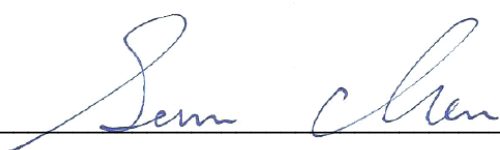


Antenna Composite Gain Test Report

FCC ID	MSQ-RTBE8H00
Equipment	ROG STRIX WiFi 7 Tri-Band Gaming Router
Brand Name	ASUS
Model Name	GS-BE18000, GS-BE12000
Applicant	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou, Taipei City 112, Taiwan
Standard	KDB662911 D03 v01
Sample Received	Jan. 09, 2025
Start Test Date	Jan. 22, 2025
Final Test Date	Feb. 06, 2025



Approved by: Sam Chen

Sporton International Inc. Hsinchu Laboratory

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



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History of this test report

[illegible]

1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G 5GAnt1	1	LYNwave	MLX24X-121AA0-A	PCB	I-PEX	2.4GHz, 5GHz UNII 1~3
2G 5GAnt2	2	LYNwave	MLX24X-121AA0-A	PCB	I-PEX	2.4GHz, 5GHz UNII 1~3
5GAnt3	3	LYNwave	MLX24X-121AA0-A	Dipole	I-PEX	5GHz UNII 1~3
5GAnt4	4	LYNwave	MLX24X-121AA0-A	Dipole	I-PEX	5GHz UNII 1~3
6G Ant1	1	LYNwave	MLX24X-121AA0-A	Dipole	I-PEX	6GHz
6G Ant2	2	LYNwave	MLX24X-121AA0-A	Dipole	I-PEX	6GHz
6G Ant3	3	LYNwave	MLX24X-121AA0-A	Dipole	I-PEX	6GHz
6G Ant4	4	LYNwave	MLX24X-121AA0-A	Dipole	I-PEX	6GHz

Note:

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

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

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

5GHz Operation Mode (4TX/4RX)

2G 5GAnt1~2 and 5GAnt3~4 can be used as transmitting/receiving antenna.

2G 5GAnt1~2 and 5GAnt3~4 could transmit/receive simultaneously.

6GHz Operation Mode (4TX/4RX)

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

6G Ant1~4 could transmit/receive simultaneously.

2. Table for Multiple Listing

EUT	Equipment Name	Model Name	Description
1	ROG STRIX WiFi 7 Tri-Band Gaming Router	GS-BE18000	The housing processing technique uses spray painting.
2		GS-BE12000	The housing processing technique uses a textured finish

Note 1: From the above models, model: GS-BE18000 (EUT 1) was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

3. 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

4. Testing Location

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rofy Chen	23.5-24.5 / 45-55	Jan. 22, 2025~Feb. 06, 2025

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

5. Test Facility and Configuration

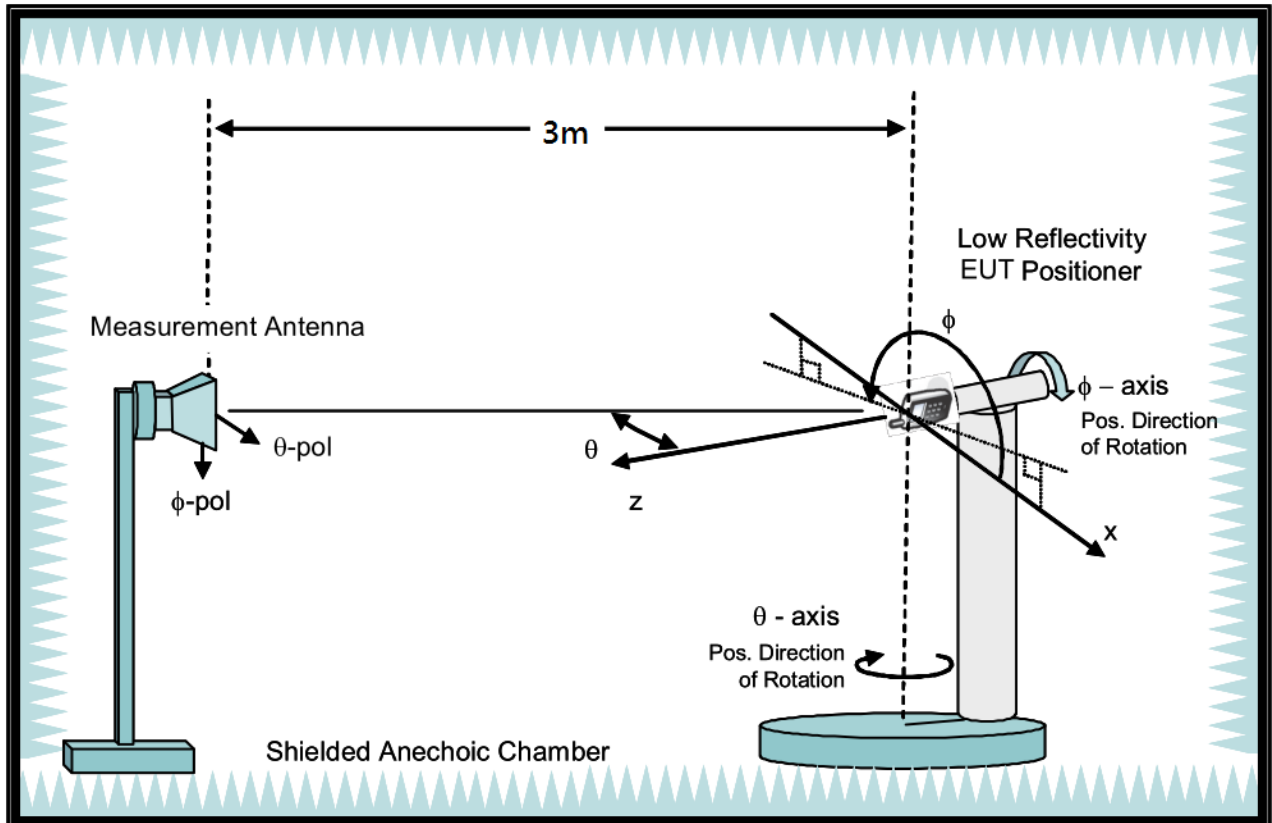
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

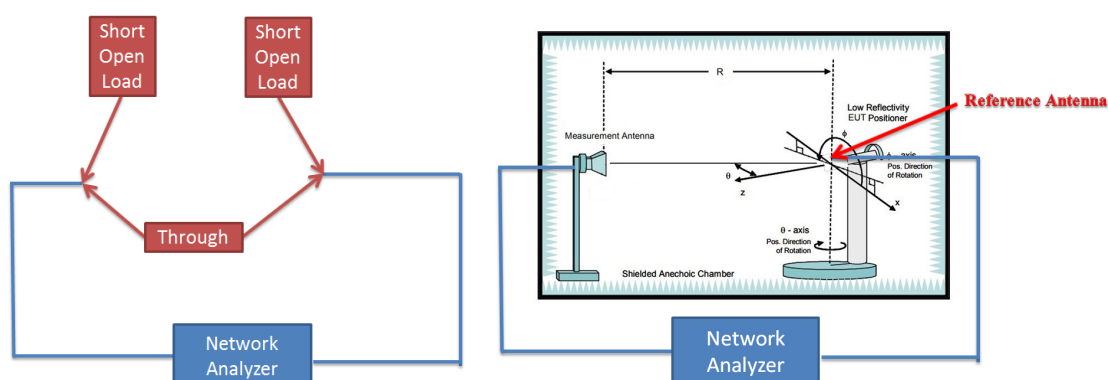
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



6. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.48	-33.18	-32.45	-32.78	-32.43	-32.85	-32.74	-32.13	-32.46	-33.46	-32.73	-33.41	-34.78	-35.31
G(phi) reading (dB)	-33.45	-32.13	-32.74	-32.43	-32.87	-31.78	-32.46	-32.37	-32.73	-32.87	-32.46	-33.68	-34.74	-35.08
Reference gain (dBi)	10.4	10.5	10.2	11.4	11.5	11.9	12.5	11.8	11.7	11.6	11.8	11.5	11.4	10.8
Factor(theta) (dB)	43.88	43.68	42.65	44.18	43.93	44.75	45.24	43.93	44.16	45.06	44.53	44.91	46.18	46.11
Factor(phi) (dB)	43.85	42.63	42.94	43.83	44.37	43.68	44.96	44.17	44.43	44.47	44.26	45.18	46.14	45.88

Note:

$$G \text{ reading (dB)} = 20 \cdot \log(V_2/V_1) = 10 \cdot \log(P_2/P_1)$$

V2 is the voltage of VNA port2 is measured, V1 is the voltage of VNA port1 is the reference source.

P2 is the power of VNA port2 is measured, P1 is the power of VNA port1 is the reference source.

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

7. 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 8 tables.

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

8. 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)	2.48	-0.39	2.13	-7.18	-6.06
Ant. 2 (dBi)	2.25	-0.03	1.15	0.07	-0.73
Ant. 3 (dBi)	-	-0.59	-0.82	2.61	1.88
Ant. 4 (dBi)	-	-1.55	-6.56	-0.52	-1.29
DG [1SS] (dBi)	5.38	5.4	5.57	5.43	4.91
Polarization	Phi	Phi	Phi	Theta	Theta
$\Theta(^{\circ})$	90	82.5	105	120	120
$\Phi(^{\circ})$	7.5	135	45	22.5	22.5

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	1.72	0.83	0.3	1.08
Ant. 2 (dBi)	-2.87	-0.7	0.64	-0.29
Ant. 3 (dBi)	3.28	1.09	1.28	-1.47
Ant. 4 (dBi)	-0.3	0.36	0.84	-0.1
DG [1SS] (dBi)	6.77	6.44	6.79	5.87
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	97.5	90	97.5	97.5
$\Phi(^{\circ})$	232.5	172.5	232.5	315

Note: The DG 1SS max value position is the maximum value of section 12 table DG 1SS Result.

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(2.48/20)}$	$10^{(-0.39/20)}$	$10^{(2.13/20)}$	$10^{(-7.18/20)}$	$10^{(-6.06/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(2.25/20)}$	$10^{(-0.03/20)}$	$10^{(1.15/20)}$	$10^{(0.07/20)}$	$10^{(-0.73/20)}$
Ant. 3 [$10^{(G/20)}$]		$10^{(-0.59/20)}$	$10^{(-0.82/20)}$	$10^{(2.61/20)}$	$10^{(1.88/20)}$
Ant. 4 [$10^{(G/20)}$]		$10^{(-1.55/20)}$	$10^{(-6.56/20)}$	$10^{(-0.52/20)}$	$10^{(-1.29/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.33	0.956	1.278	0.438	0.498
Ant. 2 [$10^{(G/20)}$] value	1.296	0.997	1.142	1.008	0.919
Ant. 3 [$10^{(G/20)}$] value		0.934	0.91	1.351	1.242
Ant. 4 [$10^{(G/20)}$] value		0.837	0.47	0.942	0.862
Sum All Antenna [Amax]	2.626	3.724	3.799	3.738	3.521
DG [$10^{\log(Amax^2/Nant)}$]	5.38	5.4	5.57	5.43	4.91

Frequency (Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 [$10^{(G/20)}$]	$10^{(1.72/20)}$	$10^{(0.83/20)}$	$10^{(0.3/20)}$	$10^{(1.08/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(-2.87/20)}$	$10^{(-0.7/20)}$	$10^{(0.64/20)}$	$10^{(-0.29/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(3.28/20)}$	$10^{(1.09/20)}$	$10^{(1.28/20)}$	$10^{(-1.47/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(-0.3/20)}$	$10^{(0.36/20)}$	$10^{(0.84/20)}$	$10^{(-0.1/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.219	1.1	1.035	1.132
Ant. 2 [$10^{(G/20)}$] value	0.719	0.923	1.076	0.967
Ant. 3 [$10^{(G/20)}$] value	1.459	1.134	1.159	0.844
Ant. 4 [$10^{(G/20)}$] value	0.966	1.042	1.102	0.989
Sum All Antenna [Amax]	4.362	4.199	4.372	3.932
DG [$10^{\log(Amax^2/Nant)}$]	6.77	6.44	6.79	5.87

Note:

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

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

9. Summary of Test Result

Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.87	4.03	4.06	3.8	2.74
Ant. 2 Max Gain (dBi)	2.66	2.23	3.44	3.5	3.04
Ant. 3 Max Gain (dBi)		4.56	5.15	4.91	4.77
Ant. 4 Max Gain (dBi)		2.04	2.49	3.65	3.25
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/90/15	Phi/97.5/300	Phi/97.5/300	Phi/97.5/300	Phi/60/292.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/90/0	Phi/90/75	Phi/112.5/337.5	Phi/82.5/75	Phi/82.5/75
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$		Theta/127.5/82.5	Theta/135/82.5	Theta/142.5/82.5	Theta/112.5/82.5
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$		Theta/120/165	Theta/127.5/172.5	Theta/97.5/240	Theta/105/262.5
Max Gain (dBi)	2.87	4.56	5.15	4.91	4.77
DG [1SS] (dBi)	5.38	5.4	5.57	5.43	4.91
DG [2SS] (dBi)	2.87	4.56	5.15	4.91	4.77
DG [4SS] (dBi)		4.56	5.15	4.91	4.77

Note:

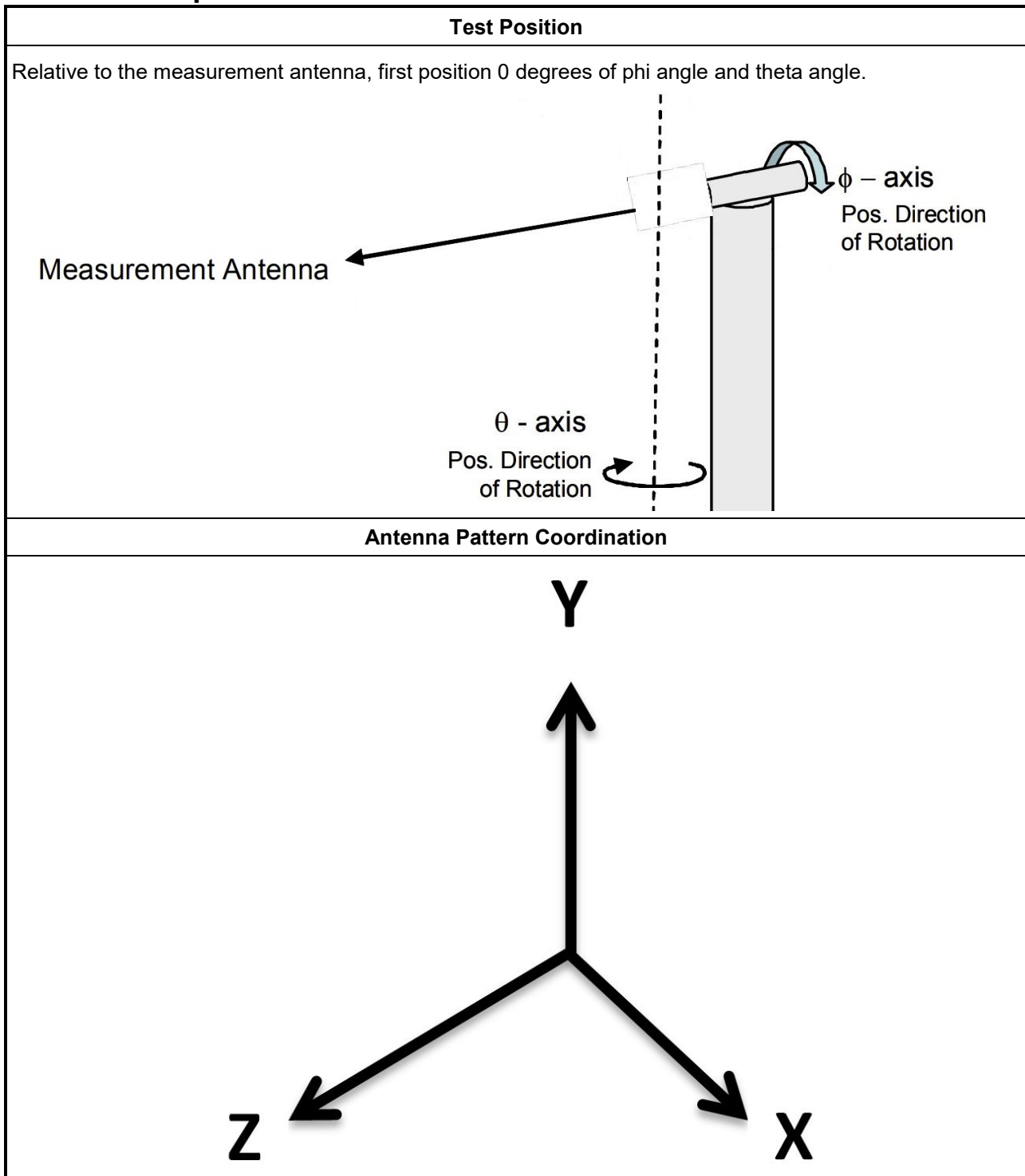
1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain. Refer to KDB662911D01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

Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.57	4.78	4.74	3.82
Ant. 2 Max Gain (dBi)	3.59	4.42	3.92	3.08
Ant. 3 Max Gain (dBi)	4.65	3.94	4.11	4.32
Ant. 4 Max Gain (dBi)	4.66	3.16	3.19	3.36
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/127.5/330	Phi/120/337.5	Theta/97.5/307.5	Theta/82.5/45
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/127.5/337.5	Theta/112.5/300	Theta/127.5/337.5	Theta/105/337.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/135/187.5	Theta/135/187.5	Theta/135/157.5	Theta/135/157.5
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/60/255	Phi/127.5/337.5	Theta/105/255	Theta/97.5/90
Max Gain (dBi)	4.66	4.78	4.74	4.32
DG [1SS] (dBi)	6.77	6.44	6.79	5.87
DG [2SS] (dBi)	4.66	4.78	4.74	4.32
DG [4SS] (dBi)	4.66	4.78	4.74	4.32

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)

10. Test Setup



Note:

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

**11. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1531	1GHz~18GHz	Dec. 20, 2024	Dec. 19, 2025
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Jul. 30, 2024	Jul. 29, 2025
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



12. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz and 5GHz.....	Page 16
Appendix B – Radiated Composite Gain of 6GHz.....	Page 31
Appendix C – Antenna Pattern of 2.4GHz and 5GHz.....	Page 42
Appendix D – Antenna Pattern of 6GHz.....	Page 49
Appendix E – Test Photos.....	Page 55



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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.87	4.03	4.06	3.8	2.74
Ant. 2 Max Gain (dBi)	2.66	2.23	3.44	3.5	3.04
Ant. 3 Max Gain (dBi)		4.56	5.15	4.91	4.77
Ant. 4 Max Gain (dBi)		2.04	2.49	3.65	3.25
Ant. 1 Polarization/Θ(°)/Φ(°)	Phi/90/15	Phi/97.5/300	Phi/97.5/300	Phi/97.5/300	Phi/60/292.5
Ant. 2 Polarization/Θ(°)/Φ(°)	Phi/90/0	Phi/90/75	Phi/112.5/337.5	Phi/82.5/75	Phi/82.5/75
Ant. 3 Polarization/Θ(°)/Φ(°)		Theta/127.5/82.5	Theta/135/82.5	Theta/142.5/82.5	Theta/112.5/82.5
Ant. 4 Polarization/Θ(°)/Φ(°)		Theta/120/165	Theta/127.5/172.5	Theta/97.5/240	Theta/105/262.5
Max Gain (dBi)	2.87	4.56	5.15	4.91	4.77
DG [1SS] (dBi)	5.38	5.4	5.57	5.43	4.91
DG [2SS] (dBi)	2.87	4.56	5.15	4.91	4.77
DG [4SS] (dBi)		4.56	5.15	4.91	4.77



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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.87	4.03	4.06	3.8	2.74
Ant. 2 Max Gain (dBi)	2.66	2.23	3.44	3.5	3.04
Ant. 3 Max Gain (dBi)		4.56	5.15	4.91	4.77
Ant. 4 Max Gain (dBi)		2.04	2.49	3.65	3.25
Ant. 1 Polarization/θ(°)/φ(°)	Phi/90/15	Phi/97.5/300	Phi/97.5/300	Phi/97.5/300	Phi/60/292.5
Ant. 2 Polarization/θ(°)/φ(°)	Phi/90/0	Phi/90/75	Phi/112.5/337.5	Phi/82.5/75	Phi/82.5/75
Ant. 3 Polarization/θ(°)/φ(°)		Theta/127.5/82.5	Theta/135/82.5	Theta/142.5/82.5	Theta/112.5/82.5
Ant. 4 Polarization/θ(°)/φ(°)		Theta/120/165	Theta/127.5/172.5	Theta/97.5/240	Theta/105/262.5
Max Gain (dBi)	2.87	4.56	5.15	4.91	4.77
DG [1SS] (dBi)	5.38	5.4	5.57	5.43	4.91
DG [2SS] (dBi)	2.87	4.56	5.15	4.91	4.77
DG [4SS] (dBi)		4.56	5.15	4.91	4.77



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

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°)	-14.86/-14.93	-15.07/-14.68	-15.71/-14.4	-14.17/-13.97	-13.29/-12.44	-11.81/-11.31	-11.22/-11.33	-11.51/-11.76	-12.12/-12.44	-12.83/-13.41	-14.1/-14.74	-14.94/-14.84	-15.32/-14.33	-15.22/-14.33	-14.22/-14.01	-13.63/-13.41	-12.89/-12.94	-12.66/-12.46	-12.35/-12.45	-12.46/-12.52	-12.67/-13.27	-14.42/-16.13	-15.42/-15.18	-15.5/-14.83
Θ(7.5°)	-9.78/-10.25	-10.08/-11.74	-11.55/-11.28	-10.83/-11.15	-11.22/-11.12	-10.13/-10	-10.70/-10.23	-10.02/-10.24	-10.61/-11.19	-12.08/-13.21	-14.42/-14.92	-16.04/-15.45	-14.76/-15.89	-14.97/-14.6	-13.79/-12.91	-12.01/-11.43	-11.18/-11.48	-11.83/-12.21	-12.67/-13.15	-12.89/-12.49	-11.92/-11.21	-10.74/-10.68		
Θ(15°)	-5.36/-5.73	-6.46/-7.29	-8.1/-8.29	-8.45/-8.89	-8.73/-8.4	-7.97/-7.59	-7.35/-7.13	-7.16/-62	-6.88/-6.93	-7.14/-7.51	-8.04/-8.82	-10.03/-11.41	-12.47/-12.32	-11.39/-10.15	-8.92/-7.99	-7.32/-6.9	-6.86/-7.14	-7.42/-7.89	-8.53/-9.32	-10.15/-10.6	-10.49/-9.88	-9.09/-8.28	-7.49/-6.71	-6.2/-5.92
Θ(22.5°)	-3.22/-3.58	-4.14/-4.8	-5.55/-6.24	-6.66/-6.6	-6.39/-6.17	-5.91/-5.58	-5.38/-5.21	-5.03/-4.87	-4.6/-4.16	-3.77/-3.61	-3.67/-4.07	-4.84/-5.99	-6.78/-6.92	-6.35/-5.47	-4.65/-4.03	-3.63/-3.46	-3.5/-3.68	-3.89/-4.25	-4.85/-5.7	-6.61/-7.27	-7.33/-6.81	-6.08/-5.27	-4.51/-3.93	-3.57/-3.48
Θ(30°)	-1.38/-1.55	-1.94/-2.56	-3.46/-4.4	-4.69/-5.03	-4.71/-4.3	-3.82/-3.35	-3/-2.88	-2.92/-2.95	-2.69/-2.12	-1.42/-0.82	-0.54/-0.65	-1.25/-2.22	-3.39/-4.1	-3.89/-3.04	-2.15/-1.5	-1.14/-1	-1.03/-1.16	-1.35/-1.67	-2.25/-3.02	-3.86/-4.46	-4.56/-4.21	-3.6/-3.99	-2.49/-2.14	-1.85/-1.7
Θ(37.5°)	0.33/0.3	-0.12/-0.96	-2.21/-3.64	-4.62/-4.82	-4.28/-3.41	-2.35/-1.4	-0.8/-0.63	-0.83/-1.21	-1.42/-1.13	-0.37/0.55	1.07/1.09	0.57/-0.43	-1.42/-1.94	-1.69/-0.96	-0.26/0.17	0.33/0.29	0.13/-0.08	-0.32/-0.69	-1.19/-1.72	-2.1/-2.23	-2.17/-1.95	-1.62/-1.31	-1.1/-0.84	-0.44/-0.09
Θ(45°)	1.52/1.29	0.56/-0.49	-1.73/-2.75	-2.99/-2.46	-1.79/-1.3	-0.91/-0.35	0.16/0.34	0.19/-0.24	-0.72/-0.97	-0.72/0.06	0.81/1.09	0.79/0.01	-0.91/-1.48	-1.26/-0.37	0.44/0.91	1.08/1.05	0.91/0.68	0.39/0.18	-0/-0.08	-0.09/-0.12	-0.25/-0.47	-0.68/-0.85	-0.8/-0.28	0.52/1.11
Θ(52.5°)	2.53/2.05	1.32/0.61	0.17/0.17	0.56/1.07	1.47/1.53	1.24/1.01	1.02/1.08	1.02/0.79	0.42/0.02	-0.12/0.3	1.01/1.35	1.2/0.62	-0.04/-0.39	0/0.92	1.74/2.25	2.52/2.59	2.54/2.46	2.42/44	2.47/2.41	2.23/1.85	1.31/0.64	-0.01/-0.28	0.25/1.23	2.07/2.41
Θ(60°)	3.65/3.6	3.24/2.8	2.41/2.21	2.2/2.3	2.41/2.36	2.09/1.78	1.68/1.81	1.99/2.06	1.98/1.8	1.61/1.67	2.05/2.39	2.43/2.1	1.61/1.1	0.91/44	2.2/2.78	3.09/3.17	3.15/3.2	3.34/3.53	3.55/3.41	3.12/2.71	2.27/1.87	1.56/1.41	1.61/2.1	2.77/3.27
Θ(67.5°)	4.71/4.74	4.34/3.83	3.37/3.02	2.76/2.65	2.62/2.56	2.41/2.19	2.01/2.02	2.2/2.4	2.52/2.46	2.31/2.29	2.52/2.75	2.77/2.62	2.32/1.98	2.03/2.53	3.07/3.38	3.43/3.29	3.16/3.24	3.41/3.63	3.77/3.93	4.09/4.21	4.18/3.92	3.32/2.39	1.68/2.06	3.24/1.16
Θ(75°)	4.71/4.68	4.27/3.9	3.64/3.45	3.33/2.8	3.25/3.14	2.9/2.63	2.35/2.15	2.21/2.54	2.94/3.18	3.18/2.97	2.69/2.48	2.36/2.25	1.99/1.56	1.38/1.88	2.65/3.22	3.41/3.27	3.07/3.01	3.13/3.42	3.86/4.4	4.83/4.95	4.76/4.22	3.37/2.42	2.06/2.53	3.54/2.18
Θ(82.5°)	4.63/4.97	4.78/4.29	3.77/3.31	3.01/2.85	2.77/2.59	2.31/2.04	1.89/1.8	1.89/2.17	2.58/2.95	3.2/3.36	3.36/3.27	3.09/2.77	2.33/1.96	1.98/2.47	3.11/3.53	3.61/3.52	3.41/3.39	3.43/3.58	3.87/4.23	4.44/4.45	4.34/2.4	4.05/3.64	3.11/2.87	3.26/4.06
Θ(90°)	5.165.38	5.19/4.79	4.32/3.9	3.62/3.57	3.64/3.72	3.73/3.59	3.41/3.14	2.89/2.74	2.77/2.99	3.25/3.47	3.53/3.37	3.03/2.57	2.12/1.94	2.16/2.57	2.94/3.17	3.24/3.21	3.19/3.26	3.36/3.48	3.71/4.05	4.35/4.5	4.44/0.7	3.51/2.77	2.31/2.78	3.84/3.75
Θ(97.5°)	3.75/3.94	3.85/3.48	2.88/2.35	2.15/2.38	2.73/2.91	2.92/2.78	2.57/2.29	1.97/1.66	1.52/1.74	2.26/2.83	3.05/2.88	2.29/1.48	1.51/1.64	2.42/2.78	2.58/2.11	1.72/1.66	1.94/2.41	2.83/3.19	3.61/4.11	4.54/4.6	4.38/3.67	2.51/1.4	1.21/1.99	2.94/3.62
Θ(105°)	2.89/3.14	3.13/2.87	2.31/1.58	1.17/1.41	1.89/2.13	2.02/1.72	1.46/1.24	0.98/0.79	0.87/1.42	2.21/2.94	3.37/3.39	2.92/0.7	1.45/1.59	2.29/2.76	2.61/3.98	1.45/1.45	1.86/2.25	2.42/48	2.77/3.34	4.4/42	4.38/3.84	2.86/1.98	1.72/1.85	2.18/2.6
Θ(112.5°)	2.57/2.85	3.02/3.06	2.84/2.31	1.75/1.67	2.03/2.38	2.52/2.35	2.03/1.64	1.07/0.23	-0.39/0.17	1.46/2.62	3.16/2.94	2.17/1.46	1.43/1.77	2.03/1.97	1.61/1.27	1.33/1.67	1.95/1.96	1.82/1.88	2.39/3.15	3.84/4.23	4.2/3.72	2.94/2.2	1.76/1.62	1.83/2.29
Θ(120°)	1.55/1.34	1.09/1.05	1.12/0.8	0.06/-0.54	-0.24/0.6	1.28/1.54	1.39/0.93	0.2/-0.68	-1.14/-0.34	1.18/2.45	3.2/84	2.34/2	1.89/1.8	1.48/0.9	0.39/0.53	1.33/2.18	2.61/2.5	1.29/1.52	2.41/2.73	2.94/2.99	2.91/2.67	2.42/1.16	1.95/1.73	1.62/1.62
Θ(127.5°)	0.55/0.24	-0.4/-0.89	-0.93/-1.02	-1.6/-1.9	-1.19/-1.17	0.09/0.56	0.15/-0.57	-1.53/-2.62	-2.72/-1.02	0.79/1.83	2.12/1.8	1.39/1.06	0.67/0.21	-0.29/-0.57	-0.2/0.77	1.85/2.52	2.58/2.15	1.79/2.14	1.51/1.47	1.34/1.14	0.95/0.83	0.75/0.67	0.53/0.37	0.36/0.5
Θ(135°)	0.16/0.17	-0.38/-1.21	-1.75/-1.68	-1.4/-1.19	-0.97/-0.7	-0.46/-0.35	-0.4/-0.64	-1.15/-1.96	-2.76/-2.38	-1.15/-0.39	-0.26/-0.45	-0.65/-0.96	-1.52/-2.26	-2.84/-2.67	-2.03/-0.98	0.09/0.7	0.81/0.63	0.47/0.3	0.12/-0.15	-0.63/-1.31	-1.86/-1.73	-1.04/-0.33	-0.06/-0.16	-0.23/0.01
Θ(142.5°)	0.54/0.76	0.49/-0.14	-0.9/-1.46	-1.3/-2.53	-3.45/-4.57	-5.08/-4.71	-3.83/-3.05	-2.58/-2.38	-2.28/-2.17	-1.93/-1.64	-1.32/-0.96	-0.53/-0.38	-0.57/-1.12	-1.85/-2.62	-3.05/-2.76	-2.42/-2.17	-1.96/-1.8	-1.91/-2.25	-2.67/-2.88	-2.73/-2.2	-1.5/-0.83	-0.28/0.06	0.14/0.01	-0.01/-0.29
Θ(150°)	-0.53/-0.46	-0.7/-1.19	-1.84/-2.58	-3.4/-4.46	-5.71/-7.04	-7.61/-7.65	-5.24/-4.07	-3.15/-2.61	-2.34/-2.15	-1.86/-1.43	-1.07/-0.96	-1.27/-1.98	-3.01/-3.91	-5.56/-6.27	-2.01/-1.59	-1.36/-1.29	-1.42/-1.76	-2.53/-2.58	-2.44/-2.11	-1.65/-1.19	-0.78/-0.5			
Θ(157.5°)	-2.39/-2.71	-3.04/-3.47	-3.98/-4.47	-4.79/-4.86	-4.57/-4.12	-3.79/-3.72	-3.72/-3.74	-3.59/-3.27	-2.9/-2.6	-2.42/-2.34	-2.36/-2.47	-2.79/-3.42	-4.58/-6.25	-8.16/-9.54	-9.63/-8.89	-8.09/-7.58	-7.42/-7.41	-7.64/-8.06	-8.54/-8.66	-8.26/-7.11	-5.62/-4.35	-3.35/-2.63	-2.08/-1.78	-1.76/-1.98
Θ(165°)	-4.37/-4.63	-4.81/-4.93	-5.15/-5.16	-4.95/-4.52	-3.97/-3.46	-3.17/-3.19	-3.73/-3.67	-3.98/-4.25	-4.47/-4.56	-4.54/-4.49	-4.49/-4.52	-4.59/-4.7	-4.86/-5.04	-5.39/-5.75	-5.98/-6.15	-6.28/-6.33	-6.29/-6.16	-5.94/-5.48	-4.89/-4.3	-3.74/-3.22	-2.83/-2.58	-2.49/-2.58	-2.79/-3.1	-3.55/-4
Θ(172.5°)	-9.05/-9.07	-8.08/-9.15	-9.12/-8.85	-8.42/-9.94	-7.47/-1.09	-6.9/-7.2	-7.37/-8.32	-8.93/-9.47	-9.9/-10.7	-10.1/-9.75	-9.33/-8.88	-8.41/-9.71	-7.38/-6.81	-6.29/-5.85	-5.4/-5.05	-4.74/-4.46	-4.23/-4.07	-3.97/-3.94	-3.83/-4.04	-4.18/-4.38	-4.69/-5.13	-5.67/-6.36	-7.14/-7.84	-8.42/-8.61
Θ(180°)	-15.37/-15.23	-15.11/-15.15	-15.09/-15.2	-13.64/-12.38	-11.61/-11.06	-10.8/-10.95	-11.45/-12.26	-13.28/-14.33	-15.14/-14.79	-15.37/-15.63	-15.17/-15.52	-15.03/-15.45	-14.99/-14.29	-13.13/-12.26	-11.6/-10.86	-10.2/-9.53	-9.04/-8.7	-8.42/-8.37	-8.51/-8.98	-9.72/-10.6	-11.48/-12.09	-13.48/-14.91	-15.49/-15.71	-15.65/-15.01
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°)	-13.65/-14.02	-14.61/-15.02	-15.75/-15.04	-15.33/-15.22	-15.14/-15.69	-15.25/-14.71	-15.48/-15.16	-14.71/-13.62	-12.94/-12.45	-11.98/-11.85	-11.45/-11.25	-11.21/-11.37	-11.52/-11.15	-11.22/-11.06	-11.29/-12.03	-12.43/-12.87	-13.43/-13.48	-14.13/-14.44	-15.09/-15.66	-15.85/-15.05	-14.97/-15.18	-14.5/-14.76	-15.03/-14.18	-14.21/-14.13
Θ(7.5°)	-13.14/-13.33	-13.1/-13.08	-13.65/-14.73	-15.69/-15.33	-15.2/-14.97	-14.95/-14.42	-13.84/-15.13	-15.75/-15.33	-14.52/-13.38	-12.11/-11.13	-10.64/-10.4	-10.84/-11.15	-11.3/-11.52	-11.75/-12.26	-12.99/-13.96	-13.93/-13.88	-14.08/-14.37	-14.2/-14.23	-14.27/-14.73	-14.46/-14.5	-14.78/-15.31	-15.41/-14.87	-15.43/-14.42	-13.63/-13.52
Θ(15°)	-12.31/-11.79	-11.08/-10.95	-11.47/-12.22	-13.61/-15.06	-15.8/-14.76	-13.75/-13.13	-12.87/-12.28	-12.47/-13.31	-12.69/-12.14	-12.01/-10.73	-10.01/-9.94	-10.16/-10.52	-10.91/-11.45	-12.42/-13.81	-15.56/-15.67	-13.96/-12.78	-13.28/-13.19	-13.96/-12.78	-12.37/-13.5	-12.37/-12.47	-12.6/-12.7	-13.73/-14.8	-14.86/-13.6	-13.19/-12.6
Θ(22.5°)	-10.81/-10.1	-9.76/-9.93	-10.59/-11.62	-13.18/-14.34	-15.49/-15.21	-13.36/-12.49	-12.35/-11.57	-11.61/-12.06	-12.47/-11.76	-11.74/-10.52	-9.89/-9.85	-10.26/-11.04	-11.03/-11.93	-14.1/-14.66	-15.16/-16.06	-13.18/-12.12	-11.5/-11.38	-11.57/-12.82	-13.17/-13.28	-12.91/-12.34	-11.81/-12.19	-12.29/-12.9	-12.92/-12.93	-11.88/-11.69
Θ(30°)	-9.59/-9.5	-9.96/-10.84	-12.13/-13.83	-14.91/-14.62	-14.95/-15.28	-14.4/-13.03	-12.59/-11.95	-12.3/-12.49	-13.13/-13.12	-13.05/-11.73	-10.78/-10.48	-10.72/-10.77	-10.85/-12.78	-13.65/-15.26	-15.3/-13.16	-11.79/-10.49	-10.57/-10.67	-11.45/-12.29	-13.15/-13.68	-13.96/-12.86	-12.22/-11.44	-11.15/-10.99	-10.89/-10.65	-10.35/-9.92
Θ(37.5°)	-10.44/-10.84	-12.06/-12.41	-13.76/-14.94	-15.11/-15.4	-15.28/-15.77	-13.99/-14.05	-12.88/-12.37	-11.81/-11.77	-12.66/-13.48	-13.56/-13.77	-13.43/-13.42	-12.86/-12.95	-13.52/-15.03	-15.69/-14.94	-13.01/-11.16	-10.16/-9.85	-10.02/-							



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(22.5°)	-0.74/-0.94	-1.05/-1.73	-2.74/-3.51	-3.18/-2.5	-2.28/-2.36	-2.83/-3.64	-4.11/-4.38	-4.31/-2.93	-2.3/-2.32	-2.63/-2.72	-2.64/-2.44	-2.33/-2.14	-2.22/-2.33	-2.16/-2.01	-2.01/-2.11	-2.22/-2.51	-2.87/-2.86	-2.25/-1.51	-1.34/-1.4	-1.4/-1.41	-1.21/-1.22	-1.48/-1.2	-1.02/-0.44	0.13/-0.13
Θ(30°)	0.79/0.6	0.30	-0.27/-0.4	0.130/-7	-0.28/-0.4	-1.54/-3.2	-4.33/-4.75	-4.16/-3.55	-2.84/-2.01	-1.56/-1.46	-1.34/-1.2	-1.24/-1.41	-1.45/-1.03	-0.17/0.05	-0.12/-0.16	-0.29/-0.62	-1.06/-0.37	0.51/0.4	1.29/1.08	0.67/0.48	0.86/1.18	1.33/1.3	1.21/1.15	1.18/1.02
Θ(142.5°)	1.65/1.87	1.62/1.55	1.51/1.48	1.34/0.78	-0.34/-1.39	-1.72/-1.93	-2.86/-3.74	-3.24/-2.93	-2.01/-0.91	-0.72/-1.3	-1.27/-0.49	-0.12/0.23	0.32/0.7	1.35/1.27	1.02/0.81	0.63/0.42	0.67/0.83	1.21/1.12	0.68/0.7	0.81/1.1	0.73/0.35	1.16/1.97	2.39/2.4	2.12/1.8
Θ(45°)	1.84/2.55	2.17/1.68	1.87/1.78	2.01/1.77	0.99/0.19	-0.61/-1.34	-1.49/-0.65	-0.18/-0.14	-0.82/-1.31	-1.1/-0.45	0.77/0.7	-0.26/-0.05	0.13/0.39	1.11/0.93	-0.19/-0.38	0.38/0.89	1.46/1.01	0.40/0.29	0.05/0.16	0.58/1.18	1.15/1.01	1.17/1.76	2.53/0.05	2.51/1.54
Θ(52.5°)	2.83/2.85	2.89/1.52	0.44/1.18	2.39/2.69	2.28/1.36	-0.03/-1.06	-0.46/1.1	2.14/2.13	1.16/-0.15	-0.87/-0.25	0.75/0.99	0.83/1.33	1.68/2.1	1.77/0.25	-2.11/-0.25	1.85/2.34	1.89/1.14	1.3/0.89	1.41/1.13	1.57/2.65	3.87/4.12	3.44/2.69	3.13/3.64	3.45/3.25
Θ(60°)	3.1/2.77	2.39/0.56	-0.36/0.72	1.33/1.45	1.32/0.47	0.31/-0.29	0.57/1.7	2.31/2.53	1.86/0.51	0.53/1.17	1.96/2.45	1.3/0.24	0.72/0.67	-0.14/-0.9	0.12/-0.49	0.72/0.85	0.36/-0.04	0.92/1.55	1.92/2.59	2.32/2.35	2.59/2.71	2.58/2.72	3.11/3.04	3.15/2.22
Θ(67.5°)	1.85/2.84	2.73/1.26	0.92/2.44	2.75/1.71	0.47/0.98	1.52/1.95	2.38/2.22	2.55/0.03	2.49/2.07	2.79/3.44	3.86/3.73	1.97/0.67	0.86/0.11	-0.67/-1.9	-2.15/-0.46	-0.35/-0.69	-0.89/-0.1	1.76/3.03	3.26/2.85	1.73/1.06	0.56/1.17	1.31/1.68	2.54/2.88	2.86/1.83
Θ(75°)	0.85/2.52	1.79/0.69	0.93/2.65	3.51/3.59	3.58/3.56	3.14/2.9	2.81/2.93	3.48/3.21	2.66/3.69	3.73/0.1	3.41/3.67	2.27/1.77	2.53/0.58	0.27/0.52	-0.27/-0.68	-0.5/-1.07	-0.9/0.58	0.55/0.94	1.96/1.68	2.2/2.56	2.79/1.9	1.91/3.04	2.26/2.34	2.38/0.49
Θ(82.5°)	0.14/1.97	1.5/0.24	0.81/2.15	2.76/3.34	4.48/5.25	4.99/3.94	2.43/1.72	2.35/2.97	3.96/4.67	4.65/4.39	4.04/3.56	2.02/1.53	1.51/-0.07	0.08/0.27	-0.05/-0.52	-0.89/-0.85	-1.4/-0.87	1.35/1.12	1.14/0.96	1.31/3.04	3.83/3.18	1.76/2.26	2.38/2.13	2.06/0.63
Θ(90°)	1.44/2.04	1.57/1.62	1.87/2.47	3.19/2.99	3.84/4.75	4.91/4.58	3.71/2.56	1.93/2.77	3.71/4.48	4.87/3.81	2.88/2.68	1.52/1.23	1.19/0.36	0.83/0.98	0.87/0.2	-0.1/-0.29	0.04/1.34	1.74/1.5	1.31/1.58	2.34/4.4	4.52/3.57	2.04/1.57	2.21/2.82	2.01/1.46
Θ(97.5°)	1.31/2.15	2.29/3.1	4.03/3.97	4.37/3.59	2.92/6.8	2.58/3.1	3.13/2.47	2.48/2.95	3.49/3.8	3.97/2.61	1.33/2.32	1.42/1.74	0.81/0.59	0.47/0.4	0.98/0.91	0.95/1.55	2.07/2.79	2.20/2.39	2.29/3.98	3.95/3.22	2.21/1.81	3.16/3.41	3.62/3.95	3.6/2.25
Θ(105°)	2.06/2.97	4.34/6.69	5.12/5.2	5.57/4.49	1.84/0.78	0.86/1.44	2.08/1.35	0.97/2.13	2.58/2.12	2.44/2.1	2.03/2.26	1.76/1.2	1.11/1	0.42/-0.09	2.37/2.92	1.08/1.33	2.18/2.69	2.77/2.92	3.03/2.81	2.84/3.65	3.55/3.56	2.89/2.26	3.34/3.93	3.37/2.69
Θ(112.5°)	1.32/1.79	3.95/3.99	3.55/2.96	3.11/2.72	1.52/0.12	1.49/2.23	1.65/0.08	-0.58/0.7	0.97/0.44	1.15/1.9	1.78/3.19	0.98/0.03	0.87/0.16	0.26/-0.2	0.31/4.48	1.61/1.36	1.41/2.1	2.85/2.74	3.09/2.17	1.09/1.53	-0.37/0.54	2.83/2.86	4.14/9.1	3.82/3.39
Θ(120°)	0.72/1.36	2.61/3.84	1.76/-0.25	1.09/1.79	0.03/0.34	0.91/05	0.83/0.05	-0.51/-0.98	0.82/1.87	1.38/0.75	1.94/2.88	0.05/-3.72	-1.28/-1.21	0.22/-0.5	-0.4/0.68	1.01/1.73	2.39/2.37	2.99/-0.11	-0.36/-0.77	1.44/4.36	1.04/-1.23	1.66/4.01	3.62/3.95	3.6/2.25
Θ(127.5°)	-3.92/-2.8	0.09/1.68	0.43/-0.17	0.49/0.61	-0.95/0.42	0.72/0.45	-0.29/0.18	0.71/44	1.87/1.07	-1.79/0.56	-0.95/-4.46	-3.69/-1.16	0.4/-0.79	-1.73/-2.53	-1.04/-1.76	-0.92/0.6	-1.22/-0.39	0.05/1.98	-2.85/-2.7	0.53/2.19	1.42/0.64	-0.01/-1.56		
Θ(135°)	-4.76/-5.18	-1.46/0.07	-1.02/-1.42	-1.21/-0.4	-1.05/0.23	0.28/-1.35	-1.21/-0.01	0.5/0.16	0.32/0.4	0.54/0.75	0.54/0.64	-1.08/-3.13	-4.48/-5.76	-1.72/-0.62	-1.14/-2.2	-2.97/-1.81	-1.77/-0.15	-0.47/-3.06	-3.67/-5.32	-5.63/-2.47	-1.88/-3.04	-4.5/-2.51	-2.81/-2.33	-5.2/-6.18
Θ(142.5°)	-6.03/-4.61	-2.27/-2.61	-3.37/-4.16	-3.93/-3.61	-2.99/-1.78	-2.33/-3.37	-3.57/-3.5	-2.84/-1.07	0.29/0.82	1.35/1.06	-1.35/-2.91	-3.32/-4.97	-7.86/-7.73	-6.39/-5.5	-4.94/-4.72	-2.94/-2.6	-1.52/-1.67	-4.35/-5.69	-5.24/-4.78	-5.41/-5.1	-2.63/-1.85	-2.52/-4.95	-7.61/-7.06	-5.64/-7.13
Θ(150°)	-4.39/-4.24	-3.08/-2.35	-2.82/-3.35	-3.12/-2.67	-2.61/-3.07	-2.88/-3.28	-2.91/-1.42	-0.77/-1.33	-1.17/-0.71	-0.25/-0.39	-1.06/-3.04	-2.46/-2.5	-4.72/-6.81	-6.73/-4.56	-3.19/-3.2	-2.92/-2.62	-1.44/-1.67	-3.31/-3.61	-4.19/-4.55	-5.17/-5.91	-6.67/-6.67	-6.44/-6.24	-4.88/-4.03	-5.78/-6.17
Θ(157.5°)	-4.04/-3.59	-3.02/-2.96	-2.92/-2.96	-2.99/-2.53	-1.92/-1.61	-1.67/-1.79	-1.88/-2.27	-2.42/-2.05	-1.83/-1.92	-1.36/-0.91	-2.25/-4.82	-6.47/-8.24	-8.45/-8.18	-8.39/-7.38	-5.29/-3.51	-2.76/-3.22	-4.67/-5.91	-6.58/-7.16	-7.65/-8.17	-8.64/-8.51	-7.75/-8.01	-8.42/-7.45	-6.4/-5.89	-5.58/-5.01
Θ(165°)	-3.94/-3.1	-2.55/-2.24	-2.15/-2.29	-1.93/-1.17	-0.63/-0.27	0.19/0.53	0.29/0.16	-0.69/-1.07	-1.02/-1.04	-0.97/-1.59	-3.17/-4.65	-6.3/-7.69	-8.4/-8.76	-8.36/-7.35	-6.54/-5.72	-6.48/-5.92	-9.87/-10.84	-10.06/-8.12	-6.8/-6.7	-7.26/-8.11	-8.42/-8.12	-8.07/-8.51	-7.91/-7.65	-6.75/-5.01
Θ(172.5°)	-6.57/-6.21	-5.63/-4.51	-3.57/-2.91	-2.29/-1.98	-1.83/-1.54	-1.23/-1.08	-1.09/-0.97	-1.06/-1.31	-1.48/-2.03	-2.99/-4.47	-6.31/-6.51	-9.74/-9.63	-9.48/-9.23	-8.96/-9.07	-8.95/-8.63	-8.8/-8.91	-7.8/-6.98	-6.55/-6.31	-6.02/-5.58	-5.52/-5.82	-6.54/-7.92	-8.82/-8.15	-7.54/-7.69	-8.46/-7.78
Θ(180°)	-6.48/-5.5	-4.83/-4.54	-4.16/-3.81	-3.54/-3.19	-2.46/-2.04	-2.11/-2.59	-3.05/-3.18	-3.74/-4.32	-4.29/-4.55	-5.36/-6.62	-1.66/-9.31	-9.21/-8.65	-8.32/-7.86	-7.65/-7	-6.26/-5.7	-5.37/-4.82	-3.74/-3.14	-3.27/-4.01	-3.93/-3.74	-3.9/-4.15	-4.52/-4.69	-4.96/-4.76	-4.61/-4.89	-5.66/-5.84
Freq(Hz)	5.3GPol.	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°)	-6.34/-5.04	-4.06/-3.15	-2/-1.03	-0.66/-1.01	-1.72/-2.13	-2.59/-3.03	-3.41/-4.33	-5.87/-6.39	-6.84/-7.66	-7.64/-7.35	-7.19/-6.56	-4.46/-4.21	-3.3/-2.51	-2.04/-1.64	-1.11/-1.71	-0.62/-0.77	-1.06/-1.16	-1.25/-1.48	-2.33/-3.1	-3.56/-4.42	-5.65/-5.59	-7.46/-7.9	-8.72/-8.27	-6.05/-6.87
Θ(7.5°)	-3.6/-2.85	-2.32/-1.88	-0.94/-0.09	-0.2/-0.02	-0.68/-1.28	-1.45/-1.26	-1.3/-1.9	-2.98/-3.67	-4.21/-5.01	-4.85/-6.93	-8.4/-8.76	-9.96/-6.62	-4.99/-3.93	-3.1/-2.54	-2.12/-1.59	-1.49/-1.88	-2.49/-2.97	-3.57/-4.12	-4.64/-5.72	-6.49/-6.78	-7.09/-6.87	-6.41/-5.84	-5.7/-5.61	-5.18/-4.3
Θ(15°)	-2.63/-1.88	-1.17/-0.67	-0.06/0.29	0.28/0.12	-0.45/-1.33	-1.87/-1.75	-2.18/-1.31	-3.82/-4.06	-3.59/-3.83	-4.88/-6.04	-7.33/-8.89	-9.6/-3.4	-6.49/-5.11	-4.06/-3.1	-2.18/-1.43	-1.32/-1.93	-3.41/-4.07	-4.03/-3.8	-3.6/-3.16	-2.58/-2.15	-1.75/-1.42	-2.17/-2.8	-3.37/-3.26	
Θ(22.5°)	-0.81/-0.38	0.18/0.56	0.35/-0.15	-1.27/-2.44	-3.23/-3.29	-3.73/-3.85	-3.66/-4.33	-4.87/-4.7	-4.12/-4.22	-5.81/-8.3	-10.42/-11.4	-10.96/-7.84	-5.6/-4.38	-3.46/-3.25	-4/-5.08	-5.35/-5.5	-5.75/-4.87	-4.08/-3.5	-3.14/-2.22	-1.19/-0.28	0.1/0.41	0.75/-0.83	0.85/0.46	-0.53/-0.81
Θ(30°)	-1.6/-1.97	-2.01/-1.74	-1.81/-2.04	-2.7/-3.57	-4.25/-4.69	-4.87/-5.94	-3.85/-4.29	-5.42/-5.87	-6.31/-7.33	-7.77/-8.69	-9.71/-11.21	-11.95/-10.45	-7.77/-5.56	-3.84/-3.79	-5.2/-6.52	-5.82/-4.05	-3.11/-3.44	-3.41/-2.74	-2.38/-1.68	-1.08/-0.48	0.6/1.52	1.76/1.78	1.3/0.46	-0.46/-1.3
Θ(37.5°)	0.25/-0.11	-0.88/-1	-1.41/-1.97	-2.29/-2.63	-4.12/-5.5	-5.41/-4.65	-4.17/-4.27	-5.05/-5.88	-7.43/-9.57	-9.07/-7.6	-6.57/-4.99	-7.88/-7.59	-7.4/-6.85	-6.06/-6.2	-7.05/-6.19	-4.43/-3.72	-3.36/-3.41	-4.06/-4.25	-3.01/-2.15	-0.79/0.45	0.87/1.32	2.22/2.41	2.48/1.91	0.79/-0.11
Θ(45°)	1.01/1.17	0.48/0.02	-0.65/-1.29	-1.73/-0.66	-0.64/-1.26	-2.19/-2.96	-2.75/-2.54	-2.89/-3.27	-4.11/-4.9	-5.87/-5.76	-4.71/-4.85	-4.81/-5.1	-5.85/-5.33	-4.41/-3.99	-4.99/-5.02	-4.84/-4.22	-4.68/-3.37	-2.13/-1.73	-1.26/-0.21	0.77/0.97	0.81/1.22	1.47/1.96	2.29/1.89	1.62/1.24
Θ(52.5°)	0.31/1.09	0.69/0.18	-0.02/0.46	-0.73/-1.12	-0.74/-1.39	-2.75/-4.23	-4.37/-3.87	-3.55/-3.27	-3.04/-3.82	-4.06/-4.53	-5.27/-4.51	-3.13/-4.1	-4.98/-3.5	-2.21/-3.43	-2.81/-1.91	-2.24/-3.12	-4.07/-3.57	-1.72/-0.74	0.07/0.91	0.99/0.78	0.4/0.84	1.39/1.75	2.03/2.08	0.91/0.26
Θ(60°)	-0.13/0.24	-0.17/-0.47	0.39/1.21	0.27/-0.39	-0.24/-0.14	-0.02/-1.1	-2.44/-2.25	-2.66/-4.27	-5.05/-5.43	-5.11/-4.84	-4.1/-3.27	-1.66/-2.23	-3.12/-2.72	-2.73/-3.02	-1.93/-1.8	-2.57/-3.64	-3.81/-4.38	-2.2/-0.33	0.37/0.38	0.84/0.8	0.58/-0.28	0.58/1.76	1.98/1.65	1.14/-0.26
Θ(67.5°)	0.56/1.26	0.1/-0.18	1.1/1.72	1.92/1.61	1.22/1.24	1.04/-0.53	-2.01/-2.48	-1.92/-2.4	-4.23/-5.43	-3.83/-3.86	-4.7/-2.86	-4.15/-1.94	-2.11/-2.09	-2.11/-2.24	-1.89/-2.24	-2.74/-2.71	-2.5/-2.56	-1.38/-1.2	-1.3/-1.13	0.11/1.17	1.75/1.41	1.56/1.86	1.94/1	0.34/0.12
Θ(75°)	-0.85/0.45	0.73/0.3	0.78/1.56	1.81/22	0.83/-0.48	-1.32/0.75	-1.03/-2.62	-3.8/-4.12	-3.58/-4.03	-2.77/-1.89	-1.95/-1.72	-0.34/-0.72	-1.65/-1.83	-2.28/-0.91	-0.86/-1.07	-2.77/-1.48	0.14/-1.57	-2.65/-1.49	-0.95/-0.74	-0.27/0.6	1.97/2.36	2.27/2.17	1.64/-1.4	1.01/-0.27
Θ(82.5°)	0.46/-1.14	0.48/1.69	2.1/93	2.23/1.86	1.76/1.15	0.13/-0.46	-1.08/-2.68	-3.86/-3.41	-2.78/-3.87	-1.96/-0.51	-1.22/-1.65	0.73/1.31	-1.06/-0.85	-0.95/-0.95	-1.21/-2.15	-2.								



