



Antenna Composite Gain Test Report

Equipment	Wi-Fi AP
Brand Name	Quantum FIBER
Model Name	Q9500WK
Applicant	Gemtek Technology Co., Ltd. No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.
Manufacturer	Gemtek Technology Co., Ltd. No. 15-1 Zhonghua Road, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, 30352.
Sample Received	Jul. 21, 2022
Start Test Date	Jul. 26, 2022
Final Test Date	Jul. 26, 2022



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History of this test report

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1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G5GL Ant1	1	Lynwave	MEX22M-222AA1-A	PIFA	I-PEX / UFL	2.4GHz, 5GHz
2G5GL Ant2	2	Lynwave	MEX22M-222AA1-A	PIFA	I-PEX / UFL	2.4GHz, 5GHz
5GH Ant1	1	Lynwave	MEX22M-222AA1-A	PIFA	I-PEX / UFL	5GHz
5GH Ant2	2	Lynwave	MEX22M-222AA1-A	PIFA	I-PEX / UFL	5GHz
5GH Ant3	3	Lynwave	MEX22M-222AA1-A	PIFA	I-PEX / UFL	5GHz
5GH Ant4	4	Lynwave	MEX22M-222AA1-A	PIFA	I-PEX / UFL	5GHz

Note:

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

2G5GL Ant1~ 2G5GL Ant2 could transmit/receive simultaneously.

5GHz Operation Mode (4TX/4RX)

5GH Ant1~ 5GH Ant4 could transmit/receive simultaneously.

2. Test Frequency

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

Band [MHz]	Test Frequency [MHz]
2400-2483.5	2450
5150-5250	5200
5250-5350	5300
5470-5725	5600
5725-5850	5785

3. Testing Location

Test Lab. : Sporton International Inc. Hsinhua Laboratory				
☒ Wen 33rd.St.	ADD:	No.14-1, Ln. 19, Wen 33rd St., Guishan Dist., Taoyuan City 333010, Taiwan (R.O.C.)		
		TEL: 886-3-318-0787	FAX: 886-3-318-0287	
Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
Radiated	05CH03-HY	Rex Liao	23.5~24.5°C / 40~50%	26/Jul/2022

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

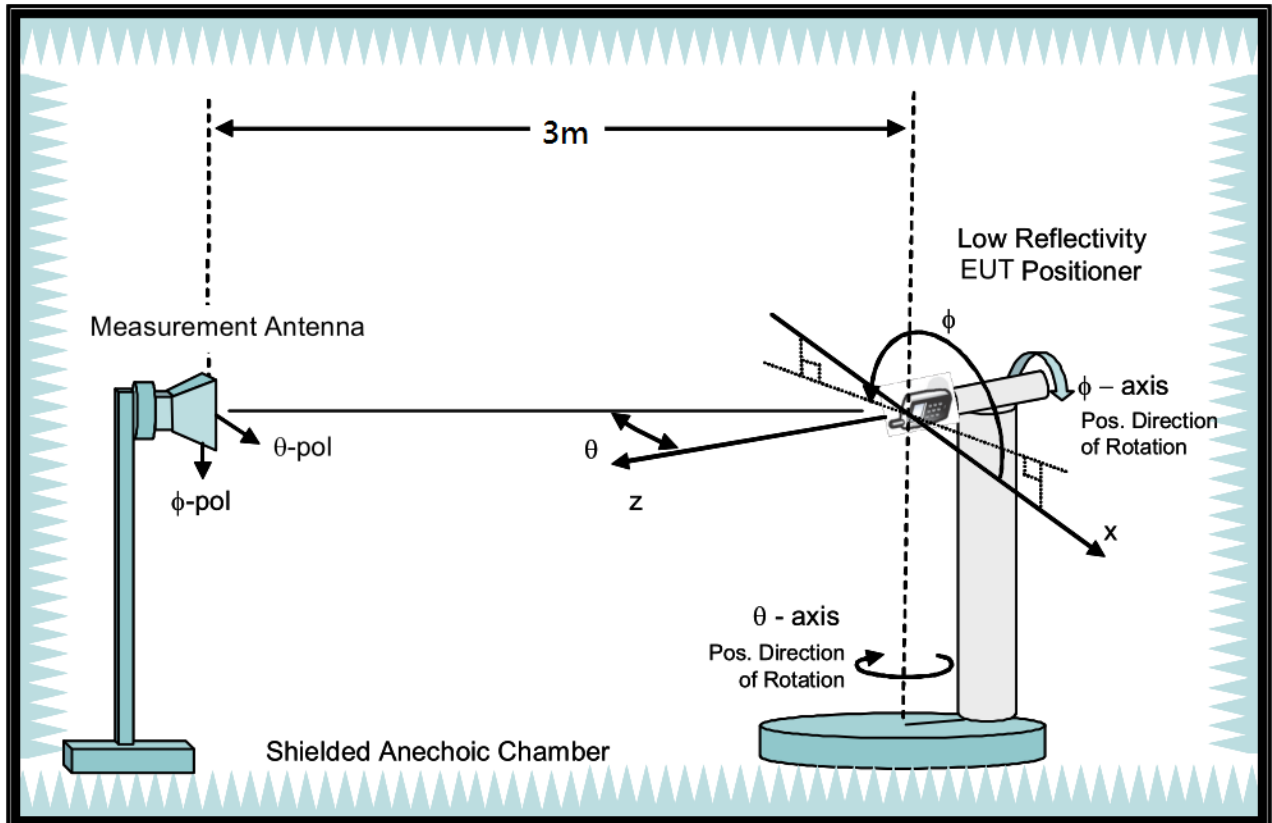
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

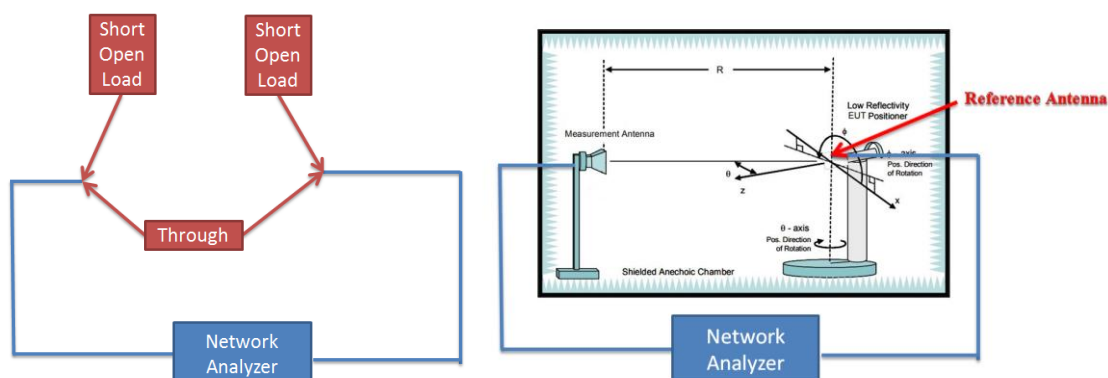
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



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	7500
G reading (dB)	-31.4	-31.4	-31.3	-31.3	-31	-30.7	-30.1	-30.5	-30.5	-30.8	-31.3	-32.8	-34.4	-35.4
Reference gain (dBi)	10.2	10.4	10.6	12.4	12.8	13.4	13.4	13.3	13.3	13.1	13.2	12.3	11.7	11.1
Factor (dB)	41.34	41.55	41.68	43.24	43.56	43.68	43.79	43.91	43.99	44.43	44.49	45.24	46.12	46.31

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 10 degree from 0 to 350 degree on Phi angle and 0 to 180 on theta angle of multi-axis positioner. Then set measurement antenna to theta polarization and repeat process. Repeat process to each antenna of EUT.

DG steps:

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

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

7. Measured Values and Calculation of Maximum Gain Positions

DG_1SS max value position

Frequency (Hz)	2.45G	5.2G	5.3G
Ant. 1 (dBi)	-3.19	-2.9	-3.41
Ant. 2 (dBi)	2.13	2.42	2.58
DG [1SS] (dBi)	2.88	3.17	3.1
Polarization	Theta	Theta	Theta
$\Theta(^{\circ})$	70	70	70
$\Phi(^{\circ})$	260	120	180

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

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G
Ant. 1 [$10^{(G/20)}$]	$10^{(-3.19/20)}$	$10^{(-2.9/20)}$	$10^{(-3.41/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(2.13/20)}$	$10^{(2.42/20)}$	$10^{(2.58/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.693	0.716	0.675
Ant. 2 [$10^{(G/20)}$] value	1.278	1.321	1.346
Sum All Antenna [Amax]	1.971	2.037	2.021
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	2.88	3.17	3.1

Note:

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

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



DG_1SS max value position

Frequency (Hz)	5.6G	5.785G
Ant. 1 (dBi)	0.13	-0.98
Ant. 2 (dBi)	-4.62	-3.54
Ant. 3 (dBi)	0.03	0.45
Ant. 4 (dBi)	-1.93	-2.5
DG [1SS] (dBi)	4.63	4.51
Polarization	Theta	Theta
$\Theta(^{\circ})$	80	40
$\Phi(^{\circ})$	250	330

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

DG_1SS max value position calculation

Frequency (Hz)	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(0.13/20)}$	$10^{(-0.98/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(-4.62/20)}$	$10^{(-3.54/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(0.03/20)}$	$10^{(0.45/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(-1.93/20)}$	$10^{(-2.5/20)}$
Ant. 1 [$10^{(G/20)}$] value	1.015	0.893
Ant. 2 [$10^{(G/20)}$] value	0.587	0.665
Ant. 3 [$10^{(G/20)}$] value	1.003	1.053
Ant. 4 [$10^{(G/20)}$] value	0.801	0.75
Sum All Antenna [Amax]	3.407	3.362
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.63	4.51

Note:

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

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

8. Summary of Test Result

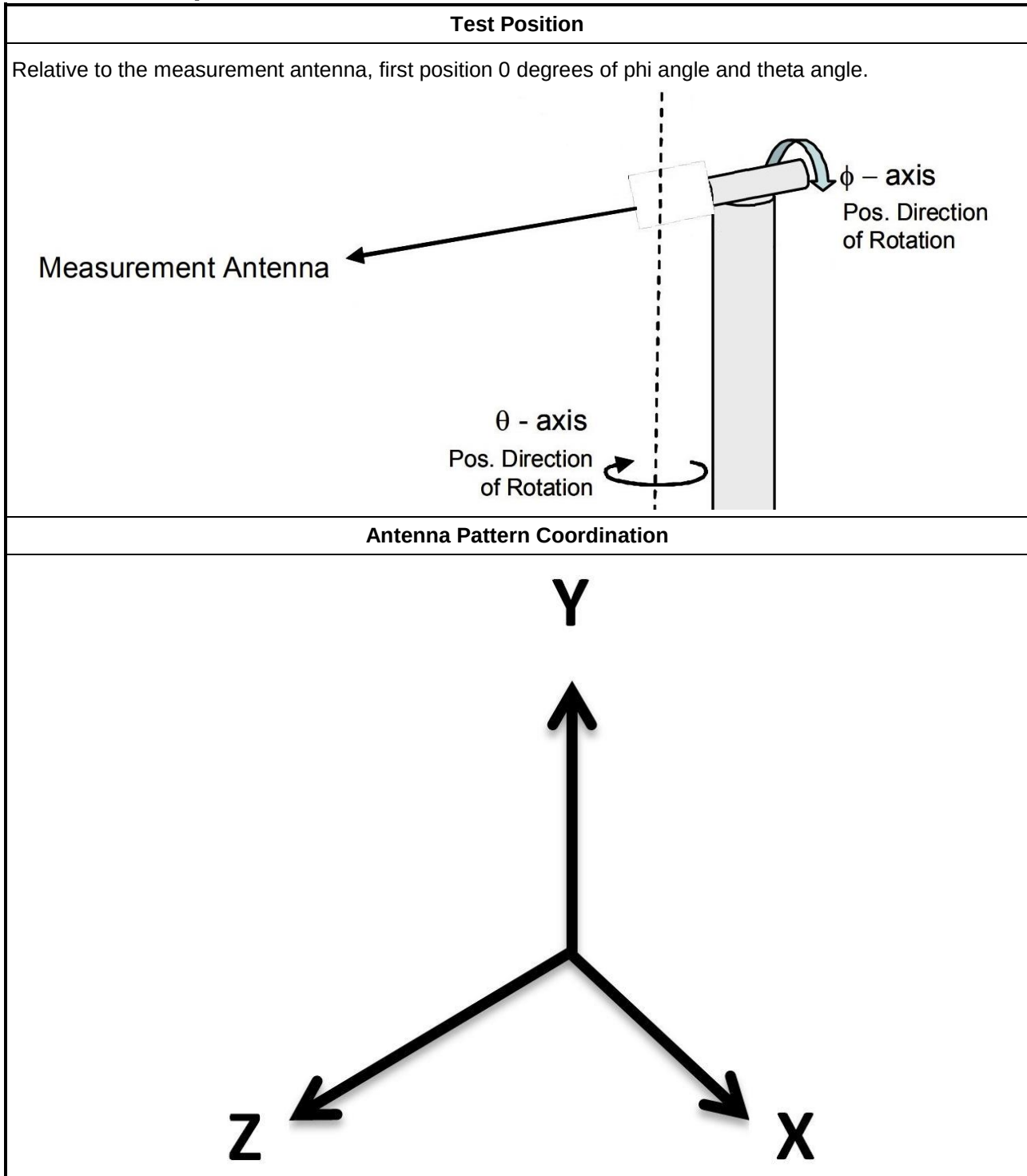
Frequency (Hz)	2.45G	5.2G	5.3G
Ant. 1 Max Gain (dBi)	2.29	1.94	1.39
Ant. 2 Max Gain (dBi)	2.13	2.42	2.58
Ant. 3 Max Gain (dBi)	Phi/150/170	Theta/60/350	Theta/120/190
Max Gain (dBi)	Theta/70/260	Theta/70/120	Theta/70/180
DG [1SS] (dBi)	2.29	2.42	2.58
DG [2SS] (dBi)	2.88	3.17	3.1
DG [3SS] (dBi)	2.29	2.42	2.58

Frequency (Hz)	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.11	2.26
Ant. 2 Max Gain (dBi)	2.97	2.18
Ant. 3 Max Gain (dBi)	2.84	3.22
Ant. 4 Max Gain (dBi)	2.29	2.42
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/30/280	Theta/50/270
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/90/40	Theta/60/120
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/80/300	Theta/80/320
Max Gain (dBi)	3.11	3.22
DG [1SS] (dBi)	4.63	4.51
DG [2SS] (dBi)	3.11	3.22
DG [4SS] (dBi)	3.11	3.22

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	V1.0.6	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

Appendix A. – Radiated Composite Gain of 2.4GHz& 5GHz (Low Band).....	Page 14
Appendix B. – Radiated Composite Gain of 5GHz (High Band).....	Page 20
Appendix C.1 – Antenna Pattern of 2.4GHz& 5GHz (Low Band).....	Page 25
Appendix C.2 – Antenna Pattern of 5GHz (High Band).....	Page 28
Appendix D – Test Photos & Antenna Positon	



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Freq(Hz)	2.45G	5.2G	5.3G
Ant. 1 Max Gain (dBi)	2.29	1.94	1.39
Ant. 2 Max Gain (dBi)	2.13	2.42	2.58
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/150/170	Theta/60/350	Theta/120/190
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/70/260	Theta/70/120	Theta/70/180
Max Gain (dBi)	2.29	2.42	2.58
DG [1SS] (dBi)	2.88	3.17	3.1
DG [2SS] (dBi)	2.29	2.42	2.58



Radiated Composite Gain Data

Appendix A

DG 1SS Result

Freq(Hz)	2.45G/Pol.	PhiL	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-6.65/-5.87	-4.61/-3.9	-2.97/-2.34	-1.94/-1.65	-1.51/-1.61	-1.98/-2.52	-3.54/-4.8	-7.61/-9.4	-7.61/-7.26	-7.09/-6.53	-5.39/-4.18	-3.25/-2.5	-1.81/-1.97	-2.21/-2.69	-3.41/-4.45	-5.58/-6.36	-7.52/-7.32	
Θ(10°)	-5.49/-4.7	-3.83/-3.14	-2.55/-2.03	-1.68/-1.53	-1.46/-1.67	-2.04/-2.46	-3.22/-4.23	-4.99/-6.1	-7.58/-8.44	-9.08/-8.74	-7.11/-5.17	-3.63/-2.23	-1.44/-1.04	-1/-1.14	-1.71/-2.43	-3.54/-5.27	-7.14/-7.77	-7.06/-6.09
Θ(20°)	-4.59/-3.99	-3.46/-2.88	-2.24/-1.68	-1.29/-1.05	-1.2/-1.5	-1.87/-2.24	-3.12/-4.29	-5.71/-6.86	-8.43/-10.26	-12.03/-13.92	-11.25/-8.51	-5.2/-3.08	-1.79/-1	-1.03/-1.23	-1.84/-3.05	-4.38/-6.59	-8.04/-7.99	-6.48/-5.37
Θ(30°)	-3.36/-3.18	-3.38/-3.36	-2.76/-1.98	-1.34/-1.4	-1.73/-2.12	-2.56/-3.31	-4.78/-7.05	-9.92/-11.34	-12.81/-14.55	-14.49/-14.02	-13.43/-11.99	-7.77/-4.73	-2.59/-1.56	-1.39/-1.39	-1.83/-2.5	-3.52/-4.87	-5.56/-5.31	-4.4/-3.63
Θ(40°)	-3.57/-3.75	-4.01/-4.06	-3.34/-2.3	-1.88/-1.96	-2.33/-2.77	-3.65/-4.96	-7.25/-10.41	-11.82/-11.42	-11.33/-11.07	-9.48/-9.36	-10.37/-11.37	-8.98/-5.58	-3.07/-1.73	-1.11/-0.96	-1.09/-1.95	-3.17/-4.31	-4.53/-3.79	-3.34/-3.17
Θ(50°)	-6.31/-6.9	-6.68/-5.75	-3.62/-2.12	-1.58/-1.42	-1.45/-1.82	-2.87/-4.76	-8.25/-14.04	-15.38/-10.65	-11.47/-11.22	-8.61/-7.61	-8.72/-9.28	-7.96/-5.32	-3.81/-2.87	-2.24/-1.98	-2.61/-3.75	-6.04/-7.05	-6.51/-5.02	-5/-5.86
Θ(60°)	-4.65/-4.85	-5.06/-5.93	-5.81/-4.63	-4.15/-4.45	-4.55/-4.26	-3.88/-4.23	-6.07/-10.07	-10.69/-9.25	-11/-12	-8.22/-6.99	-6.7/-6.6	-4.12/-2.08	-1.59/-1.96	-2.35/-2.2	-2.71/-3.76	-5.25/-6.54	-5.91/-4.77	-4.52/-4.75
Θ(70°)	-5.89/-7.18	-7.12/-5.57	-3.74/-2.96	-3.13/-3.82	-4.55/-3.57	-2.7/-2.75	-4.77/-8.26	-7.72/-6.01	-6.69/-7.77	-6.2/-5.8	-5.84/-4.8	-3.13/-1.18	-0.79/-1.73	-1.66/-1.3	-1.11/-2.1	-3.19/-4.25	-4.8/-3.85	-3.09/-3.88
Θ(80°)	-6.82/-9.17	-9.46/-8.11	-5.62/-4.28	-3.65/-4.66	-5.58/-4.26	-1.81/-0.55	-1.55/-4.24	-3.02/-2.02	-2.77/-5.21	-5.7/-4.97	-4.68/-4.12	-2.41/-0.38	0.08/-1.43	-4.45/-5.38	-3.12/-1.72	-2.16/-3.92	-5.69/-5.28	-4.9/-5.25
Θ(90°)	-7.39/-8.61	-10.9/-9.37	-6.74/-4.78	-3.6/-3.93	-4.17/-3.57	-2.48/-1.47	-2.13/-3.83	-2.79/-2.39	-4.17/-9.76	-7.72/-6.23	-3.71/-1.31	-1.27/-3.18	-5.98/-5.47	-1.86/-2.41	-2.74/-2.99	-4.25/-6.49		
Θ(100°)	-7.31/-9.26	-9.09/-7.98	-7.07/-6.72	-5.82/-6.5	-6.32/-4.65	-3.36/-2.8	-3.8/-5.37	-3.93/-3.34	-4.3/-7.52	-5.39/-5.61	-6.51/-6.88	-4.52/-1.69	-1.17/-3	-7.2/-8.89	-5.84/-2.98	-1.55/-2.03	-3.2/-2.7	-1.83/-3.17
Θ(110°)	-7.04/-13.52	-10.31/-7.98	-6.51/-6.41	-6.37/-7.81	-9.37/-5.58	-2.54/-1.65	-3.06/-3.36	-2.18/-1.6	-2.46/-5.27	-5.03/-4.09	-4.11/-6.64	-6.45/-2.86	-5.84/-11.36	-5.2/-2.08	-0.6/-0.62	-1.73/-2.73	-2.19/-2.97	
Θ(120°)	-5.99/-11.64	-12.31/-7.91	-5.3/-4.55	-3.97/-3.8	-3.29/-2.3	-5.77/-3.64	-1.11/-1.23	-2.87/-3.64	-3.2/-2.89	-6.43/-5.19	-4.87/-8.59	-6.24/-3.85	-2.46/-2.8	-4.87/-8.59	-5.62/-3.34	-2.42/-1.76	-1.58/-2.59	-3.51/-3.68
Θ(130°)	-4.47/-8.43	-8.78/-7.9	-8.12/-7.19	-7.17/-6.79	-5.23/-3.89	-3.08/-2.88	-2.99/-2.63	-2.08/-2.5	-4.23/-4.98	-3.52/-2.58	-2.66/-3.81	-6.06/-6.04	-4.71/-4.92	-6.41/-6.85	-4.84/-3.22	-1.89/-0.81	-0.19/-0.1	-0.98/-2.27
Θ(140°)	-2.81/-3.48	-3.38/-3.74	-5.5/-6.69	-6.66/-5.59	-4.61/-3.99	-3.9/-4.18	-4.63/-4.98	-4.01/-3.01	-2.38/-2.21	-1.69/-1.26	-1.05/-1.97	-4.16/-6.08	-6.5/-5.66	-5.44/-6.74	-7.68/-8.39	-6.22/-4.18	-2.66/-1.56	-1.19/-1.74
Θ(150°)	-5.3/-5.41	-5.17/-5.54	-5.84/-6.23	-5.13/-3.96	-3.05/-2.29	-1.96/-1.97	-0.04/-0.34	0.410/-1.7	-0.32/-1.52	-1.38/-2.48	-3.2/-3.59	-4.09/-4.4	-4.71/-4.94	-4.83/-4.88	-4.75/-4.7	-4.46/-3.53	-3.25/-4.04	
Θ(160°)	-8.18/-10.81	-10.99/-9.65	-9.31/-9.35	-8.93/-8.39	-7.23/-6.27	-4.78/-3.72	-2.83/-2.26	-1.19/-1.87	-2.12/-2.83	-4.1/-6	-8.09/-10.45	-13.37/-11.89	-10.03/-8.55	-7.39/-6.62	-5.54/-3.49	-3.33/-2.93	-3.05/-3.45	-4.19/-6.62
Θ(170°)	-7/-8.06	-8.05/-8.51	-9.22/-10.67	-11.79/-11.74	-10.95/-8.48	-6.5/-5.33	-4.84/-4.78	-4.97/-5.42	-6.44/-7.4	-8.89/-10.75	-10.91/-10.74	-10.52/-9.78	-9.78/-9.56	-9.09/-8.73	-7.67/-6.06	-4.78/-4.28	-4.24/-4.48	-5.13/-5.95
Θ(180°)	-6.29/-5.8	-5.51/-5.63	-6.32/-7.38	-8.77/-10.05	-10.86/-10.57	-10.77/-11.02	-10.87/-10.45	-10.16/-9.65	-8.73/-9.96	-7.39/-6.79	-6.5/-6.24	-6.13/-6.35	-6.63/-6.79	-6.96/-7.5	-7.96/-8.8	-9.27/-9.25	-8.85/-7.76	-7.35/-6.94
Freq(Hz)	2.45G/Pol.	ThetaL	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-2.77/-3.04	-3.41/-4.17	-5.36/-6.42	-6.98/-6.7	-6.14/-5.73	-5.33/-4.68	-4.27/-3.55	-3.07/-2.67	-2.51/-2.43	-2.48/-2.94	-3.68/-4.86	-5.57/-6.25	-6.12/-6	-5.84/-5.19	-4.62/-4.2	-3.9/-3.57	-3.29/-3.14	-2.79/-2.71
Θ(10°)	-4.02/-4.78	-6.03/-6.23	-6.77/-6.5	-5.93/-5.45	-6.77/-6.5	-5.91/-5.92	-5.91/-5.44	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86	-4.54/-3.86
Θ(20°)	-4.31/-5.23	-6.29/-6.48	-5.79/-5.52	-5.18/-4.57	-5.87/-5.53	-4.54/-3.46	-2.78/-2.47	-2.22/-2.28	-2.4/-1.95	-1.52/-1.02	-0.84/-1.07	-1.86/-3.1	-4.7/-6.06	-6.59/-6.23	-4.89/-3.42	-2.31/-1.85	-1.86/-2.18	-2.75/-3.57
Θ(30°)	-4.76/-5.76	-6.21/-5.73	-5.08/-4.78	-5.02/-5.17	-4.16/-2.6	-1.61/-0.76	-0.39/-0.48	-0.96/-2.07	-2.93/-2.96	-2.2/-1.25	-0.71/-0.74	-1.48/-2.99	-4.82/-6.97	-6.92/-5.16	-3.49/-2.16	-1.24/-0.85	-0.92/-1.58	-2.58/-3.51
Θ(40°)	-6.78/-8.7	-8.1/-5.79	-4.48/-4.34	-5.22/-4.43	-3.13/-1.47	-0.090.55	0.920.9	-0.76/-0.5	-0.920.9	-3.54/-1.88	-1.07/-2.25	-4.24/-4.88	-3.92/-3.18	-2.92/-2.13	-1.44/-0.9	-1.2/-1.1	-3.33/-4.78	
Θ(50°)	-7.96/-8.78	-8.17/-4.76	-3.54/-4.1	-5.26/-3.84	-1.72/-0.21	0.781.58	2.032.14	1.38/-0.54	-2.54/-3.04	-2.12/-0.74	0.080.14	-0.44/-1.38	-2.38/-2.23	-1.61/-1.4	-1.31/-1.02	-0.61/-0.57	-1.19/-2.49	-3.86/-5.55
Θ(60°)	-8.08/-10.3	-9.39/-6.06	-4.35/-5.1	-5.36/-2.65	-0.850.69	1.862.44	2.662.62	1.930.33	-1.6/-2.06	-1.33/-0.35	0.17/-0.56	-2.23/-3.04	-0.850.92	1.661.69	1.380.9	0.51/-0.01	-0.94/-2.18	-3.63/-5.49
Θ(70°)	-9.85/-11.52	-8.05/-4.4	-2.76/-3.49	-3.92/-4.19	-3.13/-1.47	0.181.47	1.872.01	0.810.14	1.822.01	-0.080.73	0.170.54	-0.32/-1.02	0.751.97	2.882.62	1.580.37	-0.96/-1.65	-2.33/-3.69	-4.99/-6.84
Θ(80°)	-10.61/-11.39	-7.45/-4.59	-3.98/-4.48	-3.29/-3.48	-3.66/-2.45	-0.660.54	0.28/-0.12	0.08/-1.2	-2.36/-1.1	-0.140.19	0.22/-0.34	-1.61/-2.04	-1.030.5	1.571.76	1.13/-0.15	-1.15/-1.7	-2.48/-4.09	-6.33/-8.31
Θ(90°)	-8.29/-9.59	-7.51/-4.44	-4.31/-5.4	-3.86/-3.56	-3.64/-1.99	-0.130.99	0.680.48	0.66/-0.58	-1.08/-0.22	0.02/-0.04	-0.36/-1.29	-2.24/-2.1	-1.52/-0.33	0.170.32	0.1/-0.7	-1.57/-2.48	-3.45/-4.32	-5.95/-7.13
Θ(100°)	-8.53/-7.78	-7.4/-4.37	-4.35/-4.27	-2.59/-2.09	-2.65/-2.49	-3.74/-1.75	-1.58/-2.05	-3.48/-4.2	-3.47/-4.01	-3.54/-5.6	-3.84/-4.42	-5.05/-3.86	-3.13/-3.16	-3.84/-4.21	-4.06/-3.92	-4.55/-6.18	-8.63/-9.3	-9.42/-9.07
Θ(110°)	-5.84/-6.18	-4.63/-2.98	-3.54/-4.39	-2.84/-1.53	-1.43/-1.85	-2.56/-3.72	-6.16/-5.68	-5.4/-6.16	-4.68/-2.44	-1.94/-2.79	-3.4/-4.22	-5.39/-4.57	-5.9/-8.95	-7.3/-4.11	-2.2/-2.43	-3.36/-4.18	-7.19/-8.17	-6.97/-6.28
Θ(120°)	-5.92/-5.34	-4.73/-5.07	-6.65/-7.58	-5.74/-3.78	-2.49/-2.07	-2.71/-4.09	-3.33/-2.12	-2.03/-3.11	-4.68/-5.28	-5.87/-5.21	-4.64/-5.27	-3.64/-2.46	-3.93/-6.57	-9.39/-8.59	-4.85/-4.3	-6.48/-8.76	-10.91/-10.48	-7.01/-6.49
Θ(130°)	-5.29/-6.34	-7.64/-6.97	-5.15/-6.42	-4.22/-3.1	-2.45/-2.72	-6.78/-6.1	-5.22/-7.06	-7.82/-7.28	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9	-5.08/-4.9
Θ(140°)	-3.26/-3.62	-5.03/-7.39	-9.35/-8.19	-5.9/-4.34	-4.06/-4.49	-4.59/-3.56	-2.7/-2.76	-3.91/-5.36	-6.41/-6.05	-5.33/-5.12	-4.08/-2.52	-2.44/-4.47	-6.9/-7.41	-7.42/-6.19	-4.43/-3.79	-4.76/-6.24	-7.43/-8.17	-6.75/-4.41
Θ(150°)	-3.62/-3.82	-5.11/-8.08	-12.69/-13.79	-10.4/-7.73	-6.13/-4.7	-3.98/-3.21	-2.77/-3.16	-4.36/-6.86	-6.24/-5.26	-5.46/-3.87	-2.53/-1.89	-2.73/-4.36	-6.08/-6.07	-4.34/-3.22	-1/-0.78	-1.35/-2.69	-4.18/-5.05	-5.32/-4.5
Θ(160°)	-4.96/-4.68	-5.84/-8.22	-10.82/-14.59	-15.09/-11.86	-9.11/-7.38	-6.35/-6.07	-8.24/-8.88	-8.49/-8.03	-6.89/-5.26	-4.63/-4.74	-6.41/-9.09	-1.68/-10.36	-8.2/-8.52	-4.88/-5.59	-8.01/-3.68	-12.04/-10.58	-8.02/-6.02	
Θ(170°)	-7/-6.42	-6.74/-6.95	-7.54/-7.86	-7.91/-7.95	-8.22/-9	-10.04/-11.31	-12.57/-13.29	-12.6/-11.99	-11/-10.5	-10.46/-9.95	-10.27/-11.06	-11.38/-11.07	-9.68/-8.61	-7.16/-6.47	-6.08/-6.75	-7.7/-8.5	-8.44/-8.19	-7.87/-7.39
Θ(180°)	-8.56/-8.77	-8.68/-8.18	-7.28/-8.62	-6.64/-6.41	-6.41/-6.44	-6.33/-6.54	-6.14/-5.76	-5.98/-6.36	-6.84/-7.51	-7.93/-8.3	-8.11/-7.51	-6.65/-5.89	-5.74/-5.66	-5.38/-5.23	-5.23/-5.29	-5.64/-6.24	-6.42/-6.75	-7.34/-8.22
Freq(Hz)	5.2G/Pol.	PhiL	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dB)	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-12.28/-11.9	-13.88/-13.43	-14.28/-15.48	-15.3/-15.96	-13.48/-14.05	-14.79/-12.59	-11.86/-10.77	-9.46/-8.68	-8.76/-8.3	-9.45/-10.26	-11.65/-13.01	-14.41/-15.34	-15.14/-15.08	-14.72/-14.89	-13.37/-11.43	-10.06/-8.23	-8.19/-8.81	-8.33/-10.49
Θ(10°)	-11.1/-9.83	-8.64/-9.02	-11.33/-12.53	-14.26/-14.58	-13.72/-12.16	-11.31/-10.22	-8.28/-8.71	-8.34/-7.19	-8.82/-8.25	-8.83/-8.74	-9.59/-9.54	-7.15/-7.49	-6.23/-6.99	-5.54/-3.05	-2.14/-0.91	-8.07/-11.3	-7.8/-5.55	
Θ(20°)	-7.76/-5.39	-4.18/-3.98	-3.89/-4.17	-5.24/-6.47	-9.28/-10.57	-9.15/-8.06	-9.19/-11.94	-13.18/-12.07	-7.94/-5.93	-4.51/-4.21	-4.51/-4.99	-4.9/-4.69	-5.33/-6.34	-6.85/-5.92	-4.48/-4.35	-4.31/-5.15	-6.89/-9.57	-12.68/-10.15
Θ(30°)	-10.46/-8.12	-5.88/-5.08	-4.97/-4.99	-6.09/-7.33	-7.67/-7.34	-7												



