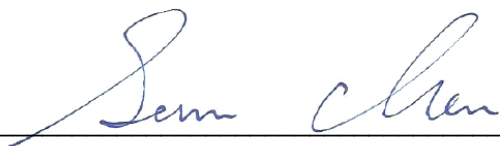


Antenna Composite Gain Test Report

FCC ID	2A8MT-AP7PRO
Equipment	Tri-Band WiFi 7 Enterprise Access Point
Brand Name	
Model Name	AP7-Pro
Applicant	Alta Networks, LLC 192 N. Old Highway 91, Unit 1 Hurricane, Utah, United States 84737
Manufacturer	Alta Networks, LLC 192 N. Old Highway 91, Unit 1 Hurricane, Utah, United States 84737
Standard	KDB662911 D03 v02
Sample Received	Dec. 26, 2025
Start Test Date	Jan. 17, 2026
Final Test Date	Jan. 17, 2026



Approved by: Sam Chen

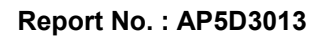
Sporton International Inc. Hsinchu Laboratory

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



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[illegible]

1. Operation Mode and Antenna Information

Antenna Position	RF Port			Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	WLAN 2.4GHz	WLAN 5GHz	Bluetooth					
2G5GAnt1	2	1	-	AOT	ANT-M2458-CBT04	PIFA	I-PEX	5GHz UNII 1~3
2G5GAnt2	1	2	-	AOT	ANT-M2458-CBT02	PIFA	I-PEX	5GHz UNII 1~3
5GAnt3	-	3	-	AOT	ANT-M5158-CBT05	PIFA	I-PEX	5GHz UNII 1~3
2G5GAnt4	-	4	1	AOT	ANT-M2458-CBT03	PIFA	I-PEX	5GHz UNII 1~3

Note:

5GHz Operation Mode (4TX/4RX)

2G5GAnt1~2, 5GAnt3 and 2G5GAnt4 can be used as transmitting/receiving antenna.

2G5GAnt1~2, 5GAnt3 and 2G5GAnt4 could transmit/receive simultaneously.

2. Test Frequency

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

Band [MHz]	Test Frequency [MHz]
5150-5250	5200
5250-5350	5300
5470-5725	5600
5725-5850	5785

3. Testing Location

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Vivi Jiang	23.5-24.5 / 45-55	Jan. 17, 2026

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

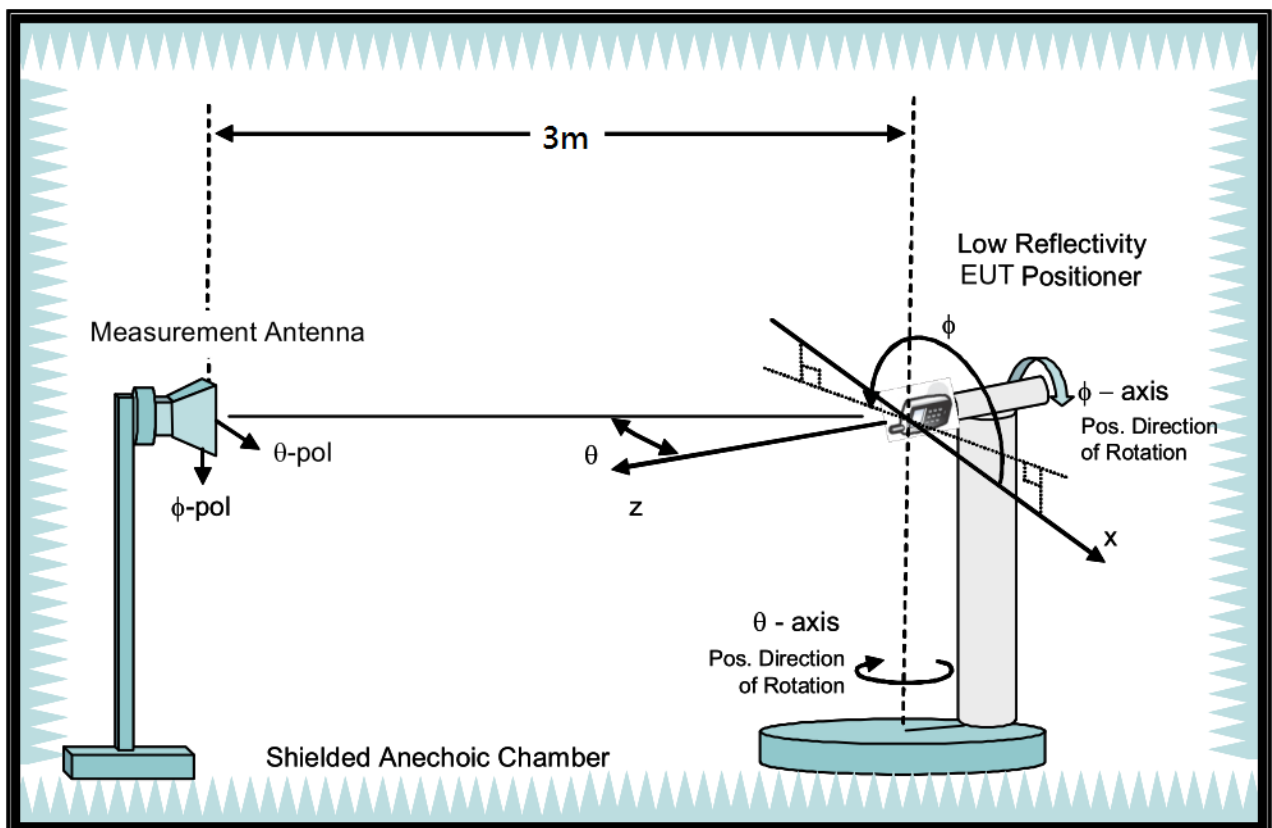
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

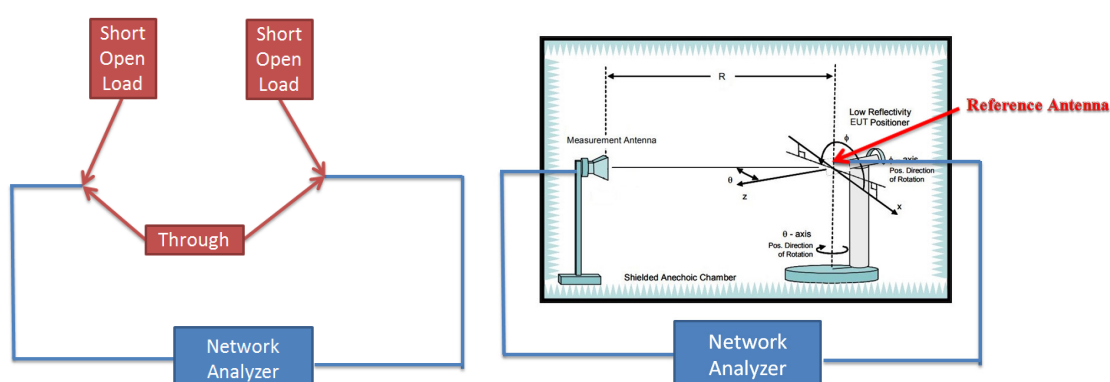
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



5. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-32.12	-32.48	-32.45	-34.55	-34.56	-34.78	-34.94	-34.89	-34.99	-35.16	-35.32	-35.68	-35.88	-35.97
G(phi) reading (dB)	-32.35	-32.11	-32.43	-34.12	-33.95	-34.23	-34.56	-34.68	-34.78	-35.32	-35.45	-35.67	-35.86	-36.11
Reference gain (dBi)	10.2	10.2	10.2	11	11.3	11.6	12	11.6	11.4	11.3	11.4	11.1	11	10.3
Factor(theta) (dB)	42.32	42.68	42.65	45.55	45.86	46.38	46.94	46.49	46.39	46.46	46.72	46.78	46.88	46.27
Factor(phi) (dB)	42.55	42.31	42.63	45.12	45.25	45.83	46.56	46.28	46.18	46.62	46.85	46.77	46.86	46.41

Note:

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

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

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

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

6. Test Method

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

DG steps:

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

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

7. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	0.6	1.26	1.87	1.57
Ant. 2 (dBi)	2.23	1.78	-0.36	-4.26
Ant. 3 (dBi)	-6.68	-2.9	-2.14	0.03
Ant. 4 (dBi)	3.66	2.45	3.39	2.19
DG [1SS] (dBi)	6.75	6.9	6.96	6.24
Polarization	Phi	Theta	Theta	Theta
$\Theta(^{\circ})$	7.5	15	15	82.5
$\Phi(^{\circ})$	105	15	0	247.5

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

DG_1SS max value position calculation

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(0.6/20)}$	$10^{(1.26/20)}$	$10^{(1.87/20)}$	$10^{(1.57/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(2.23/20)}$	$10^{(1.78/20)}$	$10^{(-0.36/20)}$	$10^{(-4.26/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(-6.68/20)}$	$10^{(-2.9/20)}$	$10^{(-2.14/20)}$	$10^{(0.03/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(3.66/20)}$	$10^{(2.45/20)}$	$10^{(3.39/20)}$	$10^{(2.19/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.072	1.156	1.24	1.198
Ant. 2 [$10^{(G/20)}$] value	1.293	1.227	0.959	0.612
Ant. 3 [$10^{(G/20)}$] value	0.463	0.716	0.782	1.003
Ant. 4 [$10^{(G/20)}$] value	1.524	1.326	1.477	1.287
Sum All Antenna [Amax]	4.352	4.426	4.459	4.101
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	6.75	6.9	6.96	6.24

Note:

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

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

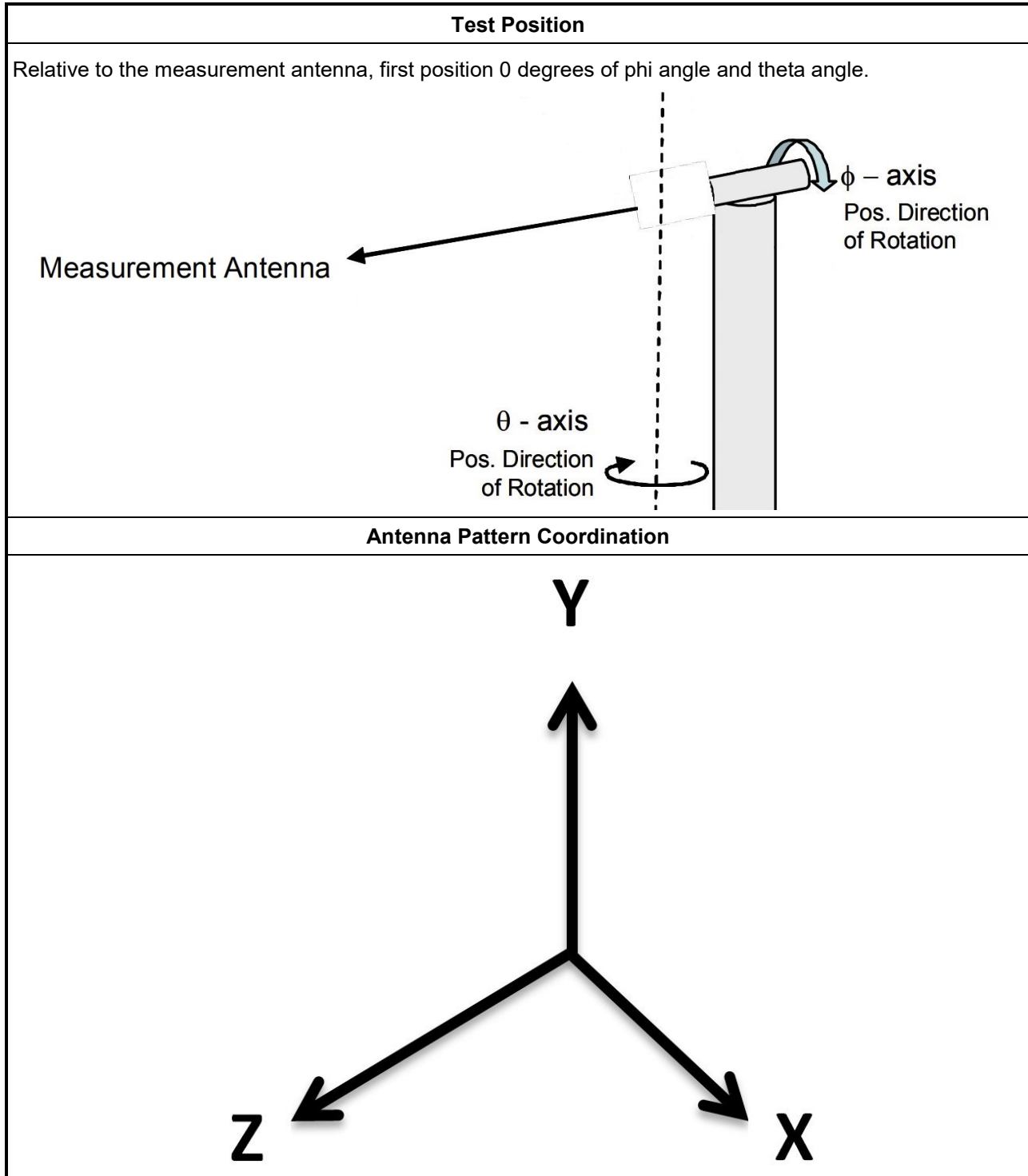
8. Summary of Test Result

Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.48	3.77	3.72	3.38
Ant. 2 Max Gain (dBi)	5.09	4.99	4.83	3.6
Ant. 3 Max Gain (dBi)	3.36	3.37	4.71	4.49
Ant. 4 Max Gain (dBi)	3.82	3.59	4.42	3.2
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/52.5/67.5	Phi/52.5/67.5	Theta/0/172.5	Theta/0/172.5
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/0/330	Phi/0/337.5	Phi/0/157.5	Phi/60/180
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/75/135	Theta/52.5/67.5	Theta/60/45	Theta/52.5/90
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/7.5/97.5	Phi/30/75	Theta/52.5/285	Theta/82.5/292.5
Max Gain (dBi)	5.09	4.99	4.83	4.49
DG [1SS] (dBi)	6.75	6.9	6.96	6.24
DG [2SS] (dBi)	5.09	4.99	4.83	4.49
DG [4SS] (dBi)	5.09	4.99	4.83	4.49

Note:

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

9. Test Setup



Note:

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



10. Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-1531	1GHz~18GHz	Dec. 19, 2025	Dec. 18, 2026
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419477	100kHz~8.5GHz	Aug. 06, 2025	Aug. 05, 2026
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain.....	Page 24
Appendix B – Antenna Pattern.....	Page 30
Appendix C – Test Photos.....	Page 31



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Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.48	3.77	3.72	3.38
Ant. 2 Max Gain (dBi)	5.09	4.99	4.83	3.6
Ant. 3 Max Gain (dBi)	3.36	3.37	4.71	4.49
Ant. 4 Max Gain (dBi)	3.82	3.59	4.42	3.2
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/52.5/67.5	Phi/52.5/67.5	Theta/0/172.5	Theta/0/172.5
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/0/330	Phi/0/337.5	Phi/0/157.5	Phi/60/180
Ant. 3 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/75/135	Theta/52.5/67.5	Theta/60/45	Theta/52.5/90
Ant. 4 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/7.5/97.5	Phi/30/75	Theta/52.5/285	Theta/82.5/292.5
Max Gain (dBi)	5.09	4.99	4.83	4.49
DG [1SS] (dBi)	6.75	6.9	6.96	6.24
DG [2SS] (dBi)	5.09	4.99	4.83	4.49
DG [4SS] (dBi)	5.09	4.99	4.83	4.49

DG 1SS Result

[illegible]



Radiated Composite Gain Data

Appendix A

Θ(22.5°)	1.572.15	2.93.56	4.194.65	4.925.09	5.325/0.57	4.54.02	3.623.19	3.483.87	3.83.42	2.862.37	2.383.15	3.894.18	4.234.12	3.983.85	3.683.73	3.462.63	2.123.43	4.274.6	4.794.45	4.224.01	4.084.07	4.254.11	3.382.42	1.371.08
Θ(30°)	2.352.49	2.723.4	4.054.44	5.15.45	5.675/5.35	4.513.15	1.782.16	3.443.93	3.573.12	2.191.23	1.472.96	4.154.97	5.275.19	4.773.9	3.012.85	2.752.04	1.893.28	4.064.17	4.153.65	2.972.76	3.343.92	4.14.04	3.242.18	1.772.08
Θ(37.5°)	1.941.92	1.652.04	2.232.59	3.424.48	5.736/1.19	5.383.25	1.842.91	4.023.86	3.032.63	2.292.44	2.192.84	3.584.22	3.793.15	3.814	2.941.75	1.421.55	2.443.64	3.983.36	2.882.95	3.133.01	3.213.45	3.563.42	3.22.86	2.862.72
Θ(45°)	2.021.6	0.210.17	0.030.97	2.534.4	5.425/7.7	5.274.1	2.923.41	42.9	1.521.04	1.191.48	1.822.71	3.093.4	3.663.64	3.342.81	2.150.64	-0.020.8	1.772.99	3.522.89	1.912.23	2.692.15	2.252.47	2.552.17	2.613.13	2.612.26
Θ(52.5°)	2.373.21	2.210.94	-0.150.6	2.214.5	5.445.1	4.073.28	2.743.37	3.622.72	1.970.63	0.220.07	0.071.15	2.033.49	4.143.69	2.511.44	0.53-0.54	-0.16-0.12	0.852.08	2.441.1	1.332.26	2.090.86	1.021.79	1.490.63	0.731.27	1.31.8
Θ(60°)	1.741.93	1.81.44	0.631.05	1.983.74	4.454.19	3.393.52	2.82.42	1.971.38	1.670.64	-0.58-0.47	-0.57-0.13	0.612.62	3.422.9	2.050.47	-0.99-1.7	-2.03-1.12	-0.440.38	1.390.69	0.91.37	0.4-1.06	0.421.45	0.29-0.4	-1-0.22	0.621.41
Θ(67.5°)	0.821.41	0.670.46	0.52-0.08	-0.551.91	2.751.83	1.252.53	2.581.83	0.70.28	0.21-1.19	-2.99-1.95	-1.64-1.03	-0.690.91	1.361.02	-0.14-1.13	-3.06-3.97	-3.02-1.48	-2.01-0.4	0.571-0.04	0.860.53	-1.66-2.21	-0.34-0.04	-1.01-1.51	-2.28-1.83	-1.390.2
Θ(75°)	-0.860.17	-0.14-1	-1.3-1.24	-1.76-0.95	1.030.66	-0.391.36	1.40.22	-1.3-1.67	-1.24-1.87	-4.86-3.4	-2.73-2.08	-2.58-0.86	-0.58-1.01	-1.77-3.1	-4.97-4.25	-3.13-2.44	-2.42-1.05	-1.28-1.85	-0.09-0.86	-3.05-2.95	-1.24-1.56	-2.75-4.07	-4.57-5.05	-2.81-1.61
Θ(82.5°)	-0.59-0.53	-1.15-2.68	-3.68-3.33	-2.86-3.12	-1.32-1.31	-1.73-0.31	0.07-1.06	-2.94-3.58	-3.09-3.51	-6.39-4.8	-3.28-3.21	-5.26-3.19	-3.58-4.63	-4.38-5.1	-3.31-2.42	-4.39-1.36	-1.97-1.82	-0.85-2.26	-4.87-4.61	-3.46-4.24	-5.04-6.88	-5.56-7.69	-4.38-2.08	
Θ(90°)	-3.44-1.63	-1.88-4.23	-5.66-5.69	-5.68-4.6	-3.84-3.74	-3.21-2.13	-1.79-2.12	-3.59-4.38	-3.51-3.79	-8.23-8.43	-6.15-4.32	-6.81-4.71	-4.96-5.35	-5.99-5.84	-5.63-5.67	-4.23-4.47	-5.89-3.67	-3.87-3.59	4-6.1	-6.16-6.52	-5.78-7.02	-7.49-9.67	-10.07-10.19	-7.88-5.32
Θ(97.5°)	-3.45-2.44	-3.62-5.78	-8.63-7.37	-5.57-6.45	-5.72-4.19	-4.29-4.63	-3.94-2.68	-3.71-4.26	-4.46-5.09	-8.57-9.52	-6.46-5.57	-7.07-4.86	-4.65-6.37	-5.85-4.97	-5.81-6.17	-7.95-4.82	-5.92-5.78	-6.9-7.85	-7.95-8.72	-8.3-7.79	-9.82-9.92	-10.03-9.43	-10.16-7.03	
Θ(105°)	-4.97-2.64	-3.65-5.22	-7.73-6.21	-7.9-7.59	-6.21-6.02	-6.53-7.57	-6.76-4.5	-3.84-4.12	-4.39-5.48	-9.13-9.15	-8.64-5.53	-9.22-7.6	-5-4.94	-7.36-5.63	-6.99-8.73	-6.99-8.4	-10.9-9.21	-7.36-7.63	-9.58-7.64	-9.88-9.06	-8.45-8.23	-8.52-10.48	-8.25-9.24	-10.27-5.1
Θ(112.5°)	-5.23-4.86	-4.98-5.64	-6.64-6.87	-9.1-8.51	-7.03-8.19	-9.65-8.22	-7.03-5.52	-6.13-5.55	-4.55-6.11	-6.36-6.61	-6.58-5.64	-8.16-8.99	-3.97-5.7	-7.13-7.58	-5.64-5.74	-6.48-8.1	-9.68-8.04	-8.29-8.28	-7.45-7.16	-11.05-9.91	-9.26-8.21	-9.94-6.44	-6.59-6.27	-5.69-6.79
Θ(120°)	-6.32-4.15	-2.97-5.54	-7.38-6.81	-7.26-7.29	-6.51-8.2	-10.55-11.55	-9.01-5.78	-5.05-6.62	-7.05-7.84	-7.05-4.8	-8.77-8.14	-8.22-7.18	-5.68-3.82	-8-5.23	-5.17-7.36	-8.32-7.65	-8.71-7.56	-6.48-6.43	-10.14-11.27	-9.27-7.69	-9.64-8.23	-5.82-5.98	-5.97-4.79	
Θ(127.5°)	-4.07-6.19	-6.55-7.06	-6.67-7.03	-8.32-8.4	-7.36-8.78	-8.07-7.71	-9.81-9.11	-8.74-8.3	-7.77-7.59	-6.53-5.06	-5.6-4.78	-4.21-4.52	-6.67-4.2	-2.63-6.75	-5.55-3.86	-5.67-5.1	-8.35-6.09	-7.18-6.52	-6.67-4.94	-8.31-10.99	-8.71-5.89	-8.54-5.07	-6.64-5.19	-8.75-5.08
Θ(135°)	-5.9-3.36	-4.67-6.58	-6.88-5.47	-7.61-8.66	-9.75-11.6	-11.13-9.39	-8.22-6.08	-7.25-8.22	-6.94-8.29	-4.17-4.69	-7.28-4.74	-4.09-1.98	-3.51-3.48	-5.89-5.24	-7.52-3.99	-5.2-4.83	-5.93-6.54	-8.33-7.07	-6.48-5.47	-8.75-11.89	-6.6-7.45	-4.34-4.86	-6.99-4.27	-7.75-7.11
Θ(142.5°)	-7.24-3.68	-4.47-6.14	-6.65-5.53	-6.11-9.83	-9.85-8.66	-7.36-6.94	-6.87-7.14	-9.33-9.54	-7.17-6.53	-6.16-6.56	-7.31-7.62	-5.67-6.44	-7.81-4.83	-6.22-7.32	-7.59-8.58	-5.48-4.83	-7.73-7.35	-7.96-7.29	-9.99-9.72	-7.55-9.18	-8.39-8.13	-7.78-8.66	-8.22-9.9	-9.78-8.46
Θ(150°)	-8.14-7.32	-7.16-7.21	-7.21-6.57	-6.21-5.17	-5.71-7.23	-8.71-7.83	-7.1-6.65	-6.79-6.78	-5.97-5.26	-5.07-5.06	-4.79-5.69	-6.73-7.23	-8-8-7.5	-6.31-9.19	-5.91-4.7	-6.54-9.37	-7.5-5.98	-7.49-8.79	-8.58-7.94	-5.53-5.18	-6.22-6.64	-8.22-9.4	-8.83-7.47	
Θ(157.5°)	-7.78-7.83	-6.61-5.23	-3.85-3.7	-4.42-5.01	-6.04-6.9	-8.15-8.36	-7.64-7.55	-8.42-9.61	-11.13-10.96	-9.77-8.67	-7.32-6.87	-7.5-8.4	-6.66-5.15	-6.54-8.25	-6.88-5.92	-5.12-5.47	-7.98-9.74	-8.14-6.53	-7.16-9.22	-11.24-11.3	-7.98-6.81	-7.4-7.03	-6.18-6.02	-6.18-7.09
Θ(165°)	-8.68-6.62	-9.03-8.88	-7.64-7.57	-6.64-6.28	-6.12-7.08	-9.96-11.4	-10.68-10.07	-10.66-11.17	-11.9-11.2	-9.45-8.32	-7.5-6.71	-5.8-5.75	-6.09-7	-8.46-8.6	-8.35-7.45	-8.02-9.44	-10.62-9.19	-7.56-6.86	-7.73-9.14	-8.91-7.88	-6.71-5.29	-4.61-9.43	-5.55-7.04	-7.64-5.9
Θ(172.5°)	-8.64-8.13	-7.3-6.55	-5.71-6.02	-6.71-7.52	-8.77-9.71	-10.33-9.57	-8.57-8.72	-9.81-10.91	-12.08-11.16	-10.59-10.32	-10.45-10.83	-10.48-10.79	-10.89-10.39	-10.02-9.21	-8.67-8.85	-9.03-9.73	-9.64-9.33	-8.62-8.86	-8.76-8.91	-8.72-8.6	-7.67-7.21	-7.1-7.99	-8.61-9.1	-9.02-9.36
Θ(180°)	-9.47-11.13	-11.48-10.68	-10.53-11.35	-9.94-9.59	-9.7-9.83	-9.26-9.16	-9.93-10.08	-9.98-9.82	-8.87-7.8	-6.98-7.29	-7.81-8.17	-8.5-9.4	-10.15-10.73	-10.99-11.11	-10.58-10.52	-9.68-9.35	-9.41-9.37	-9.15-8.66	-8.82-8.82	-10.38-10.29	-10.11-10.12	-10.12-9.94	-9.87-9.81	-11.09-11.46
Freq(Pol)	5.6GPol	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°)	5.05	5.055.13	5.195.03	4.693.99	3.63.04	2.441.99	2.513.19	3.574.05	4.695.01	5.225.4	5.565.69	5.746	6.216.35	6.326.28	6.186	5.585.17	4.784.34	3.813.3	3.163.57	3.883.95	4.124.31	4.414.53	4.694.82	4.824.81
Θ(7.5°)	6.346.15	5.845.41	4.94.08	3.332.52	1.820.97	0.561.18	2.263.11	3.924.5	4.785.1	5.555.85	5.795.62	5.665.79	6.056.32	6.226.04	6.545.82	5.594.99	4.584.33	4.03.87	4.174.57	4.895.14	5.455.75	5.815.89	5.996.12	6.226.32
Θ(15°)	6.966/9	6.636.01	5.494.65	3.710.27	1.390.38	0.581.82	3.363.91	4.154.04	4.124.23	4.520.69	4.194.19	4.314.55	4.594.43	4.114.04	3.863.67	3.565.55	3.724.3	4.694.86	4.884.9	4.995.28	5.676.08	6.346.68	6.826.94	
Θ(22.5°)	6.126.13	6.045.59	4.64.4	3.322.61	1.760.74	0.622.4	4.144.68	4.714.31	3.863.53	2.742.24	1.991.48	1.942.53	3.063.56	3.753.74	3.663.85	4.244.06	3.663.56	3.744.21	4.574.64	4.6-4.2	3.843.78	3.833.79	3.994.88	5.676.07
Θ(30°)	4.774.79	4.764.29	3.482.76	2.191.29	0.340.19	1.12.85	4.45-2.9	5.244.39	3.232.47	1.581.63	0.82-0.03	0.821.18	1.762.76	3.082.7	3.237.72	4.754.98	4.834.6	4.174.01	3.623.05	3.253.14	2.983.15	3.162.9	2.562.9	3.674.44
Θ(37.5°)	3.063.71	4.013.78	3.23.03	3.13.06	2.191.26	1.312.24	3.634.46	4.673.88	3.582.75	1.581.09	0.050.29	0.961.25	1.31.34	1.882.46	2.993.44	3.923.85	3.493.59	3.623.8	4.284.9	4.874.05	3.682.81	1.550.48	-0.290.07	0.862.92
Θ(45°)	3.13.73	3.843.92	3.423.02	3.713.89	2.691.81	2.143.51	4.114.1	4.243.6	3.713.16	2.352.07	1.03-0.33	-0.330.28	0.4-0.17	0.591.28	2.062.94	3.63.78	3.193.31	4.585.07	5.26.05	6.075.52	5.554.25	2.540.83	0.651.08	1.591.97
Θ(52.5°)	3.944.57	4.594.15	4.093.59	3.33.45	2.762.12	3.214.94	5.034.56	4.354.72	4.453.3	2.432.11	1.630.31	0.33-1.1	0.430.32	1.271.59	2.192.28	3.223.79	3.263.81	4.474.77	5.246	6.095.35	5.464.39	3.583.23	3.463.51	3.443.18
Θ(60°)	4.734.98	5.434.9	5.084.97	4.194.34	3.792.89	3.375.32	5.255.01	5.095.55	5.243.72	3.313.37	3.472.56	2.762.25	1.711.66	2.692.35	2.181.96	3.044.36	4.674.28	4.715.15	5.66.18	6.055.35	6.034.92	5.295.09	4.524.35	4.53.66
Θ(67.5°)	4.855.13	5.715.44	5.185.34	4.945.79	4.373.57	3.825.08	5.34.06	5.185.86	3.343.54	44.23	4.54.17	4.363.37	2.882.6	3.373.06	3.215.37	5.915.04	5.86.09	6.185.52	6.225.43	5.565.19	4.263.77	3.963.41		
Θ(75°)	4.524.8	4.984.82	4.745.15	4.794.75	4.574.39	4.254.84	4.934.72	4.825.64	5.353.81	4.154.2	4.234.22	4.463.97	3.543.08	3.212.63	2.712.21	2.945.43	6.616.02	5.325.28	5.866.68	6.495.93	6.245.19	5.494.97	3.963.33	3.483.22
Θ(82.5°)	4.514.15	4.213.84	3.553.76	4.354.32	4.294.14	4.254.31	3.953.98	3.944.92	4.63.4	43.64	3.643.21	4.053.01	3.163.38	2.421.76	1.892.3	3.476.14	6.916.62	5.765.3	6.166.68	6.566.4	5.874.89	4.614.12	3.893.01	2.963.87
Θ(90°)	3.112.93	4.092.38	2.513.46	2.983.26	3.753.99	4.164.04	2.983.57	2.713.84	3.682.81	2.662.15	2.791.75	1.331.77	1.440.53	1.411.41	3.095.31	5.746.22	5.565.29	5.035.89	5.895.66	4.933.76	3.192.36	2.672.33	1.963.49	



