



Antenna Composite Gain Test Report

Equipment	Telephone Gateway
Brand Name	ARRIS
Model Name	TG3442
Applicant	ARRIS 3871 Lakefield Drive, Suite 300, Suwanee, GA 30024
Manufacturer	ARRIS 3871 Lakefield Drive, Suite 300, Suwanee, GA 30024
Sample Received	Jun. 27, 2022
Start Test Date	Jun. 28, 2022
Final Test Date	Jul. 11, 2022


Approved by: Jackson Tsai

SPORTON INTERNATIONAL INC. Hsinhua Laboratory

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



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1. Operation Mode and Antenna Information

Antenna Position	RF Port	Brand Name	Model Name	Ant. Type	Connector	Modes of Operation
2G 5GAnt1	1	Galtronics	02036142-06325A1	PIFA	mini-muruta	2.4GHz, 5GHz UNII 1~3
2G 5GAnt2	2	Galtronics	02036142-06325B1	PIFA	mini-muruta	2.4GHz, 5GHz UNII 1~3
2G 5GAnt3	3	Galtronics	02036142-06325B2	PIFA	mini-muruta	2.4GHz, 5GHz UNII 1~3
5GAnt4	4	Galtronics	02036142-06325A2	PIFA	mini-muruta	5GHz UNII 1~3

Note:

2.4GHz Operation Mode (1TX/1RX)

2G Ant1 can be used as transmitting/receiving antenna.

2.4GHz Operation Mode (3TX/3RX)

2G Ant1~2G Ant3 could transmit/receive simultaneously.

5GHz Operation Mode (4TX/4RX)

5GAnt1~5GAnt4 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 (°C / %)	Test Date
Radiated	05CH03-HY	Rex Liao	23~24°C / 40~50%	28/Jun/2022, 11/Jul/2022

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

4. Test Facility and Configuration

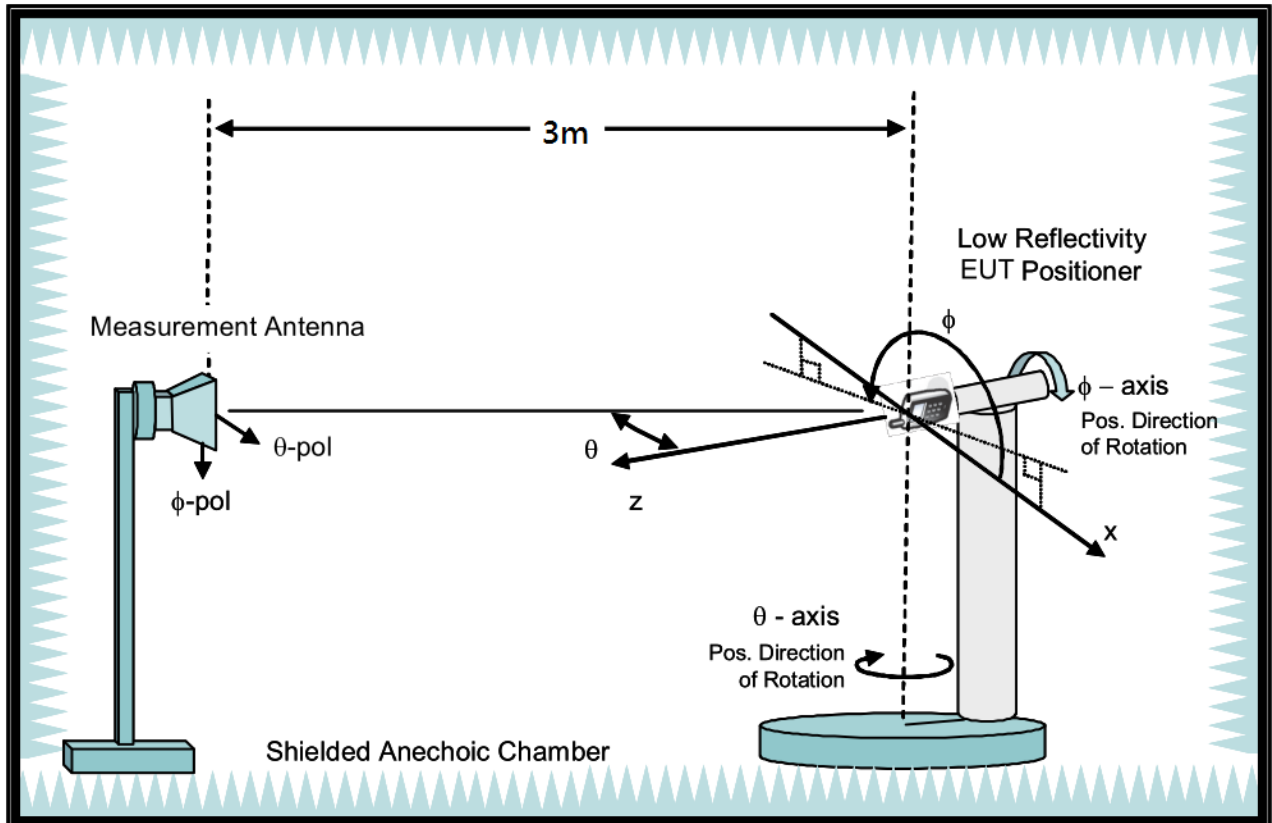
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

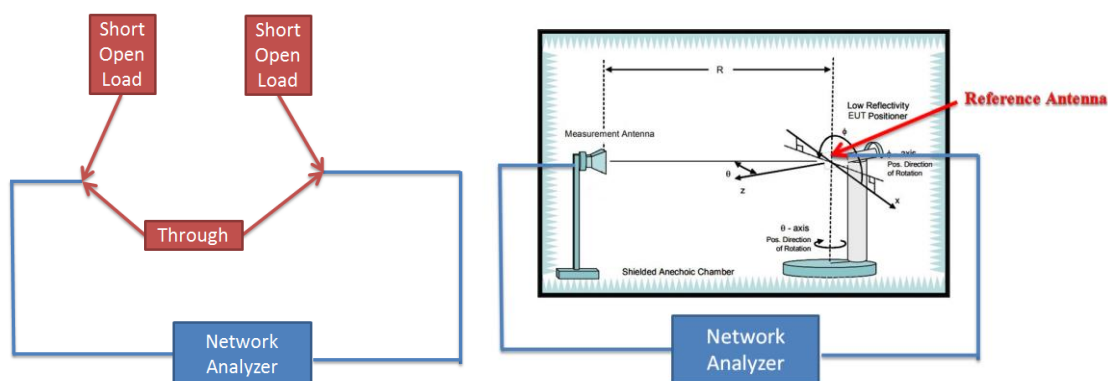
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



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.

Factor = gain factor + power gain conversion= (Reference antenna gain)-(G 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	5.6G	5.785G
Ant. 1 (dBi)	-0.63	2.42	1.75	-0.08	-0.21
Ant. 2 (dBi)	2.35	-1.31	-4.5	-2.84	-3.27
Ant. 3 (dBi)	-3.58	-2.85	2.53	0.13	-3.13
Ant. 4 (dBi)	-	-4.14	-10.17	-7.99	0.09
DG [1SS] (dBi)	4.49	4.92	4.78	3.88	4.53
Polarization	Phi	Phi	Phi	Phi	Phi
$\Theta(^{\circ})$	120	90	50	90	70
$\Phi(^{\circ})$	230	250	90	260	120

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

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(-0.63/20)}$	$10^{(2.42/20)}$	$10^{(1.75/20)}$	$10^{(-0.08/20)}$	$10^{(-0.21/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(2.35/20)}$	$10^{(-1.31/20)}$	$10^{(-4.5/20)}$	$10^{(-2.84/20)}$	$10^{(-3.27/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(-3.58/20)}$	$10^{(-2.85/20)}$	$10^{(2.53/20)}$	$10^{(0.13/20)}$	$10^{(-3.13/20)}$
Ant. 4 [$10^{(G/20)}$]	-	$10^{(-4.14/20)}$	$10^{(-10.17/20)}$	$10^{(-7.99/20)}$	$10^{(0.09/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.93	1.321	1.223	0.991	0.976
Ant. 2 [$10^{(G/20)}$] value	1.311	0.86	0.596	0.721	0.686
Ant. 3 [$10^{(G/20)}$] value	0.662	0.72	1.338	1.015	0.697
Ant. 4 [$10^{(G/20)}$] value	-	0.621	0.31	0.399	1.01
Sum All Antenna [Amax]	2.903	3.522	3.467	3.126	3.37
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	4.49	4.92	4.78	3.88	4.53

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
Ant. 1 Max Gain (dBi)	2.43
Ant. 2 Max Gain (dBi)	2.35
Ant. 3 Max Gain (dBi)	2.22
Max Gain (dBi)	2.43
DG [1SS] (dBi)	4.49
DG [2SS] (dBi)	2.43

Note:

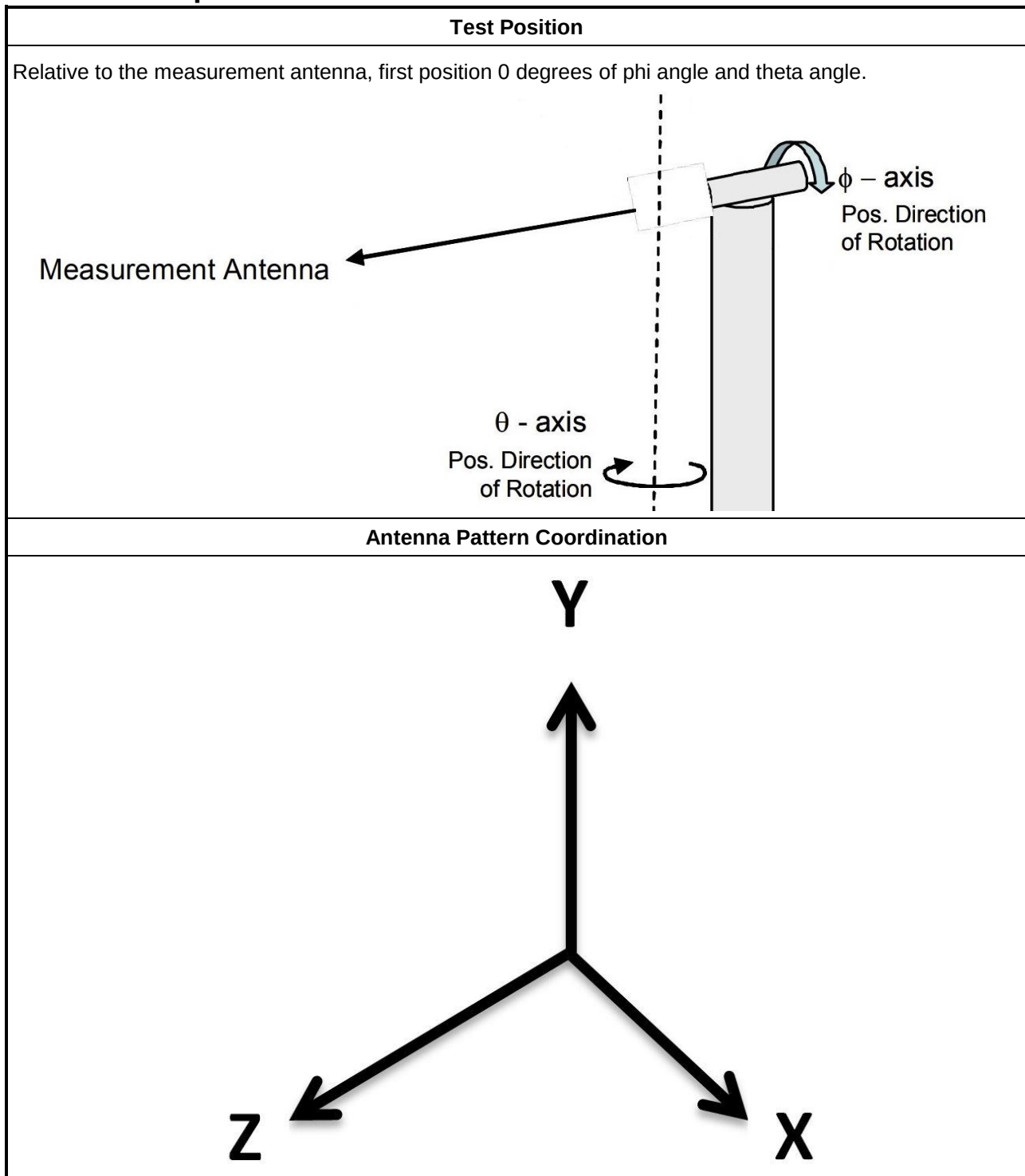
1. Antenna max gain is the max value of each individual antenna through all measurement angles.
2. The max gain is the max value of all antennas.
3. Directional Gain (2SS) = Directional Gain (1SS) – 3dB. If directional gain is less than max gain, use max gain as directional gain.

Frequency (Hz)	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.42	2.61	2.44	2.59
Ant. 2 Max Gain (dBi)	2.78	2.86	2.17	2.01
Ant. 3 Max Gain (dBi)	2.13	2.53	2.42	2.02
Ant. 4 Max Gain (dBi)	2.61	2.41	2.78	2.51
Max Gain (dBi)	2.78	2.86	2.78	2.59
DG [1SS] (dBi)	4.92	4.78	3.88	4.53
DG [2SS] (dBi)	2.78	2.86	2.78	2.59
DG [4SS] (dBi)	2.78	2.86	2.78	2.59

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-1543	1GHz~18GHz	May. 31, 2022	May. 30, 2023
Dual Polarization Horn Antenna	Sporton	S0209DP	S0209DP-001	2GHz~9GHz	N.C.R.	N.C.R.
ENA Series Network Analyzer	AGILENT	E5071C	MY46419201	100kHz~8.5GHz	Feb. 21, 2022	Feb. 20, 2023
VNA Calibration Kit	TS RF	TS85033E-F	-	DC~9GHz	N.C.R.	N.C.R.
Multi-axis positioner	Sporton	MAPS01	MAPS01-001	Theta / Phi axis	N.C.R.	N.C.R.
Test Software	SPORTON	SENSE-RDG	V1.0.8	-	N.C.R.	N.C.R.

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

NCR means Non-Calibration required.



11. Test Results

Please refer to the appendix.

