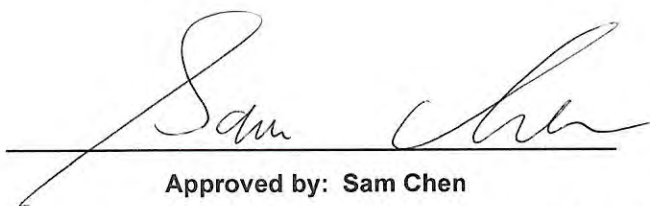




Antenna Composite Gain Test Report

FCC ID	Z3WAIR4985
Equipment	Wi-Fi 6E Smart Mesh System
Brand Name	Airties
Model Name	Air 4985
SW version	4.144.8.0_wltest
HW version	PCB-4985-D01-M01-R02
Serial Number	J48LB2HV100108
Applicant	Airties Wireless Networks Sehit Mehmet Mikdat Uluunlu Sokagi No:23 Esentepe, Sisli İstanbul, 34394 Turkey
Manufacturer	Airties Wireless Networks Sehit Mehmet Mikdat Uluunlu Sokagi No:23 Esentepe, Sisli İstanbul, 34394 Turkey
Sample Received	Aug. 19, 2022
Start Test Date	Aug. 25, 2022
Final Test Date	Aug. 25, 2022



Approved by: Sam Chen

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



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History of this test report

[illegible]

1. Operation Mode and Antenna Information

Antenna Position	RF Port			Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
	2.4G	5G	6G					
2G/6G Ant1	1	-	1	AirTies	ANT A00	PCB	N/A	2.4GHz, 6GHz UNII5~8
2G/6G Ant2	2	-	2	AirTies	ANT A11	PCB	N/A	2.4GHz, 6GHz UNII5~8
5G Ant1	-	1	-	AirTies	ANT A0X	PCB	N/A	5GHz UNII 1~3
5G Ant2	-	2	-	AirTies	ANT A1X	PCB	N/A	5GHz UNII 1~3
5G Ant3	-	3	-	AirTies	ANT A2X	PCB	N/A	5GHz UNII 1~3
5G Ant4	-	4	-	AirTies	ANT A3X	PCB	N/A	5GHz UNII 1~3

Note:

2.4GHz and 6GHz Operation Mode (2TX/2RX)

2G 6GAnt1~2 can be used as transmitting/receiving antenna.

2G 6GAnt1~2 could transmit/receive simultaneously.

5GHz Operation Mode (4TX/4RX)

5G Ant1~4 can be used as transmitting/receiving antenna.

5G Ant1~4 could transmit/receive simultaneously.

2. Test Frequency

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

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



3. Testing Location

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	Rex Liao	23-24 / 40-50	Aug. 25, 2022

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

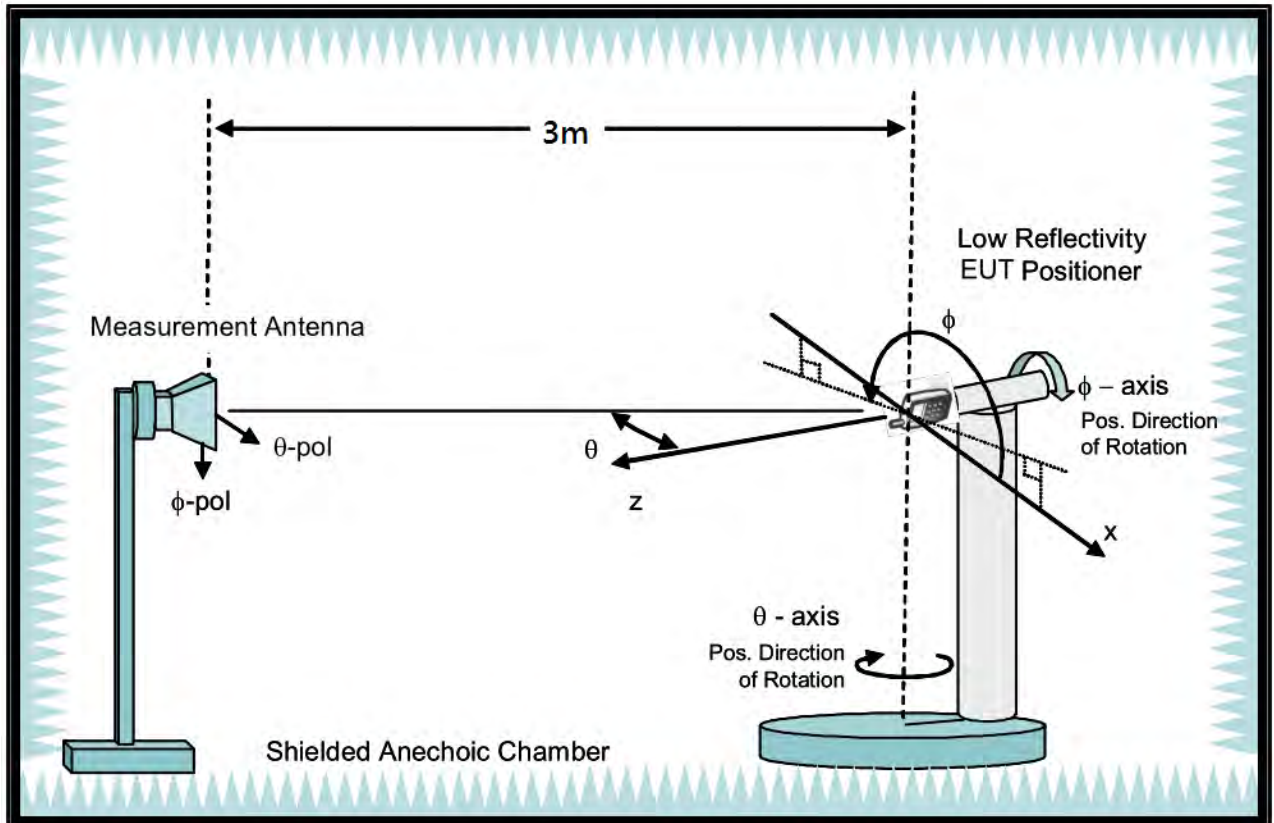
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

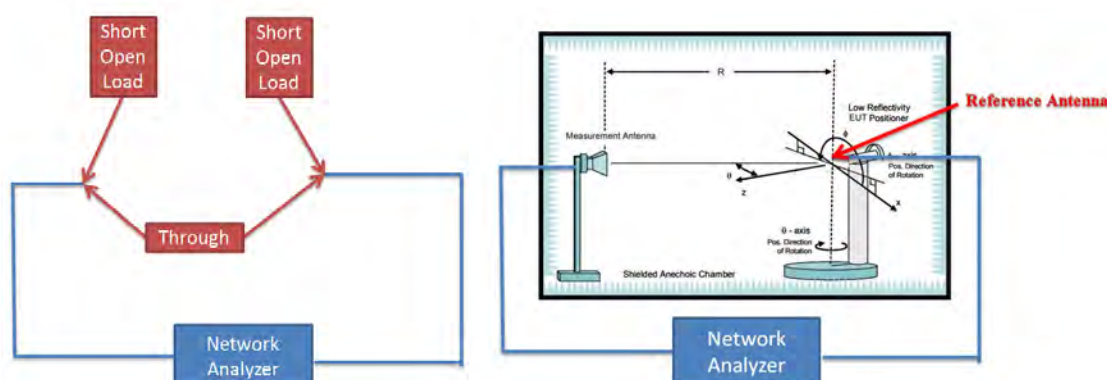
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



5. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	7200
G(theta) reading (dB)	-33.55	-33.27	-32.92	-32.91	-32.73	-32.02	-32.67	-32.82	-32.98	-33.18	-32.8	-33.92	-34.62	-35.57
G(phi) reading (dB)	-33.15	-32.7	-32.41	-32.61	-32.43	-31.72	-32.37	-32.51	-32.52	-32.66	-32.5	-33.62	-34.32	-35.48
Reference gain (dBi)	10.1	10.4	10.7	12.5	12.7	13.5	13.4	13.3	13.3	13.2	13.4	12.5	12.1	11.4
Factor(theta) (dB)	43.65	43.67	43.62	45.41	45.43	45.52	46.07	46.12	46.28	46.38	46.2	46.42	46.72	46.97
Factor(phi) (dB)	43.25	43.1	43.11	45.11	45.13	45.22	45.77	45.81	45.82	45.86	45.9	46.12	46.42	46.88

Note:

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

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

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

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



6. Test Method

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

DG steps:

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

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

7. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	2.45G	6.175G	6.475G	6.695G	6.995G
Ant. 1 (dBi)	0.87	1.32	-1.14	0.04	1.88
Ant. 2 (dBi)	2.11	0.12	1.98	2.07	0.58
DG [1SS] (dBi)	4.52	3.75	3.57	4.12	4.26
Polarization	Theta	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	142.5	97.5	75	97.5	120
$\Phi(^{\circ})$	30	172.5	0	165	195

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-5.75	-5.52	2.85	1.03
Ant. 2 (dBi)	1.81	1.29	-3.32	-3.03
Ant. 3 (dBi)	-0.96	0.6	-8.51	-6.51
Ant. 4 (dBi)	-2.58	-2.37	2.11	3.5
DG [1SS] (dBi)	4.57	4.92	5.39	5.58
Polarization	Theta	Theta	Theta	Theta
$\Theta(^{\circ})$	105	105	150	150
$\Phi(^{\circ})$	262.5	262.5	0	0

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

DG_1SS max value position calculation

Frequency (Hz)	2.45G	6.175G	6.475G	6.695G	6.995G
Ant. 1 [10 ^{^(G/20)}]	10 ^{^(0.87/20)}	10 ^{^(1.32/20)}	10 ^{^(-1.14/20)}	10 ^{^(0.04/20)}	10 ^{^(1.88/20)}
Ant. 2 [10 ^{^(G/20)}]	10 ^{^(2.11/20)}	10 ^{^(0.12/20)}	10 ^{^(1.98/20)}	10 ^{^(2.07/20)}	10 ^{^(0.58/20)}
Ant. 1 [10 ^{^(G/20)}] value	1.105	1.164	0.877	1.005	1.242
Ant. 2 [10 ^{^(G/20)}] value	1.275	1.014	1.256	1.269	1.069
Sum All Antenna [Amax]	2.38	2.178	2.133	2.274	2.311
DG [10*log(Amax ² /Nant)]	4.52	3.75	3.57	4.12	4.26

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 [10 ^{^(G/20)}]	10 ^{^(-5.75/20)}	10 ^{^(-5.52/20)}	10 ^{^(2.85/20)}	10 ^{^(1.03/20)}
Ant. 2 [10 ^{^(G/20)}]	10 ^{^(1.81/20)}	10 ^{^(1.29/20)}	10 ^{^(-3.32/20)}	10 ^{^(-3.03/20)}
Ant. 3 [10 ^{^(G/20)}]	10 ^{^(-0.96/20)}	10 ^{^(0.6/20)}	10 ^{^(-8.51/20)}	10 ^{^(-6.51/20)}
Ant. 4 [10 ^{^(G/20)}]	10 ^{^(-2.58/20)}	10 ^{^(-2.37/20)}	10 ^{^(2.11/20)}	10 ^{^(3.5/20)}
Ant. 1 [10 ^{^(G/20)}] value	0.516	0.53	1.388	1.126
Ant. 2 [10 ^{^(G/20)}] value	1.232	1.16	0.682	0.706
Ant. 3 [10 ^{^(G/20)}] value	0.895	1.072	0.375	0.473
Ant. 4 [10 ^{^(G/20)}] value	0.743	0.761	1.275	1.496
Sum All Antenna [Amax]	3.386	3.522	3.721	3.8
DG [10*log(Amax ² /Nant)]	4.57	4.92	5.39	5.58

Note:

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

Directional gain (1SS) = 10*log(10^{^(G_{ant1}/20)}+10^{^(G_{ant2}/20)}+ +10^{^(G_{ant3}/20)} +10^{^(G_{ant4}/20)}+.....)^2/Nant)

8. Summary of Test Result

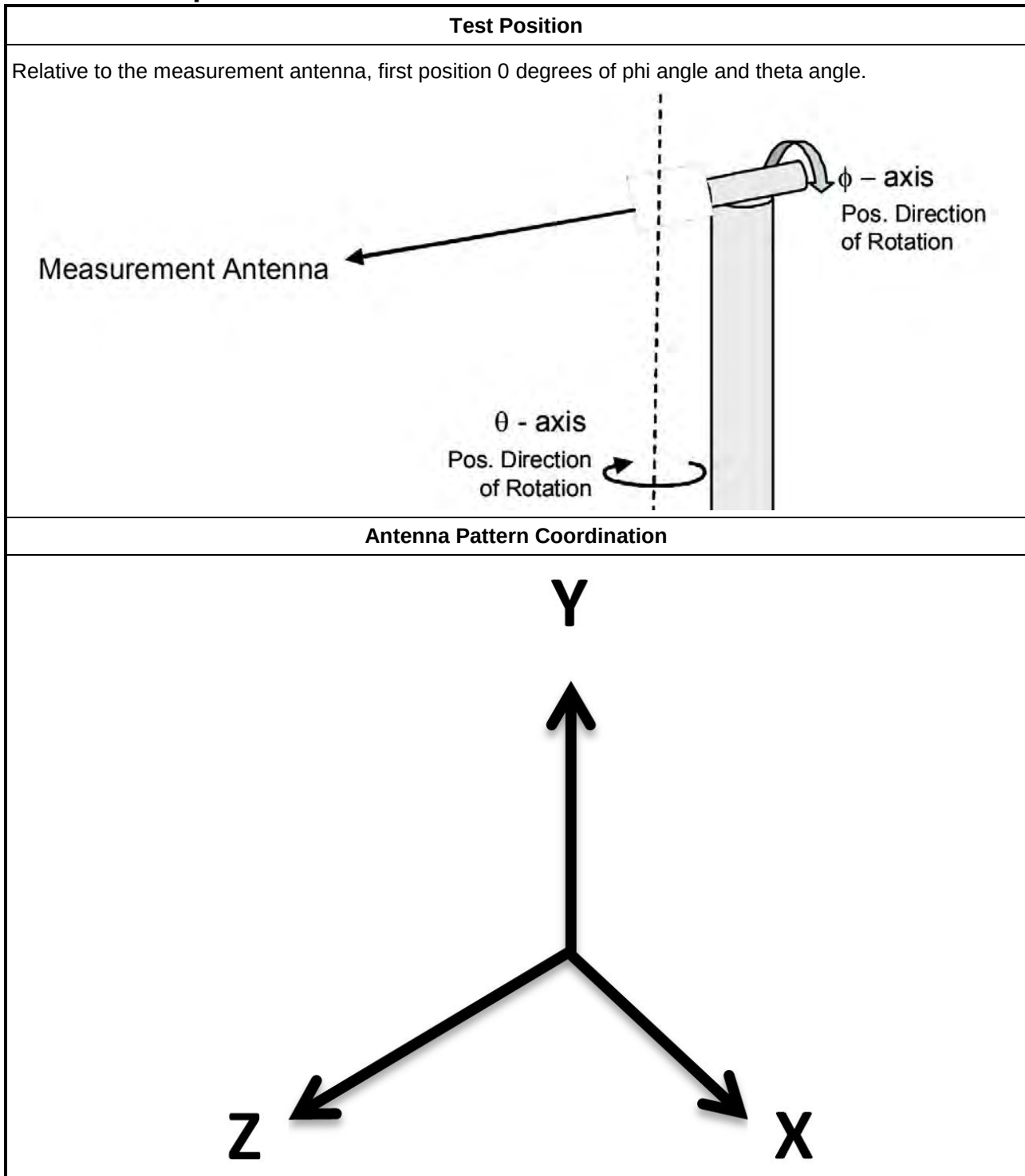
Frequency (Hz)	2.45G	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.21	1.32	1.46	1.76	2.61
Ant. 2 Max Gain (dBi)	4.42	1.62	1.98	2.47	2.12
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/112.5/60	Phi/97.5/172.5	Phi/97.5/187.5	Phi/90/180	Phi/135/195
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Phi/112.5/292.5	Theta/37.5/292.5	Phi/75/0	Theta/45/285	Phi/120/172.5
Max Gain (dBi)	4.42	1.62	1.98	2.47	2.61
DG [1SS] (dBi)	4.52	3.75	3.57	4.12	4.26
DG [2SS] (dBi)	4.42	1.62	1.98	2.47	2.61

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.49	3.27	2.85	2.09
Ant. 2 Max Gain (dBi)	3.58	2.61	4.52	2.72
Ant. 3 Max Gain (dBi)	2.41	2.6	3.51	5.47
Ant. 4 Max Gain (dBi)	4.45	4.89	4.53	4.93
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/142.5/210	Theta/142.5/210	Theta/150/0	Theta/142.5/120
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/97.5/270	Theta/82.5/90	Theta/97.5/82.5	Theta/75/322.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/105/247.5	Theta/112.5/270	Theta/97.5/262.5	Theta/105/255
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/142.5/270	Theta/142.5/270	Theta/142.5/232.5	Theta/150/262.5
Max Gain (dBi)	4.45	4.89	4.53	5.47
DG [1SS] (dBi)	4.57	4.92	5.39	5.58
DG [2SS] (dBi)	4.45	4.89	4.53	5.47
DG [4SS] (dBi)	4.45	4.89	4.53	5.47

Note:

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

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-1292	1GHz~18GHz	Aug. 04, 2021	Aug. 03, 2022
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419201	100kHz~8.5GHz	Feb. 21, 2022	Feb. 20, 2023
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

Appendix A – Radiated Composite Gain of 2.4GHz and 6GHz.....	Page 15
Appendix B – Radiated Composite Gain of 5GHz U-NII 1 and U-NII 3.....	Page 24
Appendix C – Antenna Pattern of 2.4GHz and 6GHz.....	Page 35
Appendix D – Antenna Pattern of 5GHz U-NII 1 and U-NII 3.....	Page 39
Appendix E – Test Photos.....	Page 45



-

Freq(Hz)	2.45G	6.175G	6.475G	6.695G	6.995G
Ant. 1 Max Gain (dBi)	4.21	1.32	1.46	1.76	2.61
Ant. 2 Max Gain (dBi)	4.42	1.62	1.98	2.47	2.12
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/112.5/60	Phi/97.5/172.5	Phi/97.5/187.5	Phi/90/180	Phi/135/195
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/112.5/292.5	Theta/37.5/292.5	Phi/75/0	Theta/45/285	Phi/120/172.5
Max Gain (dBi)	4.42	1.62	1.98	2.47	2.61
DG [1SS] (dBi)	4.52	3.75	3.57	4.12	4.26
DG [2SS] (dBi)	4.42	1.62	1.98	2.47	2.61



Radiated Composite Gain Data

Appendix A

DG 1SS Result

Freq(Hz)	2.45GPol.	PhiH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-0.62/-0.48	-0.67/-0.79	-1.17/-1.67	-2.09/-2.49	-2.8/-2.97	-3.61/-3.84	-4.37/-4.92	-5.7/-6.84	-7.56/-7.96	-6.68/-4.46	-3.05/-1.9	-1.08/-0.6	-0.25/-0.4	-0.07/-0.22	-0.66/-1.13	-1.56/-1.88	-2.27/-2.65	-2.91/-2.97	-3.36/-3.49	-4.09/-4.87	-5.78/-5.94	-5.19/-3.59	-2.49/-1.86	-1.59/-1.17
Θ(7.5°)	-0.83/-0.78	-0.74/-0.88	-1.08/-1.51	-2.04/-2.28	-2.48/-2.61	-2.86/-3.4	-3.85/-4.79	-5.85/-7.42	-8.17/-7.04	-5.68/-4.1	-2.79/-1.79	-1.12/-0.82	-0.37/-0.23	-0.28/-0.37	-0.81/-1.2	-1.92/-2.41	-2.82/-3.21	-4.04/-4.25	-4.44/-4.69	-5.04/-5.54	-6.41/-6.3	-5.85/-4.12	-2.71/-2.01	-1.38/-0.91
Θ(15°)	-0.73/-0.49	-0.41/-0.56	-0.87/-1.58	-2.01/-2.35	-2.6/-2.55	-2.82/-3.24	-4.07/-5.43	-6.99/-8.1	-8.16/-6.72	-5.57/-4.45	-3.16/-2.16	-1.39/-0.93	-0.61/-0.45	-0.4/-0.5	-0.85/-1.39	-2.17/-3.11	-3.68/-4.5	-5.09/-5.69	-6.32/-6.4	-5.82/-5.78	-6.31/-6.95	-6.52/-6.08	-4.15/-2.86	-1.82/-1.31
Θ(22.5°)	-1.43/-1.17	-0.98/-1.11	-1.6/-2.14	-2.29/-2.53	-2.5/-2.8	-3.33/-3.94	-5.36/-7.16	-9.61/-9.88	-8.53/-7.36	-6.95/-4.46	-3.16/-2.02	-1.36/-0.73	-0.52/-0.29	-0.36/-0.54	-1.24/-1.9	-2.89/-3.5	-5/-6.36	-7.02/-7.49	-7.98/-8.61	-8.29/-8.05	-8.82/-8.81	-8.88/-7.59	-5.07/-3.51	-2.45/-1.78
Θ(30°)	-1.66/-1.57	-1.75/-2.28	-3.12/-3.33	-3.6/-3.42	-3.36/-3.68	-4.15/-4.69	-5.91/-8.14	-10.27/-11.5	-10.33/-8.87	-7.04/-5.14	-3.72/-2.63	-1.75/-1.21	-0.85/-0.77	-0.83/-1.29	-2.1/-3.02	-4.01/-5.19	-6.57/-7.29	-7.59/-7.59	-7.51/-7.14	-7.27/-7.41	-7.87/-8.82	-10.33/-9.83	-6.95/-4.59	-3.03/-2.29
Θ(37.5°)	-1.39/-1.49	-2.15/-3.36	-4.54/-5.69	-5.84/-5.88	-5.66/-5.87	-5.84/-6.2	-7.3/-8.82	-9.73/-11.08	-11.61/-10.68	-8.52/-6.28	-4.54/-3.22	-2.37/-1.7	-1.38/-1.49	-2.03/-3.05	-4.1/-5.46	-6.85/-7.23	-7.33/-7.34	-7.19/-6.65	-6.58/-6.26	-6.52/-7.07	-7.61/-8.44	-8.86/-7.83	-5.45/-3.37	-1.99/-1.42
Θ(45°)	-1.13/-1.65	-3.02/-4.7	-6.94/-8.94	-10.56/-10.45	-10.01/-9.57	-9.86/-8.18	-9.05/-10.14	-10.46/-11.36	-12.29/-12.11	-10.07/-7.29	-5.26/-3.39	-2.35/-1.77	-1.51/-1.73	-2.55/-3.65	-5.03/-6.58	-8.06/-8.29	-8.98/-8.6	-8.17/-7.4	-6.24/-5.43	-5.4/-5.61	-6.16/-5.65	-6.42/-5.96	-4.74/-3.12	-1.9/-1.22
Θ(52.5°)	-0.93/-1.19	-2.21/-3.84	-6.32/-9.31	-9.99/-9.85	-9.3/-9.29	-9.31/-8.58	-9.09/-10.39	-11.49/-11.5	-10.89/-9.65	-7.39/-5.1	-2.93/-1.5	-0.530/0.2	-0.07/-0.71	-1.81/-3.19	-4.55/-6.54	-9.3/-11.61	-12.79/-11.59	-9.15/-6.79	-5.55/-4.66	-4.35/-4.47	-4.94/-5.69	-6.02/-5.45	-4.55/-2.99	-1.79/-0.88
Θ(60°)	-0.02/-0.19	-1.21/-3.05	-5.94/-7.93	-8.23/-7.46	-6.43/-6.67	-7.66/-7.88	-8.86/-10.67	-11.18/-10.68	-8.88/-8.51	-7.4/-5.45	-3.52/-1.99	-0.93/-0.27	-0.28/-0.81	-2.04/-3.47	-5.18/-7.1	-9.06/-10.96	-12.23/-11.64	-9.99/-7.08	-5.89/-4.78	-4.23/-4.38	-5.16/-7.1	-7.52/-6.74	-4.08/-2.21	-1.77/-0.05
Θ(67.5°)	-0.23/-1.54	-3.28/-4.98	-5/-4.86	-4.87/-4.22	-4.14/-4.72	-5.69/-7.09	-8.35/-9.43	-10.87/-11.63	-11.92/-12.53	-12.88/-9.85	-6.68/-4.25	-2.42/-1.59	-1.1/-1.1	-1.43/-2.04	-3.23/-4.36	-5.66/-7.21	-9.51/-10.04	-8.73/-6.74	-5.22/-4.42	-4.16/-4.51	-4.97/-5.14	-4.97/-4.41	-2.77/-1.09	0.16/-0.41
Θ(75°)	1.51/0.32	1.32/-2.66	-3.16/-3.25	-2.51/-1.8	-2.08/-3.57	-5.22/-6.46	-7.86/-8.47	-7.42/-5.68	-4.55/-4.49	-5.05/-5.37	-5.47/-6.45	-2.9/-1.2	-0.11/0.29	0.11/-0.5	-1.48/-2.52	-3.62/-5.43	-7.53/-7.96	-6.09/-4.37	-3.01/-2.14	-1.83/-1.98	-2.69/-3.05	-2.92/-2.47	-1.04/0.51	1.52/-1.85
Θ(82.5°)	1.72/0.86	-1.06/-2.86	-3.54/-2.58	-1.1/-0.16	-0.74/-2.83	-3.86/-3.73	-4.06/-5.06	-4.91/-3.72	-3.06/-3.28	-4.57/-6.48	-6.07/-4.38	-2.07/0.01	1.19/1.68	1.55/1.23	0.85/0.29	-0.92/-2.99	-5.42/-6.33	-5.13/-3.87	-2.47/-1.3	-0.79/-1.08	-2.06/-4.08	-6.41/-6.18	-3.44/-0.88	0.97/-1.82
Θ(90°)	1.74/0.34	-2.64/-4.95	-5.4/-3.67	-1.17/0.13	0.19/-0.17	-3.04/-1.9	-5.19/-5.2	-3.2/-1.18	-0.16/-0.37	-1.36/-2.86	-4.44/-5.82	-3.8/-0.97	0.35/0.68	0.75/0.89	1.09/0.75	-0.35/-1.9	-3.56/-4.57	-4.35/-2.89	-1.08/0.13	0.71/0.34	-0.78/-3.13	-5.88/-6.46	-3.94/-1.12	0.67/-1.54
Θ(97.5°)	2.11/0.83	-1.53/-3.25	-2.67/-2.13	-0.55/-0.13	-1.14/-2.57	-3.3/-3.65	-4.91/-5.37	-2.82/-3.08	1.09/1.46	1.17/0.13	-0.97/-2.24	-3.27/-2.31	-0.70/5.1	1.88/2.45	2.59/2.35	1.74/0.74	-1.1/-2.88	-3.52/-3.09	-2.26/-1.03	0.28/0.79	0.28/-1.65	-3.33/-3.68	-2.67/-0.48	1.24/2
Θ(105°)	2.25/1.03	-1.58/-2.01	1.52/2.87	-1.98/-0.74	1.98/-0.74	-3.41/-3.79	-5/-5.96	-3.52/-0.79	1.22/2.27	2.21/1.71	1.04/0.38	-0.27/-1.07	-0.85/0.06	0.62/0.86	0.67/0.81	0.80/1	-1.74/-2.86	-2.83/-2.74	-1.25/0.46	1.72/2.33	1.83/0.34	-1.45/-3.13	-2.19/0.21	1.61/-1.4
Θ(112.5°)	1.64/1.08	-0.81/-2.48	-2.65/-1.61	1.99/0.97	4.07/2.63	0.22/-2.13	-4.44/-7.85	-7.99/-3.23	-0.23/0.1	0.75/0.03	0.09/-0.45	-1.31/-1.06	-0.05/0.39	0.15/0.11	0.55/1.1	1.17/0.55	-0.71/-1.37	-1.63/-1.08	0.94/2.6	3.36/3.28	2.68/-1.43	-1.78/-3.14	-2.76/-2.59	-0.01/0.1
Θ(120°)	1.54/0.86	-1.88/-6.31	-6.32/-6.08	-2.31/-42	2.82/2.48	0.88/-1.69	-4.01/-5.95	-4.89/-1.76	0.25/1.05	1.21/1.75	2.04/1.5	-0.12/-2.29	-3.59/-3.91	-3.98/-4.19	-3.97/-2.98	-2.31/-2.1	-2.46/-2.41	-2.64/-2.16	0/1.8	2.66/2.65	2.22/0.79	-1.35/-2.66	-3.21/-0.73	0.91/-1.55
Θ(127.5°)	-0.96/-1.23	-3.16/-1.73	-1.11/-1.21	-1.43/-0.31	1.36/1.85	1.21/-0.6	-3.14/-5.28	-4.86/-2.8	-1.47/-1.13	-0.40/-19	-0.28/0.71	-2.12/-92	-3.49/-3.52	-3.29/-2.93	-3.01/-2.5	-1.87/-2.09	-2.71/-2.29	-2.71/-1.69	0.27/1.64	2.15/1.99	1.50/91	-0.58/-3.36	-6.72/-4.31	-2.01/-1.48
Θ(135°)	-4.75/-5.31	-3.93/-2.04	-1.14/-0.92	-0.87/-0.01	1.38/2.45	2.49/1.55	-0.16/-2.28	-3.89/-4.28	-3.98/-2.48	-0.72/0.18	0.4/-0.38	-1.38/-2.65	-3.59/-0.44	-3.76/-3.43	-2.42/-1.98	-2.38/-2.86	-2.87/-2.67	-2.68/-1.92	-0.21/1.25	2.03/2.2	2.49/2.98	2.71/1.08	-1.4/-3.28	-3.25/-3.38
Θ(142.5°)	-2.89/-3.59	-3.37/-2.04	-0.75/-0.21	-0.49/-0.69	-0.14/0.86	1.23/1.06	0.05/-1.34	-2.76/-2.42	-1.44/0.04	0.99/1.33	0.83/0.1	-1.34/-2.24	-2.38/-1.43	-0.38/0.64	1.42/-147	0.64/-0.82	-2.51/-3.75	-4.4/-4.66	-3.45/-2	-1.08/-0.87	0.37/1.48	1.75/0.84	-0.58/-1.42	-1.37/-1.54
Θ(150°)	-3.11/-3.68	-4.67/-4.65	-3.12/-5	-2.57/-3.06	-3.56/-3.67	-2.92/-2.17	-1.42/-0.51	0.67/-2.27	2.01/2.39	2.31/87	1.01/0.02	-0.67/-0.88	-0.57/0.18	0.95/1.46	1.77/1.51	-0.59/-0.79	-2.64/-3.75	-7.06/-6.28	-6.31/-4.58	-4.03/-3.62	-2.53/-1.12	-0.52/-1.04	-1.93/-2.71	-2.17/-2.76
Θ(157.5°)	-5.44/-5.7	-7.48/-8.09	-6.03/-4.94	-4.18/-3.95	-4.18/-4.54	-4.32/-3.3	-1.65/-0.26	0.85/1.61	1.89/1.82	1.39/0.54	-0.31/-1.1	-1.52/-1.69	-1.47/-1.01	-0.81/-0.26	-0.28/-1.01	-2.34/-4.58	-7.53/-10.51	-10.33/-7.91	-5.77/-4.53	-3.72/-3.1	-2.31/-1.98	-1.86/-2.23	-3.33/-4.61	-5.42/-5.43
Θ(165°)	-7.36/-7.2	-7.67/-6.76	-5.33/-4.02	-3.62/-3.42	-3.76/-2.49	-4.88/-5.14	-4.88/-4.15	-1.33/-2.52	-2.27/-2.4	-2.88/-3.59	-4.38/-4.51	-5.54/-5.57	-4.88/-4.25	-3.55/-3.18	-3.54/-4.76	-6.71/-9.08	-11.71/-10.79	-7.98/-6.54	-4.09/-3.03	-2.39/-1.89	-1.82/-1.89	-2.22/-2.88	-3.99/-5.7	-7.33/-7.8
Θ(172.5°)	-6.22/-6.49	-6.78/-6.32	-5.93/-5.38	-5.26/-5.25	-5.83/-6.94	-7.72/-8.83	-9.69/-10.45	-11.58/-12.63	-12.53/-11.92	-10.55/-9.26	-9.33/-6.55	-5.76/-5.07	-4.48/-4.21	-4.49/-4.89	-5.91/-7.57	-6.14/-10.3	-2.02/-7.78	-5.55/-4.09	-3.4/-2.23	-1.96/-1.85	-2.11/-2.57	-3.13/-3.85	-1.56/-6.66	-7.08/-7.18
Θ(180°)	-4.09/-4.64	-5.58/-6.71	-7.3/-8.29	-8.44/-8.38	-8.4/-8.88	-9.68/-10.36	-10.22/-9.6	-9.07/-8.36	-7.92/-7.38	-6.68/-6.15	-5.41/-4.98	-4.84/-4.95	-5.22/-5.78	-6.6/-7.25	-8.28/-9.02	-8.75/-7.98	-7.02/-5.43	-4.18/-3.36	-3.07/-2.69	-2.57/-2.83	-3.45/-4.17	-5/-5.63	-5.82/-5.95	-4.96/-4.46
Freq(Hz)	2.45GPol.	ThetaH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-7.03/-7.24	-7.66/-7.84	-6.78/-5.85	-5.18/-4.56	-3.78/-3.3	-3.07/-2.8	-2.47/-2.46	-2.26/-1.98	-1.73/-1.72	-1.91/-2.16	-2.84/-3.62	-4.27/-5.05	-5.41/-5.41	-5.92/-6.56	-7.55/-7.19	-7.02/-5.56	-4.36/-3.56	-3.13/-2.64	-2.25/-1.97	-1.78/-1.7	-1.74/-2.12	-2.67/-2.97	-3.58/-4.15	-5.47/-6.17
Θ(7.5°)	-7.11/-7.09	-7.42/-7.87	-7.92/-6.98	-5.97/-5.12	-4.38/-3.74	-3.45/-3.14	-2.85/-2.79	-2.79/-2.55	-2.49/-2.49	-2.61/-3.01	-3.34/-3.89	-4.81/-4.93	-5.18/-5.31	-5.75/-6.24	-7.11/-7.42	-6.78/-5.63	-4.62/-3.8	-3.26/-2.48	-2.21/-1.85	-1.58/-1.37	-1.43/-1.69	-2.26/-2.95	-3.83/-4.68	-5.5/-6.55
Θ(15°)	-8.02/-8.2	-8.33/-8.97	-8.57/-8.07	-6.61/-5.48	-6.44/-3.91	-3.87/-3.72	-3.73/-7.3	-3.73/-3.73	-2.98/-3.2	-3.21/-3.26	-3.94/-3.4	-4.84/-5.19	-5.4/-5.86	-6.3/-6.73	-7.31/-7.24	-6.41/-5.37	-4.71/-3.75	-3.42/-2.93	-2.71/-2.51	-1.39/-1.51	-1.78/-2.14	-3.09/-4.05	-5.51/-6.52	
Θ(22.5°)	-8.74/-10.51	-11.44/-12.11	-11.19/-9.89	-8.69/-7.06	-6.39/-5.91	-6.05/-5.43	-4.53/-4.42	-4.35/-3.93	-3.71/-3.57	-3.86/-4.19	-4.35/-4.73	-4.97/-5.26	-5.35/-5.66	-5.95/-6.21	-6.34/-6.05	-5.59/-4.98	-4.43/-3.69	-3.29/-3.09	-2.75/-2.45	-2.11/-1.82	-1.65/-1.6	-1.68/-2.01	-2.59/-3.59	-5.07/-6.85
Θ(30°)	-9.45/-13.06	-15.09/-15.48	-15.46/-14.95	-12.24/-9.88	-8.99/-7.87	-7.13/-6.4	-5.25/-4.63	-4.11/-4.06	-3.93/-3.93	-4.27/-4.72	-4.87/-5.12	-5.51/-5.68	-5.47/-5.44	-6.55/-7.53	-5.58/-5.11	-4.58/-3.94	-3.15/-2.7	-2.49/-2.59	-2.64/-2.89	-2.93/-2.84	-2.46/-2.28	-2.13/-2.03	-2.56/-3.28	-4.6/-6.53
Θ(37.5°)	-8.44/-10.3	-10.62/-10.73	-10.93/-9.36	-8.05/-7.19	-6.4/-5.08	-3.71/-3.19	-2.75/-3.16	-3.57/-4.15	-4.25/-4.52	-5.49/-5.48	-5.18/-4.51	-1.17/-1.55	-1.17/0.55	-0.64/-0.98	-1.54/-2.25	-3.06/-3.93	-3.67/-2.94	-2.36/-1.7	-1.71/0.55	-0.64/-0.98	-1.54/-2.25	-3.06/-3.93	-3.21/-3.64	-4.6/-6.34
Θ(45°)	-6.55/-6.08	-5.26/-4.88	-4.86/-5.02	-5.69/-5.95	-5.88/-5.85	-5.11/-4.47	-3.54/-2.8	-2.04/-1.53	-1.15/-1	-1.05/-1.43	-1.86/-2.28	-2.83/-3.32	-3.45/-3.38	-										



Radiated Composite Gain Data

Appendix A

Θ(22.5°)	0.82/1.11	0.80/1.7	-1/-2.04	-3.37/4.34	-5.76/-5.39	-6.43/-7.06	-8.1/8.6	-7.44/-6.19	-5.19/-4.62	-4.41/4.57	-3.56/-2.29	-1.66/-0.92	-1.05/-1.85	-2.49/-3.21	-3.67/-5.67	-7.28/-7.81	-8.04/-8.33	-7.83/-7.37	-6.09/-6.68	-6.96/-6.17	-4.71/-3.54	-2.59/-2.32	-0.56/-0.33	0.48/0.8
Θ(30°)	1.86/1.56	1.22/0.92	0.03/-1.33	-2.63/-4.21	-7.28/-9.42	-10.71/-10.92	-11.46/-10.84	-9.85/-7.42	-5.34/-3.95	-3.85/-3.95	-4.01/-2.4	0.1/-0.89	2.18/-3.57	-2.18/-3.57	-5.26/-6.7	-6.42/-6.29	-6/-5.99	-4.85/-3.23	-2.79/-3.61	-4.8/-6.01	-6.06/-4.51	-2.85/-1.55	-0.14/-0.44	0.91/1.45
Θ(37.5°)	2.97/2.74	1.33/-0.56	-1.55/-2.05	-3.24/-5.28	-7.85/-10.16	-10.59/-9.24	-8.62/-9.81	-10.53/-10.92	-8.06/-5.19	-3.75/-1.89	-1.52/-2.58	-3.75/-3.05	-2.92/-0.66	-1.92/-3.24	-4.77/-7.3	-11.16/-15.32	-10.74/-16.72	-4.56/-4.55	-5.54/-7.04	-7.48/-6.54	-5.88/-3.42	-1.51/-0.82	-0.07/0.75	1.52/52
Θ(45°)	3.24/2.15	-1.05/-1.72	-0.65/-1.11	-2.54/-6.41	-7.11/-8.61	-9.98/-10.42	-10.74/-11.03	-13.77/-15.89	-14.76/-11.26	-9.01/-5.06	-3.52/-2.51	-1.81/-1.07	-1.4/-2.58	-4.73/-5.21	-6.63/-10.03	-11.53/-11.74	-11.45/-9.78	-7.54/-8.48	-8.49/-5.71	-6.19/-6.63	-7.17/-6.05	-3.75/-0.95	-0.73/-0.02	1.06/2.63
Θ(52.5°)	3.03/1.84	0.07/0.28	0.44/-1.48	-4.35/-6.45	-8.21/-11.45	-14.31/-14.28	-16.1/-14.7	-15.06/-16.15	-11.68/-9.35	-6.76/-5.3	-3.64/-1.89	-1.04/-1.67	-2.9/-4.69	-4.8/-5.53	-5.24/-6.63	-8.11/-7.55	-9.46/-12.69	-13.33/-10.86	-10.36/-9.08	-6.95/-6.09	-4.96/-6.4	-4.49/-4.1	-1.64/-1.13	1.37/3.06
Θ(60°)	2.24/1.33	0.29/0.14	-0.26/-1.94	-3.14/-3.41	-6.79/-10.68	-14.31/-11.73	-10.53/-11.53	-13.33/-12.05	-11.37/-8.45	-5.75/-2.82	-2.5/-4.7	-2.31/0.7	0.12/-2.78	-2.43/-1.6	-2.79/-2.71	-12.37/-15.28	-15.35/-12.69	-11.43/-10.84	-9.94/-7.93	-5.44/-4	-5.33/-4.02	-2.47/-0.24	0.86/2.02	
Θ(67.5°)	2.45/1.72	-0.23/-0.67	-1/-1.7	-3.14/-5.19	-7.07/-7.51	-7.38/-5.01	-4.9/-6.34	-9.31/-10.1	-11.02/-10.28	-7.2/-3.03	-0.19/-0.54	-2.35/-0.72	0.39/0.53	0.86/-0.5	-2/-5.29	-6/-9.46	-10.5/-9.93	-10.8/-11.71	-8.24/-8.67	-12.34/-10.36	-5.69/-2.11	-2.36/-1.67	0.17/1.14	0.82/2.51
Θ(75°)	3.57/1.81	-0.5/-0.82	-0.62/-3.57	-6.05/-8.54	-8.36/-11.08	-8.08/-5.03	-3.63/-5.45	-7.09/-7.66	-9.02/-7.92	-1.48/0.08	0.36/-0.21	0.67/0.54	1.05/-4.2	-4.72/-6.09	-7.57/-10.21	-13.43/-14.44	-15.16/-12.32	-13.31/-10.03	-8.68/-9.84	-8.5/-8.11	-1.57/-1.05	0.69/-0.33	-0.43/2.43	
Θ(82.5°)	1.04/0.48	-2/-1.78	-1.45/-5.3	-8.82/-8.14	-5.81/-7.3	-5.9/-4.8	-6.56/-9.6	-1.17/-9.63	-9.69/-9.15	-3.59/-1.28	-1.52/-1.83	0.39/2.6	0.21/-0.32	-0.69/-0.85	-1.91/-5.5	-10.81/-12.43	-7.92/-8.55	-9.93/-9.59	-9.49/-6.91	-6.32/-11.5	-9.14/-6.75	-1.57/-2.08	-0.26/-1.03	-2.71/-0.57
Θ(90°)	0.7/-2.2	-2.78/-3.29	-3.9/-5.36	-6.16/-5.9	-4.04/-7.07	-5.2/-4.57	-4.41/-5.16	-5.71/-6.8	-4.41/-12.26	-6.26/-2.04	0.31/8.5	0.69/0.28	2.85/2.78	1.56/0.02	-1.26/-2.48	-6.2/-8.24	-8.82/-8.11	-5.93/-5.13	-9.49/-7.06	-3.63/-2.47	-10.2/-7	-2.64/-0.54	-0.51/-1.07	-2.4/0.38
Θ(97.5°)	0.95/-4.6	-0.93/-1.11	-3.97/-6.21	-7.87/-7.91	-7.52/-8.46	-4.32/-2.72	-2.46/-2.71	-1.88/-0.88	-3.43/-9.48	-3.57/0.08	0.27/2.89	2.17/-0.23	1.77/3.27	2.12/0.45	-2.14/-3.86	-6.16/-9.72	-8.16/-6.94	-3.28/-2.7	-2.86/-2.33	-4.42/-5.86	-2.31/-0.64	-1.36/-4.45	-2.92/-9.1	
Θ(105°)	0.15/-3.35	-1.17/-0.67	-4.9/-8.16	-9.41/-10.23	-3.39/-1.95	-2.15/-1.26	-4.95/-7.2	-4.47/-1.28	-3.54/-9.37	-2.19/0.03	0.33/0.93	1.12/0.28	1.83/1.57	20.32	-2.14/-4.37	-3.87/-11.57	-5.72/-3.3	-2.78/-2.27	-3.02/-4.16	-5.93/-9.06	-6.19/-1.4	-0.44/-2.08	-3.31/-5.32	-2.28/-1.25
Θ(112.5°)	-2.84/-2.08	-4.03/-3.36	-5.28/-7.33	-11.15/-6.49	-3.3/-0.89	-1.34/-1.11	-2.7/-6.59	-4.72/-1.08	-3.32/-9	-3.32/-0.02	-0.16/0.12	1.09/0.33	1.51/1.72	2.81/-1.12	-4.24/-0.52	-1.96/-8.31	-5.93/-3.07	-2.72/-4.01	-7.06/-4.44	-3.65/-4.97	-10.87/-5.92	-3.58/-4.02	-2.85/-5.09	-1.38/-1.55
Θ(120°)	-7.23/-6.2	-6.8/-7.41	-7.32/-8.2	-5.46/-7.11	-5.44/-2.52	0.03/0.87	0.11/-3.98	-6.09/-3.61	-2.74/-4.31	-2.1/0.4	-0.86/-0.66	2.73/1.4	-1.26/-0.07	0.82/-4.1	-4.6/-1.24	-1.36/-5.14	-4.37/-7.9	-2.15/-0.68	-4.44/-1.96	-3.53/-1.89	-6.2/-6.69	-7.82/-9.87	-8.54/-5.19	-4.62/-5.43
Θ(127.5°)	-6/-5.35	-3.7/-5.47	-3.56/-2.05	-6.43/-7.12	-3.56/-0.25	0.32/-1.87	-4.34/-10.88	-5.81/-8.89	-8.85/-3.95	-3.62/-2.08	0.58/-2.52	-8.19/-1.71	-2.55/-3.92	-5.36/-2.14	-4.82/-7.16	-6.8/-9.63	-0.88/-2	-7.15/-2.25	-3.32/-0.53	-5.69/-8.81	-5.03/-8.3	-7.97/-1.16	-4.41/-5.58	
Θ(135°)	-9.9/-6.86	-4.37/-2.74	-5.6/-8.77	-7.34/-4.18	-3.14/-3.74	-3.02/-3.02	-2.99/-3.71	-7.9/-8.48	-7.4/-7.96	-11.53/-9.26	-5.25/-3.63	-3.28/-5.37	-8.2/-4.75	-4.28/-6.71	-8.87/-8.17	-7.83/-6	-10.1/-10.03	-4.34/-4.35	-5.6/-3.86	-5.85/-5.21	-3.02/-7.59	-8.43/-15.42	-10.99/-5.7	-4.31/-7.54
Θ(142.5°)	-5.48/-4.17	-4.36/-7.07	-7.54/-8.57	-6.03/-5.16	-6.54/-7.75	-5.3/-7.09	-8.77/-12.1	-11.67/-12.1	-10.7/-7.59	-6.32/-3.26	-5.43/-8.82	-6.61/-8.84	-5.02/-4.4	-8.87/-7.45	-11.74/-8.18	-10.71/-13.65	-9.24/-9.53	-8.73/-7.83	-8.79/-11.48	-6.98/-8.82	-5.17/-10.07	-11.59/-7.26	-11.45/-4.99	
Θ(150°)	-9.84/-9.29	-8.59/-9.58	-7.18/-9.98	-8.73/-6.55	-5.3/-5.9	-4.71/-3.75	-2.16/-1.77	-2.77/-4.54	-6.08/-7.25	-13.89/-13.06	-10.19/-9.3	-4.63/-6.01	-14.02/-7.29	-7.53/-9.82	-8.29/-6.79	-10.71/-11.4	-8.44/-9.09	-9.67/-7.08	-5.49/-6.48	-5.49/-7.53	-8.2/-8.12	-7.2/-8.18	-10.66/-11.91	
Θ(157.5°)	-9.6/-8.46	-6.51/-2.8	-1.6/-2.03	-3.47/-4.71	-4.38/-4.55	-4.06/-3.81	-3.32/-2.99	-3.67/-5.45	-8.41/-11.59	-12.63/-15.13	-13.27/-7.47	-4.6/-2.31	-1.29/-2.41	-4.45/-7.78	-11.14/-7.52	-6.21/-9.91	-12.53/-10.14	-9.15/-8.98	-8.47/-9.76	-9.71/-9.48	-12.31/-12.61	-9.74/-10.48	-7.86/-6.08	-8.28/-9.67
Θ(165°)	-4.78/-5.72	-6.5/-7.4	-7.61/-6.73	-6.19/-6.7	-6.5/-6.88	-6.83/-7.57	-8.4/-8.26	-7.46/-7.4	-7.46/-7.97	-9.7/-10.46	-8.94/-7.21	-4.85/-2.69	-1.64/-1.67	-3.07/-4.47	-6.5/-7.67	-7.86/-7.01	-6.17/-6.21	-7.79/-9.3	-12.43/-16.03	-15.07/-11.92	-11.75/-12.29	-8.94/-5.25	-4/-3.14	-4.34/-4.03
Θ(172.5°)	-0.08/-9.38	-8.55/-8.23	-8.06/-7.62	-7.92/-8.7	-10.99/-11.32	-12.78/-14.64	-13.92/-12.07	-10.48/-8.32	-7.45/-6.32	-5.34/-8.5	-4.13/-4.2	-4.16/-4.25	-4.08/-3.89	-4.19/-4.14	-4.26/-3.99	-3.87/-3.87	-4.3/-6.11	-9.09/-13.17	-14.96/-15.29	-15.63/-11.74	-11.13/-9.63	-8.62/-7.23	-7.26/-9.24	-11.05/-10.12
Θ(180°)	-7.73/-7.45	-7.4/-7.44	-6.95/-6.78	-7.04/-6.86	-7.86/-9.69	-11.97/-13.39	-14.11/-14.37	-13.31/-11.63	-9.53/-7.98	-6.74/-5.4	-4.13/-3.42	-2.79/-2.32	-1.77/-1.68	-1.36/-1.33	-1.29/-1.88	-2.47/-3.25	-4.55/-5.32	-6.63/-8.34	-10.75/-10.93	-10.52/-10.08	-10.24/-10.03	-10.15/-9.57	-9.14/-9.47	-9.02/-8.6
Freq(Hz)	6.475GPol.	ThetaL	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-8.21/-9.86	-8.19/-9.49	-7.26/-5.27	-3.82/-2.97	-2.52/-2.13	-1.49/-1.2	-0.99/-0.82	-0.72/-1.58	-2.23/-3.31	-4.54/-5.37	-5.89/-7.39	-8.31/-9.77	-11.33/-11.29	-10.59/-10.9	-7.93/-6.17	-4.49/-3.26	-2.16/-1.81	-1.23/-0.82	-0.77/-0.79	-1.22/-1.32	-2.15/-2.95	-3.53/-4.81	-5.51/-6.4	-7.96/-9.22
Θ(7.5°)	-8.27/-9.11	-10.48/-9.95	-8.06/-6.58	-4.73/-4.02	-2.8/-2.3	-1.48/-1.36	-1.02/-0.86	-1.24/-2.15	-1.87/-2.73	-3.61/-4.94	-6.22/-8.1	-10.44/-11.61	-12.26/-11.11	-10.66/-8.09	-6.05/-5.07	-3.9/-3.83	-2.73/-2.69	-2.11/-1.49	-1.78/-2.09	-2.73/-2.48	-3.42/-6.18	-5.69/-7.53	-7.81/-8.22	
Θ(15°)	-7.81/-6.99	-7.35/-7.53	-6.95/-6.36	-4.48/-3.76	-3.51/-3.3	-3.07/-2.29	-2.64/-2.46	-3.01/-3.44	-3.8/-4.07	-4.76/-5.49	-6.83/-8.57	-10.21/-11.6	-11.94/-11.03	-9.53/-8	-6.22/-4.41	-3.93/-3.33	-2.82/-3.12	-2.84/-2.5	-2.05/-1.91	-2.46/-3.26	-3.52/-4.22	-5.4/-7.29	-8.11/-8.62	-8.57/-6.86
Θ(22.5°)	-10.57/-8.38	-7.14/-7.07	-6.49/-6.48	-5.57/-5.04	-4.5/-4.75	-5.33/-5.59	-5.09/-5.14	-5.93/-7.09	-7.45/-7.2	-7.01/-7.78	-8.86/-11.21	-12.71/-12.91	-9.77/-8.51	-7.71/-6.09	-3.86/-2.52	-2.02/-1.84	-1.72/-1.84	-2.21/-1.99	-1.48/-0.98	-0.93/-1.16	-1.03/-1.28	-2.47/-4.4	-6.39/-7.56	-9.02/-10.84
Θ(30°)	-12.19/-14.64	-11.24/-9.7	-8.63/-5.7	-5.95/-5.75	-5.35/-4.87	-4.54/-4.72	-5.23/-5.23	-6.67/-7.11	-9.07/-10.42	-11.59/-11.84	-9.86/-9.19	-11.38/-14.4	-11.66/-7.69	-6.65/-6.63	-5.12/-4.7	-3.9/-3.53	-2.68/-1.93	-1.4/-0.89	-0.52/-0.97	-1.2/-0.89	-0.95/-0.81	-0.71/-1.54	-2.64/-4.59	-7.77/-8.56
Θ(37.5°)	-11.24/-11.74	-8.32/-6.74	-4.54/-3.64	-3.13/-3.12	-2.9/-3	-3.59/-4.49	-5.57/-7.23	-8.76/-9.71	-11.24/-12.42	-12.16/-11.46	-10.42/-10.25	-9.42/-8.87	-7.54/-7.59	-7.97/-7.06	-5.43/-3.8	-3.56/-3.51	-3.37/-1.92	-1.2/-0.94	-0.78/-0.94	-0.9/-0.79	-0.82/-1.75	-4.18/-4.02	-3.28/-3.98	-6.88/-9.81
Θ(45°)	-6.35/-6.64	-5.7/-4.87	-4/-2.95	-2.76/-2.85	-2.96/-2.61	-2.37/-3.41	-5.09/-6.6	-7.06/-7.88	-8.38/-8.89	-9.81/-8.13	-7.24/-6.01	-6.24/-6.9	-6.39/-5.9	-5.32/-3.54	-4.29/-3.78	-4.68/-5.64	-5.73/-3.41	-1.32/-0.54	0.06/-0.08	0.11/-0.36	-0.38/-0.73	-1.97/-4.2	-6.75/-6.26	-6.33/-6.51
Θ(52.5°)	-5.8/-7.07	-7.75/-6.06	-2.26/-2.71	-2.08/-1.57	-0.25/0.1	-1.06/-2.65	-3.85/-5.64	-7.86/-9.15	-10.71/-11.47	-8.31/-5.39	-5.65/-5.22	-4.86/-4.01	-4.13/-5.73	-5.56/-3.76	-2.61/-4.06	-5.38/-6.74	-5.45/-5.14	-5.23/-4.9	-4.48/-2.99	-1.53/-0.21	-1.97/-1.25	-1.39/-1.62	-3.02/-5.21	-4.88/-4.03
Θ(60°)	-7.8/-8.82	-5.74/-3.91	-3.42/-4.21	-3.03/-1.94	-1.48/-2.21	-2.6/-4.17	-6.13/-7.3	-8.73/-9.06	-11.93/-13.12	-11.81/-7.73	-4.82/-5.46	-5.37/-2.83	-1.18/-1.9	-4.8/-6.21	-7.13/-10.05	-10.68/-9.17	-8.79/-6.3	-6.2/-5.17	-3.17/-2.4	-0.75/-0.29	-1.01/-2.9	-3.09/-2.2	-1.51/-2.65	-4.63/-5.06
Θ(67.5°)	-6.03/-6.93	-8.21/-9.43	-5.06/-2.36	-3.47/-4.01	-1.93/-0.7	-1.06/-2.68	-4.28/-6.69	-7.96/-10.09	-8.52/-6.61	-8.59/-9.78	-6.22/-4.17	-4.09/-3.05	-1.71/-4.65	-6.73/-6.49	-8.88/-13.03	-11.92/-10.5	-9.05/-8.73	-4.36/-3.87	-3.93/-3.06	-2.43/-0.65	-0.09/-1.76	-2.82/-3.7	-3.13/-1.5	-5.41/-5.76
Θ(75°)	-1.36/-4.14	-10.88/-6.48	-2.72/-1.27	-3.41/-1.97	-0.54/-0.64	-1.08/-2.91	-4.77/-3.61	-2.97/-3.97	-5.84/-7.97	-6.56/-5.64	-6.52/-6.7	-3.8/-3.72	-4.77/-5.17	-4.68/-3.93	-4.36/-1.3	-3.7/-3.77	-7.97/-8.5	-5.98/-4.24	-3.33/-3.06	-2.34/-3.5	-2.18/-1.32	-1.71/-1.53	-2.86/-3.5	-3.58/-2.33
Θ(82.5°)	-3.42/-3.57	-5.59/-4.56	-4.09/-4.68	-5.16/-4.39	-4.4/-2.86	-2.73/-1.08	0.16/-0.28	-1.86/-5.38	-5.4/-3.98	-7														