Radiated Composite Gain Data

Appendix A

Gain Result

Freq(Hz)	5.2GPol.	PhiAnt.1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-5.55/-4.62	-2.83/-1.27	-0.31/0.4	0.87/1.35	1.71/1.91	1.81/1.68	1.52/3.14	0.87/0.32	-0.44/-1.46	-2.71/-2.45	-6.28/-8.41	-9.55/-8.45	-6.29/-4.1	-2.32/-0.88	0.24/0.1	1.55/2.03	2.43/2.69	2.62/2.92	2.62/1.92	1.32/0.39	-0.56/-1.75	-3.33/-5.06	-6.93/-8	-7.89/-12.6
Θ(7.5°)	-6.15/-4.76	-3.25/-1.99	-0.85/0	0.46/0.98	1.32/1.42	1.59/1.57	1.32/1.01	0.6/0	-0.82/-1.99	-3.43/-5.24	-7.51/-10.45	-11.1/-8.62	-5.63/-3.08	-1.07/0.51	1.53/2.26	2.73/3.09	3.2/3.25	3.08/2.76	2.24/1.48	0.73/-0.12	-1.15/-2.38	-3.79/-5.45	-7.7/-8.88	-9.22/-13.8
Θ(15°)	-10.57/-8.11	-5.78/-3.52	-1.92/-0.71	0.0/8	1.36/1.74	1.83/1.78	1.49/1.17	0.52/-0.23	-1.18/-2.49	-4.3/-6.58	-8.59/-9.56	-8.91/-7.01	-4.92/-2.89	-1.03/0.35	1.33/2.1	2.44/2.62	2.44/2.28	2.1/7.8	1.36/0.79	0.27/-0.46	-1.27/-2.12	-3.08/-4.1	-6.8/-8.98	-11.27/-13.5
Θ(22.5°)	-10.16/-8.77	-7.25/-5.24	-3.5/-1.56	-0.11/0.09	1.83/2.25	2.03/1.81	1.32/0.47	-0.15/-0.98	-2.17/-4.34	-7.1/-10.04	-10.18/-8.8	-5.54/-3.83	-2.21/-0.75	0.38/1.08	1.52/1.57	1.34/1.06	0.87/0.87	0.86/0.48	0.86/0.48	-0.01/-1.17	-2.24/-3.53	-5.44/-7.26	-8.32/-9.79	
Θ(30°)	-9.95/-10.9	-7.71/-5.34	-3.81/-1.98	-0.1/1.21	1.78/1.72	1.58/1.16	0.78/0.6	0.59/0.39	-0.29/-1.83	-4.97/-10.45	-15.12/-14.36	-11.78/-9.24	-6.95/-5.06	-3.23/-1.76	-0.81/-0.07	0.59/1.02	1.37/1.19	0.84/0.25	-0.08/-0.33	-0.19/0.31	0.27/-0.75	-2.36/-3.67	-4.42/-4.98	-6.1/-8.07
Θ(37.5°)	-7.52/-11.1	-17.71/-15.08	-11.56/-5.72	-1.1/55	2.65/2.63	2.07/1.4	0.79/1.03	1.16/0.7	-0.22/-2.03	-5.3/-10.52	-17.17/-15.18	-9.39/-6.42	-4.8/-3.12	-1.54/-0.59	0.59/1.13	1.22/0.75	-0.14/-0.77	-1.2/-1.39	-0.91/-0.09	0.14/-0.7	-2.25/-2.88	-2.52/-2.51	-3.08/-5.32	
Θ(45°)	-8.95/-13.54	-16.12/-14.64	-11.25/-5.62	-1.04/2.08	3.4/3.12	2.22/1.13	1.26/1.8	2.07/1.34	-0.02/-1.87	-17.4/-15.68	-10.67/-9.73	-8.99/-6.52	-4.22/-2.82	-1.78/-1.22	-0.71/-0.26	0.01/-0.12	-0.83/-1.53	-1.9/-2.58	-2.87/-1.91	-1.49/-2.41	-2.91/-1.77	-0.72/-1.24	-2.8/-4.65	
Θ(52.5°)	-6.34/-7.79	-9.26/-8.85	-5.95/-2.41	0.02/2.16	3.46/3.48	2.73/2	1.61/1.75	1.69/0.32	-1.57/-3.2	-6.92/-13.87	-18.47/-14.13	-10.19/-10.6	-9.83/-7.47	-6.04/-5.12	-3.43/-2.54	-2.74/-2.25	-1.01/-0.88	-1.79/-3	-3.24/-3.2	-5.05/-3.52	-2.86/-3.57	-4.34/-3.03	-2.24/-2.51	-3.23/-4.17
Θ(60°)	-4.61/-5.92	-6.65/-6.7	-4.27/-2.16	-0.86/0.76	2.14/2.26	1.54/0.91	0.18/0.66	0.92/0.54	-2.98/-4.84	-8.74/-15.93	-18.03/-18.7	-15.47/-18.12	-16.65/-13.42	-5.56/-4.4	-4.36/-3.8	-2.73/-2.26	-3.9/-4.64	-4.56/-5.76	-6.38/-4.93	-4.07/-4.07	-3.41/-2.57	-2.78/-3.49	-3.07/-3.25	
Θ(67.5°)	-4.88/-4.21	-4.8/-4.84	-6.8/-3.76	-1.5/-0.59	0.26/0.65	0.11/0.5	-1.08/-1.01	-1.01/-3.29	-5.68/-6.72	-10.68/-15.98	-15.19/-12.81	-17.47/-14.32	-11.78/-9.67	-9.42/-9.47	-8.3/-6.72	-6.88/-6.7	-4.51/-3.26	-5.21/-6.45	-5.17/-6.97	-8.73/-5.77	-5.13/-6.05	-5.66/-6.37	-7.6/-6.72	-4.39/-3.78
Θ(75°)	-5.26/-4.76	-5.64/-9.22	-8.87/-5.89	-3.36/-2.93	-2.27/-1.19	-1.42/-1.92	-3.46/-4.59	-4.12/-5.81	-7.97/-8.82	-12.73/-18.49	-17.38/-14.43	-15/-14.34	-12.15/-10.61	-9.99/-10.16	-9.3/-7.61	-8.24/-8.77	-6.36/-5.05	-6.83/-7.43	-5.94/-7.82	-9.28/-7.47	-6.94/-7.34	-6.96/-8.22	-10.32/-7.89	-5.8/-5.59
Θ(82.5°)	-7.24/-5.62	-6.36/-10.62	-13.08/-9.92	-6.4/-6.06	-6.38/-4.49	-4.31/-5.05	-6.14/-6.7	-6.08/-4.89	-12.22/-11.95	-16.95/-18.41	-15.98/-13.74	-13.25/-11.95	-10.36/-9.02	-11.26/-13.11	-12.29/-11.42	-11.56/-13.03	-8.45/-6.83	-8.43/-9.99	-7.04/-8.77	-11.61/-9.15	-9.38/-11.55	-9.77/-12.25	-14.8/-10.56	-8.2/-7.9
Θ(90°)	-8.59/-6.57	-7.38/-10.35	-18.27/-16.62	-9.44/-8.32	-8.99/-6.58	-6.85/-8.31	-10.02/-11.04	-8.75/-10.09	-15.49/-12.76	-14.94/-19.25	-16.24/-12.89	-12.42/-13.89	-11.52/-11.2	-13.4/-12.57	-13.71/-13.74	-14.46/-15.88	-10.63/-9.04	-11.45/-10.86	-8.71/-11.7	-13.12/-11.9	-15.79/-16.84	-18.92/-19.25	-18.94/-15.72	-12.16/-12.75
Θ(97.5°)	-12.47/-8.29	-10.46/-12.89	-15.47/-19.12	-13.09/-10.06	-11.07/-10.33	-10.23/-11.36	-12.41/-15.53	-13.57/-14.09	-18.89/-14.25	-15.79/-15.08	-16.66/-13.38	-13.02/-14.5	-10.58/-10.46	-12.36/-13.71	-13.8/-14.87	-18.87/-17.3	-14.8/-10.07	-12.93/-11.69	-10.29/-14.25	-18.94/-17.4	-19.17/-18.84	-18.18/-17.27	-17.9/-16.2	-12.98/-16.95
Θ(105°)	-11.26/-10.63	-12.57/-13.55	-17.74/-18.58	-13.71/-15.32	-12.71/-13.15	-14.79/-16.94	-14.5/-12.9	-18.04/-16.11	-18.29/-13.74	-15.75/-11.77	-11.89/-13.39	-10.56/-9.98	-10.46/-11.66	-13.27/-18.07	-12.61/-18.04	-16.55/-16.1	-18.89/-15.47	-14.1/-17.35	-18.96/-17.88	-15.27/-18.91	-18.15/-18.01	-18.37/-15.86	-14.8/-10.56	-8.32/-9.79
Θ(112.5°)	-10.41/-8.7	-7.78/-8.57	-10.49/-15.17	-19.03/-17.94	-17.34/-18.65	-18.67/-19.24	-15.05/-12.94	-18.21/-17.54	-17.55/-17.79	-18.4/-14.59	-15.51/-12.13	-11.19/-13.89	-13.1/-10.92	-13.92/-19.03	-16.39/-14.5	-16.13/-18.97	-18.45/-17.94	-19/-18.91	-17.28/-19.06	-17.78/-17.76	-17.61/-17.51	-17.39/-15.52	-18/-18.44	-13.73/-13.66
Θ(120°)	-15.26/-13.28	-15.24/-13.48	-9.14/-9.71	-15.54/-18.61	-16.5/-15.9	-17.91/-18.82	-18.61/-15.09	-17.82/-17.86	-17.93/-14.66	-14.91/-15.86	-15.63/-17.06	-15.94/-17.62	-17.89/-12.09	-9.71/-12.43	-18.88/-17.79	-16.81/-17.88	-18.72/-19.41	-17.34/-17.77	-17.6/-19.12	-17.74/-15.64	-12.76/-18.02	-19.02/-13.07	-18.09/-18.34	-10.78/-11.82
Θ(127.5°)	-17.38/-11.82	-13.8/-17.4	-13.23/-9.71	-9.02/-15.97	-18.5/-14.47	-13.99/-17.87	-17.58/-15.54	-18.76/-17.2	-18.81/-13.03	-9.03/-8.66	-12.04/-13.72	-9.96/-9.55	-9.43/-8.26	-9.06/-13.36	-13.67/-13.91	-19.16/-17.72	-17.3/-17.81	-18.26/-18.54	-19.3/-17.73	-17.35/-15.27	-12.58/-12.93	-18.39/-18.55	-18.73/-12.57	-16.54/-18.76
Θ(135°)	-15.14/-9.95	-10.08/-17.34	-15.91/-11.59	-11.76/-18.36	-17.99/-17.31	-18.12/-18.1	-11.52/-14.67	-17.37/-10.95	-11.29/-14.74	-10.49/-9.29	-9.88/-10.65	-11.93/-10.74	-8.55/-9.71	-10.35/-15.7	-17.72/-18.04	-18.05/-18.29	-17.88/-17.09	-16.73/-17.48	-18.97/-17.68	-18.58/-14.01	-18.98/-17.63	-9.2/-9.08	-18.02/-17.02	-15.51/-18.23
Θ(142.5°)	-12.28/-8.35	-8.46/-13.83	-17.7/-17.53	-18.97/-19.15	-18.29/-17.88	-18.71/-12.37	-9.17/-10.01	-14.14/-11.86	-9.43/-11.03	-13.28/-11.61	-11.04/-15.93	-18.83/-17.69	-12.92/-9.39	-10.55/-15.61	-18.29/-18.75	-18.49/-18.6	-16.9/-16.95	-19.01/-18.3	-19.31/-18.43	-17.88/-16.59	-19.34/-16.97	-18.05/-18.83	-11.81/-13.38	-18.81/-17.2
Θ(150°)	-16.53/-17.92	-17.74/-17.95	-18.98/-18.21	-13.31/-8.77	-7.27/-8.03	-11.32/-11.71	-8.78/-7.7	-9.67/-11.6	-12.04/-12.02	-11.22/-9.7	-9.21/-10.1	-10.69/-10.52	-9.81/-9.23	-10.03/-11.31	-17.83/-16.68	-18.59/-18.93	-18.55/-18.8	-19.22/-18.45	-17.88/-18.42	-17.83/-15.74	-14.15/-15.59	-17.99/-18.84	-16.56/-13.01	-14.16/-16.39
Θ(157.5°)	-16.63/-18.7	-17.65/-13.51	-11.95/-14.07	-8.15/-6.5	-6.1/-7.28	-10.1/-13.73	-15.08/-14.05	-14.61/-15.06	-14.71/-14	-13.96/-13.3	-12.17/-10.59	-9.58/-9.45	-9.53/-10.08	-11.45/-14.05	-18.12/-18.67	-18.35/-19	-18.05/-18.55	-18.55/-18.73	-18.07/-19.2	-18.33/-15.13	-13.88/-15.23	-17.87/-18.1	-18.42/-18.01	-17.83/-18.54
Θ(165°)	-11.82/-12.23	-15.73/-13.84	-18.32/-17.08	-12.6/-10.6	-10/-11.43	-14.25/-16.63	-18.84/-17.12	-16.71/-17.42	-18.71/-18.43	-11.81/-18.85	-15.13/-13.17	-12.27/-12.61	-13.38/-14.2	-15.52/-17.83	-18.29/-18.65	-17.89/-17.52	-17.92/-17.92	-18.88/-18.21	-17.47/-16.62	-17.78/-16.74	-14.54/-13.51	-14.22/-16.8	-18.29/-18.41	-18.51/-14.94
Θ(172.5°)	-18.34/-18.24	-18.67/-18.3	-17.93/-16.14	-15.49/-16.24	-17.57/-18.39	-18.64/-18.18	-17.46/-17.88	-18.75/-17.61	-17.84/-17.8	-18.54/-17.1	-16.06/-15.29	-15.12/-14.68	-14.46/-14.69	-15.2/-15.42	-16.13/-16.77	-17.38/-18.3	-17.12/-18.36	-18.41/-17.62	-18.35/-18.55	-18.33/-19.14	-16.94/-16.24	-17.06/-18.78	-17.97/-17.92	-18.04/-18.95
Θ(180°)	-18.24/-17.82	-17.64/-16.18	-16.14/-16.37	-17.16/-18.46	-18.91/-18.19	-18.78/-17.95	-18.14/-19.29	-18.29/-18.1	-16.06/-14.74	-14.09/-13.31	-13.24/-14.08	-14.99/-16.44	-17.12/-17.6	-17.09/-16.66	-15.51/-15.13	-14.94/-15.56	-17.18/-18.05	-19.35/-18.18	-18.63/-18.58	-18.01/-18.19	-17.19/-18.09	-18.16/-17.92	-18.26/-17.88	-18.81/-18.43
Freq(Hz)	5.2GPol.	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°)	1.52/1.16	0.72/0.01	-0.86/-1.88	-3.19/-1.48	-5.36/-6.8	-8.07/-8.44	-7.77/-6.64	-5.58/-3.92	-2.24/-0.96	-0.2/0.52	1.13/-1.56	1.77/1.95	1.62/1.12	0.51/-0.4	-1.73/-1.77	-4.89/-6.49	-7.59/-7.42	-6.37/-7.42	-3.14/-1.8	-0.79/-0.03	0.57/1.01	1.38/1.64	1.72/1.66	
Θ(7.5°)	2.12/1.81	1.23/0.44	-0.33/-1.42	-3.4/-4.8	-6.17/-8.51	-9.68/-9.61	-8.34/-7.02	-5.79/-4.09	-2.39/-0.83	0.12/1.1	1.89/2.44	2.613.02	3.08/2.86	2.41/1.83	1.09/0.06	-1.39/-2.97	-4.64/-5.72	-5.79/-5.82	-4.1/-2.74	-1.54/-0.51	0.27/0.83	1.41/1.81	2.12/2.5	2.49/2.34
Θ(15°)	1.84/1.11	0.35/-0.55	-1.48/-2.53	-4.05/-6.02	-9.02/-14.11	-19.15/-12.79	-7.83/-5.28	-3.86/-2.82	-1.71/-0.67	0.08/0.84	1.55/2.13	2.47/2.53	2.35/1.92	1.22/0.44	-0.45/-1.69	-2.85/-3.8	-4.22/-4.28	-4.04/-3.53	-3.04/-2.05	-1.2/-2.25	0.62/1.21	1.62/2.02	2.38/2.59	2.38/2.22
Θ(22.5°)	-0.91/-2.04	-3/-3.87	-4.89/-5.61	-6.18/-7.02	-8.55/-11.25	-13.18/-9.74	-6.35/-4.41	-3.17/-2.38	-1.87/-1.52	-1.27/-0.9	-0.25/0.38	0.62/0.45	0.09/-0.47	-1.12/-1.77	-2.28/-2.67	-2.42/-1.94	-1.51/-1.19	-1.33/-1.83	-2.19/-2.14	-1.79/-0.97	-0.08/0.37	0.6/0.6	0.51/0.5	0.21/-0.07
Θ(30°)	-3.61/-3.85	-4.36/-4.98	-4.99/-4.78	-4.78/-5.84	-7.6/-9.42	-10.13/-7.95	-5.63/-9.99	-3.16/-2.87	-2.86/-3.21	-3.52/-2.95	-1.74/-0.67	-0.32/-0.75	-1.46/-2.45	-3.35/-3.73	-2.52/-2.77	-1.82/0.71	-0.18/-0.23	-1.12/-1.18	-2.06/-1.97	-1.93/-2.02	-1.91/-1.85	-2.04/-2.6	-3.27/-3.42	-4.93/-3.37
Θ(37.5°)	-4																							



Radiated Composite Gain Data

Appendix A

Θ(22.5°)	-8.76/-8.04	-6.59/-5.61	-4.13/-2.66	-1.15/-0.04	1.13/1.8	1.81/1.8	1.83/0.83	-0.32/-1.79	-3.4/-5.59	-8.26/-12.21	-15.33/-11.74	-8.42/-6.26	-4.46/-2.85	-1.71/-0.8	-0.16/0.27	0.53/0.76	0.8/0.57	0.36/-0.3	-1.23/-2.74	-3.46/-2.84	-1.47/-0.52	-0.08/-0.25	-1.33/-3.04	-5.17/-6.3
Θ(30°)	-5.54/-8.76	-7.3/-4.72	-2.97/-1.6	-0.05/-0.97	1.66/-1.92	1.53/3.4	0.97/0.37	-0.55/-1.28	-2.11/-3.79	-7.55/-15.13	-19.41/-9.66	-5.92/-4.2	-3.16/-2.08	-1.03/-0.32	0.15/0.11	0.14/0.28	0.72/0.91	0.89/0.43	-0.12/-1.72	-3.99/-4.67	-2.27/-0.25	0.07/-1.01	-2.77/-4.07	-4.11/-4.2
Θ(37.5°)	-5.72/-11.27	-12.9/-6.66	-8.43/-6.03	-1.32/-0.69	0.93/1.58	1.29/0.21	-1.46/-1.82	-1.59/-1.52	-2.19/-3.84	-7.07/-10.53	-18.83/-12.14	-1.56/-6.35	-5.58/-3.95	-2.26/-1.26	-0.83/-0.6	-0.39/0.24	1/1.03	-0.38/-0.59	-1.14/-1.96	-3.04/-3.26	-1.36/0.27	0.11/-0.82	-1.46/-1.85	-2.07/-2.91
Θ(45°)	-6.55/-12.23	-18.66/-19.14	-17.52/-9.31	-4.12/-0.98	0.41/1.16	1.17/0.19	-1.38/-1.74	-1.56/-1.5	-2.14/-4.92	-9.2/-11.89	-17.99/-11.52	-6.74/-5.49	-4.79/-3.37	-1.73/-0.99	-0.91/-1.05	-1.13/-1.03	-0.51/-0.19	-1.02/-2.61	-3.45/-3.44	-4.48/-5.05	-2.31/-0.84	-0.68/-1.75	-0.66/0	-1.68/-3.61
Θ(52.5°)	-2.64/-2.7	-5.27/-10.33	-11.47/-8.82	-1.89/-1.14	1.81/1.38	1.12/0.66	-0.95/-1.17	-1.23/-2.16	-2.98/-6.1	-11.07/-12.73	-17.94/-10.93	-1.76/-6.27	-5.47/-4.89	-3.41/-2.47	-1.95/-1.21	-1.17/-1.31	-1.27/-1.12	-1.78/-4.02	-4.99/-4.36	-5.27/-6.12	-3.13/-1.88	-2.81/-3.32	-2.37/-1.15	-1.41/-2.41
Θ(60°)	-3.3/-2.64	-4.21/-7.36	-8.45/-5.44	-1.42/-1.67	2.66/-1.67	0.76/0.75	0.14/-0.83	-1.5/-3.37	-3.9/-7.88	-18.23/-18.03	-16.45/-9.41	-8.94/-5.72	-4.04/-5.05	-4.69/-4.48	-4.65/-3.65	-3.13/-4.7	-2.71/-4.49	-6.65/-6.06	-4.65/-6.06	-4.05/-2.7	-4.56/-3.88	-2.74/-3.07	-2.68/-2.87	
Θ(67.5°)	-4.8/-4.52	-4.41/-6.04	-7.49/-6.67	-3.01/-0.1	1.61/0.94	-0.53/-0.18	-0.72/-2.03	-2.53/-5.58	-6.96/-10.27	-17.91/-18.28	-14.07/-10.29	-11.75/-6.47	-6.93/-8.45	-6.06/-5.76	-7.11/-5.91	-4.67/-3.67	-4.71/-4.03	-3.29/-6.21	-7.93/-7.05	-8.83/-9.13	-4.76/-4.07	-5.51/-4.23	-3.67/-4.52	-4.92/-4.46
Θ(75°)	-6.3/-4.85	-5.89/-10.04	-11.68/-8.28	-0.24/-0.33	-2.23/-1.78	-2.54/-5.15	-5.65/-8.95	-11.27/-12.11	-18.1/-18.87	-11.53/-9.7	-13.91/-6.91	-6.46/-8.54	-7.08/-7.04	-8.96/-8.33	-6.53/-5.04	-6.1/-5.5	-5.2/-6.96	-8.26/-6.86	-9.63/-10.64	-6.42/-6.4	-8.49/-8.66	-8.57/-9.86	-6.63/-6.34	
Θ(82.5°)	-6.33/-5.75	-6.5/-13.54	-17.86/-10.44	-6.58/-6.06	-3.03/-1.89	-3.57/-4.42	-5.2/-9.05	-8.91/-12	-17.08/-13.76	-15.44/-9.49	-9.29/-11.61	-8.03/-6.79	-9.43/-10.77	-8.83/-7.19	-8.7/-6.69	-5.95/-7.37	-8.28/-8.41	-12.1/-12.46	-8.93/-10.75	-10.97/-13.71	-13.56/-12.44	-8.71/-6.59		
Θ(90°)	-10.78/-8.79	-9.79/-18.86	-17.63/-13.58	-8.86/-9.67	-8.48/-5.03	-5.87/-7.55	-7.15/-10.33	-12.3/-13.58	-17.42/-18.81	-17.4/-17.94	-15.7/-13.18	-18.97/-10.04	-8.41/-10.45	-8.71/-8.07	-11.57/-16.13	-10.75/-10.09	-9.39/-8.3	-8.47/-10.91	-10.87/-11.11	-14.68/-12.87	-11.01/-17.17	-16.21/-15.51	-13.36/-17	-15.21/-11.4
Θ(97.5°)	-10.09/-9.28	-9.84/-12.85	-19.36/-14.91	-10.7/-1.7	-11.92/-7.19	-7.27/-12.42	-11.58/-11.59	-17.32/-13.71	-18.66/-18.4	-16.89/-18.05	-12.39/-10.37	-15.16/-10.14	-8.52/-13.67	-12.81/-9.33	-13.59/-17.14	-15.37/-16.51	-13.64/-12.21	-14.45/-13.62	-11.76/-15.08	-18.92/-19.19	-17.95/-17.73	-18.38/-18.54	-15.74/-13.21	
Θ(105°)	-13.94/-8.14	-9.19/-10.28	-14.91/-18.5	-17.82/-13.01	-15.9/-1.4	-11.67/-18.2	-19.09/-13.33	-13.27/-16.26	-18.6/-18.1	-18.68/-17.17	-15.02/-10.3	-13.08/-14.98	-9.87/-12.07	-11.11/-9.74	-13.41/-19.27	-18.31/-16.58	-18.17/-18.3	-17.41/-18.5	-18.17/-14.99	-18.94/-17.52	-18.17/-32	-15.51/-18.76	-16.64/-18.22	
Θ(112.5°)	-14.36/-16.58	-17.91/-11.29	-10.72/-13.93	-18.22/-17.36	-16.68/-18.05	-16.79/-15.95	-18.29/-14.8	-14.6/-18.64	-19.4/-17.51	-18.68/-12.03	-12.44/-9.18	-11.65/-12.11	-10.85/-13.97	-14.56/-13.27	-15.36/-16.61	-18.15/-18.26	-18.46/-19.05	-18.18/-19.42	-18.25/-18.83	-19.13/-18.38	-17.66/-17.98	-18.28/-17.56	-13.34/-13.75	-9.97/-10.46
Θ(120°)	-9.65/-12.35	-15.25/-16.85	-12.17/-11.13	-13.98/-19.05	-14.59/-18	-10.72/-11.7	-18.02/-14.57	-14.24/-17.9	-19.03/-18.54	-14.6/-13.04	-16.29/-12.65	-12.24/-14.35	-13.01/-10.72	-12.09/-11.7	-14.17/-18.83	-18.08/-18.66	-19.3/-18.13	-18.98/-18.08	-17.92/-12.96	-16.79/-18.25	-17.31/-18.62	-17.65/-13.51	-18.78/-15.16	-7.84/-7.68
Θ(127.5°)	-7.55/-9.28	-12.94/-16.83	-13.56/-9.76	-13.51/-17.76	-12.17/-14.29	-17.58/-17.23	-18.75/-18.5	-17.93/-17.47	-13.1/-14.5	-12.32/-9.07	-8.3/-8.06	-8.98/-7.78	-9.2/-12.9	-17.72/-18.49	-18.8/-18.85	-19.04/-17.38	-18.71/-17.77	-19.21/-13.29	-19.14/-17.95	-15.34/-11.95	-19.35/-11.63	-16.91/-10.75	-17.77/-8.65	
Θ(135°)	-18.09/-9.03	-9.75/-18.54	-18.6/-11.71	-14.33/-18.52	-17.75/-18.22	-18.81/-17.64	-16.3/-11.61	-11.21/-9.37	-11.53/-18.8	-10.12/-7.5	-12.64/-16.51	-9.75/-7.62	-8.04/-7.69	-9.65/-12.44	-17.35/-18.76	-15.74/-17.95	-17/-18.01	-18.79/-17.37	-18.87/-14.28	-16.36/-17.98	-14.07/-14.94	-10.13/-11.49	-19.22/-10.53	-13.6/-18.73
Θ(142.5°)	-15.62/-12.52	-16.25/-16.25	-18.73/-18.58	-18.79/-16.64	-14.17/-13.12	-11.06/-12.7	-12.82/-10.4	-8.16/-9.76	-11.93/-11.61	-12.57/-17.7	-13.88/-11.5	-10.38/-9.06	-10.9/-18.3	-16.38/-15.48	-19.22/-18.68	-18.88/-19.1	-17.85/-18.04	-18.5/-19.01	-15.76/-16.6	-14.77/-17.11	-13.57/-17.83	-16.61/-17.08	-18.28/-16.23	
Θ(150°)	-11.87/-13.06	-15.6/-16.1	-17.3/-17.14	-11.87/-9.04	-8.57/-9.29	-10.33/-10.77	-10.02/-9.49	-9.29/-8.42	-8.32/-9.41	-8.89/-7.06	-6.7/-8.45	-11.12/-13.66	-12.61/-11.08	-11.71/-14.42	-18.74/-17.19	-19.22/-18.14	-18.28/-17.99	-17.43/-17.84	-18.11/-15.31	-15.33/-15.23	-11.27/-10.32	-11.72/-16.10	-11.92/-17.23	-17.33/-12.56
Θ(157.5°)	-19.05/-18.32	-13.64/-10.95	-10.13/-10.11	-11.7/-8.68	-9.45/-11.4	-12.51/-12.63	-12.95/-12.33	-11.56/-12.19	-15.46/-18.09	-16.87/-13.42	-10.56/-9.21	-8.6/-8.72	-9.24/-9.84	-11.23/-14.05	-16.31/-17.71	-18.14/-19.06	-18.59/-18.71	-18.9/-17.87	-17.95/-17.66	-18.29/-18.13	-12.02/-10.46	-10.76/-10.48	-11.19/-14.82	-16.83/-18.85
Θ(165°)	-14.54/-13	-15.66/-18.5	-16.8/-17.56	-16.45/-13.83	-13.57/-14.69	-18.28/-17.96	-18.71/-7.29	-18.74/-17.81	-18.09/-18.14	-15.54/-12.35	-10.28/-8.51	-7.25/-7.12	-7.99/-8.88	-12.87/-14.66	-16.68/-17.79	-17.98/-18.2	-19.26/-17.98	-17.55/-16.25	-17.84/-19.12	-17.79/-13.36	-10.16/-8.68	-8.92/-9.4	-10.5/-15.26	-18.69/-19.13
Θ(172.5°)	-14.24/-13.78	-13.71/-14.23	-13.94/-14.82	-15.24/-14.9	-15.49/-17.68	-18.38/-19.23	-17.41/-17.78	-18.87/-18.45	-17.22/-16.65	-15.94/-15.92	-15.2/-14	-13.03/-12.78	-13.48/-15.38	-17.8/-19.2	-18.16/-18.5	-17.71/-17.79	-17.77/-18.43	-17.83/-16.32	-14.62/-12.77	-10.72/-10.06	-9.87/-9.62	-10.83/-12.61	-12.95/-14.59	-16.47/-15.94
Θ(180°)	-17.96/-18.92	-18.29/-18.47	-17.21/-19.15	-17.49/-18.59	-18.19/-17.71	-18.22/-18.93	-19.46/-18.53	-16.21/-16.39	-15.12/-13.87	-12.94/-12.91	-11.65/-11.75	-11.92/-12.41	-13.12/-14.25	-15.7/-16.25	-16.05/-16.91	-16.29/-17.18	-18.64/-18.81	-17.95/-17.91	-17.81/-18.04	-18.47/-17.93	-17.07/-16.18	-15.36/-15.87	-15.88/-15.09	-16.86/-16.62
Freq(Pol)	5.6GPol	ThetaAnt. 1	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	2.26/-1.45	1.18/0.52	0.1/-0.7	-2.23/-3.93	-5.14/-6.63	-7.88/-7.58	-5.91/-3.94	-2.8/-1.77	-0.42/0.6	1.56/2.4	3.04/3.37	3.63/3.2	3.47/3.16	2.66/1.98	1.18/0.26	-0.89/-2.13	-3.39/-4.42	-4.8/-6.41	-3.62/-2.15	-1.22/-0.34	0.51/1.25	1.73/2.27	2.75/2.9	2.73/2.64
Θ(7.5°)	1.72/0.94	0.12/-1.14	-2.49/-4.35	-6.24/-8.45	-10.84/-13.36	-12.1/-9.76	-7.56/-6.37	-3.82/-2.85	-1.85/-0.75	0.34/-1.31	2.22/2.84	3.26/3.51	3.35/3.04	2.34/-1.27	0.09/-0.98	-2.3/-3.31	-3.91/-4.72	-3.11/-2.61	-1.69/-1.05	0.69/1.29	1.84/2.37	2.67/2.72	2.49/2.24	
Θ(15°)	1.87/1.06	-0.05/-1.51	-2.73/-3.78	-6.05/-7.06	-10.31/-18.68	-17.41/-10.4	-6.13/-5.55	-2.46/-2.2	-1.86/-1.36	0.27/-0.03	0.72/1.26	1.59/1.75	1.43/0.78	-0.53/-2.16	-4.22/-5.87	-6.71/-5.96	-4.3/-2.66	-1.72/-1.2	-1.11/-1.23	-1.52/-1.32	-0.56/0.58	1.55/2.22	2.58/2.82	2.84/-2.49
Θ(22.5°)	0.63/-0.09	-1.1/-2.36	-3.81/-4.42	-5.22/-6.45	-8.59/-15.29	-16.79/-7.99	-3.49/-1.56	-1.02/-1.6	-2.15/-1.89	-1.19/-0.37	0.24/0.51	0.61/0.48	-0.33/-1.56	-3.38/-5.06	-5.74/-5.25	-3.98/-2.84	-1.85/-1.37	-1.16/-0.93	-0.68/-0.94	-1.3/-1.42	-1.16/-0.31	0.46/0.75	0.67/0.87	1.19/1.07
Θ(30°)	-2.02/-2.51	-3.78/-5.41	-6.75/-8.22	-8.52/-9.56	-11.61/-14.24	-11.64/-5.55	-1.98/0	-0.04/-1.23	-2.79/-3.21	-2.22/-0.92	-0.52/-0.36	-0.35/-0.7	-1.54/-2.63	-4.01/-4.62	-3.92/-1.27	-0.72/-0.21	0.30/15	-0.38/-1.19	-1.56/-1.82	-1.85/-1.94	-1.4/-1.02	-1.12/-1.8	-2.67/-2.72	-2.19/-1.78
Θ(37.5°)	-6.61/-5.61	-5.98/-6.16	-6.65/-6.84	-6.15/-6.18	-7.48/-9.16	-8.19/-4.87	-2.07/-0.09	0.01/-1.28	-2.86/-3.28	-2.33/-0.8	-0.48/-0.63	-1.12/-1.9	-2.75/-3.09	-2.9/-2.96	-2.71/-2.34	-2.86/-3.56	-2.68/-1.54	-1.61/-1.68	-1.04/-0.99	-2.26/-4.11	-3.85/-3.65	-6.33/-11.7	-16.45/-12.89	-10.02/-7.93
Θ(45°)	-10.41/-7.76	-8.18/-8.22	-9.62/-9.76	-6.66/-5.95	-5.87/-6.43	-5.75/-4.18	-2.61/-0.8	-0.13/-0.38	-1.13/-2.66	-2.73/-1.09	-1.28/-2.72	-3.1/-3.3	-4.41/-4.34	-3.07/-2.69	-2.61/-2.63	-3.37/-4.6	-4.17/-2.25	-1.1/-1.6	-2.38/-1.98	-2.02/-4.35	-5.8/-6.07	-8.51/-14.52	-15.51/-17.89	-10.81/-17.96
Θ(52.5°)	-16.91/-14.87	-19.14/-18.7	-17.43/-13.08	-10.5/-9.55	-9.59/-9.19	-7.24/-4.65	-2.94/-1.31	-0.08/0.71	0.72/-1.94	-4.44/-2.48	-2.31/-2.68	-1.72/-2.46	-3.66/-3.31	-2.52/-2.49	-2.79/-2.43	-1.85/-3.12	-3.96/-2.22	-1.22/-1.55	-2.64/-2.71	-3.92/-8.82	-8.86/-7.71	-9.52/-10.86	-10.76/-8.71	-7.81/-12.54
Θ(60°)	-8.57/-10.61	-11.73/-9.18	-4.33/-2.93	-3.76/-4.99	-7.51/-9.88	-9.76/-5.16	-3/-2.02	-0.15/-1.22	1.69/-1.12	-5.18/-2.95	-1.93/-1.58	-0.71/-1.56	-2.42/-1.59	-1.15/-1.57	-2.04/-1.54	-0.31/-0.63	-0.45/-0.44	0.28/-0.43	-1.84/-1.29	-2.63/-9.3	-8.25/-7.75	-6.16/-5.84	-8.38/-5.12	-3.07/-6.45
Θ(67.5°)	-4.21/-5.09	-6.64/-3.94	-1.22/-0.78	-0.68/-2.43	-4.54/-6.92	-8.66/-4.79	-2.07/-2.04	-0.99/1.2	1.78/-1.05	-4.14/-2.68	-1.91/-0.65	-0.03/-1.51	-2.58/-0.92	-0.38/-1.02	-1.61/-0.56	0.64/0.92	1.49/0.76	0.62/-0.09	-1.32/-0.16	-2.22/-9.83	-7.26/-5.95	-4.65/-4.09	-5.03/-2.58	-2.49/-4.85
Θ(75°)	-3.4/-49	-5.85/-3.48	-1.37/-0.34	0.26/-1.29																				



