	-3.91/-4.02	-3.97/-5.07	-7.21/-5.19	-5.69/-8.58	-9.18/-7.31	-5.87/-6.06	-6.12/-4.87	-4.64/-5.92	-7.81/-8.71	-9.48/-11.7	-17.81/-18.69	-18.13/-17.77	-19.34/-14.15	-10.29/-12.81	-9.04/-8.55	-11.15/-6.7	-7.98/-12.24	-8.88/-6.96	-6.95/-9.14	
Θ(97.5°)	-10.31/-8.94	-8.66/-7.71	-4.93/-5.34	-5.93/-6.27	-6.94/-5.34	-3.81/-4.62	-4.52/-4.97	-10.59/-9.14	-8.61/-8.89	-4.83/-6.83	-10.59/-9.14	-8.17/-7.18	-6.1/-5.75	-6.31/-7.51	-9.08/-9.86	-12.04/-14.37	-19.4/-17.38	-18.02/-18.2	-17.57/-18.71	-14.95/-16.86	-8.49/-10.48	-13.71/-8.35	-7.93/-7.87	-6.96/-7.92	-6.91/-8.86
Θ(105°)	-9.24/-7.51	-8.65/-5.51	-5.05/-4.93	-3.76/-4.09	-6.63/-3.55	-3.06/-3.17	-3.62/-5.15	-6.61/-4.87	-4.29/-7.93	-10.91/-9.09	-8.27/-7.78	-7.15/-6.39	-6.29/-9.31	-9.78/-10.46	-12.08/-14.2	-17.61/-18.78	-18.04/-17.99	-13.21/-13.24	-12.38/-18.5	-14.68/-10.97	-18.17/-7.73	-8.32/-11.01	-10.7/-8.6	-7.27/-12.05	
Θ(112.5°)	-8.04/-6.06	-5.54/-4.78	-5.13/-5.08	-4.76/-4.7	-8.3/-5.54	-3.04/-3.52	-3.77/-4.33	-5.19/-4.34	-4.92/-8.98	-12.23/-10.55	-9.85/-8.27	-7.08/-6.49	-7.29/-7.31	-8.98/-10.34	-13.58/-17.75	-19.3/-18.67	-14.21/-13.94	-15.02/-15	-7.89/-10.48	-7.99/-8.01	-19.09/-10.26	-8.48/-6.99	-9.19/-11.13	-9.66/-18.1	
Θ(120°)	-10.07/-9.4	-6.34/-5.17	-4.73/-5.78	-6.45/-5.3	-4.86/-2.78	-2.5/-3.33	-4.4/-6.3	-6.55/-4.23	-3.59/-6.28	-10.77/-12.09	-12.34/-8.77	-8.44/-8.74	-8.77/-8.08	-6.77/-11.61	-19.11/-14.36	-14.27/-18.24	-19.58/-11.85	-9.2/-12.01	-12.47/-18.74	-11.37/-9.81	-13.2/-6.38	-8.21/-12	-14.85/-18.54	-14.18/-18.47	
Θ(127.5°)	-9.77/-7.55	-5.87/-4.78	-7.16/-8.27	-6.64/-5.88	-6.56/-5.17	-4.36/-4.85	-4.45/-4.02	-3.89/-3.09	-3.67/-5.8	-9.39/-13.69	-12.02/-11.65	-10.66/-9.46	-10.77/-8.38	-10.15/-13.44	-12.3/-9.65	-16.54/-13.89	-10.38/-12.32	-11.01/-8.31	-7.49/-13.24	-13.91/-11	-14.44/-9.61	-6.59/-9.13	-10.74/-13.23	-11.64/-18.22	
Θ(135°)	-7.97/-7.19	-11.24/-10.95	-13.43/-11.4	-9.29/-8.38	-6.01/-4.27	-3.58/-5.15	-5.62/-4.45	-4.39/-4.63	-5.16/-7.5	-13.11/-15.85	-18.74/-18.23	-13.53/-11.3	-8.67/-6.49	-6.94/-9.84	-7.99/-10.57	-13.08/-17.83	-9.71/-7.42	-4.94/-7.49	-11.22/-17.25	-13.16/-11.75	-11.22/-18.27	-14.21/-15.08	-18.06/-17.79	-14.16/-12.18	
Θ(142.5°)	-7.97/-7.31	-9.59/-10.97	-14.57/-16.66	-10.03/-6.78	-4.66/-3.93	-4.21/-4.96	-6.93/-7.92	-7.28/-6.38	-6.7/-8.19	-9.91/-14.22	-18.36/-16.63	-14.75/-14.48	-11.93/-9.57	-10.16/-11.15	-11.2/-11.5	-12.95/-11.01	-10.33/-13.28	-13.77/-18.43	-18.98/-16.15	-15.21/-16.08	-14.17/-15.86	-16.84/-15.63	-15.19/-19.12	-18.19/-12.25	
Θ(150°)	-15.8/-18.73	-18.09/-16.65	-15.17/-13.1	-11.17/-5.78	-4.97/-5.65	-6.82/-9.18	-8.35/-7.52	-7.17/-63	-9.44/-11.8	-13.61/-13.21	-14.91/-15.01	-13.84/-15.89	-17.97/-18.71	-14.93/-14.41	-12.44/-11.98	-12.41/-8.87	-7.76/-9.81	-17.18/-15.43	-17.18/-15.43	-14.17/-14.89	-16.68/-19.09	-17.56/-15.05	-14.63/-14.82		
Θ(157.5°)	-18.84/-17.95	-18.4/-18.55	-17.67/-18.21	-15.97/-11.13	-7.76/-6.28	-5.79/-5.69	-5.91/-6.51	-7.04/-7.15	-7.1/-7.21	-8.22/-9.48	-11.14/-12.85	-13.96/-12.46	-10.99/-9.95	-8.61/-7.82	-7.58/-7.24	-6.8/-6.77	-6.28/-6.25	-7.84/-11.54	-16.12/-17.82	-17.62/-18.11	-15.23/-13.82	-13.29/-13.14	-12.71/-12.67	-14.04/-16.71	
Θ(165°)	-18.47/-16.7	-15.66/-15.95	-17.79/-18.82	-17.27/-18.05	-16.07/-12.42	-10.88/-10.26	-9.77/-9.91	-10.11/-10.55	-11.37/-11.61	-11.85/-11.9	-12.02/-12.53	-12.76/-11.52	-9.72/-8.43	-7.51/-6.84	-6.14/-5.75	-5.73/-6.21	-7.13/-9.03	-11.51/-15.14	-17.77/-15.94	-13.53/-11.67	-10.56/-10.05	-10.12/-11.18	-13.68/-17.45	-18.89/-18.78	
Θ(172.5°)	-16.47/-18.27	-18.58/-19.16	-19.23/-17.22	-18.35/-15.28	-13.13/-12.29	-11.49/-10.73	-9.87/-8.82	-8.39/-8.49	-8.86/-9.25	-9.13/-8.85	-8.73/-8.65	-8.39/-8.23	-8.41/-8.91	-9.28/-9.76	-10.27/-10.97	-11.94/-13.12	-14.71/-15.77	-15.65/-17.29	-18.42/-18.22	-17.06/-15.33	-15.15/-15.5	-15.57/-15.84	-17.18/-18.59	-16.59/-15.11	
Θ(180°)	-15.74/-13.24	-11.81/-11.25	-11.24/-11.06	-10.48/-9.86	-9.31/-9.27	-9.51/-9.62	-9.54/-9.34	-9.25/-9.14	-8.93/-9.25	-9.93/-11.32	-12.98/-15.32	-16.87/-16.9	-15.51/-14.22	-13.43/-12.3	-11.18/-10.22	-10.68/-11.85	-12.71/-16.82	-19.35/-17.88	-17.26/-16.12	-16.45/-18.42	-18.71/-18.31	-18.23/-18.38			
Freq(Hz)	5.3GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)	
Θ(0°)	-7.09/-5.64	4.49/-3.27	-2.32/-1.38	-0.68/-0.32	-0.22/-0.2	-0.32/-0.26	-0.19/-0.53	-1.27/-2.31	-3.21/-3.82	-4.83/-6.82	-8.78/-9.28	-9.78/-10.95	-9.15/-6.3	-4.59/-3.86	-3.12/-2.14	-1.27/-0.6	-0.21/-0.11	-0.09/-0.4	-0.86/-1.37	-2/-2.64	-3.49/-4.75	-6.55/-8.89	-11.44/-13.06	-11.47/-9.07	
Θ(7.5°)	-10.22/-9.25	-7.19/-5.35	-4.01/-2.79	-1.71/-1.06	-0.64/-0.57	-0.59/-0.31	-0.15/-0.47	-1.26/-2.6	-4.22/-5.42	-6.55/-9.04	-15.15/-14.68	-10.69/-10	-6.6/-5.33	-3.1/-2.09	-1.69/-1.46	-0.96/-0.65	-0.33/-0.29	-0.31/-0.39	-0.64/-1.14	-1.62/-2.06	-2.67/-3.4	-4.56/-6.01	-7.8/-9.61	-10.88/-11.7	
Θ(15°)	-11.35/-8.6	-8.73/-5.39	-4.07/-2.87	-1.73/-1.12	-0.7/-0.55	-0.56/-0.53	-0.74/-1.33	-1.95/-2.93	-4/-5.3	-6.73/-7.77	-12.68/-18.28	-18.81/-14.41	-11.35/-8	-4.96/-2.99	-1.98/-1.5	-1.2/-0.88	-0.53/-0.26	-0.23/-0.39	-0.81/-1.35	-1.86/-2.34	-2.8/-3.58	-4.97/-2.74	-10.25/-13.61	-16.92/-15.03	
Θ(22.5°)	-6.11/-4.63	-3.44/-2.73	-2.3/-2.06	-1.44/-1	-1.04/-1.41	-1.74/-2.03	-2.42/-2.57	-2.66/-3.04	-3.77/-4.91	-6.15/-7.28	-9.69/-16.37	-17.71/-14.12	-10.02/-6.89	-4.5/-3.09	-2.53/-2.3	-2.04/-1.53	-0.97/-1.06	-0.69/-0.91	-1.44/-1.98	-2.48/-3.12	-4.23/-6.01	-8.77/-11.18	-12.54/-11.3	-9.11/-7.55	
Θ(30°)	-5.12/-4.42	-3.49/-2.14	-1.14/-1.1	-1.28/-1.32	-1.82/-2.65	-3.09/-3.56	-3.94/-3.89	-5.63/-3.85	-4.51/-5.74	-7.01/-7.83	-14.01/-15.74	-19.12/-12.6	-7.49/-4.96	-3.97/-3.66	-3.44/-3.52	-4.05/-3.98	-3.93/-3.91	-3.76/-4.37	-5.31/-6.39	-7.04/-7.51	-8.91/-10.83	-11.19/-10.11	-9.4/-8.3	-7.77/-12	
Θ(37.5°)	-5.74/-4.53	-3.65/-2.7	-1.9/-1.71	-1.81/-1.56	-2.29/-3.47	-4.14/-4.86	-5.46/-5.48	-5.51/-6.1	-7.02/-8.22	-9.61/-12.46	-16.88/-18.78	-19.05/-13.11	-7.91/-5.51	-4.53/-8.9	-3.33/-3.51	-4.24/-4.97	-5.65/-4.72	-4.36/-5.27	-5.77/-5.89	-6.81/-9.39	-10.97/-10.06	-8.73/-8.17	-8.65/-8.83	-8.06/-6.61	
Θ(45°)	-5.13/-4.12	-3.27/-2.22	-2.1/-2.83	-2.68/-2.21	-2.76/-4.42	-6.29/-7.32	-8.18/-9.45	-11.36/-12.63	-12.69/-13.89	-15.66/-17.82	-17.62/-17.35	-18.91/-14.35	-10.95/-8.06	-4.43/-3.25	-3.66/-3.19	-3.41/-5.34	-5.95/-5.77	-7.22/-8.03	-7.83/-7.44	-7.11/-6.21	-5.65/-5.78	-6.58/-7.46	-7.83/-6.58	-7.33/-6.58	
Θ(52.5°)	-4.37/-2.96	-3.21/-3.06	-3.08/-4.33	-2.72/-2.19	-3.3/-3.38	-7.3/-4.79	-7.51/-11.53	-16.08/-12.58	-11.79/-13.11	-18.31/-18.55	-18.41/-19.44	-16.1/-12.59	-7.18/-7.19	-4.83/-4	-4.04/-4.06	-5.88/-7.07	-6.75/-8.63	-8.89/-8.04	-6.66/-6.11	-6.85/-7.2	-5.29/-3.6	-3.75/-4.82			
Θ(60°)	-4.81/-3.32	-2.93/-2.57	-2.49/-5.16	-5.05/-4.39	-3.43/-4.92	-7.18/-7.96	-8.34/-10.69	-10.95/-8.23	-9.7/-12.52	-15.18/-16.22	-17.74/-15.03	-11.61/-9.84	-7.65/-5.96	-5.8/-4.54	-4.99/-5.32	-5.58/-6.54	-7.36/-11.2	-9.73/-9.09	-9.7/-8.13	-6.52/-5.93	-5.85/-6.44	-6.28/-4.99	-3.37/-1.91	-2.08/-3.88	
Θ(67.5°)	-6.07/-4.09	-3.09/-2.97	-3.41/-5.91	-5.33/-4.8	-3.3/-5.85	-8.91/-8.65	-7.13/-10.1	-8.75/-6.31	-7.91/-9.09	-11.03/-10.29	-10.3/-8.35	-6.52/-5.6	-4.88/-5.27	-4.77/-4.95	-5.11/-5.77	-6.59/-7.4	-9.33/-11.68	-9.17/-7.53	-6.52/-6.63	-6.1/-5.49	-5.89/-6.65	-5.54/-6.33	-2.3/-1.4	-2.07/-4.31	
Θ(75°)	-7.91/-5.3	-4.51/-3.68	-3.59/-6.05	-8.51/-4.87	-3.99/-6.65	-8.39/-5.9	-5.																		



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(67.5°)	-3.31/-4.13	-5.57/-8.51	-13.38/-18.05	-11.62/-7.89	-5.16/-5.14	-5.87/-4.44	-4.19/-2.96	-2.22/-3.56	-5.07/-4.5	-3.53/-3.3	-3.07/-2.74	-2.61/-3.08	-4.25/-4.21	-4.83/-5.73	-7.57/-11.24	-13.75/-11.56	-12.95/-17.55	-15.98/-10.25	-9.88/-9.77	-9.66/-8.05	-7.22/-7.7	-7.15/-7.4	-9.1/-7.95	-6.04/-4.5
Θ(75°)	-4.14/-4.7	-7.47/-10.52	-15.32/-16.98	-10.36/-10.7	-4.59/-5.28	-5.95/-4.14	-3.68/-2.79	-2.19/-4.2	-7.51/-6.02	-4.8/-4.49	-4.31/-1.46	-4/-4.22	-5.84/-6.61	-7.91/-9.77	-8.41/-10.65	-15.54/-15.29	-18.59/-17.55	-15.66/-12.27	-9.08/-9.42	-9.34/-8.78	-8.34/-7.57	-7.43/-8.96	-13.04/-11	-6.23/-4.09
Θ(82.5°)	-4.46/-6.17	-9.68/-11.17	-12.8/-9.08	-7.82/-7.1	-5.19/-3.81	-4.58/-3.41	-3.7/-2.83	-2.26/-5.79	-8.49/-5.37	-5.07/-5.65	-4.97/-4.13	-4.63/-4.98	-5.15/-6.27	-9.17/-9.21	-11.01/-15.4	-19.11/-17.84	-18.11/-16.82	-18.11/-12.97	-9.42/-8.91	-11.24/-8.91	-7.13/-6.68	-6.99/-12.51	-13.3/-11	-7.81/-4.9
Θ(90°)	-5.73/-7.04	-9.34/-10.12	-8.96/-7.52	-5.81/-6.29	-5.34/-4.05	-4.23/-4.09	-5/-3.46	-2.52/-6.02	-9.89/-6.08	-5.94/-6.23	-5.03/-4.33	-4.71/-4.47	-5.45/-9.02	-9.64/-9.62	-11.97/-18.65	-17.93/-15.8	-18.94/-17.45	-19.06/-18.14	-15.72/-10.84	-9.45/-8.19	-8.53/-8.1	-8.55/-11.98	-8.45/-6.68	-6.78/-7.84
Θ(97.5°)	-7.61/-7.2	-8.29/-8.35	-6.19/-4.28	-4.36/-6.82	-5.02/-3.82	-4.43/-3.76	-4.1/-3.1	-2.19/-6.39	-9.37/-7.09	-6.39/-6.51	-6.34/-7.22	-6.15/-5.44	-5.06/-8.13	-8.76/-9.65	-14.92/-19.29	-18.82/-17.02	-16.37/-18.52	-18.36/-10.92	-12.89/-11.5	-11.06/-8.96	-11.63/-10.7	-11.1/-10.49	-7.3/-7.03	-7.14/-10.8
Θ(105°)	-8.05/-7.19	-6.94/-7.3	-5.11/-3.82	-3.88/-7.14	-4.75/-3.21	-3.75/-3.68	-4.42/-3.49	-2.69/-6.15	-12.6/-7.05	-7.36/-9.19	-6.35/-6.94	-6.99/-5.46	-8.61/-8.67	-10.16/-11.79	-15.93/-18.48	-17.95/-17.11	-17.75/-18.52	-17.71/-17.37	-12.65/-9.94	-8.99/-6.68	-14.77/-14.86	-10.8/-8.82	-7.28/-6.33	-6.49/-11.2
Θ(112.5°)	-7.96/-8.18	-4.12/-4.8	-3.82/-3.02	-3.6/-7.78	-3.58/-2.87	-4.68/-3.52	-3.34/-2.82	-1.95/-5.67	-12.02/-8.75	-8.07/-9.38	-10.38/-11.22	-8.85/-8.11	-7.59/-8.09	-10.2/-11.74	-13.58/-18.87	-17.89/-17.53	-18.75/-14.67	-12.18/-10.68	-11.35/-14	-10.08/-6.56	-12.01/-11.51	-7.25/-8.98	-10.09/-9.28	-8.68/-17.37
Θ(120°)	-9.96/-6.5	-3.18/-4.9	-6.15/-4.85	-4.52/-6.59	-4.04/-3.5	-4.5/-4.66	-5.88/-5.53	-3.81/-5.39	-12.41/-9.62	-7.03/-9.48	-12/-13.07	-9.15/-7.58	-7.49/-8.09	-9.84/-14.13	-18.3/-10.28	-9.37/-12.93	-18.71/-14.69	-8/-6.34	-7.05/-10.28	-10.05/-6.45	-17.65/-10.61	-11.53/-6.55	-10.95/-13.17	-10.66/-18.31
Θ(127.5°)	-6.69/-7.38	-4.64/-6.56	-4.9/-4.93	-5.45/-6.22	-3.58/-2.6	-3.54/-3.94	-4.37/-4.6	-3.48/-5.11	-11.3/-9.49	-8.4/-8.6	-14.97/-11.21	-11.51/-12.44	-10.62/-10.78	-12.29/-14.57	-8.63/-9.76	-9.43/-17.56	-7.44/-5.52	-5.04/-8.99	-8.18/-4.15	-8.74/-9.29	-12.08/-10.56	-8.21/-13.82	-9.53/-19.24	
Θ(135°)	-6.9/-7.15	-7.13/-7.48	-9/-8.02	-8.81/-5.4	-4.09/-3.97	-6.19/-4.84	-4.48/-4.3	-4.13/-4.66	-13.93/-13.4	-7.63/-7.67	-9.39/-10.31	-14.89/-10.58	-10.72/-9.53	-9.21/-9.28	-9.15/-6.22	-11.79/-12.46	-12.58/-5.02	-4.86/-4.02	-6.64/-16.07	-17.67/-11.74	-7.23/-13.97	-9.82/-11.57	-9.29/-13.39	-15.1/-18.26
Θ(142.5°)	-5.52/-7.07	-11.32/-14.37	-13.24/-17.06	-4.66/-3.58	-4.37/-5.58	-6.31/-6.31	-6.28/-7.8	-7.35/-7.73	-11.41/-18.54	-18.76/-17.43	-14.23/-13.97	-12.95/-12.67	-12.09/-9.94	-9.23/-9.76	-9.91/-10.93	-9.07/-9.96	-10.42/-9.86	-11.63/-11.32	-15.3/-18.86	-16.26/-17.36	-16.92/-17.56	-14.98/-16.1	-12.79/-14.46	-12.41/-7.76
Θ(150°)	-11.86/-13.25	-14.46/-14.8	-14.27/-11.97	-7.73/-5.43	-5.31/-6.28	-7.41/-7.56	-6.91/-6.56	-6.89/-7.25	-9.95/-15.77	-18.93/-16.2	-14.11/-16.64	-17.56/-18.14	-18.89/-18.07	-12.83/-11.98	-11.62/-11.33	-14.65/-12.12	-10.06/-10.64	-8.26/-8.17	-10.66/-17.75	-18.31/-18.84	-19.08/-16.68	-13.62/-11.76	-9.81/-9.4	-11.51/-12.04
Θ(157.5°)	-17.84/-18.83	-15.79/-12.75	-12.1/-12.64	-10.97/-9.71	-9.26/-8.96	-9.02/-8.98	-7.99/-7.5	-8.2/-9.74	-11.61/-14.21	-18.72/-17.86	-18.15/-18.06	-17.37/-18.88	-18.66/-17.99	-16.95/-11.75	-8.46/-6.39	-4.84/-4.28	-5.13/-5.9	-6.72/-9.16	-13/-15.27	-13.46/-12.12	-13.03/-15.41	-15.54/-13.87	-13.37/-14.08	-16.95/-17.92
Θ(165°)	-15.89/-14.31	-14.07/-14.18	-14.39/-16.9	-18.83/-17.22	-18.75/-14.93	-12.97/-11.67	-10.96/-10.48	-10.29/-12.71	-11.03/-12.09	-14/-16.58	-17.86/-19.51	-17.31/-18.43	-19.37/-15.56	-12.86/-10.12	-8.08/-6.68	-5.86/-5.44	-5.41/-5.97	-7.79/-10.97	-13.34/-14.61	-15.49/-15.88	-14.72/-14.21	-13.9/-16.19	-18.69/-17.46	-18.76/-17.71
Θ(172.5°)	-15.26/-15.77	-17.94/-18	-18.27/-19.06	-18.45/-17.18	-16.5/-17.67	-17.53/-16.08	-14.72/-10.77	-12.01/-12.77	-14.9/-19.42	-18.39/-18.19	-18.81/-14.89	-10.6/-7.83	-7.74/-6.84	-6.16/-6.05	-6.39/-6.96	-8.18/-10.92	-13.17/-19.57	-17.41/-19.22	-18.79/-19.46	-18.62/-17.92	-18.71/-15.91	-15.19/-15.44	-15.59/-15.19	
Θ(180°)	-17.84/-18.8	-17.69/-18.73	-17.25/-15.04	-13.89/-13.16	-12.38/-11.37	-10.99/-11.02	-11.53/-12.71	-13.31/-13.08	-12.9/-12.68	-13.4/-13.61	-13.71/-14.94	-18.36/-17.76	-17.88/-18.41	-18.32/-18.86	-16.45/-16.68	-17.32/-17.92	-19.11/-18.37	-18.69/-19	-18.23/-18.25	-17.2/-19.15	-16.58/-16.61	-19.06/-18.85	-19.12/-18.78	-18.86/-17.74
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°)	-10.62/-6.98	-4.42/-2.76	-1.8/-1.08	-0.330/3.2	0.730/7.9	0.620/5.2	0.3/-0.12	-0.76/-1.79	-3.46/-5.36	-7.01/-9.42	-15.08/-17.91	-17.96/-14.35	-9.96/-6.16	-4.36/-3.33	-2.23/-1.24	-0.52/-0.09	0.260/3.6	0.29/-0.02	-0.5/-0.99	-1.52/-2.07	-2.84/-4.29	-6.39/-9.35	-13.36/-18.16	-17.85/-15.97
Θ(7.5°)	-9.24/-6.35	-4.57/-3.22	-2.47/-1.75	-1.05/-0.37	0.120/2.1	0.150/0.3	-0.38/-0.81	-1.15/-1.5	-2.38/-2.46	-6.84/-8.43	-9.79/-14.07	-17.54/-15.14	-11.45/-8.35	-5.1/-2.86	-1.42/-0.46	0.180/5.8	0.84/-1.43	0.790/3.4	-0.42/-1.14	-1.85/-2.74	-4.11/-6.01	-8.59/-11.91	-15.79/-17.94	-19.05/-13.11
Θ(15°)	-9.82/-7	-4.54/-3.96	-2.88/-2.02	-1.13/-0.46	-0.22/-0.56	-0.97/-1.13	-1.43/-1.63	-1.92/-2.38	-3.18/-4.34	-5.84/-7.32	-9.9/-12.24	-17.89/-18.28	-14.8/-17.61	-6.58/-4.21	-2.72/-1.58	-0.68/-0.22	0.240/-4	0.24/-0.4	-1.13/-1.76	-2.21/-0.18	-6.21/-0.05	-9.71/-2.27	-16.11/-18.54	-19.51/-12.62
Θ(22.5°)	-8.43/-6.93	-5.27/-3.8	-2.54/-1.56	-0.88/-0.52	-0.68/-1.09	-1.21/-1.57	-2.56/-3.33	-4.02/-4.53	-5.56/-6.69	-7.51/-8.88	-11.33/-15.94	-18.36/-16.34	-9.97/-6.59	-4.77/-3.75	-3.1/-2.52	-2.06/-1.83	-1.48/-0.99	-0.94/-1.36	-2.51/-3.88	-5.23/-6.49	-7.48/-7.97	-8.68/-10.43	-13.63/-15.02	-12.88/-9.79
Θ(30°)	-8.92/-7.87	-5.19/-2.94	-2.26/-2.43	-1.64/-0.83	-0.9/-1.13	-1.05/-1.83	-3.41/-5.09	-6.02/-7.41	-9.3/-10.82	-11.68/-13.51	-15.58/-14.14	-13.91/-18.43	-7.48/-6.57	-3.71/-2.85	-2.13/-1.98	-2.03/-2.35	-2.76/-2.46	-1.94/-3.18	-5.06/-5.53	-6.04/-7.72	-9.45/-10.55	-11.54/-11.87	-11.9/-66	-8.84/-6.66
Θ(37.5°)	-7.67/-6.68	-5.46/-3.38	-2.90/-1.83	-1.21/-0.56	-0.97/-1.15	-2.59/-4.22	-5.37/-5.71	-6.08/-6.88	-9.02/-14.68	-15.98/-15.87	-15.24/-10.66	-7.02/-8.59	-6.01/-6.63	-2.81/-2.26	-2.38/-2.27	-1.76/-3.08	-5.43/-5.52	-5.34/-5.08	-5.06/-6.01	-7.72/-8.71	-9.29/-10.61	-11.04/-10.11	-8.65/-8.49	-8.44/-7.86
Θ(45°)	-6.06/-5.78	-5.53/-2.72	-2.04/-2.39	-1.43/-0.91	-1.11/-1.02	-1.29/-3.52	-5.88/-4.8	-4.8/-5.32	-6.52/-9.24	-13.9/-18.61	-18.53/-11.8	-7.7/-5.15	-3.71/-2.43	-2.5/-3.07	-2.5/-2.21	-1.63/-2.93	-4.59/-5.53	-4.87/-4.66	-5.24/-5.42	-7.17/-9.02	-8.38/-6.09	-4.7/-4.97	-6.58/-8.26	-9.31/-8.04
Θ(52.5°)	-4.66/-4.44	-4.54/-2.9	-2.52/-2.2	-0.63/-0.26	-0.71/-1.15	-1.78/-3.49	-5.09/-3.77	-3.05/-3.8	-5.03/-7.13	-10.40/-15.64	-16.25/-9.02	-5.51/-4.79	-3.65/-1.57	-1.7/-2.76	-2.54/-2.93	-3.28/-4.14	-5.57/-7.25	-7.41/-6.1	-6.82/-8.03	-9.05/-9.65	-6.65/-4.57	-4.22/-5.1	-6.05/-6.79	-8.46/-6.65
Θ(60°)	-4.8/-3.01	-2.39/-1.25	-2.32/-2.62	-1.210/0.3	-0.67/-1.06	-0.66/-2.28	-3.71/-3.09	-2.69/-3.26	-4.14/-5.6	-8.51/-13.26	-17.81/-12.23	-8.57/-6.18	-6.79/-4.62	-2.22/-2.86	-2.29/-3.13	-3.48/-4.03	-4.09/-4.67	-5.17/-3.28	-5.57/-5.34	-6.07/-7.01	-8.58/-7.34	-5.71/-4.86	-5.19/-4.73	-3.59/-3.07
Θ(67.5°)	-4.86/-2.72	-1.59/-0.36	-2.45/-3.42	-1.460/6.4	-0.57/-1.59	-1.3/-1.98	-3.29/-2.75	-3.12/-3.95	-4.15/-5.35	-10.84/-18.47	-12.91/-8.7	-6.6/-5.17	-4.47/-4.91	-4.48/-3.74	-4.34/-5.14	-4.47/-5.17	-5.34/-8.55	-5.89/-4.37	-5.69/-7.87	-7.64/-4.79	-3.27/-3.41	-4.14/-3.97	-2.31/-1.79	-2.85/-4.79
Θ(75°)	-6.36/-2.92	-2.92/-0.51	-2.42/-3.62	-2.53/-0.07	-1.19/-2.33	-1.54/-2.31	-3.32/-3.08	-3.74/-5.19	-5.25/-6.29	-12.62/-17.89	-11.17/-1.94	-6.87/-5.08	-5.04/-4.88	-6.69/-4.9	-4.81/-5.17	-7.32/-6.64	-4.29/-6.28	-5.69/-5.05	-6.57/-9.61	-9.37/-6.1	-3.93/-4.16	-3.98/-2.89	-2.1/-2.47	-3.06/-5.76
Θ(82.5°)	-10.03/-3.69	-4.26/-1.06	-2.85/-4.04	-1.87/-1.06	-2.36/-2.85	-1.91/-2.28	-4.22/-4.36	-5.74/-8.09	-7.94/-9.29	-15.38/-12.75	-8.47/-6.35	-6.08/-5.27	-4.72/-5.34	-6.5/-6.39	-4.5/-4.4	-9.04/-6.64	-4.4/-6.66	-6.12/-5.76	-8.18/-11.16	-6.23/-5.45	-3.51/-3.57	-2.26/-1.92	-3.13/-4.88	-6.01/-7.44
Θ(90°)	-14.73/-6.77	-4.9/-1.93	-5.26/-6.69	-3.08/-2.42	-2.86/-4.52	-2.88/-2.88	-8.81/-5.04	-5.54/-7.83	-9.12/-9.3	-13.76/-10.31	-7.43/-6.19	-4.31/-3.33	-3.77/-5.71	-6.12/-8.72	-4.74/-7.06	-7.71/-7.3	-7.14/-9.67	-7.17/-6.38	-9.49/-10.1	-7.08/-4.74	-4.51/-4.24	-2.62/-2.67	-6.18/-9.37	-9.32/-12.12
Θ(97.5°)	-17.83/-9.51	-8.84/-4.27	-6.75/-8.72	-4.2/-3.07	-3.69/-5.91	-4.87/-4.69	-6.3/-6.84	-7.34/-10.2	-12.07/-12.87	-15.08/-9.3	-5.9/-3.79	-3.35/-3.17	-4.16/-5.88	-6.74/-7.86	-4.69/-6.94	-7.42/-5.38	-8.21/-13.21	-7.68/-6.82	-6.58/-9.77	-8.85/-9.07	-7.3/-5.71	-5.11/-6.59	-10.26/-14.13	-13.44/-12.62
Θ(105°)	-14.66/-18.72	-16.78/-9.45	-10.98/-10.85	-6.66/-5.5	-5.28/-6.53	-6/-5.28	-6/-6.94	-7.87/-8.44	-11.4/-11.84	-11.65/-10.16	-18.18/-3.22	-2.15/-1.85	-2.71/-4.55	-7.55/-7.37	-4.37/-1.74	-6.69/-5.76	-9.53/-17.16	-7.55/-5.35	-6.66/-9.96	-10.95/-8.7	-13.95/-10.31	-8.14/-12.69	-16.31/-18.68	-11.9/-9.22
Θ(112.5°)	-9.81/-14.17	-18.31/-17.7	-18.85/-15.61	-9.98/-7.08	-5.56/-6.1	-7.77/-7.87	-7.23/-7.91	-8.17/-9	-10.89/-13.01	-10.89/-10.28	-6.97/-3.75	-2.09/-1.48	-3.53/-4	-6.24/-5.36	-5.7/-6.2	-5.04/-7.3	-8.39/-9.64	-5.28/-4.51	-5.88/-9.54	-12.82/-14.23	-17.5/-18.44	-16.4/-15.64	-13.39/-9.77	-9.9/-8.89
Θ(120°)	-10.55/-11.28	-13.17/-16.91	-19.34/-12.62	-10.25/-10.95	-9.62/-7.18</																			



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ (120°)	-9.77/-11.42	-12.47/6.97	-6.37/-10.09	-17.32/-17.37	-17.61/-17.42	-13.31/-11.96	-16.07/-19.14	-18.64/-16.91	-17.38/-15.29	-19.09/-14.09	-11.37/-8.9	-9.26/-9.23	-4.81/-2.56	-4.24/-6.8	-10.22/-7.4	-5.03/-5.99	-7.97/-12.93	-12.69/-5.77	-2.66/-4.82	-9/-9.37	-8.67/-6.49	-7.18/-6.66	-8.76/-17.21	-6.94/-7.17
Θ (127.5°)	-6.72/-16.91	-19.12/-15.47	-15.38/-16.79	-15.71/-16.11	-15.79/-12.4	-11.58/-12.95	-12.47/-12.54	-17.33/-16	-11.71/-13.58	-13.56/-12.73	-8.68/-6.78	-13.68/-17.98	-11.81/-3.98	-3.84/-6.78	-6.2/-3.87	-6.92/-7.16	-9.33/-18.23	-17.57/-6.8	-4.12/-7.67	-8.85/-5.55	-4.93/-4.27	-2.98/-7.94	-8.48/-5.88	-5.26/-3.63
Θ (135°)	-14.11/-11.82	-12.4/-8.59	-8.29/-16.45	-17.68/-18	-18.19/-16.8	-18.79/-14.4	-15.23/-16.29	-12.73/-14.14	-18.05/-19.14	-17.46/-18.05	-12.09/-15.47	-9.65/-7.18	-12.02/-8.62	-14.17/-8.29	-4.34/-7.17	-5.73/-3.43	-9.04/-18.92	-14.96/-7.64	-6.57/-6.96	-8.76/-6.75	-5.15/-8.36	-6.77/-4.73	-10.39/-17.35	-11.07/-12.44
Θ (142.5°)	-14.43/-8.11	-9.17/-14.87	-15.17/-14.3	-14/-15.06	-15.67/-16.38	-17.89/-18.74	-15.27/-12.67	-13.92/-17.65	-17.47/-18.82	-19.32/-15.73	-9.69/-8.04	-6.46/-5.71	-5.76/-6.66	-7.42/-8.16	-13.25/-11.83	-6.75/-7.64	-18.04/-17.81	-18.21/-10.81	-8.38/-7.62	-7.12/-8.82	-2.22/-2.76	-6.7/-8.11	-10.25/-19.32	-15.69/-18.03
Θ (150°)	-4.12/-4.83	-6.82/-8.73	-9.82/-8.95	-10.73/-13.12	-17.91/-18.5	-17.72/-14.35	-12.11/-11.32	-12.26/-14.2	-17.31/-18.55	-18.92/-17.78	-14.43/-12.67	-11.19/-8.52	-6.52/-5.51	-6.93/-7.78	-9.84/-10.7	-11.77/-15.78	-19.02/-16.99	-15/-11.97	-9.63/-8.75	-7.29/-7.69	-6.62/-5.7	-6.69/-8.69	-8.9/-3.75	-5.49/-4.23
Θ (157.5°)	-3.48/-4.1	-5.59/-8.1	-12.08/-16.2	-15.12/-13.67	-14.15/-17.26	-18.82/-18.85	-18.81/-18.95	-18.51/-17.69	-17.34/-18.9	-17.41/-13.21	-10.91/-8.57	-6.11/-4.1	-3.48/-4.13	-6.12/-8.84	-15.33/-17.91	-16.16/-18.4	-17.66/-16.22	-13.89/-12.84	-12.76/-13.35	-14.11/-15.92	-16.62/-14.23	-11.11/-8.48	-6.21/-4.49	-3.68/-3.52
Θ (165°)	-3.2/-4.47	-6.99/-10.46	-12.37/-12.93	-13.02/-13.39	-16.42/-17.8	-18.91/-17.06	-13.44/-11.24	-9.8/-8.9	-8.74/-9.23	-10.18/-11.1	-11.88/-12.57	-12.56/-11.98	-12.31/-13.59	-16.23/-18.38	-18.21/-18.26	-18.06/-16	-13.16/-12.61	-13.61/-15.67	-15.62/-15.02	-15.78/-15.25	-15.33/-12.94	-8.87/-6.25	-4.97/-4.19	-3.24/-2.79
Θ (172.5°)	-17.84/-18.74	-13.54/-10.27	-8.61/-8.33	-8.35/-8.23	-9.15/-11.45	-14.61/-15.68	-17.29/-18.1	-15.23/-11.77	-9.46/-7.84	-6.9/-6.36	-6.12/-6.07	-6.21/-6.6	-7.43/-8.62	-9.91/-10.97	-11.98/-12.23	-12.02/-11.55	-11.31/-12.14	-14.18/-16.63	-18.25/-17.55	-18.97/-18.72	-16.55/-14.31	-11.2/-9.68	-10.81/-13.48	-15.48/-18.23
Θ (180°)	-8.36/-9.42	-11.56/-12.29	-12.31/-12.8	-12.13/-11.33	-11.69/-12.97	-14.27/-15.04	-16.33/-18.09	-17.95/-18.64	-17.66/-14.54	-12.68/-11.33	-10.05/-8.99	-8.33/-7.88	-7.55/-7.32	-6.98/-6.8	-7.02/-7.53	-8.42/-9.55	-10.81/-12.42	-13.47/-15.02	-16.97/-17.81	-17.2/-16.61	-16.07/-16.4	-15.74/-13.75	-12.33/-11.47	-10.03/-8.56
Freq(Hz)	5.2GHzPol.	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)*Φ(7.5°)	Φ(15°)*Φ(22.5°)	Φ(30°)*Φ(37.5°)	Φ(45°)*Φ(52.5°)	Φ(60°)*Φ(67.5°)	Φ(75°)*Φ(82.5°)	Φ(90°)*Φ(97.5°)	Φ(105°)*Φ(112.5°)	Φ(120°)*Φ(127.5°)	Φ(135°)*Φ(142.5°)	Φ(150°)*Φ(157.5°)	Φ(165°)*Φ(172.5°)	Φ(180°)*Φ(187.5°)	Φ(195°)*Φ(202.5°)	Φ(210°)*Φ(217.5°)	Φ(225°)*Φ(232.5°)	Φ(240°)*Φ(247.5°)	Φ(255°)*Φ(262.5°)	Φ(270°)*Φ(277.5°)	Φ(285°)*Φ(292.5°)	Φ(300°)*Φ(307.5°)	Φ(315°)*Φ(322.5°)	Φ(330°)*Φ(337.5°)	Φ(345°)*Φ(352.5°)
Θ (0°)	-1.59/-1.94	-2.22/-3.07	-4.37/-5.93	-6.73/-9.71	-11.02/-18.39	-17.71/-16.64	-12.53/-9.6	-7.22/-5.54	-4.03/-2.85	-2.18/-2.49	-0.79/-0.62	-0.54/-0.49	-0.82/-1.27	-1.78/-2.47	-3.29/-4.41	-6.13/-8.31	-10.95/-14.38	-18.19/-18.69	-13.81/-10.15	-7.56/-5.82	-4.46/-3.23	-2.4/-1.96	-1.67/-1.42	-1.25/-1.29
Θ (7.5°)	-0.94/-1.39	-1.69/-2.48	-3.76/-5.09	-6.58/-8.32	-10.84/-14.86	-18.06/-18.38	-14.5/-11.32	-8.81/-6.79	-5.23/-4.01	-2.98/-2.13	-1.65/-1.5	-1.41/-1.54	-1.7/-2.1	-2.8/-3.45	-4.13/-5.46	-7.45/-9.73	-13.29/-17.85	-17.76/-18.54	-14.07/-10.35	-7.36/-5.59	-4.23/-3.05	-2.18/-1.59	-1.25/-0.81	-0.49/-0.58
Θ (15°)	-1.51/-1.79	-1.9/-2.27	-2.79/-3.35	-4.34/-5.5	-7.35/-9.76	-11.83/-12.63	-11.44/-9.59	-8.02/-6.43	-5.63/-4.43	-3.41/-2.69	-2.16/-1.93	-2.02/-2.09	-2.12/-2.44	-2.91/-3.28	-3.7/-4.51	-5.67/-7.04	-9.39/-12.65	-17.51/-17.8	-15.13/-11.11	-8.28/-6.19	-4.58/-3.16	-2.19/-1.48	-1.08/-0.84	-0.65/-0.19
Θ (22.5°)	-2.29/-2.63	-2.63/-2.85	-3.21/-3.36	-4/-5.09	-6.84/-6.67	-9.08/-8.39	-7.47/-6.88	-6.61/-6.54	-5.92/-5.25	-4.41/-3.6	-3/-2.66	-2.66/-2.7	-2.75/-2.83	-2.92/-2.89	-2.87/-3.01	-3.39/-4.32	-6.36/-10.01	-18.54/-19.09	-12.92/-9.75	-5.83/-4.57	-2.27/-1.23	-0.74/-1.06	-1.49/-1.93	
Θ (30°)	-3.13/-3.31	-4.26/-5	-5.41/-5.67	-6.28/-7.38	-8.73/-9.49	-8.52/-7.47	-7.21/-7.38	-7.53/-7.17	-6.62/-5.99	-4.77/-3.33	-2.22/-1.73	-2.1/-3.09	-3.94/-3.91	-3.57/-3.3	-3.38/-3.65	-4.18/-5.95	-8.74/-11.76	-12.87/-13.36	-15.63/-15.94	-10.25/-7.05	-6.31/-5.67	-4.33/-3.28	-2.72/-3.13	-3.24/-3.09
Θ (37.5°)	-6.94/-6.83	-5.64/-5.26	-5.99/-6.72	-7.09/-6.85	-6/-5.47	-5.02/-4.66	-4.73/-5.06	-5.42/-5.27	-4.7/-4.48	-4.33/-4.36	-2.07/-1.54	-2.37/-3.36	-4.29/-3.96	-4.01/-4.1	-4.3/-4.4	-5.6/-8.99	-12.74/-14.07	-18.33/-17.15	-15.86/-17.92	-14.09/-9.56	-8.42/-6.8	-8.09/-6.73	-6.75/-5.7	-5.96/-4.84
Θ (45°)	-6.84/-7.35	-5.71/-4.83	-4.95/-3.78	-4.95/-3.47	-1.81/-1.82	-1.62/-1.55	-3.23/-3.42	-4.56/-4.85	-3.67/-2.71	-3.15/-3.51	-1.99/-1.29	-2.38/-3.78	-3.58/-3.16	-4.34/-5.77	-6.4/-6.63	-17.71/-14.09	-16.99/-18.21	-16.52/-16.72	-15.63/-15.39	-11.25/-9.44	-7.17/-10.64	-10.47/-9.42	-8.19/-7.09	
Θ (52.5°)	-11.66/-10.31	-8.94/-8.54	-8.51/-8.54	-7.82/-5.31	-3.31/-2.11	-1.22/-1.3	-2.81/-4.34	-4.63/-4.58	-3.96/-2.9	-3.13/-4.23	-3.05/-2.23	-2.97/-3.44	-3.03/-3.5	-5.55/-6.63	-6.16/-6.04	-8.64/-12.75	-14.59/-14.34	-17.58/-18.07	-17.74/-12.55	-10.2/-12.06	-15.01/-13.18	-13.78/-16.34	-14.05/-13.67	-15.68/-13.58
Θ (60°)	-12.05/-7.5	-6.91/-7.34	-7.3/-7.26	-5.68/-3.02	-1.54/-0.84	-0.34/-0.78	-2.05/-3.32	-3.75/-3.5	-3.17/-2.23	-1.52/-3.02	-3.42/-2.61	-2.41/-2.1	-2.18/-2.42	-4.45/-8.3	-9.17/-7.68	-8.41/-10.7	-9.56/-9.85	-10.61/-16.39	-14.52/-10.09	-8.33/-8.71	-10.38/-11.45	-12.51/-13.94	-10.77/-13.69	-17.79/-15.62
Θ (67.5°)	-10.23/-7.12	-6.99/-7.34	-5.02/-2.66	-1.11/-0.35	-0.34/-1.49	-3.24/-4.55	-4.83/-4.24	-4.48/-4.86	-3.29/-3.83	-3.8/-2.31	-1.45/-1.1	-1.25/-1.6	-4.01/-6.9	-6.12/-4.38	-2.68/-7.88	-5.52/-4.73	-7.38/-10.8	-11.19/-8.16	-6.43/-6.76	-9.58/-11.34	-11.26/-13.93	-11.67/-17.61	-15.21/-17.05	-15.81/-9.31
Θ (75°)	-6.21/-8.5	-10.6/-10.83	-10.59/-7.78	-6.01/-5	-2.66/-1.52	-1.49/-3.09	-6.09/-7.93	-7.7/-6.53	-5.94/-7.22	-3.79/-2.51	-3.56/-2.02	-1.58/-0.84	0.17/-0.92	-3.53/-5.34	-4.21/-2.88	-4.34/-5.69	-2.98/-2.62	-5.17/-10.59	-10.5/-5.95	-3.77/-3.66	-5.83/-6.58	-10.11/-18.32	-18.44/-18.03	-16.49/-8.88
Θ (82.5°)	-5.13/-8	-11.23/-9.02	-9.37/-8.48	-5.6/-5.09	-1.57/-0.94	-2.21/-3.42	-6.3/-7.6	-8.54/-7.9	-5.4/-6.64	-2.82/-1.49	-1.78/-0.57	-1.35/-0.59	-0.09/-1.96	-4.07/-4.32	-2.56/-2.64	-6.79/-5.49	-2.72/-2.25	-3.87/-8.74	-8.73/-5.29	-3.12/-1.4	-1.94/-4.97	-7.15/-1.8	-1.75/-17.55	-13.28/-8.4
Θ (90°)	-6.71/-11.03	-13.77/-8.51	-7.74/-6.75	-5.58/-5.01	-1.16/-0.92	-2.56/-3.92	-5.31/-7.32	-11.42/-12.68	-8.18/-7.14	-2.39/-0.76	-2.88/-1.95	-1.95/-2.69	-1.11/-3.4	-4.17/-4.7	-3.21/-3.16	-3.46/-4.72	-4.15/-2.1	-2.89/-7.02	-10.38/-5.13	-2.58/-2.1	-1.53/-3.45	-8.2/-10.55	-16.35/-17.87	-14.7/-8.36
Θ (97.5°)	-7.26/-12.91	-15.67/-10.2	-10.76/-9.5	-7.7/-8.89	-3.31/-3.27	-4.46/-5.15	-6.22/-3.73	-9.98/-11.8	-9.76/-8.09	-2.61/-1.89	-4.42/-2.89	-2.76/-3.15	-0.71/-2	-5.99/-7.35	-4.85/-3.23	-3.09/-4.34	-4.63/-2.9	-4.02/-6.62	-7.39/-6.33	-4.36/-3.23	-2.07/-3.21	-8.25/-12.24	-18.61/-17.75	-11.69/-7.27
Θ (105°)	-7.07/-16.24	-18.89/-10.7	-12.28/-11.62	-9.82/-10.52	-5.4/-5.54	-8.77/-8.71	-7.01/-8.06	-13.16/-14.8	-11.57/-8.99	-3.25/-2.21	-4.69/-4.05	-3.92/-3.97	-3.46/-4.55	-7.09/-3.36	-5.02/-3.91	-2.34/-4.49	-5.98/-4.45	-4.84/-4.76	-4.53/-6.44	-5.05/-3.46	-3.07/-2.3	-6.24/-11.65	-17.95/-18.7	-10.38/-5.72
Θ (112.5°)	-12.53/-14.9	-13.78/-12.33	-17.25/-14.82	-12.44/-11.13	-9.97/-8.53	-7.83/-6.04	-6.09/-8.29	-10.85/-12.68	-14.33/-7.82	-3.84/-4.71	-4.93/-6.08	-6.85/-8.27	-5.7/-5.54	-8.5/-9.9	-6.2/-3.74	-2.78/-3.66	-3.01/-5.04	-7.03/-2.7	-2.37/-9.48	-8.25/-4.77	-4.04/-2.88	-5.19/-10.19	-19.63/-15.74	-9.28/-10.56
Θ (120°)	-10.71/-18.87	-15.71/-12.06	-16.23/-17.09	-18.69/-14.51	-13.85/-11.93	-10.25/-8.61	-6.66/-7.67	-13.15/-15.93	-10.76/-8.7	-8.57/-7.96	-9.12/-14.6	-19.03/-15.69	-8.14/-8.4	-12.66/-12.69	-10.84/-5.8	-2.31/-2.71	-0.63/-5.47	-12.79/-3.3	-2.09/-12.48	-10.44/-2.33	-3.86/-3.01	-5.47/-18.28	-18.26/-18.53	-9.96/-8.69
Θ (127.5°)	-9.36/-10.43	-12.51/-14.38	-19.13/-12.47	-8.81/-8.58	-8.28/-9.76	-11.01/-10.28	-15.11/-10.02	-18.16/-13.78	-13.55/-14.07	-12.55/-10.54	-9.07/-12.56	-17.66/-14.89	-15.93/-12.97	-7.69/-12.25	-7.57/-10.28	-6.2/-1.89	-0.41/-10.79	-17.93/-1.28	0.13/-9.43	-13.79/-1.54	-1.71/-7.93	-2.92/-3.37	-10.05/-18.13	-12.77/-7.77
Θ (135°)	-10.27/-12.88	-16.62/-18.87	-18.67/-9.87	-7.46/-7.63	-8.6/-6.29	-9.92/-18.1	-18.71/-13.31	-8.52/-7.78	-9.2/-14.22	-16.94/-19.15	-18.07/-17.58	-16.13/-11.53	-11.45/-11.39	-9.2/-18.61	-6.26/-6.85	-6.24/-0.2	-3.39/-18.22	-10.610.04						
Θ (142.5°)	-12.4/-18.22	-14.4/-11.3	-13.16/-9.59	-6.88/-6.58	-7.05/-6.41	-5.48/-5.77	-6.46/-6.78	-7.07/-6.89	-6.45/-7.28	-8.59/-7.83	-8.1/-10.39	-15.43/-18.56	-15.14/-13.01	-14.37/-12.96	-14.25/-11.87	-3.94/-3.07	-11.71/-10.74	-6.28/-4.02	-19.4/-5.2	-10.80/-3	-2.07/-2.56	-10.26/-14.48	-14.88/-18.49	-15.61/-12.41
Θ (150°)	-8.37/-10.94	-18.43/-16.9	-14.08/-11.05	-9.15/-9.88	-12.97/-16.46	-17.73/-16.97	-14.78/-12.68	-12.61/-14.91	-16.54/-15	-11.97/-10.74	-11.97/-14.47	-17.49/-15.44	-11.29/-2.3	-9.36/-10.83	-11.64/-9.44	-7.97/-8.76	-10.06/-6.4	0.17/-1.47	-4.62/-6.58	-5.99/-5.59	-7.94/-13.23	-17.66/-13.72	-10.32/-8.74	
Θ (157.5°)	-11.97/-15.18	-16.04/-14.52	-15.16/-11.57	-17.67/-18.95	-18.92/-18.19	-15.35/-15.16	-14.23/-13.15	-15.92/-19.18	-17.67/-18.18	-19.26/-17.86	-17.53/-17.04	-14.76/-11.28	-10.51/-10.92	-13.84/-18.25	-17.73/-19.82	-14.86/-9.79	-6.56/-4.91	-4.76/-5.65	-7.93/-11.24	-13.42/-12.59	-11.09/-9.83	-10.18/-13.77	-10.2/-10.48	
Θ (165°)	-6.65/-8.35	-8.91/-10.75	-8.24/-11.89	-9.84/-8.5	-7.8/-8.14	-8.88/-8.79	-8.36/-8.41	-9.09/-9.61	-10.3/-10.82	-10.59/-9.79	-9.12/-8.65	-8.68/-8.49	-8.59/-9.02	-10.35/-11.7	-12.02/-12.18	-14.71/-18.91	-14.78/-7.76	-4.32/-3.01	-3.2/-4.06	-5.61/-7.2	-8.19/-9.37	-6.76/-8.77	-8.52/-9.86	-10.69/-9.61
Θ (172.5°)	-15.73/-15.1	-17.33/-18.72	-18.91/-																					