Radiated Composite Gain Data

Appendix A

Θ (60°)	-0.63/-2.98	-4.53/-3.24	-1.67/-1.37	-1.59/-1.19	-2.48/-3.8	-3.83/-3.46	-4.4/-3.04	-2.11/-2.4	-1.35/0.4	1.22/-0.28	-1.74/-3.63	-4.13/-5.42	-5.61/-3.84	-1.27/0.08	-0.03/-1.06	-0.86/0.12	-0.78/-1.89	-0.77/-0.14
Θ (70°)	-0.49/-1.62	-3.53/-6.36	-5.16/-3.54	-1.82/-1.15	-2.08/-4.97	-3.25/-2.45	-3.2/-2.43	-1.35/0.07	1.23/2.89	3.11/1.27	0.74/-2.07	-2.82/-2.3	-4.58/-2.16	0.93/-0.03	-0.29/-1.81	-2.28/-1.95	-4.32/-3.3	-1.25/-0.22
Θ (80°)	-0.77/-1.24	-2.84/-6.16	-6.57/-4.62	-2.92/-2.01	-2.31/-5.12	-2.51/-1.32	-2.25/-2.47	-3.11/-2.98	-0.95/1.34	2.19/-2.08	-5.48/-6.97	-6.09/-3.28	-2.6/-0.61	0.24/-1.63	-3.36/-4.43	-7.23/-8.14	-8.6/-6.62	-3.15/-2.46
Θ (90°)	-1.66/-1.97	-3.4/-5.46	-7.8/-6.16	-3.54/-2.72	-4.63/-4.55	-1.29/-1.04	-2.97/-1.89	-2.73/-2	-1.02/-0.3	-0.8/-4.68	-3.82/-6.03	-5.6/-5	-3.55/-0.94	-2.86/-8.01	-9.32/-5.46	-8.21/-6.55	-4.6/-2.64	-3.08/-3.65
Θ (100°)	-4.44/-3.68	-5.88/-5	-7.08/-5.65	-5.16/-5.38	-8.57/-4.18	-0.64/-1.17	-3.75/-3.46	-3.98/-2.66	-1.86/-2.17	-6.8/-4.85	-1.87/-2.29	-5.23/-6.02	-4.71/-8.36	-7.33/-10.41	-8.4/-7.05	-4.12/-3.88	-2.84/-2.37	-4.72/-6.43
Θ (110°)	-2.18/-2.54	-5.26/-4.2	-4.5/-3.73	-8.81/-7.54	-8.11/-6.02	-2.58/-2.85	-4.15/-6.58	-4.53/-4.55	-3.07/-4.76	-5.69/-2.21	-2.74/-4.65	-4.9/-4.6	-3.31/-10.49	-8.13/-4.23	-3.85/-5.29	-2.38/-3.69	-2.99/-5.08	-5.36/-3.77
Θ (120°)	-3.7/-2.97	-5.1/-6.44	-3.74/-5.15	-7.6/-10.41	-7.86/-7.14	-5.09/-5.7	-5.78/-4.71	-4.4/-4.18	-4.24/-1.56	-0.25/1.01	-1.43/-4.41	-1.84/-2.42	-4.58/-6.83	-8.84/-6.36	-3.47/-6.19	-5.89/-2.98	-4.88/-9.21	-5.48/-0.46
Θ (130°)	-1.69/-1.22	-2.64/-4.41	-4.24/-3.48	-5.19/-7.82	-6.48/-8.94	-9.79/-6.69	-5.11/-3.49	-3.21/-3.59	-4.11/-1.9	-0.64/0.12	-5.9/-7.54	-3.72/-3.72	-2.02/-3.96	-6.5/-7.51	-2.39/-8.4	-7.61/-8.17	-7.36/-4.56	-2.64/0.04
Θ (140°)	-3.36/-4.28	-3.72/-7.49	-5.62/-2.72	-1.74/-2.37	-2.6/-3.04	-4.83/-5.15	-2.35/-0.72	-1.27/-2.27	-4.14/-3.15	-1.59/-2.98	-3.57/-2.45	-0.6/-4.06	-1.87/-4.48	-1.73/-0.96	-2.31/-2.79	-3.71/-5.66	-1.87/-1.89	-1.97/-1.86
Θ (150°)	-4.59/-4.56	-4.94/-4.91	-2.75/-1.64	-2.71/-5.51	-8.9/-11.1	-11.28/-7.92	-5.1/-3.97	-4.86/-5.45	-6.43/-6.05	-3.71/-2.39	-2.14/-1.63	-2.74/-5.32	-8.74/-9.37	-4.84/-4.8	-3.47/-4.68	-6.19/-5.41	-3.18/-2.34	-3.72/-4.9
Θ (160°)	-5.05/-5.52	-5.94/-6.2	-5.44/-4.98	-5.5/-8.45	-10.36/-11.72	-12.25/-11.92	-11.4/-11.53	-10.71/-8.17	-7.15/-5.46	-3.95/-3.5	-3.59/-3.01	-2.92/-4.26	-10.27/-12.02	-8.98/-9.46	-9.49/-9.72	-13.14/-15.07	-12.84/-12.16	-8.54/-6.31
Θ (170°)	-6.05/-7.67	-8.92/-11.3	-9.77/-8.97	-7.29/-6.92	-6.73/-6.24	-6.51/-8.23	-8.95/-8.56	-7.63/-6.98	-5.86/-4.13	-2.71/-2.67	-3.56/-5.63	-9.21/-11.82	-10.36/-9.25	-7.51/-6.94	-7.96/-9.06	-11.61/-13.45	-12.34/-9.13	-6.95/-5.62
Θ (180°)	-5.06/-5.87	-7.21/-7.17	-8.11/-9.88	-11.31/-11.95	-14.12/-15.87	-15.77/-13.51	-10.99/-9.42	-8.5/-7.3	-6.89/-6.86	-7.43/-9.02	-9.76/-11.24	-11.77/-12.35	-12.91/-13.61	-11.69/-11.17	-10.7/-9.35	-7.5/-6.02	-5.48/-5.25	-4.25/-4.23



Radiated Composite Gain Data

Appendix A

Gain Result

Freq(Hz)	2.45GPol.	Phi/Ant. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-9.13/-9.7	-9.54/-8.6	-7.49/-5.51	-5.97/-5.27	-4.47/-3.89	-3.54/-3.41	-3.03/-3.96	-4.64/-5.67	-7.5/-9.79	-12.07/-14.13	-13.8/-11.36	-9.46/-7.63	-4.34/-5.36	-4.73/-4.07	-3.67/-3.21	-4.02/-5.15	-6.52/-7.78	
Θ(10°)	-9.95/-10.64	-9.89/-8.83	-7.49/-6.41	-5.62/-4.61	-3.56/-2.81	-2.56/-2.36	-2.41/-2.75	-3.51/-4.68	-6.54/-8.73	-12.45/-15.23	-15.13/-12.23	-9.99/-7.85	-6.56/-5.57	-4.98/-4.58	-4.43/-4.44	-4.59/-5.3	-5.95/-7	-7.78/-8.72
Θ(20°)	-13.11/-13.05	-11.9/-9.87	-7.82/-6.36	-5.01/-3.96	-2.62/-2.22	-2.24/-2.24	-2.68/-3.38	-4.37/-5.65	-7.53/-9.74	-12.59/-17.58	-18.37/-18.88	-13.49/-10.49	-8.75/-7.4	-7.17/-6.94	-7.14/-7.7	-8.74/-9.88	-10.43/-10.6	-11.1/-11.71
Θ(30°)	-12.02/-12.05	-12.81/-11.83	-9.33/-6.63	-4.52/-3.33	-2.88/-3.15	-3.71/-4.53	-3.71/-4.53	-9.43/-11.87	-13.98/-16.35	-19.49/-19.13	-17.35/-19.13	-15.1/-11.83	-9.4/-8.27	-7.99/-7.31	-7.33/-7.26	-10.08/-10.67	-10.67/-11.26	
Θ(40°)	-10.14/-10.13	-10.8/-10.65	-8.4/-5.32	-3.48/-2.61	-3.12/-4.51	-6.51/-8.92	-11.67/-12.86	-12.75/-11.74	-11.52/-13.16	-15.69/-18.39	-19.21/-17.66	-12.49/-9.1	-6.76/-5.8	-5.31/-4.91	-4.8/-5.31	-6.37/-8.11	-9.16/-8.76	-8.91/-9.5
Θ(50°)	-18.61/-18.23	-18/-14.9	-8.29/-4.28	-2.1/-1.19	-1.67/-3.26	-5.92/-9.54	-14.66/-18.87	-18.06/-13.55	-13.25/-14.26	-15.21/-15.42	-17.37/-15.79	-11.2/-7.63	-6.36/-6.02	-6.21/-6.88	-8.73/-11.4	-17.07/-18.1	-17.56/-14.03	-14.5/-18.66
Θ(60°)	-9.09/-8.46	-9.32/-13.88	-14.79/-9.36	-6.15/-4.96	-5.11/-6.04	-7.03/-7.56	-8.64/-10.43	-12.4/-13.78	-15.37/-15.81	-15.89/-18.61	-18.74/-15.46	-8.57/-5.03	-3.61/-3.25	-3.86/-5.11	-7.35/-9.73	-12.17/-14.45	-14.57/-14.13	-12.93/-11.01
Θ(70°)	-13.09/-12.25	-10.97/-8.8	-6.13/-4	-3.19/-3.2	-4.56/-5.31	-5.39/-5.49	-6.49/-7.87	-8.87/-8.91	-8.8/-9.28	-10.85/-14.29	-16.13/-10.39	-5.61/-2.82	-1.8/-2.08	-1.89/-3.46	-5.07/-7.81	-9.3/-11.15	-13.3/-14.18	-13.05/-12.75
Θ(80°)	-18.07/-19.13	-17.65/-15.28	-9.07/-5.42	-3.93/-4.57	-6.9/-7.54	-4.63/-2.06	-1.41/-2.36	-3.66/-4.15	-4.42/-5.25	-7.11/-10.44	-12.59/-9.32	-5.48/-2.78	-1.74/-2.46	-4.87/-8.78	-7.91/-6.09	-6.28/-9.35	-17.03/-18.35	-19.15/-18.59
Θ(90°)	-16.8/-16.81	-18.4/-17.83	-10.89/-5.55	-3.04/-3.28	-4.96/-6.4	-5.46/-3.24	-2.04/-2.8	-4.86/-6.23	-7.72/-9.6	-12.26/-18.36	-18.14/-15.52	-7.34/-3.66	-6.49/-10.42	-10.65/-8.2	-6.39/-6.38	-8.35/-11.35	-15/-15.94	
Θ(100°)	-12.88/-12.68	-12.6/-12.84	-11.7/-10.16	-7.06/-7.27	-8.61/-7.99	-6.87/-5.53	-4.88/-5.57	-7.01/-7.4	-7.11/-6.57	-7.03/-11.4	-17.45/-18.57	-9.44/-4.76	-3.47/-4.29	-6.62/-14.74	-13.91/-7.02	-4.08/-4.5	-7.9/-9.57	-8.48/-9.35
Θ(110°)	-12.14/-15.1	-12.11/-10	-7.88/-7.55	-7.51/-8.81	-11.69/-8.25	-4.76/-3.14	-3.25/-4.32	-4.88/-4.47	-4.05/-3.65	-4.6/-6.36	-8.68/-15.5	-13.9/-7.39	-4.83/-4.74	-7.55/-17.06	-8.03/-3.59	-1.74/-2.04	-4.68/-7.45	-6.9/-7.87
Θ(120°)	-12.39/-18.57	-13.28/-8.41	-5.01/-3.12	-2.21/-2.12	-3.19/-4.15	-3.6/-3.25	-3.19/-4.15	-4.72/-4.88	-5.7/-6.7	-8.47/-10.66	-14.96/-15.04	-11.12/-6.96	-5.06/-5.24	-8.25/-18.62	-11.58/-6.38	-5.14/-4.38	-5.23/-8.08	-8.86/-4.47
Θ(130°)	-3.68/-7.46	-10.56/-14.26	-14.66/-9.83	-7.49/-5.78	-4.74/-4.37	-3.67/-3.05	-2.92/-2.92	-3.45/-4.93	-5.59/-4.43	-3.79/-4.12	-5.48/-7.8	-13.85/-17.78	-12.83/-13.07	-16.25/-15.57	-8.86/-5.64	-3.88/-2.48	-1.96/-2.19	-2.4/-2.35
Θ(140°)	-5.02/-5.05	-4.21/-4.07	-5.26/-5.57	-6.65/-6.08	-6.11/-6.11	-6.52/-6.93	-2.66/-1.66	-7.07/-7.01	-6.25/-4.68	-1.57/-2.14	-2.68/-3.99	-7.06/-12	-14.92/-13.37	-13.56/-17.46	-18.43/-18.47	-13.22/-9.44	-6.94/-4.53	-5.14/-5.07
Θ(150°)	-11.51/-8.24	-5.94/-4.14	-4.48/-4.86	-4.75/-4.24	-3.7/-2.87	-2.12/-1.64	-1.290.82	1.07/1.63	2.17/2.29	1.730.15	-0.07/-1.72	-3.57/-5.33	-10.77/-9.54	-10.72/-12.34	-9.23/-10.88	-11.07/-9.44	-9/-10.7	
Θ(160°)	-13.82/-15.87	-12.33/-9.74	-9.5/-9.39	-8.61/-7.48	-6.13/-4.99	-4.04/-3.23	-2.81/-2.55	-2.09/-1.86	-1.7/-2.17	-3.11/-4.6	-7.03/-10.56	-16.17/-18.09	-16.01/-13.78	-11.74/-9.82	-7.79/-6.1	-5.45/-5.74	-4.46/-6.84	-7.47/-9.59
Θ(170°)	-7.75/-8.91	-9.76/-11.09	-12.73/-16.17	-18.87/-18.01	-17.38/-13.04	-10.25/-8.43	-7.51/-7.06	-6.94/-6.99	-7.78/-8.65	-9.92/-11.21	-11.36/-10.98	-10.18/-9.83	-10.27/-10.24	-9.37/-8.01	-6.59/-5.35	-4.83/-4.81	-4.97/-5.45	-5.8/-6.59
Θ(180°)	-6.04/-6.1	-6.49/-7.18	-8.05/-9.9	-12.28/-15.72	-18.8/-18.21	-19.37/-18.68	-16.43/-13.27	-11.71/-10.11	-8.84/-7.88	-7.23/-6.83	-6.65/-6.77	-6.96/-7.47	-8.01/-8.45	-8.42/-8.49	-8.58/-8.7	-8.76/-8.46	-8.26/-7.24	-6.63/-6.37
Freq(Hz)	2.45GPol.	Theta/Ant. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-4.3/-3.79	-3.54/-3.52	-4.02/-4.94	-8.29/-7.62	-4.02/-4.94	-10.10/-10.35	-6.38/-5.7	-4.7/-4.09	-9.21/-9.96	-10.64/-10.55	-3.71/-3.78	-4.74/-4.09	-5.95/-7.55	-10.29/-9.69	-8.78/-5.4	-6.33/-5.16		
Θ(10°)	-5.54/-4.89	-4.77/-4.89	-5.58/-6.49	-7.73/-9.1	-10.86/-13.73	-15.47/-15.09	-12.7/-10.63	-8.77/-7.36	-6.2/-5.05	-4.24/-3.63	-3.36/-3.41	-3.91/-4.57	-5.76/-7.4	-8.81/-10.02	-10.52/-10.1	-9.52/-9.1	-8.8/-8.04	-7.12/-6.22
Θ(20°)	-6.65/-4.97	-4.76/-5.01	-5.73/-6.74	-9.9/-13.72	-6.53/-5.81	-15.13/-10.74	-8.9/-7.8	-7.08/-6.68	-5.53/-5.81	-5.21/-4.55	-4.29/-4.38	-4.65/-4.58	-7.18/-9.72	-12.08/-13.37	-12.03/-9.69	-6.39/-6.06	-8.01/-7.45	-7.34/-6.56
Θ(30°)	-6.15/-5.52	-6.25/-5.15	-6.12/-6.88	-13.28/-18.63	-14.75/-9.29	-6.58/-9.48	-4.39/-4.25	-4.67/-5.87	-6.82/-7.48	-18.51/-17.03	-6.63/-6.51	-7.18/-8.93	-12.1/-19.11	-9.19/-7.46	-6.81/-6.67	-6.17/-6.99		
Θ(40°)	-8.14/-8.3	-7.42/-6.39	-6.65/-9.79	-17.57/-15.53	-8.14/-4.48	-2.84/-2.07	-1.79/-2.06	-2.87/-4.65	-6.66/-7.87	-8.36/-7.83	-7.3/-7.35	-8.77/-11.43	-17.8/-18.42	-12.22/-9.24	-8.1/-7.17	-6.55/-6.21	-6.35/-6.8	-7.26/-7.65
Θ(50°)	-7.58/-8.19	-7.68/-5.99	-6.62/-10.79	-18.14/-11.58	-5.24/-2.26	-0.83/-0.21	-0.27/-0.67	-1.6/-3.1	-4.78/-6.04	-6.02/-5.34	-5.04/-5.64	-7.56/-11.53	-17.38/-15.53	-10.25/-8.09	-6.21/-4.7	-3.91/-3.95	-4.64/-5.74	-6.44/-7.01
Θ(60°)	-9.68/-9.95	-9.17/-8.05	-8.56/-14.65	-19.25/-8.39	-4.2/-1.4	0.230.9	-1.05/-2.34	-8.86/-4.69	-5.53/-5.06	-5.17/-7.49	-13.25/-17.74	-8.86/-4.69	-2.78/-1.87	-1.34/-1.28	-4.57/-6.1			
Θ(70°)	-13.13/-11.76	-8.68/-6.8	-7.18/-11.51	-14.55/-14.93	-9.92/-5.27	-2.46/-0.66	0.05/-0.19	-1.01/-1.8	-3.33/-4.16	-3.71/-3.39	-4.33/-6.02	-7.2/-6.68	-5.22/-4.06	-3.19/-2.85	-2.9/-3.26	-3.89/-4.87	-6.17/-8.04	-9.21/-11.47
Θ(80°)	-15.5/-17.49	-11.51/-8.74	-9.3/-10.29	-6.94/-7.15	-7.7/-6.35	-4.24/-2.41	-1.97/-2.61	-3.59/-4.6	-5.76/-4.64	-2.99/-2.44	-3.32/-5.22	-8.86/-10.99	-8.63/-5.6	-3.21/-2.26	-2.16/-2.34	-2.58/-3.51	-5.04/-7.99	-11.04/-12.77
Θ(90°)	-12.45/-14.22	-12.77/-8.61	-9.23/-10.47	-6.98/-7.84	-10.12/-7.44	-4.74/-2.28	-1.06/-1.15	-2.02/-3.35	-4.7/-4.38	-3.38/-3.19	-4.06/-6.23	-8.45/-8.44	-4.48/-4.05	-3.5/-2.63	-2.08/-2.85	-4.11/-5.87	-9.42/-11.8	
Θ(100°)	-7.78/-17.55	-18.9/-10.86	-10.29/-7.93	-4.12/-3.72	-10.68/-5.97	-5.85/-7.59	-8.03/-7.10	-10.7/-10.42	-10.68/-9.25	-8.03/-7.59	-8.94/-9.63	-9.11/-6.47	-5.81/-6.25	-7.42/-8.66	-5.33/-6.64	-10.88/-14.15	-14.86/-16.4	
Θ(110°)	-9.41/-13.21	-11.34/-7.48	-7.29/-6.42	-3.49/-2.42	-3.32/-4.84	-5.89/-5.89	-5.65/-6.95	-8.5/-8.65	-10/-8.62	-7.01/-6.29	-5.76/-6.2	-7.05/-5.75	-9.22/-17.83	-12.26/-6.08	-3.15/-3	-3.4/-4.01	-6.17/-9.63	-10.01/-8.88
Θ(120°)	-12.41/-11.94	-12.98/-12.67	-11.68/-8.59	-4.8/-3.13	-2.6/-7.8	-3.18/-3.36	-3.35/-3.22	-3.17/-5.18	-10.47/-14.6	-15.06/-10.53	-8.04/-7.02	-3.9/-2.77	-5.61/-10.91	-18.96/-17.44	-9.13/-7.86	-8.98/-10.14	-10.79/-11.16	-12.14/-14.14
Θ(130°)	-11.64/-13.24	-18.74/-16.21	-11.01/-7.31	-4.7/-3.16	-2.74/-3.08	-5.95/-5.16	-17.02/-16.54	-5.56/-5.79	-11.53/-8.54	-8.95/-8.23	-5.97/-5.99	-4.28/-6.44	-8.87/-11.39	-3.67/-3.31	-4.28/-6.44	-8.87/-11.39	-12.22/-12.12	
Θ(140°)	-4.25/-5.01	-7.32/-11.42	-13.65/-9.96	-6.56/-4.33	-3.29/-2.89	-3.02/-3.24	-3.61/-4.71	-6.56/-7.79	-7.75/-7.34	-6.8/-6.32	-5.52/-4.45	-4.57/-6.94	-9.91/-12.32	-15.85/-16.63	-13.28/-12.49	-14.27/-13.53	-10.41/-7.79	-5.75/-6.46
Θ(150°)	-2.91/-3.55	-5.44/-9.46	-17.48/-18.72	-12.59/-8.22	-5.98/-4.52	-4.28/-4.41	-4.78/-5.56	-6.41/-7.09	-6.37/-4.97	-5.55/-4.15	-3.22/-2.6	-3.04/-4.15	-5.88/-6.65	-6.02/-4.87	-4.23/-4.78	-6.1/-7.26	-7.03/-5.9	-4.52/-3.32
Θ(160°)	-4.63/-4.45	-6.37/-4.9	-10.61/-6.97	-18.23/-17.87	-9.13/-10.33	-8.74/-8.32	-8.01/-7.97	-8.46/-8.24	-6.51/-5.99	-5.71/-6.33	-12.02/-10.53	-12.04/-10.97	-7.96/-6.66	-7.12/-9.48	-15.03/-17.9	-15.37/-10.26	-7.64/-5.76	
Θ(170°)	-5.7/-5.28	-5.48/-6.07	-7.09/-8.2	-9.45/-10.15	-11.28/-12.37	-13.41/-14.68	-15.73/-16.66	-16.43/-15.76	-14.53/-14	-14.12/-14.39	-16.72/-18.85	-18.47/-15.34	-10.8/-8.52	-7.3/-7.63	-8.09/-9.46	-10.55/-10.98	-9.55/-8.24	-7.12/-6.26
Θ(180°)	-12.1/-12.82	-11.84/-10.6	-9.1/-8.36	-7.7/-7.3	-7.01/-6.82	-6.5/-6.78	-6.9/-7.04	-7.81/-8.53	-9.53/-10.26	-10.5/-10.56	-9.5/-8.53	-7.08/-6.06	-5.57/-5.28	-5.1/-5.57	-6.22/-6.86	-7.41/-7.99	-8.3/-8.69	-9.54/-10.95
Freq(Hz)	5.2GPol.	Phi/Ant. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-13.83/-13.04	-15.31/-16.2	-17.3/-18.43	-17.73/-18.62	-17.57/-19.68	-19.19/-17.26	-15.89/-14.64	-12.05/-11.4	-10.72/-10.2	-10.48/-11.09	-12.18/-13.66	-16.39/-18.41	-17.57/-18.62	-19.01/-19.02	-16.24/-13.55	-12.09/-10.48	-10.21/-11.79	-12.57/-14.39
Θ(10°)	-12.04/-11.15	-10.56/-11.42	-14.02/-14.44	-16.15/-17.09	-13.65/-16.87	-9.18/-8.61	-9.12/-11.24	-13.65/-16.03	-9.28/-11.24	-17.38/-13.86	-11.14/-8.35	-9.59/-7.64	-14.97/-14.33	-13.45/-13.52	-8.59/-11.01	-13.73/-12.58	-14.4/-13.9	
Θ(20°)	-9.4/-7.17	-6.79/-7.11	-7.53/-7.58	-8.33/-9.99	-13.49/-18.38	-17.64/-15.37												