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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	2.43	2.42	2.61	2.44	2.59
Ant. 2 Max Gain (dBi)	2.35	2.78	2.86	2.17	2.01
Ant. 3 Max Gain (dBi)	2.22	2.13	2.53	2.42	2.02
Ant. 4 Max Gain (dBi)		2.61	2.41	2.78	2.51
Ant. 1 Polarization/Θ(°)/Φ(°)	Theta/30/180	Phi/90/250	Phi/50/100	Phi/60/90	Phi/60/90
Ant. 2 Polarization/Θ(°)/Φ(°)	Phi/120/230	Theta/150/270	Theta/150/270	Theta/150/270	Theta/150/270
Ant. 3 Polarization/Θ(°)/Φ(°)	Theta/30/0	Phi/50/100	Phi/50/90	Phi/90/280	Phi/90/280
Ant. 4 Polarization/Θ(°)/Φ(°)		Theta/10/80	Phi/20/170	Phi/170/200	Phi/170/210
Max Gain (dBi)	2.43	2.78	2.86	2.78	2.59
DG [1SS] (dBi)	4.49	4.92	4.78	3.88	4.53
DG [2SS] (dBi)	2.43	2.78	2.86	2.78	2.59
DG [4SS] (dBi)		2.78	2.86	2.78	2.59



Radiated Composite Gain Data

Appendix A

DG 1SS Result

Freq(Hz)	2.45GPol.	Phi-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dBi)	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°)	-9.08/-8.33	-5.56/-2.85	-9.06/4.8	1.42/2.07	2.51/2.66	2.52/2.2	1.07/4.62	-0.71/-2.4	2.51/2.66	-4.32/-6.9	-9.38/-8.79	-2.52/2.1	-1.39/0.14	1.27/1.97	2.45/2.58	2.35/1.67	0.83/-0.27	-1.65/-3.42
Θ(10°)	-8.33/-7.88	-4.72/-2.25	-0.55/0.66	1.48/1.97	2.23/2.19	1.96/1.58	0.87/-0.09	-1.37/-2.97	-4.79/-6.88	-7.96/-7.73	-5.42/-2.76	-0.86/0.51	1.48/2.15	2.52/2.7	2.5/2	1.22/0.17	-1.29/-2.96	-5.08/-6.91
Θ(20°)	-6.85/-6.72	-4.48/-2.13	-0.35/0.87	1.71/2.29	2.47/2.38	2.13/1.66	0.92/-0.09	-1.7/-3.05	-4.67/-6.02	-6.73/-6.55	-4.35/-2.11	-0.53/0.59	1.29/1.96	2.42/4.1	2.57/2.56	2.11/2.22	0.08/-1.36	-3.13/-5.57
Θ(30°)	-6.82/-6.84	-4.25/-1.86	-0.29/0.87	1.76/2.41	2.84/2.75	2.55/2.16	-0.92/-2.84	-4.9/-6.27	-7.23/-6.21	-4.29/-2.36	-0.76/0.36	1.17/1.61	2.13/2.76	3.17/3.23	2.79/2.05	1.05/-0.34	-2.2/-4.4	
Θ(40°)	-8.1/-5.99	-2.38/-0.11	1.08/1.67	2.09/2.47	2.61/2.72	2.71/2.56	1.79/0.47	-1.42/-2.91	-4.1/-5.06	-6.28/-5.6	-3.69/-1.89	-0.66/0.6	1.44/1.96	2.77/3.22	3.33/0.7	2.78/2.39	1.72/0.32	-1.98/-5.19
Θ(50°)	-5.92/-3.04	-0.74/0.91	1.99/2.79	3.1/2.99	2.49/2.11	2.22/2.21	1.42/-0.17	-2.4/-3.75	-4.73/-5.87	-7.23/-6.07	-4.2/-2.3	-0.65/0.81	1.87/2.52	2.72/2.56	2.28/2.34	2.56/2.38	1.57/-0.03	-2.35/-5.51
Θ(60°)	-6.83/-5.79	-4.03/-2.34	-0.66/1.14	2.42/2.91	2.61/1.6	1.35/1.82	1.37/-0.18	-2.41/-4.89	-8.11/-9.6	-7.84/-5.27	-2.64/-0.71	0.64/1.53	1.78/1.92	1.94/2.25	2.56/2.62	2.1/0.76	-1.25/-3.42	-5.51/-7.06
Θ(70°)	-6.45/-4.56	-1.71/0.25	1.53/2.05	2.49/2.71	2.38/1.41	0.75/1.43	1.31/-0.27	-3.1/-4.96	-6.14/-7.79	-8.35/-7.33	-4.49/-2.25	-0.26/1.22	2.05/2.22	2.19/2.72	3.14/2.62	1.19/-0.88	-3.14/-5.5	-7.15/-7.05
Θ(80°)	-7.5/-5.68	-2.72/-0.83	0.26/1.17	1.48/0.97	0.53/0.11	-0.51/0.12	0.62/-0.95	-3.73/-5.58	-6.79/-7.66	-9.02/-8.41	-5.76/-2.92	-0.08/1.94	2.87/2.81	2.34/2.84	3.02/1.9	0.12/-1.54	-2.91/-4.95	-7.19/-8.1
Θ(90°)	-8.25/-8.92	-4.71/-1.14	0.96/1.78	1.73/1.26	1.17/0.76	-0.02/0.23	0.86/0.18	-0.22/5.12	-8.75/-5.92	-3.05/-0.57	1.43/2.48	2.65/2.63	2.78/3.99	2.98/1.44	0.15/-0.58	-1.58/-3.56	-5.53/-6.89	
Θ(100°)	-8.71/-5.24	-1.92/0.6	1.92/2.12	1/1.12	-1.71/-1.83	-2.22/-1.48	-0.46/-0.91	-2.83/-4.8	-5.74/-6.44	-7.28/-6.33	-3.29/-0.18	2.13/2.83	2.44/2.19	2.57/2.78	1.78/-0.44	-1.83/-1.91	-3.04/-5.71	-9.19/-11.26
Θ(110°)	-7.66/-5.07	-2.22/0.26	1.06/1.19	1.01/-0.67	-2.42/-2.98	-4.91/-3.97	-1.77/-1.9	-3.18/-4.94	-9.02/-11.88	-10.69/-8.45	-4.25/-0.92	1.65/2.62	1.87/0.19	-0.81/-0.76	-1.02/-1.08	-0.2/-0.07	-1.58/-4.88	-6.88/-8.29
Θ(120°)	-11.76/-8.67	-2.32/0.8	1.96/1.93	1.21/0.29	-0.71/-1.15	-3.38/-4.64	-3.16/-1.91	-2.46/-4.93	-8.73/-8.13	-6.52/-4.76	-0.82/2.28	3.84/4.49	3.44/1.61	1.37/1.58	0.75/-1.29	-2.66/-2.62	-2.79/-4.77	-7.01/-8.56
Θ(130°)	-6.58/-4.89	-1.57/0.92	1.65/0.35	-1.07/-1.09	-0.01/0.1	-1.4/-2.2	-1.15/0.12	-0.04/-2.31	-7.15/-12.96	-12.67/-6.32	-1.53/1.22	2.68/2.9	1.81/-0.64	-2.47/-2.24	-1.33/-0.16	0.64/0.39	-0.73/-2.93	-5.4/-5.78
Θ(140°)	-7.79/-6.03	-3.95/-1.27	0.26/0.58	-0.12/-1.14	-1.26/-1.96	-3/3.22	-2.57/-1.65	-1.29/-2.01	-4.27/-6.08	-7.11/-5.91	-4.36/-3	-1.5/-0.85	-1.46/-2.58	-3.52/-3.79	-2.79/-1.01	0.42/0.63	-0.5/-2.52	-4.75/-5.1
Θ(150°)	-13.03/-9.29	-6.06/-2.9	-0.65/0.33	0.07/-1.42	-3.68/-6.52	-7.48/-6.4	-5.63/-5.81	-5.77/-7.64	-6.57/-6.62	-6.5/-5.37	-3.82/-2.34	-1.38/-0.89	-0.88/-1.19	-2.09/-3.1	-2.85/-1.6	-0.72/-0.68	-1.62/-3.98	-7.62/-11.74
Θ(160°)	-8.88/-6.43	-4.65/-2.9	-1.63/-1.02	-1.23/-2.51	-4.5/-5.79	-8.93/-9.97	-4.69/-3.69	-3.71/-4.44	-8.85/-6.29	-3.99/-2.33	-1.39/-0.93	-1.14/-2.09	-3.49/-4.79	-4.79/-3.47	-2.71/-2.86	-3.71/-5.31	-7.87/-8.52	
Θ(170°)	-9.3/-8.18	-7.41/-6.54	-5.77/-5.19	-4.98/-5.43	-5.74/-5.18	-4.47/-4.08	-4.36/-5.32	-6.76/-8.74	-11/-10.76	-8.34/-5.97	-4.57/-3.53	-3.25/-3.68	-4.68/-5.87	-6.84/-7.48	-7.02/-6.2	-6.06/-6.72	-8.15/-10.2	-10.21/-10.11
Θ(180°)	-9.25/-8.42	-8.73/-7.7	-6.43/-5.09	-4.24/-3.85	-3.88/-4.27	-5.13/-6.07	-6.8/-7.77	-8.16/-8.12	-8.28/-8.65	-9.17/-9.8	-9.19/-8.69	-8.91/-8.66	-8.26/-7.55	-7.05/-6.92	-6.87/-7.38	-8.41/-10.02	-12/-11.8	-10.77/-9.62
Freq(Hz)	2.45GPol.	Theta-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dBi)	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°)	2.41/2.01	1.46/0.64	-0.45/-1.84	-3.69/-5.9	-8.46/-9.49	-1.85/-5.01	-2.26/0.27	1.09/1.96	2.29/2.36	2.18/1.73	1.09/0.29	-0.76/-2.35	-4.25/-6.97	-9.61/-9.6	1.79/1.62	-2/-0.39	0.79/2.72	2.16/2.4
Θ(10°)	3.56/3.24	2.49/1.49	0.02/-1.85	-4.2/-6.82	-8.8/-9.2	-8.87/-6.21	-3.14/-1.05	0.46/1.38	1.82/2.07	1.89/1.39	0.77/0.02	-0.91/-2.16	-4.16/-6.94	-9.27/-8.78	-5.72/-2.91	-0.9/0.65	1.82/2.77	3.29/3.51
Θ(20°)	3.67/3.55	3.11/2.1	0.54/-1.64	-3.79/-5.96	-7.43/-7.77	-7.63/-5.6	-2.95/-1.06	0.22/1.12	1.72/2.08	2.04/1.64	1.03/0.35	-0.5/-1.66	-4.6/-76	-8.43/-7.99	-4.68/-2.08	-0.31/1.3	2.12/2.86	3.55/3.66
Θ(30°)	2.82/2.65	2.27/1.1	0.5/-2.54	-4.37/-5.46	-6.02/-6.07	-5.96/-4.02	-1.97/-0.42	0.6/1.4	2.09/2.59	3.17/2.33	1.78/0.71	-0.56/-2.46	-4.66/-7.46	-8.28/-7.21	-4.52/-2.25	-0.48/0.83	1.63/2.19	2.53/2.79
Θ(40°)	2.54/2.04	1.18/0.22	-1.03/-2.66	-4.23/-4.94	-4.95/-4.84	-2.03/2.5	-0.62/0.58	1.11/1.46	2.82/2.9	3.21/2.63	2.04/0.94	-0.64/-2.8	-5.27/-7.83	-8.45/-7.27	-4.77/-2.89	-1.16/0.27	1.49/2.29	2.62/2.64
Θ(50°)	0.6/-0.11	-1.34/-2.06	-2.37/-2.78	-3.81/-4.54	-4.65/-4.02	-2.8/-1.03	0.26/0.44	-0.21/-0.31	0.36/0.92	0.95/0.48	-0.15/-0.85	-1.51/-2.38	-4.21/-6.2	-8.67/-8.26	-6.33/-4.77	-3.2/-1.1	0.27/0.94	1.03/0.94
Θ(60°)	-0.22/0.17	-0.34/-1.53	-2.1/-2.26	-3.36/-4.77	-5.72/-5.02	-3.37/-1.37	-0.21/-0.18	-0.71/-1.1	-0.31/-0.1	-0.45/-1.29	-2.42/-2.99	-2.77/-2.66	-2.93/-3.14	-4.05/-5.13	-5.29/-3.28	-1.46/-0.12	0.5/-0.08	-0.76/-0.91
Θ(70°)	-1.12/-0.49	-0.79/-1.94	-1.6/-0.56	-0.65/-2.21	-3.82/-4.68	-1.88/-1.56	-1.51/-1.78	-2.2/-2.44	-1.41/-1.33	-2.87/-3.42	-3.92/-2.1	-3.33/-4.2	-3.89/-3.14	-2.97/-3.79	-3.92/-2.4	-0.47/0.33	0.47/0.01	-0.74/-1.29
Θ(80°)	-2.22/-2.41	-2.85/-3.93	-4.1/-3.11	-3.35/-4.53	-6.08/-6.49	-6.25/-5.92	-3.76/-2.78	-3.35/-3.46	-2.25/-1.9	-2.28/-3.1	-3.45/-3.42	-3.68/-4.11	-4.5/-4.42	-3.57/-3.61	-3.95/-3.27	-2.62/-2.27	-2.47/-2.36	-1.9/-1.89
Θ(90°)	-3.01/-3.17	-3.83/-5.27	-5.25/-3.22	-3.56/-4.8	-5.51/-4.97	-4.48/-3.26	-1.62/-1.37	-3.69/-5.93	-4.7/-3.84	-4.23/-4.51	-4.09/-3.79	-2.77/-1.81	-1.43/-1.61	-1.54/-1.08	-0.7/0.73	-1.09/-1.65	-2.28/-2.52	-2.69/-2.9
Θ(100°)	-2.71/-2.99	-2.92/-3.09	-2.93/-1.3	-1.02/-2.34	-3.1/-3.33	-3.78/-5.61	-0.57/-10.97	-3.98/-4.48	-5.67/-5.31	-5.13/-5.58	-4.09/-2.4	-1.58/-1.04	-0.61/-0.4	-0.65/-1.11	-0.9/-0.52	-1.19/-1.55	-1.3/-1.61	-3.07/-4.61
Θ(110°)	-2.82/-3.31	-5.43/-6.9	-4.69/-2.88	-2.37/-3.21	-4.27/-3.84	-3.82/-4.39	-5.93/-8.81	-10.73/-6.44	-4.35/-4.4	-4.76/-3.98	-3.52/-4.6	-7.01/-7.8	-5.52/-4.13	-2.43/-1.25	-0.44/-0.32	-1.23/-2.19	-2.26/-3.11	-4.19/-5.53
Θ(120°)	-4.63/-3.7	-3.9/-6.36	-8.52/-5.65	-3.28/-2.47	-2.83/-3.89	-4.98/-5.18	-6.84/-6.62	-11.84/-9.65	-7.41/-6.97	-6.05/-3.6	-5.4/-5.85	-5.54/-3.99	-3.17/-3.12	-3.31/-2.85	-2.31/-1.43	-1.19/-1.55	-1.3/-1.61	-3.07/-4.61
Θ(130°)	-3.46/-2.28	-2.02/-4.67	-6.94/-7.73	-1.85/-1.27	-2.2/-4.36	-5.71/-5.48	-6.75/-7.55	-9.07/-10.98	-5.97/-7.55	-10.28/-9.22	-5.28/-3.19	-1.21/-0.56	-0.59/0.04	0.57/0.93	0.82/-0.37	-2.79/-5.2	-4.19/-3.43	
Θ(140°)	-0.9/-0.86	-2.12/-4.65	-6.81/-4.13	-1.96/-1.42	-2.45/-2.84	-2.29/-1.07	-0.99/-1.73	-3.01/-3.27	-2.91/-3.07	-3.86/-4.69	-4.61/-4.37	-3.66/-2.13	-0.50/0.17	-0.75/-1.2	-0.96/-0.7	-0.82/-1.41	-3.15/-5.22	-4.19/-2.35
Θ(150°)	-7.67/-7.47	-6.85/-5.95	-4.21/-2.59	-1.81/-1.46	-1.58/-1.41	-0.53/0.33	0.56/0.18	-0.88/-2.46	-4.22/-6.04	-7.11/-7.75	-6.43/-4.85	-2.68/-0.81	0.43/0.94	1.06/1.24	1.44/-1.42	0.93/-0.02	-1.45/-3.4	-5.47/-6.82
Θ(160°)	-1.91/-2.35	-2.78/-3.79	-4.34/-4.41	-2.63/-2.22	-1.63/-2.22	-1.73/-1	-1.54/-1.77	-0.99/-1.1	-1.3/-1.04	-0.99/-1.1	-1.54/-1.77	-1.37/-1.01	-0.73/-0.5	-0.49/-0.37	-0.43/-0.77	-1.37/-2.12	-2.71/-2.38	-1.83/-1.71
Θ(170°)	-4.7/-5.29	-6.21/-7	-7.62/-8.65	-8.44/-8.16	-7.8/-6.22	-3.46/-2.5	-1.67/-1	-0.5/-0.4	-0.62/-1.04	-1.76/-2.68	-3.88/-5.05	-5.32/-5.16	-4.99/-5.05	-5.22/-5.87	-6.61/-7.26	-6.92/-6.44	-5.6/-5.16	
Θ(180°)	-6.38/-6.54	-6.7/-6.71	-7.44/-8.36	-8.57/-11.03	-11.62/-10.28	-9.27/-8	-6.61/-5.7	-5.25/-4.88	-4.91/-5.24	-5.39/-5.78	-6.25/-6.88	-7.56/-9.18	-10.88/-12.67	-12.47/-11.76	-10.9/-9.13	-7.51/-6.22	-5.43/-5.3	-5.25/-5.45
Freq(Hz)	5.2GPol.	Phi-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
DG(dBi)	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°)	-0.14/0.35	0.87/1.34	1.88/2.26	2.41/2.37	1.87/1.65	1.76/1.66	1.34/1.08	0.74/0.34	-0.23/-0.61	-0.64/-0.22	0.46/1.34	2.12/2.26	2.22/1.74	1.5/1.61	1.52/1.8	1.69/1.52	1.08/0.65	0.18/-0.34
Θ(10°)	0.01/0.58	1.1/1.9	2.38/2.72	2.68/2.26	1.77/1.57	1.51/1.45	1.22/0.94	0.81/0.84	-0.41/0.11	1.18/1.42	1.69/1.83	2.02/1.64	1.59/1.32	1.18/1.42	1.59/1.83	1.59/1.32	0.82/0.37	0.04/-0.11
Θ(20°)	-0.83/-0.46	0.02/0.79	1.62/2.46	2.42/2.25	2.16/1.96	2.05/1.75	1.51/1.71	1.86/1.44	0.79/0.2	-0.24/0.27	0.50/0.77	0.93/1.15	1.46/1.39	0.97/0.83	0.87/1.14	1.16/1.11	0.81/0.56	0.57/-0.15
Θ(30°)	-1.97/-1.65	-1.16/-0.41	0.18/1.05	1.62/2.23	2.41/2.34	1.91/1.45	1.68/1.85	1.63/0.7										