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(165°)	-5.62/-5.99	-7.54/-10.07	-14.03/-18.68	-18.04/-18.43	-18.41/-17.7	-15.15/-12.04	-10.84/-11.33	-13.36/-16.75	-18.67/-18.6	-18.42/-16.45	-15.19/-14.33	-13.61/-12.47	-11.61/-11.39	-12.58/-15.9	-18.92/-18.89	-18.31/-17.87	-16.23/-13.08	-12.86/-15.24	-17.85/-18.11	-18.51/-17.79	-18.95/-18.7	-19.17/-16.59	-12.04/-8.51	-6.34/-5.81
Θ(172.5°)	-18.11/-18.01	-15.65/-12.75	-13.36/-15.09	-15.8/-16.41	-18.96/-18.74	-18.86/-18.04	-19.49/-16.73	-15.48/-14.10	-12.88/-11.8	-11.13/-10.33	-10.12/-10.42	-10.84/-11.77	-12.58/-12.87	-13.31/-13.61	-14.47/-15.36	-14.99/-14	-12.67/-12.3	-12.86/-14.51	-15.8/-16.18	-16.23/-14.51	-13.31/-12.31	-11.44/-12.16	-14.23/-15.45	-17.14/-18.66
Θ(180°)	-16.26/-15.53	-16.26/-17.9	-18.57/-17.9	-14.54/-12.71	-12.27/-13.03	-13.47/-13.81	-14.27/-14.16	-13.59/-12.82	-12.11/-11.9	-11.54/-10.77	-9.87/-9.02	-8.56/-8.11	-7.92/-7.79	-7.83/-7.97	-8.22/-8.82	-9.46/-10.24	-10.74/-11.41	-10.85/-10.82	-9.75/-9.08	-8.57/-8.56	-8.99/-9.2	-9.14/-9.52	-11.15/-12.7	-13.13/-14.21
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°)	-1.19/-2.06	-2.82/-3.8	-5.06/-6.72	-8.23/-10.29	-12.97/-14.67	-13.47/-10.89	-8.57/-6.64	-5.06/-3.92	-3.19/-2.58	-2/-1.65	-1.27/-1.12	-1.14/-1.34	-1.72/-2.24	-2.91/-3.98	-5.34/-7.05	-9.64/-12.3	-14.64/-14.08	-11.18/-8.26	-5.84/-3.86	-2.43/-1.46	-0.77/-0.32	0.07/0.26	1.16/0.01	-0.24/-0.71
Θ(7.5°)	-1.44/-1.91	-2.53/-3.5	-4.92/-6.72	-8.37/-11.61	-16.55/-15.62	-11.19/-7.73	-5.48/-3.83	-2.29/-1.33	-0.79/-0.36	-0.14/-0.02	0/-0.6	-0.52/-1.08	-1.58/-2.25	-3.16/-4.05	-5.21/-6.9	-8.94/-10.64	-11.95/-12.8	-13.38/-12.25	-10.16/-8.48	-6.58/-5.19	-4.19/-3.26	-2.45/-1.97	-1.57/-1.47	-1.35/-1.32
Θ(15°)	-2.05/-2.4	-3.11/-4.02	-5.28/-6.84	-8.56/-12.72	-18.15/-15.16	-11.21/-8.06	-5.98/-4.53	-3.43/-2.88	-2.31/-1.77	-1.39/-1.15	-1.06/-1.22	-1.65/-2.03	-2.49/-3.2	-3.92/-4.77	-6.05/-7.71	-9.77/-11.6	-13.35/-14.18	-14.59/-13.99	-13.47/-11.78	-9.84/-7.84	-6.28/-4.97	-3.88/-3	-2.34/-2.4	-1.98/-1.97
Θ(22.5°)	-3.83/-4.06	-4.01/-4.67	-6/-6.06	-10.75/-15.19	-17.35/-16.68	-12.38/-9.09	-6.86/-5.7	-5.2/-5.18	-4.82/-4.47	-3.82/-3.24	-2.92/-2.92	-3.09/-3.38	-3.82/-4.48	-5.25/-6.21	-7.48/-9.01	-11.92/-14.94	-16.91/-16.65	-16.39/-16.03	-15.73/-12.99	-9.79/-7.39	-5.88/-4.93	-4.06/-3.22	-2.58/-3.09	-3.15/-3.39
Θ(30°)	-6.83/-6.38	-5.69/-5.76	-7.02/-9.75	-12.94/-13.6	-12.74/-10.2	-8.51/-7.27	-6.27/-5.88	-6.18/-7.05	-7.93/-7.94	-6.88/-5.84	-5.23/-4.93	-4.6/-4.37	-4.31/-4.66	-5.69/-7.25	-9.11/-11.86	-16.45/-17.65	-17.57/-17.91	-16.29/-12.38	-10.24/-9.98	-9.13/-7.51	-6.63/-5.99	-5.09/-4.32	-3.91/-4.67	-5.45/-6.13
Θ(37.5°)	-8.36/-7.48	-6.19/-5.8	-6.36/-8.38	-10.91/-11.62	-10.58/-7.88	-5.91/-5.03	-5.25/-5.35	-5.54/-6.36	-7.43/-7.38	-7.13/-7.48	-7.45/-6.39	-5.9/-6.53	-6.37/-5.44	-5.52/-7.27	-10.46/-14.43	-18.13/-19.02	-18.99/-17.72	-13.18/-8.38	-7.23/-8.36	-9.23/-8.56	-7.05/-6.11	-5.79/-5.88	-6.22/-7.32	-8.32/-8.92
Θ(45°)	-14.53/-11.95	-8.27/-6.51	-7.19/-8.88	-9.92/-9	-7.03/-4.84	-3.44/-2.88	-2.98/-3.31	-3.54/-3.64	-4.1/-3.96	-3.78/-4.92	-5.12/-4.17	-4.73/-6.56	-6.87/-5.87	-5.9/-7.26	-8.8/-11.02	-12.4/-12.69	-12.98/-12.2	-11.82/-9.97	-9.07/-7.32	-7.07/-7.9	-8.86/-9.22	-8.73/-8.42	-8.81/-9.4	-11.22/-13.58
Θ(52.5°)	-16.09/-13.05	-8.77/-6.51	-6.74/-8.37	-7.63/-6.21	-5.11/-3.81	-2.45/-1.36	-0.83/-1.29	-0.83/-1.29	-2.66/-4.25	-1.95/-3.25	-4.26/-3.56	-3.82/-4.34	-4.41/-4.57	-5.06/-6.26	-10.02/-12.36	-10.97/-11.78	-15.68/-12.3	-17.26/-12.56	-11.01/-11.38	-11.99/-11.66	-10.86/-10.33	-9.96/-9.43	-8.63/-8.89	-11.65/-14.84
Θ(60°)	-13.87/-11.52	-9.42/-6.67	-6.96/-7.84	-6.88/-6.62	-6.6/-4.87	-3.07/-1.91	-1.47/-1.92	-2.77/-2.89	-3.48/-3.95	-2.64/-2.57	-3.11/-2.83	-3.23/-3.41	-3.4/-4.17	-4.28/-5.05	-7.41/-9.03	-8.99/-10.35	-12.82/-15.55	-13.12/-10.58	-9.98/-10.26	-10.9/-12.64	-13.52/-12.29	-12.52/-14.26	-11.37/-10.86	-13.3/-15.25
Θ(67.5°)	-11.42/-10.5	-8.89/-6.84	-5.55/-5.51	-5.81/-6.09	-6.05/-4.34	-2.9/-2.27	-2.5/-3.06	-3.33/-3.13	-3.28/-4.03	-3.85/-2.73	-2.95/-2.89	-3.38/-4.16	-3.59/-4.43	-4.66/-6.28	-9.42/-10.56	-9.7/-11.51	-14.66/-14.65	-11.11/-10.63	-12.77/-9.9	-13.51/-13.96	-12.7/-10.64	-10.49/-12.21	-10.81/-10.47	-11.61/-11.64
Θ(75°)	-13.23/-13.4	-10.49/-8.41	-6.39/-5.8	-6.87/-6.47	-5.55/-4.16	-3.61/-3.85	-3.84/-2.2	-5.21/-5.58	-5.86/-5.47	-6.83/-4.16	-3.55/-2.67	-3.01/-5.26	-3.84/-3.2	-4.09/-5.66	-7.16/-6.38	-6.65/-9	-10.47/-16.23	-11.53/-7.43	-8.71/-8.9	-11.89/-13.05	-12.17/-8.73	-9.26/-14.02	-13.25/-12.4	-12.87/-11.8
Θ(82.5°)	-11.42/-14.2	-10.74/-9.79	-7.96/-6.03	-8.1/-6.4	-5.6/-5.29	-5.31/-6.57	-7.12/-7.73	-7.87/-7.86	-9.04/-6.81	-7.97/-3.95	-3.81/-2.65	-1.98/-4.89	-3.08/-2.61	-4.89/-5.72	-4.87/-4.38	-5.59/-6.07	-8.49/-14.9	-9.65/-7.05	-7.31/-8.46	-11.32/-11.25	-10.47/-8.23	-8.36/-11.4	-18.08/-18.91	-14.07/-9.88
Θ(90°)	-9.12/-12.23	-10.17/-9.94	-8.04/-6.3	-8.1/-5.78	-10.57/-5.33	-5.84/-8.61	-9.21/-9.52	-10.16/-8.85	-9.1/-6.05	-6.39/-3.2	-3.19/-2.48	-1.67/-4.55	-3.46/-3.16	-4.61/-6.08	-5.21/-5.55	-6.8/-6.73	-11.14/-18.57	-8.71/-7.66	-7.46/-5.72	-8.06/-8.95	-7.27/-7.75	-8.07/-8.65	-15.07/-18.55	-13.27/-9.48
Θ(97.5°)	-10.71/-11.98	-10.97/-10.59	-8.72/-5.94	-7.71/-5.48	-4.53/-4.27	-4.86/-5.78	-6.17/-6.75	-11.69/-10.55	-9.29/-5.9	-5.72/-2.76	-3.48/-3.34	-3.26/-5.92	-5.89/-4.66	-5.88/-7.23	-7.83/-8.47	-6.83/-6.22	-11.67/-14.52	-6.99/-7.65	-8.14/-7.76	-9.22/-11.87	-8.65/-8.26	-10.02/-12.65	-15.76/-18.91	-12.27/-8.86
Θ(105°)	-10.98/-12.64	-11.48/-12.23	-10.84/-8.74	-8.98/-6.66	-6.26/-6.2	-4.94/-4.74	-5.38/-4.84	-12.63/-12.47	-9.98/-5.94	-4.3/-3.25	-5.26/-6.53	-6.4/-7.85	-6.24/-5.4	-6.63/-9.37	-8.75/-6.83	-5.91/-5.9	-12.82/-11.6	-5.1/-7.1	-8.91/-7.84	-10.73/-16.35	-10.5/-10.07	-10.85/-14.33	-19.13/-16.85	-9.93/-7.33
Θ(112.5°)	-7.04/-11.1	-11.58/-12.01	-11.65/-9.89	-12.66/-13.35	-8.45/-6.56	-5.47/-4.63	-5.67/-10.4	-18.07/-17.78	-14.56/-9.48	-6.6/-5.32	-6.96/-7.1	-8.02/-8.29	-7.89/-7.35	-8.06/-10.72	-9.7/-8.14	-5.8/-6.61	-10.61/-12.65	-5.73/-6.19	-5.89/-11.47	-12.52/-11.9	-10.11/-6.15	-6.43/-9.08	-14.67/-13.4	-9.03/-6.12
Θ(120°)	-9.07/-12.31	-17.73/-18.9	-16.56/-15.93	-13.53/-14.18	-13.19/-9.02	-6.38/-4.53	-7.88/-12.91	-19.01/-18.97	-17.71/-14.26	-8.4/-8.05	-7.92/-9.81	-11.92/-16.28	-12.84/-8.87	-10.97/-18.19	-14.83/-10.85	-5.4/-6.08	-7.95/-9.9	-7.78/-5.59	-4.29/-14.49	-13.69/-7.29	-9.69/-6.55	-8.62/-12.68	-18.31/-12.9	-8.05/-7.03
Θ(127.5°)	-9.5/-18.15	-16.74/-18.75	-18.29/-16.57	-12.9/-9.86	-11.36/-11.82	-10.43/-10.05	-9.79/-16	-16.48/-12.66	-17.11/-18.63	-16.82/-11.21	-9.55/-9.05	-10.87/-12.94	-16.88/-18.8	-17.79/-6.52	-12.63/-4.28	-9.39/-6.6	-11.73/-3.39	-1.68/-10.65	-12.63/-4.28	-7.8/-7.2	-9.51/-17.95	-13.01/-14.5	-11.22/-6.54	
Θ(135°)	-12.6/-18.88	-18.37/-17.79	-17.85/-17.86	-17.21/-12.73	-10.03/-10.85	-12.87/-15.25	-18.79/-13.51	-11.87/-10.03	-9.17/-10.92	-12.25/-10.88	-10.19/-12.07	-18.48/-18.39	-17.99/-18.48	-15.11/-16.53	-11.49/-4.66	-8.02/-5.13	-4.83/-10.13	-15.67/-1.63	-0.21/-7.82	-16.37/-6.16	-3.27/-10.28	-6.54/-9.72	-15.84/-13.57	-13.78/-11.27
Θ(142.5°)	-15.36/-18.27	-18.81/-15.87	-18.34/-18.3	-17.87/-19.08	-18.09/-14.83	-12.06/-10.39	-8.89/-6.4	-4.47/-4.41	-5.03/-5.09	-5.65/-7.24	-8.05/-4.95	-13.64/-17.72	-12.62/-11.44	-13.24/-13.79	-9.56/-9.35	-6.38/-3.16	-7.02/-10.97	-8.25/-9.3	-1.37/-4.77	-10.32/-7.53	-3.53/-5.12	-10.63/-10.9	-16.63/-17.57	-17.04/-14.91
Θ(150°)	-8.59/-8.44	-11.38/-16.37	-19.16/-18.27	-16.69/-16.69	-18.68/-18.33	-18.86/-18.92	-18.53/-18.36	-18.18/-18.19	-15.48/-14.32	-13.62/-13.5	-18.74/-18.79	-17.87/-11.75	-17.61/-17.75	-16.65/-16.67	-12.52/-11.42	-6.48/-2.52	-1.53/-3.36	-6.66/-10.27	-9.89/-8.51	-10.07/-18.21	-17.59/-16.78	-15.85/-11.75		
Θ(157.5°)	-11.49/-13.27	-15.77/-18.84	-17.54/-18.35	-18.01/-18.18	-18.99/-15.76	-13.73/-13.42	-12.61/-12.91	-14.92/-16.74	-17.2/-15.47	-13.81/-13.28	-13.34/-12.67	-11.79/-11.29	-11.17/-11.79	-12.94/-12.82	-11.72/-11.38	-13.56/-16.81	-15.1/-10.51	-6.41/-4.1	-3.49/-4.3	-5.97/-8.35	-9.21/-7.15	-5.4/-5.79	-7.47/-8.93	-9.51/-10.25
Θ(165°)	-12.51/-13.3	-10.75/-12.77	-16.71/-17.19	-13.74/-12.4	-12.82/-15.52	-17.54/-17.88	-15.11/-12.27	-11.36/-11.24	-12.15/-13.55	-14.28/-14.06	-13.71/-13.73	-15.52/-18.72	-16.34/-17.98	-19.17/-18.75	-18.08/-16.86	-17.1/-16.41	-12.43/-8.41	-5.42/-4.01	-4.11/-5.01	-6.8/-9.1	-10.34/-9.9	-7.91/-6.99	-7.57/-9.09	-10.71/-12.31
Θ(172.5°)	-18.92/-18.07	-18.78/-17.67	-17.74/-18.23	-17.19/-16.47	-18.38/-18.74	-18.23/-18.26	-17.87/-18.74	-17.99/-19.09	-18.46/-17.92	-17.87/-18.19	-17.36/-16.43	-15.62/-15.68	-16.17/-16.94	-17.28/-17.63	-16.87/-14.74	-12.46/-10.63	-8.34/-6.47	-5.25/-4.74	-9.47/-5.46	-6.41/-8.11	-10.12/-12.4	-13.62/-13.43	-13.49/-15.47	-17.86/-19.22
Θ(180°)	-15.33/-15.4	-15.87/-14.35	-13.6/-14.46	-13.59/-12.54	-11.44/-10.53	-10.29/-10.51	-10.31/-10.18	-10.36/-10.73	-10.6/-10.48	-10.07/-10.2	-10.81/-11.39	-11.98/-12.49	-13/-12.75	-12.15/-11.26	-10.51/-9.62	-8.85/-8.42	-8.02/-7.97	-7.92/-8.09	-8.48/-9.36	-10.49/-11.34	-12.94/-14.51	-15.24/-15.34	-14.42/-13.92	-14.35/-14.71
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°)	-2.4/-6.62	-4.89/-3.61	-2.91/-2.43	-2.15/-1.96	-1.75/-1.81	-2.07/-2.61	-3.14/-3.65	-4.25/-4.93	-5.82/-7.07	-9.21/-12.44	-17.91/-18.76	-17.76/-11.96	-8.61/-6.1	-4.18/-2.87	-2.15/-4.47	-0.93/-0.77	-0.8/-0.86	-1.02/-1.26	-1.52/-2.03	-2.96/-4.52	-6.54/-4.89	-11.53/-15.98	-18.17/-16.68	-13.5/-10.22
Θ(7.5°)	-8.88/-6.14	-4.15/-2.59	-1.64/-0.86	-0.26/0.05	0.23/0.06	-1.14/-1.83	-2.84/-3.97	-5.48/-7.36	-10.16/-13.52	-15.59/-14.72	-11.09/-8.79	-7.17/-6.56	-4.79/-4.19	-3.7/-3.11	-2.89/-2.85	-2.74/-2.71	-2.82/-3	-3.11/-3.54	-4.25/-3.4	-6.51/-7.77	-9.57/-12.21	-16.45/-18.22	-18.27/-12.81	



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(7.5°)	-13.92/-15.53	-17.54/-17.55	-18.93/-18.07	-18.97/-18.69	-18.23/-18.09	-16.03/-14.74	-13.88/-13.23	-12.46/-11.83	-11.35/-11.19	-11.3/-11.42	-11.51/-11.78	-12.05/-12.36	-12.78/-13.26	-13.62/-13.92	-14.05/-14.16	-14.01/-13.58	-12.72/-11.8	-10.83/-9.86	-9/-8.33	-7.93/-7.63	-7.55/-7.56	-7.87/-8.37	-9/-10	-11.18/-12.49
Θ(15°)	-11.74/-13.61	-16.07/-18.94	-18.24/-18	-19.1/-19.38	-18.89/-18.01	-19.29/-17.28	-18.7/-17.9	-16.86/-15.86	-14.91/-14.27	-13.79/-13.36	-13.01/-12.66	-12.28/-11.89	-11.53/-10.98	-10.27/-9.58	-9.02/-8.68	-8.48/-8.4	-8.51/-8.43	-8.29/-7.75	-6.99/-6.32	-5.84/-5.53	-5.42/-5.59	-5.91/-6.46	-7.17/-8.07	-9.13/-10.36
Θ(22.5°)	-10.52/-12.25	-14.89/-17.99	-16.25/-18.94	-17.38/-18.68	-18.22/-17.99	-19.14/-17.77	-18.38/-17.96	-18.06/-16.51	-15.17/-14.26	-13.81/-13.65	-13.64/-13.49	-13.23/-12.68	-11.81/-10.49	-9.97/-7.71	-6.65/-5.94	-5.62/-5.63	-5.91/-6.26	-6.4/-6.06	-5.43/-4.79	-4.72/-4.13	-4.17/-4.43	-4.85/-5.43	-6.21/-7.17	-8.24/-9.32
Θ(30°)	-11.71/-12.59	-14.1/-16.67	-18.1/-18.58	-19.35/-18.57	-17.97/-18.22	-18.21/-17.49	-16.23/-14.93	-13.82/-12.78	-12.05/-11.6	-11.66/-12.21	-13.34/-14.78	-16.29/-16.82	-15.79/-13.57	-10.95/-8.59	-6.77/-5.52	-4.85/-4.74	-3.98/-5.35	-5.5/-5.18	-4.52/-3.88	-3.44/-3.31	-3.51/-4.04	-4.85/-5.88	-7.18/-8.57	-9.84/-10.89
Θ(37.5°)	-15.78/-15.26	-15.18/-16.02	-17.71/-18.63	-17.35/-16.18	-15.93/-15.64	-14.56/-13	-11.83/-11.16	-10.79/-10.58	-10.37/-10.24	-10.69/-12.04	-14.94/-18.82	-19.18/-18.82	-18.1/-18.54	-17.13/-13.33	-9.59/-7.29	-5.87/-5.3	-5.33/-5.64	-5.83/-5.36	-4.57/-3.84	-3.39/-3.3	-3.64/-4.46	-5.82/-7.69	-10.08/-12.55	-14.69/-15.94
Θ(45°)	-17.9/-19.27	-16.7/-16.64	-18.77/-18.68	-18.22/-16.66	-18.52/-15.23	-12.47/-10.7	-9.97/-10.04	-10.81/-11.76	-12.08/-11.66	-11.83/-13.74	-18.76/-19.06	-18.85/-14.88	-14.05/-14.95	-17.13/-16.97	-12.78/-9.17	-6.8/-5.58	-5.23/-5.59	-6.06/-6	-5.19/-4.22	-3.59/-3.51	-4.03/-4.17	-7.05/-9.85	-13.88/-18.36	-17.75/-18.25
Θ(52.5°)	-18.91/-14.08	-11.77/-11.2	-12/-14.05	-17.18/-18.94	-17.2/-18.47	-13.9/-12	-11.56/-12.56	-14.76/-15.96	-13.62/-11.15	-10.47/-12.1	-16.71/-18.09	-13.43/-11.08	-10.42/-10.6	-10.95/-10.67	-9.31/-7.51	-5.94/-4.97	-4.58/-4.85	-5.46/-5.8	-5.25/-4.16	-3.23/-3.03	-3.66/-5.02	-7.1/-9.94	-14.38/-17.97	-17.76/-18.56
Θ(60°)	-14.67/-11.17	-9.18/-8.5	-8.8/-9.89	-11.86/-16.26	-18.87/-19.34	-13.59/-11.44	-10.88/-11.25	-11.9/-11.25	-9.2/-7.55	-7.23/-9.01	-14.09/-17.67	-13.25/-10.42	-9.67/-9.61	-9.47/-8.86	-7.87/-8.69	-6.14/-5.59	-5.27/-5.35	-5.72/-6.08	-5.86/-4.75	-3.48/-2.88	-3.28/-4.53	-6.16/-7.87	-10.33/-13.75	-17.54/-17.96
Θ(67.5°)	-15.42/-13.14	-11.58/-10.95	-11.03/-12.23	-15.59/-18.77	-17.5/-11.34	-8.66/-7.54	-7.38/-9.94	-9.15/-10.15	-9.51/-8.02	-8.06/-10.95	-17.98/-16.5	-10.29/-8.43	-8.05/-7.82	-7.26/-6.39	-5.45/-4.73	-4.39/-4.38	-4.6/-5.05	-5.71/-6.47	-6.94/-6.56	-5.31/-4.26	-4.4/-5.82	-7.61/-8.67	-9.92/-12.03	-14.54/-16.04
Θ(75°)	-17.51/-15.83	-14.41/-13.32	-12.12/-11.31	-11.13/-10.96	-10.1/-8.83	-7.94/-7.6	-7.95/-9.08	-11.31/-14.09	-12.68/-9.59	-9.15/-12.61	-18.98/-11.61	-8.15/-7.08	-6.92/-6.62	-5.94/-5.03	-4.16/-3.56	-3.34/-3.44	-3.78/-4.22	-4.86/-5.65	-6.23/-6.35	-5.68/-4.56	-4.18/-5.27	-7.55/-9.79	-11.69/-13.83	-15.84/-17.27
Θ(82.5°)	-14.38/-13.37	-12.96/-12.35	-10.83/-9.41	-8.98/-9.02	-8.98/-8.64	-8.19/-7.89	-8.04/-8.75	-10.41/-12.37	-10.66/-7.87	-7.53/-10.59	-14.42/-10.36	-7.83/-7.1	-6.83/-62	-5.27/-4.36	-3.6/-3.22	-3.38/-4.01	-6.71/-5.08	-5.38/-6.07	-6.91/-7.51	-4.22/-4.76	-6.38/-8.24	-10.44/-12.86	-14.35/-14.8	
Θ(90°)	-12.18/-12.65	-14.41/-15.61	-13.4/-10.05	-7.47/-5.97	-5.52/-5.76	-6.07/-6.27	-6.52/-7.08	-8.71/-12.03	-12.56/-8.8	-7.81/-10.63	-16.61/-12.58	-9.73/-9.15	-8.93/-8.18	-7.03/-5.86	-4.53/-3.5	-3.36/-4.22	-5.39/-5.89	-5.73/-5.54	-5.95/-7.07	-7.39/-5.9	-4.8/-5.04	-6.38/-7.95	-10/-12.59	-13.63/-12.73
Θ(97.5°)	-9.42/-11.46	-14.51/-15.46	-11.75/-7.38	-4.6/-3.47	-3.77/-4.84	-6.07/-6.96	-7.49/-8.15	-10.52/-16.4	-14.28/-9.53	-9.52/-15.2	-17.68/-11.39	-10.57/-11.66	-12.07/-11.46	-10.22/-8.19	-5.81/-4.49	-4.79/-6.61	-9.2/-10.47	-9.73/-8.61	-8.29/-8.9	-7.94/-5.19	-3.37/-3.09	-4.09/-5.46	-6.94/-8.56	-9.28/-8.95
Θ(105°)	-11.18/-15.39	-17.54/-19.1	-13.75/-7.55	-4.01/-2.57	-2.83/-4.23	-5.94/-7.31	-7.81/-8.58	-11.51/-15.28	-10.34/-7.75	-7.81/-8.58	-10.34/-7.75	-11.92/-8.92	-9.33/-10.55	-10.36/-9.62	-8.57/-6.74	-4.85/-4.11	-5.08/-7.48	-9.42/-12.51	-15.23/-9.7	-6.02/-4.68	-5.26/-6.95	-8.81/-9.77	-9.57/-9.51	
Θ(112.5°)	-14.88/-16.02	-13.74/-12.19	-10.21/-6.2	-3.06/-1.77	-2.06/-3.58	-5.49/-6.79	-7.11/-7.81	-10.11/-11.09	-8.61/-8.1	-11.17/-12.83	-9.43/-9.3	-11.93/-12.55	-10.48/-9.39	-8.67/-7.4	-6.45/-7.03	-9.68/-13.74	-14.99/-12.3	-9.66/-8.59	-9.55/-12.88	-15.31/-11.32	-7.57/-5.51	-5.12/-6.27	-8.81/-11.49	-12.67/-13.17
Θ(120°)	-12.54/-14.31	-13.32/-11.52	-10.05/-7.53	-4.85/-3.35	-3.27/-4.29	-5.69/-6.63	-6.98/-7.73	-9.07/-9.39	-8.92/-9.66	-10.16/-7.89	-6.58/-7.72	-10.88/-13.11	-12.23/-11.01	-9.35/-7.95	-7.79/-9.62	-13.98/-18.33	-16.74/-14.49	-13.28/-13.96	-17.66/-18.03	-17.78/-14.32	-10.7/-8.12	-6.81/-6.89	-8.27/-9.93	-10.65/-11.04
Θ(127.5°)	-18.98/-17.7	-11.34/-8.02	-6.55/-5.16	-4.15/-3.44	-4.44/-4.24	-5.37/-6.02	-6.11/-6.21	-6.54/-5.97	-8.23/-6.52	-6.6/-5.32	-8.86/-6.38	-7.87/-7.52	-6.3/-5.91	-6.8/-8.08	-12.09/-12.99	-10.24/-11.18	-11.47/-12.87	-14.48/-15.41	-16.85/-18.95	-17.59/-17.97	-13.91/-12.01	-12.38/-14.74	-17.46/-18.94	
Θ(135°)	-14.37/-11.87	-9.34/-5.65	-3.91/-2.97	-2.66/-2.88	-3.62/-4.73	-5.79/-5.99	-5.49/-5.13	-5.52/-7.08	-10.06/-12.61	-10.84/-94	-9.95/-11.08	-10.51/-9.16	-8.17/-9.17	-6.32/-6.21	-7.19/-9.17	-10.98/-10.86	-9.9/-9.73	-11.87/-13.78	-18.77/-18.03	-18.14/-18.91	-18.1/-14.7	-19.18/-19.7	-9.19/-9.87	-11.57/-13.85
Θ(142.5°)	-16.09/-18.34	-16.95/-12.27	-9.29/-7.56	-6.82/-6.66	-6.85/-6.93	-6.52/-5.78	-5.28/-5.43	-6.72/-9.58	-15.31/-18.46	-14.17/-13.42	-15.66/-17.01	-14.22/-11.99	-10.93/-10.08	-9.49/-9.56	-10.48/-12.15	-13.41/-13.22	-12.69/-13.26	-15.77/-18	-17.72/-16.89	-13.42/-11.83	-10.88/-10.01	-9.26/-8.66	-8.42/-8.81	-10.06/-12.39
Θ(150°)	-11.49/-11.71	-10.95/-9.54	-7.88/-6.36	-5.24/-4.51	-4.17/-4.07	-4.11/-4.39	-5.21/-6.83	-9.93/-15.43	-18.97/-15.02	-11.93/-11.67	-13.63/-13.74	-17.93/-18.59	-16.79/-15.75	-15.27/-15.39	-15.92/-16.54	-16.61/-16.3	-16.21/-11.71	-17.47/-17.78	-18.13/-13.76	-11.36/-10.04	-9.47/-8.16	-8.84/-8.59	-6.53/-8.88	-9.58/-10.66
Θ(157.5°)	-9.06/-8.72	-6.54/-5.45	-4.58/-4	-3.62/-3.5	-3.66/-4.09	-4.79/-5.92	-7.71/-10.54	-14.5/-15.77	-12.55/-10.07	-8.86/-8.8	-9.6/-10.92	-12.12/-12.85	-13.09/-13.35	-13.75/-14.11	-14.24/-14.07	-13.49/-13.08	-12.98/-13.68	-15.27/-17.78	-18.23/-17.08	-14.79/-13.47	-12.94/-12.77	-12.63/-12.25	-11.71/-12.1	-10.68/-10.01
Θ(165°)	-12.82/-10.97	-9.42/-8.36	-7.44/-7.47	-7.47/-5.3	-7.92/-8.57	-9.63/-11.09	-10.76/-13.27	-12.32/-10.69	-9.27/-8.35	-7.9/-7.91	-8.26/-6.66	-8.91/-9.01	-9.1/-9.32	-9.63/-10.02	-10.18/-10.12	-9.93/-9.78	-10.08/-10.85	-12.43/-15.27	-18.24/-18.68	-18.27/-17.97	-13.83/-18.11	-18.21/-19.02	-17.86/-18.3	-18.05/-15.19
Θ(172.5°)	-17.54/-18.45	-17.57/-18.42	-18.25/-18.01	-18.09/-19.15	-18.94/-18.75	-16.75/-14.74	-12.73/-11.17	-10.9/-9.27	-8.91/-8.79	-8.83/-9.11	-9.31/-9.36	-9.12/-8.84	-8.62/-8.54	-8.61/-8.73	-8.88/-9.97	-9.1/-9.31	-9.76/-10.47	-11.71/-13.44	-15.62/-17.53	-17.61/-16.5	-15.18/-14.36	-14.22/-14.88	-16.19/-18.12	-18/-19.16
Θ(180°)	-13.48/-13.96	-14.23/-14.04	-13.57/-12.98	-12.46/-11.83	-11.4/-10.98	-10.64/-10.21	-9.84/-9.64	-9.55/-9.67	-10/-10.49	-11.17/-11.84	-12.25/-12.21	-11.76/-11.18	-10.61/-10.26	-10.15/-10.3	-10.61/-11.04	-11.45/-11.65	-11.65/-11.59	-11.76/-12.15	-12.63/-12.99	-13/-12.6	-12.03/-11.42	-11.05/-10.96	-11.22/-11.74	-12.23/-12.89
Freq(Hz)	5.2GfPol	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°)	-0.4/-1.12	-2.25/-2.98	-3.79/-5	-6.41/-7.86	-8.31/-7.56	-6.18/-4.65	-3.46/-2.49	-1.51/-0.8	-2.07/-0.12	0.380/-59	0.770/-55	0.26/-0.14	-0.268/-3.77	-0.509/-6.73	-0.644/-6.1	-0.861/-10.08	-10.13/-8.4	-2.95/-1.8	-0.97/-0.22	0.280/-64	0.770/-83	0.410/-50	0.830/-72	0.345/-105
Θ(7.5°)	-1.73/-2.39	-3.7/-5.46	-7.67/-10.52	-14.23/-17.01	-14.97/-11.35	-7.74/-4.86	-3.15/-2.11	-1.28/-0.71	-0.250/-0.19	0.560/-79	1.390/-8	0.49/-0.04	-0.68/-1.29	-1.8/-2.5	-3.32/-4.27	-5.61/-6.24	-6.79/-6.34	-5.49/-4.28	-3.03/-2.09	-1.27/-0.62	-0.210/-0.3	0.01/-0.13	-0.43/-0.84	-1.19/-1.33
Θ(15°)	-3.61/-4.01	-4.85/-6.31	-8.13/-10.95	-15.11/-18.02	-19.72/-14.19	-9.04/-9.59	-4.53/-3.23	-2.15/-1.75	-1.69/-1.64	-1.82/-1.95	-1.86/-1.68	-1.68/-1.76	-1.88/-2.1	-2.36/-2.65	-2.92/-3.63	-4.37/-4.75	-5.19/-5.21	-5.04/-4.27	-3.38/-2.58	-2.1/-55	-1.41/-1.63	-1.94/-2.28	-2.58/-2.81	-3.06/-3.2
Θ(22.5°)	-2.89/-3.36	-4.09/-5.55	-7.25/-9.36	-11.94/-14.47	-18.58/-18.25	-12.71/-8.8	-5.52/-3.27	-2.33/-2.38	-2.91/-3.47	-3.71/-3.31	-2.82/-4.21	-2.31/-2.33	-2.5/-2.72	-3.08/-3.52	-4.11/-4.66	-4.96/-5.12	-5.55/-5.85	-5.88/-5.46	-4.52/-3.63	-3.2/-3.08	-3.35/-4.01	-4.54/-4.28	-3.48/-2.97	-2.72/-2.67
Θ(30°)	-1.41/-2.16	-3.64/-8.87	-7.44/-10.5	-14.11/-17.35	-18.38/-18.99	-18.36/-16.99	-9.04/-5.93	-4.96/-4.74	-4.55/-3.89	-2.65/-1.51	-0.83/-0.54	-0.24/-0.17	-0.59/-1.55	-2.98/-4.75	-6.02/-5.99	-5.71/-6.05	-6.05/-4.38	-2.89/-2.11	-1.94/-2.34	-2.77/-2.98	-3.32/-2.89	-2.22/-1.59	-1.12/-1.23	
Θ(37.5°)	-1.75/-2.7	-4.35/-6.44	-8.64/-10.53	-17.66/-18.39	-17.81/-18.13	-18.4/-13.8	-7.92/-4.95	-3.59/-3.4	-3.61/-2.94	-1.58/-0.61	-0.230/-1.1	-1.19/-1.59	-2.44/-4.55	-7.35/-9.8	-11.29/-11.07	-8.67/-6.5	-6.36/-7.28	-7.76/-7.59	-7.02/-6.71	-6.17/-4.79	-3.67/-2.69	-1.62/-0.92	-0.94/-1.43	
Θ(45°)	-5.65/-6.32	-7.79/-10.49	-13.88/-18.22	-15.09/-11.9	-10.71/-9.53	-10.4/-5.97	-6.6/-5.35	-5.66/-6.67	-11.48/-7.85	-4.53/-3.52	-3.6/-3.05	-2.36/-1.95	-1.66/-1.56	-2.53/-4.83	-6.92/-8.04	-8.29/-7.31	-6.84/-7.38	-8.16/-7.4	-5.51/-4.18	-3.86/-4.29	-5.15/-5.01	-4.62/-4.4	-3.75/-3.27	-3.45/-4.87
Θ(52.5°)	-4.71/-5.29	-6.85/-10.38	-12.74/-14.44	-12.46/-10.92	-10.93/-10.34	-16.1/-17.36	-9.15/-7.45	-7.72/-8.71	-8.01/-6.23	-5.12/-5.83	-7.56/-7.14	-5.14/-4.66	-4.77/-3.72	-6.83/-5.16	-6.83/-11.02	-15.51/-14.08	-12.33/-11.46	-10.21/-7.33	-4.22/-4.9					



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(60°)	-5.87/-5.88	-6.06/-5.81	-5.56/-6.33	-10.23/-16.72	-13.28/-8.9	-8.68/-12.11	-13.71/-6.48	-3.72/-4.18	-6.09/-3.34	-2.36/-4.43	-6.31/-10.87	-9.83/-7.51	-5.46/-2.72	-1.14/-1.21	-3.59/-6.31	-6.41/-4.18	-2.75/-1.93	-2.19/-4.15	-5.2/-5.94	-7.26/-10.3	-18.44/-17.88	-13.08/-11.34	-9.04/-7.7	-7.11/-6.42
Θ(67.5°)	-6.76/-7.31	-7.61/-7.21	-7.23/-8.02	-10.63/-14.1	-13.91/-10.93	-9.24/-10.09	-10.52/-3.91	-1.96/-3.29	-3.9/-9.93	-0.72/-3.96	-4.57/-5.97	-5.78/-3.89	-5.69/-3.16	-1.12/-1.35	-1.56/-2.41	-4.36/-4.1	-4/-1.69	-0.77/-2.47	-6.51/-6.95	-5.74/-8.28	-15.12/-14.79	-11.19/-11.51	-10.26/-9.93	-8.66/-8.41
Θ(75°)	-5.93/-5.77	-5.56/-6.35	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26	-6.94/-6.26
Θ(82.5°)	-4.79/-5.5	-5.41/-6.41	-6.75/-5.89	-6.68/-9.23	-13.6/-16.18	-11.75/-11.99	-8.91/-23.1	-1.49/-2.34	-1.33/-0.9	-2.17/-3.96	-2.36/-3.69	-6.3/-6.73	-18.63/-9.92	-8.43/-7.35	-3.26/-1.09	-0.41/-1.63	-5.95/-6.1	-1.41/-1.54	-6.09/-8.24	-4.88/-7.2	-13.52/-18.9	-18.81/-18.89	-14.88/-9.91	-7.32/-5.27
Θ(90°)	-6.23/-8.99	-8.08/-9.84	-9.71/-6.96	-7.26/-8.28	-12.92/-13.8	-9.82/-11.22	-10.83/-3.16	-2.29/-2.76	-2.12/-1.15	-5.46/-6.43	-5.24/-5.61	-14.25/-10.45	-9.59/-15.48	-18.38/-16.31	-8.59/-4.24	-1.92/-1.99	-4.57/-7.41	-2.85/-3.92	-5.76/-9.89	-5.78/-3.75	-16.4/-16.21	-14.9/-15.78	-12.38/-10.33	-12.11/-7.75
Θ(97.5°)	-5.11/-8.1	-8.37/-13.5	-9.61/-6.26	-10.32/-12.49	-12.82/-10.64	-7.33/-8.43	-11.36/-5.13	-5.61/-6.59	-4.16/-4.49	-8.39/-7.71	-7.2/-8.59	-18.71/-16.12	-10.09/-7.62	-10.07/-13.62	-13.9/-8.99	-3.52/-2.25	-4.82/-9.38	-5.58/-4.96	-6.43/-14.44	-11.6/-16.53	-8.31/-11.44	-9.3/-9.41	-11.93/-9.53	-9.84/-6.25
Θ(105°)	-7.42/-11.4	-11.05/-17.98	-16.94/-9.98	-7.99/-9.18	-13.93/-14.14	-11.57/-13.71	-11.93/-8.22	-9.34/-10.14	-7.74/-7.61	-15.77/-10.7	-10.69/-11.89	-17.81/-16.81	-7.73/-5.74	-8.67/-10.82	-10.48/-9.92	-6.37/-4.4	-5.03/-8	-5.39/-5.81	-8.15/-10.72	-19.81/-14.25	-17.92/-12.07	-9.38/-12.15	-7.07/-7.18	-8.95/-7.39
Θ(112.5°)	-7.98/-13.81	-19.22/-11.95	-9.32/-7.55	-6.47/-8.82	-12.75/-17.88	-14.75/-15.75	-18.58/-13.42	-15.5/-14.06	-10.65/-14.32	-16.62/-13.76	-11.85/-16.86	-12.02/-8.72	-5.08/-3.58	-4.62/-6.1	-8.97/-14.7	-10.45/-5.88	-9.41/-10.07	-4.52/-4.34	-6.18/-6.71	-13.96/-12.76	-14.74/-12.14	-9.25/-13.67	-11.1/-9.23	-8.68/-10.14
Θ(120°)	-13.27/-12.06	-8.97/-7.49	-5.16/-4.4	-4.6/-6.77	-14.15/-18.52	-18/-19.53	-19.07/-18.69	-16.32/-15.38	-18.96/-18.3	-11.33/-7.16	-6.57/-8.82	-6.3/-8.44	-5.15/-2.48	-5.36/-5.73	-5.08/-7.93	-10.43/-8.75	-8.61/-6.9	-3.34/-5.46	-9.61/-5.64	-10.94/-9.35	-12.1/-18.27	-11.63/-6.97	-5.78/-6.84	-10.15/-9.22
Θ(127.5°)	-4.19/-7.19	-6.44/-4.6	-4.2/-3.56	-5.94/-10.19	-18.47/-18.72	-18.33/-18.92	-16.61/-15.4	-11.36/-8.62	-9.72/-9.51	-7.22/-4.55	-5.28/-8.7	-8.31/-17.7	-7.67/-7.55	-11.85/-12.67	-11.51/-8.38	-6.71/-7.45	-11.51/-9.88	-6.01/-6.54	-14.57/-6.07	-11.33/-9.49	-17.92/-6.65	-13.56/-8.21	-6.78/-5.24	-5.47/-4.33
Θ(135°)	-2.59/-2.43	-2.56/-2.51	-3.59/-4.92	-8.13/-14.25	-14.87/-15.91	-13.75/-11.05	-10.8/-8.97	-7.49/-6.64	-6.79/-8.01	-5.97/-3.63	-3.81/-5.38	-4.84/-6.48	-7.26/-5.38	-5.24/-8.28	-10.25/-8.06	-7.4/-10.79	-16.12/-10.17	-4.35/-4.7	-13.56/-7.64	-14.64/-9.19	-9.42/-7.42	-5.46/-9.48	-4.39/-3.92	-2.77/-3.17
Θ(142.5°)	-8.49/-7.9	-8.77/-6.11	-6.02/-7.2	-8.68/-9.93	-11.7/-16.09	-18.73/-13.82	-9.56/-7.58	-5.02/-3.09	-3.73/-5.37	-7.23/-9.18	-8.53/-7.39	-8.22/-11.84	-11.98/-10.21	-13.63/-18.49	-18.67/-10.65	-8.97/-8.94	-7.57/-4.32	-2.55/-4.41	-11.45/-18.71	-16.51/-7.93	-6.22/-4.69	-2.58/-2.84	-3.39/-4.75	-6.68/-7.8
Θ(150°)	-10/-12.67	-18.26/-17.41	-17.93/-18.89	-18.15/-14.51	-13.19/-14.06	-15.18/-15.3	-16.3/-15.74	-11.14/-7.3	-5.28/-5.11	-6.36/-7.07	-6.69/-6.74	-8.26/-10.78	-11.14/-9.2	-8.39/-9.36	-12.21/-17.26	-17.52/-18.07	-11.69/-7.72	-5.93/-6.55	-9.77/-15.48	-17.63/-16.44	-10.27/-7.7	-6.12/-4.56	-4.28/-6.13	-9.79/-10.8
Θ(157.5°)	-5.68/-6.42	-5.79/-5.19	-5.54/-6.51	-7.53/-9.04	-10.91/-12.97	-14.33/-13.42	-11.32/-8.96	-6.94/-5.9	-5.95/-6.71	-6.71/-6.34	-6.82/-8.15	-9.91/-11.86	-12.78/-11.92	-10.48/-10.3	-11.4/-11.25	-8.52/-8.56	-7.29/-6.76	-6.97/-8.26	-12.81/-17.74	-18.28/-13.57	-9.13/-8.67	-4.1/-3.12	-1.79/-1.09	-1.9/-3.6
Θ(165°)	-5.92/-6.27	-5.52/-5.22	-5.63/-6.94	-9.62/-13.51	-16.92/-18.5	-18.47/-17.84	-16.82/-16.92	-12.33/-18.81	-17.83/-18.96	-17.39/-14.71	-15.41/-18.26	-18.05/-18.65	-11.75/-18.29	-17.69/-14.72	-16.26/-11.76	-9.47/-8.9	-9.04/-9.77	-10.92/-11.74	-13.7/-18.12	-18.62/-17.31	-14.24/-8.05	-4.33/-3.03	-2.81/-2.87	-3.53/-4.64
Θ(172.5°)	-3.71/-3.74	-3.82/-4.59	-5.82/-7.36	-9.24/-11.35	-13.06/-14.8	-16.71/-16.11	-13.85/-12.6	-11.75/-10.7	-9.94/-9.91	-10.27/-10.86	-11.3/-11.24	-10.82/-10.4	-9.97/-9.9	-10.9/-12.52	-13.28/-13.36	-13.58/-14.12	-16.08/-19.31	-19.06/-18.16	-17.8/-18.58	-17.38/-17.98	-17.6/-13.78	-9.67/-7.33	-6.41/-6	-5.17/-4.05
Θ(180°)	-18.4/-18.84	-18.23/-19.23	-19.21/-19.43	-17.54/-17.44	-18.55/-17.57	-15.53/-12.98	-11.38/-10.58	-10.54/-10.37	-10.02/-9.71	-9.56/-9.17	-8.97/-8.92	-8.95/-9.05	-9.35/-9.75	-10.76/-11.91	-13.02/-13.18	-12.61/-12.45	-12.62/-14.16	-15.92/-17.91	-19.34/-18.92	-17.36/-16.46	-17.65/-17.36	-16.44/-15.96	-14.89/-15.03	-17.11/-18.2
Freq(Hz)	5.60Pol.	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°)	-3.33/-3.57	-4.52/-6.41	-8.16/-10.39	-13.21/-17.47	-17.96/-17.85	-18.33/-14.36	-12.34/-10.78	-9.5/-8.41	-17.8/-16.01	-4.75/-3.87	-3.4/-3.1	-3.31/-3.78	-4.32/-4.92	-5.66/-6.47	-7.65/-9.68	-13.01/-17.41	-17.9/-18.11	-14.14/-11.04	-8.97/-7.49	-6.15/-4.94	-4.06/-3.47	-2.68/-2.33	-2.2/-2.47	-2.85/-3.17
Θ(7.5°)	-7.94/-7.54	-4.87/-5.69	-6.02/-7.27	-9.37/-13.17	-16.59/-18.69	-12.57/-13.35	-8.34/-6.64	-5.07/-3.73	-2.73/-2.33	-2.11/-1.9	-1.84/-2.23	-3.96/-3.84	-4.64/-5.68	-7.78/-9.6	-11.95/-16.3	-18.16/-16	-13.01/-11.24	-9.61/-8.48	-5.75/-4.99	-4.07/-3.56	-3.56/-3.86	-4.14/-3.82		
Θ(15°)	-3.33/-3.48	-3.57/-4.3	-5.49/-7	-9.59/-13.5	-16.2/-16.17	-15.66/-17.53	-15.78/-10.92	-7.6/-5.73	-4.18/-2.8	-1.99/-1.77	-1.82/-2.02	-2.32/-2.48	-2.63/-2.88	-3.45/-4.43	-5.52/-7.03	-8.83/-11.19	-13/-12.66	-11.22/-10.02	-9.42/-9.14	-8.54/-7.27	-5.61/-4.25	-3.05/-2.31	-1.98/-2.11	-2.51/-2.92
Θ(22.5°)	-4.14/-4.83	-6.14/-7.8	-8.66/-10.56	-14/-18.7	-18.73/-16.55	-14.12/-9.88	-7.52/-5.8	-4.18/-2.99	-2.75/-3.1	-3.91/-4.73	-5.16/-5.25	-5.12/-5.15	-5.22/-5.38	-5.8/-6.63	-7.92/-9.35	-9.6/-8.1	-6.28/-5.27	-5.15/-5.45	-5.65/-6.91	-3.24/-1.88	-1.11/-0.84	-1/-1.56	-2.41/-3.49	
Θ(30°)	-9.37/-12.28	-12.57/-11.81	-12.4/-17.95	-18.34/-18.2	-15.44/-14.05	-15.56/-13.79	-10.17/-9.01	-7.34/-5.58	-4.34/-3.83	-4.46/-5.86	-6.19/-4.55	-2.91/-7.9	-1.42/-1.75	-2.89/-4.74	-6.79/-7.67	-9.72/-9.39	-5.94/-4.8	-5.44/-5.54	-2.88/-1.67	-1.52/-1.99	-2.91/-4.55	-6.76/-8.25		
Θ(37.5°)	-9.72/-11.37	-11.39/-11.21	-12.91/-18.44	-19.18/-18.43	-19.17/-14.36	-10.14/-6.27	-6.45/-7.81	-6.82/-5.67	-5.46/-5.96	-7.46/-7.62	-5.44/-2.93	-1.06/-0.11	0.23/0.42	-0.17/-1.92	-4.93/-8.82	-10.22/-8.61	-8/-9.21	-8.36/-5.85	-5.65/-7.37	-7.01/-9.45	-3.62/-3	-3.44/-4.29	-5.98/-7.7	-8.64/-8.24
Θ(45°)	-5.43/-6.2	-8.37/-10.1	-9.34/-9.32	-9.56/-10.93	-13.21/-11.54	-8.91/-6.53	-8.66/-13.54	-11.59/-7.75	-7.72/-9.24	-10.11/-7.98	-5.7/-2.9	-0.83/-0.73	-0.31/0.7	0.09/-1.62	-3.3/-4.98	-11.91/-13.88	-13.55/-10.9	-8.24/-8.22	-10.29/-12.03	-11.56/-8.46	-5.63/-4.82	-5.9/-6.73	-6.55/-6.04	-4.9/-4.67
Θ(52.5°)	-11.16/-11.77	-11.24/-11.66	-11.64/-14.71	-19.03/-18.32	-18.45/-18.37	-9.41/-6.49	-6.87/-8.65	-6.43/-5.51	-7.26/-11.36	-19.24/-14.46	-10.67/-6.43	-4.49/-3.97	-1.94/-1.27	-2.01/-2.45	-5.26/-11.23	-12.54/-11.94	-13.76/-13.07	-11.77/-9.22	-7.32/-6.16	-7.09/-9.48	-3.02/-2.71	-4.49/-4.81	-8.1/-8.87	-6.21/-7.94
Θ(60°)	-9.89/-10.23	-9.22/-10.67	-11.03/-10.95	-10.94/-9.59	-10.48/-12.39	-9.02/-5.74	-6.92/-16.55	-13.15/-9.94	-13.04/-15.15	-13.7/-13.34	-13.95/-11.46	-10.18/-6.39	-3.54/-2.12	-1.72/-3.67	-7.73/-10.53	-18.71/-18.86	-18.13/-19	-16.56/-9.71	-7.63/-9.25	-10.41/-7.01	-5.08/-4.66	-6.1/-4.52	-3.09/-3.55	-4.19/-6.74
Θ(67.5°)	-13.46/-14.58	-10.92/-10.54	-10.36/-9.8	-10.92/-10.08	-10.36/-10.83	-6.49/-4.45	-6.17/-10.28	-10.28/-5.97	-12.43/-13.49	-12.88/-11.65	-13.39/-15.11	-10.24/-7.34	-4.94/-13	-5.27/-6.95	-7.75/-16.3	-18.82/-18.49	-11.57/-18	-11.21/-10.7	-9.45/-7.94	-5.95/-8.43	-4.51/-5.66	-7.42/-5.27	-3.12/-4.48	-7.24/-10.56
Θ(75°)	-10.82/-11.49	-8.62/-8.52	-10.39/-15.96	-17.71/-13.76	-13.61/-13.72	-11.91/-7.95	-8.76/-12.48	-8.61/-8.96	-9.5/-8.39	-8.18/-10.54	-15.6/-13.61	-12.69/-8.26	-3.64/-3.37	-4.01/-5	-8.46/-18.11	-14.71/-12.04	-11.35/-7.82	-9.81/-12.53	-7.88/-7.73	-6.29/-4.29	-4.96/-6.23	-7.34/-6.17	-5.2/-1.7	-5.66/-8.58
Θ(82.5°)	-11.41/-8.98	-8.27/-8.23	-10.48/-15.32	-19.36/-12.13	-8.27/-8.27	-7.45/-6.81	-12.95/-14.77	-8.51/-7.45	-5.99/-6.64	-7.72/-10.69	-17.53/-14.48	-18.52/-9.79	-5.26/-5.47	-7.34/-10.72	-14.85/-13.32	-9.94/-12.95	-9.97/-3.74	-5.55/-7.12	-6.6/-6.02	-4.88/-3.53	-4.34/-6.53	-7.57/-5.61	-4.73/-4.88	-5.99/-10.22
Θ(90°)	-7.42/-6.98	-7.09/-6.54	-8.77/-14.07	-16.99/-14.58	-14.02/-14.49	-8.66/-7.77	-10.22/-9.84	-5.77/-5.78	-5.85/-7.53	-7.67/-11.53	-16.67/-11.46	-13.92/-13.19	-8.45/-7.5	-11.33/-13.74	-14.55/-11.51	-6.17/-7.59	-11.08/-5.23	-5.56/-6.97	-9.9/-11.37	-9.52/-7.56	-8.51/-11.28	-9.18/-5.45	-4.04/-4.2	-4.54/-6.79
Θ(97.5°)	-7.77/-7.1	-8.62/-10.02	-18.79/-15.98	-14.17/-18.22	-9.28/-7.76	-9.32/-10.78	-10.18/-8.45	-7.17/-7.42	-5.64/-6.69	-8.58/-10.6	-10.18/-8.25	-13.39/-17.7	-9.08/-7.7	-11.82/-13.9	-10.08/-10.33	-7.62/-11.45	-10.73/-2.73	-3.88/-6.89	-7.38/-8.48	-6.53/-7.38	-10.23/-10.6	-8.8/-8.07	-4.75/-5.7	-5.12/-6.79
Θ(105°)	-8.44/-9.85	-11.71/-10.49	-12.65/-12.49	-14.5/-18.54	-12.02/-7.02	-6.98/-6.46	-5.86/-6.25	-6.62/-7.76	-7.76/-5.67	-8.33/-11.51	-14.26/-9.34	-12.12/-19.34	-12.14/-9.76	-13.88/-15.39	-13.04/-8.61	-5.16/-9.33	-18.84/-6.02	-6.67/-9.7	-8.45/-11.11	-8.55/-7.71	-10.36/-11.99	-9.42/-5.46	-3.11/-2.99	-5.52/-7.81
Θ(112.5°)	-13.97/-13.01	-11.51/-11.4																						