Radiated Composite Gain Data

Appendix A

Θ(60°)	2.02/-0.17	-1.71/-0.54	0.23/-1.19	-4/-6.83	-8.8/-11.46	-15.61/-10.96	-10.24/-11.77	-13.17/-13.58	-8.89/-6.69	-5.14/-7.82	-3.46/-1	-2.62/-4.09	-1.54/-1.84	-4.88/-3.89	-7.55/-7.2	-7.84/-6.5	-9.26/-11	-10.39/-7.85	-8.82/-8.7	-10.33/-10.56	-6.54/-5.39	-3.78/-1.28	0.34/-1.5	1.01/-4.2
Θ(67.5°)	0.32/-0.56	-1.27/-0.45	-0.02/-0.73	-3.53/-5.15	-6.99/-8.01	-11.55/-9.94	-10.6/-11.51	-11.12/-8.9	-8.07/-3.16	-0.78/-1.23	-3.82/-1.83	-0.29/-0.2	0.22/-1.62	-3.29/-3.41	-3.83/-4.81	-7.41/-10.78	-13.45/-9.57	-13.39/-15.4	-11.67/-5.68	-5.89/-5.56	-5.15/-4.14	-3.8/-2.02	-1.64/-0.79	0.39/-0.64
Θ(75°)	-0/-0.88	-1.32/-0.96	-0.38/-0.4	-2.27/-5.27	-6.04/-7.71	-10.27/-9.34	-5.57/-6.34	-5.78/-2.94	-2.6/-3.08	-1.66/-1.25	0.29/-0.32	-2.91/-1.22	2.51/-1.46	1.91/-0.09	-2.71/-3.55	-5.43/-10.96	-10.57/-9.28	-11.58/-14.2	-14.19/-11.49	-13.07/-10.43	-5.44/-4.27	-4.55/-2.96	-1.75/-1.07	0.68/-0.68
Θ(82.5°)	1.36/-0.86	-0.9/-0.85	-0.58/-1.92	-3.85/-4.91	-9.24/-6.89	-10.91/-7.52	-5.37/-3.89	-3.55/-3.01	-4.27/-5.92	-2.34/-2.44	-1.21/-1.2	-0.09/-1.13	2.23/-0.4	3.19/-0.24	-5.54/-4.34	-4.97/-10.65	-9.75/-12.39	-13.61/-15.23	-14.27/-9.73	-8.26/-13.64	-6.26/-5.05	-4.28/-3.32	-0.99/-0.37	-0.69/-0.13
Θ(90°)	1.08/-0.4	-1.77/-0.16	-0.82/-3.02	-2.96/-3.61	-4.98/-4.51	-7.63/-6	-4.17/-2.57	-2.98/-1.9	-4.69/-5.82	-1.65/-0.14	-0.56/-0.01	1.22/-4.11	3.4/-0.85	3.08/-0.67	-2.2/-3.33	-4.25/-12.13	-7.64/-6.08	-3.38/-4.87	-9.51/-9.54	-3.91/-5.13	-5.9/-6.46	-2.51/-3.03	-1.83/-0.55	-1.9/-1.85
Θ(97.5°)	0.23/-0.69	-3.49/-1.69	-0.11/-0.9	-4.56/-7.14	-4.67/-3.61	-6.39/-4.12	-3.41/-1.99	-1.17/-0.3	-2.28/-4.27	-3.34/-1.48	0.16/-0.04	2.08/-2.87	2.54/-3.15	2.65/-1.39	0.68/-0.41	-4.26/-6.33	-3.07/-1.45	-1.85/-1.9	-5.81/-5.63	-4.45/-6.05	-4.79/-3.64	-2.92/-3.56	-2.21/-0.47	1.3/-0.45
Θ(105°)	1.19/-0.94	-4.03/-0.69	-0.08/-1.56	-8.02/-10.05	-6.79/-4.35	-5.81/-2.23	-1.27/-1.57	-2.49/-2.05	-5.28/-5.5	-4.29/-1.19	-1.49/-2.54	2.91/-2.04	2.68/-2.99	3.05/-2.02	-0.01/-1.01	0.31/-3.76	-8.61/-1.47	-1.08/-1.46	-2.55/-4.35	-5.55/-8.05	-4.01/-4.28	-5.29/-3.7	-1.11/-1.23	-0.84/-0.24
Θ(112.5°)	0.86/-4.88	-1.88/-0.16	-4.59/-5.77	-6.56/-9.19	-5.5/-6.39	-5.52/-4.09	-1.33/-3.13	-3.78/-3.25	-5.99/-7.05	-1.06/-0.51	0.47/-2.39	-0.31/-1.91	4.12/-1.37	3.54/-2.22	-1.78/-1.49	1.58/-0.17	-6.71/-5.54	-3.71/-6.77	-4.77/-4.96	-6.4/-12.22	-9.86/-6.56	-4.57/-0.5	1.32/-1.31	-4.32/-0.93
Θ(120°)	0.68/-4.4	-1.77/-2.23	-5.69/-5.7	-5.62/-6.21	-10.01/-7.35	-2.12/-0.23	-1.28/-3	-3.89/-1.76	-4.9/-6.4	-1.4/-0.16	-1.49/-1.09	1.97/-1.26	3.14/-1.37	4.26/-0.47	-1.55/-0.9	2.06/-3.39	-5.6/-3.98	-2.04/-2.17	-2.66/-3.95	-6.46/-5.78	-9.45/-9.72	-3.51/-2.46	-0.83/-3.68	-0.91/-2.16
Θ(127.5°)	-3.76/-4.95	-5.78/-4.41	-3.87/-4.43	-4.49/-6.49	-7.67/-7.91	-2.59/-1.58	-1.45/-4.1	-4.96/-5.54	-5.13/-7.9	-3.63/-0.47	-2.04/-1.46	1.56/-1.31	-1.85/-0.08	2.74/-0.29	-1.51/-2.2	0.41/-2.43	-4.3/-6.42	-1.17/-2.58	-6.88/-3.13	-6.64/-5.31	-8.03/-10.51	-5.84/-4.01	-2.17/-3.45	-4.22/-3.39
Θ(135°)	-2.88/-4.93	-9.3/-7.34	-5.18/-4.84	-6.65/-6.03	-5.08/-4.62	-3.87/-2.39	-4.14/-7.28	-8.51/-4.87	-2.41/-4.55	-9.54/-4.2	-2.17/-2.01	-2.89/-1.34	-2.62/-1.85	2.73/-0.41	-4.18/-3.46	-3.13/-7.23	-4.99/-9.28	-2.95/-3.96	-5.72/-3.14	-5.65/-8.39	-10.13/-7.28	-7.88/-8.93	-4.86/-7.46	-4.79/-4.33
Θ(142.5°)	-8.8/-6.86	-3.81/-2.87	-5.9/-3.67	-4.25/-3.58	-3.72/-1.84	-1.08/-1.92	-2.25/-4.53	-8.78/-8.1	-9.2/-7.61	-7.83/-6.17	-3.14/-2.33	-4.32/-7.07	-7.59/-3.83	-5.23/-7.04	-4.3/-5.35	-3.9/-4.67	-7.85/-13.34	-12.51/-10.87	-11.09/-4.72	-8.82/-12.15	-6.47/-6.43	-7.74/-14.81	-8.35/-11.14	-8.2/-7.68
Θ(150°)	-6.39/-5.2	-7.18/-10.71	-10.19/-7.77	-4.66/-4.26	-5.01/-5.01	-4.3/-3.59	-2.48/-2.64	-3.77/-7.36	-13.12/-13.63	-10.13/-8.3	-7.13/-6.71	-8.53/-12.22	-12.11/-10.37	-7.33/-3.71	-2.09/-2.63	-5.87/-5.9	-6.18/-8.14	-6.02/-6.56	-10.25/-9.75	-6.5/-5.95	-5.08/-3.45	-4.99/-6.32	-9.73/-8.71	-3.84/-4.12
Θ(157.5°)	-8.1/-8.97	-4.25/-2.69	-2.32/-2.54	-3.34/-4.64	-4.69/-4.43	-3.9/-2.43	-2.17/-2.32	-3.72/-5.76	-9.48/-7.69	-5.78/-6.58	-8.07/-7.44	-5.11/-1.08	-0.68/-4.17	-9.94/-7.26	-6.37/-5.45	-4.92/-5.26	-7.34/-6.73	-6.39/-5.9	-7.81/-9.83	-8.99/-8.2	-8.75/-8.36	-9.17/-9.97	-7.35/-5.29	-4.3/-4.4
Θ(165°)	-4.74/-8.7	-10.1/-8.56	-8.15/-5.79	-4.25/-3.58	-3.65/-3.99	-4.22/-5.23	-5.27/-5.1	-5.99/-7.54	-7.52/-5.95	-5.28/-5.01	-3.9/-1.64	0.71/-1.74	1.94/-1.36	0.51/-1.08	-3.53/-5.18	-6.51/-9.43	-9.36/-8.42	-8.13/-8.58	-9.24/-7.78	-7.8/-6.46	-6.09/-4.77	-3.53/-2.15	-0.9/-0.68	-1.11/-2.09
Θ(172.5°)	-6.64/-7.62	-6.67/-5.49	-4.57/-3.7	-3.32/-5.08	-8/-10.4	-13.78/-15.51	-13.85/-11.54	-10.58/-9.76	-8.07/-8.17	-7.59/-6.83	-6.09/-6.1	-5.95/-5.35	-4.93/-5.94	-6.19/-6.73	-7.56/-8.62	-8.42/-8.5	-8.2/-9.29	-11.64/-10.88	-7.39/-5	-3.39/-3.03	-2.93/-3.27	-2.6/-2.48	-2.61/-3.77	-4.86/-5.6
Θ(180°)	-5.63/-5.31	-5.73/-4.97	-5.22/-6.47	-8.7/-9.3	-10.43/-10.98	-10.06/-9.49	-9.58/-10.03	-9.91/-9.07	-6.88/-4.5	-3.8/-2.74	-2.05/-1.23	-1/-0.28	-0.27/-0.54	-1.01/-1.24	-2.09/-2.7	-4.11/-5.3	-7.41/-9.77	-14.09/-14.96	-12.38/-11.07	-9.03/-7.71	-6.04/-5.56	-4.51/-3.58	-2.97/-3.95	-4.88/-5.49
Freq(Hz)	6.995/GPol	Theta/°	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.5/-4.41	-5.05/-4.38	-3.01/-1.81	-1.3/-0.08	0.33/-0.03	1.47/-1.43	1.68/-1.34	0.63/-0.34	-0.1/-0.51	-1.48/-2.98	-3.92/-4.9	-4.36/-3.86	-4.35/-4.63	-5.3/-4.71	-3.21/-1.03	-0.27/-0.59	1.21/-64	1.84/-1.84	2.17/-2.12	1.61/-0.85	0.17/-0	-1.25/-2	-3.54/-4.22	-4.39/-4.76
Θ(7.5°)	-3.87/-4.26	-3.38/-1.96	-1.21/-0.66	0.12/-0.87	1.19/-1.87	1.76/-1.91	1.85/-1	1.53/-1.32	0.76/-0.5	-1.09/-2.01	-3.64/-5	-5.58/-6.06	-6.54/-5.4	-4.86/-3.4	-2.03/-1.16	-0.46/-0.4	-0.03/-0.34	0.10/-16	0.0/-58	-0.89/-3.14	-1.83/-3.03	-3.38/-3.32	-3.32/-3.31	
Θ(15°)	-3.73/-4.43	-3.64/-3.32	-2.64/-1.7	-1.42/-0.83	0.19/-0.56	0.76/-0.29	-0.36/-1.23	-1.37/-1.53	-2.58/-3.53	-4.8/-5.84	-5.99/-7.72	-6.75/-6.09	-5.81/-5.91	-5.18/-4.61	-3.5/-2.5	-2.07/-1.26	-0.76/-0.09	0.06/-0.12	-0.63/-1.18	-1.15/-1.29	-2.21/-3.27	-4.63/-4.59	-3.73/-4	-3.93/-3.74
Θ(22.5°)	-5.71/-6.28	-5.69/-5.28	-4.95/-3.5	-2.11/-0.87	-0.29/-0.3	0.6/-0.46	0.87/-0.42	-0/-0.93	-1.96/-4.08	-6.76/-9.47	-11.82/-10.3	-9.47/-7.86	-6.8/-8.25	-6.71/-6.1	-5.33/-5.83	-4.9/-3.86	-1.74/-0.56	0.15/-0.76	1.19/-1.26	0.90/-28	-0.9/-1.85	-3.15/-5.03	-5.15/-5.86	-6.89/-6.11
Θ(30°)	-8.5/-7.98	-7.27/-5.63	-3.78/-2.53	-1.28/-0.81	-0.37/-0.81	-1/-0.88	-1.19/-1.7	-1.92/-1.58	-1.65/-1.73	-2.1/-4.57	-10.4/-13.32	-9.02/-7.58	-7.38/-7.9	-6.79/-8.17	-8.57/-7.1	-3.55/-1.39	-0.41/-0.16	0.46/-0.97	1.12/-0.71	0.67/-0.66	0.36/-0.27	-1.69/-4.58	-6.49/-8.81	-7.89/-6.38
Θ(37.5°)	-10.68/-10.08	-9.47/-5.25	-3.77/-2.88	-3.45/-4.71	-4.31/-4.23	-3.61/-4.03	-4.84/-5.64	-6.36/-7.13	-6.39/-4.43	-3.21/-3.62	-6.72/-10.9	-11.06/-10.73	-7.87/-4.02	-3.05/-2.72	-4.01/-4.7	-2.83/-1.39	-1.45/-2.84	-3.1/-2.99	-2.23/-2.14	-1.72/-1.2	-2/-1.8	-1.09/-1.43	-3.77/-6.6	-10.34/-10.32
Θ(45°)	-6.34/-7.67	-6.21/-3.65	-3.36/-5.3	-4.76/-1.63	-0.04/-1.18	1.55/-0.59	-0.79/-2.03	-3.25/-5.18	-6.53/-9.77	-10.46/-8.64	-9.6/-9.34	-7.1/-6.79	-7.49/-6.72	-7.89/-5.27	-4.68/-4.19	-4.24/-6.24	-7.3/-4.22	-1.95/-2.12	-0.25/-1.16	0.74/-0.84	-1.22/-1.63	-1.02/-0.22	0.43/-0.3	-3.48/-5.16
Θ(52.5°)	-8.39/-3.1	-0.54/-0.94	-3.43/-3.95	-0.92/-0.75	1.28/-0.98	0.23/-0.51	-1.11/-2.59	-3.19/-2.5	-1.99/-3.42	-5.87/-9.17	-9.2/-4.62	-1.73/-1.06	-2.16/-4.37	-5.03/-6.01	-6.18/-6.22	-6.07/-5.81	-4.26/-3.24	-2.45/-0.63	-0/-0.46	1/-1.75	1.64/-0.65	-0.24/-1.32	-2.23/-2.91	-5.37/-6.23
Θ(60°)	-7.46/-3.92	-2.56/-3.33	-3.75/-0.66	1.06/-1.48	1.53/-0.9	0.5/-0.63	-2.47/-3.68	-3.55/-4.38	-3.3/-2.51	-3.64/-4.88	-4.68/-2.37	0.17/-0.53	0.85/-0.99	-2.1/-4.95	-5.49/-4.63	-3.52/-5.67	-6.73/-6	-5.16/-1.93	-0.88/-1.79	-1.32/-0.44	0.29/-1.06	-0.15/-2.42	-4.55/-3.7	-3.89/-5.27
Θ(67.5°)	-7.66/-4.17	-1.94/-3.55	-4.52/-3.47	-1.58/-0.68	0.21/-0	0.67/-0.6	-0.35/-1.82	-2.74/-2.25	-2.61/-5.58	-8.07/-2.69	-1.46/-0.85	0.45/-0.78	0.39/-0.62	-3.52/-6.1	-4.35/-3.39	-3.03/-6.5	-7.98/-7.3	-3.66/-2.1	-2.14/-1.57	-2.87/-2.07	-1.41/-2.92	-2.89/-5.23	-5.88/-1.78	-2.43/-4.42
Θ(75°)	-3.61/-2.13	-2.2/-4.46	-4.28/-2.18	-1.76/-4.16	-2.92/-0.71	0.39/-0.24	-1.18/-2.45	-4.15/-5.1	-4.51/-5.14	-6.38/-5.36	-2.79/-1.9	-1.45/-2.3	-2.57/-2.94	-5.02/-6.53	-7.91/-6.21	-4.97/-7.48	-6.71/-2.78	0/-1.23	-0.09/-0.55	-0.71/-0.79	-1.55/-2.13	-0.14/-1.04	-2.73/-3.24	-0.6/-2.82
Θ(82.5°)	-1.63/-4.5	-6.28/-5.64	-2/-1.53	-1.87/-2.56	-2.11/-2.14	-1.12/-1.95	-4.18/-3.97	-4.76/-4.26	-9.96/-9.86	-5.08/-2.6	-4.93/-4.61	-0.8/-1.07	-1.32/-0.89	-0.72/-3.23	-3.55/-6.61	-8.24/-7.5	-5.48/-2.98	1/-1.15	1.06/-0.76	0.06/-0.67	-1.9/-7.05	-2.48/-1.9	-4.75/-3.9	-0.06/-0.36
Θ(90°)	-3.88/-5	-4.76/-4.69	-5.92/-7.59	-8.38/-8.95	-6.38/-2.53	-0.57/-1.07	-3.13/-4.23	-6.26/-12.19	-6.94/-8.06	-10.61/-3.11	-0.93/-2.92	-2.66/-0.83	-0.48/-0.28	0.07/-2.61	-5.17/-5.03	-7.52/-6.6	-5.22/-3.35	-1.13/-0.47	-0.4/-1.86	-2.66/-2.41	-1.5/-4.29	-5.86/-6.42	-6.11/-2.55	-3.53/-4.59
Θ(97.5°)	-2.8/-4.5	-7.72/-7.48	-6.16/-6.11	-9.2/-15.27	-5.9/-10.3	-11.93/-12.75	-13.96/-9.04	-4.75/-5.54	-9.89/-9.83	-15.14/-7.58	-4.39/-4.71	-5.02/-5.54	-3.84/-0.92	-0.82/-4.09	-4.29/-5.77	-8.79/-5.49	-4.06/-2.58	-1.43/-0.27	-0.76/-0.12	-1.47/-1.82	-2.42/-6.72	-9.85/-6.09	-5.51/-1.83	-2.41/-1.61
Θ(105°)	-9.14/-6.14	-3.86/-3.4	-4.35/-8.34	-9.66/-9.21	-10.37/-8.54	-5.36/-4.83	-3.86/-3.6	-3.94/-10.13	-9.52/-6.98	-7.8/-10.54	-11.38/-12.03	-3.86/-1.51	0.09/-1.72	-3.07/-1.38	-0.3/-4.39	-13.55/-7.94	-8.65/-4.14	-2.74/-3.43	-3.04/-4.25	-7.39/-7.06	-8.53/-13.78	-5.78/-4.5	-4.25/-0.46	-0.93/-3.34
Θ(112.5°)	-5.92/-7.26	-8.96/-7.45	-8.44/-13	-11.49/-12.29	-8.7/-9.46	-8.87/-4.94	-4/-3.92	-6.6/-5.1	-4.6/-4.05	-3.48/-6.57	-7.87/-6.33	-3.29/-2.79	-1.82/-2.34	-1.92/-3.88	-7.78/-12.51	-11/-6.57	-10.04/-6.71	-10.54/-6.27	-7.26/-14.42	-8.11/-10.08	-8.44/-6.73	-5.38/-12.45	-7.73/-7.96	-7.83/-7.71
Θ(120°)	-8.83/-7.98	-4.65/-4.69	-3.12/-6.27	-7.43/-6.67	-3.59/-4.19	-5.76/-6.53	-6.31/-4.23	-4.74/-5.11	-6.04/-4.55	-4.89/-5.67	-9.35/-7.24	-4.07/-3.46	-3.16/-4.49											



Radiated Composite Gain Data

Appendix A

Gain Result

Freq(Hz)	245GPol.	PhiAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)	
Θ(0°)	-1.92/-1.37	-1.12/-0.81	-0.67/-0.73	-0.88/-1.02	-1.25/-1.49	-2.26/-3.04	-4.27/-5.41	-7.50/-10.54	-14.41/-17.32	-14.06/-10.08	-7.1/-5	-3.46/-2.22	-1.35/-0.68	-0.10/-14	0.26/-36	0.45/-24	-0.24/-71	-1.49/-2.31	-3.67/-5.14	-7.14/-10.37	-14.76/-17.29	-13.33/-8.76	-6.19/-4.81	-3.62/-2.65	
Θ(7.5°)	-2.41/-1.71	-1.01/-0.58	-0.11/-0.08	-0.03/-0.31	-0.61/-1.13	-2.11/-3.38	-4.69/-6.57	-8.93/-12.24	-13.79/-11.47	-8.85/-6.22	-4.47/-3.07	-2.01/-1.22	-0.64/-0.24	0.02/-22	0.24/-23	-0.08/-0.43	-0.86/-1.5	-2.16/-3.31	-4.57/-5.93	-8.19/-10.99	-16.09/-18.29	-18.47/-11.6	-8.05/-6.06	-4.5/-3.21	
Θ(15°)	-2.68/-1.76	-0.84/-0.26	0.13/-0.22	-0.04/-0.34	-0.99/-1.8	-2.87/-4.18	-6.8/-8.46	-11.58/-13.09	-11.2/-8.07	-5.81/-4.22	-2.87/-1.39	-1.12/-0.7	-0.32/-0.2	-0.04/-0.14	0.24/-0.51	-0.9/-1.43	-2.01/-2.73	-3.56/-4.29	-5.42/-6.56	-7.77/-9.99	-12.1/-16.67	-17.67/-17.06	-10.68/-7.43	-5.2/-3.85	
Θ(22.5°)	-2.89/-1.84	-0.94/-0.29	-0.13/-0.12	-0.22/-0.78	-1.02/-2.82	-4.06/-5.61	-8.09/-11.69	-16.31/-14.87	-10.06/-7.05	-4.8/-3.31	-2.25/-1.51	-1.15/-0.83	-0.72/-0.63	-0.75/-0.93	-1.43/-1.93	-2.54/-3.3	-4.04/-4.94	-5.8/-6.5	-7.32/-9.96	-11.62/-15.52	-18.84/-16.57	-10.19/-7.07	-5.01/-3.95		
Θ(30°)	-2.53/-1.71	-1.16/-1.07	-1.26/-1.58	-1.91/-2.65	-3.65/-4.66	-5.99/-7.62	-9.94/-14.13	-17.97/-17.79	-11.48/-8.07	-5.87/-3.33	-3.4/-2.78	-2.26/-1.91	-1.81/-8.9	-2.01/-2.46	-3.26/-3.85	-4.54/-5.29	-6.1/-7.07	-7.5/-9.92	-9.86/-9.49	-9.4/-11.39	-16.38/-18.11	-11.36/-7.29	-4.89/-3.64		
Θ(37.5°)	-3.32/-2.9	-2.94/-3.73	-4.39/-4.94	-5.39/-6.28	-7.29/-8.55	-9.17/-10.6	-13.09/-16.94	-18.11/-18.26	-15.53/-11.57	-8.9/-7.11	-5.75/-4.33	-4.25/-3.81	-3.62/-3.77	-4.31/-5.05	-5.52/-6.05	-6.24/-6.6	-7.12/-7.94	-8.53/-8.58	-9.96/-8.83	-9.48/-10.32	-11.09/-12.6	-14.52/-13.64	-9.72/-6.94	-4.79/-3.84	
Θ(45°)	-5/-5.33	-6.37/-7.69	-9.15/-9.92	-10.42/-10.78	-11.57/-12.84	-12.94/-12.54	-14.9/-18.87	-19.38/-18.98	-17.55/-13.36	-9.75/-7.6	-6.12/-4.91	-4.31/-4.16	-4.32/-4.82	-5.69/-6.46	-6.76/-6.99	-7.01/-7.49	-8.22/-8.78	-9.77/-10.44	-10.44/-10.86	-12.09/-13.48	-14.24/-15.07	-14.46/-12.92	-10.61/-7.94	-6.15/-5.18	
Θ(52.5°)	-5.31/-5.17	-5.51/-6.38	-7.89/-9.59	-9.65/-9.33	-8.88/-9.51	-9.91/-10.04	-11.68/-14.13	-17.07/-15.54	-12.03/-9.14	-6.74/-5.16	-3.83/-2.94	-2.48/-2.5	-2.97/-4.08	-5.14/-6.68	-7.52/-8.82	-10.57/-12.15	-14.55/-15.7	-17.31/-16.64	-17.95/-18.95	-18.35/-18.88	-18.57/-19.05	-17.72/-14.43	-12.39/-9.24	-7.3/-5.66	
Θ(60°)	-4.48/-4.47	-5.66/-8.08	-11.51/-11.45	-8.34/-6.29	-5.36/-5.65	-6.94/-8.44	-11.14/-15.99	-18.34/-19.52	-10.96/-8.76	-7.04/-5.51	-4.16/-2.99	-2.25/-1.85	-2.21/-2.79	-3.86/-4.94	-6.55/-6.68	-11.52/-14.21	-16.36/-17.37	-18.3/-17.71	-14.97/-15.16	-15.48/-18.23	-18.46/-14.83	-9.71/-6.81	-5.59/-4.71		
Θ(67.5°)	-4.35/-6.78	-10.07/-12.41	-9.13/-6.08	-4.04/-2.77	-2.58/-3.02	-4.36/-5.8	-8.03/-11	-14.87/-18.02	-18.91/-18.03	-16.89/-13.07	-9.2/-6.36	-4.21/-3.26	-2.35/-1.75	-1.84/-2.7	-4.57/-5.74	-6.88/-9.85	-11.05/-12.16	-14.52/-15.69	-14.95/-15.18	-15.97/-18.22	-18.11/-14.28	-10.25/-7.09	-4.35/-2.49	-1.87/-2.61	
Θ(75°)	-1.83/-6.9	-5.27/-5.62	-4.34/-2.85	-1.69/-1.29	-1.67/-2.68	-4.23/-6.57	-9.28/-11.66	-10.67/-8.31	-6.8/-2.7	-6.55/-7.09	-8.64/-8.63	-6.46/-8.32	-1.84/-1	-1.36/-2.61	-4.58/-2.29	-7.81/-6.64	-11.43/-13.17	-13.06/-11.91	-10.92/-11.16	-12.97/-15.53	-17.71/-14.09	-9.82/-6.98	-4.41/-2.34	-0.98/-0.87	
Θ(82.5°)	-1.28/-2.2	-4.32/-5.91	-5.03/-2.8	-0.98/-0.1	-0.25/-1.19	-2.5/-4.67	-7.06/-9.98	-9.37/-7.02	-5.74/-5.23	-5.66/-6.7	-7.6/-6.37	-3.8/-1.28	0.06/-3.7	-0.18/-0.27	-1.36/-2.29	-4.06/-6.73	-9.87/-11.94	-12.82/-13.51	-13.02/-12.41	-12.22/-12.47	-12.28/-13.16	-13.52/-10.43	-7.36/-4.89	-2.57/-1.32	
Θ(90°)	-2.6/-4.27	-7.82/-7.77	-4.94/-2.34	-0.79/-0.27	0.55/-0.5	-1.24/-3.35	-6.3/-7.56	-5.49/-3.06	-1.94/-1.69	-2.24/-3.75	-6.94/-12.57	-9.56/-4.56	-2.39/-1.61	-1.24/-1.07	-1.26/-2.31	-4.5/-6.98	-9.47/-12.2	-15.33/-17.19	-16.58/-13.79	-11.66/-11.6	-12.85/-16.41	-16.2/-9.25	-2.57/-3.65	-3.08/-2.7	
Θ(97.5°)	-1.85/-4.6	-7.57/-6.97	-3.15/-1.32	0.17/-0.48	0.06/-0.63	-1.66/-3.72	-7.34/-10.55	-6.65/-3.19	-1.22/-0.11	0.64/-0.23	-1.69/-5.38	-10.84/-10.64	-5.85/-3.12	-1.25/-0.26	-0.24/-0.71	-1.48/-2.57	-3.93/-4.74	-8.2/-10.4	-10.86/-9.66	-8/-8.28	-10.66/-17.33	-14.47/-4.74	-3.26/-1.5	-0.52/-0.88	
Θ(105°)	-1.86/-4.43	-8.13/-5.54	-2.44/-0.1	1.61/-2.55	1.91/-0.34	-1.64/-4.35	-9.1/-14.58	-8.91/-4.18	-1.16/-0.81	1.96/-1.95	1.03/-4.74	-2.81/-4.72	-0.04/-2.91	-2.75/-2.8	-3.19/-3.24	-3.84/-4.68	-6.15/-7.62	-9.08/-9.64	-8.41/-7.6	-7.34/-8.14	-10.83/-13.78	-10.03/-6.32	-7.83/-2.29	-4.1/-1.35	
Θ(112.5°)	-1.85/-3.18	-5.67/-5.06	-1.90/-3.7	2.72/-0.74	4.21/-4.1	2/-0.39	-4.2/-10.5	-11.95/-5.18	-1.23/-0.83	1.55/-1.05	-0.07/-2.05	-4.56/-5.7	-4.51/-5.07	-5.91/-5.51	-4.2/-3.69	-3.93/-4.05	-3.84/-4.11	-5.05/-6.15	-6.42/-6.59	-7.12/-7.98	-10.44/-14.31	-18.41/-11.77	-6.83/-4.64	-3.31/-2.36	
Θ(120°)	-1.26/-2.59	-7.49/-15.66	-7.83/-6.41	-1.52/-1.57	2.86/-2.81	1.93/-0.23	-2.44/-6.13	-7.31/-3.84	-0.76/-0.77	1.35/-1.45	1.14/-0.1	-3.04/-8.3	-13.28/-13.33	-9.76/-7.77	-7.29/-7.68	-7.92/-6.69	-6.13/-7	-9.21/-10.23	-9.51/-8.75	-8.69/-10.55	-13.43/-16.97	-17.16/-16.77	-2.98/-1.24	-1.19/-1.32	
Θ(127.5°)	-8.57/-10.2	-17.84/-6.38	-2.04/-0.37	0.76/-1.46	2.22/-1.8	1.21/-0.65	-3.41/-7.04	-8.33/-5.24	-2.68/-1.32	-0.24/-0.33	0.37/-0.77	-2.92/-4.55	-7.79/-3.96	-3.98/-5.16	-7.68/-6.97	-7.77/-6.3	-6.97/-6.86	-6.36/-6.39	-7.15/-9.57	-12.82/-12.77	-11.69/-9.77	-6.01/-8.99	-6.11/-8.59		
Θ(135°)	-11.71/-7.07	-10.85/-4.32	-0.74/-0.9	1.31/-1.75	1.96/-1.3	1.61/-0.5	-2.16/-4.87	-8.99/-6.57	-4.99/-2.71	-1.04/-0.29	-0.41/-1.95	-3.81/-5.49	-6.6/-2.61	-5.64/-7.12	-6.62/-6.83	-8.03/-9.64	-10.09/-10.24	-11.01/-11.71	-10.52/-9.77	-9.98/-12.96	-12.89/-7.82	-5.08/-4.37	-4.09/-3.58	-3.83/-5.87	
Θ(142.5°)	-8.17/-16.13	-10.5/-14	-1.22/-0.86	1.32/-0.91	0.55/-0.54	0.23/-0.38	-1.59/-3	-3.91/-3.35	-2.29/-0.91	-0.01/-0.29	-0.36/-1.57	-3.33/-4.08	-4.19/-3.19	-1.85/-0.87	-0.45/-1.4	-3.34/-7.21	-12.91/-18.52	-18.88/-17.89	-14.71/-13.04	-12.11/-6.58	-12.11/-6.3	-3.67/-2.92	-3.31/-3.95	-4.32/-5.09	
Θ(150°)	-7.86/-9.64	-11.91/-10.4	-4.77/-1.8	-1.12/-1.34	-2.72/-3.16	-3.41/-3.26	-3.19/-2.74	-2.35/-1.69	-0.89/-0.4	-0.31/-0.76	-1.68/-2.5	-3.5/-3.3	-2.44/-0.95	-0.87/-2.8	1.44/-0.91	-0.56/-2.56	-4.91/-7.98	-8.37/-9	-9.14/-9.34	-10.71/-11.58	-9.18/-5.31	-3.03/-2.52	-3.15/-4.98	-6.44/-6.92	
Θ(157.5°)	-9.72/-10.73	-16.45/-18.32	-10.6/-6	-4.46/-3.89	-4.51/-6.04	-7.81/-8.05	-6.63/-5.18	-3.65/-2.66	-2.07/-1.82	-2.12/-2.96	-3.66/-4.33	-4.13/-3.27	-2.08/-0.65	0.24/-0.77	0.53/-0.46	-2.05/-4.31	-7.28/-10.12	-12.29/-12.76	-11.91/-11.15	-10.07/-8.59	-6.24/-4.6	-3.42/-3.09	-6.84/-5.79	-8.12/-9.1	
Θ(165°)	-13.1/-13.2	-14.35/-12.16	-8.54/-5.87	-4.51/-3.79	-3.95/-4.7	-7.58/-9.96	-11.77/-11.07	-8.73/-7.03	-6.02/-4.59	-5.34/-5.64	-6/-6.45	-6.04/-5.7	-4.19/-3.5	-3.22/-3.27	-4.08/-5.78	-8.24/-11.97	-18.65/-19.08	-14.71/-17.1	-9.77/-8.8	-7.98/-6.79	-6.26/-5.97	-5.93/-6.24	-7.31/-9.71	-12.99/-13.79	
Θ(172.5°)	-11.14/-10.69	-10.81/-9.04	-7.43/-6.1	-5.22/-7.67	-8.27/-9.31	-7.89/-10.06	-12.1/-13.83	-15.46/-15.53	-14.51/-12.98	-11.97/-11.2	-10.35/-9.32	-8.59/-7.92	-7.29/-7.41	-8.04/-8.73	-10.53/-13.38	-17.05/-18.95	-18.85/-13.81	-10.84/-9.34	-8.49/-8.02	-7.82/-7.91	-8.42/-9.6	-10.71/-12.27	-18.04/-18.72	-18.01/-14.79	
Θ(180°)	-8.3/-8.4	-8.89/-9.39	-9.16/-9.16	-8.43/-7.79	-8.29/-9.53	-11.39/-13.14	-14.1/-13.85	-15.12/-15.98	-17.17/-18.81	-18.44/-18.74	-16.55/-14.62	-13.47/-12.45	-12.85/-12.8	-12.21/-12.58	-13.06/-13.13	-11.95/-10.57	-9.85/-8.66	-7.54/-7.14	-7.19/-7.28	-7.42/-7.99	-9.51/-11.7	-14.41/-17.91	-18.13/-17.54	-12.83/-10.08	
Freq(Hz)	245GPol.	ThetaAnt.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)Ψ(7.5°)	Φ(15°)Ψ(22.5°)	Φ(30°)Ψ(37.5°)	Φ(45°)Ψ(52.5°)	Φ(60°)Ψ(67.5°)	Φ(75°)Ψ(82.5°)	Φ(90°)Ψ(97.5°)	Φ(105°)Ψ(112.5°)	Φ(120°)Ψ(127.5°)	Φ(135°)Ψ(142.5°)	Φ(150°)Ψ(157.5°)	Φ(165°)Ψ(172.5°)	Φ(180°)Ψ(187.5°)	Φ(195°)Ψ(202.5°)	Φ(210°)Ψ(217.5°)	Φ(225°)Ψ(232.5°)	Φ(240°)Ψ(247.5°)	Φ(255°)Ψ(262.5°)	Φ(270°)Ψ(277.5°)	Φ(285°)Ψ(292.5°)	Φ(300°)Ψ(307.5°)	Φ(315°)Ψ(322.5°)	Φ(330°)Ψ(337.5°)	Φ(345°)Ψ(352.5°)	
Θ(0°)	-7.72/-9.93	-12.55/-16.13	-15.35/-13.13	-11.57/-9.69	-8.3/-7.01	-6.33/-5.43	-4.64/-4.04	-3.44/-2.72	-2/-1.55	-1.41/-1.25	-1.37/-1.87	-2.64/-3.41	-4.85/-6.23	-8.37/-11.61	-17.38/-17.66	-17.58/-12.09	-8.63/-6.45	-4.95/-3.81	-2.72/-1.99	-1.41/-0.92	-0.6/-0.55	-0.71/-1.12	-1.7/-2.53	-3.89/-5.5	
Θ(7.5°)	-7.28/-8.8	-11.44/-13.33	-18.52/-16.56	-12.51/-9.61	-7.54/-5.89	-4.71/-3.38	-2.89/-2.37	-1.98/-1.53	-1.29/-1.02	-0.88/-1.04	-1.48/-1.27	-3.2/-4	-5.29/-6.63	-8.72/-11.69	-15.61/-19.31	-17.36/-13.63	-9.66/-6.99	-6.02/-6.41	-3.74/-2.8	-2.14/-1.57	-1.23/-1.14	-1.3/-1.61	-2.04/-2.96	-4.05/-5.4	
Θ(15°)	-7.13/-9.33	-12.31/-16.96	-18.98/-18.79	-13.42/-9.46	-7.15/-5.18	-4.18/-3.23	-2.45/-1.86	-1.52/-1.33	-1.24/-1.25	-1.28/-1.42	-1.21/-2.83	-3.71/-4.72	-5.68/-7.26	-9.32/-12.24	-16.82/-18.83	-16.75/-13.05	-11.94/-9.11	-7.91/-6.67	-5.61/-4.58	-3.59/-2.86	-2.28/-2.1	-1.89/-1.88	-2.32/-3.65	-4.06/-5.34	
Θ(22.5°)	-8.2/-10.58	-13.81/-18.71	-19.27/-17.99	-14.75/-10.41	-8/-6.22	-5/-3.94	-3.03/-2.76	-2.78/-2.54	-2.58/-2.61	-3.05/-3.38	-3.61/-4.02	-4.53/-5.23	-5.94/-7.24	-8.89/-11.19	-12.87/-12.85	-11.88/-10.22	-9.26/-7.81	-6.94/-6.5	-5.59/-4.83	-4.24/-3.66	-3.27/-2.83	-2.64/-2.7	-3.03/-3.72	-4.98/-6.09	
Θ(30°)	-11.62/-15.11	-18.07/-17.67	-17.99/-17.37	-13.59/-10.45	-8.15/-7.04	-5.94/-5.09	-4.41/-4.3	-3.47/-4.54	-4.86/-5.1	-5.52/-6.01	-5.97/-6.24	-6.57/-6.84	-7.01/-9.33	-10.01/-10.29	-13.47/-13.23	-12.25/-10.76	-9.88/-7.86	-7.23/-6.66	-6.24/-5.86	-5.56/-5.62	-4.6/-4.31	-4.2/-4.01	-4.5/-5.32	-6.51/-8.57	
Θ(37.5°)	-15.43/-19.13	-18.73/-17.67	-15.65/-13.18	-11.07/-8.9	-7.47/-5.85	-5.02/-4.29	-3.53/-4.45	-3.48/-4.12	-4.61/-5.67	-6.59/-5.77	-8.34/-8.83	-8.88/-8.47	-8.64/-9.1	-10.15/-12.21	-11.48/-10.91	-9.79/-9.429	-7.11/-6.58	-5.63/-5.67	-5.84/-6	-6.33/-6.62	-6.36/-6.43	-6.29/-6.43	-6.82/-5.75	-8.9/-11.49	
Θ(45°)	-14.32/-13.54	-12.09/-10.96	-9.99/-9.2	-8.61/-7.49	-6.14/-5.2																				



Radiated Composite Gain Data

Appendix A

Θ(22.5°)	-3.35/-3.17	-3.86/-4.97	-7.12/-7.8	-10.02/-12.67	-19.04/-17.61	-19.8/-14.3	-11.97/-10.98	-9.82/-9.22	-8.57/-8.03	-8.06/-7.9	-7.84/-6.95	-6.38/-5.86	-5.9/-6.27	-6.06/-7.06	-8.49/-12	-15.27/-16.3	-16/-14.47	-11.9/-9.92	-7.36/-6.78	-5.6/-4.82	-4.88/-4.8	-4.82/-4.42	-2.7/-3.54	-3.35/-3.23
Θ(30°)	-3.13/-3.03	-2.26/-2.41	-2.99/-4.91	-6.35/-8.78	-13.46/-18.49	-18.38/-14.38	-12.34/-10.8	-11.03/-11.89	-10.84/-9.16	-8.47/-8.76	-9.39/-9.75	-6.69/-4.1	-3.37/-3.44	-4.22/-5.4	-9.36/-15.58	-18.06/-16.47	-13.69/-11.33	-7.46/-4.83	-3.75/-4.25	-4.52/-4.85	-5.49/-6.2	-5.77/-4.65	-3.02/-2.98	-2.9/-3.2
Θ(37.5°)	-0.89/-0.99	-2.99/-4.96	-5.45/-5.64	-7.07/-9.41	-14.09/-18.03	-18.76/-17.25	-13.47/-11.42	-12.9/-10.83	-8.99/-6.8	-5.39/-6.97	-9.98/-8.81	-5.89/-5.39	-3.04/-4.67	-7.73/-11.7	-18.06/-18.4	-12.47/-31	-5.64/-6.5	-7.97/-5.79	-4.74/-4.82	-5.08/-4.8	-4.32/-3.69	-2.95/-1.5		
Θ(45°)	-0.69/-2.38	-6.78/-4.9	-3.02/-3.5	-5.09/-7.38	-11.17/-13.35	-18.62/-18.47	-17.17/-14.92	-16.29/-18.66	-17.91/-18.44	-16.39/-10.59	-6.6/-5.6	-5.84/-7.08	-7.44/-6.84	-7.04/-8.72	-9.72/-9.81	-12.66/-14.01	-15.38/-14.63	-10.68/-9.79	-9.52/-7.73	-9.59/-9.96	-9.68/-9.8	-7.34/-6.01	-6.39/-5.29	-3.24/-1.38
Θ(52.5°)	-2.06/-4.07	-5.04/-2.06	-1.02/-3.32	-6.52/-8.32	-8.5/-12.32	-17.97/-18.67	-19.33/-17.5	-18.34/-19.21	-15.59/-12.62	-10.04/-10.62	-9.03/-4.29	-3.17/-5.7	-7.81/-6.81	-7.11/-6.71	-5.46/-8.44	-16.54/-15.27	-13.56/-18.74	-18.24/-13.18	-15.31/-17.02	-14.47/-12.71	-10.24/-8.32	-8.5/-5.7	-1.0/-1.935	-2.96/-0.86
Θ(60°)	-2.8/-5.23	-3.93/-2.53	-1.84/-0.6	-4.84/-4.13	-5.9/-11.33	-17.42/-13.08	-12.11/-13.55	-18.45/-18.21	-19.04/-10.48	-5.88/-3.92	-5.93/-10.68	-7.4/-2.8	-13.9/-2.06	-2.55/-3.03	-4.23/-6.49	-17.41/-16.74	-18.18/-15.71	-18.24/-18.41	-16.35/-16.91	-13.67/-11.31	-10.68/-10.37	-9.26/-6.18	-2.84/-1.25	
Θ(67.5°)	-1.61/-3.02	-3.62/-3.62	-3.51/-3.57	-3.95/-5.02	-6.54/-10.49	-14.81/-9.83	-8.48/-11.54	-18.14/-17.84	-15.84/-13.38	-10.22/-6.52	-3.22/-3.51	-8.51/-5.22	-1.11/-0.84	-2.01/-1.86	-2.36/-6.83	-7.66/-10.92	-14.8/-14.36	-12.15/-12.12	-11.5/-13.79	-19.21/-18.42	-12.72/-9.82	-11.68/-9.49	-5.56/-4.6	-3.8/-0.95
Θ(75°)	-1.14/-3.95	-4.11/-3.68	-3.59/-5.28	-7.4/-6.39	-7.42/-12.29	-13.5/-8.35	-6.87/-9.25	-10.61/-9.89	-8.59/-9.8	-10.57/-8.03	-6.08/-3.11	-2.72/-5.5	-4.48/-3.64	-2.51/-1.83	-3.06/-6.21	-8.42/-10.19	-14.65/-18.4	-18.27/-19.08	-18.15/-13.69	-13.47/-14.06	-17.89/-16.16	-10.43/-7.82	-6.01/-11.03	-8.8/-1.99
Θ(82.5°)	-3.63/-4.89	-4.4/-3.19	-4.16/-7.02	-8.51/-7.41	-6.71/-7.53	-8.56/-6.26	-5.86/-8.74	-15.44/-12.11	-10.22/-12.92	-7.13/-3.85	-5.24/-8.31	-4.94/-1.21	-0.77/-2.45	-2.99/-6.06	-2.37/-5.92	-12.37/-18.76	-14.93/-13.11	-12.33/-13.49	-19.03/-14.77	-14.59/-19.22	-18.52/-18.8	-9.03/-4.67	-4.34/-10.88	-15.52/-4.67
Θ(90°)	-2.26/-6.18	-5.17/-3.42	-4.89/-7.24	-6.98/-5.56	-5.15/-6.94	-8.5/-5.08	-4.28/-6.3	-9.16/-3.36	-4.06/-13.23	-8.11/-3.98	-2.6/-1.06	-4.32/-4.82	1.05/-1.25	-0.43/-1.13	-2.62/-3.76	-6.16/-8.35	-18.43/-17.77	-18.04/-19.41	-18.15/-18.66	-15.6/-16.54	-19.11/-19.18	-10.94/-5.14	-4.82/-6.95	-14.7/-3.94
Θ(97.5°)	-3.18/-11.09	-3.66/-2.4	-4.49/-7.4	-8.48/-6.98	-7.13/-7.74	-6.04/-3.6	-3.56/-5.37	-4.08/-1.97	-2.88/-12.06	-5.7/-2.85	-5.13/-0.23	-0.26/-5.9	-1.83/-1.46	-0.06/-1.81	-2.56/-4.58	-5.97/-10.18	-13.44/-9.98	-7.48/-11.95	-11.43/-9.74	-11.85/-9.6	-12.89/-12.41	-8.63/-5.4	-5.64/-15.9	-8.19/-2.12
Θ(105°)	-6.02/-14.29	-3.65/-2.53	-6.28/-8.04	-8.98/-10.51	-6.21/-3.59	-2.34/-2.07	-3.18/-4.66	-6.46/-2.48	-3.67/-10.99	-3.24/-1.32	-4.13/-4.12	-1.71/-6.54	-2.85/-0.7	-1/-2.49	-3.07/-5.5	-9.1/-16.11	-13.67/-10.32	-10.23/-11.54	-16.12/-14.59	-17.8/-18.02	-8.9/-5.39	-3.71/-4.46	-10.98/-15.46	-2.94/-1.76
Θ(112.5°)	-9.37/-5.69	-3.03/-3.87	-6.32/-7.7	-13.32/-8.54	-4.46/-4.72	2.98/-2.53	-4.17/-9.6	-7.02/-2.15	-3.41/-10.35	-3.52/-0.64	-2.26/-2.24	-1.93/-7.8	-1.87/-0.05	-2.04/-2.42	-2.81/-4.58	-11.3/-14	-15.52/-14.28	-17.66/-17.86	-19.1/-14.99	-14.16/-9.73	-10.8/-8.03	-7.7/-5.78	-10.28/-11.02	-1.96/-3.84
Θ(120°)	-10.83/-9.54	-6.99/-6.36	-6.27/-8.77	-6.33/-7.39	-7.67/-6.12	2.32/-0.15	-1.15/-4.78	-6.71/-2.64	-2.74/-8.46	-4.62/-1.23	-3.44/-4.9	-1.24/-5.62	-6.11/-1.58	-2.3/-3.77	-5.04/-5.7	-10.34/-10.46	-12.9/-12.27	-11.52/-15.27	-17.22/-11.23	-13.14/-6.64	-6.02/-9.37	-18.01/-18.17	-18.85/-9.07	-6.65/-4.92
Θ(127.5°)	-10.98/-11.22	-7.64/-7.82	-9.74/-8.98	-5.84/-5.32	-12.25/-12.9	-5.09/-2.33	-2.2/-6.06	-8.52/-6.25	-6.06/-11.83	-13.14/-5.92	-7.94/-7.39	-3.75/-6.09	-11.77/-5.29	-2.35/-2.93	-7.82/-10.75	-9.45/-18.18	-13.47/-13.21	-9.13/-14.59	-15.81/-15.41	-18.25/-4.62	-6.74/-8.46	-8.75/-12.56	-8.81/-2.67	-5.18/-9.53
Θ(135°)	-17.28/-12.79	-7.28/-5.19	-11.05/-13.09	-6.72/-5.39	-4.87/-7.21	-6.91/-4.83	-4.29/-5.19	-10.53/-9.16	-7.55/-9.02	-17.2/-13.1	-8.89/-8.17	-7.83/-9.09	-10.58/-5.35	-2.64/-8.67	-10.87/-14.4	-10.28/-7.33	-9.55/-10.38	-15.28/-17.65	-8.46/-8.91	-17.7/-10.99	-5.71/-6.73	-7.93/-18.97	-11.45/-5.94	-4.32/-12.52
Θ(142.5°)	-12.56/-3.77	-6.4/-7.68	-10.56/-16.71	-11.42/-6.25	-4.99/-3.82	-5.25/-5.6	-4.43/-6	-7.95/-13.27	-18.1/-18.26	-18.07/-17.57	-12.83/-4.86	-8.71/-8.68	-9.94/-8.03	-5.26/-6.99	-16.28/-4.3	-12.35/-10.6	-8.99/-15.38	-18.02/-18.6	-11.76/-11.25	-16.93/-11.83	-8.03/-9.65	-6.87/-11.27	-12.06/-9.48	-18.42/-10.04
Θ(150°)	-18.16/-7.79	-16.28/-18.23	-17.49/-9.5	-9.33/-8.43	-7.17/-9.78	-7.8/-5.87	-4.25/-3.32	-3.35/-4.17	7.22/-9.4	-11.5/-15.54	-18.93/-14.87	-10.77/-12.78	-6.9/-7.94	-18.6/-8.36	-6.44/-9.46	-9.11/-8.69	-12.74/-18.52	-17.48/-17.86	-14.92/-11.21	-9.31/-7.67	-5.7/-6.63	-8.47/-7.77	-7.8/-7.1	-10.39/-18.46
Θ(157.5°)	-9.17/-7.53	-5.81/-3.59	-2.54/-2.81	-4.06/-6.08	-6.56/-7.47	-7.42/-6	-4.74/-4.09	-4.93/-7.39	-12.19/-17.42	-19.1/-18	-16.41/-10.61	-5.94/-2.41	-0.96/-2.06	-4.67/-8.32	-13.13/-9.31	-8.34/-13.8	-18.29/-17.42	-15.33/-12.87	-12.48/-15.82	-17.96/-18.02	-18.9/-19.1	-18.01/-19.73	-16.75/-13.24	-15.17/-12.25
Θ(165°)	-7.58/-9.74	-10.42/-10.98	-13.96/-14.57	-13.69/-15.36	-13.66/-13.02	-11.77/-11.44	-11.01/-10.7	-11.74/-12.6	-14.26/-14.94	-15.84/-16.42	-13.07/-10.39	-6.78/-2.84	-0.89/-4.07	-1.46/-2.97	-5.71/-7.85	-0.09/-9.13	-8.74/-9.04	-11.07/-16.25	-15.85/-19.03	-17.67/-17.04	-16.42/-12.84	-8.87/-5.65	-4.44/-4.06	-5.55/-9.57
Θ(172.5°)	-9.34/-9.11	-7.97/-7.51	-7.25/-6.76	-7.4/-8.32	-10.84/-11.59	-14.26/-16.5	-16.18/-14.35	-13.29/-10.31	-10.13/-8.54	-6.63/-5.48	-4.37/-4.01	-3.48/-3.18	-3.23/-3.52	-4.12/-4.76	-5.48/-5.94	-5.66/-6.39	-6.71/-8.27	-10.05/-14.98	-18.09/-18.56	-18.41/-12.07	-11.16/-9.28	-7.8/-7.2	-7.62/-9.64	-11.85/-10.56
Θ(180°)	-9.44/-9.21	-8.99/-9.62	-9.76/-10.11	-10.56/-9.81	-11.7/-16.68	-18.96/-18.86	-19.14/-16.59	-14.31/-12.35	-9.24/-7	-5.7/-4.11	-2.93/-2.1	-1.53/-0.96	-0.48/-0.44	-0.13/-0.15	-0.21/-1.09	-1.89/-2.67	-4.06/-5.05	-6.5/-8.96	-11.94/-14.05	-12.51/-11.73	-10.29/-9.81	-10.14/-9.16	-8.93/-8.96	-7.86/-9.2
Freq(Hz)	6.475GPol.	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°)	-11.49/-9.5	-8.55/-8.89	-7.43/-6.67	-5.87/-5.34	-5.18/-5.1	-4.59/-5.2	-3.78/-6.65	-6.87/-8.72	-9.87/-12.44	-15.16/-17.51	-18.78/-18.93	-18.09/-16.84	-14.75/-12.86	-10.37/-8.92	-7.9/-7.35	-6.4/-5.71	-5.77/-6.27	-6.47/-5.54	-5.76/-5.85	-6.71/-8.3	-9.27/-11.42	-12.31/-14.71	-17.39/-16.32	-16.73/-14.95
Θ(7.5°)	-12.24/-11.26	-10.54/-9.8	-8.4/-6.96	-5.69/-6.22	-5.85/-6.05	-5.4/-5.78	-5.94/-6.65	-8.68/-8.83	-9.61/-11.2	-12.86/-16.17	-17.29/-18.77	-17.83/-15.06	-14/-11.29	-8.63/-4.78	-5.85/-5.51	-4.88/-5.13	-5.12/-5.47	-5.44/-5.15	-5.52/-5.5	-6.41/-7.18	-9.02/-10.8	-12.48/-10.77	-17.06/-18.48	-14.47/-14.27
Θ(15°)	-12.34/-10.82	-9.12/-7.15	-5.81/-4.98	-3.95/-4.4	-5.05/-5.57	-5.88/-6.61	-6.89/-8.23	-9.71/-10.78	-11.19/-11.69	-12.70/-14.09	-18.36/-16.42	-13.76/-10.97	-8.84/-7.03	-5.65/-4.35	-4.71/-4.53	-4.6/-5.65	-6.71/-6.96	-7.28/-7.56	-8.51/-9.88	-10.88/-13.47	-15.07/-18.61	-19.59/-18.76	-17.24/-14.31	
Θ(22.5°)	-11.65/-10.78	-8.76/-7.86	-6.73/-5.62	-4.26/-4.26	-5.12/-6.25	-6.75/-7.86	-7.75/-9.51	-10.85/-13.21	-13.46/-14.02	-14.94/-14.85	-17.01/-18.55	-19.31/-17.08	-11.15/-9.1	-8.23/-6.44	-4.84/-4.47	-4.21/-5.06	-6.16/-7.36	-9.37/-9.21	-8.71/-7.81	-8.09/-7.79	-7.07/-7.44	-9.23/-12.17	-15.86/-14.85	-15.12/-12.93
Θ(30°)	-12.9/-17.71	-14.44/-9.37	-7.86/-7.62	-6.13/-5.95	-5.71/-5.38	-4.79/-5.1	-6.55/-7.7	-9.44/-10.62	-9.95/-11.02	-13.96/-17.69	-14.65/-12.28	-12.81/-18.73	-17.36/-12.11	-9.71/-10.33	-10.32/-10.04	-9.8/-8.97	-8.2/-7.32	-6.98/-7.56	-6.6/-5.82	-5.79/-5.35	-5.55/-5.77	-6.3/-5.7	-8.28/-10.01	-13.65/-11.37
Θ(37.5°)	-17.07/-11.92	-7.52/-6.23	-4.94/-4.42	-4.21/-3.3	-3.19/-3.45	-4.08/-4.89	-6.01/-7.63	-9.85/-10.78	-12.89/-14.31	-13.75/-11.87	-10.19/-10.92	-13.36/-18.7	-19.21/-15.44	-16.18/-134	-14.67/-11.34	-10.52/-9.57	-7.47/-5.69	-4.96/-5.32	-5.82/-7.32	-8.82/-8.77	-7.09/-6.67	-8.81/-10.49	-10.26/-11.43	-15.69/-19.09
Θ(45°)	-10.35/-7.25	-6.37/-6.88	-6.65/-4.89	-3.86/-3.31	-2.58/-1.15	-1.03/-1.91	-3.51/-5.26	-9.52/-6.89	-7.67/-8.47	-10.56/-10.68	-10.02/-10.01	-13.18/-16.95	-17.7/-13.01	-11.56/-12.48	-15.12/-11.86	-10.53/-10.72	-8.68/-6.65	-5.04/-3.82	-3.04/-3.55	-6.71/-9.37	-8.93/-8.25	-8.62/-10.4	-13.54/-16	-15.96/-13.42
Θ(52.5°)	-8/-9.19	-10.15/-10.3	-7.01/-3.77	-2.48/-0.83	0.53/-0.5	-0.99/-3.07	-5.51/-8.1	-10.5/-11.83	-12.85/-11.73	-7.64/-6.34	-7.8/-13.19	-11.74/-8.44	-8.46/-11.21	-13.78/-11.36	-9.86/-8.48	-7.44/-8.45	-8.63/-5.73	-6.36/-6.84	-8.07/-6.8	-6.08/-6.45	-9.26/-10.11	-10.55/-10.85	-10.66/-11.55	-9.55/-7.1
Θ(60°)	-16.59/-13.97	-9.4/-6.88	-6.05/-4.98	-2.93/-1.55	-1.85/-3.44	-4.72/-7.54	-11.7/-14.44	-14.87/-13.17	-13.73/-14.21	-12.51/-8.91	-8.33/-13.92	-14.06/-7.15	-4.2/-5.59	-10.74/-19.23	-18.46/-18.02	-10.7/-8.93	-10.12/-6.72	-7.98/-7.11	-4.45/-4.08	-3.24/-3.46	-5.77/-8.67	-11.03/-10.31	-9.29/-9.86	-13.51/-12.41
Θ(67.5°)	-11.57/-8.4	-11.35/-18.51	-8.67/-2.33	-4.15/-6.69	-4.07/-2.53	-2.66/-5.11	-11.37/-9.51	-11.37/-18.31	-17.7/-9.49	-11.78/-18.44	-14.03/-12.77	-16.17/-14.05	-10.32/-14.14	-12.69/-10.35	-15.8/-16.17	-18.1/-9.92	-14.28/-14.1	-8.83/-8.17	-6.78/-3.71	-3.25/-2.73	-7.23/-7.31	-6.99/-7.08	-13.56/-18.56	
Θ(75°)	-5.87/-8.47	-1.75/-1.731	-3.42/-2																					