Radiated Composite Gain Data

Appendix A

Θ(70°)	-1.27/-1.5	-2.01/2.09	-3.37/-1.51	-1.35/-4.42	-6.64/-8.1	-5.76/-3.04	-1.21/-0.83	-0.41/-1.06	-2.27/-3.19	-3.64/-3.22	-3.88/-3.57	-3.26/-3.43	-2.31/-2.94	-2.21/-1.93	-2.7/-3.45	-1.91/-1.94	-1.27/-1.16	-0.56/-0.67
Θ(80°)	-1.62/-2.32	-3.24/-3.49	-5.06/-3.27	-2.5/-2.54	-4.88/-5.83	-4.2/-3.4	-2.81/-1.83	-1.67/-2.23	-3.44/-5.07	-4.04/-6.06	-6.23/-5.19	-3.64/-3.43	-3.48/-1.99	-0.83/-1.42	-1.16/-0.85	-0.86/-2.07	-0.95/-0.41	-0.88/-1.5
Θ(90°)	-3.11/-3.49	-5.86/-5.37	-5.26/-4.26	-5.17/-6.16	-9.08/-9.51	-5.95/-3.18	-3.07/-1.77	-1.59/-2.68	-3.39/-4.36	-3.7/-4.63	-4.79/-3.67	-3.23/-2.93	-2.1/-1.2	-0.49/-1.44	-2.14/-0.87	-0.75/-1.7	-2.82/-2.27	-2.83/-2.67
Θ(100°)	-3.17/-3.22	-6.01/-6	-5.16/-3.36	-6.73/-6.45	-6.19/-5.21	-5.33/-3.75	-3.26/-2.53	-4.77/-5.4	-5.6/-6	-3.92/-3.61	-4.7/-5.04	-4.44/-2.48	-2.8/-1.36	-1.52/-2.4	-2.8/-0.3	-0.3/-2.94	-3.37/-3.06	-3.46/-2.49
Θ(110°)	-5.52/-5.08	-7.73/-5.53	-4.98/-3.71	-6.8/-7.2	-6.87/-5.97	-3.81/-3.53	-2.72/-1.38	-3.48/-3.39	-5.12/-4.31	-5.25/-2.84	-4.1/-4.55	-2.46/-3.39	-1.85/0.81	-0.39/-0.8	-1.56/-0.08	-1.24/-2.79	-4.06/-3.37	-3.98/-2.47
Θ(120°)	-3.96/-6.49	-6.21/-4.87	-4.97/-4.83	-5.33/-4.88	-4.13/-2.35	-3.77/-4.38	-3.32/-3.63	-4.89/-5.95	-5.9/-5.08	-2.54/-4.42	-6.37/-4.67	-4.14/-4.45	-1.89/-2.02	-2.23/-2.84	-2.92/0.36	-1.28/-2.91	-3.83/-3.71	-4.89/-2.66
Θ(130°)	-4.37/-5.87	-7.04/-6.25	-4.88/-7.97	-8.09/-4.21	-3.16/-4.35	-4.01/-3.97	-3.09/-4.84	-3.89/-8.61	-4.56/-6.81	-3.77/-3.56	-3.14/-2.61	-4.25/-3.4	-0.26/-0.86	0.56/-0.87	-2.15/-0.36	1.41/-1.76	-0.74/-5.07	-2.21/-1.14
Θ(140°)	-3.77/-4.86	-5.3/-6.92	-8.06/-9	-7.23/-5.57	-4.21/-3.86	-1.67/-1.16	-2.2/-2.77	-4.33/-7.46	-6.08/-4.15	-3.46/-3.52	-3.77/-4.64	-6.14/-1.56	-2.08/-2.2	-0.78/-1.48	-4.48/-3.51	-1.82/-1.31	-6.65/-3.79	-3.43/-2.96
Θ(150°)	-7.03/-7.59	-8.76/-11.32	-11.87/-11.07	-7.57/-5.18	-4.7/-4.65	-4.94/-5.16	-5.42/-7.04	-9.47/-10.3	-8.92/-6.34	-4.83/-6.33	-8.95/-11.81	-8.6/-4.17	-3.11/-1.3	0.71/0.86	-0.94/-2.55	-1.81/-2.44	-5.88/-4.5	-3.53/-4.74
Θ(160°)	-10.06/-10.39	-9.95/-9.56	-9.06/-9.33	-7.91/-7.3	-5.88/-4.34	-3.99/-4.82	-5.29/-5.72	-6.2/-6.95	-6.34/-5.59	-4.96/-5.08	-5.41/-6.28	-6.61/-5.85	-4.28/-2.62	-1.11/-1.12	-2.24/-4.2	-5.62/-6.71	-7.27/-5.17	-4.83/-6.75
Θ(170°)	-3.09/-5.56	-8.3/-10.01	-9.96/-9.04	-9.22/-7.98	-5.58/-3.35	-2.17/-1.96	-1.39/-0.93	-1.06/-1.4	-1.69/-2	-2.63/-3.41	-4.44/-6.17	-7.04/-6.95	-4.12/-2.27	-1.6/-1.76	-1.44/-2.17	-2.58/-2.29	-2.2/-2.56	-1.96/-1.7
Θ(180°)	-4.38/-4.68	-5.53/-6.61	-6.08/-6.17	-6.28/-6.05	-4.61/-3.46	-2.61/-1.84	-1.36/-1.09	-0.96/-0.87	-1.02/-1.9	-3.33/-4.27	-5.05/-5.89	-5.84/-4.45	-3.75/-3.55	-3.03/-2.94	-3.6/-4.31	-4.06/-3.41	-3.04/-2.84	-3.14/-3.8
Freq(Hz)	5.6GPol.	Phi-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	-1.86/-1.95	-1.8/-1.44	-0.94/-0.79	-0.74/-0.49	-0.73/-0.01	0.11/0.32	0.24/-0.13	-0.55/-1.19	-1.69/-2.39	-2.76/-2.52	-1.98/-1.01	-0.57/-0.27	-0.83/-0.74	-0.03/0.21	-0.28/-0.3	-0.12/-0.1	-1.52/-1.24	-
Θ(10°)	-0.59/-1.07	-1.1/-1.01	-0.8/-1.04	-0.5/-0.12	0.43/0.39	0.55/0.51	0.59/0.29	0.09/-0.19	-0.85/-1.65	-2.08/-1.54	-0.78/-0.69	-0.42/0.22	0/-0.25	0.38/0.71	0.71/0.88	1.21/3	0.86/0.17	0.12/-0.27
Θ(20°)	-0.76/-0.99	-0.1/-0.34	0.64/-1.43	1.78/-1.59	1.26/-1.1	0.88/0.32	0.44/0.39	-0.18/-0.52	-1.14/-2.85	-4.03/-2.84	-1.77/-0.62	-0.31/-0.44	-0.47/-0.75	-0.77/-0.66	0.08/0.8	0.83/0.34	0.12/0.5	0.56/0.07
Θ(30°)	-2.62/-1.25	-0.23/0.81	1.52/-2.28	2.24/-1.97	1.93/2.08	1.97/-1.49	0.92/0.05	-0.69/-0.96	-0.79/-0.81	0.26/0.12	0.47/0.8	1.26/-1.42	1.82/0.6	0.66/0.73	0.81/-0.45	-1.42/-2.03	-1.88/-2.36	-
Θ(40°)	-3.13/-1.51	-0.81/-0.27	0.39/0.85	1.03/-1.94	1.95/-1.68	2.38/2.48	1.98/-1.22	0.43/-0.34	-0.86/-0.76	-0.57/-0.01	0.8/-1.55	2.82/3.15	3.11/2.37	1/0.73	0.98/0.19	-0.23/-0.52	-1.36/-2.79	-4.06/-3.46
Θ(50°)	-3.74/-3.5	-1.42/-2.83	-0.61/-1.8	2.12/4	2.32/2.2	2.93/2.99	2.81/2.11	1.06/0.34	0.16/-0.63	-1.02/-0.71	1.19/2.26	2.32/-1.82	1.42/-1.51	1.52/-0.67	-0.36/-0.15	-0.86/-1.41	-1.8/-1.88	-2.57/-3.12
Θ(60°)	-3.14/-2.37	-1.02/0.34	1.64/2.03	3.04/3.8	3.64/3.72	3.16/3.36	3.59/2.55	0.79/0.08	0.1/-0.69	-1.19/-1.06	0.06/0.53	-1.15/-2.33	1.18/0.64	0.45/-0.58	-0.86/-0.17	-1.15/-2.33	-1.89/-2.51	-3.53/-3.63
Θ(70°)	-1.98/-1.09	-0.72/0.3	0.98/0.69	2.07/2.19	2.51/2.7	3.22/3.45	3.45/2.71	1.55/0.53	0.28/-0.43	-0.73/-0.89	-0.8/-0.73	0.54/-1.21	2.33/-1.69	1.98/-1.15	-0.11/0.43	-0.62/-0.63	-1.53/-3.9	-3.84/-2.72
Θ(80°)	-0.4/-0.3	1.01/0.72	-0.22/0.83	1.52/-1.96	1.28/-1.82	3.12/-15	0.51/-0.74	3.1/0.25	-0.58/-1.36	-0.47/-0.67	-1.66/-2.29	-0.08/-1.22	2.42/-95	0.7/0.02	-0.03/-1.16	-2.32/-5.07	-4.57/-2.42	-
Θ(90°)	-0.23/-0.37	0.76/0.27	-0.39/0.37	0.3/-1.99	0.44/-1.48	2.72/-1.38	1.97/2.34	0.3/-1.99	-0.06/-0.38	-1.4/-1.4	0.08/2.37	2.27/2.91	1.43/-14	3.25/3.17	3.89/2.49	2.27/2.91	0.43/-1.41	-5.02/-2.59
Θ(100°)	-1.03/-0.27	0.83/-0.7	-0.65/0.06	0.41/-0.55	0.33/-1	0.92/0.49	0.63/0.6	0.05/-1.59	-2.14/-2.22	-2.5/-0.74	-1.36/-1.5	0.76/-1.66	3/-1.89	2.61/0.55	-0.01/0.78	-0.74/-0.62	-1.23/-6.23	-5.55/-3.22
Θ(110°)	-2.5/-0.93	0.55/-0.67	-2.16/-2.06	-1.39/-1.76	-2.17/-1.83	-0.03/-1.16	-0.01/0.03	-0.1/-1.37	-0.93/-2.93	-1.23/-1.74	-3.36/-1.27	-1.4/-1.29	0.23/0.79	0.91/-0.5	-1.54/-2.5	-3.65/-3.76	-1.79/-5.22	-5.04/-3.49
Θ(120°)	-3.46/-3.4	-2.23/-2.87	-3.85/-2.51	-0.6/-1.97	-4.36/-5.26	-0.5/-1.25	-0.57/-2.14	-0.94/-0.74	-1.21/0.67	-1.32/-2.55	-2.75/-5.71	-3.14/-3.25	-3.46/-2.87	3.65/-4.13	-2.19/-4.31	-0.81/-1.8	-6.14/-0.72	-2.04/-2.36
Θ(130°)	-3.71/-3.17	-4.52/-3.78	-5.49/-5.58	-3.73/-4.61	-5.78/-7.63	-4.97/-3.99	-3.96/-3.99	-3.2/-2.31	-4.46/-3.94	-5.45/-2.01	-1/-1.33	-0.57/-0.79	1.17/0.06	-0.14/-2.98	-0.81/-1.8	-2.19/-4.31	-6.14/-0.72	-2.04/-2.36
Θ(140°)	-5.06/-5.78	-4.6/-4.18	-4.89/-6.03	-3.73/-4.68	-7.62/-5.99	-5.18/-5.15	-4.16/-3.45	-3.58/-2.93	-4.03/-2.78	-3.36/-0.44	-0.35/-0.5	-0.34/-0.67	-3.04/-2.25	-1.05/-0.66	-4.32/-4.53	-2.71/-2.41	-4.34/-5.54	-1.97/-2.41
Θ(150°)	-3.84/-5.29	-5.39/-6.73	-5.91/-4.91	-4.84/-6.03	-8.4/-9.06	-10.8/-11.66	-9.83/-6.39	-3.68/-3.18	-5.12/-6.71	-4.64/-1.75	-0.74/-1.07	-0.99/-1.51	-2.28/-3.05	-4.84/-6.04	-5.85/-5.29	-5.06/-6.34	-7.69/-7.71	-5.19/-3.42
Θ(160°)	-5.99/-6.8	-7.06/-6.54	-9.84/-8.87	-6.92/-6.66	-7.3/-8.28	-4.3/-5.98	-5.67/-6.19	-5.91/-5.4	-4.77/-4.44	-4.43/-4.43	-3.34/-2.79	-7.21/-7.5	-3.09/-5.16	-6.84/-6.86	-7.21/-7.5	-9.35/-9.31	-7.29/-7.18	-
Θ(170°)	-4.96/-4.52	-3.71/-3.49	-3.11/-3.37	-3.87/-5.21	-6.41/-6.42	-5.62/-5.64	-5.86/-4.97	-4.52/-3.67	-2.99/-1.51	-0.33/0.26	0.62/0.17	0.3/0.29	-0.33/-1.7	-4.06/-4.74	-9.5/-9.2	-7.06/-6.09	-5.69/-6.06	-6.31/-6.5
Θ(180°)	-4.67/-3.82	-3.3/-3.34	-2.8/-2.95	-3.33/-3.81	-4.26/-4.68	-5.65/-7.21	-7.66/-8.35	-7.7/-5.95	-4.19/-3.13	-2.17/-1.87	-1.77/-1.27	-1.4/-2.47	-3.75/-5.62	-7.28/-7.88	-8.27/-8.55	-8.67/-9	-9.35/-8.1	-6.28/-5.14
Freq(Hz)	5.6GPol.	Theta-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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°)	0.55/0.45	0.3/0.38	-0.15/-0.94	-1.85/-2.07	-2.3/-2.31	-0.86/-1.01	-1.21/-0.87	-0.86/-1.01	-1.04/-0.37	-2.05/-2.18	0.29/-0.47	-0.77/-0.81	-1.41/-1.67	-2.55/-2.18	-1.54/-1.06	-0.32/-0.27	-0.69/-0.76	-0.39/0.09
Θ(10°)	0.57/1.26	1.52/-1.19	1.3/0.54	-0.5/-1.92	-2.74/-2.87	-3.1/-2.61	-1.92/-1.63	-1.37/-0.93	-0.21/0.24	0.51/0.55	0.38/0.78	0.34/-0.91	-1.92/-2.11	-2.52/-1.72	-0.89/-0.1	0.39/0.64	0.62/0.28	0.28/0.21
Θ(20°)	0.61/54	2.18/2.06	1.77/-1.78	1.16/-0.07	-1.1/-0.93	-0.34/0.51	0.91/0.84	0.32/0.02	-0.05/0.27	0.88/0.85	0.06/-0.66	-0.87/-1.45	-2.44/-2.99	-2.25/-3.1	-0.48/-0.17	-0.46/0.07	0.91/-1.3	0.97/0.33
Θ(30°)	0.74/0.53	1.02/-1.71	1.32/0.74	0.53/0.86	1.37/0.57	-0.05/0.68	1/1.17	1.26/-1.11	0.27/0.18	0.41/0.27	-0.7/-2.01	-2.59/-2.57	-3.44/-3.41	-2.84/-2.86	-2.4/-1.35	-0.53/-0.74	-1.04/-0.38	0.39/0.78
Θ(40°)	0.39/0.39	0.56/0.73	0.01/-0.29	-0.33/-1.04	-1.89/-1.13	-0.46/0.36	0.27/-0.68	-0.23/-0.12	-1.12/-1.31	-1.01/-1.38	-3.29/-4.43	-1.25/-2.1	-3.29/-4.43	-5.25/-3.88	-2.09/-1.97	-0.64/-1.06	-1.26/-0.36	-
Θ(50°)	-0.43/-0.38	-0.19/-0.77	-1.79/-2.07	-1.39/-2.04	-3.53/-4.37	-2.36/-2.56	-1.89/-2.47	-2.62/-3.09	-3.13/-2.37	-2.94/-2.54	-2.28/-2.28	-2.22/-2.95	-3.38/-3.24	-3.33/-2.96	-3.45/-1.23	-0.86/-0.08	-0.22/-0.3	-0.13/-0.36
Θ(60°)	-1.2/-0.83	-1.41/-2.66	-2.33/-2.72	-2.64/-2.56	-3.01/-4.14	-3.22/-2.72	-1.46/-1.59	-2.84/-3	-3.4/-3.59	-4.11/-4.93	-4.56/-4.53	-4.45/-5.56	-4.87/-3.58	-4.63/-4.35	-3.14/-2.35	-2.35/-1.69	-0.37/-0.18	-
Θ(70°)	-1.1/-1.68	-2.93/-3.09	-3.04/-2.07	-3.89/-4.01	-3.88/-3.98	-3.99/-5.01	-4.59/-2.45	-2.48/-3.61	-3.88/-2.98	-3.1/-3.08	-4.39/-4.19	-4.28/-4.93	-3.79/-3.27	-4.43/-3.79	-1.51/-3.06	-3.03/-1.34	-0.73/0.24	-
Θ(80°)	-2.02/-2.74	-3.54/-3.47	-3.18/-1.06	-1.92/-4.34	-6.65/-7.44	-5.8/-3.65	-3.45/-1.92	-0.94/-2.82	-5.98/-5.78	-5.47/-5.18	-6.61/-5.57	-6.89/-5.13	-4.17/-2.61	-4/-5.58	-5.03/-4.24	-2.76/-3.62	-3.25/-2.05	-1.39/-0.72
Θ(90°)	-1.83/-3.25	-4.02/-4.69	-4.71/-4.6	-5.41/-8.68	-5.79/-5.35	-6.69/-6.03	-3.52/-2.59	-1.69/-2.66	-4.11/-4.87	-3.14/-4.49	-4.17/-5.06	-6.22/-4.09	-2.93/-0.92	-2.86/-3.75	-3.24/-1.59	-2.06/-3.28	-3.93/-2.41	-1.24/-1.58
Θ(100°)	-3.58/-3.92	-5.68/-5.25	-4.56/-4.32	-4.85/-7.09	-8.14/-7.13	-4.4/-4.8	-4.59/-5.29	-6.48/-6.8	-4.59/-5.4	-3.08/-1.38	-5.92/-3.41	-3.41/-2.16	-1.61/-2.18	-2.13/-3.64	-4.27/-4.75	-2.13/-3.64	-4.27/-4.75	-
Θ(110°)	-2.86/-5.08	-7.99/-7.13	-5.54/-4.35	-6.05/-5.79	-5.75/-4.83	-4.76/-3.13	-2.47/-1.04	-2.85/-3.97	-7.31/-4.77	-4.39/-5.35	-5.77/-5.25	-5.14/-4.3	-5.14/-0.96	-1.23/-1.97	-4.76/-2.55	-2.06/-4.81	-6/-4.61	-3.25/-2.72
Θ(120°)	-4.27/-7.46	-7.54/-5.51	-3.72/-3.89	-4.07/-3.77	-3.67/-4.78	-7.33/-4.41	-3.72/-3.3	-3.34/-4.67	-8.82/-7.46	-4.06/-3.66	-5.07/-6.78	-5.29/-4.01						