Radiated Composite Gain Data

Appendix A

θ(60°)	-2.25/-7.1	-14.07/-15.91	-11.08/-7.88	-6.07/-5.44	-8.81/-8.86	-7.01/-8.15	-18.52/-11.62	-6.43/-4.66	-4.76/-4.25	-5.15/-4.81	-4.01/-4.31	-4.73/-4.22	-6.65/-7.5	-3.69/-1.27	-1.17/-2.33	-1.93/-2	-1.55/-3.06	-0.70/-0.63
θ(70°)	-2.5/-3.55	-8.48/-18.92	-15.67/-9.08	-6.33/-6.38	-7.39/-9.52	-6.96/-7.11	-14.59/-10.16	-5.91/-3.82	-3.53/-2.25	-3.41/-7.95	-7.4/-8.53	-7.99/-4.4	-7.24/-5.92	-0.53/-1.3	-2.05/-3.21	-3/-4.04	-6.28/-4.59	-2.25/-0.41
θ(80°)	-2.99/-3.2	-6.42/-10.46	-16.48/-8.57	-6.39/-5.45	-6.61/-4.97	-5.08/-5.66	-12.63/-9.96	-3.76/-2.47	-0.21/-8.78	-1.99/-9.78	-12.83/-10.27	-11.48/-9.79	-8.21/-4.98	-12.83/-6.01	-6.33/-10.1	-12.83/-7.86	-4.18/-3.29	
θ(90°)	-3.95/-5.09	-5.91/-7.31	-15.23/-9.66	-6.67/-5.21	-5.74/-4.82	-2.94/-4.3	-6.74/-4.38	-1.93/-1.13	-2.09/-2.1	-3.53/-11.64	-8.47/-11.91	-12.22/-16.65	-14.61/-4.94	-6.62/-13.04	-17.6/-8.39	-8.87/-5.17	-3.98/-2.97	-4.13/-5.56
θ(100°)	-10.15/-7.29	-8.11/-7.87	-14.46/-10.6	-8.9/-8.89	-8.38/-6.84	-2.96/-3	-5.37/-4.43	-2.12/-1.35	-2.73/-3.55	-7.19/-9.14	-4.33/-4.32	-11.58/-14.85	-10.39/-12.01	-17.58/-17.37	-10.14/-10.32	-4.81/-2.1	-1.32/-1.8	-6.03/-12.75
θ(110°)	-6.54/-4.65	-7.98/-9.29	-10.44/-7.8	-14.13/-8.54	-11.51/-12.89	-4.71/-2.64	-4.13/-2.74	-3.05/-5.35	-4.33/-6.51	-4.71/-9.78	-3.21/-4.08	-8.53/-7.41	-4.87/-12.85	-18.27/-5.57	-4.87/-7.42	-2.85/-1.89	-2.3/-3.76	-9.7/-8.81
θ(120°)	-8.52/-5.03	-10.16/-18.55	-8.05/-6.4	-9.92/-17.89	-16.69/-14.34	-6.58/-4.3	-4.49/-3.57	-3.58/-2.36	-2.83/-1.1	-0.31/-1.39	-0.09/-2.63	-2.12/-2.28	-4.27/-8.66	-7.97/-6.25	-3.91/-9.34	-8.16/-1.1	-6/-17.49	-18.41/-5.21
θ(130°)	-4.03/-4.44	-6.23/-11.99	-6.22/-4.29	-8.64/-16.24	-8.85/-9.09	-9.33/-6.03	-4.49/-3.72	-3.02/-2.68	-2.58/-0.78	-0.58/-0.54	-7.34/-7.81	-10.33/-3.8	-2.6/-7.48	-8.89/-11.83	-1.22/-7.55	-7.9/-9.12	-8.54/-8.97	-6.38/-4.38
θ(140°)	-6.61/-8.09	-9.43/-11.77	-4.29/-2	-2.52/-4.97	-4.87/-3.31	-3.45/-4.35	-2.98/-1.03	-1.18/-2.12	-2.29/-2.29	-3.98/-5.39	-9.96/-6.15	-3.47/-9.29	-5.83/-13.41	-4.18/-2.47	-1.07/-2.04	-5.07/-8.86	-7.51/-4.03	-4.21/-5.16
θ(150°)	-7.12/-6.93	-5.81/-5.14	-3.8/-3.55	-5.18/-8.68	-14.52/-18.96	-18.67/-10.92	-6.59/-6.66	-8.69/-9.41	-9.79/-7.17	-3.35/-1.9	-0.59/-0.2	-2.88/-5.05	-8.39/-18.12	-8.5/-4.19	-2.21/-3.65	-6.99/-6.7	-4.94/-5.06	-5.54/-6.73
θ(160°)	-11.5/-13.93	-12.51/-9.21	-7.74/-8.13	-10.06/-15.92	-16.83/-15.13	-14.1/-13.48	-14.73/-18.6	-18.69/-12.22	-7.36/-3.97	-2.08/-1.62	-1.75/-1.77	-2.72/-5.51	-15.36/-15.44	-9.48/-9.07	-8.88/-11.76	-16.34/-17.99	-15.59/-18.22	-18.22/-11.88
θ(170°)	-10.67/-11.92	-12.02/-12.63	-14.33/-15.34	-13.69/-12.72	-11.32/-10.16	-10.66/-12.18	-7.58/-5.97	-4.48/-2.93	-2.51/-3.18	-5.05/-8.55	-14.84/-18.57	-12.28/-8.7	-6.54/-5.88	-7.33/-9.96	-12.49/-14.56	-5.42/-4.51	-12/-10.35	
θ(180°)	-9.36/-12.03	-14.28/-16.43	-18.46/-18.22	-18.33/-18	-18.34/-18.96	-18.59/-15.54	-13.19/-11.86	-11.49/-10.21	-9.68/-9.13	-8.67/-9.24	-9.72/-11.02	-12.15/-13.37	-13.98/-14.64	-13.02/-12.39	-13.01/-12.12	-9.69/-7.52	-5.89/-5.8	-6.23/-7.02
Freq(Hz)	2.45GPol.	PhiAnt. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
θ(0°)	-10.22/-8.13	-6.39/-5.49	-4.69/-4.33	-4.04/-4.09	-4.55/-5.42	-6.73/-8.33	-11.08/-14.91	-18.82/-18.77	-15.51/-10.78	-8.49/-6.55	-5.09/-4.38	-3.92/-3.8	-3.73/-4.29	-4.91/-5.99	-7.08/-9.22	-11.83/-15.31	-18.81/-17.9	-18.21/-13.95
θ(10°)	-7.25/-5.52	-4.59/-4.11	-3.98/-3.86	-3.85/-4.48	-5.49/-7.08	-8.57/-10.35	-13.21/-17.05	-17.81/-18.64	-18.44/-15.42	-11.75/-9.28	-6.97/-5.43	-4.23/-3.24	-3.14/-3.74	-5.02/-6.58	-9.08/-12.87	-18.61/-17.61	-13.2/-4.9	-13.2/-4.9
θ(20°)	-4.25/-3.47	-3.16/-3.17	-3.27/-3.29	-3.65/-4.6	-6.17/-7.64	-8.69/-9.88	-18.72/-19.32	-18.46/-16.32	-11.48/-17.59	-4.95/-3.18	-2.09/-1.58	-2.76/-2.75	-3.04/-4.55	-6.23/-9.41	-11.72/-11.41	-8.21/-5.98		
θ(30°)	-2.98/-2.72	-2.74/-3.04	-3.26/-3.61	-4.18/-5.65	-7.12/-7.7	-7.94/-8.58	-10.36/-13.68	-18.9/-17.85	-18.15/-18.97	-15.68/-15.24	-15.61/-12.21	-7.91/-4.97	-2.97/-1.99	-1.87/-2.22	-2.91/-4.07	-5.33/-6.71	-7.29/-6.47	-5.1/-3.64
θ(40°)	-4.06/-4.34	-4.4/-4.54	-4.69/-5.3	-6.58/-8.21	-8.34/-7.26	-6.82/-7.11	-9.05/-14.52	-17.58/-15.38	-18.55/-15.11	-10.16/-8.85	-9.92/-12	-11.51/-8.1	-5.45/-3.79	-3.08/-3.12	-3.46/-4.63	-5.99/-6.6	-6.17/-5.2	-4.37/-3.79
θ(50°)	-4.94/-5.74	-5.52/-5.2	-5.23/-6.07	-8.19/-6.5	-8.59/-6.75	-8.19/-6.5	-15.91/-14.21	-8.43/-6.3	-9.09/-7.54	-3.84/-6.81	-3.34/-3.75	-10.75/-9.09	-7.34/-5.75	-4.33/-4.75	-4.95/-5.96	-5.42/-4.51	-4.34/-4.39	
θ(60°)	-6.44/-7.3	-6.97/-5.81	-5.31/-6.2	-8.3/-11	-11/-8.71	-6.75/-6.94	-9.54/-16.92	-15.24/-10.97	-12.84/-14.27	-8.22/-5.76	-5.38/-6.14	-5.89/-5.15	-5.72/-7.12	-7.17/-5.32	-4.35/-4.56	-5.58/-6.43	-5.53/-4.15	-4.23/-5.4
θ(70°)	-6.09/-8.53	-9.31/-8.36	-7.41/-8.53	-10.63/-13.7	-12.17/-8.07	-6.04/-6.03	-9.29/-16.93	-13.09/-9.14	-10.71/-12.59	-7.83/-5.47	-4.94/-6.83	-6.7/-5.82	-6.4/-8.58	-8.79/-5.25	-3.26/-3.06	-3.92/-4.59	-4.47/-2.95	-2.29/-3.42
θ(80°)	-5.68/-8.37	-9.28/-8.32	-8.22/-9.67	-10.68/-12.53	-10.77/-0.1	-5.02/-5.37	-9.56/-19.47	-9.31/-6.02	-7.39/-12.78	-10.68/-6.07	-4.58/-5.39	-5.36/-4.05	-4.3/-7.02	-11.16/-8.01	-4.65/-3.55	-4.18/-5.04	-4.53/-3.75	-1.73/-3.67
θ(90°)	-6.75/-8.4	-9.71/-9.06	-8.75/-10.83	-12.78/-13.37	-10.17/-6.77	-5.52/-5.82	-10.02/-14.64	-6.86/-4.64	-6.67/-17.82	-9.43/-4.89	-4.8/-5.94	-6.14/-5.03	-6.17/-9.89	-12.53/-6.89	-3.92/-3.02	-3.58/-4.55	-3.75/-2.71	-3.23/-4.81
θ(100°)	-8.34/-11.87	-11.63/-9.46	-8.71/-9.33	-11.05/-12.55	-10.12/-3.75	-5.9/-6.09	-9.3/-12.57	-6.87/-4.52	-7.52/-18.02	-10.03/-6.51	-5.44/-5.64	-5.97/-4.65	-4.96/-8.17	-16.46/-9.76	-5.68/-5.07	-5.07/-5.61	-4.79/-3.05	-2.29/-3.87
θ(110°)	-8.37/-18.25	-14.72/-12.11	-11.54/-11.81	-11.78/-13.44	-13.12/-8.95	-6.41/-6.51	-10.26/-9.07	-13.83/-7.9	-7.17/-18.83	-10.38/-12.32	-4.16/-5.18	-6.53/-4.58	-8.4/-6.91	-6/-5.57				
θ(120°)	-6.57/-11.96	-17.99/-14.47	-13.7/-17.12	-18.43/-17.73	-11.18/-6.66	-4.67/-5.36	-8/-9	-8.01/-7.05	-9.64/-15.58	-10.54/-6.29	-5.34/-6.23	-7.72/-6.77	-5.91/-6.43	-7.52/-7.77	-6.44/-5.9	-5.74/-5.18	-4/-3.67	-4.68/-5.22
θ(130°)	-14.39/-19.01	-13.23/-8.5	-8.63/-10.59	-14.11/-17.52	-14.21/-10.5	-10.56/-7.12	-9.45/-10.15	-10.81/-9.61	-7.12/-6.13	-9.29/-14.12	-10.56/-7.35	-5.86/-5.94	-6.01/-4.79	-4.53/-4.72	-5.64/-6.45	-6.95/-6.87	-6.06/-5.4	-5.93/-9.74
θ(140°)	-6.71/-8.22	-9.31/-10.64	-13.76/-17.82	-17.38/-12.16	-9.46/-7.99	-7.37/-7.46	-8.3/-9.09	-7.86/-7.6	-9.41/-11.34	-6.71/-6.1	-5.71/-6.1	-7.28/-6.92	-6.2/-5.64	-5.26/-5.73	-6.66/-7.55	-6.5/-6.41	-4.56/-3.74	-3.35/-4.45
θ(150°)	-5.98/-8.61	-12.32/-17.94	-18.04/-18.52	-13.76/-10.96	-9.3/-8.7	-9.25/-10.49	-12.41/-12.13	-11.16/-11.56	-14/-17	-16.93/-15.38	-13.79/-12.29	-10.02/-8.1	-6.72/-5.86	-5.12/-5.05	-5.68/-6.5	-6.5/-5.4	-4.93/-4.37	-4.18/-4.46
θ(160°)	-9.17/-12.16	-16.08/-17.1	-16.53/-16.91	-17.4/-18.74	-18.3/-18.14	-14.52/-12.67	-10.53/-9.25	-9.14/-9.55	-10.88/-12.34	-14.76/-18.4	-18.99/-17.85	-16.59/-12.57	-10.83/-9.79	-9.24/-9.44	-9.39/-9.44	-7.33/-6.14	-5.67/-6.09	-6.94/-7.76
θ(170°)	-13.06/-13.95	-12.59/-11.97	-11.76/-11.75	-12.04/-12.39	-11.52/-10.17	-8.83/-8.26	-9.17/-10.17	-11.53/-12.63	-14.46/-17.39	-17.56/-17.85	-19.07/-17.3	-16.35/-15.77	-16.1/-18.42	-18.65/-15.71	-12.33/-10.78	-10.36/-10.15	-11.34/-12.23	
θ(180°)	-14.59/-12.78	-11.18/-10.4	-10.84/-10.91	-11.34/-11.03	-10.75/-10.58	-10.41/-11.02	-13.82/-11.36	-14.95/-16.29	-15.46/-14.36	-13.82/-12.75	-15.46/-14.36	-11.87/-11.78	-12.89/-15.19	-11.87/-13.15	-14.29/-16.7	-18.11/-16.81	-17.04/-16.13	
Freq(Hz)	2.45GPol.	ThetaAnt. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
θ(0°)	-7.56/-9.12	-10.75/-13.64	-17.51/-19.27	-18.42/-14.55	-10.66/-8.57	-6.94/-5.65	-5.09/-4.41	-4.32/-4.31	-4.73/-5.19	-6.37/-8.31	-11.28/-15.87	-18.17/-18.65	-14.2/-10.77	-8.12/-6.74	-5.4/-4.81	-4.49/-4.29	-4.38/-4.95	-5.31/-6.32
θ(10°)	-8.84/-12.16	-17.73/-18.38	-18.24/-14.18	-10.35/-7.86	-6.68/-5.85	-5.21/-4.73	-4.34/-4.26	-4.24/-4.43	-4.64/-4.6	-4.97/-5.87	-6.87/-5.87	-10.88/-13.82	-14.29/-11.49	-9.12/-7.06	-5.58/-4.75	-3.89/-3.53	-3.53/-4.1	-5.34/-6.78
θ(20°)	-9.38/-13.55	-19.37/-19.27	-13.59/-9.52	-6.77/-5.23	-4.42/-3.95	-3.8/-3.62	-3.71/-4.1	-4.42/-4.19	-3.9/-3.54	-3.44/-3.85	-5.09/-6.8	-8.28/-8.47	-7.67/-6.45	-5.12/-4.07	-3.06/-2.52	-2.57/-3.22	-4.42/-6.61	
θ(30°)	-9.83/-14.01	-16.86/-14.96	-10.63/-6.99	-7.78/-3.57	-3.18/-3.03	-3.03/-2.71	-2.52/-2.8	-3.33/-4.36	-5.14/-4.69	-3.39/-2.17	-5.15/-6.6	-2.44/-3.81	-1.83/-2.72	-4.45/-3.36	-2.27/-1.74	-1.83/-2.72	-4.25/-6.42	
θ(40°)	-11.84/-17.4	-17.65/-12.16	-8.42/-5.45	-3.84/-3.33	-3.23/-3.38	-3.36/-2.87	-2.4/-2.16	-2.91/-4.97	-7.37/-7.3	-5.05/-2.7	-1.27/-0.85	-1.05/-1.69	-2.63/-3.27	-3.66/-3.93	-4.2/-3.5	-2.76/-2.09	-2.49/-3.69	-5.51/-7.93
θ(50°)	-16.61/-18.05	-17.12/-10	-6.48/-4.54	-3.77/-3.81	-4.25/-4.29	-3.91/-2.85	-1.76/-1.07	-1.66/-4.03	-6.39/-6.06	-4.33/-2.4	-1.23/-0.78	-0.67/-0.52	-0.54/-0.66	-1.23/-1.84	-2.77/-3.4	-3.34/-3.22	-3.79/-5.26	-7.32/-10.44
θ(60°)	-12.77/-18.88	-17.59/-10.23	-6.31/-4.42	-3.69/-3.59	-5.24/-4.71	-1.13/-3.03	-1.75/-0.93	-3.29/-1.94	-0.71/-0.1	-1.01/-0.88	-1.15/-1.24	-1.93/-3.03	-3.26/-3.04	-1.02/-0.8	-1.93/-3.03	-3.26/-3.04	-3.38/-4.36	-5.77/-8
θ(70°)	-12.59/-18.61	-14.35/-8.07	-4.56/-3.34	-2.93/-3.17	-3.52/-3.76	-3.22/-2.52	-2.63/-1.9	-1.48/-3.2	-4.87/-3.96	-2.51/-1.3	-0.49/-0.17	-0.66/-0.26	-0.05/-1.2	2.13/-5.2	-0.18/-2.06	-4.06/-4.45	-4.58/-5.54	-6.94/-8.48
θ(80°)	-12.07/-12.12	-9.53/-6.59	-5.17/-5.37	-5.71/-5.88	-5.75/-4.65	-3.14/-2.53	-3.6/-3.68	-4.99/-3.62	-3.31/-3.21	-2.29/-1.81	-1.79/-1.56	-1.06/-0.24	0.03/-0.35	-1.61/-4.07	-6.1/-6.11	-5.97/-6.29	-7.92/-10.08	
θ(90°)	-10.28/-11.23	-8.74/-6.42	-5.76/-6.74	-6.77/-5.47	-4.18/-3.09	-3.52/-2.91	-3.82/-4.17	-3.52/-2.91	-2.62/-2.91	-2.73/-2.72	-2.17/-1.51	-2.17/-1.51	-2.35/-4.95	-8.12/-9.31	-2.35/-4.95	-9.7/-9.09	-8.53/-8.75	
θ(100°)	-7.94/-7.04	-6.06/-4.9	-5.18/-6.68	-7.38/-6.7														



Radiated Composite Gain Data

Appendix A

Θ (160°)	-4.62/-6.32	-6.52/-5.55	-5.31/-4.57	-4.52/-5.88	-8.08/-11.26	-11.26/-11.64	-12.04/-13.16	-14.42/-12.48	-11.83/-15.06	-18.94/-17.41	-18.29/-18.97	-17.68/-13.38	-13.04/-13.06	-13.54/-12.33	-12.83/-9.38	-5.79/-4.32	-3.43/-2.94	-3.14/-3.66
Θ (170°)	-11/-12.28	-12/-10.99	-12/-15.18	-19.69/-18.76	-16.91/-13.87	-12.07/-10.68	-10.25/-10.84	-14.51/-16.97	-14.68/-13.77	-15.2/-18.1	-18.55/-18.24	-16.31/-15.49	-15.04/-17.92	-18.41/-18.32	-16.9/-11.26	-7.79/-6.52	-6.4/-6.22	-7.55/-9.22
Θ (180°)	-18.64/-16.34	-13.64/-11.2	-9.78/-10.11	-10.16/-10.49	-11.36/-12.74	-15/-13.47	-14.58/-16.12	-17.84/-18.58	-18.21/-15.99	-14.4/-13.53	-12.63/-12.12	-11.48/-10.87	-10.91/-11.05	-11.95/-13.12	-16.11/-18.78	-18.07/-18.09	-19.13/-18.29	-18.42/-18.19
Freq(Hz)	5.3GPol.	Theta/Ant. 2	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ (0°)	-10.21/-10.91	-13.33/-15.25	-15.27/-15.38	-15.4/-15.17	-14.07/-12.37	-10.6/-9.12	-8.23/-8.03	-8.15/-7.64	-7.73/-8.43	-9.38/-10.94	-12.07/-13.11	-16.59/-17.73	-17.61/-15.63	-13.91/-11.57	-12.38/-9.56	-8.35/-7.67	-8.43/-9.52	-9.85/-9.23
Θ (10°)	-5.19/-7.61	-12.8/-18.83	-19.47/-18.35	-17.94/-15.1	-12.28/-10.91	-9.14/-8.18	-8.07/-8.06	-8.32/-8.02	-8.41/-8.45	-9.78/-9.86	-8.04/-6.89	-7.45/-8.33	-8.95/-9.87	-11.04/-12.49	-12.09/-9.66	-7.54/-5.78	-5.45/-5.61	-5.55/-4.81
Θ (20°)	-3.63/-4.67	-7.24/-7.59	-6.73/-5.79	-6.03/-6.03	-6.53/-7.47	-9.39/-9.36	-8.32/-7.18	-6.89/-7.27	-8.8/-9.05	-8.37/-7.67	-6.43/-5.8	-5.47/-5.24	-5.51/-6.33	-8.43/-11.24	-11.66/-10.57	-9.29/-8.54	-8.28/-7.16	-5.61/-4.16
Θ (30°)	-2.77/-2.25	-3.43/-3.34	-2/-1.71	-3.66/-5.81	-5.5/-4.6	-4.9/-7.41	-6.7/-5.52	-4.15/-3.82	-5.03/-6.63	-7.69/-7.52	-7.88/-8.1	-7.78/-8.14	-7.47/-6.73	-5.96/-7.1	-10.85/-9.15	-6.58/-7.24	-7.77/-7.33	-6.64/-4.56
Θ (40°)	-4.16/-3.54	-3.43/-1.39	0.13/-0.02	-2.3/-4.4	-3.74/-2.79	-3.94/-6.02	-5.54/-3.51	-3.27/-2.84	-2.98/-4.19	-6.09/-7.64	-9.85/-16.42	-19.03/-13.84	-5.47/-3.12	-3.09/-4.58	-4.27/-4.74	-4.6/-3.86	-6.16/-7.28	-8.92/-6.63
Θ (50°)	-4.08/-3.52	-3.14/-1.01	0.17/-0.24	-1.98/-3.32	-2.59/-2.05	-3.65/-6.37	-7.3/-4.45	-4.29/-4.78	-3.13/-1.97	-2.36/-3.39	-5.21/-8.01	-13.58/-18.7	-7.66/-4.58	-4.06/-4.6	-5.03/-5.22	-3.82/-4.35	-5.76/-6.77	-7.17/-5.22
Θ (60°)	-5.3/-5	-3.85/-1.79	-1.04/-1.89	-3.34/-3.12	-3.09/-5.16	-6.68/-5.06	-2.69/-2.68	-3.98/-6.2	-3.98/-0.77	0.63/-2	-5.57/-9.84	-10.49/-16.93	-11.17/-6.25	-4.91/-4.98	-5.43/-6.26	-6.36/-3.88	-6.83/-7.25	-8.58/-6.73
Θ (70°)	-4.63/-5.87	-4.96/-4.93	-4.21/-4.6	-3.56/-2.39	-3.27/-6.67	-5.62/-4.08	-2.02/-2.4	-3.04/-2.14	-0.32/-1.59	2.59/1.84	0.93/-2.62	-4.1/-6.32	-7.96/-4.48	-3.98/-5.21	-4.76/-6.79	-8.4/-5.99	-8.53/-8.45	-6.87/-7.44
Θ (80°)	-4.64/-5.45	-5.32/-8.05	-5.78/-6.78	-5.49/-4.62	-6.09/-13.16	-5.99/-3.17	-2.62/-3.01	-9.38/-12	-5.51/-1.55	0.15/-2.06	-5.89/-9.7	-7.23/-3.81	-3.08/-2.44	-3.62/-5.49	-5.94/-9.15	-17.56/-12.34	-10.54/-11.86	-8.73/-8.39
Θ (90°)	-5.46/-4.88	-6.94/-9.81	-7.9/-8.71	-6.44/-6.28	-10.08/-11.6	-5.91/-3.81	-5.29/-5.45	-12.71/-12.21	-6.54/-4.72	-4.11/-4.99	-5.45/-6.88	-6.07/-3.76	-2.45/-3.06	-5.02/-9.38	-9.08/-8.56	-14.44/-18.89	-13.98/-9.54	-8.62/-7.93
Θ (100°)	-5.4/-5.94	-9.75/-8.15	-7.2/-7.07	-7.5/-11.91	-16.7/-7.55	-4.41/-5.55	-8.42/-9.13	-19.13/-14.63	-7.72/-7.19	-13.58/-6.74	-5.46/-6.41	-5.84/-5.57	-5.68/-10.77	-6.45/-10.72	-12.91/-9.79	-10.31/-18.49	-15.89/-11.58	-9.84/-7.05
Θ (110°)	-4.02/-6.55	-8.57/-5.54	-5.32/-5.79	-9.99/-13.18	-11.09/-6.37	-6.57/-11.03	-15.21/-18.21	-18.35/-18.38	-8.28/-9.24	-18.96/-8.7	-9.37/-13.87	-7.33/-7.81	-10.54/-14.21	-7.28/-9.32	-9.45/-9.27	-8.99/-18.36	-12.57/-17.12	-7.22/-5.14
Θ (120°)	-5.21/-7.04	-6.46/-5.1	-5.62/-10.38	-11.35/-10.49	-7.41/-7.34	-9.95/-18.11	-17.7/-15.96	-14.44/-19.02	-16.69/-10.44	-7.75/-7.62	-13.54/-19.01	-8.86/-10.44	-13.03/-11.21	-19.04/-14.3	-10.15/-9.06	-9.7/-18.25	-10.3/-8.97	-3.98/-2.03
Θ (130°)	-5.42/-4.03	-5.11/-4.44	-8.42/-9.45	-7.79/-7.52	-10.19/-16.25	-18.66/-16.18	-14.46/-10.63	-11.34/-13.92	-17.23/-13.08	-8.45/-6.12	-10.83/-14.57	-4.19/-11.2	-8.41/-6.49	-10.18/-9.38	-13.77/-18.55	-14.6/-13.9	-12.7/-6.36	-4.98/-1.76
Θ (140°)	-6.13/-6.55	-4.68/-9.39	-17.7/-12.4	-7.76/-5.81	-6.43/-10.08	-17.16/-15.12	-8.66/-7.67	-9.13/-10.31	-19.17/-13.3	-5.27/-6.64	-4.15/-4.82	-3.75/-5.31	-4.03/-4	-5.33/-5.79	-13.96/-12.57	-8.75/-8.49	-2.87/-5.87	-5.82/-4.59
Θ (150°)	-8.11/-8.26	-10.81/-12.03	-8.3/-5.91	-6.3/-8.37	-9.91/-11.02	-11.39/-10.95	-9.96/-7.32	-6.76/-7.61	-9.11/-11.49	-12.32/-11.37	-15.35/-14.21	-10.06/-13.68	-17.32/-8.95	-7.25/-14.12	-15.21/-15.49	-12.16/-10.58	-7.65/-5.66	-8.12/-9.28
Θ (160°)	-5.6/-5.22	-6.43/-9.21	-9.23/-7.85	-7.2/-8.53	-10.91/-14.34	-16.59/-16.68	-14.11/-11.79	-10.58/-10.26	-14.32/-18.35	-19.15/-18.76	-18.53/-14.66	-11.07/-9.49	-11.61/-14.64	-15.54/-18.12	-18.83/-13.82	-15.97/-18.18	-16.11/-12.91	-7.82/-7.35
Θ (170°)	-7.71/-9.6	-11.84/-16.4	-11.46/-9.57	-7.87/-7.82	-8.41/-8.43	-8.51/-10.4	-11.93/-13.74	-15.4/-17.7	-18.21/-15.65	-10.86/-9.22	-8.42/-8.73	-10.21/-12.23	-14.61/-18.39	-18.09/-17.86	-17.34/-14.85	-17.44/-18.89	-15.41/-10.22	-8.31/-7.19
Θ (180°)	-6.94/-6.57	-7.46/-6.58	-7.2/-9.61	-11.59/-12.71	-16.07/-18.8	-18.98/-17.63	-14.9/-13.03	-11.54/-10.41	-10.13/-10.69	-12.66/-16.17	-17.51/-19.45	-18.58/-17.96	-18.43/-19.19	-16.78/-16.45	-14.47/-12.6	-11.42/-10.85	-12.21/-11.7	-8.42/-7.46