Radiated Composite Gain Data

Appendix A

Θ (67.5°)	-4.82/-4.27	-4.44/-2.21	-0.89/-1.6	-3.58/-4.73	-7.27/-10.02	-18.38/-11.87	-10.54/-15.41	-13.89/-11.39	-16.69/-8.07	-3.93/-4.51	-10.2/-17.24	-2.83/-1.23	-3.42/-5.46	-3.47/-4.1	-4.6/-10.84	-16.57/-18.46	-15.23/-10.78	-15.66/-18.81	-12.52/-8.02	-9.43/-9.59	-10.32/-16.53	-12.58/-10.11	-8.94/-5.9	-4.02/-5.63
Θ (75°)	-4.07/-3.95	-6.49/-2.9	0.14/-0.17	-2.19/-5.27	-7.08/-13.15	-15.19/-8.61	-6.4/-7.27	-9.26/-5.7	-5.94/-10.63	-7.46/-3.38	-1.86/-4.18	-10.3/-0.75	1.37/-1.34	0.72/-3.19	-4.53/-5.55	-7.9/-13.17	-14.52/-13.78	-17.1/-17.82	-19.25/-18.32	-14.07/-14.51	-11.53/-16.38	-17.91/-18.97	-12.68/-5.37	-1.5/-3.98
Θ (82.5°)	-3.3/-3.51	-6.89/-2.78	-0.92/-2.22	-5.52/-6.85	-10.08/-10.52	-11.1/-8.91	-5.84/-6.41	-8.07/-8.6	-10.06/-10.11	-4.87/-5.49	-6.06/-1.43	-2.68/-2.31	-0.76/-1.86	1.27/-2.73	-3.95/-4.9	-6.88/-10.42	-9.21/-12.96	-15.87/-18.54	-17.38/-15.94	-10.89/-18.34	-17.5/-13.34	-9.87/-3.4	-4.7/-7.71	
Θ (90°)	-3.51/-4.24	-5.28/-3.7	-3.09/-3.23	-4.08/-6.05	-6.13/-7.22	-6.98/-6.31	-5.32/-7.29	-13.27/-7.8	-9.52/-14.42	-4.17/-2.33	-5.02/-4.21	2.6/-1.2	0.04/-1.6	1.60/-28	-2.26/-5.6	-10.41/-13.01	-13.49/-12.15	-6.99/-8.31	-13.67/-17.38	-10.36/-9.39	-8.2/-17.63	-9.1/-9.84	-6.21/-3.24	-6.59/-8.55
Θ (97.5°)	-3.54/-2.51	-8.43/-4.42	-1.55/-0.67	-3.88/-8.37	-7.11/-6.54	-6.43/-4.77	-4.45/-5.53	-7.26/-3.33	-6.06/-10.87	-4.3/-3.09	-2.30/-5.1	-3.7/-1.18	0.15/-1.88	0.67/-1.05	-0.15/-0.6	-5.52/-6.05	-5.34/-5.57	-4.99/-6.64	-13.51/-18.58	-13.4/-11.81	-8.42/-10.43	-9.97/-15.44	-6.9/-2.47	-3.14/-6.59
Θ (105°)	-2.39/-3.87	-16.49/-2.97	-1.11/-3.54	-9.13/-16.93	-7.86/-4.93	-4.81/-3.27	-2.06/-3.93	-9.88/-3.95	-1.91/-7.55	-3.08/-2.37	-6.81/-0.56	-1.89/-0.97	-0.68/-0.56	1.26/-1.09	-1.08/-0.73	-1.78/-6.15	-9.74/-5.69	-6.15/-6.36	-17.12/-42	-18.3/-12.42	-8.09/-8.74	-14.94/-14.04	-5.33/-3.06	-4.69/-8.17
Θ (112.5°)	-3.52/-11.41	-6.75/-1.88	-5.58/-8.64	-6.61/-9.54	-10.39/-8.26	-7.14/-4.32	-4.67/-13.3	-7.24/-4.01	-9.89/-5.92	-0.75/-1.46	-5.17/-1.26	-4.86/-3.26	0.06/-0.25	1.30/-94	-3/-3.37	-1.97/-1.86	-8.22/-18.72	-13.89/-18.51	-9.2/-14.47	-11.23/-18.79	-12.45/-15.84	-9.03/-3.74	-1.24/-4.21	-11.59/-3.52
Θ (120°)	-3.37/-11.85	-3.57/-4.9	-8.12/-4.77	-4.22/-7.22	-17.4/-11.94	-3.19/-0.73	-2.1/-5.22	-7.78/-3.88	-5.32/-6.1	-0.46/-0.99	-8.83/-2.64	-0.85/-8.91	-1.19/-1.67	1.88/-04	-1.39/-3.51	-2.67/-6.2	-10.1/-17.1	-11.12/-17.7	-12.78/-15.05	-16.35/-8.64	-8.93/-18.5	-8.56/-5.58	-8.13/-12.63	-2.94/-0.63
Θ (127.5°)	-10.19/-6.97	-6.85/-8.13	-8.95/-7.34	-6.11/-7.94	-11.75/-15.43	-4.1/-0.97	-1.52/-5.42	-7.85/-4.74	-4.94/-11.11	-4.51/-1.49	-4.84/-4.7	-2.28/-4.05	-8.32/-1.55	1.85/-0.23	-1.64/-0.7	-1.25/-2.98	-10.42/-15.43	-10.01/-18.64	-18.88/-10.76	-18.31/-9.6	-7.22/-17.7	-10.2/-7.74	-10.26/-10.68	-10.66/-9.68
Θ (135°)	-4.48/-6.99	-15.91/-6.97	-6.05/-8.65	-16.3/-15.36	-11.45/-9.01	-6.01/-4.26	-5.03/-8.12	-9.18/-4.97	-2.73/-5.31	-19.08/-6.32	-3.65/-5.8	-8.94/-4.9	-3.63/-0.53	2.81/-1.67	-4.73/-5.21	-4.77/-7.26	-8.81/-16.48	-11.26/-17.67	-11.8/-7.54	-15.48/-18.86	-12.72/-10.25	-10.49/-14.54	-11.5/-18.5	-6.84/-5.42
Θ (142.5°)	-10.95/-9.02	-5.6/-5.07	-5.03/-6.16	-12.64/-14.15	-8.17/-3.67	-1.77/-1.62	-1.67/-3.27	-7.97/-8.2	-11.58/-11.78	-18.72/-16.5	-8.47/-6.1	-9.07/-14.05	-13.23/-7.51	-5.56/-5.92	-4.69/-7.96	-3.55/-4.64	-6.93/-16.28	-13.7/-13.05	-13.21/-7.6	-18.62/-13.18	-5.1/-6.24	-7.32/-16.98	-8.32/-13	-12.24/-10.12
Θ (150°)	-12.86/-10.19	-14.08/-17.08	-16.66/-13.34	-7.24/-6.32	-6.6/-48	-5.63/-2.47	-3.61/-3.08	-4.14/-7.71	-14.28/-14.84	-15.08/-17.56	-16.54/-18.06	-16.83/-9.37	-12.95/-10.05	-6.58/-4.6	-2.5/-2.53	-6.66/-5.93	-6.86/-10.75	-9.67/-10.07	-18.89/-14.73	-8.23/-5.63	-3.56/-3.72	-6.09/-6.25	-9.68/-8.8	-5.5/-8.17
Θ (157.5°)	-10.11/-15.87	-8.65/-5.52	-3.74/-3.33	-3.21/-4.47	-5.55/-5.66	-5.07/-3.52	-2.79/-3.09	-4.63/-7.23	-16.8/-13.4	-8.53/-8.9	-9.95/-7.59	-4.35/-1.74	-2.29/-6.99	-18.35/-10.85	-7.73/-5.62	-4.23/-4.33	-6.33/-12.56	-17.87/-14.07	-14.92/-15.96	-13/-11.2	-10.14/-11.59	-16.37/-18.78	-12.04/-5.72	-2.55/-3.67
Θ (165°)	-5.31/-11.67	-12.98/-12.52	-14.18/-10.53	-7.73/-6.2	-5.98/-5.93	-4.78/-4.87	-6.78/-10.73	-10.83/-8.26	-7.69/-7.05	-5.49/-2.51	0.68/-1.67	1.83/-1.24	0.34/-1.35	-4.42/-6.67	-10.35/-17.03	-17.73/-17.22	-18.4/-18.72	-15.32/-10.94	-9.05/-6.43	-5.61/-5.7	-5.01/-2.94	-0.85/-0.27	-0.56/-2.53	
Θ (172.5°)	-9.99/-9.97	-9.11/-7.82	-6.91/-6.41	-5.79/-7.3	-11.09/-14.21	-16.96/-18.79	-15.35/-12.23	-10.88/-9.84	-8.88/-8.95	-8.21/-7.01	-5.32/-7.07	-4.59/-4.47	-3.95/-4.33	-4.77/-6	-7.83/-9.32	-9.95/-11	-17.89/-12.35	-6.3/-3.35	-1.89/-1.1	-1.05/-1.29	-0.64/-0.51	-0.75/-2.06	-3.31/-4.69	
Θ (180°)	-8.24/-6.89	-7.34/-6.88	-7.14/-8.43	-11.89/-12.73	-13.23/-13.23	-12.14/-10.55	-9.11/-10.07	-9.31/-8.34	-5.59/-4.08	-3.43/-2.68	-1.7/-0.92	-0.36/-0.1	0.12/-0.23	-0.76/-1.07	-2.25/-2.57	-4.2/-5.55	-7.55/-10.14	-17.78/-17.98	-13.11/-11.05	-9.61/-8.43	-6.75/-5.93	-5.37/-4.05	-3.53/-4.76	-6.39/-7.49
Freq[Hz]	6.995GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-6.08/-5.02	-4.44/-2.69	-1.7/-1.54	-1.74/-0.6	-0.96/-0.98	-1.45/-1.96	-1.8/-2.7	-4.38/-6	-7.61/-8.65	-10.72/-15.3	-18.4/-16.48	-11.95/-8.39	-6.52/-5.24	-4.52/-3.41	-2.6/-1.57	-1.11/-0.91	-0.48/-0.61	-0.55/-1.27	-1.88/-2.36	-3.54/-4.42	-6.1/-6.62	-10.2/-11.45	-13.08/-12.86	-10.2/-6.6
Θ (7.5°)	-4.86/-4.24	-2.89/-1.61	-1.27/-1.14	-0.86/-0.21	-0.59/-0.26	-0.85/-0.91	-1.03/-1.18	-2.47/-3.61	-4.73/-7.22	-7.58/-9.21	-14.12/-16.24	-14.43/-9.51	-7.43/-6.63	-5.3/-3.93	-3.2/-2.93	-2.77/-3.21	-3.13/-3.6	-3.48/-4.42	-4.75/-5.89	-6.37/-7.09	-8.28/-9.11	-11.4/-15.09	-14.01/-10.35	-7.39/-6.59
Θ (15°)	-5.95/-5.77	-4.52/-4.6	-4.2/-3.15	-3.4/-2.97	-2.42/-1.97	-2/-2.86	-4.06/-5.33	-5.82/-6.53	-7.84/-9.07	-11.54/-13.44	-16.24/-16.87	-13.95/-4.97	-7.15/-6.93	-3.41/-4.42	-4.89/-4.99	-5.96/-5.54	-4.71/-3.26	-3.18/-3.49	-3.98/-5.61	-5.96/-6.58	-8.58/-9.64	-12.32/-13.72	-10.26/-10.57	-7.83/-7.51
Θ (22.5°)	-12.93/-12.92	-10.19/-8.76	-7.8/-5.94	-4.07/-2.49	-2.36/-1.22	-1.17/-1.28	-1.21/-2.05	-2.91/-4.22	-5.24/-7.09	-9.71/-14.42	-19.02/-17.36	-16.18/-11.92	-8.23/-7.35	-6.99/-8.22	-9.1/-10.49	-9.75/-7.87	-5.18/-3.96	-2.97/-2.95	-2.38/-2.18	-2.59/-2.81	-5.03/-6.82	-9.28/-12.82	-13.61/-14.88	-14.09/-12.76
Θ (30°)	-12.66/-11.31	-8.61/-7.34	-4.32/-2.69	-0.9/-0.32	0.21/-0.83	-1.03/-1.23	-2.12/-3.39	-4.43/-4.96	-5.14/-4.85	-4.48/-6.86	-10.79/-16.67	-13.48/-10.94	-8.49/-7.16	-7.49/-10.64	-14.96/-16.97	-10.02/-7.23	-5.89/-4.88	-5.15/-4.27	-3.92/-4.64	-4.65/-5.08	-5.01/-8.43	-7.66/-12.4	-13.72/-18.07	-13.72/-10.07
Θ (37.5°)	-16.62/-18.4	-15.92/-17.75	-14.62/-23.3	-2.49/-3.1	-2.58/-2.54	-1.82/-2.27	-3.17/-4.43	-6.74/-9.94	-10.86/-8.47	-9.22/-10.38	-12.14/-10.98	-6.95/-6.66	-4.94/-6.69	-10.67/-16.79	-12.08/-7.96	-6.88/-8.88	-8.01/-7.75	-9.93/-9.39	-8.17/-6.86	-8.96/-11.29	-10.39/-9.37	-10.02/-12.07	-18.21/-13.35	
Θ (45°)	-7.39/-11.66	-10.4/-6.19	-4.86/-5.68	-3.78/-1.05	0.72/-1.64	1.68/-0.58	-1.23/-2.52	-4.35/-7.22	-9.44/-12.71	-10.81/-9.09	-11.19/-12.52	-7.38/-6.73	-8.67/-11.28	-15.08/-11.2	-9.72/-11.06	-11.99/-13.16	-12.43/-8.59	-8.07/-11.59	-8.92/-5.75	-5.82/-7.89	-7.59/-8.42	-6.5/-3.61	-2.42/-2.28	-5.03/-5.98
Θ (52.5°)	-14.51/-7.03	-2.41/-2.63	-4.9/-4.64	-1.11/-0.6	1.41/-1.7	0.35/-0.15	-0.79/-3.32	-3.53/-5.38	-4.51/-6.53	-9.33/-10.44	-9.34/-7.88	-5.47/-7.22	-6.82/-12.61	-13.71/-12.69	-16.37/-18.44	-11.95/-9.24	-7.17/-7.75	-8.13/-6.86	-5.48/-5.17	-6.11/-3.59	-3.39/-3.63	-5.33/-4.73	-6.41/-6.9	-9.10/-0.3
Θ (60°)	-9.18/-7.05	-6.59/-6.87	-5.63/-2.6	-0.68/-0.22	0.72/-0.08	0.01/-1.5	-3.65/-4.86	-7.55/-5.65	-4.65/-4.92	-6.86/-8.2	-4.18/-3.94	-4.57/-3.7	-3.12/-5.77	-10.68/-9.96	-9.79/-4.84	-5.86/-7.44	-10.68/-9.96	-9.79/-4.84	-5.86/-7.44	-5.39/-5.73	-4.43/-3.41	-4.42/-11.68	-17.05/-10.25	-8.89/-7.31
Θ (67.5°)	-14.56/-9.94	-6.38/-5.93	-6.13/-6.36	-3.87/-1.72	-1.35/-3.15	-2.87/-2.81	-3.62/-5.31	-6.23/-4.5	-3.94/-9.02	-16.69/-3.32	-0.94/-1.81	-2.4/-2.17	-3.28/-5.16	-12.21/-13.36	-6.48/-3.98	-3.06/-8.41	-10.21/-8.16	-4.3/-3.37	-5.06/-5.2	-10.12/-10	-7.76/-8.77	-10.61/-17.68	-13.04/-5.45	-8.49/-8.74
Θ (75°)	-5.76/-5.26	-6.79/-11.01	-8.43/-4.49	-4.38/-6.23	-3.98/-4.14	-2.57/-3.3	-5.47/-8.61	-11.58/-10.34	-7.92/-7.82	-14.4/-11.61	-4.41/-2.89	-4.19/-7.96	-9.1/-11.84	-11.72/-12.9	-17.57/-8.76	-6.6/-12.1	-9.17/-2.22	0.54/-1.95	0.95/-13	-1.41/-2.7	-4.84/-6.16	-5.23/-6.04	-5.76/-6.41	-7.27/-9.02
Θ (82.5°)	-3.63/-5.09	-10.39/-9.51	-2.57/-2.01	-3.32/-4.92	-5.85/-7.56	-5.61/-5.97	-9.19/-7.19	-6.73/-5.77	-12.05/-19.05	-10.8/-8.21	-12.87/-12.27	-5.09/-6.45	-6.1/-4.46	-1.88/-6.73	-7.12/-9.41	-11.85/-12.92	-4.02/-1.65	1.31/-4.8	1.410.82	-0.82/-2.43	-4.02/-8.15	-5.74/-6.3	-10.59/-6.4	-3.23/-3.1
Θ (90°)	-8.89/-8.73	-8.5/-8.02	-8.26/-8.46	-8.73/-11.17	-13.12/-5.2	-2.02/-3.29	-5.1/-6.61	-9.42/-18.7	-7.34/-11.03	-19.48/-8.58	-1.37/-3.62	-5.62/-2.99	-2.6/-2.61	-2.7/-8.05	-10.73/-8.61	-10.21/-10.43	-6.38/-1.79	-0.22/-0.75	0.06/-0.34	-1.36/-5.13	-7.46/-10.34	-7.04/-13.88	-15.16/-6.21	-5.82/-13.34
Θ (97.5°)	-5.71/-8.26	-13.45/-12.24	-7.38/-6.24	-9.4/-18.51	-6.72/-10.77	-12.55/-13.47	-16.14/-8.53	-3.3/-4.01	-9.26/-9.74	-17.68/-6.46	-3.79/-4.26	-8.67/-15.75	-1.46/-6.21	-4/-7.3	-7.65/-12.91	-15.24/-7.28	-4.24/-2.34	-1.44/-2.28	0.19/-0.71	-0.11/-1.24	-6.19/-15.94	-16.58/-10.37	-8.74/-6.04	-5.14/-5.27
Θ (105°)	-13.32/-8.86	-4.62/-2.56	-2.66/-7.39	-13.95/-12.3	-16.31/-9.51	-4.4/-3.23	-2.83/-4.02	-4.3/-9.7	-10.82/-5.62	-6.84/-12.96	-17.91/-9.74	-7.8/-5.85	-3.12/-4.71	-6.61/-3.75	-2.45/-5.98	-18.19/-10.34	-8.23/-8.15	-9.05/-8.71	-6.76/-4.47	-6.4/-10.39	-17.84/-18.98	-8.74/-6.26	-5.47/-4.2	-3.22/-5.01
Θ (112.5°)	-8.49/-7.77	-8.38/-6.5	-8.04/-17.82	-15.44/-18.78	-18.79/-18.68	-1.486/-8.53	-7.7/-9.01	-18.34/-10.91	-8.88/-6.43	-5.61/-10.64	-7.28/-6.55	-3.74/-4.38	-4.68/-4.75	-7.16/-5.48	-0.02/-12.97	-17.89/-14.22	-16.08/-7.91	-16.18/-8.56	-10.19/-17.32	-10.63/-11.56	-9.93/-3.31	-6.93/-15.95	-15.66/-14.29	-14.71/-14.89
Θ (120°)	-10.36/-12.69	-6.4/-3.73	-1.9/-6.6	-13.03/-16.41	-8.26/-9.32	-12.61/-17.28	-18.62/-11.02	-11.24/-14.56	-17.13/-13.16	-9.84/-7.59	-8.79/-7.73	-6.12/-6.24	-8.52/-15.37	-10.08/-1										



Radiated Composite Gain Data

Appendix A

Θ (120°)	-8.24/-7.15	-6.58/-6.31	-9.89/-7.75	-6.1/-6.3	-6.77/-6.9	-3.91/-4.21	-6.97/-6.26	-12.42/-14.03	-7.99/-7.8	-4.44/-3.47	-2.58/-2.13	-0.41/-3.28	-7.58/-4.6	-13.44/-10.6	-9.26/-2.69	-5.18/-5.63	-3.02/-12.76	-3.31/-0.04	-4.11/-1.5	-1.45/-1.91	-10.32/-18.27	-4.79/-15.23	-9.22/-4.26	-7.21/-8.91
Θ (127.5°)	-8.02/-5.66	-5.56/-6.18	-8.62/-8.84	-5.57/-4.28	-4.04/-3.8	-6.17/-27	-8.61/-11.18	-10.69/-11.74	-13.81/-15.84	-9.9/-8.14	-6.59/-5.43	-7.72/-8.68	-8.95/-6.83	-18.28/-6.82	-5.55/-2.68	-3.86/-5.19	-12.85/-16.12	-1.32/-0.11	-4.31/-0.58	0.12/-2.37	-4.9/-16.38	-15.94/-9.7	-13.69/-6.75	-9/-7.68
Θ (135°)	-9.47/-6.83	-6.63/-5.15	-4.81/-4.71	-7.87/-7.62	-6.93/-7.02	-6.29/-7.48	-11.16/-13.01	-17.77/-16.68	-15.13/-10.7	-8.24/-7.29	-7.17/-8.2	-10.16/-9.26	-8.24/-9.38	-17.54/-12.5	-11.17/-10.26	-13.99/-15.99	-12.80/-15.46	-3.05/-1.6	-7.53/-5.25	-3.21/-10.5	-6.68/-17.62	-11.23/-11.16	-18.96/-14.28	-17.95/-12.84
Θ (142.5°)	-4.62/-3.44	-3.68/-5.49	-8.22/-7.53	-6.69/-6.63	-8.91/-8.61	-10.56/-13.07	-12.88/-11.25	-11.79/-13.83	-13.92/-12.36	-9.18/-7.26	-7.41/-13.51	-17.28/-12.93	-10.67/-11.19	-7.96/-7.64	-11.41/-18.03	-17.87/-11.26	-13.24/-16.8	-8.37/-9.63	-11.87/-7.62	-5.38/-13.19	-12.16/-10.17	-13.4/-17.61	-17.21/-10.79	-8/-7.16
Θ (150°)	-11.11/-6.73	-4.4/-3.88	-3.95/-5.64	-7.06/-7.59	-8.86/-9.36	-9.96/-9.22	-8.78/-8.3	-7.78/-4.74	-9.11/-8.77	-8.45/-10.33	-14.53/-14.15	-12.49/-7.53	-8.77/-10.53	-12.24/-15.5	-18.46/-17.34	-15.18/-13.63	-14.68/-11.08	-9.76/-11.08	-8.97/-7.79	-7.01/-6.95	-8.05/-9.23	-7.52/-14.13	-13.32/-11.85	-15.79/-14.87
Θ (157.5°)	-8.03/-11.05	-13.51/-11.28	-9.43/-8.42	-7.98/-7.49	-6.6/-6.6	-6.86/-7.63	-9.8/-11.6	-11.77/-11.95	-12.04/-13.34	-15.64/-11.94	-9.7/-69	-7.94/-8.12	-6.33/-9.03	-10.98/-11.07	-9.39/-8.18	-13.37/-13.94	-15.41/-12.99	-12.38/-12.67	-12.49/-15.91	-9.12/-13.75	-12.9/-11.81	-8.83/-6.27	-1.95/-5.64	
Θ (165°)	-7.54/-6.52	-6.29/-5.52	-5.46/-5.87	-7.06/-8.9	-9.78/-11.96	-12.28/-13.2	-14.07/-14.97	-16.66/-17.13	-18.19/-15.1	-12.95/-12.06	-11.34/-10.84	-10.2/-10.55	-11.14/-12.48	-12.33/-12.9	-11.37/-11.41	-10.88/-10.34	-9.41/-8.95	-12.2/-18.07	-17.91/-17.78	-15.15/-10.29	-8.88/-10.91	-17.11/-19.01	-17.87/-14.7	-11.29/-9.11
Θ (172.5°)	-13.7/-12.48	-15.04/-15.63	-15.34/-14.42	-12.68/-11.61	-11.45/-10.12	-10.62/-10.55	-10.98/-12.61	-13.79/-14.64	-15.25/-14.21	-14.92/-16.1	-17.05/-15.39	-14.11/-13.4	-12.29/-11.02	-10.2/-9.54	-8.33/-8.05	-7.92/-8.21	-9.25/-10.98	-14.01/-18.11	-18.17/-17.98	-15.23/-11.12	-10.79/-12.44	-14.58/-15.87	-14.96/-13.6	-13.53/-13.47
Θ (180°)	-18.56/-18.83	-17.72/-15.7	-13.5/-13.79	-15.52/-16	-14.82/-12.14	-11.98/-11.09	-11.07/-11.46	-12.85/-13.3	-14.67/-15.39	-14.96/-15.16	-14.66/-13.7	-13.67/-14.17	-14.83/-14.94	-13.26/-13.54	-14.7/-16.38	-18.26/-17.56	-18.18/-63	-18.33/-18.13	-18.9/-18.62	-17.56/-17.77	-18.53/-19.05	-19.1/-18.92	-17.79/-18.79	-17.84/-17.46
Freq(Hz)	6.175GPol.	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-15.45/-14.41	-10.79/-8.51	-6.63/-5.45	4.3/-3.49	-8.99/-2.44	-2.53/-2.21	-2.38/-3	-1.31/-3.55	-4.59/-5.42	-6.86/-9.03	-12.46/-15.15	-18.51/-18.47	-15.8/-12.9	-10.72/-8.41	-6.67/-5.76	-4.78/-3.94	-3.45/-3.11	-2.69/-2.48	-2.03/-2.27	-2.53/-3.25	-3.48/-4.29	-5.60/-5.77	-6.99/-8.24	-17.95/-11.98
Θ (7.5°)	-13.47/-12.77	-11.45/-10.17	-9.27/-7.79	-6.36/-5.48	-4.41/-3.29	-2.1/-1.63	-1.82/-2.05	-2.39/-2.72	-2.95/-3.43	-4.43/-5.81	-7.31/-9.49	-11.91/-13.93	-12.95/-12.63	-10.25/-8.46	-7.32/-5.88	-5.31/-4.76	-4.52/-4.51	-3.71/-3.52	-2.79/-2.64	-3.04/-3.56	-4.85/-6.17	-6.95/-8.05	-8.98/-10.49	-12.29/-12.48
Θ (15°)	-18.34/-14.52	-11.71/-11.12	-10.3/-8.55	-7.79/-6.41	-5.94/-5.34	-4.99/-4.84	-4.54/-4.3	-4.1/-3.9	-3.36/-3.34	-3.88/-4.9	-6.45/-8.27	-10.92/-12.99	-13.61/-12.52	-10.56/-8.7	-6.87/-5.1	-3.71/-2.65	-2.05/-2.05	-1.67/-0.89	-0.57/-0.25	-0.12/-0.31	-1.28/-2.41	-3.59/-4.87	-6.62/-8.67	-14.17/-19.01
Θ (22.5°)	-17.66/-17.47	-18.26/-16.49	-17.38/-13.23	-11.59/-10.28	-8.83/-7.47	-6.62/-6.98	-6.9/-6.64	-6.2/-5.84	-5.52/-5.56	-5.66/-6.76	-7.69/-8.02	-9.84/-13.48	-14.72/-13.91	-11.74/-8.33	-6.02/-4.45	-4.03/-3.65	-2.89/-2.21	-1.52/-1.31	-0.91/-0.78	-0.95/-1.33	-1.6/-1.99	-2.59/-5.12	-7.18/-8.25	-10.49/-14.99
Θ (30°)	-11.8/-16.97	-18.32/-17.81	-16.05/-14.71	-12.8/-9.97	-8.79/-8.58	-8.2/-7.57	-7.17/-7.78	-8.48/-9.24	-11.54/-12.59	-12.17/-13.91	-13.71/-11.33	-12.4/-13.6	-13.8/-9.63	-6.57/-4	-3.34/-3.33	-2.84/-2.37	-1.91/-2.27	-1.92/-1.28	-1.33/-0.93	-0.68/-0.53	-1.74/-2.53	-3.16/-3.79	-4.65/-5.91	-7.86/-9.8
Θ (37.5°)	-7.63/-10.39	-13.53/-11.41	-11.75/-10.86	-8.48/-8.27	-9.27/-8.85	-10.2/-10.3	-10.37/-9.48	-11.07/-11.31	-12.48/-15.64	-17.81/-18.82	-18.74/-18.22	-18.07/-18.56	-11.76/-6.9	-5.04/-4.76	-4.97/-5.27	-5.52/-7.5	-5.26/-4.85	4.1/-3.02	-1.58/-0.48	0.61/-8.2	0.96/-0.77	-1.72/-2.23	-4.61/-6.27	-7.09/-3.71
Θ (45°)	-9.38/-12.84	-14.08/-13.38	-11.86/-8.74	-8.46/-9.38	-9.72/-10.22	-9.45/-9.61	-9.56/-9.62	-11.11/-13.51	-14.71/-14.96	-15.23/-13.03	-11.55/-9.32	-10.77/-9.61	-5.91/-5.18	-5.82/-6.34	-7.25/-5.63	-4.3/-3.12	-2.39/-2.09	-1.04/-84	-0.95/-0.82	-0.55/-0.53	-0.5/-1.15	-2.69/-6.61	-7.6/-8.56	
Θ (52.5°)	-9.25/-10.92	-13.99/-14.26	-11.71/-8.79	-9.76/-8.86	-8.48/-7.46	-6.51/-6.92	-7.7/-8.69	-11.48/-11.91	-11.33/-9.76	-9.63/-9.59	-9.44/-9.1	-10.39/-6.99	-5.78/-5.43	-7.88/-6.65	-7.98/-12.05	-10.1/-11.77	-6.72/-5.68	-5.11/-4.67	-4.38/-3.23	-1.82/-1.07	-0.6/-2.21	-1.96/-2.61	-1.77/-3.77	-7.23/-11.7
Θ (60°)	-11.35/-11.1	-11.97/-11.13	-8.94/-7.6	-7.02/-6.22	-6.36/-6.16	-6.1/-5.96	-5.78/-5.55	-7.68/-6.65	-6.28/-6.1	-6.69/-6.15	-7.28/-7.17	-5.87/-4.69	-4.34/-8	-10.31/-4.59	-17.97/-10.79	-7.22/-5.15	-6.68/-3.9	-4.47/-3.85	-4.38/-5.05	-4.1/-7.6	-1.27/-2.17	-4.83/-3.72	-5.48/-7.19	-6.55/-9.4
Θ (67.5°)	-7.46/-8.72	-9.71/-8.4	-7.14/-5.74	-4.21/-3.68	-4.48/-4.56	-4.72/-5.74	-6.71/-6.31	-5.93/-4.71	-4.38/-4.42	-5.64/-4.83	-4.04/-4.74	-7.75/-17.63	-10.73/-16.27	-13.6/-7	-5.27/-7.23	-8.91/-9.3	-6.65/-5.37	-4.53/-7.6	-4.72/-5.66	-3.64/-7.38	-9.96/-9.23	-7.96/-6.5		
Θ (75°)	-7.4/-6.46	-9.96/-10.35	-6.22/-3.87	-2.74/-2.44	-2.95/-3.69	-4.6/-3.1	-7.43/-9	-8.51/-6.99	-5.91/-6.1	-6.88/-6.25	-4.85/-4.4	-5.72/-6.37	-12.66/-16.94	-10.46/-11.13	-10.84/-6.98	-7.5/-8.53	-9.9/-8.45	-6.03/-5.35	-5.55/-5.45	-8.78/-8.08	-6.41/-5.6	-5.42/-7.22	-7.79/-10.52	-14.21/-8.66
Θ (82.5°)	-5.73/-4.62	-6.5/-7.49	-4.05/-2.24	-1.27/-2.23	-4.04/-4.07	-4.15/-5.74	-6.28/-9.05	-10.16/-16.66	-8.94/-8.09	-6.15/-5.22	-5.44/-4.76	-6.18/-4.76	-6.8/-10.52	-12.17/-12.87	-9.39/-6.41	-5.9/-6.63	-4.17/-7.64	-10.71/-11.94	-6.59/-4.4	-4.84/-19.02	-10.49/-7.18	-11.58/-13.45	-18.91/-8.81	
Θ (90°)	-4.74/-3.61	-3.79/-5.22	-5.97/-3.41	-1.97/-3.45	-6.66/-7.5	-6.63/-7.3	-9.5/-11.52	-12.31/-9.85	-7.25/-5.4	-5.35/-7.01	-11.71/-11.4	-9.13/-7.21	-14.31/-13.4	-12.73/-15.15	-9.15/-8.75	-8.29/-9.08	-13.67/-11.07	-10.07/-9.54	-9.4/-7.36	-10.48/-11.94	-8.07/-5.52	-5.41/-7.75	-17.89/-15.12	-7.35/-6.08
Θ (97.5°)	-6.77/-4.77	-4.17/-5.11	-5.19/-4.82	-5.35/-7.37	-9.77/-11.1	-10.62/-9.46	-8.95/-9.46	-6.88/-6.17	-4.95/-4.25	-5.39/-6.26	-6.79/-6.39	-7.94/-8.09	-8.06/-8.92	-9.75/-12.07	-10.08/-17.04	-14.34/-12.84	-17.05/-11.27	-6.47/-7.56	-4.96/-9.39	-12.6/-18.55	-11.97/-8.83	-9.69/-10.45	-14.9/-18.11	-9.61/-7.19
Θ (105°)	-4.49/-4.68	-7.07/-6.67	-4.77/-5.34	-5.82/-7.35	-7.8/-12.01	-6.78/-6.67	-5.2/-5.15	-4.85/-7.29	-8.55/-9.41	-7.99/-7.62	-7.28/-8.24	-14.51/-13.08	-8.27/-9.05	-9.92/-10.52	-13.55/-12.01	-7.41/-5.26	-11.81/-16.52	-5.12/-3.39	-2.92/-3.98	-9.34/-12.92	-18.34/-17.04	-17.78/-14.46	-16.69/-13.74	-8.66/-4.42
Θ (112.5°)	-5.77/-4.67	-5.1/-4	-4.93/-7.74	-3.16/-5.45	-9.23/-8.27	-6.49/-8.45	-5.25/-1.52	-8.85/-16.18	-14.2/-9.67	-8.74/-12.05	-11.21/-6.79	-4.89/-9.57	-16.89/-18.77	-15.38/-13.7	-17.78/-8.97	-8.12/-15.3	-7.23/-3.96	-11.18/-15.2	-9.87/-8.7	-13.15/-10.18	-11.71/-15.47	-17.11/-16.58	-12.66/-10.74	
Θ (120°)	-4.5/-4.96	-3.81/-4.8	-5.65/-6.19	-5.72/-4.92	-5.12/-6.1	-7.05/-5.65	-5.44/-9.08	-14.64/-14.74	-7.07/-4.91	-4.71/-3.96	-2.71/-1.9	-2.76/-4.06	-5.53/-6.14	-15.45/-15.03	-16.23/-9.89	-14.53/-12.73	-17.34/-16.24	-13.11/-15.31	-8.5/-7.09	-19.19/-9.92	-6.32/-12.14	-17.52/-18.59	-18.13/-9.57	-8.31/-3.26
Θ (127.5°)	-4.04/-4.58	-7.21/-6.95	-5.26/-5.5	-5.87/-7.4	-8.37/-9.41	-9.36/-9.91	-9.55/-8.21	-9.34/-9.41	-1.67/-9.5	-8.88/-9.06	-7.95/-7.46	-6.99/-5.32	-5.87/-9.66	-12.54/-18.53	-10.3/-18.17	-11.77/-6.12	-7.24/-10.7	-12.44/-18.41	-17.23/-7.84	-17.94/-16.03	-18.21/-18.47	-10.75/-14.66	-16.74/-10.62	-5.61/-6.66
Θ (135°)	-7.66/-6.9	-9.53/-7.35	-8.78/-8.52	-7.34/-7.84	-8.34/-9.2	-11.91/-16.17	-18.17/-17.92	-16.79/-18.22	-18.91/-18.14	-8.78/-9.51	-8.52/-7.94	-6.78/-10.4	-9.4/-16.5	-18.37/-12.86	-14.55/-5.81	-16.65/-11.23	-18.97/-12.13	-10.45/-6.51	-11.8/-14.8	-10.2/-6.6	-9.35/-9.92	-14.64/-18.3	-11.03/-7.71	
Θ (142.5°)	-10.72/-18.83	-16.55/-14.99	-9.38/-9.06	-10.91/-11.52	-12.13/-8.6	-10.81/-11.15	-11.84/-12	-10.58/-11.29	-15.76/-16.03	-16.03/-18.63	-13.63/-7.04	-4.74/-5.82	-8.48/-17.91	-18.13/-64	-7.38/-6.18	-6.92/-9.65	-18.65/-17.38	-7.91/-6.93	-15.92/-8.76	-13.14/-18.24	-17.86/-17.91	-12.85/-12.11	-11.55/-8.41	-11.1/-12.37
Θ (150°)	-1.74/-8.43	-8.85/-7.35	-8.05/-8.24	-7.4/-9.05	-10.97/-13.75	-14.26/-9.88	-7.93/-8.67	-10.59/-10.53	-8.79/-8.61	-13.01/-18.18	-12.6/-7.97	-7.71/-10.64	-18.21/-15.92	-9.16/-7.78	-5.28/-4.67	-6.76/-8.3	-10.65/-13.57	-13.16/-12.51	-11.41/-6.09	-5.75/-9.18	-9.3/-8.5	-11.36/-15.14	-17.89/-16.13	-10.69/-10.21
Θ (157.5°)	-11.91/-9.36	-10.6/-16.25	-16.55/-14.75	-10.5/-8.41	-6.96/-6.58	-6.32/-7.31	-8.63/-10.37	-12.87/-14.96	-18.23/-18.03	-13.13/-10.15	-8.46/-8.88	-11.3/-17.27	-19.1/-16.17	-15.11/-17.39	-14.97/-14.59	-17.67/-16.6	-11.63/-7.75	-6.54/-7.34	-10.18/-15.87	-12.51/-10.31	-11.22/-8.94	-7.56/-7.06	-8.18/-8.1	-6.61/-8.61
Θ (165°)	-14.08/-15.49	-14.74/-14.19	-12.88/-9.16	-6.97/-6.17	-6.28/-6.64	-8.29/-8.63	-9.08/-9.77	-9.82/-9.8	-9.83/-9.73	-10.15/-10.05	-10.42/-11.22	-12.4/-14.96	-17.73/-18.81	-18.39/-18.61	-18.44/-18.29	-17.46/-16.07	-12.56/-9.87	-8.8/-9.71	-10.05/-10.74	-11.91/-13.91	-17.19/-18.15	-14.62/-11.88	-11.58/-13.45	-13.94/-14.24
Θ (172.5°)	-11.65/-13.93	-17/-16.08	-16.91/-18.75	-																				



Radiated Composite Gain Data

Appendix A

Θ (157.5°)	-11.57/-7.48	-5.74/-4.79	-5.83/-7.22	-8.09/-8.04	-7.67/-6.12	-5.66/-5.59	-6.43/-8.28	-10.62/-12.47	-12.44/-13.04	-13.87/-14.51	-17.55/-15.52	-8.91/-7.42	-8.84/-11.39	-10.63/-9.93	-10.86/-11.69	-10.04/-10.58	-10.4/-6.65	-6.3/-7.27	-7.83/-8.55	-8.85/-9.86	-14.37/-9.88	-8.62/-6.89	-5.77/-8.23	-16.97/-16.32
Θ (165°)	-11.64/-12.04	-11.68/-9.76	-8.02/-6.46	-5.82/-5.71	-5.34/-5.73	-6.87/-8.77	-12.25/-16.71	-18.21/-17.9	-16.71/-15.11	-12.5/-12.17	-11.45/-8.97	-7.9/-7.57	-8.47/-10.7	-12.99/-16.26	-16.2/-14.33	-12.12/-11.1	-8.86/-8.43	-7.61/-7.87	-8.97/-13.28	-17.92/-17.39	-17.53/-11.39	-8.55/-7.8	-8.35/-8.73	-9.73/-11.85
Θ (172.5°)	-19.41/-18.9	-18.32/-15.47	-11.96/-11.15	-10.83/-11.57	-12.35/-12.7	-13.18/-15.48	-14.2/-17.06	-16.2/-16.46	-17.82/-17.29	-15.6/-13.86	-13.02/-12.92	-14.13/-16.93	-18.35/-14.93	-12.13/-10.13	-9.21/-8.92	-8.13/-7.98	-8.77/-9.48	-11.82/-16.16	-17.58/-18.64	-17.84/-15.52	-15.64/-15.81	-13.37/-13.02	-13.25/-13.94	-14.94/-18.09
Θ (180°)	-8.27/-7.31	-7.31/-7.56	-9.44/-10.07	-10.2/-10.72	-11.82/-13.98	-16.04/-18.44	-19.39/-18.05	-18.01/-19.01	-17.92/-13.13	-11.77/-11.2	-11.23/-10.25	-10.38/-10	-10.39/-11.28	-10.47/-10.39	-10.98/-11.31	-11.27/-11.03	-12.56/-14.18	-15.96/-17.77	-17.32/-13.72	-13.42/-13.88	-14.43/-14.25	-15.06/-14.07	-13.57/-12.73	-10.23/-9.11
Freq(Hz)	6.995GPol.	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-9.38/-13.27	-16.55/-16.43	-13.23/-9	-6.25/-3.75	-2.27/-1.21	-0.64/-0.35	0.59/-0.7	0.70/53	0.04/-0.88	-1.05/-1.46	-2.43/-3.68	-4.85/-6.93	-9.33/-13.43	-17.22/-17.89	-16.74/-11.39	-8.26/-6.49	-4.27/-3.08	-1.56/-0.71	-0.19/-0.02	0.09/-0.24	-0.26/-0.5	-0.74/-1.29	-2.59/-3.68	-5.53/-7.94
Θ (7.5°)	-7.1/-9.89	-12.35/-17.41	-18.55/-15.91	-11.7/-9.29	-7.74/-5.42	-3.67/-2.44	-1.35/-1.27	-1.07/-1.12	-1.11/-1.3	-1.63/-2.1	-3.01/-4.82	-6.31/-8.96	-13.45/-17.43	-15.56/-10.49	-8.15/-6.67	-5.55/-4.26	-2.99/-2.42	-1.88/-0.98	-0.73/-0.37	-0.33/-0.54	-0.98/-0.91	-0.99/-1.51	-2.52/-3.38	-4.44/-5.4
Θ (15°)	-5.34/-6.76	-8.7/-11.73	-15.88/-16.14	-14.05/-11.34	-9.71/-7.38	-6.38/-5.04	-4.46/-3.94	-4.25/-4.96	-4.5/-4.17	-3.72/-3.69	-4.17/-5.08	-7.18/-8.95	-12.96/-14.06	-12.77/-8.97	-7.27/-6.26	-7/-6.01	-5.2/-3.56	-2.97/-2.52	-2.68/-2.81	-2.2/-3.01	-3.16/-3.14	-3.19/-4.05	-5.19/-6.4	-5.65/-4.77
Θ (22.5°)	-8.02/-7.56	-8.44/-8.56	-10.09/-11.02	-12.86/-11.62	-10.93/-7.84	-6.85/-6.17	-6.66/-8.56	-9.03/-9.64	-10.9/-13.23	-10.9/-7.57	-6.65/-7.36	-9.89/-15.09	-17.94/-16.34	-10.76/-8.32	-8.21/-8.5	-5.47/-3.46	-2.61/-2.07	-1.07/-0.67	-0.57/-1.36	-1.3/-0.94	-1.33/-2.37	-3.17/-3.84	-4.88/-8.38	-7.43/-6.88
Θ (30°)	-11.9/-7.57	-8.43/-10.74	-13.09/-15.04	-14.93/-12.4	-10.05/-9.86	-10.7/-11.6	-9.63/-7.8	-6.38/-6.31	-7.23/-10.69	-14.81/-18.82	-15.3/-12.1	-11.92/-13.47	-13.93/-11.59	-9.48/-8.87	-4.71/-3.78	-3.18/-2.73	-2.92/-2.91	-2.7/-2.22	-1.43/-1.35	-0.98/-0.7	-0.53/-0.32	-0.34/-0.93	-2.18/-4.53	-8/-13.46
Θ (37.5°)	-15.02/-11.25	-9.75/-11.71	-13.61/-14.66	-17.85/-17.94	-18.15/-17.68	-17.53/-17.73	-18.19/-15.3	-13.17/-11.32	-10.42/-11.45	-13.38/-17.79	-17.76/-18.42	-17.88/-15.76	-7.97/-5.46	-4.44/-3.69	-3.18/-2.83	-2.42/-3.43	-3.63/-4.08	-2.72/-0.96	-0.21/-0.37	-1.45/-1.88	-1.43/-0.52	-0.65/-2.77	-7.57/-13.67	
Θ (45°)	-14.52/-10.06	-9.31/-9.45	-11.17/-14.27	-14.55/-16.77	-15.38/-15.18	-14.23/-12.45	-11.04/-10.39	-10.11/-11.74	-14.61/-16.16	-18.16/-16.45	-12.24/-9.78	-7.62/-6.99	-4.79/-4.24	-4.4/-4.68	-4.05/-2.55	-3.53/-4.23	-2.57/-1.65	-0.53/-0.83	1.75/-2.17	2.47/-2.36	1.33/-0.6	-1.82/-2.92	-2.53/-3.21	-5.18/-8.78
Θ (52.5°)	-10.33/-10.62	-6.95/-9.87	-7.76/-7.98	-7.55/-6.79	-6.21/-6.19	-6.31/-5.16	-4.36/-4.2	-4.24/-5.45	-6.86/-9.05	-12/-15.03	-7.74/-14.7	-1.5/-1.78	-2.01/-3.16	-4.82/-5.96	-2.29/-3.5	-4.5/-4.72	-3/-2.15	-2.73/-3.47	-2.05/-0.33	0.64/-0.94	0.39/-0.22	-1.07/-1.32	-4.04/-4.9	-5.02/-8.12
Θ (60°)	-9.64/-11.24	-5.61/-5.6	-7.05/-6.27	-5.74/-3.77	-3.59/-4.02	-3.62/-4.57	-4.12/-3.98	-4.54/-4.82	-6.19/-7.26	-9.77/-12.43	-10.34/-5.62	-3.26/-2.83	-3.69/-3.22	-6.14/-4.96	-3.92/-6.09	-8.13/-10.2	-6.32/-4.27	-5.33/-4.98	-4.78/-2.86	-1.09/-0.56	-1.47/-2.96	-1.21/-1.29	-2.35/-4.18	-5.43/-5.71
Θ (67.5°)	-7.07/-7.96	-8.33/-2.28	-2.99/-4.14	-5.54/-5.12	-6.72/-6.22	-6.39/-5.39	-5.23/-5.24	-5.68/-7.5	-7.49/-8.62	-9.01/-11.44	-9.84/-7.68	-5.53/-3.79	-3.48/-3.5	-6.08/-8.21	-7.36/-10.92	-8.52/-8.28	-7.55/-5.95	-5.39/-4.85	-6.12/-5.45	-2.94/-0.67	-0.84/-1.65	-4.06/-2.29	-2.45/-4.71	-3.77/-4.03
Θ (75°)	-5.91/-13.99	-6/-3.03	-2.34/-2.64	-3.72/-3.34	-3.92/-3.78	-5.91/-7.8	-7.76/-8.54	-9.79/-13.19	-9.38/-6.1	-4.34/-4.45	-4.12/-2.27	-1.4/-1.3	-1.16/-3.68	-8.21/-11.65	-7.82/-8.24	-8.31/-10.59	-12.5/-10.58	-7.32/-4.86	-4.14/-5.01	-6.44/-6.72	-5.19/-4.56	-3.93/-3.57	-4.59/-8.61	-5.28/-2.87
Θ (82.5°)	-4.5/-7.83	-7.49/-3.79	-3.14/-4.97	-9.04/-6.9	-4.86/-3.93	-4.01/-3.68	-4.66/-5.92	-6.71/-10.05	-9.36/-7.57	-4.98/-3.72	-4.01/-3.31	-4.21/-4.65	-4.11/-5.69	-6.82/-7.5	-7.96/-13.24	-15.01/-17.65	-7.96/-5.97	-7.64/-7.35	-5.65/-1.97	-1.85/-6.54	-8.61/-4.86	-4.14/-7.85	-5.82/-4.41	
Θ (90°)	-5.86/-5.57	-4.77/-2.2	-1.92/-2.87	-8.57/-9.24	-9.81/-8.49	-6.95/-6.63	-6.26/-7.79	-9.18/-10.97	-11.92/-14.27	-14.84/-10.91	-10.18/-8.41	-9.05/-5.08	-3.45/-3.58	-4.97/-10.73	-17.75/-9.37	-9.34/-12.23	-13.21/-12.24	-15.89/-10.12	-9.93/-14.93	-10.95/-5.01	-1.9/-2.59	-10.44/-18.44	-10/-5.86	-6.38/-5.14
Θ (97.5°)	-5.97/-5.81	-8.18/-6.12	-5.21/-8.28	-13.14/-8.08	-5.95/-6.21	-8.38/-9.95	-16.75/-19.25	-18.3/-15.42	-16.34/-15.76	-17.94/-14.7	-8.71/-7.4	-6.18/-5	-4.92/-5.29	-13.14/-17.15	-7.87/-8.13	-11.19/-12.42	-18.07/-11.27	-7.35/-4.58	-10.17/-13.87	-12.89/-5.73	-5.81/-5.95	-7.48/-10.47	-17.29/-7.58	-6.31/-6.22
Θ (105°)	-8.16/-9.63	-8.26/-10.12	-8.85/-11.72	-14.91/-17.73	-12.69/-11.65	-13.5/-9.54	-11.71/-11.67	-13.03/-16.41	-16.54/-14.93	-15.81/-14.84	-11.01/-9.22	-5.31/-5.4	-7.1/-7.5	-6.49/-6.2	-5.9/-18.17	-17.68/-17.31	-15.92/-3.95	-1.22/-1.44	-17.75/-8.76	-12.07/-19.34	-8.26/-6.92	-13.24/-5.6		
Θ (112.5°)	-14.44/-10.73	-6.01/-6.83	-7.01/-8.47	-12.85/-18.6	-17.58/-13.88	-14.78/-11.53	-10.49/-9.42	-12.41/-12.85	-15.66/-17.66	-19.03/-10.83	-6.73/-5.49	-9.22/-10.06	-6.28/-7.49	-6.17/-12.25	-12.75/-13.78	-18.53/-10.15	-13.98/-10.71	-8.95/-9.07	-8.75/-13.3	-8.42/-8.55	-8.36/-13.58	-17.86/-16.77	-8.87/-8.27	-7.81/-7.95
Θ (120°)	-9.46/-14.82	-12.2/-7.59	-7.64/-8.01	-9.89/-12.96	-10.3/-9.62	-8.73/-10.42	-11.45/-10.16	-8.01/-8.68	-8.7/-9.38	-13.66/-11.99	-13.68/-14.31	-15.99/-9.55	-7.2/-7.06	-9.88/-13.55	-17.3/-14.34	-15.82/-17.49	-13.67/-15.5	-18.88/-14.11	-10.22/-6.21	-10.57/-6.48	-5.96/-11.33	-18.38/-17.91	-7.65/-7.42	-4.05/-6.94
Θ (127.5°)	-6.02/-12.27	-14.07/-14.03	-14.51/-18.36	-14.01/-8.79	-5.49/-6.05	-6.14/-6.02	-8.12/-9.67	-10.71/-18.18	-18.28/-16.19	-12.7/-12.99	-15.11/-15	-8.8/-5.7	-10.06/-15.94	-12.42/-13.49	-10.81/-8	-9.74/-13.72	-17.78/-15.05	-8.3/-8.7	-9.93/-18.86	-17.79/-15.19	-14.94/-18.39	-11.64/-8.11	-12.36/-14.1	
Θ (135°)	-4.68/-6.68	-9.79/-13.66	-10.86/-12.28	-14.96/-15.9	-14.87/-11.88	-10.69/-7.93	-6.23/-6.3	-6.33/-6.25	-7/-7.1	-8.61/-13.88	-18.55/-13.75	-11.54/-10.22	-9.02/-8.52	-10/-7.49	-17.94/-14.11	-6.55/-4.98	-6.91/-12.9	-14.45/-11.44	-6.03/-6	-19.21/-9.92	-6.49/-8.28	-7.61/-14.66	-13.55/-4.91	-3.14/-2.09
Θ (142.5°)	-14.78/-13.95	-9.6/-7.33	-8.27/-8.43	-9.41/-11.44	-8.93/-8.43	-4.84/-9.05	-8.77/-8.78	-7.99/-6.55	-17.8/-9.79	-17.11/-16.36	-13.96/-17.76	-12.17/-7.18	-5.43/-9.71	-11.89/-17.83	-15.52/-6.57	-10.42/-7.34	-14.21/-12.76	-10.04/-4.52	-11.78/-18.59	-18.09/-18.5	-11.4/-18.72	-17.61/-18.17	-15.52/-9.49	
Θ (150°)	-17.99/-18.53	-13.64/-8.85	-6.99/-9.48	-12.27/-13.3	-12.48/-11	-9.28/-7.24	-6.68/-7.33	-17.41/-10.11	-12.04/-15.38	-13.46/-13.5	-8.49/-7.44	-10.08/-15.94	-12.42/-13.49	-10.81/-8	-9.74/-13.72	-17.78/-15.05	-8.3/-8.7	-9.93/-18.86	-17.79/-15.19	-14.94/-18.39	-11.64/-8.11	-12.36/-14.1		
Θ (157.5°)	-13.71/-18.39	-18.39/-19.17	-18.38/-19.1	-18.29/-15.66	-16.27/-17.27	-14.16/-12.29	-10.4/-9.28	-7.95/-7.5	-7.53/-8.67	-13.04/-19.02	-18.71/-18.56	-16.92/-16.13	-17.68/-12.57	-10.15/-9.38	-8.56/-7.94	-6.81/-11.8	-13.04/-8.06	-5.16/-4.49	-6.32/-10.51	-12.71/-9.69	-7.22/-6.67	-7.93/-11.54	-17.79/-18.58	-16.48/-12.47
Θ (165°)	-18.75/-18.92	-17.81/-18.27	-17.61/-17.99	-19.38/-14.15	-11.85/-10.32	-8.71/-8.15	-7.96/-8.86	-10.17/-11.13	-11.28/-11.51	-12.68/-13.72	-13.96/-16.51	-18.72/-18.21	-17.72/-16.64	-14.33/-13.49	-15.39/-18.13	-17.11/-14.62	-13.88/-11.65	-8.02/-8.53	-4.74/-5.51	-7.35/-6.81	-8.16/-8.5	-9.01/-11.96	-14.24/-14.46	-17.61/-8.51
Θ (172.5°)	-18.07/-13.02	-12.53/-13.35	-14.28/-13.66	-14.79/-14.49	-17.91/-18.46	-17.01/-14.76	-13.44/-12.88	-10.4/-10.57	-10.57/-11.15	-11.67/-14.05	-18.43/-12.65	-12.49/-11.23	-12.55/-13.86	-16.91/-18.67	-17.49/-19.14	-14.57/-16.22	-15.71/-15.21	-15.31/-13.98	-14.89/-15.66	-15.79/-15.3	-13.18/-13.02	-13.73/-16.3	-17.81/-18.49	
Θ (180°)	-17.98/-17.78	-18.14/-16.75	-12.64/-9.74	-8.32/-7.1	-6.84/-6.47	-6.58/-5.98	-5.79/-5.92	-6.27/-7.55	-8.44/-9.53	-11.24/-12.94	-15.76/-17.17	-18.22/-17.06	-15.66/-14.64	-14.13/-13.32	-13.43/-13.71	-14.63/-15.61	-14.23/-12.81	-11.85/-12.68	-15.71/-18.21	-16.76/-15.53	-14.41/-11.91	-13.25/-14.66	-19.27/-17.89	-18.69/-16.33
Freq(Hz)	6.995GPol.	Phi/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	0.20/65	0.64/-0.2	0.63/-0.25	-0.38/-1.17	-2.1/-2.61	-3.66/-4.9	-8.44/-11.51	-17.29/-18.31	-18.1/-12.95	-16.9/-6.54	-3.87/-2.75	-1.45/-1.03	-0.75/-0.53	0.49/-0.09	-0.11/-0.07	-0.74/-1.6	-2.1/-3.59	-4.9/-6.66	-8.49/-12.81	-15.27/-13.09	-11.06/-7.67	-6.28/-4.01	-2.93/-1.49	-0.61/-0.03
Θ (7.5°)	0.36/-0.17	0.22/-0.1	-0.21/-0.71	-1.57/-2.24	-2.98/-3.76	-3.9/-4.86	-8.																	