Radiated Composite Gain Data

Appendix A

Gain Result

Freq(Hz)	2.45GPol.	PhiAnt. 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°)	-19.45/-15.59	-11.69/-9.11	-7.36/-5.96	-5.02/-4.27	-3.77/-3.64	-3.91/-4.43	-5.34/-6.66	-8.37/-10.35	-12.95/-16.99	-17.81/-18.23	-17.17/-32.61	-9.34/-8.06	-7.03/-6.41	-6.01/-5.9	-6.88/-6.92	-2.64/-4.42	-5.59/-7.12	-16.76/-18.99
Theta(10°)	-19.04/-14.31	-10.29/-7.83	-6.33/-5.11	-4.43/-4.15	-3.84/-3.86	-3.99/-4.23	-5.01/-5.7	-6.78/-8.5	-11.31/-16.69	-18.55/-18.01	-12.47/-9.6	-7.79/-6.51	-5.91/-5.47	-5.61/-5.99	-6.71/-5.58	-8.49/-9.96	-11.91/-14	-17.31/-17.97
Theta(20°)	-17.95/-13.45	-10.05/-7.59	-5.76/-4.51	-3.75/-3.32	-3.21/-3.29	-3.32/-3.47	-3.45/-3.16	-4.43/-6.07	-9.07/-14.48	-18.42/-13.64	-9.2/-6.62	-5.53/-4.76	-4.77/-5.36	-6.17/-6.8	-6.6/-6.14	-6.48/-7.8	-9.42/-10.88	-13.01/-18.04
Theta(30°)	-17.63/-16.33	-11.47/-8.12	-6.38/-5.16	-4.25/-3.43	-2.63/-2.52	-17.62/-13.59	-2.46/-2.33	-2.08/-2.14	-7.11/-11.93	-17.62/-13.59	-8.91/-6.42	-5.21/-4.52	-4.43/-4.95	-5.07/-4.18	-3.17/-2.74	-3.41/-4.42	-5.59/-7.12	-8.95/-12.15
Theta(40°)	-17.98/-15.82	-8.62/-5.91	-4.46/-3.87	-3.57/-3.36	-3.24/-2.91	-2.36/-1.76	-1.51/-1.6	-2.09/-3.21	-5.24/-8.61	-15.72/-18.85	-11.94/-7.58	-5.24/-3.31	-2.44/-2.1	-1.77/-1.34	-1.29/-1.75	-2.1/-2.05	-2.21/-3.29	-5.63/-9.63
Theta(50°)	-18.19/-11.83	-7.41/-5.04	-3.06/-1.74	-1.41/-2.05	-3.53/-4.46	-3.32/-2	-1.88/-2.61	-3.97/-5.52	-7.79/-11.81	-18.52/-16.47	-10.26/-6.34	-3.59/-1.63	-0.77/-0.92	-1.73/-2.6	-3.12/-2.68	-1.68/-1.24	-1.6/-3.36	-6.68/-12.75
Theta(60°)	-18.04/-16.6	-13.36/-11.07	-8.37/-4.9	-2.86/-2.16	-3.09/-4.75	-3.27/-0.58	-0.19/-0.8	-3.05/-6.08	-10.18/-16.96	-18.34/-15.6	-10.05/-6.16	-3.5/-1.97	-1.68/-2.69	-4.83/-5.8	-3.82/-2.04	-1.61/-2.56	-4.69/-7.7	-11.38/-15.59
Theta(70°)	-15.37/-16.03	-11.24/-8.31	-6.14/-5.6	-4.23/-3.05	-3.44/-5.45	-6.33/-2.63	-0.99/-1.59	-3.86/-6.59	-9.4/-12.81	-17.28/-15.85	-9.98/-6.51	-3.61/-1.12	-0.04/-0.91	-3.15/-3.72	-2.35/-2.08	-3.07/-4.6	-5.99/-7.61	-9.37/-12.41
Theta(80°)	-13.44/-19.11	-12.91/-8.72	-7.49/-6.02	-4.54/-3.84	-3.86/-5.11	-6.19/-3.46	-1.36/-1.82	-4.03/-6.67	-9.2/-12.78	-18.12/-18.32	-13.13/-9.04	-4.09/-0.67	0.28/-1.14	-4.18/-3.16	-1.51/-2.18	-3.5/-3.87	-3.68/-4.37	-6.07/-9.34
Theta(90°)	-13.48/-16.98	-13.78/-8.6	-6.14/-6.16	-6.66/-5.71	-3.69/-3.47	-3.45/-1.43	0.29/-0.02	-2.23/-5.59	-9.97/-17.32	-18.03/-18.74	-13.05/-7.26	-3.11/-0.94	0.67/-1.9	-2.95/-1.79	-1.62/-2.28	-2.07/-1.42	-1.62/-2.76	-4.76/-8.11
Theta(100°)	-18.39/-19.23	-11.14/-5.88	-3.82/-3.6	-5.06/-7.78	-7.24/-6.39	-5.38/-2.09	-0.06/-0.13	-1.91/-4.46	-7.25/-11.37	-18.32/-18.94	-10.67/-6.18	-2.93/-1.1	-0.53/-1.12	-1.51/-1.47	-2.55/-4.17	-4.79/-4.15	-4.12/-6.06	-9.44/-13.95
Theta(110°)	-14.71/-8.1	-14.42/-7.5	-6.91/-7	-6.07/-7.3	-8.63/-9.59	-11.22/-6.44	-2.87/-2.71	-4.66/-7.43	-11.35/-18	-18.02/-12.59	-11.5/-9.42	-4.59/-2.03	-1.55/-3.28	-6.56/-7.2	-5.84/-4.39	-3.08/-2.47	-2.99/-4.62	-7.16/-10.53
Theta(120°)	-18.21/-18.37	-10.46/-5.2	-3.07/-3.14	-4.25/-4.05	-3.46/-3.37	-5.75/-8	-10.75/-19.15	-3.5/-6.06	-10.75/-19.15	-17.12/-18.65	-10.05/-4.13	-1.48/-0.63	-0.78/-1.71	-7.72/-5.43	-4.62/-7.87	-4.55/-5.99	-9.67/-15.58	
Theta(130°)	-16.15/-18.16	-10.52/-4.58	-1.79/-1.88	-3.46/-4.54	-3.62/-2.56	-3.29/-5.37	-6.08/-5.56	-6.26/-8.13	-11.98/-18.81	-19.29/-11.26	-5.61/-3.19	-2.27/-2.31	-3.74/-7.12	-8.75/-7.85	-7.63/-5.4	-2.78/-0.94	-0.25/-1.22	-4.21/-8.86
Theta(140°)	-18/-15.92	-10.97/-5.88	-3.6/-3.38	-5.54/-8.96	-8.06/-4.71	-8.26/-10.47	-13.23/-12.33	-11.54/-10.82	-12.16/-15.84	-19.25/-19.05	-14.54/-12.43	-10.03/-8.9	-9.34/-8.08	-5.8/-5.12	-5.42/-4.44	-3.84/-1.71	-2.1/-2.33	-5.42/-11.51
Theta(150°)	-17.34/-15.25	-13.72/-10.56	-7.94/-6.59	-6.66/-8.45	-9.95/-10.66	-11.22/-12.55	-14.86/-16.9	-18.82/-17.74	-14.29/-13.06	-18.82/-17.74	-8.97/-7.72	-6.14/-4.54	-5.32/-3.92	-4.16/-4.12	-3.24/-5.23	-4.42/-4.15	-4.32/-5.33	-9.67/-15.58
Theta(160°)	-14.78/-13.08	-12.78/-11.22	-8.98/-6.89	-5.87/-5.54	-5.84/-6.05	-6.32/-6.87	-7.96/-9.79	-13.23/-18.4	-18.45/-14.08	-10.12/-7.69	-6.35/-5.23	-4.42/-3.9	-3.8/-4.35	-5.26/-6.42	-7.35/-7.66	-8.21/-9.44	-10.85/-12.22	-14.29/-15.98
Theta(170°)	-17.36/-14.63	-12.82/-10.25	-8.5/-7.03	-6.44/-6.16	-6.22/-6.17	-6.46/-6.91	-7.8/-6.69	-10.33/-12.32	-14.21/-14.6	-13.63/-12.05	-10.83/-9.76	-9.66/-10.7	-12.49/-14.1	-13.15/-11.01	-9.47/-9.25	-10/-12.15	-15.19/-18.32	-18.48/-18.03
Theta(180°)	-16.61/-13.39	-12.35/-10.82	-9.13/-7.67	-7.15/-6.75	-6.65/-6.47	-6.27/-6.28	-6.51/-7.01	-7.76/-8.88	-10.4/-12.26	-15.48/-19.44	-18.95/-17.79	-18.46/-15.94	-13.01/-10.66	-9.21/-8.25	-8.17/-8.92	-10.61/-13.63	-17.91/-18.87	-17.32/-17.58
Freq(Hz)	2.45GPol.	ThetaAnt. 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°)	-4.86/-5.72	-6.38/-7.24	-8.06/-9.06	-10.34/-12.99	-18.62/-19.1	-5.07/-5.41	-5.13/-4.76	-5.8/-6.483	-5.07/-5.41	-5.07/-5.41	-18.8/-18.35	-15.75/-11.64	-9.18/-7.22	-18.8/-18.35	-15.75/-11.64	-9.18/-7.22	-18.8/-18.35	-15.75/-11.64
Theta(10°)	-2.42/-2.98	-3.74/-4.91	-6.38/-8.14	-10.19/-13.11	-18.58/-18.07	-18.05/-11.41	-7.72/-5.4	-3.84/-3.05	-2.76/-2.71	-2.97/-3.58	-4.29/-5.16	-6.5/-8.34	-11.78/-17.54	-18.31/-18.63	-12.72/-9.42	-7.34/-5.52	-4.27/-3.28	-2.52/-2.25
Theta(20°)	-1.79/-2.04	-2.26/-3.22	-4.93/-4.71	-10.75/-14.22	-19.31/-19.13	-17.5/-10.51	-6.23/-3.46	-1.68/-0.71	-0.11/-0.01	-1.785/-16.77	-1.36/-2.25	-9.61/-6.55	-9.61/-6.55	-17.85/-15.39	-10.78/-8.04	-6.04/-6.4	-3.63/-2.91	-2.31/-1.88
Theta(30°)	-2.83/-2.82	-2.83/-4.22	-6.22/-9.66	-13.01/-14.18	-18.18/-79	-18.61/-9.9	-4.99/-2.16	-0.510/-47	1.071/-38	2.43/-1.14	0.58/-0.27	-1.6/-4.16	-8.67/-16.67	-18.22/-15.13	-10.94/-8.28	-6.49/-5.29	-4.45/-3.81	-3.41/-2.97
Theta(40°)	-1.41/-1.79	-2.67/-3.7	-5.42/-8.95	-14.83/-18.27	-18.89/-19.27	-16.38/-9.29	-4.84/-2.35	-1.05/-0.25	0.410/-92	1.221/-19	0.69/-0.17	-1.45/-3.69	-7.43/-13.08	-12.81/-9.21	-8.26/-6.81	-4.92/-3.13	-2.01/-1.46	
Theta(50°)	-2.5/-3.22	-4.76/-5.61	-6.15/-7.39	-10.71/-14.47	-16.56/-15.43	-11.22/-6.14	-2.87/-1.53	-1.29/-1.3	-1.07/-0.59	-0.44/-0.8	-1.49/-2.34	-3.11/-4.35	-6.88/-10.24	-15.09/-18.43	-18.3/-18.67	-17.08/-10.9	-7.55/-4.92	-3.26/-2.5
Theta(60°)	-2.59/-2.54	-3.44/-4.76	-4.86/-4.39	-5.1/-7.74	-11.61/-15.6	-14.75/-8.62	-4.86/-3.27	-3.32/-3.28	-2.9/-2.57	-2.88/-3.84	-5.06/-5.27	-4.94/-5.84	-7.5/-9.19	-11.28/-13.2	-13.06/-9.32	-5.78/-3.9	-3.65/-4.37	-4.38/-3.59
Theta(70°)	-4.11/-3.67	-3.99/-6.28	-6.13/-4.43	-4.51/-6.64	-10.43/-14.48	-15.09/-11.06	-5.42/-5.85	-5.82/-5.94	-5.81/-5.57	-5.34/-4.58	-5.15/-5.84	-10.95/-12.23	-10.95/-12.23	-4.1/-2.67	-10.95/-6.59	-4.2/-6.7	-2.42/-3.12	-4.2/-5
Theta(80°)	-4.5/-3.84	-4.36/-7.37	-11.19/-10.3	-9.85/-12.1	-17.29/-19.17	-18.76/-14.49	-8.16/-5.3	-4.81/-5.69	-5.93/-5.69	-5.72/-6.52	-7.11/-7.17	-7.18/-56	-11.75/-19.18	-17.86/-17.87	-16.24/-10.03	-9.18/-9.13	-7.77/-5.82	-4.69/-4.5
Theta(90°)	-7.97/-8.01	-8.26/-9.56	-10.34/-8.62	-8.53/-8.66	-9.86/-11.3	-12.66/-11.52	-8.61/-6.84	-7.11/-8.01	-7.56/-7	-7.76/-8.31	-7.79/-7.87	-7.43/-7.89	-9.72/-11.73	-10.53/-9.36	-8.7/-7.7	-7.11/-6.86	-7.57/-7.89	-7.4/-7.42
Theta(100°)	-9.14/-8.38	-7.85/-8.85	-10.24/-7.62	-6.59/-7.5	-8.54/-9.33	-11.79/-10.69	-16.48/-13.16	-8.65/-10.02	-11.43/-13.89	-15.52/-18.24	-8.05/-6.59	-18.86/-12.41	-8.05/-6.59	-18.86/-12.41	-8.05/-6.59	-3.88/-4.1	-8.14/-9.25	-8.14/-9.25
Theta(110°)	-9.72/-9.84	-10.54/-13.41	-14.68/-10.69	-9.66/-11.2	-15.06/-13.15	-11.24/-11.04	-14.07/-17.38	-11.9/-8.82	-7.54/-6.86	-6.64/-6.87	-7.3/-8.33	-11.56/-19.42	-18.7/-17.82	-12.04/-10.17	-8.48/-7.62	-8.64/-13.29	-17.42/-15.09	-11.5/-9.58
Theta(120°)	-12.55/-13.12	-15/-18.66	-18.52/-18.62	-14.43/-12.7	-13.54/-15.49	-14.96/-13.6	-17.31/-18.99	-14.02/-10.86	-9.24/-8.7	-8/-8.6	-8.77/-10.95	-16.32/-17.9	-18.94/-13.45	-12.29/-13.05	-13.22/-12.13	-9.99/-8.02	-7.51/-8.84	-11.17/-12.1
Theta(130°)	-10.02/-8.27	-6.43/-8.2	-13.29/-14.08	-9.53/-8.23	-8.87/-10.93	-11.66/-13.41	-9.83/-9.39	-9.57/-10.71	-11.66/-13.32	-16.06/-12.5	-9.61/-6.44	-4.77/-4.63	-9.61/-4.83	-3.92/-4.54	-10.78/-9.42	-4.77/-5.83	-9.64/-18.74	-13.93/-10.81
Theta(140°)	-5.93/-5.74	-6.37/-7.33	-10.04/-6.77	-3.79/-2.98	-4.61/-5.58	-5.71/-5.53	-5.81/-6.08	-5.96/-4.64	-3.7/-3.42	-3.86/-4.57	-4.96/-5.64	-7.46/-8.29	-4.82/-2.58	-2.86/-3.9	-3.94/-3.81	-4.42/-6.13	-9.64/-13.58	-9.71/-6.83
Theta(150°)	-12.67/-12.08	-11.45/-10.44	-8.37/-5.65	-3.99/-3.05	-3.03/-2.91	-2.05/-1.16	-0.59/-0.5	-0.85/-1.7	-2.92/-4.39	-5.55/-6.3	-6.5/-6.82	-5.57/-3.48	-1.87/-1.38	-1.89/-2.5	-2.62/-2.78	-3.07/-3.76	-4.91/-6.9	-9.3/-11.74
Theta(160°)	-7.31/-5.58	-9.71/-7.159	-10.67/-9.45	-8.26/-6.86	-6.25/-4.96	-0.680/-11	0.590/-89	0.860/-7	0.430/-07	-0.44/-0.81	-0.99/-0.78	-0.87/-1.34	-4.02/-4.62	-4.82/-9.24	-4.79/-4.39	-5.45/-6.31		
Theta(170°)	-7.19/-6.79	-11.06/-12.98	-15.43/-17.98	-18.76/-17.68	-14.96/-11.51	-8.95/-6.77	-4.98/-3.75	-2.92/-2.38	-1.94/-1.73	-1.85/-2.06	-2.53/-3.01	-3.63/-4.22	-4.87/-5.78	-6.62/-7.42	-7.92/-8.37	-8.36/-7.83	-7.23/-6.66	-6.53/-6.57
Theta(180°)	-9.5/-9.86	-9.99/-9.15	-10.08/-11.02	-12.46/-15.1	-17.33/-18.3	-18.26/-18.88	-14.21/-11.31	-9.47/-8.37	-7.75/-7.27	-7.05/-7.3	-7.66/-8.26	-9.44/-11.99	-14.28/-16.95	-19.1/-19.16	-17.4/-15.1	-13.25/-11.44	-10.14/-9.43	-9.01/-9.11
Freq(Hz)	5.2GPol.	PhiAnt. 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°)	-14.77/-8.68	-6.38/-5.15	-3.32/-1.98	-1.03/-0.64	-0.6/-0.91	-1.41/-2.26	-3.35/-5.03	-7.6/-11.3	-17.21/-18.7	-18.4/-11.93	-7.59/-5.05	-3.1/-2.14	-1.37/-0.9	-0.69/-1.24	-1.79/-2.28	-3.38/-5.14	-7.49/-10.34	-15.68/-18.94
Theta(10°)	-14.51/-9.2	-5.57/-3.65	-2.87/-2.01	-1.43/-0.99	-1.06/-1.15	-1.343/-1.73	-3.81/-4.75	-6.78/-9.23	-19.51/-12.74	-7.87/-4.77	-3.04/-1.97	-0.42/-0.6	-1.13/-0.56	-0.94/-1.24	-2/-3.26	-5.35/-9.16	-15.34/-19.43	