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Freq(Hz)	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.11	2.26
Ant. 2 Max Gain (dBi)	2.97	2.18
Ant. 3 Max Gain (dBi)	2.84	3.22
Ant. 4 Max Gain (dBi)	2.29	2.42
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/30/280	Theta/50/270
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/90/40	Theta/60/120
Ant. 3 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/80/300	Theta/80/320
Ant. 4 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/60/200	Theta/60/200
Max Gain (dBi)	3.11	3.22
DG [1SS] (dBi)	4.63	4.51
DG [2SS] (dBi)	3.11	3.22
DG [4SS] (dBi)	3.11	3.22



DG 1SS Result

Freq(Hz)	5.6GPol.	PhiL	-L	-R	-T	-B	-C	-D	-E	-F	-G	-H	-I	-J	-K	-L	-M	-N
DG(dBi)	Phi(0°)/Phi(10°)	Phi(20°)/Phi(30°)	Phi(40°)/Phi(50°)	Phi(60°)/Phi(70°)	Phi(80°)/Phi(90°)	Phi(100°)/Phi(110°)	Phi(120°)/Phi(130°)	Phi(140°)/Phi(150°)	Phi(160°)/Phi(170°)	Phi(180°)/Phi(190°)	Phi(200°)/Phi(210°)	Phi(220°)/Phi(230°)	Phi(240°)/Phi(250°)	Phi(260°)/Phi(270°)	Phi(280°)/Phi(290°)	Phi(300°)/Phi(310°)	Phi(320°)/Phi(330°)	Phi(340°)/Phi(350°)
Theta(0°)	1.95/2.04	1.74/1.33	0.69/0.23	0.53/0.33	-0.06/-0.61	-0.23/0.69	1.32/1.42	-0.23/0.69	1.32/1.42	1.71/1.94	1.78/1.21	0.18/-0.37	-0.57/-0.48	-0.19/-0.88	-1.13/-1.66	-1.45/-0.7	0.3/1	1.55/1.78
Theta(10°)	2.54/2.18	1.83/1.28	0.63/0.29	0.54/0.37	0.18/0.87	-1.62/-2.17	-3.17/-3.63	-2.85/-1.77	-1.47/-0.78	-0.15/0.45	1/1.41	1.81/1.99	2.07/1.8	1.01/0.17	-1.21/-1.66	-1.28/-0.34	0.69/1.35	1.78/2.29
Theta(20°)	1.21/1.36	1.51/1.31	0.81/0.69	0.69/1.23	0.88/0.37	-1.34/-2.38	-3.64/-3.98	-3.91/-3.96	-3.2/-2.96	-1.31/-0.02	0.24/0.5	0.95/1.64	1.86/1.79	0.58/-1	-1.32/-1.54	-1.58/-1	-0.31/0.29	0.49/1.09
Theta(30°)	-0.04/1.01	1.28/1.18	0.8/0.63	0.46/0.11	-0.01/-0.5	-0.95/-0.94	-0.4/-0.55	-0.87/-2.48	-3.57/-2.33	-0.39/0.97	1.17/0.76	0.73/2	1.89/1.45	1.02/-0.55	-3.83/-2.14	-1.81/-2.58	-2.69/-1.37	
Theta(40°)	0.67/0.88	0.38/0.07	0.6/0.58	0.03/-1.03	-1.1/-1.25	-1.41/-1.85	-1.65/-0.69	-0.5/-2.15	-3.56/-2.14	0.07/0.97	0.95/0.6	0.58/1.33	1.44/0.65	0.64/-1.15	-5.91/-7.2	-3.48/-1.8	-2.26/-2.7	-3.54/-1.59
Theta(50°)	-0.56/-0.52	-1.54/-1.36	-0.72/-0.11	-1.17/-1.69	-1.2/-1.39	-1.46/-2.22	-2.96/-2.4	-1.47/-3.76	-4.86/-3.65	-0.16/0.86	1.27/0.65	0.87/0.37	0.2/0.1	-1.94/-4.59	-7.18/-4.47	-2.28/-1.63	-2.85/-3.33	-3.11/-1.69
Theta(60°)	-2.92/-3.05	-1.81/-1.63	-1.96/-1.11	-0.74/-1.09	-0.59/-2.01	-2.84/-0.94	0.61/-1.41	-4.46/-4.87	-4.89/-3.05	-1.19/0.03	1.45/0.57	-0.61/0.25	-0.85/-5.31	-6.77/-5.25	-2.76/-2.9	-3.27/-1.97	-2.29/-3.06	
Theta(70°)	-3.86/-4.13	-2.1/-1.96	-1.71/-2.72	-0.89/-1.92	-0.09/-1.35	-2.08/-0.61	-1.74/-6.18	-5.3/-7.05	-4.98/-5.95	-2.81/-2.38	-1.45/-0.78	1.23/0.25	-2.35/-1.42	-0.33/-3.38	-3.79/-4.79	-5.25/-7.58	-5.71/-2.43	-3.16/-3.5
Theta(80°)	-2.04/-4.18	-3.53/-2.56	-1.41/-2.74	-0.6/-1.11	0.6/-0.45	-1.59/0.4	-1.04/-6.58	-4.09/-6.18	-5.04/-7.96	-3.14/-3.07	-1.85/-1.14	0.26/0.51	-1.07/1.11	0.09/-1.07	-1.9/-3.25	-1.6/-5.04	-5.44/-2.46	-2.35/-5.89
Theta(90°)	-3.4/-3.09	-4.1/-1.1	-0.04/-0.66	-0.28/-0.63	0.61/-1.21	-1.49/0.98	-0.19/-1.21	-1.11/-6.24	-5.06/-7.85	-3.09/-2.86	-2.17/-1.63	-0.38/0.55	-0.83/-0.25	-1.02/-0.48	-0.61/-2.13	-0.36/-1.77	-5.02/-4.08	-3.69/-7.77
Theta(100°)	-3.34/-3.62	-4.91/-1.47	0.35/-0.99	0.07/-0.19	0.38/-1.43	-0.95/-0.1	-2.19/-2.67	0.11/-4.62	-5.55/-8.21	-3.7/-2.1	-2.51/-2.62	-1.74/-1.99	-2.93/-0.8	-1.15/-2.03	0.18/-1.76	-1.15/-0.07	-2.1/-5.8	-6.56/-8.9
Theta(110°)	-4.22/-3.71	-5/-2.28	-0.13/-2.03	0.21/1.25	0.64/-1.41	-0.1/-1.2	-3.08/-2.32	-1.73/-5.84	-4.93/-9.19	-2.79/-2.76	-3.92/-3.27	-0.17/-1.66	-1.63/0.22	-1.09/-2.25	0.62/-1.55	-1.53/-0.15	-2.29/-7.14	-8.56/-8.69
Theta(120°)	-2.11/-6.45	-4.13/-2.12	-2.24/-3.29	-1.13/-1.5	-0.38/-3.25	0.05/0.24	-2.69/-1.98	-1.68/-5.91	-4.07/-8.96	-2.6/-3.27	-6.52/-3.87	-1.44/-1.08	-1.16/1.11	1.82/0.17	-4.75/-0.84	-3.51/-6.5	-8.7/-5.37	
Theta(130°)	-5.51/-7.46	-7.22/-4.28	-3.4/-4.89	-0.3/0.69	-0.98/-2.88	0.13/-0.57	-3.35/-0.93	-1.22/-5.42	-4.88/-7.72	-4.57/-6.16	-5.92/-6.3	-5.41/-7.92	-1.52.84	-0.29/-2.85	0.99/1.49	-3.71/-4.99	-4.26/-9.9	-6.27/-7.79
Theta(140°)	-6.77/-5.44	-6.05/-4.06	-6.64/-8.3	-4.65/-1.12	-2.34/-3.88	-2.32/-2.98	-4.66/-3.51	-4.87/-5.83	-8.91/-10.83	-7.05/-5.94	-6.54/-7.57	-6.01/-8.57	-5.91/-3.61	-9.5/-7.98	-8.44/-3.68	-6.89/-9.02	-9.13/-9.34	-6.61/-4.91
Theta(150°)	-10.7/-9.29	-4.71/-4.12	-7.15/-8.36	-3.96/-2.43	-2.53/-4.74	-7.01/-5.24	-3.71/-2.17	-7.42/-9.93	-5.94/-7.79	-8.36/-9.85	-7.45/-4.25	-4.56/-4.69	-7.85/-9.91	-7.94/-7.47	-6.69/-8.33	-9.8/-9.9	-8.67/-8.09	
Theta(160°)	-7.12/-7.71	-6.2/-7.62	-9.84/-9.08	-6.55/-4.31	-5.18/-7.22	-10.35/-8.32	-5.83/-3.58	-2.9/-4	-7.68/-10.44	-11.79/-11.73	-10.57/-8.58	-7.46/-7.35	-7.09/-7.71	-9.24/-9.82	-10.14/-7.56	-6.5/-6.29	-7.45/-8.14	-7.71/-7.19
Theta(170°)	-3.33/-11.2	-10.71/-8.72	-6.31/-5.21	-4.63/-4.63	-4.79/-5.19	-5.55/-5.88	-6.21/-6.08	-7.43/-8.65	-10.28/-10.23	-9.07/-9.51	-9.33/-8.62	-8.72/-8.38	-8.16/-8.3	-8.45/-9.55	-9.48/-7.34	-6.95/-7.16	-6.94/-8.23	-8.75/-9.8
Theta(180°)	-11.29/-9.74	-9.22/-9.22	-9.05/-9.8	-10.8/-12.85	-12.78/-12.42	-12.75/-12.39	-12.36/-10.63	-9.93/-9.19	-9.55/-10.21	-9.95/-9.43	-8.62/-9.73	-9.16/-9.32	-8.9/-9.91	-7.34/-7.23	-7.66/-8.42	-9.27/-10.14	-9.91/-9.64	-10.21/-11.48
Freq(Hz)	5.6GPol.	ThetaL	-L	-R	-T	-B	-C	-D	-E	-F	-G	-H	-I	-J	-K	-L	-M	-N
DG(dBi)	Phi(0°)/Phi(10°)	Phi(20°)/Phi(30°)	Phi(40°)/Phi(50°)	Phi(60°)/Phi(70°)	Phi(80°)/Phi(90°)	Phi(100°)/Phi(110°)	Phi(120°)/Phi(130°)	Phi(140°)/Phi(150°)	Phi(160°)/Phi(170°)	Phi(180°)/Phi(190°)	Phi(200°)/Phi(210°)	Phi(220°)/Phi(230°)	Phi(240°)/Phi(250°)	Phi(260°)/Phi(270°)	Phi(280°)/Phi(290°)	Phi(300°)/Phi(310°)	Phi(320°)/Phi(330°)	Phi(340°)/Phi(350°)
Theta(0°)	-0.58/-1.11	-1.66/-1.52	-0.61/0.41	1.28/1.48	1.96/1.67	1.81/1.96	0.94/-1.97	0.17/-0.24	1.88/1.86	1.86/-1.97	1.186/-1.35	0.67/0.03	0.71/1.35	0.16/-0.43	0.04/0.23			
Theta(10°)	-1.28/-1.25	-1.74/-2.23	-1.77/-1.52	-0.59/0.18	0.28/0.36	0.64/0.62	0.92/0.72	0.44/0.07	-0.05/0.26	0.51/0.09	-0.3/-1.17	-1.06/-0.69	-0.35/0.33	1.25/1.83	1.86/1.62	1.43/1.14	0.46/-0.29	-0.9/-0.95
Theta(20°)	-1.27/-1.42	-0.32/0.31	0.65/0.23	0.35/0.61	0.78/0.23	-0.08/0.44	0.62/1.05	1.06/0.68	-0.12/0.34	1.12/0.66	-0.73/-2.16	-2.55/-2.4	-2.05/-1.25	-0.04/1.09	1.56/1.78	1.77/0.95	0.69/0.23	-0.45/-0.9
Theta(30°)	1.84/0.46	0.81/1.75	2.06/2.21	2.36/2.34	0.55/0.15	1.57/0.69	0.82/1.87	2.14/2	1.37/0.65	-0.73/-0.61	-0.89/-1.23	3.67/3.93	3.62/7.4	1.67/2.7	2.18/2.33	3.6/2.74	2.02/2.18	2.69/2.93
Theta(40°)	2.99/2.16	1.16/2.01	2.36/1.41	0.95/0.96	0.05/-0.27	0.49/1.25	1.82/1.59	2.32/2.71	2.32/1.52	0.75/1.04	0.61/1.32	1.91/3.17	2.76/2.46	3.05/2.99	3.21/3.49	3.72/3.16	3.43/4.2	3.11/2.81
Theta(50°)	2.69/2.89	3.1/3.05	2.08/1.08	0.29/0.12	-0.99/-0.96	0.06/2	0.99/1.9	2.86/3.68	2.49/1.04	-0.2/-0.63	0.71/2.41	2.95/3.4	2.82/2.61	2.42/1.6	1.89/2.84	2.47/2.34	2.54/2.28	2.12/1.6
Theta(60°)	1.06/2.71	3.37/3.33	2.79/2.54	1.89/1.41	-0.68/-0.46	0.95/0.45	1.39/1.71	2.73/4.2	1.85/0.72	2.06/4.19	4.38/4.18	3.06/2.32	0.65/0.22	1.22	2.21/3.4	3.06/2.69	1.61/1.05	
Theta(70°)	0.13/1.93	2.51/2.66	2.85/3.35	3.15/1.99	-0.39/0.11	1.73/2.23	2.96/3.11	2.41/2.04	-0.47/-2.38	-3.13/-1.84	1.24/3.37	3.12/9.4	3.59/2.65	0.52/0.09	2.33/2.97	3.19/3.26	2.79/1.83	1.02/0.76
Theta(80°)	1.05/1.55	1.18/1.13	3.17/3.52	3.62/1.1	-0.24/0.94	1.25/1.05	2.18/2.43	1.41/-0.12	-1.47/-3.01	-4.51/-1.4	1.73/3.35	3.02/2.53	4.09/4.63	3.54/2.08	2.31/4.05	4.12/2.5	2.18/0.91	0.12/0.69
Theta(90°)	2.69/3.2	0.97/0.35	3.97/4.04	3.25/1.44	0.82/0.89	0.68/-1.06	0.50/4.3	0.33/-1.67	-3.6/-3.6	-1.5/-1.11	0.47/2.11	1.84/1.22	3.26/4.57	3.97/1.54	0.67/2.34	4.01/1.5	0.96/0.33	0.01/0.58
Theta(100°)	1.96/2.24	-0.98/-0.48	1.91/1.17	-0.07/-3.16	-2.3/-3.37	-1.65/-3.73	-2.25/-3.1	-0.98/-3.07	-3.42/-4.45	-1.65/-0.99	-1.04/-0.26	-0.72/-2.03	0.92/1.44	1.75/-2.17	-2.76/-0.88	0.26/-2.96	0.42/0.39	0.86/1.47
Theta(110°)	2.31/1.73	-0.21/-0.7	-0.79/-2.02	-1.72/-2.3	-4.28/-4.68	-6.34/-6.19	-4.08/-4.6	-3.85/-3.17	-1.95/-2.44	-0.73/-0.99	-1.04/-1.49	-2.41/-4.71	-2.59/-2.81	-1.96/-7.41	-4.95/-3.33	-4.04/-4.34	-0.85/-0.7	-1.27/0.97
Theta(120°)	0.47/-0.1	-1.18/-0.45	-1.73/-0.84	-0.78/-1.6	-5.28/-8.07	-6.78/-3.99	-3.52/-3.12	-3.76/-2.24	-0.51/-0.18	-1.62/-2.43	0.03/1	-3/-5.41	4.01/-3.71	-2.44/-8.34	-5.7/-1.4	-1.33/-5	-5.47/-2.78	-3.31/-0.61
Theta(130°)	-0.43/-1.5	-1.67/-1.24	-2.16/-1.16	-2.76/-5.86	-5.24/-1.82	-0.99/-1.96	-1.73/-2.52	-0.53/-0.15	-1.34/-3.4	-5.29/-5.1	-4.27/-6.43	-7.09/-1.84	-2.63/-5.38	-4.27/-6.43	-2.63/-5.38	-7.09/-5.04	-3.9/-3.14	
Theta(140°)	-2.03/-3.57	-3.12/-4.69	-5.18/-3.88	-3.06/-4.69	-7.3/-7.5	-7.65/-7.48	-5.38/-3.37	-3.92/-3.98	-2.28/-2.31	-5.41/-9.59	-5.19/-3.32	-3.1/-2.41	-2.94/-3.77	-5.97/-7.43	-8.63/-10.05	-9.14/-6.96	-7.28/-5.15	-2.46/-3.46
Theta(150°)	-5.21/-5.25	-6.84/-7.17	-5.96/-5.14	-5.04/-5.51	-4.18/-3.23	-4.71/-7.44	-6.83/-4.78	-5.1/-5.4	-6.23/-5.7	-5.92/-5.69	-3.78/-1.99	-0.83/-1.79	-3.03/-6.24	-8.14/-8.14	-7.63/-7.74	-7.54/-8.07	-8.21/-7.12	-6.12/-6.17
Theta(160°)	-3.44/-4.28	-3.42/-3.06	-3.2/-3.96	-5.75/-7.92	-7.36/-6.74	-7.17/-5.92	-4.96/-3.42	-6.14/-6.7	-8.57/-7.9	-6.8/-4.66	-5.28/-2.96	-4.61/-6.7	-8.53/-7	-6.54/-7.18	-8.88/-8.8	-6.54/-7.18	-3.53/-3.45	
Theta(170°)	-5.8/-5.83	-5.57/-6.32	-8.26/-9.88	-10.49/-10.51	-9.35/-8.38	-7.97/-9.09	-5.51/-4.85	-4.07/-3.78	-3.93/-4.03	-5.14/-5.4	-5.74/-5.75	-5.34/-5.67	-5.81/-6.21	-5.81/-6.86	-8.85/-10.54	-11.87/-10.07	-8.58/-8.4	-6.69/-6.05
Theta(180°)	-11.02/-10.91	-10.51/-10.9	-10.01/-9.82	-10.49/-10.85	-11.39/-11.16	-11.12/-10.67	-10.58/-10.05	-10.78/-11.83	-11.11/-11.93	-12/-11.47	-10.54/-10.21	-9.03/-8.42	-7.08/-7.54	-7.62/-9.03	-9.13/-9.44	-9.73/-9.36	-9.62/-9.84	-10.77/-10.52
Freq(Hz)	5.785GPol.	PhiL	-L	-R	-T	-B	-C	-D	-E	-F	-G	-H	-I	-J	-K	-L	-M	-N
DG(dBi)	Phi(0°)/Phi(10°)	Phi(20°)/Phi(30°)	Phi(40°)/Phi(50°)	Phi(60°)/Phi(70°)	Phi(80°)/Phi(90°)	Phi(100°)/Phi(110°)	Phi(120°)/Phi(130°)	Phi(140°)/Phi(150°)	Phi(160°)/Phi(170°)	Phi(180°)/Phi(190°)	Phi(200°)/Phi(210°)	Phi(220°)/Phi(230°)	Phi(240°)/Phi(250°)	Phi(260°)/Phi(270°)	Phi(280°)/Phi(290°)	Phi(300°)/Phi(310°)	Phi(320°)/Phi(330°)	Phi(340°)/Phi(350°)
Theta(0°)	2.93/2.91	3/3.1	2.5/1.63	0.98/-0.24	-1.62/-2.85	-4.34/-4.12	-1.7/-0.35	0.65/1.65	2.49/0.15	3.21/2.39	3.32/95	2.21/1.48	0.47/-0.41	-2.08/-3.62	-5.13/-4.15	-2.36/-8.02	0.41/1.39	2.19/2.68
Theta(10°)	3.06/3.06	2.66/2.54	2.08/1.16	0.41/-0.82	-1.87/-3.6	-5.14/-4.98	-3.57/-2.06	-0.69/0.13	1.42/2.9	2.84/3.35	3.73/3.76	3.73/3.76	-2.59/-1.1	0.33/1.19	2.12/2.82			
Theta(20°)	1.09/1.74	2.28/2.28	1.76/0.64	-1.05/-3.47	-4.74/-4.35	-3.73/-3.78	-4.79/-4.37	-4.32/-3.54	-1.61/0.65	2.13/3.58	4.32/3.4	3.53/2.95	2.01/0.53	-2.36/-5.5	-6.12/-6.24	-5.4/-3.96	-2.58/-1.59	-0.74/0.2
Theta(30°)	0.35/1.13	2.35/2.38	1.86/0.89	-1.84/-4.32	-5.71/-3.78	-2.86/-3.17	-3.17/-2.55	-2.22/-1.82	-0.98/0.24	2.23/52	3.42/2.87	2.2/2.35	1.72/0.05	-2.9/-4.				