Radiated Composite Gain Data

Appendix A

Θ (75°)	-4.7/-4.35	-4.6/-5.1	-6.53/-8.86	-11.44/-13.71	-15.58/-13.26	-9.42/-8.78	-9.51/-8.85	-8.16/-8.14	-7.17/-6.19	-3.79/-2.19	-1.89/-2.14	-2.02/-2.5	-2.52/-2.2	-2.99/-5.35	-9.18/-13.49	-17.83/-9.82	-10.04/-6.89	-6.3/-8.47	-9.55/-9.16	-12.95/-16.58	-18.71/-17.87	-12.93/-8.83	-6.4/-5.51	-4.8/-5.06
Θ (82.5°)	-5.24/-4.63	-5.56/-6.4	-8.22/-10.6	-13.29/-16.6	-14.99/-11.52	-12.23/-13.23	-13.75/-11.82	-8.94/-8.7	-7.79/-8.26	-5.86/-4.69	-4.26/-4	-4.06/-6.44	-6.62/-6.12	-6.16/-9.04	-15.69/-18.93	-11.28/-7.66	-7.28/-7.67	-6.81/-10.04	-13.16/-14.7	-17.77/-17.81	-18.92/-17.7	-18.1/-12.57	-10.21/-8.64	-6.17/-5.76
Θ (90°)	-6.3/-5.58	-6.98/-8.85	-10.5/-11.88	-17.52/-18.29	-18.61/-15.71	-11.95/-12.48	-11.95/-12.48	-16.46/-17.42	-13.3/-10.56	-8.58/-9.37	-6.84/-7.31	-6.29/-10.38	-10.46/-8.59	-18.42/-15	-18.42/-15	-10.25/-7.96	-8.16/-7.68	-9.65/-11.4	-15.84/-15.78	-17.89/-18.8	-18.45/-18.67	-18.45/-18.53	-14.75/-9.92	-7.95/-7.03
Θ (97.5°)	-9.72/-11.1	-11.78/-13.55	-14.47/-12.95	-14.37/-17.95	-17.69/-19.43	-14.75/-13.43	-15.64/-17.77	-15.75/-15.3	-10.62/-10.34	-7.97/-6.68	-8.56/-9.81	-11.1/-13.26	-11.56/-11.82	-10.71/-14.43	-19.79/-13.03	-9.77/-7.39	-8.38/-8.41	-10.12/-17.25	-17.96/-17.82	-19.14/-17.95	-18.22/-18.88	-18.25/-17.42	-15.11/-12.83	-9.85/-8.43
Θ (105°)	-10.05/-11.86	-14.36/-12.69	-12.98/-14.63	-18.68/-18.82	-19.06/-15.57	-15.85/-18.97	-18.74/-13.89	-13.64/-16.26	-18.02/-17.51	-10.04/-9.66	-9.54/-14.52	-13.42/-11.71	-9.71/-14.8	-18.3/-18.8	-16.14/-10.91	-8.17/-8.95	-13.75/-10.36	-12.6/-15.35	-14.2/-14.55	-19.21/-18.74	-17.85/-18.8	-18.18/-18.73	-13.49/-10.73	-8.04/-10.15
Θ (112.5°)	-9.26/-10.8	-12.15/-15.15	-18.65/-17.92	-18.7/-17.18	-18.63/-16.3	-18.84/-17.1	-18.67/-18.21	-17.83/-18.06	-18.76/-14.29	-12.56/-9.91	-13.35/-15.83	-14.75/-10.57	-14.22/-16.65	-18.25/-16.96	-13.73/-9.67	-8.66/-10.36	-13.17/-9.12	-9.81/-11.35	-16.15/-14.49	-19.22/-17.89	-18.79/-17.36	-17.57/-18.73	-18.23/-11.15	-9.19/-8.02
Θ (120°)	-14.67/-14.63	-17.88/-18.74	-15.55/-16.86	-17.76/-18.6	-18.3/-13.97	-18.5/-19.05	-18.53/-18.22	-19.21/-18.7	-19.16/-15.95	-10.97/-10.7	-12.57/-10.33	-14.5/-8.34	-19.36/-13.24	-12.42/-9.57	-13.06/-9.48	-8.5/-9.24	-10.55/-7.89	-8.17/-11.31	-15.63/-13.99	-16.8/-18.16	-19.06/-19.16	-16.47/-18.29	-17.79/-18.03	-14.04/-13.65
Θ (127.5°)	-11.42/-16.33	-16.18/-16.95	-18.27/-16.69	-18.45/-18.97	-18.32/-15.2	-13.42/-19.41	-19.07/-17.91	-18.32/-17.9	-13.92/-13.85	-12.35/-10.53	-17.73/-9.93	-8.89/-9.73	-17.76/-10.18	-7.45/-10.17	-8.95/-6.91	-7.92/-13.94	-15.46/-9.74	-11.59/-10.34	-14.22/-18.02	-15.75/-17.88	-14.89/-17.24	-18.94/-15.2	-17.43/-12.06	-12.76/-12.82
Θ (135°)	-11.46/-12.74	-18.94/-18.62	-17.68/-17.38	-18.04/-12.99	-11.11/-14.93	-18.9/-16.68	-15.34/-17.82	-18.62/-14.38	-14.38/-12.19	-10.43/-12.71	-16.86/-11.06	-10.6/-7.83	-14.19/-17.94	-8.19/-9.65	-13.99/-11.86	-10.65/-17.11	-15.06/-9.5	-9.64/-9.09	-12.93/-18.97	-16.57/-17.42	-17.99/-15.85	-18.49/-18.59	-17.57/-15.58	-13.79/-12.91
Θ (142.5°)	-14.95/-12.73	-12.37/-14.26	-15.2/-15.53	-16.64/-15.17	-14.19/-13.87	-15.01/-18.69	-19.15/-18.53	-13.8/-12.39	-12.77/-10.54	-10.91/-10.83	-11.32/-18.96	-17.24/-18.84	-16.24/-13.43	-18.01/-18.05	-17.35/-15.94	-18.26/-19.21	-18.29/-14.04	-13.06/-11.1	-12.97/-18.95	-18.42/-18.37	-18.96/-14.63	-15.74/-17.78	-18/-18.37	-17.16/-17.58
Θ (150°)	-16.19/-13.2	-13.55/-15.73	-16.42/-16.16	-14.15/-13.84	-16.56/-18.48	-17.37/-18.15	-16.92/-16.25	-13.63/-10.71	-10.04/-10.86	-14.36/-18.65	-18.17/-18.02	-18.69/-19.15	-18.7/-18.66	-18.32/-18.9	-18.49/-18.3	-18.42/-16.7	-14.95/-17.7	-18.6/-15.31	-14.12/-18.9	-18.19/-19.1	-19.05/-18.71	-19.06/-18.08	-17.23/-10.36	-12.43/-15.61
Θ (157.5°)	-18.65/-18.68	-19.25/-17.92	-16.24/-15.04	-14.75/-19.56	-16.45/-13.8	-12.51/-12.41	-13.41/-16.67	-18.29/-18.81	-16.4/-18.25	-16.14/-18.25	-18.48/-17.78	-17.62/-18.92	-18.68/-17.87	-19.06/-18.39	-18.63/-17.72	-18.08/-13.64	-12.64/-14.09	-15.37/-14.16	-13.83/-15.38	-17.59/-16.72	-15.35/-15.05	-18.42/-17.73	-18.96/-18.33	-18.82/-17.49
Θ (165°)	-18.66/-17.67	-17.06/-17.15	-15.86/-15.77	-17.88/-17.38	-15.55/-15.1	-16.24/-18.73	-18.79/-18.9	-18.89/-16.08	-13.08/-11.58	-11.95/-15.05	-18.36/-17.82	-18.17/-18.11	-17.3/-18.74	-18.57/-18.7	-15.8/-14.03	-12.12/-10.84	-10.71/-11.65	-12.49/-12.54	-12.36/-12.79	-14.85/-19.05	-19.1/-18.17	-16.96/-18.36	-18.86/-18.07	-18.45/-18.94
Θ (172.5°)	-17.16/-16.79	-15.94/-14.77	-13.1/-12.06	-11.56/-11.37	-11.51/-12.2	-13.4/-15.78	-18.44/-19.14	-18.59/-17.99	-18.6/-17.75	-19.16/-17.65	-18.35/-18.54	-17.72/-19	-18.31/-16.86	-15.43/-14.74	-12.94/-13.75	-14.36/-16.45	-14.82/-15.46	-15.76/-14.81	-13.92/-13.53	-13.71/-14.82	-17.96/-19	-18.32/-18.81	-18.82/-18.68	-19.03/-19.3
Θ (180°)	-18.13/-17.86	-18.72/-18.63	-18.83/-18.74	-18.95/-18.92	-18.61/-18.07	-18.01/-18.38	-19.37/-17.81	-17.57/-18.51	-17.45/-16.17	-15.55/-15.77	-16.25/-19.27	-17.94/-18.76	-18.37/-18.41	-17.74/-17.95	-18.65/-16.69	-16.4/-16.09	-15.01/-13.88	-13.12/-14.14	-14.75/-14.76	-14.91/-16.24	-18.85/-18.37	-19.38/-18.11	-19.11/-17.15	-18.03/-16.65
Freq(Hz)	5.2GPol.	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)
Θ (0°)	-1.61/-2.03	1.14/-2.58	3.62/-2.04	3.54/-3.7	3.994/-1.2	4.023/-82	3.683/-2.3	3.51/-27	1.740/-42	-1.13/-2.95	-5.37/-7.28	-6.24/-4.68	-3.16/-1.04	0.962/-26	2.910/-3	4.374	4.284/-29	2.24/-0.8	2.120/-87	3.092/-96	2.120/-87	-1/-2.88	4.46/-4.97	-7.95/-7.03
Θ (7.5°)	-2.58/-1.03	0.31/-45	2.733/-68	4.144/-24	4.214/-23	4.23/-97	3.563	2.371/-43	0.31/-0.75	-2.07/-3.65	-5.89/-8.46	-9.16/-7.29	-5.32/-3.15	-0.940/-9	2.072/-64	3.223/-98	4.54/-54	4.384/-23	4.043/-63	2.992/-48	1.90/-93	-0.65/-2.59	-4.69/-6.24	-5.81/-4.14
Θ (15°)	-2.12/-6.08	0.63/-62	2.472/-94	3.232/-71	2.572/-38	2.151/-7	1.240/-46	-0.58/-1.87	-2.61/-3.45	-4.62/-6.36	-8.28/-9.62	-10.36/-9.07	-6/-3.37	-1.30/-5	1.952/-49	2.322/-38	2.722/-76	2.372	2.152/-01	1.410/-61	-0.37/-2.03	-4.12/-6.72	-9.47/-9.06	-6.57/-9.38
Θ (22.5°)	-1.57/-0.49	0.58/-61	2.132/-35	2.552/-51	1.860/-58	-1.07/-1.9	-8.44/-3.83	-5.62/-7.71	1.88/-7.78	-8.39/-9.91	-12.57/-13.97	-9.81/-5.54	-2.73/-9.4	0.250/-95	0.890/-53	0.160/-16	-0.28/-0.18	-1.38/-1.37	-1.65/-2.87	-5.17/-19	-8.19/-29	-9.55/-8.06	-5.85/-3.37	
Θ (30°)	-1.94/-0.7	0.44/-1.1	1.44/-1.59	1.73/-1.55	0.78/-0.67	-2.76/-4.72	-6.6/-8.44	-11.68/-16.22	-17.73/-16.83	-16.1/-16.44	-19.51/-18.38	-17.71/-15.48	-11.16/-7.23	-4.92/-3.66	-2.09/-0.87	-0.4/-0.44	-0.92/-1.7	-3.09/-4	-3.5/-4.12	-5.23/-5.73	-7.13/-7.94	-8.66/-10.67	-10.99/-8.66	-5.58/-3.32
Θ (37.5°)	-2.14/-0.95	0.260/-79	0.890/-74	0.47/-0.12	-0.75/-1.81	-3.6/-6.68	-9.55/-11.8	-16.86/-15.66	-16.1/-14.81	-14.84/-17.31	-16.47/-13.32	-11.09/-10.83	-10.26/-9.05	-9.09/-8.27	-5.41/-2.84	-1.42/-1.39	-2.33/-3.89	-6.04/-7.75	-7.13/-6.76	-6.67/-5.5	-5.68/-7.26	-5.99/-10.4	-6.65/-6.8	-4.48/-3.14
Θ (45°)	-2/-1.5	-1.13/-0.17	0.27/-0.11	-0.46/-1.18	-2.69/-3.2	-3.52/-6.2	-14.43/-13.82	-14.43/-13.31	-12.18/-10.26	-8.43/-8.76	-11.46/-11.21	-8.82/-9.67	-9.94/-11.55	-15.65/-12.24	-7.42/-7.42	-3.51/-3.36	-4.25/-6.1	-9.86/-10.08	-8.80/-7.37	-5.46/-5.26	-4.75/-5.38	-7.07/-8.4	-9/-6.42	-5.53/-4
Θ (52.5°)	-2.23/-1.43	-1.35/-1.05	-1.04/-1.59	-1.91/-2.91	-4.15/-3.4	-3.36/-6.02	-9.29/-14.23	-18.58/-12.51	-8.61/-6.16	-5.18/-5.08	-7.45/-7.5	-7.88/-8.13	-8.5/-10.38	-11.46/-11.05	-9.88/-8.27	-7.81/-6.82	-5.66/-7.27	-9.52/-9.02	-7.85/-6.37	-3.72/-3.86	-3.81/-3.87	-5.56/-7.38	-8.38/-6.02	-4.71/-3.44
Θ (60°)	-1.94/-1.16	-0.85/-1.29	-3.33/-3.25	-2.68/-3.89	-4.52/-3.72	-3.46/-5.46	-8.91/-14.3	-18.14/-16.8	-10.12/-5.5	-4.79/-4.45	-5.41/-5.06	-4.9/-6.46	-4.51/-5.33	-6.3/-6.69	-10.13/-9.84	-8.8/-8.14	-5.51/-5.08	-7.7/-8.23	-6.41/-3.91	-2.9/-3.5	-3.29/-2.94	-5.18/-4.71	-6.55/-4.14	-2.74/-2.52
Θ (67.5°)	-2.68/-2.02	-2.33/-1.94	-3.75/-4.92	-4.15/-4.71	-5.27/-3.79	-2.78/-4.77	-6.39/-10.38	-18.65/-18.5	-10.99/-5.47	-4.98/-4.79	-12.96/-5.26	-3.04/-4.24	-5.16/-6.15	-10.13/-9.72	-7.39/-6.87	-4.17/-3.92	-6.75/-6.32	-5.17/-3.32	-2.64/-3.47	-4.64/-6.81	-5.56/-4.12	-3.33/-4.16		
Θ (75°)	-3.64/-3.12	-2.48/-2.35	-4.81/-4.77	-5.25/-5.26	-4.51/-4.12	-3.64/-4.69	-6.57/-8.42	-15.19/-18.22	-10.46/-5.62	-4.46/-6.19	-6.06/-4.25	-3.87/-2.5	-3.54/-4.19	-5.44/-8.92	-10.05/-9.61	-5.82/-4.76	-3.83/-2.61	-4.05/-4.36	-3.58/-1.87	-1.71/-2.35	-2.65/-2.8	-5.45/-6.73	-5.91/-3.74	-3.37/-4.42
Θ (82.5°)	-4.67/-3.5	-3.5/-4.16	-5.32/-5.11	-6/-6.46	-4.93/-4.99	-4.18/-4.94	-6.35/-9.81	-18.39/-16.15	-11.31/-5.85	-4.79/-6.04	-6.62/-4.13	-5.36/-3.5	-5.06/-5.3	-6.99/-8.18	-7.79/-7.89	-4.98/-3.01	-3.09/-2.37	-3.57/-2.69	-3.17/-1.76	-0.96/-2.1	-2.63/-3.67	-4.74/-5.17	-5.8/-4.19	-3.38/-6.22
Θ (90°)	-5.84/-4.84	-4.39/-4.85	-6.49/-6.82	-6.64/-6.1	-5.65/-5.9	-5.04/-5.1	-7.67/-10.3	-19.06/-15.91	-12.07/-8.39	-6.49/-7.8	-6.92/-4.45	-5.5/-5.19	-7.82/-6.75	-7.04/-8.63	-7.37/-7.28	-6.2/-3.4	-2.64/-2.48	-4.51/-2.81	-3.71/-2.61	-1.9/-2.92	-2.87/-3.9	-4.72/-5.75	-6.76/-4.11	-4.74/-6.16
Θ (97.5°)	-6.87/-7.13	-7.43/-7.66	-7.37/-7.06	-6.45/-6.52	-7.69/-6.66	-5.86/-6.7	-8.9/-11.93	-18.13/-14.24	-13.92/-9.78	-11.06/-8.75	-9.74/-6.31	-9.45/-8.02	-10.96/-7.55	-7.24/-9.51	-7.43/-8.52	-7.07/-5.01	-4.44/-4.05	-7.02/-4.37	-4.43/-6.3	-3.95/-4.35	-3.61/-4.45	-4.25/-5.12	-7.98/-5.41	-6.2/-8.39
Θ (105°)	-10.48/-7.33	-11.16/-10.62	-6.95/-8.65	-9.37/-8.26	-8.62/-8.14	-7.08/-7.75	-10.12/-11.61	-17.85/-15.8	-13.58/-10.16	-13.18/-8.59	-10.52/-9.15	-11.08/-9.44	-7.81/-6	-8.58/-10.73	-10.32/-10	-7.91/-8.08	-8.43/-9.29	-10.05/-9.09	-6.82/-6.3	-6.72/-5.35	-4.86/-4.69	-3.91/-5.69	-6.44/-6.72	-8.04/-9.96
Θ (112.5°)	-10.71/-10.64	-10.13/-11.31	-10.13/-11.47	-10.94/-9.6	-8.98/-9.93	-10.8/-9.61	-11.04/-11.65	-18.64/-17.27	-16.66/-15.7	-16.1/-11.59	-12.38/-12.82	-12.06/-7.98	-6.47/-6.53	-10.78/-15.05	-13.38/-10.4	-9.48/-12.52	-14.73/-12.6	-10.32/-9.24	-7.39/-6.73	-7.58/-5.77	-7.17/-5.97	-4.91/-6.18	-5.93/-7.01	-8.77/-7.16
Θ (120°)	-10.96/-12.98	-12.71/-7.06	-15.7/-14.38	-11.35/-10	-9.24/-9.46	-10.18/-11.88	-13.75/-14.65	-15.03/-18.19	-19.07/-15.86	-12.43/-11.72	-12.79/-18.69	-10.16/-8.48	-6.09/-8.3	-13.38/-15.21	-16.64/-13.46	-9.76/-14.64	-13.45/-12.91	-11.1/-9.18	-7.37/-8.86					