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(67.5°)	3.13/2.11	1.26/-1.33	-0.18/0.08	-0.52/-0.41	0.48/1.39	2.03/2.41	2.42/2.48	2.81/1.86	0.83/1.64	0.46/+0.1	1.1/+0.27	-1.05/-2.62	-0.64/1.11	-0.55/-2.76	-2.71/-3.64	-3.82/-3.32	-1.85/-1.47	0.04/1.9	2.36/2.98	3.02/2.91	2.19/1.8	1.01/0.85	1.44/1.07	0.9/2.46
Θ(75°)	0.89/1.01	2.32/0.29	0.14/-2.49	-2.37/0.79	2.97/3.65	3.92/4.11	3.88/2.61	1.43/0.89	0.81/1.61	2.37/2.19	2.11/1.8	1.22/-0.75	-2.73/0.02	0.71/-0.28	-1.4/-1.27	-1.8/-2.43	-3.29/-4.25	-2.36/-0.43	1.47/3.25	2.88/1.9	0.85/-0.88	0.65/0.87	1.09/0.55	1/1.24
Θ(82.5°)	-0.34/-0.01	1.75/1.38	1.34/-0.2	0.64/2.12	2.36/3.12	4.14/3.7	2.83/1.31	0.04/-0.55	1.05/2.33	2.23/1.99	1.67/0.99	0.92/-0.92	-1.05/1.16	1.22/+0.31	-0.75/-1.52	-1.47/-2.05	-3.92/-2.35	-0.91/-0.03	1.74/1.59	1.39/0.3	1.14/1.66	2.53/2.92	1.5/2.5	2.73/0.15
Θ(90°)	-1.81/-2.33	-0.87/-0.64	-2.11/0.49	2.09/1.51	1.1/2.75	3.28/2.84	0.67/-2.31	-1.88/0.38	2.63/2.97	2.65/2.29	2.93/1.48	0.43/1.04	-0.13/-0.09	0.5/-1.27	-1.1/0.17	-1.83/-2.72	-2.2/-1.36	0.15/0.77	1.2/-0.74	-1.21/0.8	2.59/3	1.95/2.96	3.23/4.43	3.91/-2.2
Θ(97.5°)	-1.44/-1.93	-0.58/1.05	-0.96/0.92	3/3.06	2.12/2.25	1.38/-0.16	-1.75/-1.92	-1.98/0.22	2.71/2.82	1.32/1.4	1.42/+0.52	-0.68/0.18	-1.89/-2.44	-2.07/-1.16	1.35/1.87	-0.3/-0.14	0.62/1.31	0.63/2.13	2.81/1.78	1.15/2.27	3.51/2.66	1.92/4	3.92/2.41	1.23/-0.68
Θ(105°)	-0.38/-0.75	1.99/4.13	2.46/1.39	1.82/3.15	3.04/1.77	-0.73/-0.94	-0.44/0.21	1.27/1.68	0.99/0.85	0.89/2.02	2.83/1.86	0.87/0.29	-2.44/-1.88	-0.58/-2.15	-0.53/1.48	1/-0.05	0.53/2.27	1.57/0.26	0.62/0.35	1.07/1.89	2.03/1.84	2.41/3.83	3.46/1.01	2.16/2
Θ(112.5°)	-2.82/-1.19	0.92/2.85	3.65/3.47	2.57/0.98	0.56/-0.9	-1.45/0.09	-0.1/-1.22	1.35/1.97	0.91/-0.03	0.7/0.61	1.94/2.57	2.58/-1.81	-3/-0.91	-0.57/-0.54	0.13/0.46	0.53/-0.65	-0.78/-0.07	-2.29/-2.12	-0.11/0.38	-0.64/-0.8	-0.89/0.33	2.01/1.13	0.76/1.34	3.57/1.98
Θ(120°)	-0.8/-1.12	-0.19/-0.98	0.74/0.48	0.19/0.59	0.58/-0.8	-1.62/0.17	0.27/-1.41	-2.87/-0.12	1.55/0.81	-0.88/-1.59	-0.49/2.48	2.83/-0.14	-3.57/-3.12	-0.03/0.02	-2.98/-2.85	-2.23/-2	-3.36/-1.74	0.62/-0.43	-0.6/-0.09	0.88/2.18	1.45/-1.62	-1.34/0.02	-0.2/0.82	1.3/0.24
Θ(127.5°)	-0.27/1.19	0.06/-1.51	-6.83/-9.12	-8.08/-5.07	-2.55/-0.47	-2.21/-2.84	-1.21/+0.94	-2.02/-2.55	0.16/1.05	-1.07/-0.85	1.15/3.03	1.04/-1.1	-1.95/-3.07	-1.51/-1.86	-2.16/-1.12	-1.71/-1.14	-0.66/-2.81	0.75/-2.64	-4.65/-2.25	0.41/3.37	0.77/-2.57	-3.22/-0.91	-3.24/-2.83	-1.55/-1.97
Θ(135°)	-5.92/-3.85	-2.74/-3.27	-4.21/-4.41	-3.46/-3.39	-3.57/-2.2	-2.05/-1.71	-0.85/0.28	1.02/0.57	-0.42/-0.27	-2.58/-3.41	-0.87/-1.12	-1.38/-0.72	-1.66/-3.09	-5.1/-5.99	-2.88/-5.52	-8.14/-7.11	-2.72/-3.11	-1.62/-6.54	-8.68/-5.81	-4.6/-1.57	-1.79/-6.25	-8.71/-5.74	-3.88/-3.94	-4.66/-3.72
Θ(142.5°)	-6.26/-5.75	-4.79/-5.26	-6.31/-3.52	-1.09/0.19	0.21/-0.46	-1.43/-3.54	-4.84/-3.44	-2.99/-2.92	-2.04/-2.18	-2.36/-1.96	-2.55/-3.48	-4.91/-7.65	-8.32/-7.79	-6.8/-7.45	-8.5/-9.34	-6.03/-7.11	-8.05/-5.75	-3.9/-6.05	-7.51/-8.05	-8.1/-9.25	-4.6/-1.65	-3.92/-5.24	-3.5/-3.14	-4.85/-4.82
Θ(150°)	-4.17/-4.55	-2.88/-1.48	-2.24/-3.17	-3.05/-3.49	-3.29/-2.99	-2.39/-2.67	-4.53/-6.15	-3.65/-1.32	-0.28/-0.34	-0.68/-1.1	-2.63/0.56	0.33/-3.04	-6.43/-6.19	-6.34/-7.77	-5.03/-3.44	-3.42/-2.85	-2.43/-2.99	-6.55/-10.06	-8.26/-6.57	-6.11/-7.42	-2.25/-4.07	-1.94/-2.21	-3.24/-3.09	
Θ(157.5°)	-5.19/-5.64	-5.3/-4.34	-3.35/-2.96	-3.57/-4.84	-5.64/-5.39	-4.95/-5.18	-4.5/-3.8	-4.03/-4.54	-4.64/-4.69	-3.97/-3.74	-2.74/-1.77	-2.94/-5.85	-6.86/-5.34	-4.93/-5.77	-5.79/-5.35	-5.82/-5.85	-5.04/-4.58	-5.44/-6.62	-6.46/-5.88	-6.01/-6.53	-6.29/-5.28	-3.31/-2.41	-2.71/-3.95	-3.8/-4.11
Θ(165°)	-4.19/-5.56	-5.8/-4.47	-3.4/-3.18	-4.01/-5.4	-6.1/-5.72	-5.18/-4.41	-3.44/-2.57	-1.3/-0.03	0.32/0.21	-0.2/-0.97	-2.69/-4.9	-7.93/-9.77	-8.68/-6.39	-5.17/-4.95	-5.13/-5.51	-5.59/-5.39	-6.26/-7.27	-7.31/-7.39	-7.31/-6.97	-6.53/-6.21	-4.56/-3.08	-2.73/-2.93	-3.08/-2.82	-2.76/-3.47
Θ(172.5°)	-3.15/-3.03	-2.85/-2.63	-2.61/-2.85	-3.09/-3	-2.93/-3.05	-2.75/-2.12	-1.45/-0.76	-0.27/-0.21	-0.84/-1.53	-2.72/-4.45	-6.44/-8.22	-8.39/-6.89	-6.38/-6.89	-7.64/-8.08	-7.14/-6.52	-6.29/-6.37	-7.41/-7.76	-7.72/-6.93	-5.56/-4.86	-4.14/-3.44	-2.93/-2.24	-1.57/-1.33	-1.64/-2.07	-2.76/-3.32
Θ(180°)	-4.31/-4.07	-4.39/-4.63	-4.81/-4.49	-4.13/-4.38	-5.1/-5.27	-4.72/-4.21	-3.96/-3.54	-3.61/-3.91	-4.04/-4.4	-5.16/-6.49	-7.92/-8.8	-9.77/-10.12	-9.9/-8.75	-7.38/-5.93	-5.06/-4.66	-4.79/-4.86	-4.81/-4.41	-3.88/-3.55	-3.95/-3.79	-3.72/-4.11	-4.05/-4.03	-4.35/-4.58	-5.36/-5.81	-5.54/-4.99
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°)	-1.36/-0.65	-0.37/-0.16	-0.12/-0.24	-0.24/0.49	0.99/0.57	-0.56/-1.57	-1.71/-1.82	-2.47/-2.86	-3.05/-2.84	-2.24/-1.82	-1.24/-0.81	-0.63/-0.7	-0.68/-0.77	-0.55/-0.29	-0.04/0.14	0.08/0.12	0.12/-0.26	-0.88/-1.43	-1.77/-2.63	-3.41/-3.8	-4.45/-4.27	-3.92/-3.07	-2.41/-2.22	-1.89/-1.85
Θ(7.5°)	0.07/-0.09	-0.2/0.07	0.47/0.59	0.4/0.36	0.69/0.41	-0.25/-1.7	-3.19/-4.16	-4.83/-5.16	-4.98/-4.91	-4.42/-3.52	-2.72/-2.21	-2.05/-1.93	-1.51/-1.46	-1.05/-0.72	-0.56/-0.38	-0.38/-0.35	-0.15/-0.45	-0.93/-1.42	-1.54/-1.8	-2.29/-2.17	-2.07/-1.94	-1.76/-1.01	-0.51/-0.35	-0.25/-0.17
Θ(15°)	0.82/0.16	-0.43/-0.46	-0.37/-0.57	-0.92/-1.2	-1.13/-1.4	-1.13/-0.91	-1.23/-1.94	-2.18/-2.33	-2.76/-3.1	-2.83/-2.89	-3.02/-3	-2.5/-1.79	-1.38/-1.25	-0.92/-0.73	-1.34/-2.26	-3.07/-2.86	-2.43/-2.06	-1.77/-1.71	-1.9/-2.23	-1.62/-1.19	-0.87/-0.37	0.57/1.13	1.42/1.34	
Θ(22.5°)	0.99/0.21	-0.5/-1.12	-1.58/-2.21	-2.99/-2.36	-1.71/-0.58	0.02/-0.24	-0.83/-1.51	-1.38/-1.42	-1.82/-2.25	-2.65/-2.62	-3.22/-3.97	-4.37/-3.27	-1.94/-0.92	-0.85/-1.73	-4.23/-6.94	-7.32/-7.04	-6.27/-4.64	-2.81/-1.84	-1.6/-0.99	-0.94/-1.22	-1.85/-1.67	-1.27/-0.72	0.37/1.07	1.15/1.26
Θ(30°)	0.67/0.56	0.56/0.67	-0.55/-1.93	-1.64/-0.88	-0.41/0.03	-0.04/-0.46	-1.35/-2.07	-2.31/-2.33	-2.59/-3.3	-4.33/-4.77	-4.8/-6.2	-6.14/-5.44	-3.44/-2.24	-2.59/-3.83	-6.62/-7.87	-9.08/-7.59	-4.84/-2.85	-1.68/-0.77	0.23/0.64	0.68/0.81	0.81/0.35	-0.53/-0.82	-0.36/-0.26	0.04/0.73
Θ(37.5°)	0.43/0.52	0.54/0.88	0.22/-0.72	0.04/0.41	1.14/1.72	1.59/0.81	0.3/-1.35	-3.53/-3.17	-2.32/-3.28	-4.31/-4.71	-5.19/-8.09	-8.96/-7.22	-4.02/-1.93	-2.03/-2.52	-4.01/-6.02	-6.35/-5.26	-4.07/-2.67	-2.33/-1.57	-0.75/0.12	1.05/1.72	2.16/2.12	2.05/1.99	1.23/0.03	-0.76/-0.38
Θ(45°)	-0.36/0.12	0.59/1.29	0.88/0.68	0.69/-0.02	-0.46/-1.03	-1.16/-0.95	-0.94/-1.46	-2.56/-4.12	-4.32/-4.21	-3.46/-4.12	-4.22/-3.51	-3.61/-3.67	-1.5/-0.55	-2.06/-2.55	-2.58/-4.29	-4.64/-3.28	-2.16/-0.65	-0.39/0.16	0.56/0.2	0.39/0.77	1.06/1.86	2.49/2.33	2.57/1.63	-0.46/-1.49
Θ(52.5°)	-1.18/-1.61	-1.19/-0.36	-0.73/-0.32	0.69/1.57	0.82/-0.18	-0.56/-0.05	0.3/0.16	-1.01/-0.2	-0.68/-0.65	0.61/1.07	-0.48/-1.02	-2.05/-2.23	-0.39/0.26	-1.14/-0.73	-1.71/-4	-3.15/-2.76	-1.48/-0.11	0.65/0.45	1.41/1.69	1.53/1.59	1.66/2.56	2.47/1.89	1.8/1.81	0.33/-0.91
Θ(60°)	-0.99/-0.69	-0.15/0.42	-0.47/-1.02	0.45/0.88	0.68/-0.06	0.05/1.25	1.89/1.64	1.33/1.42	1.91/0.84	-0.59/0.88	1.11/0.28	-2.32/-3.67	-1.35/-0.47	-1.1/-1.64	-3.06/-2.7	-3.33/-3.55	-2.31/-1.91	-0.73/1.08	2.41/3.41	3.47/2.9	2.71/3.61	3.62/2.5	1.38/1.06	0.18/-0.5
Θ(67.5°)	-0.45/-1.36	0.28/0.61	-0.1/0.12	1.51/0.41	-1.26/-2.24	-1.85/-1.28	0.46/0.87	0.22/-0.6	1/0.88	-0.61/45	1.49/-0.63	-2.14/-1.43	-0.85/-0.79	-1.01/-0.64	-1.48/-3.37	-5.62/-3.07	-3.28/-2.28	0.33/2.08	2.28/2.66	3.46/2.83	2.96/3.54	2.36/1.41	0.96/-0.27	-0.03/0.93
Θ(75°)	2.33/0.9	1.11/1.19	1.39/1.01	2.29/3.15	1.67/-0.58	1.09/1.92	0.99/0.65	0.35/-0.06	-0.3/1.41	1.06/1.18	2.39/1.74	-1.87/-1.22	-1.73/-3.42	-1.52/0.96	0.99/-2.22	-4.05/-2.84	-3.17/-3.23	-0.66/-0.57	-1.18/-0.95	0.98/2.07	2.93/2.49	4.11/2.89	0.36/-0.6	-1.53/2.11
Θ(82.5°)	0.82/1.69	1.87/2.03	2.45/1.57	1.54/1.64	1.25/-0.23	0.74/2.54	2.77/1.54	0.41/-0.13	-1.16/-0.54	0.14/0.11	0.75/0.99	-2.14/-1.11	-2.75/-2.98	-0.81/1.76	2.16/1.16	-2.09/-3.58	-1.17/-1.25	-0.63/-0.55	0.02/0.44	1.11/1.6	2.52/89	3.72/3.68	1.76/-0.66	1.11/1.25
Θ(90°)	1.18/2.09	1.33/3.76	3.68/2.66	2.64/2.03	2.63/1.65	-1.3/-1.31	0.86/1.35	-0.42/-1.27	-1.32/-0.3	0.56/0.04	2.19/2.49	1.14/0.45	-1.03/-4.87	-2.24/1.54	2.22/1.97	-0.59/-1.18	2.12/1.88	3.43/2.6	0.49/-0.13	0.86/2.74	1.43/1.49	2.86/2.62	1.81/1.58	1.65/1.86
Θ(97.5°)	2.47/2.49	2.7/2.91	3.11/2.44	2.26/2.85	3.68/2.62	1.64/0.34	0.99/0.52	-2.07/-1.99	-0.69/0.05	2.12/1.48	3.12/2.48	1.76/2.43	0.48/-4.11	-0.66/2.4	1.55/2.4	0.94/-0.34	2.46/3.44	4.28/3.13	0.25/0.11	0.57/3.11	2.48/0.82	2.51/2.3	1.93/2.32	1.43/2.43
Θ(105°)	2.85/3.83	3.77/4.38	4.72/3.55	2.71/2.63	2.52/1.27	1.76/2.49	2.86/2.38	0.08/-1.86	-0.32/0.28	2.04/1.49	2.54/3.48	2.75/2.12	2.36/-1.38	-1.06/1.51	2.78/0.88	0.9/-0.15	1.82/2.82	3.93/7.4	2.49/2.31	1.1/3.33	-0.49/-2.39	1.74/-0.35	-0.07/1.74	1.43/2.35
Θ(112.5°)	2.45/4.24	4.15/4.58	3.91/3.48	2.75/1.17	1.14/1.41	2.28/2.79	2.49/0.75	-0.14/-0.35	0.12/-0.74	0.57/1.64	1.71/4.05	2/0.59	-0.71/-1.61	0.2/0.78	2.29/2.91	1.99/-1.56	-0.17/0.98	-0.28/0.81	-0.28/0.07	-1.61/-1.44	-2.81/0.01	2.07/-0.43	0.8/1.5	0.28/1.16
Θ(120°)	3.56/4.85	4.42/4.91	4.73/4.1	3.55/1.98	1.36/1.01	1.4/3.25	3.23/1.43	0.97/0.69	-0.48/0.34	0.72/2.99	3.5/3.67	3.34/2.75	2.75/-0.07	-0.61/0.77	0.29/-1.82	-0.03/0.22	-2.94/-1.01	-1.43/-1.74	-1.98/-0.66	-3.62/-4.01	-5.97/-1.59	1.42/0.62	0.25/-0.12	-1.42/-1.03
Θ(127.5°)	1.66/1.64	2.21/1.71	1.07/0.78	0.38/0.21	-0.26/-1.13	-2.16/-1.95	-1.19/0.63	1.34/-0.35	-1.85/-0.14	1.32/1.88	4.05/3.79	2.99/1.												



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(22.5°)	-6.78/-3.78	-7.42/-7.7	-8.06/-8.18	-7.99/-7.56	-7.5/-8.09	-9.07/-10.22	-11.91/-13.25	-14.89/-14.9	-14.77/-15.26	-16.15/-15.91	-15.17/-15.99	-17.97/-16.39	-12.02/-8.92	-7.4/-6.76	-6.67/-6.64	-6.73/-7.29	-7.96/-8.58	-8.36/-7.99	-7.98/-7.99	-7.8/-7.56	-7.24/-7.25	-7.85/-8.05	-7.28/-6.58	-6.25/-6.64
Θ(30°)	-2.43/-2.81	-3.35/-3.78	-4.16/-4.23	-4.34/-5	-6.44/-8.81	-10.74/-12.09	-12.99/-12.2	-11.74/-11.03	-10.95/-14.04	-9.86/-9.29	-8.72/-9.16	-10.09/-8.87	-6.41/-5.82	-4.87/-5.06	-4.95/-4.36	-3.88/-3.42	-2.81/-1.67	-1.03/-1.22	-1.62/-2.04	-2.5/-2.63	-2.18/-1.74	-1.61/-1.93	-2.69/-3.11	-3.14/-3.02
Θ(35°)	-1.37/-1.15	-1.3/-1.3	-1.43/-2.1	-2.84/-4.68	-8.36/-12.74	-1.43/-2.1	-1.32/-15.3	-10.71/-8.72	-7.13/-5.82	-5.14/-4.93	-4.47/-4.65	-5.04/-3.82	-2.57/-2.3	-2.26/-1.72	-1.11/-0.72	-0.290-24	0.91/03	0.590/05	-0.45/-0.82	-1.56/-2.69	-3.25/-2.88	-2.86/-1.55	-1.17/-1.21	-1.51/-1.68
Θ(45°)	-3.03/-1.78	-1.84/-2.45	-1.88/-2.07	-2.21/-3.27	-6.02/-8.58	-10.08/-10.25	9.01/-7.13	-5.88/-5.56	-5.58/-5.29	-5.04/-4.35	-2.75/-2.36	-3.08/-2.5	-1.76/-1.8	-2.07/-2.34	-3.17/-3.31	-2.09/-1.11	-0.92/-1.18	-1.63/-2.09	-2.53/-2.93	-3.24/-3.75	-5.09/-6.35	-5.62/-4.28	-3.09/-2.32	-2.27/-2.67
Θ(52.5°)	-1.71/-142	-0.67/-167	-2.48/-2.64	-1.99/-1.73	-2.36/-2.75	-3.71/-5.07	-5.83/-5.47	-4.87/-4.86	-5.62/-5.22	-4.09/-2.43	-0.34/-0.27	-0.84/-0.94	-0.91/-1.28	-3.19/-5.77	-5.47/-2.86	-1.32/-1.16	-1.65/-2.93	-3.28/-2.16	-1.48/-0.97	-0.13/-0.88	1.28/0.61	-0.15/-0.29	0/-0.22	-0.52/-1.07
Θ(60°)	0.38/-0.36	-1.22/-3.56	-4.56/-4.55	-5.4/-11	-3.38/-3.08	-3.22/-2.89	-2.3/-1.95	-1.49/-1.13	-1.55/-2.75	-3.8/-2.9	-1.47/-1.51	-1.6/-2.16	-1.56/-2.24	-6.47/-7.36	-5.84/-4.75	-3.82/-3.66	-3.14/-1.93	-1.17/-0.96	0.131/38	1.42/0.82	1.60/-0.07	-0.8/-0.75	-0.02/-0.16	-0.48/-0.04
Θ(67.5°)	0.39/0.3	-1.08/-2.22	-2.52/-1.74	-2.4/-3.78	-5.58/-6.05	-5.27/-3.68	-2.35/-1.75	-1.54/-1.33	-1.46/-2.01	-2/-1.12	0.12/0.5	-0.67/-1.99	-2.15/-5.23	-7.3/-6.24	-5.69/-4.46	-5.24/-5.83	-4.9/-4.11	-1.17/0.45	1.08/1.35	1.14/0.22	-0.67/-0.9	-1.06/-2.64	-2.6/-0.85	-1.21/-0.72
Θ(75°)	-1.36/-0.44	-2.31/-3.43	-4.31/-1.5	0.08/-0.19	-1.47/-3.92	-6.98/-6.23	-3.25/-3.1	-0.25/-0.07	-0.33/-1.23	-1.46/-1.34	-0.42/-0.23	-0.46/-1.43	-0.1/-1.18	-1.18/-0.59	-0.69/-1.15	-2.84/-3.6	-4.58/-3.53	-3.22/-1.91	-0.50/-2.2	1.26/0.2	-0.19/-0.09	-1.66/-1.19	-1.47/-2.51	
Θ(82.5°)	-2.69/-0.74	-1.25/-3.45	-3.54/-2.72	-1.66/-0.97	-1.0/-0.05	-1.37/-2.86	-3.08/-1.94	-0.59/-0.46	0.58/-0.3	-1.05/-0.22	0.73/-1.23	-0.26/-0.21	0.69/-0.2	0.23/-0.37	-0.68/-0.78	-3.51/-4.27	-4.96/-3.21	-1.3/-0.21	0.16/0.21	0.55/-1.2	1.87/0.71	-1.69/-0.26	0.54/0.15	-0.98/-3.33
Θ(90°)	-1.02/0.46	-0.44/-1.51	-1.37/-0.15	0.05/-0.2	-0.69/-0.78	-0.43/-0.56	-1.36/-2.18	-1.37/-0.26	-0.2/-0.21	-0.67/-0.17	1.15/-1.83	-0.17/-0.05	1.01/0.66	1.22/0.44	0.64/-0.34	-1.21/-1.44	-1.73/-1.74	-0.84/0.72	1.61/-1.17	1.97/3	2.88/2.06	-0.58/-2.28	-1.04/-1.73	-2.82/-3.03
Θ(97.5°)	-3.56/0.57	0.84/-0.44	-0.06/0.8	1.52/0.74	-1/-2.58	-3.28/-2.16	-1.32/-1.29	-1.79/-2.79	-2.65/-2.07	-1.28/-0.26	0.2/0.23	-1.73/-0.22	-0.17/-0.33	-0.1/-1.15	-0.54/-0.89	-1.07/-1.39	-1.58/0.7	0.22/1.94	2.67/0.61	1.34/3.55	4.06/-4.02	2.22/0.1	0.54/0.38	-2.2/-5.34
Θ(105°)	-2.36/0.95	1.34/-1.1	2.05/2.3	2.13/-1.5	-0.27/-2.09	-5.14/-7.2	-5.25/-4.63	-3.07/-2.95	-2.21/-2.64	-2.04/-0.4	0.51/0.79	-0.88/-1.08	-0.84/0.53	0.46/-1.52	-1.96/-2.49	-1.9/-1.69	-1.38/0.04	0.39/-1.1	1.06/-0.72	0.81/2.61	2.99/2.35	1.04/0.27	0.27/1.21	0.81/-1.73
Θ(112.5°)	-0.81/0.34	1.03/-1.26	-0.17/0.42	0.47/0.41	-0.32/-1.55	-3.46/-5.37	-8.03/-11.36	-9.86/-6.26	-4.09/-1.99	-1/-2.05	-0.29/0.36	-0.94/-0.85	-0.95/-1.09	-1.61/-3.52	-3.74/-3.49	-2.03/-2.43	-2.73/-2.18	-1.69/-1.84	-2.48/-5.58	-5.67/-2.29	-4.37/-5.54	-4.28/-1.27	0.07/0.31	0.18/-0.16
Θ(120°)	-2.64/-0.1	0.13/-1.49	-3.53/-2.02	-1.33/-0.99	-1.88/-3.18	-4.06/-5.05	-5.33/-3.43	-1.97/-2.63	-2.8/-2.12	-3.54/-2.5	-4.25/-3.97	-3.53/-3.19	-2.3/-2.83	-5.83/-4.69	-2.34/-1.39	-2.25/-2.18	-1.25/-6.09	-5.74/-5.23	-12.5/-6.09	-6.13/-6.74	-7.74/-3.08	-2.83/-1.89	-1.91/-3.61	
Θ(127.5°)	-13.42/-5.44	-1.69/-1.91	-2.63/-2.74	-2.72/-3.08	-3.35/-3.42	-2.99/-2.21	-1.84/-2.66	-3.51/-3.79	-5.86/-1.17	-11.78/-6.95	-3.58/-3.74	-5.56/-4.45	-5.22/-5.14	-4.29/-6.43	-11.69/-1.57	-7.86/-5.59	-5.96/-7.82	-4.39/-5.65	-7.73/-6.07	-9.57/-11.31	-6.34/-13	-5.95/-5.52	-6.62/-9.75	-8.28/-8.92
Θ(135°)	-8.48/-8.08	-4.09/-3.94	-6.14/-7.9	-10.39/-10.1	-7.99/-6.16	-4.56/-4.92	-6.22/-6.63	-7.46/-12	-15.25/-6.16	-3.22/-3.27	-5.45/-7.95	-9.8/-7.98	-5.85/-6.3	-5.17/-5.68	-10.17/-14.79	-13.19/-7.51	-5.94/-5.94	-8.85/-18.89	-14.06/-18.5	-17.95/-6.33	-3.45/-8.62	-9.13/-8.66	-14.8/-14.81	-15.01/-10.78
Θ(142.5°)	-12.88/-11.73	-12.55/-15	-17.71/-17.1	-14.91/-24.9	-12.82/-10.04	-8.51/-7.31	-7.92/-11.58	-13.71/-9.05	-6.1/-3.54	-5.66/-6.33	-7.3/-6.67	-0.87/-10.62	-11.47/-11.52	-13.57/-16.42	-9.49/-6.68	-4.51/-3.27	-4.71/-8.64	-11.21/-10.16	-12.05/-18.55	-10.58/-11.51	-10.93/-15.2	-18.21/-18.03	-14.88/-13.41	
Θ(150°)	-13.98/-13.43	-12.58/-16.65	-18.54/-12.32	-9.54/-7.02	-9.1/-11.14	-11.81/-11.48	-13.03/-17.79	-12.67/-18.87	-16.16/-17.13	-16.13/-17.07	-13.73/-10.42	-8.93/-15.37	-15.81/-16.03	-3.39/-16.42	-10.86/-18.93	-18.71/-15.29	-17.15/-18.13	-19.15/-16.03	-17.07/-18.12	-17.46/-17.86	-15.21/-17.63	-15.23/-13.11	-17.16/-18.38	
Θ(157.5°)	-8.66/-9.1	-9.21/-9.44	-11.91/-15.96	-18.05/-15.79	-13.89/-14.23	-15.39/-16.43	-16.46/-15.44	-13.81/-12.45	-12.8/-13.49	-12.35/-11.61	-13.27/-18.54	-17.74/-18.73	-19.02/-18.3	-18.67/-18.54	-14.7/-11.16	-9.42/-9.95	-11.99/-13.6	-14.75/-14.36	-13.48/-13.25	-13.84/-14.7	-16.4/-19.14	-19.01/-16.09	-15.52/-14.55	-11.22/-9.37
Θ(165°)	-8.55/-7.26	-6.73/-7.04	-8.13/-9.34	-10.61/-12.22	-13.14/-12.68	-12.53/-13.05	-13.53/-13.45	-13.41/-12.35	-10.15/-8.02	-7.12/-7.41	-8.96/-11.75	-15.58/-18.73	-18.08/-18.49	-18.23/-17.85	-18.29/-13.79	-11.86/-11.7	-14.05/-16.97	-17.5/-16.24	-14.97/-14.59	-14.73/-15.42	-17.1/-19.38	-18.75/-17.93	-17.52/-18.19	-15.43/-11.18
Θ(172.5°)	-17.54/-15.51	-14.36/-13.63	-14.33/-13.91	-13.03/-12.86	-12.38/-11.19	-10.28/-9.99	-9.98/-9.34	-8.9/-8.69	-8.11/-8.13	-8.92/-10.42	-12.67/-16.32	-18.3/-16.2	-14.68/-14.54	-15.06/-15.94	-16.13/-16.58	-17.5/-18.53	-18.67/-17.86	-18.57/-19.37	-16.96/-14.44	-13.77/-12.46	-12.48/-13.7	-15.6/-17.56	-17.6/-17.83	-19.36/-18.17
Θ(180°)	-15.25/-14.71	-10.67/-16.06	-16.25/-16.45	-18.07/-18.05	-18.63/-18.71	-17.67/-18.63	-18.07/-18.63	-18.71/-19.53	-18.77/-17.32	-17.69/-16.73	-17.17/-17.81	-18.44/-18.1	-18.75/-18.76	-18.08/-16.51	-14.21/-12.79	-12.01/-11.03	-10.46/-10.42	-10.79/-11.33	-11.58/-11.75	-12.22/-12.88	-13.16/-13.92	-14.77/-13.3	-12.03/-11.33	-11.44/-12.08
Freq(Hz)	5.3GPol	ThetaAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-10.42/-10.08	-9.94/-9.92	-9.51/-8.9	-8.64/-8.91	-9.34/-9.76	-11.03/-12.26	-13.17/-14.23	-15.04/-14.36	-12.66/-11.3	-9.96/-9.14	-8.75/-8.46	-8.2/-7.94	-7.72/-7.76	-8.0/-8.2	-7.86/-7.89	-8.14/-8.4	-9.15/-9.98	-10.99/-11.36	-11.16/-11.06	-10.55/-9.98	-9.89/-9.59	-9.84/-9.17	-8.52/-8.19	-8.45/-9.38
Θ(7.5°)	-7.89/-7.6	-7.74/-8.11	-7.99/-7.82	-8.1/-8.7	-9.44/-10.77	-12.21/-13.13	-14.84/-16.05	-16.41/-14.82	-12.54/-10.5	-9.34/-9.14	-9.41/-9.84	-10.14/-10.07	-10.1/-9.5	-8.65/-7.97	-7.53/-7.37	-7.86/-8.7	-10.63/-12.05	-12.87/-15.43	-15.15/-14	-13.57/-12.81	-11.93/-10.58	-9.17/-8.18	-7.84/-7.91	
Θ(15°)	-8.54/-7.14	-6.23/-6.62	-4.92/-4.84	-5.68/-7.45	-8.85/-9.66	-12.23/-11.98	-15.14/-17.78	-18.12/-18.69	-15.92/-13.92	-13.73/-13.44	-9.34/-14.78	-15.17/-17.01	-16.8/-14.54	-12.16/-10.48	-9.28/-8.3	-7.78/-7.51	-8.18/-9.53	-11.63/-13.09	-14.73/-15.92	-16.19/-16.33	-14.37/-14.18	-12.82/-12.49	-11.85/-11.31	-10.53/-9.37
Θ(22.5°)	-11.86/-9.82	-7.26/-6.88	-5.71/-6.69	-9.03/-12.45	-14.5/-14.21	-14.34/-15.62	-15.36/-15.31	-15.38/-13.78	-12.97/-13.8	-15.83/-18.23	-17.27/-18.2	-18.22/-14.05	-10.62/-8.63	-8.34/-9.33	-11/-12.61	-14.27/-17.24	-18.98/-18.59	-18.19/-18.18	-17.91/-17.8	-19.09/-18.44	-18.72/-18.16	-16.15/-14.89	-12.71/-11.38	-11.64/-11.89
Θ(30°)	-18.75/-17.32	-17.55/-13.99	-12.32/-12.99	-15.06/-17.48	-16.44/-13.8	-14.02/-14.32	-13.95/-15.88	-18.95/-18.61	-17.69/-18.91	-17.52/-18.68	-17.95/-18.57	-17.87/-14.88	-11.44/-9.33	-9.19/-11.13	-13.58/-13.85	-13.24/-13.7	-13.92/-13.34	-14.24/-15.98	-19.29/-18.87	-18.47/-18.87	-16.83/-16.26	-15.62/-16.08	-17.41/-17.82	-17.37/-18.35
Θ(37.5°)	-11.73/-13.39	-17.09/-16.52	-15.19/-17.61	-19.21/-17.68	-19.1/-18.22	-15.9/-12.77	-11.86/-12.23	-14.4/-19.19	-18.16/-18.34	-18.47/-17.6	-13.39/-11.69	-10.36/-10.96	-12.7/-14.54	-16.99/-14.74	-11.78/-10.42	-10.19/-10.93	-11.31/-13.12	-16.22/-18.46	-17.66/-19.35	-17.08/-18.28	-19.21/-17.08	-13.5/-12.57	-13.65/-17.04	-17.26/-13.12
Θ(45°)	-8.75/-9.23	-10.05/-16.22	-14.65/-14.96	-18.15/-10.44	-8.53/-9.9	-11.24/-10.77	-10.21/-9.74	-10.87/-12.96	-10.77/-17.23	-17.45/-19.18	-15.87/-13.39	-10.6/-12.2	-17.16/-18.23	-19.51/-14.24	-13.58/-15	-18.44/-18.43	-18.06/-15.22	-12.51/-11.84	-11.21/-11.92	-12.31/-12.38	-15.79/-17.39	-18.8/-15.52	-12.79/-15.3	-17.59/-10.28
Θ(52.5°)	-17.91/-14.44	-12.28/-14.3	-15.06/-13.66	-19.05/-14.91	-11.15/-12.5	-14.75/-18.86	-18.56/-14.3	-13.72/-13.04	-12.51/-14.3	-14.81/-12.43	-11.92/-11.51	-10.83/-15.58	-17.77/-15.1	-14.48/-17.71	-16.64/-16.65	-16.45/-15.22	-14.07/-13.69	-13.42/-13.05	-11.68/-10.66	-12.49/-14.31	-15.15/-16.78	-17.95/-14.94	-13.48/-14.33	-17.8/-18.71
Θ(60°)	-15.22/-17.51	-14.38/-13.87	-18.6/-13.25	-14.56/-11.3	-8.89/-9.34	-8.39/-9.55	-10.83/-10.67	-12.35/-18.35	-18.84/-18.6	-19.09/-15.33	-13.07/-10.84	-8.67/-13.71	-18.13/-18.01	-17.7/-18.21	-15.91/-17.88	-17.19/-18.37	-19.18/-18.19	-18.54/-15.3	-15.71/-19	-18.22/-19.23	-18.28/-17.87	-18.42/-18.12	-14.3/-14.94	-18.16/-14.45
Θ(67.5°)	-10.66/-11.39	-13.77/-15.25	-18.55/-15.71	-13.32/-9.67	-10.07/-10.7	-10.07/-14.01	-14.33/-10.72	-8.07/-8.84	-18.84/-18.11	-17.9/-18.53	-17.78/-16.15	-13.47/-17.13	-18.81/-18.29	-19.32/-19.11	-16.76/-13.44	-11.91/-11.35	-10.37/-12.51	-18.45/-18.52	-18.85/-16.28	-14.74/-14.86	-15.12/-14.5	-11.52/-13.83	-10.51	



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(75°)	-1.66/-4.04	-1.61/-3.05	-2.75/-5.12	-6.53/-6.31	-3.46/-2.1	-1.4/-1.29	-2.48/-4.02	-5.3/-8.18	-6.91/-2.39	-0.78/-1.2	-3.05/-3.58	-4.81/-6.17	-10.06/-7.65	-5.62/-2.92	-3.01/-1.49	-1.75/-2.91	-4.88/-7.79	-5.4/-3.35	-1.57/-0.45	0.71/-0.24	-0.42/-0.16	-0.33/-6.05	-3.53/-3.24	-5.22/-1.3
Θ(82.5°)	-2.16/-4.54	-2.18/-1.9	-0.28/-1.41	-4.62/-8.46	-8.56/-5.49	-3.73/-2.57	-1.69/-3.22	-6.34/-6.15	-2.11/-0.27	0.03/-2.48	-4.43/-5.59	-4.01/-3.47	-2.05/-0.1	1.07/0.54	-0.24/-0.44	-2.79/-5.48	-7.17/-3.55	-4.35/-3.46	-1.95/-0.95	-0.11/-0.13	1.42/0.15	0.83/-0.46	-4.08/-1.94	-3.58/-6.87
Θ(90°)	-3.18/-5.19	-7.54/-5.7	-2.66/-0.54	-2.06/-5.11	-5.26/-3.8	-5.61/-5.9	-4.1/-3.67	-4.21/-1.92	0.70/81	-0.13/-2.33	-2.2/-2.05	-1.61/-2.69	-1.02/0.65	2.03/0.88	-0.44/-1.12	-4.37/-4.76	-3.37/-3.43	-2.91/-2.71	-1.06/-1.66	-0.99/0.72	1.27/0.89	-0.64/0.22	-2.54/-2.17	-7.72/-3.86
Θ(97.5°)	-3.41/-4.56	-6.78/-3.68	-4.52/-1.12	-1.51/-0.32	-1.41/0.16	-0.96/-4.5	-8.71/9.85	-5.86/-1.27	0.96/-0.47	-2.99/-2.23	-0.72/-0.63	-0.12/-0.93	-0.54/0.96	1.48/0.45	-0.12/-0.19	-1.38/0.2	-0.45/-0.12	-0.25/-1.75	2.64/-1	2.09/2.63	2.66/-1.32	0.86/0.51	-0.24/-1.88	-1.3/-3.98
Θ(105°)	-10.43/-6.13	-6.23/-0.88	-1.96/-3.24	-4.81/-2.48	-1.01/-0.2	-1.01/-2.92	-3.8/-4.04	-3.22/-1.92	-2.27/-3.68	-3.2/-2.85	-0.49/-0.4	1.12/0.31	-0.01/-0.85	0.45/-1.63	-2.49/-1.11	-0.99/0	-0.76/-0.39	-0.31/-13	-0.01/-4.13	-0.72/0.89	1.48/-1	1.68/-1.48	0.45/-2.02	-2.16/-9.44
Θ(112.5°)	-8.57/-7.52	-13.52/-1.65	-0.11/0.77	-0.53/-3.31	-5.07/-5.72	-5.1/-3.72	-1.9/-2.65	-5.66/-4.49	-1.97/-0.99	-2.77/-0.09	-0.42/-1.81	-2.96/-2.4	-0.72/-1.78	-4.15/-4.66	-3.79/-2.44	-1.48/-1.08	-1.55/-4	-3.2/-5.7	-8.02/-7.16	-14.96/-1.75	-2.22/-0.97	-2.55/-1.86	-0.53/-2.9	
Θ(120°)	-2.35/-4.2	-4.59/-11.43	-5.94/-3.24	-1.72/-3.1	-3.88/-5.35	-5.69/-5.94	-6.63/-8.02	-15.2/-15.18	-7.95/-3.87	-3.55/-5.97	-5.35/-1.42	-0.75/-4.46	-4.45/-4.15	-3.92/-5.54	-8.1/-13.42	-10.78/-4.42	-4.69/-5.02	-6.43/-3.41	-2.3/-1.63	-4.54/-5.65	-5.12/-10.5	-7.69/-4.57	-4.38/-4.87	-3.76/-1.64
Θ(127.5°)	-2.15/-1.64	-3.27/-6.56	-13.2/-18.03	-17.93/-8.65	-5.97/-5.03	-5.69/-7.13	-7.81/-9.73	-9.91/-10.47	-7.03/-3.61	-4.63/-2.23	-0.54/-2.07	-4.19/-5.13	-4.41/-5.31	-5.49/-6.2	-9.48/-10.67	-7.36/-4.4	-7.07/-1.09	-8.61/-3.31	-6.5/-4.18	-2.8/-11.2	-8.9/-15.4	-18.85/-13.57	-14.95/-13.74	-7.32/-3.98
Θ(135°)	-12.74/-7.82	-5.63/-7.23	-9.71/-13.71	-16.77/-18.45	-12.22/-7.25	-5.56/-4.8	-5.36/-6.57	-6.27/-7.04	-11.45/-10.72	-8.73/-7.46	-3.36/-3.17	-5.44/-7.72	-10.94/-10.21	-12.08/-14.3	-15.43/-19.27	-13.41/-11.27	-7.22/-9.34	-18.51/-18	-14.72/-18.39	-18.52/-11.42	-2.86/-4.71	-12.53/-14.2	-16.42/-13.77	-15.91/-11.7
Θ(142.5°)	-17.98/-18.13	-13.41/-15.51	-19.08/-14.08	-13.87/-15.61	-18.24/-15.75	-11.59/-10.67	-9.27/-7.77	-8.34/-9.48	-7.05/-5.48	-5.44/-6.39	-10.77/-17.05	-17.73/-18.02	-14.67/-15.18	-17.76/-12.08	-11.48/-11.57	-14.78/-16.24	-15.5/-11	-6.37/-8.24	-14.03/-14.26	-17.3/-18.65	-7.28/-6.69	-11.84/-19.28	-14.02/-11.24	-12.88/-18.46
Θ(150°)	-11.57/-12.57	-11.16/-10.8	-18.71/-15.96	-10.03/-9.53	-11.84/-15.96	-18.83/-14.88	-13.56/-14.38	-11.46/-17.58	-5.15/-4.8	-5.22/-6.46	-7.78/-5.46	-5.96/-9.65	-10.27/-9.72	-11.82/-13.88	-11.6/-6.52	-6.95/-8.67	-13.31/-15.04	-14.58/-18.97	-18.51/-17.6	-18.54/-17.35	-17.58/-14.48	-12.68/-11.17	-7.25/-6.72	-11.93/-16.28
Θ(157.5°)	-18.16/-16.6	-14.86/-14.81	-18.14/-12.74	-11.71/-10.95	-11.95/-13.35	-18.94/-17.61	-15.69/-14.83	-14.93/-16.34	-18.21/-16	-15.5/-12.55	-10.24/-8.56	-8.96/-11.72	-12.33/-10.63	-9.54/-8.75	-8.74/-10.71	-13.06/-10.87	-10.24/-10.26	-10.83/-10.63	-10.57/-10.28	-10.94/-13.99	-18.51/-18.67	-14.93/-14.75	-15.77/-17.72	-14.56/-17.13
Θ(165°)	-18.48/-18.32	-14.2/-11.12	-9.63/-9.06	-10.1/-12.53	-14.97/-15.59	-14.73/-13.86	-12.88/-12.18	-11.08/-10.03	-11.28/-14.87	-18.27/-18.13	-18.58/-17.99	-17.97/-18.2	-16.42/-12.75	-10.44/-9.81	-11.32/-13.53	-12.68/-10.44	-9.98/-11.47	-15.37/-17.64	-17.53/-18.36	-18.13/-17.79	-18.52/-17.54	-17.55/-17.25	-15.1/-15.37	-16.91/-19.1
Θ(172.5°)	-18.81/-13.33	-19.07/-18.47	-18/-18.7	-18.13/-18.38	-18.73/-18.64	-17.79/-17.49	-17.25/-16.58	-16.46/-16.51	-17.09/-16.92	-17.85/-17.68	-15.98/-14.4	-13.34/-12.46	-12.84/-13.41	-15.14/-18.31	-18.95/-19.03	-18.36/-18.35	-16.9/-15.89	-14.63/-13.08	-11.71/-11.63	-11.97/-11.16	-10.24/-9.54	-9.28/-9.12	-9.52/-10.38	-11.97/-14.79
Θ(180°)	-14.63/-15.76	-18/-18.16	-18.14/-18.93	-18.3/-17.56	-17.65/-18.45	-18.4/-18.13	-18.02/-18.58	-18.62/-18.93	-18.11/-18.53	-18.6/-16.41	-16.32/-16.11	-16.38/-18.01	-18.47/-18.31	-18.86/-18.08	-18.56/-16.74	-15.46/-15.32	-15.77/-15.85	-15.85/-16.27	-17.98/-18.14	-17.56/-18.42	-17.78/-17.96	-18.98/-16.24	-14.16/-13.02	-13.25/-13.91
Freq(Hz)	5.785GPol.	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°)	-6.95/-6.4	-5.95/-6	-5.71/-5.54	-5.52/-5.42	-5.41/-6.04	-7.32/-8.4	-8.71/-9.5	-9.92/-9.19	-8.27/-8.56	-8.28/-8.18	-7.71/-7.29	-6.77/-6.5	-6.12/-5.91	-5.87/-5.72	-6.05/-6.08	-6.04/-6.15	-6.26/-6.45	-6.93/-7.28	-7.88/-8.6	-8.64/-9.26	-9.92/-10.09	-10.17/-10	-13.15/-10.7	-9.62/-8.9
Θ(7.5°)	-6.66/-6.66	-6.77/-6.98	-7.24/-7.31	-7.24/-6.86	-6.83/-7.72	-7.95/-7.71	-8.25/-9.17	-9.54/-9.29	-9.73/-10.47	-10.63/-10.47	-10.03/-9.11	-8.01/-7.33	-6.94/-6.77	-6.63/-6.62	-6.31/-6	-6.09/-6.26	-6.34/-6.35	-6.75/-7.64	-8.65/-9.29	-10.06/-10.16	-9.93/-9.7	-9.35/-8.89	-8.5/-7.68	-6.67/-6.58
Θ(15°)	-7.03/-6.53	-6.28/-6.27	-7.07/-7.9	-8.38/-8.45	-10.1/-13.4	-11.97/-13.23	-14.75/-15	-18.11/-12.35	-13.1/-14.42	-14.67/-13.3	-11.99/-11.49	-11.09/-10.43	-9.28/-8.07	-7.3/-6.71	-6.38/-6.24	-5.99/-6.17	-6.79/-8.27	-10.02/-11.8	-12.18/-10.71	-9.06/-9.97	-7.13/-6.78	-6.5/-6.17	-6.32/-7.35	
Θ(22.5°)	-7.01/-6.1	-4.86/-4.81	-5.64/-5.85	-6.11/-5.66	-6.27/-6.67	-7.54/-9.27	-11.1/-12.27	-11.68/-10.71	-9.88/-9.34	-10.93/-13.41	-17.23/-17.76	-18.77/-17.44	-15.1/-10.71	-8.66/-7.89	-11.91/-9.05	-12.08/-11.59	-13.97/-15.87	-19.36/-17.8	-16.43/-12.77	-10.93/-9.45	-4.55/-5.79	-4.93/-4.61	-5.61/-6.66	
Θ(30°)	-5.4/-5.47	-4.15/-3.68	-4.69/-6.27	-6.74/-6.27	-5.96/-5.35	-5.14/-5.8	-6.55/-7.1	-7.79/-8.8	-9.61/-9.78	-9.08/-9.47	-11.22/-14.98	-14.57/-10.52	-7.5/-6.64	-8.01/-10.35	-13.52/-15.67	-16.34/-17.46	-19.36/-18.08	-18.43/-18.49	-18.61/-18	-17.82/-17.7	-15.28/-12.67	-11.4/-8.76	-5.6/-3.81	-3.96/-4.42
Θ(37.5°)	-6.14/-6.79	-6.03/-4.31	-3.76/-4.76	-5.41/-5.38	-5.05/-5.38	-5.04/-5.16	-5.71/-7.1	-10.19/-11.3	-11.7/-11.93	-10.44/-9.06	-10.66/-16.59	-14.84/-8.15	-5.24/-5.96	-8.26/-8.16	-7.84/-8.58	-10.03/-13.37	-13.66/-11.7	-11.92/-13.7	-15.6/-18.11	-18.41/-12.54	-8.57/-12.1	-5.97/-5.35	-5.37/-5.33	-5.76/-5.72
Θ(45°)	-9.04/-7.34	-6.61/-5.52	-5.91/-7.08	7.2/-6.7	-6.91/-7.23	-7.2/-7.5	-8.28/-9.05	-10.12/-11.36	-12.21/-13.75	-12.56/-9.23	-8.46/-10.61	-11.68/-8.44	-5.23/-5.38	-9.47/-10.23	-8.41/-8.77	-7.69/-6.8	-5.2/-4.78	-6.61/-9.04	-12.22/-15.87	-18.74/-19.05	-12.57/-7.78	-7.07/-7.3	7.24/-4.6	-4.42/-7.37
Θ(52.5°)	-8.5/-8.82	-10.36/-12.3	-10.42/-10.16	-5.38/-4.02	-4.85/-5.29	-4.66/-4.4	-5.46/-6.32	-6.6/-7.13	-8.71/-10.2	-9.19/-6.84	-6.78/-8.71	-11.15/-9.72	-8.53/-10.8	-11.66/-7.07	-6.58/-7.13	-6.14/-6.3	-6.73/-7.77	-10.33/-13.92	-14.32/-15.96	-18.25/-14.09	-12.24/-9.39	-8.06/-6.69	-6.38/-4.49	-2.28/-2.49
Θ(60°)	-14.66/-11.48	-10.11/-11.83	-12.74/-18.58	-8.35/-6.13	-6.31/-8.4	-6.68/-8.64	-7.27/-6.16	-4.96/-5.05	-7.32/-9.73	-10.62/-8.4	-6.99/-6.59	-11.1/-10.01	-9.92/-13.09	-14.83/-11.47	-8.94/-8.22	-7.75/-6.74	-8.9/-14.7	-15.08/-13.07	-11.37/-14.78	-19.32/-18.46	-10.84/-10.27	-10.6/-8.66	-9.49/-7.69	-4.78/-6.21
Θ(67.5°)	-11.16/-16.87	-11.81/-8.06	-6.45/-8.5	-7.38/-7.4	-7.59/-8.58	-11.09/-16.96	-14.9/-10.92	-6.71/-5.96	-7.8/-13.35	-18.37/-12.68	-9.23/-10.53	-11.44/-11.86	-17.22/-17.39	-17.33/-14	-18.45/-18	-14.56/-12.17	-16.67/-18.17	-11.13/-10.21	-13.11/-16.63	-17.83/-18.66	-12.08/-9.17	-11.64/-13.42	-11.33/-11.69	-5.7/-6.24
Θ(75°)	-2.57/-5.87	-9.48/-9.16	-8.16/-7.25	-5.65/-6.9	-7.58/-7.13	-6.7/-7.82	-10.36/-15.28	-19/-10.27	-7.12/-9.9	-12.65/-16.75	-13.2/-13.59	-16.44/-14.38	-16.49/-16.23	-16.55/-16.22	-17.77/-17.27	-15.16/-13.41	-15.89/-15.53	-19.28/-8.97	-16.84/-15.18	-11.89/-11.65	-12.86/-13.5	-11.08/-8.9	-4.86/-2.74	
Θ(82.5°)	-2.23/-3.67	-5.92/-5.07	-9.98/-18.88	-17.87/-13.45	-12.55/-10.66	-8.41/-8	-8.54/-9.11	-11.04/-15.79	-16.66/-16.3	-13.97/-15.99	-18.66/-16.75	-18.92/-18.72	-12.87/-10.31	-9.22/-9.71	-12.66/-9.2	-9.62/-12.18	-18.29/-11.54	-11.23/-13.09	-16.01/-14.07	-8.77/-11.19	-12.31/-15.79	-12.77/-9.4	-9.4/-14.25	-4.92/-3.04
Θ(90°)	-6.65/-6.29	-9.53/-3.82	-4.05/-5.38	-7.24/-10.29	-11.76/-14.22	-18.28/-18.42	-17/-11.95	-9.27/-8.77	-11.41/-11.77	-11.06/-14.07	-18.15/-9.97	-8.69/-13.28	-11.92/-14.6	-9.86/-7.02	-10.61/-9.98	-12.28/-11.27	-13.39/-14.47	-10.2/-10.84	-17.19/-14.16	-10.93/-9.4	-9.03/-9.59	-18.55/-10.98	-8.85/-13.79	-13.82/-9.53
Θ(97.5°)	-9.45/-6	-10.19/-11.23	-8.2/-8.58	-11.68/-15.36	-14.6/-14.62	-16.82/-13.67	-12.86/-17.63	-17.79/-10.9	-8.89/-6.47	-6.16/-14.25	-15.63/-8.69	-7.95/-13.35	-8/-12.47	-7.06/-6.74	-14.02/-8.95	-8.36/-8.75	-6.52/-9.56	-5.7/-5.79	-12.03/-19.05	-6.59/-4.98	-5.86/-11.39	-9.95/-10.34	-7.84/-11.62	-14.6/-15.47
Θ(105°)	-14.07/-6.52	-8.15/-9.5	-9.58/-11.82	-10.69/-11.45	-14.25/-18.01	-17.51/-12.8	-10.65/-8.47	-7.9/-10.68	-10.02/-7.91	-7.55/-9.15	-10.28/-7.2	-5.31/-8.97	-5.82/-8.69	-8.1/-8.08	-11.42/-11.02	-10.39/-6.43	-7.1/-7.64	-5.18/-5.07	-8.25/-16.2	-7.06/-6.59	-10.47/-14.1	-15.33/-15.87	-13.1/-16.19	-15.73/-15.26
Θ(112.5°)	-10.14/-5.7	-7.55/-8.36	-8.29/-8.39	-12.18/-9.1	-11.24/-9.19	-9.13/-9.74	-9.72/-9.96	-9.08/-7.39	-5.78/-6.06	-12.93/-11.29	-7.46/-5.78	-10.88/-12.67	-11.04/-7.91	-7.61/-7.83	-7.43/-4.03	-6.56/-7.19	-6.39/-5.39	-7.96/-12.95	-14.27/-7.57	-11.69/-10.64	-7.32/-7.38	-10.15/-9.02	-14.48/-17.57	
Θ(120°)	-10.26/-7.58	-6.6/-6.06	-7.61/-9.84	-10.48/-10.53	-7.17/-7.57	-8.37/-9.46	-12.58/-19.01	-18.46/-13.03	-6.36/-5.48	-6.64/-3.29	-5.34/-7.59	-10.82/-7.09	-5.18/-7.53	-9.55/-6.27	-11.6/-6.61	-4.75/-10.07	-9.27/-9.65	-12.03/-9.13	-18.29/-12.6	-18.54/-18.68	-12.86/-10.03	-10.87/-5.7	-4.46/-11.12	
Θ(127.5°)	-5.84/-9.39</																							