Radiated Composite Gain Data

Appendix B

Gain Result

Freq(Hz)	5.6G/Pol.	Phi/Ant. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	
Gain	Phi(0°)Phi(10°)	Phi(20°)Phi(30°)	Phi(40°)Phi(50°)	Phi(60°)Phi(70°)	Phi(80°)Phi(90°)	Phi(100°)Phi(110°)	Phi(120°)Phi(130°)	Phi(140°)Phi(150°)	Phi(160°)Phi(170°)	Phi(180°)Phi(190°)	Phi(200°)Phi(210°)	Phi(220°)Phi(230°)	Phi(240°)Phi(250°)	Phi(260°)Phi(270°)	Phi(280°)Phi(290°)	Phi(300°)Phi(310°)	Phi(320°)Phi(330°)	Phi(340°)Phi(350°)
Theta(0°)	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12	-1.92/-1.66	-2.05/-2.12
Theta(10°)	-2.09/-2.08	-1.71/-1.34	-0.9/-0.58	-0.55/-1.22	-2.71/-4.54	-6.75/-10.33	-15.28/-18.98	-14.19/-9.28	-6.57/-5.2	-4.03/-3.49	-2.71/-2.51	-2.73/-1.6	-4.08/-5.5	-8.04/-11.33	-17.82/-18.95	-15.4/-10.97	-7.44/-5.33	-4.45/-3.12
Theta(20°)	-5.99/-5.53	-2.76/-0.72	0.59/0.57	0.08/-0.69	-2.85/-4.86	-7.36/-8.21	-9.12/-10.24	-11.85/-14.94	-11.53/-7.09	-3.75/-2.11	-2.66/-3.73	-4.19/-4.6	-4.92/-6.17	-10.66/-12.63	-10.28/-8.11	-7.72/-6.62	-7.22/-6.26	-5.64/-5.83
Theta(30°)	-13.37/-10.05	-4.87/-2.5	-1.32/-0.72	-0.63/-2.52	-5.5/-7.85	-7.6/-6.47	-5.28/-5.81	-7.39/-14.17	-19.18/-9.08	-4.52/-2	-2.13/-3.6	-4.76/-2.83	-4.11/-5.94	-5.06/-5.94	-7.41/-7.69	-7.53/-9.52	-11.04/-12.2	
Theta(40°)	-5.2/-8.48	-9.88/-10.51	-6.15/-3.71	-3.97/-7.8	-10.42/-9.81	-10.55/-10.36	-8.39/-7.4	-8.8/-11.3	-19.23/-10.62	-4.6/-1.25	-1/-1.76	-1.92/-1.29	-3.14/-5.2	-2.45/-3.38	-11.73/-14.03	-9.14/-6.99	-8.23/-7.12	-7.9/-7.01
Theta(50°)	-7.76/-6.56	-7.87/-15.16	-13.53/-7.81	-9.5/-11.46	-10.91/-11.35	-13.32/-17.94	-17.38/-13.29	-10.22/-9.82	-11.45/-10.52	-4.28/-0.66	-0.48/-2.56	-0.2/-1.52	-7.86/-7.03	-5.38/-6.02	-15.39/-13.31	-6.59/-5.49	-6.98/-4.92	-5.4/-6.6
Theta(60°)	-11.18/-9.3	-7.12/-8.53	-18.42/-12.11	-7.64/-7.77	-8.89/-14.14	-18.96/-14.58	-16.65/-19	-18.71/-14.06	-12.67/-9.08	-7.87/-2.59	-1.71/-0.92	-0.43/-2.17	-7.03/-10.98	-8.16/-12.8	-17.95/-13.07	-8.17/-8.14	-5.36/-4.86	-4.96/-11
Theta(70°)	-18.35/-17.19	-8.83/-6.69	-10.22/-15.78	-7.52/-7.35	-9.17/-15.5	-17.66/-13.84	-11.05/-14.63	-13.82/-15.71	-11.85/-12.48	-9.46/-3.59	-2.4/-3.03	-1.02/-3.06	-14.44/-7.46	-7.51/-7.66	-7.97/-15.16	-19.31/-18.46	-9.16/-4.51	-6.14/-9.34
Theta(80°)	-9.34/-14.65	-15.57/-6.15	-7.74/-18.04	-6.11/-6.65	-9.47/-10.38	-12.62/-9.2	-9.04/-13.49	-10.69/-12.57	-12.71/-15.88	-11.45/-4.15	-4.43/-1.97	-1.49/-4.63	-7.69/-5.06	-3.98/-1.52	-4.92/-10.2	-4.79/-10.23	-19.33/-8.06	-7.95/-18.39
Theta(90°)	-11.11/-9.72	-18.01/-5.57	-4.68/-14.48	-5.14/-6.2	-10.41/-11.22	-8.99/-7.76	-6.1/-8.63	-7.35/-12.1	-14.19/-18.3	-9.57/-4.65	-7.28/-3.44	-2.24/-7.47	-3.37/-4.04	-2.18/-0.67	-3.66/-7.22	-2.01/-4.98	-9.66/-15.69	-9.3/-18.27
Theta(100°)	-7.75/-6	-13.33/-6.97	-3.97/-12.72	-4.26/-4.67	-7.67/-6.72	-6.06/-7.39	-8.89/-8.34	-6.06/-12.21	-17.09/-17.33	-8.64/-4.58	-6.27/-4.42	-2.43/-13.98	-2.59/-3.5	-3.48/-4.1	-2.48/-9.6	-5.98/-2.87	-7.61/-17.13	-15.86/-18.53
Theta(110°)	-5.77/-5.54	-11.92/-8.27	-4.02/-13.43	-5.28/-2.71	-6.85/-6.52	-4.7/-3.1	-10.16/-7.67	-9.16/-19.3	-13.25/-14.24	-8.76/-8.11	-7.06/-5.08	-1.41/-9.12	-1.29/-2.24	-2.32/-5.15	-3.19/-7.19	-7.99/-4.92	-6.73/-18.82	-17.91/-16.84
Theta(120°)	-2.61/-9.51	-13.14/-7.72	-6.21/-19.07	-5.93/-2.31	-6.23/-6.87	-2.79/-4.21	-8.18/-7.57	-17.17/-16.83	-6.36/-10.24	-4.55/-4.2	-17.61/-4.13	-2.95/-1.99	-17.6/-6.07	-10.51/-13.15	-9.11/-12.58	-8.66/-19.22	-12.4/-7.4	
Theta(130°)	-5.65/-13.01	-18.61/-8.16	-6.03/-18.28	-5.26/-4.01	-7.73/-9.83	-6.28/-9.88	-10.76/-4.26	-6.49/-13.79	-15.05/-13.07	-6.33/-10.02	-9.28/-5.41	-6.91/-15.69	-5.03/-1.31	-3.03/-6.09	-5.73/-3.53	-16.21/-10.03	-10.81/-14.63	-9.47/-7.67
Theta(140°)	-8.51/-14.83	-8.67/-6.23	-8.2/-18.95	-9.19/-4.38	-8.16/-17.97	-17.99/-19.41	-18.84/-12.77	-14.4/-12.86	-18.86/-18.71	-9.28/-8.71	-8/-7.94	-4.2/-9.5	-9.29/-8.78	-17.18/-15.62	-15.63/-12.52	-11.84/-14	-17.87/-7.5	
Theta(150°)	-14.65/-11.45	-6.72/-5.91	-9.91/-18.77	-12.21/-8.91	-11.73/-15.67	-17.89/-15.24	-12.45/-9.14	-7.05/-8.27	-12.87/-14.43	-11.78/-12.6	-8.74/-5	-17.08/-15.69	-10.05/-13.15	-9.11/-15.89	-15.15/-15.79	-17.08/-18.59	-15.22/-12.49	
Theta(160°)	-8.83/-7.73	-6.96/-9.72	-17.79/-16.22	-10.81/-8.83	-10.19/-13.78	-19.99/-17.9	-18.17/-12.41	-9.27/-8.72	-10.89/-14.56	-18.31/-18.19	-16.98/-10.36	-7.9/-7.41	-8.12/-8.61	-13.42/-19.01	-18.43/-16.64	-17.15/-18.36	-16.91/-14.84	-13.08/-10.49
Theta(170°)	-14.48/-17.65	-18.24/-17.5	-13.04/-9.64	-8.02/-7.35	-7.06/-6.91	-8.29/-8.9	-12.03/-12.7	-17.89/-18.66	-18.52/-18.75	-16.79/-14.67	-14.13/-15.96	-19.25/-18.29	-14.27/-12.3	-13.48/-14.38	-18.25/-18.84	-16.99/-17.98	-18.14/-15.95	-14.78/-14.41
Theta(180°)	-15.02/-13	-11.15/-11.43	-13.27/-13.69	-15.47/-18.81	-18.66/-18.1	-19.24/-18.83	-18.26/-16.61	-15.63/-15.2	-16.29/-16.36	-17.37/-17.09	-15.47/-14.78	-12.35/-11.32	-10.76/-9.82	-10.27/-11.43	-13.07/-14.36	-13.36/-13.16	-12.93/-12.12	-13.52/-14.83
Freq(Hz)	5.6G/Pol.	Theta/Ant. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Phi(0°)Phi(10°)	Phi(20°)Phi(30°)	Phi(40°)Phi(50°)	Phi(60°)Phi(70°)	Phi(80°)Phi(90°)	Phi(100°)Phi(110°)	Phi(120°)Phi(130°)	Phi(140°)Phi(150°)	Phi(160°)Phi(170°)	Phi(180°)Phi(190°)	Phi(200°)Phi(210°)	Phi(220°)Phi(230°)	Phi(240°)Phi(250°)	Phi(260°)Phi(270°)	Phi(280°)Phi(290°)	Phi(300°)Phi(310°)	Phi(320°)Phi(330°)	Phi(340°)Phi(350°)
Theta(0°)	-7.29/-12.1	-18.16/-18.12	-14.77/-9.22	-3.16/-2.32	-3.87/-5.73	-1.5/-1.4	-18.67/-18.44	-3.87/-5.73	-1.5/-1.4	-18.67/-18.44	-3.87/-5.73	-1.5/-1.4	-18.67/-18.44	-3.87/-5.73	-1.5/-1.4	-18.67/-18.44	-3.87/-5.73	-1.5/-1.4
Theta(10°)	-5.07/-6.32	-9.91/-16.27	-18.77/-18.52	-12.66/-7.91	-6.04/-4.75	-3.38/-2.5	-1.71/-1.51	-1.69/-2.88	-4.44/-5.62	-6.66/-8.88	-11.12/-14.27	-11.03/-7.6	-5.11/-3.13	-1.61/-1.01	-0.92/-1.03	-1.04/-1.48	-2.66/-3.85	-5.01/-4.63
Theta(20°)	-4.88/-3.72	-4.68/-6.72	-9.88/-15.71	-18.63/-10.56	-7.66/-8.6	-9.74/-7.1	-0.4/-0.95	-0.390/43	-0.92/11.3	-4.9/-5.28	-9.6/-13.9	-13.61/-6.85	-3/-0.43	0.92/11.3	0.4/-0.29	-0.88/-2.26	-3.33/-5.26	-6.22/-6
Theta(30°)	-3.27/-3.73	-1.79/-3.58	-6.82/-10.35	-12.58/-13.96	-17.58/-17.71	-1.78/-11.35	-6.57/-3.53	-0.63/1	1.180/78	-1.83/-5.07	-7.81/-13.44	1.11/23.3	3.11/2.91	2.45/0.82	-2.31/-4.92	-3.67/-2.77		
Theta(40°)	-4.37/-2.02	-1.77/-2.62	-5.77/-11.96	-17.58/-16.43	-17.94/-14.87	-12.07/-10.6	-7.56/-4.75	-2.41/-0.38	0.170/53	-1.35/-4.22	-7.1/-8.25	-9.1/-3.99	0.36/1.28	0.95/-0.31	-0.25/0.42	-0.92/-2.72	-4.6/-7.86	-7.59/-5.83
Theta(50°)	-6.71/-2.48	-1.08/-1	-5.29/-14.04	-18.26/-17.37	-18.05/-13.25	-10.15/-11.21	-14.08/-10.18	-6.35/-3.71	-3.54/-2.75	-5.39/-9.02	-7.29/-5.08	-6.46/-2.72	0.350/27	-1.93/-5.51	-4.33/-5.25	-6.93/-4.95	-12.61/-6.14	-18.09/-10.24
Theta(60°)	-14.06/-5.4	-1.76/-1.93	-5.58/-15.12	-11.85/-9.99	-16.13/-14.95	-12.34/-10.45	-10.53/-8.22	-8.16/-19.35	-6.92/-6.82	-7.1/-14.54	-7.82/-4.28	-5.15/-3.33	-0.69/-1.84	-16.87/-13.38	-10.06/-3.84	-1.95/-2.53		
Theta(70°)	-11.94/-5.04	-5.41/-5.09	-10.61/-9.16	-4.75/-4.78	-7.79/-10.55	-12.35/-11.1	-8.53/-10.4	-10.81/-11.33	-11.04/-10.72	-13.9/-18.99	-5.91/-3.61	-5.26/-5.2	-1.13/-3.36	-8.23/-5.1	-3.29/-5.17	-4.08/-3.82	-2.15/-3.29	-8.78/-18.56
Theta(80°)	-7.02/-12.29	-13.98/-10.63	-11.03/-5.4	-3.46/-4.55	-5.26/-6.84	-10.26/-10.25	-7.37/-7.37	-10.76/-12.6	-10.72/-10.34	-18.96/-17.74	-4.8/-1.57	-2.84/-6.26	0.640/13	-0.86/-0.07	-0.96/-4.59	-5.32/-7.34	-5.53/-7.12	-15.88/-17
Theta(90°)	-8.17/-6.86	-18.15/-14.89	-12.41/-7.09	-7.72/-6.72	-5.11/-5.15	-8.64/-12.78	-8.56/-9.08	-13.98/-14.35	-10.13/-9.23	-10.03/-18.28	-6.27/-1	-4.54/-9.58	0.970/7	-0.25/-1.31	-4.09/-6.36	-3.37/-2.77	-10.66/-10.22	-11.77/-14.15
Theta(100°)	-7.33/-2.63	-7.11/-1.03	-12.78/-12.48	-16.92/-14.95	-8.09/-6.8	-16.16/-18.06	-12.32/-12.87	-16.05/-18.41	-14.9/-9.35	-6.95/-18.33	-9.37/-3.07	-3.36/-17.21	-3.97/-2.4	-12.01/-4.84	-3.9/-10.83	-8.02/-5.93		
Theta(110°)	-3.96/-3.69	-4.24/-9.9	-17.07/-19.17	-15.84/-11.2	-12.5/-9.69	-15.87/-19.11	-17.93/-13.87	-17.69/-17.08	-17.77/-7.31	-5.63/-11.08	-8.89/-3.99	-4.92/-16.72	-12.38/-11.61	-5.24/-18.51	-18.77/-5.64	-6.66/-14.43	-7.95/-4.56	-14.53/-10.23
Theta(120°)	-5.64/-8.42	-7.56/-10.98	-18.21/-11.25	-8.24/-7.97	-9.1/-16.08	-17.67/-10.01	-7.36/-6.29	-6.84/-6.45	-7.36/-3.36	-7.74/-10.28	-6.3/-2.34	-3.43/-18.64	-13.25/-12.49	-5.55/-9.38	-2.31/-10.01	-15.42/-8.36		
Theta(130°)	-10.36/-13.35	-8.18/-8.49	-12.19/-9.59	-11.5/-5.04	-4.7/-8.17	-18.16/-8.76	-2.89/-2.2	-3.18/-2.38	-5.05/-17.31	-11.07/-8.56	-7.81/-7.32	-3.2/-7.77	-17.07/-17.36	-1.37/-6.87	-5.34/-7.75	-10.06/-18.09		
Theta(140°)	-16.45/-13.99	-14.31/-17.66	-17.77/-12.64	-12.28/-12.1	-7.03/-7.55	-10.57/-11.51	-6.97/-3.59	-3.57/-3.1	-3.46/-4.02	-11.56/-15.98	-6.28/-5.37	-8.91/-7.55	-18.01/-13.29	-19.38/-17.96	-14.05/-14.66	-13.66/-10.16	-12.14/-10.35	-8.75/-18.91
Theta(150°)	-12.26/-12.67	-15.35/-12.62	-8.82/-8.95	-10.99/-10.88	-7.55/-5.89	-6.97/-11.29	-17.9/-18.61	-15.94/-9.58	-9.93/-11.7	-15.94/-14.47	-5.39/-2.39	-2.46/-5.3	-5.76/-8.53	-10.88/-12.34	-12.69/-11.83	-13.33/-14.81	-16.63/-16.02	-16.82/-13.22
Theta(160°)	-11.76/-16.96	-16.3/-11.13	-7.58/-7.49	-9.99/-15.96	-18.02/-18.51	-13.61/-15.14	-8.72/-17.63	-15.83/-12.24	-9.12/-8.59	-17.38/-16.19	-18.01/-13.54	-11.77/-7.22	-14.68/-14.24	-13.29/-15.1	-17.07/-17.36	-14.05/-14.24	-12.08/-12.6	
Theta(170°)	-18.72/-17.01	-12.95/-11.59	-11.68/-12.74	-12.74/-14.13	-15.43/-14.96	-16.07/-12.09	-10.45/-9.26	-7.65/-7.43	-6.76/-6.84	-7.94/-8.07	-9.46/-9.51	-10.02/-10.81	-11.57/-11.85	-11.49/-12.95	-17.13/-18.72	-17.28/-13.95	-14.05/-19.16	-19.32/-18.99
Theta(180°)	-18.2/-19.09	-17.57/-17.07	-15.26/-14.36	-15.01/-15.81	-15.77/-15.31	-15.41/-14.43	-15.71/-16.6	-18.53/-19.16	-19.3/-18.34	-18.6/-18.29	-17.84/-16.72	-15.7/-16.37	-14.88/-15.98	-17.3/-19.56	-17.85/-17.28	-17.68/-16.55	-16.49/-18.16	-19.23/-17.91
Freq(Hz)	5.785G/Pol.	Phi/Ant. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Phi(0°)Phi(10°)	Phi(20°)Phi(30°)	Phi(40°)Phi(50°)	Phi(60°)Phi(70°)	Phi(80°)Phi(90°)	Phi(100°)Phi(110°)	Phi(120°)Phi(130°)	Phi(140°)Phi(150°)	Phi(160°)Phi(170°)	Phi(180°)Phi(190°)	Phi(200°)Phi(210°)	Phi(220°)Phi(230°)	Phi(240°)Phi(250°)	Phi(260°)Phi(270°)	Phi(280°)Phi(290°)	Phi(300°)Phi(310°)	Phi(320°)Phi(330°)	Phi(340°)Phi(350°)
Theta(0°)	0.240/11	-0.05/-0.14	-0.6/-1.5	-2.56/-4.01	-6.51/-10.54	-16.48/-16.79	-10.63/-6.98	-4.79/-3.19	-1.64/-5.05	0.02/3	0.27/0.01	-0.48/-1.28	-2.55/-4.03	-7.11/-11.94	-17.69/-16.44	-10.86/-6.78	-4.91/-3.42	-1.29/-0.3
Theta(10°)	-0.130/58	0.710/37	-0.1/-0.93	-2.12/-4.45	-2.24/-0.94	-15.81/-10.19	-6.24/-4.38	-2.24/-0.94	-5.86/-10.41	1.060/75	0.061/8.99	-1.53/-3.35	-5.66/-10.41	-1.76/-6.81	-13			



Radiated Composite Gain Data

Appendix B

Θ(60°)	-1.77/-0.91	-0.320/41	0.810/98	-0.18/-2.77	-7.13/-6.38	-2.77/-0.56	0.67/-0.2	-2.97/-4.7	-6.36/-7.84	-6.41/-4.65	-5.52/-1.41	0.62/-0.81	-3.73/-6.18	-6.16/-5.48	-3.31/-1.77	-1.2/-2.58	-4.45/-5.84	-3.19/-2.18
Θ(70°)	-2.69/-1.49	-0.510/42	1.561/52	0.07/-3.47	-8.39/-5.74	-2.18/-1.11	-0.87/-1.46	-5.4/-6.93	-9.71/-10.83	-12.29/-7.79	-7.27/-1.31	-0.14/-2.7	-6.27/-7.1	-7.64/-7.67	-3.73/-2.67	-4.34/-3.81	-4.71/-5.8	-4.5/-3.77
Θ(80°)	-4.3/-3.01	-1.440/2	1.640/87	-0.89/-5.57	-9.53/-4.62	-1.8/-1.84	-2.3/-4.62	-11.09/-9.94	-10.02/-9.98	-14.01/-7.05	-10.04/-4	-2.28/-6.13	-9.07/-4.62	-5.43/-9.32	-4.46/-1.23	-3.08/-5.42	-5.23/-5.67	-4.89/-5.43
Θ(90°)	-2.66/-1	0.95/-1.82	2.97/-1.71	-0.36/-1.89	-2.83/-3.91	-2.79/-4.19	-6.06/-11.3	-11.25/-8.46	-9.69/-11.41	-11.99/-8.81	-15.6/-8.89	7.49/-14.62	-9.03/-3	-3.49/-7.56	-5.63/-1.18	-2.54/-6.11	-5.46/-5.44	-5.81/-4.7
Θ(100°)	-4.75/-6.95	-2.820/37	0.76/-1.25	-5.43/-8.61	-6.21/-4.22	-4.88/-7.06	-9.15/-14.72	-9.6/-7.95	-10.04/-16.32	-16.56/-8.98	-13.27/-17.95	-15.97/-18.88	-7.7/-5.23	-5.22/-6.65	-7.17/-8.48	-7.24/-11.03	-4.47/-5.23	-4.45/-3.55
Θ(110°)	-3.52/-5.3	-3.61/-0.69	-0.77/-3.2	-5.91/-5.38	-5.47/-5.98	-6.04/-8.76	-13.79/-12.49	-7.49/-7.65	-9.83/-14.83	-15.43/-8.19	-11.01/-18.12	-12.63/-19.15	-13.05/-9.06	-10.18/-12.3	-12.63/-7.99	-7.01/-9.09	-6.17/-5.3	-6.17/-5.3
Θ(120°)	-4.81/-5.59	-6.02/-2.54	-1.83/-1.66	-2.86/-4.24	-7.12/-8.3	-6.92/-8.28	-15.56/-14.02	-10.24/-10.67	-9.87/-12.3	-15.97/-8.37	-8.24/-11.56	-17.58/-13.83	-16.51/-9.88	-11.11/-15.93	-16.36/-6.38	-10.78/-15.81	-10.88/-13.81	-7.58/-5.17
Θ(130°)	-3.67/-4.99	-8.05/-4.51	-3.2/-2.03	-1.64/-3.32	-7.79/-12.27	-9.5/-9.39	-15.3/-18.63	-18.38/-18.01	-17.82/-18.97	-18.07/-8.24	-9.4/-15.05	-17.45/-10.26	-11.45/-7.69	-9.77/-11.6	-16.45/-13.14	-18.56/-15.73	-7.75/-12.17	-7.1/-6.89
Θ(140°)	-7.61/-9.06	-7.07/-6.03	-4.2/-3.67	-4.43/-8.2	-17.59/-15.85	-12.32/-17.4	-17.39/-15.83	-15.13/-18.16	-17.74/-13.01	-13.25/-18.03	-18.25/-14.5	-11.98/-9.15	-9.49/-7.85	-8.59/-13.96	-18.43/-15.91	-18.88/-13.96	-12.12/-9.79	-9.28/-10.62
Θ(150°)	-9.41/-8.77	-10.26/-8.06	7.92/-7.8	-7.39/-9.44	-9.55/-9.59	-12.68/-15.28	-11.71/-9.6	-8.32/-9.15	-12.11/-15.11	-18.84/-18.12	-15.53/-13.6	-12.52/-11.45	-13.85/-17.64	-18.69/-18.56	-17.98/-19.18	-12.02/-12.39	-11.94/-11.87	-8.81/-11.5
Θ(160°)	-6.88/-7.39	-7.12/-8.04	-7.44/-7.53	-8.48/-11.38	-16.19/-18.74	-19.15/-18.59	-16.78/-11.59	-11.42/-13.52	-14.86/-17.14	-17.3/-18.64	-18.97/-18.6	-18.56/-18.44	-14.94/-14.86	-14.3/-14.38	-17.68/-18.33	-14.22/-12.82	-11.03/-7.54	-5.27/-5.82
Θ(170°)	-9.62/-10.29	-11/-12.67	-14.54/-15.8	-18.22/-19.08	-18.73/-15.41	-12.41/-11.72	-12.28/-12.17	-14.38/-16.84	-19.39/-18.9	-18.07/-18.48	-18.3/-18.09	-18.4/-18.12	-14.15/-13.9	-15.37/-18.77	-19.02/-18.31	-16.75/-14	-10.41/-10.02	-10.41/-10.02
Θ(180°)	-19.17/-18.84	-17.4/-18.81	-17.99/-18.62	-18.92/-17.91	-18.46/-18.26	-17.96/-17.91	-18.72/-16.67	-16.35/-14.97	-13.99/-16.09	-17.77/-18.7	-18.46/-18.14	-18.09/-18.72	-19.27/-18.74	-17.54/-18.56	-19.4/-18.34	-17.44/-18.61	-18.59/-19	-18.62/-18.12
Freq(Hz)	5.785G/Pol.	Phi/Ant. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-3.25/-3.53	-3.57/-4	-5.49/-8.02	-11.14/-14.35	-15.1/-12.5	-9.3/-6.69	-4.79/-3.96	-2.73/-1.96	-1.75/-1.86	-2.24/-2.41	-3.07/-4.33	-6.21/-7.15	-9.04/-11.94	-13.61/-11.78	-10.33/-8.19	-6.73/-5.62	-4.51/-3.53	-3.01/-2.92
Θ(10°)	-1.24/-1.82	-2.99/-3.83	-5.26/-7.11	-8.79/-9.96	-9.86/-9.56	-8.91/-8.25	-8.02/-7.7	-7.37/-6.08	-5.24/-2.47	-3.73/-3.56	-4.73/-6.41	-7.87/-10.35	-12.17/-14.47	-11.85/-9.65	-7.79/-5.8	-4.21/-2.91	-1.57/-1.27	-0.51/-0.82
Θ(20°)	-1.65/-3.03	-3.77/-4.29	-5.29/-7.72	-12.63/-14.04	-10.88/-6.8	-4.48/-4.44	-5.72/-7.19	-7.98/-9.03	-6.46/-2.78	-1.93/-3.21	-5.52/-6.92	-8.31/-8.25	-6.74/-4.52	-2.82/-1.85	-2.82/-1.85	-2.82/-1.85	-2.82/-1.85	-2.82/-1.85
Θ(30°)	-2.96/-3.39	-1.37/-1.04	-1.63/-2.96	-6.09/-11.53	-17.33/-7.12	-2.64/-1.91	-3.75/-6.63	-8.41/-7.83	-4.21/-0.44	1.10/7.3	-1.53/-3.4	-5.05/-6.19	-7.67/-8.76	-9.63/-11.48	-14.09/-13.59	-12.09/-12.69	-8.59/-4.58	-1.71/-1.64
Θ(40°)	-5.83/-2.88	-0.98/-1	-1.46/-2.31	-2.38/-4.52	-9.79/-12.5	-4.73/-1.84	-2.93/-6.16	-4.14/-4.46	-0.49/-0.09	1.86/0.51	-2.6/-4.99	-6.34/-9.79	-9.94/-10.27	-12.72/-13.32	-18.7/-19.72	-12.64/-12.82	-18.61/-8.92	-4.62/-9.47
Θ(50°)	-8.9/-3.46	-2.77/-3.61	-5.07/-3.6	-2.11/-2.32	-4.14/-2.94	-5.86/-2	-3.45/-4.79	0.09/-2.52	-1.78/-5.99	-6.31/-2.94	-11.42/-12.09	-17.78/-13.05	-9.79/-10.65	-11.78/-13.05	-9.79/-10.65	-12.64/-12.82	-18.61/-8.92	-4.62/-9.47
Θ(60°)	-7.09/-5.09	-6.08/-11.39	-10.41/-5.56	-3.51/-3.23	-5.19/-6.09	-6.45/-3.95	-2.88/-7.32	-3.67/-2.61	-6.4/-2.91	-2.85/-6.24	-9.67/-6.45	-9.25/-11.55	-15.82/-14.52	-13.15/-11.4	-12.67/-12.01	-8.87/-11.84	-19.11/-14.18	-11.2/-12.34
Θ(70°)	-8.04/-7.23	-10.79/-16.78	-9.75/-6.28	-3.83/-3.79	-6.15/-14.7	-7.09/-6.4	-5.11/-10.6	-4.48/-3.26	-7.67/-6.03	-10.75/-8.34	-11.72/-13.68	-13.02/-11.43	-12.63/-12.02	-10.38/-10.72	-9.73/-14.4	-13.22/-13.4	-12.63/-13.37	-12.63/-13.37
Θ(80°)	-7.46/-8.34	-12.9/-15.04	-8.28/-6.37	-7.16/-5.52	-9.34/-9.29	-9.3/-9.22	-12.93/-13.65	-4.76/-5.62	-9.87/-9.07	-10.06/-18.33	-12.48/-18.9	-8.13/-5.82	-13.22/-11.81	-12.48/-18.9	-8.13/-5.82	-13.22/-11.81	-12.08/-13.23	-12.08/-13.23
Θ(90°)	-6.87/-7.94	-15.78/-15.05	-8.63/-6.98	-6.1/-8.47	-10.35/-11.23	-8.69/-10.3	-11.65/-18.18	-7.02/-7.33	-11.63/-11.19	-10.34/-18.69	-10.91/-9.94	-18.53/-14.08	-11.25/-9.34	-10.85/-8.84	-7.01/-7.45	-7.34/-11.56	-16.68/-11.27	-14.13/-11.88
Θ(100°)	-8.29/-8.08	-16.12/-15.48	-8.16/-8.88	-8.04/-9.94	-9.58/-13.12	-10.4/-10.43	-12.47/-18.94	-9.46/-8.4	-13.27/-11.53	-12.6/-10.92	-12.32/-12.27	-18.3/-9.53	-13.95/-8.29	-8.43/-11.9	-8.75/-6.24	-7.5/-11.28	-14.67/-11.61	-12.57/-14.14
Θ(110°)	-9.36/-10.22	-16.84/-18.49	-10.96/-8.39	-7.51/-9.45	-11.85/-13.34	-12.07/-11.27	-12.86/-13.67	-16.75/-10.12	-12.86/-13.67	-16.75/-10.12	-12.11/-15.7	-12.77/-9.65	-5.74/-8.25	-7.06/-9.4	-9.4/-18.58	-18.73/-15.2	-18.73/-15.2	-18.73/-15.2
Θ(120°)	-15.03/-13.06	-17.44/-18.81	-10.52/-7.44	-6.78/-7.82	-7.97/-12.08	-10.57/-8.42	-9.21/-11.82	-10.35/-9.9	-12.93/-10.34	-12.16/-17.34	-18.94/-17.75	-18.2/-6.22	-10.67/-3.31	-6.29/-5.65	-9.03/-13.14	-8.82/-18.61	-11.06/-14.89	-11.06/-14.89
Θ(130°)	-14.05/-12.07	-16.11/-17.62	-14.26/-9.1	-6.155	-6.98/-9.13	-7.83/-5.31	-4.71/-9.36	-10.33/-11.54	-12.01/-11.6	-15.98/-18.79	-18.33/-17.83	-13.22/-17.99	-13.25/-9.6	-13.4/-11.77	-9.85/-4.74	-9.94/-16.62	-12.6/-18.44	-12.85/-13.79
Θ(140°)	-15.26/-18.72	-17.38/-16.61	-15.45/-13.41	-10.06/-7.9	-7.67/-7.63	-7.44/-6.07	-9.16/-8.67	-10.13/-13.79	-17.33/-18.14	-12.62/-13.47	-15.74/-17.33	-17.05/-18.61	-18.74/-18.11	-15.4/-11.84	-18.14/-17.72	-12.86/-14.23	-11.37/-14.7	-11.37/-14.7
Θ(150°)	-14.14/-19.38	-18.72/-17.16	-14.2/-11.61	-8.3/-6.57	-9.45/-7.54	-8.89/-11.63	-11.28/-9.02	-7.22/-7.9	-11.36/-16.74	-14.13/-12.24	-8.58/-11.32	-15.93/-16.58	-16.78/-17.28	-15.93/-18.05	-18.64/-18.76	-12.43/-13.37	-13.14/-11.75	-13.14/-11.75
Θ(160°)	-16.06/-19.68	-18.58/-19.09	-18.41/-17.18	-19.23/-14.99	-12.45/-10.2	-11.15/-10.78	-8.8/-8.42	-9.08/-10.96	-13.58/-15.06	-15.17/-18.28	-18.18/-17.21	-18.54/-19.08	-15.69/-18.87	-18.11/-19.15	-14.5/-12.69	-13.85/-17.81	-18.75/-18.64	-18.04/-15.21
Θ(170°)	-17.74/-17.63	-17.1/-16.15	-15.41/-15.61	-14.66/-12.88	-13.53/-14.21	-15.05/-17.38	-18.47/-18.62	-17.07/-16.82	-14.16/-13.29	-14.37/-15.81	-18.65/-17.94	-18.51/-18.06	-18.54/-18.17	-18.6/-18.14	-18.75/-18.11	-17.4/-15.85	-15.46/-14.14	-16.09/-18.43
Θ(180°)	-18.08/-17.59	-18.76/-15.97	-14.37/-14.01	-15.37/-16.21	-18.38/-18.71	-17.83/-18.23	-19.06/-18.52	-17.68/-17.55	-18.73/-18.28	-17.65/-18.74	-18.14/-18.41	-18.55/-18.38	-18.39/-17.64	-17.6/-17.11	-18.55/-18.74	-18.72/-19.41	-18.65/-18.17	-18.65/-18.17
Freq(Hz)	5.785G/Pol.	Theta/Ant. 2	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-12.5/-10.69	-7.88/-9.54	-4.32/-3.87	-2.74/-2.11	-1.63/-1.96	-2.38/-3.16	-4.56/-5.84	-8.51/-11.87	-14.14/-14.33	-11.88/-9.56	-6.95/-5.45	-3.89/-3.17	-2.51/-2.66	-2.91/-3.38	-4.14/-5.56	-7.26/-9.9	-12.62/-13.23	-12.62/-13.23
Θ(10°)	-13.97/-11.24	-9.02/-7.84	-5.65/-4.75	-4.06/-3.99	-3.7/-3.82	-3.75/-3.93	-4.37/-5.38	-6.52/-8.06	-11.39/-10.77	-14.92/-11.58	-8.32/-5.99	-4.82/-3.82	-3.43/-3.04	-2.65/-2.51	-3.06/-3.32	-4.36/-5.55	-7.42/-10.63	-18.5/-18.4
Θ(20°)	-15.72/-18.32	-17.64/-13.31	-8.62/-5.94	-4.99/-4.44	-4.15/-5.09	-6.04/-4.12	-3.3/-3.8	-5.14/-6.34	-9.34/-16.79	-18.76/-11.61	-8.9/-6.69	-5.88/-6.23	-6.83/-6.47	-7.45/-6.42	-5.74/-5.44	-5.9/-6.17	-7.15/-8.36	-10.69/-12.54
Θ(30°)	-5.97/-6.36	-5.54/-4.83	-4.48/-3.39	-2.35/-1.6	-1.65/-2.48	-3.72/-4.06	-6.9/-5.13	-2.01/-4.99	-8.88/-9.42	-6.51/-4.9	-5.07/-4.8	-6.54/-6.88	-6.51/-4.79	-5.67/-4.8	-4.68/-4.61	-3.73/-4.4	-4.47/-3.66	-4.47/-3.66
Θ(40°)	-3.33/-1.46	-0.39/-0.71	-2.05/-2.68	-2.37/-1.15	0.22/0.73	-0.03/-1.56	-0.68/-0.59	-0.46/-3.29	-5.86/-7.74	-5.82/-4.03	-2.98/-2.42	-1.62/-1.62	-3.22/-4	-5.26/-4.85	-4.44/-2.94	-2.72/-2.78	-3.2/-3.54	-4.74/-4.94
Θ(50°)	-1.94/-0.4	-0.07/-0.94	-1.17/0.1	0.66/-0.15	-0.44/-0.06	0.59/1.14	1.16/-1.17	0.26/-2.39	-4.5/-5.8	-3.71/-2.04	-0.23/0.75	0.43/-1.16	-3.57/-6.6	-5.64/-3.75	-2.85/-1.29	-0.76/-1.84	-3.39/-3.4	-3.74/-3.63
Θ(60°)	-2.47/-1.51	-1.46/-2.83	-0.83/-1.43	1.51/0.44	-0.61/-1.85	-4.93/-4.14	1.36/0.75	2.18/-2.04	0.69/-1.82	0.78/-1.35	0.44/-2.84	-8.53/-5.64	-2.36/-2.6	-2.86/-4	-4.67/-4.61	-4.47/-3.66	-4.47/-3.66	-4.47/-3.66
Θ(70°)	-4.46/-3.8	-4.75/-3.5	-0.31/0.95	0.69/-0.74	-2/-3.76	-3.03/-0.08	1.42/-1.21	-1.09/-4.1	-5.48/-9.79	-8.44/-1.86	0.32/0.87	-0.4/-4.41	-6.1/-8.25	-9.23/-7.06	-5.15/-4.75	-3.23/-2.99	-3.6/-5.97	-7.12/-6.2
Θ(80°)	-6.25/-5.71	-7.76/-4.4	-0.43/-0.33	0.21/-1.67	-3.43/-4.88	-4.37/-1.04	0.06/-0.39	-2.85/-6.49	-9.53/-17.52	-12.67/-3.82	-2.65/-0.74	-1.81/-5.04	-3.18/-3.28	-6.9/-8.77	-3.87/-3.48	-5.04/-4.1	-4.78/-6.24	-8.22/-7.83