Radiated Composite Gain Data

Appendix A

Θ(127.5°)	-18.23/-13.45	-17.49/-13.99	-10.47/-13.71	-14.71/-11.36	-16.28/-18.41	-12.68/-10.71	-10.88/-8.92	-8.25/-9.51	-11.51/-10.39	-11.74/-11.39	-10.49/-7.45	-7.96/-9.1	-16.16/-8.11	-5.54/-11.25	-19.19/-14.77	-5.89/-8.7	-11.46/-9.26	-9.22/-7.82	-8.44/-7.17	-12.96/-14.93	-10.44/-11.04	-12.27/-16.97	-18.28/-14.84	-17.56/-18.65
Θ(135°)	-18.59/-13.71	-12.18/-18.31	-16.8/-16.45	-17.61/-13.82	-14.38/-18.09	-15.67/-14.13	-10.39/-6.93	-9.22/-15.68	-18.22/-13.44	-9.2/-8.88	-15.88/-7.96	-5.85/-8.61	-18.88/-7.34	-7.53/-15.44	-18.11/-6.31	-7.97/-12.42	-10.07/-9.17	-11.14/-8.72	-7.56/-7.7	-14.25/-18.32	-9.2/-9.27	-9.64/-14.25	-18.47/-17.97	-19.22/-16.27
Θ(142.5°)	-17.99/-17.84	-19.31/-17.24	-16.41/-14.58	-17.31/-17.93	-19.21/-12.23	-9.99/-10.85	-11.41/-12.38	-18.02/-19.59	-13.78/-12.02	-10.59/-12.58	-15.61/-17.72	-15.51/-12.04	-18.41/-16.65	-18.45/-18.07	-11.27/-11.51	-16.71/-12.63	-11.51/-12.69	-10.81/-10.85	-12.67/-11.51	-15.58/-13.37	-12.85/-13.37	-18.95/-17.75	-19.36/-18.05	
Θ(150°)	-19.32/-17.51	-19.34/-17.95	-19.33/-18.38	-18.61/-14.69	-14.95/-17.25	-19.06/-18.39	-18.68/-18.87	-19.07/-18.02	-14.81/-12.62	-13.47/-19.23	-18.99/-18.83	-18.38/-18.68	-18.38/-18.71	-18.2/-18.44	-17.3/-13.41	-10.43/-8.88	-10.86/-15.73	-9.65/-8.3	-13.56/-14.7	-9.63/-9.82	-10.02/-14.74	-13.85/-14	-15.61/-17.55	-17.05/-15.85
Θ(157.5°)	-18.57/-18.67	-19.06/-17.53	-14.89/-15.22	-18.29/-19.22	-18.53/-18.31	-18.55/-18.09	-16.19/-16.28	-18.36/-17.4	-18.91/-18.71	-17.25/-18.51	-16.31/-15.44	-15.91/-16.65	-15.43/-14.7	-17.69/-18.68	-15.19/-12.37	-10.45/-11.5	-17.95/-14.38	-8.92/-8.12	-10.51/-13.88	-15.43/-17.63	-19.41/-18.72	-18.29/-16.32	-15.04/-15.5	-16.2/-17.57
Θ(165°)	-18.47/-19.12	-17.38/-18.4	-17.41/-18.76	-16.27/-18.16	-12.53/-12.26	-14.37/-16.49	-17.07/-16.05	-18.41/-18.94	-18.92/-18.76	-17.83/-18.25	-18.27/-17.97	-17.83/-18.77	-18.85/-19.27	-17.41/-14.38	-14.71/-16.76	-14.72/-11.46	-8.93/-8.45	-10.01/-11.47	-12.1/-12.29	-12.18/-11.67	-11.23/-11.31	-12.76/-14.14	-15.68/-17.72	
Θ(172.5°)	-15.19/-14.81	-14.66/-12.19	-10.92/-12.78	-13.32/-11.72	-11.11/-11.85	-12.48/-12.92	-12.79/-13.88	-15.38/-16.59	-16.77/-16.65	-15.64/-17.38	-18.13/-18.36	-17.37/-19.1	-19.38/-17.06	-16.22/-16.01	-15.52/-14.77	-13.65/-12.55	-11.38/-9.73	-8.88/-9.18	-10.68/-12.46	-13.42/-13.99	-13.83/-13.78	-14.52/-16.28	-18.89/-19.42	-17.56/-18.96
Θ(180°)	-17.07/-19.65	-16.88/-13.12	-13.58/-14.07	-12.85/-14.68	-17.41/-17.15	-15.35/-14.45	-13.65/-14.2	-13.55/-12.28	-10.47/-9.23	-8.53/-9.48	-11.32/-11.62	-12.46/-15.23	-16.59/-16.1	-15.99/-15.48	-15.15/-13.9	-11.49/-9.98	-9.88/-10.03	-9.3/-9.23	-10.41/-11.48	-11.73/-11.94	-12.63/-13.06	-14.55/-16.25	-15.93/-15.46	-16.94/-18.34
Freq(Hz)	5.6GPol	ThetaAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-1.36/-0.09	0.53/-1.38	2.13/-8.3	3.27/-3.6	3.61/-3.73	3.73/-2.74	4.15/-3.71	2.71/-9.8	1.36/-2.06	-1.16/-2.55	-4.05/-5.07	-4.56/-2.99	-1.42/-4.02	0.82/-0.1	2.91/-3.8	3.78/-0.4	4.27/-4.42	4.33/-4.12	3.62/-3.47	2.91/-8.9	0.79/-0.1	-1.01/-2.32	-3.11/-3.31	-2.91/-2.43
Θ(7.5°)	-0.91/-0.42	0.25/-0.91	1.35/-1.6	1.95/-2.03	2.29/-2.36	2.48/-2.68	3.02/-2.72	2.39/-2.15	1.37/-0.13	-1.29/-2.9	-5.5/-4.34	-10.68/-9.11	-5.76/-2.88	-1.15/-0.48	2.05/-3.9	3.82/-4.14	4.16/-3.99	3.79/-3.6	2.16/-1.03	-0.29/-1.3	-2.58/-3.95	-4.71/-4.53		
Θ(15°)	-0.36/-0.28	0.76/-0.83	1.18/-1.37	1.29/-0.67	0.77/-0.83	0.49/-0.39	1.35/-1.09	1.18/-1	0.3/-0.49	-1.14/-2.53	-4.88/-7.82	-9.38/-8.6	-6.51/-3.78	-1.76/-0.23	1.05/-2.36	3.03/-2.27	3.16/-2.68	2.08/-1.66	1.02/-0.31	-0.46/-2.01	-3.83/-5.02	-5.23/-4.6	-3.85/-2.84	-1.99/-1.08
Θ(22.5°)	-0.11/-0	0.31/-0.04	-0.83/-0.49	-0.48/-1.05	-1.29/-1.16	-2.26/-2.07	-0.92/-0.6	0.3/-0.26	2.1/-2.92	-4.7/-6.59	-9.41/-16.9	-10.94/-6.34	-3.26/-0.53	1.01/-1.77	1.92/-2.17	2.39/-2.04	1.04/-0.29	-1.57/-1.24	-1.15/-1.73	-2.79/-4.97	-6.43/-6.79	-6.51/-5.03	-3.44/-1.88	-0.76/-0.15
Θ(30°)	-0.13/-0.07	0.36/-0.07	-0.93/-1.52	-2.32/-4.8	-6.81/-5.74	-5.26/-1.47	-2.49/-1.86	-1.08/-3.27	-6.64/-6.81	-7.74/-6.7	-9.53/-14.87	-8.93/-6.96	-3.99/-0.57	0.93/-0.95	0.96/-0.96	0.91/-0.74	0.08/-1.37	-4.27/-4.02	-3.37/-3.5	-3.72/-5.69	-7.26/-6.4	-4.48/-2.21	-0.82/-0.26	0.15/-0.02
Θ(37.5°)	-1.23/-0.37	0.12/-0.5	-1.64/-2.43	-3.29/-5.61	-8.38/-8.37	-9.47/-7.69	-4.78/-4.3	-4.63/-11.1	-9.48/-8.49	-9.38/-9.3	-11.73/-7.87	-4.51/-2.84	-1.35/-0.58	-0.17/-0.16	0.23/-0.3	-0.47/-1.17	-3.4/-5	-5.78/-3.54	-2.27/-2.02	-3.46/-6.66	-4.9/-2.82	-1.75/-1.7	-2.25/-2.73	-2.59/-2.26
Θ(45°)	0.26/-0.78	0.91/-0.21	-1.93/-0.48	-3.8/-4.53	-10.29/-13.27	-14.27/-15.25	-5.91/-5.66	-10.08/-16.46	-9.42/-8.08	-8.12/-8.44	-5.62/-5.37	-4.02/-3.19	-2.58/-2.89	-3.94/-2.96	-1.1/-1.69	-3.56/-2.84	-4.85/-6.77	-4.28/-2.01	-1.79/-2.58	-4.96/-5.18	-0.96/-0.73	-1.72/-2.77	-2.57/-2.35	-1.96/-0.86
Θ(52.5°)	0.61/-1.51	1.84/-0.99	-0.38/-3.71	-1.7/-2.25	-10.41/-15.14	-9.38/-14.7	-5.13/-8.61	-17.1/-8.94	-8.67/-6.68	-5.13/-3.93	-4.03/-4.21	-3.45/-2.75	-2/-3.09	-4.04/-4.17	-1.46/-6	-6.99/-4.03	-5.97/-6.77	-4.42/-2.75	-2.71/-2.45	-3.71/-3.59	-0.67/-1.71	-2.79/-2	-0.76/-0.14	-0.87/-0.79
Θ(60°)	-1.03/-0.45	0.74/-0.41	-0.85/-3.93	-10.26/-7.95	-7.34/-9.38	-6.79/-2.69	-4.79/-7.74	-12.15/-6.09	-4.97/-5.65	-3.72/-2.84	-2.85/-2.28	-1.47/-0.69	-0.37/-0.82	-1.9/-4.46	-6.02/-7.97	-12.49/-4.94	-3.94/-5.55	-3.27/-2.37	-1.81/-1.91	-2.81/-2.34	-0.45/-2.76	-1.79/-0.17	0.13/-0.06	-1.44/-3.17
Θ(67.5°)	-3.83/-3.43	-0.9/-1.24	-2.69/-4.96	-11.71/-8.38	-4.51/-6.78	-5.13/-2.43	-4.84/-6.37	-8.27/-4.25	-4.82/-6.34	-2.81/-2.47	-1.77/-0.08	0.96/-0.84	0.56/-0.51	-1.15/-4.3	-6.72/-9.42	-15.85/-3.47	-1.69/-9.49	-3.44/-1.88	-0.56/-1.81	-2.52/-1.94	-0.47/-2.44	-1.13/-0.15	-1.34/-2.24	-4.24/-5.75
Θ(75°)	-5.79/-4.69	-2.69/-3.18	-3.32/-4.85	-9.84/-8.41	-4.27/-3.91	-5.21/-5.28	-7.38/-4.68	-4.4/-5.88	-2.37/-2.97	-2.01/-0.12	0.81/-0.69	-2.61/-4.28	-0.25/-0.49	-1.51/-4.7	-2.52/-2.02	0.15/-0.83	-2.39/-1.09	-1.28/-0.76	-0.54/-0.34	-1.86/-2.1	-1.26/-2.6	-5.25/-3.4		
Θ(82.5°)	-4.84/-4.89	-3.75/-4.19	-4.64/-7.09	-9.26/-8.81	-3.57/-2.72	-3.35/-2.96	-6.26/-5.07	-6.12/-4.62	-5.2/-6.36	-2.96/-5.48	-3.24/-0.62	0.06/-0.15	-0.47/-0.72	-2.55/-5.5	-7.87/-8.18	-11.37/-2.77	-0.15/-3.13	-1.07/-0.02	0.89/-1.18	-1.3/-0.49	-3.65/-3.79	-0.35/-0.73	-0.8/-1.79	-4.6/-5.69
Θ(90°)	-6.32/-5.71	-3.32/-5.08	-5.61/-5.55	-9.98/-5.95	-2.49/-2.68	-2.73/-2.73	-7.35/-6.84	-6/-9.6	-6.26/-5.73	-3.15/-7.08	-4.91/-3.21	-3.56/-4.38	-3.78/-5.48	-8.67/-9.52	-7.54/-2.61	-0.86/-3.27	-1.71/-0.27	-0.51/-1.72	-1.18/-1.6	-5/-4.11	-0.62/-1.61	-2.18/-2.27	-4.08/-4.52	
Θ(97.5°)	-4.07/-4.41	-2.53/-3.9	-5.74/-8.34	-9.78/-5.27	-2.83/-2.57	-2.29/-2.49	-7.54/-4.9	-4.94/-5.2	-5/-6.8	-3.18/-5.68	-4.61/-3.74	-5.64/-6.53	-9.67/-6.78	-4.25/-7.06	-5.82/-9.98	-7.26/-3.03	-2.14/-4.59	-3.18/-1.02	-2.84/-3.02	-2.63/-3.74	-5.82/-4.5	-1.86/-2.1	-4.34/-4.21	
Θ(105°)	-4.38/-4.47	-2.38/-4.48	-7.72/-8.99	-10.65/-5.01	-3.77/-4.05	-2.64/-1.96	-6.08/-5.05	-5.41/-5.56	-6.1/-6.92	-4.73/-5.2	-4.35/-4.51	-6.83/-5.23	-7.72/-5.95	-7.98/-13.42	-8.69/-12.65	-8.39/-3.36	-6.91/-7.04	-6.85/-4.96	-4.95/-2.75	-6.18/-6.91	-4.72/-4.88	-4.48/-3.86	-2.53/-4.12	-4.68/-5.6
Θ(112.5°)	-5.02/-2.02	-6.63/-5.38	-8.52/-13.4	-10.38/-7.97	-7.9/-6.36	-2.71/-3.34	-7.17/-6.59	-5.75/-7.35	-5.74/-6.9	-4.17/-4.45	-4.49/-6.62	-12.9/-12.51	-11.86/-10.96	-8.15/-5.21	-10.56/-9.28	-7.83/-5.17	-6.35/-3.54	-8.47/-8.53	-5.93/-5.85	-8.09/-5.14	-4.08/-4.52	-4.08/-4.79		
Θ(120°)	-7.97/-3.58	-5.98/-4.64	-7.14/-14.36	-15.36/-9.15	-15.36/-9.29	-15.36/-9.29	-15.36/-9.29	-8.69/-6.82	-9.85/-13.46	-16.03/-9.26	-8.54/-12.1	-7.77/-4.79	-2.5/-5.58	-11.67/-14.43	-10.78/-7.9	-12.42/-7.63	-6/-5.8	-10.48/-8.49	-10.29/-6.27	-4.93/-11.21	-6.14/-7.13	-7.29/-7.16		
Θ(127.5°)	-7.31/-7.25	-6.38/-6.61	-12.63/-18.56	-18.57/-16.19	-14.13/-11.89	-10.63/-11.9	-13.17/-15.74	-13.09/-19.28	-18.75/-16.32	-15.79/-11.74	-11.57/-16.34	-19.32/-16.45	-11.98/-12.14	-8.4/-6.87	-9.29/-18.51	-18.6/-12.75	-15.47/-11.85	-9.37/-10.51	-6.92/-13.35	-13.89/-12.06	-13.9/-4.52	-5.92/-8.42	-7.83/-7.76	-10.73/-7.06
Θ(135°)	-5.83/-8.24	-9.38/-11.44	-13.88/-12.91	-12.11/-11.33	-13.27/-15.29	-18.06/-18.39	-17.52/-15.74	-16.2/-18.78	-15.71/-15.5	-14.05/-13.42	-17.09/-9.96	-7.09/-6.54	-4.49/-5.06	-10.27/-15.8	-18.09/-17.01	-17.45/-15.02	-13.64/-18.87	-13.89/-13.92	-11.44/-14.82	-11.96/-18.45	-13.12/-7.45	-9.38/-10.49	-8.67/-6.3	-6.64/-5.83
Θ(142.5°)	-5.03/-4.59	-5.55/-7.68	-7.72/-8.91	-11.37/-12.02	-12.23/-11.06	-10.37/-10.36	-11.34/-14.87	-19.02/-17.41	-9.67/-9.13	-13.58/-17.36	-14.53/-11.05	-10.68/-9.84	-9.17/-13.52	-16.35/-13.52	-13.11/-17.86	-17.72/-15.38	-18.06/-14.74	-14.71/-17.95	-16.6/-12.68	-12.65/-18.67	-6.17/-6.12	-5.63/-4.44	-4.06/-4.74	
Θ(150°)	-7.31/-6.58	-7.67/-10.07	-12.78/-12.05	-6.38/-6.52	-6.78/-9.08	-10.58/-10.29	-10.39/-12.32	-15.78/-17.46	-18.42/-19.05	-18.37/-17.9	-18.79/-19.15	-18.59/-18.45	-17.93/-14.54	-10.97/-10.42	-11.56/-13.56	-13.73/-13.88	-16.28/-18.52	-15.88/-18.42	-17.67/-19.01	-11.56/-9.29	-11.26/-8.92	-6.38/-6.53	-6.47/-7.01	
Θ(157.5°)	-7.74/-803	-9.36/-8.19	-7.98/-8.46	-9.39/-9.99	-11.93/-12.64	-11.79/-12.56	-16.14/-15.91	-13.4/-14.48	-18.84/-18.66	-17.87/-18.46	-17.1/-13.17	-10.61/-8.58	-8.03/-9.21	-12.03/-18.12	-18.83/-15.39	-15.22/-15.7	-17.25/-17.77	-18.39/-17.99	-18.27/-17.99	-19.49/-15.65	-17.84/-17.86	-15.01/-12.55	-9.43/-7.34	-7.71/-8.35
Θ(165°)	-11.21/-13.74	-12.91/-13.26	-15.4/-13.27	-12.12/-9.96	-13.83/-12.6	-12.22/-12.45	-12.16/-11.95	-12.66/-14.59	-16.51/-16.94	-13.62/-11.62	-11.21/-12.1	-12.67/-13.03	-13.56/-11.47	-8.71/-7.65	-8.42/-10.4	-12.4/-15.62	-18.15/-17.52	-18.15/-17.85	-18.04/-18.46	-18.11/-15.98	-14.9/-14.19	-13.76/-11.67	-11.38/-12.39	-12/-10.39
Θ(172.5°)	-9.77/-10.03	-10.05/-10.74	-11.14/-12.29	-14.82/-17.58	-17.83/-17.5	-17.36/-17.32	-16.17/-17.98	-18.33/-18.35	-18.76/-17.66	-17.98/-18.59	-18.47/-17.67	-16.05/-15.7	-16.71/-17.69	-19.1/-19.03	-17.88/-17.74	-16.62/-15.53	-16.25/-16.6	-16.51/-18.42	-18.9/-18.56	-17.06/-16.23	-16.14/-16.27	-14.99/-13.76	-12.25/-10.16	-10.07/-9.82
Θ(180°)	-9.67/-9.32	-8.66/-8.78	-10.21/-1																					



Radiated Composite Gain Data

Appendix A

Θ(165°)	-11.89/-13.87	-12.77/-14.39	-7.92/-7.12	-6.79/-6.99	-8.44/-11.25	-15.48/-13.55	-9.69/-8.58	-9.18/-11.63	-15.97/-15.71	-13.73/-15.34	-17.32/-18.83	-16.55/-13.06	-11.33/-10.4	-11.31/-13.16	-12.67/-11.03	-9.29/-8.99	-10.72/-12.76	-13.52/-11.85	-10.81/-11.65	-13.83/-16.5	-17.84/-15.21	-13.34/-12.89	-12.82/-11.47	-9.3/-9.43
Θ(172.5°)	-15.24/-18.58	-15.34/-19.69	-15.97/-16.67	-18.89/-18.52	-18.43/-19.15	-13.89/-11.91	-10.85/-10.53	-10.21/-10.12	-10.9/-13.17	-15.4/-15.02	-14.84/-14.83	-16.43/-18.69	-18.69/-18.79	-16.22/-13.68	-11.7/-10.79	-10.25/-10.41	-11.57/-14.04	-18.43/-14.47	-18.84/-18.43	-18.17/-18.19	-18.32/-18.85	-18.03/-17.35	-13.94/-11.14	-11.04/-12.89
Θ(180°)	-18.64/-18.63	-18.17/-18.77	-15.48/-11.67	-9.54/-9.02	-9.12/-6.9	-9.39/-9.48	-10.23/-10.88	-11.37/-12.57	-15.18/-17.39	-18.28/-15.7	-18.41/-17.66	-17.72/-18.75	-17.84/-17.82	-18.93/-17.67	-18.31/-19.06	-17.46/-18.13	-19.33/-18.25	-17.97/-18.42	-18.53/-18.48	-14.15/-12.47	-12.63/-13.07	-14.12/-15.2	-18.1/-16.8	-18.17/-17.7
Freq(Hz)	5.2GPol	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°)	-10.89/-11.23	-10.96/-10.98	-11.78/-11.97	-12.06/-11.94	-11.35/-10.15	-9.1/-8.55	-7.76/-7.09	-6.69/-7.17	-7.48/-8.15	-8.19/-8.5	-7.91/-8.66	-8.81/-8.79	-9.66/-10.86	-11.04/-11.83	-12.56/-13.73	-16.71/-18.23	-17.61/-18.74	-19.51/-18.79	-12.16/-11.22	-10.60/-10.76	-11.17/-10.62	-10.36/-10.64	-9.68/-9.48	-9.71/-10.23
Θ(7.5°)	-7.95/-7.77	-7.28/-6.8	-6.49/-6.16	-5.97/-5.71	-5.3/-4.4	-4.02/-4.04	-3.83/-4.15	-4.66/-5.88	-6.9/-8.41	-9.39/-10.03	-10.01/-10.6	-11.88/-13.04	-13.88/-16.17	-16.4/-15.15	-13.61/-13.01	-13.22/-13.87	-13.9/-13.49	-12.68/-12.76	-14.46/-14.56	-13.99/-12.49	-10.77/-9.52	-9.59/-9.79	-9.76/-9.03	-8.61/-8.43
Θ(15°)	-2.34/-2.34	-2.45/-2.54	-2.6/-2.72	-3.12/-3.74	-3.83/-3.49	-3.21/-3.11	-3.3/-3.63	-4.19/-5.48	-7.88/-11.76	-15.57/-15.69	-14.4/-13.31	-12.16/-11.81	-12.55/-12.49	-11.51/-10.2	-8.01/-6.83	-6.36/-6.11	-5.82/-5.84	-6.3/-6.08	-5.34/-5.42	-3.63/-3.49	-3.84/-4.21	-4.49/-3.7	-2.39/-2.15	-2.99/-1.5
Θ(22.5°)	-1.06/-0.65	-0.69/-0.61	-0.9/-1.31	-2.47/-4.18	-5.5/-5.49	-4.57/-3.47	-2.33/-1.36	-0.85/-0.81	-1.35/-2.37	-3.99/-6.52	-8.67/-9.07	-8.03/-6.49	-5.29/-5.03	-5.87/-6.61	-7.02/-6.56	-5.05/-4.22	-3.94/-3.98	-3.73/-3.45	-3.11/-2.42	-2.12/-1.96	-1.89/-2.51	-0.84/-5.21	-5.53/-3.99	-2.48/-1.7
Θ(30°)	-0.88/-0.28	-0.23/-0.72	-1.74/-2.72	-3.99/-5.15	-5.34/-4.11	-2.85/-1.73	-1.24/-0.83	-0.71/-1.18	-2.11/-3.53	-5.01/-7.69	-11.27/-12.13	-9.5/-6.31	-3.93/-3.18	-3.51/-3.7	-3.63/-3.11	-1.86/-0.91	-1.61/-2.76	-3.11/-2.59	-2.18/-2.11	-2.4/-2.72	-2.64/-2.72	-3.73/-5.01	-5.27/-4.73	-3.88/-2.34
Θ(37.5°)	-0.81/-0.75	-0.94/-1.5	-2.31/-2.92	-2.68/-4.14	-0.50/-0.4	0.44/-0.4	0.0/-5	-1.09/-1.54	-2.29/-3.07	-3.96/-6.1	-7.3/-6.3	-4.82/-2.45	-0.89/-0.69	-0.47/-0.3	-0.36/-1.19	-0.67/-0.51	-1.91/-2.91	-2.01/-0.51	-0.3/-1.86	-3.17/-2.87	-2.22/-1.62	-1.92/-2.48	-3.1/-3.32	-2.59/-1.35
Θ(45°)	-0.63/-1.4	-2.86/-2.65	-1.51/-0.68	-1.07/-1.15	1.82/-1.81	21/-1	20.88	-0.06/-0.47	-0.96/-1.52	-4.19/-8.45	-13.98/-10.34	-9.01/-4.78	-3.96/-4.54	-1.87/-0.04	0.17/-0.19	-0.02/-0.1	-1.35/-1.8	-0.29/-0.21	-0.59/-2.33	-4.24/-4.21	-2.45/-1.39	-1.31/-1.02	-1.91/-2.6	-1.44/-0.72
Θ(52.5°)	-1.29/-3.33	-5.45/-3.39	-0.350/2.7	0.261/6.9	2.782/5.5	2.442/3.8	1.571/0.6	0.761/1.2	1.671/8.5	-0.09/-1.98	-8.26/-14.28	-9.08/-6.6	-9.05/-6.09	-2.61/-1.78	-2.08/-1.62	-0.57/-0.34	-1.21/-1.72	-0.720/-1.6	-0.64/-1.87	-1.68/-2.11	-1/-0.34	-0.96/-0.38	-0.81/-1.33	-0.91/-0.56
Θ(60°)	-0.7/-2.93	-5.51/-4.06	-0.59/-1.28	1.722/1.1	1.751/1.2	1.231/1.4	1.421/3.8	0.630/8.9	1.782/66	1.650/41	-2.34/-8.93	-8.4/-8.23	-7.6/-3.45	-2.37/-2.83	-3.49/-2.25	-0.420/-36	-3/-0.108	-0.090/-0.6	-0.63/-1.46	-2.17/-2.06	-0.870/-0.6	0.3/0.8	0.580/44	0.06/-0.14
Θ(67.5°)	-0.65/-3.44	-6.99/-3.63	-0.121/1.6	0.890/7.1	0.690/0.6	-0.260/2.6	1.041/4.9	1.020/7	1.262/55	2.71/47	-0.87/-0.64	-4.68/-6.41	-2.83/-0.95	-1.75/-3.05	-0.87/-1.26	0.280/53	-0.75/-0.17	0.66/-0.06	-0.75/-1.27	-0.66/-1.54	-0.620/14	0.781/76	1.050/22	-0.070/37
Θ(75°)	-0.9/-3.13	-4.47/-4.2	-1.35/-1.09	0.93/-0.64	-1.28/-1.35	-1.19/-1.55	-0.110/-3.4	0.220/8.7	1.211/7.9	3.36/-1.28	-0.03/-5.54	-3.09/-4.89	-1.48/-1.15	-2.87/-3.11	-2.63/-2.16	-0.530/4	0.040/7.1	1.44/-0.54	-1.06/-0.57	0.1/-0.73	-0.750/-0.4	0.181/22	1.550/4	-0.940/22
Θ(82.5°)	0.09/-2.85	-4.97/-3.29	-1.520/2.6	-0.51/-3.21	-2.82/-2.29	-2.45/-1.86	-0.95/-0.84	-0.660/0.7	0.771/4.7	3.03/-0.4	-1.07/-5.5	-1.72/-4.81	-0.66/-3.68	-8.02/-8.46	-1.38/-0.83	-0.270/0.7	-0.090/6.8	1.08/-0.91	-1.08/-0.22	0.780/5	-0.130/47	0.30/94	1/-0.46	-2.78/-0.88
Θ(90°)	-0.29/-3.19	-4.86/-2.46	-1.5/-0.75	-1.61/-6.23	-4.93/-2.41	-2.18/-3.49	-2.06/-2.13	-2.14/-2	-0.65/-0.71	2.15/-2.13	-2.09/-7.68	-5.04/-4.64	-3.96/-5.71	-11.55/-9.18	-8.33/-1.33	0.39/-0.04	-1.49/-0.92	0.02/-0.21	-1.14/-0.3	0.80/18	0.71/-0.35	-0.38/-0.5	0.33/-0.75	-4.58/-3.38
Θ(97.5°)	-0.49/-3.97	-8.03/-1.84	-1.01/-2.02	-2.85/-6.18	-6.96/-3.46	-3.74/-3.98	-3.5/-2.83	-2.41/-4.18	-3.99/-3.85	-2.04/-7.56	-5.81/-7.64	-5.73/-11.75	-8.77/-10.27	-18.23/-17.1	-10.15/-4.25	-1.13/-1.01	-2.05/-3	-2.78/-5.37	-2.01/-1.23	-0.12/-0.98	-0.28/-1.55	-2.18/-2.11	-2.65/-3.44	-4.67/-5.58
Θ(105°)	-1.54/-3.61	-10.39/-3.4	-0.82/-3.12	-4.61/-8.43	-7.32/-7.4	-5.47/-5.12	-4.03/-2.98	-3.52/-6.14	-7.32/-6.68	-7.97/-5.92	-9.29/-14.2	-9.95/-14.42	-10.33/-9.1	-14.68/-17.49	-18.48/-7.43	-2.39/-5.29	-6.64/-3.95	-5.04/-10.29	-4.07/-2.48	-1.54/-3.12	-2.4/-4	-2.22/-1.84	-2.8/-5.67	-5.37/-5.44
Θ(112.5°)	-4.02/-4.8	-7.99/-6.06	-2.02/-2.4	-6.17/-5.04	-4.78/-14.3	-15.09/-10.36	-5.89/-4.1	-5.42/-9.94	-12.51/-13.59	-8.73/-2.64	-4.39/-7.52	-6.96/-12.14	-4.79/-8.17	-14.72/-13.43	-15.46/-6.17	-6.21/-3.56	-6.93/-13.44	-5.37/-1.89	-2.28/-2.93	-4.36/-5.6	-4.69/-4.27	-3.7/-5.3	-4.84/-5.87	-4.84/-5.87
Θ(120°)	-5.58/-8.12	-10.52/-7.43	-3.23/-2.54	-5.04/-5.93	-6.65/-9.67	-18.59/-18.55	-15.95/-10.68	-10.18/-9.6	-8.16/-10.5	-4.83/-2.3	-3.93/-4.84	-6.68/-5.88	-6.24/-10.11	-10.43/-9.2	-6.63/-4.3	-5.42/-8.02	-6.29/-1.86	-3.49/-7.14	-4.95/-1.15	-2/-2.35	-6.94/-6.74	-7.03/-4.23	-4.53/-4.21	-5.29/-4.98
Θ(127.5°)	-8.34/-10.61	-9.79/-9.58	-4.42/-5.01	-5.85/-4.95	-5.5/-5.74	-9.06/-9.2	-10.56/-12.3	-10.53/-7.65	-7.46/-9.09	-8.41/-5.7	-3.97/-5.52	-13.58/-14.3	-7.37/-11.66	-11.91/-10.28	-4.17/-5.07	-9.1/-6.3	-6.67/-3.03	-4.45/-6.58	-6.05/-1.91	-4.52/-1.41	-3.19/-11.4	-8.21/-67	-2.69/-3.7	-5.81/-7.35
Θ(135°)	-12.46/-9.76	-9.03/-9.82	-7.02/-5.49	-7.77/-6.97	-8.02/-7.99	-7.21/-7.91	-9.65/-10.1	-9.12/-10.58	-9.65/-9.64	-9/-13.28	-16.14/-8.83	-7.8/-11.3	-7.41/-6.48	-9.43/-8.29	-6.02/-10.69	-11.14/-7.17	-9.41/-4.62	-6.78/-8.36	-8.97/-3.22	-3.17/-6.67	-3.66/-8.75	-13.38/-9.37	-5.73/-14.7	-9.55/-18.87
Θ(142.5°)	-17.73/-13.83	-12.12/-11.21	-11.84/-10.39	-8.56/-9.12	-8.79/-8.68	-7.58/-7.94	-8.88/-10.28	-10.44/-9.27	-9.76/-11.59	-16.73/-16.91	-10.06/-9.72	-5.8/-3.24	-5.08/-12.03	-16.69/-19.44	-14.95/-13.97	-17.48/-5.25	-4.03/-6.57	-10.89/-11.23	-12.11/-7.81	-4.43/-6.11	-9.43/-10.93	-14.36/-9.4	-6.61/-6.19	-9.22/-18.55
Θ(150°)	-11.01/-15.63	-18.14/-17.11	-12.99/-13.09	-15.81/-16.32	-13.47/-13.03	-15.49/-19.23	-18.21/-16.98	-18.41/-18.47	-14.18/-13.94	-15.91/-12.84	-10.14/-8.53	-6.69/-6.19	-8.92/-16.11	-17.48/-17.79	-17.56/-18.41	-12.79/-7.31	-6.42/-9.92	-15.91/-19.31	-19.47/-17.47	-13.61/-11.13	-9.43/-8.74	-8.79/-9.78	-8.75/-9.18	-7.76/-8.07
Θ(157.5°)	-14.5/-14.79	-15.41/-17.47	-18.98/-17.81	-18.93/-18	-17.86/-15.41	-13.34/-12.02	-12.12/-12.37	-12.56/-12.76	-12.75/-12.31	-13.44/-16.45	-15.2/-12.55	-10.55/-10.54	-11.44/-13.34	-16.32/-18.7	-17.39/-19.19	-16.8/-10.2	-8.24/-9.46	-12.77/-15.37	-15.61/-14.38	-12.83/-12.01	-11.13/-11.38	-11.81/-11.54	-10.69/-10.99	-13.18/-14.48
Θ(165°)	-17.84/-18.73	-17.59/-14.83	-17.66/-18.76	-18.31/-14.33	-12.21/-11.25	-11.74/-12.92	-13.71/-11.52	-8.84/-7.83	-8.31/-12.73	-15.31/-17.93	-17.38/-14.03	-13.42/-14.75	-16.62/-18.18	-17.71/-18.7	-17.31/-18.2	-18.68/-18.18	-17.35/-17.66	-17.12/-18.09	-18.63/-17.77	-18.88/-18.72	-17.88/-18.33	-17.81/-19.06	-17.83/-17.18	-15.26/-19.25
Θ(172.5°)	-13.23/-13.02	-13.13/-15.02	-17.94/-18.8	-19.19/-18.76	-17.16/-14.57	-12.38/-10.89	-10.09/-9.72	-9.62/-10.27	-11.43/-11.98	-11.88/-12.42	-11.65/-10.46	-9.53/-9.2	-9.17/-9.58	-10.38/-11.3	-12.96/-15.51	-17.53/-19.07	-18.61/-17.6	-16.86/-16.67	-14.54/-13.61	-12.22/-10.81	-10.02/-9.08	-9.82/-10.66	-11.64/-12.39	-13.37/-13.9
Θ(180°)	-11.81/-12.49	-13.45/-12.02	-12.29/-13.94	-15.4/-18.08	-17.18/-18.72	-18.61/-17.43	-14.19/-11.06	-9.88/-9.42	-9.62/-10.05	-11.46/-13.43	-15.67/-18.51	-17.48/-17.78	-18.76/-18.64	-17.93/-17.76	-17.69/-17.46	-18.81/-19.07	-17.98/-19.03	-18.44/-18.35	-17.72/-18.67	-17.37/-16.48	-13.02/-11.56	-10.91/-9.98	-8.93/-8.26	-9.37/-11.31
Freq(Hz)	5.3GPol	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°)	-13.63/-18.37	-13.13/-9.56	-7.63/-7.06	-4.77/-4.72	-7.75/-6.96	-6.9/-6.4	-5.78/-6.11	-6.95/-7.31	1.96/-9.14	-11.52/-15.14	-17.99/-18.36	-17.17/-18.76	-14.43/-12.33	-11.12/-10.05	-8.87/-8.04	-7.56/-7.89	-7.35/-7.83	-7.56/-8.79	-9.47/-10.27	-10.52/-10.57	-10.91/-11.55	-12.45/-14.09	-17.61/-18.05	-18.82/-19.24
Θ(7.5°)	-13.64/-14.59	-10.76/-7.77	-5.93/-5.17	-6.47/-4.78	-4.66/-4.06	-3.89/-3.79	-5.49/-4.13	-4.5/-5.59	-5.03/-6.48	-9.25/-13.77	-18.59/-18.66	-18.32/-12.2	-8.67/-6.49	-4.83/-4.15	-4.14/-4.28	-4.44/-5.17	-6.35/-7.9	-9.63/-13.05	-16.96/-18.75	-17.47/-18.63	-18.25/-16.87	-16.46/-18.48	-18.83/-18.65	-14.47/-13.08
Θ(15°)	-4.7/-4.84	-4.43/-3.9	-3.09/-2.75	-2.49/-2.07	-2.28/-2.07	-2.09/-2.4	-3.14/-3.88	-4.62/-4.8	-5.06/-6.01	-8														