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(120°)	-7.96/-9.19	-2.59/-1.3	-0.81/-4.82	-4.1/-4.4	-14.16/-10.96	-7.57/-3.92	-2.89/-3.68	-6.39/-3.85	-0.95/-1.8	-3.86/-2.71	-0.93/-3.4	-4.1/-11.77	-10.54/-6.31	-1.77/-1.26	-0.47/0.6	1.04/0.78	-0.16/-0.8	-1.26/-0.93	-1.35/-3.14	-1.36/0.12	-2.51/-3.5	-0.70/-48	0.69/-1.11	0.44/-2.22
Θ(127.5°)	-17.17/-14.84	-4.59/-1.26	-2.81/-6.2	-7.22/-7.3	-16.83/-8.41	-8.47/-6.37	-5.65/-5.67	-4.9/-3.02	-1.44/-1.31	-1.79/-0.75	-0.2/-2.22	-5.47/-13.08	-15.64/-6.31	-1.55/-0.08	0.35/-0.1	-0.33/-0.26	-1.16/-2.21	-1.04/-0.41	-1.74/-2.16	-2.06/-3.96	-9.36/-6.18	-1.21/0.71	-0.08/-2.74	-4.87/-9.74
Θ(135°)	-18.23/-18.45	-6.24/-3.16	-7.86/-9.24	-11.72/-10.82	-18.01/-8.03	-9.59/-12.85	-8.26/-6.65	-5.04/-2.34	-0.2/-0.71	-2.98/-4.2	-3.71/-1.78	-2.44/-6.92	-18.18/-18.17	-7.08/-3.64	-3.17/-2.38	-1.38/-1.21	-1.51/-1.71	-2.83/-5.06	-5.67/-5.66	-8.2/-10.13	-7.91/-5.57	-4.41/-3.83	-3.68/-4.43	-7.03/-16.72
Θ(142.5°)	-17.85/-13.63	-9.39/-7.98	-7.39/-11.53	-18.26/-13.9	-16.6/-10.5	-11.28/-16.82	-11.01/-6.63	-4.94/-4.72	-5.93/-6.15	-4.61/-3.65	-4.79/-3.87	-4.31/-10.48	-19/-18.78	-14.73/-9.01	-5.02/-3.98	-4.18/-4.02	-3.93/-5.38	-7.55/-5.84	-3.97/-3.48	-3.74/-3.2	-3.01/-4.45	-6.98/-9.83	-9.4/-8.64	-11.6/-18.85
Θ(150°)	-19.18/-18.31	-12.53/-9.25	-9.9/-14.42	-17.99/-19.09	-18.1/-11.78	-14.27/-11.18	-10.73/-6.76	-6.94/-5.88	-5.57/-3.43	-2.78/-2.75	-5.47/-1.4	-12.57/-11.02	-16.16/-17.35	-14.21/-19.28	-9.06/-9.18	-8.39/-6.43	-4.77/-3.87	-3.23/-2.99	-3.35/-4.2	-5.24/-6.22	-8.37/-8.77	-7.52/-8.75	-12.28/-16.19	-17.89/-18.83
Θ(157.5°)	-16.6/-13.33	-12.27/-11.98	-10.71/-10.59	-12.92/-15.91	-15.8/-17.92	-17.64/-13.66	-11.19/-9.8	-9.39/-8.99	-7.03/-5.63	-6.26/-7.88	-1.35/-16.06	-18.88/-17.97	-19.23/-13.52	-11.61/-11.53	-11.63/-10.63	-9.39/-8.03	-8.23/-10.25	-12.74/-13.54	-11.26/-8.63	-8.23/-9.03	-7.79/-9.03	-11.77/-14.15	-17.59/-19.25	
Θ(165°)	-17.05/-17.12	-17.09/-17.5	-17.97/-18.33	-18.8/-17.82	-14.99/-12.99	-11.61/-9.53	-9.3/-10.47	-11.44/-13.16	-16.87/-17.82	-12.3/-8.2	-6.63/-6.74	-8.64/-12.76	-17.58/-16.16	-13.91/-13.47	-14.2/-14.46	-16.66/-18.98	-19.23/-17.93	-16.79/-16.66	-18.46/-18.35	-18.21/-18.49	-18.39/-17.78	-18.56/-14.99	-15.1/-18.65	-18.72/-19.13
Θ(172.5°)	-16.48/-14.44	-11.66/-10.78	-11.09/-11.86	-13.3/-14	-14.47/-14.31	-14.32/-15.49	-16.68/-16.04	-14.97/-13.84	-14.02/-15.43	-13.11/-11.43	-10.88/-11.75	-13.86/-17.13	-18.57/-18.89	-16.65/-16.34	-17.82/-17.03	-15.96/-14.87	-12.8/-10.76	-9.5/-9.95	-11.03/-12.69	-14.08/-15.25	-15.3/-16.19	-16.49/-16.25	-17.26/-18.31	-17.85/-18.03
Θ(180°)	-14.37/-14.8	-15.89/-17.51	-17.44/-14.93	-12.92/-12.25	-11.76/-11.02	-10.94/-11.25	-11.49/-11.9	-13.01/-13.25	-14.66/-15.48	-15.12/-14.37	-13.48/-13.15	-13.39/-13.41	-13.82/-12.82	-13.63/-15.28	-17.02/-17.23	-15.31/-13.78	-13.31/-13.67	-14.97/-16.23	-17.21/-16.49	-16/-17.52	-18.58/-17.7	-17.72/-17.44	-15.99/-14.21	-12.56/-12.34
Freq(Hz)	5.2GPol	ThetaAnt. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-14.12/-15.2	-16.5/-17.9	-18.21/-18.33	-16.99/-16.58	-14.93/-15.24	-16.89/-15.67	-17.17/-15.36	-12.59/-12.52	-13.2/-13.48	-13.79/-13.96	-12.65/-12.71	-12.32/-12.92	-13.26/-13.98	-13.8/-14.06	-14.75/-14.64	-15.13/-14.57	-14.81/-17.1	-17.99/-16.5	-16.79/-17.08	-14.95/-14.01	-14.11/-14.53	-14.89/-15.44	-15.34/-14.71	
Θ(7.5°)	-11.43/-11.02	-11.49/-12.27	-13.73/-15.2	-14.04/-12.7	-12.41/-13.44	-17.28/-18.92	-18.32/-18.35	-18.03/-18.72	-18.94/-17.43	-15.97/-13.86	-12.93/-13.1	-13.45/-13.4	-13.54/-14.07	-15.2/-17.31	-18.98/-17.28	-17.77/-17.97	-18.46/-18.26	-15.54/-17.72	-17.11/-17.91	-17.97/-15.18	-13.07/-12.39	-12.8/-13.35	-13.83/-13.57	-13.99/-12.48
Θ(15°)	-13.2/-13.12	-11.6/-12.16	-13.16/-13.33	-14.23/-19.05	-17.83/-15.59	-15.03/-15.14	-16.13/-18.39	-19.12/-15.71	-18.07/-10.65	-17.71/-18.85	-17.57/-16.3	-14.1/-12.13	-12.02/-12.84	-15.33/-18.88	-18.46/-18.66	-19.34/-18.55	-18.14/-15.85	-18.04/-18.85	-18.58/-18.03	-18.12/-15.57	-13.58/-14.83	-18.77/-18.34	-18.17/-16.14	-14.72/-13.89
Θ(22.5°)	-15.5/-17.78	-18.2/-18.86	-17.12/-17.85	-13.13/-12.17	-15.04/-18.02	-18.34/-12.03	-10.7/-12.04	-18.19/-16.56	-17.17/-17.49	-19.29/-17.83	-17.3/-18.17	-19.13/-18.37	-18.34/-18.68	-17.68/-17.9	-17.43/-16.44	-13.98/-13.12	-14.95/-18.22	-16.83/-19.05	-18.44/-17.6	-17.53/-17.68	-18.12/-18.63	-14.61/-13.03	-13.26/-14.72	
Θ(30°)	-15.58/-17.67	-18.19/-17.46	-16.82/-14.95	-15.34/-18	-18.04/-13.83	-13.09/-13.17	-12.05/-12.14	-12.23/-13.32	-17.59/-17.8	-13.93/-13.2	-15.22/-18.56	-18.27/-17.63	-18.49/-17.44	-18.63/-15.51	-16.07/-18.25	-14.71/-11.6	-10.72/-10.82	-12.27/-16.16	-17.68/-18.75	-17.4/-17.98	-17.99/-18.25	-18.54/-17.97	-17.37/-18.58	-18.46/-17.14
Θ(37.5°)	-14.54/-14.75	-14.79/-13.17	-11.62/-12.48	-14.47/-17.56	-19.09/-17.47	-17.13/-15.76	-13.26/-12.66	-12.53/-13.02	-15.29/-19.63	-16.03/-15.13	-18.13/-17.62	-16.77/-14.25	-18.31/-13.34	-12.46/-11.9	-14.68/-14.41	-10.83/-9.84	-8.59/-10.98	-15.85/-18.25	-18.85/-17.61	-17.7/-17.47	-16.9/-14.57	-16.73/-17.62	-18.78/-16.3	-15.05/-14.16
Θ(45°)	-18.24/-18.51	-16.4/-15.51	-17.48/-19.02	-18.03/-18.2	-18.44/-17.83	-17.07/-12.91	-11.43/-13.64	-15.7/-16.63	-17.45/-18.81	-18.26/-17.51	-14.65/-18.29	-16.44/-12.52	-15.75/-18.88	-11.93/-11.36	-9.39/-9.82	-11.58/-14.48	-15.3/-18.41	-19.06/-16.68	-14.09/-14.57	-19.33/-18.29	-17.17/-18.32	-19.06/-17.46	-18.31/-17.34	
Θ(52.5°)	-18.56/-18.26	-17.19/-19.32	-18.32/-18.3	-18.1/-18.53	-18.66/-18.64	-18.5/-19.02	-15.99/-14.75	-16.79/-17.82	-18.13/-15.98	-18.45/-18.71	-17.54/-18.47	-9.73/-10.02	-17.68/-12.28	-9.58/-10.92	-14.57/-15.69	-13.29/-12.33	-13.17/-14.81	-17.74/-19.06	-17.22/-14.24	-14.12/-16.64	-16.36/-16.39	-19.09/-18.29	-18.56/-18.13	-17.21/-16.68
Θ(60°)	-12.8/-16.7	-17.86/-15.5	-10.29/-17.4	-13.26/-12.61	-12.67/-14.58	-16.65/-16.98	-17.99/-16.46	-17/-18.01	-18.57/-18.62	-15.69/-17.88	-18.08/-18.76	-16.16/-10.96	-13.51/-14.23	-13.97/-15.96	-14.54/-14.28	-16.62/-15.61	-18.44/-18.5	-18.5/-18.45	-15.48/-13.93	-16.35/-18.9	-15.78/-17.23	-12.44/-13.53	-17.68/-14.25	
Θ(67.5°)	-14.53/-18.27	-19.2/-19.23	-18.35/-18.04	-18.68/-17.39	-14.9/-8.85	-19.48/-7.78	-11.51/-17.9	-13.13/-10.74	-16.44/-18.08	-14.92/-15.56	-18.85/-17.56	-11.98/-9.77	-13.84/-17.92	-17.78/-17.68	-14.36/-13.9	-15.44/-17.69	-18.05/-18.17	-18.32/-14.52	-14.84/-14.02	-14.08/-13.59	-14.22/-15.02	-14.31/-17.87	-17.8/-14.34	
Θ(75°)	-15.55/-18.18	-14.33/-18.24	-17.49/-19.07	-19.21/-15.28	-14.14/-12.02	-9.19/-7.92	-9.94/-13.75	-16.83/-16.54	-16.84/-17.94	-18.78/-15.72	-17.82/-14.62	-13.72/-14.75	-16.37/-18.05	-19.08/-16.64	-18.66/-18.44	-15.17/-14.38	-18.3/-17.62	-18.57/-18.33	-18.49/-18.48	-14.04/-12.67	-10.46/-10.01	-12.18/-18.27	-18.49/-17.53	-18.87/-13.51
Θ(82.5°)	-14.53/-18.54	-16.28/-14.19	-12.38/-15.4	-13.68/-14.55	-12.12/-11.36	-13.22/-14.58	-12.47/-13.92	-18.05/-17.26	-18.28/-18.44	-17.23/-18.42	-17.43/-18.76	-16.68/-18.64	-16.57/-18.79	-16.75/-18.55	-17.82/-18.5	-18.12/-17.22	-18.09/-15.69	-16.95/-17.58	-17.83/-19.41	-10.43/-10.96	-14.84/-18.93	-17.47/-18.93	-17.85/-18.85	
Θ(90°)	-14.38/-17.69	-15.18/-13.35	-16.54/-18.71	-13.79/-9.09	-7.42/-7.96	-12.13/-17.59	-18.68/-13.93	-14.31/-18.04	-17.62/-18.7	-18.2/-17.46	-18.28/-19.15	-15.62/-18.66	-13.95/-15.31	-18.13/-18.1	-18.02/-16.57	-15.58/-18.4	-17.7/-17.27	-15.74/-15.47	-14.57/-14.03	-15.22/-14.45	-18.17/-18.94	-18.9/-17.56	-19.16/-16.29	
Θ(97.5°)	-13.7/-19.24	-15.25/-12.89	-16.83/-12.96	-8.4/-7.38	-8.71/-11.97	-14.77/-18.88	-18.04/-17.79	-17.62/-17.6	-18.29/-19	-14.8/-16.76	-18.72/-13.01	-18.35/-11.65	-14.35/-16.07	-12.09/-12.79	-15.08/-18.25	-18.7/-15.24	-13.84/-16.5	-18.1/-17.56	-18.55/-17.34	-17.96/-15.66	-13.39/-18.88	-18.48/-15.82	-13.61/-17.45	-18.24/-14.65
Θ(105°)	-16.56/-15.76	-11.58/-8.84	-10.11/-13.35	-11.41/-11.62	-12.63/-15.53	-18.49/-17.67	-18.8/-17.97	-17.25/-16.56	-14.29/-12.82	-17.48/-11.08	-12.05/-12.13	-13.16/-14.44	-10.56/-15.85	-13.1/-9.3	-11.57/-16.05	-14.66/-15.93	-17.28/-15.28	-18.79/-17.52	-13.58/-14.59	-14.67/-17.33	-18.97/-17.66	-18.06/-17.93	-13.86/-17.75	
Θ(112.5°)	-16.13/-14.32	-9.22/-7.68	-9.77/-16.46	-12.5/-10.46	-13.74/-18.67	-18.98/-19.06	-18.68/-17.42	-18.28/-15.56	-13.76/-14.2	-12.49/-10.68	-11.26/-12.41	-13.01/-13.62	-15.73/-16.85	-16.04/-6.99	-8.95/-14.05	-19.14/-15.33	-13.53/-14.75	-13.96/-14.09	-15.77/-13.86	-13.8/-18.62	-18.03/-12.56	-10.95/-14.37	-18.18/-18.26	-13.91/-17.85
Θ(120°)	-8.18/-8.07	-7.81/-7.12	-7.92/-13.05	-16.91/-15.25	-18.99/-17.95	-17.7/-14.55	-12.35/-17.89	-18.42/-17.31	-18.02/-12.6	-8.03/-9.29	-11.65/-10.93	-12.05/-18.6	-15.05/-10.83	-11.51/-11.43	-10.29/-10.28	-13.32/-17.5	-18.12/-12.26	-9.4/-13.71	-18.3/-16.24	-13.41/-19.35	-12.27/-9.15	-9.43/-14.5	-18.04/-13.11	-12.79/-13.91
Θ(127.5°)	-6.34/-6.38	-8.65/-9.29	-7.9/-16.12	-17.7/-17.92	-14.17/-13.5	-14.94/-14.86	-11.74/-9.06	-8.84/-9.6	-11.22/-13.27	-10.93/-9.93	-11.73/-9.22	-8.84/-11.98	-11.2/-9.82	-14.22/-18.48	-18.89/-18.19	-13.09/-13.5	-13.88/-15.04	-14.87/-18.16	-9.97/-10.97	-17.18/-17.58	-13.55/-13.93	-18.46/-9.35		
Θ(135°)	-6.85/-7.04	-7.2/-7.88	-12.85/-17.7	-17.79/-16.52	-17.99/-18.57	-18.2/-18.44	-11.8/-12.18	-10.57/-11.49	-10.81/-18.6	-11.15/-1.59	-10.77/-17.98	-15.79/-11.09	-11.09/-15.03	-15.78/-12.09	-13.32/-18.55	-18.24/-12.7	-14.67/-17.16	-18.28/-13.42	-11.69/-15.04	-18.33/-18.91	-11.08/-10.83	-18.46/-17.31	-14.76/-17.81	-19.01/-9.14
Θ(142.5°)	-11.59/-9.58	-8.93/-9.93	-14.47/-10.86	-6.88/-5.38	-7.58/-15.14	-18.16/-18.73	-13.2/-13.47	-16.03/-12.69	-10.51/-12.23	-14.25/-13.69	-17.12/-17.6	-18.09/-16.22	-13.12/-13.08	-17.46/-18.81	-15.09/-9.09	-10.9/-11.89	-11.9/-14.42	-17.79/-17.02	-11.83/-15.2	-10.94/-10.07	-8.39/-7.4	-10.37/-18.06	-14.91/-18.66	-18.91/-14.67
Θ(150°)	-17.79/-16.5	-14.66/-17.47	-19.3/-16.7	-12.57/-12.77	-18.48/-16.57	-11.51/-12.34	-18.05/-17.3	-15.04/-9.88	-7.59/-7.31	-6.96/-6.65	-7.86/-11.1	-17.83/-17.75	-13.55/-10.41	-8.99/-8.55	-11.03/-14.99	-18.45/-15.81	-16.94/-18.71	-12.65/-11.97	-15.92/-18.66	-17.87/-17.15	-19.13/-18.65	-18.42/-18.44	-16/-16.66	-17.5/-17.52
Θ(157.5°)	-18.5/-18.6	-18.54/-17.31	-15.1/-12.85	-12.22/-14.17	-17.73/-17.99	-14.39/-10.7	-8.61/-9.01	-11.38/-12.16	-16.83/-6.89	-8.72/-4.86	-11.29/-16.82	-15.42/-10.86	-8.72/-4.86	-9.99/-12.76	-14.83/-15.91	-18.23/-18.61	-17.41							



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(180°)	-15.72/-17.44	-17.05/-14.96	-13.76/-12.7	-12.77/-13.93	-15.55/-15.43	-11.98/-9.21	-7.58/-7.9	-8.93/-9.81	-8.96/-8.13	-8.57/-10.03	-12.18/-13.51	-13.91/-12.64	-12.03/-11.83	-12.01/-12.45	-13.32/-14.98	-17.39/-18.31	-18.25/-13.43	-11.56/-11.56	-12.16/-9.73	-7.51/-7.14	-7.8/-8.03	-8.83/-10.33	-12.12/-14.96	-17.6/-18.76
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°)	-11.81/-11.01	-10.74/-10.51	-9.97/-9.36	-8.58/-8.15	-8.13/-9.65	-10.95/-10.43	-11.88/-14.4	-17.06/-18.62	-18.19/-17.99	-17.79/-18.08	-17.56/-14.61	-12.41/-11.75	-11.01/-9.86	-9.14/-8.18	-7.69/-8.4	-8.8/-9.24	-9.36/-9.63	-10.94/-15.26	-16.88/-18.62	-17.78/-17.91	-18.97/-18.52	-17.7/-15.24	-14.5/-12.95	-12.52/-12.73
Θ(7.5°)	-9.97/-9.61	-9.29/-9.18	-9.93/-11.27	-10.83/-11.41	-14.18/-19.36	-18.77/-17.16	-15.53/-13.08	-12.49/-13.08	-14.13/-13.82	-11.69/-10.92	-11.69/-10.96	-8.44/-8.46	-8.87/-9.65	-9.26/-9.14	-9.03/-10.39	-11.16/-11.91	-13.44/-17.46	-19.08/-18.07	-18.37/-18.71	-16.71/-14.39	-12.93/-11.91			
Θ(15°)	-8.02/-8.03	-7.98/-9.93	-11.15/-13.54	-16.74/-17.73	-16.18/-12.99	-13.58/-11.54	-9.28/-9.33	-9.21/-10.18	-10.45/-9.31	-9.39/-11.2	-13.27/-16.09	-19.19/-18.99	-16.27/-11.94	-8.7/-6.78	-5.92/-5.69	-6.34/-8.13	-10.48/-11.69	-11.71/-12.05	-14.2/-16.35	-16.24/-17	-18.47/-16.66	-16.69/-14.36	-12.5/-11.22	-9.9/-9.07
Θ(22.5°)	-5.87/-6.69	-8.05/-10.58	-15.3/-18.24	-15.85/-11.04	-11.12/-12.77	-14.99/-14.18	-18.3/-14.97	-10.55/-10.61	-10.73/-10.6	-10.1/-10.18	-11.2/-14.52	-17.39/-17.53	-15.11/-9.72	-6.82/-5.41	-4.71/-4.93	-6.93/-11.95	-18.04/-18.41	-18.74/-18	-18.42/-19.31	-18.95/-17.74	-17.45/-18.58	-17.83/-18.34	-13.52/-9.75	-7.49/-6.11
Θ(30°)	-5.7/-6.28	-7.76/-9.03	-8.94/-7.32	-7.66/-11.16	-17.4/-12.01	-11.47/-13.53	-11.87/-10.59	-11.66/-13.78	-9.94/-6.82	-6.28/-6.65	-7.47/-9.02	-11.89/-14.75	-13.96/-10.71	-7.69/-5.85	-5.51/-6.77	-15.69/-10.47	-9.61/-8.78	-8.18/-8.21	-8.74/-10.13	-11.86/-14.23	-17.05/-17.56	-17.52/-12.4	-8.8/-6.46	
Θ(37.5°)	-7.81/-8.69	-10.62/-12.26	-12.76/-12.1	-12.37/-15.04	-18.88/-17.72	-12.3/-9.17	-7.29/-7.92	-11.31/-12.97	-15.91/-14.08	-10.71/-7.52	-5.71/-5.93	-7.65/-7.52	-6.14/-6.42	-7.47/-7.11	-7.28/-11.06	-18.04/-13.05	-9.08/-10.33	-13.15/-14.61	-11.37/-9.57	-9.34/-9.46	-9.87/-10.08	-12.72/-18.11	-18.05/-19.16	-11.58/-7.75
Θ(45°)	-10.2/-9.24	-8.88/-9.74	-11.49/-10.15	-9.09/-10.47	-12.72/-15.33	-15.33/-14.83	-11.76/-11.67	-14.58/-19.1	-19.06/-17.79	-17.33/-11.88	-7.08/-6.66	-9.1/-8.62	-4.34/-3.1	-5.94/-8.91	-9.67/-16.01	-17.85/-12.84	-10.45/-13.74	-16.88/-16.94	-15.63/-18.62	-13.05/-8.92	-8.69/-10.7	-16.19/-18.15	-17.62/-12.64	
Θ(52.5°)	-11.91/-11.71	-12.56/-14.45	-15.36/-13.35	-12.68/-12.81	-11.95/-12.34	-13.77/-11.58	-8.94/-8.85	-13.52/-13.28	-13.83/-16.69	-16.97/-14.47	-12.42/-12.09	-18.62/-12.43	-5.11/-2.9	-5.07/-9.48	-13.09/-17.62	-18.67/-18.21	-14.57/-10.89	-10.11/-13	-18.3/-18.69	-18.14/-16.18	-11.99/-10.7	-11.93/-17.93	-12.83/-12.46	
Θ(60°)	-16.25/-11.97	-12.11/-14.05	-14.67/-15.72	-14.36/-12.42	-10.62/-8.88	-7.53/-6.11	-5.59/-7.18	-10.17/-10.71	-8.65/-9.28	-16.53/-15.85	-15.75/-11.54	-15.92/-10.86	-8.43/-6.61	-7.5/-8.35	-11.17/-17.04	-18.82/-16.31	-10.8/-8.35	-7.74/-12.67	-18.14/-18.32	-16.75/-17.48	-18.28/-17.03	-11.22/-11.32	-13.54/-12.45	-12.02/-16.83
Θ(67.5°)	-10.69/-6.73	-9.7/-15.33	-12.18/-14.43	-15.38/-15.31	-17.02/-17.3	-8.09/-6.17	-8.08/-15.28	-17.61/-19.12	-17.79/-12.15	-16.52/-19.07	-12.79/-12.15	-16.82/-13.98	-9.52/-10.62	-14.25/-12.31	-9.24/-9.89	-12.49/-18.96	-13.84/-10.02	-10.71/-11.89	-16.56/-18.56	-14.82/-13.43	-11.31/-14.36	-9.38/-7.37	-10.08/-12.51	-14.93/-18.8
Θ(75°)	-7.84/-6.27	-11.57/-15.05	-15.21/-17.9	-18.72/-12.54	-15.46/-14.46	-11.83/-10.73	-10.69/-10.35	-9.25/-10.95	-17.93/-18.1	-19.07/-11.1	-12.61/-17.85	-16.82/-18.19	-16.46/-15.1	-19.17/-15.93	-17.89/-19.74	-8.05/-10.66	-17.2/-10.65	-7.62/-10.6	-18.71/-14.57	-8.74/-7.62	-6.72/-8.05	-8.59/-6.83	-8.72/-15.14	-17.59/-16.94
Θ(82.5°)	-6.11/-4.04	-7.19/-17.43	-11.86/-11.48	-13.23/-18.9	-10.57/-14.25	-12.95/-6.93	-9.48/-17.95	-16.35/-15.81	-19.04/-13.1	-16.52/-15.25	-11.64/-10.15	-9.3/-18.63	-15.08/-9.15	-18.04/-10.41	-8.19/-10.22	-8.86/-8.37	-14.24/-18.1	-7.12/-7.36	-9.78/-12	-9.49/-8.82	-10.16/-9.21	-7.45/-7.16	-10.09/-17.48	-13.31/-9.2
Θ(90°)	-11/-8.37	-13.16/-14.12	-10.62/-11.05	-18.2/-8.99	-4.8/-6.67	-12.59/-18.69	-12.19/-13.62	-18.88/-12.14	-17.12/-13.51	-10.18/-13.05	-7.87/-7	-6.21/-5.77	-7.57/-10.13	-10/-17.04	-15.87/-10.64	-9.78/-12.84	-8.65/-6.38	-9.06/-7.71	-9.79/-18.96	-9.58/-7.43	-5.32/-7.3	-4.22/-3.3	-12.84/-10.66	-11.43/-13.6
Θ(97.5°)	-10.03/-12.55	-17.94/-14.97	-8.28/-7.95	-8.61/-4.34	-2.41/-5.46	-14.69/-14.42	-7.66/-8.5	-13.82/-8.5	-11.34/-13.33	-6.39/-9.4	-2.88/-0.23	-3.71/-4.65	-4.65/-8.05	-7.23/-6.25	-11.43/-17.71	-14.46/-8.12	-9.63/-7.77	-3.28/-6.23	-12.92/-12.91	-6.94/-5.58	-7.76/-9.42	-9.93/-17.38	-11.29/-8.6	-14.84/-14.27
Θ(105°)	-12.98/-17.45	-8.05/-4.93	-5.71/-7.1	-3.8/-2.46	-3.94/-10.75	-18.47/-10.62	-7.12/-8.74	-10.3/-6.95	-7.26/-16.93	-7.97/-13.82	-7.87/-0.49	-0.23/-7.03	-8.04/-3.99	-4.12/-5.13	-2.97/-5.22	-13.61/-10.58	-5.91/-7.32	-12.57/-10.84	-11.21/-12.51	-5.33/-3.31	-3.46/-5.38	-8.76/-10.67	-5.84/-7.81	-14.56/-17.88
Θ(112.5°)	-18.02/-10.69	-4.33/-2.25	-7.13/-9.9	-4.45/-3.8	-6.39/-11.04	-13.26/-12.99	-12.14/-11.67	-11.99/-18.1	-6.26/-7.19	-8.61/-11.05	-7.66/-6.01	-0.81/-6.07	-10.73/-8.04	-2.4/-2.43	-1.79/-13.91	-10.24/-6.92	-5.53/-9.14	-6.03/-4.63	-11.42/-7.1	-4.35/-6.83	-11.87/-6.38	-4.87/-12.72	-17.46/-13.65	
Θ(120°)	-17.27/-4.06	-0.70/-0.7	-4.1/-15.28	-9.52/-8.38	-9.3/-11.2	-19.02/-4.56	-13.15/-4.77	-13.45/-15.95	-17.89/-10.6	-9.66/-6.4	-3.41/-2.58	-1.26/-3.27	-10.2/-18.39	-15.89/-4.86	-1.97/-13.43	-7.23/-6.39	-7.44/-10.93	-9.72/-4.94	-4.74/-5.27	-4.91/-4.2	-5.32/-12.41	-15.58/-11.86		
Θ(127.5°)	-9.15/-3.8	-1.97/-2.11	-5.65/-12.45	-14.77/-12.1	-14.16/-13.48	-18.06/-16.01	-18.58/-10.46	-6.92/-8.57	-18.53/-11.18	-10.99/-6.65	-1.35/-1.77	-5.99/-6.09	-15.59/-16.38	-18.05/-10.39	-4.32/-4.15	-5.54/-10.63	-8.21/-5.24	-4.38/-11.91	-18.96/-8.15	-4.31/-6.33	-8.21/-5.98	-3.65/-5.27	-12.5/-18.33	-15.79/-18.9
Θ(135°)	-2.25/-3.02	-4.83/-2.52	-8.23/-12.58	-19.19/-17.75	-11.12/-12.72	-14.77/-14.93	-17.11/-17.77	-15.33/-14.51	-11.19/-9.69	-12.47/-10.74	-6.05/-2.82	-5.27/-13.27	-16.05/-16.18	-8.15/-9.34	-18.09/-5.98	-3.18/-2.52	-14.6/-12.77	-9/-13.51	-13.88/-16.2	-10.41/-9.61	-5.62/-6.97	-14.6/-17.25	-17.48/-18.62	-18.2/-6.78
Θ(142.5°)	-4.85/-3.46	-3/-2.9	-8.19/-17.81	-13.67/-11.05	-16.72/-14.25	-17.09/-16.48	-9.12/-11.65	-19.2/-9.36	-17.76/-15.14	-13.77/-5.82	-3.99/-4.76	-6.02/-13.98	-5.62/-7.17	-13.78/-9.26	-16.78/-8.34	-6.75/-4.8	-5.49/-11.57	-10.68/-7.23	-5.71/-10.19	-17.84/-15.66	-5.28/-8.39	-18.19/-17.21	-17.44/-11.22	
Θ(150°)	-8.11/-8.72	-7.35/-3.46	-4.44/-12.25	-10.87/-7.27	-8.63/-12.86	-10.69/-11.61	-13.23/-16.42	-10.24/-7.59	-7.86/-7.21	-6.11/-3.94	-2.99/-5.29	-12.64/-12.81	-5.26/-3.79	-7.08/-19.06	-8.89/-5.72	-8.82/-16.39	-18.18/-10.15	-7.56/-7.21	-7.16/-8.56	-12.42/-14.42	-14.19/-14.46	-13.41/-11.86	-10.89/-12.13	-18.23/-15.12
Θ(157.5°)	-4.84/-5.09	-5.87/-4.72	-11.88/-17.77	-10.88/-9.14	-11.84/-18.21	-14.94/-15.71	-16.81/-13.85	-12.21/-10.48	-8.62/-5.92	-3.46/-1.64	-0.96/-2.82	-8.67/-11.5	-4.74/-1.95	-2.74/-7.25	-16.38/-16.87	-15.16/-14.97	-15.24/-9.98	-7.25/-9.3	-15.32/-17.9	-10.88/-10.04	-12.09/-13.63	-13.45/-14.56	-14.76/-13.68	-10.89/-6.46
Θ(165°)	-18.8/-17.23	-19.09/-18.74	-17.88/-12.02	-9.64/-8.95	-9.74/-14.18	-18.86/-16.4	-12.04/-11.21	-10.79/-13.11	-18.41/-16.93	-9.25/-6.9	-6.53/-7.07	-7.15/-3.57	-3.63/-3.07	-3.82/-5.32	-8.81/-4.14	-15.55/-11.49	-10.75/-13.28	-18.87/-15.53	-14.85/-14.82	-17.7/-18.3	-18.86/-16.85	-17.21/-16.32	-14.4/-14.45	-16.39/-18.17
Θ(172.5°)	-15.47/-15.29	-16.16/-15.54	-15.5/-14.85	-13.88/-13.65	-14.21/-17.59	-15.14/-11	-9.46/-9.07	-8.25/-9.12	-10.29/-12.23	-13.19/-13.07	-12.94/-11.55	-6.28/-6.2	-6.75/-7.56	-9.03/-11.27	-14.76/-15.8	-11.78/-10.34	-10.98/-12.35	-14.84/-14.12	-14.82/-14.31	-11.41/-10.51	-11.99/-13.23	-15.89/-17.84	-18.87/-17.98	
Θ(180°)	-9.78/-9.69	-10.26/-10.1	-9.83/-9.99	-10.46/-10.23	-9.8/-9.72	-11.24/-13.04	-15.97/-17.21	-16.39/-15.86	-15.3/-13.41	-11.83/-10.45	-9.9/-9.48	-9.02/-8.49	-8.02/-8.02	-8.07/-7.98	-7.92/-7.94	-8.23/-9.51	-10.57/-12.73	-12.74/-14.32	-15.63/-18.94	-18.46/-18.27	-18.19/-17.51	-14.6/-13.18	-13.75/-13.72	-12.76/-11.13
Freq(Hz)	5.785GPol.	PhiAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-13.34/-14.08	-15.95/-16.39	-16.88/-15.76	-12.47/-11.08	-11.37/-10.44	-8.47/-6.92	-6.41/-7.16	-8.06/-7.72	-7.04/-6.83	-7.55/-8.42	-8.66/-8.88	-10.16/-11.95	-13.63/-15.88	-16.95/-17.88	-18.53/-18.41	-15.34/-12.17	-9.74/-8.54	-6.76/-5.41	-5.76/-9.54	-5.58/-5.36	-5.58/-7.59	-6.75/-8.39	-9.13/-9.44	-9.29/-10.9
Θ(7.5°)	-10.92/-9.31	-18.35/-18.64	-18.18/-15.68	-10.7/-8.51	-7.29/-6.48	-5.22/-6.82	-4.22/-3.85	-4.77/-4.91	-5.41/-5.36	-6.21/-7.33	-8.1/-8.89	-10.21/-11.36	-12.25/-13.93	-17.01/-18.57	-17.91/-18.7	-18.67/-17.86	-16.86/-12.91	-12.63/-14.72	-15.98/-13.75	-11.61/-9.68	-9.16/-9.5	-8.6/-7.94	-8.87/-10.57	
Θ(15°)	-10.54/-11.86	-12.93/-13.13	-12.5/-11.11	-9.65/-8.59	-7.8/-7.86	-8.34/-9.96	-10.82/-12.37	-16.51/-19.12	-18.21/-17.79	-18.64/-18.49	-17.16/-13.96	-13.67/-15.64	-18.44/-18.21	-17.95/-14.44	-11.91/-10.3	-9.04/-7.68	-7.07/-6	-4.78/-4.98	-5.51/-5.48	-6.08/-6.98	-8.62/-11.47	-12.27/-11.96	-10.39/-9.23	-8.57/-10.15
Θ(22.5°)	-8.81/-8.83	-9.03/-9.26	-8.97/-7.72	-6.35/-6.38	-6.91/-7.59	-9.25/-11.78	-12.23/-11.6	-9.54/-9.14	-9.26/-9.79	-10.28/-10.49	-10.39/-11.84	-9.12/-12.19	-18.21/-12.03	-8.99/-7.12	-5.99/-5.31	-3.74/-3.13	-2.37/-1.88	-1.86/-1.79	-2.23/-2.79	-3.6/-4.71	-5.36/-7.25	-10.68/-13.44	-12.9/-10.65	
Θ(30°)	-7.31/-6.79	-6.12/-6.63	-6.98/-5.49	-4.36/-4.72	-6.46/-8.62	-																		



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(22.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(30°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(37.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(45°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(52.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(60°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(67.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(75°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(82.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(90°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(97.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(105°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(112.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(120°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(127.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(135°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(142.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(150°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(157.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(165°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(172.5°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Θ(180°)	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf	-Inf/-Inf
Freq(Hz)	5.2GPol.	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°)	-3.51/-3.74	-4.27/-5.19	-6.82/-9.17	-11.46/-14.51	-18.66/-19.18	-13.74/-9.86	-8.22/-7.34	-6.43/-5.2	-3.63/-2.68	-2.25/-2.36	-2.73/-3.09	-3.13/-3.09	-3.07/-3.37	-4.15/-5.2	-6.75/-8.71	-11.21/-14.6	-17.85/-18.94	-18.09/-17.56	-12.12/-9.69	-8.15/-7.28	-6.20/-5.13	-4.06/-3.26	-3.03/-3.11	-3.33/-3.28
Θ(7.5°)	-4.08/-4.44	-4.94/-5.34	-6.14/-7.11	-8.32/-10.21	-12.43/-16.15	-18.39/-19.11	-14.92/-11.48	-9.59/-8.01	-6.71/-4.18	-2.76/-2.21	-2.23/-2.4	-2.48/-2.48	-2.7/-3.26	-4.43/-6.16	-8.25/-10.62	-12.83/-15.59	-17.84/-14.49	-11.73/-10.73	-9.27/-7.31	-4.83/-4.49	-4.24/-3.73	-3.51/-3.59	-3.87/-3.83	
Θ(15°)	-3.65/-4.17	-4.59/-4.94	-5.53/-6.33	-7.14/-8.69	-9.73/-11.03	-12.16/-14.63	-18.33/-17.43	-12.66/-9.61	-6.19/-4.54	-2.67/-1.57	-1.33/-1.32	-1.32/-1.36	-1.58/-2.41	-3.6/-5.3	-8.86/-6.38	-10/-11.53	-12.43/-11.26	-8.72/-6.96	-6.36/-6.04	-5.46/-4.94	-3.88/-4.24	-4.44/-4.02	-3.67/-3.38	
Θ(22.5°)	-2.58/-2.91	-3.46/-4.33	-5.69/-6.76	-7.35/-7.9	-8.71/-9.79	-10.78/-12.58	-16.64/-14.89	-10.92/-8.71	-6.42/-4.07	-2.38/-1.61	-1.65/-1.94	-2.23/-2.68	-3.35/-4.17	-5.13/-6.17	-6.85/-7.51	-8.63/-10.28	-12.17/-12.29	-10.91/-9.05	-7.49/-6.83	-5.78/-5.09	-4.49/-3.63	-3.36/-3.29	-3.3/-2.82	-2.41/-2.42
Θ(30°)	-1.26/-2.04	-2.97/-4.17	-5.09/-5.58	-5.81/-6.37	-6.99/-8.04	-9.11/-11.85	-13.89/-11.79	-8.7/-6.64	-5.46/-4.38	-3.6/-3.17	-3.59/-4.26	-3.53/-2.82	-2.89/-3.66	-4.39/-4.62	-5.14/-6.38	-8.75/-10.6	-10.7/-10.12	-9.18/-8.92	-9.06/-9.77	-9.01/-7.28	-5.89/-4.59	-3.51/-2.58	-2.11/-1.57	-1.42/-1.22
Θ(37.5°)	-1.75/-2.47	-3.27/-4.19	-4.7/-5.32	-5.62/-5.68	-6.15/-7	-8.98/-10.81	-10.89/-8.87	-6.16/-4.97	-5.29/-6.93	-6.28/-3.87	-2.61/-2.24	-1.86/-2.6	-5.24/-8.18	-8.07/-7.23	-6.61/-6.83	-7.56/-8.74	-9.62/-11.69	-16.55/-17.36	-17.84/-13.34	-9.99/-9.54	-7.22/-4.96	-3.96/-2.88	-1.76/-1.28	-1.34/-1.57
Θ(45°)	-1.83/-3.23	-3.73/-4.08	-4.01/-4.92	-5.32/-5.45	-5.94/-6.38	-8.38/-10.74	-10.64/-8.52	-7.47/-6.97	-6.41/-6.26	-6.1/-5.89	-6.15/-5.88	-6.1/-5.34	-5.19/-6.32	-8.2/-8.28	-6.59/-9.33	-14.33/-17.98	-18.68/-18.2	-14.8/-10.31	-10.12/-8.88	-8.22/-7.04	-4.07/-2.29	-1.06/-0.62	-0.44/-1.09	
Θ(52.5°)	-3.23/-3.99	-3.91/-4.96	-5.84/-6.57	-6.64/-6.69	-5.95/-6.39	-8.71/-12.52	-14.22/-10.54	-9.14/-10.97	-15.24/-12.81	-8.41/-6.1	-5.14/-4.28	-4.43/-6.06	-9.71/-8.22	-7.37/-8.72	-8.12/-7.95	-10.34/-13.48	-12.05/-11.1	-12.44/-11.65	-13.82/-15.55	-13.13/-13.25	-11.34/-7.5	-5.3/-3.47	-2.47/-1.51	-1.08/-2.23
Θ(60°)	-5.57/-7.24	-6.84/-6.24	-4.85/-4.2	-3.65/-3.16	-3.02/-3.81	-6.18/-9.87	-17.09/-17.91	-17.84/-17.71	-13.46/-8.92	-6.04/-3.98	-2.67/-2.72	-4.48/-6.68	-6.65/-6.26	-7.31/-7.85	-6.88/-6.01	-11.15/-13.59	-13.4/-11.55	-9.73/-10.76	-10.39/-9.62	-9.89/-10.62	-9.33/-6.78	-4.54/-3.43	-3.63/-4.03	-3.09/-3.52
Θ(67.5°)	-7.1/-8.45	-9.16/-8.18	-5.59/-3.32	-2.5/-2.51	-3.02/-4.28	-5.74/-8.6	-13.96/-18.27	-17.57/-12.09	-6.79/-4.57	-2.51/-0.58	-0.48/-1.77	-4.18/-6.55	-6.75/-7.67	-9.08/-9.49	-12.57/-15.1	-18.4/-18.61	-14.98/-9.58	-8.25/-8.73	-12.04/-15.38	-17.24/-14.73	-14.47/-12.36	-7.57/-5.44	-5.82/-6.53	-4.52/-4.8
Θ(75°)	-8.23/-7.76	-7.84/-8.38	-5.41/-2.99	-2.71/-2.94	-3.37/-4.13	-5.33/-8.06	-11.75/-14.4	-11.99/-7.47	-4.29/-2.96	-2/-0.78	-0.75/-1.2	-1.61/-3.04	-4.99/-7.75	-9.28/-8.12	-9.52/-16.23	-18.05/-17.86	-18.38/-16.56	-15.06/-12.4	-13.9/-16.18	-17.48/-15.16	-10.55/-10.83	-9.33/-4.56	-5.49/-7.1	-5.35/-6.86
Θ(82.5°)	-7.82/-7.93	-6.36/-6.86	-6.75/-4.41	-3.45/-3.82	-4.53/-4.78	-5.9/-7.51	-9.95/-11.68	-9.59/-5.97	-3.03/-1.96	-0.59/-0.4	-2.21/-2.56	-2.94/-4.22	-6.32/-8.12	-7.89/-9.58	-17.91/-17.71	-18.84/-17.74	-18.48/-13.18	-11.59/-16.34	-19.25/-18.82	-19.25/-17.65	-14.8/-11.36	-11.84/-9.46	-7.17/-6.95	-5.64/-5.13
Θ(90°)	-5.18/-7.85	-8.05/-6.19	-5.39/-5	-5.19/-6.21	-6.23/-6.28	-6.68/-8.88	-11.28/-11.21	-9.18/-8.74	-4.47/-3.26	-1.97/-2.16	-2.83/-3.28	-6.03/-7.63	-6.59/-6.76	-6.3/-7.9	-12.19/-18.25	-17.31/-18.66	-16.69/-15.47	-13.35/-15.89	-16.73/-14.3	-12.85/-12.22	-13.48/-18.79	-10.50/-10.59	-7.72/-4.65	-3.47/-3.09
Θ(97.5°)	-3.47/-4.77	-6.23/-5.01	-3.31/-3.31	-3.75/-4.86	-8.08/-10.2	-11.16/-12.27	-12.89/-12.84	-12.09/-8.44	-5.13/-3.92	-5.02/-5.73	-3.81/-2.43	-2.78/-7.46	-14.54/-9.18	-7.57/-8.38	-12.3/-17.77	-18.74/-11.76	-17.32/-19.05	-15.86/-18.42	-18.64/-9.67	-6.42/-7.97	-15.61/-12.5	-10.59/-18.81	-14.08/-8.83	-4.61/-2.91
Θ(105°)	-2.02/-1.77	-1.41/-2.02	-2.26/-0.95	-0.88/-3.2	-5.93/-10.1	-14.6/-18.3	-17.71/-17.53	-18.34/-14.38	-11.08/-8.19	-7.53/-9.18	-6.23/-8.73	-13.01/-14.89	-10.4/-10.44	-11.56/-17.32	-18.76/-14.02	-18.13/-16.77	-9.97/-9.43	-7.91/-6.07	-6.52/-8.02	-9.56/-5.13	-6.1/-13.81	-11.2/-8.98	-7.2/-3.13	
Θ(112.5°)	-2.73/-2.39	-2.39/-1.85	-3.52/-4.17	-3.72/-3.96	-5.4/-7.67	-9.18/-10.33	-14.97/-18.18	-12.89/-11.64	-9.03/-7.6	-8.22/-8.71	-11.41/-10.35	-6.88/-8.68	-10.24/-11.71	-11.68/-12.21	-13.48/-14.12	-14.98/-14.28	-6.91/-8.85	-9.14/-7.64	-5.33/-7.07	-8.52/-5.44	-3.18/-7.72	-6.36/-5.39	-3.77/-3.95	
Θ(120°)	-3.4/-4.87	-5.19/-4.62	-4.28/-5.97	-6.99/-7.25	-7.56/-7.13	-7.62/-9.42	-10.95/-12.97	-14.86/-16.14	-16.03/-10.14	-6.25/-6.9	-9.21/-8.85	-16.9/-18.24	-11.38/-13.71	-10.96/-10.5	-10.15/-10.9	-11.56/-10.3	-12.91/-13.14	-8.43/-12.35	-11.87/-11.42	-7.37/-4.56	-7.83/-6.28	-6.46/-6.07	-4.44/-2.92	-5.85/-4.35
Θ(127.5°)	-6.26/-8.55	-11.42/-8.06	-4.83/-3.59	-4.82/-6.88	-8.84/-10.9	-12.61/-10.75	-11.03/-12.13	-13.16/-11.94	-10.5/-7.18	-6.56/-6.23	-5.97/-9.1	-11.17/-10.29	-11.53/-10.97	-11.44/-11.53	-16.42/-18.66	-12.38/-13.49	-13.19/-10.66	-7.51/-8.76	-9.83/-12.56	-16.68/-6.84	-8.68/-7.12	-8.15/-6.47	-4.6/-3.57	-4.79/-6.52
Θ(135°)	-13.45/-9.56	-6.64/-7.05	-4.7/-2.88	-2.04/-3.05	-4.46/-6.3	-8.03/-10.04	-11.48/-10.38	-8.74/-8.73	-6.94/-8.26	-10.58/-11.53	-9.2/-10.5	-10.91/-9.66	-10.38/-9.44	-7.2/-9.21	-8.61/-13.83	-10.03/-10.21	-9.05/-9.41	-9.38/-13.96	-17.42/-18.56	-17.86/-10.73	-12.82/-11.83	-10.55/-15.71	-12.13/-10.01	-13.91/-17.07
Θ(142.5°)	-13.78/-6.29	-2.94/-1.77	-2.42/-2.62	-3.01/-3.44	-4.86/-6.83	-9.23/-11.27	-12.53/-13.52	-12.67/-11.24	-9.59/-7.66	-7.8/-8.77	-9.79/-9.08	-11.18/-10.48	-14.21/-17.39	-16.84/-18.79	-17.62/-15.45									



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(75°)	-2.53/-3.44	-3.91/-2.37	-1.130/-15	0.84/-0.49	-3.13/-5.32	-5.36/-4.56	-5.16/-7.65	-10.81/-10.48	-8.69/-8.12	-6.78/-9.65	-3.08/-2.11	-1.38/-1.36	-3.4/-4.54	-5.74/-3.89	-3.06/-3.18	-5.1/-5.57	-4.84/-9.3	-8.7/-3.05	-1.45/-1.18	-2.11/-3.13	-2.23/-0.7	0.93/-1.8	1.99/-1.38	0.44/-2.11
Θ(82.5°)	-2.25/-4.99	-4.04/-1.33	-0.570/-13	0.69/-1.01	-3.3/-4.31	-3.52/-3.04	-4.63/-7.64	-8.44/-7.71	-8.26/-9.72	-6.17/-3.63	-2.19/-1.48	-0.63/-0.9	-2.11/-5.2	-5.65/-4.55	-3.79/-3.84	-5.69/-8.19	-6.1/-7.56	-11.55/-6.49	-2.78/-2.13	-2.13/-2.68	-2.52/-0.81	-0.09/-0.05	1.01/-1.53	0.72/-0.92
Θ(90°)	-1.2/-3.09	-1.76/-0.24	0.65/-1.73	1.70/-15	-2.32/-3.85	-2.56/-1.6	-2.75/-3.67	-4.13/-4.23	-6.38/-8.74	-7.13/-4.72	-3.18/-1.89	0.45/-1.22	-0.53/-3.62	-5.43/-4.84	-6.68/-6.62	-6.17/-16.9	-6.71/-3.7	-4.12/-3.95	-2.33/-0.8	-2.74/-2.05	-1.06/-1.73	-0.09/-1.33	-0.09/-1.33	-1.11/-1.33
Θ(97.5°)	-0.15/-0.28	0.120/-4.7	0.75/-1.31	0.49/-1.71	-4.13/-3.88	-0.91/-0.1	0.05/-0.41	-1.59/-4.33	-6.11/-6.3	-6.07/-6.52	-3.92/-0.96	0.89/-1.7	-1.1/-4.05	-7.78/-6.52	-9.77/-5.96	-7.45/-19.3	-6.47/-4.41	-3.92/-3.33	-3.8/-2.47	-1.35/-2.78	-5.1/-4.29	-3.12/-3.5	-0.88/-1.71	-0.87/-0.88
Θ(105°)	-0.570/-65	1.92/-1.72	1.53/-1.77	0.74/-0.57	-1.74/-0.49	0.86/-1.55	1.050/-08	-1.44/-4.1	-5.23/-6.9	-7.05/-5.4	-5.21/-2.76	-1.08/-0.48	-1.62/-3.56	-7.27/-11.55	-12.64/-6.85	-8.04/-16.9	-13.63/-8.22	-7.7/-7.65	-6.33/-5.96	-3.72/-4.18	-5.44/-6.25	-4.58/-4.59	-2.29/-0.56	-1.07/-0.94
Θ(112.5°)	-1.58/-0.08	1.62/-19	3.05/-3.17	2.150/-61	-0.7/-0.05	1.26/-4.1	0.66/-0.66	-1.78/-3.04	-6.62/-9.66	-10.86/-10.36	-6.54/-5.48	-2.43/-0.64	-6.77/-7.7	-6.4/-7.28	-8.19/-9.45	-8.18/-11.72	-17.56/-10.7	-11.63/-14.85	-9.13/-10.95	-9/-9.73	-9.1/-8.27	-6.92/-7.72	-4.97/-3.12	-1.38/-1.14
Θ(120°)	-1.46/-1.73	-0.230/-4.1	-0.030/-62	0.53/-0.07	0.31/-22	2.19/-2.8	2.190/-94	-0.85/-2.36	-3.75/-5.84	-13.38/-12	-8.46/-6.73	-4.51/-3.98	-4.48/-6.45	-8.98/-11.6	-13.71/-13.78	-11.36/-17.88	-18.87/-16.82	-16.35/-19.14	-18.95/-14.4	-8.94/-7.49	-12.03/-9.8	-4.13/-5.59	-3.88/-1.44	-0.74/-0.82
Θ(127.5°)	-3.57/-3.82	-2.45/-2.74	-2.31/-19	-0.34/-1.7	2.71/-3.59	4.23/-4.4	4.31/-4.1	1.3/-1.41	-2.96/-4.24	-9.81/-13.3	-10.44/-7.66	-5.97/-4.47	-7.19/-8.55	-9.53/-11.44	-9.89/-10.44	-13.54/-11.75	-14.71/-10.88	-11.81/-13.33	-12.01/-8.37	-8.19/-11.88	-18.88/-8.72	-8.69/-9.71	-5.78/-2.63	-0.95/-2.29
Θ(135°)	-5.66/-3.62	-4.44/-3.25	-2.69/-1.31	-0.11/-1.57	2.97/-24	4.95/-6.15	4.42/-76	0.94/-0.79	-0.03/-1.44	-12.55/-7.43	-6.91/-7.31	-7.71/-9.39	-8.49/-10.05	-10.16/-13.34	-7.13/-19.2	-18.94/-16.75	-18.46/-17.88	-14.34/-13.84	-15.96/-15.1	-16.92/-18.42	-15.62/-11.21	-9.71/-9.79	-6.82/-5.78	-4.56/-5.12
Θ(142.5°)	-5.3/-3.59	-3.15/-2.94	-3.08/-2.59	-1.41/-0.07	1.39/-2.39	3.022/-67	1.910/-96	-0.06/-2.45	-7.58/-14.45	-11/-7.43	-5.16/-5.34	-6.57/-8.38	-10.93/-10.66	-11.15/-13.59	-18.85/-15.04	-14.73/-13.5	-16.64/-18.69	-17.6/-16.64	-16.31/-14.37	-14.75/-11.63	-8/-9.05	-11.93/-12.21	-10.8/-7.54	-5/-5.05
Θ(150°)	-13.42/-11.71	-7.93/-4.24	-2.21/-1.43	-0.55/-0.13	-0.2/-0.1	0.20/-49	0.36/-0.67	-2.56/-4.49	-5.74/-7.97	-11.35/-10.38	-8.1/-6.81	-6.64/-6.56	-7.36/-10.04	-13.05/-16.8	-17.86/-12.16	-14.65/-18.03	-18.79/-19.15	-18.39/-19.1	-18.67/-17.25	-14.18/-10.49	-9.44/-8.18	-6.53/-6.35	-7.53/-10.42	
Θ(157.5°)	-10.83/-9.38	-7.54/-4.62	-2.22/-1.21	-0.67/-0.08	0.170/-71	1.39/-165	1.420/-47	-0.04/-2.69	-4.39/-7.37	-13.03/-10.96	-8.39/-8.28	-9.77/-12.26	-13.25/-12.74	-12.62/-11.96	-11.29/-10.4	-10.26/-11.12	-12.69/-14.25	-15.18/-15.44	-13.15/-11.23	-10.75/-12.56	-18.32/-16.48	-18.11/-15.48	-12.09/-10.67	-11/-11.8
Θ(165°)	-15/-13.85	-13.5/-13.21	-10.37/-7.69	-5.74/-4.31	-2.53/-0.99	-0.10/-45	0.480/-0.1	-0.72/-2.12	-4.42/-8.17	-12.75/-13.5	-13.31/-14.32	-15.29/-14.64	-13.97/-13.96	-15.91/-19.06	-17.91/-18.86	-18.23/-17.74	-18.05/-18.35	-17.74/-17.78	-14.21/-12.31	-11.73/-12.46	-14.52/-13.91	-11.22/-10.3	-10.63/-11.83	-13.44/-15.39
Θ(172.5°)	-18.99/-15.8	-13.46/-11.85	-10.92/-9.58	-8.08/-6.03	-4.07/-2.64	-2.32/-2.78	-3.7/-4.1	-5.33/-6.59	-7.84/-9.05	-9.41/-9.78	-10.96/-12.72	-14.47/-17.26	-18.24/-18.77	-18.3/-16.7	-15.56/-13.64	-12.18/-11.84	-11.44/-11.06	-11.63/-13.42	-15.84/-17.96	-18.03/-18.96	-19.16/-18.57	-18.31/-18.21	-18.27/-18.95	-18.57/-17.97
Θ(180°)	-17.61/-18.18	-18.44/-17.9	-19.31/-18.89	-15.57/-13.44	-12.15/-11.68	-11.1/-10.27	-9.1/-7.72	-7.03/-6.7	-6.73/-7.52	-8.13/-8.46	-9.28/-10.91	-13.28/-16.23	-18.19/-18.98	-18.63/-18.08	-17.29/-13.25	-10.45/-9.43	-9.61/-10.43	-10.73/-10.14	-9.72/-9.4	-8.85/-8.46	-8.57/-9.15	-10.17/-10.99	-11.99/-12.39	-13.69/-14.88
Freq(Hz)	5.6GPol.	PhiAnt.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.48/-5.53	-5.23/-4.8	-4.72/-4.87	-5.47/-6.42	-6.9/-6.86	-6.88/-7.88	-8.83/-8.67	-8.27/-8.02	-7.92/-8.05	-8.09/-8.37	-7.89/-8.61	-5.42/-4.25	-3.31/-2.68	-2.58/-2.91	-3.12/-3.34	-3.93/-4.26	-3.96/-4.76	-6.6/-6.98	-7.41/-9.1	-9.46/-9.84	-10.44/-10	-9.5/-9.05	-8.15/-7.32	-6.22/-5.46
Θ(7.5°)	-4.27/-4.34	-4.04/-3.73	-3.42/-3.16	-3.45/-4.6	-6.47/-8.07	-8.77/-9.01	-9.55/-10.9	-13.73/-13.46	-11.09/-9.96	-8.48/-7.5	-6.06/-5.7	-5.47/-5.67	-6.13/-6.54	-6.84/-6.66	-6.43/-6.67	-6.8/-6.78	-7.58/-8.17	-7.79/-8.7	-9.7/-9.4	-8.93/-8.1	-7.04/-6.84	-6.46/-5.71	-4.88/-4.3	
Θ(15°)	-2.66/-2.66	-2.68/-2.81	-2.94/-3.34	-2.33/-5.63	-7.09/-9.33	-14.8/-17.2	-18.45/-16.66	-17.88/-17.49	-14.52/-13.25	-12.5/-10.6	-8.89/-7.55	-7.35/-8.04	-9.55/-12.31	-15.11/-16.14	-15.09/-14.3	-13.81/-12.53	-10.4/-8.89	-9.06/-8.85	-7.78/-7.99	-9.03/-9.55	-9.45/-9.93	-6.32/-5.81	-5.06/-4.13	-3.38/-2.77
Θ(22.5°)	-0.48/-0.77	-1.42/-2.06	-2.83/-4.13	-5.82/-7.6	-9.79/-12.27	-16.71/-17.68	-17.37/-12.69	-13.95/-14.8	-1.16/-9.33	-9.96/-11.3	-9.74/-8.1	-8.32/-10.5	-13.68/-15.06	-14.95/-14.7	-11.81/-19.06	-17.42/-13.12	-11.43/-10	-10.01/-12.03	-14.32/-15.62	-17.62/-14.39	-10.45/-14.4	-4.67/-3.46	-2.59/-1.72	-0.96/-0.56
Θ(30°)	0.25/-0.49	-1.54/-2.67	-3.87/-4.95	-5.66/-7.08	-8.88/-13.36	-18.87/-16.88	-13.03/-12.51	-15.94/-18.36	-11.65/-7.96	-7.94/-8.5	-7.38/-6.24	-6.77/-8.69	-9.23/-8.45	-8.09/-8.77	-9.43/-10.7	-14.21/-15.48	-10.08/-6.83	-7.16/-8.67	-9.76/-12.59	-15.69/-16.08	-10.94/-7.21	-5.57/-4.56	-2.71/-0.96	0.150/-5.1
Θ(37.5°)	-0.02/-1.16	-2.46/-3.31	-3.88/-4.53	-5.11/-6.68	-10.34/-16.21	-18.75/-14.25	-8.79/-10.02	-8.18/-12.06	-8.15/-6.53	-8.34/-11.19	-9.09/-7.02	-7.42/-9.11	-8.73/-7.88	-7.61/-7.61	-8.48/-10.43	-11.47/-12.68	-11.98/-6.49	-16.18/-9.94	-8.66/-5.34	-4.34/-3.48	-1.72/-0.08	0.580/-58		
Θ(45°)	0.37/-0.99	-3.62/-4.73	-4.21/-2.43	-4.9/-6.18	-8.1/-10.53	-15.61/-18.96	-13.55/-9.58	-9.85/-12.35	-11.21/-8.53	-10.49/-14.28	-9.18/-7.02	-6.86/-9.63	-5.29/-4.9	-5.47/-7.14	-10.08/-14.13	-16.38/-12.59	-11.62/-16.21	-13.68/-10.88	-12.13/-18.89	-17.88/-12.76	-7.92/-4.98	-3.11/-2.94	-3.02/-2.3	-0.060/-6.7
Θ(52.5°)	-2.08/-1.93	-2.78/-3.63	-4.99/-5.58	-5.71/-5.75	-5.96/-7.59	-11.84/-18.72	-16.63/-11.92	-10/-9.92	-10.89/-8.68	-8.38/-8.39	-6.86/-5.39	-5.11/-5.59	-6.09/-6.71	-7.26/-9.42	-15.52/-14.58	-13.52/-13.38	-11.99/-16.43	-18.28/-15.1	-13.86/-15.31	-12.67/-10.75	-7.49/-5.22	-1.520/-52	-0.62/-1.94	-2.2/-2.1
Θ(60°)	-2.86/-1.89	-2.28/-3.42	-4.75/-6.63	-7.43/-5.87	-4.73/-4.72	-17.83/-13.55	-17.83/-13.55	-7.91/-7.39	-8.21/-6.2	-6.25/-13.24	-9/-5.33	-4.67/-3.8	-3.34/-4.33	-6.12/-12.62	-19.23/-17.61	-14.76/-14.34	-12.05/-15.71	-17.77/-13.27	-14.28/-12.11	-10.22/-11.7	-4.24/-2.4	-2.63/-4.77	-4.8/-4.26	
Θ(67.5°)	-6.43/-3.3	-1.86/-3.25	-7.61/-12.14	-10.7/-6.11	-3.76/-2.83	-4.09/-9.31	-18.02/-11.05	-9.15/-17.33	-11.51/-6.06	-6.62/-7.16	-6.62/-5.1	-4.21/-5.43	-4.69/-4.76	-6.54/-13.82	-18.9/-17.84	-15.92/-18.14	-11.13/-8.56	-10.31/-19.15	-13.89/-13.03	-10.42/-8.81	-7.58/-7.39	-4.88/-2.16	-2.62/-4.83	-4.54/-5.86
Θ(75°)	-6.3/-5.2	-3.17/-4.28	-6.54/-8.03	-8.8/-8.37	-6.31/-4.16	-3.98/-5.62	-8.33/-14.52	-17.28/-18.12	-7.78/-7.36	-3.39/-3.74	-3.66/-3.58	-4.15/-6.97	-7.74/-7.49	-9.06/-19.7	-16.62/-14.84	-12.77/-17.04	-14.88/-18.02	-9.03/-14.47	-18.36/-16.22	-14.23/-9.61	-8.24/-8.79	-6.55/-4.05	-2.97/-3.7	-1.98/-3.62
Θ(82.5°)	-5.89/-6.84	-7.51/-7.18	-6.04/-4.96	-4.95/-5.06	-6.05/-5.97	-8.43/-3.96	-5.97/-10.58	-15.71/-12.11	-5.71/-2.27	-1.67/-4.29	-3.03/-1.82	-1.64/-4.16	-6.28/-5.63	-12.4/-15.63	-18.95/-18.33	-15.29/-18.66	-11.71/-9.82	-15.86/-18.75	-15.92/-10.17	-10.91/-11.88	-10.18/-15.21	-18.01/-4.74	-3.07/-2.15	-1.94/-0.3
Θ(90°)	-7.08/-11.84	-16.48/-11.72	-6.61/-3.38	-1.25/-0.88	-2.6/-5.46	-6.63/-8.17	-9.87/-14.62	-15.91/-9.88	-4.19/-1.82	-2.14/-2.71	-2.63/-3.12	-4.76/-9	-11.65/-15.99	-18.75/-17.72	-17.59/-15.4	-17.98/-19.48	-17.71/-16.12	-16.15/-9.72	-11.67/-9.26	-8.04/-5.3	-4.69/-8.82	-9.4/-4.74	-2.45/-1.51	-0.65/-2.96
Θ(97.5°)	-5.26/-7.3	-5.1/-5.23	-5.63/-3.9	-2.16/-1.59	-2.35/-5.78	-11.75/-17.02	-18.8/-19.4	-13.98/-19.5	-4.86/-4.18	-3.66/-2.49	-3.16/-3.92	-5.57/-8.53	-8.95/-16.1	-18.84/-19.25	-16.68/-18.62	-16.97/-14.42	-19.31/-18.77	-14.13/-17.99	-10.32/-12.16	-17/-11.21	-8.56/-10.12	-13.55/-6.37	-3.7/-11.2	-0.92/-1.54
Θ(105°)	-1.94/-2.9	-4.34/-8.2	-4.91/-6.3	-7.38/-5.42	-5.92/-8.55	-18.13/-18.52	-16.84/-14.24	-18.83/-12.59	-8.76/-7.66	-6.84/-4.03	-2.45/-3.02	-5.82/-12.07	-16.73/-15.21	-18.85/-18.94	-13.68/-14.83	-17.19/-18.75	-17.18/-18.63	-17.19/-18.79	-15.84/-15.34	-17.64/-18.48	-14.18/-13.65	-17.62/-10.73	-7.03/-4.83	-2.77/-0.97
Θ(112.5°)	-3.15/-2.86	-2.3/-3.56	-4.12/-3.97	-4.17/-6.96	-9.1/-12.89	-11.19/-7.29	-7.32/-10.8	-17.84/-18.08	-15.1/-11.39	-9.53/-7.39	-5.93/-5.71	-5.58/-7.87	-11.02/-11.93	-16.21/-19.21	-15.21/-12.05	-9.97/-16.63	-18.09/-18.88	-13.55/-13.26	-10.85/-7.24	-6.73/-12.51	-10.66/-5.66	-6.91/-17.99	-11.06/-10.26	-5.21/-2.58
Θ(120°)	-4.36/-3.06	-2.12/-2.67	-6.13/-6.94	-7.48/-8.73	-7.99/-8.84	-8.44/-6.32	-5.04/-6.01	-10.06/-13.42	-15.65/-17.73	-14.75/-12.43	-11.41/-6.89	-6.74/-9.45	-15.12/-17.19	-18.24/-19.5	-18/-14.49	-18.56/-9.42	-16.76/-13.45	-6.81/-11.13	-11.15/-6.24	-5.22/-3.81	-6.95/-7.16	-6.62/-10.14	-11.84/-13.22	-12.21/-5
Θ(127.5°)	-6.85/-5.8	-4.99/-5.56	-7.6/-8.58	-11.29/-12.11	-10.94/-11.39	-6.79/-8.06	-8.65/-8.97</																	