Radiated Composite Gain Data

Appendix B

Θ(160°)	-14.49/-17.74	-18.85/-18.99	-15.91/-14.63	-14.11/-12.78	-10.77/-10.39	-11.61/-10.66	-8.84/-6.53	-5.4/-5.77	-8.52/-12.54	-12.88/-13.1	-11.96/-13.99	-16.89/-15.7	-13.21/-14.85	-18.02/-17.81	-16.74/-9.81	-7.03/-11.25	-16.72/-16.58	-15.87/-15.03
Θ(170°)	-16.89/-19.54	-17.96/-16.77	-12.38/-11.52	-11.11/-9.29	-10.94/-12.07	-10.59/-9.29	-9.06/-8.69	-9.4/-11.03	-14.51/-17.95	-19.39/-17.9	-12.98/-10.13	-9.56/-9.31	-9.5/-10.27	-10.33/-10.95	-11.9/-10.86	-12.44/-17.3	-17.79/-17.98	-14.94/-14.41
Θ(180°)	-12.79/-13.49	-11.47/-11.05	-11.53/-11.95	-15.21/-11.97	-15.71/-14.25	-17.08/-18.87	-17.96/-17.66	-19.06/-17.72	-18.68/-17.97	-17.81/-18.48	-17.12/-17.12	-18.36/-19.34	-15.36/-13.99	-13.31/-12.96	-12.58/-11.76	-13.15/-16.31	-17.46/-16.74	-15.75/-15.69
Freq(Hz)	5.785G/Pol	Theta/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-5.95/-4.83	-5.14/-5.49	-6.35/-7.63	-9.27/-11.93	-14.23/-13.43	-9.27/-11.93	-6.98/-8.01	-6.98/-6.84	-5.81/-5.45	-5.07/-5.47	-6.22/-6.78	-10.87/-12.74	-12.61/-15.09	-14.22/-11.97	-10.58/-8.99	-7.65/-7.51	-6.34/-6.53	-6.34/-6.53
Θ(10°)	-8.01/-8.1	-8.41/-8.38	-10.87/-13.79	-15.59/-18.61	-17.53/-15.58	-13.07/-9.87	-8.76/-7.54	-6.89/-5.19	-4.03/-3.03	-2.45/-2.18	-2.26/-3.96	-6.41/-11.26	-18.83/-18.35	-19.27/-13.61	-11.48/-10.59	-10.21/-9.29	-9.42/-8.52	-7.73/-7.6
Θ(20°)	-3.66/-5.39	-6.01/-4.55	-3.7/-4.32	-4.58/-7.05	-10.17/-18.21	-15.47/-9.92	-7.05/-6.26	-5.27/-5.22	-3.33/-2.74	-2/-2.51	-4.13/-6.04	-8.84/-11.32	-13.07/-8.74	-5.58/-4.25	-4.47/-4.62	-5.26/-6.68	-8/-6.55	-4.51/-3.28
Θ(30°)	-0.94/-2.52	-3.09/-1.87	-2.27/-2.7	-2.73/-4.57	-6.99/-11.29	-17.76/-16.45	-9.63/-6.16	-3.73/-2.75	-2/-2.11	-3.36/-5.26	-5.9/-6.89	-6.68/-7.96	-10.12/-7.23	-3.27/-1.69	-0.94/-1.48	-1.76/-2.38	-3.07/-3.29	-2.85/-1.59
Θ(40°)	0.31/-0.94	-2.48/-2.83	-3.66/-3.48	-3.34/-5.56	-9.75/-14.48	-10.2/-10	-10.08/-8.29	-3.46/-2.45	-2.84/-4.27	-6.58/-7.44	-8.59/-6.56	-5.07/-3.25	-3.72/-5.13	-4.29/-2.92	-2.11/-1.26	-0.68/-0.14	0.51/0.45	-0.61/-0.61
Θ(50°)	-0.01/-0.62	-1.5/-1.76	-3.75/-3.43	-5.4/-7.35	-14.14/-16.82	-10.47/-7.34	-6.86/-6.31	-1.8/-1.73	-3.68/-5.88	-8.15/-10.73	-11.92/-6.98	-4.12/-2.65	-4.26/-5.86	-5.97/-3.28	-1.62/-1.89	-2.47/-2.57	-0.180/-67	-0.4/-1.22
Θ(60°)	-3.47/-2.81	-1.74/-0.43	-2.34/-4.92	-7.74/-7.05	-8.41/-8.69	-7.45/-6.35	-5.14/-5.53	-2.46/-1.35	-5.34/-6.14	-6.97/-8.29	-6.1/-2.16	-2.56/-2.96	-0.71/-1.77	-2.64/-2.92	-1.01/0.16	-10.10/-16	0.23/-1.85	
Θ(70°)	-5.77/-7.76	-2.59/-1.51	-0.89/-3.35	-6.66/-6.52	-5.95/-6.25	-6.37/-4.58	-2.99/-4.88	-3.42/-2.11	-3.81/-3.83	-4.07/-3.86	-2.75/-5.28	-9.1/-5.24	-2.74/-2.67	-4.39/-2.4	0.46/-0.03	-1.28/-1.38	0.87/0.82	0.63/-2.43
Θ(80°)	-3.16/-5.52	-6.34/-4.24	-0.47/-2	-4.35/-5.44	-6.69/-7.04	-6.92/-4.03	-2.65/-3.07	-3.91/-3.22	-2.76/-2.2	-1.85/-2.14	-1.2/-3.52	-9.43/-5.29	-2.43/-2.4	-2.84/-1.06	0.68/-0.3	0.15/-1.96	3.22/-1.44	0.5/-1.04
Θ(90°)	-6.39/-5.24	-11.49/-6.16	-0.14/-0.92	-5.31/-10.83	-5.94/-8.91	-13.03/-3.82	-2.44/-2.56	-3.6/-5.02	-5.02/-3	0.28/-0.7	-2.42/-2.98	-6.8/-6.33	-4.02/-3.22	-5.61/-4.61	-1.9/-2.44	0.22/0.43	1.69/-1.48	-2.22/-2.97
Θ(100°)	-4.64/-3.89	-16.89/-11.81	-3.59/-3.53	-6.12/-12.9	-6.68/-9.69	-15.96/-6.8	-4.64/-3.33	-1.79/-3.96	-5.66/-6.51	-0.54/-0.68	-0.13/-0.25	-4.24/-5.44	-3.71/-5.51	-7.96/-7.49	-6.17/-8.08	-3.81/-3.19	-1.76/-4.43	-3.01/-2.17
Θ(110°)	-7.24/-6.08	-17.45/-19.14	-13.23/-9.79	-8.91/-17.93	-9.53/-10.44	-16.4/-7.77	-6.16/-5.43	-2.74/-3.04	-3.59/-6.46	-2.67/-2.81	-1.81/-1.82	-4.96/-4.93	-2.33/-6.13	-7.3/-3.02	-6.56/-10.55	-12.82/-6.71	-4.31/-5.81	-3.45/-5.4
Θ(120°)	-6.18/-7.16	-7.6/-7.18	-9.8/-10.98	-7.67/-10.93	-17.42/-17.83	-13.44/-8.79	-6.8/-5.81	-2.37/-3.99	-4.65/-3.88	-0.96/-0.29	-7.02/-7.47	-8.74/-4.59	-6.33/-14.45	-14.11/-11.98	-18.78/-6.57	-8.7/-8.06	-9.93/-11.44	
Θ(130°)	-9.62/-8.81	-9.02/-5.19	-5.54/-6.8	-6.44/-7.23	-11.35/-15.37	-11.8/-6.68	-6.46/-7.3	-3.84/-2.02	-0.28/-2.37	-1.82/-4.72	-1.1/-2.19	-9.85/-4.71	-3.05/-6.29	-10.14/-8.49	-11.8/-18.52	-6.45/-14.37	-11.63/-15.61	-18.91/-12.62
Θ(140°)	-6.37/-6.3	-8.02/-10.7	-12.17/-16.05	-14.23/-16.12	-16.41/-13.28	-10.02/-8.14	-9.57/-12.08	-11/-6.86	-4.43/-6.15	-6.64/-6.89	-3.38/-2.25	-4.83/-7.31	-6.43/-9.61	-15.76/-8.28	-15.6/-16.24	-11.5/-11.78	-16.1/-16.78	-9.85/-6.37
Θ(150°)	-14.87/-19.21	-15.79/-19.14	-18.7/-15.6	-13.79/-14.42	-14.91/-14.58	-16.48/-17.65	-6.07/-3.41	-4.1/-5.69	-4.48/-3.94	-10.89/-11.03	-11.52/-11.98	-6.69/-4.88	-11.99/-12.58	-14.61/-12.63	-11.99/-12.58	-10.54/-12.63	-15.79/-11.17	
Θ(160°)	-18.19/-18.32	-18.17/-16.38	-15.12/-11.58	-10.43/-9	-9.5/-9.42	-11.03/-12.5	-11.95/-9.5	-5.21/-2.07	-1.02/-1.95	-2.63/-2.76	-3.36/-4.94	-5.19/-5.49	-6.42/-9.13	-12.8/-10.83	-9.52/-9.3	-9.99/-9.82	-13.61/-18.42	-17.6/-18.55
Θ(170°)	-18.41/-18.76	-15.89/-17.21	-14.18/-15.87	-16.38/-18.55	-18.86/-17.7	-18.54/-18.49	-13.72/-9.98	-8.18/-6.55	-5.9/-6.6	-7.69/-9.49	-11.38/-12.41	-15.43/-18.3	-15.78/-16.08	-15.45/-12.93	-11.9/-14.1	-17.27/-18.32	-17.63/-18.84	-18.74/-17.94
Θ(180°)	-15.67/-16.08	-18.38/-18.38	-19.17/-18.14	-18.47/-18.18	-19.01/-17.67	-18.79/-18.74	-17.84/-18.04	-17.83/-17.98	-18.99/-19.34	-18.17/-19.17	-19.24/-18.37	-15.23/-12.92	-12.39/-11.64	-12.86/-13.47	-12.02/-10.56	-9.16/-9.6	-10.54/-12.11	-13.54/-14.7
Freq(Hz)	5.6G/Pol	Phi/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-3.73/-3.14	-2.67/-2.72	-3.49/-3.65	-4.71/-5.69	-3.57/-3.88	-6.17/-7.17	-3.57/-4.44	-3.66/-3.5	-5.05/-6.1	-6.23/-6.58	-5.05/-6.1	-4.64/-4.31	-4.59/-4.23					
Θ(10°)	-1.94/-1.98	-2.49/-3.11	-4.2/-4.83	-5.57/-5.73	-5.38/-6.21	-7.48/-8.03	-9.33/-9.39	-9.34/-8.79	-9.63/-8.24	-7.85/-6.99	-6.06/-4.68	-3.61/-3.27	-3.1/-3.45	-4.15/-5.3	-7.41/-8.62	-9.83/-8.73	-7.29/-5.28	-4.37/-2.7
Θ(20°)	-2.11/-1.85	-2.45/-3.46	-5.39/-5.61	-5.3/-5.08	-6.02/-6.51	-10.32/-12.86	-17.86/-17.42	-13.78/-9.94	-9.08/-10.24	-11.29/-10.25	-8.67/-6.66	-5.16/-3.78	-3.5/-3.54	-4.44/-6.27	-9.09/-12.79	-18.87/-18.35	-12.27/-8.12	-5.33/-3.47
Θ(30°)	-5.05/-3.17	-3.56/-4.58	-6.23/-6.09	-4.38/-4.1	-5.2/-8.24	-12.34/-10.89	-6.89/-5.73	-8.25/-8.24	-9.35/-8.38	-8.2/-9.32	-17.36/-19.47	-3.08/-2.52	-18.19/-9.47	-10.71/-10.64	-10.47/-7.5			
Θ(40°)	-6.48/-4.87	-4.58/-5.68	-6.29/-4.87	-3.32/-3.2	-4.64/-9.03	-9.49/-7.16	-5/-3.99	-4.55/-6.53	-7.84/-9.96	-8.51/-9.6	-9.08/-9.38	-10.85/-6.98	-3.86/-4.15	-7/-15.03	-18.15/-14.26	-8.17/-4.31	-4.24/-8.53	-14.99/-9.54
Θ(50°)	-6.39/-6.52	-7.77/-0.33	-5.37/-3.39	-2.65/-3.86	-4.85/-6.04	-7.21/-5.44	-4.23/-4.78	-6.96/-14.07	-17.58/-17.78	-11.58/-12.29	-6.8/-2.66	-9.14/-11.75	-5.04/-4.26	-9.49/-17.5	-13.88/-11.15	-11.1/-6.48	-6.81/-12.88	-14.72/-8.98
Θ(60°)	-7.78/-7.34	-6.94/-4.65	-4.15/-2.5	-2.58/-5.08	-10.99/-9.96	-7.72/-5.61	-3.56/-6.16	-5.43/-7.48	-3.08/-4.18	-7.72/-5.61	-3.08/-4.18	-9.07/-4.29	-6.06/-10.77	-8.71/-11.62	-10.51/-8.91	-10.77/-10.64	-10.47/-7.5	
Θ(70°)	-6.94/-6.9	-6.49/-4.18	-3.26/-2.32	-2.9/-5.18	-4.06/-6.44	-8.24/-4.76	-4.95/-12.57	-19.03/-18.39	-8.3/-15.53	-11.76/-13.82	-11.55/-11.54	-4.67/-6.26	-8.16/-2.27	-5.35/-13.2	-10.61/-8.58	-13.02/-18.67	-15.06/-13.59	-12.17/-7.91
Θ(80°)	-6.81/-6.99	-6.37/-4.37	-2.88/-1.4	-2.47/-4.01	-2.89/-6.12	-6.73/-4.05	-5.84/-5.47	-13.63/-18.33	-6.03/-13.66	-8.88/-10.85	-7.72/-13.89	-3.9/-2.92	-9.4/-7.1	-5.53/-12.41	-11.92/-9.48	-12.1/-16.89	-10.12/-10.92	-11.65/-10.68
Θ(90°)	-8.79/-7.87	-5.98/-3.15	-1.77/-0.66	-2.44/-3.3	-2.11/-6.78	-6.78/-3.77	-7.16/-7.4	-6.67/-11.53	-6.67/-11.53	-6.64/-10.35	-5.14/-2.52	-10.77/-7.03	-8.58/-10.56	-9.27/-9.59	-11.98/-9.07	-7.77/-10.4	-10.58/-12.46	
Θ(100°)	-8.73/-7.87	-4.71/-2.78	-1.55/-0.82	-2.5/-2.57	-7.12/-6.88	-5.7/-6.32	-10.2/-7.05	-4.68/-14.1	-7.96/-8.41	-6.25/-7.09	-10.14/-5.48	-5.21/-8.1	-9.4/-12.3	-8.66/-5.96	-6.32/-6.6	-4.44/-7.74	-12.59/-14.06	
Θ(110°)	-18.12/-8.97	-5.74/-2.96	-2.33/-1.98	-1.69/-1.44	-1.92/-5.35	-4.37/-7.64	-13.38/-8.16	-7.59/-17.3	-6.97/-16.64	-4.72/-8.51	-9.63/-8.03	-6.88/-5.71	-19.13/-8.89	-11.58/-11.31	-8.77/-6.17	-5.39/-6.59	-7.75/-7.88	-19.83/-18.15
Θ(120°)	-12.92/-9.93	-5.78/-2.79	-4.11/-3.41	-3.58/-2.12	-4.04/-6.06	-5.09/-9.72	-16/-6.7	-8.71/-16.6	-6.89/-15.85	-5.99/-7.48	-18.3/-11.13	-8.39/-2.61	-11.55/-7.98	-10.41/-12.46	-5.63/-5.95	-10.56/-9.18	-10.18/-10.76	-16.1/-16.75
Θ(130°)	-16.44/-12.3	-8.08/-6.42	-5.41/-4.56	-2.66/-3.03	-10.24/-11.72	-4.72/-4.18	-3.38/-6.55	-12.48/-18.45	-8.73/-11.6	-18.59/-10.78	-17.15/-18.1	-12/-13.85	-5.04/-3.41	-7.17/-16.21	-12.23/-14.99	-9.37/-18.96		
Θ(140°)	-14.35/-12.8	-11/-8.57	-8.18/-9.82	-9.68/-7.39	-8.08/-8.04	-5.59/-7.53	-10.39/-10	-12/-16.21	-13.77/-17.85	-13.47/-10.17	-16.53/-15.48	-17.99/-18.26	-11.93/-8.18	-18.39/-15.33	-18.92/-9.05	-18.96/-15.19	-19.16/-12.35	-13.35/-13.36
Θ(150°)	-17.91/-16.01	-9.89/-8.8	-8.61/-9.9	-8.09/-7.13	-6.81/-7.8	-9/-10.17	-14.2/-14.16	-13/-15.04	-17.39/-18.29	-11.21/-11.61	-16.67/-18.42	-18.18/-19.19	-17.99/-14.72	-15.85/-15.69	-18.97/-18.22	-17.52/-18.1	-17/-18.11	-18.77/-18.08
Θ(160°)	-17.29/-16.92	-12/-11.81	-12.05/-11.66	-13.12/-15.81	-9.84/-11.43	-15.77/-18.77	-17.2/-14.6	-16.8/-17.53	-16.83/-16	-15.51/-18.41	-13.39/-11.24	-12.88/-16.08	-13.61/-14.61	-18.59/-15.06	-15.13/-16.37	-16.97/-17.91		
Θ(170°)	-16.16/-18.34	-19.08/-14.64	-12.42/-10.71	-11.15/-12.09	-13.1/-14.01	-15.75/-17.59	-18.26/-17.59	-15.35/-14.46	-14.84/-14.6	-12.7/-14.54	-17.18/-17.59	-17.3/-16.66	-14.96/-15.87	-15.96/-15.82	-15.14/-10.98	-9.33/-8.18	-7.43/-9.15	-11.13/-13.07
Θ(180°)	-17.76/-18.46	-18.57/-18.21	-17.64/-19.05	-17.75/-19.07	-19.27/-18.04	-18.75/-18.08	-18.61/-14.02	-12.36/-11.3	-11.46/-12	-11.58/-11.55	-13.24/-15.43	-15.81/-17.65	-18.39/-19.13	-17.89/-14.33	-13.77/-14.5	-16.35/-16.83	-15.26/-15.71	-16.49/-18.46
Freq(Hz)	5.6G/Pol	Theta/Ant. 4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)											