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ (112.5°)	-2.48/-1.18	-4.14/-6.64	-8.7/-10.63	-18.83/-15.64	-13.15/-16.58	-13.62/-18.49	-17.92/-11.49	-15.51/-18.64	-14.89/-18.26	-10.42/-7.06	-5.51/-5.57	-5.05/-4.54	-6.12/-6.1	-10.02/-16.43	-18.62/-18.71	-14.42/-15.62	-7.88/-14.49	-18.61/-8.53	-17.62/-10.06	-5.05/-5.76	-2.02/-2.01	-4.27/-2.05	-2.78/-2.73	-3.05/-1.9
Θ (120°)	-4.81/-3.27	-5.21/-8.62	-9.15/-13.63	-11.86/-7.38	-9.18/-11.24	-11.13/-12.38	-12.71/-13.38	-12.42/-9.94	-7/-7.84	-7.16/-4.36	-2.3/-1.64	-3.12/-4.14	-7.22/-6.85	-10.32/-13.22	-8.83/-10.8	-14.83/-9.29	-10.76/-16.48	-17.51/-7.34	-15.71/-13.69	-3.23/-6.36	-2.38/-5.05	-4.3/-0.79	0.74/-1.37	-3.12/-3.02
Θ (127.5°)	-1.39/-3.22	-2.81/-6.56	-8.79/-9.62	-9.13/-6.25	-7.77/-11.94	-3.43/-8.93	-12.31/-14.04	-8.84/-7.16	-4.55/-3.99	-4.16/-2.39	-1.33/-2.84	-2.54/-4	-6.68/-6.55	-11.99/-15.3	-8.98/-8.74	-6.68/-6.46	-12.93/-18	-10.84/-8.79	-15.31/-18.22	-4.68/-9.04	-4.51/-12.31	-4.2/-1.08	2.81/-9.9	-1.90/-17
Θ (135°)	-0.22/-3.19	-3.62/-4.1	-6.79/-5.77	-4.23/-8.59	-8.23/-10.82	-7.63/-9.45	-11.06/-13.42	-17/-6.68	-3.4/-2.79	-3.93/-4.89	-4.95/-4.25	-2.62/-2.78	-2.72/-3.75	-7.23/-10.97	-12.97/-13.14	-8.37/-6.3	-11.53/-13.45	-7.75/-9.98	-13.75/-8.15	-10.61/-5.28	-5.99/-4.95	-7.15/-1.63	0.34/-1.73	0.360/-27
Θ (142.5°)	-4.7/-5.62	-7.11/-5.95	-4.31/-5.51	-3.11/-4.93	-10.37/-13.67	-10.34/-7.72	-7.33/-7.78	-7.35/-6.58	-4.18/-3.59	-4.72/-7.34	-13.36/-14.8	-18.44/-18.49	-19.18/-17.61	-16.75/-14.71	-14.15/-15.97	-10.9/-9.06	-12.82/-14.71	-9.77/-10.31	-18.19/-17.31	-10.79/-14.46	-2.3/-2.5	-4.07/-4.22	-2.78/-1.63	-2.12/-3.98
Θ (150°)	-7.69/-8.35	-7.85/-6.56	-5.16/-4.41	-6.69/-6.56	-10.89/-18.66	-18.79/-17.12	-15.88/-12.92	-10.4/-7.89	-5.43/-3.72	-3.53/-5.25	-7.01/-7.03	-6.57/-6.79	-7.11/-7.66	-9.89/-14.44	-17.92/-18.3	-14.16/-12.04	-13.57/-14.1	-10.82/-9.43	-10.11/-11.56	-10.39/-10.27	-8.66/-5.42	-4.86/-4.56	-5.42/-6.58	
Θ (157.5°)	-2.43/-2.11	-1.61/-1.75	-3.11/-5.53	-8.4/-12.09	-15.38/-16.09	-15.1/-15.54	-16.86/-16.51	-17.44/-18.08	-19.12/-13.66	-9.41/-6.14	-4.27/-3.87	-4.23/-4.33	-4.02/-4.29	-6.01/-9.25	-11.54/-11.8	-12.53/-13.72	-12.52/-10.03	-8.59/-8.59	-9.4/-9.42	-8.59/-6.94	-4.29/-2.22	-0.95/-0.13	0.47/0.08	-0.97/-1.77
Θ (165°)	0.25/0.09	0.24/0.13	-0.3/-1.3	-3.23/-6.51	-9.02/-13.08	-17.65/-18.31	-18.72/-16.99	-16.07/-15.34	-14.37/-14.3	-17.58/-19.7	-14.02/-11.05	-9.61/-8.92	-9.19/-11.01	-13.83/-12.56	-10.03/-8.69	-8.16/-7.94	-7.78/-7.9	-8.46/-10.14	-12.92/-14.38	-11.31/-7.15	-4.29/-2.17	-0.49/0.49	1.31/1.68	1.62/0.97
Θ (172.5°)	1.94/1.2	0.48/-0.58	-2.21/-4.53	-7.75/-12.87	-17.75/-18	-18.12/-18.53	-18.73/-18.11	-16.38/-13.8	-11.85/-11.2	-10.83/-10.03	-9.34/-9.67	-10.93/-12.87	-14.52/-15.42	-14.97/-14.04	-12.64/-11.98	-12.37/-13.75	-16.82/-18.42	-19.24/-17.33	-18.38/-18.5	-13.13/-8.41	-5.28/-2.84	-0.82/0.49	1.41/2.04	2.52/-43
Θ (180°)	-11.83/-13.91	-16.45/-17.94	-16.71/-17.29	-18.45/-19.08	-18.58/-18.59	-18.1/-17.7	-12.94/-9.9	-7.82/-6.5	-5.62/-5	-4.35/-3.64	-3.32/-3.69	-4.47/-5.33	-6.37/-7.49	-8.71/-10.05	-11.51/-13.19	-16.02/-18.02	-18.43/-19.44	-18.85/-18.32	-15.35/-12.92	-11.33/-9.85	-8.86/-8.47	-8.61/-8.94	-9.3/-9.58	-9.07/9.87
Freq(Hz)	2.45GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ (0°)	-15.12/-13.4	-11.96/-10.96	-10.24/-9.68	-9.42/-9.54	-10.2/-11.45	-13.27/-15.55	-18.08/-18.43	-19.06/-18.1	-18.11/-18.24	-18.75/-18.87	-17.88/-18.47	-18.3/-16.33	-15.11/-14.28	-13.55/-13.07	-12.68/-12.47	-12.35/-12.2	-12.38/-12.99	-14.25/-15.84	-17.49/-18.77	-18.41/-18.13	-17.99/-19.02	-18.12/-18.26	-19.19/-19.34	-18.34/-16.53
Θ (7.5°)	-14.07/-13.5	-12.85/-12.26	-11.58/-10.98	-10.69/-10.87	-11.76/-13.3	-15.38/-17.75	-18.24/-18.13	-18.72/-17.42	-19.41/-18.64	-17.39/-18.98	-18.59/-18.19	-19.17/-16.97	-14.94/-13.52	-12.66/-11.92	-11.55/-11.36	-11.24/-11.34	-11.75/-12.66	-13.96/-13.65	-16.69/-18.49	-17.73/-18.51	-19.17/-18.04	-17.18/-16.67	-16.03/-15.3	-14.63/-14.33
Θ (15°)	-12.6/-12.8	-12.95/-12.88	-12.7/-12.44	-12.45/-13.05	-14.12/-15.19	-15.78/-16.78	-18.29/-19.12	-15.87/-14.42	-14.14/-14.98	-16.93/-19.32	-18.37/-16.59	-14.5/-13.21	-12.82/-13.21	-11.95/-11.92	-11.96/-12.21	-12.82/-13.99	-15.36/-16.67	-18.12/-18.51	-17.15/-18.01	-17.14/-15.17	-16.82/-12.76	-12.18/-11.76	-11.72/-12.19	
Θ (22.5°)	-9.58/-9.79	-10.2/-10.82	-11.58/-12.36	-13.29/-14.1	-14.3/-13.84	-13.78/-15.26	-18.64/-18.73	-17.76/-13.69	-11.46/-10.51	-10.64/-11.89	-14.19/-16.3	-15.9/-13.84	-12.4/-11.64	-11.47/-11.72	-12.12/-12.5	-12.69/-12.9	-13.48/-14.49	-15.99/-17.79	-19.61/-18.79	-18.24/-18.01	-17.79/-14.7	-12.55/-11.09	-10.06/-9.39	-9.27/9.38
Θ (30°)	-6.82/-6.89	-7.39/-8.24	-9.5/-11.1	-12.51/-10.9	-12.73/-12.44	-13.07/-14.95	-17.61/-17.32	-14.09/-11.68	-9.95/-9.4	-9.78/-11.1	-12.72/-13.16	-11.75/-10.15	-9.16/-8.77	-8.91/-9.62	-10.76/-12.12	-13.08/-13.42	-13.65/-14.42	-16.04/-18.34	-17.06/-18.22	-16.78/-16.27	-16.29/-15.08	-12.69/-10.52	-8.89/-7.86	-7.29/-6.96
Θ (37.5°)	-5.37/-5.37	-5.8/-6.76	-8.09/-9.62	-10.68/-11.07	-11.27/-12.24	-14.07/-15.79	-15.61/-13.94	-12.31/-11.2	-10.75/-10.9	-9.99/-8.45	-7.21/-6.44	-6.15/-6.27	-6.91/-3.44	-10.82/-14.49	-18.19/-17.49	-16.89/-16.42	-13.99/-17.74	-19.61/-17.74	-19.99/-16.48	-13.66/-11.59	-11.35/-11.5	-10.93/-9.59	-8.16/-7.09	-6.35/-5.75
Θ (45°)	-4/-4.11	-4.71/-5.75	-7.04/-8.25	-8.99/-9.47	-10.07/-11.52	-13.72/-15.05	-14.14/-12.62	-11.86/-12.06	-12.53/-11.84	-9.91/-7.88	-6.35/-5.48	-5.21/-5.46	-5.96/-6.75	-8.14/-10.79	-16.31/-17.53	-17.71/-13.23	-11.87/-12.16	-13.91/-17.44	-18.3/-17.99	-16.46/-12.6	-10.81/-9.84	-8.69/-7.26	-6.03/-5.19	-4.73/-4.35
Θ (52.5°)	-2.59/-2.77	-3.58/-4.59	-5.91/-6.83	-7.45/-8.09	-9.11/-10.56	-12.22/-12.78	-12/-12.22	-11.56/-12.83	-12.68/-9.64	-6.62/-5.01	-4.47/-4.93	-6.17/-8.95	-9.06/-9.7	-10.8/-13.04	-14.99/-13.5	-11.28/-10.14	-9.98/-10.48	-11.48/-12.77	-14.2/-15.62	-16.12/-14.36	-12.07/-10.33	-8.64/-6.75	-4.96/-3.71	-3.06/-2.74
Θ (60°)	-2.58/-2.93	-3.45/-4.52	-5.35/-6.72	-5.87/-6.5	-7.61/-9.05	-10.44/-11.03	-10.72/-10.65	-11.74/-13.41	-11.95/-8.44	-7.96/-6.41	-6.96/-6.55	-8.72/-8.05	-7.31/-6.09	-5.99/-6.92	-8.68/-11.31	-14.71/-16.31	-15.2/-14.66	-14.61/-13.35	-11.51/-10.38	-6.83/-6.51	-5.49/-5.29	-4.55/-3.43	-2.63/-2.42	
Θ (67.5°)	-2.08/-3.17	-4.47/-5.84	-6.97/-7.03	-6.64/-6.68	-7.32/-8.4	-9.79/-11.1	-12.25/-13.63	-15.01/-13.19	-9.57/-6.93	-5.4/-4.84	-5.32/-6.39	-6.58/-5.29	-4.25/-4.11	-4.87/-6.28	-8.82/-14.34	-18.31/-15.79	-12.42/-13.21	-15.77/-13.43	-10.61/-10.12	-10.44/-8.55	-5.62/-3.47	-2.5/-2.44	-2.65/-2.36	-1.73/-1.55
Θ (75°)	-1.17/-1.65	-2.67/-3.92	-5.33/-6.43	-6.86/-6.92	-7.17/-8.09	-10.32/-14.5	-17.91/-14.68	-11.07/-8.66	-7.13/-6.43	-5.89/-5.1	-4.68/-4.91	-5.02/-6.42	-4.69/-5.43	-6.18/-6.66	-9.06/-16.29	-18.19/-11.95	-10.81/-12.51	-17.78/-13.78	-8.05/-6.61	-7.52/-8.95	-7.98/-6.42	-3.53/-2.84	-3.11/-3.26	-2.46/-1.43
Θ (82.5°)	-2.73/-2.22	-2.4/-3.04	-3.96/-5.1	-6.51/-7.94	-8.94/-10.56	-14.66/-17.52	-14.53/-11.11	-9.78/-9.42	-9.71/-9.44	-7.01/-4.4	-3.33/-3.52	-4.05/-4.71	-5.89/-6.08	-9.17/-18.6	-15.09/-8.9	-7.07/-7.74	-12.11/-19.23	-11.25/-7.72	-6.9/-6.7	-5.89/-4.54	-3.15/-2.3	-2.45/-3.66	-4.54/-3.85	
Θ (90°)	-3.74/-3.29	-3.09/-3.4	-4.15/-5.23	-6.98/-9.71	-12.95/-16.77	-17.31/-17.81	-15.68/-14.53	-15/-15	-12.21/-8.28	-4.79/-2.69	-2.19/-2.96	-4.43/-6.19	-7.27/-6.32	-5.01/-5.27	-7.82/-13.14	-13.51/-9.1	-6.99/-6.97	-9.65/-16.26	-13.72/-10.06	-9.45/-8.7	-6.45/-4.36	-2.92/-1.9	-1.48/-1.8	-2.81/-3.74
Θ (97.5°)	-4.97/-5.27	-4.54/-3.84	-3.71/-4.06	-4.91/-6.44	-8.71/-12.4	-16.16/-16.19	-14.41/-14.25	-14.26/-12.14	-8.72/-5.76	-3.62/-2.55	-2.79/-4.21	-6.02/-6.55	-5.2/-3.84	-3.54/-0.99	-6.01/-10.39	-17.93/-13.14	-9.9/-9.91	-13.35/-13.28	-7.98/-6.29	-7.29/-8.5	-6.48/-5.75	-2.13/-1.58	-1.7/-2.06	-2.73/-3.82
Θ (105°)	-3.65/-4.04	-5.67/-4.9	-4.35/-4.65	-5.41/-6.31	-9.71/-9.25	-11.02/-11.29	-11.19/-11.88	-12.13/-9.97	-7.18/-5.3	-4.21/-5.34	-5.96/-4.8	-3.59/-3.41	-3.94/-3.5	-5.84/-10.8	-18.65/-13.34	-10.33/-11	-18.94/-13.28	-5.66/-3.51	-4.19/-6.94	-9.36/-6.54	-3.25/-1.7	-1.52/-1.89	-2.22/-2.69	-2.96/-4.53
Θ (112.5°)	-4.43/-5.33	-6.17/-5.46	-4.65/-5.16	-6.71/-8.09	-8.45/-8.96	-10.09/-11.25	-12.42/-13.78	-13.51/-11.27	-9.42/-8.75	-8.02/-6.35	-5.17/-4.63	-3.91/-3.1	-3.32/-4.59	-5.33/-5.51	-7.98/-16.07	-15.2/-10.43	-9.18/-9.72	-15.21/-17.15	-7.07/-4.15	-3.91/-5.16	-6.66/-6.88	-4.88/-3.02	-2.59/-3.35	-4.17/-4.32
Θ (120°)	-4.94/-5.9	-7.43/-7.21	-5.46/-4.92	-6.23/-6.25	-12.44/-14.14	-14.61/-14.32	-13.73/-13.33	-12.62/-11.83	-11.64/-11.7	-8.51/-5.76	-4.57/-4.69	-5.22/-6	-7.75/-8.91	-7.31/-6.98	-9.42/-11.08	-8.86/-8.55	-9.84/-13.71	-16.07/-16.27	-8.57/-6.09	-6.82/-8.98	-11.52/-8.41	-4.95/-5.22	-1.47/-1.83	-3.09/-4.31
Θ (127.5°)	-5.05/-5.7	-6.87/-6.84	-4.85/-3.37	-3.28/-4.39	-5.97/-7.23	-7.79/-8.07	-8.44/-9.12	-10.03/-11.5	-14.93/-18.35	-14.85/-10.64	-9.92/-10.7	-10.52/-9.13	-7.28/-5.25	-4.42/-5.31	-6.96/-7.36	-8.03/-11.41	-18.55/-18.82	-19.12/-9.4	-4.74/-2.86	-3.08/-5.23	-9.38/-13.09	-9.13/-5.12	-2.82/-2.3	-3.14/-4.39
Θ (135°)	-5.78/-7.89	-11.1/-13.46	-9.61/-6.25	-4.92/-5.04	-6.03/-7.15	-7.96/-8.52	-9.09/-9.84	-10.81/-12.28	-14.75/-16.55	-14.39/-12.42	-11.78/-10.89	-9.01/-7.25	-6.03/-5.5	-5.89/-9.18	-7.79/-8.05	-10.48/-18.56	-18.84/-14.34	-14.09/-11.44	-7.03/-4.55	-3.9/-4.55	-5.64/-6.34	-5.91/-4.65	-3.08/-2.21	-2.99/-3.91
Θ (142.5°)	-2.12/-3.6	-5.77/-9.28	-14.2/-13.79	-10.55/-9.23	-9.48/-10.6	-11.98/-12.83	-13.21/-13.47	-14.1/-15.59	-18.09/-18.54	-17.94/-17.86	-19.37/-15.24	-11.5/-8.38	-8.52/-8.29	-7.97/-7.18	-6.77/-7.83	-11.43/-18.34	-16.72/-14.48	-17.1/-18.55	-14.9/-11.15	-9.94/-9.2	-7.38/-5.21	-3.74/-2.75	-1.86/-1.1	-0.81/-1.18
Θ (150°)	-1.03/-1.76	-2.92/-4.67	-6.8/-8.17	-7.61/-6.31	-5.56/-5.5	-6/-6.83	-7.79/-8.82	-10.07/-11.55	-13.37/-15.05	-15.61/-14.52	-12.48/-10.64	-9.36/-8.55	-7.99/-7.28	-6.43/-5.92	-6.29/-7.96	-11.4/-16.35	-19.36/-18.44	-18.03/-18.96	-17.33/-16.15	-18.58/-17.77	-11.98/-7.14	-4.61/-3.13	-2.16/-1.4	-0.89/-0.76
Θ (157.5°)	-2.46/-2.97	-3.98/-5.48	-7.27/-8.43	-7.94/-6.63	-5.54/-5.04	-5.05/-5.5	-6.26/-7.42	-8.49/-9.96	-11.61/-12.94	-13.5/-12.9	-11.91/-10.85	-9.98/-9.11	-8.27/-7.45	-6.92/-7.02	-7.93/-9.75	-12.54/-15.98	-17.71/-19.3	-19.87/-15.6						



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ (165°)	-10.83/-13.62	-16.28/-19.03	-18.82/-19.38	-17.82/-17.78	-18.23/-18.43	-15.81/-14.58	-13.54/-12.34	-10.61/-8.82	-7.74/-7.4	-7.53/-8.39	-10.01/-12.67	-15.96/-18.76	-19.43/-17.53	-15.22/-14.69	-16.07/-17.72	-18.11/-19.28	-15.2/-15.53	-17.83/-18.98	-18.26/-17.35	-19.29/-18.61	-17.48/-18.25	-19.01/-17.59	-14.29/-11.96	-9.62/-9.05
Θ (172.5°)	-18.08/-18.57	-19.18/-17.78	-17.93/-18.32	-18.05/-18.3	-19.24/-18.09	-16.37/-15.35	-14.01/-12.64	-11.08/-9.87	-9.49/-9.92	-10.41/-10.83	-11.74/-12.83	-13.87/-15.47	-18.33/-18.35	-18.71/-17.49	-18.12/-17.37	-15.91/-15.66	-17.02/-16.98	-18.46/-18.55	-17.73/-16.56	-16.79/-16.4	-16.02/-16.25	-17.79/-17.45	-17.84/-18.27	-18.48/-18.52
Θ (180°)	-16.12/-16.17	-15.75/-17.04	-19.14/-18.39	-18.82/-18.84	-19.16/-17.78	-18.59/-19.14	-19.11/-18.56	-17.48/-18.67	-18.55/-17.65	-18.68/-18.24	-19.04/-18.67	-17.69/-17.13	-19.06/-15.03	-14.72/-15.54	-17.12/-18.14	-19.06/-18.51	-15.91/-14.44	-17.73/-14.03	-13.77/-14.03	-14.08/-13.62	-14.23/-14.56	-15.81/-15.95	-15.97/-15.35	
Freq(Hz)	5.3GPol.	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ (0°)	-11.37/-11.61	-9.88/-8.01	-6.26/-4.68	-3.45/-2.48	-1.81/-1.44	-1.24/-0.98	-0.73/-0.72	-0.99/-1.4	-1.93/-2.55	-3.39/-4.45	-5.71/-9	-8.8/-10.28	-11.05/-10.63	-9.54/-8.15	-6.52/-4.95	-3.6/-2.5	-1.61/-1.1	-0.61/-0.3	-0.19/-0.2	-0.47/-0.87	-1.26/-1.8	-2.67/-3.81	-5.21/-6.59	-8.13/-10.05
Θ (7.5°)	-9.55/-10.41	-10.07/-8.73	-6.91/-5.42	-4.17/-2.89	-1.87/-1.16	-0.59/-0.17	-0.020.1	0.14/0.04	-0.19/-0.81	-1.69/-2.99	-4.55/-6.39	-8.87/-11.79	-13.31/-12.59	-10.41/-8.17	-6.42/-4.98	-3.73/-2.67	-1.96/-1.58	-1.25/-1.1	-1.12/-1.34	-1.98/-2.7	-3.13/-3.51	-4.02/-5.07	-4.66/-7.25	-7.78/-8.69
Θ (15°)	-7.82/-9.44	-10.6/-9.45	-7.26/-5.48	-4.18/-2.86	-1.82/-0.66	0.230.75	0.96/1.01	0.930.83	0.69/-0.22	-0.5/-1.39	-2.67/-4.14	-6.03/-8.34	-10.35/-11.09	-9.51/-7.49	-5.67/-4.11	-2.89/-1.79	-0.94/-0.19	0.30/0.46	0.21/-0.54	-1.59/-2.73	-3.55/-4.19	-4.76/-5.6	-6.66/-8.6	-6.53/-6.9
Θ (22.5°)	-9.79/-11.12	-10.79/-8.5	-6.14/-4.34	-3.11/-1.99	-1.41/-0.92	-0.420.17	0.620.78	0.970.91	0.580.11	-0.49/-1.25	-2.35/-3.7	-5.12/-6.7	-8.75/-10.25	-9.81/-7.75	-5.63/-3.81	-2.16/-0.79	0.321.09	1.47/1.44	1.020.14	-1.34/-3.18	-4.97/-6.28	-6.74/-6.52	-6.69/-7.36	-7.8/-8.62
Θ (30°)	-12.37/-16.14	-13.02/-8.57	-6.22/-5.47	-4.73/-4.37	-2.67/-2.13	-1.8/-1.27	-0.79/-0.49	-0.33/-0.34	-0.31/-0.47	-0.86/-1.42	-2.43/-4	-5.99/-8.11	-9.94/-11	-10.66/-9.23	-7.98/-6.21	-4.01/-1.93	-0.171.09	1.94/-2.2	1.80/0.45	-1.29/-2.51	-3.43/-4.77	-5.16/-6.2	-6.26/-7	-8.03/-9.57
Θ (37.5°)	-10.44/-11.95	-13.23/-10.13	-8.21/-7.53	-6.55/-4.45	-3.23/-2.77	-2.53/-2.29	-1.96/-1.6	-1.16/-0.81	-0.8/-1.11	-1.7/-2.47	-3.76/-5.58	-8.24/-11.19	-14.34/-15.54	-13.63/-11.12	-7.92/-5.08	-2.85/-1.18	-0.010.81	1.18/1.19	1.030.47	-1.05/-3.52	-5.07/-5.29	-5.88/-6.09	-5.94/-6.54	-7.85/-8.81
Θ (45°)	-9.79/-9.98	-9.39/-9.79	-11.38/-11.78	-8.75/-7.07	-2.88/-1.45	-0.81/-0.85	-0.97/-0.95	-0.65/-0.35	-0.48/-1.38	-2.73/-4.94	-6.11/-9.92	-12.41/-13.09	-11.75/-9.21	-6.14/-4.3	-2.53/-0.99	-0.250.13	0.50/0.84	0.810	-1.54/-3.76	-5.92/-6.61	-6.83/-7.17	-8.12/-9.19	-9.04/-8.15	
Θ (52.5°)	-10.97/-9.43	-7.73/-7.11	-8.57/-11.87	-14.29/-9.51	-5.52/-2.46	-1.27/-0.97	-1.03/-1.23	-0.94/-0.66	-0.71/-1.55	-3.05/-4.63	-5.21/-5.05	-6.83/-10.45	-16.58/-18.79	-16.18/-11.29	-7.83/-5.58	-3.28/-2.71	-2.67/-2.23	-1.73/-1.46	-1.74/-2.71	-4.86/-7.58	-7.85/-7.37	-8.16/-8.48	-8.63/-9.48	-12.44/-12.21
Θ (60°)	-8.98/-9.54	-10.17/-10.75	-13.04/-11.24	-13.72/-7.62	-3.57/-1.28	-0.39/-0.16	-0.27/-0.52	-0.350.02	-0.43/-1.83	-4.11/-6.16	-6.01/-6.09	-6.18/-4.87	-15.41/-17.95	-18.35/-17.34	-12.18/-7.74	-5.71/-4.78	-5.04/-5.73	-5.28/-4.47	-4.36/-5.34	-6.83/-9.42	-12.4/-10.71	-8.86/-8.02	-8.04/-8.62	-8.75/-8.74
Θ (67.5°)	-11.1/-10.27	-8.45/-9.18	-9.56/-11.41	-13.78/-9.89	-4.47/-2.06	-0.83/-0.47	-0.5/-0.47	-0.43/-0.43	-0.98/-2.26	-3.98/-5.27	-5.07/-4.53	-5.99/-8.05	-14.37/-17.04	-14.16/-11.27	-10.29/-9.78	-7.62/-7	-7.16/-6.41	-5.99/-5.7	-6.51/-7.06	-10.61/-14.67	-16.57/-13.41	-8.98/-7.49	-8.79/-11.51	-12.93/-13.53
Θ (75°)	-8.63/-9.86	-9.77/-10.48	-9.4/-10.29	-12.12/-9.12	-4.43/-2.15	-1.1/-1.21	-1.51/-1.38	-1.1/-1.4	-1.99/-2.78	-4.37/-5.95	-6.37/-6.78	-7.27/-9.28	-9.95/-10.13	-11.7/-14.72	-15.97/-12.57	-8.91/-6.74	-7.35/-8.8	-9.02/-6.76	-7.64/-11.24	-13.2/-14.05	-12.22/-10.83	-11.92/-8.95	-7.05/-8.98	-11.13/-8.67
Θ (82.5°)	-10.92/-8.81	-8.07/-7.33	-7.27/-9.58	-12.73/-8.44	-3.99/-1.85	-1.4/-1.59	-1.78/-1.61	-1.26/-1.41	-2.18/-3.74	-5.36/-6.72	-6.54/-6.75	-6.37/-8.14	-10.1/-8.72	-10.17/-10.35	-11.01/-13.25	-11.76/-8.05	-8.79/-10.05	-11.1/-10.19	-17.88/-14.41	-8.93/-10.52	-13.73/-8.06	-6.88/-7.72	-11.22/-12.8	
Θ (90°)	-6.9/-7.27	-7.25/-7.49	-8.29/-9.07	-9.79/-7.29	-4.23/-2.34	-1.66/-2	-2.78/-2.85	-2.4/-2.45	-2.7/-3.34	-5.25/-7.72	-7.82/-6.82	-6.93/-7.8	-8.38/-8.49	-9.82/-10.6	-9.78/-13.74	-11.66/-8.04	-7.35/-8.04	-18.73/-10.66	-9.89/-17.02	-18.3/-14.47	-9.32/-9.45	-10.95/-9.55	-5.83/-7.35	-11.64/-12.34
Θ (97.5°)	-9.41/-9	-9.22/-8.6	-7.39/-7.17	-8.16/-7.45	-4.49/-1.92	-1.9/-2.44	-2.59/-2.64	-2.99/-3.08	-2.94/-4.48	-6.76/-8.25	-7.96/-7.01	-6.89/-8.91	-8.24/-7.68	-7.83/-10.69	-9.83/-11.64	-10.88/-11.85	-13.39/-13.57	-17.84/-18.49	-17.19/-9.49	-9.08/-17.84	-8.89/-7.76	-10.47/-8.36	-5.83/-7.77	-9.56/-11.26
Θ (105°)	-12.87/-9.37	-7.6/-6.7	-8.6/-64	-9.26/-7.09	-4.13/-2.18	-1.33/-1.54	-2.54/-3.22	-3.46/-3.39	-3.32/-4	-5.75/-7.47	-6.85/-6.1	-7.69/-11.13	-6.69/-7.47	-6.93/-8.92	-10.09/-10.06	-13.1/-13.21	-13.69/-13.01	-10.03/-18.7	-18.14/-8.42	-10.02/-17.72	-9.29/-7.05	-8.98/-7.43	-6.71/-7.4	-7.97/-10.68
Θ (112.5°)	-13.14/-9.71	-7.14/-5.99	-5.86/-6.78	-6.02/-4.83	-2.73/-1.24	-1.59/-2.84	-3.49/-3.78	-3.66/-3.11	-3.03/-4.9	-6.89/-7.95	-6.14/-5.6	-6.37/-9.13	-11.72/-9.96	-8.3/-5.7	-8.6/-12.51	-12.75/-13.71	-15.68/-15.91	-10.22/-7.67	-17.9/-8.8	-12.27/-10.63	-9.25/-9.74	-6.63/-9.39		
Θ (120°)	-10.86/-8.83	-6.9/-4.77	-4.27/-3.39	-4.84/-4.49	-2.86/-1.41	-1.65/-2.71	-4.91/-7.05	-7.72/-6.46	-6.19/-8.21	-9.57/-10.06	-8.69/-7.3	-6.86/-7.66	-9.35/-12.35	-11.15/-14	-15.52/-9.85	-13.21/-19.01	-11.14/-9.05	-7.36/-11.28	-16.97/-6.1	-6.18/-8.09	-14.77/-5.76	-7.3/-6.31	-7.38/-6.74	-6.89/-7.49
Θ (127.5°)	-8.2/-6.72	-5.92/-4.41	-3.58/-3.5	-3.31/-4.16	-1.4/-2.54	-2.19/-3.59	-5.12/-5.93	-5.56/-5.37	-5.5/-5.97	-8.01/-9.12	-9.26/-9.48	-10.11/-12.55	-13.33/-14.29	-10.53/-11.77	-11.81/-11.72	-13.86/-16.88	-9.24/-11.55	-5.49/-7.54	-13.63/-10.83	-8.99/-5.55	-18.16/-7.52	-7.97/-9.34	-12.11/-13.46	-11.97/-9.24
Θ (135°)	-17.65/-12.48	-6.4/-4.49	-3.01/-3.74	-3.99/-2.87	-1.91/-2.48	-3.23/-3.81	-4.37/-5.02	-5.6/-6.36	-7.3/-9.21	-12.86/-12.17	-11.27/-9.56	-10.64/-18.7	-18.4/-13.15	-7.54/-9.46	-11.39/-18.33	-13.44/-12.9	-9.82/-16.66	-7.99/-8.79	-11.19/-17.48	-16.61/-9.96	-11.26/-12.5	-13.53/-11.33	-7.67/-6.37	-7.61/-10.06
Θ (142.5°)	-9.5/-8.9	-5.98/-4.46	-3.58/-2.67	-3.15/-3.67	-3.51/-2.78	-2.76/-3.43	-4.16/-4.7	-5.03/-5.51	-6.43/-8.22	-9.68/-10.41	-11.67/-12.44	-14.9/-15.03	-17.23/-17.68	-18.37/-19.09	-15.81/-11.33	-13.43/-11.82	-17.06/-11.56	-7.01/-8.11	-10.42/-17.96	-18.18/-17.6	-16.55/-18.83	-13.42/-9.5	-8.37/-8.17	-11.24/-11.07
Θ (150°)	-8.31/-11.5	-12.07/-9.08	-7.42/-6.81	-5.62/-5.65	-6.11/-6.44	-6.41/-6.4	-5.85/-5.16	-5.42/-7.13	-10.4/-13.61	-14.01/-13.33	-12.36/-12.84	-15.1/-15.62	-14.71/-14.24	-13.64/-10.78	-7.57/-6.93	-8.32/-10.9	-18.9/-11.33	-8.19/-9.09	-11.09/-14.81	-16.65/-12.57	-10.76/-11.66	-17.32/-14.03	-8.32/-6.12	-6.25/-7.21
Θ (157.5°)	-5.62/-6.46	-8.7/-11.35	-11.52/-10.28	-8.71/-7.79	-7.18/-6.44	-4.54/-2.25	-3.29/-2.98	-3.48/-3.38	-5.66/-7.16	-12.07/-9.56	-10.64/-18.7	-18.4/-13.15	-7.54/-9.46	-11.39/-18.33	-13.44/-12.9	-9.82/-16.66	-7.99/-8.79	-11.19/-17.48	-16.61/-9.96	-11.26/-12.5	-13.53/-11.33	-7.67/-6.37		
Θ (165°)	-6.38/-6.5	-7.4/-8.87	-10.18/-10.41	-10.02/-9.02	-7.86/-6.81	-6.14/-5.76	-5.48/-5.61	-6.44/-7.59	-8.87/-10.48	-11.87/-13.54	-15.4/-17.69	-18.78/-18.31	-18.46/-17.93	-15.22/-12.49	-10.35/-9.76	-10.9/-14.19	-18.08/-15.02	-12.33/-12.86	-16.92/-19.09	-18.1/-15.3	-13.38/-13.09	-13.12/-12.71	-10.79/-8.99	-7.39/-6.62
Θ (172.5°)	-13.68/-14.07	-14.58/-14.79	-14.19/-12.86	-11.59/-9.84	-8.21/-6.98	-6.56/-6.8	-7.17/-7.86	-8.71/-9.63	-10.63/-11.55	-12.81/-14.29	-15.11/-14.57	-13.69/-13.08	-12.45/-11.58	-11.12/-11.29	-12.47/-14.85	-18.75/-17.78	-18.63/-13.57	-12.11/-12.88	-14.99/-17.74	-18.3/-17.97	-18.16/-16.72	-15.03/-14.21	-13.63/-13.36	-12.95/-13.16
Θ (180°)	-18.31/-18.17	-18.88/-18.95	-19.55/-18.84	-19.55/-18.7	-17.6/-16.72	-15.86/-15.47	-15.08/-14.75	-14.45/-14.57	-15.09/-15.93	-17.01/-17.79	-18.99/-18.59	-18.48/-18.58	-17.68/-17.87	-17.8/-18.09	-18.43/-19.04	-18.93/-17.95	-18.24/-18.5	-18.67/-17.73	-17.44/-18.84	-19.21/-17.6	-19.02/-17.33	-19.25/-17.27	-19.41/-17.73	-18.38/-18.73
Freq(Hz)	5.3GPol.	ThetaAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ (0°)	-0.69/-0.75	-1.01/-1.25	-1.52/-2.04	-3.11/-4.18	-5.06/-6.36	-7.89/-10.02	-12.22/-13.02	-12.22/-10.44	-8.28/-6.52	-4.75/-5.57	-2.68/-1.96	-1.41/-1.01	0.93/-0.09	-0.98/-1.26	-1.67/-2.2	-2.63/-3.35	-4.46/-6	-7.99/-10.24	-12.03/-12.67	-11.89/-9.69	-7.61/-5.83	-4.35/-3.29	-2.41/-1.73	-1.13/-0.85
Θ (7.5°)	-1.43/-1.13	-1.0/-0.75	-0.56/-0.94	-2.06/-3.36	-4.49/-5.23	-6.07/-7.62	-10.09/-12.55	-11.13/-11.61	-9.12/-6.91	-4.94/-3.19	-1.81/-0.73	-0.10/-2.1	0.310.21	-0.10/-0.66	-1.4/-2.27	-3.29/-4.38	-5.79/-7.46	-9.55/-11.72	-13.63/-12.9	-10.18/-8.16	-6.89/-6.04	-5.13/-4.22	-3.4/-2.62	-2.13/-1.77
Θ (15°)	-1.7/-1.2	-0.64/-0.32	-0.17/-0.7	-1.8/-2.88	-4.07/-4.86	-5.58/-7.39	-10.69/-16.67	-18.97/-12.7	-9.07/-6.77	-4.68/-2.95	-1.66/-0.													



Radiated Composite Gain Data of 2.4GHz&5GHz

Appendix A.1

Θ(15°)	-13.34/-16.84	-18.58/-18.12	-17.97/-13.38	-10.14/-7.95	-6.45/-5.52	-5.1/-4.81	-4.45/-3.67	-2.81/-2.5	-2.43/-2.87	-3.29/-3.62	-4.13/-4.97	-6.2/-7.87	-10.62/-15.36	-18.29/-15.13	-11.24/-8.32	-6.39/-4.78	-3.43/-2.39	-1.62/-1.19	-1.24/-1.56	-1.91/-2.22	-2.52/-3.06	-4.03/-4.96	-6.27/-7.95	-9.59/-11.02
Θ(22.5°)	-8.94/-10.48	-12.03/-14.97	-17.44/-15.14	-11.28/-8.52	-6.6/-5.6	-5.16/-4.59	-3.92/-3.35	-2.89/-2.52	-2.36/-2.45	-2.99/-3.63	-4.03/-4.91	-6.1/-7.98	-10.89/-14.94	-18.01/-15.57	-12.08/-9.47	-7.32/-5.3	-3.58/-2.32	-1.54/-1.17	-1.27/-1.44	-1.58/-1.76	-2.14/-2.51	-2.96/-3.8	-5.06/-6.26	-7.19/-7.84
Θ(30°)	-5.56/-6.37	-8.48/-11.86	-15.2/-13.38	-11.1/-9.18	-7.95/-6.88	-5.37/-3.81	-2.78/-2.06	-1.79/-1.96	-2.51/-2.78	-2.79/-2.95	-3.44/-4.47	-5.74/-7.66	-10.27/-12.79	-12.87/-10.38	-8.26/-7.07	-6.22/-5.31	-4.61/-4.12	-3.41/-2.41	-1.27/-0.64	-0.95/-1.77	-2.25/-2.63	-3.18/-4.05	-4.83/-5.41	-5.48/-5.14
Θ(37.5°)	-4.87/-5.16	-6.88/-11.34	-17.9/-19.6	-12.88/-10.63	-9.6/-7.71	-5.17/-3.46	-2.73/-2.69	-2.64/-2.5	-2.35/-2.4	-2.5/-3	-3.71/-4.65	-5.99/-8.1	-10.16/-13.11	-14.75/-12.64	-10.42/-9.93	-6.9/-4.81	-2.63/-1.37	-0.81/-0.62	-0.78/-1.11	-1.57/-2.69	-3.7/-3.66	-4.16/-5.11	-6.14/-5.61	-4.45/-4.15
Θ(45°)	-6.05/-6.81	-8.83/-15.95	-16.14/-13.62	-11.65/-10.59	-9.46/-6.94	-4.46/-3.08	-2.61/-2.7	-2.95/-2.95	-2.5/-2.08	-2.66/-3.54	-3.73/-3.62	-5.2/-8.15	-11.29/-18.28	-18.67/-13.43	-10.17/-8.11	-6.13/-5.26	-4.25/-3.28	-2.52/-2.33	-2.21/-2.15	-2.72/-2.48	-2.1/-2.99	-4.49/-6.29	-7.79/-8.14	-6.54/-6.5
Θ(52.5°)	-4.59/-5.9	-8.84/-16.8	-18.7/-18.48	-14.25/-12.41	-10.22/-6.64	-4.03/-2.77	-2.63/-2.67	-2.46/-2.46	-2.6/-2.32	-2.45/-2.75	-3.33/-3.79	-5.9/-8.81	-11.07/-14.47	-18.18/-14.94	-9.56/-6.65	-6.32/-4.92	-3.47/-2.83	-2.92/-2.84	-2.69/-3.28	-4.43/-5.84	-5.17/-4.44	-5.19/-6.79	-8.57/-7.77	-5.59/-4.47
Θ(60°)	-9.52/-8.1	-10.25/-15	-14/-10.42	-9.87/-10.65	-10.34/-8.12	-5.35/-3.41	-2.69/-3.26	-3.4/-2.93	-3.06/-2.77	-2.2/-2.33	-3.51/-4.38	-6.14/-9.29	-9.59/-9.78	-14.85/-19.01	-12.62/-9.8	-9.16/-9.37	-7.93/-5.78	-4.36/-5.06	-6.34/-5.57	-5.84/-7.88	-7.26/-6.78	-8.16/-9.56	-10.01/-10.77	-12.29/-10.15
Θ(67.5°)	-6.81/-7.46	-9.1/-10.48	-11.95/-10.63	-10.46/-11.29	-12.28/-9.19	-5.56/-4.09	-4.17/-4.86	-4.7/-3.66	-2.8/-2.79	-3.36/-3.79	-4.3/-4.96	-4.6/-6.31	-8.63/-13.26	-19.57/-16.52	-11.9/-9.48	-10.93/-10.31	-9.1/-6.39	-4.15/-4.13	-5.51/-6.12	-7.94/-9.67	-9.79/-9.53	-9.44/-9.91	-10.76/-9.03	-8.17/-6.74
Θ(75°)	-8.01/-7.08	-8.35/-8.74	-12.87/-11.82	-12.86/-12.7	-11.1/-7.66	-5.24/-3.91	-3.22/-3.72	-4.91/-4.37	-3.4/-3.38	-3.2/-2.85	-2.83/-4.37	-4.94/-6.19	-6.21/-6.5	-9.1/-18.09	-15.49/-9.2	-8.52/-10.23	-12.42/-9.96	-4.72/-4.29	-6.34/-7.87	-8.76/-15.12	-18.84/-14.8	-9.29/-9.23	-9.64/-8.35	-8.04/-7.98
Θ(82.5°)	-6.31/-6.1	-7.5/-8.7	-9.52/-9.68	-10.51/-9.79	-10.52/-7.83	-4.65/-3.24	-4.03/-4.56	-4.38/-4.13	-3.9/-4.43	-4.55/-3.36	-2.88/-3.65	-4.58/-6.58	-9.56/-8.14	-8.42/-14.06	-12.76/-8.86	-8.68/-10.18	-11.2/-11.09	-6.01/-4.12	-9.02/-10.34	-10.82/-18.76	-17.76/-15.22	-9.23/-7.95	-6.95/-7.98	-8.31/-7.65
Θ(90°)	-8.76/-8.28	-6.2/-7.3	-9.96/-10.53	-10.39/-10.49	-10.11/-7.59	-6.1/-4.71	-4.68/-4.7	-4.9/-5.13	-5.52/-5.67	-4.65/-3.56	-3.16/-3.72	-5.08/-5.14	-6.76/-7.05	-8.42/-12.01	-12.67/-12.02	-11.96/-10.79	-13.8/-16.26	-9.91/-6.49	-8.66/-16.69	-14.76/-14.26	-11.12/-11.46	-6.93/-6.27	-5.34/-5.02	-6.58/-7.45
Θ(97.5°)	-7.23/-5.65	-5.54/-7.83	-11.61/-12.19	-10.34/-8.65	-9.74/-7.75	-4.72/-4.69	-6.4/-5.96	-6.47/-8.22	-8/-6.75	-4.65/-4.22	-4.72/-4.51	-4.58/-4.49	-6.93/-7.91	-8.1/-11.38	-11.29/-11.4	-11.18/-16.65	-14.9/-18.85	-17.88/-9.55	-12/-17.88	-19.17/-12.32	-8.73/-11.5	-7.35/-4.72	-4.19/-5.42	-7.95/-7.75
Θ(105°)	-6.76/-7.45	-8.5/-8.77	-10.77/-10.4	-8.59/-7.66	-5.69/-4.49	-3.79/-4.48	-4.92/-6.09	-8.36/-9.96	-10.98/-9.5	-6.37/-5.26	-5/-5.48	-6.05/-6.09	-6.4/-7.2	-7.8/-10.86	-12.1/-15.26	-12.06/-12.42	-16.6/-12.34	-13.71/-13.09	-16.49/-18.27	-16.5/-19.04	-8.7/-8.41	-6.91/-4.51	-4.3/-5.93	-8.81/-7.77
Θ(112.5°)	-8.31/-8.39	-7.67/-9.08	-14.54/-14.03	-11.44/-9.29	-6.82/-5.02	-3.28/-4.06	-6.32/-7.98	-8.18/-10.54	-13.38/-11.43	-8.72/-6.03	-5.27/-5.64	-6.11/-5.5	-6.54/-5.44	-8.2/-12.3	-15.67/-14.33	-13.99/-18.04	-12.93/-18.48	-19.14/-10.43	-12.61/-14.17	-12.5/-17.33	-9.09/-10.03	-8.09/-3.33	-3.54/-5.11	-6.9/-7.73
Θ(120°)	-7.66/-7.87	-8.17/-10.35	-11.63/-11	-9.21/-7.21	-5.65/-5.02	-4.66/-4.46	-5.62/-6.6	-6.7/-8.9	-11.25/-12.03	-9.32/-7.96	-6.94/-6.9	-6.85/-7.57	-8.63/-7.87	-13.52/-17.23	-16.57/-11.07	-10.97/-17.56	-11.08/-8.54	-11.65/-17.55	-15.69/-9.74	-12.9/-16.06	-10.1/-11.45	-7.48/-6.34	-5.25/-5.89	-8.75/-7.76
Θ(127.5°)	-9.59/-9.67	-8.71/-11.22	-11.68/-7.82	-5.08/-4.49	-4.17/-4.29	-5.45/-7.17	-7.38/-6.51	-6.7/-7.79	-10.46/-14.03	-13.9/-11.23	-9.74/-8.24	-9.89/-10.12	-11.79/-10.69	-16.27/-18.12	-14.29/-8.51	-14.28/-13.41	-9.56/-18.65	-15.14/-12.78	-14.19/-14.86	-10.81/-7.74	-18.18/-15.35	-9.79/-8.42	-9.59/-12.63	-15.01/-15.19
Θ(135°)	-11.36/-6.99	-4.87/-4.46	-5.02/-4.2	-2.49/-1.75	-2.59/-4.41	-5.91/-7.23	-7.18/-5.53	-4.7/-6.57	-12.46/-17.93	-18.5/-17.47	-9.84/-10.07	-15.54/-19.02	-16.34/-18.87	-15.27/-17.7	-8.6/-18.87	-14.95/-19.15	-18.82/-15.05	-15.05/-11.86	-17.7/-17.72	-7.87/-6.57	-6.82/-7.61	-14.26/-18.35		
Θ(142.5°)	-6.62/-7.58	-8.82/-7.02	-6.31/-6.06	-4.96/-4.15	-4.57/-7.07	-10.23/-10.23	-8.1/-7.48	-8.61/-11.07	-14.9/-18.61	-18.93/-18.43	-17.27/-18.12	-16.24/-15.87	-17.32/-17.9	-15.58/-10.1	-10.12/-9.58	-11.13/-11.43	-12.42/-15.58	-11.66/-12.68	-13.74/-18.77	-19.56/-19.28	-18.14/-15.93	-14.85/-12.56	-16.62/-13.65	-11.9/-7.08
Θ(150°)	-5.51/-7.56	-7.68/-5.68	-3.38/-2.05	-1.79/-1.87	-2.34/-2.71	-3.45/-4.76	-5.78/-6.25	-7.32/-10.39	-16.32/-18.44	-18.13/-17.48	-16.04/-19.29	-19.23/-15.79	-12.29/-11.24	-9.87/-9.22	-9.02/-6.94	-7.08/-9.91	-18.08/-17.68	-14.24/-11.71	-11.27/-15.17	-18.7/-18.7	-18.88/-18.97	-13.67/-11.2	-10.62/-8.78	-7.26/-5.15
Θ(157.5°)	-5/-7.62	-8.97/-7.62	-5.39/-3.35	-2.45/-2.63	-3.24/-3.95	-4.34/-4.4	-4.62/-5.33	-6.5/-7.7	-8.98/-10.2	-11.7/-13.62	-16.99/-18.54	-17.86/-19.13	-15.12/-10.23	-8.1/-8.24	-10.43/-15.87	-18.5/-12.96	-10.32/-11.35	-11.78/-10.21	-10.67/-13.99	-17.66/-17.4	-16.74/-13.78	-10.03/-6.27	-5.5/-4.16	-3.51/-3.72
Θ(165°)	-6.03/-8.42	-12.11/-13.73	-10.9/-8.73	-7.6/-7.08	-6.38/-5.25	-4.25/-3.82	-3.99/-4.64	-5.59/-6.95	-8.5/-11.27	-16.32/-18.53	-18.51/-19.05	-17.4/-16.97	-17.24/-17.95	-17.21/-13.73	-10.29/-8.73	-8.98/-10.94	-15.54/-18.59	-13.54/-11.48	-11.85/-13.85	-17.59/-18.52	-16.51/-12.14	-8.97/-6.76	-5.3/-4.59	-4.55/-4.95
Θ(172.5°)	-9.66/-9.33	-8.17/-6.79	-5.87/-5.09	-4.25/-3.92	-3.94/-3.97	-4.18/-4.39	-4.88/-6.35	-8.97/-12.8	-18.37/-19.03	-19.31/-18.17	-17.31/-15.83	-15.13/-15.5	-14.77/-13.36	-12.23/-11.92	-11.64/-11.44	-11.10/-5.66	-9.72/-8.64	-7.9/-7.88	-8.73/-10.51	-13.51/-17.66	-18.08/-17.59	-16.71/-11.75	-9.79/-9.47	-9.43/-9.5
Θ(180°)	-8.91/-8.12	-7.19/-6.53	-6/-5.45	-5.41/-5.81	-6.54/-7.38	-8.58/-9.69	-11.46/-14.18	-16.72/-18.64	-18.81/-18.29	-18.94/-17.99	-18.36/-17.87	-17.97/-18.84	-18.7/-17.4	-15.46/-14.08	-13.45/-13.22	-12.57/-11.68	-11.32/-11.38	-12.43/-14.22	-15.16/-15.08	-15.77/-18.09	-19.21/-18.65	-19.21/-18.98	-16.94/-13.39	-11.93/-10
Freq(Hz)	5.785GHz	Theta/Ant. 4																						
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-2.39/-1.91	-1.73/-1.82	-1.81/-2.04	-2.52/-3.25	-4.15/-5	-5.9/-7.55	-9.86/-13.12	-16.89/-19.3	-15.84/-11.53	-8.79/-7.18	-5.78/-4.43	-3.55/-2.79	-2.39/-2.13	-1.99/-1.89	-2.05/-2.3	-2.7/-3.37	-4.14/-4.89	-5.73/-7.17	-9.67/-13.84	-18.79/-11.57	-18.77/-14.02	-9.88/-7.54	-6.18/-5.05	-3.79/-2.91
Θ(7.5°)	-2.89/-2.66	-2.6/-2.78	-2.96/-2.74	-2.57/-2.9	-4.08/-5.81	-7.26/-8	-9.11/-11.74	-17.49/-18.78	-18.04/-14.83	-11.42/-9.18	-7.37/-6.75	-4.19/-2.92	-2.21/-1.78	-1.87/-1.84	-2.26/-2.7	-3.12/-3.68	-4.48/-5.59	-7.21/-9.25	-12.17/-15.19	-16.34/-15.04	-12.72/-9.82	-7.42/-5.76	-4.86/-4.18	-3.51/-3.13
Θ(15°)	-2.71/-2.63	-2.5/-2.55	-2.62/-2.65	-2.77/-3.44	-4.84/-6.17	-7.28/-8.63	-10.86/-13.95	-18.66/-17.18	-17.84/-13.45	-10.78/-9.16	-7.76/-5.89	-4.11/-2.73	-1.91/-1.56	-1.66/-2.06	-2.79/-3.58	-4.21/-4.77	-5.66/-6.75	-8.17/-10.23	-13.31/-16.23	-16.72/-15.73	-14.35/-10.9	-8.04/-5.88	-4.49/-3.4	-2.94/-2.8
Θ(22.5°)	-2.27/-1.91	-1.68/-1.58	-1.57/-1.76	-2.46/-3.73	-4.88/-5.48	-6.55/-8.42	-10.79/-13.61	-17.11/-18.42	-17.88/-16.51	-12.24/-9.97	-7.62/-5.47	-3.79/-2.78	-2.44/-2.67	-3.48/-4.36	-5.45/-6	-5.95/-6.08	-6.79/-8.22	-9.88/-11.46	-12.38/-13.09	-14.18/-14.36	-14.24/-14.84	-11.8/-7.81	-5.52/-3.68	-2.95/-2.54
Θ(30°)	-2.93/-2.31	-1.88/-1.75	-2.19/-3.37	-4.72/-5.62	-5.7/-5.75	-6.2/-6.83	-8.29/-9.78	-12.2/-16.45	-17.99/-17.98	-13.97/-8.83	-6.42/-5.37	-4.3/-3.56	-3.9/-4.86	-5.35/-5.98	-7.97/-9.93	-10.4/-10.37	-9.61/-7.7	-6.26/-6.2	-7.25/-8.01	-7.43/-7.66	-10/-10.76	-10.18/-8.65	-6.01/-4.52	-4.16/-3.53
Θ(37.5°)	-8.24/-5.12	-3.28/-2.43	-2.5/-3.65	-5.07/-6.82	-7.25/-7.04	-5.91/-5.25	-5.65/-6.16	-7.68/-10.34	-14.32/-14.34	-9.71/-6.59	-5.33/-5.56	-5.78/-6.47	-6.01/-5.14	-5.61/-7.1	-9.14/-10.29	-10.17/-9.55	-8.44/-7.87	-7.13/-5.94	-4.55/-4.08	-4.39/-5.16	-7.11/-10.41	-10.62/-8.62	-7.32/-7.14	-8.32/-10
Θ(45°)	-16.9/-8.01	-4.75/-4	-3.9/-4.43	-5.34/-6.01	-6.11/-6.3	-6.38/-5.55	-4.06/-4.04	-6.01/-9.3	-12.03/-9.59	-7.85/-7.4	-5.74/-4.36	-3.1/-3.55	-3.5/-3.87	-4.76/-5.52	-6.46/-8.82	-11.46/-11.58	-12.69/-10.71	-7.27/-5.08	-4.24/-4.8	-6.37/-7.27	-5.9/-5.6	-7/-8.5	-9.12/-9.11	-11.24/-16.67
Θ(52.5°)	-16.21/-17.4	-9.47/-5.85	-4.88/-5.26	-5.94/-5.6	-4.5/-4.52	-5.7/-6.14	-4.9/-4.4	-5.68/-7.66	-7.64/-5.42	-3.72/-3.59	-3.59/-4.1	-4.08/-5.52	-4.86/-5.48	-4.3/-4.7	-5.2/-7.44	-9.65/-12.99	-15.24/-11.37	-7.59/-4.07	-3.21/-4.3	-4.97/-5.23	-6.34/-6.99	-7.39/-7.78	-8.36/-7.68	-7.82/-10.16
Θ(60°)	-11.61/-18.63	-13.01/-6.84	-5.57/-5.79	-6.45/-3.71	-2.34/-3.15	-4.76/-5.34	-4.79/-5.38	-7.55/-10.1	-7.21/-4.66	-3.96/-5.76	-5.67/-3.9	-1.71/-2.52	-2.34/-4.16	-3.43/-4.27	-5.77/-7.05	-8.75/-9.4	-10.71/-9.23	-7.18/-6.47	-4.98/-5.04	-6.65/-7.69	-6.13/-5.48	-4.92/-4.76	-4.46/-3.53	-4.97/-5.76
Θ(67.5°)	-9.56/-11.46	-14.72/-7.56	-6.68/-6.41	-6.14/-3.43	-2.27/-2.94	-4.26/-4.73	-4.56/-5.9	-8.55/-11.07	-6.26/-4.24	-4.39/-5.8</														



Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	1.39	1.29	2.84	1.02
Ant. 2 Max Gain (dBi)	4.01	1.25	2.29	2.91
Ant. 3 Max Gain (dBi)	1.03	1.22	1.35	3.03
Ant. 4 Max Gain (dBi)	1.08	1.09	1.68	1.06
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/82.5/277.5	Theta/75/97.5	Theta/67.5/90	Theta/105/195
Ant. 2 Polarization/Θ(°)/Φ(°)	Theta/127.5/337.5	Theta/135/0	Theta/127.5/330	Theta/67.5/105
Ant. 3 Polarization/Θ(°)/Φ(°)	Theta/60/307.5	Phi/112.5/285	Phi/120/315	Theta/82.5/285
Ant. 4 Polarization/Θ(°)/Φ(°)	Theta/60/330	Theta/45/120	Theta/45/135	Theta/45/127.5
Max Gain (dBi)	4.01	1.29	2.84	3.03
DG [1SS] (dBi)	4.2	3.9	5.31	4.78
DG [2SS] (dBi)	4.01	1.29	2.84	3.03
DG [4SS] (dBi)	4.01	1.29	2.84	3.03

DG 1SS Result

Freq(Hz)	6.175GPaL	PhiL	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)	
Θ(0°)	-6.37/-4.98	-3.31/-2.17	-1.56/-1.07	-0.35/0.23	0.48/0.72	0.92/1.34	1.39/1.05	0.45/-0.21	-1.07/-1.71	-2.63/-4.25	-5.79/-6.42	-7.17/-7.31	-6.07/-4.8	-3.78/-2.81	-1.69/-1.02	-0.74/-0.4	0.03/0.43	0.80/93	1.08/0.89	0.33/-0.53	-1.28/-1.95	-2.87/-4.06	-5.06/-5.7	-6.71/-6.94	
Θ(7.5°)	-5.08/-4.55	-3.09/-1.89	-0.81/-0.22	-0.10/1.3	0.45/0.69	0.85/0.83	0.60/41	0.19/0.15	-0.77/-1.36	-2.32/-3.6	-5.2/-6.18	-6.85/-7.13	-6.64/-4.97	-3.34/-2.47	-1.88/-1.18	-0.33/0.15	0.06/0.13	0.09/0.08	0.17/0.08	-0.18/-0.76	-1.48/-2.24	-3.03/-3.76	-4.46/-4.97	-5.44/-5.47	
Θ(15°)	-3.41/-3.5	-3.56/-3.65	-3.53/-2.73	-2.15/-1.34	-1.77/-1.67	-1.32/-1.14	-1.33/-1.81	-2.84/-3.38	-3.79/-1.43	-4.64/-5	-4.77/-4.86	-5/-5.02	-5.01/-4.79	-4.26/-3.58	-3.06/-2.22	-1.3/-0.54	-0.06/0.26	0.50/45	0.16/-0.18	-0.73/-1.32	-1.79/-2.22	-2.62/-2.66	-2.6/-2.46	-2.71/-3	
Θ(22.5°)	-2.51/-1.79	-2.38/-1.63	-2.27/-2.91	-2.92/-1.99	-0.94/-0.44	-0.35/-0.45	-1.22/-2.31	-3.68/-4.38	-5.54/-5.86	-5.75/-5.82	-6.39/-6.03	-5.59/-4.06	-3.02/-2.47	-2.68/-3.26	-3.65/-3.94	-3.73/-0.9	-1.91/-0.91	-0.31/-0.41	-0.88/-1.63	-2.06/-1.91	-1.92/-2.17	-1.77/-1.45	-1.15/-1.03	-1.91/-2.71	
Θ(30°)	-4.99/-3.98	-1.74/-0.91	-1.32/-0.26	-2.33/-1.93	-0.8/-0.47	-1.14/-1.73	-1.87/-1.72	-2.1/3	-4.45/-5.6	-6.12/-6.75	-7.59/-5.53	-5.14/-31	-3.74/-2.96	-2.49/-2.57	-3.27/-4.26	-4.6/-4.24	-3.96/-2.9	-2.15/-1.88	-2.33/-2.37	-2.22/-0.56	0.35/0.5	0.34/0.01	-0.32/-1.57	-3.18/-4.77	
Θ(37.5°)	-3.05/-2.89	-2.9/-3.54	-3.23/-2.86	-2.25/-1.56	-1.07/-0.79	-1.23/-1.7	-2.62/-3.39	-4.12/-4.92	-5.96/-6.05	-5.84/-6.17	-7.84/-6.42	-4.66/-3.38	-1.98/-1.35	-1.21/-1.21	-1.11/08	-1.88/-3.61	-3.28/-1.79	-1.24/-1.36	-1.79/-0.52	0.25/-0.77	-0.27/0.57	0.26/-0.58	-1.34/-2.04	-2.42/-3.34	
Θ(45°)	-4.73/-92	-3.17/-2.52	-1.73/-1.37	-1.71/-1.78	-1.75/-1.65	-1.39/-2.06	-2.8/-3.35	-4.23/-5.73	-6.18/-5.92	-6.25/-6.67	-7.31/-6.47	-5.57/-4.32	-2.8/-1.64	-1.21/-1.08	-1.24/-1.75	-2.32/-2.85	-3.53/-2.81	-2.08/-2.9	-3.59/-1.85	-0.54/-0.01	-0.61/0.13	0.48/-0.32	-1.45/-3.11	-2.74/-2.38	
Θ(52.5°)	-4.56/-3.87	-3.67/-3.42	-3.53/-3.3	-3.33/-4.1	-3.54/-1.72	-0.89/-1.92	-2.79/-2.93	4.49/-6	-5.98/-0.62	-7.2/-0.08	-6.84/-6	-5.28/-4.7	-4.31/-2.81	-1.67/-1.14	-1.67/-1.92	-2.36/-3.37	4.29/-4.21	-3.53/-2.7	-4.17/-2.69	-1.97/-2.22	-2.13/-1.22	-0.71/-1.16	-2.84/-3.28	-3.29/-4.35	
Θ(60°)	-4.85/-307	-2.24/-3.21	-2.98/-3.87	4.41/-5.05	-5.87/-3.74	-1.98/-2.5	-2.96/-2.81	-3.82/-5.5	-5.59/-4.94	-6.34/-5.79	-5.71/-4.88	-4.27/-5.29	-7.07/-4.93	-3.61/-6.4	-2.07/-2.86	4.54/-4.33	-5.27/-5.37	2.49/-2.89	4.31/-3.09	-1.53/-2.22	-2.34/-0.95	-0.96/-1.84	-1.73/-1.87	-2.74/-3.42	
Θ(67.5°)	-4.43/-3.45	-3.72/-4.22	-4.51/-4.38	-4.76/-5.2	-7.04/-5.59	-3.32/-2.1	-6.33/-4.28	-4.69/-4.86	-5.37/-6.74	-6.92/-7.71	-5.83/-9.5	-6.62/-7.12	-6.02/-4.23	-2.91/-2.92	-5.33/-5.94	-4.56/-4.95	-5.37/-5.3	-3.47/-3.06	-4.14/-0.6	-4.68/-2.79	-2.1/-1.97	-1.59/-3.23	-4.17/-3.71	-2.37/-4.26	
Θ(75°)	-3.57/-2.36	-2.63/-2.34	4.09/-5.76	-5.37/-3.7	-5.16/-4.61	-3.92/-2.55	-2.54/-3.74	-5.04/-5.36	-5.79/-5.91	-5.14/-6.13	-5.09/-3.45	-5.9/-5.5	-5.3/-6.18	-5.94/-5.14	4.69/-6.43	4.01/-5.91	5.08/-4.07	-2.99/-3.24	-5.38/-3.47	-2.66/-2.34	-2.8/-3.38	-2.84/-2.49	-1.87/-1.19	-2.27/-4.99	
Θ(82.5°)	-3.42/-2.37	-2.6/-2.05	2.85/-5	6.64/-7.28	-4.86/-4.43	-6.39/-2.85	-3.86/-3.61	-5.36/-6.2	-6.22/-5.59	-3.87/-5.97	-6.15/-4.62	-5.74/-5.98	-3.93/-5.27	4.16/-4.44	-6.47/-4.61	-4.85/-5.86	-3.63/-2.17	-2.01/-3.85	-5.59/-1.97	-2.71/-1.3	-0.92/-2	-2.97/-4.03	-1.59/-1.35	-2.3/-3.62	
Θ(90°)	-2.86/-1.24	-1.28/-1.29	-2.43/-5.56	-4.96/-7.08	-4.11/-3.35	-3.31/-1.6	-2.36/-2.52	-2.07/-1.77	-5.13/-3.61	-2.76/-6.59	-6.33/-4.14	-5.8/-3.78	-2.2/-3.3	-4.74/-4.43	-4.66/-6.33	-5.34/-4.77	-5.67/-2.69	-4.29/-5.03	-6.37/-4.44	-2.44/-2.38	-1.56/-2.92	-4.21/-3.62	-0.24/0.4	0.41/-2.39	
Θ(97.5°)	-3.72/-2.7	-2.02/-2.04	2.99/-6.68	-4.9/-6.84	-2.79/-2.93	4.03/-2.41	-3.51/-3.12	-4.46/-6.02	-5.93/-3.94	-1.79/-4.69	-5.04/-4.14	-5.34/-2.62	-0.45/-2.2	-5.91/-6.22	-5.09/-5.73	-4.88/-5.71	-5.11/-4.28	-3.56/-5.71	-6.17/-3.59	-3.57/-2.22	-3.89/-4.96	-2.84/-2.64	-0.68/-0.66	-1.16/-2.91	
Θ(105°)	-1.12/-1.01	-1.67/-1.28	-2.62/-6.13	-5.16/-6.2	-3.92/-2.77	-3.63/-2.21	-3.32/-2.69	-4.2/-6.32	-5.53/-3.08	-1.79/-4.08	-5.71/-5.62	4.5/-3.04	-1.36/-2.85	-4.53/-5.03	4.75/-5.06	-5.18/-6.51	-5.96/-2.29	-2.04/-6.96	-7.72/-5.15	-2.28/-3.64	-4.63/-5.4	-2.94/-1.41	-0.84/-1.24	-0.46/-1.24	
Θ(112.5°)	-0.73/-1.58	-2.94/-3.21	-4.73/-5.42	-5.51/-6.05	-5.14/-4.46	-5.65/-3.42	-1.39/-3.56	-3.53/-4.09	-5.16/-2.74	-2.36/-4.06	-6.38/-5.38	-3.29/-2.08	-0.32/-1.95	-5.4/-5.05	-3.99/-5.93	-4.75/-9.1	-4.71/-0.88	-0.04/-5.21	-4.49/-1.98	-1.32/-2.43	-4.41/-3.57	-2.52/-3.14	-0.80/-0.34	-2.03/-1.28	
Θ(120°)	-3.17/-4.3	-5.5/-5.45	-3.96/-4.44	-4.47/-5.81	-5.47/-3.65	-3.21/-2.95	-2.14/-3.15	-2.85/-2.28	-2.82/-5.28	-4.63/-5.26	-7.1/-6	-5.93/-3.41	-1.37/-1.88	4.95/-4.2	-3.42/-4.83	-3.68/-3.72	6.61/-3.01	-0.22/-5.67	-4.01/-2.84	-1.83/-2.25	-3.95/-5.81	-0.79/0.36	-1.4/-1.84	-2.84/-4.83	
Θ(127.5°)	-3.17/-1.97	-2.75/-4.02	-3.2/-0.38	-5.29/-6.77	-6.44/-5.49	-5.19/-2.68	-2.58/-2.62	-2.34/-3.23	-4.08/-4.21	-3.27/-4.09	-4.23/-6.76	-3.73/-5.18	-3.28/-5.56	-7.79/-4.11	-3.99/-6.03	-3.94/-3.28	-1.4/-0.7	0.32/-1.8	-2.75/-1	0.36/0.47	-1.85/-9.49	-1.78/2.23	1.81/0.73	-1.53/-3.97	
Θ(135°)	-2.85/-2.88	-2.4/-1.49	-4.24/-3.73	-5.35/-5.41	-6.55/-4.31	-3.73/-3.99	-3.12/-1.76	-2.01/-2.65	-4.24/-4.14	-3.39/-2.69	-6.66/-5.85	-5.5/-4.16	-3.62/-8.69	-2.99/-7.93	-5.39/-6.57	-6.19/-1.34	-1.34/-5.18	-4.5/-1.64	-2.77/-7.71	-1.65/-3.86	-4.45/-1.4	-0.66/-2.39	-1.72/-3.3		
Θ(142.5°)	-3.08/-4.45	-4.34/-3.14	-3.48/-4.34	-3.39/-3.81	-5.4/-5.54	-3.14/-3.15	-3.45/-4.39	-3.63/-2.75	-1.5/-2.49	-4.11/-5.08	-3.55/-3.72	-6.45/-4.74	-3.69/-3.02	-3.44/-6.4	-8.3/-5.52	-5.93/-5.55	-3.64/-2.07	-2.75/-3.47	-4.36/-3.08	-3.23/-1.48	-4.89/-4.47	-5.27/-5	-4.69/-3.55	-2.33/-2.29	
Θ(150°)	-4.47/-6.58	-7.95/-4.22	-4.54/-4.22	-5.24/-5.1	-4.25/-4.88	-6.98/-10.11	-8.69/-6.81	-5.12/-2.41	-0.78/-1.53	-3.26/-3.89	-5.61/-5.49	-3.4/-2.78	-0.98/-3.02	-8.33/-7.52	-5.67/-3.8	-2.24/-1.36	-3.56/-7.3	-7.25/-4.13	-2.22/-3.93	-2.1/-2.03	-2.31/-3.93	-5.63/-5.41	-3.93/-3.29	-3.93/-3.29	
Θ(157.5°)	-2.29/-2.79	-3.93/-4.71	-4.83/-4.6	-4.15/-5.03	-5.63/-5.92	-6.25/-6.24	-5.66/-5.78	-4.61/-3.89	-4.37/-5.31	-4.29/-2.24	-1.14/-0.89	-1.48/-2.7	-4.88/-7.06	-8.46/-9.16	-7.14/-4.01	-3.78/-3.98	-4.58/-5.65	-3.88/-8.32	-6.88/-4.48	-4.12/-4.85	-3.09/-0.87	-0.02/0.26	-0.6/-2.3	-3.04/-2.68	
Θ(165°)	-1.71/-1.59	-1.39/-1.02	-1.16/-1.75	-2.12/-3.6	-2.98/-3.69	-4.59/-5.5	-5.19/-5.53	-5.19/-5.65	-7.08/-7.68	-7.19/-5.65	-4.97/-5.26	-7.1/-10.06	-10.64/-8.85	-8.05/-6.03	-4.32/-3.81	-4.81/-6.41	-6.64/-6.78	-7.16/9.3	-6.31/-4.33	-3.32/-3.83	-4.2/-3.39	-2.49/-1.89	-1.96/-2.2	-1.98/-1.76	
Θ(172.5°)	-3.41/-3.17	-3.34/-3.69	-4.7/-4.89	-4.6/-4.4	-4.08/-4.4	-5.15/-6.43	-7.88/-8.55	-8.23/-7.44	-6.67/-6.85	-8.88/-8.91	-9.29/-10.11	-10.81/-9.58	-7.93/-7.1	-6.65/-6.34	-4.68/-6.7	-7.66/-8.28	-8.61/-7.87	-7.37/-6.19	-4.74/-3.81	-3.42/-4	-4.58/-4.36	-4.23/-4.44	-4.67/-6.43	-4.3/-4	
Θ(180°)	-5.41/-4.8	-4.49/-4.89	-5.02/-5.57	-5.46/-4.54	-4.51/-5.62	-7.11/-7.87	-7.99/-7.75	-7.68/-6.99	-6.41/-6.24	-5.92/-5.8	-5.38/-5.1	-4.97/-5.64	-6.5/-7.33	-7.21/-7.6	-6.28/-6.33	-7.76/-6.89	-6.31/-5.82	-5.61/-5.1	-4.53/-4.22	-3.89/-3.96	-4.13/-4.01	-4.44/-5.3	-5.06/-4.64	-6.73/-6.18	
Freq(Hz)	6.175GPaL	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°)	0.68/0.42	-0.17/-0.78	-1.31/-1.76	-2.45/-3.7	-4.94/-5.73	-6.44/-6.77	-6.45/-5.81	-4.43/-3.59	-2.6/-1.7	-1.02/-0.75	-0.29/0.25	0.46/0.43	0.29/-0.02	-0.53/-1.33	-2.19/-3.01	-3.66/-4.65	-5.75/-6.53	-7.11/-7.08	-6.94/-5.78	-4.93/-2.93	-2.04/-1.52	-0.95/-0.39	-0.40/0.42	0.86/1	
Θ(7.5°)	-0.50/-1.12	-1.86/-2.61	-3.03/3	-3.47/-3.67	-5.99/-1.72	-7.7/-4	-6.14/-4.56	-4.04/-3.42	-2.47/-1.47	-0.77/-0.71	0.25/0.78	1.04/0.94	0.67/0.41	0.03/-0.38	-0.89/-1.5	-4.52/-5.28	-6.03/-6.62	-6.49/-5.42	-3.91/-2.92	-2.61/-2.47	-2.02/-1.57	-1.07/-1.07	-0.47/0.35		
Θ(15°)	-0.84/-0.83	-1.33/-2.39	-3.93/-4.6	-4.73/-6.16	-8.18/-8.15	-7.87/-6.32	-4.65/-3.63	-3.16/-3.18	-3.41/-3.18	-3.12/-7.8	-2.44/-2.1	-1.93/-2.01	-2.23/-2.67	-2.71/-2.5	-2.57/-2.63	-2.55/-2.59	-3.21/-4.42	-5.08/-4.54	-4.04/-4.11	-3.79/-3.22	-2.79/-2.36	-2.14/-2.03	-1.93/-1.66	-1.8/-1.21	
Θ(22.5°)	0.45/0.23	-0.31/-1.23	-2.65/-3.96	-4.75/-3.55	-6.13/-6.15	-5.89/-5.27	-4.51/-3.98	-3.97/-4.42	-4.68/-4.2	-3.35/-2.79	-2.28/-2.03	-2.41/-3.05	-3.6/-3.4	-4.95/-4.95	-4.96/-4.39	-3.09/-2.54	-0.77/-0.14	-4.9/-4.22	-3.43/-2.93	-2.87/-2.95	-2.77/-2.02	-1.17/-0.4	0.02/0.57	0.99/0.8	
Θ(30°)	1.19/0.94	0.6/-0.48	-2.27/-3.48	-3.64/-3.82	-5/-6.4	-6.79/-6.24	-4.77/-4.32	-4.54/-4.05	-2.75/-2.07	-1.16/-2.02	-0.48/-0.99	-1.8/-4.1	-4.95/-4.23	-4.96/-4.95	-2.12/-4.84	-4.95/-4.02	-2.67/-2.4	-2.29/-2.26	-2/-2.45	-2.93/-2.31	-1.47/-0.51	0.02/0.53	1.06/-1.82	1.52/-1.5	
Θ(37.5°)	1.81/75	0.64/-0.92	-2.13/-2.49	-1.81/-1.53	-2.33/-3.17	-2.72/-1.59	-1.58/-2.48	-3.43/-2.37	-1.24/-0.96	-0.16/0.58	1.33/-1.25	0.35/-0.97	-3.04/-4.44	-4.23/-3.48	-3.78/-5.39	-5.08/-2.47	-1.46/-1.41	-0.48/-0.64	-0.62/-0.41	-0.99/-0.72	-0.42/-1.04	-0.64/0.2	0.91/38	1.16/-1.34	
Θ(45°)	0.53/0.35	-1/-1.254	-4.51/-3.47	-1.36/-0.9	-1.29/-0.56	-0.72/-0.88	0.04/0.21	-0.19/0.4	0.74/0.68	0.17/1.08	1.54/1	-0.24/-1.54	-3.97/-5.08	-3.55/-1.68	-1.74/-2.49	-2.92/-1.31	0.37/1.21	0.27/-0.14	-1.14/-2.58	-0.74/0.43	0.11/-0.47	0.13/-1.2	2.05/-1.91	1.64/0.96	
Θ(52.5°)	1.23/0.74	-0.85/-2.86	-4.57/-1.69	-0.19/0.11	-0.02/0.01	-0.27/-0.57	0.89/-4.19	1.21/-2.13	1.81/-3																



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ(22.5°)	-3.03/-1.4	0.42/1.18	1.57/1.82	2.04/1.55	0.85/0.34	0.24/-0.34	-2.41/-3.89	-4.32/-4.22	-4.59/-5.21	-4.67/-4.43	-4.07/-3.44	-2.37/-1.17	-0.76/-0.98	-1.24/-1.33	-1.11/-1.	-0.85/-0.6	-0.26/-0.03	0.52/1.29	1.55/0.91	-0.16/-1.02	-1.08/-1.24	-1.67/-1.89	-3.28/-4.11	-4.46/-4.04
Θ(30°)	-4.07/-3.46	-1.51/0.41	0.91/0.65	0.40/0.23	0.61/-0.23	-0.77/-1.24	-1.68/-2.21	-2.7/-3.51	-4.68/-5.84	-6.63/-6.24	-5.01/-4.19	-3.73/-3.64	-2.75/-1.5	-0.97/-0.67	0.13/-0.4	-0.79/-0.34	0.87/1.2	0.52/-0.48	-1.08/-1.5	-1.81/-1.38	-0.64/-0.08	-0.13/-0.86	-2.41/-3.42	
Θ(37.5°)	-3.97/-3.7	-2.52/-1.17	-0.40/-35	0.39/0.25	0.69/0.7	0.88/-0.	-1.56/-3.6	-4.57/-4.93	-5.66/-6.76	-7.36/-7.12	-5.87/-5.55	-5.24/-4.37	-3.22/-2.25	-2.1/-1.79	-1.55/-1.57	-0.84/-0.09	0.42/0.38	0.08/-0.32	-0.65/-1.01	-1.63/-1.52	-0.80/-28	0.55/0.04	-0.71/-68	-2.38/-3.34
Θ(45°)	-3.54/-3.86	-3.22/-1.45	-0.48/-0.32	-0.86/-1.14	-0.71/-0.6	-1.19/-2.36	-2.44/-2.96	-3.37/-3.5	-4.82/-6.65	-7.23/-6.88	-6.42/-6.24	-5.21/-3.85	-2.88/-3.17	-2.95/-2.81	-2.44/-1.21	0.71/1.52	1.47/0.82	0.11/0.5	-0.52/-2.79	-2.89/-2.47	-1.51/-0.52	-0.04/-0.57	-1.28/-1.89	-2.61/-3.69
Θ(52.5°)	-3.51/-2.72	-2.05/-1.77	-1.66/-0.28	0.17/-0.73	-1.13/-0.2	-0.04/-1.05	-2.42/-3.23	-2.58/-3.41	-4.65/-6.51	-6.88/-5.27	-4.65/-3.95	-4.11/-2.44	-2.63/-2.47	-2.39/-1.9	-1.41/-1.58	-0.79/0.36	0.11/-1.24	-2.78/-2.79	-3.67/-4.22	-4.22/-2.98	-1.62/-1.26	-1.24/-1.27	-1.29/-1.78	-3.18/-3.81
Θ(60°)	-4.18/-3.67	-2.78/-1.6	-1.47/-0.95	-0.47/-0.89	-1.37/-1.4	-0.77/-2.5	-2.6/-3.19	-3.69/-3.37	-3.11/-4.99	-7.29/-8.51	-5.97/-3.9	-3.56/-3.15	-4/-2.24	-2.5/-2.47	-3.71/-1.53	-1.09/-2.87	-4.2/-1.95	-2.23/-4	-5.43/-2.81	-1.24/-1.51	-1.38/-1.41	-2.32/-3.06	-2.71/-3.56	
Θ(67.5°)	-4.59/-2.16	-2.25/-1.63	-1.31/-0.49	-1.1/-1.62	-2.04/-2.05	-2.29/-4.45	-3.87/-1.35	-2.88/-3.43	-3.31/-4.84	-6.48/-5.87	-3.89/-2.39	-4.23/-3.91	-3.43/-2.71	-2.37/-4.27	-2.45/-3.83	-3.2/-1.6	-1.52/-2.83	-3.7/-2.25	-1.57/-3.4	-3.45/-2.18	-2.15/-1.71	-1.74/-0.92	-0.94/-1.36	-2.39/-3.94
Θ(75°)	-4.83/-4.61	-3.92/-2.63	-1.81/-0.64	-0.24/-2.15	-1.41/-3.17	-1.11/-5.03	-3.45/-1.09	-3.09/-2.65	-3.67/-4.75	-6.41/-6.65	-4.96/-2.91	-3.08/-3.34	-4.64/-2.58	-3.8/-4.23	-5.44/-4.76	-4.93/-2.05	-1.01/-1.54	-4.87/-2.23	-1.42/-2.22	-3.32/-1.86	-2.03/-2.71	-1.44/-0.24	-2.61/-3.42	-3.34/-4.11
Θ(82.5°)	-2.33/-1.78	-3.1/-1.81	-1.48/-2.53	-2.01/-3.35	-2.89/-3.2	-3.01/-2.41	-2.87/-1.52	-3.82/-3.41	-6.13/-6.55	-4.45/-6.03	-3.89/-2.51	-4.16/-5.85	-5.7/-2.44	-3.34/-4.33	-4.24/-4.8	-4.64/-4.36	-0.55/-2.15	-4.12/-4.26	-2.26/-3.8	-2.53/-1.28	-2.39/-2.56	-2.07/-0.26	-1.33/-2.04	-1.59/-2.9
Θ(90°)	-2.26/-1.27	-3.2/-1.15	-0.85/-2.86	-2.26/-4.62	-3.11/-5.23	-3.57/-1.6	-4.08/-2.79	-4.18/-4.07	-4.24/-5.74	-4.81/-3.96	-3.72/-2.72	-4.39/-5	-3.17/-2.62	-2.91/-4.4	-3.73/-3.53	-5.13/-4.35	-2.95/-3.02	-4.55/-5.35	-4.94/-3.66	-3.28/-3.15	-4.08/-3.88	-3.74/-2.59	-2.21/-1.54	-1.82/-4.51
Θ(97.5°)	-1.33/-0.37	-3.36/-1.36	-1.27/-4.61	-4.08/-6.17	-3.49/-5.28	-3.29/-1.87	-4.56/-3.51	-4.41/-4.52	-6.2/-6.1	-3.6/-3.51	-4.16/-2.67	-3.59/-4.72	-3.82/-3.23	-4.25/-2.45	-3.04/-3.5	-4.56/-4.85	-5.23/-5.82	-3.51/-5.45	-6.1/-5.16	-4.12/-3.98	-5.12/-3.8	-3.7/-3.74	-3.39/-3.15	-1.4/-2.71
Θ(105°)	-0.48/-1.2	-3.53/-2.04	-2.22/-4.56	-4.41/-6.19	-3.76/-2.95	-2.54/-1.48	-4.02/-3.93	-4.31/-4.7	-5/-5.14	-2.26/-2.73	-4.28/-3.25	-4.94/-5.13	-5.1/-2.54	-3.59/-4.15	-3.67/-6.58	-3.19/-3.85	-7.23/-7.92	-3.73/-5.76	-5.09/-4.14	-3.25/-3.24	-6.14/-6.93	-4.29/-2.82	-4.06/-1.13	-1.87/-2.24
Θ(112.5°)	-0.27/-1.26	-2.74/-3.02	-4.63/-5.53	-4.7/-5.48	-4.72/-4.75	-3.92/-2.61	-4.44/-4.06	-4.91/-5.36	-4.45/-5.75	-5.18/-3.7	-2.86/-1.99	-4.44/-4.92	-3.44/-2.71	-4.14/-6.16	-3.86/-7.89	-5.47/-4.88	-7.5/-3.25	0.01/-6.42	-6.73/-3.2	-0.95/-2.43	-5.59/-7.1	-4.31/-4.13	-4.01/-1.86	-1.35/-0.35
Θ(120°)	-2.13/-4.22	-4.11/-3.08	-3.44/-5.44	-4.08/-6.29	-4.36/-5.2	-3.71/-1.38	-3.25/-4.8	-4.28/-4.36	-5.83/-5.12	-7.18/-6.09	-4.39/-2.57	-2.43/-3	-3.51/-3.14	-4.95/-4.98	-6.44/-6.47	-2.97/-3.22	-1.148/-3.4	-0.18/-5.5	-5.71/-4.57	-1.48/-2.2	-8.48/-5.1	0.14/-0.23	-4.13/-3.44	-4.08/-1.58
Θ(127.5°)	-3.02/-0.41	-4.53/-3.46	-2.54/-3.44	-5.44/-7.13	-7.18/-7.36	-4.14/-2.59	-5.43/-4.86	-3.51/-4.01	-3.92/-3.71	-4.82/-7.95	-7.07/-4.56	-5.18/-3.8	-4.45/-3.98	-6.82/-2.63	-4.24/-4.33	-3.92/-4.22	-3.92/-0.97	1.32/-3.49	-2.84/-0.57	0.37/-0.43	-3.95/-4.36	-1.25/-0.36	-2.88/-0.93	-2.52/-2.85
Θ(135°)	-1.91/-2.84	-2.75/-4.27	-4.23/-4.54	-6.35/-7.9	-7.06/-8.02	-5.27/-3.2	-4.03/-4.66	-2.89/-3.85	-6.61/-6.56	-3.24/-2.79	-4.81/-7.55	-7.09/-7.86	-7.01/-3.3	-3.94/-5.61	-3.35/-4.76	-4.46/-6.99	-2.48/-0.55	0.92/-4.94	-6.74/-2.3	-0.03/-0.49	-5.53/-5.54	-4.42/-1.17	-3.12/-1.18	-1.57/-1.59
Θ(142.5°)	-2.07/-2.4	-3.45/-4.86	-4.49/-3.8	-5.5/-6.75	-6.17/-5.72	-4.68/-3.65	-2.59/-2.37	-2.42/-2.6	-3.74/-4.52	-3.4/-4.75	-6.82/-5.86	-6.95/-4.12	-3.16/-3.81	-2.87/-4.18	-8.84/-6.5	-6.73/-7.33	-1.41/-1.43	-3.99/-5.66	-6.93/-5.27	-3.3/-1.93	-3.81/-6.85	-6.8/-4.58	-4.27/-5.38	-4.23/-2.59
Θ(150°)	-3.39/-4.7	-5.17/-5.05	-4.87/-5.05	-5.35/-6.92	-6.9/-3.79	-3.42/-4.41	-5.93/-7.24	-6.03/-3.25	-2.59/-3.43	-5.56/-4.2	-3.17/-3.68	-4.05/-4.57	-5.11/-4.2	-4.46/-4.9	-6.21/-7.52	-6.98/-4.9	-2.31/-1.92	-3.98/-8.9	-12/-8.78	-4.73/-2.22	-1.46/-2.45	-0.02/-5.51	-6.36/-4.85	-4.24/-2.4
Θ(157.5°)	-4.64/-4.29	-4.18/-3.84	-3.4/-4.44	-4.72/-4.28	-4.96/-6.53	-7.11/-5.64	-5.38/-5.13	-4.21/-3.25	-2.35/-2.47	-3.92/-3.73	-2.52/-2.17	-2.63/-3.5	-4.17/-5	-5.44/-6.83	-7.09/-4.91	-4.09/-2.85	-2.65/-4.24	-7.22/-9.53	-7.74/-5.76	-4.91/-3.41	-1.43/-0.14	0.18/-0.	-0.87/-1.88	-2.76/-3.98
Θ(165°)	-0.94/-0.79	-0.39/0.17	0.23/-0.48	-1.12/-1.66	-2.42/-3.42	-3.82/-4.09	-4.59/-4.46	-4.11/-3.24	-2.56/-2.73	-2.84/-2.3	-1.69/-2.33	-3.47/-5.39	-6.2/-5.16	-3.87/-3.06	-3.25/-3.61	-4.88/-5.66	-6.02/-6.89	-8.94/-1.67	-6.94/-6.31	-7.05/-4.99	-2.67/-1.53	-1.25/-0.86	-0.57/-0.64	-0.79/-1.04
Θ(172.5°)	-3.9/-3.15	-2.31/-2.17	-2.4/-2.76	-3.16/-3.99	-4.56/-5.32	-6.71/-8.17	-9.67/-9.29	-8.99/-8.49	-7.63/-7.36	-7.14/-7.36	-7.46/-7.39	-7.57/-7.79	-8.12/-8.76	-9.32/-7.8	-6.86/-6.59	-7.09/-7.14	-7.71/-7.78	-8.25/-9.1	-8.94/-9.02	-9.95/-8.43	-7.71/-6.53	-6.22/-6.06	-6.02/-5.68	-5.18/-4.58
Θ(180°)	-7.74/-7.09	-7.68/-8.21	-7.35/-6.67	-6.22/-5.62	-5.03/-5.07	-5.97/-6.86	-7.96/-7.92	-7.81/-7.08	-6.77/-6.72	-6.94/-7.44	-7.64/-7.86	-8.05/-8.66	-9.51/-9.33	-8.95/-9.59	-10.92/-11.51	-10.98/-10.14	-9.07/-8.83	-9.27/-10.33	-10.29/-9.57	-9.04/-8.7	-9.55/-9.43	-9.31/-9.66	-8.31/-8.18	-9.2/-8.37
Freq(Hz)	6.995G/Pol.	Theta-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	0.09/0.09	-0.17/-0.55	-0.88/-1.28	-2.29/-3.74	-4.97/-5.63	-5.76/-5.14	-4.16/-2.98	-2.25/-1.53	-0.76/-0.3	0.01/0.29	0.59/0.89	0.90/63	0.22/-0.26	-0.56/-1.22	-1.66/-2.55	-3.87/-4.94	-5.83/-5.75	-5.83/-5.82	-4.92/-3.97	-3.37/-2.62	-1.8/-1.24	-1.04/-0.79	-0.55/-0.43	-0.26/-0.07
Θ(7.5°)	0.2/-0.19	-0.5/-0.6	-1.38/-3.01	-4.69/-5.92	-6.34/-6.38	-5.93/-5.38	-4.72/-3.86	-2.67/-2.38	-2.11/-1.97	-1.67/-1.45	-1.2/-0.83	-0.39/-0.03	0.1/-0.18	-0.49/-0.68	-1.11/-1.83	-2.45/-3.1	-3.91/-4.62	-5.03/-4.89	-4.01/-3.14	-2.21/-1.06	-0.22/0.12	0.32/0.76	1.04/1.03	0.91/0.62
Θ(15°)	1.24/0.47	-0.19/-0.75	-1.67/-2.78	-3.78/-4.97	-6.53/-6.	-5.74/-4.9	-3.85/-2.93	-2.16/-1.32	-0.78/-0.54	-0.32/-0.17	-0.25/-0.12	0.02/-0.21	-0.56/-1.24	-2.28/-3.24	-3.94/-4.41	-4.55/-4.21	-3.68/-3.24	-3.21/-2.77	-2.49/-1.94	-1.49/-1.11	-0.63/-0.06	0.75/1.54	1.86/2.13	2.42/0.3
Θ(22.5°)	1.5/1.01	0.03/-1.18	-2.97/-4.23	-4.08/-4.26	-4.44/-4.33	-4.26/-3.07	-2.28/-1.62	-1.44/-1.09	-0.8/-0.02	0.63/0.7	0.49/0.16	0.25/0.35	0.15/-0.59	-1.6/-2.45	-3.33/-4.4	-4.86/-4.56	-4.4/-3.58	-2.43/-1.6	-1.26/-1.3	-1.21/-1.12	-0.49/0.25	1.1/1.75	2.142.18	2.01/1.78
Θ(30°)	2.20/1.6	0.4/-1.49	-3.13/-3.97	-4.16/-2.5	-1.86/-1.99	-2.01/-1.59	-1.25/-0.84	-1.16/-0.82	-0.24/0.23	-0.18/-0.18	-0.5/-0.6	-0.62/-0.13	0.03/-0.33	-0.96/-1.6	-2/-2.4	-3.46/-4.07	-4.05/-2.34	-1.04/-0.97	-1.11/-0.88	-0.91/-0.6	0.58/1.66	2.02/1.85	1.64/1.19	1.38/1.77
Θ(37.5°)	2.96/2.21	1.39/-0.01	-1.76/-3.74	-2/-0.6	-1.14/-1.24	-1.06/-0.45	0.13/0.8	0.87/0.99	1.21/1.51	1.87/1.44	0.86/-0.35	-1.42/-1.76	-2.52/-3.8	-3.49/-3.2	-3.69/-2.55	-2.29/-2.81	-3.15/-1.86	-0.84/-1.11	-1.46/-0.62	0.64/1.9	1.68/1.92	1.6/0.98	0.40/7.3	1.81/2.59
Θ(45°)	3.28/2.42	1.1/-0.67	-2.08/-1.88	-1.39/-0.53	0.09/0.16	0.02/-0.3	-0.46/0.64	1.59/1.74	1.78/2.3	2.62/1.3	1.7/-0.	-1.71/-1.45	-1.09/-0.93	-0.94/-2.39	-0.96/-0.94	-0.58/-0.97	-1.71/-1.06	-0.95/-0.09	0.99/1.47	1.932.11	1.38/0.02	1.07/2.6	3.29/2.25	
Θ(52.5°)	2.5/2.04	0.26/-1.28	-0.37/0.45	0.19/0.35	0.59/0.56	1.09/1.78	2.51/5.77	2.45/1.78	1.99/1.74	1.61/1.36	1.23/1.19	1.47/1.3	0.56/-0.15	-0.14/0.51	-0.16/-1.72	-2.71/-2.58	-2.7/-1.55	-0.11/0.45	0.48/1.53	1.98/1.26	1.55/2.99	3.32/2.81		
Θ(60°)	2.74/2.35	0.49/-1.14	0.18/1.88	2.09/2.35	2.39/2.06	1.51/2.51	3.21/3.42	1.88/0.27	-0.15/0.19	0.11/1.56	2.29/2.63	2.88/2.51	1.7/-0.4	-0.57/0.76	0.45/0.01	-2.49/-2.99	-3.63/-5.19	-4.78/-4.57	-3.94/-1.65	0.180.19	0.36/1.46	1.56/1.66	2.22/4.28	2.62/2.87
Θ(67.5°)	3.69/2.38	1.85/-0.33	0.98/2.67	3.06/2.23	1.87/1.85	2.73/3.19	3.26/3.21	2.07/0.39	-0.73/-0.78	-0.062.45	4.26/4.3	3.69/3.29	2.19/-0.17	-0.61/0.87	2.04/0.79	-2.29/-3.56	-5.01/-5.09	-4.14/-3.6	-2.92/-0.52	1.25/0.24	1.28/2.56	1.98/2.08	2.75/2.02	2.01/3.47
Θ(75°)	3.84/2.49	1.45/-0.76	1.15/0.37	3.86/3.37	1.41/1.29	2.57/3.38	3.17/3.38	0.9/-1.23	-0.63/-1.17	-0.17/2.75	4.96/5.31	3.85/2.9	1.95/-0.17	-2.54/-0.43	1.16/0.17	-0.08/-3.02	-5.42/-3.59	-2.6/-1.51	-0.83/0.42	1.94/1.05	2.41/3.57	2.59/2.55	2.48/1.44	1.31/3.76
Θ(82.5°)	3.3/1.	1.64/-0.78	0.92/2.92	3.26/2.84	1.15/0.55	2.02/1.61	1.58/1.48	-0.92/0.82	0.75/-0.11	0.97/3.74	5.05/4.77	2.66/1.88	1.37/0.99	-0.78/0.07	-0.02/-1.38	-0.9/-0.59	-2.21/-1.02	-0.96/-0.69	0.61/0.5	2.48/2.21	3			