Radiated Composite Gain Data

Appendix A

Θ(70°)	-10.39/-11.64	-13.33/-14.95	-16.27/-18.03	-7.56/-11.04	-10.82/-9.54	-6.48/-4.38	-3.15/-2.14	-2.76/-3.48	-4.82/-6.48	-8.37/-9.62	-8.83/-8.02	-5.94/-5.74	-6.42/-7.61	-8.65/-8.79	-11.57/-10.74	-9.27/-9.99	-11.65/-11.53	-10.36/-9.22
Θ(80°)	-10.94/-17.54	-14.76/-19.14	-18.62/-18.89	-13.65/-8.94	-7.53/-6.19	-3.95/-3.06	-3.92/-4.9	-5.59/-5.89	-6.62/-9.19	-9.89/-12.53	-9.9/-8.03	-6.97/-6.28	-7.69/-6.42	-5.18/-5.99	-6.43/-7.1	-9.77/-12.77	-9.53/-10.49	-11.19/-11.28
Θ(90°)	-13.9/-19	-19.04/-14.47	-16.83/-12.16	-10.46/-12.47	-17.99/-18.76	-7.73/-6.12	-5.14/-4.18	-8.7/-4.2	-9.72/-10.8	-10.82/-12.47	-9.14/-7.59	-6.57/-6.83	-6.91/-6.76	-4.58/-5.66	-6.99/-9.76	-10.11/-9.72	-10.38/-11.49	-17.83/-18.19
Θ(100°)	-17.45/-17.5	-17.25/-15.18	-13.64/-11.5	-11.39/-10.35	-7.2/-6.03	-6.29/-5.73	-7.32/-8.18	-12.92/-18.36	-18.53/-18.26	-18.28/-10.98	-11.48/-11.33	-9.88/-8.69	-5.7/-4.05	-4.47/-6.26	-9.77/-10	-11.51/-10.66	-11.52/-17.7	-18.04/-17.61
Θ(110°)	-18.12/-18.4	-17.9/-16.3	-14.24/-8.66	-8.57/-10.26	-8.65/-10.64	-5.67/-5.11	-6.55/-5.42	-7.69/-8.24	-13.48/-11.8	-17.2/-9.45	-8.79/-9.47	-11.35/-9.47	-5.78/-4.13	-6.41/-7.64	-4.59/-7.6	-17.9/-10.35	-13.61/-18.34	-17.87/-13.68
Θ(120°)	-10.79/-17.31	-18.92/-11.88	-11.49/-9.93	-9.35/-8.18	-6/-5.09	-10.9/-10.36	-6.1/-5.53	-19.22/-18.05	-14.31/-12.16	-10.9/-10.59	-9.79/-9.74	-6.87/-7.22	-6.71/-5.34	-13.04/-15.74	-13.09/-15.09	-17.71/-9.2		
Θ(130°)	-8.2/-17.52	-18.63/-14.03	-13.04/-17.71	-12.95/-7.74	-7.31/-6.66	-8.49/-5.03	-5.48/-7.87	-11.22/-14.95	-11.51/-8.41	-8.4/-6.15	-6.68/-15.77	-16.23/-10.62	-6.22/-6.41	-8.23/-9.48	-3.63/-3.58	-9.51/-13.6	-5.07/-8.43	-12.95/-7.2
Θ(140°)	-8.07/-9.39	-8.81/-11.13	-13.03/-13.82	-13.69/-12.01	-7.65/-9.08	-6.43/-6.21	-6.37/-9.71	-14.66/-17.72	-9.25/-6.1	-6.83/-4.31	-6.19/-12.16	-11.5/-9.18	-9.29/-8.72	-12.32/-12.62	-7.68/-3.26	-5.73/-7.75	-17.11/-6.3	-10.63/-10.75
Θ(150°)	-9.3/-12.45	-17.86/-19.1	-17.18/-17.02	-11.16/-8.17	-6.81/-5.73	-6.68/-5.86	-7.76/-10.26	-12.09/-16.7	-11.04/-11.13	-10.71/-10.39	-12.09/-18.7	-16.84/-11.53	-9.44/-9.05	-10.23/-10.66	-6.4/-2.94	-2.48/-5	-11.57/-6.28	-6.46/-9.31
Θ(160°)	-15.66/-13.02	-13.92/-18.03	-13.77/-12.3	-11.53/-10.16	-8.14/-8.55	-8.26/-7.54	-6.98/-8.92	-13.4/-17.49	-16.85/-16.83	-13.22/-10.74	-10.32/-14.18	-18.57/-18.55	-16.23/-17.95	-17.91/-15.77	-8.8/-6.06	-5.98/-9.34	-13.11/-10.33	-10.62/-16.98
Θ(170°)	-12.96/-11.77	-12.92/-12.88	-14.01/-14.35	-14.72/-11.12	-8.08/-6.98	-6.37/-6.21	-6.11/-6.46	-8.53/-10.6	-10.01/-8.69	-7.48/-6.23	-5.7/-6.02	-8.3/-12.46	-14.65/-12.31	-8.62/-7	-5.96/-5.68	-6.71/-8.58	-11.05/-12.75	-10.95/-9.9
Θ(180°)	-8.49/-10.79	-12.19/-13.19	-11.19/-11.86	-14.25/-17.53	-17.53/-18.5	-18.3/-15.57	-12.51/-10.06	-8.79/-7.91	-7.87/-9.15	-10.09/-11.12	-11.17/-8.5	-8.96/-8.87	-9.65/-13.51	-18.87/-18.28	-12.33/-8.72	-7.34/-6.79	-6.22/-5.75	
Freq(Hz)	5.6GPol.	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°)	-13.87/-10.8	-9.75/-8.4	-6.34/-5.12	-4.36/-3.73	-4.1/-4.63	-5.42/-5.62	-6.35/-8.45	-10.99/-15.54	-17.24/-18.88	-18.39/-13.31	-8.5/-6.11	-5.42/-4.37	-4.23/-3.97	-3.83/-4.72	-5.89/-6.72	-12.07/-9.74	-12.73/-18.99	
Θ(10°)	-18.85/-15.09	-11.8/-9.52	-7.63/-6.13	-4.46/-3.21	-2.7/-3.22	-3.56/-4.14	-4.44/-5.61	-8.67/-12.94	-16.68/-18.42	-16.42/-11.94	-7.4/-4.76	-3.17/-2.52	-2.31/-2.24	-2.24/-2.56	-3.57/-4.47	-6.45/-7.09	-9.91/-15.01	-17.44/-17.51
Θ(20°)	-18.08/-12.73	-7.09/-5.27	-4.69/-3.19	-2.27/-2.15	-1.96/-1.93	-2.75/-3.55	-4.04/-4.94	-6.82/-8.45	-11.45/-15.79	-16.41/-11.1	-8.28/-5.83	-3.82/-3.22	-3.51/-3.56	-5.12/-4.79	-5.96/-7.13	-8.47/-10.41	-13/-16.72	
Θ(30°)	-15.28/-8.99	-6.3/-3.84	-2.32/-1.36	-1.15/-1.22	-0.78/-0.16	-0.34/-1.67	-3.59/-5.78	-7.32/-9.18	-11.61/-18.79	-0.88/-1.4	-3.81/-2.74	-1.9/-0.97	-0.88/-1.45	-2.55/-3.73	-4.74/-6.83	-8.86/-11.32	-14.16/-18.7	
Θ(40°)	-15.41/-10.91	-8.69/-8.47	-5.69/-4.04	-2.22/-1.15	-0.86/-1	-0.49/-0.76	-1.9/-3.24	-4.74/-7.34	-11.48/-16.94	-13.17/-11.13	-9.79/-7.04	-3.85/-2.6	-1.59/-1.06	-0.73/-1.14	-1.21/-1.53	-2.85/-5.22	-7.47/-11.31	-18.8/-18.86
Θ(50°)	-17.4/-12.36	-14.14/-10.31	-5.16/-3.45	-2.18/-1	-0.04/-0.2	-0.1/-1.08	-2.53/-8.31	-4.74/-6.1	-7.45/-10.38	-13.81/-12.75	-9.73/-5.89	-3.6/-2.94	-2.29/-1.49	-1.35/-1.25	-1.48/-2.5	-4.22/-5.59	-7.65/-7.8	-9.08/-14.26
Θ(60°)	-14.18/-16.82	-11.8/-12.8	-4.31/-2.72	-0.84/-0.92	1.112.44	1.02/-0.74	-9.66/-3.18	-6.51/-10.63	-4.32/-4.71	-13.96/-13.35	-9.6/-7.31	-5.31/-3.36	-1.77/-2.46	-2.63/-3.68	-5.17/-7.92	-7.46/-7.92	-9.87/-12.94	
Θ(70°)	-12.41/-10.12	-7.92/-7.09	-4.37/-3.37	-1.95/-1.05	-0.49/-0.39	-0.33/-1.03	-2.02/-2.76	-3.44/-4.69	-6.69/-10.53	-18.04/-15.23	-10.84/-8.61	-5.53/-2.84	-1.08/-2.29	-1.22/-0.92	-2.03/-4.53	-5.65/-5.93	-8.71/-11.4	-12.98/-13.11
Θ(80°)	-7.2/-8.6	-6.88/-8.17	-6.42/-4.04	-3.11/-2.26	-2.43/-1.26	-1.59/-2.18	-2.64/-3.41	-4.64/-5.48	-8.2/-14.32	-17.63/-17.25	-15.97/-11.14	-7.68/-3.58	-2.46/-1.91	-0.97/-0.28	-1.83/-2.32	-3.82/-6.7	-9.53/-12.57	-10.01/-10.04
Θ(90°)	-6.21/-8.82	-7.73/-12.01	-7.91/-4.2	-3.22/-6.85	-3.37/-1.53	-3.02/-6.01	-5.72/-6.83	-8.88/-10.24	-11.05/-12.6	-13.42/-14.34	-12.13/-13.3	-8.63/-3.38	-1.81/-0.38	-0.08/-1.31	-2.12/-0.71	-3.42/-6.52	-7.57/-2.95	-9.56/-8.67
Θ(100°)	-8.31/-10.15	-8.86/-15.26	-11.67/-5.53	-5.23/-4.83	-4.35/-4.98	-4.88/-5.55	-7.31/-6.52	-6.67/-7.9	-11.17/-14.11	-19.18/-14.12	-15.1/-14.05	-10.14/-5.64	-2.04/-1.42	-0.95/-1.14	-1.79/-1.3	-7.56/-5.87	-7.12/-7.99	-9.56/-8.35
Θ(110°)	-6.43/-10.3	-7.58/-13.03	-11.84/-7.16	-9.62/-7.3	-7.07/-6.68	-6.44/-3.95	-5.21/-7.63	-5.75/-8.9	-9.02/-11.33	-11.84/-11.13	-12.47/-11.11	-13.66/-9.18	-3.37/-3.52	-2.46/-3.72	-2.67/-4.26	-10.78/-7.81	-6.64/-10.03	-11.67/-8.4
Θ(120°)	-10.18/-13.39	-11.01/-13.63	-18.36/-11.9	-18.16/-11.09	-10.36/-12.69	-8.88/-9.04	-6.27/-6.44	-9.96/-9.33	-8.12/-11.07	-13.12/-13.03	-16.15/-7.99	-5.59/-4.97	-11.10/-53	-10.87/-12.16	-12.14/-11.8			
Θ(130°)	-18.17/-12.5	-16.65/-17.87	-18.91/-17.88	-18.63/-16.03	-10.84/-14.84	-12.65/-7.99	-7.48/-8.06	-8.01/-7.67	-10.45/-12.65	-15.05/-10.21	-6.43/-8	-12.29/-8.76	-4.71/-4.31	-3.09/-7.28	-6.19/-7.16	-9.34/-10.61	-8.79/-7.78	-18.12/-18.65
Θ(140°)	-15.93/-18.48	-17.35/-17.66	-17.99/-18.14	-17.9/-16.83	-17.23/-18.57	-19.22/-12.49	-6.65/-6.71	-8.81/-9	-9.86/-11.61	-11.04/-10.58	-11.02/-14.1	-17.79/-11.8	-6.17/-5.11	-5.71/-8.62	-12.11/-13.73	-11.9/-8.17	-11.26/-14.43	-10.88/-12.25
Θ(150°)	-15.92/-18.94	-18.68/-16.58	-13.15/-14.72	-17.44/-17.98	-19.06/-18.9	-18.25/-19.34	-16.21/-9.64	-8.61/-12.34	-18.06/-19	-18.66/-14.76	-9.77/-9.94	-11.31/-10.57	-8.09/-7.27	-10.26/-15.61	-15.23/-13.6	-11.8/-15.19	-18.98/-18.65	-18.17/-14.88
Θ(160°)	-13.26/-13.06	-9.56/-10.35	-15.11/-17.93	-14.1/-11.55	-14.2/-14.82	-11.43/-9.52	-9.11/-8.06	-6.62/-5.11	-5.36/-7.02	-11.26/-18.75	-15.26/-9.9	-7.88/-7.57	-8.09/-8.93	-8.97/-9.58	-10.32/-11.01	-15.8/-17.95	-19.04/-18.48	-15.09/-14.75
Θ(170°)	-15.21/-17.85	-19.32/-18.75	-13.36/-10.63	-11.16/-12.49	-17.26/-16.26	-13.45/-11.44	-9.09/-7.48	-6.88/-6.29	-6.26/-6.76	-7.9/-10.73	-15.92/-17.53	-14.09/-11.57	-10.89/-11.23	-13.74/-14.93	-16.95/-17.95	-17.25/-18.72	-16.23/-13.55	-14.73/-16.65
Θ(180°)	-18.27/-17.33	-17.26/-18.95	-19.19/-17.79	-17.12/-17.13	-14.27/-12.81	-12.51/-14.37	-15/-15.24	-16.97/-18.36	-19.12/-19.21	-16.88/-14.73	-13.14/-11.9	-10.82/-11.92	-12.33/-13.72	-13.81/-13.62	-14.64/-15.69	-17.14/-17.79	-16.23/-15.87	-15.54/-15.34
Freq(Hz)	5.6GPol.	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°)	-4.56/-5.1	-6.06/-7.55	-9.38/-12.66	-18.08/-18.27	-18.77/-13.67	-11.05/-8.72	-7/-5.58	-4.85/-4.68	-4.54/-4.74	-4.8/-5.25	-17.18/-12.33	-9.63/-7.86	-5.71/-4.81	-4.15/-3.83				
Θ(10°)	-5.94/-6.3	-5.96/-7.02	-8.12/-10.52	-13.02/-17.09	-17.69/-16.11	-11.74/-8.83	-6.67/-5	-3.87/-3.38	-2.94/-3.32	-4.24/-4.69	-4.96/-5.71	-8.2/-12.35	-18.82/-18.46	-18.08/-12.82	-9.47/-7	-5.69/-4.94	-4.47/-3.84	-3.63/-4.45
Θ(20°)	-6.06/-6.3	-5.68/-6.32	-8.26/-10.44	-13.91/-17.66	-17.15/-10.15	-6.24/-3.84	-2.42/-1.12	-0.82/-1.22	-1.34/-1.9	-2.3/-2.83	-3.33/-3.58	-4.9/-9.74	-17.73/-18.14	-15.96/-14.44	-10.42/-7.76	-7.13/-6.31	-4.76/-3.61	-3.36/-3.84
Θ(30°)	-5.17/-7.01	-8.4/-9.37	-12.12/-19.17	-17.04/-10.97	-8.11/-7.14	-5.19/-3.17	-2.13/-1.69	-1.72/-1.65	-2.63/-1.38	-3.63/-5.88	-5.77/-8.2	-10.31/-11.47	-14.34/-15.51	-11.87/-9.31	-8.38/-6.06	-6.25/-4.99	-4.04/-4.38	
Θ(40°)	-6.11/-8.84	-8.51/-9.93	-13.22/-14.64	-17.98/-16.95	-18.3/-13.55	-9.48/-5.35	-4.63/-4.9	-1.7/-2.6	-2.65/-3.94	-5.01/-5.15	-5.17/-6.36	-8.04/-9.9	-13.94/-17.09	-10.56/-10.77	-10.52/-7.76	-7.17/-6.64	-6.87/-6.25	
Θ(50°)	-7.65/-8.67	-10.33/-12.67	-16.35/-16.15	-17.93/-19.02	-16.33/-12.49	-8.75/-6.36	-4.57/-4.2	-3.55/-2.91	-3.62/-4.26	-4.05/-4.63	-6.24/-6.16	-6.35/-8.31	-8.24/-7.55	-10.11/-14.66	-14.01/-12.17	-10.62/-8.27	-8.54/-8.04	-8.12/-8.21
Θ(60°)	-10.11/-9.09	-12.53/-14.65	-19.08/-18.61	-18.45/-17.92	-10.39/-7.39	-5.48/-4.42	-4.13/-3.16	-3.5/-4.22	-5.16/-6.93	-7.78/-8.44	-9.75/-8.24	-9/-9.82	-9.37/-10.96	-11.08/-12.7	-13.88/-18.48	-13.8/-12.44	-13.79/-9.94	-8.89/-8.82
Θ(70°)	-11.59/-11.84	-13.87/-16.28	-19.18/-17.93	-18.07/-19.14	-16.89/-10.98	-8.76/-5.84	-7.38/-7.47	-7.74/-8.57	-10.26/-9.4	-8.76/-8.66	-10.26/-9.4	-10.45/-10.47	-14.01/-14.34	-8.61/-11	-14.01/-14.34	-13.41/-15.01	-13.15/-11.42	-9.42/-9.12
Θ(80°)	-13.49/-19.31	-19.28/-18.36	-16.06/-12.56	-13.82/-15.15	-10.1/-10.78	-8.27/-7.17	-7.57/-6.55	-5.56/-8.19	-11.26/-11.95	-14.54/-13.21	-16.23/-13.57	-13.51/-11.42	-10.77/-7.74	-9.53/-14.15	-13.97/-15.95	-16.85/-13.38	-15.52/-16.54	-12.88/-11.45
Θ(90°)	-14.09/-17.95	-17.16/-19.27	-17.84/-18.35	-18.06/-15.29	-10.84/-10.28	-10.59/-10.62	-9.86/-10.39	-13.77/-18.72	-16.57/-18.39	-14.38/-15.97	-12.79/-16.98	-15.18/-11.07	-8.78/-6.61	-9.11/-12.69	-13.42/-13.94	-15.93/-19.07	-19.47/-15.74	-14.15/-13.33
Θ(100°)	-19.22/-18.15	-14.56/-14.31	-13.03/-12.82	-10.5/-13.13	-11.48/-9.43	-8.66/-6.53	-10.53/-12.51	-13.										