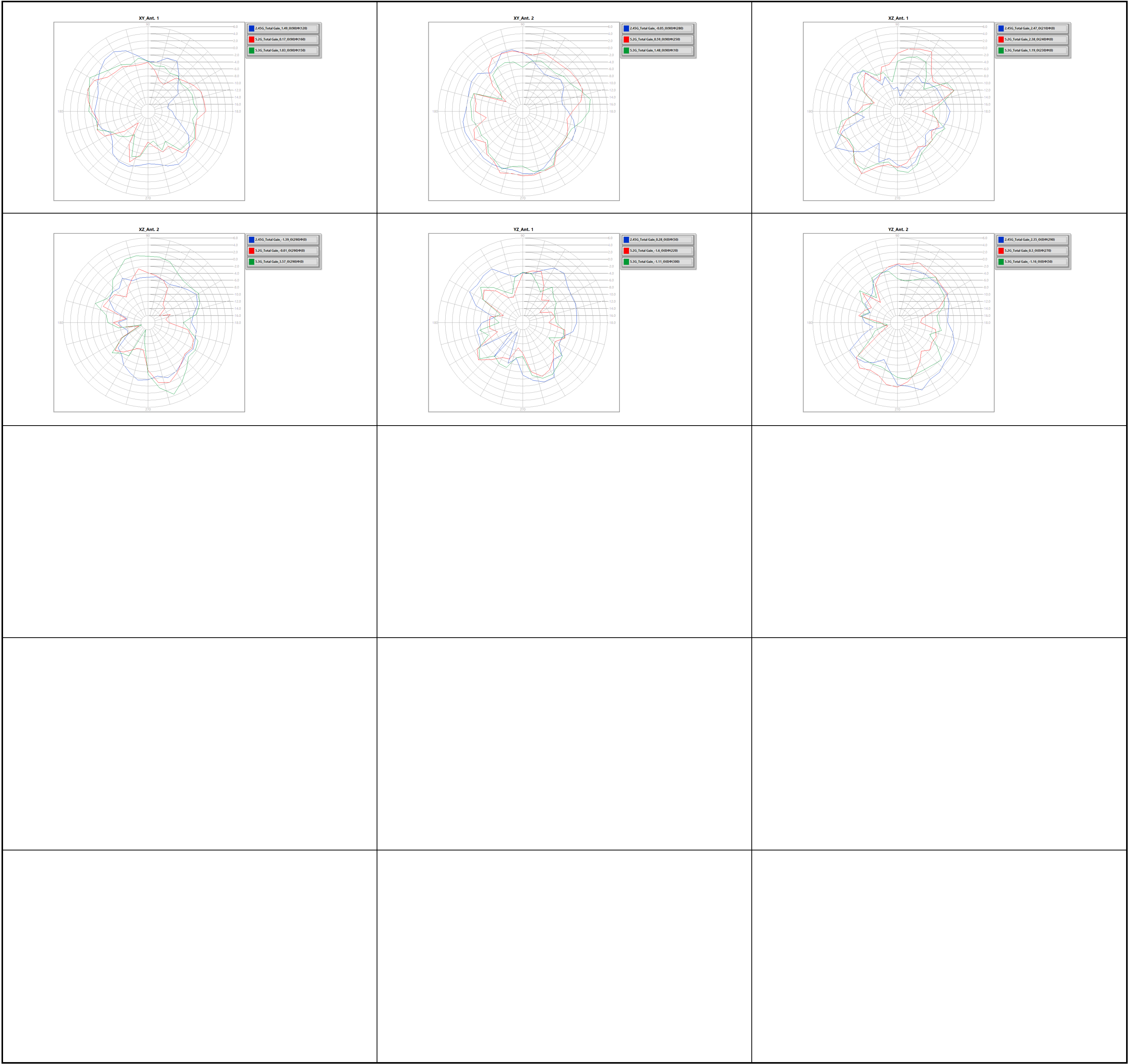
Total Gain Data

Freq(Hz)	2.45GPol.	TotalAnt. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	
Gain	Φ(0°)Ψ(Φ(10°)	Φ(20°)Ψ(Φ(30°)	Φ(40°)Ψ(Φ(50°)	Φ(60°)Ψ(Φ(70°)	Φ(80°)Ψ(Φ(90°)	Φ(100°)Ψ(Φ(110°)	Φ(120°)Ψ(Φ(130°)	Φ(140°)Ψ(Φ(150°)	Φ(160°)Ψ(Φ(170°)	Φ(180°)Ψ(Φ(190°)	Φ(200°)Ψ(Φ(210°)	Φ(220°)Ψ(Φ(230°)	Φ(240°)Ψ(Φ(250°)	Φ(260°)Ψ(Φ(270°)	Φ(280°)Ψ(Φ(290°)	Φ(300°)Ψ(Φ(310°)	Φ(320°)Ψ(Φ(330°)	Φ(340°)Ψ(Φ(350°)
Θ(0°)	-3.07/-2.80	-2.57/-2.35	-2.41/-2.64	-2.87/-2.88	-2.83/-2.70	-2.66/-2.61	-2.73/-2.88	-3.08/-3.41	-3.89/-4.27	-3.97/-3.68	-3.30/-3.08	-3.01/-3.02	-3.13/-3.31	-3.41/-3.07	-2.87/-2.47	-2.35/-2.49	-2.77/-3.17	-3.41/-3.27
Θ(10°)	-4.20/-3.87	-3.61/-3.42	-3.42/-3.44	-3.54/-3.29	-2.82/-2.47	-2.34/-2.13	-2.02/-2.09	-2.38/-2.81	-3.36/-3.50	-3.63/-3.34	-3.08/-2.87	-2.95/-2.90	-3.13/-3.38	-3.48/-3.49	-3.47/-3.40	-3.38/-3.79	-4.13/-4.48	-4.43/-4.28
Θ(20°)	-4.93/-4.34	-3.99/-3.78	-3.64/-3.34	-3.79/-3.16	-2.51/-2.13	-1.98/-1.67	-1.75/-2.04	-2.51/-3.12	-3.99/-4.33	-4.48/-4.34	-4.12/-4.23	-4.12/-4.29	-4.88/-5.40	-5.95/-6.05	-5.92/-5.69	-5.55/-5.87	-6.04/-5.92	-5.79/-5.40
Θ(30°)	-5.11/-4.65	-4.52/-4.31	-4.42/-4.52	-3.98/-3.20	-2.61/-2.20	-1.90/-1.74	-2.03/-2.57	-3.42/-4.90	-6.06/-6.95	-7.24/-6.78	-6.28/-6.28	-6.53/-7.13	-7.53/-7.93	-7.82/-6.12	-5.15/-4.34	-4.32/-4.75	-5.06/-5.44	-5.54/-5.34
Θ(40°)	-6.02/-6.11	-5.78/-5.01	-4.43/-3.99	-3.31/-2.39	-1.93/-1.48	-1.29/-1.25	-1.37/-1.71	-2.45/-3.87	-5.43/-6.74	-7.62/-7.46	-7.03/-6.96	-7.23/-7.10	-6.43/-5.57	-4.50/-3.55	-3.13/-3.13	-3.45/-4.05	-4.52/-4.66	-5.00/-5.47
Θ(50°)	-7.28/-7.78	-7.29/-5.46	-4.36/-3.40	-1.99/-0.81	-0.09/-0.28	0.34/-0.27	-0.11/-0.60	-1.50/-2.73	-4.20/-5.43	-5.53/-4.93	-4.79/-5.24	-6.00/-6.15	-6.03/-5.56	-4.77/-4.43	-4.28/-3.86	-3.71/-3.79	-4.42/-5.14	-5.81/-6.72
Θ(60°)	-6.36/-6.13	-6.23/-7.04	-7.63/-8.23	-5.94/-3.33	-1.62/-0.12	0.98/-1.48	1.31/-0.48	-0.74/-2.04	-3.72/-5.07	-5.15/-4.87	-4.98/-6.85	-7.30/-4.80	-2.48/-0.90	-0.27/-0.70	-1.43/-2.70	-4.16/-4.57	-6.48/-6.90	
Θ(70°)	-10.10/-8.99	-6.67/-4.68	-3.61/-3.29	-2.88/-2.92	-3.45/-2.28	-0.67/-0.57	0.92/-0.49	-0.35/-1.03	-2.25/-3.00	-2.94/-3.05	-4.05/-4.67	-3.32/-1.32	-0.17/-0.05	0.52/-0.13	-0.84/-1.95	-2.79/-3.95	-5.40/-7.09	-7.71/-9.05
Θ(80°)	-13.59/-15.22	-10.56/-7.87	-6.17/-2.40	-2.17/-2.66	-4.27/-3.89	-1.42/-0.78	1.33/-0.53	-0.61/-1.36	-2.03/-1.92	-1.57/-1.80	-2.83/-3.79	-3.84/-2.17	-0.93/-0.74	-0.95/-1.39	-1.14/-0.81	-1.04/-2.50	-4.77/-7.61	-10.42/-11.76
Θ(90°)	-11.09/-12.31	-11.72/-8.12	-6.97/-4.34	-1.57/-1.98	-3.80/-3.88	-2.07/-0.28	1.49/-1.11	-0.20/-1.55	-2.94/-3.24	-2.85/-3.06	-3.89/-5.75	-4.85/-2.41	-1.55/-1.51	-2.36/-3.15	-2.73/-1.57	-0.71/-1.26	-2.71/-4.79	-8.36/-10.38
Θ(100°)	-11.67/-11.46	-11.70/-8.73	-7.93/-5.89	-2.34/-2.13	-0.80/-4.78	-1.17/-2.75	-1.79/-2.57	-4.54/-5.64	-5.29/-4.17	-4.49/-6.08	-8.37/-9.11	-1.65/-2.52	-1.47/-2.15	-3.99/-7.70	-6.95/-3.59	-6.13/-8.27	-7.58/-8.57	
Θ(110°)	-7.55/-11.04	-8.70/-5.55	-4.56/-4.05	-2.04/-1.52	-2.73/-3.21	-2.28/-1.29	-1.28/-2.43	-3.31/-3.32	-3.07/-2.45	-2.63/-3.31	-3.97/-5.72	-6.23/-3.48	-3.48/-4.53	-6.29/-5.75	-1.93/-0.27	0.52/-0.10	-2.35/-5.39	-5.17/-5.34
Θ(120°)	-9.39/-11.09	-10.12/-7.03	-4.16/-2.04	-0.30/-0.41	0.13/-0.40	-0.37/-0.29	-0.68/-0.93	-0.87/-2.02	-4.45/-6.05	-7.61/-7.58	-7.24/-6.38	-3.15/-1.37	-2.32/-4.20	-7.90/-14.98	-7.17/-4.30	-3.64/-3.36	-4.16/-6.34	-7.19/-7.43
Θ(130°)	-3.04/-6.44	-9.45/-12.12	-8.80/-5.38	-2.86/-1.27	-0.62/-0.67	-0.80/-0.97	-0.13/-1.11	-1.93/-4.00	-5.29/-4.17	-3.11/-2.78	-3.74/-4.92	-5.31/-5.71	-7.19/-8.41	-8.21/-6.35	-2.52/-1.31	-1.07/-1.01	-1.15/-1.70	-1.97/-1.91
Θ(140°)	-1.61/-2.02	-2.48/-3.34	-4.67/-4.22	-3.07/-2.11	-1.46/-1.20	-1.42/-1.69	-1.98/-2.70	-3.39/-2.95	-1.49/-0.62	-0.43/-0.74	-0.86/-1.20	-2.63/-5.76	-8.72/-9.80	-11.55/-14.01	-12.12/-11.51	-10.70/-8.01	-5.33/-3.44	-2.42/-1.85
Θ(150°)	-2.35/-2.28	-2.40/-3.02	-4.27/-4.69	-4.09/-2.78	-1.68/-0.61	-0.06/-0.20	0.32/-1.72	1.79/-2.18	2.74/-3.04	2.47/-5.12	1.64/-0.87	-0.29/-1.69	-3.60/-4.76	-4.93/-4.15	-3.35/-3.54	-4.38/-5.69	-5.59/-4.31	-3.20/-2.60
Θ(160°)	-4.14/-4.15	-4.59/-5.46	-7.00/-8.69	-8.16/-7.10	-5.36/-3.88	-2.77/-2.06	-1.67/-1.45	-1.19/-0.96	-2.77/-1.01	-1.48/-2.23	-3.31/-4.94	-5.77/-9.83	-10.58/-8.52	-6.44/-4.95	-5.00/-5.48	-5.93/-5.21	-4.54/-4.26	
Θ(170°)	-3.59/-3.72	-4.10/-4.88	-6.04/-7.56	-8.98/-9.49	-10.33/-9.68	-8.54/-7.51	-6.90/-6.61	-6.48/-6.45	-6.95/-7.54	-8.52/-9.50	-10.25/-10.32	-9.58/-8.75	-7.52/-6.29	-5.20/-4.81	-4.27/-3.93	-3.80/-3.87	-3.67/-3.61	-3.40/-3.41
Θ(180°)	-5.08/-5.26	-5.38/-5.55	-5.53/-6.05	-6.40/-6.72	-6.73/-6.52	-6.28/-6.51	-6.44/-6.11	-6.32/-6.24	-6.16/-5.90	-5.55/-5.30	-4.83/-4.55	-4.01/-3.70	-3.61/-3.57	-3.44/-3.78	-4.23/-4.67	-5.02/-5.21	-5.27/-4.89	-4.84/-5.07
Freq(Hz)	5.2GPol.	TotalAnt. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)Ψ(Φ(10°)	Φ(20°)Ψ(Φ(30°)	Φ(40°)Ψ(Φ(50°)	Φ(60°)Ψ(Φ(70°)	Φ(80°)Ψ(Φ(90°)	Φ(100°)Ψ(Φ(110°)	Φ(120°)Ψ(Φ(130°)	Φ(140°)Ψ(Φ(150°)	Φ(160°)Ψ(Φ(170°)	Φ(180°)Ψ(Φ(190°)	Φ(200°)Ψ(Φ(210°)	Φ(220°)Ψ(Φ(230°)	Φ(240°)Ψ(Φ(250°)	Φ(260°)Ψ(Φ(270°)	Φ(280°)Ψ(Φ(290°)	Φ(300°)Ψ(Φ(310°)	Φ(320°)Ψ(Φ(330°)	Φ(340°)Ψ(Φ(350°)
Θ(0°)	-11.01/-10.12	-11.15/-10.55	-9.45/-9.54	-9.25/-10.23	-9.80/-10.23	-10.92/-11.40	-11.65/-11.84	-10.89/-10.60	-9.98/-9.54	-9.80/-10.19	-11.19/-11.18	-10.70/-9.86	-8.85/-9.24	-9.42/-10.26	-10.86/-10.34	-10.55/-9.95	-9.57/-11.00	-11.38/-12.17
Θ(10°)	-6.65/-7.44	-8.44/-10.62	-12.81/-12.09	-6.34/-11.45	-9.46/-8.79	-6.73/-9.26	-6.83/-8.25	-7.51/-6.76	-6.32/-6.48	-6.32/-6.89	-5.15/-4.69	-4.01/-4.58	-6.25/-6.48	-5.03/-5.64	-4.03/-4.46	-5.93/-5.48	-4.54/-4.70	-5.03/-6.37
Θ(20°)	-0.92/-1.31	-2.67/-4.49	-6.12/-6.56	-7.20/-7.73	-8.41/-9.38	-10.57/-10.66	-13.25/-14.01	-13.37/-10.85	-7.72/-7.07	-5.43/-3.03	-3.54/-3.03	-3.20/-3.84	-5.15/-6.63	-6.47/-5.27	-3.55/-2.38	-1.45/-0.68	0.31/-0.49	0.16/-0.38
Θ(30°)	-3.36/-3.63	-3.50/-4.50	-6.18/-8.20	-12.60/-15.23	-15.84/-12.40	-10.26/-11.14	-12.59/-12.57	-12.19/-12.07	-10.71/-9.09	-6.81/-5.43	-3.95/-2.72	-3.21/-4.37	-6.04/-6.65	-6.96/-7.36	-5.67/-3.80	-2.61/-2.29	-1.65/-0.99	-1.48/-2.26
Θ(40°)	-4.82/-4.91	-4.01/-3.44	-2.82/-4.60	-9.63/-15.28	-11.51/-8.19	-6.51/-6.21	-8.05/-10.59	-8.60/-7.48	-5.21/-6.21	-5.04/-5.55	-3.83/-2.37	-1.91/-1.13	-5.04/-8.53	-10.07/-6.68	-5.06/-2.73	-0.63/-0.47	-0.89/-1.51	
Θ(50°)	-3.08/-10.73	-9.76/-5.19	-3.22/-5.25	-10.25/-15.06	-9.42/-9.62	-8.37/-6.56	-7.42/-11.57	-11.91/-7.94	-6.85/-6.57	-5.18/-3.99	-3.13/-1.79	-1.53/-2.29	-4.71/-6.01	-6.85/-4.48	-2.82/-3.04	-2.90/-1.85	-1.44/-0.35	-0.08/-0.79
Θ(60°)	1.48/-0.21	-2.37/-4.02	-5.58/-6.16	-10.43/-5.59	-3.93/-5.97	-9.12/-7.07	-7.03/-8.92	-9.07/-5.17	-3.55/-4.48	-6.38/-6.16	-3.44/-1.77	-1.59/-3.07	-5.01/-4.55	-3.36/-2.66	-0.76/-0.90	-2.27/-3.14	-0.74/-0.28	1.57/-1.98
Θ(70°)	0.71/-0.85	-4.39/-8.14	-6.42/-5.10	-7.31/-5.18	-1.06/-2.81	-4.81/-2.56	-5.60/-4.21	-5.24/-3.04	-1.45/-2.77	-5.00/-9.26	-3.64/-4.21	-3.74/-3.42	-5.99/-3.83	-1.76/-1.76	-0.61/-0.98	-2.35/-4.44	-5.15/-4.26	-0.93/-0.42
Θ(80°)	-0.06/-0.54	-2.01/-3.91	-5.29/-5.45	-8.57/-7.46	-3.35/-3.16	-3.66/-4.39	-4.12/-6.82	-6.54/-1.73	-0.05/-1.16	-3.11/-5.97	-4.44/-3.98	-5.12/-8.84	8.24/-2.25	-1.49/-3.78	-3.09/-1.95	-4.54/-4.37	-3.76/-4.45	-1.72/-1.69
Θ(90°)	-1.61/-1.89	-1.93/-3.13	-4.58/-5.66	-9.29/-8.66	-6.40/-4.12	-4.55/-4.36	-3.44/-3.55	-2.98/-0.51	0.17/-0.83	-2.20/-3.65	-2.66/-3.83	-9.25/-13.69	-7.32/-2.72	-5.44/-9.27	-7.83/-5.72	-6.58/-2.69	-2.48/-2.40	-3.63/-4.04
Θ(100°)	-4.52/-3.31	-6.04/-4.25	-6.05/-4.87	-1.10/-0.06	-7.48/-8.08	-2.69/-0.81	0.48/-2.06	-0.03/-1.01	-2.69/-0.81	0.48/-2.06	-0.03/-1.01	-2.69/-0.81	0.48/-2.06	-0.03/-1.01	-2.69/-0.81	0.48/-2.06	-0.03/-1.01	-2.69/-0.81
Θ(110°)	-4.66/-4.70	-4.69/-4.65	-5.07/-8.55	-6.37/-3.44	-6.92/-10.35	-3.63/-1.24	-0.50/-0.83	-0.14/-0.43	-0.75/-1.99	-1.24/-0.63	1.11/-0.58	-5.21/-4.20	-1.42/-6.42	-9.23/-6.98	-5.31/-10.11	-4.64/-2.46	-3.08/-5.01	-8.12/-9.01
Θ(120°)	-8.13/-6.86	-8.31/-7.86	-4.57/-5.29	-5.38/-2.93	-4.62/-9.81	-3.95/-1.12	-1.05/-0.37	-1.45/-1.03	-0.60/-0.78	2.38/-3.74	3.01/-1.49	-0.02/-1.72	-2.13/-4.23	-3.75/-6.59	-2.80/-1.47	-12.03/-2.40	-6.75/-11.17	-10.57/-5.88
Θ(130°)	-3.80/-4.57	-8.16/-8.28	-2.48/-2.21	-4.92/-4.65	-4.58/-6.26	-6.06/-3.46	-0.21/-2.36	-1.26/-1.01	-0.74/-0.72	0.75/-1.42	-0.21/-2.36	-5.00/-4.09	-2.37/-4.44	-1.70/-4.28	-0.80/-3.05	-5.41/-4.25	-6.16/-5.93	-5.59/-5.18
Θ(140°)	-5.47/-8.12	-10.07/-8.26	-4.42/-2.35	-2.25/-3.92	-4.47/-3.69	-2.20/-1.65	-2.16/-1.58	-1.91/-2.26	-1.44/-0.70	-1.47/-0.72	-3.33/-3.21	-3.31/-4.51	-3.36/-9.38	-3.30/-1.60	-0.88/-2.24	-6.46/-7.00	-6.32/-3.57	-3.67/-5.64
Θ(150°)	-7.23/-7.03	-3.53/-3.69	-2.89/-2.73	-3.83/-5.22	-6.20/-5.06	-3.95/-3.36	-3.79/-5.94	-9.88/-9.17	-6.30/-3.58	-1.52/-2.72	0.13/-0.49	-1.47/-3.88	-10.57/-13.67	-7.19/-3.08	-1.51/-2.47	-4.50/-4.24	-3.04/-2.73	-3.93/-6.95
Θ(160°)	-11.06/-11.02	-10.59/-5.59	-7.30/-7.62	-8.55/-11.28	-12.24/-12.17	-12.12/-10.63	-9.94/-10.62	-12.09/-8.48	-5.13/-2.56	-0.62/-0.38	0.40/-0.43	-12.54/-12.93	-8.82/-9.80	-13.00/-10.43	-12.54/-12.93	-9.57/-9.58	-11.99/-13.12	
Θ(170°)	-8.04/-8.34	-9.08/-9.28	-9.32/-10.99	-10.65/-10.05	-9.79/-8.60	-9.07/-9.62	-9.39/-9.35	-8.47/-7.09	-5.70/-4.28	-3.23/-2.46	-2.40/-3.67	-6.54/-10.92	-16.15/-11.89	-9.00/-8.52	-9.22/-9.42	-9.98/-10.40	-11.30/-11.45	-10.35/-8.35
Θ(180°)	-6.97/-8.58	-9.29/-9.16	-8.93/-8.81	-8.86/-8.70	-8.71/-8.58	-8.94/-9.45	-10.03/-9.65	-8.58/-7.48	-6.94/-7.06	-7.36/-7.86	-7.76/-7.21	-6.43/-5.77	-6.20/-6.83	-7.74/-8.95	-8.58/-7.40	-6.60/-6.11	-6.24/-6.48	-6.42/-6.29
Freq(Hz)	5.3GPol.	TotalAnt. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)Ψ(Φ(10°)	Φ(20°)Ψ(Φ(30°)	Φ(40°)Ψ(Φ(50°)	Φ(60°)Ψ(Φ(70°)	Φ(80°)Ψ(Φ(90°)	Φ(100°)Ψ(Φ(110°)	Φ(120°)Ψ(Φ(130°)	Φ(140°)Ψ(Φ(150°)	Φ(160°)Ψ(Φ(170°)	Φ(180°)Ψ(Φ(190°)	Φ(200°)Ψ(Φ(210°)	Φ(220°)Ψ(Φ(230°)	Φ(240°)Ψ(Φ(250°)	Φ(260°)Ψ(Φ(270°)	Φ(280°)Ψ(Φ(290°)	Φ(300°)Ψ(Φ(310°)	Φ(320°)Ψ(Φ(330°)	Φ(340°)Ψ(Φ(350°)
Θ(0°)	-8.00/-9.33	-9.22/-9.99	-9.30/-9.13	-9.57/-8.88	-8.09/-8.48	-9.05/-9.86	-9.13/-9.26	-9.56/-10.64	-10.65/-10.58	-10.62/-9.72	-8.47/-8.68	-9.08/-8.14	-8.23/-7.78	-8.36/-8.89	-9.65/-9.71	-9.32/-9.30	-8.96/-8.43	-7.89/-9.61
Θ(10°)	-5.30/-6.90	-7.87/-8.87	-8.21/-8.18	-8.44/-8.35	-8.39/-8.63	-6.96/-6.99	-6.01/-6.17	-6.53/-6.01	-6.84/-8.09	-6.96/-6.35	-6.00/-5.40	-5.50/-5.57	-4.73/-4.58	-4.58/-4.44	-4.68/-4.92			
Θ(20°)																		



Θ(60°)	-1.50/-0.47	0.20/0.57	0.29/-0.84	-1.87/-0.95	-1.12/-3.57	-6.44/-3.64	-1.25/-2.08	-3.81/-5.72	-3.36/-0.25	1.34/-0.67	-4.95/-9.25	-9.90/-13.31	-9.52/-6.00	-3.74/-2.62	-2.08/-2.23	-1.45/0.12	-0.67/-1.96	-3.56/-2.68
Θ(70°)	0.34/0.48	0.36/-0.57	-1.27/-2.27	-1.79/-1.17	-2.01/-5.20	-5.40/-3.31	-0.79/-1.13	-2.08/-1.34	0.38/2.45	3.57/2.51	1.54/-1.45	-3.07/-6.10	-6.79/-3.59	-2.79/-2.54	-1.34/-1.21	-1.76/-0.73	-0.83/-2.07	-2.22/-1.40
Θ(80°)	0.86/1.26	0.15/-2.16	-2.17/-3.57	-3.35/-2.53	-3.22/-6.03	-5.01/-2.88	-1.87/-2.49	-8.20/-11.08	-3.94/-0.87	0.75/-1.18	-5.30/-7.24	-6.19/-3.60	-2.47/-1.16	-1.91/-1.72	-0.60/-0.48	-1.34/-2.02	-3.02/-2.85	-3.32/-1.60
Θ(90°)	0.82/1.48	-0.64/-2.40	-2.69/-3.74	-3.49/-2.80	-3.51/-5.51	-3.84/-3.29	-3.73/-4.73	-9.87/-11.22	-3.24/-2.88	-3.45/-3.33	-4.71/-4.43	-5.02/-2.77	-2.07/-0.63	-2.14/-2.45	-0.62/-0.26	-0.56/-3.43	-3.56/-3.55	-3.33/-1.12
Θ(100°)	1.25/0.89	-1.09/-1.71	-3.59/-5.04	-4.35/-4.00	-4.68/-3.24	-1.76/-3.69	-5.66/-7.46	-12.07/-10.37	-3.20/-3.66	-12.34/-4.67	-5.00/-4.03	-4.55/-3.14	-5.42/-2.90	-1.73/-3.79	-4.32/-2.27	-2.70/-4.49	-3.00/-2.48	-3.60/-1.29
Θ(110°)	1.07/-0.03	-1.90/-1.41	-2.79/-3.93	-4.80/-2.97	-3.88/-3.07	-3.48/-6.21	-6.61/-8.97	-10.87/-9.37	-3.36/-3.93	-15.81/-5.08	-8.40/-6.59	-4.46/-2.97	-6.73/-5.01	-2.95/-4.64	-5.08/-3.72	-3.08/-7.86	-5.37/-3.05	-2.87/-0.02
Θ(120°)	-1.10/-2.32	-2.38/-1.95	-2.88/-6.35	-5.05/-3.78	-3.09/-3.43	-4.60/-6.37	-5.91/-9.07	-9.70/-11.22	-6.50/-4.97	-7.12/-4.98	-12.37/-11.53	-5.45/-3.39	-4.90/-3.91	-1.94/-4.37	-2.81/-4.03	-4.98/-7.45	-2.73/-1.16	-1.24/0.59
Θ(130°)	-2.43/-1.28	-1.68/-0.98	-3.98/-4.37	-3.14/-2.61	-4.99/-8.80	-7.75/-5.58	-5.73/-6.69	-9.89/-9.97	-14.94/-8.45	-6.65/-5.08	-9.77/-10.38	-3.13/-10.06	-5.60/-2.75	-3.99/-4.02	-4.88/-7.47	-7.96/-8.97	-4.23/-1.50	-1.14/0.36
Θ(140°)	-4.88/-4.52	-2.66/-4.25	-6.10/-6.33	-2.87/-1.33	-1.69/-4.06	-7.04/-5.20	-4.02/-6.24	-8.40/-7.28	-10.85/-9.59	-4.71/-5.05	-4.00/-4.62	-3.05/-5.11	-3.20/-2.76	-3.73/-3.40	-6.66/-4.59	-4.39/-2.73	-1.81/-3.43	-5.02/-3.68
Θ(150°)	-4.43/-4.65	-4.78/-5.35	-4.56/-3.41	-3.65/-4.26	-5.04/-6.47	-8.38/-8.44	-6.55/-5.13	-5.89/-7.18	-7.86/-10.77	-9.72/-7.98	-11.82/-10.20	-8.15/-8.26	-9.39/-7.44	-6.28/-9.40	-10.37/-5.74	-5.41/-5.36	-3.42/-3.34	-5.49/-4.72
Θ(160°)	-2.07/-2.72	-3.46/-4.00	-3.83/-2.90	-2.65/-4.00	-6.26/-9.52	-10.14/-10.46	-9.94/-9.41	-9.08/-8.22	-9.89/-13.39	-16.03/-15.02	-15.40/-13.29	-10.21/-8.00	-9.26/-10.77	-11.42/-11.31	-11.86/-8.05	-5.39/-4.15	-3.20/-2.52	-1.87/-2.11
Θ(170°)	-6.04/-7.73	-8.91/-9.89	-8.71/-8.52	-7.59/-7.48	-7.84/-7.34	-6.92/-7.53	-8.00/-9.04	-11.92/-14.31	-13.09/-11.60	-9.50/-8.69	-8.02/-8.27	-9.26/-10.55	-11.81/-15.14	-15.24/-15.07	-14.10/-9.68	-7.34/-6.28	-5.89/-4.76	-4.90/-5.08
Θ(180°)	-6.66/-6.13	-6.52/-5.29	-5.29/-6.84	-7.81/-8.45	-10.10/-11.78	-13.54/-12.06	-11.73/-11.30	-10.63/-9.79	-9.50/-9.57	-10.43/-11.64	-11.41/-11.38	-10.71/-10.09	-10.20/-10.43	-10.72/-11.46	-12.20/-11.66	-10.57/-10.10	-11.41/-10.84	-8.01/-7.11