Gain Result

Freq(Hz)	6.1750Pol.						Phi/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°)	-13.01/-12.08	-10.56/-9.26	-8.58/-7.78	-7.19/-6.46	-6.09/-5.59	-5.67/-5.49	-5.49/-5.79	-6.16/-8.4	-8.11/-9.27	-10.52/-11.79	-12.82/-12.62	-13.5/-13.75	-11.8/-10.92	-10.81/-9.06	-7.5/-7.1	-7.56/-7.3	-6.81/-5.83	-5.31/-5.3	-5.12/-5.01	-5.45/-6.38	-7.24/-7.91	-8.37/-9	-9.85/-10.08	-11.01/-12.36												
Θ(7.5°)	-8.09/-8.02	-7.69/-7.26	-7.24/-6.95	-6.89/-6.72	-6.95/-6.78	-6.65/-6.67	-6.29/-6.21	-6.35/-6.08	-6.73/-7.05	-7.71/-8.01	-8.45/-9.03	-10.04/-11.79	-12.67/-11.29	-9.85/-69	-9.4/-8.48	-7.33/-6.85	-7.08/-1.72	-6.64/-6.27	-5.89/-9.95	-6.78/-1.83	-9.71/-16	-11.79/-11.26	-10.23/-9.94	-8.37/-8.19												
Θ(15°)	-5.26/-5.57	-7.16/-7.97	-8.99/-9.32	-9.23/-9.06	-9.18/-8.98	-8.56/-8.76	-8.32/-8.55	-8.84/-8.58	-8.65/-8.17	-8.02/-7.64	-7.77/-8.48	-8.14/-9.62	-9.91/-10.29	-10.67/-10.57	-8.99/-8.97	-8.07/-7.54	-7.13/-6.67	-6.28/-6.3	-7.21/-9.14	-8.63/-8.73	-8.26/-7.59	-7.2/-7.5	-6.33/-5.57	-4.9/-5.13												
Θ(22.5°)	-4.88/-4.99	-5.62/-6.96	-10.34/-14.54	-15.33/-12.75	-9.33/-7.06	-5.77/-5.24	-6.92/-8.18	-9.24/-8.18	-9.52/-9.72	-9.04/-8.62	-9.15/-10.53	-11.72/-11.43	-11.15/-11.73	-11.93/-14.01	-11.79/-10.74	-10.45/-9.59	-7.4/-5.55	-4.76/-5.11	-6.51/-9.14	-10.47/-9.89	-8.26/-6.27	-5.34/-7.1	-4.27/-3.91	-4.35/-5.04												
Θ(30°)	-12.25/-10.97	-9.21/-9.79	-14.22/-17.5	-18.05/-15.65	-10.55/-7.04	-5.54/-4.17	-3.49/-3.41	-4.35/-5.78	-7.74/-8.18	-7.48/-7.96	-10.06/-12.43	-14.93/-15	-13.42/-12.6	-12.44/-11.99	-12.21/-13.42	-16.41/-17.98	-15.02/-9.32	-6.97/-6.97	-9.49/-15.31	-15.43/-10.08	-6.21/-3.84	-3.02/-3.66	-4.94/-6.97	-10.58/-13.98												
Θ(37.5°)	-7.08/-8.1	-8.91/-11.62	-14.23/-17.99	-13.58/-9.04	-6.73/-5.08	-4.42/-4.02	-3.91/-4.48	-6.08/-6.03	-8.69/-9.02	-8.23/-9.74	-14.33/-17.14	-18.63/-17.78	-16.37/-12.39	-9.66/-8.24	-7.35/-6.99	-8.31/-10.87	-11.95/-10.14	-8.52/-6.67	-6.57/-7.81	-8.65/-8.73	-6.59/-4.95	-4.89/-6.88	-10.01/-10.91	-8.87/-8.26												
Θ(45°)	-15.29/-17.46	-14.78/-12.03	-11.05/-9.34	-9.72/-9.38	-2.79/-6.02	-5.61/-5.34	-3.74/-6.26	-8.34/-9.25	-10.04/-11.45	-13.27/-15.26	-18.45/-18.49	-18.34/-15.32	-10.63/-10.61	-8.55/-7.29	-8.16/-9.99	-9.63/-9.52	-8.86/-7.29	-6.81/-5.55	-9.63/-7.86	-6.71/-5.85	-5.82/-7.66	-11.66/-14.25	-12.15/-13.06													
Θ(52.5°)	-18.16/-29	-15.02/-10.23	-8.15/-7.37	-9.11/-13.04	-10.3/-6.84	-5.64/-6.07	-5.28/-3.61	-3.59/-6.33	-8.41/-9.53	-12.54/-14.44	-15.02/-12.38	-12.15/-16.5	-18.67/-18.23	-13.09/-9.78	-8.51/-8.57	-8.35/-7.67	-7.62/-9.23	-8.45/-6.16	-7.06/-6.88	-8.71/-7.1	-6.02/-6.39	-8.3/-12.6	-19.33/-13.09	-11.73/-15.68												
Θ(60°)	-15.11/-13.78	-15.11/-16.48	-14.79/-10.99	-13.38/-17.73	-14.72/-10.39	-7.79/-7.24	-6.22/-3	-2.36/-5.64	-7.32/-6.43	-8.34/-10.04	-11.76/-14.18	-15.04/-16.19	-17.59/-14.53	-13.58/-10.82	-10.33/-12.81	-7.88/-10.31	-6.21/-6.4	-6.87/-8.2	-6.24/-5.01	-6.36/-8.43	-12.78/-18.01	-17.56/-18.17	-17.69/-17.54													
Θ(67.5°)	-17.62/-18.83	-18.52/-18.41	-17.85/-14.21	-11.1/-19.51	-12.77/-18.83	-11.23/-7.28	-8.32/-6.28	-6.56/-7.25	-6.48/-7.96	-10.03/-13.59	-12.43/-9.76	-11.18/-13.33	-15.62/-12.41	-9.98/-9.32	-13.2/-16.81	-12.62/-14.62	-5.74/-5.61	-7.31/-8.01	-6.04/-8.4	-6.38/-8.92	-9.45/-12.52	-18.33/-18.08	-12.06/-17.99													
Θ(75°)	-9.58/-9.77	-16.71/-13.04	-15.35/-19.21	-10.76/-17.82	-10.32/-11.41	-16.9/-7.28	-8.54/-7.5	-5.77/-6.27	-5.22/-6.96	-7.89/-1.01	-10.69/-8.83	-9.99/-11.46	-14.69/-17.43	-12.31/-12.59	-18.24/-18.83	-13.47/-9.94	-8.98/-10.37	-4.57/-6.07	-12.14/-10.71	-4.87/-4.58	-7.92/-9.51	-9.77/-14.82	-18.76/-11.87	-12.65/-16.69												
Θ(82.5°)	-6.85/-6.6	-9.63/-8.02	-10.61/-18.34	-15.07/-18.93	-7.75/-6.8	-16.63/-6.27	-9.25/-4.08	-6.18/-1.86	-6.21/-7.69	-8.75/-9.39	-9.59/-8.15	-8.1/-8.2	-13.09/-13.76	-8.45/-9.96	-19.31/-16.3	-14.6/-10.76	-9.92/-9.01	-4.08/-6.74	-14.64/-8.41	-6.98/-6.93	-7.71/-10.6	-10.49/-18.13	-9.64/-8.24	-10.3/-9.73												
Θ(90°)	-6.42/-6.4	-8.60/-7.46	-8.32/-18.34	-11.71/-19.02	-6.80/-5.88	-12.14/-6.14	-5.76/-3.46	-5.47/-7.61	-5.39/-5.71	-5.7/-8.29	-10.55/-9.44	-9.44/-8	-10.67/-17.56	-12.68/-10.99	-16.53/-14.28	-15.67/-11.79	-11.29/-11.45	-7.75/-7.5	-11.81/-13.33	-11.88/-9.36	-8.71/-10.43	-12.93/-18.54	-6.78/-4.64	-6.29/-8.03												
Θ(97.5°)	-5.3/-6.8	-9.25/-8.88	-9.42/-18.64	-11.28/-14.84	-6.02/-4.69	-11.77/-5.84	-8.21/-5.58	-6.7/-8.71	-7.82/-6.79	-6.25/-10.59	-12.1/-9.36	-9.44/-6.11	-7.49/-13.55	-12.34/-12.62	-12.21/-10.03	-15.11/-14.29	-10.57/-10.12	-12.35/-12.42	-12.55/-8.84	-13.56/-11.65	-14.89/-13.9	-13.53/-15.92	-6.87/-5.65	-6.27/-5.46												
Θ(105°)	-1.16/-3.87	-8.79/-7.05	-10.63/-17.07	-10.24/-19.18	-7.58/-4.76	-10.01/-7.28	-5.71/-4.86	-6.1/-9.42	-7.03/-11.91	-7.54/-5.85	-5.61/-9.42	-14.14/-15.4	-11.01/-7.27	-8.18/-16.47	-10.46/-11.15	-10.1/-13	-12.99/-17.63	-11.56/-16.7	-7.87/-15.79	-14.25/-10.67	-11.14/-17.1	-12.09/-18.35	-15.32/-10.65	-5.73/-4.06	-3.56/-3.35											
Θ(112.5°)	-2.34/-3.7	-9.02/-10.51	-16.43/-11.18	-10.54/-18.02	-7.48/-6.99	-12.28/-7.34	-8.93/-9.29	-10.02/-10.94	-10.6/-7.64	-6.84/-6.56	-14.81/-17.45	-11.31/-7.2	-7.37/-9.01	-10.84/-10.73	-9.9/-11.3	-14.08/-18.3	-11.51/-6.5	-6.09/-6.94	-11.91/-9.51	-9.42/-8.37	-12.27/-12.58	-11.71/-10.25	-5.3/-2.58	-5.65/-4.04												
Θ(120°)	-6.33/-11.79	-15/-17.69	-14.9/-9.58	-7.22/-13.66	-14.06/-8.14	-9.92/-7.54	-6.45/-7.96	-8.45/-9.25	-9.01/-9.43	-8.09/-8.7	-12.93/-18.44	-15.57/-10.44	-9.88/-11.77	-12.01/-10.11	-6.2/-9.81	-15.34/-17.46	-11.36/-9.72	-7.58/-10.39	-9.22/-12.22	-11.81/-12.19	-9.69/-9.46	-9.33/-11.81	-5.15/-4.06	-8.84/-6.27												
Θ(127.5°)	-6.26/-6.52	-16.55/-18.44	-8.44/-7.48	-6.08/-17.83	-18.82/-14.93	-13.02/-5.84	-4.25/-1.57	-6.66/-8.6	-13.53/-14.61	-8.71/-5.41	-6.78/-11.58	-13.65/-18.14	-19.32/-12.65	-13.31/-11.27	-13.59/-13.19	-18.84/-9.4	-6.24/-9.17	-10.98/-13.23	-12.78/-11.08	-5.84/-8.53	-8.16/-11.66	-10.53/-6.43	-5.53/-6.21	-7.69/-9.37												
Θ(135°)	-10.05/-13.77	-17.78/-10.55	-6.63/-5.72	-5.25/-9	-17.77/-16.4	-8.32/-5.22	-3.71/-5.73	-10.49/-12.79	-14.63/-15.9	-10.05/-7.46	-9.34/-73	-9.91/-15.65	-18.71/-16.02	-15.87/-16.82	-10.93/-16.1	-10.78/-25	-5.47/-6.24	-10.41/-7.63	-10.99/-11.48	-6.62/-5.86	-5.21/-8.99	-6.75/-6.49	-17.69/-19.9													
Θ(142.5°)	-5.32/-9.73	-13.47/-10.67	-7.72/-7.48	-10.34/-14.32	-16.45/-17.43	-10.47/-6.71	-5.93/-7.91	-15.93/-15.13	-9.93/-9.08	-10.18/-10.63	-9.29/-11.96	-18.44/-18.84	-16.68/-15.04	-15.78/-16.39	-14.74/-15.21	-13.77/-10.35	-11.52/-18.7	-9.37/-6.24	-8.85/-8.99	-5.2/-6.33	-9.91/-6.53	-9.47/-9.47	-12.26/-11.33	-8.14/-7.1												
Θ(150°)	-4.28/-7.48	-8.88/-2.3	-7.22/-7.3	-8.85/-12.3	-17.85/-18.25	-18.07/-17.1	-14.85/-4	-14.85/-12.9	-9.03/-8.46	-9.42/-10.74	-12.34/-13.86	-14.78/-11.63	-7.46/-10.58	-5.08/-7.48	-12.32/-13.61	-10.05/-10.53	-12.58/-11.79	-10.32/-10.18	-10.94/-9.96	-6.86/-16.2	-7.84/-8.6	-9.34/-9.29	-9.81/-9.26	-6.25/-3.77												
Θ(157.5°)	-8.11/-10.81	-14.59/-18.89	-18.46/-18.84	-17.81/-14.44	-11.31/-11.29	-11.84/-11.55	-11.58/-12.58	-15.25/-18.97	-18.73/-15.57	-12.49/-10.5	-9.24/-8.3	-8.44/-8.96	-10.1/-10.1	-12.91/-15.74	-19.18/-17.45	-18.13/-16.56	-19.87/-17.82	-15.24/-12.44	-12.06/-11.98	-11.78/-10.36	-9.14/-9.71	-9.81/-14.74	-12.71/-8.88													
Θ(165°)	-12.89/-12.32	-12.9/-15.95	-18.92/-16.03	-11.58/-8.93	-8.03/-8.64	-9.67/-10.9	-12.34/-12.06	-11.41/-10.04	-9.33/-8.35	-7.38/-6.71	-7.35/-9.52	-13.66/-18.18	-19.14/-17.63	-18.66/-16.74	-14.01/-11.99	-11.17/-12.07	-12.88/-13.3	-12.33/-10.64	-9.68/-9.65	-9.92/-9.5	-8.67/-8.13	-8.26/-10.23	-14.75/-18.74	-18.11/-15.37												
Θ(172.5°)	-8.15/-9.25	-10.69/-11.52	-12.5/-12.68	-12.47/-12.68	-11.61/-11.59	-11.69/-11.71	-11.12/-10.11	-9.1/-8.2	-7.83/-8.37	-9.46/-10.73	-12.16/-13.31	-13.96/-12.94	-11.95/-11.42	-11.25/-12.13	-12.64/-12.72	-13.46/-14.68	-15.26/-13.88	-13.89/-12.36	-12.01/-12.8	-12.88/-13.5	-14.95/-15.94	-15.29/-13.78	-12.18/-10.47	-9.5/-8.64												
Θ(180°)	-10.17/-9.04	-8.93/-9.75	-11.35/-14.11	-17.06/-14.93	-12.51/-11.43	-10.94/-10.6	-8.93/-7.54	-6.99/-6.58	-6.3/-6.14	-5.86/-6.58	-5.56/-5.55	-5.98/-7.1	-8.69/-9.71	-10.26/-12.91	-12.42/-14.44	-15.41/-14.58	-13.99/-14.08	-12.54/-11.64	-10.72/-9.54	-8.26/-7.47	-6.89/-6.58	-7.06/-6.81	-12.37/-11.53	-12.91/-11.53												
Freq(Hz)	6.1750Pol.	ThetaAnt.1																																		
	Gain	Φ(0°)*Φ(7.5°)	Φ(15°)*Φ(22.5°)	Φ(30°)*Φ(37.5°)	Φ(45°)*Φ(52.5°)	Φ(60°)*Φ(67.5°)	Φ(75°)*Φ(82.5°)	Φ(90°)*Φ(97.5°)	Φ(105°)*Φ(112.5°)	Φ(120°)*Φ(127.5°)	Φ(135°)*Φ(142.5°)	Φ(150°)*Φ(157.5°)	Φ(165°)*Φ(172.5°)	Φ(180°)*Φ(187.5°)	Φ(195°)*Φ(202.5°)	Φ(210°)*Φ(217.5°)	Φ(225°)*Φ(232.5°)	Φ(240°)*Φ(247.5°)	Φ(255°)*Φ(262.5°)	Φ(270°)*Φ(277.5°)	Φ(285°)*Φ(292.5°)	Φ(300°)*Φ(307.5°)	Φ(315°)*Φ(322.5°)	Φ(330°)*Φ(337.5°)	Φ(345°)*Φ(352.5°)											
Θ(0°)	-6.23/-6.43	-6.9/-6.2	-8.21/-6.98	-7.79/-9.84	-11.26/-12.3	-13.52/-14.58	-14.69/-13.48	-11.21/-9.99	-9.1/-8.43	-7.73/-6.98	-6.51/-6.03	-5.69/-5.99	-6.47/-6.5	-7.05/-6.85	-9.4/-9.52	-9.01/-9.3	-10.79/-12.44	-13.44/-14.59	-15.13/-14.13	-12.55/-11.37	-10.3/-9.89	-9.13/-8.04	-7.19/-5.98	-5.3/-5.62												
Θ(7.5°)	-8.47/-9.73	-9.9/-9.2	-13.98/-14.96	-8.93/-9.94	-11.17/-12.76	-13.98/-14.98	-15.15/-14.71	-14.61/-14.99	-13.11/-11.58	-9.94/-8.34	-7.09/-6.01	-5.48/-5.28	-5.09/-4.78	-5.16/-5.62	-5.97/-6.24	-6.4/-3.71	-9.52/-11.72	-13.42/-14.04	-13.61/-11.74	-9.61/-8.18	-7.62/-7.34	-6.81/-6.33	-5.78/-5.82	-6.45/-4.73												
Θ(15°)	-8.26/-8.07	-8.81/-9.79	-9.76/-8.81	-7.95/-8.48	-10.5/-12.59	-15.82/-18.1	-17.6/-18.3	-19.09/-17.69	-18.22/-15.52	-12.39/-9.75	-7.92/-6.64	-5.41/-4.23	-4.11/-4.88	-5.26/-4.96	-5.42/-6.25	-7.05/-7.54	-8.92/-11.87	-16.84/-17.91	-15.47/-13.38	-10.67/-8.53	-7.35/-6.38	-5.85/-5.88	-6.29/-7.46	-8.1/-8.39												
Θ(22.5°)	-10.33/-8.65	-6.75/-8.67	-6.27/-6.73	-6.47/-6.23	-7.67/-9.4	-11.88/-15.79	-17.63/-17.93	-17.68/-17.69	-16.94/-16.06	-14.48/-11.76	-8.36/-6.28	-5.83/-6.18	-7.05/-9.78	-8.1/-8.79	-10.22/-10.65	-9.61/-8.81	-9.89/-12.86	-18.23/-18.25	-15.51/-12.95	-11.13/-9.57	-8.85/-8.14	-7.45/-7.32	-7.56/-9.23	-10.71/-10.69												
Θ(30°)	-8.73/-6.29	-5.47/-4.21	-5.16/-6.07	-6.12/-5.54	-6.85/-9.49	-13.25/-18.94	-17.76/-17.61	-16.91/-13.32	-12.31/-14.38	-16.75/-10.82	-7.76/-6.76	-5.88/-5.96	-5.88/-7.56	-11.15/-14.22	-14.99/-15.15	-18.54/-14.75	-11.34/-11.69	-11.56/-10.08	-8.75/-8.77	-7.52/-8.04	-8.69/-10.96	-9.33/-9.71	-8.98/-9.2	-9.98/-9.81												
Θ(37.5°)	-4.97/-3.74	-3.23/-3.86	-5.08/-3.62	-2.45/-3.29	-5.68/-9.71	-15.07/-15.93	-19.04/-19.33	-16.7/-13.75	-13.12/-13.12	-10.57/-7.97	-6.47/-5.23	-4.45/-4.79	-6.35/-8.71	-10.14/-10.58	-11.38/-12.18	-12.02/-9.96	-9																			



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ(15°)	-7.24/-6.8	-7.26/-7.95	-9.45/-9.17	-9.09/-10.22	-10.87/-11.48	-12.28/-11.34	-11.46/-10.6	-8.93/-7.19	-5.8/-5.51	-5.88/-7.15	-8.79/-9.01	-8.42/-8.14	-9.2/-11.1	-11.8/-10.84	-11.69/-11.64	-11.35/-11.31	-11.96/-11.78	-10.19/-8.12	-7.23/-7.18	-8.28/-9.99	-10.16/-10.03	-10.29/-11.84	-12.98/-10.28	-9.34/-8.37	
Θ(22°)	-7.53/-6.44	-4.93/-4.08	-4.51/-6.03	-7.07/-7.7	-8.02/-8.46	-7.91/-7.14	-7.26/-8.64	-6.25/-5.56	-5.17/-5.5	-5.78/-6.61	-7.65/-8.61	-8.29/-7.08	-6.96/-7.92	-8.29/-7.99	-7.95/-8.69	-8.42/-7.73	-7.52/-8.88	-8.46/-5.98	-5.08/-6.01	-8.09/-10.05	-10.37/-9.55	-8.63/-8.27	-9.64/-9.39	-9.62/-8.76	
Θ(30°)	-5.68/-5.82	-6.27/-5.55	-5.74/-6.87	-8.56/-8.81	-7.82/-6.85	-5.74/-5.68	-5.88/-5.94	-4.85/-3.93	-3.91/-4.28	-5.23/-6.2	-7.43/-8.09	-8.71/-9.92	-10.41/-9.58	-8.8/-8.93	-7.67/-5.17	-10.72/-12.3	-5.68/-4.46	-5.96/-5.61	-5.73/-6.26	-7.22/-9.35	-11.17/-9.09	-6.03/-4.22	-3.63/-3.49	-4.63/-5.39	
Θ(37.5°)	-16.79/-17.64	-13.2/-12.93	-12.71/-12.89	-13.09/-9.72	-7.03/-5.2	-3.62/-3.33	-4.28/-6.32	-5.61/-4.02	-3.77/-5.08	-6.96/-7.36	-7.84/-10.87	-14.21/-13.11	-12.41/-11.08	-10.68/-10.64	-8.94/-5.74	-3.59/-3.04	-3.97/-5.54	-7.49/-8.41	-8.36/-6.57	-6.53/-8.29	-9.1/-6.05	-3.5/-2.63	-3.4/-4.75	-7.71/-12.59	
Θ(45°)	-19/-17.5	-17.77/-18.9	-17.41/-18.42	-16.34/-9.25	-5.02/-4.2	-5.43/-4.85	-2.77/-2.57	-3.28/-3.68	-4.86/-9	-10.38/-8.12	-8.72/-13.22	-17.14/-16.69	-18.63/-18.19	-16.34/-15.32	-10.47/-6.81	-5.01/-4.8	-4.82/-6.66	-7.38/-7.8	-4.46/-4.74	-8.92/-11.5	-9.81/-5.55	-3.11/-3.26	-5.32/-8.93	-12.89/-19.12	
Θ(52.5°)	-18.83/-17.17	-14.94/-14.07	-19.26/-17.33	-15.58/-9.27	-4.5/-3.36	-4.24/-4.91	-3.14/-1.87	-2.21/-7.72	-4.61/-9.76	-9.64/-6.24	-6.2/-7.75	-11.89/-12.9	-17.97/-18.53	-18.66/-18.45	-10.92/-9.29	-4.66/-5.14	-14.05/-16.96	-14.31/-12.92	-14.05/-10.93	-8.11/-6.6	-11.6/-6.9	-5.66/-8.66	-10.56/-12.67		
Θ(60°)	-14.02/-17.82	-15.13/-13.98	-17.63/-13.91	-16.48/-9.96	-4.88/-3.46	-4.37/-7.23	-3.51/-2.17	-4.26/-3.9	-4.36/-8.12	-9.55/-9.23	-8.15/-9.7	-17.26/-17.84	-17.79/-11.78	-14.08/-17.04	-8.61/-9.16	-8.57/-6.97	-6.07/-7.26	-14.31/-9	-9.34/-12.88	-14.58/-8.49	-5.38/-5.39	-5.91/-7.42	-11.94/-11.58	-7.51/-8.81	
Θ(67.5°)	-16.64/-10.61	-16.46/-15.75	-17.17/-19.31	-9.47/-14.97	-11.34/-8.05	-5.82/-8.72	-3.97/-1.42	-3.83/-7.2	-3.97/-7.14	-6.8/-8.18	-6.99/-8.15	-16.31/-15.03	-11.9/-13.39	-17.6/-18.65	-10.95/-9.52	-7.92/-6.36	-5.92/-8.17	-12.09/-10.22	-8.17/-4.71	-6.54/-4.66	-4.73/-4.77	-5.91/-8.49	-7.97/-8.69	-10.68/-13.2	
Θ(75°)	-10.79/-11.19	-18/-17.94	-18.86/-9.12	-8.64/-15.39	-13.62/-10.93	-6.4/-9.96	-4.56/-1.87	-4.64/-3.76	-4.82/-6.04	-6.51/-9.91	-8.36/-7.37	-10.91/-11.58	-8.76/-7.79	-13.47/-17.13	-11.04/-10.68	-13.74/-7.16	-4.81/-5.86	-15.95/-10.41	-9.65/-11.19	-10.9/-5.77	-4.09/-5.92	-5.99/-5.38	-10.61/-11.66	-8.87/-10.84	
Θ(82.5°)	-14.22/-9.45	-18.23/-17.89	-19.33/-13.65	-7.64/-14.6	-8.62/-12.96	4.69/-5.52	-5.72/-1.51	-4.66/-3.67	-5.94/-6.21	-5.76/-6.79	-5.23/-7.5	-12.6/-19.42	-13.37/-8.8	-11.03/-9.83	-9.47/-10.79	-13/-11.53	-6.13/-5.28	-9.44/-9.16	-9.99/-11.28	-7.05/-4.41	-5.29/-5.27	-5.26/-4.55	-7.34/-11.02	-15.61/-13.23	
Θ(90°)	-8.44/-5.85	-12.65/-11.85	-14.98/-15.54	-7.16/-14.94	-7.38/-17.11	-6.54/-4.45	-9.09/-4.21	-7.16/-7.5	-7.09/-4.69	-4.83/-5.7	-6.5/-2.29	-11.97/-13.4	-8.36/-7.91	-8.74/-8.45	-8.93/-11.46	-15.01/-12.7	-11.5/-10.85	-11.75/-10.2	-13.11/-12.59	-8.46/-8.47	-8.5/-10.31	-10.51/-12.18	-13.62/-11.57	-14.09/-14.1	
Θ(97.5°)	-5.84/-5.79	-13.69/-11.33	-12.7/-18.54	-7.46/-18.5	-7.32/-16.84	-6.4/-28	-8.46/-4.56	-7.02/-10.43	-5.22/-7.99	-8.17/-5.45	-8.81/-5.63	-11.64/-16.68	-8.01/-7.12	-8.76/-6.58	-5.32/-9.38	-16.58/-13	-10.83/-10.75	-13.21/-10.32	-13.46/-14.75	-11.71/-14.84	-13.44/-15.83	-16.3/-15.49	-12.44/-13.26	-10.85/-13.19	
Θ(105°)	-4.65/-6.64	-11.52/-13.48	-15.75/-17.11	-9.94/-18.46	-7.47/-10.28	-6.04/-3.95	-8.25/-5.28	-7.36/-7.06	-7.07/-7	-7.02/-5.66	-4.09/-5.46	-13.83/-18.22	-9.59/-8.4	-7.67/-7.73	-6.67/-14.37	-13.62/-14.08	-14.86/-19.16	-10.78/-12.55	-13.02/-11.99	-7.6/-9.06	-13.5/-18.49	-19.19/-18.52	-13.18/-6.99	-8.21/-8.6	
Θ(112.5°)	-3.96/-8.71	-13.75/-17.45	-18.9/-13.59	-9.27/-17.76	-6.61/-8.06	-11.5/-12	-6.81/-5.08	-7.16/-7.5	-8.29/-9.18	-10.56/-5.81	-2.56/-3.18	-9.21/-18.18	-11.6/-11.38	-16.96/-15.33	-11.47/-17.59	-11.85/-12.73	-18.49/-9.67	-7.28/-12	-13.81/-8.39	-9.36/-16.28	-18.07/-18.96	-15.11/-17.5	-17.33/-8.17	-7.64/-5	
Θ(120°)	-10.07/-18.4	-11.82/-9.4	-7.33/-7.1	-9.81/-18.7	-8.95/-8.77	-11.61/-8.77	-8.95/-5.5	-10.11/-9.25	-8.71/-8.53	-9.85/-10.28	-14.31/-9.5	-4.79/-3.48	-5.93/-8.18	-17.97/-9.88	-16.24/-15.76	-19.01/-18.54	-10.84/-12.53	-18.75/-6.53	-6.41/-13.73	-18.12/-17.03	-14.12/-13.28	-16.6/-16.59	-15.91/-10.56	-7.77/-10.94	-10.34/-7.79
Θ(127.5°)	-9.31/-11	-18.27/-11.73	-5.88/-4.23	-8.62/-16.84	-13.98/-19.15	-8.05/-6.24	-12.11/-10.84	-8.06/-9.65	-13.23/-10.25	-11.75/-18.21	-11.62/-9.54	-12.2/-8.07	-7.33/-8.95	-12.32/-11.98	-8.33/-7.29	-8.71/-18.53	-10.96/-6.55	-5.34/-12.32	-9.42/-5.53	-4.14/-6.86	-18.22/-9.94	-5.39/-7.31	-10.06/-8.68	-13.77/-12.4	
Θ(135°)	-9.91/-12	-8.14/-9.47	-9.96/-9.49	-11.12/-19.01	-10.46/-15.78	-10.72/-6.46	-8.89/-4.92	-6.61/-7.92	-14.31/-16.06	-11.25/-6.68	-13.51/-17.83	-15.54/-12.94	-12.96/-6.48	-6.07/-8.41	-9.16/-8.9	-13.57/-12.3	-3.85/-1.4	-2.17/-10.32	-9.21/-8.08	-2.44/-3.46	-19.08/-12.52	-15.17/-5.06	-12.78/-8.61	-9.47/-10.1	
Θ(142.5°)	-5.4/-7.49	-11.17/-9.78	-8.06/-9.42	-16.17/-18.4	-10.63/-7.37	-6.07/-7.23	-10.53/-10.14	-6.18/-4	-13.61/-17.36	-6.66/-8.92	-15.03/-19.01	-11.89/-7.52	-6.6/-5.93	-6.05/-7.73	-15.31/-19.01	-13.72/-9.93	-6.81/-5.03	-8.09/-17.95	-16.39/-11.27	-3.9/-0.96	-15.48/-12.53	-18.49/-14.12	-10.9/-14.28	-8.63/-5.41	
Θ(150°)	-5.38/-10.08	-15.37/-17.1	-13.07/-13.26	-17.99/-18.89	-13.38/-7.5	-5.92/-6.74	-9.5/-12.89	-9.57/-6.3	-7.5/-12.6	-14.92/-11.38	-7.94/-7.78	-7.72/-7.11	-8.13/-10.29	-16.55/-14.02	-11.09/-11.74	-8.56/-6.63	-6.45/-5.89	-8.83/-16.6	-18.79/-18.46	-9.33/-3.75	-3.78/-7.43	-10.41/-11.84	-14.16/-14.1	-8.98/-5.05	
Θ(157.5°)	-16.43/-15.86	-16/-15.82	-15.75/-18.34	-10.81/-6.41	-5.15/-5.26	-6.72/-9.35	-12.15/-12.34	-9.55/-7.06	-5.63/-5.36	-5.94/-7.25	-9.02/-11.39	-13.16/-16.19	-17.83/-16.79	-12.09/-10.43	-9.81/-10.01	-9.3/-9.09	-10.3/-12.69	-17.78/-17.3	-11.84/-11.23	-9.63/-7.6	-5.59/-4.75	-4.33/-4	-4.65/-6.19	-7.6/-10.87	
Θ(165°)	-5.36/-6.29	-7.48/-8.88	-12.78/-14.55	-10.51/-7.63	-6.23/-5.88	-6.32/-6.83	-7.73/-7.76	-7.12/-4.53	-3.53/-2.22	-1.5/-1.96	-3.35/-5.62	-8.5/-13.32	-17.22/-14.24	-11.78/-10.3	-9.98/-11.72	-14.23/-16.3	-18.49/-17.38	-19.1/-13.47	-11.49/-11.38	-10.89/-8.96	-7.22/-6.45	-8.84/-7.8	-8.33/-7.81	-6.43/-5.74	
Θ(172.5°)	-9.59/-10.97	-11.61/-12.25	-10.98/-10.55	-9.64/-8.72	-8.61/-9.15	-9.59/-9.95	-10.61/-9.86	-9.08/-7.98	-7.3/-7.13	-7.24/-8.07	-8.66/-9.8	-11.5/-13.85	-16.14/-18.18	-18.92/-14.73	-12.95/-11.77	-11.68/-11.99	-13.28/-13.2	-13.73/-14.28	-13.45/-13.18	-13.06/-12.33	-12.63/-15.85	-17.07/-12.72	-9.55/-7.49	-7.64/-8.46	
Θ(180°)	-18.7/-19.06	-17.83/-18.8	-16.69/-18.1	-15.76/-14.63	-12.21/-10.71	-9.41/-8.74	-8.37/-7.65	-7.14/-7.03	-7.12/-6.69	-6.16/-6.13	-6.4/-6.84	-7.65/-8.85	-10.55/-12.35	-14/-15.95	-19.1/-18.8	-18.69/-19.06	-17.85/-18.13	-19.07/-19.34	-18.32/-14.86	-13.13/-12.57	-11.84/-10.51	-10.09/-10.57	-10.18/-12.6	-19.34/-17.71	
Freq(Hz)	6.695GPol.	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°)	-6.27/-5.97	-6.32/-6.78	-7.18/-8.01	-8.83/-9.09	-9.35/-9.75	-9.86/-9.62	-8.66/-7.62	-7.3/-7.16	-7.05/-6.91	-6.6/-6.58	-6.78/-6.91	-6.87/-6.87	-7.43/-7.67	-7.65/-8.44	-8.7/-8.71	-8.88/-9.86	-9.88/-9.56	-9.36/-9.87	-9.14/-8.61	-8.16/-7.55	-6.93/-6.19	-6.52/-6.62	-6.04/-5.86	-6.21/-6.48	
Θ(7.5°)	-9.21/-9.27	-8.82/-8.37	-8.59/-8.8	-9.32/-9.72	-9.37/-9.61	-9.88/-9.7	-8.96/-8.98	-9.26/-8.64	-8.24/-7.6	-6.93/-6.9	-6.48/-6.02	-5.78/-6.59	-7.18/-7.08	-7.01/-7.66	-8.08/-7.88	-8.32/-8.86	-9.68/-9.49	-8.74/-8.43	-8.27/-7.8	-7.23/-7.2	-8.1/-8.56	-8.21/-8.66	-8.15/-8.43		
Θ(15°)	-6.55/-7.8	-8.74/-9.61	-9.53/-8.32	-8.06/-8.23	-7.95/-8.87	-9.8/-9.79	-9.89/-9.36	-9.59/-9.85	-9.5/-8.5	-7.84/-7.15	-6.72/-6.76	-7.3/-8.38	-8.59/-8.96	-10.26/-11.56	-12.81/-9.77	-10.79/-10.49	-10.05/-9.54	-9.28/-8.67	-9.4/-9.51	-10.23/-10.47	-10.7/-11.12	-10.53/-8.16	-6.47/-5.65	-4.95/-5.15	
Θ(22.5°)	-5.55/-7.77	-7.13/-9.24	-12.81/-13.82	-10.34/-9.12	-9.82/-12.51	-15.27/-14.25	-11.11/-11.25	-12.82/-14.81	-14.74/-11.21	-8.72/-7.07	-6.13/-5.65	-5.4/-5.79	-6.23/-5.65	-5.47/-8.77	-8.63/-9.37	-12.19/-12.57	-13.23/-9.53	-7.19/-5.93	-5.65/-7.28	-8.69/-10.64	-11.36/-10.95	-8.49/-6.16	-4.5/-4.34	-10.55/-5.29	
Θ(30°)	-9.78/-9.87	-9.86/-9.73	-8.74/-8.49	-8.44/-8.61	-10.34/-12.33	-13.51/-12.81	-12.49/-11.47	-14.04/-18.47	-16.89/-9.93	-6.95/-6.16	-5.69/-4.57	-3.84/-3.83	-4.4/-5.21	-5.69/-6.38	-6.12/-5.05	-5.6/-7.74	-11.78/-9.97	-5.26/-4.56	-5.14/-6.25	-6.51/-7.29	-5.93/-4.72	-4.65/-4.48	-7.19/-9.2	-9.89/-10.65	
Θ(37.5°)	-5.38/-4.4	-4.65/-5.96	-6.69/-6.61	-9.99/-9.27	-16.75/-18.87	-16.75/-12.16	-11.19/-12.22	-14.52/-19.08	-13.99/-7.12	-4.93/-5.36	-5.49/-4.88	-5.3/-6.72	-10.74/-11.98	-9.85/-7.95	-6.61/-5.06	-5.42/-7.29	-9.09/-7.7	-5.65/-6.26	-6.26/-5.28	-3.32/-4.21	-2.54/-3.7	-5.98/-10.19	-17.9/-14.12	-8.72/-6.79	
Θ(45°)	-5.54/-4.22	-5.05/-6.76	-6.95/-6.63	-7.94/-9.15	-18.8/-15.53	-14.13/-14.4	-16.83/-17.98	-11.69/-6.72	-5.98/-6.71	-7.68/-8.86	-9.47/-8.02	-6.16/-6.11	-7.09/-8.69	-11.61/-7.37	-5.58/-4.55	-5.63/-7.75	-9.03/-7.95	-6.65/-4.25	-2.81/-2.49	-2.8/-4.43	-8.58/-15.41	-8.28/-4.31	-3.11/-3.99		
Θ(52.5°)	-7.09/-4.8	-4.94/-7.51	-7.4/-8.74	-9.92/-9.25	-8.73/-9.85	-12.58/-5.75	-2.9/-5.1	-10.79/-18.78	-8.13/-6.46	-9.23/-12.55	-9.03/-5.43	-2.63/-1.94	-2.39/-3.49	-4.16/-4.25	-8.46/-13.12	-8.81/-7.75	-10.16/-10.98	-11.13/-9.74	-8.97/-8.26	-5.28/-6.06	-8.62/-9.81	-9.78/-12.56	-8.69/-3.42	-3.4/-5.89	
Θ(60°)	-6.54/-7.6	-4.55/-6.44	-4.3/-3.54	-5.62/-6.04	-4.52/-4.83	-7.81/-1.79	0.68/-1.07	-9.44/-13.78	-6.99/-8.33	-10.32/-2.82	-1.41/-9.03	-2.69/-3.32	-3.96/-4.27	-6.89/-10.36	-19.3/-9.43	-9.05/-10.9	-13.75/-19.85	-8.76/-4.72	-4.38/-7.26	-13.65/-12.44	-11.69/-8.61	-8.57/-8.41	-6.83/-7.07		
Θ(67.5°)	-6.14/-1.39	-2.33/-4.95	-2																						



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ(60°)	-17.65/-16.07	-10.4/-6.86	-5.07/-6.57	-7.22/-6.87	-6.49/-4.63	-5.06/-9.19	-9.6/-11.44	-18.21/-15.96	-14.77/-18.24	-17.22/-15.92	-16.66/-14.39	-10.1/-9.24	-13.23/-9.82	-7.59/-7.58	-4.81/-8.38	-17/-12.88	-9.71/-11.68	-17.44/-18.91	-16.21/-10.97	-9.44/-17.79	-13.95/-7.04	-6.08/-8.55	-9.15/-12.05	-12.6/-14.59
Θ(67.5°)	-12.56/-15.41	-19.15/-12.07	-7.3/-6.28	-7.55/-8.39	-8.77/-4.91	-4.27/-7.5	-12.4/-13.74	-17.7/-12.42	-15.88/-18.92	-15.9/-18.18	-11.82/-7.78	-7.69/-11.49	-9.7/-10.08	-6.33/-4.89	-9.05/-10.08	-10.98/-12.28	-9.83/-9.9	-15.47/-18.3	-14.74/-15.28	-17.68/-18.58	-17.27/-10.46	-10.46/-14.97	-14.09/-13.33	-11.93/-12.02
Θ(75°)	-13.46/-15.96	-13.07/-18.74	-8.47/-7.89	-6.88/-5.91	-6.85/-5.14	-3.97/-6.29	-7.11/-11.6	-19.14/-15.54	-16.45/-16.2	-12.24/-15.18	-12.31/-9	-13.89/-13.58	-12.59/-10.37	-12.21/-10.57	-7.65/-10.09	-11.99/-14.17	-10.98/-9.95	-14.34/-15.8	-17.7/-18.28	-15.25/-18.28	-18.95/-11.93	-12.37/-11.52	-8.27/-8.08	-9.87/-10.98
Θ(82.5°)	-14.13/-19.12	-17.8/-11.31	-8.53/-6.93	-6.02/-6.79	-9.56/-7.82	-7.31/-9.83	-10.01/-13.18	-16.26/-15.97	-19.05/-16.86	-11.45/-16.34	-19.32/-14.54	-18.76/-17.02	-8.48/-9.17	-8.52/-8.09	-9.02/-9.97	-13.88/-18.4	-11.18/-9.5	-13.22/-18.74	-17.61/-18.07	-16.17/-16.04	-17.62/-11.74	-12.12/-17.52	-10.37/-9.61	-13.52/-13.59
Θ(90°)	-9.18/-10	-11.75/-12.84	-10.4/-8.32	-7.33/-7.2	-8.2/-4.71	-3.23/-6.51	-9.15/-16.35	-8.77/-11.31	-18.97/-14.56	-9.44/-16.59	-18.02/-12.6	-17.98/-11.34	-5.48/-5.91	-9.23/-7.86	-9.25/-14.9	-14.78/-18.07	-12.76/-9.87	-15.9/-18.47	-17.45/-18.72	-14.04/-12.92	-16.88/-14.13	-15.5/-17.06	-8.27/-7.62	-7.47/-6.86
Θ(97.5°)	-14.19/-12.5	-12.82/-12.04	-11.34/-8.36	-7.64/-8.8	-8.4/-4.53	-5.06/-7.36	-9.93/-15.35	-10.67/-12	-15.14/-15.1	-13.76/-18.8	-13.86/-10.63	-13.04/-6.81	-3.33/-4.56	-10.69/-14.6	-10.93/-18.45	-15.59/-16.31	-13.37/-10.99	-14.49/-18.51	-16.48/-16.7	-16.05/-16.7	-18.55/-16.7	-12.21/-12.22	-8.62/-7.62	-8.04/-11.98
Θ(105°)	-8.75/-9.27	-8.48/-5.8	-5.84/-7.6	-8.13/-8.75	-8.87/-6.1	-5.58/-5.81	-6.01/-8.27	-6.91/-10.9	-13.02/-14.64	-12.97/-15.63	-17.48/-18.53	-12.93/-8.12	-6.14/-5.02	-9.44/-10.23	-13.19/-12.52	-15.34/-17.78	-13.46/-9.57	-13.79/-15	-17.48/-18.64	-18.06/-13.17	-16.33/-17.93	-13.76/-13.43	-9.97/-7.46	-8.59/-7.92
Θ(112.5°)	-7.35/-11.32	-13.99/-10.42	-8.09/-7.4	-7.36/-9.29	-10.99/-9.68	-10.15/-10.9	-9.98/-8.23	-7.63/-7.77	-10.92/-14.68	-18.13/-19.13	-18.48/-15.61	-10.17/-7.7	-3.93/-5.09	-11.09/-10.47	-9.69/-19.17	-12.12/-14.23	-14.43/-11.36	-13.17/-13.15	-18.02/-13.96	-18.48/-13.17	-16.9/-14.67	-16.9/-14.67	-8.44/-6.94	-7.04/-6.92
Θ(120°)	-9.63/-10.86	-16.92/-11.51	-6.29/-6.8	-7.04/-6.79	-6.92/-4.68	-3.82/-5.95	-9.06/-10.67	-5.76/-6.09	-9.76/-16.9	-18.26/-18.02	-18.64/-12.96	-14.06/-9.5	-5.5/-5.63	-9.84/-18.36	-6.74/-11.45	-14.46/-18.24	-18.33/-16.41	-18.24/-18.6	-18.3/-15.05	-16.73/-11.21	-18.52/-18.47	-9.37/-9.19	-10.26/-13.42	-10.3/-11.7
Θ(127.5°)	-10.76/-7.68	-3.94/-5.89	-5.87/-7.27	-10.17/-9.22	-12.13/-10.55	-6.63/-5.09	-5.98/-6.57	-8.47/-11.7	-19.02/-9.3	-8.49/-8.23	-10.49/-17.82	-10.8/-12.97	-6.62/-9.79	-16.45/-6.07	-8.64/-14.48	-9.22/-7.73	-18.66/-14.31	-16.97/-10.04	-11.06/-14.44	-13.95/-13.06	-18.56/-17.7	-7.52/-6	-3.59/-3.82	-6.94/-7.28
Θ(135°)	-8.28/-8.82	-4.71/-3.42	-6.26/-6.68	-8.39/-10.46	-10.47/-10.35	-11.41/-14.72	-11.27/-15.97	-4.02/-5.55	-10.28/-14.43	-17.19/-17.77	-18.4/-18.12	-18.04/-7.26	-5.17/-11.97	-13.39/-17.5	-8.72/-7.2	-5.35/-16.85	-8.4/-9.55	-18.1/-15.61	-18.92/-12.91	-8.96/-7.1	-12.55/-14.63	-18.25/-7.41	-6.68/-5.86	-7.33/-5.84
Θ(142.5°)	-9.01/-9.16	-6.91/-4.6	-5.04/-5.82	-4.75/-6.73	-8.62/-4.99	-3.91/-5.06	-8.95/-13.72	-8.54/-5.82	-7.97/-17.44	-18.75/-19.05	-18.78/-15.63	-18.79/-18.69	-18.57/-9.17	-6.22/-9.16	-9.78/-6.33	-9.86/-9.32	-3.22/-3.76	-12.23/-14.09	-15.78/-14.68	-7.97/-6.49	-11.51/-18.87	-16.52/-11.77	-7.99/-6.66	-6.52/-6.7
Θ(150°)	-18.01/-18.75	-17.94/-17.3	-12.19/-11.38	-10.34/-6.56	-5.59/-7.38	-9.93/-11.81	-13.11/-16.29	-15.28/-10.15	-8.13/-9.01	-12.08/-15.22	-18.45/-14.86	-12.61/-18.29	-10.12/-5.16	-6.06/-12.07	-19.04/-18.89	-13.19/-6.69	-4.82/-5.91	-10.47/-15.32	-18.05/-14.21	-9.59/-7.42	-6.78/-8.23	-10.63/-13.46	-18.57/-18.48	-17.79/-18.37
Θ(157.5°)	-4.33/-3.75	-3.83/-3.71	-2.73/-2.87	-4.96/-6.97	-17.51/-16.36	-10.13/-8.31	-8.5/-8.73	-7.54/-6.56	-6.74/-7.77	-8.48/-7.38	-6.59/-6.55	-7.86/-11.5	-16.78/-18.59	-17.73/-18.86	-13.37/-8.16	-5.16/-4.18	-4.74/-7.33	-11.76/-16.38	-17.97/-17.22	-15.86/-12.63	-8.64/-7.07	-7.02/-6.58	-6.04/-5.35	-5.17/-4.89
Θ(165°)	-4.19/-3.38	-2.26/-1.02	-10.42/-2.65	-3.91/-4.59	-5.4/-7.7	-4.73/-5.25	-5.95/-6.51	-6.93/-8	-10.19/-13.77	-17.76/-18.76	-18.79/-18.69	-19.02/-18.41	-12.82/-9.48	-7.68/-7.14	-7.47/-8.48	-9.72/-10.02	-9.64/-10.71	-13.76/-17.48	-19.15/-16.67	-13.31/-11.65	-8.89/-6.75	-6.01/-5.77	-6.55/-7.06	-5.49/-4.51
Θ(172.5°)	-5.11/-3.42	-2.6/-2.76	-3.59/-3.71	-3.66/-3.43	-3.61/-4.66	-6.76/-9.1	-11.72/-15.82	-17.88/-18.32	-18.99/-18.51	-19.31/-18.9	-17.62/-18.93	-17.72/-14.74	-12.33/-11.66	-12.55/-14.9	-19.03/-18.79	-15.17/-12.22	-11.59/-12.55	-14.68/-15.86	-13.61/-11.07	-8.94/-8.36	-8.1/-7.88	-8.43/-9.31	-10.41/-10.36	-8.61/-7.21
Θ(180°)	-3.86/-2.33	-11.08/-12.63	-12.48/-11.5	-9.62/-8.13	-9.13/-12.36	-18.18/-18.21	-18.97/-18.47	-19.02/-18.4	-17.94/-19.8	-19.07/-18.56	-17.92/-18.76	-17.76/-17.62	-17.64/-18.55	-17.84/-19	-17.12/-14.24	-12.36/-10.83	-9.68/-5.59	-8.05/-7.43	-7/-6.98	-6.81/-7.16	-8.24/-8.92	-9.78/-9.83	-8.83/-8.65	-8.73/-8.73
Freq(Hz)	6175GPdL	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-6.03/-6.62	-7.82/-8.74	-8.91/-9.07	-9.55/-10.46	-11.68/-13.03	-15.93/-17.12	-16.27/-14.47	-12.96/-11.06	-9.49/-6.87	-7.86/-7.22	-6.62/-6.2	-6.25/-6.3	-5.96/-5.96	-6.3/-6.99	-8.2/-9.2	-9.73/-10.42	-11.2/-12.82	-14.28/-14.63	-14.09/-13.26	-11.18/-10.06	-8.64/-7.56	-6.81/-6.32	-6.31/-5.94	-5.58/-5.55
Θ(7.5°)	-7.14/-7.47	-8.24/-9.54	-10.32/-9.72	-8.79/-9.44	-10.43/-11.8	-13.87/-14.93	-13.58/-11.44	-8.93/-8.83	-8.24/-7.71	-6.22/-5.94	-5.62/-5.45	-5.47/-5.24	-5.6/-5.54	-6.04/-7.04	-8.28/-9.23	-10.12/-10.97	-12.45/-14.24	-15.36/-16.49	-15.97/-14.75	-12.81/-11.11	-10.01/-9.1	-8.42/-8.21	-8.19/-7.71	-6.98/-6.86
Θ(15°)	-5.29/-5.18	-5.73/-6.44	-7.5/-8.24	-9.76/-12.3	-14.9/-13.09	-10.64/-8.26	-6.82/-6.27	-6.22/-6.63	-7.19/-7.43	-7.77/-7.72	-7.72/-7.92	-8.93/-10.54	-11.39/-12.55	-13.09/-13.29	-13.93/-14.23	-14.37/-14.51	-15/-16.01	-16.77/-15.97	-15.07/-14.45	-12.78/-11.31	-10.72/-9.69	-8.47/-7.85	-7.42/-7.04	-6.1/-5.45
Θ(22.5°)	-4.2/-4.5	-5.27/-5.49	-5.57/-5.86	-7.39/-10.37	-12.36/-11.56	-9.54/-9.77	-7.41/-7.41	-7.6/-7.6	-7.99/-7.2	-7.09/-7.6	-8.49/-8.98	-9.22/-9.3	-8.88/-9.23	-11.09/-13.8	-16.42/-18.99	-17.57/-17.81	-17.37/-16.91	-15.84/-15.04	-13.39/-11.63	-10.71/-10.39	-9.91/-8.76	-7.34/-6.02	-5.34/-4.35	-3.39/-3.78
Θ(30°)	-3.71/-5.58	-7.25/-8.55	-8.51/-8.73	-7.29/-8.48	-10.58/-12.71	-12.63/-10.25	-8.54/-7.95	-8.14/-8.46	-7.71/-6.68	-5.53/-4.32	-3.5/-3.16	-2.97/-3.17	-4.63/-7.05	-8.89/-9.52	-10.75/-12.45	-13.35/-12.7	-10.63/-10.1	-10.67/-11.86	-12.23/-10.68	-9.19/-8.7	-7.03/-6.13	-5.71/-4.53	-2.95/-1.73	-1.81/-2.76
Θ(37.5°)	-2.12/-4.15	-8.64/-15.44	-13.23/-10.56	-9.29/-8.59	-7.72/-6.46	-5.68/-5.59	-5.44/-4.1	-4.01/-4.83	-5.52/-4.88	-2.89/-1.52	-1.44/-2.29	-3.76/-6.2	-8.93/-10.68	-10.85/-11.1	-12.58/-16.93	-18.69/-13.72	-10.03/-9.41	-9.52/-8.97	-6.38/-6.76	-6.7/-8.24	-8.44/-7.51	-6.42/-4.69	-2.38/-1.04	-0.78/-0.97
Θ(45°)	-3.91/-4.91	-7.57/-13.95	-16.42/-8.26	-5.71/-5.32	-5.09/-3.89	-3.88/-4.45	-3.28/-1.59	-1.55/-2.66	-3.75/-3.07	-1.8/-1.27	-1.96/-3.3	-4.75/-2.79	-9.69/-9.37	-7.35/-7.26	-11.16/-17.73	-16.25/-13.09	-10.56/-7.3	-6.79/-8.17	-12.36/-17.39	-12.56/-10.35	-10.47/-10.01	-8.45/-5.38	-2.97/-1.74	-1.63/-2.59
Θ(52.5°)	-3.47/-3.88	-7.25/-12.33	-17.7/-17.14	-4.59/-3.99	-3.01/-2.23	-3.53/-3.95	-2.06/-0.37	-1.25/-4.09	-3.97/-1.65	-0.63/-0.02	-1.71/-1.28	-1.85/-3.32	-5.92/-9.23	-9.86/-9.46	-10.64/-11.68	-18.2/-18.15	-10.37/-7.67	-6.88/-8.05	-9.91/-9.13	-9.61/-11.42	-14.95/-18.63	-18.41/-8.59	-5.03/-3.75	-3.23/-3.91
Θ(60°)	-4.39/-3.82	-7.76/-14.38	-10.68/-6.42	-5.01/-4.81	-4.23/-2.27	-2.21/-4.12	-1.89/-0.62	-3.12/-5.78	-2.73/-1.19	-4.30/-7.8	1.32/-52	1.16/-1.78	-4.37/-6.6	-9.99/-8.1	-7.25/-14.9	-15.86/-18.6	-18.47/-14	-7.69/-8	-12.13/-15.23	-11.36/-10.55	-18.49/-12.98	-6.86/-5.5	-4.24/-3.26	-3.04/-4.75
Θ(67.5°)	-3.44/-4.19	-7.09/-12.01	-8.15/-3.39	-2.5/-3.57	-3.39/-1.22	-1.63/-4.74	-2.19/-1.69	-4.43/-4.19	-1.51/-1.81	-0.83/-1.8	2.21/-12	0.15/-3.55	-5.7/-8.82	-11.64/-7.59	-6.83/-8.37	-17.38/-14.61	-15.37/-14.4	-9.4/-6.74	-9.1/-12.74	-11.3/-11.64	-19.19/-14.91	-8.13/-6.21	-5.07/-3.63	-3.11/-3.16
Θ(75°)	-2.44/-2.85	-5.18/-10.29	-9.4/-3.88	-2.72/-5.2	-5.84/-1.47	-1.26/-3.88	-2.66/-2.38	-4.51/-2.64	-1.23/-1.92	-0.052/-17	1.41/-4.35	-8.95/-11.34	-16.55/-12.26	-6.09/-7.93	-17.15/-13.72	-10.07/-16.06	-13.76/-9.07	-9.38/-10.85	-11.67/-9.49	-18.27/-10.59	-5.74/-4.54	-3.5/-2.29	-1.65/-1.94	
Θ(82.5°)	-4.07/-1.76	-4.14/-6.93	-8.07/-4.15	-3.02/-6.84	-4.45/-0.75	-1.04/-4.45	-1.46/-1.64	-2.54/-0.79	-0.68/-1.39	0.45/-8.7	1.66/-0.51	-2.57/-5.65	-1.77/-7.86	-11.15/-13.08	-10.57/-8.6	-18.03/-11.67	-9.48/-9.68	-11.2/-10	-9.65/-8.75	-9.41/-9.33	-12.8/-8.87	-4.7/-4.02	-3.76/-2.05	-1.61/-1.29
Θ(90°)	0.16/-1.36	-3.79/-4.72	-6.46/-2.56	-2.57/-8.26	-5.8/-1.94	-2.46/-6.53	-0.41/-0.67	-1.58/-9.01	-1.66/-1.37	0.81/-7	0.72/-1.2	-2.67/-3.84	-5.3/-4.7	-5.67/-8.08	-12.41/-12.23	-18.4/-13.28	-8.48/-9.62	-12.65/-14.46	-10.69/-5.77	-6.79/-6.17	-6.91/-5.44	-2.72/-2.34	-2.11/-0.06	0.8/-1.2
Θ(97.5°)	0.13/-1.84	-5.46/-4	-6.05/-8.34	-3.55/-9.67	-4.58/-2.67	-4.5/-3.76	0.27/-8.03	-0.66/-0.56	-1.81/-1.51	-0.17/-0.1	-1.52/-3.83	-2.99/-4.9	-3.11/-3.2	-3.84/-5.88	-8.73/-14.2	-13.81/-18.78	-9.39/-16.69	-11.49/-14.08	-12/-8.37	-7.38/-9.75	-5.45/-6.6	-4/-2.39	-0.830/-89	1.74/-1.27
Θ(105°)	-0.55/-0.98	-4.43/-3.5	-3.63/-3.51	-3.99/-8.87	-4.89/-2.9	-5.35/-3.93	-1.6/-3.03	-1.81/-1.25	-3.86/-3.8	-1.77/-1.92	-8.89/-5.14	-4.93/-5.33	-4.53/-5.49	-4.57/-5.3	-9.33/-8.2	-13.85/-18.05	-10.62/-11.8	-9.62/-12.22	-16.91/-8.46	-5.01/-6.32	-5.32/-4.67	-3.7		