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: AP510722



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

Θ(150°)	-11.64/-10.82	-8.68/-7.45	-7.12/-7.27	-9.52/-13.25	-18.72/-18.67	-16.72/-10.71	-7.75/-6.56	-5.95/-6.01	-5.15/-3.58	-3.56/-4.34	-2.37/-0.21	0.67/-0.2	-1.65/-6.59	-16.2/-4.95	-1.77/-1.42	-2.9/-4.86	-10.17/-18.1	-12.45/-13	-16.02/-18.02	-18.07/-17.02	-15.16/-11.05	-10.09/-11.32	-11.05/-10.03	-9.81/-10.77
Θ(157.5°)	-6.4/-6.06	-6.45/-7.62	-8.53/-8.81	-9.61/-11.51	-14.69/-17.59	-16.16/-15.43	-12.75/-11.06	-9.94/-8.02	-6.27/-5.55	-3.53/-1.52	-0.54/-0.8	-2.14/-5.65	-8.36/-4.42	-2.22/-1.6	-2.08/-3.97	-6.6/-9.72	-15.61/-16.36	-14.29/-14.76	-14.29/-12.07	-10.89/-12.18	-14.44/-12.56	-11.42/-11.78	-11.62/-9.85	-7.41/-6.65
Θ(165°)	-13.58/-13.13	-13.1/-13.64	-15.72/-15.97	-16.05/-15.91	-16.91/-15.82	-12.3/-13.4	-10.86/-8.8	-7.15/-2.3	-3.48/-2.08	-1.41/-1.67	-2.32/-2.34	-2.06/-1.96	-2.62/-3.81	-5.22/-6.97	-9.68/-11.51	-10.09/-9.08	-9.02/-9.23	-6.62/-11.12	-13.75/-16.29	-16.15/-14.45	-11.73/-10.39	-10.57/-10.75	-10.92/-12.13	-13.16/-14.55
Θ(172.5°)	-11.44/-11.71	-11.16/-10.86	-9.5/-9.47	-9.38/-9.07	-9.28/-11.08	-13.54/-14.64	-12.92/-10.49	-8.06/-6.54	-4.61/-3.21	-2.49/-2.28	-2.13/-2.07	-2.69/-4.1	-5.78/-6.48	-6.39/-6.35	-6.98/-7.91	-9.13/-10.62	-11.98/-14.58	-18.11/-17.91	-18.45/-18.3	-17.41/-15.21	-13.89/-12.94	-11.94/-10.87	-10.52/-11.78	-12.75/-11.98
Θ(180°)	-3.12/-3.29	-4.12/-4.88	-5.28/-5.39	-5.96/-6.95	-8.14/-9.88	-12.34/-15.6	-18.13/-15.11	-11.23/-9.03	-7.39/-6.39	-5.31/-4.58	-4.32/-4.48	-5.23/-6.11	-6.71/-6.46	-5.97/-6.08	-6.92/-8.32	-10.28/-12.42	-14.16/-14.85	-13.53/-12.13	-12.57/-13.85	-12.73/-11.19	-9.53/-7.91	-6.33/-5.25	-4.34/-4.07	-3.72/-3.31
Freq(Hz)	5.3GPol.	Phi/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°)	-7.78/-8.7	-10.16/-13.6	-18.19/-18.21	-18.81/-16.45	-14.28/-12.4	-10.44/-8.8	-7.64/-7.21	-6.65/-5.91	-5.89/-6.52	-7.62/-8.46	-8.37/-7.96	-8.28/-9.34	-10.31/-11.91	-13.94/-16.53	-18.33/-17.42	-17.95/-16.18	-11.98/-9.49	-8.14/-7.55	-6.87/-6.1	-4.95/-4.21	-4.08/-4.4	-4.38/-4.4	-4.74/-5.38	-6.24/-7.01
Θ(7.5°)	-9.23/-9.19	-10.16/-12.51	-16.99/-18.41	-17.51/-18.92	-16.09/-15.77	-14.9/-12.3	-9.55/-7.43	-6.43/-6.24	-6.05/-5.27	-4.77/-5.72	-7.11/-7.89	-8.27/-8.89	-10.27/-12.4	-15.77/-18.8	-19.17/-15.58	-12.56/-11.03	-9.22/-8.11	-7.52/-7.91	-9.29/-9.37	-8.13/-7.55	-7.94/-9.91	-10.39/-9.46	-8.17/-8.02	-8.73/-8.96
Θ(15°)	-10.61/-11.71	-11.84/-12.51	-15.58/-17.55	-18.37/-13.93	-11.13/-10.22	-8.85/-9.26	-8.82/-8.24	-7.58/-6.19	-7.19/-7.55	-7.71/-7.04	-7.6/-8.24	-8.46/-9.21	-10.65/-13.08	-16.85/-16.33	-11.01/-7.51	-5.67/-4.58	-3.91/-4.1	-5.25/-6.21	-6.25/-6.5	-7.91/-9.32	-10.47/-11.3	-11.98/-15.07	-17.21/-13.65	-10.71/-9.66
Θ(22.5°)	-10.31/-10.33	-10.48/-13.13	-17.71/-17.79	-10.48/-7.5	-6.67/-6.03	-5.96/-7.03	-8.41/-10.08	-10.98/-10.95	-11.84/-11.97	-10.61/-9.18	-9.22/-9.53	-9.01/-9.09	-10.81/-13.02	-13.96/-11.92	-9.33/-7.95	-7.59/-7.02	-6.55/-7.01	-8.2/-8.95	-8.87/-8.26	-7.63/-8.37	-9.77/-11.12	-13.02/-13.91	-18.58/-17.32	-12.83/-10.8
Θ(30°)	-12.87/-12.27	-16.05/-18.94	-15.17/-10.65	-17.7/-16.31	-6.14/-5.65	-6.69/-8.08	-9.11/-10.84	-13.71/-16.37	-16.52/-15.37	-14.5/-12.89	-11.25/-10.99	-11.41/-11.24	-12.65/-11.65	-9.11/-7.57	-7.45/-7.89	-7.57/-3.4	-9.1/-11.7	-11.47/-10.98	-9.19/-9.66	-12.89/-13.49	-9.41/-8.51	-9.88/-13.35	-15.86/-18.06	-18.86/-15.37
Θ(37.5°)	-12.71/-14.28	-18.41/-17.4	-15.3/-11.38	-8.34/-6.9	-6.62/-6.58	-6.79/-6.49	-7.95/-10.57	-15.04/-16.9	-14.18/-12.14	-14.97/-18.12	-15.41/-13.01	-15.77/-18.07	-18.77/-13.58	-9.06/-6.94	-6.47/-8.18	-11.99/-15.81	-17.52/-19.15	-11.57/-9.85	-10.49/-10.57	-8.46/-7.74	-12.31/-18.57	-15.26/-16	-18.57/-17.83	-16.1/-12.25
Θ(45°)	-16.32/-15.53	-18.96/-18.87	-12.48/-9.15	-6.65/-6	-5.73/-4.7	-4.67/-5.35	-6.27/-5.88	-6.11/-7.09	-9.45/-12.17	-17.15/-19.31	-11.26/-6.81	-10.94/-14.51	-17.58/-14.95	-10.7/-11.29	-11.93/-10.91	-11.32/-12.1	-7.93/-7.07	-8.34/-8.68	-8.77/-7.03	-5.08/-4.58	-7.04/-9.09	-11.3/-14.32	-17.69/-15.7	-15.89/-15.86
Θ(52.5°)	-18.95/-12.79	-11.85/-17.85	-17.74/-8.3	-5.1/-4.95	-4.45/-4.05	-4.06/-4.14	-3.61/-2.64	-2.03/-2.62	-4.97/-8.6	-12.54/-14.48	-14.6/-13.48	-15.06/-16.79	-12.94/-7.67	-6.58/-9.99	-16.28/-12.46	-6.04/-3.62	-3.94/-4.89	-6.37/-5.35	-4.28/-5.47	-6.35/-4.35	-4.28/-4.09	-7.25/-11.03	-13.45/-13.78	-16.23/-17.67
Θ(60°)	-18.44/-13.42	-10.44/-13.36	-15.49/-7.8	-4.73/-4.41	-3.98/-3.75	-3.5/-2.81	-1.79/-1.19	-1.27/-2.28	-5.07/-9.41	-12.46/-13.46	-12.48/-10.31	-12.84/-18.09	-16.36/-14.89	-9.4/-9.88	-8.93/-9.47	-6.02/-4.52	-5.56/-6.59	-4.2/-2.27	-1.8/-2.38	-4.19/-5.71	-5.45/-6.83	-6.86/-7.26	-10.07/-18.08	-17.58/-17.89
Θ(67.5°)	-18.39/-16.75	-10.65/-13.41	-13.53/-6.59	-3.64/-0.41	-4.77/-3.44	-2.12/-1.8	-2.29/-1.62	-1.31/-2.78	-7.04/-10.53	-10.04/-11.31	-12.36/-10.24	-10.59/-16.33	-12.92/-11.08	-10.39/-17.56	-10.48/-5.71	-3.67/-3.93	-5.48/-5.52	-3.61/-1.35	-0.65/-0.96	-3.07/-6.23	-11.66/-11.61	-9.36/-9.33	-6.31/-11.53	-12.42/-17.63
Θ(75°)	-17.13/-11.24	-10.72/-13.15	-11.6/-6.35	-6.14/-6.12	-4.12/-3.16	-2.93/-3.01	-3.25/-3.78	-3.94/-6.21	-17.48/-11.7	-8.99/-11.03	-17.24/-18.28	-18.19/-14.53	-12.19/-13.23	-15.04/-17.61	-14.88/-6.82	-6.46/-8.32	-9.57/-8.08	-7.42/-2.27	-2.45/-3.67	-3.86/-4.36	-1.75/-10.94	-17.7/-9	-6.76/-9.8	-12.95/-17.68
Θ(82.5°)	-16.89/-12.12	-16.81/-17.8	-12.19/-10.17	-9.64/-8.36	-5.69/-3.48	-2.68/-2.97	-4.62/-5.42	-6.43/-9.98	-8.36/-4.57	-2.59/-3.47	-9.24/-15.51	-18.35/-13.26	-13.72/-18.76	-19.33/-18.48	-13.22/-13.69	-10.67/-9.59	-11.83/-16	-8.11/-8.13	-6.16/-4.44	-4.15/-3.83	-4.35/-6.16	-13.29/-18.24	-10.55/-12.17	-18.47/-15.95
Θ(90°)	-13.23/-17.67	-18.21/-18.01	-18.74/-14.81	-11.6/-18.22	-8.9/-3.9	-2.17/-1.81	-1.87/-2.47	-4.57/-7.23	-5.92/-2.29	-1.39/-1.51	-12.33/-14.36	-16.96/-8.72	-8.63/-15.87	-12.98/-10.44	-13.51/-15.52	-17.66/-18.55	-14.56/-8.99	-6.16/-8.57	-7.33/-2.93	-3.24/-3.07	-4.44/-4.86	-9.25/-14.81	-12.86/-10.36	-12.94/-9.17
Θ(97.5°)	-13.96/-18.05	-18.27/-17.71	-8.85/-7.06	-8.98/-10.94	-3.88/-6.35	-4.23/-3.74	-3.2/-1.7	-3.88/-6.23	-1.44/-7	-15.79/-11.27	-8.76/-8.34	-5.2/-7.74	-14.8/-14.31	-14.46/-16	-18.65/-14.02	-8.23/-5.97	-6.24/-2.84	-6.62/-8.7	-6.34/-4.88	-6.4/-12.13	-11.94/-16.07	-13.51/-14.61	-18.44/-10.47	
Θ(105°)	-12.66/-19.27	-17.6/-11.52	-7.54/-6.42	-6.56/-6.8	-8.33/-5.65	-4.58/-4.14	-3.87/-3.56	-2.62/-1.49	-0.92/-1.65	-3.5/-6.86	-11.93/-12.72	-5.69/-8.42	-5.32/-4.58	-9.88/-18.53	-17.9/-13.2	-16.14/-17.77	-8.14/-6.09	-5.52/-3.54	-4.43/-4.21	-7.63/-6.58	-9.11/-13.72	-9.83/-7.77	-11.13/-8.55	-13.3/-16.79
Θ(112.5°)	-14.51/-16.79	-14.32/-12.05	-10.55/-8.08	-8.47/-11.02	-7.54/-5.4	-3.01/-2.14	-1.11/-10.36	-0.89/-3.1	-6.63/-9.03	-7.65/-8.52	-13.81/-7.29	-6.37/-9.16	-6.34/-9.55	-16.58/-9.04	-12.18/-10.26	-6.87/-8.29	-7.01/-4.06	-3.06/-5.17	-10.59/-11.73	-19.35/-11.75	-3.91/-9.51	-9.64/-5.56	-8.25/-9.4	
Θ(120°)	-9.01/-16.74	-15.29/-10.17	-11.89/-10.67	-6.04/-4.59	-4.74/-5.09	-4.55/-4.32	-6.34/-8.59	-5.76/-4.71	-4.68/-13.88	-13.22/-4.55	-7.07/-15.35	-5.56/-7.51	-10.19/-17.08	-16.23/-13.91	-17.29/-13.33	-4.02/-4.21	-3.71/-18.55	-11.73/-15.27	-4.72/-0.08	-7.28/-8.84	-6.27/-4.41	-9.65/-9.09	-4.31/-5.3	
Θ(127.5°)	-8.1/-17.84	-17.05/-13.99	-19.32/-13.64	-7.11/-5.08	-5.35/-5.65	-5.72/-5.98	-6.13/-9.59	-3.44/-0.61	-1.02/-3.71	-17.35/-7.24	-2.41/-5.02	-11.09/-18.83	-9.55/-7.27	-6.47/-11.61	-13.03/-14.32	-12.32/-17.6	-8.91/-2.63	-2.47/-9.17	-17.64/-15.14	-8.39/-1.93	-17.65/-10.32	-11.76/-7.62	-10.04/-8.23	-5.96/-5.12
Θ(135°)	-8.67/-13.24	-18.34/-17.22	-14.4/-15.33	-11.68/-7.58	-5.87/-9.49	-4.63/-4.34	-4.1/-3.91	-3.79/-4.35	-5.25/-12.58	-8.23/-4.39	-3.32/-6.51	-13.25/-18.73	-14.8/-15.78	-11.28/-9.77	-9.77/-12.14	-14.34/-19.01	-19.03/-10.52	-9.13/-9.82	-11.18/-15.14	-7.67/-8.59	-16.38/-18.09	-19.16/-8.87	-7.29/-9.58	-8.71/-7.5
Θ(142.5°)	-9.24/-17.8	-17.75/-19.16	-17.18/-18.46	-16.71/-16.63	-10.79/-16.6	-6.21/-5.57	-5.06/-4.69	-5.32/-5.14	-2.31/-3.5	-7.25/-11.62	-15.29/-15.1	-16.44/-11.7	-8.98/-9.46	-10.35/-11.49	-12.29/-16.1	-17.96/-18.5	-18.51/-18.12	-19.94/-18.1	-16.29/-13.78	-14.74/-16.17	-12.8/-11.4	-8.77/-9.5		
Θ(150°)	-12.84/-17.66	-18.54/-15.08	-10.61/-9.42	-10.81/-12.28	-13.22/-12.33	-10.33/-7.59	-4.29/-1.98	-1.22/-1.95	-2.69/-2.51	-3.26/-5.68	-6.16/-6.22	-8.28/-13.42	-18.98/-18.99	-18.25/-16.75	-10.92/-7.4	-5.23/-3.95	-3.92/-6.49	-9.32/-9.93	-13.2/-17.71	-14.03/-12.89	-13.11/-13.1	-15.11/-17.47	-13.64/-12.19	-12.99/-16.45
Θ(157.5°)	-17.5/-17.62	-17.12/-18.06	-15.88/-14.6	-12.79/-10.19	-7.95/-5.9	-5.06/-4.64	-4.4/-8.82	-5.24/-4.79	-4.69/-6.1	-6.94/-6.1	-6.48/-9.15	-12.15/-14.49	-16.18/-14.84	-11.59/-8.79	-6.82/-5.58	-4.99/-4.99	-6.24/-9.58	-13.72/-17.28	-17.77/-17.91	-18.14/-17.71	-15.26/-15.03	-15.82/-14.61	-13.13/-13.26	-16.29/-17.61
Θ(165°)	-13.54/-13.33	-13.32/-12.74	-12.95/-14.77	-11.54/-7.96	-5.6/-3.66	-2.09/-0.64	0.030/-26	0.13/-0.16	-0.72/-1.25	-2.38/-4.46	-11.21/-12.84	-13.17/-12.84	-11.62/-10.23	-9.35/-9.69	-12.5/-17.85	-17.99/-15.31	-11.68/-8.85	-7.01/-6.73	-8.15/-9.71	-9.84/-10.24	-12.94/-12.98	-18.03/-17.24	-15.05/-13.67	
Θ(172.5°)	-11.38/-11.81	-12.9/-96	-8.7/-07	-5.6/-3.55	-2.05/-0.95	0.220/-49	0.890/-85	0.04/-94	-1.74/-62	-4.32/-7.03	-10.56/-14.32	-16.08/-16.16	-16.12/-15.52	-13.59/-11.7	-10.27/-9.52	-9.88/-10.66	-10.19/-10.17	-9.52/-9.64	-7.91/-9.26	-8.7/-8.84	-10.07/-13.22	-14.97/-11.58	-10.07/-10.83	-12.72/-12.21
Θ(180°)	-13.78/-11.91	-10.3/-8.85	-7.23/-6.2	-5.24/-4.17	-3.12/-2.54	-2.26/-1.94	-1.64/-1.86	-2.78/-3.34	-3.4/-2.7	-6.06/-8.77	-12.15/-16.45	-18.45/-18.31	-17.82/-17.19	-16.85/-14.45	-12.94/-11.99	-11.32/-10.33	-7.71/-5.51	-4.17/-3.56	-3.06/-2.43	-2.21/-2.61	-3.34/-4.38	-5.28/-6.32	-7.64/-9.35	-12.74/-14.53
Freq(Hz)	5.3GPol.	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°)



Radiated Composite Gain Data_2.4GHz and 5GHz

Appendix A

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°)	-10.67/-13.85	-18.37/-18.24	-18.13/-17.84	-12.74/-10.34	-8.17/-6.68	-5.66/-4.85	-3.97/-3.7	-3.76/-3.03	-2.75/-3.68	-4.92/-5.34	-5.97/-6.74	-7.46/-8.47	-10.23/-13.02	-15.99/-17.44	-16.33/-15.5	-16.24/-11.9	-7.34/-5.59	-6.1/-6.81	-5.08/-3.35	-3.3/-4.72	-5.18/-4.03	-3.76/-5.02	-7.34/-8.21	-8.35/-8.49
Θ(7.5°)	-12.45/-16	-17.54/-18.7	-17.88/-14.02	-10.75/-9.67	-9.39/-8.47	-6.72/-5.32	-4.52/-4.53	-4.87/-4.28	-3.52/-4.38	-6.01/-6.15	-5.83/-6.84	-8.83/-11.41	-14.09/-18.21	-17.91/-18.71	-13.11/-9.46	-8.02/-6.98	-5.3/-3.73	-3.24/-3.94	-4.13/-2.91	-2.25/-2.48	-3.13/-3.79	-3.99/-4.57	-6.4/-8.53	-9.91/-10.61
Θ(15°)	-10.91/-15.05	-17.73/-18.4	-18.25/-18.83	-14.14/-12.3	-9.9/-7.77	-5.94/-5.13	-4.83/-4.38	-2.93/-2.55	-3.59/-4.36	-4.76/-6.73	-8.96/-9.39	-9.47/-11.05	-15.52/-17.88	-18.52/-14.02	-10.36/-8.79	-8.04/-8.09	-8.46/-8.45	-8.04/-7.32	-6.9/-6.71	-5.98/-4.46	-3.42/-4.02	-5.05/-4.47	-4.28/-5.51	-7.84/-9.49
Θ(22.5°)	-12.77/-17.1	-18.05/-18.76	-18.91/-18.65	-19.27/-18.41	-17.66/-13.27	-11.09/-11.13	-10.62/-10.66	-8.37/-7.07	-7.81/-7.37	-6.81/-7.49	-9.09/-10.45	-11.82/-14.28	-18.61/-17.76	-15.6/-14.36	-13.87/-13.22	-12.92/-13.93	-11.69/-8.11	-5.98/-5.04	-4.94/-5.87	-7.1/-7.1	-6.34/-6.62	-7.63/-7.18	-6.27/-7.89	-10.43/-11.93
Θ(30°)	-13.86/-15.73	-18.11/-18.01	-18.19/-18.37	-17.75/-17.86	-14.22/-11.12	-9.85/-8.08	-7.67/-8.66	-9.43/-10.06	-9.64/-8.38	-8.46/-10.23	-12.94/-12.44	-11.55/-11.59	-13.97/-18.72	-17.86/-12.42	-10.06/-8.27	-7.89/-7.26	-6.67/-6.97	-6.84/-7.28	-9.3/-12.89	-16.53/-14.83	-12.52/-14.61	-17.92/-17.39	-17.62/-13.86	-12.41/-13.25
Θ(37.5°)	-18.01/-19.3	-15.12/-14.98	-14.44/-19.25	-17.57/-17.86	-15.6/-11.14	-8.43/-6.1	-6.12/-6.28	-6.92/-8.14	-9.28/-8.91	-9.22/-10.48	-17.86/-16.22	-14.3/-15.89	-17.73/-14.12	-13.4/-11.71	-11.39/-11.03	-9.9/-10.33	-9.89/-12.86	-18.44/-10.93	-9.3/-10.44	-12.42/-12.2	-10.95/-11.72	-11.61/-12.43	-16.28/-18.52	-17.92/-18.2
Θ(45°)	-17.43/-16.46	-12.06/-9.43	-7.8/-9.43	-10.95/-14.74	-16.28/-9.79	-6.04/-4.98	-4.54/-4.61	-5.88/-6.02	-5.31/-5.66	-8.32/-8.79	-10.71/-17.71	-18.63/-18.1	-18.1/-11.41	-9.27/-6.99	-6.12/-8.55	-13.8/-17.92	-18.44/-17.88	-17.19/-11.22	-9/-9.91	-9.78/-6.83	-6.04/-7.68	-8.68/-10.66	-15.8/-19.17	-16.29/-13.52
Θ(52.5°)	-13.95/-18.68	-18.54/-14.48	-8.81/-7.47	-9.42/-14.05	-18.68/-12.97	-8.04/-5.84	-5.31/-5.53	-5.98/-6.43	-8.05/-9.21	-7.89/-8.9	-13.9/-18.37	-17.85/-18.82	-14.29/-7.44	-5.97/-6.02	-7.41/-11.21	-18.49/-18.21	-14.4/-10.47	-9.76/-7.66	-7.7/-9.1	-6.69/-3.57	-4.41/-4.68	-5.08/-9.47	-12.07/-12.88	-18.5/-15.7
Θ(60°)	-14.49/-12.26	-13.57/-18.45	-7.93/-6.27	-9.81/-18.49	-15.32/-9.58	-6.07/-3.07	-1.99/-2.15	-2.7/-3.14	-4.49/-5.58	-7.79/-12.58	-12.54/-13.03	-18.23/-17.92	-14.28/-6.64	-5.79/-5.42	-6.99/-12.68	-18.68/-12.47	-9.05/-7.39	-7.04/-4.32	-2.68/-4	-3.59/-2.78	-4.03/-5.05	-7.57/-6.36	-8.95/-10.69	-14.31/-16.65
Θ(67.5°)	-12.71/-8.73	-10.63/-17.07	-5.35/-4.22	-8.77/-12.79	-9.33/-5.93	-3.45/-0.6	0.99/1.11	-0.02/-1.68	-3.19/-5.21	-10.86/-18.16	-12.44/-18.11	-16.63/-18.96	-6.81/-3.6	-4.76/-7.93	-10.83/-18.38	-18.17/-8.33	-7.24/-7.66	-5.19/-2.89	-1.72/-0.35	-0.44/-1.79	-4.85/-6.93	-6.73/-7.06	-8.87/-9.34	-13.41/-15.48
Θ(75°)	-10.57/-7	-9.3/-19.29	-8.84/-7.77	-12.29/-7.96	-3.5/-2.93	-2.43/-1.29	0.01/-0.17	-1.29/-2.5	-4.45/-7.52	-11.17/-14.34	-8.7/-8.27	-13.81/-14.18	-18.23/-6.98	-5.56/-11	-12.35/-13.26	-15.74/-11.92	-8.64/-9.32	-9.46/-5.67	-3.26/-0.86	-0.97/-1.84	-3.8/-8.79	-7.9/-6.51	-8.73/-15.78	-13.06/-18.73
Θ(82.5°)	-12.49/-8.43	-9.76/-14.59	-9.83/-10.29	-12.28/-3.89	-2.34/-3.97	-4.75/-5.3	-3.68/-4.25	-5.5/-5.85	-5.73/-8.49	-17.55/-9.47	-7.56/-11.22	-17.18/-18.52	-13.33/-7.74	-9.8/-17.68	-17.2/-16.78	-13.05/-10.16	-10.4/-10.45	-9.43/-5.35	-3.33/-6.16	-5.76/-5.71	-5.85/-12.36	-16.29/-10.63	-17.44/-14.76	-12.02/-18.26
Θ(90°)	-10.3/-12.36	-9.62/-14.33	-17.86/-11.04	-5.94/-4.27	-4.9/-4.08	-4.79/-7.02	-9.05/-9.75	-7.72/-5.31	-3.82/-5.29	-4.66/-3.74	-3.59/-5.69	-12.87/-13.35	-18.63/-13.59	-11.3/-18.55	-18/-17.85	-16.1/-13.37	-18.81/-18.3	-11.98/-12.55	-10.38/-19.07	-12.07/-9.27	-6.26/-8.07	-18.55/-11.73	-15.88/-13.16	-10.05/-16.94
Θ(97.5°)	-18.16/-17.83	-8.73/-8.23	-12.67/-18.11	-9.5/-8.24	-7.56/-6.64	-6.88/-5.73	-4.63/-2.8	-2.63/-2.44	-1.46/-2.08	-4.26/-3.34	-4.29/-10.12	-18.73/-14.91	-18.41/-18.19	-18.22/-18.01	-16.31/-14.52	-16.03/-14.01	-10.79/-13.46	-18.69/-8.89	-5.56/-6.03	-5.99/-8.76	-13.09/-14.05	-16.27/-13.62	-15.31/-18.24	-11.94/-13.31
Θ(105°)	-18.09/-14.14	-6.61/-5.19	-7.13/-10.43	-12.35/-6.96	-5.11/-5.18	-5.92/-3.93	-2.69/-2.3	-0.84/-0.79	-1.93/-2.09	-2.41/-3.38	-3.77/-6.78	-18.58/-14.03	-18.03/-18.98	-18.31/-18.31	-18.19/-19.42	-17.62/-13.52	-8.37/-9.08	-13.93/-6.79	-5.27/-2.16	-5.15/-8.37	-18.82/-18.2	-14.18/-18.16	-15.09/-13.05	-11.13/-12.44
Θ(112.5°)	-18.06/-18.94	-10.22/-6.73	-4.5/-4.24	-5.62/-6.07	-7.71/-5.53	-5.53/-8.05	-7.72/-5.31	-2.91/-1.86	-1.04/-2.8	-4.92/-5.68	-5.94/-11.08	-9.53/-16.06	-14.12/-11.37	-14.91/-11.22	-11.98/-13.46	-16.92/-14.23	-6.4/-5.77	-17.85/-8.83	-4.5/-6.42	-9.85/-13.37	-11.96/-10.59	-7.04/-11.88	-14.39/-12.28	-13.87/-11.69
Θ(120°)	-14.48/-18.63	-18.31/-17.51	-9.74/-5.46	-4.74/-5.88	-7.85/-7.36	-5.57/-4.88	-5.99/-5.81	-3.48/-1.62	-2.11/-6.02	-6.27/-3.45	-6.92/-14.25	-5.07/-7.23	-19.14/-12.04	-9.89/-11.21	-10.83/-10.06	-6.78/-18.08	-12.43/-7.9	-2.82/-9.74	-17.94/-18.64	-4.44/-2.68	-7.96/-9.46	-4.97/-5.11	-8.72/-7.07	-13.56/-11.37
Θ(127.5°)	-13.48/-13.09	-9.74/-12.63	-12.67/-9.54	-8.6/-9.21	-6.34/-6.33	-7.53/-8.26	-7.95/-9.09	-11.72/-13.34	-8.25/-5.11	-4.12/-7.75	-17.98/-9.23	-6.86/-9.05	-12.43/-11.24	-9.53/-11.64	-13.6/-6.9	-10.06/-9.28	-7.79/-7.96	-0.14/-9.03	-19.27/-10.22	-6.41/1.22	-3.82/-6.13	-6.91/-3.9	-7.06/-7.65	-7.24/-7.34
Θ(135°)	-9.88/-11.57	-6.17/-7.98	-15.19/-9.12	-4.83/-3.51	-4.99/-5.86	-4.74/-3.36	-2.28/-1.5	-0.88/-1.31	-3.04/-3.81	-7.7/-11.22	-11.81/-10.15	-10.66/-10.48	-7.86/-7.35	-10.72/-17.36	-8.77/-14.79	-17.44/-18.69	-11.3/-7.85	-2.53/-10.91	-17.61/-12.83	-9.55/-2.87	-6.29/-16.56	-17.97/-5.95	-5.45/-7.8	-7.66/-5.52
Θ(142.5°)	-5.97/-4.84	-5.07/-6.36	-12.93/-10.6	-6.32/-4.24	-4.02/-5.12	-6.33/-7.16	-7.61/-7.42	-7.53/-7.28	-6.02/-6.5	-7.89/-5.54	-5.33/-12.39	-18.73/-17.71	-16.69/-12.17	-12.01/-12.48	-12.71/-16.22	-13.83/-18.32	-15.56/-14.71	-17.55/-18.43	-17.98/-18.65	-17.69/-17.71	-17.99/-11.54	-11.21/-7.52	-6.96/-6.56	-9.13/-5.74
Θ(150°)	-6.36/-5.11	-4.85/-4.34	-5.87/-8.96	-11.72/-13.58	-10.32/-8.45	-7.92/-8.56	-9.14/-9.23	-10.18/-11.52	-11.06/-8.69	-6.79/-5.61	-6.37/-6.51	-8.35/-11.43	-14.19/-19.31	-16.49/-15.57	-14.84/-10.72	-9.87/-9.53	-5.72/-5.78	-11.4/-18.3	-18.59/-12.39	-10.24/-17.74	-12.15/-6.78	-7.43/-8.15	-6.27/-8.48	-9.61/-5.28
Θ(157.5°)	-10.63/-9.17	-9.22/-8.13	-8.13/-11.11	-14.25/-16.9	-15.81/-11.94	-7.76/-4.93	-3.52/-3.54	-5.29/-7.16	-9.11/-10.64	-12.2/-14.24	-15.6/-14.14	-14.05/-14.02	-11.96/-10.85	-10.25/-9.22	-7.91/-7.65	-7.95/-6.7	-5.04/-5.73	-8.56/-11.44	-13.58/-14.65	-13.24/-11.22	-10.27/-8.78	-7.84/-8.28	-10.42/-11.96	-10.03/-10.16
Θ(165°)	-17.88/-18.56	-17.56/-14.06	-11.8/-10.16	-9.77/-9.83	-9.31/-8.48	-7.21/-5.66	-4.21/-2.68	-1.32/-0.73	-1.37/-2.34	-3.24/-4.15	-5.56/-7.7	-10.01/-11.35	-11.8/-12.6	-13.44/-13.5	-12.41/-11.14	-10.97/-12.06	-15.05/-18.25	-9.29/-8.84	-8.88/-9.28	-8.94/-9.88	-13.79/-18.11	-17.49/-14.13	-12.61/-14.74	
Θ(172.5°)	-15.55/-12.05	-9.37/-7.56	-6.33/-5.33	-4.37/-3.23	-2.09/-1.39	-1/-1.1	-1.26/-1.21	-1.05/-1.51	-2.65/-3.38	-3.79/-4.77	-7.08/-10.81	-14.57/-16.12	-15.77/-15.97	-14.85/-12.38	-9.61/-7.85	-6.78/-6.44	-6.99/-8.22	-9.78/-10.07	-10.3/-10.47	-10.34/-10.08	-10.13/-10.33	-10.18/-9.93	-11.08/-13.79	-18.35/-17.77
Θ(180°)	-9.48/-7.98	-6.44/-5.36	-4.73/-4.14	-3.68/-3.67	-3.57/-3.14	-2.72/-2.37	-2.38/-2.59	-3.58/-4.19	-3.76/-3.71	-4.92/-7.15	-10/-12.1	-14.37/-15.46	-14.6/-13.92	-12.62/-10.48	-8.64/-7.52	-7.1/-6.75	-6.14/-4.92	-3.81/-3.42	-3.3/-3.26	-3.34/-4.02	-5.49/-7.17	-8.51/-9.8	-12.66/-16.43	-14.81/-11.84
Freq(Hz)	5.785GPol.	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°)	-4.52/-3.82	-3.29/-3.53	-3.51/-3.75	-4.29/-4.31	-4.54/-5.4	-7.07/-9.79	-12.21/-14.69	-18.29/-18.35	-18.04/-15.63	-11.37/-9.13	-7.16/-5.93	-5.05/-4.4	-3.82/-3.28	-2.79/-2.36	-2.31/-2.77	-3.81/-4.92	-5.91/-7.48	-9.4/-10.94	-11.95/-14.88	-18.81/-18.04	-19.3/-14.97	-11.94/-9.25	-7.57/-7.31	-6.36/-5.55
Θ(7.5°)	-4.71/-4.1	-4.09/-4.08	-3.51/-3.88	-4.53/-4.92	-5.15/-5.63	-6.83/-9.17	-11.14/-13.27	-15.74/-18.04	-15.2/-14.11	-11.65/-8.72	-7.31/-7.72	-6.08/-5.22	-4.16/-3.43	-2.72/-2.56	-2.87/-3.39	-4.16/-4.91	-5.73/-7.42	-9.56/-11.28	-13.15/-16.21	-19.1/-18.02	-15.99/-13.12	-10.71/-7.94	-6.29/-6.22	-5.98/-5.64
Θ(15°)	-4.24/-4.85	-5.4/-5.17	-4.39/-4.82	-5.37/-6.15	-5.92/-5.84	-5.99/-6.18	-7.01/-8.91	-9.2/-8.88	-9.39/-8.21	-6/-5.68	-6.54/-7.11	-6.62/-5.4	-4.5/-4.12	-3.55/-3.46	-4.24/-5.98	-8.04/-9.5	-10.24/-10.12	-9.72/-10.23	-11.66/-14.13	-16.83/-17.8	-18.77/-17.23	-14/-10.38	-7.06/-5	-3.91/-3.76
Θ(22.5°)	-3.36/-3.89	-5.55/-6.23	-6.21/-6.45	-7.27/-7.09	-5.78/-5.38	-4.44/-3.93	-3.87/-4.17	-4.41/-5.41	-6.8/-7.9	-7.83/-6.32	-5.68/-6.05	-6.83/-6.6	-5.17/-4.36	-4.89/-6.71	-11.07/-15.58	-17.28/-17.72	-15.17/-13.23	-11.67/-10.23	-9.49/-8.57	-8.6/-10.7	-16.47/-18.64	-18.56/-16.47	-11.48/-7.91	-5.94/-4.29
Θ(30°)	-2.4/-1.71	-2.02/-1.82	-2.77/-3.93	-4.41/-4.56	-4.63/-3.88	-3.22/-2.42	-2.07/-1.79	-2.33/-3.04	-3.92/-5.77	-9.99/-13.17	-11.81/-9.72	-7.55/-9.31	-9.3/-8.06	-7.85/-8.42	-10.67/-12.35	-18.07/-18.71	-17.88/-19.01	-15.77/-11.52	-9.13/-8.33	-7.89/-6.65	-4.71/-4.45	-6.72/-8.78	-9.88/-17.24	-12/-4.88
Θ(37.5°)	-0.28/0.23	-0.99/-1.87	-2.78/-3.73	-3.06/-3.53	-2.94/-1.92	-1.45/-1.25	-0.91/-1.75	-3.32/-3.17	-2.34/-3.87	-7.76/-12.62	-14.65/-17.92	-1												



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Freq(Hz)	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.57	4.78	4.74	3.82
Ant. 2 Max Gain (dBi)	3.59	4.42	3.92	3.08
Ant. 3 Max Gain (dBi)	4.65	3.94	4.11	4.32
Ant. 4 Max Gain (dBi)	4.66	3.16	3.19	3.36
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/127.5/330	Phi/120/337.5	Theta/97.5/307.5	Theta/82.5/45
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/127.5/337.5	Theta/112.5/300	Theta/127.5/337.5	Theta/105/337.5
Ant. 3 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/135/187.5	Theta/135/187.5	Theta/135/157.5	Theta/135/157.5
Ant. 4 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/255	Phi/127.5/337.5	Theta/105/255	Theta/97.5/90
Max Gain (dBi)	4.66	4.78	4.74	4.32
DG [1SS] (dBi)	6.77	6.44	6.79	5.87
DG [2SS] (dBi)	4.66	4.78	4.74	4.32
DG [4SS] (dBi)	4.66	4.78	4.74	4.32



Radiated Composite Gain Data_6GHz

Appendix B

DG 1SS Result

Freq(Hz)	6.175GPol.	Phi-	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°)
DG(dB)	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-8.07/8.04	-8.3/-0.9	-6.1/-5	-4.45/-3.94	-3.46/-2.58	-1.84/-1.66	-1.31/-1.26	-1.66/-3.15	-2.81/-3.37	-4.13/-5.49	-7.27/-8.55	-9.89/-11.92	-12.14/-10.7	-8.91/-7.6	-7.03/-6.12	-5.06/-4.02	-2.73/-2.39	-3.16/-2.7	-2.59/-2.67	-4.92/-4.18	-4.2/-5.5	-6.65/-8.22	-7.72/-7.76	
Θ(7.5°)	-8.09/8.5	-8.38/-8.54	-6.81/-5.46	-5.71/-6.51	-7.1/-5.65	-5.17/-4.79	-4.28/-3.7	-3.06/-2.74	-2.68/-2.6	-2.41/-2.3	-2.98/-3.99	-5.11/-6.56	-6.38/-6.2	-6.27/-6.19	-5.2/-3.58	-2.15/-1.54	-0.96/-0.32	-0.34/-1.07	-1.4/-0.81	-0.75/-1.36	-2.77/-4.1	-4.82/-6.43	-6.57/-7.61	-8.35/-8.53
Θ(15°)	-8.13/-9.08	-8.86/-7.18	-4.64/-3.8	-2.92/-1.87	-1.39/-1.72	-2.68/-2.66	-2.39/-2.39	-2.21/-1.61	-0.56/-2.02	0.81/-0.74	0.39/-0.2	-0.19/-1.24	-2.44/-3.23	-2.92/-2.15	-1.51/-1.26	-1.35/-1.18	-0.69/-0.19	0.30/-32	0.19/-0.68	-1.83/-2.47	-2.89/-3.82	-4.9/-5.6	-5.56/-6.11	-6.64/-6.76
Θ(105°)	-6.06/-5.97	-5.53/-3.67	-1.22/0.52	1.54/-1.77	1.02/0.1	-2.65/-3.76	-4.2/-4.29	-3.6/-2.07	-0.83/-0.44	-0.34/-0.13	0.63/0.68	0.02/-1.3	-10.1	0.63/0.84	0.66/0.56	0.65/0.64	-0.16/-1.22	-1.92/-2.91	-4.04/-4.83	-5.62/-6.3	-7.88/-6.87	-5.8/-5.76		
Θ(30°)	-3.53/-3.95	-3.55/-1.42	1.19/2.79	3.14/2.39	1.15/-0.24	-1.43/-3.08	-5.09/-5.46	-5.52/-5.86	-5.33/-5.37	-5.54/-4.17	-3.33/-2.4	-1.63/-0.83	-0.43/0.08	0.64/-1.02	1.33/-1.36	1.10/-58	0.33/0.48	0.99/0.71	-0.3/-1.76	-3.25/-4.57	-5.88/-4.15	-2.62/-2.54	-3.47/-5.78	-6.41/-4.53
Θ(37.5°)	-6.02/-4.47	-3.04/-0.43	3/3.7	2.66/-1.78	1.33/0.21	-1.19/-2.76	-3.91/-4.73	-4.78/-5.76	-6.43/-7.29	-6.93/-7.24	-5.72/-3.44	-1.77/-1.59	-1.41/-0.14	0.91/-31	2.02/2.16	1.76/-1.36	1.22/-1.1	1/1.12	0.73/-1.07	-3/-4.58	-4.99/-4.55	-5.36/-6.26	-5.31/-4.43	-5.53/-6.92
Θ(45°)	-4.78/-3.88	-1.09/-2.02	3.47/3.52	3.04/2.37	1.72/-1.05	-0.51/-2.28	-3.2/-3.62	-3.63/-4.48	-5.43/-6.22	-6.71/-7.99	-5.78/-3.83	-3.3/-3.1	-2.51/-0.8	-0.45/-0.3	1.08/-1.73	0.89/0.46	1.71/-1.41	0.24/-1.96	-2.39/-0.79	-0.82/-2.06	-3.37/-5.97	-5.08/-5.1	-6.1/-5.74	-5.23/-5.33
Θ(52.5°)	-4.8/-3.4	0.74/3.09	2.65/2.06	1.31/0.8	0.33/-0.97	-2.28/-2.33	-2.84/-4.04	-5.72/-5.98	-6.09/-8.73	-7.27/-5.96	-4.87/-2.56	-1.51/-0.45	-0.55/-0.05	0.28/-0.03	1.05/0.25	-0.21/0.91	0.5/-0.42	-1.64/-1.47	-1.55/-1.38	-1.14/-0.42	-0.87/-3.32	-4.82/-4.16	-4.09/-5.44	-4.89/-4.75
Θ(60°)	-2.54/-1	2.63/3.82	2.76/-1.75	1.04/-0.96	0.27/-0.63	-0.25/-0.78	-1.83/-2.63	-4.26/-6.06	-7.15/-7.78	-7.67/-3.43	-2.44/-2.2	-0.96/-1.62	0.96/0.72	1.57/-0.19	-0.06/0.66	1.06/-1.5	0.29/-0.77	-2.47/-1.87	-1.68/-1.4	-0.68/-0.51	-1.21/-2.96	-3.69/-2.07	-2.57/-3.31	-2.27/-2.96
Θ(67.5°)	-0.46/-1.7	3.74/2.88	2.27/-1.09	-0.41/-0.58	-0.94/-0.23	-0.02/-0.25	-1.78/-3	-3.04/-3.11	-2.16/-2.08	-3.62/-3.56	-1.58/-1.63	-1.47/0.41	1.07/-0.17	1.67/0.51	0.35/-1.99	1.17/-0.47	-0.87/-1.96	-3.92/-4.3	-2.43/-1.77	-2.49/-1.09	-1.15/-2.53	-2.59/-1.96	-2.22/-2.08	-2.5/-0.91
Θ(75°)	0.34/3.19	3.61/2.6	2.16/-0	-1.7/-2.76	-3.27/-1.12	-1.18/-2.87	-4.41/-4.44	-2.78/-2.16	-2.91/-2.01	-1.75/-2.04	-1.03/-1.21	-0.54/-1.02	-1.25/0.89	1.19/0.53	-0.54/-1.58	1.44/-0.79	-2.87/-2.43	-3.35/-4.03	-2.64/-2.83	-4.93/-1.66	0.21/-0.92	-2.18/-3.34	-1.08/-0.39	-0.24/-0.34
Θ(82.5°)	0.12/2.82	2.55/-1.3	0.33/-0.03	-0.86/-3.42	-3.76/-1.46	-1.26/-3.29	-6/-6.38	-4.35/-5.41	-3.47/-2.57	-2.86/-1.18	-0.8/-1.45	0.18/-0.93	0.13/1.83	2.1/-0.25	-1.26/-0.45	-0.2/-1.5	-2.59/-2.86	-2.05/-2.69	-3.23/-4.37	-4.77/-2.33	1.93/-1.36	-2.05/-2.86	-0.61/-1.45	1.21/0.89
Θ(90°)	1.72/3.37	3.28/0.32	-0.48/0.78	-1.21/-3.89	-2.32/-4.81	-2.53/-0.43	-0.1/-0.07	-1.55/-4.14	-4.42/-2.8	-4.32/-3.87	-1.71/-2.02	-2.16/-2.79	-3.6/0.2	1.39/0.45	-3.88/0.03	1.85/-0.35	-2.62/-3.6	-2.95/-3.93	-3.34/-2.93	-4.98/-2.23	1.39/-1.32	-0.31/-0.91	-1.48/0.26	2.07/-1.52
Θ(97.5°)	0.25/2.36	3.07/-0.64	-2.03/0.15	-3.13/-4.68	-4.36/-5.04	-5.96/-0.95	-0.22/-1.88	-2.13/-2.19	-2.01/-1.5	-3.03/-4.3	-0.61/-1.67	-0.75/-1.52	-3.78/-0.96	-0.81/-0.4	-2.98/-2.32	2.22/-1.12	-1.97/-4.56	-5.37/-4.49	-4.24/-0.97	-3.98/-4.45	1.53/-1.26	0.64/-0.99	-0.91/-1.34	0.01/-2.29
Θ(105°)	1.08/-1.67	1.31/-2.27	-1.7/-0.5	-4.44/-8.3	-7.72/-5.08	-3.92/-4.55	-4.91/-3.93	-2.85/-0.73	-1/-3.57	-1.45/-2.35	-0.43/-1.57	-1.97/-0.19	0.59/-0.42	-0.08/-0.82	1.67/3.02	-0.46/-4.36	-9.53/-8.64	-2.04/-0.41	-4.77/-3.33	0.71/-1.23	1.1/-1.3	0.1/-73	-0.7/-4.4	
Θ(112.5°)	0.65/0.19	-0.36/-1.77	-1.57/-1.33	-1.59/-4.05	-1.27/-7.7	-6.74/-8.13	-5.82/-3.1	-1.65/-4.18	-1.26/-4.85	-2.14/-6.1	-1.64/-1.28	-1.58/-0.83	-1.05/-1.04	-0.88/-3.72	-3.87/-5	-4.82/-6.15	-7.79/-1.79	-1.39/0.26	-2.81/-1.99	0.58/-1.97	-0.69/-1.16			
Θ(120°)	2.17/-0.06	1.43/0.37	-3.24/-2.35	0.25/0.11	-1.02/-3.27	-4.25/-2.98	-3.3/-2.69	-2.01/-1.68	-3.06/-2.84	-3.31/-6.31	-3.24/-1.92	-4.21/-5.34	-5.9/-4.09	-1.86/-2.77	-5.06/-3.14	-0.55/-0.65	-0.99/0.6	-3.52/-3.39	-2.43/-3.98	-5.23/-5.41	-0.8/-0.41	0.47/0.89	2.51/3.97	1.65/0.44
Θ(127.5°)	3.44/2.15	1.91/0.85	0.99/-1.63	1.75/0.98	-2.57/-2.88	-0.88/-1.17	-4.36/-6.96	-4.44/-2	-3.86/-5.35	-6.82/-5.98	-5.21/-5.68	-6.26/-4.4	-6.48/-7.08	-3.43/-3.78	-2.68/-4.24	-2.97/-1.47	0.88/-2.31	-5.96/-5.63	-3.32/-3.99	-8.82/-7.31	-4.3/-1.8	-0.32/-1.04	3.19/4.95	4.27/3.23
Θ(135°)	2.02/2.59	1.08/0.32	-1.97/-2.26	-1.52/-1.57	-2.39/-4.75	-5.94/-4.65	-4.86/-6.24	-7.42/-7.19	-5.96/-8.35	-8/-8.05	-4.03/-3.65	-5.22/-2.67	-2.18/-3.17	-2.42/-1.75	-5.07/-4.82	-2.04/0.6	2.51/-15	-1.5/-2.88	-0.84/-1.18	-4.91/-4.95	-3.04/-2.92	-4.22/-3.07	-0.28/2.31	2.71/-1.68
Θ(142.5°)	0.15/-1.16	0.27/-1.26	-0.63/-1.41	-0.48/-1.27	-2.18/-4.37	-3.77/-3.92	-3.75/-4.44	-6.34/-6.24	-5.18/-6.19	-6.19/-5.79	-3.81/-3.78	-5.61/-5.18	-4.23/-6.31	-5.94/-4.75	-6.05/-2.09	-1.38/-0.6	-2.08/-2.72	-4.39/-3.44	-1.88/-1.85	-4.5/-7.48	-6.71/-3.74	-2.37/-4.43	-4.76/-2.8	-0.76/-2.04
Θ(150°)	-2.89/-2.74	-2.82/-3.59	-2.69/-2.43	-4.47/-5.56	-7.17/-8.13	-9.4/-7.69	-8.25/-9.6	-9.6/-9.03	-8.25/-5.3	-4.12/-2.56	-7.28/-8.5	-6.26/-8.79	-6.03/-2.39	-1.73/-2.66	-0.29/0.31	1.16/0.67	-1.75/-2.87	-2.97/-4.81	-5.05/-4.8	-2.73/-3.18	-8.17/-7.38	-5.14/-4.56	-4.3/-2.06	-1.37/-1.96
Θ(157.5°)	-0.01/0.09	1.13/1.8	0.87/0.84	-2.41/-5.18	-6.43/-7.2	-7.81/-7.89	-7.51/-7.22	-6.2/-5.09	-3.44/-2.48	-2.31/-2.29	-2.21/-2.19	-4.02/-6.15	-3.63/-0.9	0.47/-1.33	-3.35/-3.18	-2.22/-3.11	-4.86/-3.64	-3.47/-4.96	-5.63/-3.63	-3.36/-4.67	-5.28/-5.75	-6.71/-10.12	-8.42/-4.9	-2.21/-0.73
Θ(165°)	-2.02/-1.52	-1.79/-2.65	-4.7/-5.55	-6.01/-7.42	-8.94/-8.83	-7.93/-7.06	-5.84/-3.53	-1.69/-1	-1.22/-2.08	-2.91/-3.4	-2.68/-2.79	-1.88/-2.22	-0.63/0.99	1.37/-1.78	2.31/-62	0.11/-0.09	-0.04/-0.45	-1.95/-3.76	-5.45/-6.73	-7.38/-6.13	-5.24/-4.12	-3.38/-3.47	-5.17/-3.92	-2.32/-3.13
Θ(172.5°)	-5.42/-4.98	-5.97/-4.15	-6.93/-6.7	-6.26/-5.52	-4.84/-5.09	-4.81/-4.79	-4.4/-4.02	-3.85/-4	-3.92/-3.81	-3.61/-3.38	-2.99/-1.95	-0.85/0.02	0.41/0.44	0.27/0.4	0.54/0.81	1.35/-1.58	1.25/0.29	-0.83/-1.8	-3.1/-3.53	-2.84/-2.62	-3.31/-3.48	-3.68/-5.05	-7.35/-8.86	-8.67/-7.68
Θ(180°)	-7.13/-6.04	-5.35/-4.44	-3.91/-3.89	-3.96/-4.92	-5.51/-5.32	-4.81/-5.18	-5.46/-5.62	-6.24/-6.82	-7.14/-6.98	-5.89/-4.81	-3.64/-2.89	-2.42/-2.32	-2.34/-2.06	-1.51/-1.23	-1.1/-1.13	-1.03/-0.92	-0.79/-0.73	-0.84/-1.37	-1.68/-2.34	-3.33/-6.19	-8.59/-8.74	-8.56/-8.5	-8.41/-7.8	-7.21/-7.91
Freq(Hz)	6.175GPol.	Theta-	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°)	-2.59/-2.39	-2.07/-2.37	-3.21/-4.14	-5.3/-6.2	-7.74/-8.64	-9.87/-11.75	-12.98/-11.26	-9.03/-7.19	-6.2/-5.1	-3.99/-3	-2.29/-1.87	-1.59/-1.63	-1.96/-2.42	-2.73/-3.32	-4.1/-4.66	-5.81/-7.43	-8.82/-9.69	-11.09/-11.22	-11.26/-10.69	-9.2/-8.03	-6.05/-4.69	-3.93/-3.32	-2.51/-2.29	
Θ(7.5°)	-4.76/-5.03	-5.14/-5.5	-6.37/-7.29	-6.38/-5.57	-4.49/-3.9	-3.55/-3.49	-3.27/-3.18	-3.09/-3.58	-4.35/-4.92	-5.19/-4.87	-4.22/-3.56	-3.12/-87	-2.91/-2.97	-2.48/-2.09	-2.07/-2.47	-3.26/-4.36	-6.16/-6.37	-1.41/-8.22	-8.23/-8.68	-8.21/-7.14	-5.62/-4.38	-3.61/-2.73	-2.69/-3.12	-2.71/-4.13
Θ(15°)	-6.53/-7.58	-8.7/-8.63	-8.17/-5.43	-2.68/-1.09	-0.8/-0.79	-0.33/0.4	0.80/-46	-0.32/-0.97	-1.34/-2.27	-3.5/-4.56	-4.97/-6.25	-7.33/-6.34	-4.98/-3.83	-2.69/-1.97	-2.05/-2.37	-2.45/-2.7	-3.51/-2.41	-5.36/-6.7	-7.2/-8.26	-7.04/-4.96	-3.65/-2.97	-2.41/-1.93	-1.73/-2.54	-4.28/-5.36
Θ(22.5°)	-3.07/-4.46	-5.67/-5.17	-2.5/-0.24	0.82/-1.5	0.73/0.55	0.31/-0.21	-0.94/-1.63	-1.81/-1.55	-1.61/-1.71	-2.53/-3.37	-3.94/-3.3	-4.39/-3.93	-2.43/-1	-0.71/-1.31	-2.29/-2.35	-2.11/-1.45	-1.12/-2.24	-2.42/-3.26	-3.53/-3.92	-2.85/-1.64	-1.01/-1.06	-1.79/-4.12	-3.42/-4.15	-3.44/-2.68
Θ(30°)	-2.99/-5.17	-5.53/-4.27	-1.41/-1.17	1.21/8.2	1.21/1.02	1.18/1	0.49/-0.09	-0.71/-1.24	-1.3/-1.07	-0.16/-0.5	-0.98/-1.02	-0.59/-0.44	0.69/1.53	0.88/-1.21	-1.82/-0.81	-0.19/-0.19	-0.9/-1.79	-1.46/-0.85	-0.36/0.05	1.04/-1.69	-1.18/-0.35	-1.97/-1.71	-1.54/-2.07	-2.92/-9.3
Θ(37.5°)	0.52/-1.6	-0.18/-1.13	0.93/-1.42	1.55/0.92	0.77/0.52	0.39/0.38	0.43/-0.01	-0.63/-1.28	-0.99/-0.46	-0.05/-1.08	0.91/0.64	1.81/-73	0.92/-1.39	1.54/0.63	0.42/0.3	-0.03/-0.2	-0.8/-0.57	-0.36/-0.91	-1.22/0.31	1.91/2.22	2.55/2.37	1.32/0.31	-0.21/-0.04	1.28/-1.83
Θ(45°)	3.32/-1.66	1.85/2.51	2.42/-49	2.31/-35	0.89/-1.56	1.91/-15	0.88/0.37	-0.18/-1.23	-1.27/0.72	2.08/-2.29	2.42/-2.17	2.05/-1.4	1.34/-1.14	1.12/0.7										