Radiated Composite Gain Data

Appendix A

Θ(7.5°)	-3.87/-4.79	-6.58/-8.42	-9.72/-11.34	-11.43/-10.26	-9.87/-9.88	-9.85/-8.01	-6.85/-5.87	-5.09/-5.25	-6.3/-6.1	-4.87/-4.29	-5.19/-5.9	-6.43/-6.92	-6.57/-5.35	-4.88/-4.68	-4.33/-3.92	-4.28/-4.34	-3.85/-3.29	-3/-2.53	-2.1/-1.9	-1.61/-1.04	-0.340/0.4	-0.11/-0.65	-1.21/-1.73	-2.26/-3.14
Θ(15°)	-2.14/-2.08	-2.79/-3.72	-4.71/-6.57	-7.69/-8.04	-8.91/-8.53	-6.64/-4.52	-3.61/-3.49	-4.56/-6.49	-7.48/-8.28	-8.15/-7.53	-7.63/-8.32	-9.27/-9.4	-7.89/-6.14	-4.71/-4.29	-4.06/-3.46	-2.99/-2.93	-2.92/-2.6	-2.04/-1.08	-0.4/-0.17	-0.19/-0.4	0.01/-0.18	-0.33/-0.65	-1.32/-1.71	-2.06/-2.09
Θ(22.5°)	-3.02/-2.22	-1.91/-1.47	-1.55/-2.89	-4.57/-5.13	-5.8/-5.65	-4.23/-2.65	-1.41/-0.99	-1.68/-1.88	-2.09/-4.21	-8.76/-12.27	-12.54/-11.9	-10.48/-8.93	-6.68/-5.55	-4.66/-4.06	-3.45/-2.42	-1.44/-1.74	-2.25/-2.03	-1.20/-0.68	-0.41/-0.36	-0.52/-1.19	0.21/-2.71	-2.99/-4.25	-5.39/-5.05	-4.51/-3.9
Θ(30°)	-3.16/-2.11	-0.890/0.1	-0.04/-1.45	-3.03/-3.34	-4.01/-3.47	-1.48/-0.38	0.57/-1.44	1.360/9.1	-0.33/-3.17	-7.54/-9.4	-10.89/-11.26	-9.78/-7.3	-5.06/-3.48	-2.98/-3.51	-3.54/-2.77	-1.04/-0.34	-1.33/-0.92	0.78/-1.2	-0.09/-1.77	-1.38/-1.21	-1.64/-1.59	-2.33/-3.99	-6.01/-6.68	-6.29/-4.78
Θ(37.5°)	-3.13/-1.39	0.02/0.5	0.520/1.2	0.390/7.7	0.03/-0.61	0.070/-29	0.861/35	1.49/-1.24	0.17/-2	-4.62/-6.09	-7.07/-7.5	-7.23/-5.72	-4.84/-5.48	-4.35/-2.87	-1.98/-1.34	-0.5/-0.16	0.18/-1.3	1.79/-1.49	0.970/-25	0.230/-51	-0.51/-2.61	-4.26/-4.95	-6.44/-6.87	-6.1/-4.47
Θ(45°)	-1.11/-1.05	-0.550/-5.2	1.57/-2.29	3.123/0.1	1.42/-0.33	-0.320/93	1.41/-0.1	0.82/-0.25	-1.41/-1.7	-2.07/-3.83	-5.95/-6.43	-6.47/-4.97	-3.89/-5.69	-4.44/-3.58	-3.27/-1.61	0.280/64	-0.070/63	2.04/-0.4	0.95/-63	1.330/-55	-0.27/-2.28	-2.72/-3.27	-4/-2.88	-1.56/-1.33
Θ(52.5°)	1.6/-1.8	0.6/0.3	2.323/8.3	4.413/6.4	1.320/0.5	0.992/34	2.872/0.8	1.21/-0.91	-2.15/-1.71	-1.26/-2.74	-3.46/-7.17	-9.52/-7.11	-9.78/-9.65	-5.84/-3.23	-1.99/-2.07	-1.66/-0.72	0.19/-1.23	1.040/73	0.820/46	0.650/68	0.26/-1.03	-0.09/-0.22	-0.37/-0.1	0.13/-1.38
Θ(60°)	1.97/-1.97	1.420/58	1.673/94	4.713/4.6	0.66/-0.13	0.542/23	3.13/0.5	2.570/74	-0.94/-1.36	0.46/-0.1	-0.29/-3.61	-6.97/-11.24	-18.23/-12.27	-6.48/-3.59	-3.18/-2.86	-1.82/-0.51	0.250/-77	0.550/-79	0.620/-07	-0.170/-29	1.730/81	1.560/-97	1.12/-1.28	1.36/-1.75
Θ(67.5°)	1.64/-1.81	1.69/-1.18	1.313/61	4.442/51	-0.35/-0.18	0.530/87	2.222/78	2.57/-1.26	-0.52/-1.64	1.232/0.9	1.72/-1.61	-5.32/-9.47	-11.68/-8.42	-6.9/-3.9	-2.37/-1.94	-1.080/24	0.79/-1.06	0.20/-57	-0.22/-1.41	-0.330/-71	2.11/-85	1.65/-1.03	1.060/81	1.42/-1.35
Θ(75°)	1.1/-1.13	0.920/31	0.662/59	3.031/24	-1.320/23	0.2/-0.2	0.74/-1.58	21/-39	0.11/-1.33	0.892/25	1.61/-1.49	-3.14/-5.49	-5.41/-4.97	-8.36/-4.69	-2.13/-1.18	-0.190/91	1.15/-1.81	0.09/-0.7	-0.87/-1.19	0.6/-1.17	2.8/-1.9	1.340/-58	1.070/68	1.07/-1
Θ(82.5°)	0.810/-25	0.560/-24	0.18/-1.27	1.880/-1	-2.03/-0.57	-0.24/-1.5	-1.6/-0.83	0.350/-44	-0.66/-1.3	0.78/-1.62	0.9/-3.42	-2.34/-8.04	-3.95/-4.28	-1.41/-6.03	-2.13/-0.38	0.81/-14	0.81/-1.34	-0.73/-2	-0.690/-11	0.92/-193	2.84/-195	0.81/-0.04	0.590/-57	0.37/-23
Θ(90°)	-0.81/-0.9	-0.85/-2.19	-1.340/-98	-0.95/-2.28	-4.2/-0.83	-0.42/-1.28	-2.66/-2.85	-1.11/-0.54	-1.66/-1.82	-1.25/-0.42	-0.42/-3.18	-0.42/-9.29	-6.25/-4.42	-11.65/-10.36	-2.46/-0.62	0.370/-95	-1.04/-0.57	-1.09/-2.65	-1.310/-36	-0.110/-88	1.420/-57	-1.130/-94	-0.370/-35	-2.260/-0.6
Θ(97.5°)	-1.09/-4.26	-0.67/-1.99	-2.78/-0.9	-2.03/-5.05	-6.54/-3.84	-1.69/-1.16	-2.33/-2.83	-1.8/-2.87	-3.25/-5.33	-3.59/-5.04	-2.46/-3.81	-3.49/-8.97	-13.26/-11.89	-10.02/-10	-5.55/-2.73	-0.41/-1.12	-6.01/-1.08	-3.73/-5.43	-1.74/-0.32	-0.58/-0.12	0.04/-1.18	-2.34/-2.39	-0.82/-0.65	-4.71/-1.53
Θ(105°)	-3.85/-6.82	-3.54/-3.59	-3.92/-1.65	-2.78/-7.61	-10.69/-6.15	-3.45/-1.05	-1.43/-1.32	-1.25/-3.49	-5.53/-7.74	-7.65/-11.74	-6.58/-6.72	-5.88/-9.84	-11.96/-19.23	-12.71/-19.23	-10.38/-6.68	-3.48/-3.92	-9.7/-3.8	-4.36/-8.07	-3.71/-3.29	-1.26/-2.08	-3.47/-3.74	-5.36/-2.18	-3.08/-2.88	-5.91/-4.89
Θ(112.5°)	-4.21/-7.06	-4.54/-4.31	-4.54/-4.89	-4.92/-9.01	-8.01/-6.16	-7.47/-5.45	-4.54/-3.11	-2.43/-5.64	-4.99/-11.87	-13.51/-6.75	-4.19/-5.26	-7.06/-13.69	-12.71/-18.42	-17.67/-14.55	-11.71/-6.8	-5.63/-9.14	-15.18/-4.53	-5.28/-13.28	-5.38/-4.61	-1.6/-2.37	-3.05/-6.47	-4.47/-3.26	-3.61/-6.07	-6.91/-6.38
Θ(120°)	-7.2/-6.4	-9.93/-9.58	-6.95/-5.93	-5.25/-7.55	-6.3/-5.25	-8.34/-13	-11.52/-6.99	-5.2/-6.52	-4.66/-4.74	-5.3/-4.75	-5.2/-6.12	-10.91/-9.33	-11.69/-18.58	-15.93/-7.45	-6.12/-6.38	-7.66/-10.65	-6.9/-4.05	-4.78/-10.75	-5.12/-1.52	-3.63/-1.52	-5.86/-6.75	-7.67/-5.95	-4.75/-7.83	-8.29/-6.94
Θ(127.5°)	-8.08/-14.31	-13.54/-10.32	-9.08/-6.25	-6.39/-6.76	-5.92/-4.07	-6.1/-7.49	-10.11/-15	-14.57/-9.67	-7.16/-8.81	-9.3/-12.29	-11.42/-6.12	-10.85/-9.97	-16.16/-9.9	-8.48/-11.25	-6.32/-0.73	-9.19/-6.42	-6.94/-2.14	-4.04/-8.79	-4.96/-1.4	-2.47/-2.92	-14.07/-10.59	-14.83/-6.41	-5.34/-4.85	-8.48/-7.79
Θ(135°)	-9.86/-14.76	-18.54/-19.17	-9.52/-6.79	-5.72/-8.66	-7.81/-4.41	-3.23/-4.1	-5.64/-8.41	-9.81/-10.02	-12.03/-11.53	-10.45/-14.11	-12.35/-10.66	-9.82/-13.91	-12.62/-8.59	-10.33/-10.5	-5.98/-6.83	-13.46/-11.5	-4.31/-2.2	-7.73/-17.96	-12.26/-4.91	-6.8/-3.67	-7.29/-18.22	-12.47/-14.12	-1.65/-4.01	-8.36/-10.57
Θ(142.5°)	-9.66/-10.4	-14.05/-14.45	-14.87/-11.46	-13.89/-14.81	-10.6/-6.06	-3.75/-3.75	-5.64/-6.99	-8.73/-9.89	-4.69/-7.29	-8.87/-9.58	-4.69/-2.87	-5.03/-5.02	-0.45/-7.67	-17.66/-17.58	-7.49/-7.19	-10.56/-6.97	-5.79/-6.05	-12.47/-18.18	-18.46/-10.37	-10.43/-13.7	-8.96/-11.1	-14.32/-10.81	-7.16/-4.92	-6.25/-9.96
Θ(150°)	-12.62/-14.51	-12.34/-10.07	-9.29/-11.48	-14.21/-17.41	-16.45/-11.61	-10.18/-12.11	-15.21/-14.39	-14.39/-15.66	-1.08/-18.9	-19.13/-14.23	-9.34/-7.09	-7.71/-11.06	-16.33/-19.2	-18.14/-18.38	-16.13/-18.26	-18.4/-12.98	-9.09/-7.59	-10/-17.99	-17.42/-13.86	-9.59/-9.27	-12.9/-17.39	-15.71/-13.7	-10.24/-8.09	-7.17/-9
Θ(157.5°)	-14.42/-15.42	-15.69/-15.16	-13.6/-13.48	-15.03/-15.77	-14.69/-12.92	-11.22/-11.98	-14.91/-18.39	-16.54/-11.71	-9.91/-10.1	-10.61/-10.89	-10.44/-9.71	-10.1/-10.66	-12.45/-16.3	-18.13/-19.09	-18.33/-18.6	-18.45/-19.06	-16.95/-15.82	-15.29/-13.5	-13.15/-13.23	-12.73/-12.53	-13.02/-14.69	-15.53/-15.49	-14.98/-14.36	-12.83/-14.73
Θ(165°)	-18.81/-18.39	-16.58/-18.95	-18.25/-17.86	-18.23/-18.11	-14.58/-12.3	-11.07/-10.94	-11.72/-12.67	-13.13/-85	-15.5/-17.88	-19.09/-18.02	-15.23/-14.64	-16.15/-15.39	-18.48/-16.68	-18.89/-17.77	-16.14/-16.69	-18.24/-19.3	-19.15/-17.38	-17.71/-19.1	-14.9/-14.59	-13.95/-15.74	-16.04/-16.23	-18.1/-16.23	-15.1/-15.22	-17.64/-18.32
Θ(172.5°)	-12.51/-13.05	-12.57/-13.23	-15.35/-17.86	-18.82/-18.71	-18.25/-15.76	-14.2/-12.76	-12.01/-11.38	-11.7/-12.25	-13.14/-13.13	-13.53/-13.77	-14.56/-14.66	-14.3/-12.81	-11.51/-17	-13.22/-14.49	-16.51/-18.03	-19.2/-18.22	-18.78/-18.18	-18.77/-18.14	-19.08/-18.59	-17.97/-14.68	-13.26/-13.19	-13.2/-13.47	-14.83/-15.83	-16.53/-14.8
Θ(180°)	-16.32/-17.65	-18.57/-17.48	-18.77/-17.61	-17.27/-15.89	-17.09/-18.19	-17.94/-17.41	-17.92/-18.37	-16.18/-13.41	-12.22/-13.41	-15.75/-17.16	-18.72/-17.78	-17.43/-17.75	-18.04/-18.75	-18.02/-17.4	-18.29/-18.57	-18.94/-19.25	-18.4/-18.63	-17.93/-18.71	-18.21/-17.63	-18.77/-17.88	-18.32/-16.2	-13.41/-13.26	-14.09/-14.2	-14.69/-15.65
Freq[Hz]	5.785GPol.	PhiAnt.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-7.74/-8.3	-9.41/-9.99	-10.65/-11.54	-12.18/-14.48	-16.87/-17.33	-15.9/-14.67	-11.6/-12.1	-10.07/-10.2	-9.64/-9.85	-9.17/-18.3	-7.23/-8.75	-9/-10.13	-11.83/-13.2	-12.19/-14.32	-15.16/-17.27	-18.36/-19.2	-18.14/-17.07	-16.47/-16.1	-13.69/-12.1	-11.58/-9.82	-8.57/-7.9	-7.88/-8.2	-8.76/-8.4	-8.11/-7.5
Θ(7.5°)	-4.29/-3.63	-4.51/-3.13	-5.98/-6.82	-7.72/-9.64	-12.52/-18.15	-17.91/-17.99	-18.17/-17.89	-17.97/-18.69	-19.77/-15.83	-13.91/-12.16	-9.97/-8.76	-9.19/-7.8	-9.07/-6.88	-8.41/-8.93	-10.37/-12.17	-14.26/-17.68	-18.38/-17.64	-19.35/-19	-12.92/-18.21	-18.48/-18.5	-15.25/-13.58	-10.93/-8.58	-8.18/-8.29	-7.46/-5.57
Θ(15°)	-6.56/-5.49	-4.64/-3.91	-3.42/-3.1	-3.67/-5	-7.2/-4.95	-9.49/-8.97	-9.3/-12.08	-16.08/-19.2	-18.22/-15.05	-14.2/-15.27	-12.79/-4.66	-7.65/-6.91	-7.26/-7.81	-7.01/-6.82	-7.85/-9.76	-12.89/-17.82	-17.97/-17.84	-18.29/-17.88	-18.82/-18.31	-19.71/-18.98	-16.22/-12.27	-9.28/-6.68	-9.6/-6.8	-8.88/-5.4
Θ(22.5°)	-14.38/-11.77	-8.38/-5.74	-3.78/-2.35	-2.31/-3.29	-5.52/-7.1	-6.32/-6.02	-8.02/-15.7	-10.01/-7.14	-5.71/-6.15	-5.43/-6.85	-7.84/-6.04	-4.81/-4.3	-4.6/-6.63	-8.03/-8.26	-7.77/-7.5	-9.82/-13.81	-19.33/-18.82	-15.92/-13.14	-12.04/-14.88	-18.63/-18	-17.94/-14.68	-12.25/-11.71	-12.41/-13.68	-16.52/-18.59
Θ(30°)	-9.55/-8.48	-8.51/-7.87	-5.28/-3.53	-3.08/-3.9	-6.2/-6.27	-4.16/-4.02	-7.47/-15.6	-10.72/-6.33	-4.09/-2.84	-3.09/-5.42	-9.1/-7.95	-4.92/-3.46	-2.61/-3.49	-6.02/-9.48	-8.94/-7.86	-9.47/-14.02	-18.43/-15.59	-12.02/-8.71	-10.27/-14.95	-15.92/-14.36	-14.31/-15.09	-12.49/-10.28	-9.65/-10.57	-11.49/-10.44
Θ(37.5°)	-8.16/-6.58	-6.47/-6.89	-7.57/-5.62	-4.63/-4.48	-4.98/-3.05	-1.84/-3.43	-8.55/-17.68	-9.73/-8.15	-6.18/-0.43	-4.37/-6.92	-9.88/-4.98	-6.05/-3.69	-2.55/-2.86	-4.29/-10.2	-11.55/-6.84	-10.2/-16.43	-18.57/-14.77	-10.19/-9.5	-8.96/-10.37	-9.96/-11.2	-17.26/-18.09	-13.93/-11.8	-12.47/-11.68	-9.63/-8.75
Θ(45°)	-5.02/-5.87	-7.71/-11.07	-14.51/-9.95	-7.15/-5.32	-2.76/-0.3	-0.6/-2.29	-6.38/-13.02	-8.54/-10.26	-12.07/-9.66	-8.2/-7.82	-10.26/-6.03	-2.97/-3.7	-4.1/-3.52	-3.76/-9.06	-12.51/-10.34	-11.61/-18.87	-16.29/-13.78	-10.35/-9.97	-8.62/-7.3	-7.15/-12.51	-18.71/-10.82	-7.93/-7.29	-6.68/-6.73	-6.86/-5.19
Θ(52.5°)	-3.66/-4.98	-8.17/-11.06	-14.78/-16.9	-8.02/-3.7	-2.22/-0.66	-4.59/-1.48	-4.98/-10.72	-8.49/-9.48	-13.76/-13.79	-5.39/-3.58	-7.65/-5.99	-3.85/-3.93	-3.31/-4.33	-4.45/-6.52	-11.56/-12.46	-15.76/-18.5	-14.01/-17.33	-12.95/-10.04	-8.57/-9.51	-10.39/-18.14	-12.41/-8.18	-6.41/-6.44	-5.09/-5.37	-4.85/-3.97
Θ(60°)	-5.81/-6.72	-8.68/-13.06	-11.03/-15.73	-13.59/-4.05	-1.84/-1.2	-0.87/-1.04	-41/-1.61	-9.02/-6.59	-11.63/-10.8	-2.85/-1.92														