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Freq(Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.49	3.27	2.85	2.09
Ant. 2 Max Gain (dBi)	3.58	2.61	4.52	2.72
Ant. 3 Max Gain (dBi)	2.41	2.6	3.51	5.47
Ant. 4 Max Gain (dBi)	4.45	4.89	4.53	4.93
Ant. 1 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/142.5/210	Theta/142.5/210	Theta/150/0	Theta/142.5/120
Ant. 2 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/97.5/270	Theta/82.5/90	Theta/97.5/82.5	Theta/75/322.5
Ant. 3 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/105/247.5	Theta/112.5/270	Theta/97.5/262.5	Theta/105/255
Ant. 4 Polarization/ $\Theta(^{\circ})/\Phi(^{\circ})$	Theta/142.5/270	Theta/142.5/270	Theta/142.5/232.5	Theta/150/262.5
Max Gain (dBi)	4.45	4.89	4.53	5.47
DG [1SS] (dBi)	4.57	4.92	5.39	5.58
DG [2SS] (dBi)	4.45	4.89	4.53	5.47
DG [4SS] (dBi)	4.45	4.89	4.53	5.47



Sporton International Inc. Hsinchu Laboratory



Radiated Composite Gain Data

Appendix B

Θ(22.5°)	0.910/74	-0.18/-1.05	-3.08/-2.51	-2.96/-3.32	-4.2/-4.4	-4.42/-4.39	-3.4/-3.04	-2.38/-1.98	-1.92/-2.2	-2.79/-2.84	-2.69/-2.54	-2.97/-3.81	-3.58/-3.99	-3.54/-3.54	-3.07/-2.43	-2.06/-2.78	-3.43/-4.19	-4.7/-1.5	-4.85/-4.43	-3.69/-2.59	-1.95/-1.6	-1.55/-1.11	-0.12/-0.83	-0.15/-0.09
Θ(30°)	1.70/97	-0.39/-1.35	-1.75/-2.4	-3.29/-4.58	-5.44/-5.3	-5.22/-5.99	-5.31/-4.79	-3.85/-3.42	-2.35/-1.75	-1.74/-1.75	-1.46/-1.23	-0.76/-0.88	-0.94/-0.82	-1.62/-2.93	-4.06/-4.79	-5.7/-6.53	-5.96/-3.85	-3.23/-4.49	-6.7/-7	-6.73/-5.74	-4.02/-3.54	-2.79/-2.09	-0.55/-0.81	1.43/-1.43
Θ(37.5°)	-0.97/-0.62	-2.08/-2.19	-2.12/-2.78	-4.75/-4.56	-4.06/-4.25	-5.09/-4.2	-3.82/-3.06	-1.75/-1.78	-0.98/-1.2	-1.72/-2	-1.75/-1.75	-1.32/-1.1	-1.83/-2.3	-2.76/-3.3	-4.83/-6.78	-7.16/-6.38	-6.37/-7.37	-8.42/-7.88	-6.82/-6.17	-6.47/-4.85	-3.55/-2.5	-1.01/-0.31	-0.27/-0.96	-1/-0.4
Θ(45°)	-0.8/-0.41	-1.07/-1.59	-1.99/-1.15	-2.14/-3.2	-3.42/-5.2	-5.93/-5.59	-4.78/-4.71	-3.83/-3.15	-3.64/-4.01	-3.23/-2.12	-1.4/-1.61	-1.39/-0.99	-1.27/-2.03	-4.05/-6.02	-6.21/-6.82	-6.26/-6.64	-5.36/-4.39	-5.47/-7.57	-6.62/-6.41	-8.55/-10.24	-7.96/-9.55	-3.43/-2.63	-1.88/-1.2	-1.91/-1.33
Θ(52.5°)	0.52/-0.02	-0.14/-0.78	-1.45/-1.25	-1.19/-0.96	-1.36/-2.55	-3.15/-3.77	-4.14/-4.93	-5.51/-6.07	-4.16/-3.85	-4.4/-3.79	-1.72/-1.62	-1.54/-1.39	-1.93/-2.68	-3.05/-3.7	-5.8/-6.3	-6.73/-5.1	-4.77/-5.41	-3.37/-2.65	-4.04/-5.12	-6.14/-7.24	-8.47/-9.29	-7.29/-6.5	-5.13/-5.62	-3.49/-1.68
Θ(60°)	-2.13/-1.51	-0.080/0.03	-0.27/-1.06	-1.51/-2.07	-3.09/-4.83	-5.11/-5.37	-5.27/-4.5	-4.45/-4.8	-4.24/-3.52	-2.92/-2.81	-1.23/-0.62	-1.57/-2.03	-2.21/-2.98	-4.06/-4.94	-4.15/-4.26	-6.97/-6.15	-4.96/-4.14	-4.57/-5.83	-4.2/-3.36	-3.4/-5.05	-5.16/-4.77	-4.24/-2.7	-2.74/-2.35	-2.73/-3.86
Θ(67.5°)	0.47/-0.75	-1.78/-1.46	-1.9/-2.23	-3.51/-5.7	-6.41/-5.14	-4.4/-4.49	-5.44/-5.5	-3.88/-3.2	-3.3/-4.19	-4.54/-2.5	-1.85/-2.39	-3.17/-1.78	-1.18/-3.25	-6/-4.77	-5.22/-6.34	-6.39/-4.56	-3.21/-3.22	-2.89/-2.75	-4.25/-6.13	-7.07/-8.48	-7.13/-7.29	-10.24/-9.26	-9.75/-6.69	-2.52/-0
Θ(75°)	0.75/-0.62	-0.64/-1.34	-3.56/-4.61	-5.34/-5.16	-5.49/-7.7	-7.28/-6.46	-6.3/-6.53	-5.47/-5.52	-4.01/-3.44	-4.9/-5.23	-3.34/-1.87	-2.54/-3.49	-2.19/-3.02	-4.28/-6.02	-4.92/-5.99	-6.07/-4.51	-3.82/-3.33	-4.96/-5.93	-5.4/-6.72	-6.87/-5.63	-6/-4.52	-4.55/-4.54	-6.55/-7.13	-1.690/-42
Θ(82.5°)	-2.02/-1.91	-1.08/-0.85	-2.29/-3.67	-4.72/-6.21	-5.95/-5.37	-5.94/-6.08	-5.8/-5.06	-6.37/-6.3	-6.89/-6.41	-4.43/-5.41	-7.49/-3.78	-1.73/-2.62	-4.19/-2.6	-1.54/-1.96	-5.12/-5.56	-7.53/-5.27	-3.22/-2.49	-2.5/-3.48	-4.49/-4.77	-3.39/-2.21	-2.36/-2.76	-3.77/-6.07	-5.77/-3.65	-2.69/-1.09
Θ(90°)	-2.39/-2.08	-1.51/-2.52	-2.18/-1.8	-3.5/-3.11	-2.96/-3.61	-5.33/-5.75	-4.28/-3.29	-1.21/-1.24	-2.83/-3.25	-2.73/-3.42	-5.92/-6.89	-3.49/-1.37	-2.05/-0.73	-0.4/-1.77	-3.51/-5.75	-4.71/-2.57	-1.69/-1.7	-0.39/-0.45	-3.45/-4.25	-3.3/-2.62	-0.86/-2.46	-1.42/-2.89	-2.04/-5.43	-3.32/-2.72
Θ(97.5°)	-2.28/-1.22	-2.45/-4.47	-4.5/-3.18	-2.94/-3.95	-2.38/-2.87	-4.51/-5.13	-4.24/-1.59	-1.89/-1.49	-1.48/-3.13	-2.85/-3.6	-5.55/-6.28	-4.11/-1.78	-0.67/-2.63	-2.39/-1.57	-2.34/-5.25	-4.81/-2.61	-2.09/-3.32	-3.99/-3.75	-3.5/-2.17	-1.97/-2.36	-3.42/-1.48	-0.16/-1.38	-2.03/-2.23	-6.84/-3.21
Θ(105°)	-4.05/-3.23	-1.28/-0.55	-2.46/-5.06	-6.82/-4.26	-2.34/-1.98	-3.14/-4.55	-5.58/-5.9	-3.09/-2.4	-2.87/-3.02	-4.65/-4.93	-5.02/-4.74	-4.94/-3.62	-1.71/-0.81	-3.97/-4.55	-3.62/-3.74	-4.29/-2.48	-0.86/-4.3	-5.14/-4.07	-3.71/-2.65	-2.09/-0.43	-1.36/-2.31	-1.22/-0.47	-3.35/-3.85	-2.3/-2.32
Θ(112.5°)	-2.75/-4.52	-2.93/-1.42	-2.51/-3.45	-4.09/-2.41	-1.65/-1.88	-3.7/-6.15	-7.6/-10.79	-10.21/-7.97	-5.67/-3.98	-3.93/-5.86	-8.25/-5.1	-5.3/-6.88	-3.61/-2.48	-4.79/-8.34	-9.83/-6.63	-5.85/-3.7	-1.02/-2.85	-4.31/-5.43	-5.24/-6.79	-4.39/-2.34	-1.89/-2.72	-5.94/-6.83	-2.85/-1.53	-0.97/-1.17
Θ(120°)	-2.75/-6.67	-3.51/-0.38	-3.07/-3.37	-3.58/-4	-2.64/-2.41	-1.28/-1.77	-2.15/-3.22	-4.15/-4.42	-3.5/-4.09	-6.08/-8.95	-8.43/-3.76	-4.03/-5.4	-3.49/-3.55	-2.67/-4.08	-3.18/-2.66	-5.02/-1.92	-1.41/-3.02	-0.98/-0.72	-0.51/-3.26	-3.17/-0.49	-0.98/-0.72	-0.51/-3.26	-3.59/-0.93	1.04/-1.09
Θ(127.5°)	-1.31/-2.97	-2.53/-2.27	-2.01/-2.1	-1.91/-1.44	-1.5/-0.97	-1.9/-1.9	-2.97/-3.27	-3.02/-2.46	-3.16/-2.76	-3.93/-1.25	-1/-1.53	-2.77/-3.01	-0.03/-0.75	-3.55/-5.18	-4.24/-7.03	-3.63/-3.39	0.021/89	0.160/25	1.331/13	-0.23/-0.03	-5.81/-5.8	-2.81/-2.74	-0.56/-0.76	
Θ(135°)	-7.91/-5.69	-1.87/-0.6	-0.32/-0.67	-2.62/-3.8	-2.69/-0.92	0.07/-1.27	-2.59/-2.04	-2.81/-2.73	-2.92/-4.83	-6.08/-4.5	-3.15/-4.56	-6.98/-5.18	-2.8/-1.57	-3.71/-5.38	-7.54/-5.73	-6.07/-5.02	-9.62/-4.19	-1.250/63	-0.81/-3.27	-1.4/-0.52	0.940/73	-0.89/-3.22	-3.55/-4.72	-7.08/-7.87
Θ(142.5°)	-5.94/-0.27	-7.46/-5.1	-4.67/-4.1	-3.64/-3.89	-3.11/-2.86	-3.19/-2.55	-1.9/-1.3	-1.49/-1.86	-2.39/-1.83	-1.71/-3.97	-8.43/-10.05	-8.69/-5.54	-1.01/-0.39	-5.6/-4.95	-7.29/-6.98	-9.96/-8.65	-6.1/-5.55	-3.99/-4.74	-3.5/-1.91	-1.85/-0.87	-0.220/12	-3.53/-6.1	-6.68/-10.23	-4.81/-5.03
Θ(150°)	-2.82/-0.07	0.86/-1.06	0.71/-1.03	-0.86/-4.11	-4.11/-4.7	-4.22/-4.67	-6.19/-6.4	-5.75/-4.53	-3.04/-1.51	-0.39/-4.28	-1.07/-1.7	-1.57/-2.03	-1.83/-0.77	-1.34/-1.98	-1.75/-2.3	-4.29/-2.48	-4.55/-5.3	-5.62/-6.66	-4.86/-3.62	-2.68/-4.52	-5.57/-2.8	-2.28/-3.17	-3.19/-4.27	-6.54/-5.12
Θ(157.5°)	1.18/-1.54	0.45/-0.58	-0.93/-1.86	-2.22/-3.18	-4.82/-6.57	-7.4/-7.16	-6.37/-5.33	-4.05/-2.26	-0.97/-0.43	0.260/73	0.70/78	1.150/92	0.690/02	-0.93/-1.69	-3.03/-5.21	-8.16/-9.18	-7.99/-7.66	-7.89/-6.15	-3.35/-2.14	-1.99/-1.94	-0.83/-0	0.89/-1.35	1.71/39	0.50/71
Θ(165°)	-2.36/-3.94	-5.6/-7.13	-5.34/-3.47	-4.27/-4.6	-6.18/-7.62	-8.73/-9.63	-9.39/-8.38	-7.72/-6.3	-4.49/-2.56	-0.840/-29	0.80/8	0.35/-0.09	-1.16/-1.64	-2/-2.82	-3.64/-4.18	-4.1/-5.09	-4.85/-5.2	-6.16/-6.77	-4.94/-2.89	-1.27/-0.69	0.191/09	1.761/88	1.230/64	-0.68/-2.91
Θ(172.5°)	-2.89/-2.7	-3.14/-2.92	-3.27/-3.25	-2.76/-3.08	-4.36/-5.99	-7.45/-7.79	-7.38/-6.26	-5.12/-3.99	-3.7/-3.13	-3.78/-4.1	-4.19/-3.24	-2.31/-1.24	-0.150/-18	0.750/63	0.590/36	-0.06/-0.67	-2.11/-3.74	-6.06/-10.49	-9.22/-6.12	-4.84/-3.52	-2.18/-1.69	-1.52/-1.65	-2/-3.09	-4.44/-3.69
Θ(180°)	-1.4/-1.31	-1.91/-2.76	-3.28/-4.05	-4.26/-5.64	-7.01/-8.76	-10.01/-9.31	-8.62/-7.05	-5.75/-4.07	-2.88/-2.29	-1.41/-0.82	-0.280/41	0.961/44	1.591/63	1.670/11	0.44/-0.22	-0.1/-2.63	-4.12/-5.44	-5.95/-5.58	-4.26/-3.04	-2.23/-1.19	-1.51/-1.87	-2.19/-2.41	-1.94/-2.27	-1.98/-1.61
Freq(Hz)	5.6G/Pol.	Theta/-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DG(dB)	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-6.11/-5.37	-5.27/-4.21	-3.95/-3.08	-2.16/-1.91	-1.53/-1.36	-1.22/-1.14	-1.33/-1.58	-1.91/-2.46	-2.43/-3.48	-3.77/-4.19	-4.84/-5.46	-5.64/-6.15	-6.03/-5.13	-4.05/-3.51	-3.34/-2.81	-2.3/-1.88	-1.65/-1.77	-1.66/-2.36	-2.62/-2.87	-3.53/-4.45	-5.17/-4.99	-4.73/-5.35	-6.18/-6.17	-6.72/-6.84
Θ(7.5°)	-4.15/-3.2	-2.26/-1.83	-1.57/-2.1	-1.35/-1.15	-1.84/-1.61	-1.75/-2.67	-3.37/-4.13	-4.75/-4.93	-5.42/-5.89	-6.32/-5.72	-6.24/-5.55	-7.34/-7.6	-8.19/-7.91	-7.06/-6.56	-5.78/-4.74	-3.98/-3.53	-2.57/-1.97	-1.33/-0.77	-0.72/-1.08	-1.82/-2.14	-2.46/-2.78	-3.49/-3.76	-4.76/-5.17	-5.23/-4.91
Θ(15°)	-2.04/-1.14	-0.720/-39	0.02/-0.21	-0.36/-0.46	-0.98/-0.97	-1.39/-1.96	-3.39/-4.28	-5.95/-6.58	-7.58/-7.4	-6.54/-6.02	-6.56/-6.58	-7.17/-3.71	-6.31/-5.75	-4.98/-4.21	-3.83/-2.85	-2.88/-2.07	-1.75/-1.11	-0.96/-0.74	-0.62/-0.48	-0.85/-1.61	-2.13/-13	-3.4/-2.55		
Θ(22.5°)	-0.92/-0.01	0.70/95	1.150/55	0.550/07	-0.48/-1.18	-1.77/-2.49	-2.85/-3.4	-4.61/-4.94	-5.45/-5.45	-5.02/-4.52	-4.91/-5.18	-5.03/-5.93	-6.47/-6.45	-6.1/-4.99	-4.46/-4.52	-4.47/-4.04	-3.86/-4.17	-3.03/-3.23	-2.51/-1.81	-0.99/-0.66	-0.210/06	-0.39/-0.19	-0.18/-1.11	-1.67/-1.79
Θ(30°)	0.010/28	0.651/02	0.861/11	0.930/48	-0.57/-0.9	-1.19/-1.67	-1.88/-2.17	-3.48/-4.75	-4.69/-5.44	-6.26/-5.81	-5.01/-4.71	-3.85/-1.59	-5.4/-3.55	-2.86/-2.65	-2.84/-3.78	-3.79/-3.11	-2.27/-2.47	-2.83/-2.36	-1.8/-1.88	-1.2/-0.43	0.010/32	-0.4/-0.39	-0.24/-0.18	0.160/15
Θ(37.5°)	0.361/03	1.782/12	1.80/63	0.26/-0.69	-0.63/-0.16	-0.13/-0.61	-1.38/-2.53	-3.22/-4.06	-4.25/-4.17	-3.58/-3.22	-3.68/-4.15	-5.27/-8.02	-8.94/-8.49	-7.96/-6.75	-4.71/-2.79	-1.56/-1.12	-1.38/-0.57	-0.21/-0.14	0.51/36	1.320/68	0.521/08	1.210/32	-0.88/-0.92	-1.09/-0.48
Θ(45°)	0.910/36	-0.070/04	-0.63/-0.63	-0.29/-0.76	-0.87/-1.29	-1.59/-1.8	-1.52/-1.75	-1.85/-2.33	-2.64/-2.64	-3.24/-3.71	-2.67/-2.91	-1.28/-4.46	-2.87/-1.55	-1.95/-2	-2.65/-2.28	-0.860/37	1.442/02	2.361/79	1.832/06	2.141/53	1.181/5	1.821/49	1.1/53	
Θ(52.5°)	1.04/-1.54	1.36/-69	1.510/-41	0.14/-1.06	-1.85/-2.1	-1.75/-1.13	-1.01/-1.58	-1.11/-1.38	-1.87/-1.69	-1.38/-2.21	-2.66/-2.74	-3.08/-3.22	-2.13/-0.59	-0.84/-2.24	-2.93/-3.4	-3.7/-2.08	-0.67/-0.13	0.971/69	1.461/21	1.66/-18	0.6/-0.33	-0.67/-0.19	1.031/-46	1.361/61
Θ(60°)	0.891/93	1.750/-66	0.130/24	-0.370/-67	0.530/-39	0.17/-0.1	-0.13/-0.34	-1.01/-0.84	-1.31/-2.11	-2.9/-2.63	-2.57/-1.16	-0.7/-0.36	-0.75/-1.77	-3.92/-3.87	-1.45/-1.16	-0.44/-0.18	0.761/-44	1.641/7	2.11/-25	1.81/-18	0.93/-0.15	-0.38/-0.14	0.06/-1.51	-1.53/-0.44
Θ(67.5°)	-0.550/51	1.341/07	0.070/1	0.691/06	0.55/-0.12	-0.520/23	0.56/-0.04	-0.37/-1.32	-3.39/-5.32	-3.64/-2.8	-1.76/-3.17	-2.11/-3.07	-2.64/-2.36	-2.51/-2.23	-0.94/-0.69	-1.4/-2.09	-1.41/-1.11	-0.66/-0.04	-0.25/-0.49	-0.87/-1.25	-0.91/-0.18	0.931/-46	0.76/-0.7	-1.421/-58
Θ(75°)	-0.290/3	1.09/-1.2	-0.02/-0.02	1.341/68	1.12/-0.23	-0.80/23	1.31/-29	0.4/-0.83	-2.47/-4.09	-4.41/-2.25	-1.23/-1.66	-1.01/-0.74	0.191/31	0.710/-14	-1.79/-2.15	-3.54/-2.85	-2.23/-0.97	-0.350/6	0.18/-0.24	-0.090/11	0.160/-56	0.040/-45	1.131/-09	1.321/04
Θ(82.5°)	0.670/52	1.271/-19	1.59/-95	2.312/-46	2.031/93	2.583/61	3.923/32	2.481/-39	-0.44/-1.46	-3.05/-0.92	0.120/24	-0.130/-02	0.781/78	0.01/-2.71	-2.85/-2.38	-0.75/-0.75	0.521/3	2.192/-15	2.412/01	2.222/-21	1.11/-0.49	-1.09/-1.78	-0.310/-57	2.122/-18
Θ(90°)																								



Radiated Composite Gain Data

Appendix B

Θ(22.5°)	-4.71/-6.13	-12.96/-12.91	-19.01/-12.16	-11.98/-10.25	-9.25/-8.76	-7.14/-7.22	-7.39/-8.37	-9.08/-10.6	-12.01/-14.5	-14.75/-13.62	-14.03/-12.58	-13.95/-19.35	-18.31/-18.47	-19.12/-19.48	-13.81/-10.37	-8.75/-8.59	-8.18/-8.5	-9.03/-11.07	-12.63/-16.27	-18.62/-18.8	-18.48/-11.5	-8.54/-6.53	-4/-5.08	-3.43/-4.44
Θ(30°)	-5.03/-7.87	-18.17/-18.07	-14.83/-10.07	-8.84/-7.85	-7.15/-6.47	-6.67/-7.68	-8.77/-9.28	-10.24/-8.86	-7.82/-8.31	-9.96/-10.87	-10.77/-9.92	-8.23/-0.98	-9.2/-7.73	-7.73/-9.47	-14.77/-18.76	-18.84/-18.35	-18.96/-12.31	-9.7/-10.56	-14.18/-19.58	-19.23/-17.83	-18.66/-13.03	-9.23/-8.02	-5/-3.68	-2.27/-3.46
Θ(37.5°)	-4.87/-2.24	-15.16/-19.07	-8.21/-5.96	-5.36/-4.89	-4.14/-4.12	-4.92/-4.48	-4.57/-8.15	-4.46/-4.96	-5.8/-6.92	-10.02/-10.08	-9.69/-10.11	-9.27/-9.86	-12.1/-10.19	-11.1/-13.47	-18.45/-18.67	-16.54/-16.83	-14.69/-18.25	-19.58/-15.18	-13.92/-13.14	-11.31/-9.58	-9.24/-9.19	-6.7/-5.85	-4.84/-4.68	-3.43/-3.02
Θ(45°)	-3.14/-3.63	-6.18/-9.97	-17.11/-11.17	-8.08/-6.86	-5.2/-5.84	-6.99/-7.14	-7.53/-9.42	-8.91/-8.05	-9.63/-9.96	-10.07/-9.65	-9.62/-12.77	-13.12/-10.34	-9.29/-9.28	-11.95/-15.94	-14.4/-12.05	-9.89/-9.95	-8.02/-9.59	-12.34/-16.89	-13.71/-11.56	-12.21/-17.43	-13.69/-12.37	-8.87/-6.85	-5.68/-4.55	-4.11/-3.42
Θ(52.5°)	-5.13/-4.87	-7.69/-13.51	-16.92/-9.41	-6.16/-6.13	-5.24/-5.72	-5.51/-5.98	-7.53/-10.07	-11.72/-12.14	-14.72/-17.66	-19.3/-13.63	-9.78/-13.8	-17.58/-17.1	-13.93/-15.8	-16.89/-16.42	-19.09/-12.77	-11.16/-10.93	-13.19/-12.97	-8.66/-4.78	-8.64/-10.35	-12.78/-14.05	-15.45/-17.1	-18.08/-18.69	-15.22/-11	-11.32/-7.3
Θ(60°)	-12.96/-10.27	-7.61/-9.73	-11.56/-9.37	-6.56/-6.86	-8.09/-11.34	-14.74/-15.54	-15.44/-13.44	-14.28/-14.59	-14.5/-12.7	-12.86/-13.93	-12.59/-11.99	-11.38/-10.3	-14.42/-16.57	-18.26/-16.02	-18.38/-18.5	-17.77/-13.34	-10.03/-8.22	-9.01/-10.27	-9.59/-9.61	-6.96/-8.89	-13.56/-16.25	-19.02/-18.02	-14.71/-8.71	-8.12/-14.23
Θ(67.5°)	-6/-8.14	-5.97/-6.77	-7.85/-8.33	-8.9/-11.07	-12.63/-9.79	-8.09/-8.64	-9.72/-10.97	-12/-15.84	-14.79/-13.85	-12.73/-12.51	-15.15/-18.6	-16.89/-15.28	-15.2/-15.45	-15.11/-13.08	-13.81/-11.31	-9.34/-7.44	-6.06/-6.89	-6.28/-6.05	-8.29/-12.48	-16.4/-18.49	-19/-18.08	-19.13/-15.66	-10.71/-6.83	-5.05/-6.05
Θ(75°)	-4.58/-4.25	-2.86/-6.25	-10.03/-9.9	-10.67/-9.01	-6.87/-7.45	-7.76/-8.32	-9.45/-13.55	-14.64/-17.85	-18.62/-18.01	-17.16/-15.37	-17.33/-15.94	-13.79/-17.1	-17.65/-19.32	-17.84/-12.68	-13.87/-14.26	-12.45/-6.98	-7.6/-7.28	-12.13/-11.52	-9.41/-10.45	-10.94/-7.66	-7.79/-6.98	-5.64/-7.23	-12.71/-14.96	-7.93/-4.97
Θ(82.5°)	-7.63/-8.54	-7.5/-5.63	-7.71/-8.16	-8.66/-8.65	-7.57/-5.13	-4.75/-6.15	-6.87/-7.35	-10.7/-10.26	-11.81/-14.62	-12.71/-14.39	-17.25/-15.74	-13.2/-11.81	-15.44/-12.31	-11.26/-10.12	-11.75/-14.6	-11.8/-8.68	-6.68/-6.92	-5.71/-7.95	-8.31/-7.42	-5.12/-4.05	-4.3/-4.58	-4.91/-6.69	-7.55/-18.09	-12.8/-6.88
Θ(90°)	-10.97/-12.62	7.56/-4.21	-5.74/-7.35	-9.33/-6.33	-3.82/-4.8	-6.19/-5.47	-5.95/-6.5	-7.41/-10.52	9.09/-7.9	8.67/-10.47	-13.69/-18.44	-18.47/-16.79	-18.03/-14.04	-10.46/-10.71	-11.43/-12.71	-5.68/-3.99	-5.85/-6.3	-2.58/-2.55	-4.54/-4.57	-3.03/-3.12	-2.89/-4.34	-3.92/-4.27	-2.35/-6.77	-16.35/-11.08
Θ(97.5°)	-8.92/-6.28	-8.5/-6.58	-7.95/-8.5	-8.64/-10.89	-8.51/-7.04	-4.71/-3.73	-3.88/-4.27	-7.53/-8.16	-10.57/-10.6	-8.98/-16.41	-18.99/-12.65	-16.75/-15.8	-9.2/-15	-14.53/-19.62	-12.22/-13.34	-8.28/-5	-5.13/-6.23	-5.39/-2.68	-3.2/-2.52	-4.39/-6.04	-5.69/-3.4	-3.41/-7.46	-14.67/-12.29	
Θ(105°)	-17.3/-9.73	-2.9/-1.87	-4.65/-10.22	-15.98/-10.82	-7.67/-8.7	-11.34/-11.16	-10.31/-8.3	-8.39/-12.34	-8.33/-8.09	-6.61/-7.49	-10.7/-7.44	-6.99/-7.64	-7.75/-8.65	-17.37/-14.97	-15.75/-12.35	-5.31/-4.29	-4.41/-10.8	-8.72/-5.25	-5.57/-9.44	-3.91/-1.37	-2.96/-5.63	-3.88/-3.49	-5.44/-8.28	-6.47/-8.31
Θ(112.5°)	-12.11/-17.28	7.27/-6.53	-7.65/-10.97	-11.33/-8.63	-8.2/-7.52	-11.71/-13.78	-12.9/-17.76	-18.74/-15.9	-12.42/-7.03	-6.27/-11.58	-16.74/-9.88	-12.38/-18.22	-9.35/-10.65	-18.97/-17.1	-15.58/-12.57	-7.6/-5.49	-6.88/-11.45	-15.54/-11.35	-17.87/-18.77	-10.42/-6.37	-5.36/-5.2	-7.72/-14.19	-9.05/-6.3	-5.48/-6.52
Θ(120°)	-13.76/-14.4	-6.34/-4.1	-6.23/-11.27	-14.65/-10.21	-6.01/-3.57	-2.16/-3.57	-5.71/-6.15	-6.88/-9	-9.72/-12.3	-16.81/-18.1	-14.36/-9.11	-15.38/-18.84	-10.64/-15.36	-11.54/-11.67	-8.65/-9.22	-8.13/-5.44	-3.82/-6.69	-5.06/-4.13	-8.43/-8.96	-5.82/-7.52	-4.6/-7	-8.85/-4.47	-8.24/-18.12	-12.6/-6.86
Θ(127.5°)	-12.25/-18.62	-11.93/-7.19	-5.32/-6.77	-8.03/-7.61	-6.33/-4.51	-4.53/-3.57	-4.18/-7.12	-19.29/-11.96	-14.95/-10.56	-10.59/-5.87	-5.47/-6.91	-11.88/-14.51	-6.68/-11.93	-17.98/-19.21	-11.16/-10.31	-17.04/-12.45	-7.66/-11.17	-4.2/-2.13	-6.32/-5.93	-3.11/-3.08	-4.08/-9.87	-16.5/-10.42	-8.72/-15.17	-15.39/-13.13
Θ(135°)	-15.18/-11.7	-11.93/-11.28	-10.27/-5.1	-4.01/-3.24	-3.2/-3.43	-2.81/-4.08	-5.15/-5.2	-5.78/-5.62	-4.93/-7.57	-10.2/-6.58	-4.81/-7.04	-14.2/-13.08	-11.07/-10.1	-14.65/-14.8	-11.29/-12.83	-10.16/-14.72	-11.05/-10.38	-18.96/-9.55	-10.66/-18.33	-8.34/-5.61	-2.74/-2.88	-8.66/-9.65	-9.18/-12.79	-18.83/-16.09
Θ(142.5°)	-8.04/-6.46	-7.96/-3.38	-15.88/-13.18	-7.93/-4.64	-6.7/-7.86	-9.62/-9.73	-7.21/-8.2	-11.48/-16.48	-18.56/-13.06	-8.27/-9.59	-17.69/-14.94	-11.81/-9.25	-8.87/-16.09	-17.99/-17.74	-14.96/-17.88	-14.96/-10.34	-10.37/-10.35	-9.38/-11.79	-18.67/-15.83	-8.59/-7.02	-10.39/-12.26	-15.3/-18.2	-18.73/-15.58	-10.81/-8.7
Θ(150°)	-11.46/-6.33	-2.96/-3.41	-4.69/-9.96	-10.79/-9.29	-7.28/-5.57	-4.97/-5.46	-7.18/-7.12	-7.24/-9.1	-11.63/-11.95	-14.51/-14	-12.91/-9.75	-7.83/-10.02	-15.19/-10.91	-6.59/-4.95	-4.39/-5.04	-9.76/-9.27	-9.25/-10.09	-10.75/-9.66	-7.71/-8.92	-9.84/-16.52	-19.01/-15.6	-11.5/-17.82	-7.82/-9.87	-11.26/-10.6
Θ(157.5°)	-6.4/-6.68	-9.49/-12.98	-13.92/-19.46	-17.65/-18.91	-17.87/-17.35	-18.17/-18.56	-18.56/-18.5	-13.94/-10.72	-7.88/-6.16	-4.33/-2.64	-3.27/-5.07	-7.01/-13.41	-17.85/-14.94	-12.91/-14.05	-17.03/-19.71	-17.68/-13.71	-12.08/-10.74	-8.88/-7.94	-8.29/-6.67	-3.21/-2.51	-3.32/-4.18	-4.48/-5.46	-7.48/-7.93	
Θ(165°)	-5.71/-6.83	-9.21/-12.41	-11.91/-11.21	-9.36/-9.63	-7.37/-8.75	-9.41/-10.14	-9.3/-7.88	-7.26/-6.05	-5.12/-4.14	-3.37/-3.37	-3.93/-5.82	-8.64/-12.41	-17.76/-14.69	-10.9/-9.25	-9.14/-10.91	-12.67/-18.75	-18.03/-16.17	-13.51/-11.29	-10.49/-11.22	-9.56/-7.81	-5.35/-4.19	-3.96/-4.23	-4.66/-5.3	-7.21/-5.56
Θ(172.5°)	-6.35/-6.6	-7.2/-7.76	-8.59/-7.59	-6.26/-6.18	-7.75/-9.16	-10.35/-11.03	-10.74/-8.28	-7.14/-6.22	-6.71/-6.76	-15.69/-11.89	-14.53/-11.76	-9.19/-8.06	-7.09/-7.74	-8.84/-10.88	-12.79/-15.45	-18.42/-16.92	-17.25/-14.79	-16.82/-16.56	-16.82/-14.67	-11.64/-9.57	-8.73/-8.66	-8.09/-7.33	-7.02/-6.62	
Θ(180°)	-7.42/-8.11	-8.56/-9.57	-11.09/-12.12	-12.46/-13.88	-14.09/-14.89	-16.32/-14.29	-13.53/-14.85	-16.03/-16.69	-15.03/-15.52	-12.71/-12.59	-11.44/-10.31	-9.58/-8.56	-8.7/-8.04	-11.23/-10.57	-10.31/-10.26	-9.91/-9.39	-8.78/-8	-8.43/-9.16	-8.56/-8.32	-7.88/-8.78	-8.7/-8.42			
Freq(Hz)	5.60/GPol.	Theta/Ant. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-11.62/-10.54	-10.56/-9.77	-9.1/-7.99	-6.98/-6.96	-7.13/-7.97	-8.83/-8.35	-8.64/-8.89	-10.27/-11.33	-11.03/-11.82	-11.91/-11.89	-11.53/-11.95	-12.27/-12.52	-10.92/-9.76	-8.58/-8.79	-8.98/-9.31	-8.87/-8.93	-8.91/-9.55	-10.01/-11.18	-11.13/-12.35	-12.93/-13.95	-15.24/-15.83	-13.87/-14.53	-15.19/-16.67	-16.26/-13.81
Θ(7.5°)	-12.35/-9.82	-8.13/-6.56	-6.19/-8.21	-6.05/-6.84	-8.28/-9.73	-11.67/-14.28	-17.09/-10.82	-19.03/-17.25	-18.84/-16.34	-14.94/-14.23	-13.89/-14.88	-15.05/-14.28	-14.06/-15.19	-15.95/-16.71	-16.3/-14.54	-13.22/-12.48	-10.95/-10.03	-9.59/-8.82	-9.19/-9.79	-11.01/-10.37	-10.44/-12.09	-14.24/-16.2	-18.64/-16.65	-18.41/-7.03
Θ(15°)	-10.27/-9.34	-5.15/-4.2	-3.63/-7.4	-4.12/-5.52	-8.28/-10.93	-13.91/-14.37	-18.66/-17.66	-19.96/-17.84	-18.17/-18.3	-17.71/-11.67	-10.99/-10.68	-11.42/-11.96	-11.36/-11.8	-10.66/-12.06	-11.13/-14.96	-16.46/-16.77	-13.1/-10.79	-12.73/-19.42	-16.86/-16.77	-13.1/-10.94	-9.62/-9.57	-19.14/-18.6	-17.65/-12.35	
Θ(22.5°)	-9.61/-6.91	-4.51/-3.64	-3.34/-4.94	-5.15/-6.92	-9.44/-13.43	-18.53/-18.07	-18.47/-16.5	-12.82/-11.13	-9.92/-9.34	-8.94/-7.66	-6.84/-8.27	-9.43/-10.26	-11.03/-11.52	-12.74/-11.07	-9.31/-9.5	-10.57/-10.14	-10.71/-10.76	-9.8/-10.47	-10.94/-10.12	-10.15/-8.86	-8.43/-7.72	-8.88/-8.49	-10.42/-13.65	-18.29/-18.67
Θ(30°)	-7.11/-6.72	-5.07/-3.99	-4.17/-5.27	-6.64/-8.89	-10.81/-10.31	-10.18/-10.7	-12.32/-13.36	-16.65/-13.36	-10.88/-8.84	-8.46/-8.23	-7.4/-7.29	-8.08/-10.6	-10.8/-8.93	-8.39/-7.8	-7.84/-9.17	-11.31/-14.16	-18.24/-18.23	-18.33/-15.17	-13.25/-12.81	-13.12/-11.78	-10.41/-9.91	-9.62/-9.64	-9.62/-11.7	-11.16/-7.07
Θ(37.5°)	-8.62/-8.52	-7.14/-6.89	-8.37/-12.06	-11.67/-12.96	-12.82/-10.63	-9.5/-10.38	-12.13/-14.94	-17.41/-17.05	-12.12/-8.13	-5.53/-5.18	-6.57/-6.76	-7.32/-9.65	-11.88/-11.43	-12.21/-14.11	-17.26/-18.09	-17.22/-18.9	-16.82/-12.3	-12.48/-14.27	-12.45/-8.33	-6.85/-8.24	-9.95/-9.64	-8.84/-10.14	-13.24/-11.91	-11.12/-10.13
Θ(45°)	-9.94/-15.08	-12.92/-14.44	-16.42/-16.27	-18.35/-19.72	-18.77/-18.28	-16.63/-15.67	-16.63/-16.2	-18.95/-17.18	-13.26/-10.97	-8.86/-8.28	-7.84/-8.22	-10.84/-11.9	-13.3/-10.49	-12.93/-12.7	-11.37/-11.73	-13.96/-18.28	-18.64/-16.93	-10.34/-7.68	-6.21/-6.91	-7.56/-6.91	-5.86/-6.76	-6.83/-6.3	-5.57/-7.52	-11.01/-9.22
Θ(52.5°)	-6.34/-4.23	-6.12/-7.02	-7.98/-11.81	-11.81/-13.26	-14.5/-13.77	-11.53/-11.04	-10.02/-11.35	-12.87/-13.26	-12.86/-11.47	-12.44/-12.1	-14.95/-16.24	-10.57/-9.92	-6.54/-8.58	-8.85/-13.46	-12.67/-18.85	-19.22/-12.69	-7.93/-7.83	-7.59/-7.4	-6.88/-6.84	-3.99/-3.7	-6.26/-7.34	-7.32/-7.05	-5.36/-6.74	-9.45/-10.49
Θ(60°)	-7.08/-4.53	-6.71/-9.5	-12.65/-9.35	-11.56/-8.22	-9.28/-9.63	-8.17/-10.57	-9.17/-7.56	-8.33/-8.6	-10.15/-11.44	-12.11/-11.98	-10.15/-8.72	-9.67/-9.59	-9.56/-10.68	-12.12/-13.82	-12.85/-18.1	-18.59/-15.69	-14.78/-15.39	-18.52/-18.83	-16.31/-10.94	-11.07/-8.31	-5.02/-8.82	-9.73/-12.72	-9.22/-11.58	-19/-10.57
Θ(67.5°)	-9.29/-7.7	-6.56/-7.77	-9.87/-8.5	-5.75/-5.67	-7.84/-8.95	-11.19/-9.28	-7.44/-7.7	-6.84/-8.82	-13.48/-18.69	-11.13/-8.34	-8.98/-8.23	-10.39/-14.26	-17.18/-15.52	-13.61/-14.41	-14.12/-16.59									



Radiated Composite Gain Data

Appendix B

Θ(75°)	-8.3/-5.26	-6.26/-4.45	-4.83/-6.78	-14.13/-17.57	-17.82/-18.88	-18.91/-17.3	-12.52/-9.5	-9.53/-11	-16.41/-12.77	-11.57/-8.26	-8.04/-7.44	-9.13/-7.78	-8.76/-9.49	-10.79/-11.22	-12.37/-12.6	-16.61/-17.33	-11.53/-10.01	-9.52/-10.33	-13.82/-14.1	-14.34/-13.98	-14/-10.97	-11.92/-9.17	-6.57/-9.04	-17.72/-10.23
Θ(82.5°)	-4.61/-3.97	-6.24/-11.07	-14.66/-14.72	-16.29/-18.91	-18.36/-18.24	-18.31/-14.57	-10.96/-10	-8.88/-8.18	-6.9/-6.1	-6.27/-8.25	-12.75/-11.43	-7.21/-6.46	-8.82/-11.42	-12.97/-12.18	-10.93/-12.87	-8.99/-7.41	-6/-7.46	-11.14/-15.12	-17.72/-19.1	-17.76/-17.37	-16.08/-13.63	-8.32/-6.38	-6.92/-9.09	-16/-8.82
Θ(90°)	-4.66/-2.46	-3.88/-5.67	-10.44/-15.93	-13.78/-14.29	-11.49/-14.92	-18/-17.53	-15.88/-11.98	-9.25/-7.45	-5.97/-4.83	-6.54/-8.39	-10.58/-8.23	-7.04/-9.75	-13.2/-14.83	-12.93/-10.25	-13.9/-14.24	-10.41/-8.9	-4.54/-6.68	-11.13/-10.88	-14.18/-17.2	-15.08/-13.2	-10.18/-6.32	-6.81/-6.41	-9.8/-6.5	
Θ(97.5°)	-4.04/-6.96	-8.21/-8.1	-9.84/-15.33	-17.09/-10.37	-9.02/-10.16	-13.43/-18.96	-18.94/-17.29	-12.46/-9.65	-7.74/-8.24	-9.54/-10.86	-9.32/-6.48	-6.92/-8.64	-10.71/-10.47	-11.59/-14.77	-16.62/-14.73	-12.21/-10.91	-10.81/-13.53	-16.37/-16.2	-15.86/-14.46	-12.75/-12.69	-13.06/-13.98	-11.28/-8.5	-5.32/-5.05	-4.8/-6.25
Θ(105°)	-1.79/-2.31	-8.81/-16.01	-12.26/-12.11	-14.19/-11.19	-9.21/-8.35	-11.26/-18.15	-18.07/-18.98	-18.82/-14.74	-12.21/-11.38	-10.52/-9.14	-11.16/-13.14	-10.03/-7.17	-6.41/-10.32	-18.56/-19.02	-16.14/-14.83	-11.26/-10.18	-5.94/-7.65	-5.82/-13.25	-13.36/-14.66	-9.63/-7.14	-6.42/-11.08	-15.59/-9.33	-8.44/-8.73	-4.91/-2.2
Θ(112.5°)	-1.01/-1.71	-3.02/-7.09	-13.79/-16.77	-17.16/-18.08	-18.65/-18.4	-17.19/-18.76	-18.98/-17.51	-16.26/-12.46	-8.92/-7.39	-10.16/-14.86	-16.96/-9.95	-7.6/-10.18	-14.88/-18.26	-18.97/-12.37	-9.37/-16.69	-18.2/-9.3	-6.67/-6.73	-10.74/-18.1	-18.11/-15.22	-8.06/-7.96	-9.91/-8.99	-9.9/-10.68	-18.53/-12.66	-4.22/-1.75
Θ(120°)	-4.35/-2.87	-3.42/-5.38	-8.75/-11.26	-15.33/-16.09	-17.81/-16.07	-16.08/-13.05	-12.24/-13.35	-18.85/-17.94	-14.22/-18.09	-18.51/-16.26	-9.52/-6.94	-8.83/-13.65	-19.11/-12.07	-15.03/-15.17	-16.57/-18.34	-13.14/-7.84	-10.47/-10.25	-6.86/-5.8	-6.39/-4.19	-4.07/-4.59	-8.29/-10.72	-11.24/-7.79	-8.09/-16.03	-14.08/-6.1
Θ(127.5°)	-10.56/-9.15	-8.11/-8.68	-14.16/-18.76	-14.08/-8.83	-7.44/-6.28	-6.31/-8.27	-9.91/-10.24	-9.75/-11.33	-13.08/-14.26	-18.83/-18.99	-12.58/-11.29	-10.77/-13.92	-12.09/-13.16	-17.71/-18.82	-18.51/-15.87	-11.53/-18.99	-18.59/-12.36	-5.13/-5.45	-4.93/-2.09	-1.37/-5.05	-6.96/-18.14	-7.43/-6.66	-6.81/-12.41	-18.98/-17.03
Θ(135°)	-13.15/-8.54	-8.36/-6.61	-6.85/-9	-9.27/-11.23	-10.81/-9.27	-8/-7	-8.16/-11.87	-17.63/-18.45	-18.96/-17.94	-18.26/-14.73	-12.91/-15.02	-19.41/-17.3	-14.15/-16.08	-18.42/-18.8	-15.79/-17.56	-14.91/-8	-3.03/-3.86	-5.61/-4.27	-2.47/-4.65	-11.1/-14.1	-15.7/-9.38	-10.28/-14.42	-18.82/-18.04	
Θ(142.5°)	-17.61/-12.42	-8.93/-9.18	-8.44/-10.04	-14.24/-18.51	-17.24/-16.06	-12.59/-10.22	-9.01/-9.01	-9.91/-14.13	-18.41/-18.14	-17.25/-16.26	-16.67/-12.39	-13.23/-14.8	-13.21/-16.22	-18.91/-19.2	-14.79/-15.53	-13.13/-9.16	-8.59/-7.99	-7.36/-8.43	-12.16/-9.72	-6.56/-7.91	-14.45/-13.37	-10.1/-9.63	-10.15/-10.62	-12.15/-16.6
Θ(150°)	-18.11/-18.12	-13.54/-11.45	-9.49/-9.9	-10.44/-11.94	-15.73/-19.24	-15.92/-12.98	-11.08/-10.28	-11.05/-9.9	-10.14/-11.67	-15.68/-15.88	-11.72/-8.79	-7.18/-7.4	-10.02/-18.85	-17.99/-11.12	-7.8/-7.79	-8.93/-7.77	-8.52/-12.41	-15.72/-18.26	-16.81/-17.94	-16.18/-15	-15.54/-14.63	-13.68/-10.16	-8.99/-8.49	-8.67/-11.99
Θ(157.5°)	-14.94/-17.35	-18.15/-17.95	-13.55/-10.75	-9.94/-9.57	-10.45/-11.58	-13.69/-16.06	-17.95/-18.82	-12.17/-8.83	-18.18/-16.19	-10.89/-7.69	-6.02/-4.83	-5.24/-7.41	-11.91/-18.4	-17.68/-12.65	-9.11/-7.73	-8.19/-8.55	-9.59/-11.48	-16.39/-17.44	-14.61/-11.89	-9/-7.01	-6.43/-6.73	-6.6/-5.52	-7.75/-10.16	
Θ(165°)	-8.1/-9.71	-10.07/-12.27	-13.87/-15.59	-16.17/-15.75	-16.59/-18.07	-17.89/-18.25	-17.27/-19.25	-19.01/-17.73	-16.15/-14.34	-12.05/-9.63	-8.41/-8.3	-7.91/-9.5	-11.67/-13.58	-13.64/-10.7	-9.06/-8.45	-8.57/-8.81	-10.3/-12.92	-17.16/-18.32	-18.53/-18.66	-18.68/-18.02	-13.08/-10.28	-9.17/-9.64	-8.53/-7.85	-7.57/-7.39
Θ(172.5°)	-12.28/-10.43	-9.35/-8.61	-8.32/-8.18	-7.65/-7.51	-8.16/-9.16	-10.41/-12.37	-13.06/-16.32	-18.77/-18.94	-19.23/-18.78	-18.65/-18.23	-16.04/-14.23	-13.64/-11.14	-9.8/-8.95	-8.28/-7.85	-7.22/-7.53	-7.76/-8.23	-8.41/-9.7	-10.51/-11.04	-11.01/-11.24	-12.69/-13.74	-12.58/-12.91	-13.82/-17.53	-18.49/-18.55	-17.82/-15.47
Θ(180°)	-11.48/-11.35	-10.98/-9.64	-9.29/-8.44	-7.85/-8.17	-9.65/-9.71	-11.39/-12.38	-14.34/-14.5	-17.16/-18.73	-18.57/-18.32	-18.72/-17.76	-17/-14.16	-12.85/-11.14	-9.91/-10.16	-9.54/-10.04	-10.18/-10.54	-11.03/-11.79	-12.22/-12.91	-13.24/-13.59	-13.94/-12.77	-13.55/-15.12	-14.13/-13.88	-12.73/-12.69	-13.46/-13.67	-12.84/-11.42
Freq(Hz)	5.2GPol.	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-12.91/-13.22	-12.95/-11.75	-12.74/-14.31	-13.18/-13.65	-14.45/-13.7	-12.85/-15.33	-16.99/-17.25	-16.22/-14.53	-16.49/-13.76	-12.27/-11.95	-10.52/-10.85	-10.82/-10.42	-11.23/-10.12	-11.14/-10.83	-11.02/-11.53	-11.75/-12.97	-14.71/-17.56	-18.66/-19.11	-17.84/-17.56	-16.65/-17.12	-14.22/-12.74	-11.89/-11.71	-10.29/-10.51	-11.04/-10.61
Θ(7.5°)	-9.62/-8.89	-8.09/-7.9	-9.14/-8.95	-9.84/-11.85	-12.22/-13.74	-14.94/-16.33	-16.42/-16.02	-13.57/-12.48	-10.68/-9.32	-8.11/-7.89	-8.23/-8.45	-9.51/-10.38	-12.85/-13.94	-14.93/-14.57	-15.73/-14.71	-13.69/-13.47	-12.21/-11.91	-12.36/-14.74	-16.53/-17.4	-18.09/-18.76	-18.16/-17.66	-18.24/-18.01	-18.03/-13.87	-12.16/-10.94
Θ(15°)	-9.03/-7.87	-8.99/-8.85	-9.14/-9.46	-9.91/-12.33	-12.04/-9.17	-11.23/-10.25	-9.49/-10.19	-9.41/-9.85	-8.55/-8.62	-7.8/-8.72	-7.66/-8.55	-9.48/-12.49	-15.21/-17.52	-15.11/-12.36	-11.38/-11.27	-11.67/-11.23	-11.03/-10.46	-11.78/-13.02	-14.45/-17.92	-18.37/-18.94	-18.91/-17.7	-19.11/-17.06	-14.28/-13.78	-11.28/-10.06
Θ(22.5°)	-7.93/-11.04	-10.53/-10.3	-10.46/-10.55	-10.55/-10.77	-10.52/-9.95	-10.55/-10.26	-9.83/-9.98	-8.84/-7.9	-7.39/-8.55	-10.32/-11.5	-16.55/-18.44	-16.29/-15.76	-10.95/-10.08	-8.71/-7.16	-6.65/-5.79	-5.67/-6.4	-7.8/-8.21	-9.02/-9.52	-10.96/-12.31	-15.4/-16.53	-18.73/-18.54	-17.43/-14.66	-11.76/-10.16	
Θ(30°)	-11.41/-10.96	-12.5/-12	-11.43/-9.64	-9.14/-8.29	-7/-5.95	-5.36/-4.51	-3.99/-3.91	-4.22/-4.76	-5.26/-6.35	-8.5/-10.27	-11.68/-13.03	-16.69/-16.83	-17.27/-17.17	-12.36/-8.79	-6.16/-5.36	-5.51/-5.83	-7.42/-9.33	-7.99/-6.93	-6.42/-6.92	-7.69/-9.46	-10.56/-11.49	-12.92/-14.01	-14.67/-14.68	-13.84/-12.96
Θ(37.5°)	-7.59/-7.87	-8.56/-9.1	-8.83/-8.14	-7.5/-5.38	-5.49/-5.1	-4.63/-4.31	-4.23/-4.05	-3.57/-4.88	-5.06/-5.76	-8.32/-12.32	-16.57/-17.7	-16.69/-18.1	-12.39/-13.86	-12.29/-10.15	-9.06/-9.93	-9.19/-19.18	-17.28/-18.92	-12.68/-10.08	-7.93/-6.41	-6.54/-6.75	-7.95/-10.05	-11.87/-11.58	-12.59/-12.28	-10.66/-8.38
Θ(45°)	-7.65/-6.31	-6.5/-6.25	-5.72/-5.85	-6.48/-6.54	-6.36/-6.17	-6.38/-6.35	-6.88/-7.56	-8.01/-7.77	-7.72/-8.44	-11.19/-16.42	-17.74/-17.96	-18.66/-16.4	-16/-18.95	-14.39/-13.92	-13.72/-13.26	-11.46/-9.48	-7.88/-5.82	-5.33/-6.14	-6.07/-7.7	-8.8/-8.4	-9.28/-8.68	-8.73/-9.31		
Θ(52.5°)	-10.29/-7.84	-7.42/-8.61	-7.42/-8.12	-7.47/-7.7	-9.09/-9.02	-10.45/-9.91	-9.12/-7.98	-7.79/-7.55	-7.58/-7.55	-9.72/-12.71	-18.1/-19.03	-18.19/-17.47	-14.87/-15.56	-10.92/-7.69	-5.69/-3.53	-2.18/-1.7	-0.94/-1.56	-1.53/-1.44	-1.48/-2.56	-3.73/-3.7	-3.23/-3.72	-4.68/-6.21	-6.08/-6.99	-8.48/-9.38
Θ(60°)	-13.37/-16.72	-14.54/-14.74	-10.97/-8.79	-9.86/-9.6	-13.1/-12.79	-12.75/-12.17	-12.35/-12	-10.24/-10.78	-9.42/-10.84	-12.2/-16.84	-18.98/-18.14	-19.06/-16.2	-18.1/-15.05	-12.28/-12.22	-10.57/-6.25	-5.94/-5.64	-6.19/-6.85	-5.91/-5.06	-4.2/-3.46	-2.39/-1.73	-2.34/-2.72	-2.75/-2.7	-3.5/-3.68	-5.39/-5.96
Θ(67.5°)	-6.07/-8.77	-9.16/-9.15	-7.99/-6.64	-6.55/-6.86	-7.19/-6.8	-6.05/-5.05	-4.95/-7.8	-7.26/-6.85	-9.27/-12.49	-13.76/-17.56	-16.96/-17.77	-18.31/-13.97	-16.95/-12.88	-13.72/-10.48	-9.25/-8.5	-19.19/-8.5	-10.75/-12.05	-13.08/-11.31	-9.67/-5.86	-7.17/-5.22	-3.01/-4.11	-3.31/-3.04	-3.09/-5.04	
Θ(75°)	-3.87/-5.12	-5.78/-6.01	-5.8/-5.59	-5.99/-4.54	-4.05/-2.4	-1.31/-0.77	-0.57/-0.97	-2.12/-4.4	-6.51/-10.48	-13.64/-19.13	-15.42/-12.01	-13.27/-18.28	-15.54/-19.44	-17.83/-17.52	-13.07/-8.89	-7.91/-6.93	-6.23/-3.3	-2.04/-1.83	-1.08/-2.75	-5.83/-7.97	-9.68/-5.68	-4.85/-4.47	-5.31/-6.39	-3.02/-4.01
Θ(82.5°)	-2.48/-2.66	-3.72/-4.73	-7.66/-8.01	-11.33/-9.23	-7.12/-3.62	-1.080.71	1.43/-1.22	0.21/-4.9	-4.13/-8.59	-11.79/-17.97	-14.98/-13.88	-11.8/-13.16	-9.93/-13.18	-12.45/-9.3	-7.08/-6.76	-5.87/-8.99	-19.15/-73	-5.91/-4.64	-5.36/-5.01	-5.92/-5.34	-6.52/-5.63	-4.42/-5.28	-4.42/-6.01	-4.83/-3.26
Θ(90°)	-8.89/-8.5	-6.4/-6.69	-7.88/-7.43	-6.08/-3.89	-6.03/-1.68	1.35/-1.68	1.76/-1.65	0.32/-1.42	-4.09/-6.78	-10.27/-17.54	-14.6/-10.72	-9.34/-11.68	-9.47/-9.74	-10.14/-10.47	-9.88/-9.84	-4.22/-2.9	-0.530.65	-1.03/-3.68	-4.63/-6.07	-1.98/-1.73	-2.1/-4.8	-5.37/-9.16	-12.04/-12.24	
Θ(97.5°)	-9.95/-10.32	-14.2/-13.18	-13.82/-14.43	-13.56/-10.42	-4.69/-1.71	0.64/-1.96	2.08/-1.4	0.14/-2.35	-6.31/-12.22	-17.37/-10.15	-6.76/-6.33	-6.05/-5.94	-5.31/-8.68	-7.75/-12.82	-18.34/-17.69	-16.68/-8.21	-3.020.93	-2.12/-5.2	3.58/-2.36	-3.58/-11.06	-6.25/-3.55	-1.66/-5.06	-3.67/-6.84	-7.97/-7.17
Θ(105°)	-5.61/-6.88	-5.65/-6.64	-12.53/-18.36	-17.1/-13.7	-9.45/-5.45	-1.88/-0.15	0.97/-1.28	0.54/-0.88	-3.16/-6.26	-7.29/-5.55	-5.91/-9.62	-9.73/-7.12	-8.72/-12.4	-17.65/-8.73	-9.29/-11.8	-1.13/-10.11	-8.87/-2.58	1.26/-1.81	0.56/-1.3	-2.77/-7.69	-11.31/-4.37	-4.4/-4.25	-7.61/-6.54	-10.56/-8.42
Θ(112.5°)	-10.13/-9.4	-8.84/-8.26	-11.92/-9.81	-17.1/-13.5	-7.17/-4.48	-1.99/-0.1	0.390.5	-0.06/-1.63	-3.82/-6.33	-11.04/-11.45	-13.75/-18.59	-15.94/-11.22	-10.98/-18.97	-9.78/-6.97	-16.53/-8.46	-9.05/-6.41	-8.76/-7.23	-2.36/-1.43	-4.21/-10.77	-7.32/-15.35	-7.49/-8.64	-7.58/-5.74	-5.53/-10.65	-15.74/-13.78
Θ(120°)	-17.3/-16.98	-11.29/-10.55	-9.33/-10.32	-11.05/-13.84	-10.5/-5.77	-3.06/-2.32	-1.86/-1.88	-3.57/-4.88	-6.92/-14.42	-18.08/-14.63	-10.08/-6.9	-5.82/-6.55	-12.39/-14.36	-10.08/-12.69	-17.38/-14.31	-8.62/-3.45	-4							