Radiated Composite Gain Data_6GHz

Appendix B

Θ(22.5°)	-6.81/-5.77	-4.77/-2.67	-2.6/-3.04	-2.73/-2.71	-2.09/-2.28	-2.61/-2.66	-3.31/-3.7	-4.69/-4.56	-3.82/-2.6	-1.58/-1.22	-1.29/-1.29	-2.1/-3.47	-3.91/-3.31	-3.08/-3.63	-4.43/-5.92	-6.73/-5.95	-3.86/-2.26	-1.79/-1.68	-1.87/-2.47	-3.63/-4.39	-4.79/-5.47	-5.5/-6.1	-7.2/-7.96	-7.28/-6.05
Θ(30°)	-7.97/-8.2	-6.9/-5.81	-4.02/-2.63	-1.49/-1.14	-0.93/-1.74	-1.71/-1.49	-1.37/-1.81	-2.86/-4.51	-5.05/-3.9	-2.83/-2.41	-1.7/-0.96	-0.62/-0.88	-1.54/-2.92	-3.06/-2.64	-2.75/-4.18	-4.39/-3.38	-1.89/-1.32	-1.52/-1.51	-1.06/-1.35	-1.59/-1.88	-2.7/-3.98	-5.1/-5.7	-5.59/-6.69	-7.26/-7.9
Θ(37.5°)	-5.26/-7.21	-4.99/-4.82	-3.22/-0.46	-0.02/-0.39	-0.81/-1.33	-1.36/-2.23	-3.63/-5.73	-7.31/-8.42	-8.78/-8.48	-7.13/-4.62	-3.05/-2.24	-1.17/-0.27	-0.42/-1.57	-2.69/-1.62	-1.53/-1.42	-0.83/-0.1	-0.39/-1.28	-1.83/-2.91	-4.07/-4.63	-5.14/-4.02	-4.55/-8.4	-8.24/-5	-3/-2.3	-1.57/-2.81
Θ(45°)	-3.14/-4.98	-3.79/-2.43	0.822/4.4	2.091/4.8	0.45/-0.35	-0.27/-0.2	-0.44/-1.19	-3.4/-5.97	-6.11/-4.99	-5.56/-6.61	-4.7/-2.74	-1.71/-2.12	-1.46/-1.01	-1.41/-1.53	-0.520/85	0.37/-0.16	0.29/-0.09	-1.48/-3	-2.65/-2.82	-4.09/-4.68	-5.25/-5.1	-8.06/-7.8	-4.46/-3.93	-3.35/-2.05
Θ(52.5°)	-2.51/-1.47	-3.67/-0.17	2.662/5	2.381/1.8	-0.46/-0.32	0.260/-17	-0.63/-1.07	-0.88/-1.53	-2.46/-2.44	-4.14/-5.44	-4.71/-3	-2.78/-1.66	0.16/-0.39	-0.37/-1.75	-0.84/-0.17	0.611/32	1.981/01	-1.04/-2.07	-3.05/-1.68	-1.8/-2.02	-4.3/-5.45	-6.28/-7.88	-4.72/-3.92	-2.97/-2.79
Θ(60°)	-2.39/-0.37	-0.682/98	3.512/33	1.53/-0.48	-0.71/-0.25	-0.89/-1.35	-2.53/-3.75	-3.56/-3.02	-2.18/-0.97	-0.57/-1.07	-3.78/-2.78	-1.79/-2.24	-0.98/-0.4	-1.53/-1.87	-2.330/04	0.75/-0.01	0.520/65	-0.66/-1.5	-3.17/-3.37	-3.04/-3.36	-4.13/-5.41	-6.41/-7.96	-7.35/-4.17	-3.8/-2.34
Θ(67.5°)	-1.16/-1.15	0.273/55	2.461/78	0.95/-0.5	-0.57/-0.05	-0.6/-2.92	-4.67/-6.68	-6.5/-5.84	-4.51/-2.04	-1.84/-0.47	-1.63/-3.04	-0.15/-1	-0.02/-1.62	-1.66/-0.56	-0.69/-1.93	-0.480/03	-1.22/-1.3	-1.98/-3.01	-2.81/-3.65	-3.22/-3.61	-5.35/-5.44	-5.87/-7.47	-2.55/-4.69	-2.84/-1.75
Θ(75°)	-1.02/-1.18	2.53/44	1.350/43	1.03/-0.35	-2.63/-2.59	-1.95/-3.14	-5.52/-5.94	-4.71/-3.81	-1.72/-1.14	-1.65/-1.05	-0.25/-0.8	-2.45/-0.62	-1.19/-1.37	-4.08/-0.27	0.02/1.32	-1.63/-1.81	-2.68/-1.66	-2.29/-4	-4.68/-4.62	-3.86/-6.26	-8.2/-6.16	-5.68/-5.36	-3.66/-4.69	-2.85/-3.33
Θ(82.5°)	-1.310/05	3.012/07	0.441/37	0.44/-2.95	-4.69/-4.34	-3.81/-3.42	-5.2/-5.97	-3.58/-2.64	-3.06/-2.38	-3.9/-2.16	-2.24/-1.36	-1.03/-2.21	-0.89/-1.76	-2.04/-0.72	1.96/2.22	-2.29/-1.16	0.13/-1.31	-2.39/-3.41	-5.25/-5.38	-6.16/-5.05	-7.82/-8.02	-4.86/-2.77	-1.69/-2.14	-1.62/-1.55
Θ(90°)	-3.87/-2.73	0.420/54	-0.040/8	-0.86/-1.2	-3.48/-3.77	-2.91/-2.63	-3.24/-1.54	-1.36/-2.66	-2.55/-4.39	-3.88/-1.96	-1.23/-3.94	-2.09/-3.16	-3.49/-1.34	0.09/-3	0.48/-0.16	-1.281/26	0.92/-2.3	-5.8/-4.57	-4.85/-5.47	-5.84/-4.91	-9.81/-5.62	-2.03/-1.52	-2.18/-4.33	-2.33/-1.78
Θ(97.5°)	-2.36/-2.44	-0.36/-0.68	-0.75/-0.56	-1.58/-0.69	-1.6/-6.41	-4.44/-4.19	-3.18/-1.96	-2.25/-6.16	-5.26/-5.19	-7.84/-1.96	-0.49/-1.57	-4.44/-5.44	-6.51/-2.87	0.9/-1.2	0.780/94	-1.81/-72	-3.85/-3.2	-5.51/-5.68	-6.06/-4.79	-7.66/-3.12	-2.24/-1.26	-1.51/-7.47	-1.76/-0.41	
Θ(105°)	-2.08/-1.66	-0.60/38	-0.34/-1.34	-2.23/-1.38	-0.67/-4.97	-8.44/-3.25	-2.72/-4.57	-5.46/-3.5	-4.53/-3.26	-8.74/-4.62	-0.05/-0.39	-1.48/-3.32	-2.07/-1.85	-1.22/-0.87	-1.75/-2.65	-1.93/-3.79	0.921/72	0.69/-3.5	-3.95/-5.85	-6.36/-5.16	-4.63/-1.9	-1.45/-1.44	-1.37/-2.49	2.47/-0.47
Θ(112.5°)	-2.25/-1.34	-1.15/-0.6	-1.57/-0.49	-4.12/-2.42	-0.45/-4.11	-8.22/-4.21	-4.71/-3.39	-1.54/-0.67	-0.87/-1.7	-4.82/-6.57	-1.92/-0.84	-2.1/-5.28	-2.52/-0.28	-0.340/32	-3.08/-2.98	0.44/-1.24	-4.63/-2.95	-0.68/-2.65	-2.14/-2.07	-2.5/-5.55	-2.32/-1.65	-3.29/-2.82	-3.130/67	1.68/-1.01
Θ(120°)	-1.48/-1.7	-3.99/-2.07	-3.08/-3.4	-3.97/-3.11	-2.6/-3.71	-3.71/-2.32	-1.38/-3.67	-1.320/-47	-0.82/-1.07	-3.73/-6.74	-3.33/-3.03	-3.67/-1.77	0.67/-1.61	-2.81/-2.85	-3.59/-3.08	-4.83/-5.01	-5.49/-1.68	-1.06/-4.12	-2.25/-2.95	-0.53/-1.29	-1.45/-2.57	-0.212/8	0.9/-2.85	
Θ(127.5°)	-0.49/-2.99	-2.84/-4.6	-3.85/-3.37	-1.21/-1.62	-3.23/-4.54	-2.65/-1.96	-2.074/06	-2.76/-1.31	-0.55/-1.72	-2.27/-5.5	-4.3/-4.01	-2.67/-4.14	-6.91/-7.32	-4.67/-1.76	-2.71/-1.97	-1.61/-1.19	-6.57/-2.92	-2.19/-3.26	-5.67/-3.18	-2.11/-1.11	-2.62/-2.11	-0.23/65	3.31/-0.49	
Θ(135°)	0.18/-1.02	-2.09/-3.81	-2.81/-1.49	-3.84/-1.84	-2.5/-5.01	-5.79/-4	-4.81/-6.7	-9.54/-3.43	-3.46/-5.61	-5.47/-6.24	-6.28/-5.84	-4.14/-3.18	-2.91/-1.92	1.04/-0.76	-1.09/-6.97	-3.32/-1.65	1.822/08	-0.95/-2.58	0.450/58	-4.81/-5.4	-2.8/-2.82	-2.06/-0.17	-0.982/28	1.81/-1.65
Θ(142.5°)	-3.32/-2.11	-2.96/-3.23	-2.98/-3.13	-3.08/-3.07	-3.01/-6.09	-8.04/-5.93	-4.6/-3.42	-3.55/-2.66	-3.19/-2.48	-3.54/-3.37	-5.04/-6.26	-6.51/-3.34	-0.97/-1.75	-1.74/-3.26	-8.53/-3.25	-2.461/67	-0.5/-0.12	-6.67/-6.17	-2.86/-1.08	-0.79/-7.88	-6.4/-2.92	-3.94/-0.48	-2.11/-2.88	-2.94/-2.66
Θ(150°)	-5.18/-8.53	-9.33/-7.44	-5.84/-5.34	-5.46/-5.7	-5/-4.57	-6.34/-6.68	-6.5/-7.48	-5.94/-5.06	-4.9/-4.26	-3.22/-4.13	-5.01/-6.2	-6.21/-2.77	-1.66/-1.46	-1.08/-2.35	-6.25/-6.5	-6/-4.68	-4.24/-3.9	-3.58/-3.79	-6.56/-8.48	-8.01/-6.62	-6.05/-4.65	-2.71/-1.88	-3.39/-2.06	
Θ(157.5°)	-1.97/-2.33	-2.99/-3.67	-3.7/-5.32	-6.23/-6.41	-5.79/-6.23	-7.06/-7.31	-4.67/-3.23	-3.27/-3.31	-2.29/-1.71	-2.19/-3.47	-3.64/-4.06	-5.68/-8.09	-7.7/-4.78	-3.06/-2.14	-1.53/-3.26	-4.46/-6.08	-7.34/-6.46	-3.86/-3.03	-4.94/-8.95	-8.67/-8.5	-8.4/-9.26	-6.71/-4.49	-3.97/-2.46	-2.4/-1.98
Θ(165°)	-2.52/-2.42	-5.84/-5.79	-5.84/-5.03	-4.95/-6.07	-7.99/-8.91	-9.26/-9.26	-8.16/-8.06	-7.24/-7.72	-6.67/-5.62	-3.29/-1.72	-1.14/-1.48	-1.73/-0.98	0.150/34	-0.64/-1.97	-2.59/-1.45	-0.64/-0.72	-0.480/01	-0.35/-1.68	-3.52/-4.81	-6.3/-7.32	-7.94/-7.75	-7.76/-7.81	-6.39/-4.34	-2.53/-1.87
Θ(172.5°)	-9.74/-9.58	-8.6/-9.38	-9.41/-8.45	-8.37/-8.67	-8.37/-8.66	-8.69/-8.97	-8.16/-7.4	-6.78/-6.91	-6.49/-5.88	-5.74/-4.78	-2.81/-1.82	-1.17/-0.87	-0.7/-0.61	-0.36/-0.06	0.230/33	0.04/-0.19	-0.52/-1.61	-3.15/-4.9	-5.74/-4.02	-3.51/-3.68	-4.9/-5.69	-6.55/-8.83	-9.8/-11.77	
Θ(180°)	-8.66/-8.63	-7.43/-8.13	-8.03/-6.64	-5.76/-5.7	-6.45/-6.94	-7.07/-6.8	-8.62/-7.4	-8.14/-8.25	-8.1/-7.86	-7.42/-6.35	-4.94/-4	-6.37/-3.05	-2.41/-1.94	-1.78/-1.79	-2.13/-2.76	-3.14/-3.05	-2.86/-3.44	-4.19/-4.87	-4.82/-5.78	-6.8/-7.69	-9.05/-9.15	-8.27/-5.6	-6.72/-7.3	-7.49/-10.01
Freq(Hz)	6.9950Pol.	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°)	-2.3/-2.68	-2.73/-2.97	-3.17/-3.24	-3.49/-3.87	-4.2/-4.23	-4.48/-4.06	-3.37/-2.89	-2.51/-1.84	-1.53/-1.16	-0.61/-0.55	-1.18/-1.55	-1.74/-2.48	-3.39/-3.55	-3.74/-4.26	-7.73/-5.34	-4.97/-4.85	-5.05/-5.43	-5.19/-4.41	-2.77/-2.63	-2.62/-2.09	-1.74/-1.49	-1.74/-1.81	-1.66/-2.08	
Θ(7.5°)	-4.32/-5.01	-4.59/-3.85	-4.46/-4.36	-4.38/-0.43	-3.43/-3.02	-3.12/-3.06	-2.93/-2.93	-3.09/-3.06	-3.09/-2.51	-1.76/-1.59	-1.47/-1.74	-2.03/-1.82	-1.46/-1.28	-1.17/-1.35	-1.42/-1.98	-2.84/-3.52	-4.21/-4.63	-4.91/-4.16	-3.45/-3.03	-2.36/-1.9	-1.73/-1.4	-1.53/-1.6	-2.4/-2.59	-2.17/-2.97
Θ(15°)	-5.48/-4.43	-3.23/-2.44	-2.07/-1.85	-2.45/-2.54	-2.54/-2.6	-2.69/-2.44	-2.16/-1.72	-1.84/-2.08	-3.15/-3.99	-3.98/-3.3	-2.54/-2.67	-2.71/-2.01	-0.89/-0.26	0.170/45	0.510/33	-0.37/-1.41	-2.47/-3.29	-3.97/-4.36	-3.78/-3.23	-3.44/-3.68	-2.49/-1.36	-1.08/-0.81	-1.71/-2.64	-3.69/-5.5
Θ(22.5°)	-5.54/-4.02	-1.4/-0.46	-0.95/-2.56	-4.29/-3.78	-2.54/-2.63	-2.58/-2.73	-2.16/-2.16	-1.93/-1.48	-1.82/-2.19	-1.94/-1.5	-1.25/-0.35	-0.41/-0.34	-0.561/78	2.151/47	3.21/-4.74	-3.21/-4.74	-5.09/-4.11	-3.48/-3.03	-4.45/-4.25	-4.44/-4.23	-3.72/-2.93	-3.21/-3.02	-4.07/-4.53	
Θ(30°)	-3.55/-1.66	-0.57/-0.67	-1.82/-2.65	-2.97/-3.07	-3.41/-2.8	-2.1/-1.54	-1.14/-0.48	-0.86/-0.92	-1.13/-1.99	-2.18/-1.69	-0.69/-0.61	-0.230/73	0.69/-0.26	0.51/74	1.981/28	-0.41/-2.08	-2.89/-2.37	-1.99/-2.53	-3.03/-2.89	-2.69/-2.13	-1.6/-1.6	-1.15/-0.96	-0.3/-0.17	-0.95/-2.55
Θ(37.5°)	0.091/87	1.190/12	-0.27/-1.11	-3.01/-7.72	-1.4/-0.44	-0.49/-0.38	-0.47/-0.91	-1.66/-1.91	-2.03/-1.63	-1.55/-1.29	0.081/53	1.641/42	1.05/-0.1	0.911/91	2.21/36	0.41/-1.07	-1.91/-2.07	-1.86/-1.6	-1.69/-2.45	-1.93/-0.16	0.931/38	1.241/05	-0.05/-0.94	-0.49/-0.49
Θ(45°)	2.593/36	3.072/5	2.721/28	2.801/1	-0.47/-0.6	0.061/75	2.882/63	0.65/-0.68	-0.270/48	2.082/48	1.661/97	2.662/99	2.030/18	1.131/09	0.721/16	-0.41/-1.56	-1.15/-0.98	0.630/43	0.04/-0.41	0.210/27	0.630/83	1.371/06	-0.042/49	
Θ(52.5°)	3.783/21	2.632/86	2.22/55	2.912	0.361/23	1.881/48	1.782/33	1.28/-1.2	-0.930/16	1.582/81	3.173/54	2.812/74	2.4/-0.42	0.472/13	2.252/81	1.39/-0.51	-0.020/64	0.951/97	1.671/02	0.19/-0.6	-0.640/42	2.291/62	0.582/08	1.942/33
Θ(60°)	4.494/54	3.933/41	21.94	2.682/28	2.283/26	3.472/51	1.112/01	3.061/21	0.442/08	2.143/63	2.842/52	4.022/83	1.870/61	0.993/05	2.633/64	3.032/35	1.691/02	-1.71/-0.15	1.452/03	1.911/09	-0.3/-0.02	1.642/73	1.422/83	2.893/39
Θ(67.5°)	4.006/05	4.964/56	2.82/85	2.81/41	0.51/93	2.421/64	0.51/93	1.922/47	3.394/85	3.632/85	4.14/07	3.833/82	1.521/21	2.582/78	2.452/87	3.562/35	2.221/24	-0.120/16	0.40/76	1.831/37	0.302/14	1.475/05	2.973/87	4.074/34
Θ(75°)	4.815/04	5.024/28	3.353/12	3.871/86	-0.362/23	2.71/4	1.592/37	3.043/93	4.515/46	4.642/05	2.464/47	4.534/86	3.072/38	4.112/96	2.181/7	3.192/19	0.860/08	0.45/-1.01	-1.02/-0.16	0.940/45	-0.30/-3.1	2.713/05	2.943/57	4.154/19
Θ(82.5°)	4.835/72	5.435/25	3.532/88	2.99/-0.63	0.233/24	4.264/18	3.442/31	1.571/92	3.814/83	5.063/13	3.9714/83	5.855/14	3.014/36	3.373/6	2.693/06	3.832/78	2.690/9	1.90/24	0.380/2	1.07/2	1.72/19	4.574/69	4.733/48	4.394/99
Θ(90°)	3.965/36	3.833/03	0.991/04	2.020/89	0.613/23	3.033/12	4.444/53																	



Radiated Composite Gain Data_6GHz

Appendix B

Gain Result

Freq(Hz)	6.175GPol.	PhiAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ(0°)	-13.27/-14.05	-14.12/-14.02	-14.46/-13.09	-13.16/-11.17	-9.58/-7.86	-6.8/-5.85	-4.96/-4.69	-5.23/-5.19	-5.14/-5.37	-6.28/-7.64	-9.44/-10.05	-11.75/-16.48	-18.48/-17.77	-19/-17.95	-13.47/-11.56	-9.45/-7.76	-6.82/-6.21	-6.52/-7.07	-7.73/-7.97	-8.85/-8.5	-8.47/-11.29	-13.45/-13.18	-12.99/-12.79	
Θ(7.5°)	-17.5/-17.72	-18.23/-17.96	-17.68/-14.28	-14.7/-16.98	-18.63/-18.11	-18.22/-16.27	-12.27/-10.58	-9.31/-7.78	-6.93/-6.21	-6.47/-7.05	-7.12/-7.46	-9/-10.66	-10.43/-10	-9.5/-9.87	-10.27/-10.41	-10.22/-8.68	-6.25/-4.5	-3.15/-2.31	-2.24/-2.45	-2.75/-3.16	-3.93/-4.47	-5.25/-7.76	-10.78/-13.39	-16.25/-18.31
Θ(15°)	-18.15/-16.97	-13.39/-11.73	-8.68/-8.32	-8.92/-8.98	-8.48/-8.93	-10.89/-11.24	-11.16/-9.94	-7.65/-5.51	-5.35/-5.16	-1.57/-1.52	-2.1/-2.73	-3.27/-4.46	-5.69/-6.69	-7.02/-6.68	-6.31/-6.61	-7.58/-7.59	-7.23/-6.15	-5.38/-5.02	-5.12/-5.81	-6.25/-6.55	-6.27/-6.68	-6.98/-8.74	-9.51/-11.08	-15.57/-17.75
Θ(22.5°)	-15.84/-11.29	-8.14/-3.48	-5.44/-3.49	-3.12/-3.62	-5.32/-8.17	-10.61/-13.68	-13.48/-13.19	-11.57/-8.66	-6.16/-4.17	-2.49/-1.69	-1.5/-1.88	-2.16/-2.9	-3.7/-4.4	-4.67/-4.46	-3.81/-3.05	-3.43/-4.63	-6.04/-7.05	-8.02/-9.44	-12.16/-18.18	-18.8/-18.44	-12.39/-9.86	-9.81/-9.25	-10.96/-10.5	-11.23/-11.09
Θ(30°)	-8.3/-9.37	-8.01/-4.6	-0.90/5.1	-0.45/-3.04	-6.64/-11.45	-11.92/-12.39	-16.2/-17.66	-18.67/-19.1	-15.99/-12.75	-9.76/-7.61	-5.67/-3.66	-2.23/-1.95	-2.33/-2.25	-1.75/-1.35	-1.08/-1.14	-2.33/-3.81	-3.77/-3.28	-3.88/-5.62	-8.01/-9.84	-9.86/-10.88	-13.93/-11.04	-7.34/-5.84	-6.61/-8.86	-9.56/-8.75
Θ(37.5°)	-17.99/-13.16	-8.2/-4.55	-2.66/-3.48	-7.39/-11.23	-8.76/-8.37	-8.34/-7.73	-12.79/-17.76	-18.48/-19.01	-12.16/-10.76	-10.68/-9.58	-8.25/-5.08	-2.47/-1.66	-1.25/-0.77	0.47/1.46	0.97/-0.59	-2.05/-3.1	-4.8/-8.03	-10.71/-11.67	-10.02/-9.03	-8.8/-8.34	-9.79/-10.42	-10.2/-9.87	-9.84/-19.8	-9.17/-17.52
Θ(45°)	-15.84/-11.29	-8.14/-3.55	-1.55/-3.34	-6.24/-5.73	-4.77/-4.32	-5.62/-8.27	-12.34/-15.43	-18.06/-18.31	-12.3/-10.16	-11.8/-11.11	-8.82/-8.11	-4.76/-2.28	-2.03/-1.81	-1.95/-1.63	-2.04/-1.28	-2.19/-4.43	-6.13/-11.12	-17.68/-18.05	-12.01/-8.78	-8.21/-8.52	-9.4/-16.35	-15.37/-12.1	-12.78/-14.15	-16.79/-18.42
Θ(52.5°)	-18.84/-10.28	-3.13/-2.28	-3.2/-5.88	-8.1/-7.07	-6.3/-6.42	-7.6/-8.7	-10.98/-11.14	-11.93/-16.29	-17.39/-19.32	-17.95/-10.83	-6.18/-9.5	-9.21/-2.43	-0.7/-0.41	-0.24/-1.43	-1.28/-3.09	-4.52/-4.02	-7.82/-12.31	-18.23/-16.42	-9.37/-5.8	-4.07/-2.46	-3.27/-7.01	-14.09/-17.28	-14.33/-14.78	-14.66/-17.64
Θ(60°)	-9.17/-5.67	-2.59/-3.47	-7.54/-10	-9.94/-8.7	-6.57/-6.71	-6.4/-7.49	-8.34/-9.58	-10.46/-10.04	-13.55/-17.96	-13.66/-7.06	-3.45/-4.43	-11.42/-3.18	-1.33/-1.13	-0.52/-0.11	-2.28/-4.76	-4.26/-2.44	-6.11/-9.83	-18.47/-12	-9.17/-6.42	-4.32/-5.57	-6.16/-6.09	-7.81/-7.83	-10.21/-11.06	-9.34/-14.71
Θ(67.5°)	-13.66/-2.96	-1.72/-4.03	-7.46/-9.62	-16.89/-14.65	-13.97/-10.61	-11.51/-13.09	-18.26/-18.28	-13.54/-9.72	-11.84/-15.29	-8.22/-8.19	-3.43/-5.71	-1.99/-1.55	-1.63/-3.66	-5.83/-6.04	-8.17/-12.6	-15.95/-18.65	-11.13/-7.78	-5.23/-2.18	-3.46/-4.32	-4.63/-3	-3.7/-5.98	-10.64/-7.22	-8.59/-13.83	
Θ(75°)	-9.62/-2.98	-1.79/-3.97	-4.38/-9.62	-18.41/-15.38	-17.38/-14.71	-10.33/-8.33	-14.28/-18.48	-19.17/-16.78	-19.19/-18.25	-11.61/-5.73	-4.13/-9.84	-6.77/-6.79	-8.25/-4.83	-1.44/-0.43	-2.75/-3.71	-4.87/-6.08	-10.95/-11.02	-15.55/-18.7	-18.03/-17.68	-13.6/-3.46	0.53/-0.62	-3.14/-4.06	-1.27/-2.12	-5.48/-14.13
Θ(82.5°)	-8.37/-2.02	-1.94/-3.76	-4.97/-6.04	-7.14/-14.26	-11.46/-2.5	-1.89/-5.38	-14.59/-18.63	-10.88/-18.69	-18.51/-18.06	-12.85/-6.46	-3.9/-2.7	-6.08/-7.14	-7.9/-7.38	-1.92/-2.42	-4.79/-5.82	-6.31/-6.42	-12.71/-16.24	-19.12/-19.17	-15.14/-17.75	-15.52/-3.35	2.422/9.8	-1.6/-7.22	-0.95/-1.56	-3.15/-8.86
Θ(90°)	-4.74/-0.89	-0.93/-3.06	-4.07/-4.07	-11.59/-8.51	-6.11/-5.03	-6.76/-9.78	-16.54/-18.38	-16.37/-11.79	-8.97/-6.68	-8.89/-15.17	-12.15/-10.77	-4.13/-2.01	-6.52/-4.75	-4.2/-21.01	-14.96/-14.23	-18.21/-13.42	-7.92/-7.17	-14.94/-6.66	0.073/0.2	1.35/-2.55	-0.642/7.7	-0.81/-10.05		
Θ(97.5°)	-5.19/-0.87	0.67/-3.51	-6.46/-5.83	-9.71/-16.99	-15.82/-13.06	-11.31/-6.78	-10.39/-18.82	-14.09/-16.43	-18.03/-16.06	-9.35/-7.34	-6.11/-5.55	-8.72/-14.2	-19.17/-9.2	-6.4/-5.09	-10.88/-9.31	-4.76/-7.24	-13.58/-11.36	-15.52/-11.53	-10.79/-4.99	-10.62/-10.83	-0.45/-1.2	0.44/-1.54	0.37/2.21	-3.46/-14.07
Θ(105°)	-4.43/-1.21	-0.97/-6.04	-4.37/-5.98	-9.01/-7.94	-16.2/-19.1	-12.12/-8.84	-11.72/-13.55	-18.38/-19.2	-14.83/-7.18	-4/-6.56	-9.91/-5.76	-5.66/-1.57	-17.72/-10.15	-5.1/-9.6	-16.47/-14.71	-7.68/-4.32	-9.7/-18.76	-15.18/-15.54	-5.35/-3.36	-11.42/-9.12	-2.73/-0.17	0.09/-0.95	0.58/1.52	-2.91/-11.7
Θ(120°)	-3.72/-2.19	-3.79/-6.15	-3.3/-5.04	-3.01/-3.56	-6.99/-18	-11.81/-18.85	-18.43/-12.17	-12.41/-13.94	-7.42/-5.25	-3.01/-8.35	-13.75/-11.87	-11.27/-10.7	-18.51/-14.2	-8.26/-13.99	-15.73/-18.12	-17.91/-19.15	-12.28/-11.71	-10.82/-10.13	-11.33/-13.68	-18.13/-9.97	-6.33/-2.46	-1.49/-0.36	1.24/1.72	-2.86/-6.61
Θ(125°)	0.33/-1.19	-3.52/-3.5	-5.16/-6.32	-2.7/-2.49	-6.93/-15.13	-11.27/-12.49	-18.61/-9.07	-5.14/-4.66	-5.78/-5.17	-6.21/-14.62	-12.51/-15.47	-17.37/-19.08	-14.62/-11	-8.96/-15.54	-15.87/-18.22	-11.25/-14.26	-7.36/-4.28	-5.71/-11.98	-17.03/-14.31	-4.49/-1.25	1.712/5.2	2.523/19	1.39/-2.07	
Θ(127.5°)	1.29/-0.76	-2.27/-1.05	-1.96/-1.62	-1.34/-3.1	-9.65/-12.9	-6.85/-9.2	-16.5/-15.89	-7.28/-4.59	-7.58/-6.73	-11.04/-18.06	-14.92/-17.91	-13.76/-18.09	-17.77/-18.49	-10.16/-16.37	-8/-15.76	-10.85/-14.69	-3.27/-10.08	-13.88/-10.72	-15.89/-11.5	-17.73/-17.04	-18.17/-8.52	-4.11/-1.67	0.762/57	1.060/54
Θ(135°)	-1.28/-0.98	-2.37/-3.76	-8.32/-11.93	-5.49/-5.44	-11.29/-15.67	-15.27/-9.47	-10.48/-16.71	-18.97/-18.61	-13.55/-14.78	-11.67/-15.91	-13.21/-18.8	-19.05/-9.2	-8.96/-9.63	-4.87/-5.05	-16.2/-9.54	-11.62/-3.95	-2.64/-7.71	-6.96/-4.93	-9.22/-10.76	-18.34/-10.87	-12.91/-8.3	-8.32/-1.29	0.84/-1.25	-1.76/-1.74
Θ(142.5°)	-1.47/-0.24	-0.3/-2.43	-3.09/-5.84	-4.24/-4.53	-7.31/-13.61	-11.01/-8.98	-8.6/-8.08	-8.87/-15.98	-16.1/-17.68	-12.07/-9.94	-7.43/-7.45	-10.47/-9.39	-9.32/-18.74	-10.04/-61	-11.64/-2.39	-1.36/-6.35	-17.82/-13.07	-14.92/-8.88	-9.64/-14.86	-18.1/-10.81	-10.58/-8.25	-4.67/-6.76	-6.05/-5.27	-1.580/0.3
Θ(150°)	-5.54/-6.38	-7.68/-8.99	-9.82/-12.26	-16.5/-9.21	-8.6/-11.08	-18.15/-16.16	-16.04/-18.31	-17.79/-18.61	-17.14/-17.77	-8.2/-6.9	-9.62/-10.93	-14.88/-11.87	-8.76/-4.82	-4.05/-4.36	-2.43/-2.46	-3.38/-2.82	-6.08/-1.74	-8.84/-7.21	-10.65/-10.48	-8.82/-7.38	-12.48/-11.94	-8.41/-11.33	-1.475/-8.86	-6.72/-6.31
Θ(157.5°)	-2.41/-2.45	-2.02/-1.17	0.52/-1.28	-5.41/-13.39	-18.25/-18.35	-18.67/-19.36	-16.43/-13.97	-14.99/-17.28	-13.95/-10.07	-8.73/-10.59	-16.45/-13.66	-12.64/-12.72	-10.13/-7.37	-6.77/-6.85	-11.91/-11.15	-8.54/-9.78	-17.77/-11.82	-8.2/-9.02	-9.66/-8.23	-7.64/-9.86	-10.64/-10.79	-11.66/-15.82	-13.41/-8.5	-4.19/-2.68
Θ(165°)	-12.79/-9.23	-6.71/-6.28	-8.11/-11.66	-17.72/-18.43	-16.52/-15.52	-17.72/-18.98	-14.52/-11.69	-9.93/-8.98	-8.76/-8.18	-9.94/-11.02	-11.44/-11.92	-9.91/-7.71	-3.44/-1.57	-1.37/-2.19	-1.84/-6.89	-18.54/-13.65	-8.47/-6.29	-5.34/-5.65	-7.57/-10.95	-14.28/-13.34	-10.37/-8.23	-10.22/-10.62	-13.43/-12.58	-11.45/-13.17
Θ(172.5°)	-7.91/-8.01	-8.71/-9.93	-10.39/-11.44	-13.01/-12.97	-11.55/-12.07	-12.25/-12.3	-11.93/-12.51	-13.19/-14.25	-17.17/-18.56	-17.37/-17.66	-17.46/-16.81	-14.46/-12.81	-11.67/-10.72	-9.7/-8.26	-6.5/-5.21	-4.31/-4.04	-4.41/-5.22	-6.3/-7.22	-8.86/-10.97	-10.08/-6.7	-8.94/-8.17	-9.09/-10.74	-13.4/-15.71	-15.79/-10.98
Θ(180°)	-12.71/-10.37	-8.36/-8.21	-9.47/-10	-10.78/-11.1	-10.73/-9.95	-8.95/-9.22	-10.65/-12.77	-16.25/-18.64	-18.56/-16.74	-12.59/-10.28	-8.63/-7.49	-6.88/-6.47	-5.87/-5.1	-4.47/-4.52	-4.62/-5.05	-5.35/-5.56	-6.43/-7.34	-7.81/-8.4	-9.21/-11.97	-14.62/-18.6	-19.08/-18.32	-18.83/-17.35	-18.05/-16.54	-13.97/-13.23
Freq(Hz)	6.175GPol.	ThetaAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ(0°)	-9.08/-8.41	-7.81/-7.42	-7.99/-8.2	-8.41/-9.36	-10.12/-10.66	-11.31/-15.3	-19.17/-17.57	-15.61/-13.58	-12.66/-10.59	-9.33/-8.44	-7.27/-7.05	-7.11/-7.12	-7.38/-7.47	-7.41/-7.45	-7.83/-7.96	-8.87/-9.79	-10.74/-12.45	-14.4/-14.92	-15.06/-15.72	-16.63/-15.97	-16.14/-15.67	-15.09/-12.51	-12.47/-13.04	-11.48/-9.27
Θ(7.5°)	-12.52/-13.31	-13.71/-12.94	-13.36/-11.78	-11.03/-10.43	-8.54/-8.03	-7.73/-8.06	-8.04/-8.02	-7.89/-8.44	-10.54/-8.03	-11.41/-11.48	-10.74/-11.14	-11.77/-11.53	-10.54/-8.69	-7.13/-6.14	-5.69/-5.54	-5.64/-6.29	-7.22/-7.9	-9.76/-11.85	-13.89/-17.2	-17.73/-17.66	-15.41/-12.45	-11.05/-10.04	-9.86/-10.27	-12.08/-11.46
Θ(15°)	-15.44/-18.77	-18.55/-17.84	-14.93/-11.66	-8.7/-8.47	-5.72/-5.61	-5.14/-0.2	-3.15/-2.76	-2.94/-3.5	-4.25/-4.3	-7.32/-8.49	-9.39/-11.92	-14.73/-15.77	-15.09/-13.41	-10.71/-8.44	-7.05/-6.53	-6.11/-5.74	-5.59/-5.7	-5.62/-5.66	-6.16/-7.42	-8.67/-9.42	-9.43/-9.36	-8.62/-6.91	-8.81/-8.12	-11.89/-14.63
Θ(22.5°)	-11.34/-13.5	-14.93/-14.98	-10.78/-5.91	-2.66/-1.13	-0.92/-1.55	-2.41/-3.55	-4.98/-6.04	-6.01/-5.55	-5.04/-5.04	-4.97/-4.55	-4.94/-6.17	-7.38/-7.89	-6.95/-6.34	-6.84/-8.62	-10.24/-8.48	-7.64/-6.37	-5.25/-4.83	-4.45/-4.09	-4.06/-4.15	-4.01/-4.58	-5.03/-4.66	-4.53/-5.74	-8.6/-12.63	-15.37/-11.92
Θ(30°)	-14.01/-18.15	-10.79/-14.26	-15.71/-7.29	-3.14/-1.83	-2.25/-3.48	-2.83/-3.18	-2.68/-3.16	-3.42/-3.11	-1.4/-2.69	-2.35/-3.93	-5.97/-5.74	-7.05/-6.93	-13.83/-14.48	-12.52/-10.66	-9.19/-8.58	-7.56/-5.72	-4.34/-3.74	-3.57/-2.92	-3.03/-3.74	-7.35/-7.31	-7.87/-10.31	-8.61/-15.88	-11.58/-11.58	
Θ(37.5°)	-13.73/-10.1	-4.54/-8.4																						



Radiated Composite Gain Data_6GHz

Appendix B

Θ(22.5°)	-14.25/-17.39	-13.21/-6.5	-9.1/-10.84	-10.49/-11.26	-10.31/-10.38	-11.98/-11.29	-10.36/-8.69	-8.17/-7.4	-5.71/-3.86	-2.87/-2.56	-2.42/-2.36	-3.04/-4.61	-6.29/-7.09	-7.74/-8.5	-10.88/-14.59	-17.65/-15.58	-13.86/-13.01	-14.4/-16.99	-17.2/-16.07	-17.53/-17.85	-16.09/-11.9	-11.43/-11.61	-14.09/-15.47	-15.01/-12.71
Θ(30°)	-15.64/-16.23	-15.33/-17.77	-15.91/-10.66	-9.09/-9.78	-8.76/-10.4	-10.53/-11.1	-10.65/-10.4	-7.86/-6.38	-5.39/-4.42	-3.39/-2.66	-1.22/-0.13	0.21/-0.99	-2.25/-3.31	-5.13/-6.98	-8.38/-11.61	-16.61/-19.15	-18.78/-15.46	-14.59/-12.5	-10.01/-9.43	-9.03/-10.02	-12.66/-13.32	-9.67/-7.52	-7.89/-10.07	-11.94/-13.63
Θ(142.5°)	-6.43/-9.88	-16.62/-13.21	-10.7/-8.3	-9.78/-7.28	-6.85/-11.34	-13.69/-18.95	-18.44/-16.32	-17.21/-18.96	-17.33/-11.73	-7.83/-4.87	-2.82/-1.18	-0.43/-0.01	0.26/-0.39	-2.61/-3.75	-5.53/-19.74	-10.72/-9.25	-10.71/-13.32	-10.72/-9.25	-10.9/-9.68	-12.67/-14.74	-12.46/-17.93	-18.31/-8.48	-3.42/-1.8	-4.72/-6.76
Θ(45°)	-5.67/-10.38	-15.91/-9.77	-5.86/-3.86	-3.79/-7.21	-13.68/-19	-10.27/-7.03	-6.17/-6.57	-10.24/-15.31	-13.47/-9.95	-8.79/-8.59	-5.81/-3.01	-1.27/-0.97	0.67/1.45	-0.25/-3.03	-5.94/-0.4	-5.52/-5.71	-4.16/-6.11	-9.78/-14.27	-15.78/-14.91	-17.34/-19.4	-15.84/-17.3	-18.13/-13.63	-6.37/-3.84	-4.01/-5.15
Θ(52.5°)	-8.89/-10.81	-15.53/-10.01	-5.92/-3.47	-6.48/-11.14	-9.58/-4.59	-2.65/-2.22	-2.79/-4.29	-5.24/-5.95	-7.59/-11.74	-15.39/-17.06	-17.53/-7.53	-2.03/-2.21	1.71/1.54	-1.08/-3.84	-2.53/-3.53	-3.99/-3.12	-2.84/-6.38	-11.61/-18.39	-18.13/-12.49	-13.59/-9.38	-14.08/-18.27	-18.77/-18.72	-10.33/-7.72	-6.23/-9.78
Θ(60°)	-6.82/-9.26	-11.69/-4.56	-4.48/-6.48	-6.55/-9.64	-6.85/-3.23	-2.24/-2.51	-4.15/-5.32	-6.71/-7.17	-4.86/-3.84	-4.47/-6.04	-8.91/-17.56	-6.30/-2.22	-0.13/-0.2	-1.51/-1.71	-4.52/-3.93	-5.2/-6.07	-10.96/-12.79	-15.37/-16.48	-12.95/-8.47	-10.01/-12.67	-18.06/-15.81	-13.86/-10.44	-11.17/-12.29	
Θ(67.5°)	-8.49/-18.6	-5.77/-2.55	-7.29/-8.01	-8.73/-18.19	-12.03/-6.31	-5.53/-10.04	-15.14/-17.94	-14.47/-7.82	-7.06/-5.78	-7.77/-8.2	-9.18/-15.13	-7.89/-3.14	-1.72/-6.01	-2.75/-2.03	-1.33/-3.56	-3.66/-5.83	-8.94/-9.3	-10.99/-10	-9.88/-19.16	-18.51/-11.23	-10.61/-11.96	-16.36/-15.33	-7.55/-11.94	-12.69/-12.09
Θ(75°)	-12.72/-11.02	-2.31/-2.97	-9.91/-11.38	-10.2/-14.2	-18.64/-17.26	-12.5/-13.01	-12.25/-12.77	-18.81/-14.8	-5.27/-6.5	-8.65/-10.8	-8.77/-6.6	-18.32/-5.55	-5.28/-2.69	-8.27/-1.12	-2.34/-4.45	-5.29/-6.42	-11.54/-8.03	-7.96/-6.6	-14.08/-12.27	-17.39/-17.93	-18.77/-14.72	-15.71/-12.77	-7.68/-18.86	-18.7/-18.56
Θ(82.5°)	-10.08/-7.6	-3.66/-7.56	-10.73/-7.32	-9.93/-13.04	-18.73/-12.33	-8.95/-7.38	-10.45/-14.09	-18.76/-10.54	-6.77/-11.2	-13.85/-7.88	-6.05/-6.73	-9.09/-9.08	-5.2/-6.73	-6.02/-4.63	0.01/-4.67	-8.61/-6.22	-5.73/-8.23	-9.42/-11.04	-15.02/-11.83	-17.94/-15.63	-12.14/-10.4	-7.85/-14.23	-9.16/-8.96	
Θ(90°)	-10.77/-13.9	-6.61/-7.16	-8.02/-5.91	-4.5/-4.05	-7.89/-6.59	-5.12/-5.05	-15.52/-13.48	-14.13/-16.14	-8.86/-16.71	-17.57/-10.84	-4.3/-5.59	-9.34/-13.06	-17.95/-8.49	-3.97/-12.64	-2.83/-3.86	-7.69/-2.92	-3.54/-9.28	-15.93/-15.08	-13.53/-18.57	-11.4/-11.89	-11.15/-7.45	-4.72/-4.39	-7.54/-17.73	-3.21/-9.21
Θ(97.5°)	-8.25/-11.81	-5.65/-3.85	-3.73/-4.28	-2.81/-3.43	-7.54/-18.67	-9.25/-9.69	-13.79/-12.73	-9.83/-12.21	-12.5/-8.16	-17.51/-10.08	-3.93/-4.15	-13.99/-11.61	-13.09/-17.06	-2.49/-7.21	-5.48/-6.19	-17.92/-4.77	-3.09/-3.2	-9.23/-9.44	-12.91/-17.64	-15.57/-8.73	-10.64/-10.39	-4.32/-2.06	-6.43/-17.45	-4.56/-2.69
Θ(105°)	-5.61/-9	-4.84/-3.6	-5.19/-5.15	-5.27/-5.42	-6.12/-15.21	-18.3/-7.1	-17.59/-9.27	-17.31/-10.3	-12.63/-11.8	-7.37/-1.64	-7.85/-14.23	-5.83/-9.87	-8.81/-6.17	-8.81/-11.25	-14.08/-12.94	-2.69/-1.51	-3.64/-18.19	-17.78/-17.95	-17.71/-13.59	-8.14/-6.63	-2.25/-2.1	-2.55/-2.11	1.26/-1.34	
Θ(112.5°)	-6.05/-5.07	-3.23/-4.44	-4.27/-4.03	-10.65/-7.08	-8.35/-14.42	-11.69/-5.98	-9.43/-7.54	-4.95/-4.29	-3.86/-5.33	-4.53/-15.15	-5.25/-3.31	-9.05/-16.61	-4.39/-5.04	-17.61/-5.23	-17.51/-17.48	-6.87/-5.08	-8.96/-8.77	-5.43/-11.04	-8.4/-9.68	-6.82/-12.54	-10.78/-6.13	-5.57/-2.96	-3.28/-1.1	0.08/-2.15
Θ(120°)	-4.23/-3.42	-2.81/-5.91	-3.73/-7.75	-7.1/-3.53	-4.23/-15.45	-6.64/-6.23	-5.25/-7.28	-5.56/-2.88	-2.79/-2.81	-6.15/-18.34	-7.09/-6.98	-7.98/-13.96	-7.65/-5.12	-9.24/-14.8	-16.34/-18.44	-16.84/-15.86	-14.71/-5.28	-13.94/-8.44	-8.28/-13.61	-6.23/-6.05	-5.5/-7.84	-1.67/-1.54	0.523/-9	1.99/-3.53
Θ(127.5°)	-5.53/-3.1	-3.07/-6.36	-5.36/-9.3	-9.28/-4.85	-6.27/-17.99	-7.2/-5.6	-5.18/-11.62	-6.72/-3.51	-2.12/-3.45	-8.4/-15.31	-7.47/-15.06	-12.39/-14.72	-17.48/-12.88	-17.84/-7.06	-12.8/-8.18	-12.78/-10.68	-14.82/-8.57	-10.49/-6.61	-17.54/-9.59	-17.69/-11.12	-2.57/-2.93	-2.95/-2.59	0.32/2.75	1.85/-5.09
Θ(135°)	-5.2/-4.22	-8.27/-8.52	-6.17/-5.16	-14.55/-15.88	-17.77/-17.75	-12.03/-7.28	-8.85/-11.67	-19.04/-7.72	-9.25/-14.31	-18.42/-15.91	-11.3/-14.8	-9.51/-17.8	-16.98/-13.77	-5.87/-6.24	-5.78/-18.32	-7.9/-5.43	-0.14/-3.08	-6.05/-12.94	-6.51/-4.35	-19.09/-5.95	-16.17/-6.17	-7.03/-2.55	-3.71/-0.75	-2.43/-7.75
Θ(142.5°)	-5.07/-6.39	-8.88/-4.95	-6.93/-9.13	-7.56/-6.89	-10.41/-17.12	-18.28/-15.64	-17.61/-13.84	-9.36/-4.97	-13.96/-17.69	-10.76/-7.56	-5.84/-4.84	-19.1/-4.55	-12.81/-18.52	-10.62/-9.98	-12.75/-15.45	-6.89/-8.08	-1.8/-1.36	-10.64/-11.78	-8.64/-5.81	-7.28/-15.06	-18.08/-8.84	-13.34/-9.07	-5.35/-4.28	-4.62/-7.01
Θ(150°)	-10.62/-10.93	-15.44/-15.88	-9.71/-9.85	-10.08/-8.1	-5.87/-7.34	-13.17/-6.8	-12.61/-9.9	-8.72/-10.7	-14.18/-9.77	-5.02/-4.71	-6.11/-7.99	-14.88/-18.27	-12.32/-11.01	-11.26/-18	-2.03/-3.04	-13.57/-17.29	-13.21/-6.28	-6.94/-11.78	-19.02/-14.52	-15.28/-9.26	-11.18/-18.28	-14.34/-10.79	-5.66/-7.41	-10.41/-8.9
Θ(157.5°)	-4.02/-5.82	-10.85/-15.59	-10.62/-8.6	-10.27/-15.86	-14.59/-12.6	-16.56/-18.87	-13.82/-12.76	-11.32/-8.59	-6.2/-5.45	-6.34/-8.85	-13.28/-18	-17.82/-17.52	-18.40/-18.63	-12.03/-9.13	-11.03/-18.41	-12.09/-13.57	-11.54/-6.52	-5.5/-6.6	-8.32/-11.85	-12.99/-13.53	-17.94/-14.33	-7.96/-6.53	-5.17/-4.28	-4.7/-4.39
Θ(165°)	-6.18/-9.26	-13.76/-15.02	-17.12/-16.58	-14.37/-15.88	-16.11/-15.57	-15.19/-16.77	-14.86/-15.48	-15.21/-13.97	-12.92/-10.95	-8.66/-7.72	-7.94/-9.71	-7.18/-6.67	-6.38/-6.51	-8.82/-14.4	-18.48/-15.55	-11.69/-11.46	-8.73/-6.91	-7.31/-9.81	-12.01/-11.98	-11.45/-11.02	-13.23/-17.37	-18.98/-13.87	-10.68/-7.2	-5.39/-5.36
Θ(172.5°)	-18.07/-19.1	-17.85/-18.08	-17.77/-17.73	-19/-18.55	-17.96/-17.64	-18.42/-18.16	-17.64/-17.4	-17.08/-15.35	-13.92/-13.48	-13.59/-11.32	-9.23/-8.33	-7.83/-8.32	-9.93/-9.3	-8.67/-7.65	-6.86/-6.79	-7.11/-7.53	-7.5/-7.7	-8.25/-10.24	-11.97/-12	-9.89/-9.24	-9.21/-8.98	-9.43/-11.47	-13.08/-17.39	
Θ(180°)	-16.15/-17.96	-15.17/-19.18	-18.1/-19.17	-17.66/-15.66	-12.71/-10.96	-10.99/-12.84	-14.43/-14.75	-16.46/-18.5	-18.85/-18.28	-17.33/-16.92	-13.14/-11.01	-9.75/-8.58	-8.05/-7.55	-7.44/-7.18	-7.27/-7.65	-7.55/-7.29	-7.23/-7.37	-7.71/-8.42	-9.19/-10.82	-14.02/-14.82	-17.07/-18.5	-19.11/-17.94	-15.31/-15.32	-14.74/-16.87
Freq(Hz)	6.995GPol.	ThetaAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-18.84/-18.32	-18.04/-17.97	-17.68/-16.07	-15.72/-16.33	-18.4/-18.49	-18.11/-18.23	-16.98/-17.6	-18.57/-17.67	-18.91/-17.23	-18.22/-17.41	-18.12/-18.21	-19.13/-18.64	-18.32/-18.22	-19.31/-18.59	-18.85/-18.96	-18.34/-18.25	-18.89/-18.66	-19.06/-19.09	-18.01/-18.51	-18.14/-17.96	-18.14/-18.09	-17.58/-17.19	-19.15/-18.33	-18.69/-18.56
Θ(7.5°)	-17.36/-16.56	-14.47/-11.49	-11.4/-9.59	-7.89/-7.58	-7.27/-6.82	-6.79/-6.71	-6.96/-7.9	-9.25/-10.92	-12.18/-14.17	-14.43/-15.56	-15.05/-15.97	-18.07/-17.7	-19.39/-18.22	-18.18/-18.18	-16.84/-18	-18.57/-17.78	-19.23/-18.2	-16.24/-14.04	-13.4/-12.72	-13.61/-13.64	-13/-12.22	-12.84/-11.93	-12.33/-15.09	-16.28/-15.89
Θ(15°)	-15.92/-12.19	-8.71/-6.38	-5.08/-3.35	-2.78/-3.11	-2.55/-2.84	-3.31/-4.18	-5.35/-5.33	-5.67/-6.32	-7.11/-7.87	-7.97/-7.08	-7.06/-8.61	-12.14/-16.05	-18.68/-18.31	-14.4/-10.5	-8.41/-7.57	-7.56/-8.1	-8.56/-9.12	-10.13/-11.9	-14.26/-14.35	-14.63/-16.76	-16.26/-14.86	-13.54/-11.26	-10.93/-12.47	-15.88/-17.87
Θ(22.5°)	-18.69/-14.71	-10.48/-5.99	-3.94/-3.06	-3.28/-3.15	-3.94/-4.71	-4.53/-6.57	-6.52/-7.41	-7.69/-7.18	-8.87/-8.09	-5.92/-3.68	-5.94/-6.6	-10.8/-9.16	-6.37/-8.29	-8.28/-2.51	-3.37/-4.39	-6.14/-8	-10.4/-13.36	-14.42/-15.01	-14.63/-12.84	-12.34/-13.24	-12.18/-9.17	-9/-10.44	-16.19/-16.63	
Θ(30°)	-11.79/-10.74	-8.41/-5.72	-4.22/-3.6	-5.18/-7.51	-8.58/-7.78	-6.12/-6.17	-5.52/-6.13	-6.87/-7.89	-8.93/-8.98	-7.28/-4.55	-1.93/-0.87	-1.36/-2.76	-4.39/-6.12	-3.91/-1.97	-1.67/-2.03	-3.99/-6.92	-9.72/-8.76	-6.75/-7.64	-9.34/-8.34	-8.75/-6.81	-7.35/-6.21	-6.09/-7.53	-9.22/-9.87	-14/-16.45
Θ(37.5°)	-11.09/-9.96	-8.58/-6.32	-5.26/-7.04	-9.49/-6.67	-4.09/-3.29	-3.71/-3.82	-3.89/-4.76	-6.1/-7.88	-8.98/-7.98	-6.73/-5.31	-1.92/0.44	0.32/-0.4	-2.18/-6.54	-3.73/-1.92	-1.96/-5.09	-9.19/-87	-8.23/-7.15	-7.25/-7.12	-7.09/-8.58	-9.38/-6.35	-4.42/-4.43	-3.52/-3.35	-6.58/-10.61	-17.33/-15.02
Θ(45°)	-4.92/-5.75	-3.56/-2.14	-2.08/-2.36	-1.04/-2	-1.01/-1.37	-2.04/-2.06	-1.69/-1.4	-1.89/-3.99	-5.91/-5.83	-3.04/-1.6	-1.58/-2.4	0.72/0.39	-0.47/-8.54	-7.5/-2.8	-5.58/-11.26	-18.31/-18.1	-13.31/-11.36	-8.78/-6.67	-8/-10.34	-11.58/-14.69	-12.45/-8.72	-6.82/-4.4	-3.98/-6.61	-13.83/-6.51
Θ(52.5°)	-2.41/-2.35	-2.66/-1.96	-1.34/-1.7	0.36/-0.06	-2.09/-1.93	-1.78/-2.66	-2.22/-2.06	-2.61/-5.6	-10.6/-9.49	-3.47/-0.7	-0.41/0.48	0.45/-0.58	-1.13/-6.8	-1.29/2.46	-4.65/-7.29	-18.1/-17.56	-14.69/-10.39	-7.34/-6.2	-5.6/-5.53	-8.43/-12.04	-13.46/-16.95	-9.57/-6.95	-7.51/-7.54	-9.25/-7.65
Θ(60°)	-1.78/-0.89	-3.12/-2.04	0.88/0.54	1.23/0.47	0.36/1.59	1.4/-1.37	-5.9/-4.26	-5.62/-8.98	-7.08/-3.41	-3.62/-3.22	-3.03/-1.64	0.67/0.14	-2.4/-5.32	-6.78/-4.8	-5.25/-4.03	-12.79/-10.95	-18.95/-10.94	-5.25/-5.08	-4.88/-5.17	-7.25/-7.01	-11.95/-7.4	-6.69/-4.59	-7.46/-6.84	
Θ(67.5°)	-2.01/-2.61	-2.24/-1.56	1.58/-1.26	1.26/-2.25	0.62/-1.99	-0.38/-4.69	-13.08/-9.28	-7.27/-2.98	0.95/2.52	0.16/-2.7	-4.87/-2.69	-4.26/-4.19	-2.82/-2.99	-3.93/-5.06	-7.27/-8.69	-7.19/-9.53	-14.71/-13.32	-8.05/-6.06	-4.69/-3.93	-5.54/-3.75	-3.76/-6	-6.93/-4.94	-3.52/-3.94	