Radiated Composite Gain Data

Appendix A

Θ(60°)	-4.49/-2.19	-2.31/-0.97	-0.72/-1.19	-3.29/-6.25	-4.72/-1.83	-3.36/-4.62	-4.08/-4.4	-4.11/-2.06	-0.88/-1.24	-3.33/-6.13	-8.77/-8.08	-9.26/-8.44	-12.09/-7.66	-8.4/-9.82	-8.75/-3.48	-1.97/-3.52	-4.98/-2.93	-2.23/-1.86	-1.08/-0.47	0.38/1.35	1.59/0.68	-1.41/-4.13	-5.91/-7.36	-6.39/-4.93
Θ(67.5°)	-3.73/-2.19	-1.9/-8.4	-0.66/-1.47	-3.79/-6.91	-3.11/-2.31	-4.61/-4.73	-3.27/-3.93	-4.33/-1.78	-0.63/-1.37	-2.73/-5.29	-7.88/-7.8	-9.52/-8.25	-12.27/-5.7	-7.14/-9.88	-10.24/-3.57	-2.03/-2.69	-3.52/-1.29	-1.31/-1.44	-0.41/-0.2	0.6/1.85	1.37/-0.66	-2.86/-6.86	-9.54/-11.24	-7.12/-4.87
Θ(75°)	-2.34/-1.61	-0.54/-0.5	-0.25/-2.08	-4.28/-5.8	-2.31/-2.37	-4.26/-4.2	-3.83/-4.59	-4.35/-2.15	-0.41/-5.6	-3/-7.06	-8.45/-7.04	-6.16/-6.95	-8.91/-6.22	-6.17/-9.6	-16.81/-7.18	-4.04/-3.24	-3.19/-0.6	-0.19/-0.17	-0.26/-0.48	0.552/1.7	1.11/-2.3	-5.25/-8.08	-12.59/-15.32	-8.49/-6.07
Θ(82.5°)	-1.98/-2.34	-0.92/-2.11	-1.32/-3.43	-5.18/-4.08	-2/-2.42	-4.79/-4.6	-3.3/-3.83	-3.91/-1.85	-0.37/-2.22	-3.65/-7.61	-7.34/-6.81	-5.9/-6.87	-9.3/-5.67	-7.18/-11.91	-18.46/-9.57	-5.67/-4.61	-4.71/-1.05	0.31/-0.32	-1.3/-1.02	0.931/9.9	-0.17/-5.41	-11.68/-12.92	-9.28/-10.73	-7.38/-6.83
Θ(90°)	-3.54/-3.51	-2.38/-4.34	-2.46/-4.86	-5.78/-3.38	-2.52/-3.08	-4.58/-4.61	-3.81/-4.29	-3.75/-3.13	-1.78/-2.94	-3.37/-6.61	-5.97/-3.3	-6.34/-9.25	-12.01/-7.13	-7.73/-9.14	-15.31/-10.27	-5.67/-5.08	-6.46/-1.64	0.03/-1.17	-3.63/-2.53	-0.56/-1.19	-1.64/-6.99	-15.61/-15.57	-6.62/-8.87	-6.59/-5.26
Θ(97.5°)	-4.52/-5.52	-4.24/-6.77	-4.67/-7.09	-6.69/-3.72	-3.44/-4.17	-4.96/-5.38	-3.69/-3.68	-3.77/-4.07	-3.18/-4.53	-4.68/-7.21	-6.32/-8.24	-8.42/-11.21	-10.92/-7.58	-7.68/-10.67	-11.45/-8.86	-6.16/-6.76	-12.12/-3.15	-2.11/-3.68	-7.76/-4.82	-2.66/-2.51	-5.55/-9.24	-11.95/-10.94	-6.67/-8.27	-4.58/-5.44
Θ(105°)	-4.8/-6.07	-5.89/-8.48	-7.89/-9.45	-7.2/-3.68	-3.58/-6.27	-5.95/-5.34	-4.29/-3.55	-4.22/-5.74	-5.88/-6.5	-6.31/-7.98	-7.59/-9.76	-10.13/-12.47	-12.27/-8.95	-8.45/-10.08	-9.94/-8.89	-7.83/-9.05	-11.51/-4.84	-6.68/-9.59	-12.41/-8.36	-7.01/-6.85	-7.66/-8.94	-9.8/-9.45	-7.48/-10.57	-5.56/-6.62
Θ(112.5°)	-5.94/-6.67	-6.71/-9.27	-10.53/-13.8	-7.33/-4.17	-3.49/-6.21	-5.78/-4.67	-4.25/-4.58	-5.83/-6.13	-7.88/-8.44	-8.61/-9.77	-10.19/-10.85	-10.89/-11.28	-9.81/-9.65	-9.55/-10.31	-12.82/-9.02	-9.33/-17.43	-6.32/-5.82	-12.43/-16.18	-12.5/-11.3	-10.69/-6.23	-9.12/-7.39	-12.35/-8.41	-8.94/-13	-7.94/-7.94
Θ(120°)	-7.88/-10.01	-10.35/-12.63	-13.76/-16.7	-8.19/-4.27	-4.44/-7.99	-1.11/-7.45	-5.36/-6	-8.19/-8.37	-8.91/-9.03	-10.24/-9.63	-11.02/-9.97	-11.45/-13.27	-11.35/-12.58	-9.88/-12.51	-18.91/-14.74	-14.69/-17.81	-5.28/-5.25	-7.5/-10.74	-10.24/-8.88	-10.97/-6.56	-6.84/-9.52	-15.43/-13.8	-15.82/-13.55	-9.72/-9.95
Θ(127.5°)	-13.95/-15.38	-13.68/-14.83	-14.87/-14.62	-10.19/-6.34	-5.79/-9.05	-12.21/-12.63	-11.57/-9.95	-8.8/-9.48	-9.57/-11.47	-11.61/-11.38	-9.34/-13.45	-10.62/-17.22	-13.65/-16.56	-15.53/-17.72	-12.41/-15.06	-17.57/-16.85	-7.64/-10.27	-7.82/-11.23	-13.23/-12.55	-9.17/-10.54	-7.67/-12.88	-18.71/-19.07	-15.18/-18.49	-10.11/-12.1
Θ(135°)	-18.19/-18.01	-18.37/-15.67	-18.07/-15.66	-13.72/-10.87	-9.67/-11.26	-14.04/-12.29	-9.21/-8.64	-10.64/-11.84	-12.79/-13.13	-13.26/-14.32	-14.11/-11.52	-13.05/-12.32	-14.49/-19.16	-18.16/-10.27	-10.56/-11.84	-11.85/-16.35	-18.52/-15.43	-8.5/-12.31	-18.26/-18.53	-11.87/-14.64	-15.06/-13.14	-19.16/-16.52	-18.43/-17.41	-12.54/-10.57
Θ(142.5°)	-18.24/-17.65	-18.07/-17.53	-18.41/-14.35	-13.54/-13.54	-10.75/-8.9	-7.78/-7.67	-7.65/-7.6	-7.92/-9.1	-10.4/-10.48	-10.01/-10.64	-11.88/-13.22	-16.97/-17.69	-18.27/-18.63	-19.3/-18.9	-15.05/-18.01	-9.69/-6.9	-9.89/-7.87	-7.36/-9.98	-13.41/-15.02	-11.62/-12.17	-13.58/-9.37	-15.03/-14.71	-11.37/-17.94	-18.22/-19.34
Θ(150°)	-18.56/-17.72	-19.55/-15.44	-15.05/-13.41	-11.35/-12.35	-15.78/-15.3	-11.99/-10.78	-11.03/-13.99	-17.41/-17.73	-15.92/-13.65	-12.92/-14.16	-15.83/-16.02	-18.91/-18.41	-18.55/-15.93	-14.15/-14.02	-15.61/-17.41	-17.4/-12.69	-11.25/-8.46	-8.99/-12.3	-13.75/-15.22	-14.47/-12.46	-15.39/-17	-14.98/-18.74	-18.92/-18.48	-18.89/-15.84
Θ(157.5°)	-16.87/-15.31	-14.35/-13.38	-12.82/-12.95	-13.43/-13.5	-14.26/-15.95	-15.64/-14.93	-14.77/-15.66	-17.31/-18.87	-18.13/-17.38	-16.99/-17.76	-19.75/-17.38	-18.6/-17.2	-18.82/-17.58	-17.99/-18.91	-18.01/-16.72	-15.5/-14.73	-12.71/-10.59	-10.35/-12.57	-16.78/-17.72	-19.04/-18.93	-18.4/-19.33	-18.53/-18.06	-17.83/-18.85	-18.86/-18.77
Θ(165°)	-18.77/-16.51	-16/-18.12	-19.71/-19.97	-17.62/-16.2	-14.35/-14.26	-15.49/-16.74	-16.52/-14.67	-13.07/-12.41	-12.54/-13.39	-15.75/-19.39	-19.01/-18.99	-17.9/-18.28	-19.12/-18.11	-17.25/-17.79	-18.04/-15.72	-14.5/-14.56	-14.97/-15.38	-16.44/-17.61	-18.58/-19	-19.27/-19.06	-17.61/-18.36	-19.08/-18.2	-17.01/-18.26	-17.98/-17.79
Θ(172.5°)	-17.98/-17.27	-17.75/-19.15	-18.47/-17.52	-18.44/-17.28	-18.58/-18.94	-17.5/-17.09	-16/-15.61	-15.48/-16.93	-18.77/-19.21	-18.77/-18.51	-17.94/-18.6	-18.19/-18.73	-19.33/-17.95	-18.92/-17.17	-15.46/-13.58	-12.43/-11.85	-11.96/-12.29	-12.29/-12.43	-13.22/-14.94	-16.86/-17.3	-19.17/-18.3	-19.05/-17.73	-18.64/-18.91	-18.29/-19.3
Θ(180°)	-18.01/-17.23	-18.62/-18.57	-18.39/-18.43	-16.62/-14.31	-12.37/-11.54	-11.76/-12.36	-12.79/-13.64	-14.61/-15.28	-16.45/-19.37	-18.91/-18.74	-17.98/-18.94	-17.43/-18.54	-18.06/-19.03	-18.57/-18.12	-18.27/-18.34	-18.26/-18.15	-18.09/-18.89	-17.3/-18.58	-19.09/-17.82	-18.51/-18.61	-18.88/-18.42	-17.74/-17.79	-17.96/-18.87	-18.89/-19.04
Freq(Pol)	5.3GPol	PhiAnt. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-11.21/-13.39	-12.8/-95	-6.39/-3.48	-2.58/-1.12	-0.130.89	1.662/18	2.782/84	2.482/13	1.871/39	0.810/1	-0.89/-2.41	-4.53/-7.54	-11.88/-16.76	-13.11/-8.52	-13.51/-8.52	-5.29/-2.98	-1.210.05	2.262/48	2.572/76	2.582/43	2.081/66	1.190/49	-0.67/-2.3	-4.72/-7.58
Θ(7.5°)	-9.75/-7.18	-5.61/-4.25	-3.06/-1.79	-0.610.33	0.941/7	2.232/49	2.642/51	2.331/86	1.360/61	-0.28/-1.44	-2.96/-4.91	-10.64/-10.73	-3.95/-7.04	-3.96/-1.85	-2.62/192	1.471/94	2.392/66	2.912/97	3.042/92	2.52/16	1.576/84	-0.03/-1.23	-3.01/-5.44	-8.89/-10.4
Θ(15°)	-9.8/-5.62	-3.1/-1.44	-0.120.86	1.441/33	2.012/52	2.862/92	32/54	1.810/83	0.24/-0.05	-0.5/-1.19	-1.95/-3.04	-4.63/-6.15	-6.04/-3.97	-1.490.42	1.762/47	2.642/47	2.141/91	1.982/22	2.322/16	1.720/98	-0.09/-1.25	-2.62/-4.36	-6.92/-11.03	-18.72/-16.49
Θ(22.5°)	-16.18/-8.31	-3.86/-1.05	0.912/0.4	2.382/58	3.193/26	3.372/98	2.761/91	1.181/21	0.950.38	-0.48/-1.65	-3.31/-5.49	-6.64/-5.52	-3.16/-0.72	1.224/9	2.892/24	1.691/52	1.661/6	1.030/21	-0.46/-1.02	-1.34/-1.77	-2.22/-3.21	-5.21/-8.07	-17.76/-18.66	
Θ(30°)	-17.92/-15.99	-7.16/-2.54	0.441/99	2.682/95	3.283/56	3.392/98	1.840/98	0.841/37	1.922/16	1.760/77	-0.44/-1.73	-3.59/-6.04	-7.98/-7.61	-5.75/-3.41	-0.531/49	2.061/41	0.29/-0.5	-0.64/-0.86	-1.48/-2.54	-3.4/-3.07	-1.441/133	-1.771/22	-4.24/-6	-7.49/-10.84
Θ(37.5°)	-10.67/-8.06	-5.67/-2.86	-0.521.16	2.042/07	2.443/03	3.111/78	0.12/-0.15	0.711/67	1.891/14	-0.04/-1.58	-2.82/-3.51	-4.28/-6.08	-7.51/-6.6	-5.52/-5.95	-5.7/-3.28	-0.8/-0.28	-0.560.26	1.271/12	-0.31/-1.63	-1.63/-0.82	-0.75/-1.85	-3.61/-5.29	-7.22/-9.31	-11.39/-13.09
Θ(45°)	-3.1/-4.9	-2.63/-1.8	-0.530.49	0.720.55	0.941/62	1.650/67	-0.69/-1	0.040.38	-0.25/-1.81	-3.12/-3.51	-3.71/-23.3	-2.4/-3.24	-4.91/-6.15	-6.68/-7.05	-9.13/-5.78	-1.6/-0.28	0.150/91	1.971/7	0.47/-0.54	-0.370.05	0.04/-1.43	-4.86/-9.74	-10.86/-11.61	-14.61/-16.91
Θ(52.5°)	-6.08/-3.2	-1.92/-1.73	-1.18/-0.44	-0.66/-0.93	-0.440.47	0.90/12	-1.36/-1.1	0.040.42	-1.35/-1.83	-3.26/-3.33	-3.9/-4.18	-3.22/-3.89	-4.51/-7.01	-8.76/-10.06	-13.28/-77	-3.07/-1.28	-1.46/-0.63	0.530.84	0.21/-1.15	-1.09/-4.69	-1.33/-3.42	-6.14/-10.01	-14.22/-14.09	-17.71/-13.2
Θ(60°)	-6.07/-2.73	-1.63/-1.31	-1.8/-2.08	-1.98/-2.36	-2.06/-0.71	-0.53/-1.02	-1.69/-1.17	-0.94/-1.62	-3.2/-4.67	-5.62/-6.54	-6.42/-6.9	-5.55/-4.23	-4.56/-7.39	-12.31/-16.59	-14.25/-11.65	-5.12/-2.96	-2.8/-2.1	-1.52/-1.19	-1.45/-2.53	-1.94/-1.5	-2.4/-4.88	-8/-11.64	-12.82/-11.96	-18.54/-14.39
Θ(67.5°)	-6.77/-3.93	-3.61/-2.93	-3.27/-2.38	-3.6/-4.48	-4.25/-2.37	-1.86/-2.53	-2.92/-2.42	-2.49/-2.99	-4.08/-5.04	-5.96/-3.38	-8.5/-10.56	-10.08/-7.05	-6.63/-11.4	-18.92/-167	-13.03/-10.22	-6.13/-4.39	-3.86/-3.4	-3.39/-2.12	-2.03/-3.56	-3.04/-2.45	-4.07/-5.92	-6.99/-9.27	-14.21/-16.17	-17.37/-10.7
Θ(75°)	-8.28/-6.48	-5.55/-4.02	-5.38/-6.29	-5.69/-6.35	-5.66/-3.94	-3.44/-3.63	-3.85/-3.75	-3.61/-4.12	-5.21/-6.53	-8.68/-10.99	-13.66/-15.45	-13.39/-9.81	-7.97/-11.94	-17.47/-13.25	-12.36/-12.07	-9.64/-7.43	-5.99/-5.16	-5.92/-3.82	-3.23/-4.29	-3.56/-3.75	-5.76/-7.06	-9.62/-12.15	-19.38/-19.01	-13.91/-12.16
Θ(82.5°)	-7.11/-7.68	-7.64/-6.35	-8.87/-9.32	-8.07/-9.63	-9.43/-7.32	-5.54/-5.38	-3.25/-5.51	-5.87/-5.93	-6.53/-8.89	-12.07/-16.32	-17.84/-16.19	-18.76/-15.23	-11.32/-19.09	-18.41/-11.48	-13.54/-15.31	-14.24/-9.99	-6.58/-6.44	-6.53/-5.16	-5.86/-5.44	-4.3/-5.87	-8.82/-8.28	-10.9/-14.12	-14.67/-17.52	-15.36/-8.49
Θ(90°)	-7.65/-9.78	-9.33/-8.65	-10.53/-11.5	-9.76/-12.02	-1.295/9.91	-7.74/-6.42	-6.41/-6.72	-6.61/-7.09	-9.14/-12.42	-16.09/-18.85	-18.65/-16.16	-16.99/-16.13	-9.74/-13.81	-17.38/-11.46	-13.17/-16.84	-17.63/-16.34	-9.3/-7.85	-6.32/-6.09	-9.12/-7.93	-7.25/-9.92	-12.93/-9.86	-12.34/-15.66	-15.71/-18.31	-12.2/-8.68
Θ(97.5°)	-10.11/-9.5	-7.16/-6.81	-11.57/-12.21	-11.51/-15.69	-17.66/-14.26	-12.68/-9.3	-8.55/-10.4	-9.46/-8.57	-10.34/-17.47	-18.36/-18.93	-17.87/-14.14	-17.4/-13.48	-9.63/-11.87	-18.9/-14.8	-15.72/-18.36	-17.32/-18.3	-15.02/-11.67	-6.73/-8.35	-14.84/-10.45	-11.34/-12.24	-11.52/-10.31	-12.98/-15.62	-18.79/-12.09	-11.74/-9.95
Θ(105°)	-7.99/-9.2	-7.4/-9.28	-12.29/-13.17	-13.97/-18.21	-18.52/-16.82	-14.18/-12.29	-12.35/-13.86	-11.1/-9.68	-12.57/-18.17	-15.19/-15.43	-16.81/-13.88	-19.59/-17.55	-9.91/-11.37	-18.96/-15.43	-14.36/-19.24	-18.61/-17.71	-17.64/-19.21	-11.08/-11.93	-18.26/-16.76	-18.21/-13.45	-14.92/-13.59	-10.86/-16.01	-14.27/-10.72	-12.93/-9.9
Θ(112.5°)	-8.71/-8.72																							



Radiated Composite Gain Data

Appendix A

Θ(105°)	-3.04/2.59	-3.76/-5.75	-7.21/-5.51	-4.88/-2.4	-1.2/-0.89	-1.03/-1.38	-3.45/-5.76	-6.04/-3.96	-3/-3.2	-5.7/-6.65	-9.79/-11.53	-8.23/-5.07	-5/-6.92	-8.55/-8.09	-7.22/-14.93	-13.48/-11	-12.46/-8.19	-8.63/-5.18	-6.04/-7.93	-4.14/-4.03	-7.26/-11.61	-11.59/-8.98	-8.49/-11.45	-6.18/-3.93
Θ(112.5°)	-5.44/-5.44	-6.93/-9.05	-7.99/-6.87	-6.35/-3.76	-2.53/-2.3	-2.5/-2.37	-3.71/-5.57	-6.01/-4.55	-4.38/-5.2	-6.26/-6.75	-9.53/-13.85	-12.71/-8.78	-9.91/-7.76	-7.14/-6.25	-5.64/-8.69	-9.62/-9.19	-12.36/-6.02	-10.64/-10.27	-11.77/-17.74	-9.94/-8.69	-8.24/-9.42	-8.27/-8.1	-8.38/-9.38	-7.95/-6.18
Θ(120°)	-7.63/-7.77	-10.8/-12.02	-10.77/-8.94	-6.05/-5.16	-3.64/-3.13	-2.74/-2.34	-2.8/-4.73	-6.13/-5.71	-5.58/-6.22	-6.53/-9.57	-11.18/-14.76	-15.8/-9.48	-12.76/-11.12	-9.45/-11.03	-8.46/-8.64	-16.37/-14.18	-6.62/-5.75	-7.31/-9.21	-7.51/-7.63	-7.09/-2.91	-7.27/-7.35	-14.99/-11.09	-15.1/-18.2	-9.31/-17.2
Θ(127.5°)	-10.03/-12.56	-18.53/-16.07	-12.88/-9.7	-6.66/-5.2	-4.96/-5.66	-6.69/-5.35	-5.14/-5.63	-7.37/-8.61	-8.2/-6.51	-5.78/-8.14	-12.6/-13.53	-19.17/-12.45	-12.07/-8.89	-10.71/-13.12	-11.5/-9.59	-18.57/-19.26	-7.09/-11.29	-6.07/-8.75	-7.81/-7	-7.73/-5.15	-4.32/-11.89	-18.14/-11.56	-10.9/-18.16	-11.93/-10.13
Θ(135°)	-16.23/-18.01	-18.31/-19.03	-13.59/-10.99	-7.75/-4.98	-4.55/-5.11	-6.13/-7.26	-7.13/-6.83	-6.89/-7.94	-9.08/-9.23	-10.44/-11.75	-13.61/-18.61	-16.17/-18.69	-10.73/-15.97	-13.57/-17.16	-14.48/-19.08	-11.76/-10.83	-11.08/-12.01	-5.94/-10.09	-13.54/-17.14	-10.77/-12.99	-8.48/-10.69	-18.89/-16.89	-10.98/-18.45	-11.51/-14.52
Θ(142.5°)	-12.29/-12.95	-13/-12.77	-10.1/-9.7	-8.7/-6.49	-5.83/-6.34	-7.74/-8.83	-9.59/-10.26	-11.31/-11.34	-10.86/-12.33	-17.16/-18.85	-14.61/-14.83	-16.78/-16.07	-18.92/-18.94	-17.69/-11.33	-14.24/-13.71	-13.82/-5.45	-9.32/-7.87	-5.95/-9.61	-14.53/-18.95	-8.97/-10.63	-8.71/-6.96	-12.2/-8.27	-11.04/-17.94	-11.74/-10.12
Θ(150°)	-16.07/-13.78	-12.71/-11.67	-10.32/-10.91	-13.22/-11.69	-8.79/-7.63	-7.74/-8.85	-9.51/-9.73	-9.84/-11.45	-14.41/-16.18	-16.01/-15.49	-14.85/-18.23	-17.91/-17.64	-18.51/-18.35	-17.13/-18.09	-13.07/-13.16	-17.91/-10.62	-13/-11.6	-10.13/-13.36	-14.16/-15.18	-11.77/-11.81	-11.94/-10.09	-12.03/-15.11	-16.46/-18.67	-16.13/-16.35
Θ(157.5°)	-15.4/-19.46	-18.22/-18.37	-15.56/-13.47	-13.03/-13.4	-13.95/-13.32	-11.67/-10.88	-11.8/-14.14	-15.33/-14.37	-13.91/-15.3	-17.49/-15.91	-14.47/-15.58	-19.02/-19.2	-17.51/-17.63	-17.79/-18.57	-18.17/-18.45	-14.04/-12.73	-14.24/-13.7	-12.21/-13.44	-16.6/-18.5	-18.06/-18.24	-15.31/-14.54	-15.99/-19.2	-19.39/-19	-18.55/-16.33
Θ(165°)	-18.97/-17.83	-18.27/-18.62	-14.37/-12.1	-10.76/-10.69	-11.81/-12.78	-13.56/-13.73	-12.95/-12.23	-11.76/-11.65	-12.14/-12.68	-13.05/-14.12	-16.53/-17.35	-18.23/-17.3	-18.6/-18.43	-17.61/-18.44	-17.8/-15.62	-15.08/-15.47	-15.64/-15.97	-17.1/-18.41	-18.75/-18.34	-17.38/-15.43	-11.68/-8.73	-7.9/-9.46	-12.15/-17.43	-18.97/-19.03
Θ(172.5°)	-17.55/-17.67	-17.5/-18.03	-18.17/-17.84	-14.5/-12.8	-12.14/-12.4	-12.83/-13.74	-13.76/-13.13	-12.99/-13.36	-14.35/-15.86	-17.53/-18	-18.72/-18.56	-17.89/-17.7	-18.77/-18.55	-16.38/-14.1	-12.28/-10.92	-10.11/-9.91	-10.19/-10.62	-11.4/-12.38	-12.72/-13.4	-14.33/-13.97	-12.73/-11.91	-12.77/-16.88	-17.84/-17.79	-19.74/-19.09
Θ(180°)	-18.59/-18.27	-18.24/-18.32	-17.61/-16.95	-16.58/-16.88	-16.77/-15.73	-14.65/-14.33	-15.5/-16.96	-17.16/-16.35	-16.96/-17.6	-19.29/-18.25	-19.03/-18.37	-18.71/-19.04	-18.03/-18.75	-18.18/-18.41	-18.48/-18.32	-17.47/-18.24	-18.92/-19.23	-16.7/-16.8	-17.52/-18.2	-17.66/-19.33	-18.12/-17.46	-18.6/-17.52	-18.9/-18.06	-19.14/-17.45
Freq(Hz)	5.785GPol.	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°)	-15.36/-10.51	-7.35/-4.45	-2.73/-1.22	-0.16/-0.21	0.69/0.94	1.24/1.28	1.47/1.45	1.04/0.66	0.08/-1.11	-2.58/-4.17	-6.24/-8.72	-13.12/-17.54	-18.13/-11.24	-6.96/-4.12	-2.34/-1.11	-0.26/-0.3	0.69/0.85	0.92/1.11	1.28/1.02	0.42/-0.28	-1.07/-2	-3.38/-5.15	-7.45/-10.81	-16.34/-19.25
Θ(7.5°)	-19.09/-15.77	-9.8/-9.73	-4.03/-1.82	-0.57/0.31	0.81/1.02	1.12/1.08	1.18/1.29	1.51/1.37	0.87/-0.01	-1.26/-2.9	-5.04/-7.5	-10.99/-19.03	-18.86/-12.21	-7.51/-4.55	-2.61/-1.26	-0.29/0.33	0.79/0.96	1.04/1.01	0.83/0.48	-0.11/-0.87	-1.75/-2.8	-4.03/-5.48	-7.43/-10.33	-13.51/-17.95
Θ(15°)	-18.13/-19.05	-10.84/-6.41	-3.3/-1.38	-0.04/0.8	1.21/1.23	1.03/0.95	1.35/1.79	2.09/1.99	1.87/1.02	-0.18/-1.73	-3.76/-6.01	-9.03/-12.61	-12.9/-9.42	-5.84/-3.02	-1.18/-0.04	0.6/0.98	1.1/0.87	0.62/0.6	0.73/0.7	0.24/-0.84	-2.1/-3.29	-4.61/-6.38	-8.03/-9.8	-12.92/-16.78
Θ(22.5°)	-18.44/-10.79	-6.53/-13.67	-2.32/-1.23	-0.06/1.06	1.58/0.87	0.09/-0.52	0.46/1.68	2.39/-39.2	1.57/0.31	-1.02/-2.31	-3.45/-4.41	-5.51/-6.39	-6.23/-4.88	-2.97/-1.49	-0.6/0.18	0.71/0.85	0.59/0.2	0.17/0.36	0.56/0.45	-0.18/-1.46	-2.95/-4.71	-6.68/-8.57	-9.65/-10.55	-14.79/-17.91
Θ(30°)	-18.49/-8.85	-4.23/-2.53	-1.49/-0.47	0.49/1.13	1.77/1.31	-0.12/-1.27	-0.31/-1.47	2.19/1.87	0.66/-0.8	-1.87/-2.6	-3.07/-2.77	-2.92/-4.07	-4.99/-5.1	-3.92/-2.01	-0.51/-0.17	-0.08/0.11	-0.32/-1.3	-2.2/-1.93	-1.43/-1.31	-1.83/-3.05	-4.68/-5.89	-6.14/-6.55	-7.97/-9.58	-11.69/-18.11
Θ(37.5°)	-15.1/-7.77	-4.38/-2.5	-1.41/-0.58	-0.34/0.24	1.16/0.73	-0.78/-2.24	-1.17/0.47	0.97/0.65	-0.22/-0.92	-1.35/-1.91	-2.71/-2.55	-2.5/-3.75	-5.15/-6.24	-5.64/-2.82	-1.31/-2.36	-2.38/-1.45	-1.36/-1.98	-2.22/-1.79	-1.5/-2.23	-3.44/-4.44	-5.25/-6.34	-8.01/-7.58	-6.53/-7.41	-9.9/-18.66
Θ(45°)	-8.07/-4.58	-1.30/-1.257	-1.71/-1.71	-1.51/-0.35	-0.03/-0.36	-1.44/-2.16	-1.8/-0.76	0.41/0.54	-0.05/-1.01	-2.08/-2.28	-2.55/-3.09	-2.56/-3.64	-4.86/-6.47	-7.88/-8.88	-3.25/-3.95	-4.51/-1.6	-0.11/-0.4	-0.32/-0.14	-0.8/-1.74	-2.67/-3.96	-5.13/-6.36	-7.52/-8.34	-7.68/-9.27	-14.38/-16.86
Θ(52.5°)	-4.96/-2.97	-3.04/-2.76	-3.23/-2.84	-2.19/-1.08	-0.69/-1.06	-2.18/-2.27	-2.3/-2.09	-0.69/0.15	-0.69/-2.31	-3.12/-3.22	-4.45/-4.82	-4.22/-4.09	-4.44/-6.59	-9.79/-8.84	-4.76/-4.77	-5.67/-2.1	-0.71/-1.53	-0.72/-0.57	-1.67/-2.16	-2.67/-3.3	-3.22/-3.83	-7.31/-9.87	-11.69/-12.99	-13.25/-16.66
Θ(60°)	-3.9/-2.94	-3.21/-3.36	-3.43/-4.12	-3.77/-3	-1.94/-1.91	-2.42/-2.9	-4/-4.55	-2.92/-1.32	-2.2/-4.13	-3.96/-3.58	-5.93/-8.23	-7.78/-6.12	-5.12/-5.22	-10.56/-14.66	-9.74/-6.26	-5.73/-3.3	-2.21/-3.33	-2.76/-1.75	-2.07/-3.18	-4.24/-4.3	-3.51/-5.05	-7.65/-15.17	-18.45/-18.14	-18.25/-7.23
Θ(67.5°)	-6.57/-5.05	-4.4/-4.28	-5.19/-1.71	-6.2/-4.96	-4.01/-3.94	-3.83/-3.43	-3.82/-4.5	-3.19/-2.05	-3.72/-7.01	-6.49/-5.6	-7.74/-9.49	-8.77/-7.32	-7.05/-5.72	-10.47/-17.83	-14.6/-8.18	-9.26/-4.96	-3.39/-4.56	-3.22/-2.74	-2.42/-3.68	-5.02/-4.18	-4.35/-7.34	-18.87/-13.81	-18.21/-17.11	-12.43/-8.18
Θ(75°)	-6.08/-7.4	-6.32/-6.99	-8.36/-9.7	-8.62/-7.1	-6.12/-5.67	-4.49/-4.08	-3.45/-5.61	-4.78/-3.75	-6.41/-10.18	-8.42/-7.03	-10.14/-14.05	-10.46/-7.08	-11.06/-15.12	-15.28/-9.93	-6.63/-6.61	-4.56/-6	-5.63/-5.74	-3.49/-4.78	-7.05/-5.16	-5.26/-8.53	-11.8/-12.8	-16.57/-15.14	-13.25/-8.05	
Θ(82.5°)	-7.29/-8.65	-7.52/-7.38	-10.79/-12.64	-11.09/-9.66	-10.13/-8.6	-6.42/-6.5	-7.08/-7.87	-7.18/-5.92	-7.72/-11.95	-10.32/-9.65	-16.01/-19.49	-15.97/-11.62	-11.02/-7.01	-10.49/-15.44	-12.62/-11.74	-13.35/-8.42	-7.07/-5.95	-7.64/-7.68	-4.83/-7.67	-8.84/-6.01	-7.05/-9.6	-1.11/-13.57	-18.38/-17.38	-13.07/-7.36
Θ(90°)	-10.78/-9.9	-8.58/-9.25	-13.03/-12.13	-12.17/-13.15	-15.24/-11.41	-8.23/-9.1	-9.87/-9.11	-8.19/-7.18	-9.74/-13.75	-15.09/-12.97	-17.87/-17.86	-17.71/-11.83	-16.53/-9.53	-11.71/-17.95	-12.27/-17.48	-17.05/-12.98	-9.95/-7.26	-8.05/-10.37	-6.44/-9.13	-8.26/-8.86	-10.88/-11.34	-12.43/-13.97	-18.87/-14.2	-12.49/-6.33
Θ(97.5°)	-9.32/-11.24	-10.47/-10.25	-12.48/-12.7	-12.48/-14.91	-17.36/-12.08	-10.1/-10.13	-10.73/-10.81	-9.96/-10.8	-11.85/-11.92	-18.21/-17.54	-17.95/-19.03	-15.14/-11.4	-19.17/-10.4	-13.13/-15.41	-11.12/-18.29	-19.18/-18.16	-12.85/-8.88	-8.87/-11.12	-11.26/-10.88	-10.44/-14.93	-15.46/-10.37	-13.43/-15.42	-18.61/-15.89	-10.92/-9.38
Θ(105°)	-9.53/-11.55	-7.99/-9.36	-11.51/-11.24	-12.2/-15.82	-17.15/-15.26	-11.91/-13.13	-15.26/-12.65	-10.69/-13.95	-12.1/-11.88	-19.23/-18.41	-17.68/-18.06	-17.42/-15.28	-17.38/-8.94	-10.29/-16.11	-11.31/-18.99	-18.31/-18.58	-18.73/-15.7	-9.93/-10.3	-17.77/-15.14	-16.13/-16.42	-17.17/-13.24	-13.86/-13.19	-18.59/-12.76	-9.9/-9.51
Θ(112.5°)	-9.02/-8.43	-8.67/-9.25	-12.16/-12.77	-12.13/-13.15	-18.18/-18.07	-14/-14.74	-19.47/-14.55	-12.61/-11.85	-11.31/-12.19	-17.63/-17.92	-18.32/-18.3	-19.07/-13.82	-13.7/-6.88	-12.51/-14.1	-13.23/-18.86	-17.47/-18.91	-18.3/-19.22	-16.78/-14.62	-18.96/-19.03	-17.35/-18.86	-15.94/-9.87	-17.23/-13.9	-13.67/-9.95	-10.65/-14.05
Θ(120°)	-7.82/-8.37	-8.3/-10	-11.38/-9.24	-11.79/-13.92	-15.08/-14.7	-18.04/-18.36	-18.23/-19.01	-14.22/-11.5	-9.96/-12.86	-14.14/-15.86	-13.27/-19.79	-17.77/-17.73	-13.41/-9.54	-9.49/-12.99	-12.32/-11.18	-18.71/-14.92	-18.73/-18.04	-17.2/-16.05	-18.19/-15.47	-18.74/-18.62	-14.84/-13.63	-19.01/-12.89	-10.79/-10.74	-11.2/-6.15
Θ(127.5°)	-7.19/-11.33	-11.01/-11.11	-9.4/-10.13	-11.72/-11.56	-12.67/-18.88	-18.3/-19.11	-17.96/-17.92	-19.27/-12.62	-12.08/-12.31	-15.7/-17.3	-15.31/-13.78	-13.16/-13.76	-13.59/-13.19	-13.61/-14.01	-7.48/-17.65	-15.39/-17.38	-18.36/-14	-13.35/-13.21	-17.81/-18.07	-17.66/-18.1	-19.35/-11.65	-19.33/-17.44	-11.43/-13.36	-11.77/-6.7
Θ(135°)	-10.64/-9.9	-8/-8.1	-6.18/-7.54	-11.17/-13.78	-13.44/-15.49	-17/-16.19	-16.68/-18.04	-19.03/-18.65	-14.87/-13.53	-10.73/-12.17	-14.96/-15.77	-12.68/-14.55	-9.52/-11.87	-11.96/-14.8	-18.36/-10.11	-16.32/-8.33	-18.79/-17.28	-11.49/-12.21	-19.41/-17.87	-19.09/-18.71	-16.45/-10.95	-18.36/-11.02	-9.55/-6.92	-17.46/-17.71
Θ(142.5°)	-17.13/-12.83	-13.97/-10.23	-10.38/-10.73	-14.29/-12.52	-13.6/-16.49	-16.95/-15.44	-16.59/-17.73	-17.51/-18.74	-15.63/-11.92	-11.33/-9.6	-9.43/-9.88	-12.81/-11.68	-18.78/-12.14	-10.17/-9.59	-11.61/-13.01	-11.7/-8.92	-19.13/-15.01	-17.24/-11.96	-18.12/-17.89	-17.69/-18.17	-16.25/-14.18	-16.5/-17.5	-17.79/-16.61	-18.38/-15.38
Θ(150°)	-15.78/-12.35	-9.69/-7.83	-7.83/-10.88	-18.3/-18.95	-15.19/-13.73	-15.9/-19.21	-18.31/-19.07	-16.98/-15.69	-16.56/-17.97	-18.15/-14.52	-11.99/-													