Radiated Composite Gain Data

Appendix B

Θ (127.5°)	-5.73/-6.43	-7.61/-8.17	-11.9/-13.49	-14.97/-12.61	-10.77/-8.95	-11.39/-14.02	-17.93/-19.08	-19.77/-18.65	-13.59/-12.68	-12.42/-14.34	-14.34/-10.94	-14.49/-16.19	-11.4/-7.19	-9.37/-14.88	-8.57/-12.66	-7.99/-3.81	-8.62/-6.59	-2.71/-1.75	-5.42/-3.2	-0.93/-2.18	-4.11/-8.41	-10.42/-9.09	-8.34/-12.9	-9.7/-9.47
Θ (135°)	-14.95/-12.24	-9.81/-8.43	-9.45/-12.13	-15.42/-18.15	-16.17/-9.48	-7.31/-7.96	-9.86/-11.17	-17.49/-18.97	-15.44/-16.41	-18.24/-18.39	-13.54/-11.13	-15.04/-15.89	-19.05/-12.61	-18.67/-15.14	-17.73/-18.54	-10.51/-7.79	-17.05/-6.59	-2.31/-1.88	-5.57/-5.3	-3.69/-4.35	-4.72/-4.97	-9.86/-8.9	-10.78/-14.79	-16.35/-14.86
Θ (142.5°)	-10.52/-19.02	-17.62/-14.19	-11.92/-14.86	-14.79/-12.64	-11.08/-10.38	-8.4/-6.42	-6.99/-8.13	-8.08/-8.33	-6.51/-9.18	-10.18/-11.18	-11.51/-16	-18.37/-13.97	-10.78/-11.72	-13.1/-12.2	-9.9/-13.02	-15.87/-13.5	-14.82/-10.42	-6.2/-2.36	-12.03/-11.75	-7.25/-4.67	-6.32/-6.23	-10.67/-10.74	-13.38/-18.34	-19.63/-18.56
Θ (150°)	-17.17/-15.41	-10.03/-8.15	-6.88/-6.58	-7.54/-10.06	-13.15/-16.77	-19.01/-19.13	-15.96/-11.73	-9.82/-9.97	-10.24/-10.46	-11.18/-12.94	-18.04/-17.99	-12.31/-9.41	-7.24/-7.77	-11.96/-16.05	-13.17/-8.99	-9.13/-10.75	-8.38/-7.89	-8.74/-13.59	-19.05/-19.09	-12.32/-8.52	-8.03/-8.58	-7.18/-6.65	-7.09/-7.82	-14.57/-18.13
Θ (157.5°)	-15.06/-11.68	-9.96/-8.56	-7.32/-6.6	-7.88/-9.44	-10.93/-11.69	-13.65/-14.5	-12.89/-10.01	-9.26/-8.21	-9.28/-8.97	-12.37/-15.26	-18.6/-14.33	-10.3/-8.11	-6.68/-11.84	-17.97/-18.6	-16.32/-13.32	-12.74/-11.52	-8.91/-9.13	-11.3/-15.97	-18.25/-17.92	-19.72/-17.43	-11.75/-9.06	-8.55/-7.66	-7.23/-8.49	-11.18/-13.4
Θ (165°)	-11.73/-13.84	-14.71/-14.51	-13.95/-13.34	-13.35/-15.99	-16.86/-17.23	-19.02/-18.95	-19/-18.46	-17.54/-18.19	-16.85/-11.59	-8.53/-6.27	-6.35/-6.31	-6.95/-7.96	-10.97/-14.48	-16.85/-14.99	-13.78/-11.29	-9.4/-8.89	-9.1/-9.97	-11.82/-16.12	-19/-17.18	-16.63/-11.74	-8.43/-8.22	-5.44/-5.04	-5.48/-5.73	-7.22/-10.34
Θ (172.5°)	-11.93/-12.37	-13.32/-12.78	-12.76/-12.5	-11.97/-9.64	-10.3/-10.27	-11.04/-10.67	-9.84/-9.33	-8.75/-7.87	-7.83/-7.62	-7.37/-7.73	-8.11/-8.56	-8.45/-8.98	-8.37/-8.27	-6.95/-8.44	-5.61/-5.28	-6/-6.07	-7.79/-9.73	-11.81/-14.97	-18.49/-18.31	-18.68/-17.65	-12.91/-11.02	-10.24/-10.95	-10.3/-10.32	-9.99/-10.81
Θ (180°)	-6.53/-6.04	-6.31/-7.18	-7.47/-7.93	-8.42/-8.99	-9.65/-11.96	-12.4/-13.85	-15.79/-16.12	-18.48/-17.26	-18.34/-18.92	-17.41/-16.49	-15.3/-14.75	-14.22/-13.83	-12.37/-10.81	-9.9/-9.87	-9.77/-9.59	-10.58/-11.37	-13.04/-14.85	-14.58/-14.68	-14.55/-13.07	-13.94/-12.24	-12.32/-13.06	-12.67/-11.44	-10.71/-8.63	-7.87/-6.8
Freq(Hz)	5.6GPol.	Theta/Ant. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-8.09/-8.41	-8.93/-9.22	-9.35/-9.97	-9.32/-9.55	-8.33/-7.97	-7.26/-7.22	-7.47/-7.47	-8.17/-8.65	-7.84/-7.95	-7.39/-7.08	-7.52/-7.91	-8.16/-8.18	-8.22/-8.19	-8.51/-7.86	-9.01/-8.87	-8.75/-9.63	-9.31/-9.01	-9.46/-9.31	-10.06/-9.49	-9.86/-9.7	-9.85/-8.88	-8.85/-8.48	-8.78/-7.96	-8.27/-8.09
Θ (7.5°)	-5.06/-5.77	-5.83/-5.98	-6.24/-7.18	-6.18/-8.11	-8.45/-8.15	-7.98/-8.51	-8.87/-10.94	-12.73/-13.7	-13.81/-10.67	-10.44/-10.59	-10.09/-9.93	-9.01/-8.77	-9.22/-8.56	-7.86/-7.33	-7.29/-7.01	-6.68/-6.08	-5.47/-5.34	-5.11/-5.31	-5.62/-5.43	-5.29/-4.93	-5.43/-5	-5.16/-5.19	-4.63/-4.82	-4.69/-4.82
Θ (15°)	-2.84/-2.61	-2.83/-2.91	-2.99/-4.04	-4.53/-5.07	-5.06/-5.11	-4.66/-5.05	-6.17/-7.38	-10.24/-13.3	-17.53/-18.71	-17.97/-16.65	-14.08/-11.76	-10.86/-9.61	-8.25/-8.12	-7.49/-7.53	-6.49/-5.72	-4.68/-3.69	-4.05/-3.24	-3.39/-3.34	-3.75/-3.7	-3.29/-3.06	-2.95/-2.95	-2.88/-3.39	-3.1/-3.42	-2.99/-2.6
Θ (22.5°)	-1.03/-0.79	-1.31/-1.4	-1.49/-1.79	-1.48/-1.53	-1.66/-2.3	-2.64/-4.03	-4.79/-5.92	-8.38/-10.72	-12.44/-18.5	-17.84/-17.7	-15.72/-11.82	-8.82/-3.99	-7.62/-6.82	-5.92/-5.88	-5.86/-6.24	-6.45/-7.21	-8.64/-9.75	-7.55/-7.26	-6.45/-6.3	-6.35/-6.64	-5/-3.86	-2.94/-2.73	-2.45/-1.88	-1.5/-1.39
Θ (30°)	-2.08/-1.5	-1.56/-1.71	-1.56/-1.45	-1.58/-1.56	-2.56/-3.08	-3.87/-4.56	-6.88/-8.47	-9.96/-14.25	-17.92/-18.82	-13.83/-10.01	-7.35/-6.83	-6.6/-5.9	-5.62/-7.56	-8.15/-9.45	-10.49/-9.37	-6.57/-6	-7.75/-8.93	-8.03/-8.48	-6.34/-7.6	-3.4/-2.8	-4.3/-5.4	-2.82/-2.46	-2.23/-1.98	
Θ (37.5°)	-1.58/-1.44	-1.08/-0.66	-0.82/-1.59	-2.35/-3.89	-4.17/-3.48	-3.97/-4.29	-5.04/-5.79	-6.87/-8.13	-8.36/-9.43	-11.6/-10.6	-9.74/-10.98	-12.55/-13.78	-13.93/-12.24	-14.21/-15.26	-12.53/-10.19	-7.28/-5.59	-5/-3.92	-2.66/-1.47	-0.7/-0.17	-1.07/-2.03	-2.46/-1.91	-1.63/-1.47	-1.78/-2	-1.55/-1.45
Θ (45°)	-0.61/-0.52	-0.64/-1.88	-2.29/-2.29	-3.34/-4.62	-4.65/-4.24	-4.78/-4.48	-4.05/-4.33	-3.84/-4.36	-5.13/-5.87	-7.05/-8.8	-7.13/-9.22	-11.73/-10.7	-8.5/-7.32	-6.84/-6.19	-7.31/-8.72	-7.65/-5.94	-4.71/-3.96	-3.3/-2.64	-2.69/-3.54	-3.03/-1.71	-1.03/-1.35	-1.46/-1.6	-1.5/-1.26	-1.4/-1.63
Θ (52.5°)	0.04/-0.15	-0.83/-1.99	-2.72/-3.55	-6/-6.69	-6.92/-6.61	-6.01/-4.92	-4.66/-4.48	-4.52/-5.54	-6.82/-6.42	-5.04/-5.31	-5.34/-6.26	-6.95/-7.43	-7.08/-7.1	-8.35/-11.89	-14.65/-14.26	-17.69/-17.86	-18.54/-16.19	-15.1/-13.2	-13.09/-10.72	-6.26/-4.76	-4.04/-2.25	-2.16/-2.01	-2.86/-1.8	-1.19/-0.27
Θ (60°)	0.790/7.1	0.59/-0.81	-3.09/-4.87	-6.96/-6.57	-6.55/-5.37	-4.77/-4.75	-4.83/-5.06	-6.44/-6.44	-6.55/-7.41	-6.58/-6.95	-5.36/-5.08	-4.26/-4.24	-3.78/-4.8	-7.19/-6.47	-4.4/-4.57	-4.33/-6.14	-6.83/-6.47	-5.19/-5.96	-5.44/-3.58	-4.5/-5.8	-4.37/-2.1	-0.99/-0.28	-1.32/-3.11	-2.87/-1.09
Θ (67.5°)	-1.26/-0.32	-1.03/-3.67	-7.17/-10.9	-11.27/-8.63	-6.31/-8.41	-3.57/-3.07	-4.02/-5.06	-6.03/-7.96	-11.01/-14.37	-12.66/-11.58	-7.93/-6.49	-2.86/-2.79	-1.24/-2.71	-2.61/-2.64	-1.6/-1.57	-2.82/-5.63	-7.11/-8.9	-8.44/-5.48	-4.84/-5.48	-3.21/-3.35	-3.95/-3.48	-1.06/-1.33	1.330/-13	-2.01/-2.77
Θ (75°)	-2.1/-1.86	-3.26/-3.52	-8.25/-9.41	-8.91/-6.64	-7.44/-2.66	-1.61/-0.99	-0.98/-1.63	-3.13/-4.95	-6.61/-10.23	-14.4/-19.51	-14.44/-19.5	-5.54/-2.37	-1.96/-1.99	-3.14/-4.71	-6.12/-7.36	-14.04/-18.9	-14.57/-14.81	-14.28/-9.52	-10.22/-12.91	-10.22/-3.38	-6.13/-3.59	-3.010/-1	1.58/-1.75	0.05/-0.45
Θ (82.5°)	0.18/-1.69	-3.25/-5.59	-6.29/-5.81	-4.93/-3.25	-2.1/-0.74	0.741/-35	2.122/-17	1.03/-0.17	-2.18/-4.71	-11.25/-12.5	-13/-8.94	-6.01/-3.78	-3.65/-3.27	-5.6/-10.12	-6.22/-8.37	-7.14/-8.3	-7.06/-5.15	-4.94/-4.35	-3.02/-4.27	-4.35/-4.83	-8.4/-9.61	-5.47/-3.88	-1.86/-1.21	0.190/52
Θ (90°)	-0.41/-0.32	-2.28/-5.02	-6.53/-11.1	-10.43/-7.77	-4.24/-13.3	1.012/-59	3.093/62	2.640/-99	-2.13/-6.04	-8.29/-17.76	-17.99/-14.13	-7.61/-5.95	-5.55/-5.12	-8.23/-4.77	-4.51/-5.4	-6.02/-11.43	-17.92/-8.46	-8.41/-7.65	-6.18/-3.73	-2.15/-0.13	-1.15/-5.85	-3.76/-1.65	-0.36/-3.5	-3.5/-1.9
Θ (97.5°)	-8.57/-2.95	-4.67/-6.24	-9.11/-14.3	-7.63/-1.29	1.233/-46	4.25/52	1.913/-29	1.90/-18	-2.81/-6.26	-8.28/-11.71	-14.12/-10.54	-6.75/-7.3	-5.36/-6.88	-4.51/-3.68	-5/-7.65	-10.51/-13.47	-14.74/-6.21	-8.28/-9.2	-3.64/-4.71	-2.34/-2.48	-1.26/-2.97	-3.92/-6.13	0.25/-1.1	-5.96/-5.27
Θ (105°)	-4.42/-5.21	-8.43/-11.28	-19.22/-13.13	-10.16/-5.6	-2.56/-0.45	1.212/23	1.771/-53	0.32/-0.95	-3.03/-6.71	-13.87/-17.66	-11.78/-7.97	-7.13/-5.43	-5.47/-6.4	-9.36/-11.64	-10.42/-7.28	-10.24/-9.7	-5.22/-2.44	-1.3/-1.66	0.23/-0.13	-3.58/-4.79	-7.11/-8.86	-3.84/-3.63	-0.98/-0.7	-1.84/-2.1
Θ (112.5°)	-2.1/-3.04	-7.03/-11.15	-18.09/-19.9	-9.53/-4.17	-3.37/-1.94	0.740/-84	2.282/73	2.862/-41	1.47/-0.98	-3.73/-9.34	-11.77/-9.6	-4.07/-4.64	-3.82/-4.72	-9.8/-14.26	-7.63/-13.66	-7.77/-10.21	-16.12/-5.13	-3/-2.85	-4.75/-1.25	-4.36/-3.24	-12.18/-7.13	-7/-4.84	-6.53/-5.21	-3.52/-4.46
Θ (120°)	-5.48/-8.15	-8.3/-12.67	-16.9/-18.59	-12.5/-9.75	-4.04/-1.69	-0.140/64	0.751/-41	1.08/-0.89	-3.39/-6.68	-17.78/-14.29	-18.16/-12.65	-7.7/-8.55	-10.89/-12.74	-18.19/-10.24	-8.51/-8.22	-7.74/-8.8	-9.48/-16.54	-6.41/-5.16	-13.87/-15.42	-5.03/-5.05	-3.13/-10.1	-0.767/-3.04	-3.71/-9.28	-7.8/-10.49
Θ (127.5°)	-17.53/-17.68	-17.3/-17.77	-15.09/-15.28	-14.95/-11.71	-8.64/-3.89	-1.450/-12	0.49/-0.55	-0.98/-2.39	-4.23/-6.77	-9.82/-8.54	-7.29/-6.08	-8.57/-12.68	-15.5/-10.88	-8.23/-5.37	-7.9/-15.9	-16.96/-14.92	-18.26/-13.12	-17.29/-19.03	-9.18/-11.89	-7.79/-6.51	-2.29/-6.99	-6.23/-3.3	-1.18/-5.86	-8.88/-10.27
Θ (135°)	-12.71/-13.89	-18.86/-18.31	-16.03/-9.66	-6.62/-5.52	-5.64/-6.11	-5.27/-6.65	-1.37/-0.63	-1.24/-1.53	-3.68/-5.77	-7.71/-12.21	-16.72/-18.69	-10.05/-8	-5.64/-6.79	-12.76/-13.48	-10.53/-4.74	-5.77/-8.37	-10.92/-15.58	-18.4/-18.89	-13.16/-15.23	-17.72/-9.91	-6.97/-1.71	-7.76/-4.08	-8.82/-6.35	-8.07/-6.27
Θ (142.5°)	-15.03/-18.42	-16.9/-14.96	-12.12/-12.43	-10.47/-7.29	-7.16/-9.31	-10.91/-15.49	-15.3/-15.53	-16.86/-18.81	-18.57/-16.81	-6.84/-9.45	-4.88/-4.54	-4.59/-9.91	-16.09/-13.67	-8.07/-5.07	-7.69/-19.12	-17.18/-8.49	-6.28/-6.94	-6.88/-7.96	-9.75/-12.01	-13.36/-12.37	-9.89/-9.16	-9.78/-13.2	-12.19/-3.2	
Θ (150°)	-3.32/-4.32	-6.29/-7.49	-6.46/-5.54	-5.46/-3.82	-2.12/-1.36	-1.6/-1.87	-2.39/-2.63	-3.4/-4.45	-4.57/-5.66	-5.33/-6.81	-9.54/-11.5	-17.48/-17.66	-14.62/-12.26	-6.31/-3.72	-2.68/-2.4	-7.49/-7.06	-6.03/-4.38	-5.48/-10.27	-17.77/-19.12	-17.86/-10.86	-9.06/-1.7	-4.59/-2.38	-1.65/-2.11	-4.41/-6.3
Θ (157.5°)	-11.96/-13.67	-18.99/-17.81	-19.3/-14.63	-11.21/-10.58	-9.61/-8.05	-6/-4.72	-4.06/-3.84	-4.09/-4.61	-5.17/-5.75	-6.86/-7.95	-11.1/-14.9	-19.21/-16.03	-16.95/-14.53	-12.77/-12.58	-12.39/-12.76	-14.54/-14.42	-9.78/-6.82	-5.02/-4.78	-5/-5.3	-6.95/-8.92	-13.87/-17.38	-16.66/-14.81	-13.04/-12.34	-11.75/-11.77
Θ (165°)	-9.59/-10.55	-11.51/-12.37	-13.51/-14.31	-15.57/-14.58	-11.86/-11.18	-9.68/-8.73	-9.32/-11.4	-12.29/-14.36	-14.47/-12.71	-12.62/-11	-9.37/-8.2	-7.92/-9.05	-9.89/-10.4	-9.76/-9.38	-8.56/-7.95	-6.68/-6.39	-5.52/-5.29	-5.57/-6.7	-8.21/-8.15	-9.47/-9.79	-10.17/-9.2	-9.16/-8.5	-7.89/-8.45	-8.26/-7.96
Θ (172.5°)	-17.46/-18.83	-19.12/-18.19	-17.86/-16.36	-13.5/-12.55	-12.8/-10.8	-11.5/-10.9	-10.86/-9.59	-9.54/-9.99	-9.97/-10.57	-10.83/-11.18	-12.57/-14.22	-16.74/-18.91	-19.33/-18.9	-18.91/-17.94	-19.06/-13.68	-11.24/-9.46	-7.89/-7.58	-6.48/-6.4	-6.54/-6.38	-6.94/-7.33	-7.63/-8.24	-9.71/-11.01	-12.48/-15.96	-18.34/-18.85
Θ (180°)	-17.22/-17.29	-17.72/-18.24	-16.19/-12.8	-11.81/-10.56	-9.99/-4.42	-8.92/-9.7	-																	



Radiated Composite Gain Data

Appendix B

Θ(180°)	-18.14/-18.94	-18.22/-18.59	-17.74/-17.92	-19.18/-19.17	-18.07/-19.24	-19.07/-18.57	-17.85/-18.71	-18.28/-19.08	-18.69/-17.3	-17.18/-15.79	-14.81/-13.63	-14.14/-14.24	-13.96/-14.67	-15.68/-16.17	-16.57/-16.44	-16.26/-16.58	-13.58/-14.58	-14.61/-14.49	-14.54/-17.55	-15.31/-16.45	-18.83/-18.11	-18.24/-18.11	-18.54/-19.12	-17.93/-17.55
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°)	-12.19/-10.23	-9.48/-8.85	-7.9/-7.41	-7.02/-6.63	-6.44/-6.82	-6.55/-6.82	-7.03/-7.2	-7.51/-7.4	-8.47/-9.14	-10.08/-11.37	-11.98/-11.23	-11.91/-10.44	-10.59/-10.01	-9.34/-9.02	-8.54/-8.21	-7.89/-7.38	-7.4/-8	-8.3/-8.79	-8.57/-9.38	-9.97/-10.38	-11.31/-12.63	-13.28/-13.92	-14.15/-13.58	-12.41/-11.07
Θ(7.5°)	-11.41/-13.7	-10.61/-10.35	-9.2/-9.04	-8.84/-8.35	-9.08/-9.99	-10.11/-10.48	-12.09/-13.19	-15.16/-17.87	-18.94/-17.19	-16.99/-16.55	-14.48/-13.09	-12.33/-11.26	-10.51/-9.9	-8.91/-8.41	-7.84/-7.44	-7.42/-6.67	-7.35/-6.58	-7.47/-7.71	-8.02/-8.15	-7.3/-7.79	-8.17/-7.75	-7.89/-8.91	-9.93/-10.93	-10.77/-11.1
Θ(15°)	-10.77/-11.32	-10.91/-11.66	-12.03/-11.72	-13.79/-12.79	-12.07/-12.52	-10.9/-10.57	-9.81/-10.16	-10.5/-11.8	-12.33/-14.17	-14.43/-16.21	-16.08/-14.68	-11.78/-10.57	-9.77/-8.72	-8.88/-8.44	-8.27/-8.55	-8.42/-8.65	-9.35/-10.48	-13.05/-14.13	-15.06/-15.2	-13.38/-12.16	-10.73/-10.34	-9.38/-8.96	-9.31/-8.95	-9.99/-10.57
Θ(22.5°)	-7.34/-7.7	-8.93/-8.73	-7.26/-6.73	-5.69/-4.71	-4.73/-3.91	-4.16/-4.19	-3.91/-4.06	-4.35/-5.01	-6.29/-7.46	-8.24/-9.88	-13.58/-18.75	-17.59/-14.66	-12.89/-12.05	-11.05/-9.38	-9.31/-8.55	-8.81/-9.9	-11.52/-13.5	-16.44/-18.17	-19.11/-19.1	-18.38/-18.44	-18.22/-16.92	-13.91/-12.62	-11.01/-9.13	-7.24/-7.77
Θ(30°)	-6.83/-7.15	-7.07/-6.6	-5.92/-4.98	-4.48/-3.74	-3.66/-3.2	-3.14/-3.75	-3.83/-4.1	-5.09/-4.97	-5.28/-5.63	-6/-7.24	-9.57/-14.48	-18.97/-18.53	-19.09/-14.89	-11.03/-9.05	-8.93/-10.4	-11.61/-16.86	-19.01/-16.93	-18.78/-17.54	-16.34/-14.18	-13.1/-12.27	-11.36/-10.49	-10.93/-10.45	-10.48/-8.8	-8.15/-7.6
Θ(37.5°)	-7.72/-8.13	-8.68/-8.65	-8.54/-7.92	-7.92/-7.62	-7.52/-7.83	-8.15/-9.21	-10.01/-11.22	-11.01/-10.17	-9.46/-9.64	-10.44/-9.88	-10.56/-13.22	-16.33/-18.85	-18.36/-16.8	-13.14/-11.41	-10.61/-13.69	-19.31/-18.21	-17.79/-16.93	-12.57/-9.89	-8.11/-7.5	-8.07/-10.02	-10.12/-9.02	-9.06/-8.52	-7.94/-7.76	-7.03/-6.9
Θ(45°)	-11.64/-10.61	-9.71/-8.4	-7.03/-5.89	-5.17/-4.74	-4.41/-4.35	-4.57/-4.53	-7.31/-8.26	-9.95/-10.31	-11.69/-12.21	-12.31/-11.79	-12.09/-13.97	-16.52/-17.59	-16.71/-19.3	-17.91/-18.13	-15.97/-14.58	-13.12/-10.27	-8.15/-6.32	-4.58/-3.46	-2.96/-3.11	-3.04/-4.58	-7.73/-8.97	-9.5/-9.8	-9.84/-10.06	-11.87/-11.61
Θ(52.5°)	-11.65/-11.09	-8.55/-6.08	-4.38/-3.41	-3.04/-2.41	-1.67/-2.2	-2.33/-2.54	-2.86/-3.47	-4.05/-5.1	-6.14/-8.03	-10.2/-10.96	-11.9/-14.52	-13.66/-11.76	-11.8/-12.39	-10.38/-9.17	-11.16/-10.9	-8.78/-7.61	-5.28/-5.2	-4.3/-3.7	-1.94/-1.93	-2.65/-3.23	-4.37/-7.3	-10.6/-13.2	-11.23/-11.17	-11.26/-11.15
Θ(60°)	-9.97/-8.2	-7.07/-6.1	-5.94/-4.69	-3.54/-2.1	-1.24/-0.82	-0.71/-1.29	-1.66/-2.03	-2.73/-3.42	-4.76/-7.8	-10.48/-11.96	-13.75/-19.05	-17.09/-11.91	-10.85/-8.67	-8.16/-8.44	-11.57/-10.98	-9.65/-7.39	-6.9/-5.49	-3.89/-3.96	-2.73/-1.27	-0.64/-1.04	-2.02/-4.21	-0.31/-1.12	-11.06/-10.4	-10.52/-9.93
Θ(67.5°)	-8.64/-7.48	-7.79/-8.88	-6.96/-3.73	-1.93/-0.61	-0.82/-1.76	-2.52/-2.96	-3.17/-2.52	-2.41/-3.03	-4.49/-7.61	-10.14/-8.87	-9.18/-12.49	-18.26/-18.25	-17.99/-14.77	-13.54/-11.66	-13.21/-10.52	-6.98/-4.29	-3.33/-3.28	-3.14/-2.13	-1.44/-0.85	-0.71/-1.21	-1.92/-3.86	-5.89/-10.32	-11.07/-10.72	-10.22/-8.68
Θ(75°)	-8.16/-8.88	-10.37/-9.78	-5.33/-2.84	-1.94/-1.29	-2.5/-3.81	-2.85/-1.65	-6.10/-1.4	0.27/-0.56	-2.03/-5.7	-9.41/-9.58	-9.05/-6.65	-12.5/-16.86	-12.29/-11.09	-11.96/-10.5	-11.96/-6.24	-3.61/-1.8	-1.14/-1.24	-2.99/-2.28	-2.55/-2.28	-2.36/-3.32	-4.09/-5.96	-6.9/-8.62	-9.65/-8.25	-7.05/-5.68
Θ(82.5°)	-9.56/-13.06	-12.98/-10.34	-6.84/-5.29	-5.48/-5.67	-6.74/-5.18	-2.81/-0.8	-0.160/3.1	-0.11/-0.72	-2.09/-4.79	-8.78/-10.71	-11.83/-13.82	-16.93/-15.27	-9.3/-5.66	-8.34/-10.13	-11.29/-9.86	-8.77/-4.07	-3.61/-1.98	-2.94/-3.27	-1.46/-1.19	-0.89/-0.88	-0.79/-2.46	-5.61/-5.76	-7.5/-7.1	-7.04/-4.89
Θ(90°)	-10.71/-18.25	-11.35/-9.07	-8.2/-5.56	-7.11/-5.48	-5.37/-3.83	-2.49/-1.46	-0.78/-1.02	-2.14/-3.1	-4.66/-5.33	-8.73/-8.94	-8.91/-10.02	-14.42/-14.34	-16.51/-5.89	-8.84/-10.62	-19.01/-18.07	-6.67/-3.28	-2.28/-2.77	-3.11/-2.35	-2.11/-2.17	-1.34/-0.71	-1.02/-1.96	-5.58/-7.67	-9.39/-6.98	-10.51/-5.91
Θ(97.5°)	-6.46/-13.08	-9.32/-6.98	-5.65/-3.71	-6.25/-5.58	-8.41/-8.07	-4.05/-1.62	-0.030/0.3	-0.12/-2.38	-5.15/-8.58	-15.08/-9.65	-14.16/-18.11	-11.37/-16.82	-8.26/-7.39	-10.67/-12.29	-18.79/-10.4	-3.4/-0.53	-0.35/-1.57	-3.31/-2.67	-4.12/-4.8	-3.12/-3.04	-2.39/-2.38	-4.18/-5.6	-6.46/-5.3	-6.66/-5.9
Θ(105°)	-8.15/-13.7	-12.95/-11.84	-10.29/-6.65	-10.47/-12.51	-11.4/-6.54	-3.05/-0.7	-0.010/3.1	-0.12/-3.12	-4.67/-7.2	-13.62/-6.95	-9.73/-8.24	-17.68/-18.12	-13.72/-12.06	-18.99/-9.25	-7.27/-4.59	-3.31/-1.14	0.992/-4.1	0.53/-6.96	-1.23/-2.34	-1.65/-1.24	-1.39/-2.94	-5.97/-7.4	-6.39/-6.71	-8.14/-7
Θ(112.5°)	-18.15/-17.38	-18.64/-7.43	-7.43/-4.14	-7.26/-12.18	-9.41/-5.19	-3.31/-2.6	-2.72/-3.61	-5.11/-6.31	-12.42/-18.24	-13.35/-4.83	-5.04/-3.47	-9.41/-11.47	-8.14/-9.33	-12.06/-10.58	-17.84/-16.44	-6.05/-3.49	-1.17/-1.6	-3.21/-1.08	-0.43/-2.86	-3.12/-1.57	-2.73/-3.92	-10.4/-10.84	-11.08/-14.17	-13.27/-9.59
Θ(120°)	-14.62/-18.59	-18.73/-12.67	-7.12/-14.68	-4.14/-10.75	-10.44/-17.02	-7.26/-3.25	-1.59/-3.31	-7.92/-12.17	-17.67/-11.69	-9.74/-6.14	-8.47/-11.39	-9.78/-7.43	-10.83/-11.8	-10.36/-13.23	-16.99/-12.42	-6.13/-7.84	-7.02/-6.38	-9.77/-10.08	-5.82/-5.45	-6.47/-9.22	-13.77/-12.85	-10.12/-13.98	-18.85/-12.12	
Θ(127.5°)	-9.5/-13.23	-18.71/-14.99	-8.65/-4.59	-4.61/-6.86	-8.44/-9.6	-6.77/-3.46	-2.16/-2.45	-4.08/-7.62	-12.53/-12.85	-10.51/-13.76	-16.54/-18.75	-12.71/-13.27	-7.16/-5.97	-7.11/-10.3	-11.12/-9	-10.47/-4.32	-5.23/-5.14	-3.16/-3.51	-4.13/-4.63	-1.84/-6.13	-7.02/-8	-10.74/-8.13	-7.02/-8	-11.53/-13.71
Θ(135°)	-11.04/-17.24	-17.06/-18.61	-14.8/-10.78	-8.88/-10.28	-10.51/-9.34	-7.18/-6.78	-6.11/-6.28	-7.13/-11.88	-19.56/-10.97	-6.49/-6.45	-6.83/-10.59	-12.16/-14.43	-17.72/-11.29	-6.47/-7.56	-10.39/-9.72	-7.38/-5.11	-5.27/-3.55	-3.72/-4.13	-3.16/-2.79	-6.94/-8.5	-9.1/-17.98	-14.08/-13.19	-8.69/-7.66	-11.5/-10.15
Θ(142.5°)	-16.43/-16.09	-9.76/-11.11	-11.64/-11.01	-13.65/-16.81	-19.34/-18.79	-16.52/-11.32	-9.97/-9.97	-11.61/-15.4	-19.95/-13.37	-10.42/-6.53	-8.23/-9.96	-9.58/-12.36	-15.06/-15.05	-7.31/-7.02	-11.18/-16	-13.62/-12.2	-17.91/-16.34	-8.55/-4.53	-6.69/-12.66	-13.77/-14.15	-17.77/-14.6	-15.34/-15.43	-18.23/-14.82	
Θ(150°)	-16.06/-13.38	-18.62/-16.72	-15.54/-11.91	-10.74/-10.53	-11.52/-13.52	-18.1/-18.35	-14.85/-12.93	-13.05/-14.47	-18.88/-18.43	-18.05/-11.73	-11.01/-11.91	-9.87/-10.81	-11.85/-11.97	-10.67/-9.76	-8.74/-12.17	-19.05/-19.33	-17.66/-12.16	-11.95/-10.53	-9.26/-8.02	-8.51/-11.38	-13.61/-15.93	-16.51/-14.08	-15.76/-18.84	-16.88/-13.7
Θ(157.5°)	-18.76/-17.38	-15.22/-14.19	-12.81/-10.9	-9.22/-9.19	-8.7/-8.74	-11.04/-13.43	-15.44/-17.03	-18.21/-17.75	-18.62/-18.13	-17.7/-16.67	-16.74/-14.28	-10.51/-10.41	-12.49/-13.16	-16.27/-18.82	-18.51/-18.43	-17.96/-16.64	-18.95/-18.17	-17.9/-18.64	-15.8/-11.61	-9.03/-8.33	-9.04/-10.61	-11.38/-11.79	-13.07/-14.83	-18.03/-18.54
Θ(165°)	-18.59/-17.63	-18.61/-17.75	-18.89/-17.38	-15.29/-14.93	-13.24/-13.14	-12.74/-12.76	-13/-15.47	-15.8/-16.16	-17.44/-17.7	-18.78/-18.29	-19.11/-19.05	-15.41/-13.91	-13.26/-14.04	-12.82/-13.58	-14.42/-17.48	-18.88/-17.92	-18.62/-18.12	-18.28/-18.55	-16.63/-14.43	-14.05/-13.49	-12.91/-14.9	-14.69/-16.1	-16.32/-16.13	-16.43/-19.59
Θ(172.5°)	-17.23/-18.14	-18.36/-19.68	-18.13/-17.48	-17.01/-14.46	-13.82/-13.62	-13.74/-12.14	-11.87/-12.36	-12.93/-14.55	-15.71/-17.3	-17.52/-18.66	-19.23/-18.23	-18.84/-17.97	-17.56/-17.46	-17.83/-17.24	-16.62/-15.22	-15.61/-16.04	-18.61/-18.1	-17.38/-18.15	-18.89/-19.11	-17.94/-16.57	-15.36/-14.45	-14.39/-14.05	-16.59/-18.66	
Θ(180°)	-18.89/-18.94	-18.41/-19.09	-18.67/-18.62	-19.23/-19.13	-17.75/-17.77	-18.36/-18.55	-18.98/-18.48	-18.59/-18.38	-18.27/-18.19	-18.82/-17.54	-18.81/-18.36	-18.01/-18.36	-17.88/-16.03	-13.54/-12.97	-13.17/-13.29	-15.93/-16.88	-18.24/-18.65	-18.24/-18.45	-17.96/-18.37	-18.65/-18.44	-16.98/-17.56	-16.23/-19.38	-19.08/-19.06	-19.1/-18.72
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°)	8.79/-9.08	8.09/-8.18	-8.05/-8.29	-8.98/-7.95	-7.1/-7.09	-6.48/-6.13	-6.11/-6.03	-6.18/-6	-6.33/-7.06	-7.24/-7.08	-7.8/-7.59	-7.74/-8.25	-8.25/-8.77	-8.59/-8.62	-8.88/-7.86	-7.18/-6.06	-5.92/-5.5	-5.13/-5.02	-5.22/-5.72	-5.7/-6.41	-6.87/-6.94	-7.45/-7.09	-8.09/-9.09	-9.3/-8.95
Θ(7.5°)	-7.54/-8.18	-8.24/-7.92	-7.43/-6.75	-7.18/-6.71	-6.02/-5.58	-5.55/-5.24	-5.45/-5.18	-5.7/-6.49	-7.59/-8.39	-8.87/-9.75	-11.25/-11.89	-11.77/-12.47	-12.21/-11.47	-10.68/-10.99	-9.73/-8.66	-7.79/-7.28	-6.79/-6.55	-6.63/-6.39	-6.09/-6.23	-5.93/-6.32	-6.55/-6.8	-6.87/-6.2	-6.16/-6.25	-6.48/-7.1
Θ(15°)	-7.76/-8.92	-10.68/-11.62	-10.65/-10.13	-9.87/-8.83	-9.08/-9.12	-8.35/-7.57	-7.12/-6.92	-7.29/-6.78	-7.87/-10.02	-10.85/-15.44	-16.86/-16.59	-16.57/-15.16	-12.74/-11.51	-10.53/-10.09	-9.39/-9.18	-9.23/-9.01	-8.56/-8.3	-8.04/-7.3	-8.28/-5.32	-4.43/-4.43	-5/-5.48			
Θ(22.5°)	-5.37/-6.54	-8.35/-11.25	-13.2/-17.67	-18.48/-19.02	-17.98/-19	-16.9/-13.42	-9.96/-8.14	-6.54/-5.35	-5.27/-5.84	-7.39/-8.41	-10.51/-12.46	-14.87/-17.59	-18.55/-18.82	-19.22/-16.36	-12.99/-12.41	-11.27/-12.33	-12.71/-12.93	-13.02/-11.78	-12.18/-12.47	-13.95/-14.44	-14.65/-12.37	-9.34/-6.81	-5.26/-4.85	-4



Radiated Composite Gain Data

Appendix B

Θ(30°)	-4.84/-4.52	-4.74/-4.5	-4.79/-4.59	-4.08/-4.17	-4.44/-4.1	-4.67/-5.73	-5.92/-6.08	-6.3/-7.04	-7.36/-8.46	-10.03/-11.42	-10.54/-10.3	-11.64/-15.77	-18.64/-17.26	-14.08/-12.12	-11.05/-9.66	-7.76/-6.72	-6.63/-6.86	-6.17/-5.89	-5.98/-5.74	-5.58/-5.86	-5.47/-4.75	-4.19/-3.89	-3.67/-3.59	-3.95/-5.21
Θ(37.5°)	-6.17/-5.36	-4.13/-3.22	-3.29/-3.19	-1.91/-1.27	-0.93/-1.08	-1.54/-2.1	-2.56/-3.31	-3.75/-4.75	-6.41/-8.08	-10.39/-11.77	-11.74/-11.23	-12.96/-17.82	-17.6/-17.71	-19.41/-16.13	-12.44/-9.79	-8.69/-7.7	-7.68/-6.47	-6.04/-5.78	-6.19/-5.88	-5.99/-6.16	-6.22/-5.72	-5.19/-5.53	-6.01/-6.59	-7.22/-7.41
Θ(45°)	-3.65/-3.32	-3.34/-2.79	-2.24/-1.55	-1.1/-1.09	-1.02/-1.66	-2.41/-3.26	-3.92/-4.31	-4.14/-4.14	-4.54/-4.98	-6.88/-9.21	-9.19/-8.85	-8.41/-9.67	-9.47/-10.03	-10.45/-10.17	-8.28/-12.58	-9.8/-8.12	-6.01/-4.25	-3.31/-2.85	-2.57/-2.52	-6.66/-6.61	-6.61/-5.49	-4.48/-4.44	-3.82/-3.63	
Θ(52.5°)	-4.21/-3.67	-2.61/-2.35	-1.94/-1.82	-1.15/-1.32	-1.73/-2.26	-2.69/-3.06	-3.21/-3.83	-3.39/-3.41	-3.35/-3.29	-3.98/-5.37	-6.93/-7.19	-7.24/-8	-8.09/-7.35	-9.51/-9.67	-13.46/-13.83	-9.91/-6.87	-3.38/-2.09	-0.580/48	0.03/-0.55	-1.98/-2.56	-4.82/-6.85	-8.2/-10.85	-8.64/-6.99	-5.13/-6.5
Θ(60°)	-4.72/-3.79	-3.19/-2.39	-1.15/-1.48	0.150/34	0.04/-3.6	-0.66/-0.96	-1.45/-2.14	-2.91/-3.52	-4.29/-4.59	-5.19/-5.01	-6.8/-5.3	-7.6/-5.8	-6.43/-5.39	-6.61/-6.62	-9.74/-9.01	-7.02/-4.78	-2.36/-3.09	0.110/65	0.52/-0.26	-0.94/-1.63	-3.12/-4.2	-6.77/-8.04	-8.32/-10.12	-7.43/-5.84
Θ(67.5°)	-6.02/-4.09	-3.04/-2.43	-0.96/-0.34	0.280/04	-0.87/-1.27	-1.87/-2.45	-2.66/-2.62	-2.63/-3.03	-3.99/-4.06	-4.28/-5.56	-6.65/-10.84	-10.61/-10.3	-10.61/-7.61	-9.08/-7.33	-7.62/-5.86	-4.22/-3.32	-2.58/-1.08	-0.070/2	-0.180/05	-4.22/-3.12	-3.29/-4.24	-4.04/-7.79	-7.37/-8.81	-7.38/-6.53
Θ(75°)	-4.4/-2.9	-2.78/-1.63	-0.030/31	0.01/-0.68	-2.08/-3.15	-3.81/-3.85	-2.98/-3.43	-3.99/-4.75	-6.15/-5.44	-4.8/-3.78	-4.58/-6.67	-7.28/-8.09	-9.61/-6.63	-7.74/-5.34	-6.54/-4.8	-3.28/-1.7	0.140/68	1.24/-1.21	1.310/57	-0.59/-2.07	-3.33/-5.41	-4.54/-7.75	-6.25/-6.98	-6.94/-5.33
Θ(82.5°)	-3.44/-2.44	-2.29/-2.04	-0.93/-1.16	-2.14/-4.02	-5.27/-4.87	-4.12/-2.73	-2.44/-2.61	-3.17/-5.18	-9.48/-9.14	-5.82/-3.82	-4.01/-6.79	-5.84/-5.55	-6.14/-5.34	-7.48/-7.06	-10.28/-7.66	-6.28/-2.93	-0.560/43	0.950/98	1.020/32	-0.4/-0.83	-1.99/-9.47	-4.44/-6.53	-6.64/-6.77	-5.32/-3.59
Θ(90°)	-6.09/-4.51	-4.99/-4.9	-2.81/-2.7	-2.53/-3.81	-5.4/-36	-3.58/-2.82	-2.36/-2.03	-2.36/-3.26	-6.74/-11.19	-7.98/-4.72	-4.03/-7.41	-8.76/-7.45	-10.71/-4.65	-8.72/-9.39	-15.32/-13.27	-9.65/-2.09	0.651/85	1.64/-2.7	2.24/-0.7	0.04/-4.7	-1.03/-4.38	-7.35/-7.96	-13.54/-7.02	-8.23/-5.4
Θ(97.5°)	-5.53/-7.13	-5.18/-4.12	-1.94/-1.52	-2.08/-3.98	-6.06/-5.98	-4.62/-3.41	-2.37/-2.21	-2.94/-4.37	-9.49/-13.65	-7.85/-5.55	-3.68/-5.21	-5.57/-10.16	-7.18/-5.3	-6.88/-7.27	-13.66/-13.44	-50/31	2.41/-3.29	3.340/3.51	2.90/91	-0.22/-2.19	-3.07/-3.86	-4.84/-3.56	-4.35/-3.41	-5.45/-5.26
Θ(105°)	-6.29/-5.47	-4.57/-3.7	-2.28/-2.45	-3.5/-7.22	-11.43/-9.29	-7.38/-6.56	-5.53/-5.56	-5.62/-6.21	-10.9/-13.7	-11.35/-10.29	-7.63/-10.61	-6.94/-8.02	-7.33/-5.26	-7.83/-7.39	-10.15/-19.07	-9.08/-2.33	0.692/94	3.162/69	2.94/-1.63	0.03/-1.31	-2.96/-7.52	-5.85/-4.29	-5.12/-4.32	-6.01/-7.23
Θ(112.5°)	-5.45/-6.17	-5.38/-5.43	-5.26/-5.29	-6.59/-6.95	-8.04/-7.68	-5.76/-5.48	-4.85/-2.26	-13.34/-13.66	-18.37/-12.46	-7.76/-6.07	-6.19/-8.48	-10.79/-12.11	-6.32/-5.81	-6.65/-9.23	-18.5/-19.07	-0.981/05	0.442/4	1.41/-0.59	-0.14/-1.87	-4.17/-9.65	-10.71/-65	-5.67/-5.03	-5.94/-4.74	
Θ(120°)	-13.14/-12.14	-10.62/-8.66	-6.76/-5.29	-5.84/-6.02	-8.07/-13.23	-11.83/-8.45	-6.7/-5.74	-6.11/-8.55	-14.76/-17.98	-13.73/-7.21	-6.57/-6.7	-8.7/-13.31	-10.45/-3.99	-6.27/-8.23	-7.54/-9.56	-13.96/-5.16	-1.8/-2.14	-1.28/-1.2	-2.37/-4.26	-5.8/18	-17.07/-19.05	-11.63/-12.31	-8.4/-9.4	-17.2/-14.35
Θ(127.5°)	-10.76/-11.87	-11.59/-11.26	-7.23/-4.76	-4.88/-5.39	-7.73/-13.25	-19/-17.26	-9.46/-8.57	-9.37/-11.96	-15.82/-18.27	-19.03/-17.27	-18.09/-13.04	-7.92/-11.94	-7.63/-5.23	-8.03/-6.71	-5.41/-1.11	-16.81/-11.18	-4.07/-3.87	-2.14/-2.31	-6.36/-7.58	-16.15/-13.71	-12.4/-7.62	-8.5/-6.78	-7.66/-6.94	
Θ(135°)	-10.9/-63	-8.68/-12	-8.64/-7.27	-6.51/-6.71	-9.6/-16.33	-18.59/-14.4	-10.55/-11.02	-15.67/-11.63	-15.35/-9.38	-8.08/-7.77	-13.16/-18.22	-11.31/-12.36	-9.67/-13.57	-19.13/-19.14	-17.88/-14.09	-13.59/-10.17	-9.45/-6.87	-4.48/-5.01	-3.81/-3.11	-5.65/-9.44	-11.83/-18.51	-12.56/-13.49	-6.5/-6.35	-6.82/-6.16
Θ(142.5°)	-9.53/-13.98	-13.54/-13.5	-15.22/-15.35	-14.69/-14.42	-15.03/-19.02	-16.48/-11.98	-9.69/-10.32	-13.78/-17.42	-12.38/-9.07	-7.58/-7.75	-8.37/-13.64	-18.25/-18.95	-11.39/-10.76	-7.98/-5.26	-6.85/-9.97	-9.99/-16.25	-11.87/-8.14	-9.13/-10.06	-6.63/-5.72	-8.04/-12.95	-14.07/-18.13	-12.23/-10.82	-9.31/-9.1	-10.22/-8.57
Θ(150°)	-8.51/-10.2	-12.18/-13.07	-11.49/-13.08	-11.27/-12.55	-15.19/-18.86	-18.49/-19.13	-18.19/-18.52	-19.03/-17.8	-13.87/-11.32	-8.58/-7.74	-6.13/-7.14	-7.07/-7.26	-9.37/-9.66	-7.49/-5.68	-5.44/-6.16	-10.8/-18.09	-18.75/-18.39	-11.44/-9.58	-9.35/-10.54	-12.26/-18.29	-18.51/-13.57	-12.47/-11.38	-10.15/-10.84	-12.39/-9.68
Θ(157.5°)	-14.33/-16.24	-18.88/-18.06	-17.69/-13.87	-11.95/-11.12	-10.44/-10.65	-12.13/-13.57	-14.22/-15.5	-16.63/-19.09	-18.84/-16.45	-11.06/-7.6	-6.76/-8.13	-8.91/-7.48	-6.63/-6.67	-7.36/-8.63	-10.76/-10.26	-11.14/-14.77	-17.3/-18.06	-18.71/-17.97	-18.56/-12.56	-10.92/-11.85	-8.62/-10.39	-9.96/-10.52	-11.16/-9.1	-10.32/-13.08
Θ(165°)	-9.69/-10.57	-9.15/-9.17	-9.3/-10.53	-12.37/-13.25	-14.1/-14.46	-15.04/-17.8	-17.1/-17.73	-18.11/-18.47	-17.52/-17.35	-10.78/-8.06	-6.29/-6.05	-6.71/-7.28	-8.02/-8.33	-8.53/-8.74	-9.59/-10.33	-12.5/-16.58	-18.19/-19.07	-18.8/-18.72	-18.24/-14.62	-12.26/-12.51	-11.7/-9.39	-6.89/-5.61	-5.86/-6.24	-7.31/-8.87
Θ(172.5°)	-16.9/-17.41	-18.08/-17.64	-17.52/-17.45	-14.25/-13.99	-14.26/-14.34	-12.22/-15.95	-13.05/-13.1	-15.63/-18.87	-18/-17.34	-18.25/-15.36	-13.98/-13.65	-14.11/-14.54	-15.53/-16.96	-17.98/-18.06	-17.78/-19.01	-18.7/-19.14	-18.54/-17.73	-16.92/-15.3	-14.05/-14.37	-15.71/-14.42	-14.12/-13.23	-11.34/-12.19	-11.87/-14.08	-17.15/-19.07
Θ(180°)	-15.44/-15.25	-16.9/-18.03	-16.38/-16.58	-16.32/-17.56	-18.07/-18.66	-17.38/-17.11	-17.62/-17.62	-18.5/-17.81	-18.4/-18.96	-18.49/-19.4	-18.44/-18.35	-19.48/-18.06	-17.68/-18.8	-18.71/-17.97	-16.88/-17.61	-17.77/-17.97	-18.83/-18.26	-18.53/-17.12	-17.58/-17.24	-17.35/-16.19	-16.1/-17.42	-18.33/-15.49	-14.57/-13.54	-14.88/-15.28
Freq[Hz]	5.785GPol.	Phi/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ(0°)	-4.95/-5.38	-5.46/-5.58	-6.76/-6.64	-6.56/-6.89	-6.46/-7.04	-7.75/-7	-7.79/-9.03	-8.71/-7.4	-7.29/-3.73	-6.2/-6.4	-6.41/-6.38	-6.64/-7.33	-7.24/-7.82	-7.13/-7.82	-7.42/-7.33	-7.09/-7.55	-7.98/-8.52	-7.81/-7.71	-7.17/-7.41	-6.28/-6	-6.02/-5.89	-5.61/-4.98		
Θ(7.5°)	-7.89/-8.27	-8.23/-8.09	-7.44/-7.02	-6.63/-7.24	-6.54/-6	-6.28/-7.01	-7.25/-8.54	-9.18/-10.27	-10.2/-9.36	-8.89/-7.7	-7.2/-6.15	-6/-5.8	-6.2/-6.27	-6.62/-6.98	-7.33/-7.92	-7.46/-7.55	-6.94/-6.97	-7.01/-6.94	-6.79/-7.22	-6.58/-6.82	-6.51/-6.51	-6.95/-7.56	-7.62/-8.31	-9.1/-8.63
Θ(15°)	-10.87/-9.62	-9.24/-8.07	-7.71/-6.63	-5.96/-5.59	-5.61/-4.73	-5.53/-5.19	-5.29/-5.63	-6.02/-7.08	-8.62/-9.44	-9.3/-8.74	-5.55/-5.3	-5.41/-5.34	-9.31/-9.79	-8.88/-8.55	-7.33/-7.93	-7.81/-7.96	-8.31/-7.64	-7.06/-7.68	-7.1/-6.92	-7.43/-7.4	-8.09/-8.26	-9.43/-10.73		
Θ(22.5°)	-9.47/-8.78	-8.33/-7.27	-7.55/-7.74	-7.01/-6.55	-6.04/-6.46	-5.53/-4.74	-4.98/-5.06	-4.74/-5.35	-4.26/-7.27	-7.67/-7.48	-7.32/-6.38	-6.21/-6.91	-6.76/-7.64	-8.36/-9.06	-9.26/-10.57	-9.36/-8.27	-6.81/-7.07	-8.84/-8.37	-8.59/-8.82	-7.99/-10.55	-11.78/-12.46	-11.19/-10.56		
Θ(30°)	-7.83/-7.02	-7.12/-8.16	-7.72/-7.4	-7.83/-7.85	-8.33/-8.14	-6.96/-6.71	-6.36/-7.12	-7.77/-7.38	-7.91/-7.97	-7.39/-7.41	-6.39/-6.48	-6.1/-6.46	-6.45/-6.9	-8.25/-8.31	-6.97/-6.19	-5.87/-6.28	-7.21/-10.02	-13.98/-13.67	-11.05/-9.58	-8.68/-8.58	-7.5/-7.81	-7.1/-7.89	-7.88/-8.42	-7.88/-7.76
Θ(37.5°)	-7.63/-6.73	-6.74/-8.49	-10.79/-10.9	-12.56/-16.6	-18.94/-19.29	-17.08/-15.09	-13.66/-12.54	-10.8/-8.97	-7.91/-7.38	-6.95/-7.02	-6.57/-7.01	-6.39/-6.11	-8.06/-7.78	-6.94/-5.2	-5.08/-4.54	-7.23/-7.94	-9.45/-10.59	-12.57/-13.41	-16.92/-16.61	-13.18/-10.3	-8.99/-1.8	-6.86/-7.12	-5.77/-8.32	-8.02/-8.2
Θ(45°)	-7.08/-9.67	-7.77/-9.83	-11.74/-13.4	-14.03/-14.75	-14.42/-13.56	-13.86/-13.08	-10.83/-8.79	-7.69/-7.69	-7.71/-8.1	-8.01/-8.67	-10.71/-11.52	-10.21/-8.42	-8.18/-7.86	-7.72/-7.81	-7.82/-7.6	-8.28/-8.52	-9.15/-9.26	-9.91/-11.05	-14.43/-13.11	-9.55/-8.09	-6.54/-6.19	-5.75/-5.59	-6.05/-7.45	-7.77/-6.84
Θ(52.5°)	-5.39/-6.33	-6.61/-9.55	-11.79/-11.21	-10.83/-9.38	-9.37/-11.44	-13.95/-15.04	-15.11/-10.64	-8.6/-8.95	-6.31/-6.38	-7.88/-8.07	-9.02/-9.25	-9.29/-8.96	-7.44/-7.86	-7.58/-7.25	-6.03/-5.58	-7.22/-9.36	-11.52/-10.4	-11.06/-13.83	-16.84/-18.86	-14.17/-10.44	-7.09/-5.31	-3.73/-3.86	-5.1/-5.72	-8.22/-5.74
Θ(60°)	-5.68/-7.59	-9.05/-12.25	-15.89/-13.5	-10.44/-9.64	-9.68/-10.14	-11.32/-11.73	-12.78/-14.29	-15.34/-13.6	-10.13/-9.34	-7.97/-7.81	-9.45/-13.11	-10.82/-10.7	-7.98/-6.51	-6.34/-9.9	-5.06/-4.57	-7.44/-8.92	-9.43/-9.43	-11.27/-12.01	-14.18/-18.56	-18.27/-11.49	-8.36/-6.64	-5.61/-4.68	-5.96/-7.1	-7.27/-5.68
Θ(67.5°)	-3.35/-4.42	-6.89/-9.27	-13.3/-13.24	-12.4/-9.18	-8.72/-9.19	-11.18/-13.21	-12.65/-12.23	-14.66/-18.13	-18.39/-12.18	-10.09/-10.51	-12.73/-13.3	-12.53/-9.08	-8.06/-8.14	-6.82/-6.97	-6.96/-8.72	-10.36/-10.15	-12.99/-12.44	-14.15/-16.14	-18.23/-18.49	-17.38/-17.99	-13.17/-9.6	-6.14/-89	-7.49/-9.82	-7.8/-5.34
Θ(75°)	-3.37/-5.53	-9.34/-10.22	-13.71/-14.17	-17.25/-12.66	-11.63/-14.76	-18.95/-17.68	-17.26/-12.43	-8.89/-8.22	-9.92/-16.68	-17.58/-19.24	-18.23/-12.84	-12.1/-9.53	-7.48/-7.74	-7.9/-7.9	-7.06/-7.89	-6.34/-8.86	-8.91/-8.09	-9.86/-14.44	-18.92/-18.22	-12.19/-11.03	-9.79/-6.34	-6.29/-6.22	-5.66/-6.54	-6.88/-3.89
Θ(82.5°)	-3.36/-6.15	-7.93/-8.28	-11.09/-17.75	-17.64/-15.88	-17.44/-18.76	-17.93/-15.33	-15.62/-18.17	-17.68/-12.24	-9.16/-11.73	-15.2/-18.46	-18.15/-13.31	-13.12/-10.13	-7.65/-6.78											