Radiated Composite Gain Data_6GHz

Appendix B

Θ(67.5°)	-2.4/-2.33	-2.4/-1.14	-0.7/-2.09	-4.06/-5.59	-3.53/-2.92	-3.33/-5.06	-6.33/-7.37	-10.72/-14.84	-10.8/-9.67	-10.67/-7.86	-8.07/-8.34	-4.01/-3.28	-3.55/-4.51	-3.57/-7.1	-10.53/-7.26	-5.08/-4.94	-4.11/-4.51	-6.74/-9.37	-10.62/-8.89	-9.96/-11.15	-12.04/-15.3	-17.64/-13.84	-13.28/-7.82	-4.12/-4.5
Θ(75°)	-0.83/-0.94	-1.3/-1.99	-1.66/-2.81	-5.44/-4.14	-3.9/-3.64	-3.65/-5.45	-7.08/-6.47	-5.92/-7.21	-10.57/-11.15	-10.92/-9.29	-7.03/-5.93	-5.1/-4.21	-4.25/-2.02	-3.54/-6.67	-8.23/-7.77	-5.08/-7.21	-6.65/-4.3	-4.3/-7.56	-10.56/-8.51	-10.39/-14.75	-18.88/-18.56	-17.61/-16.47	-12.6/-6.57	-4.79/-2.22
Θ(82.5°)	-2.49/-2.33	-1.79/-4.56	-5.71/-6.91	-5.13/-4.32	-5.77/-5.39	-5.46/-6.48	-6.08/-4.64	-6.73/-8.7	-10.43/-10.59	-11.36/-11.43	-11.33/-6.62	-3.31/-5.72	-6.38/-2.56	-3.23/-4.34	-6.66/-7.36	-8.79/-6.32	-6.53/-3.67	-3.58/-8.08	-9.63/-10.08	-8.99/-13.02	-11.31/-13.25	-18.01/-10.14	-10.5/-9.94	-7.39/-2.64
Θ(90°)	-3.85/-3.76	-1.04/-6.38	-7.53/-5.74	-2.39/-5.52	-7.48/-6.43	-7.36/-8.23	-4.61/-2.76	-4.43/-8.28	-8.28/-9.96	-11.93/-11.94	-14.03/-13.4	-8.99/-5.85	-7.71/-3.38	-3.71/-3.05	-5.48/-3.07	-4.57/-4.57	-7.08/-9.11	-4.17/-4.71	-7.47/-12.76	-11.51/-8.13	-9.51/-14.62	-17.79/-17.06	-14.36/-9.42	-5.97/-1.57
Θ(97.5°)	-4.81/-1.64	-1.36/-9.07	-12.01/-3.87	-2.25/-10.66	-10.42/-7.56	-12.84/-5.36	-2.25/-3.81	-9.47/-18.11	-15.26/-11.24	-15.87/-17.08	-18.18/-16.93	-9.07/-6.11	-6.33/-4.13	-5.19/-3.99	-2.12/-3.29	-1.59/-4.95	-7.99/-17.25	-9.16/-6.6	-7.3/-4.94	-12.19/-12.79	-8.34/-8.49	-13.18/-18.5	-14.53/-11.78	-10.4/-4.97
Θ(105°)	-10.34/-4.77	-5.38/-8.95	-9.2/-2.72	-5.35/-8.09	-10.83/-14.5	-10.46/-8.76	-11.05/-13.22	-12.4/-18.07	-18.73/-17.24	-18.44/-17.08	-15.37/-19.08	-8.91/-1.96	-8.33/-4.6	-5.21/-5.25	-2.76/-1.36	-0.05/-1.02	-4.63/-6.82	-11.86/-15.01	-7.35/-4.98	-7.95/-7.75	-4.98/-7.87	-9.39/-12.4	-10.33/-14.46	-14.19/-16.07
Θ(112.5°)	-11.56/-8.9	-7.03/-5.17	-4.61/-4.35	-4.89/-4.57	-5.57/-15.83	-14.9/-18.67	-15.71/-10.64	-8.25/-9.38	-18.05/-14.2	-12.3/-18.64	-12.72/-17.67	-10/-18.93	-7.9/-7.79	-7.5/-9.13	-4.88/-3.71	-2.47/-2.22	-3.9/-10.12	-7.78/-7.18	-11.53/-9.32	-10.41/-5.72	-10.96/-12.59	-19.03/-18.04	-17.81/-11.35	-7.84/-8.81
Θ(120°)	-15.19/-12.72	-4.37/-3.7	-5.74/-7.71	-5.12/-5.02	-2.48/-6.73	-14.23/-9.04	-8.81/-13.07	-12.34/-11.61	-18.24/-16.2	-17.98/-16.53	-18.81/-10.84	-18.53/-19.19	-17.18/-7.26	-5.84/-10.42	-15.87/-7.21	-2.68/-1.85	-5.04/-5.67	-17.59/-13.28	-12.9/-18.22	-13.47/-14.34	-13.52/-11.3	-11.97/-9.74	-10.03/-7.3	-9.16/-18.24
Θ(127.5°)	-7.37/-5.97	-4.01/-3.8	-0.88/-1.94	-4.98/-2.03	-3.78/-7.21	-8.74/-4.89	-4.17/-7.92	-18.18/-11.75	-11.77/-18.99	-18.87/-15.41	-17.31/-11.58	-18.01/-12.62	-9.54/-9.41	-2.75/-4.56	-11.3/-9.01	-8.5/-6.4	-6.74/-13.21	-13.55/-9.02	-10.84/-17.96	-13.16/-18.47	-13.68/-10.11	-5.17/-5.55	-4.38/-1.4	-1.48/-6.43
Θ(135°)	-5.06/-3.02	-4.57/-5.15	-4.8/-3.54	-4.25/-5.27	-3.91/-7.75	-11.28/-8.18	-8.06/-12.42	-14.96/-7.57	-7.86/-13.75	-18.66/-15.09	-7.92/-8.91	-18.12/-15.64	-9.66/-7.14	-11.54/-5.87	-6.44/-13.26	-5.75/-15.06	-4.24/-9.14	-11.29/-9.55	-10.73/-13.11	-18.75/-16.7	-17.09/-17.97	-17.27/-10.96	-8.66/-4.57	-1.52/-3.9
Θ(142.5°)	-9.37/-5.31	-4.44/-3.95	-2.59/-3.92	-3.72/-5.08	-7.06/-8.93	-6.84/-6.06	-6.69/-10.06	-18.1/-14.96	-19.02/-17.98	-17.91/-16.14	-13.92/-12.51	-14.86/-13.31	-7.95/-9.08	-8.19/-4.79	-13.79/-2.67	-7.53/-12.02	-5.48/-5.14	-6.61/-11.06	-12.39/-14.68	-16.91/-18.22	-17.95/-11.39	-13.11/-5.47	-8.72/-5.61	-5.29/-8.8
Θ(150°)	-15.92/-12.61	-9.25/-10.08	-7.55/-6.57	-10.22/-14.66	-18.33/-18.1	-17.02/-12.61	-10.27/-10.95	-15.43/-17.95	-17.89/-18.67	-18.29/-18.74	-15.71/-13.41	-11.35/-18.2	-10.97/-7.85	-9.17/-13.08	-12.76/-17.64	-4.58/-5.34	-13.88/-7.16	-6.26/-6.66	-9.9/-11.91	-11.6/-12.24	-17.77/-18.45	-17.17/-12.32	-8.71/-10.78	-8.37/-10.21
Θ(157.5°)	-4.34/-5.23	-2.96/-2.08	-4.64/-6.03	-4.85/-5.79	-7.13/-8.13	-8.81/-8.37	-9.44/-13.01	-15.07/-14.41	-13.64/-13.77	-11.78/-8.76	-7.37/-9.39	-14.46/-11.34	-5.01/-1.42	-1.36/-4.11	-10.29/-15.53	-12.13/-9.94	-7.69/-6.4	-7.33/-11.38	-19.09/-16.29	-17.01/-18.96	-15.99/-12.64	-15.38/-18.91	-10.66/-5.83	-4.79/-3.43
Θ(165°)	-2.31/-1.84	-2.98/-6.43	-10.71/-13.64	-15/-15.93	-15.12/-12.08	-11.09/-13.41	-15.39/-12.44	-14.8/-13.2	-8.96/-9.95	-8.68/-7.48	-7.6/-1.9	-9.51/-6.8	-4.66/-4.08	-4.68/-4.34	-2.23/-1.45	-1.25/-1.59	-3.36/-2.67	-10.9/-16.31	-16.91/-14.34	-14.67/-13.61	-13.99/-14.86	-14.1/-10.25	-8.72/-5.61	-2.72/-2.32
Θ(172.5°)	-17.81/-17.51	-18.15/-12.83	-11.3/-9.95	-9.22/-9.3	-18.15/-13.02	-15.26/-16	-18.51/-16.31	-13.78/-13.98	-16.01/-17.92	-18.29/-18.24	-18.27/-11.9	-7.81/-4.8	-2.71/-1.18	-10.150.75	1.18/-1.27	0.890.31	-0.47/-1.78	-3.58/-5.59	-8.13/-10.81	-12.38/-12.82	-17.38/-18.77	-14.18/-13.27	-11.61/-10.09	-9.81/-6.72
Θ(180°)	-14.37/-13.41	-15.3/-13.13	-9.27/-7.24	-6.2/-6.8	-7.02/-6.47	-6.06/-6.84	-7.91/-8.69	-9.76/-11.47	-13.05/-14.99	-15.32/-12.48	-9.49/-7.4	-5.83/-4.93	-4.43/-3.92	-3.38/-3.05	-2.59/-2.45	-2.97/-3.85	-4.64/-5.41	-5.75/-7.32	-8.97/-11.82	-15.45/-17.56	-17.57/-18.26	-15.55/-13.61	-11.77/-10.12	-9.79/-13.48
Freq(Hz)	6.175GPol.	ThetaAnt.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.56/-5.35	-5.92/-6.92	-8.07/-9.54	-10.47/-11.54	-13.69/-15.15	-18.26/-19.13	-19.08/-16.53	-12.98/-10.8	-9.5/-8.62	-7.7/-6.69	-6.28/-5.87	-5.48/-5.57	-5.82/-6.63	-7.01/-7.99	-8.88/-9.27	-11.16/-13.36	-14.69/-15.6	-18.64/-18.59	-18.56/-19.05	-16.49/-17.42	-15.99/-15.13	-12.7/-9.77	-7.82/-6.6	-6.11/-5.44
Θ(7.5°)	-6.48/-5.67	-7.28/-7.42	-8.23/-10.53	-8.59/-7.62	-7.15/-6.69	-6.64/-5.79	-5.49/-5.74	-6.02/-6.42	-7.24/-8.93	-10.56/-10.55	-6.64/-7.99	-6.58/-6	-6.18/-6.38	-6.28/-5.96	-6.31/-7.16	-8.4/-9.31	-9.87/-10.14	-10.51/-10.89	-9.62/-9.85	-10.14/-9.62	-8.16/-6.77	-5.12/-4.44	-3.94/-4.4	-4.85/-5.73
Θ(15°)	-13.04/-15.04	-13.33/-11.21	-9.27/-8.9	-6.29/-5.37	-5.12/-4.93	-4.14/-2.63	-1.36/-1.32	-2.24/-3.46	-3.94/-4.02	-6.16/-6.13	-7.48/-4.4	-7.96/-6	-5.85/-6.85	-7.42/-7.01	-6.72/-6.78	-6.77/-7.13	-8.83/-10.45	-13.28/-18.34	-16.95/-19.31	-13.26/-10.15	-7.73/-6.63	-2.59/-4.96	-4.78/-6.65	-8.47/-11.4
Θ(22.5°)	-16.04/-12.96	-11.73/-11.57	-9.19/-8.17	-7.57/-7.06	-6.77/-5.09	-3.65/-2.67	-2.21/-2.19	-2.18/-2.42	-2.76/-3.47	-4.86/-6.03	-6.46/-7.35	-7.47/-7.11	-6.08/-5.62	-6.14/-6.69	-6.37/-6.33	-7.21/-8.16	-9.86/-12.32	-14.82/-17.8	-17.46/-15.16	-10.85/-10.16	-9.9/-10.59	-12.11/-14.68	-16.07/-19.23	-17.94/-18.42
Θ(30°)	-18.49/-17.44	-16.69/-18.2	-13.07/-10.86	-7.07/-5.02	-3.01/-1.32	-0.46/-0.14	-0.47/-1.17	-2.22/-3.5	-4.69/-4.07	-1.62/-3.33	-3.25/-2.61	-2.64/-5.3	-5.08/-4.35	-4.74/-6.13	-5.81/-5.25	-5.09/-6.01	-4.51/-7.08	-11.22/-16.77	-14.77/-17.63	-17.9/-16.29	-14.59/-15.22	-15.25/-13.65	-15.26/-16.75	-18.48/-17.73
Θ(37.5°)	-11.51/-13.31	-16.88/-18.9	-18.16/-11.98	8.52/-5.31	3.14/-1.9	-1.63/-2.04	-0.78/-1.5	-1.52/-1.5	-1.05/-0.54	0.160.11	-1.83/-2.33	-0.32/-1.47	-4.79/-3.78	2.23/-3.14	-4.76/-5.49	-4.79/-3.18	-4.51/-8.06	-11.17/-12.85	-14.88/-18.29	-15.22/-12.22	-12.86/-13.99	-13.91/-11.23	-12.03/-17.5	-11.56/-9.74
Θ(45°)	-7.46/-9.97	-13.14/-14.98	-11.14/-8.35	-4.55/-2.23	-2.15/-1.05	-0.09/-0.07	-0.67/-1.66	-1.77/-0.92	-1.02/-1.06	-0.230.9	0.96/-0.37	-1.72/-2.56	-3.67/-3.11	-3.1/-4.2	-1.496/-16.54	-16.17/-10.65	-11.19/-12.05	-10.8/-14.33	-12.24/-7.99	-8.1/-10.99	-8.1/-10.99	-8.1/-10.99	-8.1/-10.99	-8.1/-10.99
Θ(52.5°)	-8.94/-8	-10.18/-11.61	-5.44/-2.98	-2.77/-3.43	-2.87/-0.99	-0.39/-0.77	-1.18/-1.45	-1.51/-1.38	-0.43/-0.22	-0.37/-1.21	0.191.03	-0.47/-1.24	-2.15/-0.95	-2.66/-3.1	-2.08/-4.51	-2.27/-1.54	-2.71/-7.19	-12.47/-10.53	-9.01/-9.18	-8.15/-5.68	-3.51/-5.33	-5.26/-6.28	-7.66/-10.59	-7.61/-6.92
Θ(60°)	-6.83/-8.26	-6.74/-5.34	-2.45/-2.01	-2.63/-3.15	-3.32/-0.6	1.081.03	-0.36/-1.62	-1.33/-0.62	-0.04/-0.01	1.280.92	0.640.69	-1.481.34	-1.05/-2.17	-1.12/-1.89	-0.5/-1.14	-1.51/-1.6	-4.28/-6.57	-8.67/-8.04	-7.34/-7.62	-6.62/-4.97	-3.7/-3.72	-4.62/-3.14	-2.8/-5.63	-8.27/-7.74
Θ(67.5°)	-5.32/-5.43	-6.48/-6.39	-3.27/-2.07	-1.21/-4.05	-3.44/-0.12	1.108.03	-0.09/-0.77	-1.19/-0.12	0.82/-0.13	-0.73/-2.1	-0.611.96	-10.11	0.44/-1.61	-1.04/-0.29	-1.44/-0.36	-0.84/-3.31	-3.48/-9.28	-8.91/-7.8	-7.54/-5.16	-4.73/-5.12	-3.8/-1.38	-2.51/-1.81	-1.31/-2.34	-2.86/-4.87
Θ(75°)	-3.36/-3.3	-4.46/-3.62	-5.62/-1.72	-1.55/-5	-1.981	2.052.09	0.05/-2.72	-5.03/-3.29	-0.96/-0.55	1.380.07	-3.39/-0.92	0.16/-0.15	-0.41/-0.47	-1.130.54	-21/-0.96	-0.25/-5.46	-3.58/-6.28	-7.5/-7.4	-4.9/-4.57	-6.51/-7.09	-4.35/-1.49	-0.63/-1.07	-1.170.24	-0.82/-0.7
Θ(82.5°)	-1.65/-1.57	-4.82/-4.16	-5.07/-0.16	-2.13/-6.54	-1.722.19	2.771.35	-0.82/-3.69	-6.21/-0.67	-3.36/-1.86	-0.1/-2.03	-3.14/-4.5	-2.65/-1.34	-0.371.36	0.36/-2.36	-3.54/-2.95	-2.38/-2.81	-5.33/-5.8	-6.13/-5.46	-5.53/-5.61	-5.96/-2.87	-1.26/-1.97	0.560.61	0.20	0.1/-78
Θ(90°)	-2.12/-3.52	-5.49/-4.63	-4.59/-1.2	-1.91/-6.87	-2.031.92	1.31/-1.16	-1.16/-2.32	-6.87/-4.18	-1.04/-3.22	-4.45/-2.57	4.91/-1.29	-0.840.09	2.03/-1.73	-1.18/-2.23	4.33/-0.62	-3.71/-4.6	-2.38/-3.01	-2.07/-1.27	-3.19/-1.74	0.31/-1.87	0.110.05	-0.20/-1.7	1.66/-0.45	
Θ(97.5°)	-1.47/-2.07	-4.23/-3.79	-3.97/-3.07	-0.99/-0.44	-1.881.73	0.911.52	1.69/-1.19	-9.93/-6.01	-0.61/-2.71	-2.47/-10.17	-10.42/-8.58	-3.42/-4.22	-0.43/-0.24	2.151.42	-0.35/-2.45	-3.8/-2.87	-3.77/-3.5	-2.38/-1.32	-1.18/-1.75	-2.41/-0.79	0.89/-0.95	-1.15/-0.29	-1.76/-1.17	3.11/-1.15
Θ(105°)	-2.36/-0.3	-5.56/-2.51	-5.84/-3.5	2.95/-7.11	4.1/-0.77	1.611.37	1.107.3	-2.29/-6.1	-2.74/-6.89	-3.97/-4.45	-14.41/-7.08	-5.38/-4.11	-5.490.45	0.361.22	0.091.32	0.16/-3.2	-3.71/-5.25	-1.69/-3.58	-2.27/-1.58	0.182.93	2.541.55	1.210.27	-1.60/-51	0.82/-2.39
Θ(112.5°)	-0.31/-1.2	-4.17/-3.3	-8.61/-7.44	-4.76/-4.18	-1.33/-0.18	-1.73/-4.2	-0.36/-0.3	-1.38/-0.94	-4.57/-10.69	-5.59/-7.82	-13.82/-8.51	-8.24/-6.6	-3.42/-0.88	-4.74/-2.94	-2.71/-2.53	-2.55/-3.25	-4.4/-5.82	-1.80.16	0.490.85	-0.26/-4.13	1.132.47	2.740.09	-2.37/-1.59	-1.76/-1.08
Θ(120°)	-1.58/-0.41	-7.75/-4.17	-6.95/-13.21	-3.74/-3.6	-4.42/-5.29	-5.15/-8.88	-11.63/-5.04	-6.01/-13.52	-4.79/-10.83	-10.92/-9.84														



Radiated Composite Gain Data_6GHz

Appendix B

Θ(120°)	-13.44/-9.91	-14.46/-10.81	-12.36/-7.26	-7.26/-8.08	-8.69/-6.77	-11.28/-9.73	-7.25/-12.77	-11.02/-9.69	-11.62/-9.99	-10.9/-10.28	-13.49/-14.73	-11.36/-13.27	-15.04/-12.11	-6.14/-7.61	-7.65/-6.66	-9.29/-6.36	-12.73/-16.24	-10.94/-11.6	-10.66/-13.22	-14.23/-9.71	-12.52/-18.19	-18.54/-14.13	-15.52/-16.62	-18.14/-10.98
Θ(127.5°)	-8.04/-9.89	-9.37/-10.63	-8.12/-6.05	-4.54/-5.28	-4.27/-1.05	-12.11/-6.72	-5.38/-8.48	-18.77/-9.32	-9.78/-14.67	-10.81/-12.46	-17.31/-13.99	-17.28/-18.23	-17.52/-11.11	-7.58/-9.74	-15.96/-5.92	-9.61/-12.58	-17.82/-12.84	-13.77/-18.69	-17.41/-17.86	-17.44/-18.57	-19.15/-17.25	-16.29/-16.21	-10.36/-8.07	-6.83/-8.12
Θ(135°)	-4.11/-5.34	-4.49/-6.78	-7.86/-5.53	-6.09/-2.31	-3.25/-4.64	-13.21/-6.04	-18.26/-9.68	-8.05/-12.41	-17.72/-12.53	-14.44/-13.23	-13.08/-17.58	-17.62/-10.71	-11.19/-6.25	-1.93/-10.26	-4.24/-18.83	-8.31/-10.38	-7.59/-8.45	-13.21/-15.44	-5.26/-16.53	-17.04/-13.47	-18.17/-12.74	-9.03/-6.03	-10.15/-8.05	-3.72/-3.38
Θ(142.5°)	-10.21/-5.51	-3.79/-4.27	-5/-5.06	-6.52/-6.23	-5.13/-8.58	-10.51/-7.99	-7.99/-11.28	-18.24/-10.76	-10.67/-14.5	-13.05/-12.25	-12.77/-18.06	-17.83/-11.17	-7.08/-7.02	-4.72/-6.05	-17.66/-5.56	-18.17/-5.36	-12.27/-10.38	-16.06/-7.89	-10.76/-11.57	-10.43/-14.57	-13.29/-9.98	-16/-11.2	-12.55/-14.71	-12.35/-10.59
Θ(150°)	-10.68/-13.32	-18.89/-14.91	-10.94/-11.29	-13.06/-14.11	-16.28/-13.53	-14.87/-14.66	-13.39/-16.21	-18.29/-18.06	-18.44/-18.39	-18.61/-14.12	-17.89/-18.55	-11.14/-11.13	-11.76/-6.41	-6.29/-10.28	-15.4/-17.46	-14.09/-13.15	-16.09/-17.54	-9.6/-7.72	-10.2/-15.59	-15.24/-18.42	-18.4/-13.42	-14.09/-13.08	-16.29/-9.62	-7.83/-10.16
Θ(157.5°)	-3.18/-4.29	-6.58/-6.89	-6.75/-10.6	-12.79/-10.25	-9.32/-11.08	-10.6/-10.07	-13.33/-13.1	-11.01/-10.44	-10.6/-9.78	-10.59/-8.45	-6.71/-8.67	-9.65/-11.96	-14.59/-8.45	-6.91/-7.84	-5.6/-8.49	-11.83/-6.67	-9.62/-12.37	-13.97/-13.31	-13.67/-18	-17.93/-18.38	-14.81/-18.15	-17.91/-18.71	-14.31/-9.63	-7.65/-4.7
Θ(165°)	-3.79/-4.98	-5.39/-5.3	-6.48/-6.73	-8.49/-10.54	-12.62/-16.06	-18.42/-17.52	-17.75/-17.04	-14.64/-14.15	-14.2/-13.67	-11.46/-10.15	-9.63/-10.71	-9.49/-8.45	-4.88/-5.53	-8.6/-13.2	-14.61/-9.19	-5.5/-4.18	-4.01/-4.22	-5.01/-6.39	-8.48/-10.6	-11.89/-11.96	-11.61/-12.38	-13.67/-17.81	-12.61/-8.29	-5.39/-3.25
Θ(172.5°)	-16.59/-19.13	-18.24/-19.04	-14.72/-19.3	-8.72/-9.04	-9.76/-13.19	-18.05/-18.13	-18.46/-16.94	-17.77/-17.58	-18/-17.33	-18.97/-14.53	-9.12/-6.16	-4.71/-4.09	-3.85/-4	-4.06/-4.76	-4.84/-4.22	-3.01/-2.87	-2.74/-3.06	-4.06/-5.46	-8.06/-10.73	-13.65/-13.63	-13.92/-15.43	-18.48/-17.24	-14.9/-15.7	-14.86/-17.31
Θ(180°)	-19.04/-18.13	-17.5/-19.28	-15.28/-10.13	-7.83/-8.58	-10.84/-14.5	-16.05/-15.35	-16.64/-16.98	-16.73/-15.42	-14.97/-15.28	-14.03/-11.06	-8.62/-7.45	-7.42/-7.51	-7.57/-7.42	-6.62/-6.29	-6.74/-8.82	-10.37/-11.31	-11.88/-12.98	-15.2/-18.63	-17.48/-18.33	-17.98/-17.57	-17.14/-14.69	-12.47/-12.31	-11.18/-12.03	-13.55/-19.08
Freq(Hz)	6.695GPdL	ThetaAnt.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.6/-5.47	-5.99/-6.22	-6.92/-8.99	-10.31/-11.26	-11.73/-11.8	-11.75/-10.41	-8.94/-7.9	-7.06/-6.32	-5.28/-4.63	-3.68/-3.41	-3.47/-3.71	-2.56/-5.96	-6.95/-8.11	-9.53/-11.55	-12.22/-12.77	-12.07/-11.65	-10.41/-8.49	-6.48/-4.94	-4.69/-4.29	-3.88/-3.42	-3.13/-3.16	-3.96/-4.45	-3.81/-4.12	
Θ(7.5°)	-6.44/-6.53	-7.48/-9.21	-10.29/-11.33	-15.24/-15.28	-13.71/-11.38	-11.29/-10.19	-8.41/-6.92	-6.34/-5.39	-4.98/-4.18	-3.21/-2.73	-3.03/-3.33	-3.55/-3.6	-3.66/-4.01	-4.76/-5.28	-6.25/-7.7	-9.75/-11.92	-15.21/-18.37	-19.01/-15.18	-12.51/-10.23	-8.39/-6.62	-6.68/-6.82	-7.33/-7.28	-9.25/-7.56	-6.85/-6.38
Θ(15°)	-9.49/-10.36	-11.14/-13.39	-16.17/-18.05	-19.21/-16.68	-14.43/-10.19	-7.61/-7.04	-6.25/-4.48	-3.42/-3.29	-4.19/-5.54	-5.58/-5	-4.84/-4.89	-4.53/-4.22	-3.1/-2.67	-2.39/-2.87	-4.05/-5.97	-8.32/-10.27	-12.62/-13.65	-14.31/-13.97	-11.84/-11.52	-10.82/-10.32	-10.09/-8.77	-7.96/-8.11	-6.63/-9.58	-9.75/-10.12
Θ(22.5°)	-17.49/-18.75	-17.71/-18.51	-17.82/-18.7	-17.22/-13.99	-10.46/-7.65	-6.67/-5.84	-4.89/-3.69	-3.35/-3.38	-3.29/-3.77	-4.43/-4.29	-3.69/-2.83	-2.6/-2.88	-3.37/-3.66	-5.3/-7.35	-9.1/-10.95	-14.13/-17.27	-18.11/-14.75	-12.61/-13.65	-13.16/-17.63	-18.82/-17.93	-17.75/-17.58	-19.05/-15.41	-16.66/-17.94	
Θ(30°)	-18.85/-18.17	-18.41/-17.43	-18.87/-14.86	-11.42/-9.13	-9.66/-8.05	-5.87/-3.79	-2.24/-1.84	-2.14/-2.55	-2.82/-3.43	-4.09/-4.67	-5.86/-7.47	-6.72/-4.38	-2.85/-2.91	-3.78/-4.41	-5.15/-6.33	-7.59/-10.94	-15.17/-13.32	-10.71/-10.12	-11.71/-14.7	-19.07/-17.77	-18.45/-18.27	-12.73/-12.03	-12.99/-15.51	-18.63/-18.58
Θ(37.5°)	-13.05/-11.42	-12.77/-9.92	-8.45/-6.82	-8.72/-8.69	-7.25/-4.67	-3.15/-17.8	-1.52/-2.05	-3.39/-4.82	-4.86/-4.45	-4.77/-4.4	-3.32/-2.93	-3.48/-4.66	-4.69/-3.14	-2.2/-2.4	-3.24/-3.41	-6.22/-11.26	-13.03/-12.69	-15.11/-17.96	-18.63/-18.01	-18/-18.72	-16.11/-12	-11.54/-12.28	-13.09/-19.24	-18.16/-17.38
Θ(45°)	-13.23/-10.77	-10.71/-10.57	-7.85/-5.65	-4.13/-5.99	-4.64/-4.54	-4.46/-3.03	-1.59/-0.81	-1.13/-1.92	-2.71/-2.22	-0.88/-1.07	-2.98/-2.94	-1.78/-1.41	-3.35/-2.54	0.44/-2.35	-4/-2.63	-6.37/-7.75	-6.3/-9.08	-14.36/-18.06	-18.44/-12.11	-10.74/-11.63	-12.87/-15.31	-14.34/-18.54	-15.69/-12.13	-19.07/-18.46
Θ(52.5°)	-6.87/-7.46	-8.01/-10.53	-8.13/-4.74	-3.04/-3.38	-4.98/-3	-1.49/-1.52	-2.17/-3.4	-4.45/-3.62	-2.35/-3.18	-3.14/-1.1	-0.06/-0.99	-4.4/-2.24	-1.36/-4.53	-1.18/-1.75	-2.94/-1.99	-2.54/-5.74	-6.28/-7.59	-12.66/-14.41	-10.96/-10.65	-9.58/-9.54	-8.93/-7.23	-7.3/-11.75	-18.02/-12.58	-13.33/-9.65
Θ(60°)	-6.99/-8.21	-6.49/-7.39	-3.32/-1.85	-0.86/-2.22	-3.39/-2.01	-1.06/-0.85	-0.76/-0.17	-0.37/-6.1	-2.4/-0.64	-1.24/-1.27	-2.66/-3.48	-1.48/-5.02	-2.49/-2.5	-3.88/-1.57	-1.77/-1.18	-1/-2.32	-3.84/-5.3	-11.62/-10.66	-6.48/-4.41	-4.21/-4.02	-5.88/-8.68	-5.86/-7.18	-12.63/-9.31	-7.8/-5.2
Θ(67.5°)	-5.9/-3.86	-4.28/-3.73	-4.22/-4.21	-2.65/-4.34	-4.79/-1.18	0.02/-1.22	-2.62/-3.19	-2.32/-2.11	-2.78/-2.83	-2.26/-3.21	-1.73/-4.3	-0.29/-3.23	-4.24/-3.61	-2.35/-3.96	-2.96/-3.21	-1.73/-4.3	-4.03/-4.19	-9.99/-8.67	-6.92/-6.41	-4.58/-5.53	-4.54/-4.32	-5.86/-7.2	-6.87/-4.95	
Θ(75°)	-2.4/-2.67	-1.83/-3.55	-4.18/-2.06	-0.9/-3.18	-4.510.8	1.440.8	0.21/-2.07	-3.5/-1.93	-0.74/-1.42	-2.56/-6.05	-4.86/-2.31	-3.37/-2.31	-1.01/-2.92	0.64/-1.48	-1.88/-5.52	-5.06/-5.1	-8.52/-6.18	-8.05/-13.39	-6.96/-5.79	-4.23/-4.94	-7.15/-7.13	-5.31/-4.75	-2.33/-3.54	-3.71/-3.01
Θ(82.5°)	-2.51/-1.49	-0.74/-2.03	-3.17/-4.59	-3.6/-4.97	-1.210.71	1.391.17	-1.19/-9.19	-1.61/-6.23	-3.07/-3.02	-1.09/-1.4	-4.88/-3.08	-2.16/-1.88	-19.22/-1.45	-0.10/-51	-1.59/-1.17	-3.87/-6.52	-4.27/-6.33	-5.81/-9.38	-9.19/-7.56	-7.4/-3.3	-4.56/-4.22	-2.08/-2.15	0.34/-0.35	-0.58/-2.11
Θ(90°)	-0.53/-0.8	-1.33/-3.25	-5.08/-4.08	-1.9/-2.33	-1.78/-0.52	-0.21/-1.27	-2.13/-4.52	-11.78/-15.04	-4.03/-4.05	-4.27/-2.79	-1.62/-4.95	-5.41/-1.28	-1.91/-0.61	0.820.24	-0.22/-4.44	-2.45/-5.97	-3.94/-10.32	-9.2/-11.76	-12.82/-6.88	-5.31/-3.48	-5.13/-3.94	-0.06/-4.39	0.920.55	-10.55/-0.64
Θ(97.5°)	-1.35/-1.5	-1.97/-3.65	-5.86/-4.14	-3.07/-4.89	-2.11/-0.02	-2.09/-0.43	0.73/-2.86	-17.53/-4.51	-0.93/-5.25	-2.35/-4.94	-2.51/-3.31	-5.34/-2.07	-2.43/-0.02	0.4/-4.62	-1.71/-0.07	-0.10.64	-6.01/-4.93	-4.8/-7.11	-5.17/-4.54	-2.74/-1.32	2.992.21	0.74/-1.37	-0.34/-1.76	2.24/-0.48
Θ(105°)	-1.16/-0.31	-2/-4.33	-3.95/-4.56	-1.13/-5.62	-6.02/-2.63	-3.99/-0.6	-0.36/-1.93	-7.86/-6.61	-3.04/-0.67	-1.33/-7.8	-7.16/-4.84	-4.97/-2.98	0.34/-0.76	-0.89/-3.79	-1.66/-1.54	-1.810.13	-2.39/-5.1	-1.86/-1.25	-3.11/-3.05	-0.482.06	2.030.02	-1.5/-0.61	0.61/-41	2.84/-1.77
Θ(112.5°)	-1.480	-3.98/-1.84	-3.89/-4.4	-7.46/-10.86	-12.01/-2.11	-2.13/-2.73	-1.55/-1.87	-4.52/-6.71	-7.72/-1.62	-3.29/-11.06	-10.74/-13.65	-5.48/-7.21	-0.24/-0.73	-3.02/-4.55	-1.16/-2.9	-4.9/-12.37	-6.97/-9.53	-4.76/-0.63	-2.22/-1.05	2.481.33	-0.061.78	1.710.34	-1.14/-0.29	
Θ(120°)	-2.05/-1.24	-4.69/-5.78	-7.49/-6.53	-10.4/-9.1	-5.32/-5.8	-4.01/-7.41	-16.49/-6.45	-5.27/-8.46	-9.23/-12.04	-4.83/-11.3	-17.57/-15.88	-16.13/-9.7	-9.98/-3.86	-3.32/-6.73	-10.87/-4.17	-3.8/-2.61	-5.48/-7.84	-3.25/-6.73	-2.85/-3.6	-5.42/-1.68	1.871.81	-0.04/-4.48	-4.27/-1.29	1.84/-0.45
Θ(127.5°)	-2.73/-4.59	-6.29/-4.79	-9.04/-7.79	-13.79/-12.92	-6.87/-12.43	-6.79/-6.53	-11.18/-16.57	-15.81/-17.89	-12.83/-17.37	-8.83/-4.84	-16.98/-19.26	-18.51/-7.3	-9.74/-6.06	-6.99/-11.54	-17.68/-6.33	-8.91/-5.95	-17.53/-11.34	-5.3/-6.08	-0.54/-5.02	-6.7/-1.54	1.080.57	-2.91/-1.98	0.93.92	2.3/-77
Θ(135°)	-5.9/-4.74	-3.82/-10.37	-18.13/-11.34	-16.83/-17.64	-12.81/-9.47	-8.21/-8.66	-6.71/-5.38	-6.65/-17.3	-11.33/-9.77	-12.86/-9.99	-13.88/-18.77	-18.3/-13.4	-9.84/-11.77	-4.51/-14.27	-7.94/-9.5	-3.38/-1.97	-4.61/-7.79	-11.03/-3.49	-2.45/-14.77	-15.78/-2.09	-1.07/-0.38	-3.15/-4.13	-3.782.14	1.6/-73
Θ(142.5°)	-6.57/-5.03	-11.86/-12.26	-14.24/-17.99	-16.61/-18.07	-10.71/-18.94	-10.77/-16.4	-14.25/-9.77	-6.31/-5.86	-5.47/-5.73	-10.19/-14.3	-14.44/-13.16	-18.68/-17.78	-15.08/-18	-11.96/-7.23	-18.36/-9.62	-17.75/-3.81	-5.84/-5.88	-18.120.11	0.51/-9.46	-1.592/-1.53	-1.599/-2.3	-2.85/-11.34	-4.85/-0.31	-1.157/-3.4
Θ(150°)	-6.12/-5.94	-11.76/-12.52	-15.6/-15.46	-13.71/-15.83	-18.44/-17.43	-19.11/-18.53	-19.05/-16.94	-18.57/-18.49	-14.3/-10.29	-9.83/-12.46	-12.18/-8.32	-10.62/-18.84	-17.59/-12.81	-13.52/-9.82	-5.26/-9.1	-9.87/-8.11	-16.5/-9.77	-11.24/-7.15	-7.41/-17.28	-16.74/-6.29	-3.26/-8.72	-7.63/-3.33	-3.85/-1.66	-2.5/-7.31
Θ(157.5°)	-9.9/-11.8	-13.47/-12.08	-11.83/-15.46	-18.69/-18.7	-18.06/-17.65	-17.53/-13.16	-11.41/-11.6	-14.92/-18.55	-16.09/-15.58	-18.33/-18.09	-17.49/-15.09	-12.59/-10.96	-11.04/-10.12	-17.3/-17.99	-18.42/-17.88	-14.08/-14.39	-16.89/-15.22	-9.4/-7.4	-8.35/-11.82	-10.53/-6.26	-4.14/-4.68	-4.53/-3.32	-2.93/-4.2	-6.28/-8.19
Θ(165°)	-7.27/-12.24	-16.48/-13.27	-12.9/-17.48	-19.09/-17.92	-17.77/-19.16	-18.15/-18.18	-18.46/-16.12	-13.1/-11.13	-10.86/-12.08	-11.57/-12.05	-12.95/-15.4	-17.37/-16.6	-16.18/-17.25	-16.22/-12.87	-12.79/-10.41	-7.59/-5.68	-5.53/-7.55	-9.62/-10.62	-9.27/-8.88	-7.99/-8.94	-9.31/-7.77	-6.89/-6.6	-3.17/-2.77	-3.4/-5.05
Θ(172.5°)	-14.39/-11.6	-																						



Radiated Composite Gain Data_6GHz

Appendix B

Θ(172.5°)	-8.24/-7.11	-8.38/-10.12	-15.15/-18.11	-15.99/-12.58	-8.97/-7.31	-5.69/-4.88	-3.49/-2.82	-3.19/-3.86	-4.11/-5.48	-5.94/-7.09	-6.75/-5.54	-4.73/-4.8	-5.93/-7.81	-10.13/-11.85	-13.3/-12.32	-7.99/-5.64	-5.03/-5.46	-5.34/-5.32	-5.53/-4.06	-2.25/-1.9	-2.36/-2.92	-3.73/-6.3	-11.54/-18.62	-17.87/-11.53
Θ(180°)	-10.67/-9.9	-8/-6.62	-6.46/-7.63	-8.87/-10.76	-13.56/-15.09	-16.1/-15.02	-11.95/-9.84	-8.65/-8.05	-7.42/-6.78	-6.3/-6.54	-6.54/-6.75	-7.45/-8.64	-10.49/-11.96	-13.56/-12.57	-11.4/-9.83	-7.95/-6.01	-4.07/-3.05	-2.79/-2.58	-1.98/-1.55	-2.08/-5.42	-9.86/-10.96	-12.16/-13.9	-15.9/-16.5	-16.12/-13.56
Freq(Hz)	6.175GPol.	ThetaAnt. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-9.74/-9.56	-8.68/-9.17	-10.46/-12.71	-15.47/-18.22	-17.82/-18.9	-18.34/-18.52	-18.79/-17	-14.18/-12.42	-12.06/-10.78	-9.98/-9.09	-8.71/-8.3	-8.05/-8.27	-8.64/-8.59	-9/-9.95	-12/-13.94	-15.85/-18.91	-19.35/-18.65	-17.96/-17.85	-17.96/-14.66	-11.63/-8.43	-7.33/-6.96	-8.52/-9.28	-9.84/-9.2	-8.03/-9.31
Θ(7.5°)	-10.3/-10.35	-9.97/-10.89	-13.87/-18.38	-18.29/-16.68	-15.8/-14.6	-16.78/-12.58	-11.88/-11.04	-10.07/-10.4	-11.36/-11.43	-10.7/-10.24	-10.43/-10.54	-10.16/-9.67	-9.28/-9.33	-10.01/-10.78	-11.36/-11.32	-11.98/-12.62	-18.8/-18.81	-18.68/-18.85	-18.41/-15.74	-14.09/-10.41	-8.78/-8.21	-9.43/-8.51	-9.08/-9.28	-9.96/-10.3
Θ(15°)	-8.84/-11.46	-16.19/-18.88	-18/-9.6	-6.41/-5.31	-6.15/-6.76	-6.22/-4.14	-8.49/-11.46	-15.59/-17.77	-17.34/-18.56	-17.96/-18.53	-17.58/-18.9	-18.17/-15.08	-10.8/-8.07	-6.73/-7.37	-10.01/-11.85	-12.76/-15.19	-18.87/-19.02	-18.98/-19.4	-17.19/-18.13	-14.53/-8.72	-6.81/-6.15	-6.61/-6.44	-6.36/-6.32	-6.94/-6.72
Θ(22.5°)	-5.47/-8.79	-10.86/-7.26	-4.14/-2.58	-3.23/-4.39	-5.55/-5.85	-6.86/-9.04	-11.14/-13.24	-17.37/-17.98	-18.52/-15.25	-16.26/-18.15	-18.95/-14.69	-13.53/-12.77	-9.68/-7.24	-7.13/-10.6	-16.82/-15.64	-12.99/-11.64	-11.43/-17.02	-17.28/-17.76	-16.04/-18.39	-16.25/-9.56	-6.41/-5.99	-7.3/-6.16	-4.77/-3.97	-3.37/-3.48
Θ(30°)	-3.19/-6.36	-8.58/-5.51	-2.3/-0.79	-1.33/-2.83	-4.17/-4.46	-5.26/-6.96	-9.64/-11.04	-12.21/-15.36	-17.47/-15.24	-11.59/-12.74	-17.72/-17.7	-13.66/-16.6	-4.67/-4.16	-7.24/-15.22	-14.2/-8.03	-6.86/-7.56	-10.37/-14.98	-13.52/-9.1	-8.08/-7.91	-4.63/-3.05	-4.06/-5.17	-5.9/-4.64	-2.46/-1.49	-1.02/-1.39
Θ(37.5°)	-0.02/-5.31	-4.31/-0.13	0.75/-0.46	-1.62/-3.69	-6.22/-8.44	-8.38/-8.35	-8.72/-9.42	-10.47/-14.47	-16.71/-17.75	-19.13/-11.77	-12.4/-16.09	-14.37/-10.62	-7.21/-6.51	-9.72/-17.28	-10.1/-6.62	-6.99/-9.26	-14.56/-12.73	-8.92/-7.69	-6.54/-2.69	-1.15/-2.84	-1.64/-0.11	-1/-3.83	-3.9/-0.07	1.73/-1.99
Θ(45°)	1.820/2.4	0.61/-1.25	0.32/-0.26	-1.96/-5.91	-8.77/-7.89	-5.87/-4.68	-4.24/-3.7	-3.61/-6.44	-13.79/-12.54	-10.36/-16.31	-15.67/-13.5	-13.18/-12.31	-11.5/-11.3	-11.43/-16.85	-17.93/-16.24	-18.84/-18.41	-9.2/-7.17	-3.69/-2.55	-3.74/-4.07	-2.26/-1.93	-2.83/-4.02	-1.12/-1.05	-1.820/7	1.33/-1.68
Θ(52.5°)	2.512/2.27	2.30/5	0.47/-0.44	-3.91/-7.03	-8.01/-8.47	-4.77/-4.73	-5.07/-4.7	-2.41/-0.78	-2.56/-8.67	-8.23/-6.94	-8.86/-8.95	-9.63/-8.33	-13.74/-17.93	-10.51/-6.93	-5.88/-7.6	-9.84/-11.68	-11.5/-9.24	-6.6/-5.4	-2.54/-2.35	-1.730/-43	0.171/-44	1.770/2		
Θ(60°)	2.572/2.21	2.19/-0.15	0.5/-2.31	-6.41/-9.18	-11.81/-11.45	-12.46/-9.82	-5.6/-4.21	-4.77/-4.29	-2.48/-3.56	-6.68/-6.85	-9.9/-6.29	-7.13/-6.56	-6.89/-15.57	-14.44/-16.21	-6.74/-5.38	-7.75/-4.59	-5.29/-9.19	-5.74/-6.89	-6.72/-7.17	-1.99/-1.02	1.22/2.5	2.67/3.56		
Θ(67.5°)	-0.56/-1.11	0.490/0.12	0.67/-1.9	-2.47/-6.91	-13.65/-15.07	-11.69/-14.84	-12.64/-5.48	-3.29/-4.02	-4.32/-4.03	-4.81/-5.6	-10.58/-7.75	-6.8/-5.42	-5.07/-12.78	-8.36/-8.11	-5.72/-4.61	-7.41/-5	-5.27/-7.59	-7.49/-7.62	-5.96/-5.02	-4.29/-7.22	-5.87/-3.27	-4.22/-2.72	0.492/58	2.6/0.3
Θ(75°)	-0.310/9.3	2.22/-3.1	-1.72/-5.17	-7.65/-13.44	-8.33/-10.38	-14.95/-9.82	-11.28/-11.85	-5.63/-4.73	-6.11/-3.37	-2.55/-2.72	-6.75/-6.32	-3.61/-3.11	-1.1/-5.24	-2.59/-4.56	-4.95/-2.57	-1.290/-15	-1.07/-2.13	-5.82/-7.82	-3.83/-1.8	-1.89/-4.44	-6.18/-2.56	-2.14/-1.64	-0.26/-1.98	2.29/-4.1
Θ(82.5°)	-2.44/-0.92	-1.51/-4.05	-5.4/-6.36	-7.68/-5.46	-6.32/-18.47	-14.23/-6.46	-5.76/-4.93	-2.76/-4.26	-7.82/-3.9	-2.05/-1.19	-8.14/-5.53	-2.9/-2.25	-0.61/-4.24	-2.69/-4.09	-5.68/-3.78	-3.45/-0.02	-0.78/-1.14	-6.63/-6.53	-2.42/-1.95	-2.58/-4	-5.25/-3.69	-0.97/-2.23	-3.430/68	1.16/-0.16
Θ(90°)	-2.19/-2.24	-0.71/-4.97	-1.29/-5.09	-7.38/-3.95	-4.88/-17.77	-8.71/-7.35	-8.88/-6.82	-4.45/-5.46	-9.48/-4.78	-2.27/-0.85	-1.42/-4.93	-2.91/-1.69	0.04/-1.41	-4.44/-2.28	-3.82/-3.39	-1.25/-0.86	-0.62/-0.38	-2.91/-4.1	-2.55/-3.82	-0.72/-2.19	-2.26/-1.34	-1.22/-1.52	0.73/-1.29	-0.91/-0.8
Θ(97.5°)	-4.74/-3.77	-2.04/-4.81	-2.07/-7.06	-11.14/-4.39	-2.55/-11.47	-6.37/-3.84	-6.59/-18.71	-9.6/-7.6	-6.12/-30.1	-3.69/-0.61	0.75/-3.23	-0.73/-3.03	0.67/-1.67	0.71/-2.09	-4.62/-1.37	1.753/28	2.270/73	-2.54/-1.97	-1.02/-2.47	-1.05/-0.71	1.390/82	-0.950/97	0.25/-2.04	-2.80/56
Θ(105°)	-6.55/-8	-3.74/-10.4	-9.99/-12.11	-17.62/-8.66	-2.42/-7.44	-13.5/-8.2	-7.49/-12.35	-13.01/-13.13	-6.96/-3.97	-3.23/-0.09	2.09/-0.3	2.07/-1.13	-1.34/-1.31	0.06/-0.76	-2.03/-1.29	-0.682/15	2.05/-0.13	-2.23/-3.76	-3.21/-7.28	-5.95/-3.76	-6.49/-10.74	-2.66/-1.71	-7.5/-8.6	-4.65/-2.99
Θ(112.5°)	-7.02/-5.67	-4.21/-18.44	-11.89/-18.59	-18.1/-12.85	-7.87/-16.54	-13.6/-11.24	-18.06/-13.86	-7.96/-10.21	-8.24/-5.64	-4.590/5	0.9/-0.06	2.23/-3	-0.152	-0.70/-22	-0.71/-30.4	-1.030/14	-1.37/-2.8	-7.55/-4.27	-4.85/-6.63	-0.84/-4.76	-8.84/-0.19	0.72/-5.29	-6.83/-4.91	-0.2/-0.18
Θ(120°)	-6/-96	-4.97/-10.18	-11.88/-18.38	-17.82/-18.23	-13.62/-16.59	-18.91/-1.68	-9.96/-10.44	-8.97/-11.49	-7.13/-5.87	-8.78/-0.3	1.240/97	1.83/-1.27	0.190/98	-0.320.1	-4.33/-30.4	0.482/02	1.32/-1.97	-8.05/-6.38	-1.02/-2.66	-4.79/-2.26	-18.56/-14.02	-8.04/-10.11	-5.78/-0.83	0.45/-1.3
Θ(127.5°)	-3.38/-8.57	-4.42/-4.33	-12.49/-11.17	-10.93/-17.73	-17.2/-15.15	-14.06/-12.34	-13.57/-11.75	-12.38/-12.93	-10.07/-7.67	-3.550/28	1.082/65	1.90/62	2.23/63	4.342/-177	-1.03/-2.89	-2.030/08	-2.27/-6.28	-16.23/-14.64	-4.35/-2.54	-10.7/-6.35	-13.23/-10.16	-11.26/-7.24	-3.43/-2.1	-0.19/-0.66
Θ(135°)	-9.29/-10	-6.55/-5.24	-5.12/-3.62	-4.06/-7.42	-18.38/-18.37	-13.53/-11.13	-7.52/-6.31	-7.03/-7.7	-4.450/12	2.350/33	3.682/21	2.244/65	4.55/-1.64	-3.12/-22.1	-0.310/17	-1.68/-5.85	-5.46/-13.65	-12.83/-8.42	-9.44/-14.67	-8.2/-73	-6.81/-9.82	-14.6/-8.41	-2.2/-2.1	
Θ(142.5°)	-6.96/-9.66	-8.28/-13.08	-14.89/-15.9	-18.33/-17.52	-18.64/-12.83	-9.24/-9.19	-11.58/-16.23	-18.41/-11.13	-6.51/-7.13	-6.38/-4.78	-4.98/-9.04	0.91/-3.38	-1.883/52	2.54/-4.31	-12.73/-10.08	-3.06/-2.02	-6.89/-8.29	-11.89/-17.77	-11.25/-4.42	-6.17/-15.61	-10.56/-10.96	-9.33/-11.03	-13.24/-8.99	-4.81/-4.01
Θ(150°)	-13.13/-17.46	-17.6/-8.33	-6.74/-10.88	-16.92/-11.98	-9.01/-5.85	-4.43/-4.95	-6.2/-6.99	-13.33/-9.13	-3.8/-0.64	-7.71/-5.5	6.53/-1.94	-0.33/-1.17	-1.011/37	2.511/-0.6	-4.27/-1.16	-6.77/-7.68	-11.49/-13.47	-18.51/-16.62	-15.65/-6.87	-6.38/-13.58	-17.78/-16.59	-16.83/-9.49	-7.04/-4.31	-5.07/-10.1
Θ(157.5°)	-1.88/-3.09	-4.86/-4.43	-4.4/-6.49	-5.98/-9.82	-8.86/-7.98	-7.54/-7.13	-7.09/-7.2	-8.03/-5.22	-1.02/-1.14	1.79/-1.53	1.221/52	1.19/-2.18	-0.310/4	1.21/-2.98	-7/-9.7	-9.42/-9.46	-10.63/-11.78	-11.71/-13.13	-16.78/-15.17	-12.12/-11.89	-18.94/-13.73	-8.89/-7.31	-5.17/-2.37	
Θ(165°)	-15.8/-12.26	-10.41/-10.53	-13.03/-14.47	-14.94/-14.72	-14.06/-14.24	-13.16/-12.22	-15.92/-17.45	-15.95/-7.99	-3.48/-14.2	0.561/74	2.413/08	3.683/78	3.4/2.65	1.560/79	-0.25/-1.98	4.51/-6.84	-9.68/-12.57	-12.14/-10.62	-9.24/-8.97	-10.35/-12.9	-12.18/-11.37	-12.84/-12.06	-16.43/-19.05	-18.93/-18.8
Θ(172.5°)	-17.15/-16.83	-17.58/-13.88	-10.5/-3.97	-7.3/-7.72	-9.07/-9.69	-10.53/-11.02	-10.47/-8.17	-5.55/-3.71	-2.23/-1.38	-1.09/-1.29	-1.5/-1.52	-1.22/-0.81	-0.090/24	0.19/-0.33	-0.89/-1.51	-2.02/-3.02	-5.12/-6.83	-8.68/-13	-18.66/-15.47	-10.88/-6.51	-5.15/-5.27	-4.98/-5.48	-7.32/-7.52	-7.91/-9.56
Θ(180°)	-15.21/-14.03	-13.83/-15.76	-18.03/-14.06	-12.01/-10.22	-9.61/-9.9	-10.87/-10.81	-11.71/-12.9	-16.6/-18.76	-17.49/-18.37	-12.81/-18.41	-17.83/-13.61	-10.82/-8.79	-6.88/-5.85	-5.95/-6.01	-5.59/-5.5	-6.62/-4.87	-9.27/-8.95	-10.01/-11.29	-8.77/-6.49	-5.17/-4.21	-18.77/-17.61	-18.77/-17.61		
Freq(Hz)	6.475GPol.	PhiAnt. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-13.38/-10.09	-8.75/-8.79	-7.56/-5.67	-4.79/-4.62	-4.13/-2.85	-2.24/-2.58	-3.12/-2.8	-2.34/-2.63	-3.62/-5.18	-5.97/-7.25	-8.95/-9.92	-10.94/-11.89	-12.65/-13.3	-13/-10.53	-8.54/-7.72	-5.8/-5.1	-4.47/-3.99	-3.69/-3.26	-3.11/-3.88	-4.82/-5.19	-5.45/-5.99	-9.9/-10.68	-11.52/-12.87	-13.18/-14.14
Θ(7.5°)	-13.32/-10.31	-6.99/-5.51	-6.72/-6.3	-5.88/-5.66	-6.57/-6.86	-6.05/-6.35	-8.25/-8.61	-7.69/-7.28	-7.59/-7.24	-6.75/-6.65	-5.56/-9.94	-12.52/-14.49	-14.12/-11.05	-8.16/-5.71	-4.22/-2.75	-1.76/-1.27	-1.47/-1.69	-1.57/-2	-2.07/-2.66	-1.82/-2.28	-4.4/-3.72	-11.21/-13.33	-14.73/-14.91	-15.12/-15.58
Θ(15°)	-18.91/-11.51	-9.18/-8.41	-7.48/-9.83	-11.32/-10.86	-11.06/-11.21	-9.95/-9.36	-11.49/-15.86	-17.94/-16.72	-18.2/-18.94	-14.97/-11.37	-9.27/-8.55	-9.25/-12.72	-12/-8.5	-5.91/-4.08	-3.32/-2.8	-2.68/-2.79	-3.36/-3.81	-3.88/-4.54	-4.63/-3.83	-3.47/-3.35	-4.26/-6.94	-9.51/-11.11	-14.32/-15.24	-18.39/-19.35
Θ(22.5°)	-19.44/-14.62	-17.57/-13.06	-10.66/-8.94	-6.93/-5.81	-4.54/-4.47	-4.26/-4.16	-3.89/-4.83	-7.25/-9.51	-12.94/-17.64	-18.13/-17.67	-18.51/-14.18	-13.53/-15.24	-12.66/-8.97	-5.96/-6.57	-7.27/-8.56	-9.44/-8.66	-7.08/-6.21	-4.92/-3.25	-2.97/-4.18	-4.71/-4.12	-5.72/-6.28	-5.61/-		