Radiated Composite Gain Data

Appendix A

Θ(170°)	-12.52/-10.72	-9/-8.15	-8.1/-8.95	-11.02/-15.3	-18.51/-15.32	-11/-8.57	-7.62/-7.73	-8.77/-11.28	-16.01/-17.03	-12.17/-8.46	-6.75/-5.64	-5.41/-6.02	-7.57/-9.94	-13.77/-19.21	-18.62/-14.13	-12.17/-12.17	-14.01/-19.5	-18.48/-16.09
Θ(180°)	-9.47/-10.01	-11.22/-12.67	-13.39/-13.16	-12.17/-12.06	-12.23/-13.18	-16.03/-18.21	-18.66/-18.59	-17.22/-14.11	-12.24/-10.91	-9.96/-9.72	-9.54/-10.17	-11.33/-12.83	-15.13/-16.92	-17.91/-19.37	-18.34/-18.59	-18.24/-18.4	-18.48/-15.15	-12.12/-10.22
Freq(Hz)	2.45GPol.	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°)	-2.89/-3.41	-4.2/-5.38	-7.14/-9.3	-12.13/-13.6	-12.23/-9.55	-7.83/-6.36	-5.13/-4.12	-3.27/-2.7	-2.4/-2.38	-2.84/-3.71	-5.22/-6.94	-8.66/-10.53	-11.18/-11.99	-11.42/-9.48	-7.6/-6.04	-4.99/-4.04	-3.42/-2.95	-2.82/-2.8
Θ(10°)	-2.38/-3.04	-4.05/-5.36	-7.53/-10.64	-15.46/-18.36	-13.95/-10.5	-8.45/-6.68	-3.9/-3.58	-3.44/-3.6	-4.21/-5.26	-6.43/-7.55	-8.18/-8.71	-9.05/-8.43	-7.66/-6.53	-5.4/-4.4	-3.43/-2.7	-2.45/-2.5	-2.03/-2.5	-2.45/-2.5
Θ(20°)	-4.59/-5.32	-6.56/-8.28	-10.81/-14.89	-17.41/-17.75	-13.5/-10.07	-7.58/-6.03	-4.61/-4.02	-3.81/-3.7	-3.84/-4.21	-4.91/-6	-7.15/-8.13	-8.36/-8	-8.4/-7.86	-7.78/-7.78	-7.29/-6.73	-5.9/-5.13	-4.64/-4.15	-3.93/-4.11
Θ(30°)	-8.35/-9.35	-11.03/-13.24	-16.1/-18.45	-18.25/-16.09	-10.79/-7.92	-5.71/-4.2	-3.23/-2.57	-2.19/-1.99	-2.03/-2.14	-2.75/-3.63	-4.3/-6.06	-7.64/-8.86	-8.62/-7.94	-7.5/-7.21	-7.13/-6.8	-6.49/-6.38	-6.74/-7.12	-7.41/-7.59
Θ(40°)	-8.11/-9.31	-11.51/-13.58	-15.05/-14.41	-11.8/-9.4	-7.25/-5.51	-4.1/-2.45	-1.3/-0.69	-1.45/-1.43	-1.76/-2.36	-3.29/-4.72	-7.88/-7.3	-7.45/-7.9	-9.03/-8.67	-7.88/-7.3	-7.45/-7.9	-7.43/-7.05	-6.69/-6.71	-7.03/-7.52
Θ(50°)	-9.8/-10.86	-11.69/-11.93	-10.32/-8.31	-6.68/-5.68	-5.24/-4.77	-4.07/-3.14	-2.67/-3.11	-4.48/-5.08	-4.41/-4.12	-4.41/-5.19	-5.79/-6.22	-6.25/-8.4	-5.96/-7.4	-9.06/-7.51	-7.23/-7.51	-7.53/-6.72	-6.3/-6.75	-7.85/-8.33
Θ(60°)	-9.86/-8.99	-9.48/-10.6	-9.77/-7.72	-6.9/-6.78	-5.84/-4	-2.61/-1.73	-1.69/-2.58	-3.47/-4.34	-3.79/-3.84	-4.35/-5.1	-6.3/-7.24	-6.47/-4.58	-3.02/-2.58	-3.11/-4.24	-4.69/-4.93	-5.82/-6.43	-6.1/-7.5	-9.48/-10.47
Θ(70°)	-13.15/-12.25	-10.41/-9.89	-7.87/-5.79	-4.29/-3.61	-3.25/-3.19	-3.33/-3.43	-4.72/-4.54	-3.78/-3.42	-3.45/-3.76	-4.72/-5.84	-7.29/-7.28	-4.78/-2.6	-1.67/-2.68	-3.5/-3.92	-4.62/-5.66	-6.76/-7.94	-9.21/-10.39	-9.21/-10.39
Θ(80°)	-15.05/-17.94	-18.51/-15.41	-10.27/-7.13	-6.39/-5.13	-4.56/-4.44	-5.27/-6.14	-5.58/-6.06	-8.31/-8.87	-7.24/-6.59	-7.16/-7.78	-7.53/-6.73	-5.97/-5.1	-4.11/-2.78	-1.62/-1.08	-1.87/-3.71	-5.11/-7	-10.99/-14.78	-14.46/-13.87
Θ(90°)	-8.75/-8.45	-9.18/-12.28	-12.42/-7.86	-7.12/-7.42	-6.8/-5.25	-4.13/-2.88	-1.87/-2.46	-6.03/-10.18	-8.5/-7.4	-7.61/-7.83	-7.71/-7.08	-4.8/-2.2	-0.54/-0.08	-0.28/-0.17	-0.36/-1.7	-3.83/-6.63	-8.81/-8.59	-8.53/-8.58
Θ(100°)	-6.55/-6.85	-8.18/-9.78	-8.87/-5.29	-3.64/-3.83	-4.16/-4.22	-4.63/-4.91	-6.48/-5.86	-6.69/-6.7	-7.11/-6.09	-6.32/-6.58	-6.36/-4.12	-2.02/-0.78	-0.74/-1.04	-1.65/-3.16	-5.81/-9.3	-10.39/-8.9	-8.9/-7.52	-8.9/-7.52
Θ(110°)	-6.63/-7.33	-11.9/-15.08	-7.89/-5.24	-3.47/-2.9	-2.46/-2.46	-3.49/-4.9	-6.31/-9.54	-18.55/-11.92	-8.67/-9.37	-10.8/-8.42	-6.63/-6.84	-7.96/-6.47	-3.68/-1.9	-1.08/-0.66	-0.93/-2.57	-4.83/-5.2	-4.3/-5.57	-9.04/-8.93
Θ(120°)	-10.86/-7.45	-6.08/-9.22	-14.76/-6.45	-2.78/-1.57	-1.59/-2.22	-3.62/-4.31	-5.46/-9.29	-18.57/-15.84	-12.45/-12.93	-11.71/-9.55	-8.11/-6.62	-3.94/-1.51	-0.55/-1.39	-2.71/-2.58	-1.7/-2	-3.8/-5.78	-5.3/-5.21	-6.85/-10.42
Θ(130°)	-8.96/-8.51	-8.93/-13.57	-12.81/-5.83	-2.28/-1.82	-2.71/-4.5	-6.53/-7.51	-16.53/-11.72	-14.46/-13.25	-12.25/-12.66	-13.98/-15.51	-16.63/-12.09	-5.71/-1.95	-0.51/-0.67	-1.33/-1.5	-0.86/-0.52	-1.52/-3.77	-5.6/-5.54	-5.21/-6.04
Θ(140°)	-7.8/-8.23	-9.69/-13.9	-13.88/-7.96	-5.37/-4.61	-4.69/-4.41	-3.16/-1.91	-2.03/-2.72	-4.29/-6.54	-8.66/-10.7	-12.79/-14.26	-11.64/-7.58	-4.39/-2.43	-2.29/-2.32	-3.03/-3.24	-3.44/-2.89	-2.92/-4.16	-6.61/-9.24	-9.49/-9.11
Θ(150°)	-18.08/-17.79	-17.6/-18.27	-13.63/-9.73	-7.49/-6.03	-4.82/-3.83	-2.98/-2.69	-3.15/-4.3	-6.28/-8.82	-12.4/-16.67	-18.25/-19.04	-13.26/-8.58	-5.23/-3.25	-1.94/-1.13	-0.82/-1.02	-1.45/-1.86	-2.75/-4.58	-7.92/-13.14	-18.15/-17.92
Θ(160°)	-8.48/-9.36	-10.86/-14.21	-18.42/-17.6	-11.22/-7.37	-5.16/-4.09	-3.98/-4.27	-9.39/-8.59	-12.51/-15.34	-13.37/-10.34	-9.43/-8.98	-3.22/-4.38	-8.17/-7.08	-10.39/-9.96	-14.22/-13.41	-8.51/-9.36	-12.42/-13.41	-18.15/-17.92	-18.15/-17.92
Θ(170°)	-12.66/-13.63	-15.71/-18.44	-17.62/-17.26	-12.75/-9.59	-7.78/-7.03	-7.13/-7.87	-8.53/-8.73	-5.75/-5.23	-5.14/-5.56	-6.96/-9.28	-12.76/-16.54	-14.48/-11.3	-9/-8.12	-8.22/-9.56	-12.16/-16.98	-18.36/-18.08	-14.86/-13.44	-14.86/-13.44
Θ(180°)	-13.03/-13.43	-13.8/-14.3	-14.48/-14.66	-14.84/-14.82	-13.58/-10.66	-9.56/-8.24	-8.41/-8.82	-9.68/-10.6	-11.28/-12.17	-13.49/-15.2	-17.2/-18.96	-17.81/-17.55	-17.11/-17.67	-15.1/-13.27	-11.97/-11.18	-10.31/-10.08	-10.24/-10.74	-10.79/-10.82
Freq(Hz)	5.2GPol.	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°)	-4.94/-4.42	-3.71/-3.34	-2.74/-2.58	-2.99/-3.67	-4.72/-5.02	-7.64/-9.72	-12.29/-13.22	-12.42/-11.21	-9.46/-8.09	-6.72/-5.22	-4.07/-3.38	-3.24/-3.24	-3.7/-3.42	-5.33/-6.91	-8.87/-10.6	-12.29/-11.3	-10.75/-9.59	-7.39/-6.53
Θ(10°)	-2.23/-1.62	-1.57/-1.8	-0.98/-0.76	-1.29/-2.52	-1.76/-5.4	-3.72/-5.74	-7.4/-9.87	-11.9/-13.31	-3.76/-2.69	-2.29/-2.67	-3.27/-4.08	-5.4/-6.62	-7.91/-9.18	-11.5/-13.39	-15.9/-15.73	-15.9/-15.73	-5.43/-3.75	-5.43/-3.75
Θ(20°)	-4.69/-3.54	-2.45/-1.55	-1.15/-0.88	-1.36/-1.93	-2.97/-4.69	-7.76/-12.01	-14.73/-12.03	-9.24/-6.74	-5.26/-4.29	-4.23/-4.53	-5/-5.2	-5.24/-5.19	-5.38/-5.83	-6.59/-8.99	-12.68/-15.33	-14.52/-10.61	-8.54/-7.57	-5.88/-5.16
Θ(30°)	-5.91/-3.96	-2.57/-2.13	-1.9/-1.77	-1.82/-1.63	-2.26/-3.45	-6.08/-10.91	-15.34/-17.44	-11.4/-8.62	-7.1/-5.45	-2.77/-2.93	-3.87/-6.68	-7.32/-8.66	-10.63/-12.29	-16.42/-16.69	-14.36/-9.92	-8.99/-10.76	-8.99/-10.76	-8.5/-9.1
Θ(40°)	-7.66/-2.7	-1.54/-1.1	-1.01/-0.86	-0.44/-0.54	-1.34/-3.75	-5.28/-3.98	-1.36/-1.47	-2.97/-3.58	-2.59/-2.74	-2.97/-3.9	-5.46/-5.58	-19.09/-17.66	-15.46/-15.57	-18.27/-18.02	-14.36/-8.22	-14.36/-8.22	-14.36/-8.22	-14.36/-8.22
Θ(50°)	-6.19/-1.46	0.07/-0.92	-0.64/-0.05	0.03/-0.25	-1.11/-2.72	-4.89/-9.98	-17.04/-19.23	-16.93/-9.87	-4.36/-3.94	-4.82/-3.83	-3.78/-2.6	-1.58/-1.71	-3.04/-6.18	-12.62/-19.22	-18.36/-15.19	-11.76/-8.82	-11.01/-18.33	-16.33/-10.51
Θ(60°)	-1.43/-0.34	0.65/-0.09	0.66/-0.31	-0.07/-0.22	-0.07/-1.27	-5.89/-9.38	-14.62/-17.36	-19.03/-14.37	-8.26/-4.65	-2.3/-1.04	-0.86/-1.76	-2.39/-2.54	-3.62/-7.3	-12.32/-18.6	-17.92/-16.91	-16.12/-11.66	-10.47/-10.39	-7.49/-7.38
Θ(70°)	0.49/-1.66	1.01/-0.8	0.02/-0.65	-0.38/-0.55	-1.11/-5.65	-14.33/-12.8	-11.47/-14.91	-17.76/-12.13	-1.65/-0.4	-0.98/-1.66	-2.82/-5.17	-9.37/-18.05	-13.75/-18.52	-13.79/-11.19	-9.14/-9.79	-3.33/-0.53	-3.33/-0.53	-3.33/-0.53
Θ(80°)	-1.26/-0.5	1.76/-1.57	-0.7/-2.96	-2.31/-1.36	-2.31/-7.5	-10.8/-9.3	-12.4/-17.65	-18.62/-13	-7.13/-3.32	-1.99/-0.29	-1.21/-1.55	-0.12/-0.7	-0.38/-3.26	-5.26/-13.5	-15.63/-12.23	-6.95/-6.74	-9.24/-7.7	-5.56/-1.67
Θ(90°)	-0.63/-1.5	2.57/-2.05	0.3/-3.22	-4.65/-5.15	-4.2/-8.42	-17.21/-7.66	-11.18/-15.03	-17.7/-14.26	-5.83/-4.26	-1.17/-0.72	-2.97/-1.34	0.53/-1.91	1.49/-1.31	-4.15/-12.14	-12.49/-8.91	-5.02/-2.54	-10.05/-18.71	-8.01/-3.25
Θ(100°)	-0.28/-1.65	2.61/-6.7	-0.13/-4.63	-7.04/-6.33	-5.62/-11.73	-4.94/-4.66	-0.32/-0.77	-1.02/-1.5	-18.83/-19.02	-4.44/-11.91	-3.67/-8.13	0.64/-4.49	-4.44/-11.91	-8.94/-8.46	-3.67/-8.13	-11.46/-14.79	-4.78/-1.55	-4.78/-1.55
Θ(110°)	-2.48/-2.14	-1.07/-0.85	-2.52/-9.72	-11.16/-8.94	-10.01/-15.82	-18.82/-9.62	-12.3/-8.62	-14.96/-18	-7.9/-4.89	-4.04/-2.53	-2.47/-3.17	0.08/-0.47	-0.62/-6.1	-4.85/-16.32	-19/-8.44	-3.67/-4.87	-13.87/-18.15	-13.04/-8.41
Θ(120°)	-5.63/-8.58	-2.95/-3.24	-7.72/-10.43	-13.56/-13.49	-18.22/-18.43	-14.45/-14.47	-19.09/-14.16	-8.07/-4.83	-7.77/-8.04	-1.80/-3	-2.86/-4.45	-2.1/-0.04	-1.29/-8.1	-5.71/-18.52	-16.32/-7.2	-6.21/-6.66	-6.34/-10.62	-18.18/-4.4
Θ(130°)	-10.89/-7.39	-9/-10.82	-10.71/-18.44	-17.88/-17.47	-18.47/-18.62	-14.5/-14.92	-13.53/-9.61	-17.51/-15.59	-9.9/-2.58	-8.2/-3.44	0.91/-6	-2.07/-8.93	-4.82/-18.19	-13.47/-8.45	-2.28/-4.9	-10.48/-5.37	-3.39/-8.21	-3.39/-8.21
Θ(140°)	-11.54/-10.84	-7.79/-12.94	-14.72/-16.6	-17.56/-19.32	-18.3/-13.23	-8.32/-8.89	-18.99/-18.14	-9.32/-9.44	-15.93/-7.88	-3.45/-2.75	-2.17/-2.57	-0.30/-0.8	-1.77/-18.11	-10.7/-12.23	-11.56/-11.94	-5.33/-4.27	-7.67/-5.5	-6.54/-4.8
Θ(150°)	-2.26/-4.67	-7.8/-11.16	-18.33/-18.07	-18.09/-16.93	-18.76/-18.67	-14.07/-13.91	-18.64/-15.58	-10.06/-10.9	-12.81/-9.36	-4.5/-2.07	-2.41/-2.92	-2.59/-5.86	-11.38/-11.2	-8.71/-13.7	-18.69/-16.33	-18.37/-11.71	-10.43/-9.78	-4.16/-2.24
Θ(160°)	-3.46/-3.82	-6.28/-12.17	-17.18/-18.34	-18.28/-17.38	-18.19/-17.73	-18.92/-17.04	-17.85/-15.55	-12.84/-11.76	-9.09/-5.35	-3.21/-3.2	-5.06/-8.45	-12.53/-14.64	-14.01/-13.56	-15.26/-16.29	-11.72/-11.86	-9.8/-7.2	-5.66/-4.22	-5.66/-4.22
Θ(170°)	-5.54/-5.47	-6.14/-6.16	-8.68/-11.39	-16.22/-17.97	-19.09/-18.24	-12.15/-13.45	-19.09/-14.74	-12.95/-11.84	-10.82/-13.45	-13.01/-11.68	-9.78/-8.49	-8.99/-9.24	-10.82/-13.56	-16.45/-17.66	-18.87/-15.85	-11.85/-8.15	-11.85/-8.15	-11.85/-8.15
Θ(180°)	-9.22/-9.85	-9.85/-8.47	-8.58/-8.36	-8.88/-10.74	-13.22/-17.81	-17.41/-18.75	-13.55/-10.79	-9.53/-7.72	-6.06/-5.34	-5.09/-5.09	-5.07/-5.48	-6.32/-7.53	-9.38/-11.68	-16.05/-18.04	-18.07/-19.2	-16.31/-14.66	-11.91/-10.78	-11.41/-9.63
Freq(Hz)	5.2GPol.	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°)	-6.68/-																	