Radiated Composite Gain Data

Appendix B

Θ (67.5°)	-6.75/-7.44	-9.35/-14.13	-14.01/-9.32	-6.44/-8.32	-8.6/-8.79	-11.23/-18.57	-19.38/-11.58	-9.52/-12.92	-16.97/-17.79	-13.25/-12.2	-13.51/-12.25	-8.05/-6	-4.35/-7.62	-10.86/-9.77	-13.12/-15.97	-15.94/-10.43	-9.1/-7.8	-9.11/-12.52	-13.46/-11.67	-11.73/-11.42	-9.95/-11.86	-18.82/-18.73	-16.26/-10.5	-7.35/-7.02
Θ (75°)	-7.85/-10.18	-8.08/-11.34	-9.83/-7.12	-9.86/-14.91	-10.75/-7.84	-6.72/-8.93	-12.42/-13.69	-13.05/-12.5	-11.02/-11.36	-8.2/-7.91	-8.18/-7.97	-8.83/-5.49	-3.46/-5.44	-6.23/-5.44	-7.59/-11.09	-7.74/-6.04	-4.41/-5.29	-7.6/-5.03	-4.69/-5.11	-2.85/-3.32	-4.97/-9.64	-17.95/-12.76	-7.32/-5.77	-6.21/-5.41
Θ (82.5°)	-13.45/-11.04	-6.29/-11.46	-8.99/-7.45	-8.95/-11.25	-18.37/-13.19	-11.23/-11.13	-10.41/-11.33	-12.19/-8.88	-7.98/-10.01	-11.52/-11.3	-12.28/-7.3	-4.41/-5.57	-6.05/-6.74	-5.43/-4.4	-6.97/-7.47	-5.06/-4.16	-5.04/-6.94	-8.85/-10.27	-10.78/-8.47	-7.51/-14.18	-14.77/-5.94	-4.41/-5.66	-4.72/-5.89	-6.47/-11.07
Θ (90°)	-7.02/-16.97	-11.16/-15.08	-11.87/-13.78	-15.52/-11.59	-10.81/-12.81	-18.83/-17.86	-13.44/-12.02	-11.15/-14.36	-15.71/-15.66	-14.05/-14.72	-18.29/-19.31	-11.21/-14.52	7.07/8.96	-8.1/-5.48	-3.98/-4.09	-6.61/-4.88	-4.4/-6.57	-10.63/-12.85	-11.54/-12.97	-18.32/-10.65	-7.35/-3.75	-4.42/-8.87	-12.23/-18.37	-18.96/-12.79
Θ (97.5°)	-10.76/-15.28	-19.53/-6.91	-6.12/-7.51	-6.9/-10.04	-8.35/-7.09	-9.67/-12.51	-15.51/-17.81	-19.52/-16.45	-18.62/-16.22	-8.03/-11.67	-10.37/-17.2	-18.06/-14.05	-8.13/-7.62	-10.05/-9.14	-6.34/-4.91	-1.81/-0.95	-1.17/-7.27	-4.32/-0.48	-7.66/-5.54	-3.85/-4.37	-2.33/-4.17	-8.86/-13.68	-10.8/-7.2	-9.44/-9.88
Θ (105°)	-2.99/-5.49	-4.61/-4.37	-5.47/-3.07	-6.17/-1.15	-10.61/-6.7	-6.99/-8.05	-8.76/-10.34	-12.04/-9.67	-10.5/-13.9	-5.85/-4.13	-4.43/-2.63	-6.15/-8.75	-3.96/-1.32	-2.33/-5.67	-6.53/-6.4	-1.281/0.08	-0.82/-0.84	-3.13/-2.58	-3.34/-7.49	-4.2/-5.61	-4.89/-4.3	-8.1/-5.98	-8.55/-10.11	-6.95/-13.2
Θ (112.5°)	-4.61/-5.72	-5.38/-10.25	-14.03/-12.02	-12.43/-12.46	-10.84/-13.33	-14.18/-16.04	-16.57/-15.53	-17.23/-17.08	-17.98/-19.01	-12.39/-10.14	-11.5/-3.66	-5.53/-9.76	-5.07/-1.8	-3.84/-4.8	-4.51/-1.57	0.61/-0.7	-1.35/-4.7	-7.45/-3.36	-2.24/-10.94	-8.43/-6.52	-9.5/-4.59	-5.13/-7.86	-6.5/-10.23	-9.97/-6
Θ (120°)	-6.2/-8.22	-9.36/-9.97	-10.73/-12.14	-11.25/-19.41	-19.35/-14.24	-10.43/-10.35	-12.99/-15.15	-13.61/-10.84	-9.25/-5.5	-10.42/-13.89	-10.64/-2.95	-2.21/-5.01	-4.67/-2.54	-3.0/-2.37	-3.98/-4.14	-2.9/-1.62	-2.86/-6.87	-10.97/-5.12	-4.1/-15.14	-16.1/-13.22	-15.51/-18.45	-17.57/-11.53	-7.93/-8.48	-7.28/-5.63
Θ (127.5°)	-11.69/-19.12	-18.31/-15.26	-9.66/-8.5	-8.27/-10.65	-17.64/-13.09	-5.88/-6.73	-5.47/-6.93	-9.51/-9.86	-7.24/-8.59	-12.45/-14.44	-15.14/-10.34	-6.35/-7.95	-3.44/-1.55	-3.95/-8.09	-15.6/-3.21	-1.91/-1.47	0.24/-4.26	-11.73/-4.37	-2.13/-12.87	-17.9/-5.55	-2.68/-4.53	-2.75/-10.6	-11.26/-8.58	-7.62/-8.34
Θ (135°)	-6.57/-11.59	-11.84/-6.25	-3.57/-3.31	-5.25/-7.63	-9.06/-9.44	-8.76/-9.8	-12.09/-17.11	-18.08/-17.35	-11.44/-8.97	-6.99/-3.81	-2.83/-10.45	-7.77/-10.79	-6.0/-9.4	-1.26/-5.99	0.18/-1.15	-0.382/8.4	1.45/-4.82	-4.070/9.3	2.66/-1.16	-9.89/-4.85	0.41/-2.72	-6.18/-2.65	-4.99/-7	-2.12/-3.88
Θ (142.5°)	2.1/-6.1	-0.29/-0.18	-0.52/-1.67	-3.3/-5.42	-7.39/-9.68	-10.99/-12.44	-12.48/-11.65	-13.71/-16.58	-14.24/-9.88	-6.02/-2.65	-1.23/-3.7	-3.2/-0.7	-1.12/-3.86	-4.21/-2.55	-1.81/-6.61	2.693/6.8	0.93/-1.07	0.43/8.81	4.45/-1.42	-4.42/-7.15	-0.64/-0.41	-3.67/-5.52	-4.27/-6.7	-6.46/-1.79
Θ (150°)	-2.43/-1.9	-2/-2.81	-3.43/-4.79	-6.72/-7.51	-7.79/-7.45	-7.35/-7.18	-7.25/-8.9	-5.28/-7.12	-3.93/-2.79	-1.88/-0.73	-1.29/-2.5	-1.98/-0.66	-0.59/-1.23	-1.13/-1.38	-0.78/-1.2	1.84/-0.69	-4.35/-2.61	-0.521/8	1.91/-0.86	-5.51/-12.03	-9.29/-2.03	-3.21/-4.38	-3.65/-3.57	-5.85/-5.05
Θ (157.5°)	-5.33/-4.79	-4.26/-5.95	-10.86/-14.72	-14.51/-14.35	-15.62/-17.23	-19.1/-18.21	-13.73/-10.89	-9.46/-9.11	-8.81/-7.95	-7.34/-5.92	-4.66/-3.45	-1.290/9	2.232/55	2.04/-1.93	1.94/-1.73	1.13/-0.22	-0.360/8.3	2.693/7.9	3.34/-2.01	-0.34/-2.42	-4.2/-3.28	-2.24/-3.61	-6.58/-7.7	-6.22/-5.68
Θ (165°)	-8.97/-7.14	-7.71/-7.41	-7.81/-7.82	-9.21/-11.58	-12.41/-12.21	-13.83/-17.61	-18.34/-18.97	-16.84/-14.31	-14.01/-13.75	-15.74/-18.68	-18.27/-16.2	-9.06/-5.38	-3.12/-1.75	-0.80	0.70/8.2	0.85/-1.11	1.62/0.4	2.923/11	3.163/43	2.66/-1.11	-0.49/-2.2	-3.2/-3.65	-5.85/-9.55	-12.95/-12.25
Θ (172.5°)	-8.2/-11.5	-9.73/-8.5	-8.37/-4.44	-5.43/-4.95	-5.08/-5.12	-5.87/-12.2	-7.21/-7.19	-5.47/-7.78	-7.78/-8.2	-8.86/-10.68	-13.4/-16.23	-19.03/-17.55	-18.66/-17.16	-12.87/-7.98	-4.93/-2.9	-0.820/8.1	2.3/3	3.53/66	3.683/4	2.620/85	-1.24/-4.54	-6.56/-7.81	-9.4/-12.79	-13.52/-11.15
Θ (180°)	-7.17/-6.43	-5.63/-6.07	-5.56/-5.39	-3.43/-2.48	-1.75/-1.23	-0.97/-0.62	0.250/65	0.64/0.4	-0.23/-1.74	-3.1/-4.7	-6.78/-9.34	-12.03/-15.73	-16.38/-12.28	-8.79/-6.04	-3.62/-1.49	-0.41/-1.34	2.372/8.7	2.92/85	1.920/8	-0.28/-1.26	-2.95/-5.42	-8.37/-9.84	-8.34/-8.52	-9.42/-8.53
Freq(Hz)	5.30Pol.	Phi/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-4.54/-3.78	-5.11/-4.77	-5.41/-5.95	-6.3/-6.93	-7.32/-7.6	-9.5/-12.68	-17.36/-18.48	-17.77/-17.18	-13.26/-10.81	-8.64/-7.3	-6.03/-5.2	-5.81/-4.98	-4.86/-4.68	-4.35/-4.81	-5.08/-5.64	-6.93/-7.84	-8.24/-9.36	-10.53/-11.73	-12.97/-14	-13.64/-13.7	-15.35/-16.19	-13.23/-12.3	-9.84/-7.92	-7.18/-5.39
Θ (7.5°)	-6.21/-5.18	-4.88/-5.38	-6.11/-6.94	-7.03/-6.58	-6.82/-8.52	-10.07/-16.76	-17.77/-17.76	-16.75/-15.81	-13.31/-11.48	-9.89/-7.49	-6.39/-6.31	-6.45/-6.87	-6.11/-6.28	-6.24/-6.72	-6.27/-6.6	-6.62/-6.87	-7.55/-7.7	-10.61/-18.2	-13.99/-17.42	-19.03/-19.45	-19.47/-16.02	-13.61/-11.2	-9.98/-7.09	-6.54/-6.41
Θ (15°)	-8.95/-8.26	-8.89/-7.69	-6.71/-6.71	-7.73/-7.51	-8.07/-9.83	-12.76/-16.82	-18.97/-19.14	-17.91/-17.99	-16.58/-12.49	-8.83/-8.73	-9.33/-7.83	-9.13/-9.22	-8.54/-8.91	-8.6/-8.88	-9.68/-10.91	-11.44/-12.08	-11.92/-11.37	-12.63/-15.21	-14.79/-16.76	-17.22/-16.7	-18.26/-18.12	-15.25/-18.88	-18.03/-17.83	-12.96/-9.61
Θ (22.5°)	-18.19/-19.46	-12.44/-9.4	-11.5/-13.39	-15.17/-15.46	-14.09/-13.27	-12.53/-13.42	-13.07/-13.93	-12.98/-11.79	-13.42/-16.27	-18.74/-19.02	-19.15/-18.44	-17.74/-14	-10.73/-8.12	-6.6/-7.96	-10/-13.01	-15/-14.4	-15.21/-17.09	-15.64/-13.3	-11.34/-11.97	-14.57/-17.9	-18.43/-18.24	-19.29/-14.09	-11.16/-11.03	-18.67/-17.75
Θ (30°)	-8.28/-9.67	-11.31/-19	-17.66/-13.88	-11.09/-9.52	-8.01/-8.42	-8.63/-11.23	-12.85/-12.35	-7.49/-5.51	-4.82/-4.59	-6.22/-6.79	-7.32/-7.87	-9.76/-10.78	-8.99/-6.87	-5.9/-6.1	-8.12/-9.94	-9.01/-10.16	-12.94/-18.54	-16.21/-14.87	-11.49/-10.82	-9.32/-9.3	-12.3/-12.43	-12.71/-16.65	-18.24/-14.22	-7.72/-5.93
Θ (37.5°)	-9.05/-9.84	-14.16/-10.5	-7.07/-6.69	-8.05/-11.21	-12.66/-12.28	-11.78/-16.65	-18.84/-11.37	-7.91/-6.51	-6.63/-7.28	-7.87/-8.43	-8.1/-8.19	-8.82/-9.71	-10.07/-9.22	-10.32/-13.15	-14.17/-13.12	-14.07/-16.07	-17.41/-13.11	-11.05/-11.21	-9.16/-9.55	-8.79/-7.83	-7.86/-9.06	-9.99/-11.9	-13.01/-13.07	-9.41/-10.1
Θ (45°)	-8.19/-4.64	-8.67/-12.26	-12.16/-12.35	-12.74/-14.44	-11.04/-10.82	-9.83/-9.01	-8.41/-8.58	-11.18/-11.21	-8.07/-5.86	-6.39/-9.98	-11.59/-10.26	-10.31/-10.5	-7.52/-5.36	-5.98/-9.57	-8.85/-8.13	-9.06/-10.23	-10.71/-13.61	-15.55/-11.8	-9.18/-7.81	-6.78/-5.98	-6.76/-6.73	-7.54/-12.89	-18.82/-16.3	-7.58/-5.52
Θ (52.5°)	-17.18/-13.92	-6.61/-4.11	-3.76/-5.44	-6.62/-7.95	-10.36/-10.23	-6.47/-5.34	-5.13/-7.23	-11.2/-11.28	-9.68/-8.69	-10.12/-12.69	-11.32/-10.04	-14.82/-16.27	-10.82/-10.91	-13.9/-14.94	-16.74/-12.15	-13.88/-10.79	-12.8/-15.3	-15.76/-16.7	-8.73/-7.29	-6.73/-6.62	-6.7/-6.23	-4.56/-4.49	-7.91/-7.47	-18.83/-17.69
Θ (60°)	-4.25/-6	-7.39/-7.57	-8.45/-8.37	-8.42/-8.16	-7.92/-9.02	-10.68/-11.64	-10.15/-8.64	-8.73/-8.51	-10.47/-10.3	-14.39/-17.61	-10.34/-9.01	-12.61/-14.77	-6.96/-4.75	-6.09/-9.01	-13.08/-12.27	-10.1/-10.49	-10.84/-10.9	-11.83/-13.97	-15.43/-15.37	-16.37/-14.64	-12.66/-14.16	-16.04/-12.28	-13.7/-5.45	-2.17/-1.73
Θ (67.5°)	-8.59/-8.43	-9.21/-7.23	-8.59/-8.81	-8.9/-9.39	-9.75/-9.95	-11.47/-15.99	-18.28/-18.73	-14.56/-14.41	-18.41/-15.81	-13.94/-18.88	-13.94/-10.03	-10.78/-18.96	-12.6/-6.41	-9.4/-8.66	-13.06/-13.59	-13.73/-12.26	-10.74/-8.84	-11.86/-10.98	-9.15/-8.25	-8.96/-6.73	-6.92/-7.73	-8.97/-9.75	-17.58/-16.08	-9.46/-8.74
Θ (75°)	-8.39/-7.37	-11.83/-13.44	-15.27/-12.56	-18.91/-18.8	-14.32/-12.39	-10.69/-9.97	-14.19/-14.16	-11.99/-14.16	-18.35/-18.14	-12.25/-11.59	-18.59/-11.84	-5.9/-7.8	-11.41/-7.39	-5.72/-6.43	-8.41/-9.51	-9.95/-6.57	-4.93/-6.76	-7.65/-10.11	-12.7/-13.77	-14.25/-8.51	-7.96/-8.88	-17.51/-15.87	-7.46/-5.3	-5.13/-5.05
Θ (82.5°)	-10.74/-6.82	-6.52/-10.61	-10.77/-10.44	-11.39/-9.09	-8.42/-6.75	-8.03/-16.02	-19.07/-18.47	-12.88/-10.45	-13.11/-12.59	-8.01/-4.5	-5.47/-8.34	-3.88/-2.87	-3.97/-6.48	-4.8/-3.73	-3.56/-4.94	-8.39/-10.95	-10.43/-9.61	-15.61/-14.39	-11.68/-8.62	-7.16/-7.95	-9.67/-12.5	-19.09/-18.3	-18.07/-11.56	-5.8/-7.85
Θ (90°)	-8.17/-8.04	-5.58/-5.15	-9.13/-10.78	-10.8/-8.58	-9.96/-11.71	-16.88/-13.53	-12.8/-9	-6.31/-5.7	-7.52/-14.1	-14.23/-6.38	-5.16/-5.93	-4.98/-1.83	-0.37/-3.33	-7.58/-4.43	-3.26/-4.08	-9.56/-8.91	-10/-13.47	-18.49/-18.38	-10.39/-8.31	-9.64/-10.32	-10.21/-8.81	-5.8/-9	-8.89/-11.23	-17.59/-16.1
Θ (97.5°)	-13.69/-18.49	-11.83/-6.31	-4.67/-4.47	-4.42/-5.85	-8.23/-10.89	-10.13/-11.58	-9.57/-8.4	-7.76/-8.77	-9.46/-9.87	-12.15/-5.87	-4.02/-4.59	-6.48/-3.85	-2.98/-5.3	-8.49/-6.75	-4.84/-6.63	-6.45/-10.54	-12.07/-12.69	-11.16/-9.85	-11.45/-7.99	-7.55/-9.12	-12.94/-11.54	-9.47/-9.41	-10.41/-13.47	-9.37/-13.29
Θ (105°)	-9.14/-13.87	-13.47/-14.03	-8.26/-6.12	-6.09/-9.57	-11.55/-13.92	-17.38/-19.25	-15.08/-17.78	-19.02/-18.33	-15.9/-18.5	-15.78/-19.26	-9.72/-5.12	-7.97/-14	-12.58/-4.74	-1.74/-3.8	-7.95/-9.84	-12.32/-9.11	-7.91/-7.13	-7.87/-11.03	-6.26/-7.43	-13.7/-9.93	-9.38/-10.6	-8.63/-7.05	-7.3/-2.99	-1.26/-3.45
Θ (112.5°)	-4.86/-4.06	-6.11/-11.58	-11.61/-5.61	-4.79/-8.05	-10.05/-12.27	-13.96/-15.36	-12.53/-10.88	-10.52/-11.57	-17.23/-18.83	-7.64/-6.35	-9.26/-6.93	-4.93/-4.61	-6.85/-15.46	-12.37/-8.91	-7.69/-5.74	-8.81/-15.4	-11.41/-15.31	-15.23/-19.03	-13.02/-13.22	-16.62/-9.21	-9.09/-7.62	-4.96/-9.82	-9.59/-8	



Radiated Composite Gain Data

Appendix B

Θ (120°)	-3.84/-7.87	-11.76/-10.02	-8.58/-9.09	-16.17/-13.48	-10.71/-15.05	-14.34/-9.37	-7.64/-7.36	-9.77/-14.29	-12.51/-10.24	-13.64/-12.75	-7.47/-1.66	-1.24/-3.41	-1.96/0.75	1.54/-0.73	-1.13/0.03	0.01/-1.13	-1.42/-6.27	-10.74/-2.21	-1.98/-14.1	-8.83/-3.24	-4.41/-2.94	-3.51/5.65	-5.72/-5.32	-5.04/-5.05
Θ (127.5°)	-5.42/-6.79	-8.89/-13.34	-16.66/-12.47	-9.75/-7.12	-5.64/-5.49	-7.51/-9.38	-8.51/-10.21	-17.82/-18.68	-16.03/-8.03	-9.25/-16.04	-12.41/-4.93	-2.15/-3.23	-1.16/-0.75	-1.75/-4.44	-6.15/-3.4	0.82/-0.72	-0.4/-6.4	-11.32/-3.03	-3.3/-15.09	-10.25/-4.22	-5.94/-2.34	-3.33/-6.34	-5.75/-9.69	-6.46/-3.28
Θ (135°)	-1.62/-5.39	-8.29/-11.16	-9.09/-6.93	-5.47/-5.14	-5.3/-6.53	-9.16/-11.96	-12.34/-11.8	-13.27/-11.83	-7.04/-4.61	-3.53/-4.23	-4.47/-10.55	-12.38/-14.38	-4.30/58	-0.63/-11.79	-2.96/2.24	2.03/3.68	3.88/-3.77	-4.29/1.75	2.34/-5.7	-18.1/-0.21	2.11/-2.43	0.3/-3.81	-14.48/-18	-4.71/-1.12
Θ (142.5°)	-0.26/1.16	2.27/3.5	3.14/2	1.63/1.28	0.12/-1	-2.18/-3.53	-6.54/-10.02	-10.42/-9.14	-7.09/-5.28	-3.72/-1.76	-0.37/-1.32	-4.77/-3	-3.12/0.52	2.43/2.55	4.16/3.52	4.51/4.53	2.25/0.04	2.38/4.44	4.45/-0.51	-2.11/-4.62	2.42/-0.73	-6.5/-2.91	-6.54/-8.68	-5.88/-2.62
Θ (150°)	2.11/1.02	0.08/-0.22	-1.2/-2.69	-3.47/-4.29	-5.08/-5.28	-5.53/-5.9	-6.74/-6.89	-7.24/-8.95	-11.11/-9.6	-6.01/-3.84	-2.44/-1.61	-0.54/0.94	0.28/-0.7	1.92/3.72	3.3/-2.92	3.89/2.99	-0.78/-2.57	1.44/3.72	3.86/1.21	-5.87/-7.39	-2.44/-0.77	-2.28/-1.71	0.48/1.33	1.8/1.89
Θ (157.5°)	-6.39/-5.15	-4.92/-5.28	-6.84/-5.78	-3.72/-2.59	-2.19/-2.66	-3.3/-3.93	-3.73/-3.66	-4.06/-4.94	-6.93/-7.14	-5.1/-3.72	-2.08/-0.52	1.11/2.56	2.58/1.93	1.43/2.26	3.17/3.75	3.53/1.8	0.57/1.09	2.75/4.31	4.12/1.85	-1.74/-4.95	-4.65/-2.37	-2.02/-3.27	-3.72/-3.86	-5.75/-6.94
Θ (165°)	-13.64/-8.73	-5.51/-5.16	-5.14/-5.25	-5.53/-5.69	-6.8/-7.41	-9.68/-9.33	-8.4/-8.11	-7.03/-5.14	-4.89/-5.07	-7.01/-10.06	-12.55/-9.37	-5.77/-3.09	-1.81/-0.61	0.58/1.96	2.74/2.77	2.72/3.4	2.76/3.59	3.41/3.73	3.6/3.52	2.44/1.14	0.60/66	0.71/0.22	-1.87/-4.16	-8.73/-17.33
Θ (172.5°)	-5.48/-5.77	-6.45/-6.59	-5.77/-4.74	-4.19/-3.1	-3.19/-3.3	-3.1/-2.77	-2.14/-2.09	-1.65/-1.92	-1.82/-2.25	-3.25/-4.5	-6.62/-9.6	-14.63/-18.89	-15.99/-9.09	-5.91/-3.03	-1.4/-0.22	0.83/1.73	2.77/3.49	3.05/3.59	3.83/3.53	3.52/1.81	0.26/-1.04	-1.8/-2.7	-3.81/-4.89	-4.32/-4.68
Θ (180°)	-5.15/-4.15	-3.2/-2.24	-1.62/-0.9	0.14/0.74	1.78/2.53	3.27/3.52	3.85/3.82	3.81/3.17	2.62/1.52	0.48/-1.14	-3.28/-5.85	-9.55/-19.01	-17.33/-8.12	-4.07/-1.67	-10.11/3.4	2.47/3.59	3.39/3.76	4.07/3.99	4.07/3.99	-0.93/-3.24	-5.11/-6.31	-7.02/-8.57	-9.13/-7.17	
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°)	-5.01/-5.74	-7.43/-7.23	-6.89/-7.39	-8.15/-11.19	-14.32/-18.65	-18.39/-17.48	-12.95/-9.46	-8.84/-8.51	-9.06/-8.6	-7.59/-6.54	-5.73/-5.71	-5.29/-5.4	-6.1/-7.4	-9.04/-9.49	-10.55/-10.67	-11.11/-12.69	-17.57/-18.65	-19.34/-16.82	-16.24/-15.88	-13.15/-9.19	-7/-6.31	-5.58/-5.35	-6.7/-5.11	
Θ (7.5°)	-5.51/-7.07	-6.39/-5.52	-5.5/-5.34	-5.67/-8.23	-10.53/-12.95	-14.78/-15.73	-18.02/-18.09	-18.56/-12.77	-10.15/-8.68	-8.35/-7.7	-6.98/-5.08	-4.5/-4.18	-3.81/4.15	-4.91/-6.62	-9.06/-11.3	-13.74/-15.4	-15.43/-13	-12.91/-11.53	-10.31/-10.37	-9.77/-8.67	-9.76/-7.77	-6.39/-5.7	-5.32/-6.06	-4.99/-4.4
Θ (15°)	-6.03/-6.2	-5.06/-5.67	-6.4/-7.19	-8.96/-12.82	-13.39/-16.33	-15.15/-15.36	-15.12/-17.74	-14/-10.4	-8.62/-7.32	-7.12/-6.42	-5.32/-4.71	-4.88/-4.57	-4.01/-4.2	-5.02/-5.85	-7.68/-10.67	-13.07/-19.6	-16.08/-13.62	-12.97/-10.56	-9.69/-8.09	-7.79/-7.28	-5.99/-6.07	-4.21/-3.04	-3.08/-3.45	-4.6/-6
Θ (22.5°)	-7.82/-10.07	-11.45/-15.93	-15.61/-15.56	-16.27/-17.59	-18.8/-18.99	-17.54/-17.96	-17.58/-17.75	-18.36/-19.29	-18.41/-16.4	-14.88/-16.06	-17.95/-16.94	-11.62/-8.68	-8.67/-10.31	-14.42/-18.34	-19.05/-18.74	-19.07/-19.09	-18.1/-15.06	-12.7/-13.12	-12.16/-7.9	-6.32/-8.16	-11.93/-8.36	-6.98/-6.01	-5.39/-3.58	-6.91/-7.74
Θ (30°)	-14.19/-15.19	-12.41/-8.9	-10.01/-9.23	-8.74/-9.45	-12.86/-13.05	-12.76/-11.02	-14.31/-14.02	-11.03/-9.41	-8.54/-7.7	-6.34/-6.26	-6.02/-8.09	-11.1/-10.97	-9.61/-9.63	-11.52/-16.56	-18.41/-18.82	-18.88/-18.05	-17.39/-18.03	-16.44/-15.11	-11.49/-7.81	-7.77/-11.02	-11.01/-10.13	-9.71/-8.3	-7.19/-6.59	-8.03/-8.02
Θ (37.5°)	-12.16/-12.09	-8.04/-5.58	-7.61/-10.23	-14.67/-17.77	-18.27/-19.89	-15.12/-12.66	-13.95/-19.43	-18.34/-19.03	-17.72/-18.83	-11.05/-7.54	-5.46/-7.53	-12.3/-16.21	-12.19/-19.02	-10.63/-13.05	-15.25/-18.27	-19.2/-18.82	-18.59/-15.4	-10.77/-9.96	-11.51/-12.57	-10.11/-6.74	-5.87/-6.97	-9.66/-12.61	-15.39/-11.63	-12.71/-11.32
Θ (45°)	-14.62/-7.65	-5.62/-8.55	-11.27/-14.86	-10.67/-9.06	-11.77/-13.96	-17.87/-18.3	-18.4/-9.93	-7.87/-8.63	-10.86/-11.05	-13.62/-16.85	-10.62/-7.57	-7.53/-14.38	-15.82/-9.64	-9.49/-14.46	-15.78/-17.7	-17.42/-14.26	-11.14/-12.52	-13.15/-12.48	-13.23/-12.61	-13.8/-17.11	-17.55/-17.65	-17.43/-16.45	-11.71/-16.3	
Θ (52.5°)	-6.51/-6.16	-4.74/-3.94	-5.28/-4.46	-5.37/-10.36	-17.4/-13.37	-9.76/-7.72	-7.2/-8.17	-10.09/-9.3	-10.46/-14.65	-14.82/-7.32	-5.57/-5.23	-6.1/-5.39	-3.68/-3.96	-6.58/-9.17	-17.68/-17.65	-18.6/-12.32	-11.65/-15.05	-18.58/-17.7	-14.08/-12.06	-11.12/-11.45	-16.03/-15.09	-10.99/-7.83	-6.26/-10.49	-12.86/-11.47
Θ (60°)	-3.96/-3.05	-6.07/-15.04	-6.12/-2.71	-3.33/-5.72	-4.71/-4.8	-4.27/-4.29	-10.43/-15.88	-17.51/-16.13	-14.26/-11.27	-8.93/-7.58	-4.05/-3.21	-6.37/-5.44	-1.54/-1.36	-6.23/-7.71	-5.42/-5.2	-6.5/-4.88	-4.46/-5.99	-7.69/-7.08	-7.65/-11.85	-13.95/-13.1	-15.27/-11.05	-12.82/-12.35	-16.9/-18.69	-10.12/-11.19
Θ (67.5°)	-2.06/-0.53	-3.11/-6.66	-5.63/-5.69	-5.72/-3.23	-1.49/-2.13	-3.69/-7.02	-9.29/-9.84	-10.97/-7.85	-5.47/-9.78	-12/-5.91	-3.67/-6.97	-3.23/0.8	0.86/-4.22	-5.87/-5.65	-7.33/-13.53	-17.3/-15.31	-7.88/-6.77	-5.05/-4.73	-5.8/-7.23	-7.63/-11.84	-10.48/-10.43	-13.83/-10.84	-6.92/-6.14	-14.77/-8.43
Θ (75°)	-5.12/-2.68	-2.44/-5.89	-5.22/-6.72	-8.78/-7.08	-5.98/-9.08	-12.59/-15.35	-13.54/-9.72	-9.12/-8.47	-9.31/-10.04	-8.91/-3.33	-1.27/-3.45	-8.76/-2.76	-0.77/-3.03	-5.56/-3.44	-3.84/-7.68	-10.91/-8.61	-6.83/-7.52	-7.21/-8	-6.36/-10.7	-14.72/-11.46	-14.2/-14.5	-18.65/-11.84	-7.05/-9.62	-11.79/-8.41
Θ (82.5°)	-9.24/-5.1	-4.09/-4.63	-6.92/-8.65	-12.98/-11.67	-10.11/-8.33	-7.04/-7.29	-10.43/-15.88	-17.51/-16.13	-14.26/-11.27	-8.93/-7.58	-4.05/-3.21	-6.37/-5.44	-1.54/-1.36	-6.23/-7.71	-5.42/-5.2	-6.5/-4.88	-4.46/-5.99	-7.69/-7.08	-7.65/-11.85	-13.95/-13.1	-15.27/-11.05	-12.82/-12.35	-16.9/-18.69	-10.12/-11.19
Θ (90°)	-9.94/-4.11	-1.75/-4.1	-7.66/-6.64	-9.59/-5.97	-1.56/-1.44	-4.64/-17.43	-10.63/-16.47	-6.39/-5.22	-12.21/-9.48	-6.04/-3.95	-5.13/-2.14	0.49/-1.07	-2.07/0.33	-0.29/-4.17	-5.85/-6.03	-7.29/-9.49	-9.4/-9.62	-11.56/-16.79	-14.03/-9.17	-8.76/-12.95	-19.28/-18.89	-15.4/-9.98	-10.33/-6.07	-2.49/-3.43
Θ (97.5°)	-4.46/-2.89	-1.74/-7.36	-7.18/-4.81	-6.67/-6.74	-4.6/-6.09	-9.44/-9.69	-7.56/-4.6	-4.5/-3.82	-4.7/-7.2	-4.23/-1.57	-3.71/-2.19	2.16/1.01	-1.95/-1.03	-0.72/-3.99	-7.71/-7.91	-16.28/-18.69	-10.17/-5.76	-6/-5.45	-6.21/-8.17	-8.91/-11.76	-15.89/-10.17	-3.34/-4.54	-7.44/-9.63	-7.67/-6.73
Θ (105°)	-13.91/-8.37	-6.13/-6.36	-8.19/-5.45	-8.74/-14.55	-14.08/-8.89	-7.62/-8.75	-8.51/-7.41	-5.63/-3.86	-9.3/-9.75	-4.51/-7.77	-6.47/-11.63	-1.03/0.91	-0.08/-3.75	-8.11/-4.66	-3.49/-11.75	-18.46/-9.79	-5.3/-6.18	-4.67/-3.98	-5.42/-7.71	-7.93/-15.24	-13.28/-9.59	-6.05/-4.97	-14.76/-15	-12.71/-14.06
Θ (112.5°)	-12.46/-7.62	-4.88/-4.13	-4.12/-4.21	-8.06/-13.42	-14.71/-10.77	-9.73/-11.63	-16.84/-18.72	-18.46/-18.76	-18.85/-12.9	-11.66/-9.57	-7.72/-3.49	-2.15/-3.21	-2.71/5.26	-10.04/-10.64	-8.51/-7.44	-14.23/-10.38	-6.93/-9.05	-8.57/-6	-3.96/-77	-6.75/-6.66	-10.43/-10	-18.98/-14.3	-13.21/-14.5	-9.67/-11.46
Θ (120°)	-4.16/-6.1	-7.9/-11.38	-6.74/-3.39	-5.16/-12.19	-12.04/-10.24	-13.64/-11.63	-5.38/-3.53	-5.74/-9.42	-13.58/-18.4	-10.96/-9.38	-10.17/-6.07	-4.45/-3.97	-4.64/-3.01	-3.15/-7.67	-14.75/-17.15	-11/-15.38	-10.22/-9	-18.89/-13.98	-13.45/-19.19	-14.71/-6.32	-5.38/-8.38	-7.1/-6.52	-7.15/-0.19	0.84/-3.95
Θ (127.5°)	-1.97/-0.92	-0.96/-2.64	-8.05/-5.55	-4.3/-8.4	-11.05/-9.24	-13.59/-14.16	-8.68/-6.67	-4.61/-3.75	-4.59/-3.59	-2.87/-3.75	-3.58/-2.78	-1.86/-1.88	-0.70/-39	-3.35/-3.39	-12.04/-11.1	-14.26/-10.06	-5.82/-5.06	-10.48/-14.26	-11.76/-8.52	-10.84/-17.97	-18.83/-10.16	-12.11/-13.6	-10.27/-6.93	-0.130/59
Θ (135°)	-12.74/-11.41	-6.16/-4	-2.2/-9.07	-2.79/-5.68	-7.27/-7.31	-7.95/-10.73	-9.56/-5.27	-7.31/-9.3	-6.35/-3.68	-4.44/-5.6	-9.44/-10.14	-5.35/-3.46	-2.86/-2.72	-2.08/-6.59	-9.18/-8.99	-7.54/-5.61	-8.31/-4.89	-5.08/-5.37	-3.13/-4.4	-11.6/-8.46	-10.13/-7.53	-4.87/-13.46	-3.26/-0.93	-5.01/-10.96
Θ (142.5°)	-6.83/-5.37	-7.21/-19.06	-10.96/-6.67	-5.99/-8.11	-9.04/-8.29	-7.91/-8.81	-9.83/-6.19	-2.79/-2.18	-4.52/-4.68	-6.29/-11.65	-1.93/-7.08	-8.09/-9.88	-3.31/-5.67	-12.06/-14.56	-9.27/-11.87	-11.72/-18.89	-8.05/-7.8	-15.98/-11.82	-2.19/0.62	-3.73/-9.18	-2.53/-1.57	-11.42/-6.12	-7.43/-6.66	-1.08/-4.45
Θ (150°)	-3.15/-1.32	-0.77/0.65	1.31/0.56	-1.29/-3.63	-5.51/-5.77	-6.81/-7.04	-8.08/-12.21	-14.67/-9.32	-3.94/0.26	1.77/1.91	0.76/-0.69	-2.19/-2.03	-1.55/-2.11	-3.25/-4.85	-7.92/-12.84	-14.02/-10.77	-11.74/-12.93	-18.37/-17.53	-8.32/-6.55	-7.43/-14.63	-16.59/-8.05	-13.56/-15.4	-11.97/-19.23	-16.77/-8.72
Θ (157.5°)	1.79/1.74	1.24/0.21	-0.53/-1.08	-0.97/-1.71	-3.05/-4.34	-4.55/-4.04	-3.84/-3.99	-3.62/-1.91	-0.39/0.34	-0.26/-1.08	-1.57/-2.1	-1.91/-0.98	0.91/2.36	2.80/-97	-2.46/-8.35	-15.83/-12.57	-11.72/-11.65	-13.8/-8.63	-3.51/-1.6	-2.49/-3.45	-5.16/-5.21	-2.36/-0.41	-0.52/0.72	1.58/-1.7
Θ (165°)	-3.51/-5.47	-8.13/-15.61	-9.34/-7.41	-7.64/-8.42	-10.63/-12.55	-16.86/-18.28	-18.92/-15.73	-12.75/-10.39	-7.99/-6.95	-5.46/-4.26	-2.34/-1.01	-0.37/0.28	0.41/-0.07	-1.12/-3.72	-6.61/-8.53	-9.52/-8.77	-8.56/-10.2	-12.31/-7.11	-2.09/0.35	1.76/1.86	1.29/1.69	1.16/0.93	0.2/-45	
Θ (172.5°)	-7.25/-6.55	-6.11/-5.33	-5.13/-5.51	-5.88/-6.78	-7.25/-9.61	-13.43/-15.03	-15.26/-15.66	-17.11/-18.35	-14.58/-13.6	-15														

Total Gain Data

2.45G/Pol		TotalAnt.	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Freq(Hz)	Phi(7°)Psi(7.5°)	Phi(22.5°)	Phi(30°)Psi(37.5°)	Phi(45°)Psi(52.5°)	Phi(60°)Psi(67.5°)	Phi(75°)Psi(82.5°)	Phi(90°)Psi(97.5°)	Phi(105°)Psi(112.5°)	Phi(120°)Psi(127.5°)	Phi(135°)Psi(142.5°)	Phi(150°)Psi(157.5°)	Phi(165°)Psi(172.5°)	Phi(180°)Psi(187.5°)	Phi(195°)Psi(202.5°)	Phi(210°)Psi(217.5°)	Phi(225°)Psi(232.5°)	Phi(240°)Psi(247.5°)	Phi(255°)Psi(262.5°)	Phi(270°)Psi(277.5°)	Phi(285°)Psi(292.5°)	Phi(300°)Psi(307.5°)	Phi(315°)Psi(322.5°)	Phi(330°)Psi(337.5°)	Phi(345°)Psi(352.5°)
Theta	-0.9170-0.80	-0.82/-0.68	-0.52/-0.49	-0.52/-0.47	-0.47/-0.42	-0.82/-1.06	-1.44/-1.66	-2.00/-2.06	-1.76/-1.44	-1.17/-0.72	-0.34/-0.15	-0.02/0.24	0.25/0.39	0.50/0.42	0.33/0.43	0.52/0.49	0.35/0.32	0.13/0.01	-0.16/-0.28	-0.38/-0.45	-0.44/-0.46	-0.48/-0.43	-0.38/-0.44	-0.74/-0.83
Theta'	-1.19/-0.95	-0.63/-0.44	-0.05/0.17	0.21/0.17	0.19/0.12	-0.21/-0.59	-0.69/-0.97	-1.18/-1.18	-1.05/-0.65	-0.24/0.11	0.29/0.41	0.45/0.62	0.64/0.66	0.56/0.49	0.35/0.28	0.00/-0.18	-0.32/-0.56	-0.66/-0.90	-1.12/-1.08	-1.18/-1.10	-1.09/-1.06	-1.22/-1.20	-1.07/-1.23	-1.26/-1.16
Theta''	-1.35/-1.06	-0.54/-0.17	0.18/0.27	0.23/0.16	-0.05/-0.16	-0.47/-0.66	-0.86/-1.00	-1.11/-1.05	-0.82/-0.43	0.03/0.41	0.54/0.67	0.79/0.58	0.79/0.58	0.44/0.12	-0.15/-0.45	-0.79/-1.14	-1.51/-1.83	-2.20/-2.31	-2.50/-2.45	-1.29/-1.93	-1.85/-1.86	-1.78/-1.75	-1.70/-1.70	-1.58/-1.51
Theta'''	-1.77/-1.30	-0.72/-0.23	-0.08/-0.05	-0.07/-0.33	-0.72/-1.19	-1.49/-1.68	-1.85/-2.24	-2.99/-2.29	-1.87/-1.28	-0.83/-0.33	0.13/0.42	0.49/0.52	0.42/0.23	-0.13/-0.54	-1.13/-1.59	-2.06/-2.50	-2.90/-3.13	-3.32/-3.49	-3.35/-3.16	-2.92/-2.75	-2.68/-2.60	-2.54/-2.53	-2.27/-2.07	-1.98/-1.88
Theta''''	-2.03/-1.52	-1.07/-0.99	-1.17/-1.47	-1.62/-1.98	-2.41/-2.28	-2.95/-3.16	-3.34/-3.87	-4.18/-4.34	-4.00/-3.33	-2.68/-2.08	-1.49/-1.15	-0.89/-0.70	-0.66/-0.92	-1.37/-2.01	-2.86/-3.28	-3.86/-4.21	-4.30/-4.44	-4.35/-4.29	-3.96/-3.75	-3.62/-3.53	-3.36/-3.53	-3.94/-3.84	-3.69/-3.18	-2.61/-2.43
Theta'''''	-3.06/-2.80	-2.32/-3.56	-4.08/-4.33	-4.35/-4.39	-4.22/-3.98	-3.61/-3.38	-3.03/-3.26	-3.33/-3.96	-4.27/-4.68	-5.08/-4.32	-3.84/-3.27	-2.96/-2.53	-2.43/-2.65	-1.37/-1.21	-4.54/-4.82	-4.65/-4.35	-4.10/-3.73	-3.83/-3.88	-4.12/-4.18	-3.62/-5.08	-5.08/-5.49	-5.68/-5.67	-5.02/-4.22	-3.37/-4.15
Theta''''''	-4.52/-4.72	-5.34/-6.01	-6.54/-6.53	-6.41/-5.82	-5.05/-4.51	-3.62/-3.09	-2.58/-2.45	-2.31/-2.47	-2.67/-2.79	-2.90/-3.06	-2.88/-2.67	-2.53/-2.62	-2.86/-3.44	-4.35/-5.10	-5.33/-5.28	-4.88/-4.68	-4.74/-4.69	-4.76/-5.01	-4.99/-4.90	-4.99/-5.12	-5.61/-5.85	-6.45/-6.84	-6.68/-5.94	-5.19/-5.70
Theta'''''''	-3.66/-3.40	-3.42/-3.93	-4.84/-5.77	-5.94/-5.51	-4.50/-5.36	-2.74/-2.04	-1.75/-1.52	-1.73/-1.73	-1.84/-2.04	-1.88/-1.60	-1.15/-0.82	-0.70/-1.10	-1.82/-3.11	-4.10/-4.99	-4.83/-4.89	-4.71/-4.73	-4.94/-5.22	-5.76/-6.13	-6.40/-7.03	-7.20/-7.77	-7.86/-7.66	-7.08/-6.71	-6.72/-5.81	-5.30/-4.18
Theta''''''''	-2.35/-2.20	-2.84/-3.33	-6.30/-6.92	-5.68/-3.92	-2.35/-1.32	-0.75/-0.30	-0.09/-0.16	-0.18/-0.60	-1.14/-1.84	-2.14/-1.96	-1.18/-0.42	-0.04/-0.23	-1.17/-2.23	-4.30/-4.24	-4.59/-4.71	-5.11/-5.76	-6.47/-6.94	-7.02/-7.12	-7.57/-8.62	-9.97/-11.16	-8.97/-7.74	-5.61/-4.20	-3.68/-3.10	-2.94/-2.58
Theta'''''''''	-1.90/-1.98	-2.64/-3.78	-4.31/-3.81	-2.63/-1.46	-0.72/-0.27	-0.20/-0.18	-0.29/-0.68	-1.10/-1.63	-2.80/-4.12	-4.81/-3.87	-1.99/-0.31	0.61/0.40	0.01/-0.55	-1.33/-2.46	-3.87/-4.91	-5.67/-6.55	-7.66/-8.61	-9.83/-10.32	-9.48/-8.22	-6.34/-4.80	-3.36/-2.13	-1.43/-1.04	-0.94/-0.66	-0.70/-1.14
Theta''''''''''	0.28/0.24	-0.96/-1.99	-2.46/-2.11	-1.44/-0.88	-0.42/-0.11	-0.07/-0.02	-0.01/0.06	-0.12/-0.45	-1.57/-3.16	-4.41/-4.13	-2.30/-0.51	0.80/1.51	1.70/1.26	0.07/-0.78	-3.65/-2.27	-4.24/-4.36	-4.53/-5.15	-6.13/-6.65	-6.61/-6.14	-5.10/-3.74	-2.67/-2.25	-1.97/-1.90	-1.57/-0.82	0.20/0.61
Theta'''''''''''	0.17/0.01	-1.33/-3.23	-4.08/-2.63	-0.73/0.76	1.62/1.96	2.18/2.26	2.32/2.27	2.07/1.55	0.26/-1.72	-4.59/-6.35	-5.05/-1.91	0.61/2.17	2.55/2.13	1.06/0.04	-0.54/-1.08	-1.77/-2.48	-2.95/-3.29	-3.93/-4.65	-4.50/-3.82	-1.31/-2.75	-2.64/-2.93	-3.07/-3.26	-3.22/-2.58	-1.26/-0.16
Theta''''''''''''	-1.39/-1.86	-2.86/-3.52	-3.47/-2.02	-0.70/0.56	1.51/1.92	1.73/1.39	1.25/1.60	2.18/2.50	2.06/0.92	-0.76/-3.13	-6.61/-8.12	-3.95/-1.12	-0.31/-0.21	-0.16/-0.23	-0.54/-1.49	-3.11/-4.20	-4.67/-4.74	-4.73/-5.04	-4.66/-3.86	-3.25/-3.45	-3.85/-4.34	-4.58/-3.69	-2.85/-2.36	-2.25/-1.92
Theta'''''''''''''	-0.87/-3.26	-5.44/-4.46	-2.70/-1.25	0.28/0.78	0.94/1.26	1.25/0.79	0.25/0.37	1.22/1.79	2.01/1.76	1.63/0.83	-1.44/-4.92	-7.80/-6.86	-3.78/-1.37	0.23/0.90	0.67/0.12	-0.53/-1.34	-2.09/-2.93	-3.85/-4.23	-4.41/-4.77	-4.75/-4.94	-5.51/-6.45	-6.17/-4.19	-1.51/0.15	0.64/0.11
Theta''''''''''''''	0.05/-2.05	-5.40/-4.47	-2.18/0.06	1.68/0.74	2.46/1.64	0.98/0.35	-0.41/-0.50	-0.22/0.42	1.30/2.21	2.79/2.52	1.44/-4.97	-2.52/-3.93	-2.75/-1.58	-1.55/-1.73	-2.23/-2.20	-2.53/-3.58	-4.83/-5.58	-5.76/-5.65	-5.30/-5.24	-5.14/-5.29	-5.01/-3.99	-2.69/-2.13	-1.43/-0.47	0.23/0.51
Theta'''''''''''''''	-0.73/-1.45	-3.13/-3.43	-1.57/0.49	2.85/4.35	4.73/4.31	3.46/1.93	0.12/-1.63	-2.59/-1.62	0.20/1.68	2.25/1.87	1.13/-0.01	-1.31/-2.05	-2.45/-3.63	-4.39/-3.37	-1.77/-1.07	-1.51/-1.68	-1.31/-1.74	-2.65/-3.36	-3.12/-1.92	-1.02/-0.77	-1.27/-1.56	-1.60/-1.83	-2.67/-3.03	-2.39/-1.21
Theta''''''''''''''''	-0.08/0.40	0.17/-0.92	-2.27/-2.58	-1.02/1.88	3.25/3.43	2.92/1.82	0.12/-1.64	-2.64/-1.91	-0.25/0.96	1.55/1.90	2.18/1.90	0.61/-1.92	-4.68/-5.54	-3.96/-2.06	-1.12/-1.01	-0.89/0.01	0.44/-0.30	-2.25/-3.41	-4.29/-2.74	-0.78/0.08	-0.15/-1.32	-1.64/-1.08	-0.16/-0.04	-0.61/-0.82
Theta'''''''''''''''''	-1.83/-0.27	0.72/2.10	1.45/1.00	1.10/1.64	2.31/2.32	1.59/0.34	-1.38/-3.17	-4.46/-3.80	-2.32/-1.21	-0.04/0.12	1.86/1.85	0.89/-0.38	-1.12/-0.75	-0.33/-0.48	-0.92/-0.75	0.50/1.79	2.23/1.62	0.27/0.83	-0.65/0.42	1.58/2.24	2.23/1.35	0.26/-0.48	-0.55/-0.65	-1.72/-2.83
Theta''''''''''''''''''	-1.03/-0.11	1.05/1.93	2.66/2.50	1.79/2.00	2.17/2.24	1.72/0.44	-1.48/-3.46	-0.58/-5.12	-4.32/-2.60	-0.95/-2.29	1.08/0.97	0.46/-0.32	-1.01/-1.31	-1.41/-1.42	-0.96/-1.00	0.85/1.60	2.00/1.50	0.37/-0.60	-0.61/-0.04	0.78/1.40	1.78/1.70	1.29/0.45	0.08/-0.00	-0.07/-0.65
Theta'''''''''''''''''''	-0.02/0.46	1.36/0.22	2.96/2.12	2.16/1.39	0.93/0.92	0.62/0.12	-0.83/-1.98	-2.76/-2.48	-1.88/-0.83	0.05/0.60	0.45/0.14	-1.20/-1.91	-2.27/-1.66	-0.60/0.46	1.13/0.45	1.18/0.57	-0.05/-1.10	-2.37/-3.33	-3.48/-2.71	-1.66/-3.08	0.76/1.78	2.11/1.78	0.93/0.28	0.06/0.15
Theta''''''''''''''''''''	-0.99/-0.40	0.19/0.78	1.80/2.11	1.26/0.42	-0.65/-1.48	-1.75/-1.70	-1.80/-1.61	-0.51/-1.10	-0.61/-0.24	-0.06/-0.22	-0.69/-1.47	-2.14/-2.35	-1.88/-0.53	0.87/1.73	2.10/1.85	0.92/-0.34	-1.78/-3.14	-4.08/-4.24	-3.76/-2.89	-1.77/0.39	1.07/2.22	2.78/2.47	1.46/0.12	-0.89/-1.11
Theta'''''''''''''''''''''	-4.11/-3.22	-2.39/-1.51	-0.15/-0.22	0.15/0.25	-1.04/-0.61	-0.77/-0.69	-0.57/-0.48	-0.15/0.44	-0.64/-0.84	-1.32/-1.93	-2.25/-2.63	-2.56/-2.06	-1.13/0.16	1.13/1.76	1.86/1.34	0.93/-0.79	-2.07/-3.18	-3.83/-3.92	-4.84/-2.81	-1.97/-0.97	0.08/0.75	1.03/0.59	-0.45/-2.25	-4.07/-4.57
Theta''''''''''''''''''''''	-8.31/-6.85	-5.56/-3.90	-2.12/-1.01	-0.41/0.02	0.13/-0.15	-0.19/-0.26	-0.49/-0.97	-1.57/-2.11	-2.66/-2.38	-3.86/-4.52	-4.90/-5.34	-4.93/-0.44	-3.19/-2.35	-1.71/-1.31	-1.39/-1.98	-2.83/-3.84	-4.95/-3.75	-6.22/-5.76	-5.64/-5.60	-5.36/-4.52	-4.08/-3.94	-4.02/-4.46	-5.66/-7.83	-10.18/-10.31
Theta'''''''''''''''''''''''	-7.11/-6.67	-6.28/-5.06	-4.17/-3.09	-2.49/-1.58	-2.08/-2.56	-2.70/-2.99	-4.77/-4.47	-5.74/-6.97	-7.84/-8.64	-9.39/-9.58	-9.46/-9.81	-8.21/-7.49	-6.73/-6.50	-6.30/-6.37	-6.92/-7.52	-8.81/-8.76	-8.24/-7.75	-7.47/-7.47	-7.39/-7.54	-8.01/-9.08	-9.66/-10.04	-11.71/-11.01	-10.40/-8.55	
Theta''''''''''''''''''''''''	-0.08/-6.52	-7.10/-7.71	-4.78/-7.36	-6.94/-6.23	-6.74/-7.94	-9.13/-9.75	-10.64/-11.12	-12.54/-13.41	-13.98/-13.65	-12.15/-11.86	-10.36/-9.82	-9.10/-9.33	-9.42/-9.59	-9.50/-9.49	-9.65/-9.71	-8.77/-8.27	-7.22/-6.84	-6.89/-6.93	-6.95/-7.15	-8.11/-8.76	-9.09/-9.43	-11.87/-8.73	-7.70/-6.55	
2.45G/Pol	TotalAnt.	+	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Phi(7°)Psi(7.5°)	Phi(22.5°)	Phi(30°)Psi(37.5°)	Phi(45°)Psi(52.5°)	Phi(60°)Psi(67.5°)	Phi(75°)Psi(82.5°)	Phi(90°)Psi(97.5°)	Phi(105°)Psi(112.5°)	Phi(120°)Psi(127.5°)	Phi(135°)Psi(142.5°)	Phi(150°)Psi(157.5°)	Phi(165°)Psi(172.5°)	Phi(180°)Psi(187.5°)	Phi(195°)Psi(202.5°)	Phi(210°)Psi(217.5°)	Phi(225°)Psi(232.5°)	Phi(240°)Psi(247.5°)	Phi(255°)Psi(262.5°)	Phi(270°)Psi(277.5°)	Phi(285°)Psi(292.5°)	Phi(300°)Psi(307.5°)	Phi(315°)Psi(322.5°)	Phi(330°)Psi(337.5°)	Phi(345°)Psi(352.5°)
Theta	-1.80/-1.76	-2.09/-2.27	-2.38/-2.52	-2.63/-2.50	-2.45/-2.16	-1.77/-1.07	-1.06/-0.77	-1.00/-1.31	-1.40/-1.32	-1.35/-1.27	-1.15/-1.16	-1.25/-1.47	-1.37/-1.54	-1.52/-1.35	-1.44/-1.49	-1.94/-2.02	-1.87/-1.60	-1.55/-1.58	-1.70/-1.45	-1.57/-1.54	-2.18/-2.01	-1.82/-1.98	-1.70/-1.36	-1.22/-1.19
Theta'	-0.89/-1.37	-1.11/-1.54	-1.39/-1.55	-1.69/-1.73	-1.56/-1.85	-1.38/-1.66	-1.47/-1.63	-1.55/-1.52	-1.83/-2.34	-2.87/-2.92	-2.85/-4.29	-2.84/-2.78	-1.71/-1.37	-1.55/-1.56	-1.86/-1.63	-1.00/-0.76	-0.85/-1.08	-1.10/-1.09	-1.43/-1.77	-1.38/-1.26	-1.07/-1.74	-0.71/-0.74	-0.94/-0.75	
Theta''	-1.45/-1.18	-0.83/-0.34	-0.43/-0.95	-1.45/-2.07	-2.19/-2.85	-3.15/-2.39	-2.84/-2.30	-2.23/-2.34	-3.16/-3.35	-3.74/-3.83	-3.95/-4.21	-4.14/-4.20	-3.79/-3.41	-2.20/-1.78	-2.05/-1.88	-1.63/-1.49	-1.16/-0.24	-0.31/-0.13	-0.11/0.10	-0.14/-0.56	-0.48/-0.37	-0.81/-0.95		
Theta'''	-2.18/-1.45	-1.05/-0.62	-1.07/-0.20	-3.01/-3.69	-3.65/-3.45	-3.04/-2.81	-2.47/-2.97	-3.47/-4.39	-5.08/-5.03	-4.43/-3.83	-3.43/-3.48	-4.23/-5.23	-6.04/-5.61	-4.42/-3.17	-2.41/-1.96	-2.14/-2.32	-2.19/-2.32	-2.09/-1.70	-1.35/-1.00	-0.14/0.45	1.04/0.33	-0.57/-1.39	-2.12/-2.33	
Theta''''	-1.74/-0.93	-0.85/-1.96	-2.40/-2.91	-2.41/-1.72	-1.22/-1.34	-1.81/-2.49	-2.99/-3.12	-3.59/-4.14	-5.26/-2.73	-7.92/-6.98	-6.03/-5.78	-5.90/-5.96	-7.85/-6.46	-8.27/-6.98	-6.74/-6.46	-6.09/-6.74	-7.01/-7.34	-5.93/-4.93	-4.38/-3.06	-2.00/-1.03	-0.17/0.59	0.73/0.21	-0.67/-2.55	-3.58/-2.76
Theta'''''	-1.32/-1.58	-1.69/-2.01	-2.15/-1.90	-1.05/-1.08	-1.56/-2.54	-3.63/-5.19	-5.78/-5.18	-4.77/-5.52	-7.12/-8.54	-7.13/-8.41	-3.76/-4.37	-4.72/-5.15	-6.40/-9.27	-9.76/-9.21	-9.38/-10.91	-13.15/-11.87	-9.59/-7.33	-6.37/-5.49	-5.11/-4.92	-4.67/-3.00	-1.76/-1.34	-0.81/-0.55	-1.89/-1.62	
Theta''''''	-0.43/-0.64	-1.97/-2.41	-2.13/-1.78	-1.19/-1.21	-1.32/-2.42	-2.90/-4.35	-5.48/-8.38	-10.63/-11.51	-10.76/-9.60	-8.08/-7.14	-6.68/-5.71	-3.66/-2.09	-3.08/-6.27	-7.36/-6.69	-7.73/-9.87	-10.19/-9.41	-6.86/-6.40	-6.29/-5.59	-5.23/-4.73	-3.97/-4.13	-3.56/-2.41	-2.18/-1.79	-0.88/-1.09	-1.18/-0.62
Theta'''''''	-1.64/-1.49</																							