Radiated Composite Gain Data_6GHz

Appendix B

Θ(15°)	-8.74/6.14	-4.54/-3.93	-3.61/-4.32	-6.4/-7.17	-8.65/-11.13	-14.06/-12.94	-11.47/-12.42	-13.4/-15.04	-17.96/-18.53	-18.23/-15.47	-11.48/-9	-6.8/-5.02	-4.53/-4.54	-4.84/-4.86	-4.7/-4.76	-5.59/-7.07	-8.2/-9.78	-13.34/-15.7	-13.47/-9.95	-9.34/-9.3	-6.14/-4.29	-4.01/-3.46	-4.43/-6.24	-7.78/-8.56
Θ(22.5°)	-6.98/-4.72	-1.53/-1.74	-3.85/-8.75	-12.92/-13.55	-10.83/-10.8	-10.55/-9.64	-8.09/-8.95	-8.97/-8.66	-9.68/-11.55	-14.45/-18.93	-19.04/-9.88	-9.41/-8.49	-9.2/-9.23	-7.37/-5.37	-4.61/-6.26	-9.59/-13.05	-15.91/-17.07	-15.76/-12.78	-10.44/-9.95	-8.29/-7.47	-5.98/-4.48	-3.57/-3.75	-4.57/-4.34	-4.15/-4.33
Θ(30°)	-6.06/-3.4	-2.06/-1.23	-5.32/-6.82	-6.48/-6.51	-7.63/-9.47	-11.19/-13.68	-6.48/-6.51	-10.16/-9.04	-7.97/-7.96	-8.36/-9.45	-10.72/-13.28	-13.22/-10.18	-10.24/-11.99	-10.59/-9.17	-10.51/-13.98	-15.64/-12.32	-15.69/-16.15	-12.05/-9.62	-7.04/-4.74	-3.44/-5.26	-6.91/-4.79	-1.59/-0.79	-0.69/-2.33	
Θ(37.5°)	0.64/-1.33	-0.19/-3.46	-4.47/-3.95	-5.38/-6.9	-8.57/-10.5	-13.3/-16.47	-19.01/-17.66	-16.49/-12.35	-11.58/-11.03	-10.89/-11.44	-12.19/-10.67	-10.54/-11	-12.85/-15.73	-17.74/-13.43	-13.25/-16.58	-10.21/-11.69	-14.93/-17.98	-11.42/-7.99	-7.21/-7.08	-5.65/-3.39	-2.4/-2.01	-2.65/-2.84	-3.18/-1.4	0.77/-1.31
Θ(45°)	0.04/0.68	-0.10/-1.47	-1.17/-1.46	-6.8/-9.62	-13.17/-14.95	-12.76/-7.82	-5.66/-6.47	-11.03/-13.35	-9.59/-8.92	-7.97/-8.66	-7.27/-9.43	-9.59/-8.69	-12.18/-14.82	-14.45/-18.24	-13.41/-18.53	-16.16/-9.45	-5.6/-3.59	-1.42/-0.09	0.13/0.7	0.62/-0.19	-1.28/-1.38	-1.01/-1.48	0.43/-2.3	
Θ(52.5°)	0.24/-1.09	-0.63/0.96	-1.52/-3.01	-3.58/-6.26	-10.01/-9.34	-8.74/-9.38	-9.97/-6.95	-6.6/-12.78	-7.03/-7.98	-6.67/-6.33	-8.31/-9.35	-15.16/-9	-0.96/-7.24	-10.62/-12.42	-15.18/-18.1	-6.67/-6.66	-4.52/-1.44	-1.63/-1.53	-1.1/-8.3	-1.57/0.76	1.95/-0.29	-0.42/-3.55	1.61/-2.4	
Θ(60°)	2.34/2.69	1.25/-1.28	-6.87/-6.38	-6.12/-8.11	-8.47/-8.63	-8.4/-7.36	-7.64/-7.66	-4.5/-4.66	-7.3/-9.97	-11.65/-5.4	-6.97/-6.77	-7.83/-9.08	-13.23/-14.24	-8/-3.97	-8.59/-10.56	-7.98/-8.68	-7.45/-9.44	-12.02/-8.3	-7.12/-4.26	-3.16/-3.34	-3.79/-2.78	0.05/0.53	-0.79/-1.15	1.01/0.83
Θ(67.5°)	-0.07/-1.37	1.27/-0.97	-2.31/-2.51	-4.42/-5.38	-7.88/-13.25	-15.65/-9.59	-5.58/-4.58	-6.93/-7.68	-7.72/-3.82	-5.03/-10.33	-5.83/-3.52	-6.31/-3.82	-12.41/-8.47	-6.8/-6.47	-15.38/-10.48	-5.68/-6.01	-6.17/-11.01	-13.55/-12.87	-8.49/-6.93	-4.77/-1.49	-4.07/-0.57	-3.84/-2.42	-0.12/-11	1.45/0.58
Θ(75°)	0.46/-1.31	-1.72/-3.44	-1.62/-3.51	-2.44/-4.14	-8.95/-11.46	-10.08/-12.77	-16.03/-6.74	-4.9/-8.9	-8.59/-4.09	-4.07/-7.51	-11.53/-4.17	-5.24/-2.02	-7.39/-8.83	-4.63/-7.75	-10.4/-9.1	-5.13/-3.3	-3.63/-6.08	-5.58/-5.29	-4.6/-5.71	-3.92/-4.25	-5.29/-5.8	-2.1/-2.66	-2.18/-1.42	0.76/0.29
Θ(82.5°)	-2.11/-3.5	-1.84/-1.16	-5.69/-5.26	-6.28/-8.62	-6.41/-9.63	-11.28/-6.49	-7.54/-6.71	-7/-16.21	-6.77/-1.78	-1.57/-5.2	-5.58/-4.66	-0.66/-0.71	-5.24/-4.25	-3.07/-5.91	-6.78/-4.99	-2.96/-2.44	-3.11/-2.96	-2.01/-3.64	-4.11/-6.53	-1.74/-1.47	-5.15/-4.97	-0.45/-0.96	-1.85/-0.26	-0.07/-0.51
Θ(90°)	-9.16/-9.66	-6.79/-6.72	-1.85/-7.7	-7.23/-4.6	-5.22/-12.5	-11.23/-4.22	-6.5/-3.57	-1.94/-17.32	-7.66/-1.41	-1.47/-2.63	-2.87/-5.85	-1.58/-1.8	-3.06/-1.54	-1.86/-1.92	-6.83/-6.68	-2.99/0.33	0.37/-0.73	-5.21/-4.53	-4.6/-4.47	-1.12/-2.97	-3.01/-3.26	-2.31/-1.51	-5.27/-1.7	-1.68/-2.5
Θ(97.5°)	-4.57/-8.26	-2.98/-5.82	-10.92/-5.66	-8.6/-4.15	-4.55/-12.42	-8.08/-2.47	-8.21/-7.78	-13.63/-18.5	-6.1/-2.67	-0.72/-1.53	-3.68/-2.82	-3.75/0.28	0.28/-0.93	-0.13/-0.67	-3.56/-3.45	-2.21/1.28	-1.99/-4.77	-2.85/-3.28	-0.52/-7.86	-2.34/0.07	-1.25/-1.52	-1.96/-3.11	-1.61/-2.67	
Θ(105°)	-13.26/-10.62	-3.71/-4.45	-16.11/-8.86	-18.19/-6.4	-4.39/-19.07	-11.32/-6.31	-17.91/-9.8	-5.12/-11.14	-4.48/-2.49	-2.09/0.71	1.1/-1.13	-3.56/2.32	-1.41/-0.03	-0.4/-2.19	-4.47/-3.74	-1.69/-0.91	2.02/2.66	0.58/-1.06	0.42/-3.44	-0.51/-3.34	-5.31/-2.22	-6.34/-1.95	-5.65/-7.83	-6.39/-1.76
Θ(112.5°)	-6.35/-7.97	-7.8/-6.94	-18.19/-6.57	-9.41/-11.7	-9.15/-15.11	-12.48/-17.55	-16.76/-12.83	-14.86/-17.57	-5.12/-5.27	-2.29/-1.23	0.48/-1.49	-0.21/-17	0.43/-1.14	-0.28/0.07	-3.4/-4.04	-4.02/-3.26	-1.04/-0.49	-3.09/-6.48	-6.84/-13.17	-6.82/-5.58	-9.57/-17.18	-5.51/-5.75	-12.52/-13.83	-8.26/-1.9
Θ(120°)	-0.85/-1.33	-4.52/-6.01	-9/-12.5	-18.61/-18.79	-11.97/-12.47	-13.39/-13.9	-12.81/-11.83	-13.69/-10.54	-4.3/-6.24	-2.09/-0.29	0.46/0.54	0.07/-147	2.76/-0.95	-0.13/-0.67	-3.55/-4.31	-2.77/-3.07	-4.27/-6.04	-8.67/-3.69	-1.12/-2.43	-8.7/-9.48	-13.72/-13.6	-4.7/-5.01	-9.8/-6.25	-1.95/-0.09
Θ(127.5°)	-2.05/-4.34	-7.74/-6.8	-9.43/-13.05	-11.52/-13.75	-15.68/-15.17	-15.2/-18.46	-16.44/-14.49	-13.12/-14.95	-6.55/-3.98	-1.79/-0.08	-0.36/2.01	-1.15/-1.16	1.97/-0.76	-0.29/-0.18	-6.55/-4.54	-1.7/-0.95	-0.96/-7.4	-8.45/-1.39	-1.33/-3.15	-6.2/-6.44	-8.21/-14.49	-11.22/-9.84	-17.59/-17.64	-4.09/-0.85
Θ(135°)	-2.73/-5.58	-5.61/-4.81	-6.77/-9.99	-6.45/-10.1	-16.29/-8.57	-7.67/-10.86	-17.92/-13.37	-8.01/-7.77	-6.09/-2.94	0.18/-1.44	0.414,11	1.84/2.51	3.06/2.53	1.65/0.54	-4.76/-11.53	-4.03/-2.26	-1.99/-10.09	-15.69/-16.36	-18.47/-14.32	-10.72/-17.15	-15.31/-11.94	-3.98/-1.71	-14.66/-17.67	-8.62/-4.36
Θ(142.5°)	-6.68/-5.81	-3.71/-10.56	-16.22/-15.16	-13.16/-16.61	-17.24/-14.03	-11.75/-14.58	-16.63/-6.49	-4.3/-4.98	-5.14/-6.31	-6.32/-3.41	0.38/0.1	-0.43/0.22	-0.65/0.3	-2.12/-4.15	-7.74/-11.49	-9.49/-4.98	-3.9/-6.25	-8.99/-12.87	-9.53/-4.85	-5.67/-9.55	-18.41/-17.72	-16.64/-13	-13.8/-15.9	-13.84/-6.99
Θ(150°)	-18.84/-11.67	-11.94/-10.95	-7.68/-7.2	-10.55/-16.29	-10.37/-7.55	-6.54/-8.77	-12.87/-11.6	-5.83/-3.25	-3.72/-5.72	-11.53/-7.22	-3.38/-2.95	-3.82/-5.71	-2.79/-1.16	0.48/-4.42	-9.66/-8.79	-7.87/-7.47	-9.05/-17.37	-18.14/-14.3	-12.59/-19.21	-18.47/-18.39	-11.76/-10.44	-12.96/-14.33	-13.85/-11.55	-7.46/-7.08
Θ(157.5°)	-5.72/-5.93	-7.94/-8.03	-6.78/-6.5	-7.23/-7.72	-8.4/-8.44	-7.9/-7.79	-10.1/-16.31	-1.84/-4.73	-3.68/-1.76	-0.59/0.55	0.63/-1.23	-3.42/-4.04	-2.59/-1.3	2.28/-1.43	-1.46/-7.28	-16.63/-18.07	-16.08/-18.06	-17.54/-16.31	-12.78/-12.51	-18.89/-19.06	-19.02/-14.72	-14.94/-13.8	-10.62/-8.92	-9.01/-11
Θ(165°)	-7.19/-8.39	-9.91/-11.57	-19.15/-16.76	-16.59/-17.39	-18.11/-18.57	-16.86/-12.91	-9.97/-7.73	-6/-4.53	-3.25/-2.21	-0.46/-1.47	2.64/-6.23	1.63/0.15	-1.31/-2.47	-0.97/0.46	0.26/-1.2	-4.12/-7.85	-15.11/-18.31	-16.15/-12.17	-12.31/-12.64	-13.84/-14.16	-12.77/-14.31	-16.6/-14.95	-12.4/-11.74	-10.76/-10.06
Θ(172.5°)	-8.32/-8.97	-10.54/-15.14	-18.68/-18.62	-18.44/-18.59	-17.78/-18.45	-17.16/-15.08	-11.1/-8.47	-6.69/-5.65	-5.39/-5.71	-5.61/-4.54	-3.39/-2.88	-3.88/-6.41	-8.87/-9.45	-8.52/-7.55	-6.94/-7.39	-8.91/-11.41	-12.83/-14.51	-16.66/-19.18	-18.62/-17.83	-17.75/-12.44	-8.72/-7.4	-7.95/-9.32	-10.91/-11.46	-9.46/-7.31
Θ(180°)	-17.98/-18.76	-18.74/-18.07	-15.48/-14.74	-13.15/-10.1	-9.49/-9.86	-9.46/-8.79	-8.47/-9.51	-10.8/-12.21	-12.89/-14.36	-15.4/-16.4	-15.82/-15.31	-17.13/-18.27	-17.8/-18.56	-17.6/-18.92	-18.13/-18.29	-18.26/-18.3	-15.78/-12.11	-11.22/-10.05	-7.69/-6.24	-5.99/-6.16	-6.48/-8.87	-14.33/-16.77	-15.05/-12.79	-13.9/-14.69
Freq(Hz)	6.995GPol.	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°)	-17.95/-18.99	-17.63/-15.08	-9.59/-7.81	-7.05/-5.42	-4.51/-4.79	-6.12/-6.82	-5.87/-4.26	-4.25/-4.36	-4.79/-4.91	-5.99/-6.93	-8.4/-10.32	-12.72/-16.08	-18.82/-18.01	-16.54/-12.1	-9.14/-7.3	-6.16/-5.23	-4.17/-3.63	-4.22/-3.69	-2.74/-2.01	-2.49/-2.86	-2.94/-3.29	-3.58/-5.03	-6.3/-8.97	-11.23/-16.88
Θ(7.5°)	-15.96/-18.18	-18.81/-15.38	-12.03/-9.37	-7.8/-6.79	-5.9/-4.57	-3.87/-4.42	-4.43/-3.78	-3.37/-3.4	-3.63/-7.1	-3.84/-4.53	-5.01/-6.26	-7.82/-9.47	-12.48/-15.99	-18.35/-17.14	-18.96/-18.64	-17.78/-16.78	-13.58/-11.11	-9.9/-9.3	-7.29/-5.97	-5.22/-5.28	-5.76/-5.44	-6.14/-7.98	-8.21/-10.5	-13.03/-19.3
Θ(15°)	-15.82/-18.83	-16.27/-14.13	-14.45/-14.86	-15.82/-15.24	-12.25/-11.88	-12.41/-12.51	-9.17/-8.75	-10.36/-10.24	-8.92/-7.09	-6.74/-6.22	-6.35/-8.15	-9.66/-11.4	-14.22/-13.75	-11.77/-9.26	-5.83/-3.39	-1.72/-0.65	-0.05/-0.17	-0.9/-1.41	-1.27/-2.26	-4.55/-6.29	-8.79/-10.3	-9.72/-10.23	-12.82/-12.74	
Θ(22.5°)	-13.85/-13.59	-12.61/-10.92	-11.28/-9.8	-9.69/-9.67	-9.23/-8.18	-7.25/-8.23	-9.18/-10.51	-12.15/-12.25	-11.7/-9.27	-8.34/-10.09	-10.08/-9.14	-7.19/-7.8	-9.48/-13.44	-17.91/-16.62	-10.6/-6.7	-4.01/-1.58	-0.11/0.15	-0.04/-0.28	-0.8/-2.13	-1.68/-2.95	-3.54/-5.05	-7.99/-10.45	-10.47/-9.49	-8.1/-7.98
Θ(30°)	-9.25/-12.67	-12.83/-9.66	-6.03/-4.36	-3.91/-4.3	-4.23/-4.15	-4.89/-5.19	-5.31/-5.72	-5.91/-5.53	-6.52/-9.76	-9.95/-8.6	-8.99/-8.66	-8.05/-8.6	-10.3/-12.56	-16.33/-14.58	-8.91/-7.23	-6.27/-5.49	-5.4/-6.05	-6.12/-4.93	-3.94/-3.36	-2.97/-3.4	-3.24/-3.95	-6.99/-7.17	-13.49/-19.48	-18.04/-15.09
Θ(37.5°)	-12.21/-12.68	-14.75/-7.44	-4.03/-3.2	-3.36/-2.49	-3.49/-5.24	-4.88/-3.96	-4.73/-3.35	-8.4/-10.85	-15.17/-10.98	-6.73/-5.22	-10.46/-12.82	-9.39/-13.77	-16.98/-17.4	-13.8/-18.9	-13.34/-12.18	-11.55/-18.84	-14.93/-8.67	-4.95/-2.09	-1.8/-3.62	-3.38/-2.92	-4.48/-5.22	-7.72/-12.4	-15.42/-16.5	-16.26/-12.88
Θ(45°)	-9.26/-8.69	-7.82/-7.14	-6.31/-3.97	-3.01/-4.02	-4.08/-3.03	-2.33/-2.02	-2.31/-3.72	-4.58/-4.63	-5.24/-4.89	-1.99/-9.51	-7.2/-13.92	-15.53/-15.58	-16.83/-16.93	-13.1/-6.2	-18.25/-11.4	-12.2/-5.35	-3.21/-1.67	-1.82/-2.62	-6.45/-9.45	-5.45/-6.96	-15.48/-17.51	-19.05/-9.84		
Θ(52.5°)	-6.67/-6.28	-5.28/-5	-2.96/-3.16	-2.61/-0.82	-0.21/-1.41	-3.78/-5.54	-10.41/-14.39	-9.45/-6.39	-4.38/-5.74	-7.55/-16	-8.84/-9.01	-18.66/-18.44	-10.09/-12.03	-15.28/-10.5	-10.97/-15.65	-7.78/-6.45	-6.1/-6.23	-4.02/-2.69	-2.66/-2.16	-2.54/-2.6	-2.14/-5.89	-10.78/-11.07	-10.66/-15.17	-18.76/-10.26
Θ(60°)	-4.75/-3.35	-5.01/-7.35	-3.12/-4.17	-3.7/-2.54	-3.71/-4.16	-4.54/-5.15	-8.14/-15.06	-13.35/-9.77	-3.65/-3.25	-7.71/-6.39	-13.83/-8.65	-10.81/-13.01	-9.02/-7.3	-8.82/-8.53	-12.11/-17.39	-7.15/-5.28	-8.4/-11.68	-8.27/-5.36	-3.38/-3.65	-3.78/-3.26	-4.14/-8.08	-9.28/-11.4	-11.72/-18.19	-13.77/-6.38
Θ(67.5°)	-8.9/-3.58	-4.92/-3.72	-3.26/-3.25	-3.21/-4.63	-5.54/-4.86	-3.15/-2.69	-5.85/-8.84	-4.46/-9.18	-9.06/-5.9	-4.36/-4.39	-13.08/-8.65	-12.86/-8.31	-11.44/-7.41											



Radiated Composite Gain Data_6GHz

Appendix B

Θ(60°)	-3.4/-1.18	0.45/-2.59	-8.2/-5.34	-6.83/-11.74	-11.19/-7.81	-6.34/-5.63	-7.24/-8.9	-3.65/-2.16	-3.79/-5.24	-5.04/-3.66	-1.88/-0.74	-0.96/-1.02	-2.28/-1.53	0.59/0.87	-0.96/-1.48	-0.37/-1.34	2.91/4.24	4.66/-2	3.32/1	-1.39/-2.16	-2.25/-1.21	-1.45/-0.95	-0.08/-1.35	-0.87/-1.69
Θ(67.5°)	-2.51/-0.41	-0.86/-4.84	-5.2/-5.05	-10.65/-17.74	-18.82/-16.93	-9.34/-4.35	-2.11/-3	-6.66/-3.67	-2.69/-5.18	-2.41/-0.39	-0.09/0.84	0.17/0.19	-1.36/-1.75	0.31/0.79	-0.95/-1.45	-0.58/0.72	2.63/3.4	3.38/2.7	1.42/-0.28	-1.22/-0.48	-6.06/-3.5	-2.68/-0.16	-0.54/-1.49	-1.38/-1.37
Θ(75°)	-1.16/-0.77	-1.78/-3.05	-2.69/-4.5	-12.97/-17.08	-13.61/-6.68	-1.96/-1.29	-2.06/-0.74	-0.93/-2.65	-1/-1.54	-3.38/-0.63	1.07/6.1	1.52/0.75	0.05/-0.32	0.32/1.12	-0.27/-1.38	-2.15/-0.17	2.64/2.93	2.19/-1.5	1.36/0.47	-3.96/-12.78	-1.47/-6.88	-2.35/-1.46	-1.31/-1.14	-0.06/-0.22
Θ(82.5°)	-0.30/47	1.76/-1.13	-1.77/-3.95	-8.92/-18.28	-18.64/-11.34	-1.65/-1.57	0.14/-1.41	-0.1/-2.27	-2.2/-0.35	-0.89/-0.13	0.14/3.81	3.39/0.05	1.39/0.83	0.32/0.4	-0.15/0.45	-0.87/-0.34	0.08/2.6	3.55/3.35	1.92/0.26	-7.6/-11.71	-9.23/-9.35	-3.26/-0.26	1.19/0.54	-0.07/-1.31
Θ(90°)	0.66/-0.15	2.11/0.7	-5.67/-3.42	-6.29/-13.66	-10.98/-5.76	0.32/7.8	2.73/-1.46	0.57/-0.5	-2.39/-3.04	-1.66/0.22	-0.133/0.3	3.05/2.37	0.51/-0.27	-0.97/-2.15	-1.55/-0.95	-2.69/-1.14	-0.27/-1.93	3.3/-2.7	0.69/-0.85	-6.79/-8.76	-6.89/-7	-1.54/0.16	-1.07/-1.48	-4.05/-3.1
Θ(97.5°)	-1.18/-2.11	2.01/-1.2	-12.48/-3.06	-5.96/-11.89	-6.31/-1.96	2.77/6.3	2.05/-1.74	0.82/-1.68	-0.47/-1.23	-2.36/-1.56	-1.44/-2.69	2.14/-1.23	-1.97/-1.76	-0.54/-0.95	-3.08/-4.28	-2.53/-0.3	1.08/-1.97	2.67/-1.57	-1.41/-3.09	-5.75/-3.92	-5.65/-5.74	-1.59/-2.15	-5.66/-3.56	-7.47/-8.52
Θ(105°)	0.3/-1.7	3.31/-0.4	-4.8/-0.02	-2.51/-18.51	-5.15/-1.04	0.64/-2.14	1.05/-0.97	-1.37/-2.09	-1.52/-2.1	-1.77/-0.66	-2.82/-1.44	0.28/0.13	-0.98/-2.62	-2.85/-1.84	-3.2/-4.45	-4.08/-1.21	-0.07/0.82	0.83/-1.23	-1.76/-1.27	-8.01/-8.89	-11.33/-10.18	-2.06/-3.36	-4.74/-1.55	-4.93/-5.28
Θ(112.5°)	-0.19/-0.1	3.47/-0.69	-5.24/-1.7	-2.17/-9.44	-8.04/-3.52	-4.49/-4.97	-2.93/-3	-4.54/-2.14	-0.55/-0.78	-1.27/-1.01	-1.452/-1.8	-0.34/-1.44	-4.08/-2.37	-5.58/-4.15	-5.73/-4.67	-8.01/-5.49	-4.18/-1.19	-0.95/-1.65	-4.79/-5	-8.73/-14.85	-13.62/-13.76	-7.49/-11.78	-9/-3.87	-5.51/-1.99
Θ(120°)	-1.84/-1.08	0.96/-3.35	-7.86/-5.41	-4.87/-9.4	-8.2/-6.13	-5.85/-11.89	-10.72/-3.41	-2.93/-4.64	-0.95/0.7	-0.54/-1.77	-2.01/-0.36	-1.79/-3.88	-6.34/-6.46	-5.19/-5.54	-7.11/-12.43	-17.55/-13.99	-10.02/-4.42	-3.92/-6.82	-12.7/-8.7	-17.86/-19.12	-16.43/-11.49	-8.56/-14.44	-7.82/-7.89	-9.51/-3.98
Θ(127.5°)	-2.09/-1.32	-0.01/-2.41	-5.48/-6.44	-13.08/-8.98	-11.96/-13.14	-8.14/-9.57	-18.09/-4.82	-1.76/-2.61	-1.57/0.51	-0.17/-0.44	-0.11/-1.77	-3.98/-3.52	-3.68/-4.63	-11.23/-17.09	-7.62/-11.17	-16.88/-9.43	-12.23/-13.55	-9.23/-15.08	-19.37/-12.83	-15.57/-14.87	-16.45/-16.46	-16.93/-18.14	-19.11/-14.8	-9.63/-3.43
Θ(135°)	-8.42/-5.13	-3.68/-7.58	-10.23/-7.88	-8.5/-18.31	-18.32/-18.61	-9.8/-7.51	-8.89/-10.35	-8.19/-4.89	-2.07/-0.01	0.38/-1.63	-7.03/-3.81	-3.68/-1.93	-6.89/-9.53	-12.3/-8.5	-18.44/-15.19	-8.09/-13.99	-5.86/-7.76	-9.97/-7.33	-7.88/-15.86	-10.2/-12.27	-13.69/-17.87	-15.52/-10.06	-12.7/-11.73	
Θ(142.5°)	-6.84/-5.55	-8.14/-10.59	-7.42/-7.88	-10.84/-14.1	-17.88/-18.85	-9.65/-4.62	-3.97/-4.6	-9.49/-7.27	-1.43/0.58	0.75/0.82	0.05/-4.55	-17.57/-10.74	-6.45/-3.88	-5.87/-10.64	-18.49/-18.3	-6.1/-7.2	-9.37/-12.92	-11.87/-18.97	-11.5/-16.32	-17.95/-18.24	-16.65/-17.4	-16.31/-16.16	-14.22/-15.72	-16.87/-18.03
Θ(150°)	-6.08/-4.73	-5.31/-6.43	-7.79/-10.31	-17.33/-12.46	-10.23/-9.41	-8.06/-6.94	-6.62/-9.92	-17.08/-11.81	-5.25/-2.04	-1.24/-1.35	-2.19/-3.5	-8.51/-14.3	-8.9/-8.07	-7.49/-7.85	-8.42/-13.94	-10.68/-10.64	-17.54/-13.46	-17.5/-14.75	-13.8/-8.7	-11.42/-18.75	-17.86/-13.41	-12.58/-11.62	-10.27/-14.43	-12.98/-8.31
Θ(157.5°)	-4.77/-4.47	-4.55/-5.73	-7.59/-14.07	-18.41/-18.29	-13.48/-11.63	-9.53/-8.62	-8.72/-10.19	-13.62/-12.58	-9.09/-5.66	-3.47/-2.92	-3.77/-5.79	-9.48/-10.44	-6.99/-5.32	-5.93/-7.05	-8.81/-7.05	-6.51/-9.05	-9.54/-10.49	-15.57/-13.24	-13.79/-17.47	-18.39/-18.88	-18.22/-18.88	-17.96/-14.86	-14.02/-15.39	-12.15/-8.03
Θ(165°)	-6.68/-7.28	-8.21/-8.33	-8.86/-10.39	-12.71/-14.15	-11.45/-9.15	-9.08/-9.73	-9.46/-7.67	-7.04/-7.06	-7.72/-9.23	-11.71/-13.06	-13.57/-14.8	-16.6/-15.01	-8.65/-7.67	-8.84/-7.65	-8.35/-8.07	-9.25/-14.57	-18.37/-17.56	-15.67/-18.23	-18.11/-18.96	-19.19/-19.14	-18.07/-18.03	-16.31/-18.72	-13.38/-10.86	-8.75/-6.45
Θ(172.5°)	-17.63/-16.68	-18.39/-19	-19.08/-15.93	-13.88/-14.6	-13.97/-13.9	-13.25/-12.41	-11.08/-9.98	-8.78/-7.8	-7.79/-8.27	-9.78/-12.95	-18.31/-17.72	-14.74/-12.66	-10.42/-9.4	-9.18/-9.53	-10.84/-13.31	-16.8/-17.38	-14.46/-10.48	-7.63/-6.68	-7.48/-9.49	-12.67/-13.62	-14.57/-16.08	-15.06/-13.68	-12.81/-12.62	-13.18/-16.27
Θ(180°)	-19.35/-19.02	-18.88/-18.44	-19.03/-16.66	-15.55/-15.94	-15.54/-14.83	-17.33/-18.19	-18.89/-18.18	-18.31/-17.84	-18.44/-17.83	-18.36/-18.66	-17.87/-18.68	-17.94/-17.81	-18.41/-18.02	-17.55/-16.69	-17.3/-15.21	-13.38/-12.35	-12.69/-12.42	-11.68/-11.07	-12.17/-14.74	-18.08/-18.37	-18.78/-18.1	-17.98/-19.32	-18.12/-18.17	-17.89/-18.51
Freq(Hz)	6.4750GPol.	Phi/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°)	-5.95/-4.5	-3.24/-3.35	-3.65/-4.47	-5.34/-6.35	-7.5/-7.82	-7.76/-8.74	-10.61/-11.29	-13.05/-15.97	-19.02/-17.83	-17.43/-13.61	-10.7/-8.11	-6.42/-3.66	-4.43/-4.55	-5.69/-5.74	-4.56/-3.93	-3.54/-4.1	-5.22/-6.3	-6.83/-8.63	-7.14/-8.2	-10.16/-13.01	-16.56/-18.57	-16.5/-10.32	-9.92/-7.88	-7.69/-6.93
Θ(7.5°)	-4.81/-3.37	-2.81/-3.09	-3.88/-3.76	-3.91/-4.35	-4.95/-5.72	-6.68/-10.24	-12.14/-12.22	-13.17/-12.92	-17.81/-19.03	-18/-15.65	-14.17/-12	-8.77/-6.95	-6.12/-5.82	-5.59/-5.28	-6.05/-6.52	-7.36/-8.46	-10.05/-12.09	-13.1/-13.63	-16.18/-18.05	-12.96/-18.92	-16.31/-12.7	-10.67/-11.77	-6.26/-4.85	
Θ(15°)	-6.33/-5.06	-5.11/-6.23	-6.21/-6.37	-7.49/-8.2	-8.61/-10.68	-14.32/-16.5	-17.78/-17.98	-17.68/-14.56	-11.53/-9.12	-7.56/-6.77	-5.97/-6.66	-5.89/-6.33	-6.25/-6.38	-6.38/-5.84	-5.8/-5.59	-5.69/-7.15	-9.85/-12.48	-14.77/-14.95	-13.6/-11.66	-9.9/-9.37	-9.57/-11.07	-13.62/-15.24	-12.31/-11.2	-9.22/-7.6
Θ(22.5°)	-10.65/-9.91	-9.3/-8.1	-7.58/-7.37	-7.15/-7.29	-7.6/-9.59	-11.9/-12.46	-13.07/-13.79	-14.76/-16.38	-16.24/-12.25	-8.61/-6.29	-4.38/-4.09	-5.47/-4.48	-9.86/-11.7	-10.95/-7.4	-7.77/-8.87	-13.74/-12.92	-14.77/-15.17	-12.79/-13.21	-11.05/-8.45	-7.48/-7.19	-8.54/-9.95	-11.68/-13.82	-16/-12.82	-11.77/-11.66
Θ(30°)	-16.52/-13.08	-10.57/-9.08	-8.4/-8.23	-6.81/-6.74	-7.76/-12.52	-17.01/-17.64	-13.77/-14.92	-13.15/-13.78	-15.29/-17.09	-17.89/-15.55	-10.26/-7.01	-4.83/-3.93	-11.79/-10.65	-9.58/-10.09	-13.33/-16.37	-15.69/-11.93	-9.56/-7.51	-6.17/-5.55	-5.62/-8.37	-13.47/-17.29	-13.29/-10.3	-9.17/-11.77	-15.23/-18.26	
Θ(37.5°)	-18.24/-18	-14.71/-9.5	-5.81/-3.98	-3.47/-5.14	-7.85/-8.49	-7.8/-8.36	-10.58/-14.57	-14.35/-13.08	-13.51/-16.46	-17.72/-16.74	-17.58/-14.23	-8.16/-7	-6.92/-8.86	-14.8/-17.92	-13.09/-8.7	-8.55/-10.57	-11.13/-11.6	-18.56/-19.02	-13.13/-10.11	-10.14/-12.52	-13.75/-11.93	-10.83/-11.4	-12.19/-12.75	-15.31/-17.53
Θ(45°)	-9.86/-9.35	-11.02/-7.76	-3.32/-1.23	-1.99/-3.99	-4.88/-5.53	-8.85/-14.04	-17.66/-18.07	-16.81/-16.94	-16.08/-18.24	-14.49/-11.54	-13.41/-16.99	-11.29/-7.73	-7.98/-6.66	-9.51/-14.85	-18.66/-10.95	-7.53/-6.25	-7.85/-10.76	-13.01/-13.01	-10.34/-7.51	-7.57/-9.45	-9.75/-10.66	-12.47/-11.39	-10.59/-12.36	-14.46/-19.23
Θ(52.5°)	-9.71/-8.12	-6.43/-3.03	-1.88/-2.75	-4.78/-3.31	-7.76/-13.5	-12.32/-10.2	-8.73/-17.91	-9.83/-12.66	-13.26/-13.6	-9.34/-13.91	-8/-10.11	-11.46/-13.77	-11.82/-9.35	-9.94/-14.5	-15.86/-10.41	-6.97/-8.23	-10.61/-15.84	-11.55/-13.77	-10.58/-7.22	-3.92/-4.24	-4.61/-8.37	-10.18/-12.8	-15.12/-15.98	-15.1/-11.23
Θ(60°)	-4.34/-5.34	-2.95/-0.35	-0.39/-1.93	-3.06/-4.35	-6.5/-12.07	-16.61/-14.04	-10.67/-8.86	-11.53/-14.13	-16.73/-17.16	-11.11/-6.42	-4.16/-3.91	-4.62/-5.55	-14.28/-10.14	-7.04/-10.65	-13.45/-16.31	-11.15/-9.3	-10.45/-11.86	-17.71/-16.44	-16.36/-12.74	-8.23/-6.75	-7.71/-9.61	-11.74/-11.63	-14.7/-14.6	-18.16/-12.46
Θ(67.5°)	-5.74/-6.87	-2.69/-0.71	-1.75/-2.92	-2.22/-2.09	-3.76/-8.74	-18.48/-14.16	-8.68/-8.31	-9.9/-15.02	-8.92/-11.19	-18.03/-8.88	-6/-4.76	-4.35/-5.82	-9.74/-7.43	-5.53/-7.93	-12.9/-14.61	-10.86/-7.32	-7.96/-9.27	-14.28/-15.16	-18.67/-14.18	-8.86/-9.23	-10.47/-15.68	-14.64/-11.66	-14.43/-11.05	-18.59/-5.52
Θ(75°)	-6.16/-6.8	-1.9/-1.5	-2.7/-2.98	-2.98/-3.49	-4.57/-7.91	-18.48/-18.23	-9.87/-5.1	-4.33/-6.66	-10.66/-16.15	-6.18/-4.04	-3.18/-4.5	-7.55/-6.37	-6.68/-8.01	-7.57/-8.32	-9.89/-9.15	-9.11/-9.21	-12.5/-16.2	-16.57/-18.32	-14.79/-11.29	-11.48/-12.92	-12.3/-13.92	-8.42/-5.05	-5.38/-5.23	
Θ(82.5°)	-6.51/-6.03	-3.14/-0.4	-2.82/-2.67	-3.61/-4.66	-5.18/-7.71	-15.09/-17.93	-19.08/-18.41	-15.47/-8.29	-5.39/-6.53	-9.76/-10.92	-7.36/-6.32	-7.29/-1.41	-1.3/-1.78	-7.36/-11.55	-11.09/-8.41	-9.87/-11.24	-12.97/-9.76	-12.07/-12.96	-16.46/-18.18	-16.66/-14.73	-18.09/-18.34	-18.84/-13.72	-7.11/-10.51	-7.94/-3.57
Θ(90°)	-5.58/-3.82	-3.96/-4.52	-2.96/-3.3	-8.61/-6.74	-5.89/-15.16	-11.92/-12.51	-18.37/-12.79	-10.83/-11.72	-8.9/-8.94	-8.12/-7.68	-5.95/-7.02	-10.32/-7.62	-3.6/-1.5	-1.91/-5.8	-7.02/-8.77	-7.95/-4.73	-5.08/-7.66	-11.27/-12.94	-18.05/-17.22	-13.65/-9.05	-18.76/-16.34	-14.46/-13.56	-6.68/-9.67	-4.48/-4.51
Θ(97.5°)	-5.86/-4.03	-5.59/-7.78	-4.81/-4.36	-11.31/-11.13	-8.08/-12.43	-17.89/-10.88	-11.28/-10.3	-6.16/-6.18	-14.31/-14.21	-7.01/-5.69	-6.23/-6.12	-5.78/-9.49	-9.74/-5.13	-3.51/-4.57	-5.7/-8.07	-5.82/-4.38	-3.57/-6.53	-11.45/-11.65	-9.13/-13.25	-10.29/-11.17	-14.58/-15.61	-5.75/-4.57	-7.44/-6.37	-2.61/-4.38
Θ(105°)	-6.99/-7.11	-6.61/-5.5	-4.49/-5.76	-10.15/-16.83	-10.76/-18.96	-13.4/-8.28	-12.44/-9.96	-5.74/-5.59	-10.55/-9.27	-16.13/-8.08	-6.38/-8.61	-4.65/-2.65	-3.94/-4.66	-5.51/-4.66	-6.47/-9.06	-8.49/-8.65	-10.37/-7.83	-8.07/-8.79	-8.42/-8.27	-12.27/-14.18	-6.88/-2.85	-2.79/-2.43	-6.59/-3.69	-2.16/-9.07
Θ(112.5°)	-6.62/-																							



Radiated Composite Gain Data_6GHz

Appendix B

Θ(112.5°)	1.54/1.14	1.40/52	-7.25/-6.76	-3.26/-8.19	-8.5/-5.96	-4.61/-2.09	-1.8/-1.6	-1.83/-4.87	-1.87/-2.35	-1.99/-2.07	-1.34/-0.14	-3.98/-2.79	-7.29/-6.77	-9.2/-11.55	-5.8/-8.61	-16.98/-8.39	-3.95/-4.26	-2.44/-3.32	-6.1/-5.57	-9.99/-11.69	-7.71/-6.82	-6.02/-5.55	-7.6/-8.58	-3.56/-3.66
Θ(120°)	-0.06/0.01	1.28/-1.67	-11.83/-14.3	-5.96/-6.28	-10.93/-14.9	-10.53/-10.53	-9.33/-6.05	-6.3/-3.29	0.53/-0.58	-0.11/-0.32	-1.11/-0.66	-1.82/-4.66	-6.59/-9.01	-10.1/-10.97	-12.24/-10.12	-8.63/-7.15	-10.39/-16.02	-13.02/-13.58	-17.71/-12.76	-18.66/-15.93	-14.71/-16.97	-10.04/-10.77	-10.18/-6.77	-4.33/-1.71
Θ(127.5°)	-1.43/-0.59	-0.24/-2.5	-5.71/-9.95	-8.35/-7.28	-13.86/-16.49	-9.57/-13.15	-16.99/-7.51	-4.29/-3.99	-1.68/0.87	0.93/-0.3	-0.41/-1.19	-1.19/-2.68	-2.7/-8.88	-14.83/-13.35	-6.45/-3.66	-8.32/-7.82	-5.82/-10.18	-16.32/-13.92	-10.33/-5.17	-5.68/-16.18	-15.51/-12.67	-12.81/-12.53	-8.86/-7.01	-4.63/-4.45
Θ(135°)	-5.09/-5.31	-3.4/-3.96	-6.5/-10.95	-17.9/-18.11	-18.73/-8.98	-6.98/-8.29	-18.38/-11.84	-5.73/-3.62	-0.95/0.76	0.35/0.55	-0.36/-1.01	-1.66/-1.38	0.12/-2.9	-7.04/-11.36	-4.9/-6.1	-13.3/-10.54	-10.47/-11.28	-10.02/-6.44	-10.13/-11.06	-9.23/-15.28	-15/-16.92	-18.56/-10.83	-16.79/-13.14	-11.12/-11.35
Θ(142.5°)	-14.85/-9.4	-6.09/-10.04	-18.56/-14.52	-18.64/-15.45	-10.98/-6.05	-3.86/-4.76	-7.82/-15.49	-6.98/-1.33	0.47/0.72	0.98/0.71	0.27/-2.31	-4.25/-1.24	-3.61/-1.82	-7.45/-11.31	-8.25/-7.38	-8.24/-6.37	-9.35/-15.68	-9.84/-11.58	-13.54/-17.17	-5.01/-6.68	-13.43/-8.33	-7/-12.46	-9.67/-12.54	-11.17/-14.64
Θ(150°)	-5.57/-4.09	-4.53/-7.5	-6.99/-5.57	-12.77/-16.87	-9.56/-6.34	-4.11/-3.58	-5.65/-7.93	-5.39/-2.56	-1.43/-1.58	-2/-1.77	-1.88/-5.16	-6.68/-4.92	-4.89/-6.02	-7.73/-13.22	-8.53/-12.89	-18/-18.3	-14.34/-12.23	-18.58/-16.79	-12.73/-18.99	-15.7/-8.96	-11.2/-14.03	-10.04/-12.82	-9.67/-7.34	-6.99/-5.86
Θ(157.5°)	-1.88/-3.18	-4.57/-6.01	-8.31/-12.55	-16.52/-12.08	-8.09/-5.75	-4.92/-4.75	-6.25/-9.7	-13.83/-12.63	-10.14/-8.51	-7.61/-6.95	-6.1/-6.15	-6.58/-6.58	-5.57/-4.54	-5.02/-7.61	-10.34/-9.79	-5.43/-6.46	-11.94/-12.27	-13.03/-11.37	-10.58/-14.07	-19.26/-16.2	-14.05/-18.93	-18.3/-18.79	-9.33/-4.98	-3.1/-3.61
Θ(165°)	-10.34/-9.77	-8.73/-8.26	-9.84/-12.47	-13.89/-11.15	-9.14/-8.95	-10.41/-9.25	-7.65/-6.82	-7.33/-7.17	-6.61/-5.86	-4.63/-4.03	-4.64/-6.53	-8.56/-9.68	-10.84/-11.42	-12.21/-13.71	-11.75/-9.78	-10.99/-17.04	-18.89/-16.94	-12.63/-16.78	-17.73/-18.4	-12.46/-8.64	-7.89/-9.43	-13.4/-16.69	-13.01/-9.93	-9.13/-10.04
Θ(172.5°)	-14.24/-11.37	-10.71/-11.97	-11.4/-9.27	-8.76/-7.9	-7.92/-7.99	-8.08/-8.24	-6.69/-5.99	-5.68/-6.12	-6.76/-8.04	-9.51/-11.07	-11.95/-12.53	-13.34/-17.52	-14.31/-15.07	-15.15/-14.25	-13.66/-13.65	-14.01/-13.26	-12.1/-10.17	-9.83/-9.64	-11.1/-10.79	-10.61/-9.95	-10.75/-13.35	-17.71/-19.22	-17.77/-17.23	-16.22/-15.17
Θ(180°)	-12.87/-13.79	-14.13/-15.44	-16.16/-16.04	-16.73/-15.64	-17.01/-15.42	-14.08/-13.44	-12.98/-10.81	-9.77/-8.8	-7.54/-7.1	-7.2/-7.13	-7.52/-8.21	-7.94/-8.18	-9.33/-10.64	-12.58/-13.31	-12.9/-13.5	-14.96/-16.56	-17.04/-18.59	-17.72/-17.85	-18.36/-16.23	-14.21/-11.7	-9.74/-8.33	-7.45/-8.38	-10.83/-13.96	-13.36/-12.14
Freq(Hz)	6.995GPol.	Phi/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°)	-4.4/-4.47	-4.32/-5.1	-6/-7.92	-10.37/-12.77	-13.13/-14.68	-15.04/-13.17	-12.71/-11.79	-11.21/-10.76	-9.84/-9.35	-8.45/-7.49	-6.82/-6.47	-5.79/-4.64	-4.38/-4.49	-4.47/-5.51	-6.78/-7.14	-7.8/-9.42	-12.12/-15.81	-17.69/-18.75	-18.92/-13.87	-11.6/-9.18	-7.01/-5.87	-5.32/-4.72	-4.44/-4.44	-3.71/-3.76
Θ(7.5°)	-4.22/-4.07	-4.03/-4.16	-4.71/-6.15	-7.69/-8.64	-9.45/-11.65	-12.77/-13.22	-12.77/-11.2	-9.66/-7.71	-6.33/-5.77	-5.01/-4.74	-3.72/-3.12	-3.37/-3.86	-3.71/-7.71	-3.87/-5.8	-7.14/-8.07	-7.73/-7.37	-7.29/-7.77	-8.76/-9.74	-9.42/-8.11	-7.5/-7.93	-7.18/-6.31	-6.15/-5.04	-6.76/-7.82	-6.87/-4.44
Θ(15°)	-4.3/-3.62	-3.32/-3.78	-5.07/-6.79	-8.34/-9.9	-11.31/-11.18	-13.29/-13.09	-13.12/-12.47	-12.15/-12.2	-11.22/-9.37	-7.98/-6.44	-4.74/-4.48	-4.71/-3.71	-2.78/-3.1	-4.48/-5.77	-6.24/-6.01	-6.34/-6.93	-8.3/-9.61	-10.67/-10.21	-8.76/-8.39	-8.19/-8.12	-8.9/-8.16	-6.26/-6.02	-6.03/-5.08	
Θ(22.5°)	-10.48/-8.14	-7.95/-9.43	-11.43/-11.24	-11.21/-10.56	-9.38/-9.63	-9.62/-11.23	-12.29/-13.92	-13.51/-11.62	-10.93/-12.89	-18.57/-18.34	-15.01/-9.12	-7.94/-7.52	-6.35/-5.28	-6.63/-6.28	-7.65/-9.12	-9.67/-10.45	-12.38/-15.24	-16.69/-17.37	-17.86/-13.83	-11.64/-11.04	-9.58/-7.58	-7.51/-7.74	-7.76/-7.96	-10.09/-12.53
Θ(30°)	-18.36/-13.02	-10.08/-9.41	-7.84/-5.83	-6.12/-7.82	-11.15/-15.01	-15.25/-12.64	-10.1/-63	-6.38/-5.89	-5.24/-5.7	-8.72/-13.25	-14.58/-13.54	-12.31/-8.45	-5.37/-5.38	-6.67/-8.6	-11.15/-12.83	-13.04/-15.31	-15.23/-18.09	-18.62/-14.08	-12.7/-12.88	-18.3/-15.73	-10.28/-8.12	-7.14/-6.03	-10.01/-11.84	-14.12/-16.18
Θ(37.5°)	-13.21/-17.49	-14.31/-15.63	-14.9/-12.15	-11.59/-11.72	-11.22/-12.43	-14.63/-18.58	-18.36/-18.24	-11.78/-13.55	-11.39/-8.73	-8.03/-7.78	-5.81/-5.68	-6.49/-7.32	-8/-6.79	-6.75/-8.8	-12.52/-11.65	-14.16/-17.82	-17.19/-10.73	-11.32/-8.16	-11.93/-18.17	-18.91/-15.82	-10.95/-9.21	-8.75/-9.58	-7.05/-7.77	
Θ(45°)	-14.35/-15.93	-17.86/-16.52	-11.48/-9.33	-9.91/-14.56	-17.78/-12.68	-10.06/-11.5	-13.9/-12.35	-10.33/-9.4	-6.65/-6.3	-6.51/-8.83	-10.55/-7.32	-4.58/-3.35	-4.68/-8.37	-8.2/-12.45	-13.05/-10.24	-11.68/-12.92	-9.54/-6.44	-6.19/-8.06	-8.53/-9.65	-12.11/-11.34	-12.39/-11.94	-9.74/-6	-5.07/-6.9	-5.41/-6.64
Θ(52.5°)	-16.11/-10.87	-13.01/-14.3	-8.5/-4.51	-4.52/-7.97	-12.5/-17.8	-17.66/-9.6	-6.86/-6.63	-7.66/-9.19	-8.04/-5.04	-3.76/-3.62	-5.13/-5.99	-5.49/-4.33	-3.22/-4.67	-9.96/-6.49	-11.53/-9.38	-10.48/-14.79	-15.05/-13.52	-10.8/-15.36	-14.18/-17.61	-13.27/-8.48	-5.75/-5.02	-5.29/-7.34	-8.44/-10.07	-6.94/-16.67
Θ(60°)	-12.43/-8.62	-12.98/-8.95	-5.11/-4.51	-7.95/-9.44	-10.21/-10.81	-11.19/-11.64	-11.11/-13.17	-13.76/-13.39	-14.6/-9.03	-6.21/-4.7	-4.64/-5.52	-5.03/-6.49	-4.72/-4.56	-8.82/-5.02	-8.63/-9.95	-11.16/-15.99	-16.34/-14.71	-18.23/-17.96	-15.19/-18.26	-16.07/-7.34	-6.17/-4.58	-3.5/-5.36	-7.75/-18.76	-10.1/-14.85
Θ(67.5°)	-8.21/-5.07	-5.88/-3.85	-2.11/-3.1	-2.77/-4.26	-12.09/-12.04	-10.45/-12.02	-16.9/-19.23	-18.33/-17.73	-17.63/-6.07	-2.67/-3.01	-5.52/-7.52	-6.42/-6.08	-5.16/-5.51	-3/-3.7	-9.62/-12.14	-12.89/-17.27	-17.58/-16.05	-12.61/-13.13	-13.18/-18.54	-7.56/-5.6	-6.15/-8.23	-10/-8.48	-15.3/-13.57	-7.22/-14.9
Θ(75°)	-5.21/-5.88	-7.17/-3.93	-3.43/-2.59	-1.37/-1.74	-4.07/-8.03	-12.05/-18.73	-18.82/-17.91	-15.91/-15.4	-9.73/-10.38	-5.8/-2.06	-2.76/-8.1	-12.31/-17.75	-8.71/-3.81	-1.88/-1.52	-7.08/-13.66	-7.63/-6.24	-14.09/-12.27	-7.89/-12.17	-14.99/-14.79	-12.69/-9.95	-8.35/-10.89	-13.97/-9.03	-18.09/-11.51	-11.18/-11.3
Θ(82.5°)	-3.96/-3.86	-2.07/-2.74	-5.39/-2.6	-12.07/-9.41	-11.01/-17.5	-17.16/-19.09	-18.59/-12.16	-11.38/-11.78	-15.8/-12.22	-8.74/-7.08	-6.26/-9.93	-12.7/-5.13	-1.22/-1.11	-5.01/-13.8	-8.08/-4.53	-8.18/-17.74	-10.06/-17.45	-14.23/-16.57	-18.26/-14.26	-9.68/-13.4	-12.66/-10.74	-12.22/-5.15	-8.73/-8.46	
Θ(90°)	-1.81/-3.62	-1.33/-2.35	-2.98/-1.6	-6.88/-10.2	-10.85/-16.44	-10.01/-13.29	-11.32/-8.85	-10.4/-11.99	-15.82/-12.74	-8/-8.8	-11.79/-17.74	-11.61/-6.08	-6.02/-9.66	-4.81/-5.23	-6.65/-11.55	-14.22/-8.66	-5.75/-5.28	-9.79/-7.08	-8.62/-13.24	-18.3/-10.8	-9.31/-17.92	-15.07/-9.6	-7.21/-6.63	-10.91/-4.25
Θ(97.5°)	-2.15/-0.76	-0.41/-4.52	-5.97/-6.25	-17.81/-12	-9.38/-19.04	-7.82/-1.63	-9.34/-6.72	-4.85/-5.68	-7.31/-17.94	-9.13/-5.46	-5.98/-7.43	-14.44/-11.43	-6.85/-8.15	-4.25/-1.03	-3.54/-6.45	-5.1/-5.94	-5.46/-7.17	-10.28/-13.28	-11.97/-17.44	-14.39/-9.76	-12.43/-8.14	-7.08/-6.98	-5.93/-4.97	-7.21/-2.66
Θ(105°)	-3.5/-2.14	-1.91/-4.34	-5.44/-10.6	-18.55/-18.82	-18.25/-11.46	-9.83/-14.56	-14.32/-6.93	-3.76/-5.09	-2.72/-7.39	-13.59/-10.38	-4.71/-3.06	-10.33/-13.38	-12.52/-4.9	-3.66/-4.74	-4.14/-8.4	-6/-9.33	-17.84/-17.78	-15.39/-19.01	-7.67/-11.94	-8.07/-6.9	-5.69/-5.95	-6.27/-9.76	-4.28/-2.63	
Θ(112.5°)	-6.26/-4.59	-4.28/-6.34	-12.34/-17.59	-9.5/-12.08	-8.78/-11.85	-11.53/-18.15	-12.79/-5.62	-7.2/-7.45	-2.47/-5.3	-7.53/-10.9	-6.29/-6.25	-5.09/-3.59	-6.55/-11.01	-10.19/-7.63	-8.87/-12.86	-15.12/-14.34	-11.54/-4.85	-8.06/-17.8	-16.11/-12.28	-5.83/-16.82	-4.84/-2.34	-3.58/-4.09	-2.8/-2.39	-0.51/-3.48
Θ(120°)	-9.76/-10.4	-9.57/-6.3	-9.84/-17.95	-18.46/-6.66	-5.16/-15.24	-17.85/-9.95	-10.77/-10.13	-13.58/-6.26	-4.52/-3.87	-3.4/-6.09	-5.45/-3.24	-4.63/-4.96	-6.18/-7.67	-6.03/-7.73	-8.12/-11.93	-10.19/-10.51	-10.19/-14.64	-6.04/-14.52	-9.72/-14.52	-13.47/-4.84	-1.08/-0.5	-7.16/-8.13	-6.45/-0.11	-0.62/-6.06
Θ(127.5°)	-3.43/-8.35	-8.05/-11.93	-14.72/-5.63	-3.5/-10.28	-16.4/-11.81	-9.36/-12.96	-12.48/-14.23	-8.14/-7.63	-5.26/-1.56	-1.42/-2.15	-2.51/-2.73	-3.62/-3.34	-6.26/-8.33	-3.91/-2.17	-7.45/-9.78	-13.6/-9.64	-17.73/-7.93	-18.48/-7.41	-13.19/-16.06	-13.19/-7.58	-4.73/-5.68	-7.58/-9.36	-3.34/-1.47	-1.79/-1.27
Θ(135°)	-8.74/-10.16	-7.05/-12.72	-13.44/-8.04	-9.03/-12.25	-9.83/-5.22	-7.45/-13.22	-17.09/-10.46	-8.34/-8.61	-6.9/-3.86	-3.79/-4.22	-7.77/-5.9	-5.14/-5.64	-5.53/-1.21	-7.04/-15.26	-18.32/-12.53	-18.94/-6.69	-17.89/-13.98	-10.68/-18.34	-9.97/-8.86	-6.88/-8.84	-1.31/-5.21	-3.08/-1.82	-2.48/-5.55	
Θ(142.5°)	-7.42/-5.43	-8.61/-10.97	-10.11/-13.14	-16.06/-9.75	-10.36/-17.6	-17.62/-17.94	-12.72/-10.25	-7.45/-6.12	-9.55/-8.26	-6.94/-8.88	-10.53/-12.07	-7.73/-6.49	-2.72/-4.72	-7.89/-9.61	-7.15/-5.49	-5.44/-10.63	-19.17/-13.9	-17.84/-18.45	-11.6/-19.36	-8.89/-6.94	-17.68/-10.07	-3.46/-3.21	-2.44/-3.34	-7.99/-11.31
Θ(150°)	-14.06/-18.07	-18.38/-13.54	-14.78/-16.43	-17.45/-12.39	-11.17/-13.65	-18.12/-14.9	-15.4/-13.63	-10.43/-6.68	-5.15/-7.81	-11.07/-8.85	-9.78/-16	-17.87/-14.16	-12.18/-10.22	-10.11/-10.25	-14.37/-12.55	-8.73/-9.62	-9.24/-10.66	-12.98/-11	-11.22/-18.8	-14.73/-9.3	-10.91/-18.8	-17.24/-18.8	-12.64/-7.14	-6.47/-12.6
Θ(157.5°)	-18.27/-13.81	-10.15/-12.62	-17.84/-16.81	-12.83/-13.58	-17.43/-19.1	-18.61/-15.75	-14.45/-13.07	-12.12/-9.49	-7.78/-7.27	-6.52/-5.5	-5.59/-6.31	-7.55/-10.29	-19.08/-16.06	-9.17/-8.24	-10.35/-11.58	-12.7/-12.99	-12.54/-19.12	-12.72/-9.48	-13.42/-15.22	-17.98/-17.46	-11.77/-11.29			