Radiated Composite Gain Data

Appendix A

Θ(60°)	-4.63/-1.82	-1.26/-1.31	-1.61/-1.57	-1.69/-1.78	-2.44/-4.28	-5.87/-5.8	-6.51/-9.05	-10.95/-12.1	-9.8/-6.47	-4.96/-2.67	-2.29/-3.68	-4.27/-4.14	-4.72/-6.78	-9.32/-14.75	-18.57/-14.7	-14.39/-11	-14.19/-14.65	-12.54/-8.43
Θ(70°)	-3.150-3.4	0.27/-0.47	-2.01/-2.89	-3.11/-3.06	-3.62/-5.16	-4.89/-4.4	-5.03/-7.02	-11.85/-14.38	-8.06/-5.76	-4.09/-3.21	-3.14/-4.77	-4.38/-3.18	-2.72/-4.31	-6.86/-12.92	-17.62/-14.01	-17.56/-10.33	-10.53/-15.37	-13.09/-6.75
Θ(80°)	-2.64/-0.21	-0.04/-1.59	-4.18/-5.52	-3.79/-3.36	-6.81/-8.33	-4.87/-4.67	-3.91/-5.17	-10.33/-6.34	-10.33/-6.34	-4.87/-4.67	-3.91/-5.17	-10.33/-6.34	-10.33/-6.34	-5.14/-12.62	-15.78/-12.91	-6.58/-11.14	-13.42/-18.11	-10.9/-5.56
Θ(90°)	-2.99/-0.23	0.34/-0.49	-5.37/-8.42	-6.72/-6.17	-8.49/-13.65	-6.39/-5.03	-4.9/-6.93	-11.54/-18.87	-10.74/-5.57	-3.66/-2.74	-4.71/-5.03	-2.59/-0.45	0.26/-1.95	-2.84/-10.7	-15.74/-11.23	-6.67/-4.21	-6.88/-15.05	-18.64/-6.21
Θ(100°)	-3.4/-1.57	-1.07/-3.17	-6.9/-12.28	-12.14/-8.22	-10.33/-17.68	-8.87/-7.33	-7.25/-8.81	-12.23/-17.76	-13.68/-6.85	-5.92/-2.19	-3.23/-3.84	-2.72/-0.62	-0.32/-3.06	-2.53/-13.6	-16.08/-10.09	-8.13/-4.87	-5.92/-13.89	-18.8/-8.27
Θ(110°)	-8.52/-4.57	-2.83/-6.1	-12.24/-16.28	-12.98/-11.37	-16.06/-13.47	-8.47/-7.28	-7.41/-13.3	-14.94/-14.73	-14.94/-14.73	-8.47/-7.28	-7.41/-13.3	-14.94/-14.73	-14.94/-14.73	-2.69/-12.13	-17.76/-17.46	-10.12/-8.55	-8.21/-9.87	-10.13/-15.12
Θ(120°)	-11.76/-11.46	-10.77/-15.42	-17.81/-15.36	-16.54/-17.61	-19.71/-13.12	-9.41/-9.47	-13.27/-10.67	-6.83/-6.85	-11.05/-15.72	-11.55/-2	-2.94/-5.87	-4.11/-3.16	-3.47/-8.52	-4.65/-17.1	-16.39/-12.63	-7.76/-5.05	-5.35/-6.68	-8.55/-17.48
Θ(130°)	-7.56/-12.75	-19.19/-15.93	-18.96/-18.64	-17.22/-19.06	-18.23/-16.48	-9.37/-9.67	-13.96/-18.84	-16.04/-17.1	-17.29/-12.03	-16.69/-4.48	-4.04/-19.12	-2.11/-0.19	-1.38/-5	-4.44/-13.13	-16.71/-11.44	-6.56/-7.22	-16.75/-4.7	-3.98/-3.69
Θ(140°)	-7.45/-6.31	-11.42/-15.22	-17.6/-14.54	-14.77/-17.37	-17.93/-13.64	-9.16/-8.53	-5.97/-12.74	-14.55/-12.07	-17.95/-10.97	-14.67/-7.24	-5.97/-2.68	-1.53/-0.73	-5.59/-13.03	-9.96/-12.41	-17.66/-16.3	-7.59/-6.97	-6.11/-7.76	-5.5/-5.69
Θ(150°)	-2.84/-4.94	-5.65/-9.71	-17.4/-16.21	-14.98/-17.35	-17.82/-14.65	-13.26/-16.31	-14.54/-10.5	-9.95/-9.15	-12.17/-10.93	-5.57/-2.84	-2.36/-3.34	-3.95/-5.8	-9.08/-8.71	-7.56/-13.71	-18.27/-18.25	-15.93/-17.66	-17.94/-12.57	-6.36/-3.13
Θ(160°)	-7.99/-8.63	-15/-18.66	-18.62/-15.95	-13.65/-13.51	-14.71/-15.78	-15.85/-17.66	-18.2/-18.05	-16.05/-16.3	-15.67/-10.67	-5.94/-3.73	-3.8/-6.06	-9.97/-12.13	-12.09/-11.61	-11.77/-16.53	-18.18/-18.29	-15.39/-12.77	-13.5/-11.61	-8.34/-7.53
Θ(170°)	-9.7/-9.95	-9.64/-10.13	-10.64/-12.29	-13.48/-15.45	-17.47/-17.63	-16.13/-16.68	-16.84/-15.12	-14.95/-14.2	-12.61/-11.11	-9.55/-8.2	-6.59/-8.11	-10.88/-16.57	-18.32/-15.09	-12.09/-10.52	-10.38/-11.9	-10.19/-9.24		
Θ(180°)	-14.27/-12.09	-13.61/-12.65	-11.63/-11.88	-12.9/-14.23	-17.22/-17.18	-17.91/-15.93	-11.66/-9.12	-7.25/-5.98	-4.94/-4.33	-4.04/-4.55	-5.2/-5.33	-6.19/-7.67	-9.54/-12.36	-15.4/-18.74	-19.17/-17.78	-15.36/-12.59	-11.68/-12.53	-12.19/-13.76
Freq(Hz)	5.6GPol.	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°)	-8.23/-10.18	-12.65/-13.61	-15.28/-14.51	-13.84/-12.36	-10.22/-8.49	-7.24/-6.32	-5.28/-4.75	-4.8/-5.29	-5.99/-7.28	-8.6/-10.13	-12.27/-15.71	-17.8/-14.48	-12.51/-10.06	-8.21/-6.66	-5.83/-5.19	-4.55/-4.91	-5.55/-5.82	-6.31/-7.05
Θ(10°)	-5.43/-5.56	-6.15/-7	-7.87/-7	-9.69/-11.2	-11.04/-8.89	-8.65/-7.24	-6.57/-7.29	-7.48/-7.22	-7.33/-8.78	-10.84/-13.3	-16.63/-18.3	-17.37/-15.69	-13.1/-11.05	-8.66/-6.76	-6.05/-5.31	-4.52/-3.82	-3.94/-4.18	-3.88/-4.77
Θ(20°)	-4.57/-4.53	-4.48/-4.48	-4.28/-5.36	-7.11/-8.54	-8.01/-6.35	-6.21/-6.6	-4.17/-5.08	-5.9/-5.58	-6.21/-6.6	-10.25/-17.85	-15.35/-17.85	-19.17/-18.04	-15.35/-12.72	-9.05/-7.02	-5.17/-4.39	-4.08/-3.43	-2.78/-3.52	-3.49/-4.67
Θ(30°)	-3.52/-3.16	-2.79/-1.98	-2.26/-2.68	-3.46/-3.9	-3.64/-3.62	-5.22/-5.48	-4.71/-4.29	-3.2/-3.54	-5.28/-5.95	-6.29/-8.77	-12.53/-15.32	-17.14/-17.39	-18.03/-17.32	-12.27/-11.01	-10.18/-7.06	-5.38/-6.1	-5.44/-4.27	-4.04/-3.66
Θ(40°)	-2.55/-2.98	-2.9/-2.15	-2.54/-2.73	-2.65/-4.27	-5.72/-5.87	-6/-5.04	-4.17/-5.3	-3.88/-5.26	-6.88/-6.93	-10.11/-11.94	-11.11/-10.35	-11.6/-11.21	-16.46/-18.68	-13.64/-9.12	-7.5/-9.3	-7.98/-5.49	-6.06/-5.1	-4.69/-3.5
Θ(50°)	-2.25/-2.1	-1.82/-2.06	-2.64/-2.96	-3.33/-4.41	-5.56/-6.3	-6.54/-5.43	-4.14/-9.3	-5.6/-8.55	-17.03/-16.89	-15.26/-14.05	-13.08/-15.07	-17.04/-17.7	-13.89/-16.57	-18.32/-15.09	-12.09/-10.52	-10.38/-11.9	-10.19/-9.24	
Θ(60°)	-2.72/-2.48	-2.66/-3.79	-4.24/-3.18	-3.59/-5.84	-10.6/-13.51	-12.93/-7.14	-4.8/-4.53	-6.13/-6.22	-8.7/-9.89	-10.48/-10.44	-12.78/-18.43	-17.42/-15.67	-13.73/-18.29	-16.4/-12.37	-11.62/-10.58	-8.77/-6.15	-5.41/-4.76	-2.77/-2.49
Θ(70°)	-2.14/-2.12	-3.5/-3.75	-3.19/-2.59	-3.97/-6.28	-9.1/-11.18	-12.95/-7.81	-5.9/-3.93	-3.69/-3.03	-6.19/-7.21	-7.44/-7.8	-9.26/-13.98	-13/-13.45	-10.96/-13.31	-14.39/-11.89	-13.45/-9.25	-8.77/-7.24	-6.57/-3.97	-2.56/-1.52
Θ(80°)	-2.1/-2.34	-4.5/-4.84	-4.07/-2.75	-5/-6.81	-12.46/-19.11	-14.43/-6.48	-5.73/-3.72	-2.59/-3.41	-6.19/-6.91	-12.37/-16.62	-7.77/-9.72	-8.07/-6.98	-11.03/-8.9	-6.55/-8.33	-6.33/-6.99	-2.39/-1.21		
Θ(90°)	-2.81/-3.26	-5.82/-6.97	-5.5/-6	-8.16/-16.78	-13.53/-13.64	-17.88/-7.48	-4.96/-3.11	-2.32/-3.73	-7.57/-7.62	-6.01/-6.04	-8.66/-9.75	-9.95/-7.65	-5.31/-3.58	-6.62/-5.72	-8.13/-4.72	-4.59/-4.65	-5.62/-4.15	-1.68/-1.36
Θ(100°)	-5.12/-4.5	-10.67/-12.16	-8.03/-6.95	-7.61/-17.49	-16.88/-12.83	-18.2/-10.85	-6.45/-3.92	-4.74/-6.72	-14.72/-13.14	-8.08/-8.61	-12.49/-12.66	-12.57/-6.15	-7.17/-3.99	-5.18/-3.59	-5.58/-4.29	-3.41/-5.35	-5.3/-6.58	-3.05/-2.09
Θ(110°)	-7.25/-7.12	-19.28/-15.07	-8.22/-8.87	-11.76/-11.07	-9.37/-13.29	-17.18/-10.01	-7.21/-3.02	-6.52/-8.42	-17.21/-13	-10.81/-10.8	-16.04/-18.6	-12.86/-10.62	-7.64/-5.46	-4.57/-3.85	-7.64/-6.71	-6.04/-10.43	-9.54/-9.2	