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





Total Gain Data

Freq(Hz)	5.6GPol.	TotalAnt. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-0.81/-1.28	-1.94/-2.01	-0.81/-1.28	-1.67/-1.08	-1.16/-1.08	-1.05/-1.24	-1.35/-1.97	-1.96/-1.82	-1.50/-1.82	-1.88/-1.57	-1.39/-1.62	-2.09/-1.80	-1.95/-2.44	-1.10/-1.27	-1.50/-1.68	-1.31/-1.09	-1.95/-2.44	-1.70/-4.60
Θ(10°)	-0.32/-0.69	-1.09/-1.20	-0.83/-0.51	-0.29/-0.38	-1.05/-1.63	-1.74/-1.84	-1.51/-1.43	-1.45/-1.98	-2.37/-2.39	-2.14/-2.39	-2.12/-2.23	-2.10/-1.83	-1.55/-1.14	-0.72/-0.62	-0.83/-0.96	-0.88/-1.02	-1.41/-1.52	-1.71/-0.80
Θ(20°)	-2.39/-1.52	-0.60/-0.25	0.96/0.67	0.14/-0.26	-1.61/-3.33	-5.38/-4.61	-3.51/-1.89	-0.09/0.55	0.30/-0.00	0.12/-0.27	-1.86/-3.59	-3.72/-2.57	-0.84/-0.60	1.21/-1.31	0.76/0.37	-0.06/-0.92	-1.89/-2.72	-2.91/-2.90
Θ(30°)	-2.87/-2.82	-0.05/0.00	-0.24/-0.27	-0.36/-2.22	1.22/-1.21	0.04/-0.26	-2.87/-1.51	0.20/-1.13	1.22/-1.21	-1.09/-3.17	-3.62/-0.91	0.54/-1.69	2.86/-1.31	1.47/-13.63	3.48/3.27	2.86/-1.31	-1.47/-13.63	-2.94/-2.30
Θ(40°)	-1.75/-1.14	-1.15/-1.97	-2.95/-3.10	-3.78/-7.24	-9.71/-8.63	-8.23/-7.47	-4.94/-2.87	-1.51/-0.04	0.22/0.85	0.33/0.52	-0.05/-0.88	-1.16/0.58	1.96/2.16	2.58/-1.43	0.05/0.57	-0.31/-1.34	-3.04/-4.46	-4.73/-3.37
Θ(50°)	-4.19/-1.05	-0.25/-0.84	-4.68/-6.88	-8.96/-10.47	-10.14/-9.19	-8.44/-10.37	-12.41/-8.45	-4.86/-2.76	-2.89/-2.08	-0.74/-0.07	0.34/-0.63	0.72/0.93	0.96/-1.01	-0.31/-1.58	-4.00/-4.62	-3.75/-2.03	-2.31/-2.48	-5.17/-5.04
Θ(60°)	-9.38/-3.92	-0.65/-1.07	-5.36/-10.35	-8.24/-5.73	-8.14/-11.52	-11.48/-9.03	-8.73/-10.96	-9.71/-7.21	-5.90/-4.79	-5.00/-2.50	-0.76/0.73	0.83/0.30	0.22/-1.34	-14.37/-10.21	-6.00/-2.47	-0.32/-0.53	-3.53/-10.36	
Θ(70°)	-11.05/-7.54	-3.78/-2.81	-7.40/-8.30	-2.91/-2.87	-5.42/-9.34	-11.23/-9.25	-6.60/-9.01	-9.05/-9.98	-8.42/-8.50	-8.13/-3.47	-0.80/-0.30	0.37/-0.99	-0.93/-1.93	-4.84/-3.18	-2.02/-4.76	-3.95/-3.67	-1.36/-0.85	-4.25/-8.85
Θ(80°)	-5.02/-10.30	-11.69/-4.83	-6.07/-5.17	-1.58/-2.46	-3.86/-5.25	-8.27/-6.68	-5.11/-6.42	-7.71/-9.57	-8.59/-9.27	-10.74/-3.96	-1.60/-1.24	0.90/-2.36	0.86/2.28	0.51/-3.54	-2.04/-5.54	-5.35/-4.55	-7.30/-14.63	
Θ(90°)	-6.39/-5.05	-15.07/-5.09	-4.00/-6.36	-3.99/-4.44	-3.99/-4.19	-5.80/-6.56	-4.15/-5.84	-6.50/-10.07	-8.69/-8.72	-3.74/0.96	-3.74/0.96	0.37/-2.97	1.90/2.03	-0.86/-3.76	0.37/-2.97	-7.12/-9.44	-7.35/-12.73	
Θ(100°)	-4.52/-0.99	-6.17/-5.53	-3.43/-9.59	-4.03/-4.28	-4.86/-3.75	-4.47/-7.03	-7.26/-7.03	-5.65/-11.28	-12.85/-8.71	-4.70/-4.40	-4.54/-0.68	0.14/-12.29	-0.22/0.10	0.26/-3.04	-2.02/-3.59	-1.81/-2.23	-4.80/-5.61	-7.92/-8.85
Θ(110°)	-1.76/-1.51	-3.56/-6.00	-3.81/-12.40	-4.91/-2.13	-5.80/-4.81	-4.38/-2.99	-9.49/-6.74	-8.59/-15.04	-11.94/-6.51	-3.91/-6.34	-5.24/-1.49	0.19/-8.42	-0.96/-1.76	-0.53/-4.95	-4.26/-4.46	-4.29/-4.40	-12.89/-9.37	
Θ(120°)	-0.86/-5.92	-6.50/-6.04	-5.94/-10.59	-3.92/-1.27	-4.42/-6.38	-2.65/-3.20	-4.74/-3.87	-3.91/-6.14	-6.93/-3.17	-3.99/-7.25	-3.81/-0.13	0.87/-11.34	-2.56/-1.62	-0.36/-2.71	-3.80/-1.02	-2.18/-4.60	-7.35/-8.02	-9.54/-5.23
Θ(130°)	-4.39/-10.17	-7.81/-5.31	-5.09/-9.04	-4.23/-1.48	-2.95/-5.91	-6.01/-6.27	-2.48/-0.46	-1.63/-2.08	-2.63/-1.86	-2.63/-9.28	-5.47/-3.25	-1.66/-7.12	-4.77/-1.20	-2.40/-4.14	-3.84/-1.67	-5.00/-6.73	-10.19/-13.01	-6.74/-6.75
Θ(140°)	-7.86/-11.38	-7.54/-5.93	-7.75/-11.73	-7.46/-3.70	-4.55/-7.17	-9.85/-10.86	-6.70/-3.09	-3.23/-2.87	-3.34/-3.87	-4.31/-3.92	-2.94/-5.42	-8.74/-7.46	-15.13/-13.62	-11.76/-12.94	-10.00/-8.58	-8.98/-8.79	-5.28/-4.73	
Θ(150°)	-10.28/-9.01	-6.16/-5.07	-6.32/-8.52	-8.55/-6.77	-4.64/-5.09	-6.63/-9.82	-11.36/-8.68	-6.52/-5.87	-7.73/-10.15	-11.65/-11.46	-4.49/-1.99	-1.54/-2.14	-2.63/-3.87	-7.43/-9.72	-7.53/-9.15	-11.14/-13.86	-13.84/-14.11	-12.94/-9.83
Θ(160°)	-7.04/-7.24	-6.48/-7.36	-7.18/-6.94	-7.37/-8.06	-9.53/-12.52	-12.71/-13.29	-15.20/-11.05	-8.40/-7.12	-6.91/-7.61	-11.05/-14.49	-14.45/-8.65	-4.72/-4.30	-4.72/-6.54	-10.34/-13.62	-12.73/-12.82	-12.43/-10.29	-9.54/-8.29	
Θ(170°)	-13.09/-14.31	-11.82/-10.60	-9.30/-7.91	-6.76/-6.52	-6.47/-6.28	-7.62/-7.79	-8.16/-7.64	-7.26/-7.11	-6.48/-6.57	-7.41/-7.21	-8.19/-8.62	-9.53/-10.10	-9.70/-9.06	-9.36/-10.60	-14.64/-15.77	-14.12/-12.50	-12.62/-14.25	-13.47/-13.11
Θ(180°)	-13.31/-12.04	-10.26/-10.38	-11.14/-11.00	-12.22/-14.05	-13.97/-13.47	-13.91/-13.08	-13.78/-13.59	-13.83/-13.73	-14.53/-14.23	-14.83/-14.64	-13.48/-12.63	-10.70/-10.14	-9.34/-8.88	-9.48/-10.81	-11.82/-12.57	-11.99/-11.52	-11.34/-11.15	-12.49/-13.09
Freq(Hz)	5.785GPol.	TotalAnt. 1	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	0.51/0.18	0.12/0.34	0.12/0.34	0.61/0.93	0.30/0.17	0.33/0.27	0.55/0.30	0.26/0.38	0.33/0.27	0.34/0.30	0.35/0.39	0.37/0.44	0.48/0.61	0.09/0.12	0.19/0.44	0.09/-0.65	0.02/0.37	0.02/0.37
Θ(10°)	0.29/0.73	0.76/0.52	0.32/-0.15	-0.28/-0.95	-1.57/-2.20	-2.58/-1.94	-1.78/-1.59	-0.95/-1.03	-0.69/-0.36	0.41/0.90	1.15/-1.11	1.10/0.88	0.74/0.38	-0.05/-0.34	0.06/-0.31	-0.42/-0.53	-0.45/-0.62	-0.58/0.09
Θ(20°)	-1.38/-0.68	-0.55/-0.08	-0.71/-1.57	-3.02/-6.52	-8.91/-9.15	-9.83/-8.57	-6.85/-5.21	-3.36/-1.54	-0.53/0.24	-2.83/-2.76	-1.46/0.92	-0.38/-0.84	-1.00/-1.96	-2.83/-2.76	-2.67/-2.79	-2.84/-2.54	-2.36/-1.94	-2.40/-1.88
Θ(30°)	-3.72/-3.51	-3.42/-2.44	-2.26/-3.33	-7.17/-11.19	-9.90/-7.69	-7.21/-7.89	-8.04/-5.21	-3.18/-1.74	-0.90/0.60	1.48/-1.72	1.94/-1.32	-0.41/-1.32	-1.58/-0.37	0.44/0.16	0.51/-1.16	1.53/-1.22	0.07/-0.52	-0.88/-1.84
Θ(40°)	-5.71/-16.44	-10.43/-5.21	-1.94/-2.74	-6.47/-6.05	-2.92/-1.70	-2.57/-4.33	-0.61/-6.51	-5.09/-3.06	-2.43/-2.33	-0.83/0.72	1.93/-1.01	-0.44/-0.99	-0.60/0.94	2.10/2.22	2.22/-1.61	0.10/0.65	-0.67/-3.28	
Θ(50°)	-3.40/-4.08	-7.59/-10.42	-1.75/-0.24	-2.22/-3.45	-2.13/-1.63	-2.02/-1.74	-2.27/-3.59	-4.78/-5.07	-3.65/-4.23	-3.88/-1.60	0.35/-1.13	-1.12/0.24	0.79/-1.45	3.04/0.04	1.19/-1.45	-3.45/-4.70	-4.85/-4.09	-2.58/-4.32
Θ(60°)	-3.45/-1.98	-4.21/-11.04	-1.40/-1.44	0.10/-2.91	-4.61/-5.29	-2.80/-2.28	-3.90/-6.37	-10.88/-10.54	-7.49/-6.09	-5.71/-1.95	0.10/-2.51	-2.84/-0.45	-0.60/-0.57	0.54/-0.33	-5.45/-6.62	-5.46/-3.27	-3.44/-3.48	-3.88/-5.09
Θ(70°)	-9.71/-2.98	-2.26/-6.89	-1.63/0.69	-0.35/-2.67	-4.78/-9.39	-7.34/-4.17	-1.37/-12.14	-10.85/-8.50	-6.94/-1.98	-1.32/-3.56	-1.76/0.02	-0.81/-6.21	-3.35/-1.40	-0.72/-2.03	-0.88/-1.35	-0.61/-6.21	-3.81/-3.39	-5.75/-6.04
Θ(80°)	-4.66/-3.83	-3.12/-3.10	-1.28/-0.48	-1.40/-3.03	-4.38/-6.16	-6.57/-5.02	-4.51/-4.87	-4.75/-6.83	-5.57/-3.23	-2.27/-1.95	-0.67/-1.94	-0.94/-1.00	0.94/-3.40	0.89/-0.34	2.11/-1.05	0.13/-1.35	-2.94/-4.17	-4.73/-4.45
Θ(90°)	-11.91/-11.91	-5.50/-2.94	-5.79/-1.41	-2.72/-7.03	-4.38/-7.31	-11.34/-4.20	-3.67/-6.03	-5.77/-5.19	-6.20/-4.87	-4.69/-1.23	-2.55/-2.92	-0.27/-3.02	1.30/2.53	-0.61/2.75	2.44/-1.48	-2.70/-2.30	-6.20/-7.57	-5.89/-10.05
Θ(100°)	-12.68/-0.07	-6.95/-2.66	-7.75/-5.89	-4.97/-10.28	-7.84/-6.22	-8.61/-5.84	-5.49/-5.68	-4.70/-3.95	-5.78/-5.06	-4.64/-1.26	0.22/-5.95	-1.27/-0.32	0.58/-1.74	-4.54/-4.35	0.58/-1.40	-4.54/-2.53	-5.73/-14.84	
Θ(110°)	-3.73/-0.70	-5.80/-4.23	-6.57/-10.93	-3.04/-5.77	-11.50/-6.20	-7.42/-6.93	-5.88/-6.29	-4.60/-4.75	-7.63/-7.80	-4.83/-1.91	-5.16/-4.23	-1.11/-10.38	-0.82/-1.35	-1.51/-2.43	-1.88/-4.61	-3.93/-1.78	-2.78/-4.76	-11.48/-9.60
Θ(120°)	-3.84/-8.37	-8.06/-4.37	-8.06/-6.67	-2.11/-1.55	-5.75/-7.37	-3.54/-3.99	-4.47/-3.33	-5.39/-8.06	-11.29/-4.75	-2.31/-2.35	-4.49/-2.10	0.14/-14.48	-3.61/-3.02	-0.78/-2.44	-2.18/-1.17	-2.47/-2.40	-8.86/-7.13	-6.88/-6.12
Θ(130°)	-5.01/-12.64	-7.02/-6.43	-7.60/-8.59	-1.83/-0.41	-2.35/-5.36	-5.45/-2.82	-4.60/-1.04	-4.93/-6.78	-4.40/-1.71	-2.49/-4.00	-4.96/-5.80	-2.87/-6.55	-4.59/-3.10	-6.70/-1.44	-3.52/-6.92	-9.04/-15.40	-4.60/-6.58	
Θ(140°)	-14.92/-10.64	-5.28/-4.49	-6.52/-6.93	-4.11/-2.26	-3.90/-6.06	-6.61/-3.20	-2.44/-4.01	-5.25/-5.74	-5.12/-4.21	-4.35/-6.24	-4.66/-4.56	-4.86/-7.82	-9.54/-10.02	-11.27/-15.18	-14.79/-15.35	-9.61/-11.48	-13.95/-13.23	-6.39/-11.52
Θ(150°)	-12.78/-13.98	-8.43/-6.06	-7.39/-11.31	-12.88/-9.53	-6.74/-5.98	-3.93/-2.84	-3.41/-2.77	-3.25/-4.94	-4.56/-6.74	-8.20/-8.71	-9.09/-6.67	-5.21/-4.63	-4.77/-7.10	-12.25/-14.01	-10.43/-11.42	-12.84/-15.37	-15.37/-11.43	-9.67/-9.04
Θ(160°)	-9.98/-9.93	-7.41/-5.96	-5.87/-7.33	-10.70/-13.72	-14.85/-10.60	-7.81/-8.02	-6.62/-5.19	-5.30/-5.83	-6.03/-6.29	-7.11/-7.50	-12.75/-11.93	-11.20/-7.97	-4.72/-8.63	-10.40/-11.65	-12.75/-15.72	-8.08/-8.42	-7.93/-9.06	
Θ(170°)	-13.46/-12.75	-14.49/-14.38	-13.76/-13.33	-12.06/-11.65	-10.66/-11.40	-11.46/-12.56	-14.46/-11.72	-10.40/-8.25	-7.46/-8.32	-9.46/-10.01	-10.30/-11.26	-10.76/-8.48	-7.04/-6.61	-8.03/-9.17	-11.37/-12.93	-13.01/-13.09	-14.05/-14.14	-12.98/-12.27
Θ(180°)	-13.59/-15.29	-15.55/-15.06	-14.77/-15.85	-15.46/-16.33	-15.82/-14.64	-15.07/-14.52	-14.49/-14.12	-12.80/-12.70	-13.45/-13.80	-12.61/-11.69	-13.25/-13.20	-13.66/-12.05	-13.01/-12.39	-12.58/-14.31	-15.61/-15.26	-14.75/-15.52	-14.92/-15.30	-15.12/-14.04
Freq(Hz)	5.6GPol.	TotalAnt. 2	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-	+-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-1.36/-1.41	-1.49/-1.02	-1.16/-1.36	-1.06/-1.58	-1.63/-1.44	-1.25/-1.42	-1.84/-2.30	-1.89/-1.62	-1.01/-1.12	-1.05/-1.23	-1.32/-1.19	-1.38/-1.57	-1.93/-1.90	-1.59/-1.75	-1.91/-1.92	-2.28/-1.91	-1.85/-1.66	-1.12/-1.12
Θ(10°)	-1.39/-1.76	-2.21/-2.86	-3.15/-2.48	-2.55/-2.45	-2.25/-2.24	-1.92/-2.10	-2.50/-2.23	-4.04/-3.75	-1.48/-1.05	-0.64/-0.70	-0.72/-0.64	-0.56/-1.29	-0.41/-1.05	-0.64/-0.70	-0.72/-0.64	-0.13/-0.40	-0.74/-1.06	
Θ(20°)	-3.83/-4.27	-4.02/-3.29	-1.81/-1.15	-0.10/0.20	0.83/0.69	0.40/-0.16												



Antenna Pattern

Appendix C.2

Θ(60°)	-2.31/-2.54	-1.66/-0.11	-1.87/-4.72	-7.39/-5.53	-4.62/-3.94	-4.87/-5.90	-4.55/-4.32	-2.16/-1.25	-3.42/-5.04	-4.86/-5.81	-3.63/-1.61	-0.68/-1.21	-0.17/-0.45	-0.48/-0.54	0.50/-1.29	-2.25/-2.31	-0.92/0.25	0.29/-1.05
Θ(70°)	-4.30/-7.41	-2.26/-1.24	-0.49/-3.06	-5.65/-5.79	-2.24/-2.11	-4.21/-4.21	-2.55/-3.83	-2.91/-1.99	-3.63/-3.71	-3.85/-3.71	-1.72/-2.10	-2.06/-0.41	0.31/0.50	-0.35/-0.78	2.35/0.61	-0.71/-0.73	0.93/0.90	0.70/-1.88
Θ(80°)	-2.64/-4.92	-5.31/-3.88	-0.27/-1.67	-3.75/-3.61	-2.49/-2.34	-4.32/-2.29	-2.00/-2.45	-3.56/-2.95	-2.58/-2.06	-1.71/-1.97	-0.61/-1.91	-3.41/-0.59	0.97/0.52	0.56/-1.91	2.54/1.06	1.47/2.49	3.50/-1.72	0.86/-0.73
Θ(90°)	-4.64/-3.99	-8.64/-5.25	0.11/-0.31	-4.57/-6.08	-3.30/-4.65	-5.93/-1.69	-1.11/-1.59	-2.83/-4.53	-4.56/-2.87	0.34/-0.64	0.22/-2.10	-3.82/-1.20	-0.51/-0.44	-0.91/0.09	0.41/-0.76	2.08/1.29	2.03/-1.30	-1.98/-2.68
Θ(100°)	-3.41/-3.33	-11.91/-8.61	-3.23/-3.14	-5.41/-5.68	-3.48/-6.22	-8.03/-3.50	-2.66/-2.15	-0.89/-2.79	-4.84/-6.04	-0.46/-0.61	0.16/0.12	-3.33/-2.82	-2.08/-3.37	-4.68/-3.37	-2.97/-3.13	-1.51/-1.96	-1.05/-3.72	-2.26/-2.04
Θ(110°)	-4.25/-5.77	-12.94/-15.01	-10.59/-9.21	-8.20/-6.35	-3.40/-4.38	-5.35/-3.45	-3.72/-3.34	-1.34/-1.57	-3.10/-5.97	-2.43/-2.70	-1.34/-1.26	-3.83/-3.02	-0.68/-3.66	-3.66/-5.14	-2.44/-4.92	-6.22/-3.08	-3.51/-4.49	-2.79/-5.17
Θ(120°)	-5.07/-6.77	-6.31/-6.87	-9.20/-9.92	-7.11/-8.11	-10.52/-8.63	-5.08/-4.59	-4.40/-3.63	-2.84/-1.45	-1.61/-3.78	-4.23/-3.76	-0.62/0.13	-5.37/-4.28	-2.56/-2.96	-1.78/-9.12	-3.75/-5.11	-5.88/-2.21	-7.21/-4.77	-9.11/-6.77
Θ(130°)	-8.44/-7.81	-7.13/-4.85	-5.32/-6.52	-6.17/-5.95	-10.07/-11.39	-5.17/-2.87	-2.79/-3.26	-1.95/-1.48	0.01/-2.25	-1.74/-4.50	-0.59/-1.92	-6.75/-3.80	-1.82/-2.72	-4.51/-6.35	-3.30/-5.42	-5.44/-4.12	-5.07/-13.87	-15.39/-10.09
Θ(140°)	-5.97/-5.89	-7.24/-9.09	-11.19/-14.00	-11.19/-10.06	-7.93/-5.30	-4.01/-4.35	-7.03/-7.69	-7.51/-5.07	-4.22/-5.47	-6.38/-6.57	-3.09/-1.51	-4.03/-6.13	-6.20/-6.09	-10.18/-7.14	-8.78/-8.04	-5.78/-10.07	-13.55/-14.72	-9.30/-4.42
Θ(150°)	-10.45/-15.59	-12.93/-12.95	-15.45/-13.21	-9.16/-8.67	-9.38/-9.40	-10.06/-8.81	-7.39/-6.43	-5.70/-4.73	-3.92/-3.70	-3.45/-5.20	-4.13/-3.77	-3.74/-3.22	-3.33/-3.76	-6.01/-8.39	-9.29/-8.42	-9.01/-10.52	-14.05/-12.04	-11.08/-8.30
Θ(160°)	-12.95/-15.01	-15.49/-14.48	-12.49/-9.83	-8.88/-7.48	-7.08/-6.87	-8.30/-8.47	-7.11/-4.76	-2.29/-0.53	-0.21/-1.59	-2.24/-2.38	-2.80/-4.43	-4.91/-5.09	-5.59/-8.10	-11.66/-10.04	-8.77/-6.54	-5.25/-7.47	-11.88/-14.39	-13.64/-13.43
Θ(170°)	-14.57/-16.12	-13.79/-13.97	-10.18/-10.16	-9.98/-8.80	-10.29/-11.02	-9.94/-8.80	-7.78/-6.28	-5.74/-5.23	-5.34/-6.29	-7.41/-8.90	-9.10/-8.11	-8.56/-8.79	-8.58/-9.26	-9.17/-8.82	-8.89/-9.17	-11.21/-14.77	-14.70/-15.38	-13.43/-12.87
Θ(180°)	-10.99/-11.58	-10.66/-10.31	-10.84/-11.01	-13.53/-14.58	-14.04/-12.62	-14.84/-15.79	-14.90/-14.84	-15.39/-14.84	-15.82/-15.59	-14.98/-15.80	-15.13/-14.69	-13.69/-12.03	-10.62/-9.65	-10.07/-10.20	-9.28/-8.12	-7.70/-8.76	-8.74/-10.82	-11.50/-12.12
Freq(Hz)	5.6G/Pol.	TotalAnt. 4	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-1.87/-1.81	-1.42/-1.29	-1.53/-1.37	-1.31/-1.18	-1.05/-1.41	-1.25/-1.40	-1.54/-1.88	-2.19/-1.93	-1.43/-1.64	-1.71/-1.81	-1.75/-1.65	-1.83/-1.91	-1.69/-1.55	-1.41/-1.54	-1.33/-1.16	-1.62/-1.94	-1.47/-1.53	-1.40/-1.50
Θ(10°)	-1.42/-1.24	-1.38/-1.19	-0.83/-0.88	-0.87/-0.98	-1.11/-1.54	-1.95/-2.19	-2.63/-3.17	-3.96/-4.38	-3.60/-2.78	-2.46/-2.34	-2.70/-2.64	-2.24/-2.25	-2.28/-2.60	-2.69/-2.73	-3.21/-3.30	-3.28/-2.89	-3.02/-2.89	-2.78/-1.86
Θ(20°)	-1.96/-1.78	-1.54/-1.16	-0.90/-0.95	-0.97/-1.14	-1.49/-1.41	-1.85/-1.82	-2.38/-3.30	-5.47/-7.25	-7.65/-5.92	-3.88/-2.42	-1.96/-1.23	-0.77/-0.92	-1.77/-2.82	-4.11/-5.53	-6.12/-6.50	-6.47/-6.18	-4.78/-3.63	-3.01/-2.52
Θ(30°)	-3.14/-2.88	-3.31/-2.96	-2.14/-1.46	-0.80/0.19	0.66/0.75	0.62/0.49	-0.38/-2.43	-3.21/-5.00	-6.75/-8.02	-6.51/-3.63	-1.88/-0.32	0.40/0.37	-0.13/-1.47	-4.04/-8.55	-11.89/-8.74	-6.34/-4.65	-3.45/-2.21	-1.69/-1.80
Θ(40°)	-1.31/-1.31	-4.41/-4.80	-3.12/-1.96	-0.62/0.30	0.09/-0.27	-0.68/-1.31	-1.60/-2.32	-1.91/-2.79	-4.27/-7.16	-7.45/-4.57	-1.78/0.34	0.62/-0.05	-2.15/-3.99	-6.12/-10.60	-10.07/-8.49	-3.98/-1.87	-0.94/-0.72	-0.80/-1.32
Θ(50°)	-0.96/-2.58	-4.90/-5.35	-3.38/-0.96	0.47/0.71	0.12/-0.50	-0.69/-1.02	-1.10/-0.77	-1.55/-4.89	-7.58/-5.77	-0.95/-0.13	-1.37/-4.05	-6.37/-4.05	-5.85/-9.26	-6.31/-9.67	-9.45/-4.84	-3.27/-2.63	-3.30/-3.30	-2.91/-1.41
Θ(60°)	-1.19/-1.58	-3.92/-4.24	-2.45/0.02	0.70/0.08	-0.35/-0.30	0.66/0.68	0.47/0.39	0.67/2.10	-0.17/-1.14	0.46/2.00	3.40/-2.75	1.23/-0.68	-2.54/-1.74	-3.52/-4.92	-4.10/-4.05	-3.39/-1.68	-5.29/-4.66	-4.03/-1.41
Θ(70°)	-1.84/-1.42	-2.23/-3.23	-1.85/-0.40	-0.17/-0.63	-0.54/-0.40	0.57/1.26	0.91/0.48	0.61/0.85	-1.17/-6.05	-6.25/-2.42	-1.02/-2.42	-1.98/-2.46	-2.03/0.54	-2.58/-10.67	-8.85/-3.84	-4.29/-4.48	-8.74/-9.20	-6.31/-2.23
Θ(80°)	-2.16/-1.58	-1.59/-3.58	-1.55/-0.08	-0.18/-1.04	-0.53/-1.04	-0.56/0.15	-0.46/-0.93	-6.86/-9.94	-0.32/-2.60	-6.74/-1.53	-0.51/-2.63	-0.93/0.48	-1.93/0.10	-1.10/-7.73	-10.92/-4.53	-3.97/-6.10	-7.16/-7.77	-6.46/-4.99
Θ(90°)	-1.57/-1.61	-2.34/-2.83	0.16/1.18	0.47/-0.53	-0.41/-2.17	-1.43/-0.90	-1.47/-1.49	-0.62/-7.10	-6.25/-8.04	-5.08/-1.95	-1.58/-5.02	-0.97/1.47	-3.33/-1.86	-1.95/-5.69	-8.38/-5.55	-4.64/-5.47	-6.28/-6.24	-6.24/-5.98
Θ(100°)	-2.44/-2.85	-2.86/-1.45	0.88/0.97	0.12/-0.66	-0.82/-3.34	-2.32/-3.36	-4.20/-3.86	-2.15/-10.99	-7.04/-8.90	-5.13/-1.64	-3.80/-5.82	-6.71/-0.98	-5.24/-6.10	-3.67/-7.52	-7.96/-9.40	-4.57/-5.25	-4.10/-5.15	-5.47/-6.11
Θ(110°)	-2.30/-2.72	-2.41/-1.36	-0.10/-0.41	0.33/-0.00	-1.24/-4.92	-4.07/-6.61	-7.99/-6.49	-6.86/-9.94	-4.35/-12.23	-7.95/-10.42	-6.44/-7.19	-6.27/-4.32	-10.76/-8.49	-7.95/-10.42	-6.30/-5.14	-4.00/-5.42	-4.68/-4.32	-5.44/-3.37
Θ(120°)	-3.97/-2.36	-2.40/-0.87	-2.65/-1.68	-1.90/-0.99	-3.73/-5.80	-4.54/-7.56	-11.05/-6.42	-8.23/-9.42	-4.10/-10.44	-3.96/-5.63	-11.91/-9.79	-8.04/-2.14	-9.02/-6.13	-7.51/-11.13	-4.39/-4.02	-5.34/-7.56	-5.07/-3.81	-4.90/-3.86
Θ(130°)	-3.23/-3.37	-2.59/-3.62	-4.38/-3.57	-1.42/-1.17	-4.00/-3.40	-1.99/-2.89	-6.80/-7.77	-10.44/-12.60	-8.08/-7.97	-6.96/-7.36	-14.33/-15.38	-7.41/-5.74	-4.76/-4.31	-8.96/-10.38	-3.20/-3.24	-5.14/-7.88	-9.72/-4.78	-5.71/-4.14
Θ(140°)	-4.90/-7.46	-5.92/-6.53	-7.84/-7.70	-6.38/-6.19	-7.70/-7.57	-5.38/-6.86	-8.30/-7.44	-10.87/-12.44	-8.06/-10.45	-11.67/-9.44	-14.37/-13.71	-9.97/-8.81	-5.99/-6.29	-9.37/-9.39	-13.91/-8.54	-12.37/-13.51	-11.61/-9.44	-7.37/-6.12
Θ(150°)	-11.46/-1.86	-7.22/-8.26	-9.01/-9.24	-7.06/-6.03	-5.13/-5.14	-6.05/-7.58	-8.92/-8.55	-10.61/-13.52	-14.04/-15.68	-8.26/-7.17	-12.94/-15.01	-11.05/-9.75	-10.32/-11.01	-11.43/-12.43	-15.24/-15.27	-15.02/-12.54	-11.55/-8.66	-10.75/-13.92
Θ(160°)	-5.96/-5.10	-3.20/-3.85	-6.44/-8.57	-8.98/-7.50	-6.48/-5.34	-4.48/-4.87	-6.96/-8.46	-8.69/-9.12	-8.58/-8.88	-6.67/-6.98	-9.11/-15.60	-15.71/-10.77	-12.07/-13.19	-12.17/-10.61	-11.79/-11.15	-12.70/-13.15	-12.69/-9.93	-6.98/-6.22
Θ(170°)	-6.20/-6.56	-7.13/-8.16	-9.92/-10.16	-10.32/-10.16	-8.84/-9.12	-9.47/-10.50	-10.44/-13.18	-13.29/-13.15	-13.22/-12.94	-11.59/-13.03	-13.06/-10.95	-7.76/-7.21	-6.70/-7.29	-7.69/-9.34	-10.61/-9.50	-8.79/-7.73	-6.56/-6.98	-6.49/-5.99
Θ(180°)	-14.87/-15.11	-15.34/-14.48	-12.56/-12.61	-12.74/-14.10	-15.52/-15.03	-15.35/-14.13	-12.35/-10.69	-10.56/-10.65	-10.45/-11.18	-10.73/-10.06	-10.38/-11.62	-10.33/-9.81	-8.95/-9.62	-9.19/-9.59	-10.50/-12.13	-14.68/-14.72	-13.62/-13.25	-14.44/-15.14
Freq(Hz)	5.785G/Pol.	TotalAnt. 4	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-0.56/-0.33	-0.80/-0.43	-0.65/-0.97	-0.74/-0.81	-0.63/-0.50	-0.48/-0.35	-0.24/-0.43	-1.19/-1.36	-0.95/-0.12	-0.39/-0.61	-0.58/-0.69	-0.91/-1.01	-0.77/-0.27	-0.25/-0.20	-0.45/-0.30	-0.39/-0.50	-0.74/-0.86	-1.12/-1.04
Θ(10°)	-1.87/-2.18	-1.82/-0.98	-0.47/-0.01	0.02/0.09	-0.13/-0.39	-0.38/-0.60	-0.88/-0.62	-0.76/-0.61	-0.66/0.07	0.37/0.20	0.43/0.38	0.23/0.02	-0.57/-0.79	-1.43/-1.65	-2.03/-2.60	-2.80/-2.45	-2.11/-2.44	-2.42/-2.08
Θ(20°)	-1.99/-2.28	-1.83/-1.22	-1.04/-1.14	-1.38/-1.31	-1.13/-1.45	-1.44/-1.36	-1.44/-1.68	-2.69/-2.60	-2.07/-0.88	-0.40/0.12	0.37/0.06	-0.59/-1.39	-2.23/-2.87	-4.17/-3.89	-4.37/-4.17	-3.91/-3.33	-2.15/-1.18	-0.78/-1.23
Θ(30°)	-0.07/-1.13	-2.33/-2.75	-2.96/-2.69	-3.45/-5.09	-5.68/-4.36	-2.70/-1.59	-0.80/-0.75	-1.63/-1.36	-1.64/-3.42	-2.94/-1.91	-2.33/-3.33	-4.54/-4.53	-5.72/-6.63	-8.03/-7.95	-5.22/-3.17	-2.18/-2.15	-1.91/-0.43	0.07/0.26
Θ(40°)	-1.56/-2.41	-3.77/-4.89	-5.18/-6.23	-7.71/-7.03	-5.94/-4.56	-3.74/-3.21	-2.84/-2.30	-1.01/-0.11	-0.56/-3.39	-2.05/-2.09	-2.95/-3.25	-3.68/-4.42	-4.73/-4.24	-7.52/-9.88	-6.13/-3.72	-3.52/-3.11	-2.57/-2.17	-1.97/-1.53
Θ(50°)	-2.08/-2.79	-5.14/-6.14	-4.90/-5.96	-5.67/-3.29	-2.95/-4.68	-6.20/-8.41	-9.94/-9.19	-3.20/-1.47	-1.86/-2.38	-0.14/-0.58	-0.51/-0.43	-2.23/-4.53	-4.49/-4.35	-7.30/-7.30	-4.67/-3.40	-3.69/-4.23	-5.56/-5.37	-3.94/-2.45
Θ(60°)	-3.09/-5.05	-5.84/-3.05	-3.04/-6.06	-2.61/0.15	-0.20/-0.96	-1.72/-2.01	-3.22/-4.02	-4.56/-2.56	-1.05/-0.78	0.12/1.92	3.42/-1.85	0.39/-0.79	-2.32/-1.85	-3.99/-4.79	-4.31/-4.99	-4.82/-6.11	-6.94/-6.68	-5.50/-4.36
Θ(70°)	-3.24/-5.37	-5.02/-2.27	-2.54/-4.21	-1.74/-0.33	-0.23/0.40	0.58/0.46	0.24/-2.82	-5.45/-3.11	-3.22/-3.69	-0.92/-2.40	-2.56/0.07	0.28/-2.30	-2.75/-1.57	-5.47/-12.87	-4.88/-4.79	-7.25/-5.86	-4.69/-3.31	-4.06/-3.77
Θ(80°)	-4.28/-5.35	-2.64/-2.82	-4.14/-3.72	-0.53/0.14	0.42/1.26	0.62/0.96	-0.05/-2.82	-3.94/-3.72	-2.32/-4.08	-1.59/-0.31	-4.75/-2.26	0.34/-0.63	-2.07/-0.83	-3.71/-11.18	-5.81/-4.11	-7.40/-5.03	-3.70/-3.00	-3.30/-3.45
Θ(90°)	-3.24/-2.77	-2.38/-3.64	-3.71/-2.00	0.82/1.19	1.48/1.23	-1.12/-0.26	-0.70/-2.93	-2.14/-7.36	-4.40/-4.40	-4.30/-0.14	-2.75/-1.62	0.82/-1.10	-2.82/-0.34	-1.31/-6.08	-5.92/-4.69	-7.78/-4.70</		

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