Antenna Pattern_2.4GHz and 5GHz

Appendix C

Total Gain Data

Freq(Hz)	2.450Pol.	TotalAnt. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-14.72/-15.28	-15.12/-14.73	-15.92/-15.17	-15.23/-15.52	-15.14/-14.91	-14.14/-14.16	-14.40/-14.27	-14.20/-14.15	-14.47/-14.51	-14.42/-14.68	-14.60/-14.68	-14.56/-14.34	-14.59/-14.27	-13.56/-12.68	-12.53/-12.48	-12.56/-12.74	-13.04/-13.52	-13.71/-13.93	-13.91/-13.84	-13.89/-13.79	-14.30/-14.59	-14.98/-15.30	-14.64/-14.71	-15.48/-15.68
Θ(7.5°)	-13.31/-14.12	-14.65/-14.71	-14.39/-14.59	-14.66/-15.02	-15.10/-15.26	-14.87/-14.44	-13.54/-14.05	-14.19/-13.93	-13.77/-13.62	-13.45/-13.34	-13.22/-13.06	-13.69/-13.83	-13.70/-14.18	-13.83/-14.24	-14.09/-13.68	-13.26/-13.06	-12.97/-13.27	-13.48/-13.49	-13.42/-13.40	-13.43/-13.44	-13.87/-14.32	-14.55/-13.90	-14.50/-14.20	-13.82/-13.94
Θ(15°)	-9.51/-10.04	-10.67/-11.58	-12.82/-13.43	-14.50/-15.74	-15.40/-14.09	-13.61/-13.19	-12.87/-12.13	-11.68/-11.40	-11.13/-10.98	-10.87/-10.96	-11.07/-11.55	-12.23/-13.03	-13.66/-13.82	-13.48/-12.51	-11.32/-10.32	-9.35/-8.98	-8.88/-8.78	-9.05/-9.18	-9.34/-9.62	-9.97/-10.20	-10.30/-10.45	-10.63/-10.86	-10.89/-10.33	-10.11/-9.93
Θ(22.5°)	-6.81/-7.33	-8.15/-9.32	-10.78/-12.51	-14.22/-14.10	-13.56/-12.88	-11.95/-11.42	-11.34/-10.93	-10.81/-10.72	-10.51/-10.31	-10.01/-9.77	-9.65/-9.77	-10.04/-10.31	-9.82/-9.17	-8.29/-6.98	-6.03/-5.23	-4.77/-4.57	-4.51/-4.63	-4.86/-5.30	-5.76/-6.34	-6.92/-7.33	-7.47/-7.46	-7.39/-7.24	-6.90/-7.04	
Θ(30°)	-4.50/-5.04	-5.88/-6.99	-8.38/-9.87	-10.44/-9.82	-9.00/-8.08	-7.48/-6.91	-6.66/-6.61	-7.07/-7.53	-7.90/-8.07	-7.94/-7.60	-7.25/-7.08	-7.12/-7.01	-6.72/-6.10	-4.89/-3.70	-2.70/-1.98	-1.82/-1.46	-1.55/-1.80	-2.16/-2.61	-3.16/-3.74	-4.32/-4.75	-4.98/-4.97	-4.84/-4.71	-4.64/-4.52	-4.40/-4.51
Θ(37.5°)	-3.08/-3.53	-4.16/-4.93	-5.79/-6.58	-6.51/-5.82	-4.93/-4.18	-3.64/-3.34	-3.13/-3.19	-3.46/-3.94	-4.51/-4.97	-5.28/-5.33	-5.28/-5.35	-5.39/-5.28	-4.79/-3.81	-2.59/-1.47	-0.68/-0.23	-0.11/-0.20	-0.48/-0.84	-1.27/-1.75	-2.26/-2.78	-3.28/-3.61	-3.73/-3.60	-3.31/-3.03	-2.87/-2.78	-2.76/-2.97
Θ(45°)	-1.80/-2.14	-2.65/-3.20	-3.72/-4.07	-3.87/-3.16	-2.43/-1.97	-1.73/-1.63	-1.67/-1.83	-2.15/-2.57	-3.14/-3.80	-4.48/-5.05	-5.50/-5.91	-6.13/-6.03	-5.27/-3.97	-2.53/-1.26	-0.48/-0.11	-0.09/-0.29	-0.62/-1.06	-1.52/-1.99	-2.39/-2.81	-3.26/-3.58	-3.69/-3.57	-3.22/-2.84	-2.52/-2.28	-2.06/-1.98
Θ(52.5°)	0.320/0.2	-0.55/-1.17	-1.70/-1.96	-1.69/-1.14	-0.57/-0.28	-0.28/-0.41	-0.59/-0.82	-1.10/-1.46	-1.97/-2.66	-3.41/-4.02	-4.49/-4.79	-4.56/-3.86	-2.81/-1.63	-0.610/0.13	0.570/0.69	0.570/0.31	-0.04/-0.43	-0.83/-1.22	-1.61/-2.05	-2.54/-2.95	-3.13/-3.03	-2.72/-2.24	-1.64/-0.98	-0.37/-0.00
Θ(60°)	1.91/1.74	1.16/0.46	-0.23/-0.71	-0.76/-0.35	0.110/0.32	0.210/0.3	-0.06/0.04	0.010/-0.02	-0.21/-0.61	-1.11/-1.53	-1.83/-2.07	-2.22/-1.98	-1.38/-0.57	0.160/0.68	0.950/0.96	0.730/0.34	-0.07/-0.40	-0.58/-0.72	-0.89/-1.06	-1.26/-1.43	-1.44/-1.36	-1.20/-0.96	-0.520/-0.18	0.92/0.53
Θ(67.5°)	2.40/2.47	2.09/1.50	0.85/0.27	0.00/0.13	0.430/0.50	0.320/0.04	0.320/0.04	0.320/0.55	0.660/0.50	0.22/-0.02	-0.28/-0.55	-0.70/-0.54	-0.20/0.12	0.240/0.26	0.22/-0.01	-0.45/-0.94	-1.20/-1.08	-0.80/-0.42	0.030/0.47	0.740/0.78	0.700/0.53	0.29/-0.02	-0.270/0.14	1.06/1.93
Θ(75°)	2.24/2.67	2.52/2.07	1.53/1.03	0.84/1.02	1.24/1.24	1.030/0.72	0.460/0.39	0.590/0.97	1.24/1.19	0.900/0.54	0.270/0.02	-0.17/-0.18	-0.16/-0.22	-0.35/-0.32	-0.22/-0.33	-0.73/-1.14	-1.25/-0.96	-0.500/0.04	0.58/1.04	1.29/1.28	1.17/1.01	0.780/0.26	-0.42/-0.63	0.20/1.41
Θ(82.5°)	1.56/2.30	2.38/1.97	1.35/0.76	0.360/0.33	0.450/0.44	0.350/0.26	0.300/0.46	0.89/1.37	1.65/1.56	1.26/1.00	0.920/0.88	0.780/0.58	0.250/0.09	0.250/0.57	0.680/0.38	-0.18/-0.60	-0.59/-0.18	0.290/0.71	1.09/1.41	1.56/1.42	1.13/1.00	1.050/0.98	0.52/-0.16	-0.190/0.73
Θ(90°)	1.72/2.58	2.99/2.90	2.46/1.87	1.37/1.06	0.770/0.36	-0.06/-0.13	0.210/0.74	1.40/1.95	2.20/2.10	1.82/1.63	1.57/1.51	1.280/0.87	0.320/0.03	0.200/0.40	0.13/-0.65	-1.71/-2.60	-2.55/-1.63	-0.570/0.18	0.72/1.15	1.40/1.27	0.800/0.27	0.130/0.30	0.330/0.18	0.30/0.02
Θ(97.5°)	0.29/1.28	1.93/2.04	1.66/1.14	0.840/0.76	0.55/-0.03	-0.78/-1.23	-1.05/-0.45	0.200/0.60	0.690/0.40	0.06/-0.08	0.010/0.12	-0.07/-0.56	-0.75/-0.30	0.12/-0.07	-1.04/-2.54	-4.23/-5.08	-4.07/-2.26	-0.840/0.03	0.70/1.43	1.98/2.19	1.90/1.15	0.15/-0.71	-1.35/-1.62	-1.23/-0.36
Θ(105°)	-1.08/-0.24	0.450/0.79	0.48/-0.32	-0.86/-0.71	-0.38/-0.36	-0.70/-1.10	-1.04/-0.52	0.080/0.40	0.32/-0.07	-0.40/-0.37	-0.030/0.13	-0.23/-0.86	-1.09/-0.47	0.17/-0.16	-1.42/-3.38	-5.34/-5.89	-4.51/-3.11	-2.11/-1.46	-0.730/0.23	1.24/1.90	2.05/0.69	0.89/-0.18	-1.31/-2.14	-2.14/-1.52
Θ(112.5°)	-1.08/-0.44	0.26/0.92	1.09/0.64	0.060/0.5	0.560/0.86	0.57/-0.09	-0.69/-0.82	-0.55/-0.41	-0.66/-1.08	-1.11/-0.60	-0.26/-0.62	-1.57/-2.04	-1.34/-0.82	-1.06/-2.41	-4.56/-6.02	-5.55/-3.94	-2.73/-2.10	-2.05/-2.23	-2.14/-1.53	-0.530/0.48	1.05/1.15	0.77/0.04	-1.15/-2.10	-2.21/-1.52
Θ(120°)	-2.26/-1.92	-1.63/-1.11	-0.77/-0.98	-1.41/-1.35	-0.620/0.12	0.380/0.13	-0.42/-1.04	-1.51/-1.89	-2.27/-2.36	-1.83/-1.16	-0.99/-1.51	-1.97/-1.64	-0.88/-0.58	-1.26/-2.86	-4.52/-4.89	-3.76/-2.34	-1.36/-1.17	-1.56/-2.12	-2.47/-2.35	-1.67/-0.67	0.180/0.60	0.50/-0.23	-1.41/-2.62	-3.15/-2.76
Θ(127.5°)	-3.26/-2.73	-2.62/-2.28	-1.79/-1.46	-1.52/-1.71	-1.71/-1.35	-0.76/-0.41	-0.50/-0.93	-1.59/-2.24	-2.51/-2.22	-1.65/-1.39	-1.62/-2.01	-1.91/-1.51	-1.53/-2.40	-4.02/-5.88	-6.77/-5.98	-4.23/-2.63	-1.68/-1.51	-1.63/-1.81	-1.94/-2.09	-2.16/-2.15	-1.98/-1.83	-1.93/-2.47	-3.52/-4.56	-4.71/-3.95
Θ(135°)	-5.29/-4.27	-3.72/-3.35	-2.88/-2.37	-2.06/-2.18	-2.57/-2.74	-2.27/-1.72	-1.31/-1.28	-1.58/-1.98	-2.22/-2.23	-2.23/-2.47	-2.87/-3.08	-2.92/-2.66	-2.50/-2.58	-3.01/-3.96	-5.22/-5.95	-5.19/-3.71	-2.58/-2.07	-1.97/-2.28	-2.20/-2.25	-2.35/-2.54	-2.82/-3.08	-3.42/-4.00	-4.99/-6.26	-6.98/-6.28
Θ(142.5°)	-5.27/-4.37	-3.82/-3.61	-3.62/-3.63	-3.88/-4.30	-5.17/-6.34	-4.49/-6.05	-5.47/-4.78	-3.45/-4.01	-3.76/-3.70	-3.84/-4.10	-4.30/-4.20	-3.80/-3.28	-2.95/-3.00	-3.55/-4.69	-6.29/-7.31	-7.03/-5.93	-5.00/-4.52	-4.44/-4.44	-4.41/-4.24	-4.15/-4.20	-4.44/-4.64	-4.75/-4.68	-4.79/-5.17	-6.80/-5.74
Θ(150°)	-5.42/-5.02	-4.73/-4.69	-4.75/-4.80	-4.98/-5.25	-5.73/-6.68	-8.11/-9.42	-10.40/-10.98	-9.64/-8.38	-7.46/-7.03	-6.56/-6.18	-5.62/-5.18	-4.60/-4.26	-4.30/-4.89	-5.90/-7.18	-8.05/-7.98	-7.40/-6.87	-6.65/-6.66	-6.52/-6.48	-6.40/-6.21	-6.01/-6.00	-6.23/-6.45	-6.45/-6.06	-5.58/-5.32	-5.40/-5.47
Θ(157.5°)	-6.11/-6.23	-6.30/-6.36	-6.34/-6.23	-5.87/-5.67	-5.40/-5.31	-5.48/-5.63	-5.66/-5.95	-5.92/-5.79	-5.56/-5.24	-4.88/-4.58	-4.32/-4.20	-4.30/-4.78	-5.64/-6.90	-8.29/-8.38	-9.49/-9.05	-8.64/-8.56	-8.58/-8.54	-8.53/-8.18	-7.75/-6.99	-6.45/-6.22	-6.28/-6.47	-6.66/-6.58	-6.28/-5.97	-5.89/-5.93
Θ(165°)	-7.37/-7.78	-6.80/-6.25	-8.30/-8.10	-7.72/-7.47	-7.08/-6.78	-6.48/-6.29	-6.16/-6.09	-5.99/-5.98	-5.83/-5.65	-5.37/-5.13	-5.01/-5.02	-5.18/-5.64	-6.24/-7.13	-8.21/-9.44	-10.57/-11.45	-11.08/-9.84	-8.65/-7.68	-7.02/-6.61	-6.46/-6.53	-6.70/-6.89	-6.98/-6.96	-6.98/-6.96	-6.98/-6.96	-6.98/-6.96
Θ(172.5°)	-10.60/-11.20	-11.82/-12.33	-12.49/-12.07	-11.94/-11.72	-11.38/-11.07	-10.77/-10.46	-10.63/-10.95	-11.25/-11.29	-11.13/-10.89	-10.57/-10.12	-9.91/-9.78	-9.70/-9.71	-9.90/-10.15	-10.51/-10.89	-11.20/-11.43	-11.51/-11.50	-11.36/-10.99	-10.55/-10.11	-9.68/-9.29	-8.82/-8.52	-8.35/-8.45	-8.65/-8.91	-9.21/-9.44	-9.76/-10.12
Θ(180°)	-13.91/-14.50	-15.57/-15.23	-15.00/-15.99	-15.15/-15.20	-15.25/-14.84	-14.93/-14.41	-14.70/-14.09	-13.70/-13.30	-13.06/-12.97	-13.13/-13.32	-12.92/-12.96	-12.58/-12.50	-12.59/-12.76	-12.89/-13.10	-13.23/-13.10	-13.06/-13.10	-13.19/-13.32	-13.34/-13.37	-13.42/-13.42	-13.20/-13.14	-13.13/-12.97	-13.35/-13.80	-13.85/-14.16	-13.82/-13.85
Freq(Hz)	5.62GPol.	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°)	-10.23/-9.94	-9.66/-9.61	-9.70/-9.96	-10.05/-10.23	-10.26/-10.07	-9.69/-9.58	-9.70/-9.91	-10.16/-9.96	-10.31/-10.84	-11.22/-11.35	-11.12/-10.97	-10.90/-10.77	-10.38/-10.07	-9.76/-9.18	-8.91/-8.74	-8.56/-8.77	-8.88/-9.12	-8.75/-8.93	-9.84/-9.90	-9.51/-9.76	-10.52/-10.79	-10.16/-9.49	-9.23/-9.78	-10.39/-10.63
Θ(7.5°)	-7.62/-7.00	-6.77/-6.51	-6.40/-6.47	-6.84/-7.33	-7.55/-7.44	-7.28/-7.36	-7.71/-7.78	-7.69/-7.79	-8.40/-9.08	-9.98/-10.60	-11.38/-12.33	-12.95/-13.06	-13.71/-13.07	-13.95/-13.46	-13.06/-13.13	-13.31/-13.59	-14.12/-13.90	-13.13/-13.96	-14.17/-13.59	-13.89/-14.23	-14.14/-13.28	-12.23/-11.13	-10.48/-10.11	-9.25/-8.52
Θ(15°)	-8.40/-7.66	-6.59/-6.26	-6.44/-7.02	-7.76/-8.33	-8.65/-8.52	-9.05/-10.14	-10.59/-10.85	-11.76/-12.64	-12.69/-13.67	-14.32/-14.42	-15.32/-15.03	-15.71/-15.36	-13.94/-11.96	-10.45/-9.47	-9.85/-10.19	-11.05/-12.16	-13.47/-14.22	-15.01/-14.30	-14.35/-13.81	-13.07/-12.37	-12.24/-12.23	-12.19/-12.08	-12.49/-11.92	-10.82/-9.45
Θ(22.5°)	-7.62/-7.55	-6.89/-6.51	-5.29/-5.61	-6.31/-6.95	-7.11/-7.46	-8.35/-9.32	-10.69/-12.14	-13.11/-13.35	-14.02/-14.89	-14.51/-14.68	-14.68/-14.62	-15.66/-15.10	-11.72/-8.86	-7.32/-6.87	-7.20/-7.93	-8.95/-9.50	-8.65/-6.91	-5.65/-5.19	-5.39/-5.89	-6.48/-6.56	-6.43/-6.51	-6.70/-7.07	-7.45/-7.47	-7.60/-7.82
Θ(30°)	-2.73/-2.84	-3.17/-3.38	-3.67/-4.26	-4.67/-4.68	-6.78/-9.06	-10.92/-11.18	-10.86/-10.39	-9.69/-8.78	-8.10/-7.84	-7.55/-7.42	-7.60/-7.94	-8.26/-7.52	-6.26/-5.48	-5.08/-4.80	-4.55/-4.23	-3.73/-2.84	-2.76/-2.07	-0.57/-0.43	-0.57/-1.15	-1.98/-3.73	-4.40/-4.41	-4.40/-4.41	-4.63/-3.16	
Θ(37.5°)	-1.61/-1.70																							



Antenna Pattern_2.4GHz and 5GHz

Appendix C

Θ(22.5°)	-3.13/2.82	-2.37/2.91	-4.11/4.73	-5.27/5.14	-5.91/6.36	-7.24/8.75	-9.89/11.11	-10.75/10.04	-9.19/-8.06	-7.36/7.51	-8.14/8.25	-8.88/-9.70	-10.64/8.04	-5.37/3.97	-3.79/4.16	-4.56/4.80	-4.91/5.51	-6.57/7.26	-7.02/5.69	-4.06/2.66	-1.93/1.50	-1.00/0.50	-0.46/0.85	-2.04/2.98
Θ(30°)	-1.23/-1.92	-1.52/-1.50	-2.37/-3.63	-4.04/-3.93	-4.11/-4.23	-4.61/-5.53	-6.24/-6.31	-6.25/-6.44	-6.80/-6.75	-5.99/-5.94	-7.06/-6.99	-9.52/-8.70	-6.06/-6.34	-2.41/-2.71	-3.93/-4.87	-5.53/-6.50	-7.75/-7.10	-5.82/-4.56	-3.63/-3.17	-3.47/-3.99	-4.16/-4.34	-4.51/-3.04	-0.850/-35	0.16/-0.37
Θ(142.5°)	-0.72/-1.07	-0.91/-0.44	-0.46/-1.06	-0.99/-0.78	-0.92/-1.64	-2.45/-3.45	-4.18/-4.96	-4.62/-4.19	-4.40/-5.17	-5.52/-6.17	-8.82/-11.09	-8.98/-4.90	-2.47/-2.09	-2.14/-1.35	-1.07/-1.73	-2.82/-6.11	-2.19/-1.63	-1.59/-1.31	-1.28/-1.43	-1.06/-0.31	0.17/0.17	0.13/-0.18	-0.27/-0.27	-0.59/-0.52
Θ(45°)	-1.11/-0.87	-0.72/-0.15	-0.090/0.7	0.73/1.05	0.52/0.68	-2.33/-4.05	-5.93/-7.54	-8.15/-7.70	-6.85/-6.45	-5.93/5.21	-4.71/-3.77	-2.50/-1.01	-0.22/-0.11	-0.030/2.7	-0.66/-2.24	-2.43/-1.42	-0.160/0.94	1.290/93	0.18/-0.18	-0.43/-2.01	-2.42/-12.03	-0.44/-0.53	-0.410/88	0.68/-0.72
Θ(52.5°)	-0.910/-1.7	-0.110/-0.8	-0.100/-1.0	0.45/-0.06	-1.34/-1.89	-1.31/-1.34	-2.18/-2.81	-3.74/-4.94	-5.79/-5.75	-3.77/-2.28	-1.89/-1.82	-1.17/-0.41	-1.23/-1.58	-1.62/-2.75	-3.39/-2.55	-0.560/-2.0	0.08/-0.35	-0.97/-0.53	0.640/75	0.390/2.1	-0.89/-1.96	-2.12/-1.08	-1.40/-0.97	0.75/-0.26
Θ(60°)	-4.34/-3.65	-2.20/-1.16	0.100/58	1.260/51	-0.75/-2.99	-2.46/-2.98	-2.20/-1.96	-2.55/-3.95	-6.30/-7.02	-4.39/-2.41	-1.02/-1.31	-2.31/-3.04	-4.49/-4.58	-5.52/-7.36	-4.92/-2.25	-0.74/-1.12	-1.95/-2.47	-1.89/-0.64	0.48/-1.00	1.752/81	0.27/-0.07	-0.78/-2.49	-0.76/-1.11	
Θ(67.5°)	-0.39/-2.51	-2.58/-2.45	-0.14/-0.21	0.600/1.7	0.37/-0.03	-1.34/-2.17	-1.77/-2.13	-2.63/-3.61	-4.91/-4.50	-3.60/-3.23	-2.97/-4.22	-4.67/-5.79	-11.76/-12.84	-13.20/-6.76	-3.99/-4.29	-4.25/-4.96	-3.31/-1.93	-0.150/73	0.100/35	0.260/43	1.15/1.35	-0.57/-0.96	1.230/34	0.92/1.40
Θ(75°)	0.92/-1.87	-0.94/-2.10	-1.65/-3.05	-3.06/-3.58	-2.04/-0.91	-0.28/-0.42	-1.82/-3.71	-5.12/-6.09	-4.00/-1.68	-0.51/-1.08	-2.65/-4.77	-4.47/-5.56	-9.17/-7.09	-5.28/-2.72	-2.86/-1.38	-1.56/-2.54	-4.55/-7.11	-3.88/-2.76	-1.48/-0.62	1.120/31	-0.30/-0.03	-0.04/-4.99	-2.83/-2.20	-2.03/-1.05
Θ(82.5°)	0.82/-1.07	-0.68/-0.19	0.16/-1.33	-4.42/-7.26	-7.10/-4.34	-2.46/-1.48	-0.87/-2.22	-5.07/-5.70	-1.960/36	0.20/-2.29	-4.27/-5.27	-3.87/-4.21	-1.700/30	1.460/93	0.000/10	-1.97/-4.64	-6.85/-4.41	-3.54/-3.01	-1.78/-0.49	0.44/1.28	1.600/26	1.020/06	-2.96/-1.73	-1.19/-1.54
Θ(90°)	-1.57/-2.69	-5.39/-1.17	-0.290/69	-0.91/-3.96	-4.38/-3.42	-5.38/-5.66	-3.88/-3.07	-3.02/-1.10	0.96/1.04	0.21/-2.05	-2.09/-1.40	-0.83/-2.29	-0.680/91	2.30/1.53	0.04/-0.59	-3.72/-3.88	-2.96/-3.10	-2.17/-2.09	-0.96/-1.42	-0.57/1.12	1.66/1.26	-0.570/54	-1.63/-1.88	-0.51/-2.82
Θ(97.5°)	-2.35/-1.79	-5.15/-2.99	-2.97/-0.40	-1.11/-0.19	-1.210/30	-0.85/-4.00	-7.29/-9.18	-5.59/-0.82	1.390/50	-1.28/-1.97	-0.580/00	0.54/-0.69	0.18/1.15	2.05/1.21	0.050/35	-0.59/-1.18	0.510/35	0.842/45	2.79/1.14	2.64/3.32	2.98/1.55	1.210/85	0.46/-1.44	-1.10/-3.59
Θ(105°)	-8.67/-3.31	-4.07/-3.22	-1.27/-2.68	-3.81/-1.78	-0.81/-0.13	-0.91/-2.50	-2.98/-2.70	-1.95/-1.38	-1.60/-2.29	-1.84/-0.72	-0.06/0.42	2.010/79	1.00/-0.32	1.02/0.91	-1.97/-0.69	-0.520/89	0.15/1.02	0.92/0.26	0.60/-3.87	0.19/1.71	1.75/1.23	1.77/1.56	0.64/-1.86	-1.97/-4.83
Θ(112.5°)	-6.27/-3.51	-6.57/-0.81	0.50/1.27	-0.21/-2.38	-4.13/-4.11	-4.22/-4.40	-3.81/-2.71	-1.14/-1.39	-2.71/-2.19	-1.64/-0.60	-1.500/95	-0.05/-1.45	-2.73/-2.01	-0.33/-0.83	-2.53/-2.95	-2.23/-0.15	-0.31/-0.13	-0.32/-1.63	-1.95/-4.95	-7.10/-4.35	-10.01/-8.15	-1.05/-0.08	-1.85/-1.10	-0.29/-3.13
Θ(120°)	-1.70/-2.56	-2.47/-4.95	-3.68/-2.38	-1.18/-2.37	-2.21/-3.31	-3.82/-4.34	-5.65/-7.69	-13.52/-10.96	-5.14/-1.59	-1.82/-1.42	-2.33/-0.48	-0.34/-2.57	-1.79/-2.51	-2.87/-2.88	-6.01/-10.48	-8.16/-2.37	-1.71/-3.84	-4.61/-4.23	-1.86/-0.92	-4.36/-4.85	-4.93/-9.89	-6.54/-3.48	-3.50/-2.25	-1.09/-1.18
Θ(127.5°)	-0.59/-0.97	-2.07/-5.87	-10.81/-14.20	-10.67/-5.05	-4.44/-3.21	-3.86/-6.34	-7.01/-5.89	-5.05/-6.15	-6.49/-3.28	-2.440/11	1.630/65	-2.17/-4.33	-3.98/-6.63	-1.33/-0.37	-4.49/-7.70	-4.74/-1.32	-2.88/-9.09	-8.07/-3.11	-6.11/-3.99	-2.51/-5.93	-5.94/-8.37	-9.66/-9.96	-11.65/-7.47	-2.39/-1.84
Θ(135°)	-6.32/-5.80	-4.91/-6.71	-9.21/-12.59	-13.25/-11.88	-7.19/-6.44	-5.29/-4.53	-4.82/-5.30	-3.71/-3.35	-4.01/-4.40	-6.89/-5.60	-2.47/-2.19	-3.29/-5.57	-6.24/-6.91	-5.73/-4.36	-7.10/-8.12	-6.12/-4.41	-2.91/-4.10	-8.74/-15.25	-10.33/-11.17	-6.54/-3.80	-2.14/-4.52	-10.17/-9.72	-9.14/-6.21	-4.32/-4.66
Θ(142.5°)	-15.47/-15.02	-11.75/-11.11	-15.51/-12.62	-10.34/-9.50	-9.10/-8.27	-8.40/-9.22	-7.93/-5.88	-5.81/-5.78	-3.79/-2.93	-2.66/-3.52	-6.35/-8.97	-12.22/-15.09	-9.83/-5.77	-8.53/-5.77	-5.87/-8.05	-11.29/-7.43	-4.86/-4.39	-3.90/-7.71	-12.70/-12.87	-13.68/-13.98	-6.95/-6.18	-8.96/-8.73	-7.49/-6.44	-4.75/-9.87
Θ(150°)	-9.38/-11.34	-8.88/-6.97	-8.44/-10.09	-8.73/-8.46	-10.42/-14.25	-14.87/-12.66	-12.22/-15.07	-10.49/-7.27	-4.98/-4.30	-4.01/-4.40	-4.45/-3.25	-4.38/-6.19	-9.67/-8.82	-9.07/-7.81	-5.11/-4.44	-5.95/-6.24	-12.18/-12.16	-13.23/-13.02	-11.75/-15.06	-15.48/-12.51	-13.96/-12.43	-9.24/-8.09	-6.10/-5.45	-7.79/-9.46
Θ(157.5°)	-7.13/-6.61	-6.88/-7.14	-7.26/-8.07	-9.11/-10.94	-13.38/-15.04	-13.25/-11.68	-12.07/-14.16	-14.89/-13.44	-9.58/-8.84	-9.29/-9.08	-7.59/-6.99	-8.56/-10.95	-11.00/-8.42	-6.20/-4.82	-5.07/-6.44	-7.26/-6.95	-7.50/-8.58	-14.98/-9.85	-9.77/-9.45	-9.64/-11.91	-15.40/-15.33	-14.02/-11.83	-11.66/-11.87	-10.00/-7.91
Θ(165°)	-8.42/-9.52	-10.02/-9.73	-9.13/-6.60	-9.43/-11.17	-11.22/-10.89	-10.52/-9.53	-8.29/-7.78	-7.85/-8.72	-9.25/-12.75	-15.30/-14.90	-15.83/-15.56	-15.25/-15.45	-14.36/-10.59	-8.70/-8.82	-10.43/-11.52	-9.20/-7.46	-6.94/-6.71	-9.29/-10.16	-10.48/-11.27	-12.27/-14.05	-15.28/-14.75	-15.15/-13.88	-11.77/-8.67	-7.27/-1.03
Θ(172.5°)	-14.90/-15.04	-16.09/-14.62	-12.26/-10.99	-9.64/-9.49	-9.45/-9.71	-10.16/-10.36	-9.95/-9.81	-9.87/-10.14	-10.39/-10.49	-10.85/-10.51	-10.40/-10.86	-11.12/-10.69	-10.65/-10.44	-10.58/-10.47	-9.11/-9.70	-6.84/-6.18	-5.89/-5.63	-6.22/-7.17	-8.54/-9.33	-9.61/-9.00	-8.53/-8.20	-6.69/-8.99	-9.64/-11.46	
Θ(180°)	-12.95/-13.95	-15.41/-15.56	-14.78/-15.64	-16.36/-15.04	-14.79/-15.56	-15.56/-14.82	-15.16/-15.60	-15.08/-15.70	-15.14/-15.50	-15.25/-14.04	-14.28/-14.22	-13.40/-12.91	-12.55/-11.86	-12.51/-13.88	-15.07/-14.25	-13.25/-13.40	-13.55/-12.66	-12.49/-13.08	-13.23/-13.40	-15.08/-15.42	-14.77/-14.05	-10.52/-10.60	-11.59/-11.79	-12.02/-12.26
Freq(Hz)	2.45GPol	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°)	-13.70/-13.70	-14.54/-14.94	-15.54/-14.27	-14.13/-13.56	-13.11/-12.67	-12.19/-11.35	-11.47/-11.56	-11.57/-11.25	-10.92/-10.76	-10.70/-10.76	-10.85/-10.96	-11.08/-11.38	-11.68/-11.97	-12.05/-12.11	-12.46/-13.12	-13.03/-12.78	-12.73/-12.54	-12.77/-12.73	-13.11/-13.69	-13.77/-13.41	-13.00/-13.64	-13.96/-15.46	-15.85/-14.58	-14.05/-13.34
Θ(7.5°)	-9.42/-9.58	-9.91/-10.38	-10.70/-10.81	-10.79/-10.74	-10.70/-10.49	-10.24/-9.79	-9.91/-10.06	-10.21/-10.42	-10.58/-10.70	-10.78/-10.85	-11.15/-11.52	-11.78/-11.79	-11.74/-12.23	-12.34/-12.39	-12.59/-12.85	-12.27/-11.79	-11.77/-12.11	-12.27/-12.74	-13.38/-13.99	-14.38/-14.42	-14.21/-13.93	-14.32/-13.10	-12.26/-11.41	-10.41/-10.20
Θ(15°)	-5.96/-5.92	-6.23/-6.47	-6.67/-6.82	-7.13/-7.53	-7.80/-7.77	-7.35/-6.95	-6.75/-6.46	-6.66/-6.71	-6.42/-6.24	-6.37/-6.47	-6.84/-7.46	-6.39/-6.24	-6.91/-10.24	-10.51/-10.78	-10.44/-10.32	-9.93/-9.54	-9.16/-9.29	-9.65/-10.34	-11.32/-12.49	-12.42/-12.79	-12.50/-11.58	-10.86/-9.92	-8.76/-7.69	-6.98/-6.53
Θ(22.5°)	-4.39/-4.36	-4.42/-4.50	-4.68/-4.90	-5.22/-5.51	-5.72/-5.76	-5.53/-5.22	-4.98/-4.76	-4.55/-4.35	-3.92/-3.22	-2.80/-2.64	-2.83/-3.39	-4.38/-5.82	-7.09/-8.23	-9.02/-9.10	-8.72/-8.48	-7.70/-7.13	-6.99/-7.20	-7.17/-8.10	-9.01/-10.08	-10.94/-11.31	-10.78/-10.02	-8.85/-7.67	-6.49/-6.65	-5.11/-4.78
Θ(30°)	-3.12/-2.91	-2.94/-3.24	-3.88/-4.65	-5.35/-5.75	-5.91/-5.98	-5.57/-5.02	-4.54/-4.26	-4.08/-3.66	-3.67/-2.89	-1.29/-0.56	-0.30/-0.56	-1.40/-2.78	-4.66/-6.67	-8.29/-8.53	-7.97/-7.06	-6.24/-5.72	-5.63/-6.67	-5.77/-6.15	-6.95/-8.11	-9.32/-9.70	-9.32/-8.28	-7.12/-6.07	-5.21/-4.62	-4.14/-3.69
Θ(37.5°)	-1.58/-1.28	-1.61/-2.48	-4.09/-6.09	-8.08/-9.47	-9.53/-8.72	-6.75/-5.06	-3.93/-3.48	-3.52/-3.76	-3.29/-2.89	-1.43/-0.01	0.720/7.77	0.06/-1.53	-3.59/-5.86	-6.99/-6.90	-6.15/-5.37	-4.88/-4.72	-4.70/-4.74	-4.85/-5.18	-5.83/-6.62	-6.92/-6.59	-5.10/-5.68	-5.24/-4.87	-4.69/-4.22	-3.39/-2.45
Θ(45°)	-0.60/-0.73	-1.66/-3.23	-5.19/-7.19	-8.21/-9.74	-7.46/-7.08	-6.25/-5.00	-3.76/-3.10	-2.98/-3.29	-3.61/-3.38	-2.35/-0.75	0.54/1.05	-0.70/-0.53	-2.45/-4.67	-5.99/-5.65	-4.59/-3.83	-3.28/-3.16	-3.09/-3.08	-3.26/-3.30	-3.34/-3.14	-2.71/-2.39	-2.43/-2.86	-3.47/-4.17	-4.48/-3.72	-2.32/-1.22
Θ(52.5°)	-0.80/-1.50	-2.46/-3.44	-3.74/-3.54	-3.02/-2.63	-2.43/-2.61	-3.17/-3.48	-3.06/-2.52	-2.22/-2.24	-2.47/-2.58	-2.16/-0.92	0.47/1.05	0.70/-0.66	-2.68/-4.85	-5.51/-4.45	-3.09/-2.05	-1.29/-0.85	-0.57/-0.37	-0.160/1.8	0.530/7.7	0.820/50	-0.23/-1.36	-2.68/-3.59	-3.26/-2.07	-1.06/-0.71
Θ(60°)	-0.32/-0.28	-0.44/-0.63	-0.78/-0.73	-0.70/-0.89	-1.13/-1.36	-1.71/-2.08	-1.98/-1.77	-1.09/-0.87	-0.87/-1.00	-1.09/-0.70	0.200/0.96	1.140/54	-0.71/-2.43	-3.89/-3.65	-2.47/-1.16	-0.280/2.2	0.621/00	1.35/1.72	1.87/1.76	1.390/81	0.10/-0.59	-1.14/-1.51	-1.61/-1.49	-1.05/-0.69
Θ(67.5°)	1.40/1.35	0.850/34	0.08/-0.06	-0.37/-0.78	-1.08/-1.22	-1.23/-1.39	-1.65/-1.72	-1.53/-1.27	-1.06/-0.97	-0.99/-0.88	-0.330/24	0.400/11	-0.57/-1.36	-1.46/-0.68	0.290/97	1.39/1.51	1.51/1.55	1.61/1.65	1.54/1.44	1.54/1.75	1.82/1.55	0.75/-0.57	-1.80/-1.64	-3.40/-0.78
Θ(75°)	1.510/95	0.18/-0.15	-0.030/1.0	-0.11/-0.42	-0.74/-0.94	-1.04/-1.21	-1.55/-2.06	-2.25/-2.01	-1.41/-0.73	-0.24/-0.15	-0.34/-0.60	-0												



Antenna Pattern_2.4GHz and 5GHz

Appendix C

θ (75°)	-2.78/0.75	1.53/-0.25	-2.08/-3.04	-0.04/-1.21	0.37/-1.66	2.62/2.52	2.05/-1.26	0.18/-0.03	-0.36/-1.32	-1.41/-0.50	1.11/-0.72	-1.60/-1.09	-2.67/-4.28	-2.10/-1.63	-2.09/-3.13	-3.62/-4.99	-7.90/-6.70	-3.47/-3.50	-4.11/-3.16	-3.96/-4.71	-3.63/-1.32	-0.20/-0.51	1.42/0.44	-0.94/-2.93
θ (82.5°)	-2.58/-1.72	1.48/0.33	-2.37/-2.12	1.05/-0.98	0.33/2.64	3.60/2.83	0.70/-0.27	1.33/-1.19	-0.28/-1.07	-2.03/-0.85	0.02/-1.72	-1.46/-0.28	-1.15/-5.48	-3.77/-2.18	-1.42/-2.65	-4.45/-3.69	-4.72/-4.52	-3.03/-2.83	-2.44/-3.25	-4.03/-5.34	-2.87/-0.12	1.14/0.44	-0.06/-2.49	1.63/-5.11
θ (90°)	-2.40/-5.02	1.49/-0.55	-3.58/-0.86	-0.09/-0.13	1.26/-5.3	3.60/3.30	-0.95/-4.47	-1.23/-0.92	0.37/-2.01	-2.03/-3.11	-0.67/-4.08	-0.29/-0.11	-0.42/-5.55	-7.47/-7.48	-3.67/-1.05	-1.36/-3.88	-2.98/-0.19	-0.02/-1.11	-2.53/-3.06	-2.71/-2.07	-0.74/-0.78	0.89/0.44	0.60/-1.50	-1.49/-6.91
θ (97.5°)	-3.20/-0.72	1.87/-0.01	-0.65/-1.05	1.93/0.88	0.78/0.72	-1.22/-1.80	-1.84/-3.90	-7.95/-2.54	-1.13/-3.07	-2.72/-3.51	-1.12/-0.32	-2.74/-0.53	-2.23/-6.47	-5.38/-2.80	-0.98/-1.72	1.30/0.59	0.48/-1.45	2.53/-0.13	-2.18/-1.63	-1.53/-0.38	-2.18/-1.96	1.99/-2.31	1.32/0.05	-2.13/-3.01
θ (105°)	-4.49/-3.94	1.75/-2.22	1.86/0.62	1.53/-1.56	0.17/-3.55	-3.64/-1.89	-1.81/-4.23	-2.91/-1.26	-3.35/-3.96	-2.78/-6.43	-3.60/-1.93	0.14/-3.45	-4.52/-1.93	1.11/-0.12	2.02/-2.15	2.46/-2.26	1.40/-1.06	0.64/0.62	0.34/-0.98	0.27/-0.36	-0.58/-0.29	2.38/-2.29	0.79/-2.25	-2.47/-0.12
θ (112.5°)	-4.96/-0.69	2.29/-0.01	0.62/-2.80	0.09/0.82	-1.20/-8.62	-0.89/-6.22	-4.15/-2.31	-1.67/-2.78	-4.27/-4.70	0.74/-2.69	0.76/-2.72	1.58/0.94	0.83/-3.20	1.02/-1.15	1.51/-2.13	1.58/0.94	0.78/0.31	0.53/-0.46	-0.05/-1.04	-3.33/-0.22	1.89/0.16	-1.77/-0.38	1.23/-2.43	2.11/-9.12
θ (120°)	-14.67/-1.06	2.79/-0.51	0.17/-9.04	-5.86/-3.48	-2.49/-4.00	-9.57/-7.96	-5.23/-5.82	-6.40/-4.12	-2.42/-1.59	-2.87/-3.38	0.15/-1.64	0.11/-0.98	-6.64/-10.19	-5.19/0.97	1.69/0.70	-0.54/-0.59	0.36/-1.32	0.91/-0.37	-0.54/-0.94	-0.28/-2.12	1.32/-1.99	-1.54/-1.83	4.00/2.61	-2.77/-9.77
θ (127.5°)	-4.82/-1.24	0.59/-0.62	-3.12/-10.77	-6.79/-5.36	-7.35/-3.65	-8.38/-13.90	-7.81/-3.06	-2.01/-1.99	-1.85/-2.38	-3.98/-1.81	1.63/-2.22	-0.61/-3.56	-12.53/-7.78	-4.10/-1.58	1.43/-1.80	-0.03/-3.40	-2.32/-0.67	-1.68/-3.43	-4.21/-0.98	2.43/-1.39	-1.55/-2.71	-0.28/-0.50	-0.34/-0.32	-4.31/-11.30
θ (135°)	-0.48/-1.31	-4.06/-0.17	-4.07/-10.23	-16.01/-10.56	-10.43/-7.98	-7.58/-11.61	-8.18/-3.90	-3.83/-5.06	-3.81/-1.87	-3.40/-5.77	-2.70/-0.16	-1.30/-4.75	-8.05/-13.29	-5.42/-3.86	-1.75/-0.37	0.83/-2.66	-10.30/-10.39	-3.29/-1.36	-2.33/-2.84	-1.23/-2.55	-2.14/-3.10	-7.14/-5.45	-3.17/-7.79	-15.46/-5.65
θ (142.5°)	-4.38/-3.23	-1.77/-2.09	-7.80/-13.70	-7.30/-4.70	-4.89/-3.67	-4.62/-8.91	-8.37/-9.57	-7.97/-3.62	-2.31/-3.31	-4.11/-2.39	-3.41/-2.84	-2.81/-5.29	-4.45/-6.87	-10.81/-6.61	-9.03/-5.08	-1.93/-0.32	-0.84/-4.97	-6.47/-4.64	-2.39/-4.63	-14.78/-13.80	-6.17/-0.03	1.61/-0.75	-4.96/-10.79	-14.55/-9.61
θ (150°)	-7.63/-8.19	-5.12/-1.55	-2.89/-10.06	-9.79/-6.29	-7.25/-8.38	-4.89/-4.60	-7.70/-11.99	-5.71/-2.96	-1.48/-0.21	0.47/0.07	-1.81/-3.50	-2.88/-4.09	-4.54/-3.51	-5.59/-8.67	-6.09/-4.59	-5.88/-5.42	-4.23/-5.11	-5.53/-4.86	-3.32/-2.90	-4.99/-7.53	-7.71/-6.86	-9.57/-9.75	-5.92/-6.33	-9.01/-10.12
θ (157.5°)	-4.63/-4.91	-5.52/-6.68	-8.01/-7.29	-5.67/-5.20	-7.79/-12.57	-11.87/-10.61	-7.79/-5.23	-5.43/-5.82	-5.26/-4.18	-2.84/-1.53	-7.41/-1.51	-4.73/-8.92	-4.54/-1.25	-1.58/-4.77	-7.54/-6.20	-6.09/-7.80	-10.10/-7.30	-4.11/-3.63	-11.03/-11.65	-4.75/-6.39	-7.79/-8.80	-11.07/-8.90	-10.30/-11.43	-9.61/-6.09
θ (165°)	-12.49/-11.01	-10.57/-9.06	-8.70/-8.63	-8.58/-8.46	-9.13/-12.10	-14.16/-12.09	-9.26/-8.62	-8.42/-9.59	-11.46/-11.14	-7.89/-6.50	-6.27/-6.72	-6.85/-5.15	-3.27/-2.31	-2.47/-3.54	-5.24/-6.03	-5.81/-5.50	-6.88/-9.91	-11.83/-11.34	-11.38/-12.34	-14.51/-15.60	-14.80/-10.63	-9.11/-9.69	-10.74/-12.79	-14.05/-14.24
θ (172.5°)	-12.58/-13.22	-13.57/-12.23	-11.53/-10.63	-10.28/-10.78	-11.82/-13.37	-10.27/-17.00	-5.41/-5.44	-5.57/-6.44	-6.56/-6.70	-7.28/-8.28	-9.53/-9.41	-8.14/-6.33	-5.26/-5.15	-5.62/-6.34	-7.66/-9.73	-12.87/-13.87	-10.90/-8.61	-8.25/-8.38	-10.29/-8.38	-6.77/-6.38	-6.23/-6.09	-7.12/-8.53	-10.60/-13.16	-15.18/-15.34
θ (180°)	-8.77/-8.75	-9.57/-9.49	-9.34/-9.29	-9.70/-9.24	-7.10/-5.95	-6.54/-6.57	-6.49/-6.57	-5.99/-5.93	-6.66/-6.52	-6.10/-5.99	-6.32/-6.78	-7.15/-7.30	-7.09/-6.96	-6.87/-6.80	-7.06/-7.34	-7.45/-7.83	-8.23/-8.52	-8.65/-8.16	-7.66/-8.63	-9.32/-9.71	-10.21/-10.57	-11.06/-11.78	-12.38/-10.95	-9.75/-8.92
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°)	-4.76/-3.99	-3.98/-3.98	-4.91/-6.13	-6.35/-3.34	-4.83/-5.25	-5.50/-5.30	-5.24/-5.87	-7.04/-7.18	-6.54/-6.31	-6.94/-7.43	-6.89/-6.14	-5.97/-5.99	-5.80/-5.65	-5.36/-5.33	-5.59/-5.76	-5.25/-5.22	-4.71/-4.48	-4.58/-5.32	-5.32/-5.17	-5.33/-5.35	-5.94/-6.46	-6.06/-5.81	-6.35/-5.50	
θ (7.5°)	-3.14/-2.96	-2.84/-2.57	-2.87/-2.99	-3.09/-2.94	-2.45/-2.75	-2.86/-3.57	-3.92/-3.69	-4.80/-4.67	-4.70/-4.55	-4.83/-5.15	-4.71/-4.11	-4.29/-4.87	-5.41/-6.35	-7.04/-7.98	-9.04/-9.76	-9.48/-9.56	-9.94/-10.99	-11.44/-10.72	-10.06/-11.96	-13.90/-12.50	-10.86/-9.18	-8.73/-8.19	-6.69/-5.43	-5.03/-4.62
θ (15°)	-3.25/-3.58	-3.97/-4.09	-4.70/-5.25	-5.84/-6.26	-5.81/-6.36	-5.79/-4.89	-4.16/-3.89	-4.29/-4.87	-4.70/-4.53	-5.66/-4.54	-5.04/-4.21	-3.65/-3.68	-3.96/-4.52	-5.19/-6.07	-7.77/-8.64	-8.54/-7.24	-6.77/-5.74	-4.59/-4.72	-5.14/-5.08	-5.56/-6.45	-8.16/-10.50	-7.31/-10.12	-7.84/-6.13	-4.72/-3.51
θ (22.5°)	-3.25/-3.62	-3.93/-4.75	-5.50/-6.28	-6.04/-6.13	-6.35/-5.22	-4.74/-5.10	-4.64/-5.01	-4.30/-3.93	-4.46/-4.84	-5.64/-6.95	-4.60/-5.20	-4.82/-3.57	-3.09/-3.45	-4.30/-4.87	-4.24/-3.78	-3.54/-2.79	-1.80/-1.31	-1.32/-1.29	-1.75/-2.34	-3.27/-4.37	-5.05/-6.71	-7.80/-6.76	-5.07/-5.34	
θ (30°)	-4.58/-4.15	-3.76/-4.33	-5.90/-5.22	-4.21/-4.47	-5.57/-6.69	-5.84/-4.95	-4.18/-4.85	-6.56/-7.23	-7.64/-7.86	-7.31/-6.17	-4.98/-5.63	-7.36/-8.13	-6.43/-4.60	-3.96/-4.50	-4.78/-3.61	-2.70/-2.40	-2.29/-1.96	-2.11/-2.08	-1.58/-1.33	-1.45/-1.77	-2.40/-2.89	-4.11/-6.27	-7.36/-5.51	-4.36/-4.49
θ (37.5°)	-3.18/-2.80	-2.26/-2.36	-1.80/-2.10	-1.56/-2.21	-1.29/-0.42	-0.06/-0.72	-1.32/-2.46	-3.91/-4.64	-4.18/-3.86	-4.34/-5.11	-4.44/-5.02	-5.26/-5.75	-1.66/-3.13	-2.14/-2.56	-4.72/-4.31	-3.00/-2.28	-2.14/-2.56	-2.46/-3.08	-3.30/-3.33	-2.94/-2.33	-2.42/-3.71	-6.63/-5.08	-3.28/-3.22	-2.86/-2.54
θ (45°)	-2.50/-2.47	-2.74/-1.71	-1.86/-3.18	-3.69/-2.82	-1.47/-0.35	0.36/0.38	-0.30/-1.10	-2.47/-4.47	-8.83/-13.27	-9.88/-8.94	-10.99/-6.53	-5.20/-5.57	-4.42/-7.28	-4.00/-4.70	-7.16/-2.93	-3.13/-2.98	-3.06/-3.64	-3.95/-3.29	-2.21/-2.69	-3.17/-2.84	-2.93/-4.09	-4.25/-2.44	-1.07/-0.46	-1.39/-4.10
θ (52.5°)	-5.41/-5.26	-2.01/-1.34	-3.26/-4.03	-2.85/-1.67	-0.92/-0.72	-0.54/-0.31	-0.90/-3.55	-10.66/-7.50	-5.63/-6.76	-6.29/-5.77	-8.19/-10.31	-10.79/-3.15	-0.70/-1.27	-3.32/-5.61	-5.48/-5.00	-5.02/-5.58	-6.42/-6.08	-6.36/-5.23	-4.82/-3.50	-1.71/-1.30	-3.31/-7.43	-8.23/-2.93	-0.21/-0.27	-2.02/-3.95
θ (60°)	0.07/-0.58	-1.23/-2.05	-2.58/-2.86	-4.14/-4.22	-2.02/0.06	0.70/-0.75	-2.69/-3.54	-2.24/-1.59	-2.62/-3.43	-4.67/-5.50	-5.86/-6.00	-2.05/-0.50	-3.10/-6.13	-8.14/-9.73	-8.62/-7.46	-7.69/-9.06	-9.92/-6.04	-2.97/-1.65	-2.03/-3.14	-4.30/-4.50	-5.61/-4.38	-1.08/-1.34	-5.85/-2.74	
θ (67.5°)	-0.40/-2.93	-3.53/-10.09	-15.45/-12.46	-9.49/-5.93	-6.42/-6.10	-3.49/-1.74	0.09/0.99	0.42/-1.35	-1.36/0.17	0.41/-0.07	-0.53/-1.01	-2.66/-4.72	-2.19/-1.49	-4.10/-6.12	-5.97/-6.11	-6.61/-6.96	-9.46/-10.42	-6.67/-2.96	-2.70/-3.63	-4.54/-4.55	-2.77/-4.21	-9.21/-7.70	-5.08/-4.72	-2.29/0.60
θ (75°)	-5.50/-3.12	-1.91/-4.56	-4.38/-9.05	-4.73/-0.39	0.31/-0.02	1.09/-1.43	0.87/0.59	1.59/0.75	-1.35/-1.07	0.26/-1.20	0.28/0.63	0.37/-2.35	-3.47/-3.58	-2.64/-1.69	-3.36/-6.17	-5.79/-6.46	-10.79/-8.40	-4.75/-3.48	-2.81/-2.67	-3.71/-4.45	-5.25/-8.53	-5.45/-1.63	-2.31/-4.22	-1.73/-0.54
θ (82.5°)	-8.22/-2.35	-2.09/-1.45	-0.93/-2.83	0.82/0.24	1.44/2.30	3.42/3.31	1.61/-0.39	0.18/-0.12	-4.21/-5.21	-3.08/-2.44	-2.25/-3.02	-0.72/-3.05	-6.88/-6.47	-3.31/-3.10	-3.64/-5.05	-3.34/-3.36	-7.00/-4.63	-1.67/-2.38	-2.21/-2.34	-4.50/-9.42	-6.54/-0.73	-0.21/-0.16	-1.33/-2.59	0.71/-1.70
θ (90°)	-10.74/-2.94	-1.38/0.40	-2.62/-2.43	-1.05/-2.51	-1.16/-1.35	2.14/2.04	0.17/-2.93	-6.04/-4.03	-4.19/-6.99	-9.77/-5.98	-2.32/-5.05	-2.60/-1.89	-4.74/-6.74	-7.65/-8.03	-3.88/-0.94	-2.84/-5.29	-2.65/-0.91	-0.22/-0.79	-2.79/-4.90	-7.52/-3.49	-1.85/0.15	0.90/-0.81	-0.15/0.24	0.18/-12.05
θ (97.5°)	-3.87/-1.98	-0.74/-0.56	-1.51/-0.61	0.67/-1.41	0.73/-1.49	0.01/-3.24	-3.20/-3.83	-10.03/-7.77	-4.21/-8.09	-4.98/-4.63	-0.59/-1.25	-3.53/0.09	-4.08/-11.70	-8.44/-3.90	-10.10/0.48	-1.16/-2.82	-0.52/-1.76	-1.20/-0.55	-3.70/-4.01	-6.17/-2.68	0.44/-0.35	-0.66/-2.44	1.67/-0.54	-6.63/-6.79
θ (105°)	-1.53/-2.64	1.54/-1.19	1.57/-1.93	2.74/-2.12	1.07/-1.53	-5.14/-8.62	-6.07/-3.16	-3.62/-4.66	-5.40/-6.93	-3.01/-2.47	-1.15/-0.84	0.00/-1.51	-3.00/-3.49	-3.81/-2.51	0.81/-1.02	0.67/0.02	-0.90/-1.80	2.08/-3.45	-1.76/-1.76	-1.49/-1.31	-1.85/-0.70	0.77/-2.87	1.97/-1.28	-1.37/-1.38
θ (112.5°)	-7.06/-1.38	1.65/-1.69	1.48/0.40	0.71/-0.98	-0.30/-5.47	-8.96/-1.74	-1.87/-1.84	-3.91/-1.25	-1.87/-4.01	-1.01/-1.79	0.35/2.69	1.96/-2.51	-6.86/-2.49	0.43/0.73	1.80/2.64	1.11/-1.40	-1.72/-1.57	-2.98/-3.43	-2.53/-0.68	-0.36/-0.62	-0.05/0.59	0.13/-1.21	0.86/0.99	2.22/-0.89
θ (120°)	-2.91/-0.61	0.23/-1.52	0.74/-2.93	-3.72/-4.03	-1.75/-4.01	-12.13/-4.46	-2.22/-5.61	-7.44/-1.88	0.60/-2.22	-2.87/-2.61	0.53/-0.90	1.97/-0.54	-5.11/-8.97	-0.94/-1.77	-0.98/-0.16	-1.14/-3.22	-5.05/-1.91	0.02/-0.20	-0.13/-0.52	-2.59/0.26	-1.32/-1.72	0.67/-1.56	0.24/-6.88	
θ (127.5°)	-2.48/-1.41	-1.91/-1.81	-5.01/-7.56	-10.37/-7.67	-4.83/-3.38	-10.77/-9.23	-2.98/-0.04	-1.49/-1.98	-0.44/-0.54	-1.66/-1.47	2.01/-0.22	1.40/-1.10	-6.79/-6.62	-3.97/-0.78	1.05/-0.36	-1.71/-2.53	-1.20/-1.34	-2.28/-4.92	-8.30/-9.02	-2.57/-0.31	-1.28/-3.68	-2.57/-1.05	-3.22/-3.3	