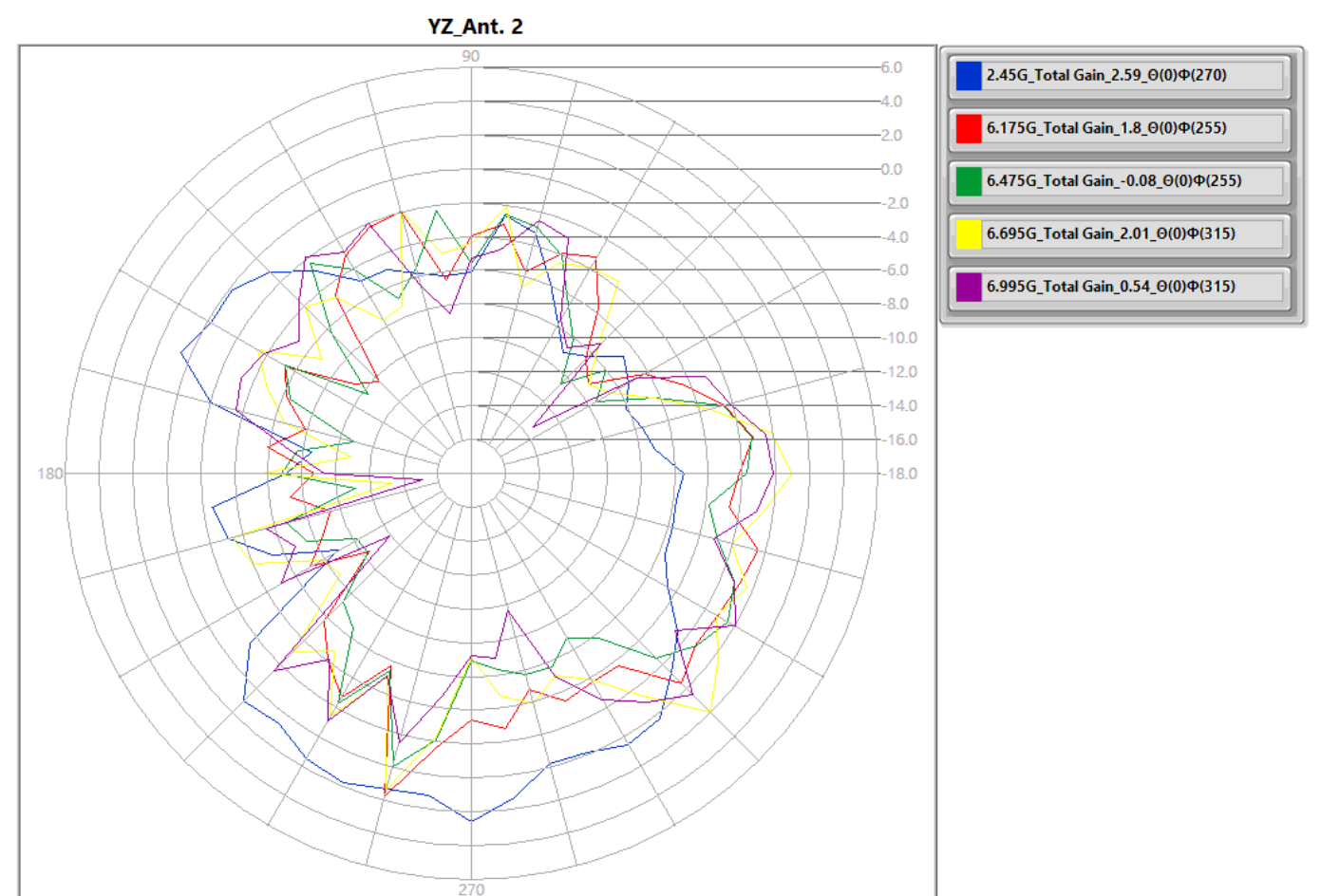
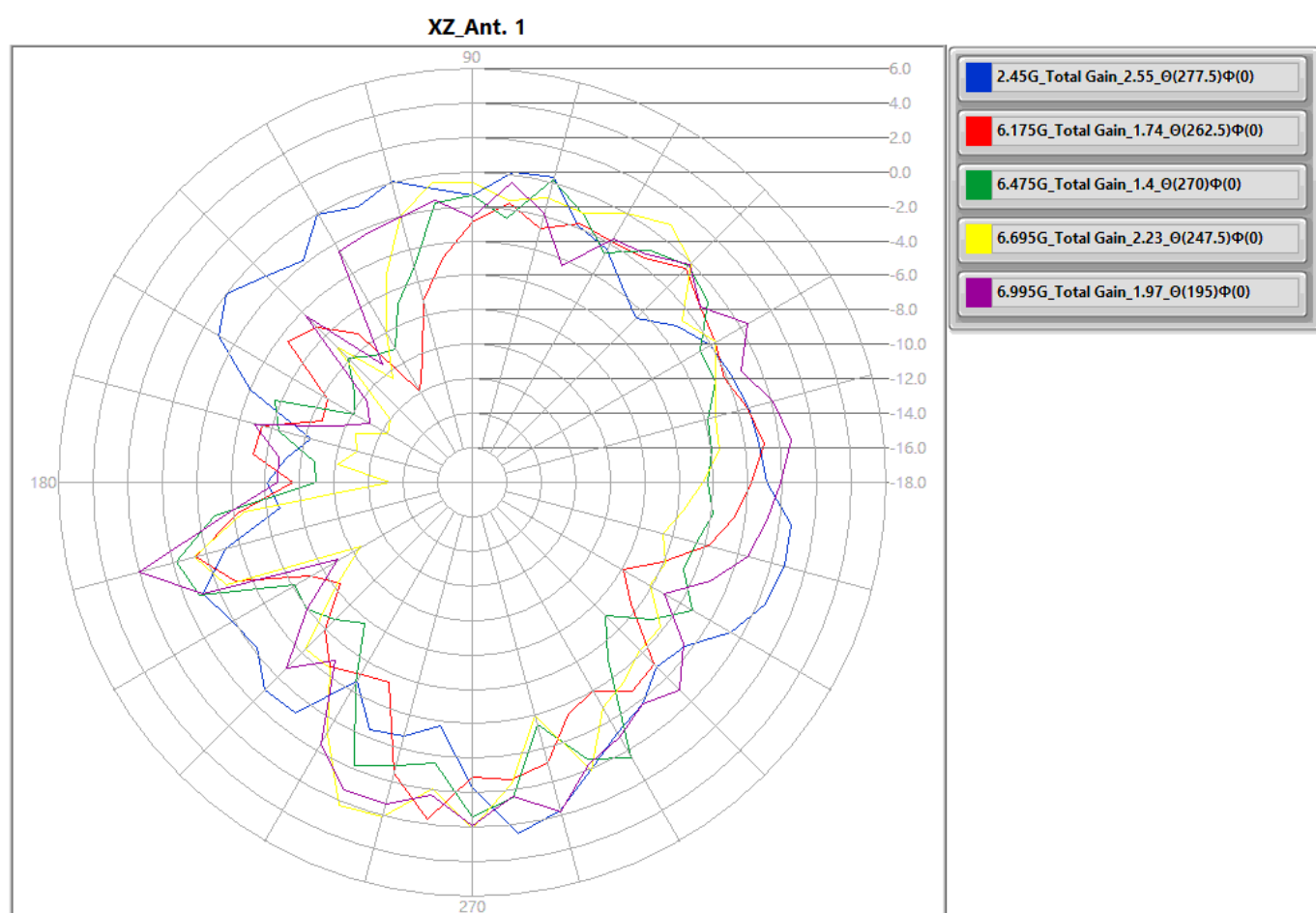
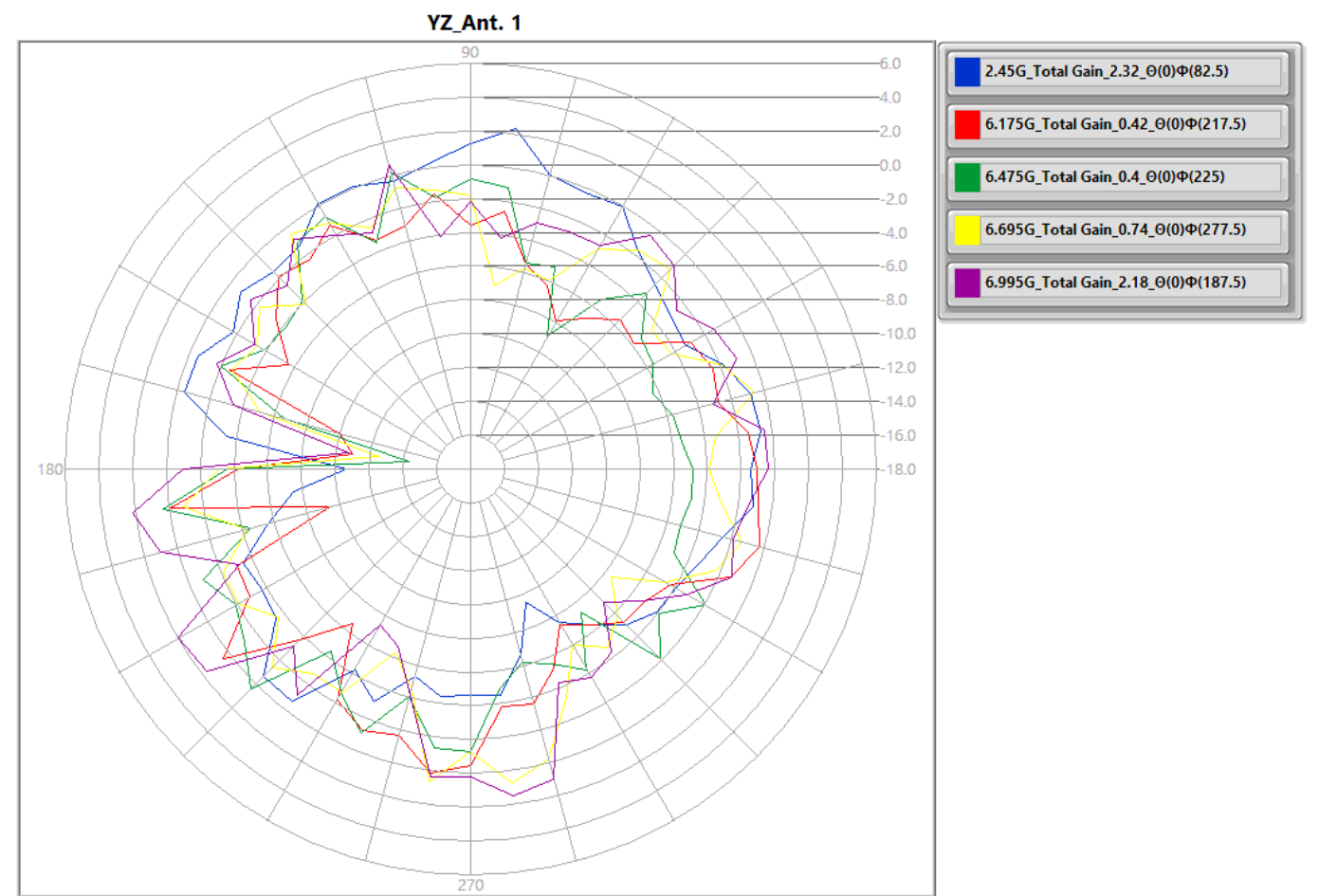
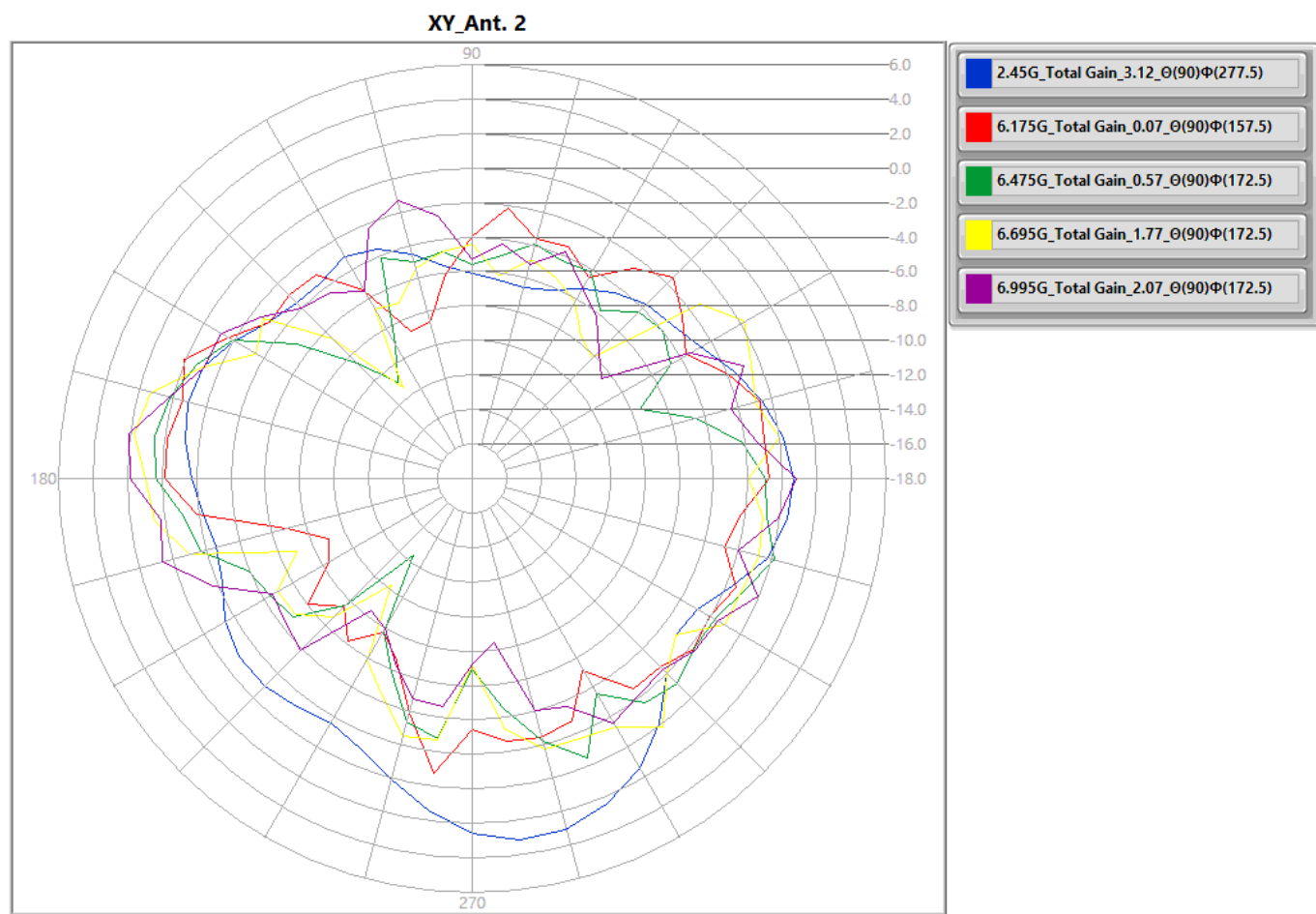
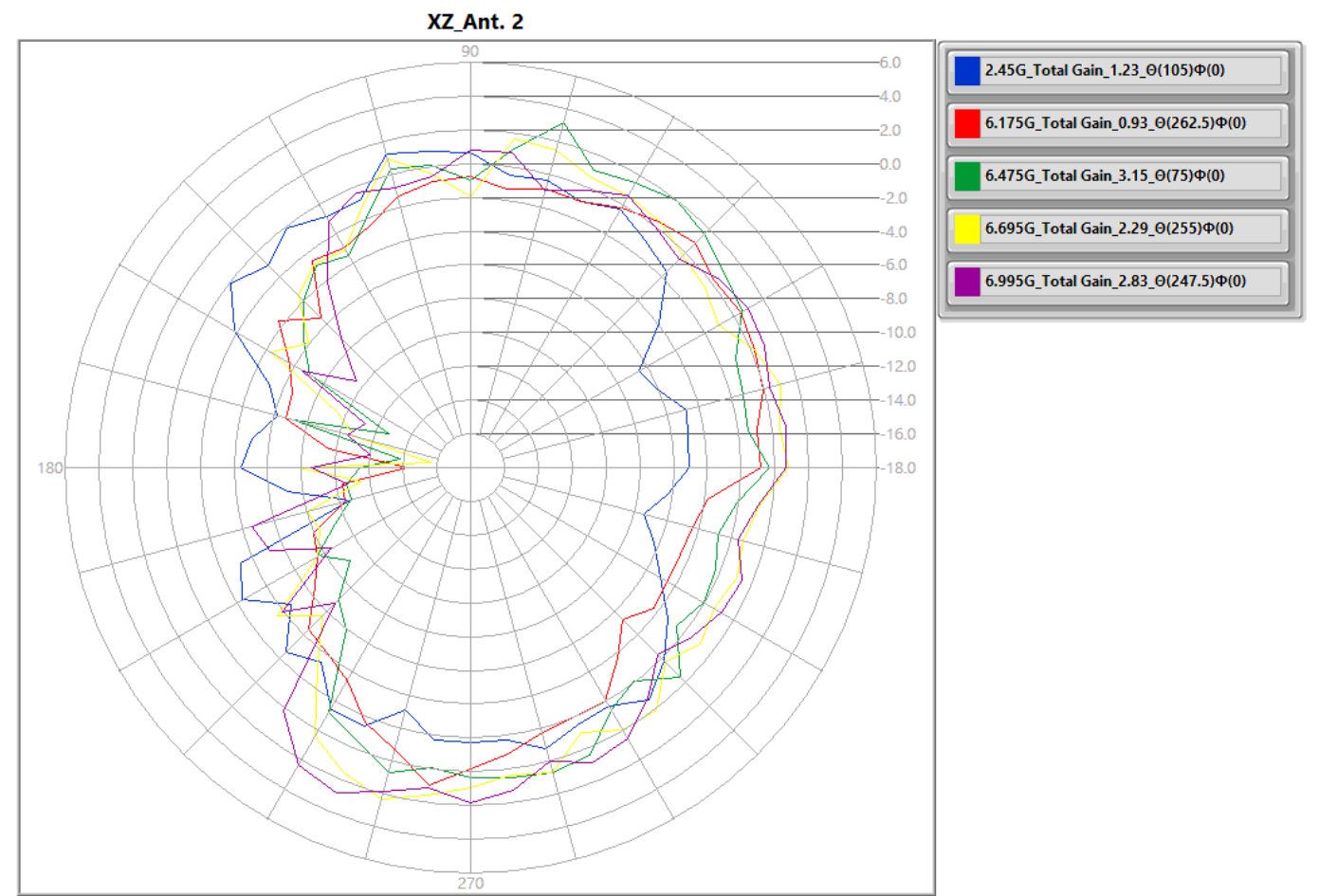
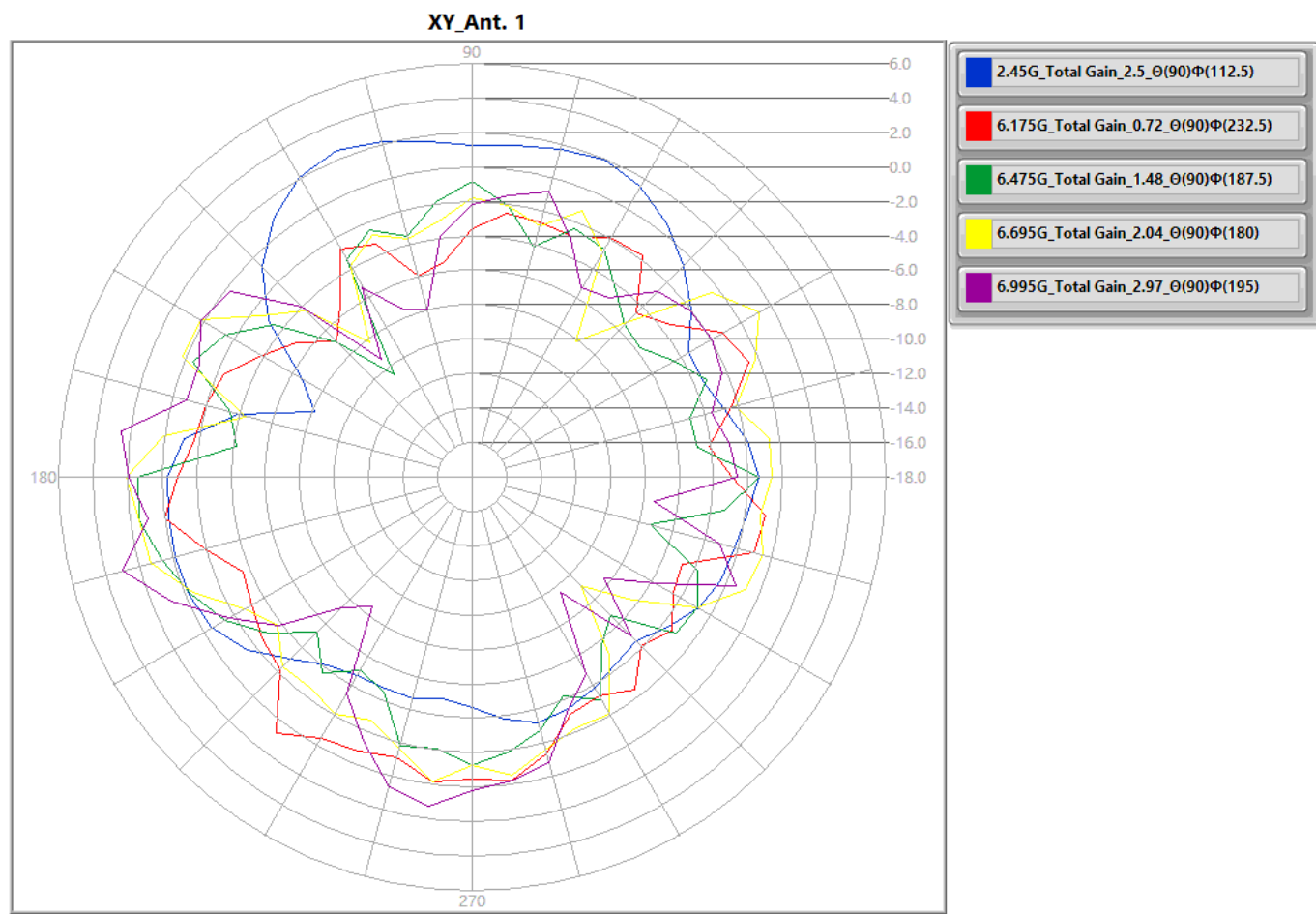
Antenna Pattern

Appendix C

Θ (22.5°)	-1.10/-1.01	-1.20/-1.54	-1.91/-1.23	-2.01/-1.57	-1.79/-1.06	-1.07/-1.14	-0.91/-1.46	-2.09/-3.04	-3.52/-5.33	-7.11/-8.81	-7.83/-6.31	-4.79/-3.82	-3.06/-3.06	-3.90/-4.79	-6.13/-6.43	-6.13/-6.11	-4.52/-3.53	-2.66/-2.35	-1.26/-0.80	-0.66/-0.85	-1.40/-1.56	-1.06/-1.12	-2.10/-2.42	-2.10/-1.92
Θ (30°)	0.48/0.24	-0.49/-1.72	-1.34/-1.25	-0.27/-0.08	0.38/-0.55	-0.61/-0.71	-1.43/-2.56	-3.65/-4.16	-4.29/-6.37	-3.37/-4.90	-6.82/-8.32	-8.03/-6.66	-5.12/-4.24	-4.66/-5.43	-6.73/-6.08	-5.93/-5.47	-5.31/-4.57	-4.83/-3.64	-3.21/-3.64	-2.75/-2.46	-1.64/-1.53	-2.76/-5.79	-5.21/-3.03	-0.92/0.05
Θ (37.5°)	-1.29/-3.12	-3.66/-3.22	-2.31/-0.97	-1.59/-2.39	-2.41/-2.44	-1.65/-1.88	-2.61/-3.91	-6.05/-8.41	-9.87/-8.11	-6.05/-5.33	-5.53/-4.14	-3.86/-2.82	-2.58/-1.68	-1.38/-2.60	-5.42/-6.66	-8.50/-5.75	-6.82/-6.45	-6.12/-0.24	-5.22/-4.82	-5.82/-3.95	-5.00/-5.30	-4.81/-3.37	-1.13/-0.53	
Θ (45°)	-0.17/-0.28	0.10/0.01	-0.86/-2.42	-1.98/-0.59	0.85/-69	1.73/0.63	-0.97/-2.01	-3.38/-6.00	-7.95/-8.85	-6.57/-5.30	-7.96/-8.75	-3.07/-0.14	-0.93/-3.84	-4.03/-4.83	-1.60/-3.39	-5.85/-8.20	-7.93/-5.62	-5.36/-4.64	-6.89/-5.29	-4.82/-6.37	-5.25/-0.27	-3.07/-1.48	-0.62/0.04	-0.79/-0.70
Θ (52.5°)	-1.37/-1.26	2.03/-1.16	-1.01/-0.53	0.49/-1.32	1.81/-139	0.44/-0.02	-0.59/-2.13	-3.40/-3.44	-4.36/-6.26	-6.16/-4.04	-3.09/-5.12	-4.63/-4.13	-1.81/-3.67	-2.68/-1.68	-3.53/-1.78	-6.53/-7.19	-5.73/-6.43	-6.61/-4.77	-4.32/-4.32	-5.19/-3.43	-3.27/-3.41	-3.95/-2.59	0.41/-0.22	-3.23/-4.55
Θ (60°)	-1.70/-1.00	-1.65/-1.27	0.06/0.97	1.03/-1.12	1.21/0.35	0.08/-1.07	-0.75/-4.29	-4.50/-5.42	-3.74/-3.01	-4.57/-6.58	-2.09/-0.40	-2.05/-2.12	-0.95/-2.99	-4.28/-4.47	-6.08/-6.32	-4.57/-6.90	-3.77/-5.41	-5.20/-5.46	-4.22/-3.21	-5.61/-5.41	-4.54/-2.20	-4.54/-2.20	-3.77/-3.81	
Θ (67.5°)	-4.38/-3.23	-2.29/-0.67	0.25/-0.35	-0.71/0.04	-0.36/-2.34	-2.75/-2.30	-2.82/-4.91	-5.54/-3.69	-3.72/-5.51	-3.71/-0.86	-0.45/-0.72	0.40/-1.34	-0.34/-2.30	-2.93/-3.61	-2.43/-3.17	-2.87/-8.00	-9.02/-6.68	-3.99/-3.25	-4.34/-3.37	-6.75/-6.78	-5.84/-8.10	-8.47/-9.41	-7.51/-2.66	-2.69/-3.90
Θ (75°)	-1.82/-1.55	-3.63/-2.28	0.71/-1.45	-0.14/-2.71	-2.25/-1.81	-2.34/-2.18	-2.90/-4.88	-7.26/-4.96	-3.81/-5.99	-6.66/-2.77	0.06/-0.48	-3.24/-0.01	1.74/-1.51	0.96/-2.75	-4.32/-3.85	-4.19/-9.59	-8.06/-1.93	0.61/-2.00	0.99/-0.19	-1.18/-2.42	-4.00/-1.75	-5.00/-5.82	-4.96/-2.85	-0.48/-2.80
Θ (82.5°)	-0.45/-1.22	-5.29/-1.94	1.34/-0.90	-1.27/-2.77	-4.46/-5.78	-4.53/-4.19	-4.19/-3.77	-4.34/-3.95	-7.93/-9.59	-3.88/-3.63	-5.24/-1.09	-0.71/-0.89	0.35/-2.77	2.98/-1.27	-2.24/-3.58	-6.97/-8.48	-2.87/-1.34	1.38/-1.52	1.45/-0.87	-0.73/-2.24	-3.21/-7.75	-5.46/-5.52	-7.20/-1.64	-0.59/-1.81
Θ (90°)	-2.60/-2.92	-3.59/-2.33	-1.94/-2.09	-2.80/-4.89	-5.34/-3.08	-0.82/-1.53	-2.20/-3.93	-7.92/-7.46	-5.28/-9.39	-4.04/-0.30	0.19/-0.89	-0.84/-2.54	1.93/0.93	2.97/0.88	-1.68/-3.84	-7.30/-8.52	-3.50/-1.41	0.61/-1.26	0.24/-0.25	-0.85/-3.45	-4.80/-9.60	-4.94/-8.34	-5.69/-1.47	-3.18/-7.35
Θ (97.5°)	-1.48/-1.49	-7.24/-3.76	-0.54/-0.39	-2.81/-7.97	-3.90/-5.15	-5.48/-4.22	-4.17/-3.77	-1.83/-0.65	-4.36/-7.26	-4.11/-1.45	0.03/-1.76	-2.50/-1.03	0.29/-2.51	1.94/-0.13	0.56/-0.35	-5.08/-3.01	-1.74/-0.65	0.15/-0.92	0.37/0.76	0.09/-0.87	-4.15/-9.35	-9.11/-9.19	-4.71/-0.89	-1.02/-2.87
Θ (105°)	-2.05/-2.67	-4.35/0.25	1.19/-2.04	-7.89/-11.01	-7.28/-3.63	-1.59/-2.04	0.58/-0.96	-3.03/-2.93	-6.12/-3.47	-1.55/-2.01	-6.48/-0.48	-0.90/-0.25	1.28/-2.10	1.92/0.79	1.30/0.40	-1.68/-4.75	-5.91/-3.74	-4.35/-4.37	-4.19/-3.82	-6.13/-8.28	-7.63/-8.35	-7.81/-5.59	-2.39/-0.58	-0.88/-3.30
Θ (112.5°)	-2.32/-6.21	-3.86/-0.59	-3.63/-8.14	-6.08/-9.05	-9.80/-7.88	-6.46/-2.92	-2.92/-7.64	-6.92/-3.20	-6.35/-3.16	0.48/-0.96	-3.09/-0.13	-1.25/-0.77	1.32/-1.07	1.88/-1.83	-1.81/-2.92	-1.86/-1.61	-7.56/-7.56	-11.88/-8.14	-6.66/-12.65	-7.91/-10.81	-8.00/-7.60	-4.84/-3.49	-1.09/-3.80	-9.87/-3.21
Θ (120°)	-2.58/-9.24	-1.75/-1.27	-0.97/-2.58	-3.68/-6.73	-7.76/-7.43	-2.72/-0.63	-2.00/-4.21	-6.16/-3.52	-5.04/-5.33	0.01/-0.13	-5.80/-1.47	0.28/-4.36	-0.45/-1.76	2.15/0.70	-0.91/-2.74	-1.51/-2.32	-3.14/-7.42	-2.90/-5.38	-7.37/-6.63	-10.31/-6.37	-5.19/-9.45	-7.26/-4.12	-4.96/-6.86	-2.24/-0.10
Θ (127.5°)	-9.42/-4.67	-2.44/-1.12	-3.51/-4.94	-5.34/-6.44	-6.95/-9.17	-3.07/-0.49	-0.85/-4.75	-7.44/-4.28	-3.31/-3.46	-3.58/-1.38	-2.33/-2.12	-2.05/-3.13	-4.98/-0.33	2.02/-0.16	-1.45/-1.12	-0.19/-1.92	-4.14/-5.23	-0.82/-2.14	-1.12/-4.23	-2.87/-4.34	-4.27/-5.20	-6.55/-2.55	-2.94/-8.14	
Θ (135°)	-4.30/-4.16	-5.82/-3.07	-3.50/-2.95	-2.13/-3.70	-3.90/-4.36	-2.90/-2.13	-2.64/-4.40	-5.66/-2.12	0.73/0.71	-3.41/-4.57	-3.45/-4.29	-6.12/-3.90	-2.80/-1.64	3.11/-1.71	-4.44/-3.97	-3.48/-3.02	-5.98/-7.25	-6.89/-6.62	-3.14/-5.98	-6.45/-9.91	-11.50/-6.75	-9.81/-12.90	-9.31/-4.72	-4.27/-5.19
Θ (142.5°)	-10.27/-4.22	-5.07/-4.66	-4.71/-4.65	-5.08/-7.46	-5.71/-2.96	-1.45/-1.51	-1.57/-3.13	-7.15/-3.98	-2.30/-1.48	-1.28/-2.40	-2.70/-3.70	-3.81/-6.28	-5.92/-6.63	-5.34/-5.54	-3.33/-4.12	-2.37/-3.56	-5.64/-3.35	-2.75/-0.16	1.66/-3.88	-3.36/-0.10	-3.82/-8.54	-1.85/-4.39	-5.48/-8.84	-6.77/-0.08
Θ (150°)	-11.15/-4.85	-2.21/-1.13	-2.66/-3.58	-4.46/-6.08	-4.39/-5.76	-4.71/-3.88	-3.52/-2.82	-3.85/-6.19	-9.56/-9.69	-5.75/-9.27	-2.80/-8.15	-14.51/-14.63	-9.02/-6.60	-5.59/-4.16	-1.62/-1.53	-5.99/-3.77	-2.13/-4.05	-4.26/-6.33	1.98/0.81	-2.48/-0.63	-0.48/-2.70	-4.83/-3.99	-5.01/-4.76	-2.83/-1.33
Θ (157.5°)	-9.49/-7.90	-4.02/-2.93	-2.56/-2.21	-2.59/-3.88	-4.39/-3.88	-2.87/-1.89	-1.75/-2.84	-4.36/-5.87	-11.79/-12.23	-7.42/-6.58	-6.34/-5.60	-3.71/-1.29	-1.12/-2.57	-4.23/-4.21	-3.96/-2.56	-1.27/-1.43	-4.98/-8.90	-4.48/-2.52	-3.18/-6.86	-6.66/-10.20	-9.29/-10.61	-11.93/-8.73	-4.78/-2.78	-1.47/-3.29
Θ (165°)	-4.95/-10.84	-11.52/-10.56	-9.54/-6.23	-4.56/-3.24	-2.83/-3.85	-3.97/-4.43	-3.49/-3.98	-5.84/-8.12	-6.08/-3.84	-3.52/-3.09	-2.22/-0.59	1.35/-1.92	1.97/-1.40	0.66/-0.47	-1.97/-2.07	-2.96/-4.09	-3.90/-2.36	-0.26/-0.94	0.97/0.21	-2.77/-4.48	-4.95/-4.97	-3.81/-1.19	0.40/0.81	0.49/-1.45
Θ (172.5°)	-6.69/-9.42	-8.33/-6.70	-5.58/-5.24	-4.69/-6.03	-9.91/-11.97	-12.29/-10.94	-10.71/-9.14	-9.22/-8.22	-7.83/-6.64	-5.11/-4.44	-3.83/-4.07	-3.59/-3.98	-4.04/-3.70	-3.82/-3.11	-1.97/-1.20	0.13/-1.13	1.88/-2.26	2.18/-2.29	2.44/-2.16	1.80/-1.08	1.47/-1.43	0.61/-1.31	-2.77/-4.39	
Θ (180°)	-6.68/-5.82	-5.98/-5.38	-5.56/-6.01	-5.69/-4.06	-2.77/-1.90	-1.46/-1.40	-0.97/-1.27	-1.01/-0.66	-0.19/-0.20	-0.31/-0.47	-0.30/-0.42	0.20/-0.38	0.33/0.11	-0.08/-0.49	0.25/0.90	0.83/-0.29	1.42/-2.13	1.92/-2.04	1.38/0.11	-0.45/-1.68	-2.48/-2.45	-2.83/-4.33	-5.90/-7.01	
Freq(Hz)	2.45GPol.	TotalAnt. 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)/Φ(7.5°)	Φ(15°)/Φ(22.5°)	Φ(30°)/Φ(37.5°)	Φ(45°)/Φ(52.5°)	Φ(60°)/Φ(67.5°)	Φ(75°)/Φ(82.5°)	Φ(90°)/Φ(97.5°)	Φ(105°)/Φ(112.5°)	Φ(120°)/Φ(127.5°)	Φ(135°)/Φ(142.5°)	Φ(150°)/Φ(157.5°)	Φ(165°)/Φ(172.5°)	Φ(180°)/Φ(187.5°)	Φ(195°)/Φ(202.5°)	Φ(210°)/Φ(217.5°)	Φ(225°)/Φ(232.5°)	Φ(240°)/Φ(247.5°)	Φ(255°)/Φ(262.5°)	Φ(270°)/Φ(277.5°)	Φ(285°)/Φ(292.5°)	Φ(300°)/Φ(307.5°)	Φ(315°)/Φ(322.5°)	Φ(330°)/Φ(337.5°)	Φ(345°)/Φ(352.5°)
Θ (0°)	-5.04/-4.92	-5.13/-4.96	-4.90/-5.06	-5.11/-5.39	-5.14/-5.26	-5.41/-5.51	-5.41/-5.81	-5.66/-5.59	-5.31/-5.39	-4.84/-4.68	-4.76/-4.63	-4.56/-5.08	-5.19/-5.37	-5.49/-5.33	-5.41/-5.57	-5.77/-5.87	-6.03/-6.41	-6.86/-6.68	-6.52/-5.78	-5.41/-4.89	-4.61/-4.41	-4.81/-4.67	-4.70/-4.90	-5.49/-5.60
Θ (7.5°)	-5.02/-5.33	-5.56/-5.52	-6.56/-5.74	-6.20/-6.56	-6.87/-7.08	-7.20/-7.12	-7.07/-7.23	-7.33/-7.58	-7.93/-7.94	-7.98/-7.78	-7.05/-6.64	-6.62/-6.39	-6.25/-5.94	-5.74/-5.34	-5.56/-5.44	-5.48/-5.68	-6.31/-5.87	-5.78/-5.57	-4.96/-4.49	-4.21/-3.99	-3.82/-3.86	-3.74/-3.96	-4.12/-4.49	
Θ (15°)	-4.75/-5.02	-5.47/-5.89	-6.67/-5.77	-6.70/-7.29	-7.55/-7.42	-7.57/-7.45	-7.54/-8.06	-8.35/-9.00	-10.19/-11.03	-10.71/-11.61	-10.78/-9.67	-9.84/-7.96	-7.36/-6.65	-6.14/-5.40	-5.05/-4.97	-4.92/-5.07	-5.01/-4.75	-4.95/-5.04	-5.68/-5.53	-4.59/-4.42	-4.21/-4.00	-3.87/-3.91	-4.06/-4.14	-4.30/-4.61
Θ (22.5°)	-6.03/-7.03	-7.85/-8.80	-9.38/-9.17	-8.99/-8.98	-8.80/-8.45	-8.72/-8.10	-8.11/-8.40	-9.35/-10.09	-11.02/-11.87	-12.21/-11.90	-10.80/-9.40	-8.16/-6.92	-6.26/-5.48	-4.98/-4.46	-4.56/-4.68	-5.09/-5.46	-5.48/-5.51	-5.49/-5.48	-5.65/-5.83	-5.56/-5.23	-5.01/-4.87	-4.71/-4.60	-4.59/-4.80	-5.14/-5.38
Θ (30°)	-6.53/-8.44	-10.25/-12.62	-15.60/-15.12	-14.44/-11.53	-9.69/-8.48	-8.11/-7.43	-7.27/-7.54	-7.68/-8.33	-8.70/-8.82	-8.97/-8.75	-8.13/-7.25	-6.43/-5.83	-5.02/-4.37	-3.76/-3.48	-3.35/-3.48	-3.58/-3.71	-3.71/-3.69	-3.76/-4.15	-4.61/-5.20	-5.50/-5.65	-5.51/-5.40	-4.97/-4.56	-4.64/-4.64	-4.85/-5.69
Θ (37.5°)	-3.91/-4.83	-6.17/-7.57	-9.83/-12.88	-13.11/-11.58	-9.68/-8.81	-8.19/-7.22	-6.70/-6.35	-6.15/-6.32	-6.25/-6.27	-6.03/-5.68	-5.19/-4.77	-4.33/-3.88	-3.30/-2.70	-2.45/-2.37	-2.52/-2.30	-2.27/-2.03	-1.80/-1.51	-1.65/-1.98	-2.60/-3.41	-4.29/-4.88	-5.17/-5.10	-4.41/-4.00	-3.42/-2.83	-2.80/-3.16
Θ (45°)	-1.64/-1.96	-2.69/-3.55	-4.89/-6.30	-8.36/-9.89	-8.75/-10.64	-8.78/-8.74	-8.24/-7.34	-6.39/-5.71	-5.10/-4.68	-4.60/-3.57	-3.21/-2.68	-2.47/-2.22	-1.83/-1.49	-1.46/-1.59	-1.97/-2.02	-1.77/-1.31	-1.29/-1.06	-1.21/-1.28	-1.26/-1.31	-1.64/-2.20	-2.81/-2.82	-2.87/-3.03	-2.60/-2.11	-1.82/-1.74
Θ (52.5°)	-1.08/-0.95	-1.44/-2.01	-2.95/-3.81	-4.76/-6.04	-7.64/-9.08	-10.26/-9.98	-9.05/-8.19	-6.88/-5.54	-4.45/-3.55	-2.43/-1.86	-1.22/-1.04	-0.85/-0.76	-0.69/-0.77	-1.04/-1.64	-1.80/-1.57	-1.41/-1.00	-0.81/-0.59	-0.34/-0.06	0.28/-0.47	0.10/-0.37	-1.11/-1.87	-2.20/-2.39	-2.14/-1.73	-1.37/-1.06
Θ (60°)	-0.29/0.14	0.12/-0.19	-0.97/-1.62	-2.79/-4.03	-5.41/-6.98	-8.10/-8.32	-7.82/-7.14	-5.86/-4.94	-3.87/-2.88	-2.00/-1.25	-1.05/-1.06	-1.26/-1.53	-1.66/-2.05	-2.47/-2.51	-1.74/-1.01	-0.41/-0.08	0.25/-0.49	0.40/-0.50	0.49/0.13	-0.31/-1.12	-2.06/-3.20	-3.88/-3.90	-2.92/-2.20	-1.11/-0.57
Θ (67.5°)	-0.97/-0.49	-0.16/-0.38	-0.74/-1.27	-2.08/-2.90	-3.85/-4.77	-5.37/-5.89	-5.86/-5.20	-4.42/-3.79	-3.28/-2.63	-1.83/-1.12	-1.03/-0.80	-0.72/-0.88	-1.52/-2.04	-1.84/-1.17	-0.80/-0.41	-0.15/-0.17	-0.14/-0.42	-0.31/-0.26	-0.13/-0.17	-0.36/-0.60	-1.16/-2.00	-3.08/-4.10	-4.50/-4.01	-2.81/-1.78
Θ (75°)	-0.37/-0.12	-0.23/-0.66	-1.11/-1.42	-1.49/-1.85	-2.06/-2.59	-2.97/-3.20	-3.27/-3.13	-2.58/-2.45	-2.34/-2.08	-1.47/-0.80	-0.33/-0.18	0.60/-0.21	-0.78/-1.58	-1.52/-1.32	-1.22/-1.00	-0.87/-1.05	-1.21/-1.21	-0.96/-0.75	-0.24/-0.38	0.85/-1.03	0.68/-1.02	-0.48/-0.97	-1.16/-0.82	-0.89/-0.06
Θ (82.5°)	-0.55/-0.44	-0.62/-1.27	-2.15/-2.76	-2.96/-3.06	-3.15/-3.33	-3.27																		



Θ(75°)	1.46/-2.59	-1.11/0.37	-0.76/-1.33	-1.90/-2.84	-3.78/-3.43	-5.03/-5.94	-6.65/-5.54	-4.62/-5.11	-5.21/-5.10	-2.86/-1.11	-1.27/0.32	1.33/0.55	0.68/0.79	0.02/-2.71	-5.59/-7.46	-7.19/-9.52	-10.44/-8.39	-6.41/-4.35	-3.93/-4.61	-6.09/-5.78	-2.40/-0.23	0.78/1.02	1.89/0.93	0.182/37
Θ(82.5°)	1.67/0.10	-1.21/-0.18	-0.60/-3.09	-7.53/-6.02	-3.71/-3.58	-3.41/-3.35	-2.09/-2.31	-4.14/-7.35	-7.52/-6.22	-2.56/0.12	-0.66/-0.11	0.59/0.17	0.35/0.73	-1.45/-5.29	-6.37/-11.09	-10.72/-12.76	-9.45/-7.77	-6.40/-4.93	-4.77/-3.79	-3.79/-1.85	-0.36/-1.91	-1.76/-0.01	1.32/0.07	-2.85/0.66
Θ(90°)	-1.97/-0.05	-0.97/-0.50	0.22/-1.35	-8.14/-7.57	-6.18/-5.40	-4.84/-6.16	-4.37/-4.75	-5.36/-6.99	-6.65/-11.36	-6.51/-2.77	-3.53/-1.15	1.29/1.77	0.92/0.58	-0.99/-7.02	-4.97/-5.05	-6.69/-10.26	-5.82/-4.32	-2.53/-2.71	-7.17/-3.34	-1.74/-1.65	-1.32/0.21	-2.05/-3.15	-1.13/-1.04	-0.74/-1.01
Θ(97.5°)	-0.45/-1.70	-1.44/-2.82	-3.08/-4.83	-11.31/-7.67	-4.28/-4.70	-3.94/-6.56	-4.87/-5.74	-6.66/-6.19	-7.12/-13.93	-7.98/-4.91	-2.33/-1.43	2.68/1.17	1.53/1.04	-3.65/-3.45	-4.91/-3.25	-9.39/-10.86	-7.36/-3.97	-2.34/0.84	-2.42/-4.18	-1.89/-1.81	-3.16/-1.73	-1.29/-1.46	-2.37/-3.00	-0.21/1.78
Θ(105°)	0.91/-2.26	-1.29/-2.61	-5.03/-7.73	-10.92/-9.72	-6.27/-10.71	-8.63/-7.10	-1.89/-1.40	-2.79/-4.24	-6.91/-11.24	-5.33/-1.64	-0.09/-2.35	2.00/1.76	2.29/0.48	-1.44/-1.80	-2.61/-7.08	-2.94/-6.71	-4.49/-1.06	0.61/1.01	1.41/-0.40	-2.88/-6.03	-5.70/-3.52	-2.97/-2.58	-1.98/-2.74	-0.65/2.23
Θ(112.5°)	-1.23/-4.13	-2.81/-2.22	-4.35/-7.46	-10.16/-9.08	-4.36/-6.54	-7.87/-7.72	-7.29/-3.92	-3.20/-2.71	-6.30/-14.53	-6.77/-3.44	-0.29/0.78	-0.08/1.90	1.57/-2.52	2.05/-4.47	-7.81/-1.43	-0.09/-2.77	-5.49/-2.42	-0.99/-3.65	-4.95/-2.89	-2.65/-5.65	-7.82/-7.11	-7.55/-3.05	-0.95/-1.68	-4.44/-0.19
Θ(120°)	-3.14/-4.91	-8.75/-6.36	-5.64/-6.15	-7.10/-4.72	-3.53/-1.46	-5.03/-6.88	-7.55/-5.66	-3.87/-4.00	-6.99/-6.18	-8.47/-4.92	-3.83/-2.61	-0.63/2.00	0.37/-2.87	1.67/-8.10	-12.88/-3.58	1.12/-4.63	-5.01/-4.90	-1.86/-0.38	-1.43/-0.29	-1.71/-2.77	-5.73/-6.09	-10.35/-8.77	-2.33/-2.56	-1.56/-3.33
Θ(127.5°)	-2.79/-6.27	-8.44/-12.46	-11.33/-7.90	-4.60/-3.95	-1.92/-3.12	-2.16/-2.85	-4.87/-5.93	-8.99/-12.89	-9.28/-8.86	-6.52/-6.41	-4.14/-1.70	0.79/0.15	-3.09/-1.10	-3.44/-6.87	-12.27/-2.00	-3.68/-3.94	-4.28/-7.67	-0.80/-0.79	-4.75/-1.07	-4.56/-3.33	-7.92/-12.40	-6.51/-12.88	-2.67/-0.57	-0.03/-0.16
Θ(135°)	-3.64/-3.63	-5.02/-5.27	-8.04/-10.29	-5.89/-3.93	-3.66/-2.71	-4.01/-4.30	-4.16/-5.05	-5.80/-6.02	-6.52/-6.12	-5.91/-6.13	-5.21/-2.77	-2.45/-4.32	-5.59/-3.82	-5.78/-7.16	-10.95/-6.71	-4.89/-4.57	-6.32/-11.79	-4.15/-1.67	-3.04/-2.85	-6.23/-5.05	-4.32/-7.74	-7.28/-12.46	-7.49/-2.84	-2.43/-1.08
Θ(142.5°)	-5.93/-7.31	-7.02/-4.45	-4.38/-5.32	-7.96/-9.22	-6.65/-6.08	-5.71/-6.07	-6.86/-7.49	-6.92/-5.95	-6.78/-8.79	-12.60/-8.91	-5.30/-4.20	-4.62/-5.48	-3.58/-6.05	-10.63/-12.12	-7.97/-5.41	-8.96/-5.54	-10.00/-13.67	-10.81/-7.83	-8.22/-3.30	-7.37/-15.44	-10.84/-10.93	-10.59/-15.35	-14.22/-10.96	-8.06/-4.78
Θ(150°)	-4.34/-5.28	-5.96/-6.33	-6.12/-6.88	-6.71/-6.09	-4.63/-4.28	-3.76/-3.17	-3.43/-4.00	-4.82/-6.88	-10.01/-11.61	-9.34/-8.22	-7.07/-7.70	-7.66/-7.13	-7.50/-9.45	-11.31/-8.28	-8.28/-7.29	-8.19/-7.56	-9.61/-9.32	-4.60/-2.78	-7.76/-12.46	-10.46/-10.83	-13.06/-12.63	-8.55/-9.53	-9.22/-7.72	-9.90/-4.71
Θ(157.5°)	-7.83/-6.94	-6.97/-7.07	-7.74/-6.89	-6.15/-5.53	-5.64/-5.76	-6.11/-5.74	-5.60/-6.66	-5.93/-7.25	-7.98/-7.96	-8.49/-8.97	-9.92/-9.53	-9.72/-9.22	-9.26/-9.63	-8.92/-8.60	-9.02/-9.34	-9.62/-9.73	-10.30/-10.43	-10.43/-11.51	-13.42/-12.40	-11.77/-11.62	-11.41/-9.91	-11.05/-11.34	-12.53/-11.57	-9.65/-8.62
Freq[Hz]	6.995GPol.	TotalAnt.2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	0.67/0.95	0.77/0.26	0.75/0.63	0.31/-0.07	-0.25/0.15	0.48/0.33	-0.18/-0.40	-0.65/-0.20	-0.09/-0.09	-0.30/-0.39	0.08/-0.18	0.33/0.28	-0.04/-0.15	0.61/0.01	0.13/0.65	0.35/0.02	0.32/0.17	-0.09/-0.02	0.65/0.57	0.44/-0.14	-0.11/0.29	0.31/0.53	0.11/0.50	0.66/0.78
Θ(7.5°)	0.78/0.43	0.45/0.28	0.36/0.16	-0.11/-0.26	-0.10/0.15	0.36/0.29	-0.48/-0.22	-0.24/0.22	0.05/-0.35	-0.38/-0.50	-0.17/-0.65	-0.42/-0.79	-0.84/-0.74	-0.98/-0.69	-1.10/-0.98	-0.99/-0.66	-0.50/-0.95	-1.26/-1.38	-1.02/-0.51	-0.52/-0.98	-0.70/-0.37	0.07/0.12	0.11/0.35	0.39/0.30
Θ(15°)	0.33/0.05	-0.09/-0.06	-0.52/-0.72	-0.98/-1.56	-1.12/-1.05	-1.00/-1.54	-2.14/-2.81	-2.55/-2.08	-2.57/-2.87	-2.85/-2.85	-2.57/-3.47	-2.77/-2.72	-1.62/-0.91	-0.94/-1.75	-1.85/-2.34	-2.52/-2.11	-2.51/-2.48	-2.61/-2.66	-3.17/-2.80	-2.21/-1.28	-0.82/-0.90	-0.84/-0.55	0.36/0.29	0.07/0.72
Θ(22.5°)	0.83/0.42	-0.07/-1.27	-2.31/-2.99	-3.45/-3.59	-2.89/-3.65	-3.45/-3.81	-3.03/-2.95	-2.86/-3.22	-3.91/-5.02	-6.01/-5.84	-5.62/-3.73	-2.46/-1.44	-0.60/-0.35	-1.21/-2.77	-3.28/-4.43	-4.23/-3.67	-2.52/-2.15	-2.12/-1.31	-1.20/-1.22	-1.51/-2.16	-1.82/-1.30	-1.14/-0.93	0.22/0.54	0.38/0.53
Θ(30°)	0.92/0.32	-0.69/-1.90	-3.81/-5.69	-7.13/-6.96	-7.48/-6.85	-7.58/-7.03	-6.64/-6.02	-5.26/-4.09	-3.73/-3.67	-3.91/-4.04	-4.46/-4.41	-3.27/-1.74	-0.87/-0.41	-2.11/-4.55	-5.34/-4.45	-2.48/-0.92	-0.30/-0.33	0.00/0.25	0.00/-0.29	-0.55/-0.21	-0.67/-0.55	-0.96/-0.79	0.23/0.94	1.26/1.39
Θ(37.5°)	0.47/-0.16	-1.52/-1.87	-4.52/-6.13	-8.03/-9.41	-11.28/-11.78	-11.69/-12.30	-13.45/-14.91	-11.88/-9.67	-7.79/-6.02	-4.58/-3.36	-3.31/-3.70	-5.29/-3.71	-1.55/-1.13	-2.03/-2.73	-3.19/-1.51	-0.93/-1.17	-2.16/-3.34	-4.09/-3.99	-2.79/-2.21	-2.17/-1.98	-1.75/-0.25	0.50/0.97	0.55/0.46	0.91/0.45
Θ(45°)	-0.54/-2.23	-2.60/-2.56	-4.47/-6.67	-8.67/-7.10	-7.76/-6.97	-6.13/-6.74	-7.15/-8.08	-7.95/-8.53	-8.50/-10.75	-11.65/-6.55	-4.48/-3.37	-4.80/-3.50	-2.34/-2.01	-5.23/-5.74	-4.85/-4.10	-4.02/-6.13	-8.13/-5.46	-2.01/-0.77	0.54/1.18	0.61/-0.72	-1.67/-1.21	-0.32/0.76	0.96/1.01	0.81/0.59
Θ(52.5°)	-0.02/-1.63	-1.92/-1.59	-3.34/-5.40	-6.27/-5.53	-6.01/-6.50	-6.75/-8.15	-8.67/-9.58	-7.88/-6.17	-4.79/-5.73	-6.43/-7.14	-5.31/-2.68	-1.78/-2.27	-0.77/-1.68	-4.08/-4.40	-4.62/-4.66	-5.95/-6.92	-6.34/-4.78	-3.21/-1.11	-0.93/-0.37	1.02/1.14	1.29/-0.23	0.05/0.88	0.49/0.09	0.76/1.32
Θ(60°)	0.59/-2.27	-2.61/-2.18	-2.96/-3.18	-2.88/-3.49	-4.21/-4.86	-5.87/-6.18	-7.44/-8.30	-8.00/-8.50	-7.07/-5.37	-4.08/-4.70	-5.87/-3.06	-0.01/-0.34	0.53/-0.04	-2.03/-3.37	-5.01/-5.10	-4.98/-4.40	-5.74/-6.38	-5.74/-3.96	-2.59/-2.75	-2.53/-1.12	0.10/0.89	0.66/0.88	1.10/1.20	1.46/1.82
Θ(67.5°)	-0.19/-0.86	-0.91/-2.91	-4.22/-3.59	-4.34/-5.56	-4.08/-2.38	-1.44/-1.76	-2.97/-3.90	-4.79/-5.20	-4.69/-3.04	-2.22/-2.78	-3.46/-1.39	-0.22/-0.34	0.90/-0.02	-2.40/-4.61	-6.03/-4.19	-5.32/-7.76	-10.89/-10.27	-9.20/-6.94	-4.99/-2.90	-1.94/-0.92	-0.68/-0.23	-0.10/0.29	-0.42/-0.01	0.80/0.92
Θ(75°)	-0.99/-1.37	-0.18/-2.06	-4.56/-3.31	-3.96/-6.96	-6.74/-3.95	-2.17/-3.09	-2.50/-2.63	-2.82/-2.54	-3.11/-2.01	-1.01/-2.60	-2.16/-1.36	-0.79/-0.11	0.02/-0.85	-1.29/-1.59	-4.13/-5.58	-6.29/-8.10	-8.34/-8.45	-7.52/-7.85	-9.65/-7.88	-6.61/-4.35	-2.12/0.09	0.85/1.36	0.50/-1.23	1.00/0.97
Θ(82.5°)	0.81/-3.39	-0.84/-0.66	-4.90/-5.48	-4.53/-4.47	-4.09/-2.30	-2.73/-3.47	-4.68/-4.08	-3.72/-2.86	-4.64/-5.52	-2.93/-1.42	-0.62/-0.24	-0.09/1.18	1.26/0.20	0.12/-1.67	-5.81/-7.27	-5.68/-8.23	-15.50/-13.55	-7.00/-6.98	-6.96/-5.02	-3.63/-4.89	-3.78/-2.97	-0.80/-0.06	0.64/-0.87	-0.15/2.17
Θ(90°)	0.83/-1.38	-2.47/-0.96	-3.45/-8.50	-7.57/-6.17	-5.21/-3.75	-5.19/-4.30	-5.28/-2.63	-1.31/-2.33	-5.49/-4.41	-3.98/-2.58	-1.20/-1.17	0.22/2.07	1.87/0.21	0.58/-1.75	-4.61/-4.32	-3.96/-8.36	-7.93/-6.40	-4.78/-4.66	-7.23/-8.37	-4.07/-3.67	-1.59/-2.19	-2.39/-1.70	-1.51/-0.04	-1.99/-0.09
Θ(97.5°)	-0.58/-0.86	-3.40/-3.55	-4.13/-7.76	-12.09/-11.36	-6.71/-6.31	-12.57/-9.81	-8.45/-4.31	-1.79/-3.18	-4.41/-4.54	-8.60/-5.93	-3.04/-0.27	1.73/1.87	1.13/0.93	0.54/-0.95	-3.01/-2.58	-7.12/-9.31	-5.54/-2.75	-3.37/-0.90	-4.71/-2.94	-3.52/-5.54	-2.79/-1.94	-2.41/-1.24	-2.49/-0.16	0.65/0.65
Θ(105°)	-0.86/-2.94	-1.88/-3.98	-5.42/-5.52	-9.40/-8.17	-8.70/-9.14	-13.19/-7.41	-6.54/-4.10	-2.35/-6.11	-7.70/-9.14	-13.90/-5.84	-2.18/-0.15	2.11/1.00	1.84/1.47	0.02/0.51	-1.84/-6.23	-3.43/-6.03	-12.38/-1.59	0.14/-0.69	-1.55/-3.43	-3.91/-6.82	-3.91/-5.54	-3.20/-1.85	-2.18/-0.97	-0.60/1.12
Θ(112.5°)	-0.38/-4.81	-3.93/-4.48	-9.42/-7.87	-10.86/-11.14	-4.38/-6.70	-6.91/-5.90	-2.03/-0.50	-2.82/-4.33	-4.26/-7.38	-5.35/-2.47	-0.44/0.16	-1.36/1.25	2.83/-1.43	1.50/-1.90	-6.39/-5.60	-0.54/-2.54	-8.15/-3.35	-2.30/-4.21	-5.05/-4.09	-6.38/-10.67	-10.29/-4.89	-4.82/-3.00	-1.08/-3.02	-2.94/-0.07
Θ(120°)	-1.16/-3.31	-4.41/-5.15	-8.21/-11.41	-8.00/-4.93	-3.99/-3.91	-3.79/-3.09	-2.92/-2.59	-2.65/-2.06	-4.10/-3.82	-5.25/-4.60	-1.53/-1.02	-0.44/2.66	2.34/-1.87	1.90/-5.93	-9.06/-3.79	0.71/-5.85	-5.69/-2.34	-1.40/-0.16	-1.07/-1.65	-4.47/-5.11	-10.20/-6.58	-3.56/-4.46	-0.31/-2.21	-3.24/-0.88
Θ(127.5°)	-4.14/-6.14	-8.12/-4.94	-3.71/-5.08	-4.48/-4.67	-4.19/-3.30	-2.60/-3.93	-1.89/-2.13	-1.50/-3.23	-4.66/-6.24	-7.94/-5.81	-5.06/-3.96	-0.10/1.10	0.20/-1.12	-2.20/-5.64	-7.18/-1.89	-3.91/-6.79	-3.54/-4.37	-0.12/-0.09	-4.15/-1.97	-5.07/-6.95	-11.53/-7.21	-7.26/-6.08	-0.50/-0.97	-1.31/-2.92
Θ(135°)	-7.21/-8.46	-8.27/-9.07	-9.51/-5.51	-4.41/-3.83	-3.63/-3.13	-3.81/-2.91	-3.56/-4.66	-4.87/-5.06	-4.44/-5.87	-4.57/-4.77	-5.43/-4.13	-3.42/-2.83	-6.68/-1.95	-4.38/-6.83	-10.00/-7.62	-5.82/-8.36	-4.56/-7.40	-2.29/-2.04	-1.47/-0.78	-4.54/-4.27	-4.93/-6.67	-5.69/-8.68	-4.66/-4.20	-3.99/-5.52
Θ(142.5°)	-9.52/-9.25	-5.16/-5.43	-4.45/-5.75	-5.34/-4.16	-3.43/-3.21	-2.91/-3.70	-5.15/-6.08	-5.77/-6.78	-5.25/-4.43	-4.35/-4.61	-4.10/-3.31	-4.81/-4.92	-3.99/-4.31	-7.69/-9.05	-8.24/-6.88	-5.62/-8.45	-6.29/-11.18	-14.76/-9.92	-11.89/-3.20	-6.24/-15.09	-15.49/-7.91	-7.49/-8.73	-9.05/-13.36	-9.65/-10.43
Θ(150°)	-6.50/-5.35	-6.02/-6.78	-6.83/-4.97	-3.86/-4.16	-5.77/-5.45	-4.83/-4.75	-3.87/-4.24	-5.67/-7.67	-9.20/-11.90	-10.04/-6.74	-5.78/-4.89	-6.15/-6.98	-8.45/-13.82	-13.21/-7.78	-6.64/-7.65	-9.06/-11.61	-11.42/-9.34	-5.39/-2.36	-5.01/-1					

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



Appendix D

Freq(Hz)	5.2GPol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Φ(7.5°)	Φ(15°)Φ(22.5°)	Φ(30°)Φ(37.5°)	Φ(45°)Φ(52.5°)	Φ(60°)Φ(67.5°)	Φ(75°)Φ(82.5°)	Φ(90°)Φ(97.5°)	Φ(105°)Φ(112.5°)	Φ(120°)Φ(127.5°)	Φ(135°)Φ(142.5°)	Φ(150°)Φ(157.5°)	Φ(165°)Φ(172.5°)	Φ(180°)Φ(187.5°)	Φ(195°)Φ(202.5°)	Φ(210°)Φ(217.5°)	Φ(225°)Φ(232.5°)	Φ(240°)Φ(247.5°)	Φ(255°)Φ(262.5°)	Φ(270°)Φ(277.5°)	Φ(285°)Φ(292.5°)	Φ(300°)Φ(307.5°)	Φ(315°)Φ(322.5°)	Φ(330°)Φ(337.5°)	Φ(345°)Φ(352.5°)
Θ(0°)	-4.95/-4.84	-6.36/-6.99	-7.93/-6.74	-7.82/-7.71	-7.22/-6.73	-7.70/-7.53	-8.07/-7.10	-8.03/-7.38	-7.05/-6.14	-4.93/-5.22	-4.78/-4.08	-4.60/-4.57	-4.00/-4.24	-4.01/-4.19	-4.45/-4.40	-4.70/-4.88	-5.19/-5.26	-4.88/-5.12	-5.27/-5.17	-6.02/-5.88	-6.60/-6.80	-7.40/-7.48	-6.78/-5.71	-5.15/-5.04
Θ(7.5°)	-3.12/-3.48	-3.19/-4.47	-4.23/-4.23	-4.37/-4.29	-3.72/-3.95	-3.31/-3.91	-4.28/-6.41	-4.83/-5.59	-5.42/-4.92	-4.77/-4.38	-4.08/-4.01	-3.51/-4.06	-3.94/-4.25	-4.64/-5.17	-5.41/-5.71	-5.86/-6.15	-6.50/-7.31	-6.90/-6.69	-6.18/-6.71	-6.59/-6.82	-7.14/-6.56	-6.84/-5.72	-5.14/-4.63	-4.44/-3.14
Θ(15°)	-3.87/-2.45	-3.48/-4.92	-4.10/-4.40	-3.98/-5.02	-4.83/-4.95	-5.50/-5.90	-5.31/-6.04	-6.28/-6.37	-6.47/-7.20	-7.69/-7.23	-6.53/-6.00	-5.47/-5.46	-5.50/-5.78	-6.45/-6.27	-5.17/-5.29	-5.08/-4.68	-5.02/-5.27	-5.73/-6.15	-6.68/-6.60	-7.31/-7.58	-7.70/-6.82	-6.82/-6.28	-5.95/-4.40	
Θ(22.5°)	-2.10/-1.27	-1.41/-1.67	-2.21/-4.36	-5.50/-5.78	-6.40/-7.00	-8.30/-8.36	-8.65/-8.48	-8.47/-8.01	-8.54/-8.96	-9.82/-10.08	-10.78/-10.19	-10.05/-10.78	-9.78/-8.25	-7.54/-7.25	-7.00/-6.66	-6.93/-7.79	-10.18/-11.45	-12.70/-12.05	-10.62/-8.97	-8.62/-8.09	-7.40/-6.14	-5.81/-5.45	-4.64/-2.60	-2.80/-3.18
Θ(30°)	-0.87/-0.32	0.43/-0.17	0.43/-1.36	-2.83/-11.00	-14.14/-11.85	-11.07/-9.62	-7.10/-5.45	-4.35/-4.29	-4.79/-6.59	-7.20/-8.20	-8.59/-7.84	-8.39/-7.12	-6.60/-6.47	-7.60/-8.39	-8.69/-8.61	-9.71/-7.66	-7.14/-6.61	-5.01/-4.98	-5.14/-3.83	-3.17/-3.81	-5.70/-5.06	-5.00/-4.68	-5.50/-4.76	-7.29/-1.66
Θ(37.5°)	-1.54/-0.36	1.30/-1.42	0.50/-0.32	-2.69/-4.78	-9.13/-14.25	-14.65/-13.07	-9.36/-7.65	-5.62/-5.08	-5.19/-5.24	-5.14/-5.49	-6.45/-8.19	-11.65/-10.17	-13.46/-12.42	-9.70/-10.29	-13.54/-10.92	-7.51/-6.84	-5.28/-3.87	-3.61/-3.53	-4.04/-6.14	-4.83/-2.16	-1.80/-3.16	-3.18/-3.06	-3.33/-3.58	-4.03/-4.50
Θ(45°)	-7.89/-2.58	0.72/-0.56	-0.44/-1.20	-3.24/-2.32	-7.26/-10.04	-8.84/-7.96	-6.81/-5.75	-5.86/-4.69	-4.27/-4.61	-8.85/-7.27	-8.33/-11.57	-11.15/-10.70	-13.41/-10.20	-9.74/-11.20	-10.04/-5.63	-4.15/-3.08	-2.56/-3.30	-3.89/-5.78	-5.51/-3.50	-1.18/-4.58	-3.59/-3.52	-4.88/-4.02	-4.30/-4.16	-4.19/-4.77
Θ(52.5°)	-1.22/-0.90	-0.05/-2.53	-3.16/-6.29	-7.73/-6.62	-8.03/-7.16	-7.71/-6.87	-9.05/-7.49	-7.14/-7.40	-8.06/-11.20	-14.08/-15.43	-13.89/-13.86	-9.23/-8.74	-12.13/-11.34	-9.36/-10.25	-10.91/-9.31	-5.79/-5.04	-6.55/-8.82	-11.43/-10.10	-9.34/-7.62	-4.20/-2.05	-1.91/-2.99	-7.56/-14.29	-7.30/-4.10	-3.18/-2.53
Θ(60°)	0.76/-1.59	-8.98/-10.39	-6.60/-5.87	-4.53/-2.71	-2.50/-3.35	-3.92/-3.94	-4.78/-5.50	-5.60/-5.17	-5.35/-6.56	-5.32/-6.68	-8.78/-11.47	-13.02/-12.83	-8.66/-9.07	-9.28/-11.74	-12.48/-8.37	-8.15/-8.05	-5.95/-6.53	-6.14/-5.10	-4.45/-6.73	-5.20/-3.69	-4.79/-5.03	-2.86/-3.90	-5.33/-9.39	-2.20/-0.77
Θ(67.5°)	2.22/-0.29	-1.54/-4.31	-5.33/-6.60	-5.92/-6.19	-6.53/-7.53	-6.88/-6.76	-6.21/-6.15	-5.63/-6.45	-6.10/-11.03	-8.03/-9.91	-7.86/-7.59	-6.27/-6.34	-6.06/-5.52	-6.42/-7.74	-6.94/-2.39	-8.58/-6.46	-4.51/-6.17	-7.33/-7.02	-5.97/-4.46	-8.33				