Total Gain Data



Antenna Pattern

Appendix B

Θ (15°)	5.35/5.21	4.75/4.40	4.44/4.31	4.10/3.33	3.17/3.14	3.23/3.23	3.34/3.27	2.90/2.37	2.54/2.89	3.33/3.88	4.53/4.99	5.06/5.13	5.28/5.22	4.97/4.75	4.64/4.28	3.43/2.88	2.85/2.91	2.93/3.16	3.85/4.28	4.39/4.51	4.83/4.33	4.36/4.43	4.59/4.72	4.59/4.40
Θ (22.5°)	4.51/4.39	4.09/3.97	3.90/3.64	3.36/3.05	2.48/1.69	1.06/1.21	1.47/1.36	0.68/0.07	0.87/1.82	2.65/3.40	4.11/4.65	4.80/4.76	4.81/4.82	4.61/4.07	3.39/2.71	1.82/0.99	0.35/0.47	0.84/1.08	1.53/1.98	2.29/2.54	2.84/3.18	3.61/4.00	4.28/4.50	4.41/4.40
Θ (35°)	3.80/3.69	3.79/3.86	3.44/2.84	2.56/2.25	1.68/0.95	0.32/-0.06	-0.35/-0.42	-1.33/-1.54	-0.51/0.59	1.45/1.03	2.68/3.26	3.65/3.75	3.73/3.67	3.38/2.83	0.34/-0.12	-0.57/-1.04	-0.57/1.04	0.92/1.03	0.91/1.22	1.57/1.57	1.87/2.37	2.59/2.70	3.02/3.56	
Θ (37.5°)	3.26/3.45	3.93/3.81	3.02/2.08	1.49/0.95	0.59/0.26	-0.02/-1.24	-1.55/-0.90	-1.56/-1.35	-0.00/1.05	1.10/0.97	1.31/2.11	2.34/2.45	2.69/2.39	1.68/1.10	0.64/-0.03	-0.83/-1.26	-1.66/-2.07	-1.37/-1.11	-1.04/-0.60	-0.45/-0.17	-0.02/-0.49	-0.52/0.44	1.03/1.34	2.37/3.17
Θ (45°)	2.84/3.11	2.96/2.84	2.63/1.61	0.72/0.06	-0.83/-0.83	-0.18/-0.79	-1.18/-1.35	-2.14/-1.54	-0.49/-0.13	-0.29/-0.29	0.15/0.91	1.37/2.24	2.73/2.73	2.23/0.74	-1.05/-2.12	-2.93/-3.22	-3.56/-4.08	-3.45/-2.39	-2.33/-1.92	-1.42/-1.68	-1.27/-1.38	-1.61/-0.99	-0.29/0.13	1.21/2.32
Θ (52.5°)	1.89/2.52	2.15/1.74	1.58/0.41	-0.97/1.96	-2.28/-1.10	-0.39/-1.60	-2.70/-2.92	-2.80/-1.73	-0.70/-0.55	-0.49/0.28	0.69/0.99	1.82/3.12	3.62/3.53	2.54/0.17	-2.31/-4.24	-7.10/-6.48	-4.42/-4.41	-3.33/-3.05	-3.42/-2.63	-1.61/-2.22	-2.30/-1.69	-0.62/0.32	0.95/1.28	
Θ (60°)	1.18/1.51	1.53/0.89	-0.65/-1.20	-1.43/-2.52	-3.04/-2.41	-1.48/-2.18	-3.23/-3.80	-4.27/-3.96	-2.78/-1.85	-1.22/0.29	0.59/1.02	2.06/3.16	3.56/3.61	2.55/-0.08	-3.58/-6.00	-7.99/-7.81	-4.06/-3.14	-3.71/-3.62	-3.36/-2.19	-1.99/-2.72	-2.45/-2.00	-3.04/-2.75	-1.56/-0.24	0.74/1.00
Θ (67.5°)	-0.15/0.44	0.21/0.09	-1.47/-2.91	-3.22/-3.97	-4.04/-2.30	-1.32/-3.10	-4.82/-5.51	-5.53/-5.36	-3.72/-2.12	-0.98/0.22	0.29/0.58	1.45/2.11	2.25/1.89	0.66/-1.87	-4.72/-7.61	-7.02/-6.89	-2.58/-2.06	-3.32/-3.51	-3.48/-2.34	-2.16/-2.99	-2.45/-1.80	-3.34/-3.30	-1.99/-0.80	-0.49/-1.24
Θ (75°)	-1.13/-0.68	-0.40/-0.64	-2.58/-3.34	-4.31/-4.68	-4.18/-3.62	-2.62/-3.26	-4.79/-5.62	-7.37/-7.73	-5.50/-2.89	-1.10/-0.73	-0.48/-0.06	0.16/0.51	0.01/-0.07	-1.03/-3.77	-6.58/-8.12	-5.55/-3.58	-2.90/-1.23	-2.02/-2.94	-2.60/-1.13	-1.40/-2.19	-2.54/-2.67	-4.74/-4.64	-3.14/-1.53	-1.02/-1.72
Θ (82.5°)	-1.94/-1.02	-1.40/-2.13	-3.52/-4.03	-5.26/-5.14	-4.52/-4.12	-3.55/-4.34	-5.62/-7.73	-8.47/-7.98	-6.19/-3.88	-2.28/-2.30	-2.27/-1.05	-1.65/-1.72	-2.76/-2.68	-3.54/-5.58	-7.14/-7.56	-4.07/-1.73	-1.69/-1.02	-1.88/-1.96	-2.76/-1.54	-0.87/-2.02	-2.53/-3.50	-4.54/-4.44	-4.46/-2.10	-1.54/-2.97
Θ (90°)	-3.05/-2.18	-2.48/-3.39	-5.04/-4.86	-6.30/-5.85	-5.44/-5.47	-4.23/-4.37	-7.13/-9.53	-12.28/-9.45	-6.97/-5.84	-4.30/-4.87	-3.27/-2.64	-3.66/-4.04	-5.96/-4.56	-5.52/-7.44	-7.04/-6.60	-4.76/-2.10	-1.57/-1.33	-3.35/-2.25	-3.45/-2.41	-1.79/-2.81	-2.74/-3.76	-4.54/-5.52	-6.12/-3.10	-3.04/-3.56
Θ (97.5°)	-5.05/-5.67	-6.07/-6.66	-6.60/-6.06	-6.06/-6.22	-7.28/-6.44	-5.33/-5.86	-8.07/-10.92	-13.77/-11.73	-8.95/-7.04	-6.24/-5.70	-6.08/-4.71	-7.19/-6.88	-8.24/-6.17	-5.63/-4.30	-7.18/-7.20	-5.20/-3.03	-2.97/-2.69	-5.29/-4.15	-4.21/-3.47	-3.82/-4.46	-4.08/-4.87	-7.21/-4.69	-4.64/-5.40	
Θ (105°)	-7.25/-6.02	-9.46/-8.14	-5.98/-7.67	-8.89/-7.89	-9.15/-7.42	-6.54/-7.43	-9.56/-9.59	-12.24/-13.01	-12.25/-9.43	-8.32/-5.81	-6.99/-8.04	-9.09/-7.42	-5.64/-5.48	-8.14/-10.01	-9.31/-7.42	-5.03/-5.48	-7.31/-6.78	-8.13/-6.49	-6.09/-5.69	-6.48/-5.16	-4.65/-4.52	-3.75/-5.48	-5.66/-5.27	-5.03/-7.04
Θ (112.5°)	-6.91/-7.71	-8.01/-9.81	-9.56/-10.58	-10.27/-9.60	-8.53/-9.03	-8.05/-8.90	-15.21/-14.64	-16.10/-11.93	-10.94/-7.66	-8.83/-11.70	-10.19/-10.62	-5.80/-6.12	-10.06/-12.89	-10.54/-7.01	-6.04/-8.30	-10.87/-5.71	-7.04/-7.16	-6.85/-6.06	-7.29/-5.51	-6.88/-5.67	-4.68/-5.95	-5.68/-5.59	-5.96/-6.56	
Θ (120°)	-9.42/-10.72	-11.55/-14.81	-12.61/-12.44	-10.46/-9.44	-8.73/-8.14	-9.58/-11.12	-12.50/-12.68	-13.63/-15.43	-16.10/-12.89	-8.63/-8.17	-9.67/-9.74	-8.80/-5.40	-5.89/-5.94	-9.86/-8.52	-12.00/-8.02	-6.07/-8.14	-8.75/-6.70	-6.38/-7.11	-6.77/-7.70	-8.77/-7.09	-6.71/-5.45	-6.81/-8.51	-5.75/-6.76	-7.94/-6.71
Θ (127.5°)	-7.89/-13.72	-13.52/-12.81	-13.59/-10.64	-8.47/-9.01	-10.48/-7.95	-7.23/-10.40	-13.82/-12.75	-14.02/-14.44	-12.72/-12.56	-11.37/-9.56	-15.45/-9.46	-8.38/-8.47	-11.09/-8.69	-6.47/-8.10	-7.77/-5.87	-6.21/-12.62	-13.75/-8.43	-8.45/-6.80	-7.10/-9.56	-9.27/-12.52	-9.68/-4.31	-5.58/-9.06	-10.29/-6.82	-9.00/-8.92
Θ (135°)	-9.11/-9.49	-12.20/-12.44	-11.36/-10.23	-9.95/-8.08	-7.20/-6.87	-9.21/-9.56	-10.55/-12.74	-15.06/-13.02	-12.95/-11.24	-9.87/-11.02	-12.46/-7.48	-7.30/-6.35	-7.63/-5.59	-8.63/-8.68	-12.64/-9.04	-9.58/-15.47	-13.56/-7.94	-8.67/-7.27	-6.92/-10.91	-10.55/-14.95	-11.06/-6.94	-4.63/-9.17	-11.14/-9.57	-8.35/-9.55
Θ (142.5°)	-11.80/-10.22	-10.02/-10.94	-10.70/-10.33	-10.95/-9.13	-8.01/-8.70	-10.42/-13.00	-13.32/-13.62	-12.06/-11.48	-11.79/-9.67	-9.75/-10.17	-10.15/-14.79	-14.78/-14.72	-13.73/-12.39	-15.15/-15.57	-13.72/-13.43	-10.70/-14.91	-14.99/-11.81	-12.02/-9.04	-8.94/-14.47	-11.97/-15.08	-12.80/-10.61	-12.65/-12.09	-12.30/-11.51	-10.99/-12.24
Θ (150°)	-10.95/-10.15	-11.77/-11.38	-10.08/-10.24	-9.04/-9.08	-11.36/-13.33	-12.90/-13.05	-13.47/-14.24	-12.36/-9.94	-9.44/-10.14	-12.99/-15.07	-15.07/-15.08	-15.52/-15.72	-15.93/-15.55	-13.45/-13.10	-15.06/-15.40	-15.86/-12.99	-13.41/-15.52	-15.47/-13.68	-12.37/-15.72	-12.87/-12.87	-14.08/-12.07	-11.96/-14.37	-11.66/-9.41	-10.25/-12.04
Θ (157.5°)	-13.06/-13.80	-12.57/-11.92	-12.69/-13.40	-14.76/-16.08	-14.19/-12.62	-11.47/-11.61	-12.17/-14.49	-15.20/-15.38	-14.19/-13.68	-14.42/-14.89	-14.84/-14.54	-12.64/-11.62	-11.33/-12.25	-14.80/-15.25	-15.38/-14.54	-13.91/-12.45	-11.60/-12.88	-13.67/-12.38	-11.88/-13.80	-14.89/-12.99	-12.22/-12.29	-13.25/-13.03	-14.46/-13.87	-12.30/-11.45
Θ (165°)	-13.48/-13.31	-13.94/-15.67	-13.76/-14.11	-15.21/-14.81	-13.94/-13.56	-13.96/-15.37	-15.28/-15.21	-15.84/-14.24	-12.23/-10.16	-9.46/-10.48	-12.13/-13.68	-15.60/-15.43	-15.16/-15.75	-14.35/-13.05	-11.86/-11.62	-11.02/-10.10	-9.97/-11.00	-11.27/-11.25	-11.16/-11.49	-12.38/-12.84	-12.61/-13.45	-14.67/-15.12	-15.72/-15.33	-13.86/-13.12
Θ (172.5°)	-14.03/-12.88	-12.01/-11.08	-10.69/-10.70	-10.73/-10.59	-10.58/-11.41	-12.29/-13.95	-15.09/-15.36	-15.48/-15.31	-16.80/-14.92	-15.51/-14.61	-12.14/-15.50	-15.42/-14.79	-13.65/-12.37	-11.93/-12.49	-12.94/-13.05	-13.19/-13.62	-13.79/-13.29	-12.62/-12.32	-12.54/-12.29	-12.49/-12.17	-12.05/-12.80	-12.82/-13.27	-14.50/-15.48	
Θ (180°)	-15.51/-14.80	-15.35/-15.07	-15.32/-15.86	-15.53/-15.50	-15.96/-15.56	-15.21/-15.12	-15.36/-14.91	-15.13/-15.49	-14.50/-14.16	-13.83/-12.82	-12.08/-12.14	-11.63/-12.72	-13.85/-14.49	-14.58/-15.33	-15.77/-14.97	-14.05/-14.20	-13.55/-12.55	-12.01/-12.48	-13.34/-12.98	-13.19/-14.33	-16.14/-14.83	-16.17/-14.87	-15.42/-14.95	-14.97/-14.63
Freq(Hz)	5.3GPol.	TotalAnt.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	4.94/4.95	5.22/5.29	5.20/4.84	4.49/4.48	4.51/4.47	4.53/4.63	4.86/4.96	5.12/5.24	4.96/4.76	4.87/4.83	4.76/4.54	4.52/4.64	4.58/4.61	4.67/5.01	4.74/4.69	4.60/4.54	4.59/4.58	4.64/4.75	5.02/5.26	5.50/5.59	5.55/5.42	5.29/5.26	5.31/5.31	5.23/4.98
Θ (7.5°)	4.68/4.68	4.89/5.35	5.14/5.16	5.28/5.33	5.22/5.08	4.95/4.83	4.75/4.76	4.76/4.53	4.35/4.39	4.50/4.64	4.71/4.80	4.72/4.75	4.48/4.79	4.68/4.54	4.49/4.49	4.42/4.49	4.78/5.03	5.19/5.36	5.61/5.82	5.94/5.82	5.45/5.28	5.08/5.00	5.04/5.06	5.04/4.84
Θ (15°)	5.17/5.23	5.30/5.08	4.60/4.36	4.20/3.85	3.69/3.29	3.13/1.16	3.20/3.05	2.65/1.91	1.67/1.90	2.34/2.93	3.48/4.13	4.71/4.96	5.04/4.99	4.84/4.58	4.18/3.88	3.71/3.19	2.75/2.88	3.27/3.82	4.38/4.68	4.56/4.49	4.76/4.12	4.14/4.19	4.38/4.68	4.65/3.72
Θ (22.5°)	4.55/4.64	4.92/4.80	4.45/4.27	4.01/3.62	3.04/2.43	1.87/1.88	1.58/0.95	-0.21/-1.58	-1.48/-2.09	1.27/2.56	3.45/4.11	4.43/4.62	4.72/4.55	4.23/3.82	3.15/2.46	1.90/1.26	0.41/0.48	0.93/1.45	1.94/2.31	2.24/2.31	2.86/3.47	4.11/4.35	4.56/4.57	
Θ (30°)	4.19/4.66	4.68/4.52	4.25/3.47	2.49/2.03	1.60/1.26	1.01/1.08	0.64/-0.11	-2.12/-4.10	-3.59/-1.98	-0.41/0.81	1.81/2.70	3.70/4.31	4.34/4.06	3.71/3.18	2.09/2.27	-0.54/-0.43	-1.48/-2.39	-0.83/0.71	0.68/-0.03	-0.03/0.80	1.11/1.41	1.84/2.04	2.24/2.73	3.23/3.57
Θ (37.5°)	4.11/4.80	4.54/4.25	4.25/3.45	1.76/0.78	0.85/0.98	0.81/-0.00	-1.20/-2.10	-4.45/-5.21	-2.99/-1.11	-0.57/-0.11	1.12/2.38	3.24/3.37	3.24/2.95	2.28/1.45	-0.73/-0.78	-2.49/-2.65	-2.84/-2.78	-1.38/-0.51	-0.25/-0.25	-0.21/0.25	-0.26/-0.73	0.99/0.77	1.28/2.35	3.05/3.25
Θ (45°)	3.66/3.83	3.48/3.17	2.72/2.41	1.58/0.39	0.04/-0.34	-0.79/-1.08	-1.49/-2.10	-4.35/-5.71	-3.84/-2.32	-2.58/-2.13	-0.49/-1.32	2.41/2.66	2.99/2.55	1.47/0.09	-1.22/-3.25	-5.29/-4.73	-4.44/-5.61	-2.96/-1.42	-1.99/-2.00	-1.73/-1.63	-1.74/-2.02	-1.85/-1.22	-0.14/-1.53	2.87/3.26
Θ (52.5°)	3.25/2.85	2.17/1.83	0.95/0.51	0.53/-0.68	-1.97/-0.95	0.32/-0.73	-3.41/-5.55	-6.79/-5.24	-2.84/-2.28	-3.05/-2.19	-0.70/0.86	2.28/3.63	4.01/3.33	1.90/-0.63	-3.46/-5.96	-9.38/-7.00	-4.83/-5.21	-3.32/-2.53	-2.59/-1.92	-1.54/-3.00	-3.38/-2.79	-2.48/-2.03	-0.45/-0.55	2.23/2.91
Θ (60°)	2.53/2.39	1.09/0.44	-0.91/-2.84	-2.46/-1.65	-2.31/-1.94	-0.55/-1.64	-4.05/-5.27	-5.33/-5.76	-4.11/-2.90	-3.08/-1.28	-0.13/0.70	2.01/3.55	3.97/3.73	2.24/-0.63	-4.00/-7.65	-11.64/-8.68	-4.44/-4.36	-3.44/-2.42	-2.37/-2.10	-2.52/-3.21	-3.25/-2.85	-3.07/-2.32	-0.86/0.36	1.49/1.90
Θ (67.5°)	1.53/1.08	0.16/-0.74	-2.73/-4.21	-4.02/-3.72	-3.49/-1.95	-0.52/-2.38	-6.37/-6.2																	