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ (112.5°)	-8.32/-7.73	-8.86/-8.12	-8.34/-7.03	-5.12/-5.86	-8.58/-5.89	-4.4/-4.05	-6.37/-7.59	-9.93/-10.29	-10.98/-13.77	-15.14/-14.44	-19.32/-15.95	-13.77/-9.16	-7.81/-6.42	-7.64/-12.95	-11.14/-18.75	-16.46/-15.33	-18.38/-18.17	-14.06/-17.97	-19.45/-18.8	-9.68/-10.4	-13.52/-16.16	-16.04/-17.63	-11.33/-7.93	-5.28/-5.31
Θ (120°)	-6.91/-9.45	-10.34/-8.49	-8.84/-9	-4.49/-5.81	-7.41/-6.71	-5.21/-3.79	-4.67/-6.94	-5.43/-6.6	-12.76/-15.34	-18.55/-17.6	-17.58/-15.45	-9.99/-8	-7.95/-5.79	-7.24/-13.95	-10.11/-15.48	-14.46/-15.03	-18.16/-16.49	-16.27/-13.92	-18.61/-18.64	-8.95/-6.69	-9.13/-13.12	-7.96/-11.74	-16.24/-10.69	-8.23/-5.77
Θ (127.5°)	-9.25/-10.6	-8.79/-7.37	-4.96/-7.72	-7.4/-8.02	-10.39/-7.96	-5.4/-3.6	-6.92/-7.71	-4.81/-5.6	-8.74/-12.65	-12.66/-18.98	-17.37/-16.26	-18.66/-12.22	-12.64/-10.19	-17.99/-8.29	-10.38/-17.32	-19.64/-9.47	-17.36/-10.68	-8.84/-8.26	-12.08/-9.25	-14.61/-9.93	-7.1/-14.88	-12.75/-7.33	-9.75/-6.07	-7.1/-8.32
Θ (135°)	-4.5/-3.49	-7.46/-10.36	-5.95/-4.15	-7.24/-9.13	-11.71/-13.01	-7.59/-5.26	-5.97/-10.66	-8.45/-7.83	-11.58/-15.4	-12.26/-11.16	-9.93/-15.51	-18.59/-18.32	-11.93/-9.03	-19.15/-18	-9.66/-9.74	-6.11/-9.8	-7.86/-13.34	-5.95/-10.72	-18.87/-5.99	-16.94/-12.3	-10.94/-12.13	-16.58/-13.52	-9.73/-6.67	-4.31/-4.14
Θ (142.5°)	-9.84/-9.62	-12.12/-17.68	-9.49/-8.88	-4.18/-5.81	-8.15/-9.3	-7.1/-33	-4.27/-7.85	-13.78/-9.1	-17.14/-6.68	-13.08/-19.29	-17.2/-12.57	-17.67/-15.76	-15.44/-18.39	-9.59/-10.81	-14.36/-7.71	-8.29/-13.66	-3.78/-7.8	-8.7/-6.67	-11.29/-11.04	-12.3/-14.78	-10.89/-14.2	-16.96/-13.3	-10.81/-8.83	-8.45/-8.91
Θ (150°)	-10.13/-13.54	-14.12/-12.67	-10.78/-9.86	-7.7/-8.42	-7.7/-7.13	-8.91/-9.84	-10.47/-13.5	-18.59/-13.04	-8.1/-7.73	-8.97/-10.49	-11.26/-12.52	-14.07/-12.41	-15.88/-10.29	-8.58/-10.79	-10.61/-11.61	-19.36/-14.74	-9.26/-15.48	-16.67/-9.29	-8.22/-17.93	-17.06/-13.06	-13.42/-17.61	-16.91/-8.82	-6.64/-7.66	
Θ (157.5°)	-8.14/-6.86	-5.36/-4.8	-3.42/-2.87	-4.16/-6.96	-12.16/-18.33	-15.76/-9.48	-7.89/-8.77	-10.24/-10.97	-10.72/-11.89	-14.98/-12.92	-7.53/-4.78	-4.58/-5.43	-6.08/-7.46	-11.88/-19.19	-17.31/-9.71	-6.21/-5.07	-5.91/-7.69	-10.67/-14.74	-14.98/-12.68	-12.27/-17.07	-18.48/-13.11	-9.65/-7.3	-6.7/-7.29	-8.44/-8.66
Θ (165°)	-3.1/-2.34	-1.42/-0.21	0.60/-0.8	-1.6/-3.04	-4.59/-6.21	-7.47/-8.71	-9.41/-10.42	-10.71/-10.85	-11.33/-13.59	-18.85/-18.05	-13.27/-11.9	-11.43/-10.51	-8.79/-7.23	-5.91/-5.45	-5.47/-5.8	-5.56/-4.7	-4.82/-6.21	-8.9/-12.84	-17.44/-17.84	-19.24/-13.72	-11.61/-9.85	-8.11/-6.19	-4.94/-4.58	-4.76/-4.28
Θ (172.5°)	-6.53/-4.19	-3.07/-3.03	-3.62/-3.44	-3.27/-4.98	-6.62/-7.97	-10.9/-13.83	-17.83/-17.58	-17.45/-18.76	-18.52/-18.72	-19.01/-19.14	-19.1/-18.16	-16.89/-13.88	-12.4/-12.06	-11.55/-10.14	-9.52/-9.33	-8.71/-8.13	-8.77/-10.62	-13.79/-18.43	-19.29/-18.71	-18.09/-14.48	-12.72/-12.92	-13.22/-14.78	-15.03/-15.07	-10.35/-7.83
Θ (180°)	-13.04/-11.95	-16.07/-18.01	-15.76/-11.82	-10.78/-8.54	-7.66/-8.27	-11.22/-13.85	-15.56/-17.22	-18.18/-16.85	-15.02/-15.13	-16.31/-18.4	-18.78/-18.72	-17.17/-16.84	-17.33/-18.81	-17.87/-17.93	-18.01/-18.71	-17.31/-15.76	-14.82/-13.66	-13.24/-13.22	-13.35/-13.76	-14.42/-15.55	-15.98/-16.66	-16.75/-18.39	-16.57/-13.95	-13.74/-15.16
Freq[Hz]	6.995GPol.	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°)	-9.08/-6.68	-8.31/-8.2	-7.48/-6.92	-7.37/-9.19	-12.28/-13.75	-13.66/-12.94	-12.5/-12	-11.67/-10.23	-9.14/-8.75	-9.19/-8.78	-7.97/-7.2	-6.82/-6.84	-6.93/-7.05	-6.61/-6.77	-6.54/-7.23	-8.51/-9.01	-9.82/-11.19	-12.98/-14.68	-17.33/-18.05	-18.89/-18.39	-16/-14.17	-11.98/-10.8	-10.68/-10.5	-9.82/-9.14
Θ (7.5°)	-4.78/-4.86	-4.76/-4.6	-4.52/-4.44	-6.27/-7.58	-9.52/-11.48	-13.31/-13.19	-16.1/-15.34	-15.75/-15.55	-14.68/-14.31	-13.52/-12.94	-12.57/-11.78	-10.37/-9.31	-8.83/-8.62	-8.88/-8.91	-9.72/-10.81	-10.91/-13.4	-12.47/-13.18	-13.08/-12.76	-12.23/-11.69	-10.3/-8.89	-8.16/-6.73	-6.94/-6.05	-5.51/-4.96	-4.74/-4.58
Θ (15°)	-2.69/-3.2	-3.49/-3.96	-4.35/-5.43	-6.32/-8.13	-10.25/-13.16	-14.73/-13.78	-11.34/-9.89	-8.61/-7.65	-6.48/-6.26	-6.42/-6.97	-7.24/-5.7	-8.5/-5.39	-10.04/-10.31	-9.92/-9.38	-8.61/-8.47	-7.8/-7.11	-5.87/-4.75	-7.93/-8.16	-13.74/-3.12	-2.52/-1.91	-1.86/-1.62	-1.86/-1.62	-1.86/-1.62	-1.86/-1.62
Θ (22.5°)	-1.05/-1.71	-3.23/-5.11	-6.8/-8	-8.11/-9.29	-10.3/-9.53	-8.71/-7.24	-6.78/-5.84	-5.38/-4.95	-5.23/-5.62	-6.17/-6.96	-8.08/-9.39	-10.47/-10.91	-10.33/-9.92	-9.98/-10.74	-12.24/-12.59	-11.04/-9.05	-8.24/-8.62	-9.25/-9.67	-10.06/-10.46	-11.14/-8.91	-5.82/-4.38	-3.51/-2.89	-2.05/-1.26	-1.32/-0.91
Θ (30°)	-0.37/-0.55	-1.75/-3.99	-7.51/-13.32	-19.05/-10.67	-7.04/-5.44	-5.13/-4.82	-4.8/-4.39	-4.75/-5.16	-5.74/-7.14	-10.02/-12.14	-13.78/-15.34	-14.64/-12.52	-11.71/-11.58	-11.27/-10.81	-10.71/-10.8	-10.16/-10.84	-12.47/-13.18	-13.08/-12.76	-12.65/-10.42	-8.93/-7.44	-5.56/-4.26	-3.58/-3.32	-2.63/-2.1	-1.55/-0.69
Θ (37.5°)	-1.36/-2.22	-3.16/-4.66	-8.04/-18.64	-9.07/-4.74	-4.12/-4.72	-4.74/-5.57	-2.76/-2.74	-2.82/-4.54	-3.41/-5.57	-7.46/-6.83	-8.77/-10.24	-10.14/-8.91	-13.71/-11.94	-12.78/-11.69	-10.83/-10.23	-9.6/-9.67	-12.93/-13.68	-13.2/-14.47	-15.89/-12.3	-8.73/-6.28	-4.55/-2.92	-1.79/-1.86	-2.33/-2.73	-2.35/-1.73
Θ (45°)	-0.71/-1.8	-4.19/-6.38	-9.4/-11.38	-7.61/-3.49	-2.02/-3.02	-3.39/-3.05	-3.8/-3.11	-1.41/-0.73	-2.14/-4	-5.21/-5.47	-4.94/-6.81	-6.78/-7.52	-9.92/-9.94	-8.9/-9.4	-9.45/-9.53	-10.48/-11.98	-10.71/-11.76	-17.57/-19.12	-18.31/-11.96	-8.89/-7.56	-6.04/-4.64	-2.57/-2.18	-2.29/-1.6	-1.36/-0.89
Θ (52.5°)	0.5/-1.19	-3.57/-6.39	-5.44/-5.32	-5.99/-3.4	-2.02/-2.72	-0.46/-2.8	-1.37/-0.71	0.33/-0.1	-2.4/-3.89	-3.83/-3.28	-4.1/-3.87	-3.99/-4.57	-7.98/-9.66	-8.85/-8.7	-6.72/-11.55	-13.06/-15.12	-15.18/-14.86	-14.17/-17.64	-14.42/-11.33	-10.19/-9.29	-6.36/-3.88	-2.48/-9.77	-1.1/-0.72	-0.02/-0.55
Θ (60°)	0.39/-0.46	-3.32/-8.53	-7.91/-4.92	-3.21/-0.01	-1.1/-2.41	-2.16/-1	-2.07/-0.78	-0.01/-1.73	-4.26/-4.7	-3.83/-1.1	-2.6/-1.83	-3.5/-0.4	-1.129/-1.73	-8.96/-8.9	-16.79/-18.96	-17.63/-18.31	-16.79/-18.96	-17.63/-18.31	-9.6/-10.19	-6.07/-3.65	-4.29/-3.77	-1.47/-0.98	-0.22/-0.25	-0.22/-0.25
Θ (67.5°)	-1.09/-1.11	-3.38/-9.11	-8.15/-2.96	-1.24/-0.28	-0.38/-1.96	-0.18/-0.34	-1.86/-0.41	-0.37/-2.39	-4.64/-4.86	-4.45/-2.74	-0.71/-0.41	-1.85/-2.47	-4.76/-7.08	-9.83/-8.22	-4.37/-8.11	-11.42/-19.36	-17.94/-18.32	-18.84/-16.98	-18.16/-13.04	-8.99/-9.92	-4.73/-2.55	-2.67/-2.8	-1.74/-1.57	-1.45/-1.23
Θ (75°)	-2.67/-2.94	-4.22/-7.43	-9.35/-3.3	-0.69/-0.21	-0.9/-3.44	-1.05/-0.62	-2.08/-0.52	-2.08/-0.74	-5.51/-6.18	-5.95/-1.47	0.78/-0.65	-0.26/-3.6	-4.58/-9.54	-19.37/-13.7	-7.73/-13.8	-18.78/-16.73	-12.25/-15.28	-17.8/-11.21	-15.3/-15.04	-10.1/-7.1	-3.95/-2.14	-4.03/-3.91	-2.03/-2.21	-2.93/-1.1
Θ (82.5°)	-1.88/-3.56	-3.88/-6.89	-5.98/-3.27	-1.93/-1.13	-1.55/-3.09	-0.75/-1.48	-3.03/-1.9	-3.62/-7.04	-5.5/-6.6	-4.12/-0.35	1.06/-0.3	-2.82/-6.63	-6.59/-8.41	-9.98/-16.51	-16.25/-18.14	-18.35/-15.06	-13.53/-13.93	-13.43/-8.6	-8.94/-12.68	-11.54/-6.66	-2.84/-1.48	-4.84/-3.74	-0.47/-0.1	-1.64/-2.17
Θ (90°)	-2.3/-3.49	-3.41/-6.77	-6.95/-4.49	-4.28/-1.96	-1.59/-1.61	-0.92/-2.5	-4.8/-2.51	-3.89/-5.38	-5.28/-6.22	-4.6/-1.19	0.43/-1.65	-3.41/-5.06	-6.68/-5.87	-6.13/-14	-19.15/-17.7	-13.57/-13.36	-16.84/-15.42	-17.87/-11.95	-18.61/-11.89	-8.88/-5.45	-3/-1	-3.02/-2.86	0.21/-0.93	-1.59/-3.27
Θ (97.5°)	-0.45/-2.67	-3.26/-6.38	-7.36/-4.9	-3.92/-2.7	-2.72/-2.86	-1.09/-3.91	-3.65/-3.03	-5.36/-4.52	-5.09/-7.05	-3.98/-1.46	-1.47/-3.54	-6.13/-5.15	-6.48/-5.58	-6.66/-13.84	-14.36/-14.19	-12.58/-18.12	-15.78/-7.83	-18.31/-10.86	-11.84/-14.62	-14.09/-4.43	-3.78/-1.76	-1.74/-1.34	0.58/-3	-0.87/-1.96
Θ (105°)	-0.31/-1.92	-2.94/-6.35	-11.94/-7.23	-4.25/-2.53	-5.44/-3.48	-2.95/-4.68	-3.01/-2.36	-5.36/-3.61	-5.26/-7.25	-6.73/-3.47	-4.85/-7.72	-9.11/-8.29	-7.02/-7.29	-4.43/-7.53	-12.13/-13.05	-10.93/-16.61	-18.19/-11.79	-19.24/-14.91	-10.71/-10.97	-10.27/-5.28	-3.56/-2.77	-1.74/-0.55	0.23/-0.66	0.05/-1.73
Θ (112.5°)	-1.12/-1.37	-6.28/-7.75	-8.59/-9.34	-6.86/-2.58	-6.72/-6.16	-3.63/-4.57	-2.86/-3.87	-3.92/-3.79	-5.54/-10.16	-11.69/-10.31	-13.71/-16.12	-16.4/-16.11	-13.49/-9.91	-7.06/-7.75	-11.27/-10.67	-18.18/-14.21	-18.36/-11.48	-17.14/-9.72	-17.97/-10.83	-8.34/-3.02	-2.65/-5.28	-3.19/-1.2	0.97/-0.85	-3.66/-1.53
Θ (120°)	-1.89/-2.32	-8.99/-10.02	-6.48/-6.78	-5.88/-4.39	-5.67/-6.43	-7.92/-7.66	-3.94/-6.82	-10.74/-9.87	-11.11/-18.84	-17.69/-17.5	-18.39/-15.38	-15.41/-14.55	-16.31/-11.65	-7.26/-7.34	-16.71/-13.45	-12.64/-18.57	-13.4/-8.69	-14.79/-6.15	-9.39/-13.05	-3.19/-14.3	-1.85/-0.91	-2.62/-1.87	-0.11/-2.91	-1.35/-1.67
Θ (127.5°)	-5.83/-4.27	-4.15/-9.35	-5.86/-6.8	-7.84/-5.81	-7.62/-11.83	-15.33/-8.33	-6/-7.59	-16.67/-15.99	-17.8/-14.26	-11.56/-10.66	-8.21/-8.5	-8.74/-10.15	-10.77/-12.87	-7.54/-10.66	-12.15/-17.39	-11.47/-17.62	-18.05/-6.02	-9.55/-8.54	-9.31/-11.4	-0.38/-2.42	-3.36/-4.38	-4.03/-3.1	2.29/-1.22	-2.24/-1.33
Θ (135°)	-5.44/-4.04	-2.53/-4.68	-8.36/-6.91	-6.25/-5.96	-6.67/-10.67	-17.95/-10.28	-9.32/-13.55	-16.59/-17.31	-18.04/-17.01	-10.72/-8.6	-6.66/-6.71	-4.39/-4.6	-5.94/-6.01	-9.43/-9.39	-16.78/-10.61	-9.49/-7.17	-13.23/-4.36	-3.78/-9.78	-14.96/-13.9	-5.5/-2.84	-1.51/-4.42	-7.45/-2.69	-2.29/-1.83	0.2/-0.68
Θ (142.5°)	-2.94/-6.14	-6.49/-6.52	-11.39/-14.33	-9.05/-6.08	-6.79/-10.72	-18.93/-17.44	-17.62/-18.72	-9.59/-5.7	-5.57/-8.81	-13.22/-16.07	-14.89/-12.29	-13.39/-12.16	-9.79/-11.56	-9.82/-12.57	-18.43/-14.19	-13.89/-6.63	-19.07/-2.14	-0.04/-4.34	-17.87/-10.76	-9.49/-3.4	-1.79/-0.26	-1.44/-1.6	-0.87/-1.58	-3.8/-2.9
Θ (150°)	-10.68/-10.39	-11.44/-13.29	-14.16/-13.15	-10.92/-7.83	-6.51/-7.09	-9.47/-13.68	-18.65/-18.04	-17.71/-14.21	-10.95/-10.67	-15.02/-13.45	-10.96/-10.57	-9.84/-10.86	-11.91/-13.17	-16.07/-15.13	-13.61/-13	-10.91/-11.68	-9.36/-4.2	-3/-4.2	-7.47/-7.89	-3.6/-1.16	-1.79/-3.45	-3.91/-3.7	-2.59/-3.05	-5.54/-8.84
Θ (157.5°)	-2.94/-3.1	-5.52/-7.02	-8.31/-5.13	-7.6/-9.14	-13.2/-16.38	-17.14/-16.32	-13.18/-10.41	-8.91/-7.95	-7.99/-10.91	-15.72/-14.99	-16.75/-18.83	-17.09/-16.17	-16.49/-14.42	-11.76/-10.92	-12.71/-16.27	-16.75/-10.95	-5.98/-4.6	-5.48/-8.2	-14.16/-18.09	-18.57/-11.89	-9.07/-6.07	-3.13/-1.37	-	



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ (165°)	-12.33/-15.19	-16.45/-14.19	-11.55/-15.06	-10.75/-13.02	-15.74/-17.18	-18.92/-19.05	-18.41/-13.25	-11.63/-13.12	-18.77/-18.16	-17.02/-12.9	-10.89/-9.62	-10.36/-12.69	-17.56/-18.04	-17.48/-14.21	-10.12/-7.86	-8.33/-11.06	-12.3/-14.13	-14.03/-10.27	-8.96/-8.48	-9.17/-11.45	-11.09/-8.49	-7.24/-7.02	-6.85/-7.17	-8.17/-9.79
Θ (172.5°)	-18.38/-18.39	-18/-18.88	-18.78/-17.44	-15.66/-15.04	-14.07/-12.68	-11.99/-13.05	-16.34/-18.07	-18.44/-18.62	-15.58/-15.41	-16.89/-19.07	-18.81/-18.17	-18.42/-17.33	-14.89/-12.92	-11.52/-9.72	-8.23/-7.86	-9.67/-13.15	-15.53/-14.08	-11.84/-10.13	-9.25/-8.78	-9.25/-11.62	-14.07/-12.67	-10.77/-10.41	-10.44/-11.88	-14.19/-15.71
Θ (180°)	-14.73/-12.58	-10.36/-9.15	-9.05/-9.68	-9.25/-8.56	-8.49/-9.44	-10.31/-11.62	-13.81/-15.7	-17.56/-19.33	-19.15/-18.36	-19.71/-17.67	-18.59/-18.46	-17.36/-17.6	-17.33/-18.38	-17.51/-17.41	-18.36/-16.76	-14.31/-11.17	-10.28/-10.68	-11.68/-13.39	-14.93/-15.04	-14.93/-14.99	-14.04/-13.09	-13.97/-17.05	-18.12/-17.84	-16.71/-16.02
Freq(Hz)	6.175GHzPol.	Theta/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°)	-4.61/-4.35	-5.13/-5.98	-6.11/-6.01	-5.92/-6.33	-6.92/-7.04	-6.71/-6.51	-6.92/-7.59	-8.11/-8.68	-8.47/-8.17	-8.45/-8.12	-7.44/-6.45	-6.01/-5.72	-5.8/-6.16	-6.42/-6.56	-6.69/-7.28	-8.24/-9.09	-9.34/-9	-9.39/-10.48	-10.87/-10	-9.01/-8.46	-8.15/-7.89	-7.32/-7.26	-6.82/-6.15	-5.21/-4.58
Θ (7.5°)	-5.01/-5.07	-5.88/-7.07	-7.51/-7.57	-8.27/-9.95	-11.26/-11.48	-10.69/-9.43	-8.85/-8.6	-8.59/-8.99	-7.57/-7.1	-7.3/-7.37	-6.65/-5.74	-5.12/-5.11	-5.53/-6.11	-6.1/-5.5	-5.12/-5.45	-6.22/-6.47	-5.98/-5.83	-6.35/-7.4	-8.09/-7.65	-7.32/-7.79	-8.64/-9.14	-9.36/-9.35	-8.82/-7.58	-6.46/-5.4
Θ (15°)	-5.05/-4.64	-4.39/-5.38	-8.33/-10.94	-11.76/-13.36	-14.68/-14.16	-13.76/-12.04	-9.44/-7.95	-7.26/-7.4	-8.19/-8.48	-9.51/-10	-10.03/-9.2	-8.25/-6.77	-7.41/-7.25	-6.73/-6.22	-5.63/-4.65	-3.71/-3.6	-3.93/-3.59	-2.88/-2.96	-3.71/-4.96	-5.98/-6.6	-7.16/-7.82	-8.26/-8.35	-8.57/-7.84	-7.18/-6.09
Θ (22.5°)	-2.34/-2.3	-3.02/-5.38	-10.03/-14.55	-17.01/-16.03	-14.6/-15.53	-15.67/-13.3	-10.71/-18.18	-7.75/-8.86	-10.04/-10.06	-9.15/-9.83	-10.83/-11.68	-13.67/-14.94	-14.87/-13.07	-9.83/-7.15	-5.26/-4.31	-3.91/-3.37	-3.22/-3.32	-3.09/-2.42	-2.49/-3.18	-4.94/-6.77	-7.39/-7.31	-7.09/-8.58	-4.75/-3.86	-2.66/-2.38
Θ (30°)	-3.31/-3.31	-3.05/-4.17	-7.27/-10.79	-13.87/-16.55	-15.63/-13.78	-12.43/-10.65	-8.19/-7.6	-8.91/-9.29	-8.83/-5.65	-5.78/-8.07	-10.46/-11.31	-17.25/-18.91	-16.38/-19.62	-18/-11.93	-8.61/-7.09	-6.2/-5.15	-4.2/-4.02	-2.92/-1.94	-2.35/-4.69	-5.86/-5.72	-5.39/-4.18	-4/-4.14	-3.16/-2.01	-2.55/-3.43
Θ (37.5°)	-2.97/-2.69	-3.36/-4.86	-6.72/-8.69	-8.93/-8.85	-9.81/-10.8	-8.6/-8.26	-6.38/-8.58	-9.27/-6.64	-5.49/-6.43	-11.1/-9.92	-10.39/-14.42	-16.5/-12.64	-8.95/-6.31	-4.07/-2.96	-3.16/-2.65	-1.77/-1.69	-1.68/-2.58	-3.99/-2.22	-1.85/-2.2	-2.53/-3.87	-4.05/-3.26	-3.68/-3.57		
Θ (45°)	-2.48/-2.77	-3.93/-4.97	-7.11/-10.12	-9.22/-7.91	-8.34/-9.2	-8.39/-6.62	-6.23/-7.08	-6.77/-4.7	-5.55/-4.33	-5.51/-6.83	-4.98/-4.7	-7.33/-9.6	-13.79/-18.66	-13.69/-9.63	-2.92/-1.13	-0.2/-0.99	-1.73/-0.93	-1.9/-3.97	-3.26/-1.01	0.63/-0.42	-3.33/-2.87	-4.69/-6.54	-5.46/-6.55	
Θ (52.5°)	-2.18/-4.03	-6.43/-7.92	-9.44/-8.09	-6.26/-6.41	-7.85/-9.83	-8.33/-6.62	-6.72/-8.13	-6.17/-3.02	-2.41/-3.03	-4.58/-4.06	-3.66/-4.48	-5.93/-7.72	-11.41/-18.72	-11.29/-7.21	-4.75/-2.82	-2.42/-1.42	-0.97/-1.28	-1.39/-1.23	-2.33/-6.57	-6.53/-2.1	0.45/-0.44	0.05/-3.22	-5.48/-7.05	-3.8/-2.52
Θ (60°)	-0.92/-1.6	-5.31/-10.1	-16.78/-11.82	-8.62/-5.46	-5.07/-9.05	-11.56/-9.33	-5.13/-9.72	-6.68/-4.34	-3.32/-2.85	-4.24/-3.96	-2.42/-2.25	-4.27/-6.53	-8.82/-14.14	-11.77/-8.3	-5.21/-4.06	-5.02/-4.02	-2.58/-1.83	-2.49/-2.82	-3.94/-4.52	-3.11/-1.51	0.85/-0.33	-0.89/-3.57	-5.06/-5.4	-2/-4.07
Θ (67.5°)	-2/-2.16	-6.07/-7.99	-9.21/-9.83	-8.38/-4.52	-4.36/-8.39	-9.7/-3.65	-3.53/-6.65	-6.68/-4.48	-3.2/-8.7	-4.81/-3.84	-2.07/-1.42	-2.88/-4.16	-6.04/-10.45	-13.21/-8.6	-8.28/-7.94	-7.2/-7.5	-5.46/-2.71	-1.23/-1.12	-2.28/-5.97	-4.44/-2.47	-5.0/-2.6	-4.4/-5.16	-2.95/-0.96	
Θ (75°)	-1.59/-2.59	-5.99/-6.96	-6.7/-7.2	-6.09/-3.58	-4.28/-7.41	-9.71/-4.27	-3/-5.8	-6.15/-4.18	-3.19/-2.94	-4.98/-2.62	-0.4/-0.79	-1.76/-2.49	-2.89/-9.61	-10.27/-6.58	-8.92/-7.73	-4.91/-3.41	-5.33/-3.91	-0.05/-1.17	-1.24/-3.38	-3.79/-1.91	-0.21/-1.75	-1.71/-2.07	-4.72/-5.83	-2.23/-0.9
Θ (82.5°)	-1.93/-3.61	-5.05/-6.39	-5.98/-5.68	-3.62/-9.23	-4.1/-6.57	-7.41/-3.27	-3.63/-5.53	-6.22/-3.01	-4.27/-4.03	-3.99/-1.42	-0.21/-1.39	-1.77/-2.5	-1.34/-9.72	-5.88/-6.57	-6.62/-5.42	-2.01/-1.27	-1.63/-9.23	-0.69/-7.02	0.54/-1.75	-2.09/-0.4	-0.62/-1.47	-2.14/-4.23	-4.13/-6.67	-1.62/-1.71
Θ (90°)	-2.41/-5.06	-5.28/-6.17	-4.62/-4.25	-2.19/-1.98	-3.6/-5.92	-6.61/-5.16	-4.21/-6.3	-5.57/-3.46	-4.71/-4.68	-3.02/-6.01	0.52/-1.19	-4.26/-3.21	-1.59/-7.46	-4.09/-4.65	-6.78/-7.06	-3.11/-1.5	-0.63/-3.24	-0.72/-2.52	-0.85/-2.16	-1.51/-1.12	-1.67/-2.1	-3.58/-3.92	-3.5/-4.59	-1.28/-3.22
Θ (97.5°)	-3.63/-5.72	-5.72/-7.4	-6.01/-4.62	-1.6/-1.92	-4.21/-5.42	-5.33/-5	-4.52/-6.48	-4.64/-4.06	-7.25/-3.15	-2.46/-1.35	-1.2/-3.9	-6.65/-4.39	-3.48/-7.16	-4.04/-4.16	-8.49/-9.55	-5.64/-2.49	-2.32/-5.81	-3.26/-7.38	-4.91/-3.64	-1.73/-2.81	-5.06/-3.41	-2.93/-3.63	-3.43/-6.04	-2.15/-3.66
Θ (105°)	-5.04/-5.34	-7.41/-6.6	-4.26/-4.04	-2.71/-0.8	-2.96/-4.58	-4.64/-3.2	-4.57/-6.76	-4.4/-6.41	-1.11/-3.78	-3.1/-1.64	-1.85/-1.71	-15.08/-5.62	-7.09/-5.36	-6.44/-4.35	-8.66/-18	-13.01/-7.9	-7.09/-10.31	-6.98/-11.86	-17.89/-6.29	-4.03/-5.16	-5.96/-4.14	-3.1/-4.71	-4.3/-4.36	-2.46/-3.37
Θ (112.5°)	-1.15/-5.32	-12.09/-8.83	-6.67/-4.79	-2.91/-0.99	-3.55/-8.03	-5.42/-3.63	-4.08/-4.9	-6.18/-10.34	-10.19/-5	-3.94/-2.43	-6.88/-14.6	-17.13/-5.85	-5.08/-7.59	-4.08/-7.72	-17.81/-17.12	-18.25/-10.81	-9.82/-10.29	-11.15/-11.17	-15.76/-7.05	-6.34/-1.42	-7.21/-6.48	-5.58/-3.2	-6.75/-4.54	-3.56/-2.27
Θ (120°)	-5.47/-4.27	-10.22/-11	-13.28/-6.18	-6.18/-3.36	-3.67/-6.05	-5.35/-3.53	-5.21/-7.51	-7.71/-12.8	-12.34/-5.73	-4.07/-4.82	-7.91/-14.82	-12.87/-7.36	-6.43/-6.97	-8.82/-12.7	-17.29/-12.95	-13.57/-14.05	-17.79/-8.33	-13.3/-12.28	-13.51/-12.29	-6.34/-5.28	-13.84/-11.49	-2.79/-2.2	-6.19/-6.46	-6.34/-3.74
Θ (127.5°)	-4.87/-8.51	-7.26/-12.94	-9.94/-7.77	-5.57/-5.8	-6.51/-8.77	-5.65/-8.87	-6.25/-9.79	-11.65/-18.12	-11.12/-5.89	-4.71/-5.23	-9.15/-13.4	-10.45/-8.18	-9.33/-8.64	-6.91/-8.57	-6.62/-7.15	-5.04/-12.48	-15.74/-6.75	-5.24/-7.38	-11.06/-12.26	-7.95/-9.26	-14.26/-9.79	-2.75/-2.73	-6.41/-4.96	-4.08/-4.8
Θ (135°)	-2.7/-6.55	-8.8/-12.29	-9.87/-9.21	-7.06/-8.06	-10.87/-11.68	-7.96/-8.98	-11.58/-12.79	-14.79/-13.96	-12.28/-8.07	-6.92/-10.76	-17.13/-19.15	-17.81/-15.2	-11.54/-6.27	-5.65/-3.83	-3.91/-4.7	-13.8/-18.44	-14.65/-4.19	-3.61/-6.95	-11.67/-10.13	-9.07/-17.64	-7.51/-6.94	-7.32/-6.59	-3.66/-3.52	
Θ (142.5°)	-4.64/-3.9	-5.47/-8.43	-11.6/-13.17	-13.88/-12.02	-11.2/-14.42	-13.18/-8.23	-8.74/-12.71	-12.95/-15.75	-15.68/-10.76	-11.68/-18.34	-16.29/-18.02	-18.21/-18.26	-12.29/-7.66	-5.28/-6.67	-10.38/-10.12	-13.34/-14.03	-8.42/-4.47	-6.66/-10.95	-10.59/-9.2	-10.38/-13.92	-10.56/-12.69	-8.69/-6.99	-7.25/-8.33	-6.33/-4.98
Θ (150°)	-8.2/-14.53	-14.75/-14.78	-11.38/-8.06	-6.56/-7.39	-9.83/-14.07	-16.53/-17.96	-17.70/-6.09	-5.56/-7.46	-9.97/-13.34	-18.95/-18.7	-17.26/-14.9	-16.75/-13.89	-9.33/-8.64	-6.55/-9.2	-6.69/-11.85	-18.96/-15.53	-12.45/-15.19	-17.74/-17.88	-17.56/-19	-11.53/-14.26	-18.15/-12.06	-10.92/-7.84	-6.56/-5.52	-5.22/-5.5
Θ (157.5°)	-12.83/-10.49	-8.77/-9.16	-9.55/-8.56	-10.66/-15.96	-16.1/-12.46	-9.25/-4.87	-6.92/-8.07	-11.12/-26.29	-18.09/-16.9	-14.92/-13.03	-9.13/-12.34	-10.77/-11.19	-12.63/-14.09	-13.02/-9.61	-6.15/-4.47	-5.08/-7.48	-10.89/-14.81	-17.51/-17.96	-14.76/-11.75	-8.78/-14.6	-14.74/-6.89	-10.44/-17.18	-18.76/-13.42	-11.64/-12.52
Θ (165°)	-11.23/-13.01	-13.38/-14.08	-17.84/-17.42	-18.04/-17.94	-14.57/-13.93	-16.69/-18.47	-17.9/-17.58	-15.56/-13.57	-13.61/-14.45	-14.87/-15.03	-14.93/-12.76	-10.63/-9.51	-10.55/-11.92	-11.42/-10.04	-10.04/-12.73	-17.23/-19	-16.72/-16.56	-16.54/-16.01	-16.37/-16.07	-17.62/-15.64	-13.88/-10.99	-8.89/-9.58	-11.88/-11.45	-10.32/-10.18
Θ (172.5°)	-17.85/-18.57	-16.84/-18.71	-18.12/-17.21	-18.28/-18.15	-17.35/-16.95	-12.51/-10.61	-10.79/-11.39	-12.36/-14.4	-18.25/-18.75	-18.24/-19.23	-14.77/-11.87	-10.49/-9.9	-9.22/-8.72	-8.12/-8.32	-9.91/-12.11	-14.85/-15.38	-14.23/-13.98	-14.86/-18.13	-17.53/-17.58	-15.03/-12.31	-11.62/-12.39	-16.01/-17.6	-18.03/-19.18	-16.39/-16.37
Θ (180°)	-10.88/-11.48	-11.92/-13.25	-16.38/-18.43	-17.39/-19.28	-18.23/-12.39	-10.93/-10.47	-10.63/-11.73	-13.02/-14.48	-15.49/-15.54	-14.98/-15.84	-17.82/-17.62	-17.76/-19.09	-18.79/-17.91	-17.16/-18.19	-16.42/-16.34	-17.59/-18.76	-18.34/-19.24	-18.96/-18.05	-15.81/-13.36	-12.36/-12.31	-11.89/-11.45	-10.66/-9.34	-8.96/-9	-9.84/-10.31
Freq(Hz)	6.475GHzPol.	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°)	-10.23/-9.41	-8.37/-8.09	-8.46/-8.72	-7.67/-6.46	-5.45/-5.67	-5.83/-5.91	-5.85/-8.54	-6.22/-6.96	-7.32/-7.68	-9.16/-9.63	-9.45/-8.69	-7.81/-7.15	-6.66/-6.16	-5.51/-5.09	-6.05/-6.32	-6.17/-6.55	-6.92/-7.6	-8.66/-9.52	-10.4/-10.66	-10.54/-10.66	-11.28/-11.07			
Θ (7.5°)	-7.83/-7.41	-6.83/-6.17	-5.49/-5.88	-6.47/-6.42	-5.64/-5.15	-6.08/-7.48	-9.86/-11.17	-10.7/-10.47	-10.91/-11.23	-11.16/-11.53	-11.24/-11.35	-11.27/-11.22	-11.42/-11.1	-10.93/-11.4	-11.04/-10.24	-8.79/-6.98	-6.46/-6.77	-6.71/-5.99	-5.46/-5.3	-5.28/-5.59	-6.18/-6.92	-7.21/-7.19	-7.1/-7.42	-7.47/-7.48
Θ (15°)	-5.21/-4.98	-5/-4.58	-3.33/-3.02	-4.05/-5.07	-4.63/-4.29	-5.4/-7.89	-11.36/-13.95	-12.98/-13.92	-12.93/-13.42	-13.8/-15	-14.56/-12.84	-11.54/-10.34	-9.81/-8.54	-7.81										



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ(7.5°)	-3.86/4.34	-5.02/4.76	-6.32/-10	-14.36/-17.85	-19.11/-18.49	-15.83/-14.07	-12.64/-10.98	-9.2/-8.1	-8.12/-8.26	-7.62/-7.54	-7.43/-6.45	-5.68/-5.28	-5.21/-5.42	-5.52/-5.77	-6.14/-6.77	-7.48/-8.3	-8.72/-9.39	-10.19/-10.75	-9.62/-8.24	-6.58/-5.32	-4.41/-3.85	-3.39/-2.97	-2.73/-2.79	-2.92/-3.49
Θ(15°)	-2.41/-3.32	-4.08/-4.1	-5.28/-7.7	-10.78/-13.2	-16.49/-15.45	-13.55/-12.37	-11.66/-11.22	-10.93/-9.92	-10.35/-10.97	-10.43/-9.93	-9.42/-8.19	-6.95/-7.01	-8/-9.28	-10.86/-11.32	-10.8/-10.88	-10.18/-8.45	-7.14/-6.92	-7.32/-6.82	-6/-5.17	-4.7/-3.96	-3.5/-3.14	-2.66/-2.22	-2.14/-1.8	-1.61/-1.76
Θ(127.5°)	-3.86/-3.18	-3.87/-4.18	-4.87/-5.82	-7.69/-10.02	-10.34/-9.95	-9.75/-8.23	-9.11/-10	-11.66/-11.5	-11.59/-9.45	-7.26/-7.2	-8.08/-8.78	-7.66/-6.56	-6.19/-6.9	-8.15/-8.28	-7.4/-6.97	-6.59/-6.55	-6.81/-6.84	-6.32/-5.42	-4.89/-3.94	-3.44/-3.29	-2.93/-2.37	-1.76/-1.67	-2.21/-2.31	-0.87/-2.83
Θ(30°)	-1.15/-1.41	-3.46/-5.73	-6.24/-5.69	-6.26/-6.16	-5.88/-7.52	-7.77/-7.77	-8.61/-10.26	-12.67/-10.95	-10.87/-12.92	-11.97/-10.89	-10.34/-10.13	-11.01/-9.51	-8.26/-8.78	-9.57/-8.63	-6.88/-7.31	-8.52/-8.34	-6.62/-5.08	-4.42/-3.72	-3.35/-3.85	-4.08/-3.48	-2.87/-2.09	-1.98/-2.07	-2.21/-1.78	-1.85/-1.51
Θ(37.5°)	-0.13/-0.92	-2.25/-3.72	-4.88/-6.67	-6.79/-5.72	-5.71/-5.63	-5.64/-7.95	-9.67/-7.64	-7.73/-8.1	-9.39/-12.41	-10.31/-8.23	-6.72/-10.56	-13.38/-15.26	-18.05/-18.06	-13.58/-11.69	-11.79/-9.2	-7.14/-6.77	-6.53/-5.42	-4.07/-8.32	-2.63/-1.22	-1.07/-1.64	-1.3/-1.15	-2.54/-2.99	-2.23/-1.18	-0.16/-0.07
Θ(45°)	0.35/-1.39	-2.38/-3.31	-4.35/-5.27	-6.37/-7.2	-5.73/-3.85	-4.77/-9.18	-11.04/-6.73	-5.67/-8.92	-11.88/-10.39	-7.28/-7.08	-6.11/-7.83	-10.11/-13.3	-11.65/-11.78	-9.42/-9.33	-7.47/-4.98	-6.82/-4.96	-2.9/-3.26	-3.25/-1.39	-0.64/-0.93	-0.64/-0.68	-0.49/-0.05	-0.7/-1.57	-1.390/-13	0.980/85
Θ(52.5°)	-0.75/-1.93	-4.38/-4.03	-2.76/-1.49	-2.55/-4.88	-6.19/-5.83	-7.29/-11.67	-10.27/-7.11	-6.08/-7.91	-8.03/-9.74	-7.21/-6.62	-6.11/-5.75	-6.7/-9.43	-14.83/-16.84	-11.89/-6.57	-3.93/-6.3	-8.14/-4.81	-3.06/-2.81	-2.6/-2.51	-2.61/-1.93	-1.43/-0.58	-0.950/44	0.44/-0.86	-0.270/84	1.120/62
Θ(60°)	-0.61/-1.68	-3.88/-3.39	-2.28/-1.39	-1.81/-3.22	-4.86/-4.2	-5.31/-12.48	-8.7/-5.28	-6.78/-10.17	-15.65/-10.38	-6.59/-6.14	-5.82/-4.76	-3.26/-5.44	-8.58/-18.95	-16.06/-6.9	-4.67/-3.85	-5.98/-8.14	-5.45/-5.41	-3.82/-3.16	-3.73/-3.57	-1.99/-1.11	-0.640/43	1.280/23	-1.08/-0.19	0.460/33
Θ(67.5°)	-0.58/-2.33	-2.11/-2.84	-1.21/-1.37	-1.1/-1.06	-5.43/-4.57	-6.63/-12.78	-18.54/-12.86	-9.95/-10.46	-16.42/-10	-6.9/-8.77	-3.11/-2.06	-2.74/-6.36	-8.86/-18.06	-19.21/-9.33	-5.64/-3.47	-6.99/-11.5	-7.39/-5.28	-5.03/-2.93	-2.8/-2.66	-0.67/-0.78	-0.480/64	0.490/26	-0.59/-1.1	-0.55/-0.98
Θ(75°)	0.07/-1.03	-2.29/-3.88	-1.46/-1.25	-0.14/-2.81	-5.08/-6.56	-6.19/-8.19	-12.9/-12.12	-15.55/-18.43	-16.48/-9.52	-6.48/-7.67	-1.78/-0.2	-3.02/-4.64	-10.86/-14.5	-17.75/-12.31	-11.53/-5.93	-7.4/-10.3	-18.78/-7.31	-4.09/-2.64	-1.84/-0.77	0.65/-0.95	-0.380/2	0.53/-0.13	-0.8/-1.05	-1.35/-0.8
Θ(82.5°)	-0.03/-2.38	-2.39/-2.57	-1.23/-1.14	-0.07/-1.5	-3.44/-9.21	-5.64/-10.39	-13.8/-18.91	-19.37/-18.86	-8.65/-8.57	-5.47/-4.66	-0.370/-29	-4.94/-3.89	-8.23/-16.05	-11.7/-10.28	-17.53/-6.76	-4.34/-4.67	-7.61/-5.94	-2.26/-1.72	-0.250/54	0.930/-99	0.14/-0.25	-0.46/-0.82	-0.72/-1.48	0.52/-0.68
Θ(90°)	-0.18/-1.79	-2.75/-3.94	-2.71/-1.12	-1.12/-2	-5.32/-10.86	-5.66/-12.89	-14.45/-12.8	-19.30/-19.36	-0.90/-10.46	-5.32/-3.79	-0.25/-0.63	-3.72/-4.65	-9.26/-12.21	-9.27/-9.04	-11.42/-9.47	-3.96/-4.89	-3.8/-5.06	-1.39/-2.92	-0.160/46	1.050/62	0.09/-1.37	-1.19/-1.07	-0.15/-1.5	0.57/-0.31
Θ(97.5°)	0.39/-2.8	-3.33/-3.13	-2.2/-2.12	-1.47/-1.49	-3.9/-11.38	-4.93/-14.06	-13.22/-9.5	-11.2/-11.75	-9.52/-10.51	-2.89/-2.69	-0.97/-2.63	-5.56/-6.28	-7.58/-10.31	-8.17/-8.25	-11.75/-10.28	-5.54/-7.25	-7.69/-7.91	-2.12/-5.67	-2.55/-1.48	-0.45/-0.61	-2.93/-2.16	-1.63/-1.76	-0.71/-1.38	1.26/-0.66
Θ(105°)	0.08/-3.95	-4.74/-6.56	-4.02/-2.5	-1.26/-3.1	-3.21/-7.14	-5.28/-11.13	-12.37/-13.05	-9.42/-8.29	-8.46/-11.21	-3.53/-4.4	-4.52/-5.51	-10.31/-11.77	-7.71/-11.34	-7.2/-7.1	-10.98/-11.13	-5.69/-7.61	-11.7/-13.87	-4.27/-8.58	-7.96/-4.82	-2.97/-3.4	-5.69/-3.72	-1.47/-1.63	-2.79/-2.66	0.60/27
Θ(112.5°)	-0.62/-2.74	-3.52/-6.48	-1.82/-2.81	-1.27/-4.01	-2.58/-2.37	-9.84/-14.03	-13.08/-13.1	-9.05/-6.38	-10.22/-6.35	-5.33/-7.01	-8.21/-13.95	-15.14/-6.11	-4.73/-9.74	-6.54/-10.19	-19.07/-11.9	-12.16/-11.45	-15.89/-11.47	-8.49/-10.96	-10.57/-3.86	-2.21/-4.69	-6.27/-3.76	-0.24/-3.24	-3.22/-0.91	-0.920/1
Θ(120°)	-2.53/-2.06	-5.79/-5.39	-1.54/-2.02	-1.28/-0.96	-0.99/-1.1	-4.51/-9.76	-9.43/-13.12	-9.06/-5.76	-12.03/-18.78	-9.61/-8.21	-9.91/-18.28	-11.99/-5.27	-4.22/-5.67	-11.03/-13.24	-18.1/-18.56	-17.41/-18.1	-12.67/-9.03	-18.05/-14.68	-17.62/-9.55	-8.15/-6.82	-11.85/-9.03	-2.02/-1.62	-5.49/-2.23	-2.880/4
Θ(127.5°)	-3.96/-4.29	-5.63/-6.64	-3.89/-3.29	-2.42/-0.64	0.79/-0.54	-3.75/-5.75	-7.54/-12.58	-12.09/-12.22	-14.59/-17.2	-10.17/-9.3	-17.44/-18.04	-10.01/-6.6	-6.95/-9.89	-8.74/-7.09	-9.82/-11.31	-13.43/-11.96	-10.55/-9.45	-8.23/-9.91	-14.04/-19.53	-11.98/-11.36	-13.12/-8.05	-4.25/-2.7	-1.59/-2.03	-3.2/-1.71
Θ(135°)	-2.56/-5.79	-7.61/-6.06	-3.89/-3.25	-2.37/-0.3	0.43/-0.55	-3.38/-4.86	-4.96/-6.72	-16.15/-18.99	-17.53/-14.58	-17.16/-17.65	-14.95/-10.88	-18.07/-13.85	-8.71/-7.75	-7.15/-8.02	-5.93/-7.09	-10.35/-13.33	-9.86/-4.92	-4.81/-7.79	-8.09/-13.26	-13.04/-12.92	-17.23/-6.38	-1.83/-4.89	-4.57/-1.58	-0.88/-0.66
Θ(142.5°)	-4.66/-6.02	-9.48/-9.18	-7.46/-4.79	-2.67/-1.61	0.73/-3.09	-4.45/-6.6	-8.91/-12.08	-9.13/-18.26	-18.4/-18.67	-14.69/-13.97	-12.02/-11.01	-17.71/-16.46	-12.47/-7.86	-5.14/-5.96	-14.71/-14.06	-12.96/-15.94	-17.2/-14.31	-10.71/-11.99	-17.13/-11.12	-7.82/-9.92	-14.52/-8.98	-6.49/-5.61	-5.96/-7.51	-6.46/-4.93
Θ(150°)	-9.1/-6.19	-6.08/-6.51	-4.9/-3.44	-2.26/-2.31	-3.11/-3.24	-3.18/-4.49	-10.57/-18.33	-12.62/-12.67	-16.07/-14.24	-13.53/-11.65	-10.04/-13.2	-12.63/-16.15	-18.76/-13.23	-9.94/-6.84	-6.48/-11.36	-18.45/-12.65	-11.77/-15.7	-17.79/-13.03	-11.45/-14.23	-17.78/-15.54	-12.65/-10.27	-6.72/-5.23	-4.85/-6.3	-7.1/-8.07
Θ(157.5°)	-7.23/-10.43	-9.57/-8.57	-6.73/-4.52	-3.77/-3.77	-4.07/-4.99	-6.12/-9.23	-10.8/-10.83	-15.47/-18.58	-11.53/-6.75	-11.26/-18.18	-18.68/-17.86	-18.36/-16.73	-19.19/-17.24	-13.88/-10.21	-7.3/-6.8	-8.7/-10.56	-11.31/-14.29	-15.99/-17.85	-7.89/-7.4	-8.16/-9.24	-17.24/-11.12	-6.88/-4.75	-3.57/-4.27	
Θ(165°)	-6.91/-9.94	-16.08/-18.81	-14.36/-8.73	-7.11/-6.85	-6.62/-6.48	-6.41/-6.68	-9.47/-9.33	-12.07/-12.58	-11.67/-11.52	-13.63/-19.87	-15.4/-11.16	-9.5/-8.44	-8.31/-8.74	-9.44/-10.8	-13.41/-19.19	-18.13/-17.16	-18.28/-18.32	-12.29/-9.47	-8.79/-8.38	-6.84/-5.39	-4.14/-3.06	-3.41/-5.28	-6.09/-5.55	-4.97/-5.5
Θ(172.5°)	-10.04/-12.27	-17.96/-17.8	-12.43/-11.08	-10.2/-10.26	-10.99/-13.62	-18.26/-17.88	-15.5/-13.96	-14.38/-16.71	-18.16/-18.63	-18.35/-17.66	-14.14/-12.24	-12.46/-13.89	-14.79/-14.29	-13.44/-12.68	-13.04/-14.51	-15.51/-14.76	-13.99/-12.56	-11.24/-11.22	-12/-12.11	-11.29/-11.51	-12.75/-11.55	-9.15/-8.82	-7.94/-3.77	-7.11/-8.44
Θ(180°)	-10.52/-12.42	-16.88/-17.56	-19.09/-17.59	-19.29/-18.69	-17.7/-15.55	-11.96/-10.91	-12.1/-14.38	-14.95/-13.82	-11.95/-10.65	-10.12/-10.95	-13.09/-16.1	-19.13/-16.76	-18.74/-18.49	-18.23/-18.51	-16.45/-15.42	-15.63/-16.65	-15.64/-13.05	-11.45/-11.06	-11.02/-10.69	-10.25/-9.64	-9.64/-8.72	-7.63/-7.21	-8.29/-9.29	-9.33/-9.77
Freq(Hz)	6.995GPol.	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°)	-7.82/-6.54	-5.84/-4.91	-4.69/-3.81	-3.81/-3.3	-2.71/-2	-1.72/-3.01	-3.76/-4.21	-5.13/-5.66	-6.19/-7.6	-9.37/-10.51	-10.65/-10.97	-10.5/-8.05	-6.31/-5.21	-4.44/-3.53	-2.94/-2.58	-2.58/-2.93	-2.9/-2.86	-3.56/-4.74	-5.3/-6.31	-7.33/-8.29	-10.13/-12.17	-16.1/-18.58	-17.81/-16.49	-12.17/-9.71
Θ(7.5°)	-6.22/-4.41	-3.16/-1.94	-1.53/-1.25	-1.46/-1.44	-1.49/-1.74	-2.4/-3.85	-5.17/-7.12	-8.48/-9.89	-11.94/-14.25	-16.34/-15.2	-14.48/-14.1	-12.16/-9.8	-8.22/-6.68	-5.98/-4.74	-3.76/-3.13	-2.58/-2.23	-2.13/-2.43	-3.07/-3.76	-4.18/-4.39	-4.55/-4.89	-5.41/-6.17	-7.59/-8.66	-10.05/-10.59	-10.05/-8.27
Θ(15°)	-6.5/-5.84	-3.96/-1.98	-1.91/-1.64	-2.69/-2.96	-2.71/-3.31	-4.98/-6.43	-7.19/-6.98	-8.49/-9.93	-13.99/-17.73	-19.51/-16.41	-14.09/-11.83	-9.46/-7.67	-6.02/-4.63	-3.24/-2.39	-1.99/-2.02	-2.06/-2	-1.92/-2.59	-3.56/-4.39	-4.4/-3.94	-3.92/-4.41	-5.26/-5.91	-6.79/-8.02	-8.91/-9.2	-7.27/-6.61
Θ(22.5°)	-5.12/-4.42	-3.48/-1.65	-1.06/-2.43	-4.46/-4.04	-3.45/-4.45	-5.79/-8.78	-9.37/-8.88	-10.54/-14.22	-18.41/-18.57	-19.23/-16.35	-13.72/-12.69	-11.87/-9.07	-6.32/-5.27	-5.16/-5.39	-5.16/-4.71	-4.24/-4.29	-4.14/-4.01	-4.12/-4.92	-4.99/-3.8	-2.33/-1.91	-2.2/-2.8	-3.58/-5.34	-6.49/-6.39	-6.67/-6.24
Θ(30°)	-5.29/-4.81	-3.55/-2.8	-2.62/-3.47	-4.49/-5.73	-6.24/-5.27	-6.46/-10.3	-11.67/-12.94	-11.2/-11.85	-12.95/-13.5	-16.03/-17.87	-18.35/-18.57	-12.66/-8.87	-7.41/-6.95	-6.13/-4.89	-4.37/-5.15	-6.27/-5.98	-5.57/-5.75	-7.19/-8.43	-6.74/-5.32	-4.29/-2.93	-2.57/-2.27	-1.77/-2.96	-4.03/-4.58	-5.92/-5.83
Θ(37.5°)	-6.61/-5.02	-4.73/-4.32	-3.98/-3.99	-5.64/-7.87	-9.77/-8.83	-9.95/-8.18	-9.82/-10.23	-11.2/-12.88	-12.72/-13.68	-14.02/-15.17	-17.86/-18.21	-15.82/-8.68	-6.42/-4.66	-7.38/-7.66	-8.79/-9.29	-6.92/-5.94	-4.86/-3.98	-2.98/-2.84	-4.93/-4.78	-2.56/-1.54	-1.51/-2.55	-3.36/-3.93	-3.41/-4.14	-6.56/-6.55
Θ(45°)	-3.2/-2.6	-3.32/-4.8	-6.15/-5.74	-6.27/-7.52	-9.04/-9.71	-7.55/-9.44	-13.29/-17.53	-18.87/-18.48	-18/-17.45	-15.36/-18.07	-17.25/-9.63	-6.6/-5.74	-6.23/-7.84	-9.77/-10.23	-9.86/-5.74	-4/-3.64	-4.79/-7.45	-7.12/-7.3	-3.48/-2.17	-3.44/-3.1	-2.05/-1.55	-1.81/-2.89	-4.48/-3.94	-4.76/-6.19
Θ(52.5°)	-2.86/-2.8	-3.01/-5.54	-7.59/-7.87	-7.66/-7.34	-9.87/-10.68	-12.02/-18.56	-18.94/-18.89	-17.08/-18.4	-18.24/-1.74	-15.05/-18.11	-16.54/-8.17	-7.44/-9.12	-10.9/-8.3	-8.35/-6.61	-5.92/-8.46	-4.89/-2.57	-2.95/-4.43	-7.88/-9.78	-8.31/-6.96	-5.85/-5.2	-2.8/-0.72	-1.54/-3.56	-3.29/-4.44	-7.09/-6.3
Θ(60°)	-0.59/-1.18	-2.18/-6.18	-7.93/-8.09	-11.93/-10.69	-6.62/-8.47	-10.04/-10.39	-10.98/-14.14	-13.66																