Antenna Pattern

Appendix D

Θ (22.5°)	-5.77/-7.31	-7.76/-7.93	-7.48/-6.83	-6.61/-5.95	-5.85/-5.90	-7.05/-6.78	-6.91/-6.81	-6.49/-6.52	-6.13/-7.38	-8.72/-10.55	-11.47/-12.18	-13.24/-12.83	-11.99/-11.02	-9.73/-7.10	-7.59/-6.55	-6.26/-5.48	-5.16/-5.29	-5.60/-5.29	-5.51/-5.61	-6.60/-8.34	-9.07/-8.25	-6.82/-5.74	-4.81/-4.17	-4.71/-5.64
Θ (30°)	-5.95/-7.12	-9.49/-10.55	-8.48/-6.43	-2.90/-1.45	-0.80/-1.34	-1.96/-2.46	-2.75/-2.87	-2.95/-3.13	-3.94/-5.06	-7.32/-8.97	-9.27/-8.25	-7.96/-6.80	-8.93/-9.28	-8.05/-7.12	-5.66/-5.19	-4.78/-2.46	-3.99/-3.58	-2.93/-2.82	-2.94/-3.37	-4.44/-6.47	-9.13/-10.29	-9.27/-7.95	-7.07/-5.12	-4.80/-5.13
Θ (37.5°)	-6.66/-7.56	-8.14/-8.62	-6.28/-4.65	-2.33/-0.94	-0.65/-0.96	-1.24/-2.16	-2.80/-2.13	-3.84/-3.80	-3.28/-3.77	-6.15/-6.86	-8.39/-7.90	-8.09/-8.08	-8.18/-8.53	-9.21/-9.20	-8.16/-6.58	-5.50/-3.92	-3.12/-3.43	-4.14/-4.15	-4.08/-4.22	-4.67/-5.15	-5.54/-7.76	-10.91/-8.95	-6.85/-5.85	-5.63/-5.65
Θ (45°)	-6.16/-4.50	-4.25/-3.74	-4.04/-4.72	-5.12/-4.72	-4.29/-3.37	-3.67/-4.51	-4.96/-5.47	-5.91/-4.92	-3.56/-3.18	-3.75/-4.64	-5.31/-5.80	-4.86/-4.85	-6.07/-9.70	-10.36/-10.85	-7.88/-5.07	-2.62/-2.39	-2.76/-2.74	-3.27/-4.57	-4.63/-3.99	-2.87/-3.08	-4.09/-5.15	-5.72/-6.63	-8.73/-8.28	-8.14/-8.32
Θ (52.5°)	-6.69/-6.98	-4.88/-3.98	-4.12/-5.71	-5.94/-6.83	-7.24/-6.72	-7.14/-6.91	-6.52/-6.05	-5.91/-4.95	-4.30/-4.02	-5.33/-6.25	-7.17/-6.37	-4.78/-5.26	-7.36/-10.86	-10.14/-13.77	-4.63/-2.46	-1.57/-1.27	-0.71/-1.46	-1.45/-1.37	-1.35/-1.22	-3.09/-2.42	-1.64/-1.66	-2.48/-3.53	-3.79/-5.13	-5.72/-9.94
Θ (60°)	-1.97/-10.17	-3.83/-2.96	-1.53/-2.41	-3.71/-6.21	-9.76/-10.47	-9.00/-8.90	-7.85/-7.74	-8.19/-7.70	-6.51/-6.73	-5.89/-7.43	-6.47/-6.73	-4.92/-6.50	-11.41/-9.82	-8.39/-4.62	-3.84/-4.33	-4.64/-4.42	-4.42/-3.51	-3.17/-2.55	-1.40/-0.72	-1.00/-1.26	-0.99/-1.01	-1.43/-2.50	-5.02/-8.96	
Θ (67.5°)	-3.21/-3.55	-3.12/-2.60	-2.20/-2.71	-4.20/-5.97	-6.81/-6.49	-5.63/-4.89	-4.65/-5.24	-6.35/-6.92	-7.43/-9.26	-10.09/-7.76	-6.15/-5.24	-6.30/-6.81	-11.55/-11.89	-11.48/-14.60	-11.67/-9.80	-8.92/-7.35	-6.46/-5.91	-7.22/-8.01	-8.75/-7.76	-6.74/-4.20	-2.44/-1.62	-1.69/-2.19	-1.80/-2.08	-2.91/-3.96
Θ (75°)	-2.53/-2.18	-3.00/-2.15	-2.28/-3.13	-5.37/-4.33	-3.87/-2.30	-1.24/-0.67	-0.30/-0.40	-1.40/-3.54	-6.09/-8.47	-9.47/-7.92	-7.31/-6.14	-7.71/-7.41	-7.93/-9.07	-10.01/-10.31	-9.70/-7.35	-7.36/-6.55	-5.11/-2.46	-1.33/-1.26	-0.85/-2.44	-5.26/-7.00	-8.31/-4.55	-4.07/-3.20	-2.88/-4.51	-2.88/-3.08
Θ (82.5°)	-0.41/-0.26	-1.79/-3.82	-6.87/-7.08	-10.13/-8.79	-6.81/-3.47	-1.000.84	1.67/-1.54	0.71/-0.65	-2.29/-4.17	-5.20/-7.81	-10.71/-9.66	-5.91/-5.82	-6.33/-9.20	-9.69/-7.50	-5.58/-5.81	-4.42/-5.12	-5.79/-5.44	-4.77/-4.27	-5.11/-4.84	-5.64/-5.08	-6.06/-4.90	-2.94/-2.78	-2.48/-4.27	-4.63/-1.67
Θ (90°)	-3.27/-1.49	-1.95/-3.14	-5.90/-6.86	-5.83/-3.51	-0.540.36	1.40/-1.73	1.83/-1.83	0.77/-0.45	-1.92/-2.69	-5.01/-7.89	-8.98/-7.79	-6.34/-7.20	-7.84/-9.97	-7.89/-6.98	-7.25/-8.95	-6.41/-3.68	-1.37/-1.38	-0.170.95	-0.69/-3.27	-4.17/-5.75	-1.77/-1.43	-1.47/-2.48	-3.02/-4.56	-7.77/-5.47
Θ (97.5°)	-3.05/-5.31	-7.23/-6.93	-8.38/-11.19	-11.97/-7.38	-3.33/-1.13	0.81/-1.99	2.11/-1.20	0.37/-1.61	-3.96/-6.78	-8.88/-7.48	-4.84/-3.39	-3.45/-0.47	-4.21/-6.47	-6.25/-10.68	-14.39/-12.95	-11.32/-6.34	-2.35/-1.08	2.18/-5.58	3.63/-2.45	-3.08/-8.79	-5.43/-3.17	-1.21/-3.44	-1.41/-2.84	-3.09/-3.68
Θ (105°)	-0.25/-1.01	-3.94/-7.91	-9.39/-11.19	-12.40/-9.26	-6.32/-3.65	-1.41/-0.08	1.02/-1.32	0.59/-0.71	-2.65/-5.10	-5.60/-3.97	-4.80/-4.73	-6.87/-4.33	-4.40/-8.23	-15.07/-8.34	-8.47/-10.05	-8.27/-7.13	-0.73/-1.41	-1.96/-4.44	-5.20/-3.53	-4.08/-3.08	-5.42/-4.13	-3.86/-1.27		
Θ (112.5°)	-0.51/-0.78	-2.01/-4.63	-9.74/-14.70	-14.07/-12.20	-6.87/-4.30	-1.88/-0.04	0.44/-0.57	0.04/-1.29	-2.65/-3.82	-7.57/-9.82	-12.05/-9.39	-7.01/-7.66	-9.50/-15.59	-9.29/-5.87	-8.61/-7.85	-8.55/-4.68	-4.58/-3.96	-1.77/-1.34	-4.06/-9.44	-4.66/-7.23	-5.45/-6.21	-5.58/-4.53	-5.32/-8.65	-3.92/-1.49
Θ (120°)	-4.14/-2.70	-2.76/-2.43	-6.02/-7.75	-9.67/-11.81	-9.76/-5.38	-2.85/-1.97	-1.48/-1.58	-3.44/-4.67	-6.18/-12.87	-15.64/-12.36	-6.78/-4.72	-4.06/-5.78	-5.71/-10.06	-8.87/-10.76	-13.95/-12.86	-7.31/-2.16	-3.21/-1.65	-1.63/-2.38	0.53/-0.07	-3.92/-4.43	-1.77/-4.02	-4.83/-5.28	-2.50/-5.05	-8.40/-5.27
Θ (127.5°)	-1.16/-7.99	-7.78/-8.27	-11.86/-13.64	-8.90/-6.36	-4.94/-3.37	-1.74/-0.85	-0.26/-0.13	-0.49/-2.25	-5.89/-8.05	-9.33/-8.49	-6.80/-6.86	-6.68/-6.87	-4.80/-9.34	-11.86/-12.85	-7.48/-8.27	-8.46/-3.68	-3.44/-3.37	-0.840.77	-1.04/-4.62	-3.91/-3.06	-4.21/-3.54	-2.69/-4.22	-9.55/-7.96	
Θ (135°)	-4.41/-5.14	-6.12/-5.81	-6.01/-6.98	-5.45/-4.91	-4.48/-4.06	-3.24/-2.33	-2.04/-2.22	-2.81/-3.85	-5.36/-7.26	-10.68/-11.42	-11.85/-11.74	-10.28/-7.09	-6.33/-8.11	-12.07/-14.87	-9.42/-12.11	-13.70/-15.03	-10.50/-6.63	-2.44/-2.38	-3.07/-2.13	-1.97/-4.16	-8.76/-8.15	-7.67/-3.78	-2.26/-2.57	-4.34/-4.94
Θ (142.5°)	-0.07/-8.64	-8.11/-8.58	-7.71/-7.52	-6.16/-4.10	-2.84/-2.15	-2.20/-2.20	-2.00/-2.44	-3.80/-5.64	-6.24/-6.61	-11.35/-6.61	-9.76/-10.72	-9.76/-10.43	-9.98/-11.53	-10.52/-5.82	-3.59/-5.54	-3.77/-7.16	-4.60/-4.63	-6.85/-8.70	-11.10/-8.47	-5.02/-6.00	-8.32/-8.08	-8.86/-6.96	-5.16/-4.58	-5.92/-6.61
Θ (150°)	-9.64/-10.24	-8.82/-8.45	-8.40/-8.98	-9.74/-10.91	-9.73/-7.89	-6.14/-5.27	-5.27/-8.67	-6.45/-6.42	-7.53/-9.74	-11.83/-10.48	-9.07/-7.24	-6.18/-6.57	-9.29/-15.65	-15.06/-10.48	-7.47/-6.79	-7.68/-6.95	-6.26/-6.35	-8.17/-11.60	-12.22/-9.26	-6.30/-5.81	-7.69/-8.44	-8.47/-7.19	-6.52/-6.07	-5.29/-6.89
Θ (157.5°)	-11.45/-12.57	-12.96/-13.67	-12.15/-9.99	-8.94/-8.09	-8.15/-8.15	-8.31/-8.93	-9.47/-9.90	-10.95/-11.64	-14.71/-13.45	-9.69/-6.56	-4.88/-3.87	-4.30/-5.97	-8.92/-10.97	-10.77/-10.16	-7.83/-7.05	-7.34/-6.90	-7.03/-8.18	-9.44/-13.75	-14.40/-13.70	-11.43/-10.11	-8.44/-6.66	-6.14/-6.49	-5.91/-5.85	-6.85/-8.09
Θ (165°)	-7.66/-9.20	-8.81/-9.74	-9.42/-8.74	-8.38/-8.78	-7.60/-7.23	-7.40/-8.31	-8.48/-8.63	-9.02/-9.15	-8.25/-7.41	-6.32/-5.55	-5.62/-7.04	-7.27/-8.97	-10.64/-12.23	-11.99/-12.42	-6.98/-6.06	-5.62/-4.94	-4.97/-3.35	-6.60/-8.11	-9.00/-9.60	-10.00/-9.31	-8.04/-5.54	-5.27/-5.30	-4.78/-4.97	-5.94/-7.63
Θ (172.5°)	-10.74/-9.82	-8.80/-8.07	-7.87/-7.46	-6.40/-5.69	-5.81/-6.22	-6.49/-7.12	-7.40/-8.55	-8.19/-8.41	-8.71/-8.67	-9.60/-9.43	-9.07/-9.22	-9.84/-8.89	-8.75/-8.38	-7.89/-7.49	-6.93/-6.93	-6.84/-6.75	-6.77/-7.92	-8.65/-9.30	-9.59/-9.62	-10.25/-9.94	-9.26/-8.84	-9.20/-9.84	-12.33/-13.47	-13.00/-12.08
Θ (180°)	-10.70/-10.43	-10.19/-9.08	-8.40/-7.39	-6.55/-6.53	-6.90/-7.36	-8.66/-9.19	-9.94/-11.04	-11.73/-12.12	-11.86/-12.16	-13.62/-12.55	-12.97/-12.15	-11.20/-10.33	-9.41/-9.52	-9.00/-9.49	-9.54/-9.78	-9.90/-10.20	-9.87/-9.68	-10.06/-10.60	-10.92/-10.65	-11.73/-13.56	-12.92/-12.02	-11.70/-11.67	-12.22/-12.52	-11.93/-10.78
Freq(Hz)	5.36GPol.	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°)	-5.16/-5.00	-4.47/-3.81	-3.66/-3.31	-3.87/-4.34	-4.32/-3.77	-3.80/-3.47	-3.48/-3.47	-3.19/-3.44	-2.69/-2.41	-2.17/-2.37	-2.12/-2.19	-2.29/-2.46	-2.56/-2.81	-3.01/-2.90	-3.26/-2.95	-3.40/-3.55	-3.48/-3.05	-3.07/-2.83	-2.93/-2.88	-2.61/-2.60	-2.90/-2.83	-2.76/-2.92	-3.13/-3.51	-3.60/-3.57
Θ (7.5°)	-3.47/-3.11	-3.09/-2.89	-2.68/-2.34	-2.82/-3.06	-3.12/-2.97	-3.08/-3.05	-3.02/-2.59	-2.78/-2.60	-2.60/-2.73	-2.67/-2.88	-3.07/-3.12	-2.85/-3.32	-3.57/-3.60	-3.77/-3.72	-3.85/-3.94	-3.77/-3.80	-3.56/-3.55	-3.18/-2.91	-2.40/-2.14	-1.98/-1.87	-1.87/-2.17	-1.80/-1.81	-1.93/-2.31	-2.88/-3.47
Θ (15°)	-3.28/-3.31	-3.24/-4.03	-4.04/-6.64	-5.34/-6.16	-6.49/-6.46	-4.12/-5.64	-6.44/-6.47	-6.05/-5.91	-5.48/-5.35	-4.34/-4.28	-3.69/-3.40	-3.43/-3.66	-4.64/-4.20	-4.69/-4.44	-4.46/-4.20	-3.98/-4.59	-5.05/-5.17	-5.11/-4.75	-4.59/-4.06	-3.36/-3.00	-2.28/-2.26	-1.81/-1.72	-1.84/-2.49	-2.28/-2.54
Θ (22.5°)	-4.61/-5.55	-6.13/-4.50	-4.96/-4.81	-5.70/-6.18	-6.78/-6.42	-6.60/-6.70	-6.65/-6.02	-5.44/-5.32	-5.30/-5.09	-4.90/-3.92	-3.35/-3.00	-3.42/-3.14	-3.70/-4.06	-4.77/-5.78	-6.18/-6.59	-7.10/-6.45	-5.36/-4.90	-4.65/-4.82	-5.05/-5.85	-7.51/-8.25	-7.94/-6.33	-5.30/-3.88	-2.68/-2.46	-2.65/-3.66
Θ (30°)	-3.73/-4.94	-6.83/-7.29	-6.91/-6.46	-5.88/-5.24	-4.65/-4.98	-5.90/-5.64	-6.76/-6.37	-5.89/-5.71	-5.35/-5.15	-5.16/-5.68	-4.99/-4.80	-5.87/-5.64	-6.75/-6.31	-6.18/-5.23	-3.49/-3.73	-2.14/-1.62	-1.30/-1.31	-1.13/-1.30	-2.13/-2.81	-3.46/-4.81	-5.74/-6.93	-7.14/-5.91	-4.66/-4.01	-3.60/-3.45
Θ (37.5°)	-6.34/-8.28	-10.91/-8.99	-5.04/-4.53	-3.34/-2.53	-3.15/-4.23	-6.01/-6.13	-5.75/-5.95	-6.24/-6.59	-7.17/-6.96	-6.42/-7.17	-7.71/-7.38	-7.19/-6.82	-6.71/-5.94	-5.48/-4.52	-4.58/-3.87	-3.01/-2.37	-1.38/-0.60	-0.87/-1.31	-1.21/-1.25	-1.59/-1.93	-2.33/-3.42	-5.17/-6.02	-4.85/-4.38	-3.99/-5.13
Θ (45°)	-5.60/-6.98	-8.50/-9.96	-9.73/-9.65	-8.50/-6.48	-6.10/-5.34	-5.29/-6.29	-8.00/-8.96	-9.11/-8.47	-7.90/-7.57	-7.38/-8.06	-9.05/-8.20	-7.90/-5.99	-5.94/-5.70	-5.55/-5.48	-6.91/-6.41	-5.29/-2.61	-2.00/-2.47	-1.89/-1.90	-2.79/-3.93	-4.72/-4.52	-5.07/-6.25	-6.08/-4.77	-5.12/-5.43	
Θ (52.5°)	-5.85/-5.92	-5.55/-7.00	-6.58/-7.51	-6.74/-5.44	-5.15/-5.33	-5.72/-6.08	-7.23/-7.89	-7.57/-6.14	-6.05/-5.85	-6.80/-7.82	-9.04/-10.03	-8.79/-8.68	-9.00/-9.18	-7.62/-5.58	-3.25/-2.04	-0.18/-0.65	-0.70/-0.97	-1.70/-1.62	-1.83/-2.10	-3.14/-3.17	-3.75/-4.17	-4.53/-3.98	-4.82/-5.28	-4.68/-5.70
Θ (60°)	-10.42/-7.72	-5.47/-4.96	-4.88/-5.38	-5.18/-5.48	-3.75/-3.63	-3.02/-3.31	-3.58/-3.74	-4.30/-4.80	-3.96/-4.40	-5.23/-6.87	-8.73/-8.57	-6.66/-7.60	-5.37/-6.70	-5.05/-3.96	-3.16/-1.67	-1.04/-1.61	-2.09/-2.97	-3.19/-3.53	-2.69/-0.89	-0.62/-1.30	-2.05/-2.92	-3.62/-4.26	-3.69/-4.00	-6.95/-10.71
Θ (67.5°)	-9.62/-13.68	-11.89/-9.15	-7.59/-7.13	-5.80/-5.05	-4.01/-3.09	-2.07/-2.52	-3.41/-3.15	-3.30/-3.98	-3.74/-5.08	-6.19/-9.12	-9.58/-5.82	-5.47/-4.99	-6.64/-5.28	-3.35/-4.22	-3.53/-3.79	-5.40/-5.95	-6.36/-7.41	-7.98/-8.27	-7.99/-6.72	-5.00/-3.17	-2.73/-2.94	-3.81/-3.35	-3.08/-2.77	-3.60/-6.57
Θ (75°)	-3.35/-6.49	-7.53/-6.67	-5.53/-4.79	-4.81/-2.29	-1.07/-0.45	-0.030.01	-0.26/-0.25	-0.03/-1.07	-1.68/-3.84	-4.50/-5.05	-5.20/-4.02	-5.75/-6.28	-6.59/-5.11	-4.23/-4.74	-4.52/-5.58	-5.02/-5.27	-6.23/-8.42	-8.23/-10.80	-9.71/-10.81	-10.44/-8.45	-5.2			



Antenna Pattern

Appendix D

Θ (67.5°)	-6.69/-6.19	-5.03/-4.73	-4.30/-3.27	-1.83/-0.55	-0.71/-1.66	-2.42/-2.69	-2.54/-1.64	-1.10/-1.32	-2.44/-5.06	-9.40/-8.05	-5.08/-6.36	-6.23/-8.21	-8.92/-7.20	-6.64/-6.99	-8.18/-7.88	-5.67/-3.44	-2.63/-2.51	-2.57/-2.04	-1.36/-0.62	-0.25/-0.52	-1.19/-3.44	-5.65/-9.61	-7.19/-6.10	-5.55/-5.67
Θ (75°)	-5.91/-5.21	-5.30/-5.70	-4.49/-2.77	-1.85/-1.11	-2.24/-3.65	-2.74/-1.29	-0.07/0.69	0.87/0.11	-1.30/-0.46	-8.21/-8.98	-7.33/-6.59	-6.83/-10.03	-9.59/-8.28	-8.77/-7.53	-6.88/-6.41	-2.96/-1.69	-1.05/-1.95	-2.82/-2.19	-2.45/-2.20	-2.10/-3.09	-3.92/-5.69	-6.60/-7.92	-6.96/-5.27	-4.79/-4.52
Θ (82.5°)	-6.08/-6.60	-6.70/-6.11	-5.17/-4.44	-4.85/-4.93	-6.25/-4.86	-2.67/-0.54	0.21/0.74	0.64/0.16	-0.73/-1.35	-7.65/-9.93	-7.49/-7.16	-8.80/-9.21	-6.05/-4.42	-7.95/-9.35	-8.25/-6.48	-5.97/-6.33	-3.48/-1.68	-2.68/-3.15	-1.36/-1.08	-0.76/-0.69	-4.89/-5.41	-6.70/-5.34	-4.96/-3.46	
Θ (90°)	-8.47/-9.56	-6.74/-5.46	-6.32/-5.33	-6.24/-4.00	-3.69/-3.08	2.11/-1.02	-0.42/-0.37	-0.98/-1.18	-1.62/-2.58	-6.84/-8.55	-5.26/-4.49	-7.54/-11.91	-9.86/-4.81	-7.82/-10.05	-14.38/-15.44	-5.89/-2.63	-2.10/-2.64	-2.95/-2.12	-1.95/-2.06	-1.22/-0.32	-0.10/-1.46	-4.54/-5.89	-7.18/-5.53	-6.72/-4.17
Θ (97.5°)	-6.10/-10.40	-5.21/-3.98	-4.52/-3.58	-4.31/-2.10	-3.31/-3.96	-2.98/-1.32	0.27/0.49	0.75/-0.27	-1.50/-4.00	-10.30/-9.16	-7.26/-5.55	-8.53/-14.62	-12.71/-6.78	-9.37/-10.88	-12.24/-9.68	-3.25/-0.47	-0.29/-1.46	-2.92/-2.09	-3.15/-3.99	-2.84/-2.84	-2.08/-2.08	4.00/-5.32	-6.14/-4.89	-6.56/-5.08
Θ (105°)	-8.73/-11.90	-8.83/-9.92	-9.58/-5.70	-5.44/-3.23	-2.81/-2.94	-1.52/0.08	0.44/0.61	-0.29/-0.82	-0.84/-2.61	-6.50/-6.45	-7.42/-5.94	-9.54/-15.41	-12.61/-11.26	-15.45/-8.81	-6.86/-5.01	-2.38/-0.70	1.27/2.48	0.73/-0.48	-0.67/-1.67	-1.27/-0.72	-1.13/-2.80	-5.87/-5.63	-6.76/-6.64	
Θ (112.5°)	-15.40/-13.51	-13.37/-6.17	-6.16/-2.89	-4.02/-4.78	-2.99/-1.69	-1.28/-1.39	-2.03/-3.26	-3.63/-2.78	-2.21/-4.35	-7.38/-4.66	-3.82/-2.31	-7.43/-10.37	-7.71/-8.91	-9.80/-9.14	-15.31/-13.99	-5.41/-2.44	-0.79/-1.31	-3.08/-0.74	-0.32/-2.39	-2.25/-0.97	-1.67/-3.59	-9.87/-8.35	-8.61/-11.19	-11.21/-8.93
Θ (120°)	-13.16/-14.71	-11.25/-7.72	-5.42/-4.02	-3.03/-3.66	-3.35/-2.72	-1.85/-0.99	-0.62/-0.67	-1.34/-2.10	-4.43/-4.77	-13.02/-9.54	-6.14/-3.80	-7.02/-11.95	-7.87/-6.88	-9.81/-10.19	-7.69/-9.38	-11.63/-8.82	-5.19/-5.73	-5.54/-4.17	-7.38/-8.36	-5.04/-5.06	-5.98/-5.48	-11.29/-10.42	-7.39/-8.98	-11.08/-11.10
Θ (127.5°)	-8.41/-10.32	-10.49/-7.87	-5.62/-4.02	-4.32/-4.56	-3.04/-1.30	-0.13/0.33	-0.15/-1.69	-3.94/-6.53	-7.94/-8.01	-8.49/-11.96	-11.28/-13.70	-10.96/-11.05	-6.45/-5.41	-6.36/-8.51	-7.52/-7.91	-6.51/-3.78	-4.69/-4.31	-1.24/-1.16	-2.30/-2.54	-4.67/-4.99	-9.51/-7.13	-9.99/-7.13	-6.77/-6.64	-10.28/-11.79
Θ (135°)	-7.20/-8.76	-8.40/-7.65	-9.28/-9.11	-8.41/-7.70	-4.59/-2.13	-0.92/-0.50	-1.31/-2.63	-5.02/-10.84	-16.00/-10.14	-6.19/-5.99	-5.84/-10.02	-11.12/-10.35	-9.87/-10.56	-6.21/-6.92	-7.94/-8.05	6.96/-4.48	4.21/-2.11	-0.70/-0.71	-1.26/-1.20	-2.91/-5.20	-6.50/-6.34	-8.61/-12.06	-8.16/-7.32	-9.87/-8.87
Θ (142.5°)	-9.83/-8.41	-6.81/-6.31	-7.79/-9.65	-12.58/-12.71	-7.80/-4.24	-2.80/-2.26	-2.46/-3.96	-7.29/-12.45	-16.22/-12.18	-9.89/-8.11	-7.81/-6.46	-7.93/-10.76	-6.63/-6.62	-10.43/-12.30	-12.43/-11.31	-10.87/-8.83	-5.93/-6.73	-5.66/-3.71	-3.24/-4.93	-8.94/-11.12	-10.39/-13.78	-13.40/-13.93	-13.86/-10.92	
Θ (150°)	-10.44/-11.64	-15.29/-13.43	-11.83/-10.46	-9.94/-9.89	-10.64/-11.07	-11.08/-10.42	-9.66/-9.90	-10.92/-13.18	-14.51/-15.42	-13.70/-9.41	-9.69/-10.76	-8.85/-7.36	-5.78/-6.03	-7.41/-7.55	-15.38/-15.27	-15.39/-10.08	-8.20/-6.85	-7.03/-6.54	-6.02/-7.56	-9.72/-10.03	-10.61/-11.39	-11.06/-10.60	-12.32/-11.23	
Θ (157.5°)	-9.32/-9.46	-10.57/-12.03	-11.82/-10.08	-8.74/-8.78	-8.25/-7.92	-8.91/-9.73	-11.10/-13.05	-15.29/-14.89	-15.66/-12.12	-10.10/-10.25	-12.46/-12.09	-9.87/-9.75	-9.85/-9.64	-11.10/-13.81	-15.44/-15.63	-14.57/-13.19	-15.51/-15.28	-13.90/-13.95	-12.74/-10.89	-8.56/-7.98	-8.52/-9.29	-8.90/-9.00	-9.99/-10.63	-11.46/-11.04
Θ (165°)	-9.21/-9.33	-10.40/-12.42	-13.14/-12.94	-12.81/-12.20	-12.18/-11.39	-11.24/-10.98	-11.04/-12.10	-12.81/-13.96	-14.24/-13.79	-12.42/-12.83	-13.36/-12.11	-10.45/-10.83	-9.92/-11.83	-12.38/-14.31	-13.60/-11.52	-11.23/-12.05	-12.74/-14.00	-12.56/-11.36	-10.95/-10.53	-9.68/-8.73	-8.03/-8.16	-9.48/-9.94	-8.70/-9.64	
Θ (172.5°)	-11.44/-11.15	-12.11/-12.54	-12.65/-13.60	-13.22/-11.09	-11.37/-11.16	-11.12/-10.94	-10.98/-11.45	-11.68/-13.07	-13.56/-13.99	-14.40/-16.10	-15.90/-15.40	-15.16/-13.99	-12.02/-11.71	-13.20/-13.81	-15.64/-14.35	-14.47/-13.55	-13.72/-13.95	-14.88/-14.49	-12.76/-13.43	-13.41/-13.28	-14.15/-12.91	-12.99/-13.05	-12.21/-12.88	-12.51/-12.29
Θ (180°)	-15.49/-15.93	-15.30/-15.82	-15.17/-15.25	-16.19/-16.14	-14.90/-15.43	-15.69/-15.55	-15.37/-15.58	-15.42/-15.71	-15.46/-14.71	-14.91/-13.57	-13.35/-12.37	-12.65/-12.82	-12.48/-12.29	-11.47/-11.27	-11.54/-11.58	-13.08/-13.72	-12.30/-13.14	-13.05/-13.02	-12.91/-14.93	-13.66/-14.32	-14.80/-14.82	-14.11/-15.69	-15.79/-16.08	-15.47/-15.09
Freq[Hz]	5.3GPol.	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°)	4.90/-4.92	3.90/-4.10	4.21/-4.53	-5.09/-5.10	-4.81/-5.05	4.74/-4.63	4.64/-4.67	4.64/-4.43	4.64/-4.78	5.10/-4.46	4.81/-4.35	-3.89/-3.81	3.91/-4.20	4.27/-4.19	4.42/-4.38	4.26/-3.90	4.40/-4.36	4.96/-4.06	4.22/-4.49	4.41/-4.69	4.83/-4.41	4.68/-4.56	4.67/-4.79	4.89/-4.45
Θ (7.5°)	4.41/-4.41	4.13/-3.79	3.61/-3.95	-4.02/-3.94	-3.90/-4.03	4.24/-4.08	4.09/-4.04	4.10/-4.43	-5.05/-5.28	-5.10/-5.07	5.14/-4.72	-4.66/-4.63	4.66/-4.71	5.19/-5.19	5.57/-5.19	-5.08/-5.29	-5.57/-5.48	-5.61/-5.69	-5.24/-5.22	-5.16/-5.45	-5.63/-5.59	-5.72/-5.08	-4.70/-4.78	-4.66/-4.54
Θ (15°)	-2.53/-6.34	-7.23/-7.65	-7.23/-7.65	-7.95/-7.16	-7.95/-8.10	-7.69/-7.22	-6.83/-6.59	-6.77/-6.11	-5.75/-6.00	-5.59/-5.51	-5.11/-4.73	-4.94/-5.13	-6.67/-4.10	-7.34/-7.71	-9.92/-9.70	-9.29/-9.76	-8.73/-8.50	-7.92/-7.94	-7.61/-7.47	-7.55/-6.79	-5.76/-4.94	-4.01/-3.93	-4.32/-4.39	
Θ (22.5°)	4.64/-5.67	7.03/-9.16	-10.01/-12.36	-13.50/-13.15	-12.08/-12.41	-11.19/-9.41	-7.38/-6.44	-5.47/-4.83	-5.06/-5.49	-6.29/-6.27	-6.36/-6.11	-6.50/-7.03	-7.74/-8.69	-10.04/-11.33	-10.63/-11.37	-10.59/-11.45	-11.75/-11.31	-10.17/-8.07	-7.95/-7.17	-8.30/-8.80	-9.83/-8.95	-7.68/-6.20	-4.76/-4.53	-3.80/-4.20
Θ (30°)	-3.95/-5.12	-6.59/-7.49	-8.63/-9.06	-9.40/-8.34	-9.09/-9.06	-5.68/-6.25	-6.22/-7.00	-7.40/-6.57	-4.93/-4.09	-4.98/-7.01	-9.78/-9.95	-8.34/-6.70	-5.27/-9.48	-5.87/-5.76	-4.25/-3.31	-2.29/-2.95	-4.10/-5.40	-5.80/-5.71	-4.82/-4.72	-4.25/-3.35	-3.51/-4.03	-3.57/-3.42	-4.56/-4.02	-4.61/-4.82
Θ (37.5°)	-2.68/-6.42	-5.56/-6.40	-7.08/-6.97	-7.83/-6.84	-6.23/-5.51	-4.61/-3.68	-3.84/-3.66	-3.80/-3.55	-3.19/-4.14	-5.46/-3.74	-8.90/-11.17	-12.22/-9.68	-8.29/-8.40	-8.61/-9.30	-10.42/-9.98	-8.48/-6.57	-5.40/-4.37	-3.12/-2.23	-1.93/-2.31	-2.65/-1.22	-2.54/-3.58	-4.17/-4.38	-3.13/-2.37	-1.88/-2.09
Θ (45°)	4.16/-6.21	-10.21/-11.47	-9.52/-8.41	-7.74/-6.80	-7.44/-8.25	-8.38/-8.67	-7.45/-6.13	-5.06/-4.59	-4.57/-5.41	-8.14/-10.61	-11.00/-10.73	-9.18/-6.97	-6.61/-6.14	-7.49/-8.77	-7.59/-5.04	4.29/-3.81	-3.85/-4.00	-3.96/-3.36	-3.34/-2.22	-1.72/-2.20	-2.62/-2.70	-3.30/-3.48	-3.48/-3.37	-3.28/-3.40
Θ (52.5°)	-6.11/-10.68	-13.06/-9.52	-6.36/-5.28	-6.69/-8.74	-9.09/-9.06	-5.68/-6.25	-6.22/-7.00	-7.40/-6.57	-4.93/-4.09	-4.98/-7.01	-9.78/-9.95	-8.34/-6.70	-5.27/-9.48	-5.87/-5.76	-4.25/-3.31	-2.29/-2.95	-4.10/-5.40	-5.80/-5.71	-4.82/-4.72	-4.25/-3.35	-3.51/-4.03	-3.57/-3.42	-4.56/-4.02	-4.61/-4.82
Θ (60°)	-5.03/-6.45	-7.88/-5.31	-4.94/-7.20	-9.09/-9.26	-6.00/-3.50	-2.55/-2.14	-2.78/-4.94	-3.96/-9.76	-7.02/-4.56	-7.20/-5.55	-7.36/-6.66	-9.13/-6.56	-6.27/-6.18	-1.92/-2.50	-3.29/-2.08	-1.78/-2.95	-4.60/-6.07	-6.24/-6.07	-5.94/-4.73	-4.67/-4.21	-4.52/-4.47	-4.01/-5.06	-4.29/-3.24	-2.99/-3.19
Θ (67.5°)	-3.15/-4.13	-3.27/-3.22	-5.04/-9.22	-7.97/-6.02	4.48/-2.94	2.67/-2.91	-3.36/-4.65	-6.69/-11.55	-13.52/-8.32	-6.48/-8.23	-7.12/-7.96	-6.81/-5.53	4.14/-1.37	-1.73/-3.45	-5.18/-4.78	-5.59/-6.96	-7.97/-8.94	-7.87/-6.35	-5.92/-5.50	-5.12/-4.89	-5.12/-5.33	-5.47/-4.64	-3.79/-1.74	-1.00/-1.27
Θ (75°)	-1.59/-1.80	-2.57/-3.39	-3.82/-3.49	-4.27/-6.19	-8.31/-6.81	-4.53/-3.06	3.17/-4.05	-5.65/-8.20	-13.12/-15.14	-11.04/-9.74	-8.23/-6.56	-6.04/-5.95	-4.45/-2.39	-3.33/-4.00	4.97/-5.22	-6.72/-6.32	-6.07/-6.88	-6.04/-4.31	-3.29/-3.79	-5.97/-6.62	-7.73/-10.00	-6.82/-5.93	-4.58/-3.28	-1.58/-0.94
Θ (82.5°)	-2.83/-3.22	4.54/-6.15	-3.73/-4.48	-4.48/-8.06	-9.88/-4.72	-1.50/-0.01	1.06/0.29	-2.20/-5.65	-10.38/-10.54	-7.18/-7.45	-7.90/-9.89	-7.75/-4.41	-2.80/-2.08	-5.32/-5.77	-4.79/-6.03	-6.78/-4.77	-5.86/-4.48	4.19/-4.79	-5.74/-5.12	-7.34/-9.87	-8.32/-8.49	-8.86/-4.66	-4.91/-3.36	-3.08/-1.41
Θ (90°)	4.37/-7.59	7.09/-6.31	4.76/-6.49	-7.22/-7.33	-5.87/-3.77	-2.01/-0.76	-0.49/-0.70	-1.62/-5.60	-9.13/-10.41	-8.85/-8.53	-5.55/-5.93	-9.08/-9.19	2.88/-0.10	-2.80/-5.21	-7.65/-6.43	-6.32/-7.03	-3.90/-1.42	-0.50/0.27	0.56/-0.98	-2.15/-3.17	-5.75/-4.82	-9.06/-8.14	-5.33/-3.07	-3.71/-1.88
Θ (97.5°)	-1.94/-5.26	-2.72/-2.66	2.53/-5.73	-5.01/-4.39	-5.06/-5.03	4.39/-4.52	3.10/-3.12	-3.90/-5.15	-7.49/-9.34	-1.58/-15.84	-7.29/-6.43	-4.95/-6.77	-1.70/-1.14	-2.81/-6.58	-9.61/-5.73	4.21/-4.49	-2.09/-0.04	1.78/0.24	1.94/-1.24	1.39/-2.83	-3.81/-4.32	-5.55/-6.39	-7.02/-3.13	-2.91/-2.54
Θ (105°)	-2.23/-4.38	-2.63/-3.99	-3.45/-5.00	4.56/-4.03	-4.77/-4.79	2.78/-1.04	0.01/-0.28	-2.03/-5.76	-6.30/-6.47	-7.82/-12.87	-10.93/-8.05	-5.76/-7.65	4.63/-4.13	-5.75/-8.35	-9.33/-7.26	4.62/-2.67	-4.10/-2.29	0.70/1.03	0.60/1.09	-0.17/-2.88	-2.09/-4.31	-4.68/-7.19	-6.94/-5.90	-3.60/-1.76
Θ (112.5°)	-6.31/-9.60	-9.21/-8.27	-7.08/-6.13	-6.79/-4.35	-4.20/-3.61	-3.21/-2.38	-2.69/-3.29	-5.63/-7.24	-6.81/-5.00	-6.10/-6.31	-6.93/-4.32	-10.27/-11.38	-4.71/-4.79	-13.91/-14.12	-13.64/-9.28	-3.89/-1.19	-0.60/0.47	0.64/2.69	2.66/-0.03	0.32/-0.25	-3.34/-2.08	-10.12/-11.35	-14.75/-11.71	-6.72/-2.98
Θ (120°)	-7.02/-12.49	-8.43/-5.47	-5.06/-3.35	-3.77/-5.32	-5.66/-6.43	-5.72/-5.44	-4.09/-4.12	-5.29/-6.29	-6.60/-5.39	-8.50/-9.31	-8.84/-4.62	-												



Antenna Pattern

Appendix D

Θ (120°)	-3.57/-6.45	-4.69/-2.67	-2.25/-4.22	-5.94/-12.87	-15.92/-12.82	-9.20/-9.03	-10.04/-9.27	-7.85/-8.95	-8.75/-4.72	-6.30/-6.15	-4.95/-2.07	-1.17/-2.82	-0.42/0.60	0.49/-2.11	-2.60/-2.07	-2.25/-1.09	-1.88/-4.47	-7.07/-4.11	-3.24/-11.10	-13.61/-6.52	-4.71/-3.96	-2.92/-0.65	-0.31/-2.22	-2.86/-3.35
Θ (127.5°)	-3.87/-6.47	-12.34/-7.04	-3.33/-1.44	-2.30/-5.87	-10.28/-8.15	-6.20/-5.87	-5.26/-6.42	-8.14/-9.48	-6.09/-5.48	-4.76/-3.57	-4.36/-4.68	-3.16/-2.49	0.36/0.02	-2.54/-4.01	-8.26/-2.66	-1.37/-1.05	0.46/-3.06	-7.93/-3.37	-1.41/-10.59	-15.12/-4.97	-2.55/-4.32	-1.30/-3.98	-7.07/-0.20	-0.14/-2.05
Θ (135°)	-4.90/-9.42	-5.34/-3.49	-3.32/-3.18	-4.99/-6.20	-5.29/-4.27	-4.11/-5.43	-8.81/-14.90	-12.87/-10.46	-10.29/-8.08	-5.23/-2.76	-1.22/-2.96	-4.83/-10.06	-4.63/2.16	0.26/-4.91	0.29/-0.68	-0.30/2.88	1.69/-3.13	-3.46/-1.04	3.01/0.61	-5.28/-4.52	1.30/-1.19	-5.87/-2.55	-2.69/-4.55	-1.17/-1.34
Θ (142.5°)	2.48/1.89	0.30/-0.02	0.25/-0.56	-2.03/-3.49	-4.77/-5.85	-6.13/-7.34	-9.48/-7.96	-6.74/-10.03	-11.21/-7.10	-3.80/-1.28	-0.69/-3.10	-1.67/0.08	-0.46/-2.60	-2.80/-0.94	-1.68/-0.08	2.87/3.70	1.49/-0.59	0.83/4.09	4.92/2.77	-1.32/-4.25	0.38/2.78	1.66/-2.80	-0.78/-3.37	-5.55/-1.61
Θ (150°)	2.96/0.45	3.60/2.63	1.86/0.67	-0.49/-0.69	-1.10/-2.65	-4.24/-5.21	-6.08/-5.25	-4.48/-2.82	-1.17/0.19	0.84/1.60	1.10/0.18	1.09/1.85	1.20/-0.13	-0.57/-0.84	0.34/2.21	2.07/-0.47	-3.02/-2.28	-0.28/2.22	2.98/1.39	-1.91/-7.12	-8.85/-1.84	-0.67/-2.22	-1.88/-1.69	-0.72/-1.54
Θ (157.5°)	2.86/2.51	1.93/0.14	-2.71/-4.36	-6.12/-1.52	-9.93/-12.27	-15.67/-15.14	-12.47/-10.09	-7.22/-5.30	-3.45/-2.49	-1.91/-0.79	0.60/2.26	3.83/4.60	4.61/4.02	3.28/3.05	2.89/2.27	1.36/0.02	-0.13/0.87	2.72/3.95	3.91/3.11	1.90/0.39	-0.63/0.51	1.92/2.22	2.01/2.15	2.95/3.24
Θ (165°)	-4.70/-4.98	-5.35/-5.21	-5.00/-5.52	-5.73/-6.39	-6.57/-7.15	-10.19/-15.38	-14.75/-15.51	-12.12/-9.40	-7.56/-7.01	-6.88/-5.30	-3.96/-2.31	-0.79/0.10	0.41/0.71	0.91/1.35	1.77/1.81	1.82/1.87	2.04/2.25	2.95/3.14	3.38/3.93	3.62/2.76	2.10/1.52	1.33/1.75	1.04/-0.83	-2.93/-4.06
Θ (172.5°)	-4.54/-8.94	-5.92/-4.48	-4.52/-3.77	-3.71/-3.91	-4.38/-4.98	-5.47/-6.03	-5.73/-4.57	-4.04/-3.27	-2.44/-2.20	-3.01/-4.00	-5.34/-5.88	-6.10/-5.26	-0.31/-2.22	-0.93/0.10	1.10/1.82	2.35/2.84	3.41/3.57	3.70/3.73	3.92/4.08	4.02/3.40	2.83/1.68	1.05/0.50	-0.57/-2.88	-5.73/-7.24
Θ (180°)	-1.65/-3.01	-4.10/-5.05	-4.76/-4.47	-2.75/-1.93	-1.25/-0.70	-0.60/-0.28	0.53/1.11	1.33/1.46	1.42/0.56	0.39/0.00	-0.13/0.11	0.35/0.58	0.81/1.27	1.35/1.38	1.71/2.07	2.17/2.62	3.08/3.23	3.17/3.18	2.54/2.00	1.54/1.48	0.97/-0.04	-1.27/-2.64	-3.15/-3.79	-3.80/-2.13
Freq(Hz)	5.3GHz	Total/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)*Φ(7.5°)	Φ(15°)*Φ(22.5°)	Φ(30°)*Φ(37.5°)	Φ(45°)*Φ(52.5°)	Φ(60°)*Φ(67.5°)	Φ(75°)*Φ(82.5°)	Φ(90°)*Φ(97.5°)	Φ(105°)*Φ(112.5°)	Φ(120°)*Φ(127.5°)	Φ(135°)*Φ(142.5°)	Φ(150°)*Φ(157.5°)	Φ(165°)*Φ(172.5°)	Φ(180°)*Φ(187.5°)	Φ(195°)*Φ(202.5°)	Φ(210°)*Φ(217.5°)	Φ(225°)*Φ(232.5°)	Φ(240°)*Φ(247.5°)	Φ(255°)*Φ(262.5°)	Φ(270°)*Φ(277.5°)	Φ(285°)*Φ(292.5°)	Φ(300°)*Φ(307.5°)	Φ(315°)*Φ(322.5°)	Φ(330°)*Φ(337.5°)	Φ(345°)*Φ(352.5°)
Θ (0°)	-4.02/-3.43	-4.65/-4.59	-5.18/-5.63	-5.28/-4.92	-4.77/-4.63	-5.26/-5.69	-5.45/-5.30	-5.16/-5.18	-4.67/-4.62	-4.16/-3.62	-3.34/-3.50	-4.29/-3.93	-4.43/-4.51	-4.19/-4.65	-4.86/-5.21	-6.08/-6.53	-6.54/-6.27	-6.45/-5.84	-5.49/-5.92	-5.51/-6.29	-5.94/-5.42	-6.82/-7.77	-7.25/-5.99	-5.88/-4.58
Θ (7.5°)	-3.69/-3.38	-3.65/-4.26	-5.09/5.94	-5.53/-4.26	-4.05/-4.94	-5.25/-6.38	-6.63/-6.28	-6.96/-6.73	-6.75/-6.51	-6.13/-5.31	-5.06/-5.01	-5.47/-6.07	-5.56/-5.95	-5.83/-5.71	-5.46/-5.12	-4.64/-4.63	-5.16/-5.25	-5.38/-4.51	-3.62/-3.12	-3.52/-3.71	-3.80/-4.39	-4.90/-4.46	-4.56/-4.10	-3.85/-2.62
Θ (15°)	-5.44/-5.47	-5.53/-5.37	-4.81/-5.26	-6.48/-6.26	-6.77/-7.81	-7.89/-6.30	-5.65/-4.73	-5.19/-6.64	-7.41/-7.26	-6.71/-5.93	-6.23/-5.93	-6.97/-8.17	-7.83/-8.45	-7.76/-7.60	-7.61/-7.44	-6.69/-6.75	-6.34/-5.67	-5.66/-5.25	-4.20/-4.19	-4.87/-5.91	-6.95/-6.84	-7.22/-6.37	-6.23/-6.66	-5.81/-4.84
Θ (22.5°)	-3.71/-6.54	-5.87/-5.58	-7.47/-8.20	-10.68/-12.37	-11.60/-11.85	-11.47/-12.20	-11.45/-10.57	-9.85/-8.73	-9.87/-11.65	-12.61/-13.10	-14.50/-15.08	-15.46/-12.60	-9.74/-7.13	-5.30/-4.93	-4.87/-5.44	-6.54/-6.76	-6.90/-5.65	-3.62/-2.41	-2.77/-3.32	-4.88/-7.08	-6.64/-8.80	-7.97/-6.76	-6.46/-7.50	-8.29/-7.14
Θ (30°)	-4.81/-5.26	-7.70/-11.47	-11.55/-10.49	-8.66/-8.47	-7.05/-7.85	-7.14/-7.46	-7.49/-7.62	-6.43/-5.29	-4.64/-5.30	-6.00/-6.48	-7.01/-6.80	-6.99/-7.75	-7.70/-5.84	-4.35/-3.47	-3.39/-3.59	-4.02/-4.79	-4.92/-5.18	-5.39/-5.19	-5.00/-4.21	-3.02/-3.69	-5.83/-7.24	-7.29/-8.60	-10.57/-11.20	-6.02/-4.05
Θ (37.5°)	-6.86/-9.99	-8.14/-9.29	-6.76/-6.61	-7.14/-10.19	-11.57/-11.36	-10.55/-11.41	-9.96/-7.95	-6.20/-6.11	-6.37/-6.91	-7.51/-7.76	-6.83/-5.92	-4.99/-5.84	-6.92/-6.87	-6.36/-6.49	-5.84/-5.68	-4.30/-2.77	-1.41/-1.90	-3.02/-3.16	-2.27/-2.58	-2.12/-1.72	-3.04/-0.65	-7.99/-8.42	-8.72/-9.01	-7.72/-7.14
Θ (45°)	-5.28/-2.58	-7.46/-11.48	-11.31/-11.35	-9.32/-7.63	-7.13/-9.39	-9.32/-8.52	-7.98/-8.05	-9.32/-8.15	-5.96/-4.12	-5.00/-8.26	-10.61/-9.39	-7.32/-6.47	-4.70/-3.28	-3.14/-4.66	-5.65/-5.51	-4.17/-2.14	-1.91/-2.00	-2.14/-1.91	-2.12/-2.95	-3.59/-3.49	-4.34/-5.90	-6.15/-8.32	-7.69/-7.68	-5.70/-4.04
Θ (52.5°)	-10.14/-11.39	-6.36/-3.70	-3.34/-4.57	-5.69/-7.51	-8.98/-8.76	-5.71/-4.62	-4.45/-6.58	-9.98/-9.69	-8.78/-7.85	-9.03/-11.58	-10.56/-9.36	-10.62/-8.71	-8.50/-10.12	-11.89/-12.59	-10.91/-7.32	-4.74/-3.86	-3.52/-3.81	-5.74/-6.85	-5.93/-3.90	-3.43/-4.63	-5.23/-4.70	-3.75/-3.75	-6.41/-10.55	-14.10/-13.23
Θ (60°)	-3.40/-3.56	-6.28/-6.77	-7.97/-8.05	-6.48/-6.61	-6.43/-7.63	-9.09/-10.17	-9.50/-8.16	-8.31/-8.14	-9.86/-9.00	-9.96/-15.21	-9.82/-8.49	-11.81/-12.86	-5.95/-4.27	-5.57/-8.05	-6.87/-6.53	-6.12/-6.74	-8.26/-11.19	-12.35/-12.42	-14.31/-13.31	-11.70/-12.66	-11.11/-7.33	-7.23/-4.14	-1.93/-4.13	-
Θ (67.5°)	-4.94/-3.80	-4.28/-4.64	-6.76/-7.86	-4.97/-7.19	-8.45/-7.98	-9.16/-11.08	-11.80/-10.57	-9.55/-11.99	-15.01/-13.77	-10.98/-8.70	-6.68/-6.00	-5.35/-6.78	-6.37/-5.08	-3.59/-5.79	-12.18/-12.53	-9.32/-9.09	-11.09/-10.24	-6.80/-5.45	-4.48/-6.37	-7.82/-9.04	-14.20/-9.02	-6.06/-6.11	-	-
Θ (75°)	-5.79/-5.18	-5.51/-9.27	-10.40/-5.93	-8.09/-14.98	-13.01/-8.95	-5.82/-5.55	-7.38/-8.01	-7.10/-7.36	-9.73/-11.37	-7.27/-6.40	-10.80/-6.33	-2.67/-2.70	-2.99/-3.71	-3.28/-3.24	-6.07/-6.75	-4.26/-2.78	-2.13/-4.83	-7.02/-8.12	-8.88/-7.26	-4.54/-2.56	-1.93/-2.27	-8.00/-12.75	-6.10/-3.36	-2.75/-2.06
Θ (82.5°)	-8.81/-6.11	-3.76/-6.06	-7.98/-6.08	-5.98/-6.28	-7.93/-6.52	-7.68/-12.97	-10.81/-8.36	-8.53/-9.16	-6.33/-3.67	-4.43/-3.66	-0.31/-0.48	-1.71/-3.25	-1.32/-0.91	-2.06/-3.91	-3.62/-3.61	-1.84/-7.19	-7.34/-6.44	-4.73/-5.39	-9.72/-9.23	-6.46/-6.78	-7.99/-8.42	-8.72/-9.01	-7.72/-7.14	-
Θ (90°)	-6.89/-7.37	-4.77/-4.94	-8.70/-8.34	-8.61/-8.12	-7.61/-10.01	-14.17/-12.34	-9.56/-7.47	-5.51/-5.16	-7.15/-12.43	-12.23/-5.91	-4.94/-5.63	-3.82/-1.61	0.37/-2.20	-5.18/-1.90	-1.22/-1.87	-5.65/-5.27	-4.70/-8.67	-12.60/-13.48	-6.70/-6.92	-7.18/-6.41	-2.66/-6.71	-8.90/-9.56	-12.46/-11.94	-
Θ (97.5°)	-10.68/-9.08	-7.47/-4.87	-4.15/-3.44	-3.13/-5.61	-6.97/-9.37	-8.25/-8.10	-8.31/-7.23	-6.31/-7.10	-9.03/-8.71	-6.49/-5.01	-3.74/-4.50	-5.92/-3.27	-1.64/-3.55	-6.08/-4.49	-1.85/-2.34	-1.67/-3.35	-5.54/-7.31	-5.26/-5.41	-5.04/-2.08	-2.86/-4.00	-1.67/-2.71	-3.78/-5.60	-7.60/-8.71	-6.68/-10.84
Θ (105°)	-3.10/-3.89	-2.08/-2.25	-4.07/-1.84	-3.15/-2.75	-9.15/-9.21	-9.05/-8.66	-9.90/-10.92	-10.81/-8.36	-6.33/-3.67	-4.43/-3.66	-0.31/-0.48	-1.71/-3.25	-1.32/-0.91	-2.06/-3.91	-3.62/-3.61	-1.84/-7.19	-7.34/-6.44	-4.73/-5.39	-9.72/-9.23	-6.46/-6.78	-7.99/-8.42	-8.72/-9.01	-7.72/-7.14	-
Θ (112.5°)	-2.09/-3.11	-3.18/-5.16	-6.55/-4.33	-4.60/-7.25	-9.59/-9.20	-8.55/-9.14	-6.67/-8.41	-9.45/-10.70	-14.94/-14.82	-7.94/-4.51	-6.07/-2.37	-1.48/-2.84	-1.58/0.34	-1.74/-2.36	-2.74/-0.47	-0.95/-1.29	-2.35/-7.97	-6.55/-3.94	-6.00/-7.96	-5.60/-7.96	-4.56/-1.18	-2.82/-6.66	-1.67/-1.50	-4.56/-2.53
Θ (120°)	-7.21/-7.53	-4.26/-1.89	-2.75/-5.10	-6.15/-10.17	-15.49/-13.36	-11.32/-9.58	-9.60/-9.78	-9.33/-7.55	-6.74/-4.67	-6.93/-6.15	-3.89/-1.08	-0.89/-2.44	-1.22/1.17	2.17/-0.72	-1.50/-0.98	-1.48/-1.32	-3.26/-6.17	-6.37/-2.77	-2.64/-9.83	-9.14/-6.33	-6.28/-4.78	-3.88/-1.53	-1.12/-1.54	-1.76/-5.39
Θ (127.5°)	-2.92/-5.44	-10.92/-9.81	-4.36/-1.03	-2.07/-3.93	-8.04/-8.30	-5.71/-4.64	-4.10/-3.87	-5.67/-3.74	-5.97/-4.83	-4.76/-3.39	-3.94/-4.67	-3.14/-2.58	0.62/0.39	-1.89/-1.92	-8.50/-2.29	-1.06/-1.99	-0.39/-3.97	-4.94/-2.22	0.70/-3.99	-9.08/-1.94	-2.13/-4.50	-2.10/-6.93	-6.07/-0.64	-0.81/-1.59
Θ (135°)	-7.18/-11.16	-4.80/-4.36	-4.25/-4.01	-4.77/-5.08	-5.34/-5.49	-6.10/-7.00	-9.83/-13.39	-14.59/-8.78	-7.70/-7.44	-5.99/-3.88	-1.23/-2.63	-5.56/-12.29	-3.22/1.11	-0.98/-8.96	-0.41/-0.66	-1.18/0.02	2.09/-2.10	-2.67/2.67	4.61/0.91	-3.98/-0.73	2.74/-0.02	-3.13/-2.27	-3.49/-4.46	0.33/-0.43
Θ (142.5°)	1.56/1.81	1.42/1.33	1.19/-0.02	-1.61/-3.20	-4.60/-6.75	-4.98/-8.29	-10.59/-7.19	-4.96/-5.79	-6.94/-3.64	-1.46/0.48	0.98/-1.29	-1.18/0.45	-0.01/-1.33	-1.20/0.69	0.21/-0.11	3.40/4.84	1.91/1.21	2.78/3.93	5.24/3.63	1.26/-1.17	2.04/2.29	-0.51/-4.80	-1.63/-4.27	-0.42/-0.64
Θ (150°)	1.92/2.92	2.44/1.64	0.69/-0.56	-0.86/-0.97	-1.40/-3.07	-5.29/-6.66	-6.49/-5.83	-5.56/-3.42	-1.02/0.66	1.55/2.35	2.01/1.32	1.73/2.43	1.74/0.81	1.27/1.60	2.15/3.28	2.84/-0.02	-3.46/-4.07	-0.64/2.65	3.06/1.20	-1.77/-6.80	-7.61/-2.04	-2.06/-4.75	-2.46/-0.99	-0.90/-0.74
Θ (157.5°)	2.99/2.45	1.51/-0.65	-2.55/-4.10	-5.32/-6.69	-9.09/-11.92	-11.45/-10.19	-8.69/-7.42	-6.04/-3.48	-1.93/-0.82	-0.12/0.46	1.42/2.79	4.11/4.89	4.73/4.43	4.13/4.19	4.08/3.42	1.41/-0.48	-1.16/0.06	2.69/4.49	4.48/3.21	1.32/-0.50	-2.34/-0.92	0.93/1.81	1.75/2.16	3.21/2.22
Θ (165°)	-3.19/-4.64	-5.02/-4.43	-4.35/-4.36	-5.61/-6.29	-6.58/-8.23	-10.84/-14.03	-15.85/-12.59	-8.82/-7.09	-5.36/-5.01	-6.01/-4.86	-3.87/-2.43	-0.72/0.62	1.21/2.01	2.58/2.89	3.06/2.95	2.46/2.13	2.11/2.72	3.38/4.18	4.28/4.05	3.62/2.68	1.70/1.14	1.48/1.53	0.80/-1.23	-0.58/-0.84
Θ (172.5°)	-3.37/-8.98	-7.20/-5.22	-5.06/-3.43	-3.76/-3.33	-3.87/-5.00	-6.14/-5.60	-4.56/-4.15	-3.09/-2.41	-1.81/-2.00	-2.98/-4.46	-6.14/-7.27	-6.89/-4.59	-2.60/-0.97	0.40/1.25	2.11/2.38	2.95/3.17	3.47/3.70	3.77/4.21	4.33/4.42	3.84/3.42	3.00			

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