Antenna Pattern

Appendix B

θ(60°)	0.49/-1.55	-4.36/-3.76	-0.48/-1.51	1.90/2.35	2.41/-1.84	1.86/-1.60	1.69/-1.78	1.49/-1.68	2.20/3.03	2.46/0.95	-2.12/-8.03	-5.16/-3.06	-1.80/-0.83	-1.34/-2.22	-3.16/-2.02	0.02/0.55	-0.10/-0.60	0.89/-1.24	0.12/-1.08	-1.94/-1.94	-0.80/0.13	0.46/-1.11	0.85/0.68	0.41/0.63	
θ(67.5°)	-0.27/-3.17	-6.64/-3.50	-0.04/-1.21	0.98/0.96	1.28/0.56	0.19/0.52	1.19/-1.71	1.36/-1.08	1.59/2.88	3.18/-1.80	-0.47/-5.66	-2.46/-1.53	-0.40/-0.07	-1.40/-2.45	-2.67/-1.38	0.72/0.75	-0.26/-0.37	1.19/0.80	-0.13/-0.97	-0.56/-1.46	-0.53/0.20	0.98/-2.27	1.60/0.83	0.57/0.88	
θ(75°)	-0.11/-2.63	-4.31/-4.01	-1.26/-1.13	0.98/-0.55	-0.75/-0.82	-0.80/-1.37	-0.01/0.41	0.32/-1.14	1.63/-2.28	3.76/-1.68	-0.67/-5.35	-2.52/-2.23	-0.38/-0.77	-2.49/-1.90	-0.83/-0.89	0.67/-1.42	0.65/-1.08	1.80/0.28	-0.81/-0.48	0.15/-0.66	-0.68/0.16	0.43/-1.57	1.82/0.61	-0.40/-0.91	
θ(82.5°)	0.31/-2.65	-4.79/-3.15	-1.31/0.32	-0.43/-0.05	-2.53/-1.98	-2.23/-1.74	-0.66/-0.72	-0.59/0.16	1.03/-1.59	3.13/-0.08	0.06/-5.29	-1.14/-1.77	-0.15/-3.29	-6.84/-3.29	0.24/0.78	1.32/-1.76	0.31/0.96	1.62/-0.50	-0.95/-0.08	0.90/0.61	0.00/0.60	0.68/-1.36	1.32/-0.19	-2.23/-0.45	
θ(90°)	0.05/-2.92	-4.63/-2.33	-1.42/-0.67	-1.48/-5.75	-4.75/-2.03	-1.81/-3.76	-1.83/-1.97	-1.90/-1.89	-0.28/-0.45	2.24/-2.04	-0.94/-7.28	-4.17/-4.55	-1.33/-4.44	-1.19/0.72	1.98/0.83	-1.03/-0.13	0.31/-1.98	-1.07/-0.19	1.02/0.29	0.82/-0.02	-0.07/-0.00	0.63/-0.48	-3.65/-2.65	-2.65/-2.65	
θ(97.5°)	-0.14/-3.56	-7.57/-1.74	-0.90/-1.90	-2.59/-5.66	-6.52/-3.18	-4.34/-3.71	-3.38/-2.71	-2.04/-3.83	-3.52/-3.54	-2.86/-6.27	-5.32/-6.32	-5.89/-4.63	-6.82/-6.18	-4.18/-2.16	-0.18/-0.39	-1.52/-2.59	-2.61/-5.17	-1.87/-0.98	0.11/-0.72	-0.05/-1.47	-1.94/-1.86	-2.31/-3.31	-4.27/-4.23	-4.27/-4.23	
θ(105°)	-1.45/-3.48	-9.40/-3.27	-0.73/-3.00	-4.26/-4.22	-6.02/-5.86	-5.26/-4.90	-3.69/-2.87	-3.35/-5.89	-6.19/-6.05	-7.11/-8.99	-5.89/-10.47	-8.87/-8.27	-6.03/-4.21	-4.86/-4.87	-6.08/-3.24	-0.57/-4.19	-6.35/-3.68	-4.88/-9.61	-3.07/-2.31	-1.44/-2.96	-2.30/-3.84	-2.12/-1.32	-2.22/-4.62	-4.53/-4.81	
θ(112.5°)	-3.41/-4.62	-7.53/-5.82	-1.91/-2.31	-3.69/-4.54	-6.24/-9.73	-10.01/-8.75	-5.67/-3.97	-5.15/-8.95	-10.71/-11.50	-7.53/-2.50	-3.05/-6.76	-6.61/-5.28	-2.36/-3.19	-5.04/-5.17	-6.32/-4.01	-5.13/-8.65	-5.91/-3.36	-6.19/-9.91	-4.88/-1.71	-2.17/-2.81	-4.11/-5.36	-4.47/-4.08	-3.56/-4.89	-4.11/-4.02	
θ(120°)	-4.30/-6.25	-7.88/-7.04	-3.10/-2.42	-4.84/-5.57	-5.51/-7.77	-13.37/-14.71	-13.55/-9.74	-8.54/-8.75	-8.32/-10.00	-4.49/-1.82	-3.18/-4.66	-7.34/-3.23	-3.62/-6.44	-6.27/-7.20	-5.22/-3.44	-4.98/-5.44	-5.07/-1.42	-2.16/-5.28	-4.04/-0.87	-1.80/-2.23	-6.55/-6.46	-6.78/-4.03	-4.36/-4.06	-4.79/-4.37	
θ(127.5°)	-6.88/-6.84	-8.72/-5.52	-3.90/-4.81	-5.60/-4.79	-5.28/-7.16	-8.63/-8.52	-10.01/-11.46	-9.31/-7.29	-7.11/-8.62	-7.27/-6.18	-3.66/-5.31	-12.43/-4.83	-4.86/-9.98	-8.32/-10.76	-2.83/-4.24	-4.74/-1.32	-3.01/-2.42	-2.49/-3.52	-4.56/-1.45	-3.99/-1.27	-3.04/-10.89	-7.72/-7.22	-1.75/-2.66	-5.60/-6.97	
θ(135°)	-9.35/-6.15	-5.91/-7.80	-6.17/-4.45	-4.65/-6.28	-7.52/-7.56	-6.92/-7.53	-8.83/-8.58	-8.26/-9.96	-12.79/-9.16	-8.13/-7.32	-7.40/-7.38	-6.51/-3.00	-3.38/-5.75	-8.56/-5.46	-4.51/-8.24	-4.59/-2.22	-3.52/-2.16	-3.21/-4.82	-6.90/-2.75	-2.83/-5.95	-3.52/-7.89	-12.36/-8.61	-5.00/-2.87	-5.43/-11.31	
θ(142.5°)	-9.96/-8.82	-6.76/-7.98	-9.15/-8.45	-6.73/-6.98	-8.10/-7.98	-7.22/-7.32	-6.39/-6.50	-7.67/-7.51	-8.49/-10.05	-14.10/-14.72	-6.56/-8.36	-4.59/-2.64	-4.47/-11.16	-8.55/-8.06	-12.40/-11.44	-6.90/-1.16	-1.46/-4.11	-5.91/-5.43	-6.42/-6.14	-4.24/-5.90	-8.89/-10.12	-12.63/-14.46	-14.85/-13.49	-6.20/-5.72	-7.52/-9.04
θ(150°)	-10.40/-13.40	-15.16/-14.69	-10.63/-8.65	-9.05/-9.97	-9.74/-8.82	-7.70/-6.15	-5.08/-5.29	-6.79/-8.41	-8.61/-8.70	-8.62/-8.51	-8.37/-6.77	-4.43/-4.15	-8.16/-12.08	-7.33/-8.94	-14.24/-15.24	-5.49/-1.00	-1.25/-5.26	-10.58/-10.44	-10.07/-10.84	-11.61/-10.45	-8.61/-7.95	-8.31/-9.16	-9.15/-8.60	-6.99/-7.44	
θ(157.5°)	-8.08/-9.13	-9.78/-10.55	-9.15/-7.49	-7.77/-8.10	-7.23/-6.24	-6.44/-7.19	-8.10/-8.43	-8.52/-10.63	-11.62/-11.26	-9.35/-8.59	-8.39/-8.44	-8.54/-8.95	-8.60/-14.99	-7.57/-8.40	-13.97/-8.84	-5.32/-3.09	-3.35/-6.51	-9.22/-10.29	-10.13/-11.50	-11.89/-11.06	-10.33/-9.38	-8.88/-8.57	-8.14/-8.77	-9.86/-8.43	
θ(165°)	-11.07/-12.64	-11.53/-8.30	-7.48/-6.83	-6.49/-6.25	-6.92/-8.24	-10.21/-10.21	-8.08/-6.80	-6.00/-6.32	-7.47/-9.51	-11.44/-13.43	-14.34/-12.79	-11.70/-10.81	-10.20/-9.73	-10.58/-11.90	-11.39/-10.27	-8.80/-8.50	-9.87/-11.54	-11.97/-10.92	-10.15/-10.70	-12.63/-14.46	-14.85/-13.49	-12.01/-11.95	-11.63/-10.17	-8.32/-9.00	
θ(172.5°)	-11.11/-11.95	-11.09/-11.84	-13.83/-14.60	-16.03/-15.63	-14.74/-13.27	-10.06/-8.36	-7.44/-7.10	-6.89/-7.18	-8.15/-9.52	-10.28/-10.52	-9.95/-9.11	-8.72/-8.74	-8.71/-9.09	-9.37/-9.32	-9.27/-9.76	-9.51/-9.86	-10.79/-12.45	-14.56/-14.44	-13.17/-12.47	-11.24/-10.08	-9.42/-8.64	-9.21/-9.82	-9.63/-8.90	-9.04/-10.36	
θ(180°)	-10.99/-11.54	-12.19/-11.19	-10.59/-9.65	-8.54/-8.51	-8.49/-9.10	-8.90/-8.83	-8.76/-7.96	-7.55/-7.71	-8.55/-9.31	-10.64/-11.99	-13.81/-15.05	-14.59/-15.23	-15.27/-15.20	-15.39/-14.70	-14.98/-15.18	-15.07/-15.56	-15.59/-15.61	-15.19/-15.37	-15.10/-15.56	-12.46/-11.02	-9.81/-9.24	-9.21/-8.84	-8.42/-7.88	-8.83/-10.41	
Freq(Hz)	5.3GPdL	TotalAnt.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°)	-9.88/-9.77	-8.43/-9.84	-5.90/-5.80	-6.66/-8.62	-7.39/-6.62	-6.60/-6.15	-5.46/-5.41	-5.66/-3.57	-5.20/-5.58	-6.04/-6.43	-6.24/-5.71	-5.30/-5.47	-5.37/-5.31	-5.35/-3.59	-5.31/-5.42	-5.68/-6.10	-6.27/-6.95	-6.81/-7.81	-7.59/-7.80	-8.12/-8.26	-8.46/-8.28	-8.61/-9.33	-10.89/-11.60	-10.51/-9.88	
θ(7.5°)	-7.51/-8.24	-7.07/-6.56	-4.33/-3.75	-3.33/-3.24	-2.83/-2.26	-1.91/-1.78	-1.57/-2.15	-2.62/-2.89	-3.41/-4.47	-5.62/-6.33	-6.76/-6.66	-6.05/-5.26	-4.49/-3.68	-2.80/-2.29	-2.44/-2.44	-2.38/-2.65	-3.24/-4.30	-5.15/-6.45	-6.23/-6.55	-6.47/-7.32	-8.07/-8.46	-8.51/-7.58	-8.21/-8.55	-8.51/-7.58	
θ(15°)	-0.62/-0.58	-0.59/-0.70	-0.48/-0.38	-0.06/-0.31	0.18/0.42	0.60/0.47	0.13/-0.35	-0.95/-1.27	-2.12/-3.76	-6.58/-10.12	-12.36/-12.00	-9.99/-8.50	-7.10/-5.53	-3.87/-2.50	-1.64/-1.11	-0.74/-0.59	-1.02/-1.98	-2.96/-3.81	-3.17/-2.24	-1.43/-1.04	-1.32/-2.13	-2.74/-3.42	-3.43/-3.20	-2.73/-1.47	
θ(22.5°)	0.95/0.24	2.56/2.33	1.62/-1.24	1.44/-1.11	1.16/-1.36	1.02/0.49	0.36/0.42	0.58/0.56	-0.06/-1.03	-2.78/-4.74	-6.38/-7.08	-5.52/-2.83	-1.38/-0.97	-1.42/-2.14	-2.56/-2.73	-2.11/-1.31	-1.00/-1.10	-0.12/-0.77	0.04/0.57	0.50/0.08	-1.17/-2.57	-3.84/-4.76	-4.55/-3.81	-2.94/-6.43	
θ(30°)	1.91/0.31	3.00/2.46	1.52/-1.03	0.82/0.29	-0.19/0.18	0.12/0.00	0.17/0.25	0.81/-0.04	-1.01/-2.61	-4.24/-4.43	-2.84/-0.31	1.08/-1.07	0.19/-0.82	-0.95/-0.34	-0.39/-0.66	-0.55/-0.01	0.56/0.58	0.55/0.62	-0.03/-1.33	-2.00/-2.80	-3.03/-3.09	-3.10/-2.88	-1.56/-2.03	-1.56/-2.03	
θ(37.5°)	2.84/3.36	3.20/2.49	1.61/0.78	0.21/0.31	1.38/2.34	2.42/-1.59	0.61/0.18	-0.13/-0.42	-0.68/-1.19	-1.22/-1.78	-2.67/-3.05	-2.13/0.45	2.17/2.52	2.00/0.64	-0.41/0.26	1.10/0.51	-0.98/-0.88	0.58/-1.39	0.76/-0.70	-1.53/-1.95	-1.86/-1.49	-0.91/-0.13	-0.03/-0.60	-0.28/-1.30	
θ(45°)	2.58/2.99	2.55/-1.76	0.71/0.63	1.10/2.27	3.47/3.76	3.19/2.67	2.53/-1.81	1.37/-1.24	0.55/-0.65	-2.49/-5.47	-4.00/-3.17	-2.79/-6.05	0.73/-1.11	1.55/-1.25	0.89/-1.18	1.33/0.32	-0.84/-0.27	1.38/0.91	-0.58/-2.53	-3.56/-2.76	-1.72/-1.39	-0.56/0.88	0.89/0.51	0.87/-1.54	
θ(52.5°)	1.61/-0.01	0.11/-0.41	0.55/-1.68	1.60/-1.68	3.26/4.04	3.84/3.81	2.93/-3.6	2.21/-0.04	1.58/0.53	-2.38/-5.34	-5.62/-4.36	-2.83/-2.60	-2.93/-2.58	-1.26/-0.91	-1.16/0.06	1.28/0.44	-1.35/-0.55	1.06/0.75	-1.51/-2.19	-1.89/-2.58	-1.56/-1.74	2.32/2.20	1.94/-1.49	1.94/-1.49	
θ(60°)	1.81/-1.30	-1.02/-1.87	0.10/-1.62	1.44/-1.60	3.18/3.42	3.21/3.15	3.01/3.05	3.04/-9.8	2.52/-2.14	0.30/-2.70	-4.08/-3.86	-2.49/-2.65	-2.30/-3.06	-4.33/-2.95	-1.39/0.32	1.60/0.78	-1.60/0.21	1.90/0.57	-1.33/-2.05	-1.26/-1.09	-0.46/-0.08	0.63/-1.95	1.85/-1.43	1.03/-1.49	
θ(67.5°)	0.48/-0.24	-1.87/-3.17	-1.26/0.47	0.25/-0.08	1.73/2.56	1.60/-1.25	1.73/2.38	2.87/2.73	2.13/-2.19	1.70/-1.09	-1.54/-2.73	-1.05/-1.90	-0.83/-1.69	-4.29/-3.58	-1.28/0.35	1.80/0.97	-1.04/-1.29	2.03/-0.37	-2.29/-1.25	0.27/-0.47	0.31/0.45	1.53/2.68	2.44/-1.82	0.76/0.57	
θ(75°)	0.65/0.20	-1.58/-2.54	-1.89/-0.87	-1.90/-1.74	1.12/-1.48	0.50/-0.32	-0.69/0.17	0.54/-1.72	2.18/2.32	3.30/0.22	0.27/-2.46	-0.63/-2.72	-0.63/-1.09	-4.14/-4.29	-1.51/0.95	2.51/-1.55	-0.55/-1.65	2.19/-1.40	-2.48/-0.33	1.50/-1.31	1.43/-1.04	1.08/-1.97	1.96/-1.80	-0.93/0.01	
θ(82.5°)	-0.50/-2.13	-1.64/-2.51	-3.06/-2.34	-0.40/-3.76	-0.21/0.49	-0.96/-2.07	-2.00/-1.69	-1.26/-0.39	0.53/0.92	0.97/-1.63	-0.76/-2.79	-0.76/-2.60	-6.50/-4.80	-0.98/-1.16	0.73/-3.99	-2.64/0.63	2.66/2.45	1.60/0.48	-0.71/-0.29	0.73/-0.59	0.43/-2.01	-0.17/-2.01	-0.17/-2.01	-0.17/-2.01	
θ(90°)	-0.83/-3.44	-2.98/-1.56	-3.99/-3.96	-5.43/-6.24	-2.26/-1.36	-1.87/-1.88	-2.42/-2.06	-1.90/-1.34	-0.11/-0.40	1.61/-1.03	-1.71/-4.59	-1.05/-4.06	-2.44/-3.59	-8.59/-4.96	-1.50/-1.09	1.37/-1.11	-1.53/-0.55	-1.40/-5.21	-1.57/-1.02	2.52/2.29	1.07/-1.51	-2.37/-3.21	-0.12/-1.95	-7.33/-4.28	
θ(97.5°)	-1.67/-3.41	-4.05/-2.55	-4.56/-3.94	-4.22/-6.93	-5.34/-3.45	-4.08/-2.70	-1.95/-2.58	-2.14/-2.63	-2.11/-2.81	-2.25/-7.88	-4.22/-5.29	-2.24/-5.98	-3.64/-5.02	-9.40/-7.86	-5.32/-3.46	-1.79/-1.05	-3.20/-2.97	-4.01/-8.37	-2.25/0.08	1.12/0.09	-1.33/-4.70	-4.73/-3.05	-1.92/-1.72	-6.96/-6.74	
θ(105°)	-2.81/-2.95	-5.04/-3.53	-4.30/-4.83	-3.79/-5.73	-7.47/-5.83	-5.49/-4.97	-4.21/-9.3	-2.74/-4.57	-4.55/-5.67	-6.76/-11.37	-7.94/-9.48	-6.97/-8.93	-5.68/-5.52	-6.44/-6.93	-6.49/-3.17	-1.30/-7.04	-3.87/-3.37	-6.42/-12.42	-3.35/-1.04	-0.05/-2.14	-3.72/-7.78	-5.10/-2.91	-2.00/-3.38	-6.50/-7.93	
θ(112.5°)	-3.92/-4.47	-6.98/-6.82	-3.71/-4.37	-4.57/-3.28	-5.59/-8.60	-9.89/-8.94	-8.60/-6.63	-6.28/-8.05	-10.03/-8.40	-6.60/-2.67	-2.36/-4.49	-4.82/-7.96	-2.46/-2.78	-6.33/-6.06	-7.25/-2.98	-5.05/-10.									



Antenna Pattern

Appendix B

θ(97.5°)	-3.74/-4.01	-2.96/-3.89	-3.49/-5.73	-5.50/-3.42	-3.31/-4.02	-4.24/-4.40	-3.31/-3.27	-2.88/-2.86	-2.61/-4.20	-4.48/-6.93	-6.06/-7.86	-8.09/-9.15	-8.85/-7.43	-7.21/-8.76	-10.01/-8.47	-5.94/-6.08	-9.86/-2.32	-0.37/-2.24	-6.98/-3.76	-2.04/-1.99	-4.35/-5.91	-8.77/-10.32	-8.25/-7.67	-4.30/-4.19
θ(105°)	-3.20/-4.19	-3.31/-5.14	-6.21/-7.77	-6.41/-3.52	-3.43/-5.98	-5.70/-4.73	-3.77/-3.18	-3.32/-4.07	-4.78/-5.89	-6.06/-7.64	-7.25/-9.13	-9.51/-11.39	-9.09/-8.49	-7.45/-8.33	-8.40/-8.47	-7.38/-8.46	-10.68/-4.27	-4.50/-6.83	-9.78/-7.47	-6.72/-6.22	-6.11/-6.90	-8.41/-8.89	-6.74/-7.80	-5.19/-5.39
θ(112.5°)	-4.02/-3.49	-4.25/-5.86	-8.43/-9.92	-6.24/-4.01	-3.34/-5.98	-5.41/-4.43	-4.02/-4.23	-5.02/-6.17	-6.33/-6.95	-8.08/-9.11	-9.25/-9.76	-10.26/-9.92	-8.66/-9.05	-9.06/-8.33	-10.90/-8.29	-8.72/-14.76	-6.11/-5.56	-11.19/-13.15	-11.38/-10.52	-9.87/-5.84	-7.32/-5.66	-11.09/-7.52	-6.90/-9.48	-6.93/-5.11
θ(120°)	-5.55/-7.17	-6.48/-7.44	-7.86/-10.33	-6.57/-4.03	-4.16/-7.61	-10.31/-6.78	-4.92/-5.59	-7.22/-7.09	-7.07/-7.41	-9.13/-9.17	-8.96/-9.45	-10.44/-10.88	-9.12/-11.71	-8.53/-9.08	-9.63/-11.88	-13.30/-11.55	-5.02/-4.86	-7.20/-9.09	-8.79/-8.38	-10.23/-5.99	-5.58/-8.38	-13.85/-12.32	-8.84/-7.32	-6.61/-6.93
θ(127.5°)	-7.27/-6.28	-8.17/-8.63	-9.15/-8.53	-8.25/-6.04	-5.49/-7.89	-10.60/-11.32	-9.94/-9.02	-8.42/-8.60	-8.13/-8.64	-9.01/-7.80	-7.51/-8.85	-9.88/-10.84	-10.45/-11.92	-12.61/-7.54	-10.39/-13.54	-13.90/-12.80	-6.99/-8.59	-5.78/-8.94	-12.05/-11.55	-7.62/-9.55	-6.79/-11.63	-12.66/-10.00	-10.12/-6.22	-8.91/-7.68
θ(135°)	-10.88/-9.76	-11.33/-13.30	-12.36/-11.22	-10.99/-10.29	-8.83/-9.80	-11.76/-11.20	-8.80/-7.19	-8.68/-10.02	-9.47/-9.45	-10.22/-10.10	-8.82/-8.76	-8.87/-8.76	-11.00/-12.99	-9.11/-6.30	-9.16/-10.61	-8.24/-9.57	-15.43/-13.60	-6.63/-9.22	-10.78/-11.92	-10.93/-13.09	-12.81/-11.63	-9.44/-11.75	-9.90/-8.95	-9.02/-8.46
θ(142.5°)	-12.27/-13.45	-14.09/-13.54	-11.44/-11.15	-11.66/-12.35	-9.70/-7.94	-7.43/-7.34	-7.14/-6.75	-6.98/-8.50	-9.84/-9.91	-9.34/-8.80	-7.61/-9.42	-13.61/-14.09	-11.30/-11.54	-10.38/-9.95	-8.64/-14.81	-5.52/-4.96	-9.25/-7.44	-6.91/-7.75	-9.78/-13.26	-10.71/-11.17	-12.10/-8.91	-8.51/-9.57	-8.50/-13.57	-14.95/-13.35
θ(150°)	-15.53/-15.06	-12.88/-9.20	-8.35/-8.46	-9.08/-11.25	-14.04/-13.40	-10.92/-10.13	-8.57/-8.91	-11.02/-13.04	-11.97/-11.01	-10.91/-11.91	-14.04/-13.91	-13.74/-15.22	-11.54/-7.25	-7.63/-10.48	-13.39/-14.61	-12.14/-10.59	-10.40/-8.04	-8.60/-8.63	-8.29/-10.29	-12.21/-11.49	-13.86/-14.79	-13.23/-15.93	-15.57/-15.81	-14.28/-12.27
θ(157.5°)	-11.06/-13.53	-12.69/-11.95	-9.91/-9.72	-10.68/-11.64	-12.56/-13.96	-13.63/-13.43	-13.35/-13.52	-14.63/-15.53	-13.98/-11.98	-10.57/-9.98	-10.10/-10.61	-12.99/-14.10	-12.31/-11.25	-13.56/-15.96	-14.93/-14.66	-13.10/-12.34	-11.54/-9.79	-9.59/-9.94	-11.01/-12.32	-15.50/-15.96	-15.28/-13.94	-12.69/-11.47	-10.02/-9.76	-9.39/-9.51
θ(165°)	-15.68/-14.35	-12.45/-10.72	-10.07/-9.61	-9.75/-9.82	-9.93/-10.93	-12.07/-13.37	-13.52/-12.74	-12.05/-11.17	-10.35/-10.15	-10.72/-12.05	-12.95/-14.70	-15.14/-15.08	-15.72/-15.30	-15.18/-15.07	-14.89/-13.82	-13.19/-13.19	-13.34/-13.71	-13.87/-13.84	-14.80/-15.37	-15.44/-15.57	-14.74/-12.87	-11.20/-10.75	-11.15/-12.85	-14.16/-14.08
θ(172.5°)	-15.52/-15.11	-15.19/-15.90	-15.08/-14.38	-14.56/-14.03	-14.68/-15.04	-14.78/-14.88	-13.99/-13.98	-13.47/-14.31	-15.04/-15.00	-15.34/-15.37	-14.94/-15.42	-15.55/-15.41	-15.79/-15.42	-13.84/-12.82	-11.89/-10.97	-10.47/-10.56	-11.13/-11.09	-11.26/-11.61	-12.21/-13.61	-14.62/-14.70	-16.04/-15.28	-14.77/-15.22	-15.90/-15.44	-15.15/-15.93
θ(180°)	-12.22/-11.87	-12.51/-12.49	-12.74/-12.87	-12.23/-11.40	-10.74/-10.70	-10.98/-11.25	-11.93/-12.38	-13.13/-13.58	-14.46/-15.44	-15.21/-15.17	-14.78/-15.20	-14.81/-15.30	-15.58/-15.87	-15.51/-15.27	-14.82/-15.38	-15.64/-15.30	-15.18/-15.98	-15.03/-15.27	-15.49/-14.99	-15.21/-14.93	-14.22/-13.57	-13.15/-13.37	-13.43/-13.14	
Freq(Hz)	5.3GPol.	TotalAnt.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
θ(0°)	2.16/2.24	2.42/2.61	2.57/2.43	2.39/2.46	2.41/2.58	2.75/2.83	3.08/2.92	2.52/2.24	2.27/2.25	2.32/2.40	2.37/2.26	2.09/1.90	1.77/1.81	1.85/2.03	2.35/2.53	2.59/2.68	2.82/2.92	2.90/2.81	2.70/2.82	2.68/2.71	2.67/2.65	2.61/2.52	2.34/2.11	1.96/2.08
θ(7.5°)	2.56/2.84	3.02/3.14	3.08/3.01	3.09/3.01	2.68/2.66	2.78/2.75	2.70/2.54	2.57/2.52	2.60/2.67	2.73/2.76	2.70/2.55	2.26/2.99	2.21/2.40	2.63/2.98	3.22/3.24	3.12/3.02	2.99/2.98	3.03/3.00	3.07/3.04	2.86/2.91	2.97/2.82	2.71/2.56	2.41/2.41	
θ(15°)	2.63/3.01	3.52/3.86	4.06/3.97	3.76/3.13	3.24/3.31	3.35/3.22	3.24/2.93	2.59/2.19	2.25/2.48	2.65/2.82	2.99/2.91	2.76/2.72	2.97/3.25	3.59/3.81	3.86/3.67	3.26/2.77	2.32/2.10	2.18/2.39	2.53/2.55	2.49/2.28	1.95/1.60	1.28/1.22	1.46/1.75	2.07/2.17
θ(22.5°)	1.76/2.28	3.02/3.83	4.25/4.31	4.10/4.04	4.34/4.14	4.09/3.69	3.54/2.85	2.34/2.37	2.56/2.86	3.01/3.04	2.98/2.79	2.32/1.82	1.72/1.96	2.13/2.35	2.68/3.10	3.18/2.81	2.44/2.33	2.25/2.02	1.59/1.13	0.93/0.85	0.92/0.70	0.35/0.02	-0.24/-0.17	0.46/1.10
θ(30°)	0.57/0.78	1.42/2.42	3.33/3.69	3.87/3.86	3.98/4.24	4.35/3.84	2.84/2.20	2.07/2.47	3.00/3.41	3.23/2.47	1.65/0.96	0.07/-0.79	-0.95/-0.82	-1.03/-1.05	0.38/2.00	2.88/2.27	1.25/0.25	-0.22/-0.61	-1.07/-1.39	-1.28/-0.90	-0.19/0.51	0.46/0.04	-0.50/-0.88	-0.56/0.04
θ(37.5°)	-1.16/-0.67	-0.16/0.69	1.61/2.45	2.86/2.64	3.06/3.76	3.80/2.51	1.18/1.18	1.84/2.62	2.93/2.42	1.32/-0.34	-1.51/-1.89	-3.37/-3.16	-3.37/-3.15	-3.36/-4.54	-4.26/-1.35	0.75/0.81	0.28/0.63	1.66/2.07	1.67/1.31	1.51/2.11	2.25/1.36	-0.21/-1.55	-2.24/-2.38	-2.22/-1.76
θ(45°)	-2.04/-1.12	-0.01/0.52	1.44/2.03	1.67/1.32	1.82/2.57	2.52/1.62	0.79/0.59	1.31/1.76	1.69/0.70	-0.92/-2.26	-2.71/-2.11	-1.52/-2.44	-4.16/-5.52	-6.19/-6.69	-7.41/-2.92	0.30/0.91	0.78/1.74	3.12/3.33	3.20/3.52	3.94/3.92	3.85/3.05	0.43/-2.56	-2.88/-2.51	-2.69/-2.76
θ(52.5°)	-2.29/0.80	0.26/1.05	1.76/2.05	1.18/0.38	1.10/2.20	2.35/-1.65	0.57/0.49	1.49/1.74	1.48/0.84	-0.76/-2.01	-2.87/-2.87	-2.85/-3.03	-4.17/-5.82	-7.21/-7.89	-7.48/-2.15	0.58/0.82	0.18/1.17	2.63/3.44	3.77/3.65	3.69/3.83	3.62/2.72	0.81/-1.77	-2.66/-2.40	-2.48/-3.23
θ(60°)	-2.52/0.33	0.91/1.86	1.97/1.34	0.52/-0.66	0.62/1.64	1.32/1.05	0.66/0.89	1.15/1.57	1.21/0.03	-1.73/-3.24	-3.53/-3.43	-3.18/-3.08	-4.11/-5.20	-6.81/-8.55	-8.55/-3.53	-10.03/-37	-0.28/1.07	1.67/2.43	3.25/3.39	3.53/3.73	3.46/2.23	0.30/1.63	-2.45/-3.17	-2.65/-3.55
θ(67.5°)	-1.74/-0.63	0.57/1.49	1.72/0.92	-0.13/-1.24	0.57/1.21	0.84/0.82	0.74/0.55	0.35/1.30	1.53/0.02	-1.72/-3.46	-3.86/-3.91	-3.23/-3.80	-5.04/-5.51	-5.59/-7.47	-6.64/-4.32	-0.98/0.11	0.36/1.76	1.88/2.82	3.56/3.00	3.15/3.88	3.12/1.25	-0.54/-2.89	-3.71/-4.89	-2.58/-2.93
θ(75°)	-0.70/-1.47	0.01/0.51	0.65/-0.80	-1.38/-1.26	0.14/0.30	0.05/0.52	0.85/0.14	-0.09/0.56	0.75/-0.71	-2.09/-4.10	-3.96/-5.25	-2.79/-5.51	-5.12/-5.21	-3.67/-4.95	-8.22/-7.59	-3.12/-1.03	-0.18/0.21	2.46/3.08	3.02/2.20	2.89/3.87	2.59/-0.51	-3.66/-5.4	-6.12/-8.55	-2.01/-2.48
θ(82.5°)	-0.13/-2.16	-0.64/-0.75	-0.30/-1.71	-2.62/-1.80	-1.00/-0.78	-0.86/-0.12	0.21/-0.90	-1.52/-0.71	0.04/-1.37	-2.39/-4.70	-4.13/-5.38	-3.15/-7.21	-6.56/-4.65	-3.17/-4.18	-8.49/-9.47	-6.57/-1.52	-0.62/1.72	2.93/3.02	1.61/1.25	2.66/3.24	1.46/-2.48	-8.20/-9.86	-8.15/-7.56	-1.78/-2.24
θ(90°)	-0.72/-2.57	-0.96/-1.90	-1.20/-2.65	-3.50/-1.90	-2.23/-2.08	-2.21/-0.79	-0.00/-1.34	-2.24/-1.75	-1.88/-2.26	-3.49/-3.53	-4.60/-3.73	-3.10/-5.94	-5.81/-6.89	-5.43/-6.10	-8.58/-13.51	-5.97/-3.88	-3.08/0.06	2.11/1.76	-0.56/0.09	1.50/2.28	-1.18/-4.86	-10.43/-13.23	-9.33/-8.87	-2.24/-2.12
θ(97.5°)	-2.35/-1.70	-0.94/-1.40	-2.05/-3.97	-4.54/-2.76	-3.42/-6.29	-2.93/-1.87	-1.34/-3.00	-4.01/-2.92	-2.20/-3.42	-4.30/-7.23	-5.90/-5.92	-4.67/-6.99	-6.82/-7.43	-7.15/-7.86	-9.46/-9.94	-6.10/-5.09	-8.25/-1.90	0.30/-1.10	-5.35/-2.48	-0.58/-0.64	-3.70/-6.47	-8.56/-11.02	-9.20/-7.55	-4.71/-3.40
θ(105°)	-2.21/-3.36	-2.14/-3.57	-4.19/-5.65	-5.40/-2.98	-3.69/-3.73	-2.63/-1.64	-1.24/-2.81	-3.86/-4.22	-3.97/-4.14	-5.13/-8.18	-8.27/-6.99	-6.09/-6.95	-7.88/-8.60	-8.02/-11.26	-8.64/-7.65	-9.87/-4.14	-4.67/-6.17	-9.29/-5.82	-4.94/-4.79	-5.90/-7.94	-8.81/-8.10	-10.71/-8.45	-4.65/-5.47	
θ(112.5°)	-4.19/-4.10	-4.78/-5.79	-7.41/-5.95	-4.15/-3.22	-3.84/-5.21	-3.78/-2.70	-2.14/-2.86	-4.51/-6.02	-5.92/-5.87	-6.71/9.31	-9.94/-6.81	-8.55/-7.18	-7.16/-7.82	-7.59/-7.12	-9.09/-8.69	-8.87/-11.23	-5.86/-4.88	-9.96/-11.45	-9.55/-8.65	-9.17/-5.62	-7.36/-5.18	-9.65/-8.28	-8.30/-6.53	-5.21/-3.81
θ(120°)	-4.92/-6.91	-6.03/-6.64	-8.37/-9.14	-4.93/-3.11	-4.17/-6.82	-5.80/-3.60	-3.25/-4.14	-6.64/-6.96	-6.51/-5.89	-7.74/-11.29	-10.92/-7.57	-8.08/-6.88	-7.75/-8.41	-8.60/-8.93	-9.84/-12.45	-13.99/-12.25	-4.42/-4.26	-5.92/-8.79	-7.44/-7.13	-9.65/-8.08	-5.46/-6.94	-13.39/-12.44	-9.15/-7.94	-5.79/-5.33
θ(127.5°)	-6.07/-5.92	-7.01/-7.45	-9.32/-8.60	-8.34/-5.33	-5.67/-8.07	-7.84/-3.70	-6.56/-6.82	-7.81/-9.20	-8.30/-7.56	-8.48/-10.27	-8.85/-8.19	-7.53/-9.13	-8.68/-9.24	-11.23/-7.82	-9.91/-12.31	-14.50/-14.68	-6.74/-7.16	-4.78/-9.59	-10.64/-9.63	-5.58/-9.44	-10.53/-9.23	-10.71/-6.85	-8.79/-7.50	
θ(135°)	-12.09/-9.43	-11.02/-9.56	-10.54/-9.20	-8.83/-7.00	-5.87/-6.96	-7.94/-7.44	-7.44/-6.90	-7.04/-7.76	-8.22/-9.61	-12.51/-10.67	-9.92/-8.61	-9.71/-7.63	-8.66/-10.80	-11.56/-5.58	-8.14/-9.27	-9.98/-9.93	-13.71/-11.80	-5.96/-9.81	-10.23/-11.08	-9.96/-13.53	-9.49/-10.69	-10.91/-9.60	-8.86/-7.25	-9.40/-10.05
θ(142.5°)	-11.16/-13.46	-13.46/-11.81	-9.38/-9.01	-9.07/-9.23	-7.19/-5.96	-5.88/-6.25	-6.25/-8.86	-5.46/-6.07	-7.96/-3.07	-11.61/-10.28	-7.67/-6.04	-11.53/-12.93	-10.78/-13.18	-11.41/-12.94	-10.18/-14.45	-5.50/-4.07	-7.60/-6.01	-5.31/-6.58	-8.67/-10.52	-9.57/-11.74	-9.78/-6.27	-7.70/-7.85	-7.62/-15.78	-14.44/-11.29
θ(150°)	-14.31/-15.95	-12.66/-9.61	-7.77/-7.05	-7.47/-10.45	-13																			

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