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ(52°)	-6.98/-7.56	-10.26/-12.57	-19.33/-16.35	-12.83/-11.36	-17.18/-13.21	-7.58/-5.09	-5.16/-6.85	-7.62/-5.68	-3.97/-4.15	-5.89/-8.48	-9.81/-8.6	-7.33/-7.2	-7.66/-10.59	-8.98/-6.61	-4.87/-6.57	-14.15/-14.99	-9.81/-13.3	-14.42/-18.48	-14.41/-9.66	-7.78/-7.57	-9.18/-9.95	-5.06/-3.35	-2.23/-2.43	-4.78/-5.47
Θ(60°)	-5.35/-9.3	-9.2/-11.34	-17.49/-18.23	-10.37/-10.03	-17.1/-13.96	-7.84/-5.79	-5.12/-6.68	-7.17/-5.08	-4.71/-6.02	-8.13/-10.71	-12.56/-13.55	-9.15/-6.23	-5.15/-5.4	-7.41/-8.94	-5.95/-6.1	-9.51/-11.4	-7.21/-8.99	-14.16/-18.23	-18.11/-12.78	-6.6/-9.07	-15.72/-6.89	-2.77/-0.12	1.08/-0.32	-2.63/-4.08
Θ(67°)	-4.77/-8.97	-10.14/-13.27	-18.81/-15.39	-7.86/-10.25	-18.71/-11.25	-7.82/-6.86	-6.88/-8.68	-8.41/-6.45	-5.74/-6.2	-8.77/-11.76	-11.82/-9.41	-5.37/-2.45	-2.48/-2.62	-4.56/-9.9	-6.73/-4.83	-6.6/-8.59	-6.39/-7.96	-13.37/-18.7	-13.28/-18.7	-7.31/-11.07	-10.04/-4	-1.34/-0.78	-0.96/-2.78	-4.91/-4.65
Θ(75°)	-5.85/-11.51	-14.28/-10.23	-14.04/-18.74	-9.35/-11.14	-18.99/-13.45	-9.03/-8.32	-9.39/-8.55	-7.33/-5.19	-5.15/-6.07	-7.81/-9.79	-7.68/-7.87	-5.12/-1.56	-0.6/-0.6	-1.71/-7.04	-12.64/-6.36	-4.77/-6.33	-7.27/-11.45	-13.66/-17.34	-18.85/-7.8	-4.15/-12.32	-4.66/-0.47	-0.63/-2.57	-3.31/-4.04	-6.27/-6.18
Θ(82°)	-6.51/-15.14	-17.86/-10.39	-11.13/-18.04	-11.13/-13.31	-18.11/-11.75	-9.24/-8.97	-10.47/-8.49	-7.67/-6.72	-5.05/-5.36	-6.15/-6.93	-5.2/-5.56	-3.63/-1.26	-1.39/-0.17	-14.14/-7.4	-4.15/-7.51	-8.38/-11.73	-15.02/-18.67	-18.73/-7.84	-5.04/-18.95	-4.88/-0.33	-1.36/-4.59	-8.27/-6.67	-7.96/-8.48	
Θ(90°)	-6.46/-14.74	-18.53/-10.07	-9.55/-18.08	-15.63/-13.73	-14.98/-10.79	-9.31/-8.52	-11.34/-7.2	-6.96/-6.21	-5.88/-7.08	-6.81/-6.85	-5.19/-4.25	-2.24/-1.92	-2.4/-1.4	-0.43/-3.4	-11.31/-10.44	-13.27/-6.63	-13.28/-18.7	-13.27/-18.7	-6.96/-16.68	-3.96/-1.98	-3.62/-9.78	-1.31/-7.93	-6.82/-9.61	
Θ(97°)	-6.33/-15.13	-17.86/-9.33	-6.8/-13.8	-16.55/-18.33	-12.81/-8.87	-6.87/-6.99	-9.94/-7.94	-8.05/-8.43	-6.97/-6.59	-8.33/-7.47	-6.51/-5.42	-4.16/-3.32	-2.5/-2.62	-1.71/-7.51	-10.4/-11.43	-8.14/-10.22	-18.08/-17.91	-13.77/-19.22	-13.46/-7.73	-8.82/-8.7	-6.24/-5.73	-9.08/-15.37	-19.24/-11.15	-8.04/-9.69
Θ(105°)	-10.52/-19.12	-18.71/-8.72	-7.31/-12.76	-18.24/-16.44	-11.49/-6.02	-6.48/-8.65	-12.33/-8.4	-7.26/-9.52	-10.27/-9.39	-10.29/-8.5	-7.98/-5.95	-5.34/-5.21	-4.19/-8.46	-12.11/-10.27	-9.39/-12.11	-18.16/-18.05	-16.07/-13.43	-13.78/-11.67	-13.83/-6.3	-10.45/-18.41	-14.36/-17.98	-18.44/-11.94	-9.37/-13.33	
Θ(112°)	-14.35/-14.83	-12.23/-7.92	-8.72/-12.95	-18.8/-13.5	-7.39/-8.48	-6.31/-9.38	-11.87/-9.25	-8.24/-6.73	-8.63/-12.74	-18.72/-15.19	-11.59/-10.05	-9.05/-8.46	-10.09/-18.73	-17.37/-7	-8.98/-17.17	-14.1/-15	-15.66/-18.08	-18.45/-8.92	-11.85/-9.74	-18.15/-7.39	-11.75/-17.83	-15.28/-18.07	-14.15/-9.19	-10.52/-11.08
Θ(120°)	-16.58/-12.85	-10.08/-9.69	-14.74/-17.36	-13.54/-15.56	-10.61/-6.64	-6.33/-10.05	-18.54/-16.2	-8.85/-7.08	-7.87/-10.51	-18.91/-14.4	-16.15/-16.58	-10.6/-12.28	-10.25/-10.22	-7.05/-4.58	-8.09/-13.42	-10/-13.44	-13.34/-11.99	-16.01/-9.82	-19.44/-13.61	-15.44/-6.59	-5.97/-10.02	-12.26/-16.3	-14.56/-7.82	-11.71/-12.17
Θ(127°)	-8.85/-13.4	-10.57/-15.16	-5.81/-17.34	-9.71/-9.2	-9.28/-8.31	-8.03/-10.38	-17.12/-18.37	-11.49/-9.4	-11.26/-11.79	-11.33/-9.74	-7.12/-5.42	-4.5/-5.1	-5.92/-6	-5.45/-6.47	-16.84/-18.36	-18.35/-11.11	-14.7/-7.21	-19.36/-13.08	-19.44/-17.1	-14.04/-9.7	-6.38/-12.57	-12.79/-9	-19.37/-11.07	-10.44/-14.5
Θ(135°)	-9.1/-9.75	-9.19/-9.74	-8.29/-5.54	-6.27/-8.39	-14.1/-11.93	-8.86/-10.19	-14.21/-19.03	-1.63/-2.37	-4.17/-3.47	-10.07/-8.36	-5.13/-5.34	-5.42/-5	-1.33/-0.03	0.02/-1.85	-7.36/-7.72	-12.84/-9.41	-17.88/-8.41	-10.76/-13.16	-10.55/-7.62	-11.32/-17.23	-10.15/-12.7	-18.84/-18.79	-17.85/-14.05	-16.21/-12.29
Θ(142°)	-17.39/-11.98	-8.47/-6.69	-6.14/-6.1	-7.38/-10.7	-18.64/-19.4	-14.03/-14.26	-12.71/-11.27	-12.62/-10.57	-9.2/-10.68	-15.54/-17.7	-15.68/-17.31	-8.8/-4.35	-3.36/-3	-3.16/-5.77	-8.5/-12.61	-9.34/-8.03	-10.34/-6.16	-5.97/-8.34	-11.27/-10.84	-11.4/-14.29	-15.54/-18	-13.4/-13.29	-11.92/-15.12	-15.97/-16.83
Θ(150°)	-7.82/-7.22	-6.5/-5.85	-6.22/-6.38	-13.8/-16.88	-10.58/-9.66	-11.51/-11.83	-9.96/-10.84	-16.05/-16.4	-15.81/-14.97	-11.03/-8.61	-8.06/-9.15	-11.86/-15.41	-16.18/-16.86	-11.81/-7.31	-5.68/-7	-9.94/-16.05	-10.78/-10.87	-14.97/-14.6	-14.58/-12.96	-14.09/-15.19	-14.11/-14.19	-15.58/-18.45	-18.03/-16.29	-10.65/-8.22
Θ(157°)	-17.67/-18.77	-17.54/-17.42	-17.86/-14.69	-11.92/-16.65	-12.84/-18.95	-18.61/-17.5	-14.91/-12.3	-8.62/-5.69	-4.17/-3.47	-2.89/-2.05	-1.63/-2.37	-5.01/-9.96	-15.89/-17.2	-10.21/-7.2	-6.9/-6.74	-5.24/-4.22	-4.32/-6.74	-7.88/-9.1	-10.04/-11.53	-15.67/-17.9	-18.4/-17.97	-11.93/-11.81	-15.16/-17.7	-19.87/-18.41
Θ(165°)	-11.6/-13.18	-14.28/-13.75	-11.88/-12.11	-14.66/-18.35	-17.12/-17.94	-17.19/-17.49	-14.09/-11.68	-9.75/-8.22	-7.18/-6.86	-7/-7.41	-7.96/-9.19	-11.38/-14.11	-14.3/-12.83	-11.52/-11.35	-10.89/-9.61	-8.67/-9.08	-10.67/-11.01	-10.05/-9.72	-10.24/-12.36	-16.88/-18.09	-15.75/-13.29	-11.67/-10.72	-11.85/-13.58	-11.47/-10.74
Θ(172°)	-10.12/-9.72	-10.08/-10.45	-10.19/-9.65	-9.04/-9.57	-10.11/-10.01	-10.23/-10.34	-10.71/-18.7	-14.27/-13.17	-17.95/-18.21	-18/-17.79	-15.83/-14.66	-15.7/-18.22	-18.8/-17.8	-19.15/-16.99	-12.95/-10.2	-8.65/-8.74	-10.03/-10.93	-10.84/-11.31	-12.51/-13.86	-15.33/-16.08	-17.84/-14.99	-12.78/-11.49	-11.26/-11.81	-12.29/-11.37
Θ(180°)	-11.56/-12.33	-13.3/-15.48	-19.2/-18.69	-19.11/-17.69	-18.05/-16.11	-13.23/-11.26	-10.08/-9.82	-10.93/-12.18	-13.82/-16.1	-19.3/-18.02	-18.83/-18.84	-18.39/-18.55	-18.06/-15.7	-14.28/-12.54	-10.87/-9.68	-9.8/-10.98	-13.45/-16.42	-17.59/-18.59	-18.09/-17.9	-18.61/-18.08	-14.23/-13.73	-13.11/-10.69	-9.84/-10.71	-11.65/-11.62
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°)	-15.87/-13.08	-10.49/-8.17	-6.55/-6.63	-5.03/-4.56	-4.06/-3.7	-3.39/-3.27	-3.33/-3.43	-4.05/-4.91	-6.08/-7.33	-8.65/-11.7	-15.25/-18	-18.35/-18.61	-14.37/-12.01	-9.78/-7.98	-6.99/-6.36	-5.8/-5.28	-4.49/-4.17	-4.07/-4.34	-4.91/-5.55	-5.74/-6.05	-6.47/-7.34	-8.97/-10.73	-12.85/-14.92	-17.55/-17.93
Θ(7.5°)	-13.76/-11.78	-10.16/-8.85	-7.21/-6.38	-5.81/-5.33	-4.82/-4.62	-4.6/-4.78	-4.98/-5.23	-5.93/-7	-8.21/-8.87	-9.29/-10.47	-12.27/-13.42	-14.01/-13.61	-12.57/-11.19	-9.33/-7.49	-6.49/-5.66	-4.84/-3.82	-3.2/-3.13	-3.13/-3.33	-3.72/-4.07	-4.31/-4.9	-6.07/-7.59	-8.79/-10.69	-15.44/-18.09	-18.95/-16.36
Θ(15°)	-7.76/-8.25	-5.18/-9.32	-7.7/-6.15	-5.33/-5	-4.63/-4.86	-5.73/-6.23	-7.42/-8.14	-8.78/-9.16	-10.26/-10.96	-9.78/-9.21	-7.87/-8.2	-7.95/-7.06	-6.37/-6.01	-5.67/-5.13	-5.06/-5.29	-4.52/-3.48	-3.93/-3.8	-4.87/-6.15	-4.87/-6.15	-7.91/-9.73	-11.58/-14	-16.93/-13.42	-10.72/-8.9	
Θ(22.5°)	-6.19/-6.99	-7.58/-7.56	-6.34/-7.2	-3.77/-3.14	-2.93/-3.09	-3.72/-4.97	-7.27/-9.17	-11.17/-13.06	-15.02/-13.57	-9.67/-7.53	-7.41/-7.61	-5.6/-5.27	-4.51/-4.27	-4.04/-3.65	-3.85/-3.71	-3.24/-3.35	-4.06/-4.16	-4.1/-4.5	-5.67/-7.69	-9.49/-11.08	-13.66/-18.81	-17.76/-16.46	-14.43/-10.29	-7.91/-6.43
Θ(30°)	-6.37/-7.4	-8.43/-8.1	-6.28/-4.11	-2.67/-1.85	-1.85/-2.47	-3.31/-4.67	-5.98/-5.63	-8.61/-12.73	-19.03/-17.72	-13.33/-10.11	-8.57/-9.03	-10.16/-7.97	-5.13/-3.89	-3.06/-2.89	-3.53/-4.45	-4.34/-4.48	-4.6/-4.78	-5.05/-5.66	-7.26/-10.29	-16.73/-18.39	-17.79/-18.7	-16.74/-15.47	-15.48/-13.26	-10.14/-6.99
Θ(37.5°)	-8.78/-9.13	-8.93/-9.44	-6.63/-3.74	-2.03/-1.35	-2.02/-3.36	-4.84/-5.75	-5.82/-6.48	-7.85/-6.44	-16.34/-17.6	-15.69/-11.89	-10.33/-9.33	-10.43/-12.63	-8.79/-5.64	-4.33/-4.07	-5.1/-4.3	-2.89/-2.54	-2.67/-3.37	-3.84/-3.58	-4.78/-7.34	-8.66/-8.79	-11.61/-10.74	-17.92/-17.68	-19.79/-17.79	-14.28/-10.83
Θ(45°)	-12.98/-10.25	-10.79/-10.46	-6.9/-3.62	-1.86/-1.2	-1.79/-3.55	-5.44/-5.62	-5.76/-7.03	-7.98/-9.12	-12.69/-17.65	-19.34/-12.24	-9.47/-8.2	-8.22/-11.28	-13.14/-8.68	-5.26/-5.21	-7.22/-4.98	-1.62/-2.66	-2.82/-3.05	-4.24/-6.14	-7.61/-7.92	-8.84/-16.53	-19.01/-16.55	-13.97/-16.78	-18.43/-18.39	
Θ(52.5°)	-13.67/-10.64	-12.45/-11.45	-8.36/-5.54	-3.69/-2.75	-3.5/-3.54	-7.23/-3.74	-8.13/-7.88	-7.91/-8.71	-10.27/-13.89	-18.18/-16.55	-9.42/-8.4	-4.95/-6.55	-11.87/-9.51	-5.97/-7.4	-8.62/-5.51	-2.36/-1.22	-1.72/-3.59	-4.09/-4.55	-6.14/-8.94	-9.38/-10.02	-12.95/-18.33	-17.19/-14.49	-13.02/-10.91	-11.82/-13.72
Θ(60°)	-11.3/-12.19	-10.33/-10.54	-7.95/-6.67	-5.55/-5.93	-4.25/-6.29	-6.79/-6.62	-8.03/-10.73	-12.56/-12.4	-13.25/-13.83	-18.41/-18.17	-10.1/-4.68	-5.53/-7	-8.86/-11.38	-7.75/-7.7	-10.52/-9.99	-5.6/-3.8	-3.88/-6.38	-7.33/-6.39	-6.94/-9.64	-9.7/-10.58	-13.81/-17.93	-16.22/-15.6	-14.2/-11.28	-9.42/-9.65
Θ(67.5°)	-8.78/-8.74	-7.77/-8.98	-7.19/-5.9	-5.99/-4.98	-4.97/-5.98	-6.25/-7.49	-11.28/-13.5	-14.28/-12.72	-14.53/-14.96	-18.93/-18.84	-9.82/-5.67	-5.09/-7.72	-10.4/-9.87	-9.08/-9.44	-11.07/-8.63	-7.01/-5.19	-5.6/-6.34	-7.24/-6.79	-7.4/-12.97	-11.77/-10.56	-15.26/-15.83	-16.77/-18.98	-15.56/-8.25	-7.32/-8.17
Θ(75°)	-7.86/-8.07	-6.98/-8.62	-7.11/-6.78	-8.12/-7.16	-5.58/-5.79	-6.23/-7.49	-10.62/-15.6	-16.32/-17.69	-18.24/-18.83	-17.99/-16.06	-11.42/-8.82	-7.22/-9.06	-10.09/-10.11	-9.18/-12.91	-14.59/-9.16	-5.79/-6.86	-8.39/-9.78	-12.89/-8.78	-8.99/-16.04	-10.81/-11.92	-16.53/-18.54	-18.25/-17.51	-14.62/-8.32	-7.2/-8.5
Θ(82.5°)	-7.53/-9.01	-7.55/-8.77	-6.33/-5.68	-7.32/-8	-5.77/-6.34	-5.34/-6.97	-10.44/-14.58	-15.54/-15.76	-19.11/-18.23	-14.36/-11.41	-9.02/-7.12	-8.42/-16.22	-9.47/-9.9	-10.71/-11.86	-14.3/-9.35	-6.43/-9.37	-13.43/-19.1	-18.07/-13.31	-13.06/-19.4	-12.79/-16.52	-17.8/-15.09	-17.02/-17.21	-10.45/-8.18	-7.85/-8.61
Θ(90°)	-10.22/-6.65	-7.29/-8.32	-5.84/-9.27	-7.68/-9.22	-7.62/-7.38	-6.23/-7.82	-9.73/-16.8	-17.78/-18.55	-18.54/-18.91	-14.99/-10.62	-9.83/-8.08	-9.03/-13.85	-11.67/-10.35	-10.82/-11.8	-11.66/-9.37	-7.26/-8.7	-10.91/-17.12	-18.71/-17.72	-17.41/-15.98	-16.86/-16.56	-18.52/-16.41	-12.53/-18.3	-9.57/-8.76	-6.83/-10.11
Θ(97°)	-11.05/-6.16	-6.78/-8.21	-5.51/-7.6	-8.75/-10.34	-7.89/-6.79	-7.64/-8.87	-12.31/-19.03	-18.53/-18.4	-17.86/-16.27	-14.55/-11.7	-9.27/-8.21	-12.07/-17.19	-15.0/-9.48	-10.62/-14.87	-8.98/-7.63	-7.41/-9.2	-10.03/-14.58	-16.68/-15.73	-18.11/-15.09	-15.22/-16.56	-12.61/-19.			



Radiated Composite Gain Data of 6GHz

Appendix A.2

Θ (105°)	-15.35/-19.09	-18.59/-18.95	-17.51/-10.59	-10.79/-9.27	-5.37/-6.25	-5.71/-3.58	-4.29/-3.18	-2.29/-3.62	-7.92/-8.99	-5.88/-2.76	-2.55/-4.12	-9.05/-6.24	-2.73/-3.48	-2.51/-3.07	-2.97/-3.4	-3.26/-5.14	-7.77/-8.62	-14.02/-15.06	-13.97/-14.18	-9.95/-12.58	-12.77/-14	-10.21/-10.68	-17.37/-14.55	-19.11/-10.15
Θ (112.5°)	-14.3/-18.4	-17.02/-18.75	-18.66/-12.42	-9.87/-6.6	-5.01/-4.94	-4.47/-4.65	-5.24/-4.53	-2.87/-5.43	-10.43/-11.45	-6.16/-3.37	-3.47/-5.95	-7.89/-6.62	-2.55/-2.55	-3.51/-6.13	-4.12/-2.88	-3.01/-6.28	-8.24/-11.19	-9.98/-11.02	-9.37/-10.82	-9.31/-11.93	-10.34/-10.45	-15.42/-17.79	-14.12/-17.39	-14.44/-10.54
Θ (120°)	-18.43/-18.38	-14.99/-18.23	-13.49/-10.56	-10/-4.59	-3.74/-4.21	-3.59/-3.06	-4.74/-5.77	-6.39/-6.99	-8.29/-8.33	-5.84/-5.19	-4.61/-7.91	-11/-6.44	-3.65/-4.42	-5.85/-8.38	-7.53/-7.37	-3.88/-5.43	-8.9/-12.47	-9.14/-9.45	-9.33/-9.49	-7.63/-9.1	-5.42/-5.8	-17.74/-9.5	-10.1/-9.28	-17.58/-17.98
Θ (127.5°)	-18.09/-14.09	-13.2/-10.63	-7.97/-6.94	-6.3/-5.07	-3.82/-5.68	-5.7/-4.36	-5.7/-8.08	-8.32/-7.99	-7.26/-7.36	-8.6/-8.99	-8.89/-11.08	-11.41/-9.86	-9.22/-9.07	-13.59/-17.72	-11.16/-8.11	-7.03/-8.71	-13.35/-13.71	-15.26/-11.35	-16.2/-10.09	-9.72/-13.97	-8.51/-18.18	-18.04/-9.94	-9.17/-12.16	-13.7/-18.47
Θ (135°)	-19.3/-18.11	-9.45/-8.09	-7.32/-7.74	-5.73/-4.74	-4.46/-6.71	-8.92/-7.56	-6.68/-7.72	-10.92/-11.54	-11.07/-11.18	-10.46/-10.41	-12.4/-14.88	-17.15/-15.79	-18.56/-18.26	-18.07/-10.96	-12.1/-8.8	-14.39/-12.03	-15.46/-18.16	-11.9/-13.66	-15.16/-18.8	-17.46/-17.27	-16.61/-15.7	-18.52/-18.66	-11.94/-14.17	-11.49/-15
Θ (142.5°)	-12.81/-10.1	-10.08/-7.73	-8.27/-8.65	-7.76/-6.97	-7.59/-9.01	-9.97/-9.68	-9.17/-9.23	-9.71/-10.78	-10.79/-10.13	-9.82/-10.59	-12.56/-15.52	-17.13/-18.64	-18.19/-15.43	-12.1/-12.02	-15.86/-18.63	-13.93/-17.89	-14.72/-17.27	-14.46/-15.4	-17.95/-18.54	-18.1/-15.43	-13.9/-12.08	-14.82/-16.98	-18.01/-15.53	-9.58/-9.68
Θ (150°)	-9.86/-11.78	-16.2/-18.88	-14.96/-10.19	-8.09/-6.69	-6.99/-10.97	-17/-15.26	-12.41/-10.69	-9.66/-9.09	-8.8/-8.87	-9.35/-9.98	-11.44/-15.74	-17.97/-17.53	-18.5/-19.3	-18.89/-14.44	-12.56/-15.36	-12.27/-10.36	-13.89/-9.22	-11.01/-18.33	-18.9/-14.67	-12.58/-13.86	-15.51/-13.39	-11.66/-12.86	-13.73/-12.49	-9.86/-9.33
Θ (157.5°)	-13.81/-18.26	-18.62/-18.01	-17.5/-14.66	-14.98/-15.05	-14.12/-13.08	-14.25/-15.75	-12.28/-10.89	-11.02/-11.35	-10.94/-11.22	-12.92/-15.04	-17.96/-18.67	-19.13/-19.26	-18.35/-16.98	-11.96/-7.41	-5.59/-5.15	-6.28/-10	-11.11/-9.48	-10.78/-13.05	-14.49/-18.21	-16.46/-17.77	-18.84/-16.52	-15.57/-18.03	-18.67/-19.19	-14.94/-12.39
Θ (165°)	-18.33/-18.1	-18.78/-18	-17.39/-13.28	-10.91/-9.39	-8.51/-7.95	-8.25/-9.15	-10.43/-11.05	-11.61/-11.71	-11.74/-12.99	-13.84/-13.9	-14.04/-15.45	-18/-18.48	-18.97/-15.44	-11.42/-10.12	-10.58/-12.3	-12.83/-11.33	-10.78/-14.03	-18.1/-18.05	-19.06/-17.99	-16.58/-10.21	-8.7/-8.6	-8.71/-10.78	-15.91/-17.41	-16.22/-18.45
Θ (172.5°)	-17.25/-15.1	-13.61/-11.52	-10.24/-9.51	-8.89/-8.94	-9.78/-11.6	-13.59/-15.33	-16.69/-18.67	-18.2/-16.37	-14.32/-13.05	-12.15/-12.58	-13.15/-14.3	-15.99/-17.03	-16.15/-14.53	-12.54/-10.95	-10.72/-11.4	-12.54/-14.65	-18.57/-17.94	-18.24/-19.07	-19.5/-18.77	-19.3/-16.02	-14.21/-13.69	-13.16/-14.92	-16/-17.07	-17.49/-18.89
Θ (180°)	-19.13/-18.9	-19.13/-18.28	-18.54/-19.09	-19.01/-19.04	-18.49/-18.55	-18.54/-17.87	-17.53/-17.46	-15.92/-15.22	-14.89/-14.93	-15.57/-16.94	-17.43/-17.66	-19.24/-18.53	-18.92/-17.93	-17.86/-18.34	-16.59/-14.79	-14.91/-17.72	-18.28/-17.42	-19.15/-17.54	-18.26/-19.33	-17.8/-18	-18.96/-18.16	-18.33/-18.86	-17.88/-17.88	-19.36/-17.44
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°)	-7.31/-6.6	-5.75/-5.75	-5.39/-5.39	-5.29/-5.43	-5.39/-5.62	-5.87/-6.24	-6.55/-7.34	-8.45/-10.14	-12.25/-13.67	-13.63/-13.64	-12.31/-9.9	-7.8/-6.68	-5.78/-5.19	-4.82/-4.69	-4.51/-4.24	-4.49/-4.91	-5.69/-6.16	-6.29/-6.71	-8.51/-10.85	-12.99/-14.51	-14.96/-13.94	-12.86/-12.06	-10.98/-9.69	-8.39/-7.81
Θ (7.5°)	-6.62/-5.46	-4.47/-3.83	-3.85/-3.83	-3.94/-4.17	-4.66/-5.55	-6.68/-8	-9.03/-9.97	-11.66/-14.26	-17.14/-16.97	-15.19/-12.65	-10.97/-10.2	-8.88/-7.81	-6.82/-6.33	-6.15/-6.3	-6.1/-6.15	-6.1/-5.96	-5.93/-5.79	-5.67/-5.79	-6.16/-7.22	-8.73/-9.81	-11.09/-12.8	-14.84/-15.68	-13.46/-11.21	-8.65/-7.73
Θ (15°)	-7.86/-5.97	-4.15/-3.17	-2.88/-2.62	-2.83/-3.41	-4.28/-5.38	-6.78/-8.4	-10.14/-11.81	-15.02/-18.48	-18.22/-15.65	-13.82/-10.69	-8.31/-6.88	-6.66/-6.28	-5.5/-4.99	-5.11/-5.79	-7.12/-7.76	-7.92/-7.66	-7.55/-7.07	-6.45/-5.59	-5.35/-6.12	-7.84/-9.95	-12.38/-17.96	-18.77/-18.98	-13.94/-11.78	-10.06/-8.98
Θ (22.5°)	-8.39/-7.17	-5.28/-3.21	-1.94/-1.64	-1.77/-2.37	-2.93/-3.87	-5.07/-6.13	-7/-7.73	-9.36/-13.24	-17.99/-18.92	-17.46/-13.75	-11.21/-10.6	-10.38/-8.12	-5.79/-4.55	-4.84/-6.15	-7.71/-9.51	-10.6/-10.97	-10.5/-8.99	-7.34/-6.48	-6.5/-8.19	-11.41/-13.73	-15.55/-18.51	-17.46/-13.36	-12.27/-11	-9.14/-9.23
Θ (30°)	-6.9/-6.08	-4.83/-3.61	-1.89/-1.56	-0.84/-2.08	-3.19/-4.23	-4.48/-5.04	-6.41/-8.32	-9.66/-10.32	-12.71/-18.6	-16.44/-15.76	-13.94/-10.58	-7.28/-5.98	-5.38/-4.69	-5.33/-6.62	-8.13/-9.84	-8.57/-7.7	-7.92/-8.33	-9.47/-12.42	-17.74/-17.84	-18.41/-17.96	-14.81/-11.72	-8.87/-6.93	-6.16/-6.48	
Θ (37.5°)	-4.86/-5.88	-4.36/-2.43	-1.01/-0.09	-0.78/-2.33	-3.52/-4.11	-4.2/-5.45	-6.96/-8.01	-8.87/-10.78	-14.32/-18.52	-18.2/-17.67	-14.4/-11.23	-10.53/-11.09	-8.7/-6.73	-4.88/-4.03	-4.85/-5.22	-5.81/-5.47	-5.33/-4.97	-4.53/-5.4	-8.58/-13.86	-15.52/-12.96	-13.52/-14.88	-16.5/-17.02	-11.94/-7.97	-6.31/-4.79
Θ (45°)	-5.58/-4.74	-4.6/-4.05	-2.43/-0.9	-1.45/-3.37	-4.92/-5.3	-5.63/-7.98	-9.9/-10.38	-10.62/-11.12	-12.97/-17.74	-17.89/-17.87	-14.44/-10.19	-8.36/-8.06	-7.68/-6.38	-4.23/-2.75	-3.13/-3.23	-2.5/-2.4	-4.01/-5.89	-5.57/-5.4	-6.29/-6.85	-9.19/-11.44	-15.99/-17.47	-18.19/-18.78	-16.69/-10.85	-7.53/-6.88
Θ (52.5°)	-5.21/-3.62	-3.67/-3.76	-3.08/-2.18	-2.58/-3.97	-4.6/-3.77	-4.75/-7.64	-12.01/-14.06	-13.66/-11.86	-11.21/-11.76	-14.52/-18.56	-18.91/-14.85	-10.67/-8.32	-5.96/-4.8	-4.31/-3.85	-2.51/-3.05	-2/-2.96	-4.47/-6.4	-6.92/-6.11	-7.07/-10.1	-11.13/-15.1	-15.74/-18.8	-17.28/-14.05	-13.69/-15.14	-12.67/-7.89
Θ (60°)	-6.09/-4.11	-3.89/-3.48	-3.6/-3.99	-3.68/-4.66	-5.13/-4.23	-5.53/-9.23	-13.15/-14.45	-14.45/-13.56	-13.54/-11.12	-11.98/-15.75	-17.49/-12.34	-9.61/-8.9	-5.73/-3.76	-3.54/-2.31	-2.38/-2.78	-3.11/-3.1	-4.24/-8.28	-8.99/-8.54	-8.84/-10.39	-13.3/-13.71	-18.45/-15.66	-14.75/-12.77	-13.18/-14.27	-18.55/-9.54
Θ (67.5°)	-5.34/-3.93	-4.29/-4.05	-5.3/-8.83	-4.11/-5.5	-6.68/-4.53	-5.24/-7.98	-9.89/-11.24	-15.47/-13.61	-11.79/-11.73	-11.46/-11.68	-14.19/-13.39	-16.99/-12.83	-11.46/-11.04	-8.81/-8.68	-11.3/-8.23	-6.29/-7.7	-6.17/-6.12	-8.46/-7	-13.01/-12.7	-13.8/-16.91	-13.17/-17.95	-17.17/-18.13	-18.51/-18.05	-12.01/-17.3
Θ (75°)	-4.51/-2.97	-4.79/-3.89	-4.02/-7.08	-4.94/-6.37	-7/-5.39	-8.65/-11.97	-11.74/-10.71	-13.05/-16.37	-10.18/-11.26	-13.62/-14.66	-11.34/-10.33	-11/-8.48	-7.57/-5.08	-4.97/-6.18	-3.48/-5.21	-7.34/-4.96	-7.89/-13.97	-15.58/-14.94	-12.14/-14.48	-17.22/-17.11	-14.64/-19.02	-11.59/-8.75	-9.12/-7.34	
Θ (82.5°)	-3.62/-3.22	-4.43/-4.16	-5.08/-7.71	-6.72/-7.38	-9.68/-7.91	-8.8/-9.4	-9.5/-10.05	-12.8/-8.03	-14.14/-11.37	-14.69/-14.57	-10.39/-10.54	-9.52/-9.02	-8.77/-5.01	-4.67/-6.38	-4.62/-6.57	-7.64/-6.89	-12.49/-17.99	-18.29/-18.08	-12.6/-17	-8.08/-13.83	-17.45/-18.55	-12.13/-18.36	-16.65/-10.46	-8.26/-6.91
Θ (90°)	-3.54/-3.46	-4.98/-5.07	-5.3/-8.83	-6.7/-8.46	-10.11/-13.33	-11.6/-12.03	-11.44/-11.68	-13.64/-16.22	-14.19/-13.39	-16.99/-12.83	-11.46/-11.04	-8.81/-8.68	-11.3/-8.23	-6.29/-7.7	-6.17/-6.12	-8.46/-7	-13.01/-12.7	-13.8/-16.91	-18.79/-19.32	-11.52/-16.98	-18.6/-17.64	-14.98/-18.41	-11.37/-7.54	-8.4/-6.77
Θ (97.5°)	-3.63/-4.2	-6.21/-5.15	-3.86/-4.94	-8.17/-10.27	-15.17/-16.96	-11.71/-13.11	-14.64/-11.82	-14.51/-16.69	-12.62/-16.61	-16.89/-11.17	-10.34/-11.94	-9.16/-7.76	-10.39/-7.86	-7.22/-8.7	-7.89/-6.37	-6.88/-7.03	-14.71/-10.74	-10.56/-14.56	-18.54/-18.89	-18.43/-19.16	-16.81/-18.7	-14.64/-19.02	-11.59/-8.75	-9.12/-7.34
Θ (105°)	-5.54/-4.86	-7.6/-6.96	-7.48/-11.15	-10.04/-11.82	-16.23/-14.64	-11.88/-11.86	-16.79/-11.7	-15.51/-8.05	-13.3/-17.6	-14.55/-10.97	-11.05/-13.88	-8.52/-8.04	-12.58/-7.7	-8.41/-10.8	-6.67/-6.82	-5.16/-5.84	-14.53/-10.34	-9.67/-13.84	-18.81/-19.05	-17.27/-18.15	-13.42/-18.55	-15.22/-18.57	-12.77/-10.69	-8.74/-8.57
Θ (112.5°)	-6.46/-7.09	-8.96/-6.78	-8.95/-12.64	-10.7/-16.93	-18.45/-18.5	-11.05/-9.62	-11.72/-16.7	-18.66/-16.31	-17.64/-15.91	-12.35/-13.23	-15.67/-14.55	-8.67/-9.13	-13.92/-6.68	-10.28/-11.08	-6.53/-7.6	-6.26/-7.66	-14.05/-9.47	-7.54/-10.21	-17.04/-18.15	-16.38/-17.17	-15.3/-17.97	-17.28/-18.25	-18.29/-8.76	-8.68/-12.82
Θ (120°)	-9/-13.42	-10.13/-8.26	-11.45/-14.29	-11.47/-12.7	-18.55/-16.81	-10.92/-11.52	-14.08/-16.72	-17.18/-18.05	-17.58/-12.92	-9.91/-10.53	-13.54/-12.72	-9.67/-9.12	-16.38/-12.44	-13.89/-11.13	-6.8/-10.56	-5.01/-6.22	-18.48/-11.29	-7.82/-10.31	-12.14/-18.78	-14.33/-15.39	-10.96/-18.46	-16.47/-12.78	-17.6/-17.69	-15.04/-11.32
Θ (127.5°)	-12.43/-15.36	-14.26/-9.92	-11.05/-13.42	-11.13/-14.82	-17.86/-14.36	-12.36/-11.24	-12.97/-15.88	-18.95/-13.87	-15.69/-14.22	-9.93/-10.94	-11.43/-9.12	-8.56/-8.66	-12.63/-13.21	-8.73/-11.02	-9.2/-11.41	-6.39/-8.62	-18.37/-13.51	-7.85/-12.98	-16.88/-17.31	-15.46/-14.49	-13/-19.03	-13.7/-14.61	-18.45/-13.48	-18.1/-15.72
Θ (135°)	-14.06/-11.74	-9.76/-10.92	-11.64/-12.25	-12.34/-12.79	-13.54/-14.28	-11.5/-14.73	-18.75/-18.27	-18.46/-15.32	-14.87/-16.67	-11.67/-9.59	-9.95/-7.97	-7.08/-8.31	-11.03/-12.26	-8.63/-10.04	-15.35/-14.17	-12.11/-18.26	-16.79/-13.83	-11.68/-17.92	-15.04/-16.3	-13.8/-18.03	-18.96/-18.2	-19.71/-16.85	-11.73/-15.31	-15.55/-19.08
Θ (142.5°)	-9.44/-9.16	-7.83/-9.23	-12.2/-11.4	-13.1/-16.15	-17.66/-18.14	-18.99/-17.09	-17.55/-15.32	-14.6/-15.48	-15.99/-14.15	-16.79/-19.08	-17.18/-13.19	-13.05/-16.04	-15.31/-15.27	-12.58/-17.63	-18.58/-17.63	-18.23/-18.02	-16.72/-14.64	-14.09/-18.12	-18.68/-18.96	-16.03/-18.12	-14.74/-16.59	-16.08/-11.11	-8.9/-6.86	-6.51/-8.28
Θ (150°)	-9.88/-8.92	-9.37/-10.18	-12.73/-14.43	-13.02/-13.14	-15.36/-18.89</																			



Antenna Pattern of 2.4GHz&5GHz

Appendix B.1

Total Gain Data

Freq(Hz)	2.45GPol.	TotalAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)		
Θ(0°)	-0.78/-0.86	-1.01/-1.10	-1.13/-0.71	-1.02/-0.99	-1.04/-1.11	-1.23/-1.29	-1.34/-1.36	-1.35/-1.41	-1.49/-1.56	-1.59/-1.61	-1.61/-0.90	-0.68/-0.50	-0.43/-0.46	-0.54/-0.64	-1.31/-1.10	-1.61/-1.36	-1.53/-1.36	-1.20/-1.12	-1.11/-1.24	-1.42/-1.55	-1.24/-1.32	-1.12/-1.04	-0.93/-0.73	-0.48/-0.26		
Θ(7.5°)	-0.39/-0.43	-0.50/-0.53	-0.48/-0.39	-0.31/-0.34	-0.44/-0.64	-0.85/-1.02	-1.18/-1.32	-1.45/-1.60	-1.78/-1.86	-1.80/-1.56	-1.29/-1.02	-0.82/-0.73	-0.78/-0.94	-1.19/-1.39	-1.52/-1.62	-1.74/-1.91	-2.06/-2.10	-2.08/-1.99	-1.84/-1.69	-1.49/-1.33	-1.24/-1.21	-1.22/-1.19	-1.08/-0.85	-0.59/-0.39		
Θ(15°)	-0.21/-0.18	-0.19/-0.18	-0.12/-0.01	0.05/0.05	-0.07/-0.27	-0.47/-0.69	-0.92/-1.14	-1.32/-1.51	-1.67/-1.68	-1.50/-1.17	-0.87/-0.64	-0.52/-0.59	-0.83/-1.24	-1.72/-1.26	-2.48/-2.76	-2.98/-3.14	-3.17/-3.04	-2.81/-2.58	-2.34/-2.07	-1.81/-1.54	-1.32/-1.20	-1.12/-1.04	-0.93/-0.73	-0.48/-0.26		
Θ(22.5°)	-0.65/-0.55	-0.50/-0.43	-0.33/-0.17	0.00/0.11	0.09/0.00	-0.13/-0.34	-0.60/-0.84	-1.01/-1.09	-1.07/-0.92	-0.61/-0.32	-0.10/-0.00	-0.05/-0.27	-0.64/-1.14	-1.76/-2.42	-3.14/-3.83	-4.34/-4.60	-4.47/-4.09	-3.64/-3.22	-2.85/-2.48	-2.12/-1.84	-1.69/-1.62	-1.62/-1.64	-1.60/-1.46	-1.16/-0.84		
Θ(30°)	-1.81/-1.49	-1.32/-1.18	-0.98/-0.63	-0.24/0.07	0.25/0.26	0.11/0.17	-0.46/-0.63	-0.65/-0.52	-0.25/0.02	0.24/0.34	0.30/0.16	-0.03/-0.27	-0.52/-0.81	-1.24/-1.90	-2.85/-4.01	-5.17/-5.86	-5.82/-5.29	-4.57/-3.88	-3.29/-2.76	-2.38/-2.22	-2.28/-2.51	-2.84/-3.17	-3.38/-3.32	-2.90/-2.30		
Θ(37.5°)	-3.46/-2.58	-2.06/-1.73	-1.28/-0.71	-0.12/0.34	0.59/0.58	0.29/-0.19	-0.55/-0.67	-0.49/-0.12	0.30/0.58	0.64/0.50	0.21/-0.17	-0.50/-0.78	-0.92/-1.04	-1.28/-1.77	-2.59/-3.68	-4.86/-5.06	-5.61/-5.30	-4.74/-4.05	-3.37/-2.81	-2.51/-2.55	-2.88/-3.47	-4.24/-5.00	-5.69/-6.00	-5.56/-4.54		
Θ(45°)	-5.16/-3.85	-2.99/-2.35	-1.54/-0.57	0.28/0.81	1.01/0.87	0.44/-0.16	-0.59/-0.66	-0.24/-0.02	0.34/0.53	0.49/0.23	-0.14/-0.58	-1.00/-1.38	-1.64/-1.75	-1.84/-2.01	-2.44/-3.11	-3.86/-4.61	-5.32/-5.55	-5.35/-4.91	-4.09/-3.41	-3.06/-3.16	-3.64/-4.50	-5.37/-6.45	-7.52/-8.29	-8.19/-6.77		
Θ(52.5°)	-4.69/-3.63	-3.21/-3.02	-2.42/-1.24	-0.13/0.54	0.72/0.53	0.08/-0.41	-0.62/-0.39	0.04/0.39	0.54/0.45	0.14/-0.25	-0.70/-1.16	-1.67/-2.10	-2.30/-2.17	-1.86/-1.61	-1.61/-2.00	-2.72/-3.95	-5.40/-6.64	-6.79/-5.89	-4.68/-3.78	-3.42/-3.64	-4.44/-5.69	-7.18/-8.45	-9.03/-8.92	-8.17/-6.23		
Θ(60°)	-3.05/-1.91	-1.67/-2.20	-2.79/-2.49	-1.51/-0.74	-0.39/-0.40	-0.83/-1.34	-1.23/-0.54	0.19/0.62	0.00/0.54	-1.06/-1.63	-2.22/-2.68	-2.75/-2.42	-1.90/-1.54	-1.51/-1.91	-2.66/-3.96	-5.43/-6.68	-6.95/-6.04	-4.84/-4.08	-3.99/-4.53	-5.51/-6.74	-6.67/-7.95	-7.95/-7.43	-6.80/-4.91			
Θ(67.5°)	-3.32/-1.87	-1.32/-1.76	-2.81/-3.40	-3.03/-2.39	-1.18/-1.35	-1.63/-2.45	-2.57/-1.66	-0.61/-0.10	-0.70/-0.43	-0.89/-1.31	-1.76/-2.31	-2.91/-3.36	-3.48/-3.27	-2.94/-2.69	-2.61/-2.62	-3.98/-3.58	-4.69/-5.86	-6.08/-5.04	-3.84/-3.21	-3.32/-3.85	-4.25/-4.22	-4.01/-4.04	-4.48/-5.26	-5.60/-5.03		
Θ(75°)	-3.56/-2.11	-1.45/-1.82	-2.95/-3.87	-4.00/-3.64	-2.86/-1.89	-1.71/-2.34	-2.84/-2.32	-1.40/-0.87	-0.89/-1.18	-1.41/-1.41	-1.45/-1.79	-2.41/-3.21	-3.88/-4.17	-4.00/-3.68	-3.28/-2.87	-2.67/-3.21	-4.47/-5.72	-5.49/-3.51	-1.98/-1.39	-1.82/-2.75	-3.29/-2.94	-2.32/-2.22	-2.94/-4.28	-5.44/-5.12		
Θ(82.5°)	-3.33/-1.53	-0.92/-1.59	-3.37/-4.97	-5.12/-4.17	-2.92/-1.98	-1.90/-2.49	-2.76/-2.08	-1.15/-0.83	-1.15/-1.69	-1.88/-1.63	-1.45/-1.74	-2.49/-3.54	-4.27/-4.47	-4.25/-3.89	-3.24/-2.40	-2.01/-2.42	-3.64/-5.30	-5.77/-4.03	-2.44/-2.16	-2.84/-4.28	-4.05/-2.53	-1.91/-1.35	-2.72/-5.84	-1.43/-13.38		
Θ(90°)	-4.90/-1.85	-0.69/-1.11	-3.32/-6.82	-9.10/-7.00	-2.72/-2.05	-2.04/-2.68	-2.62/-1.65	-0.71/-0.47	-0.97/-1.84	-2.43/-2.51	-2.47/-2.82	-3.64/-4.73	-5.59/-6.01	-5.80/-4.95	-3.51/-2.26	-1.79/-2.27	-3.91/-6.70	-8.50/-5.92	-3.63/-3.18	-4.31/-5.72	-5.39/-3.44	-1.78/-1.24	-2.00/-4.03	-7.10/-7.57		
Θ(97.5°)	-6.28/-2.65	-0.74/-0.58	-2.28/-5.55	-9.44/-10.96	-6.31/-3.55	-3.35/-4.21	-3.74/-2.05	-0.69/-0.18	-0.43/-0.97	-1.44/-1.64	-1.87/-2.42	-3.27/-4.32	-5.29/-5.84	-5.65/-4.88	-3.84/-3.18	-3.04/-3.79	-5.88/-9.10	-9.31/-5.51	-3.23/-3.24	-4.80/-5.97	-4.83/-2.86	-1.60/-1.47	-2.65/-5.21	-9.20/-9.93		
Θ(105°)	-8.90/-4.85	-2.36/-1.70	-3.16/-6.63	-9.82/-10.55	-7.59/-4.70	-4.07/-5.02	-5.28/-3.77	-2.27/-1.64	-1.69/-1.94	-1.99/-1.81	-1.75/-2.06	-2.75/-3.68	-4.51/-4.77	-4.82/-4.79	-4.39/-3.65	-3.07/-3.51	-3.64/-5.30	-5.77/-4.03	-2.44/-2.16	-2.84/-4.28	-4.05/-2.53	-1.91/-1.35	-2.72/-5.84	-1.43/-13.38		
Θ(112.5°)	-8.92/-5.24	-3.04/-2.27	-3.62/-7.74	-11.92/-10.42	-8.15/-6.55	-6.01/-6.41	-5.77/-3.92	-2.43/-1.73	-1.63/-1.74	-1.81/-1.90	-2.16/-2.67	-3.31/-3.85	-3.97/-3.90	-4.18/-4.44	-3.92/-2.96	-2.51/-2.98	-4.31/-5.91	-5.70/-3.32	-1.90/-2.29	-4.45/-7.21	-7.21/-4.80	-2.78/-2.16	-3.15/-3.60	-12.78/-15.06		
Θ(120°)	-11.49/-7.76	-5.21/-3.93	-4.42/-7.50	-12.08/-9.86	-7.29/-6.62	-6.87/-7.80	-7.56/-5.65	-3.68/-2.46	-1.65/-1.18	-1.01/-1.09	-1.39/-1.72	-2.03/-2.40	-2.77/-3.23	-3.87/-3.97	-3.19/-2.30	-2.00/-2.44	-3.77/-6.19	-7.95/-5.79	-3.89/-3.83	-5.24/-6.37	-5.62/-3.79	-2.13/-1.50	-2.24/-4.77	-9.55/-13.75		
Θ(127.5°)	-8.74/-7.48	-6.17/-5.14	-5.46/-7.77	-11.94/-11.15	-8.37/-7.26	-6.93/-6.73	-5.90/-4.31	-2.67/-1.45	-0.67/-0.36	-0.47/-0.86	-1.33/-1.74	-2.10/-2.53	-2.97/-3.45	-3.78/-3.70	-3.37/-3.25	-3.63/-4.64	-6.58/-8.17	-6.08/-3.06	-1.40/-1.14	-2.03/-3.69	-4.98/-4.87	-3.86/-3.26	-3.93/-6.28	-10.92/-12.70		
Θ(135°)	-8.47/-6.56	-5.70/-5.33	-5.66/-6.78	-8.57/-9.08	-7.84/-7.75	-6.28/-6.60	-7.41/-6.12	-2.80/-1.13	-0.09/-1.52	-1.68/-1.65	0.12/-0.42	-1.98/-2.25	-2.02/-2.25	-2.36/-4.12	-4.76/-4.95	-4.85/-4.84	-4.96/-4.73	-3.66/-2.31	-1.61/-1.90	-3.31/-6.02	-9.70/-11.86	-10.45/-9.09	-9.18/-10.64	-12.29/-11.64		
Θ(142.5°)	-10.11/-8.79	-7.66/-7.07	-7.27/-7.69	-7.96/-7.19	-5.99/-5.38	-5.65/-6.54	-7.20/-6.66	-5.12/-3.53	-2.38/-1.77	-1.64/-1.70	-1.70/-1.55	-1.41/-1.38	-1.64/-2.25	-3.07/-3.68	-3.82/-3.62	-3.48/-3.65	-4.23/-4.83	-5.05/-4.90	-5.12/-6.29	-5.86/-13.09	-15.33/-14.56	-12.47/-11.77	-11.72/-11.55	-11.77/-11.32		
Θ(150°)	-11.27/-10.89	-10.68/-10.23	-10.13/-10.85	-10.21/-8.40	-6.45/-5.00	-4.28/-3.99	-3.90/-3.80	-3.55/-3.15	-2.62/-2.08	-1.56/-1.05	-0.53/-0.10	0.10/0.08	-0.18/-0.63	-1.14/-1.61	-2.08/-2.68	-3.57/-4.81	-6.41/-8.09	-9.14/-9.28	-9.29/-9.93	-10.61/-11.31	-11.45/-10.95	-10.99/-11.10	-11.13/-11.21	-11.36/-11.42		
Θ(157.5°)	-10.93/-11.07	-11.54/-12.29	-12.49/-12.66	-12.81/-10.78	-8.60/-6.76	-5.47/-4.56	-3.82/-3.17	-2.62/-2.07	-1.46/-0.89	-0.40/0.00	0.32/0.53	0.57/0.39	0.03/-0.53	-1.26/-2.13	-3.19/-4.47	-6.04/-7.75	-9.38/-10.48	-10.44/-9.63	-8.79/-8.36	-8.29/-8.41	-8.89/-9.61	-10.30/-10.86	-11.38/-11.92	-11.85/-11.56		
Θ(165°)	-10.39/-10.02	-10.50/-11.31	-12.45/-12.65	-12.20/-11.94	-10.99/-9.54	-8.33/-5.73	-6.47/-5.62	-4.82/-4.05	-3.29/-2.59	-2.01/-1.54	-1.22/-1.07	-1.17/-1.53	-2.13/-2.97	-3.96/-5.01	-6.02/-7.07	-8.09/-8.76	-9.12/-8.83	-8.69/-8.08	-7.51/-7.21	-7.00/-7.07	-8.67/-9.47	-10.36/-11.46	-12.19/-11.33			
Θ(172.5°)	-8.18/-8.73	-8.76/-9.19	-9.86/-10.35	-10.48/-10.18	-9.73/-9.13	-8.66/-8.30	-8.06/-7.80	-7.45/-6.93	-6.32/-5.76	-5.32/-4.97	-4.82/-4.88	-5.20/-5.73	-6.30/-6.89	-7.44/-7.67	-7.90/-7.77	-7.53/-7.30	-7.16/-7.04	-6.87/-6.82	-6.80/-6.89	-7.03/-7.27	-7.60/-8.03	-8.50/-9.02	-9.55/-10.14	-10.35/-8.86		
Θ(180°)	-8.47/-7.84	-7.39/-7.74	-7.51/-7.71	-7.74/-7.64	-7.43/-7.13	-6.89/-6.69	-6.61/-6.63	-6.66/-6.64	-6.56/-6.56	-6.76/-7.09	-7.40/-7.70	-8.01/-8.30	-8.44/-8.52	-8.39/-7.98	-7.34/-6.84	-6.43/-6.23	-5.98/-5.87	-5.97/-6.33	-6.87/-7.55	-8.27/-9.17	-9.33/-9.34	-9.27/-9.17	-9.32/-9.54	-9.54/-9.15		
Freq(Hz)	5.20GPol.	TotalAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)		
Θ(0°)	-0.54/-0.58	-0.51/-0.38	-0.25/-0.25	-0.21/-0.14	-0.08/-0.09	-0.20/-0.42	-0.67/-0.57	-0.16/-0.02	-0.24/-0.60	-0.64/-0.43	-0.56/-0.90	-0.80/-0.44	-0.44/-0.78	-0.98/-0.78	-0.50/-0.45	-0.53/-0.62	-0.57/-0.45	-0.26/-0.23	-0.28/-0.11	0.00/-0.02	-0.02/-0.06	-0.13/-0.07	-0.07/-0.01	-0.00/-0.29		
Θ(7.5°)	-0.42/-0.47	-0.55/-0.67	-0.65/-0.63	-0.59/-0.47	-0.34/-0.24	-0.03/-0.01	-0.29/-0.49	-0.33/0.00	0.20/-0.01	-0.30/-0.13	0.24/0.18	-0.31/-0.46	-0.19/-0.18	-0.55/-0.85	-0.88/-0.66	-0.38/-0.25	-0.07/0.00	-0.00/-0.00	-0.02/-0.07	-0.17/-0.34	-0.59/-0.64	-0.50/-0.34	-0.46/-0.74	-0.73/-0.58		
Θ(15°)	-0.16/0.23	0.32/0.15	-0.08/-0.36	-0.75/-0.72	-0.61/-0.53	-0.34/-0.18	-0.19/-0.12	-0.01/0.16	0.26/0.17	0.03/-0.04	0.13/0.17	-0.05/-0.29	-0.18/-0.21	-0.50/-0.90	-1.08/-1.00	-0.76/-0.59	-0.44/-0.43	-0.51/-0.67	-0.73/-0.77	-0.74/0.86	-1.09/-1.11	-0.82/-0.42	-0.14/-0.15	-0.34/-0.43		
Θ(22.5°)	-0.65/-0.54	-0.33/-0.25	-0.30/-0.48	-0.83/-0.78	-0.68/-0.54	-0.57/0.57	-0.49/-0.43	-0.40/-0.16	0.00/0.19	0.01/0.15	0.01/0.22	1.25/0.04	-0.17/0.38	-0.74/-1.23	-1.77/-2.04	-2.17/-2.35	-2.55/-2.64	-2.75/-2.79	-2.86/-2.90	-2.64/-2.06	-1.61/-1.34	-1.18/-1.10	-0.92/-0.73	-0.64/-0.56		
Θ(30°)	0.12/0.25	0.03/-0.19	-0.34/-0.50	-1.12/-1.37	-1.63/-1.58	-1.39/-1.17	-1.18/-1.33	-1.30/-1.21	-1.09/-0.91	-0.78/-0.66	-0.50/-0.24	0.21/0.22	-0.26/-0.80	-1.12/-1.44	-2.11/-2.78	-3.26/-3.47	-3.59/-3.24	-3.26/-4.23	-5.13/-4.34	-3.10/-2.43	-2.55/-3.18	-3.62/-3.36	-2.50/-1.55	-0.70/-0.16		
Θ(37.5°)	0.28/0.71	0.90/0.67	0.17/-0.54	-1.36/-1.59	-1.69/-1.90	-1.94/-1.73	-1.93/-2.35	-2.46/-2.46	-2.24/-1.94	-1.65/-1.19	-0.69/-0.40	-0.23/-0.14	-1.08/-1.48	-1.88/-2.44	-3.28/-4.06	-3.84/-3.09	-3.23/-3.49	-2.71/-2.64	-3.31/-3.59	-3.15/-2.87	-3.27/-3.76	-3.50/-2.85	-1.91/-0.58			
Θ(45°)	0.40/0.71	0.37/0.5																								



Antenna Pattern of 2.4GHz&5GHz

Appendix B.1

Θ(22.5°)	0.88/1.00	0.80/0.45	0.21/0.17	0.14/0.05	-0.27/-0.55	-0.39/-0.50	-1.09/-1.43	-1.52/-1.28	-1.14/-0.85	-0.77/-0.93	-1.24/-0.97	-0.60/-0.63	-0.81/-0.88	-0.72/-0.61	-1.27/-1.64	-1.71/-1.68	-1.39/-0.88	-0.65/-0.83	-1.46/-2.03	-2.36/-2.40	-2.22/-1.61	-0.97/-0.51	-0.29/0.10	0.61/0.88
Θ(30°)	0.02/0.05	0.46/0.67	0.10/-0.79	-0.51/-0.04	-0.16/-0.19	0.14/-0.28	-1.25/-1.82	-1.60/-1.44	-1.28/-1.43	-1.50/-1.61	-1.83/-1.63	-1.08/-0.83	-0.79/-0.70	-0.46/-0.36	-0.63/-1.27	-1.82/-2.24	-2.64/-2.25	-1.61/-2.45	-3.40/-3.13	-2.98/-3.39	-3.13/-1.94	-1.08/-0.54	-0.15/0.22	0.65/0.54
Θ(37.5°)	0.22/0.25	0.16/0.03	-0.39/-1.04	-0.75/-2.17	-0.44/-0.79	-1.03/-1.54	-1.39/-0.81	-0.50/-0.33	-0.72/-1.71	-2.62/-2.37	-1.72/-1.10	-1.05/-1.38	-1.51/-1.15	-0.77/-0.84	-1.14/-1.17	-0.82/-1.29	-3.83/-3.86	-3.48/-2.98	-2.70/-3.33	-4.64/-4.81	-3.37/-2.05	-2.11/-2.98	-3.12/-2.55	-1.31/-0.54
Θ(45°)	0.18/0.39	0.49/0.68	-0.61/-1.67	-1.12/-0.68	-0.68/-0.21	0.01/-0.78	-0.82/-0.08	0.24/0.18	-0.49/-1.75	-2.76/-2.41	-1.36/-0.75	-1.01/-1.23	-0.90/-0.47	-0.98/-1.62	-1.14/-0.86	-0.65/-2.08	-3.84/-4.83	-4.31/-3.92	-4.13/-4.14	-5.15/-5.06	-3.95/-2.77	-2.13/-2.48	-3.18/-3.09	-2.32/-0.70
Θ(52.5°)	0.02/0.46	0.00/0.13	-1.10/-1.73	-0.39/-0.09	-0.11/-0.14	-0.15/-0.71	-0.92/-0.18	0.56/0.14	-1.00/-1.67	-1.71/-1.37	-1.23/-1.00	-0.36/-0.10	-0.36/0.17	-0.15/-0.93	-0.91/-1.50	-2.05/-2.65	-3.82/-5.79	-6.37/-4.80	-4.79/-6.26	-6.31/-5.98	-3.98/-2.57	-2.62/-2.94	-2.58/-2.13	-2.21/-1.81
Θ(60°)	-0.34/0.54	0.25/0.40	-1.57/-2.43	-0.93/0.51	0.49/0.32	0.68/0.08	-0.76/0.11	0.93/0.40	-0.78/-1.07	-1.15/-1.76	-2.27/-1.75	-1.06/-1.17	-0.96/-0.58	-0.34/-1.42	-1.89/-2.64	-2.58/-2.80	-5.82/-5.19	-5.16/-4.95	-5.03/-5.16	-5.80/-5.22	-4.12/-3.48	-3.36/-2.66	-1.60/-1.01	-0.75/-0.59
Θ(67.5°)	-1.01/-0.36	-0.13/0.26	-2.11/-3.27	-1.06/-1.21	0.73/-0.00	0.00/-0.03	-0.71/0.16	0.36/-0.74	-1.58/-1.89	-2.79/-3.17	-2.64/-1.76	-1.15/-0.99	-1.35/-1.54	-1.84/-1.61	-2.65/-4.19	-3.99/-4.27	-4.65/-8.04	-5.48/-3.39	-4.29/-5.71	-5.52/-3.11	-1.80/-2.04	-2.38/-2.34	-1.48/-0.85	-1.15/-1.63
Θ(75°)	-2.10/-0.71	-1.61/-0.10	-2.20/-3.42	-1.87/0.73	0.44/-0.55	-0.20/-0.12	-0.49/0.08	0.11/-1.66	-3.22/-3.14	-4.14/-4.30	-3.50/-2.64	-2.19/-1.62	-2.41/-2.65	-4.25/-3.06	-3.24/-0.49	-6.71/-6.06	-4.13/-5.98	-5.27/-4.30	-4.64/-6.60	-6.34/-4.23	-2.59/-2.53	-2.36/-2.09	-1.76/-1.90	-1.35/-1.83
Θ(82.5°)	-3.40/-1.75	-3.16/-0.66	-2.43/-2.86	-0.89/-0.09	-0.54/-0.29	-0.03/0.20	-0.94/-0.52	-0.65/-3.78	-5.20/-3.89	-4.88/-4.88	-3.37/-2.09	-2.28/-2.11	-1.92/-2.77	-4.24/-4.56	-3.62/-4.99	-8.63/-5.76	-4.22/-6.26	-5.85/-5.00	-5.75/-6.88	-6.47/-3.83	-1.94/-1.49	-1.22/-1.56	-2.73/-3.93	-3.81/-2.98
Θ(90°)	-5.22/-3.89	-3.57/-1.32	-3.72/-4.07	-1.22/-0.93	-0.92/-1.27	-0.48/-0.43	-1.89/-1.17	-0.76/-3.82	-6.48/-4.39	-5.28/-4.80	-3.06/-1.73	-1.50/-0.85	-1.52/-4.05	-4.52/-6.14	-3.99/-6.77	-7.31/-6.73	-6.86/-9.00	-6.90/-6.10	-8.56/-7.44	-5.09/-3.12	-3.06/-2.74	-1.34/-2.19	-4.16/-4.81	-4.86/-6.46
Θ(97.5°)	-7.22/-5.51	-5.56/-2.84	-3.45/-2.95	-1.27/-1.54	-1.29/-1.73	-1.63/-1.19	-2.05/-1.57	-0.75/-4.88	-7.50/-6.07	-5.84/-4.58	-3.10/-2.16	-1.52/-0.79	-1.58/-3.85	-4.62/-6.65	-4.30/-6.69	-7.12/-5.09	-7.59/-12.09	-7.32/-5.39	-5.67/-7.54	-6.81/-6.00	-5.94/-4.51	-4.13/-5.11	-5.52/-6.26	-6.23/-8.61
Θ(105°)	-7.19/-6.89	-6.51/-5.23	-4.61/-5.23	-2.04/-3.23	-2.00/-1.55	-1.72/-1.40	-2.13/-1.87	-1.54/-4.14	-8.95/-5.75	-5.99/-6.64	-4.12/-1.68	-0.92/-0.28	-1.23/-3.13	-5.66/-6.03	-4.08/-6.83	-6.38/-5.45	-8.92/-14.86	-7.15/-5.09	-5.68/-6.94	-6.85/-4.61	-11.33/-9.00	-6.23/-6.33	-5.77/-6.08	-5.39/-7.24
Θ(112.5°)	-5.78/-7.20	-3.96/-4.58	-3.69/-2.79	-2.70/-4.41	-1.45/-1.18	-2.95/-2.16	-1.85/-1.65	-1.20/-4.01	-8.41/-7.37	-6.24/-6.80	-5.34/-3.03	-1.26/-0.63	-2.09/-2.57	-4.77/-4.46	-5.04/-5.97	-4.82/-6.91	-8.01/-8.45	-4.47/-3.57	-4.80/-8.21	-8.23/-5.87	-10.93/-10.71	-6.75/-8.13	-8.40/-6.51	-6.24/-8.31
Θ(120°)	-7.23/-5.25	-2.77/-6.13	-5.95/-4.18	-3.49/-5.23	-2.98/-1.95	-2.63/-3.37	-4.47/-4.20	-2.79/-3.42	-7.59/-6.69	-5.16/-6.19	-5.53/-5.04	-1.77/-1.11	-1.44/-2.04	-4.71/-6.92	-6.90/-3.61	-3.22/-6.72	-15.05/-8.24	-1.27/-1.28	-2.40/-5.63	-9.96/-4.65	-6.64/-5.83	-8.87/-8.62	-6.87/-8.62	-5.31/-7.74
Θ(127.5°)	-7.93/-5.73	-3.80/-5.91	-4.72/-4.59	-4.80/-5.41	-2.82/-1.29	-1.80/-2.61	-3.28/-3.56	-2.80/-3.42	-6.46/-6.99	-5.49/-3.86	-5.36/-3.91	-3.01/-4.91	-3.59/-3.87	-4.07/-6.19	-4.41/-2.34	-4.45/-8.65	-5.88/-5.96	-1.41/-3.98	-3.29/-4.63	-3.91/-3.38	-6.07/-3.35	-5.67/-7.04	-5.20/-11.59	-6.88/-10.09
Θ(135°)	-6.45/-5.59	-6.27/-6.90	-8.40/-6.46	-6.92/-4.72	-3.63/-2.80	-4.59/-4.30	-3.80/-3.75	-3.73/-5.16	-7.93/-8.47	-5.52/-4.24	-3.32/-2.59	-4.49/-3.56	-2.54/-3.12	-3.32/-5.47	-5.32/-4.45	-4.70/-9.93	-5.95/-4.08	-2.46/-3.86	-5.98/-8.23	-5.82/-9.21	-6.38/-7.66	-7.29/-10.60	-8.27/-11.44	-12.51/-13.25
Θ(142.5°)	-5.19/-6.80	-10.40/-12.69	-8.53/-7.41	-3.23/-2.41	-2.95/-4.22	-5.25/-5.87	-5.64/-6.09	-6.71/-7.22	-9.51/-13.75	-4.41/-2.95	-2.76/-3.53	-1.77/-1.11	-1.44/-2.04	-4.71/-6.92	-6.90/-3.61	-6.95/-6.51	-8.05/-5.66	-8.54/-10.48	-13.68/-11.26	-8.13/-10.98	-12.50/-12.57	-12.30/-13.97	-11.82/-12.74	-10.20/-6.54
Θ(150°)	-0.09/-8.34	-9.88/-10.50	-7.16/-6.32	-5.51/-4.36	-3.94/-4.14	-5.41/-6.42	-6.59/-6.30	-6.52/-6.81	-7.43/-7.97	-7.97/-7.48	-6.06/-5.84	-6.27/-5.87	-6.00/-8.33	-9.61/-7.82	-6.11/-5.39	-5.58/-7.18	-9.50/-9.43	-7.76/-7.33	-9.55/-15.00	-13.38/-12.32	-13.81/-14.87	-12.19/-10.23	-8.19/-7.31	-8.17/-9.38
Θ(157.5°)	-11.81/-10.98	-9.88/-8.67	-7.07/-5.98	-5.11/-5.08	-5.57/-6.36	-7.88/-8.48	-7.54/-7.20	-7.42/-8.44	-10.37/-12.24	-13.71/-14.69	-15.72/-15.49	-14.93/-14.29	-11.69/-9.50	-8.08/-6.97	-6.25/-5.35	-4.24/-3.83	-4.57/-5.61	-6.40/-7.48	-10.33/-13.59	-12.12/-9.91	-10.18/-11.64	-13.48/-12.19	-11.94/-11.46	-12.14/-12.57
Θ(165°)	-13.78/-12.66	-12.90/-13.00	-11.87/-10.41	-9.79/-9.35	-9.79/-9.43	-9.57/-9.67	-9.95/-9.79	-9.68/-9.97	-9.03/-9.13	-10.53/-11.33	-9.50/-7.43	-6.16/-6.56	-7.17/-6.94	-6.54/-6.05	-5.52/-4.94	-4.77/-4.96	-5.13/-5.75	-7.47/-10.24	-12.28/-13.16	-13.94/-13.81	-13.16/-12.53	-11.18/-11.07	-9.93/-8.51	-9.16/-11.68
Θ(172.5°)	-13.52/-14.01	-14.85/-13.91	-13.55/-12.88	-12.50/-13.85	-14.78/-14.72	-14.06/-14.31	-14.50/-14.46	-13.04/-11.82	-10.01/-9.10	-9.15/-9.42	-8.32/-7.71	-7.62/-6.61	-6.53/-5.47	-5.68/-5.76	-5.74/-5.73	-6.08/-6.63	-7.85/-9.58	-12.09/-15.07	-14.47/-14.79	-13.46/-13.79	-14.99/-15.37	-15.22/-13.98	-13.18/-13.06	-13.72/-13.34
Θ(180°)	-11.49/-12.02	-12.95/-14.98	-14.68/-13.43	-12.73/-12.13	-11.55/-10.58	-10.37/-10.26	-10.77/-11.53	-12.22/-12.04	-11.79/-11.69	-9.15/-9.95	-8.05/-9.16	-9.45/-8.98	-9.15/-9.94	-13.73/-12.41	-13.37/-14.45	-14.91/-15.44	-15.41/-15.24	-15.69/-14.63	-13.58/-13.06	-12.91/-14.26	-13.73/-13.48	-13.69/-13.05	-13.52/-13.54	-12.95/-11.91
Freq(Hz)	2.45GPol.	Total/Ant.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-5.21/-5.49	-5.70/-5.78	-5.72/-5.57	-5.49/-5.29	-5.06/-4.92	-4.90/-4.77	-4.47/-4.14	-3.85/-3.65	-3.45/-3.29	-3.22/-3.15	-3.08/-2.98	-2.98/-3.06	-3.25/-3.53	-3.94/-4.33	-4.57/-4.44	-4.28/-4.32	-4.33/-4.33	-4.28/-4.16	-4.06/-3.94	-3.84/-3.69	-3.56/-3.55	-3.75/-3.94	-4.14/-4.33	-4.59/-4.91
Θ(7.5°)	-3.25/-3.39	-3.43/-3.36	-3.28/-3.16	-3.15/-3.19	-3.14/-3.25	-3.40/-3.51	-3.52/-3.49	-3.51/-3.63	-3.82/-3.98	-3.99/-4.05	-4.07/-4.09	-4.14/-4.34	-4.70/-5.22	-5.86/-6.39	-6.67/-6.59	-6.46/-6.51	-6.41/-6.26	-5.98/-5.52	-5.05/-4.59	-4.10/-3.56	-3.13/-2.97	-2.86/-2.82	-2.77/-2.77	-2.87/-3.08
Θ(15°)	-2.15/-2.25	-2.26/-2.18	-2.08/-1.98	-1.88/-1.96	-1.98/-2.10	-2.30/-2.55	-2.80/-3.06	-3.35/-3.71	-4.12/-4.48	-4.70/-4.83	-4.88/-4.89	-4.86/-4.95	-5.21/-5.69	-6.25/-6.74	-7.10/-7.31	-7.47/-7.50	-7.42/-7.12	-6.66/-6.03	-5.38/-4.75	-4.13/-3.54	-2.94/-2.52	-2.23/-2.07	-1.88/-1.80	-1.85/-2.01
Θ(22.5°)	-1.82/-1.87	-1.85/-1.80	-1.71/-1.63	-1.51/-1.42	-1.49/-1.54	-1.67/-1.89	-2.26/-2.72	-3.25/-3.76	-4.20/-4.45	-4.52/-4.47	-4.26/-3.99	-3.68/-3.56	-3.63/-3.90	-4.28/-4.71	-5.20/-5.70	-6.29/-6.66	-6.87/-6.73	-6.31/-5.77	-5.16/-4.52	-3.84/-3.20	-2.65/-2.27	-1.94/-1.69	-1.50/-1.45	-1.54/-1.71
Θ(30°)	-2.12/-2.06	-2.03/-2.05	-2.08/-2.03	-1.90/-1.66	-1.51/-1.45	-1.42/-1.53	-1.90/-2.45	-3.17/-3.80	-4.14/-4.02	-3.60/-3.00	-2.33/-1.72	-1.27/-1.08	-1.17/-1.14	-2.14/-2.88	-3.75/-4.66	-5.62/-6.53	-7.21/-7.41	-7.15/-6.58	-5.89/-5.12	-4.34/-3.65	-3.11/-2.71	-2.43/-2.12	-1.91/-1.90	-2.00/-2.10
Θ(37.5°)	-2.60/-2.47	-2.52/-2.73	-2.93/-2.93	-2.76/-2.33	-1.90/-1.55	-1.31/-1.37	-1.77/-2.52	-3.51/-4.36	-4.63/-4.13	-3.06/-1.89	-0.83/0.01	0.52/0.65	0.42/-0.14	-0.95/-1.90	-2.93/-3.98	-5.16/-6.46	-7.92/-9.05	-9.47/-9.02	-7.97/-8.65	-5.81/-4.92	-4.28/-3.83	-3.48/-3.23	-3.09/-3.02	-2.94/-2.82
Θ(45°)	-2.78/-2.59	-2.73/-3.11	-3.45/-3.50	-3.21/-2.65	-1.85/-1.22	-0.83/-0.90	-0.46/-2.42	-3.69/-4.78	-5.16/-4.51	-3.22/-1.77	-0.45/0.50	1.08/1.25	1.06/0.59	-0.05/-0.73	-1.44/-2.16	-3.00/-4.10	-5.56/-7.42	-9.35/-10.51	-10.01/-8.61	-7.15/-5.98	-4.91/-4.20	-3.81/-3.69	-3.73/-3.71	-3.48/-3.14
Θ(52.5°)	-2.46/-2.30	-2.48/-2.91	-3.34/-3.41	-3.08/-2.38	-1.37/-0.52	-0.03/-0.14	-0.77/-1.78	-2.98/-3.66	-4.05/-4.45	-2.38/-1.17	-0.11/0.67	1.11/1.19	0.95/0.57	0.11/-0.38	-0.84/-1.26	-1.79/-2.52	-3.64/-5.14	-6.92/-8.42	-8.66/-7.66	-6.25/-5.03	-4.04/-3.32	-2.96/-2.98	-3.12/-3.19	-3.04/-2.73
Θ(60°)	-2.27/-2.16	-2.33/-2.75	-3.27/-3.48	-3.26/-2.51	-1.29/-0.22	0.33/0.14	-0.55/-1.44	-2.24/-2.61	-2.56/-2.20	-1.49/-0.61	0.26/0.93	1.28/1.24	0.92/0.43	-0.17/-0.75	-1.21/-1.53	-1.93/-2.66	-6.21/-7.46	-7.66/-6.64	-5.27/-4.18	-3.38/-2.78	-2.52/-2.60	-2.87/-3.02	-2.89/-2.57	
Θ(67.5°)	-2.86/-2.70	-2.75/-3.04	-3.39/-3.52	-3.40/-2.85	-1.60/-0.29	0.31/-0.05	-1.14/-2.32	-2.60/-2.56	-2.22/-2.04	-0.18/-1.11	0.96/1.01	0.83/0.50	0.31/-0.08	-0.22/-0.50	-0.17/-1.93	-3.09/-4.44	-6.02/-7.48	-7.72/-6.44	-4.83/-3.70	-3.08/-2.76	-2.72/-3.05	-3.65/-4.06	-3.63/-3.30	
Θ(75°)	-3.25/-2.96	-3.00/-3.33	-3.63/-3.52	-3.25/-2.67	-1.37/-0.04	0.67/0.41	-0.64/-1.80	-2.15/-1.60	-1.17/-1.36	-1.80/-1.84	-1.28/-0.56	-0.12/0.02	0.05/0.04	0.19/0.52	0.76/0.67	-1.90/-3.39	-5.18/-6.57	-6.31/-4.89						



Antenna Pattern of 2.4GHz&5GHz

Appendix B.1

Θ(75°)	-11.26/-9.07	-7.91/-6.34	-4.60/-3.88	-5.09/-5.90	-5.31/-3.79	-2.57/-2.15	-1.89/-2.09	-3.54/-5.03	-5.56/-4.91	-5.59/-3.67	-3.30/-2.29	-2.59/-4.79	-3.14/-2.44	-2.93/-3.80	-5.01/-3.83	-3.07/-3.83	-4.48/-4.49	-4.10/-3.01	-2.49/-2.55	-2.47/-2.83	-3.55/-3.80	-5.33/-10.74	-10.57/-10.23	-9.36/-10.30
Θ(82.5°)	-7.81/-8.07	-7.41/-7.31	-6.34/-4.83	-6.94/-6.18	-5.25/-5.13	-4.60/-5.43	-5.48/-5.96	-6.93/-7.56	-8.61/-6.17	-7.24/-3.78	-3.64/-2.54	-1.89/-4.69	-2.53/-1.92	-3.73/-4.40	-3.46/-2.50	-2.64/-2.73	-3.63/-5.49	-3.65/-2.48	-2.85/-2.77	-3.04/-3.82	-3.92/-4.18	-6.15/-9.70	-10.79/-8.69	-7.42/-6.81
Θ(90°)	-6.31/-6.74	-6.30/-5.90	-4.92/-4.15	-6.44/-5.50	-4.53/-5.02	-5.62/-7.23	-7.79/-7.72	-6.45/-5.02	-8.24/-5.77	-5.45/-3.01	-3.05/-2.27	-1.42/-4.27	-3.05/-2.21	-3.16/-4.95	-3.86/-3.55	-5.93/-3.32	-5.67/-7.09	-4.21/-3.00	-2.64/-1.95	-2.64/-3.32	-2.95/-4.55	-6.92/-9.11	-9.90/-9.27	-10.61/-7.11
Θ(97.5°)	-8.18/-7.10	-6.25/-6.38	-5.65/-3.90	-5.92/-5.29	-4.11/-4.11	-4.66/-5.51	-5.92/-8.30	-9.98/-9.50	-8.85/-5.62	-4.98/-2.57	-3.33/-3.20	-2.82/-5.39	-4.79/-2.60	-3.28/-4.90	-5.36/-5.87	-4.46/-3.71	-6.57/-8.50	-4.09/-2.92	-3.13/-3.39	-4.05/-5.95	-4.26/-4.53	-8.48/-10.73	-9.63/-11.00	-7.72/-7.13
Θ(105°)	-8.16/-8.43	-6.65/-6.73	-7.85/-6.14	-7.14/-6.34	-5.59/-5.74	-4.69/-5.48	-5.19/-8.06	-11.79/-11.57	-9.33/-5.74	-3.54/-2.91	-5.04/-6.01	-5.35/-4.65	-4.37/-2.74	-3.98/-7.47	-6.05/-4.69	-3.79/-3.56	-8.69/-8.07	-3.44/-3.11	-2.11/-3.38	-5.42/-7.10	-5.51/-6.65	-9.11/-12.71	-15.67/-10.14	-8.44/-6.50
Θ(112.5°)	-6.58/-9.79	-9.50/-8.17	-7.12/-6.61	-9.05/-11.88	-7.67/-6.31	-5.24/-4.48	-5.40/-9.79	-15.08/-15.37	-13.26/-8.45	-6.11/-5.11	-6.55/-5.42	-4.82/-5.16	-5.09/-4.23	-4.31/-6.38	-7.19/-4.56	-5.97/-6.92	-5.84/-4.39	-5.72/-7.39	-9.43/-11.53	-8.03/-6.98				
Θ(120°)	-7.50/-9.64	-10.35/-12.31	-11.71/-11.93	-11.92/-11.80	-10.56/-8.58	-6.11/-5.05	-7.47/-11.74	-15.17/-15.77	-15.08/-12.68	-7.15/-6.59	-6.46/-6.24	-6.89/-9.15	-6.02/-2.71	-4.20/-11.56	-10.16/-7.85	-3.86/-4.39	-6.45/-7.39	-5.99/-3.04	-1.39/-6.02	-7.81/-4.53	-4.89/-4.08	-5.32/-6.96	-12.80/-7.48	-4.19/-5.01
Θ(127.5°)	-6.83/-13.20	-11.18/-11.23	-11.64/-12.27	-11.94/-8.83	-9.40/-10.63	-9.39/-8.05	-7.51/-12.57	-14.51/-11.45	-14.96/-15.57	-14.24/-10.41	-8.96/-8.33	-9.14/-10.22	-8.14/-7.20	-8.13/-5.86	-14.89/-3.36	-2.68/-7.19	-3.29/-6.57	-8.61/-1.63	-0.01/-6.68	-9.81/-3.23	-4.58/-4.01	-4.30/-9.86	-7.35/-10.80	-6.12/-3.54
Θ(135°)	-11.62/-13.37	-12.96/-12.15	-14.13/-14.77	-14.67/-11.64	-9.20/-10.09	-11.82/-11.41	-11.90/-11.82	-11.13/-9.47	-8.50/-9.05	-10.11/-10.33	-9.58/-9.33	-11.51/-12.45	-13.00/-13.47	-11.95/-15.76	-6.43/-2.01	-6.06/-3.38	-3.24/-8.17	-10.59/-0.20	1.01/-4.98	-8.50/-3.43	-2.25/-2.68	-3.96/-6.51	-13.48/-12.40	-12.39/-10.59
Θ(142.5°)	-10.44/-15.51	-15.93/-14.34	-14.36/-13.21	-12.39/-14.19	-14.81/-13.17	-10.23/-8.14	-7.48/-6.04	-4.30/-4.02	-4.26/-4.59	-5.38/-6.87	-7.64/-8.54	-9.01/-7.31	-6.38/-6.53	-7.85/-7.88	-6.51/-7.74	-4.72/-1.90	-5.72/-15.78	-6.270.28	0.80/-2.92	-6.02/-3.83	-1.37/-3.07	-6.18/-5.62	-9.18/-11.64	-8.44/-7.85
Θ(150°)	-4.46/-5.32	-8.57/-11.87	-11.25/-9.05	-7.99/-8.59	-11.75/-15.32	-15.41/-15.74	-14.02/-14.78	-14.98/-14.54	-13.12/-11.92	-10.80/-9.34	-8.05/-7.15	-6.55/-6.43	-7.65/-9.81	-11.24/-10.40	-10.32/-10.46	-8.45/-8.61	-11.19/-10.71	-5.73/-1.73	-0.86/-2.71	-5.82/-8.12	-7.28/-7.52	-11.10/-15.22	-14.78/-11.57	-9.19/-6.05
Θ(157.5°)	-5.37/-7.55	-10.84/-13.56	-14.35/-15.35	-13.62/-13.46	-11.56/-12.21	-11.40/-11.75	-13.29/-14.44	-12.40/-10.83	-9.73/-8.80	-8.02/-6.60	-5.31/-4.52	-4.24/-4.49	-5.25/-6.70	-9.18/-10.72	-12.36/-14.89	-13.45/-9.30	-5.39/-3.37	-2.85/-3.75	-5.38/-7.14	-7.76/-6.69	-5.20/-5.52	-6.47/-5.91	-4.65/-4.50	
Θ(165°)	-4.81/-4.88	-5.84/-8.20	-12.16/-14.86	-12.37/-11.43	-11.76/-13.46	-13.17/-11.03	-9.46/-8.76	-9.24/-10.16	-11.28/-12.32	-12.86/-12.08	-11.38/-11.01	-11.45/-11.59	-10.77/-10.53	-11.72/-14.08	-15.47/-14.75	-14.65/-14.07	-10.92/-7.14	-4.70/-3.69	-3.93/-4.80	-6.52/-8.55	-9.78/-9.36	-7.60/-6.54	-6.24/-5.78	-4.99/-4.93
Θ(172.5°)	-15.49/-15.03	-13.93/-11.54	-12.01/-13.37	-13.43/-13.63	-15.65/-15.23	-15.52/-15.14	-15.59/-14.61	-13.55/-12.87	-11.82/-10.85	-10.30/-9.67	-9.37/-9.45	-9.59/-10.29	-11.00/-11.43	-11.85/-12.16	-12.50/-12.03	-10.53/-8.99	-6.98/-5.46	-4.56/-4.30	-4.63/-5.41	-5.98/-7.21	-8.34/-9.26	-9.38/-9.74	-10.83/-12.45	-14.47/-15.92
Θ(180°)	-12.54/-12.45	-13.54/-12.76	-12.40/-12.34	-11.01/-9.61	-8.82/-8.59	-8.58/-8.84	-8.84/-8.72	-8.67/-8.84	-8.28/-8.12	-7.73/-7.47	-7.30/-7.03	-6.93/-6.76	-6.75/-6.59	-6.46/-6.30	-6.21/-6.19	-6.13/-6.23	-6.16/-6.35	-6.13/-6.23	-6.06/-6.21	-6.41/-6.72	-7.52/-8.08	-8.19/-8.51	-9.47/-10.26	-10.69/-11.44
Freq(Hz)	5.785GPol.	TotalAnt.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-0.99/-1.05	-1.11/-1.05	-1.15/-1.23	-1.37/-1.55	-1.59/-1.71	-1.96/-2.28	-2.43/-2.32	-2.09/-1.89	-1.72/-1.59	-1.46/-1.39	-1.28/-1.16	-1.11/-0.99	-0.90/-0.72	-0.54/-0.32	-0.34/-0.37	-0.35/-0.46	-0.65/-0.73	-0.76/-0.63	-0.39/-0.28	-0.24/-0.51	-0.67/-0.66	-0.84/-1.01	-0.92/-1.00	-1.05/-1.11
Θ(7.5°)	-0.150.11	0.250.51	0.600.62	0.650.57	0.520.30	0.170.16	0.130.13	-0.04/-0.10	-0.15/-0.11	-0.19/-0.27	-0.37/-0.59	-0.88/-1.12	-1.32/-1.46	-1.58/-1.65	-1.80/-1.89	-2.20/-2.45	-2.50/-2.56	-2.69/-2.86	-2.76/-2.79	-2.71/-2.70	-2.69/-2.51	-2.36/-1.99	-1.62/-1.15	-0.81/-0.53
Θ(15°)	-1.46/-0.96	-0.450.07	0.500.92	0.920.89	0.950.79	0.800.83	0.910.96	1.07/-0.11	1.010.91	0.750.55	0.30/-0.03	-0.44/-0.83	-1.25/-1.69	-2.09/-2.32	-2.40/-2.62	-2.74/-2.59	-2.36/-2.25	-2.13/-2.01	-1.98/-2.11	-2.34/-2.68	-2.99/-3.04	-2.89/-2.83	-3.03/-2.67	-2.41/-1.98
Θ(22.5°)	-4.57/-3.81	-3.05/-2.39	-1.40/-0.53	-0.61/-0.75	-0.54/-0.61	-0.45/-0.54	-0.63/-0.52	-0.230.05	0.250.13	-0.20/-0.53	-0.56/-0.70	-1.01/-1.47	-2.25/-2.52	-2.69/-2.73	-2.84/-2.86	-2.69/-2.33	-1.80/-1.24	-0.50/-0.12	0.10/-0.06	-0.79/-1.54	-2.03/-2.41	-2.80/-3.55	-4.89/-5.09	-5.45/-5.20
Θ(30°)	-6.59/-5.54	-4.93/-4.17	-3.58/-3.29	-3.15/-2.83	-2.11/-1.75	-1.50/-1.58	-1.71/-1.82	-1.87/-1.53	-1.37/-1.58	-2.09/-2.18	-1.78/-1.33	-1.24/-1.57	-1.94/-2.22	-2.53/-2.81	-2.81/-2.49	-2.22/-1.85	-1.16/-0.41	-0.12/-0.19	-0.050.15	0.22/-0.26	-1.27/-2.43	-3.42/-4.84	-7.04/-8.26	-8.81/-7.84
Θ(37.5°)	-8.72/-9.02	-7.68/-6.80	-6.57/-4.94	-3.62/-2.98	-1.97/-1.17	-0.65/-0.44	-0.51/-0.70	-0.40/-0.80	-0.97/-1.81	-3.06/-3.86	-3.95/-3.42	-3.23/-3.83	-4.61/-4.26	-3.88/-4.01	-3.95/-3.34	-2.67/-1.96	-1.18/-1.14	-1.38/-1.03	-0.62/-0.76	-0.93/-1.30	-2.24/-2.39	-5.72/-6.74	-7.51/-7.93	-9.11/-10.43
Θ(45°)	-11.23/-11.03	-9.06/-7.59	-6.58/-4.94	-3.03/-1.92	-0.870.03	0.91/-1.48	1.58/-1.18	0.750.40	-0.15/-1.38	-3.14/-5.40	-7.42/-5.79	-4.36/-4.79	-1.65/-4.05	-3.59/-4.01	-4.34/-4.51	-4.65/-4.09	-3.76/-3.98	-3.32/-3.21	-1.95/-1.37	-1.20/-2.30	-3.23/-3.98	-5.97/-8.51	-9.60/-10.82	-13.52/-10.60
Θ(52.5°)	-9.64/-10.34	-10.63/-9.46	-8.23/-6.03	-3.68/-2.40	-1.090.15	1.14/-1.97	2.38/-1.2	1.140.02	-0.97/-2.39	-3.37/-5.04	-6.96/-5.66	-5.50/-5.79	-5.47/-4.50	-3.88/-4.02	-5.33/-6.61	-5.15/-3.70	-4.21/-4.42	-3.92/-2.78	-1.75/-1.59	-2.23/-3.45	-5.72/-8.20	-10.19/-9.80	-8.76/-8.83	-9.26/-9.57
Θ(60°)	-14.60/-15.53	-14.91/-11.20	-8.65/-6.28	-3.40/-2.29	-1.28/-0.07	1.34/-0.65	3.20/-0.22	2.28/-1.41	0.67/-1.25	-3.31/-4.52	-6.25/-5.26	-5.09/-3.44	-3.90/-4.60	-4.14/-4.37	-7.29/-7.46	-4.36/-3.55	-3.92/-4.22	-4.24/-3.75	-3.02/-2.16	-2.09/-6.33	-5.29/-7.65	-11.43/-12.29	-9.38/-9.63	-14.41/-12.06
Θ(67.5°)	-9.77/-9.58	-9.90/-9.16	-6.60/-5.10	-3.19/-3.23	-2.56/-0.81	1.182.18	2.51/-2.43	1.600.37	-1.02/-2.62	-4.67/-5.06	-6.02/-5.27	-4.92/-4.61	-6.46/-3.96	-4.60/-4.71	-6.93/-6.78	-6.46/-6.69	-5.66/-5.92	-5.38/-3.78	-2.23/-1.50	-1.61/-3.29	-5.96/-6.08	-12.24/-13.08	-9.24/-8.09	-9.99/-10.57
Θ(75°)	-10.45/-9.97	-11.82/-13.00	-9.45/-6.49	-5.69/-4.91	-3.42/-1.86	-0.340.71	1.050.88	0.09/-0.99	-2.70/-4.89	-6.96/-6.70	-5.50/-3.71	-2.95/-5.36	-3.91/-2.96	-3.92/-4.24	-4.99/-4.34	-3.84/-3.99	-4.13/-4.99	-4.43/-2.92	-2.31/-1.98	-2.19/-3.22	-5.57/-7.52	-9.48/-12.09	-11.28/-10.54	-9.12/-10.21
Θ(82.5°)	-8.74/-9.57	-8.92/-9.06	-7.55/-6.03	-6.77/-5.06	-5.04/-2.70	-1.13/-1.21	-1.08/-0.90	-1.27/-1.95	-4.50/-5.95	-5.13/-4.04	-4.57/-3.70	-2.93/-4.57	-3.87/-2.92	-4.41/-5.42	-4.19/-4.05	-4.01/-3.93	-4.51/-5.71	-4.41/-3.32	-2.72/-2.26	-2.70/-2.55	-4.02/-0.76	-9.73/-10.81	-13.89/-11.66	-10.61/-9.56
Θ(90°)	-8.57/-9.29	-7.75/-7.50	-6.69/-5.12	-6.84/-5.05	-4.12/-2.47	-2.85/-3.55	-4.11/-3.90	-3.32/-3.49	-5.26/-7.05	-5.15/-3.51	-3.24/-2.93	-2.68/-6.15	-4.33/-3.07	-4.69/-6.90	-5.67/-4.76	-6.37/-3.74	-5.07/-7.02	-4.15/-3.73	-4.35/-3.25	-2.84/-2.58	-3.37/-6.55	-7.82/-7.68	-11.11/-11.40	-13.84/-8.84
Θ(97.5°)	-9.36/-10.25	-9.23/-9.13	-9.15/-8.84	-7.78/-4.96	-3.63/-1.92	-1.97/-3.44	-4.28/-5.38	-5.89/-5.74	-8.82/-6.76	-4.48/-3.10	-4.69/-5.49	-5.72/-7.49	-6.42/-3.53	-4.65/-7.06	-6.54/-8.14	-5.93/-4.92	-8.06/-9.19	-4.71/-5.36	-5.66/-4.54	-5.09/-5.26	-4.75/-6.57	-8.67/-7.04	-10.39/-11.48	-9.67/-7.82
Θ(105°)	-7.10/-7.63	-8.56/-9.98	-9.65/-8.54	-9.70/-6.52	-4.69/-3.31	-3.53/-3.98	-3.69/-4.17	-6.64/-8.10	-8.27/-6.91	-4.10/-3.75	-5.87/-6.47	-8.03/-9.43	-6.03/-4.25	-6.58/-11.46	-10.67/-6.44	-6.66/-5.68	-9.86/-8.70	-3.97/-5.02	-5.50/-5.29	-6.08/-6.46	-5.82/-9.72	-7.44/-9.87	-10.44/-9.43	-8.58/-5.35
Θ(112.5°)	-6.81/-8.92	-8.45/-9.38	-8.27/-7.68	-9.45/-8.49	-6.02/-5.14	-4.84/-3.58	-3.05/-5.71	-10.82/-13.90	-11.11/-7.99	-6.95/-6.12	-7.52/-6.31	-7.05/-7.51	-6.33/-6.06	-7.88/-9.52	-9.53/-6.09	-4.05/-5.90	-8.04/-7.80	-3.59/-2.80	-2.54/-2.92	-4.50/-7.84	-7.10/-5.97	-4.81/-5.06	-10.45/-10.51	-8.21/-5.13
Θ(120°)	-7.28/-10.06	-9.32/-10.91	-10.16/-10.79	-11.31/-10.44	-9.67/-9.12	-6.78/-4.43	-4.25/-6.30	-10.44/-10.07	-14.83/-12.14	-8.00/-8.33	-8.32/-7.78	-8.21/-10.50	-8.08/-4.38	-6.11/-10.20	-13.01/-8.85	-5.86/-5.67	-7.57/-8.47	-5.65/-3.51	-2.70/-5.92	-5.67/-5.53	-6.29/-4.36	-5.48/-8.13	-13.07/-9.48	-5.21/-5.02
Θ(127.5°)	-7.71/-11.78	-9.89/-13.03	-13.99/-13.38	-15.63/-15.56	-11.16/-11.26	-10.61/-6.92	-4.78/-6.52	-13.05/-14.95	-15.92/-15.69	-15.16/-11.45	-11.80/-12.22	-15.05/-15												