Θ(120°)	-10.6/-14.58	-16.06/-9.45	-7.77/-5.67	-8.3/-9.82	-6.24/-10.35	-18.94/-13.96	-9.07/-6.38	-5.25/-8.24	-17.51/-19.3	-8.47/-11.17	-13.65/-19.34	-18.15/-8.32	-4.03/-6.94	-7.39/-5.19	-12.42/-4.77	-7.27/-7.84	-9.81/-18.42	-6.19/-7.35
Θ(130°)	-9.77/-14.32	-15.33/-8.95	-7.18/-9.06	-12.55/-12.94	-10.3/-12.29	-18.37/-18.8	-12.32/-12.66	-11.99/-13.43	-12.06/-18.2	-16.2/-16.45	-12.22/-8.6	-1.79/-8.52	-1.38/-0.5	-15.02/-0.41	-4.34/-5.38	-6.67/-18.81	-19.07/-10.46	
Θ(140°)	-15.39/-10.04	-10.15/-10.09	-10.49/-9.68	-7.77/-10.05	-11.06/-7.15	-10.06/-13.64	-13.87/-11.37	-11.59/-13.9	-17.85/-18.09	-19.59/-17.17	-14.8/-16.61	-16.1/-5.02	-4.21/-8.34	-0.9/-0	-14.21/-11.22	-4.38/-13.28	-7.06/-12.92	-10.86/-14.7
Θ(150°)	-19.12/-14.41	-14.09/-13.59	-18.32/-18.64	-19/-13.49	-10.92/-11.11	-12.07/-19.48	-13.1/-9.69	-14.84/-19.02	-18.39/-19.28	-14.48/-17.02	-15.06/-9.69	-8.2/-6.12	-6.1/-2.93	1.332/-1.7	-2.43/-9.99	-9.71/-9.06	-12.55/-12.42	-11.02/-14.86
Θ(160°)	-13.81/-17.54	-17.54/-18.84	-17.9/-18.3	-15.36/-18.43	-17.92/-12.26	-12.15/-16.95	-18.27/-18.05	-18.83/-18.85	-16.56/-11.74	-10.06/-10.82	-11.73/-10.35	-9.08/-7.75	-5.34/-2.88	-1.1/-0.43	-2.44/-7.48	-10.61/-10.87	-11.53/-10.3	-10.22/-11.25
Θ(170°)	-19.02/-18.32	-18.62/-17.95	-15.22/-12.42	-11.6/-11.1	-11.24/-11	-11.87/-12.42	-12.04/-11.13	-11.37/-12.3	-13.76/-15.99	-18.05/-18.59	-16.89/-13.09	-10.28/-7.86	-4.58/-2.1	-0.66/-0.71	-1.69/-3.71	-5.92/-6.66	-8.42/-15.81	-17.86/-18.37
Θ(180°)	-18.01/-19.18	-18.47/-15.43	-17.67/-9.28	-7.58/-5.79	-4.65/-4.47	-4.7/-4.88	-11.81/-15.24	-4.95/-6.03	-7.67/-9.28	-18.14/-18.97	-17.21/-15.65	-10.42/-8.11	-6.2/-5.83	-5.52/-4.74	-4.69/-6.28	-8.28/-11.69	-13.87/-12.83	-18.24/-18.63
Freq(Hz)	5.785GPol.	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°)	-5.86/-5.32	-4.71/-4.3	-4.46/-4.83	-5.16/-5.47	-9.43/-8.21	-5.74/-6.81	-8.16/-9.92	-11.75/-11.72	-9.43/-8.22	-6.93/-6	-5.33/-5.04	-4.54/-4.57	-5.22/-5.57	-12.52/-15.31	-8.59/-10.17	-12.52/-15.31	-8.82/-6.72	
Θ(10°)	-5.25/-4.07	-3.05/-2.36	-2.34/-2.38	-2.63/-3.45	-4.16/-5.42	-7.39/-9.9	-12.49/-16.83	-19.05/-15.73	-12.38/-10.12	-7.82/-5.67	-4.52/-3.85	-3.8/-4.45	-5.2/-6.51	-7.85/-8.62	-9.82/-10.61	-11.58/-11.99	-9.9/-7.92	-7.08/-5.68
Θ(20°)	-5.9/-4.34	-2.77/-2.15	-1.94/-1.37	-1.42/-2.01	-3.23/-5	-6.83/-10.14	-14.8/-17.41	-17.5/-12.9	-8.52/-6.41	-5.11/-4.47	-3.83/-4.27	-4.61/-5.26	-6.57/-8.17	-9.02/-9.27	-9.41/-9.53	-9.6/-9.26	-8.53/-8.11	-8.73/-7.2
Θ(30°)	-6.3/-6.16	-4.17/-2.51	-1.85/-1.52	-1.25/-1.71	-2.86/-4.59	-6.6/-8.5	-11.14/-12.62	-8.53/-7.43	-4.94/-3.13	-10.07/-11.67	-13.72/-10.61	-8.14/-4.16	-5.16/-6.93	-9.85/-10.26	-10.91/-16.68	-7.71/-6.91		
Θ(40°)	-5.29/-4.17	-3.79/-3.21	-1.95/-1.15	-1.14/-1.51	-2.6/-3.42	-4.74/-5.72	-6.34/-6.73	-7.26/-8.46	-8.11/-6.23	-4.39/-3.26	-1.76/-0.97	-0.93/-1.59	-3.3/-6	-10.07/-13.25	-12.87/-13.64	-11.5/-9.35	-8.69/-9.65	-11.35/-10.11
Θ(50°)	-4.36/-2.83	-3.14/-2.34	-1.42/-1.16	-1.7/-2.38	-3.31/-4.69	-4.27/-3.32	-4.03/-6.33	-7.38/-8.22	-7.78/-6.4	-5.4/-3.75	-2.68/-1.99	-2.11/-2.61	-3.32/-4.91	-9.89/-18.98	-18.66/-10.27	-8.89/-10.55	-11.69/-11.16	-9.97/-7.97
Θ(60°)	-4.32/-3.11	-2.6/-1.91	-2.35/-2.14	-2.63/-3.43	-3.74/-4.59	-3.22/-4.61	-5.33/-3.98	-4.55/-4.28	-7.61/-10.81	-3.32/-3.98	-4.75/-15.21	-3.94/-3.75	-3.99/-4.81	-18.53/-12.55	-15.46/-9.6	-11.5/-8.54	-7.77/-6.23	
Θ(70°)	-2.04/-1.12	-0.78/-1.45	-2.74/-3.48	-3.69/-4.13	-4.64/-4.59	-2.67/-1.78	-3.27/-5.6	-8.14/-9.86	-8.39/-6.03	-5.07/-4.57	-4.67/-5.5	-4.65/-2.58	-2.05/-2.87	-4.94/-13.61	-17.27/-11.94	-12.64/-8.32	-9.93/-8.4	-6.76/-4.94
Θ(80°)	-1.59/-0.5	-0.49/-2.03	-4.97/-5.88	-5.22/-5.98	-9.15/-6.1	-4.23/-2.55	-3.65/-5.99	-10.2/-16.09	-11.96/-7.58	-4.79/-3.71	-3.75/-6.41	-5.11/-2.78	-1.71/-2.6	-3.86/-11.28	-12.26/-10.77	-8.38/-6.61	-8.91/-11.93	-7.82/-3.73
Θ(90°)	-3.97/-1.44	-0.53/-1.96	-7.84/-8.5	-5.92/-7.16	-13.13/-8.4	-1.21/-2.91	-1.85/-1.83	-2.51/-2.91	-6.18/-18.35	-4.19/-3.06	-5.05/-6.43	-3.6/-1.54</						



Radiated Composite Gain Data

Appendix A

Θ(50°)	-4.35/-3.89	-3.71/-3.39	-4.52/-4.64	-5.55/-7.76	-10.09/-12.42	-13.97/-17.99	-18.02/-17.81	-15.27/-15.24	-14.85/-11.27	-11.08/-12.26	-12.26/-14.81	-15.71/-16.02	-19.08/-17.75	-18.6/-13.12	-11.13/-9.48	-7.54/-6.3	-5.46/-5.22	-4.08/-3.65
Θ(60°)	-4.68/-4.79	-5.24/-5.62	-5.81/-5.66	-6.93/-8.28	-10.17/-14.74	-10.1/-12.2	-13.12/-15.18	-16.06/-15.95	-17.69/-17.87	-13.78/-14.16	-16.18/-17.86	-17.31/-18.11	-18.64/-18.47	-13.51/-12.02	-12.08/-9.27	-7.53/-7.3	-5.72/-5.35	-5.11/-3.96
Θ(70°)	-6.28/-6.21	-7.35/-7.35	-7.03/-7.91	-8.71/-8.62	-10.39/-9.16	-12.09/-13.12	-16.72/-15.61	-16.16/-16.74	-16.04/-16.66	-18.66/-18.7	-18.21/-17.64	-18.21/-17.64	-18.82/-15.2	-13.42/-10.13	-8.99/-8.97	-6.4/-8.75	-7.16/-5.8	-6.66/-5.67
Θ(80°)	-6.83/-6.62	-7.28/-6.65	-7.4/-7.55	-8.68/-10.88	-18.31/-14.53	-10.66/-10.81	-11.51/-12.33	-12.72/-18.05	-19.04/-18.73	-17.06/-18.17	-15.63/-18.27	-19.34/-15.88	-15.73/-12.39	-12.77/-10.58	-8.75/-6.71	-5.95/-6.81	-6.68/-6.15	-6.6/-6.09
Θ(90°)	-6.22/-9.25	-7.8/-7.07	-8.95/-9.03	-11.61/-11.55	-9.04/-8.45	-9.87/-15.96	-12.48/-12.81	-16.06/-17.4	-18.26/-17.51	-14.02/-18.88	-17.81/-17.19	-18.16/-14.48	-11.81/-10.57	-11.88/-11.66	-7.43/-5.54	-5.16/-5.23	-6.84/-5.4	-4.75/-6.57
Θ(100°)	-8.05/-8.07	-7.35/-6.96	-7.87/-8.62	-10.27/-8.36	-12.07/-19.33	-14.03/-14.01	-11.89/-14.16	-14.34/-12.26	-13.67/-9.16	-14.03/-13.51	-19.2/-17.98	-11.04/-10.78	-13.67/-9.16	-11.04/-10.44	-6.71/-5.56	-5.76/-5.62	-7.15/-6.87	-5.55/-6.63
Θ(110°)	-7.33/-7.36	-7.46/-8.65	-11.7/-8.01	-9.11/-11.45	-14.53/-14.91	-12.85/-18	-14.6/-17.3	-19.1/-13.67	-18.57/-18.88	-14.58/-17.26	-17.67/-17.93	-18.03/-11.34	-17.64/-9.86	-12.19/-17.22	-10.1/-6.73	-7.23/-8.34	-7.26/-6.17	-5.5/-7.48
Θ(120°)	-7.27/-7.9	-9.94/-10.54	-12.54/-10.22	-9.9/-8.72	-10.49/-15.29	-13.04/-13.99	-12.79/-12.02	-10.02/-12.59	-18.96/-18.14	-11.17/-14.48	-19.31/-14.83	-13.69/-15.25	-17.63/-10.89	-14.05/-19	-10.96/-8	-9.12/-8.01	-7.02/-6.46	-5.07/-6.87
Θ(130°)	-9.22/-10.95	-10.01/-11.82	-13.84/-12.32	-10.17/-12.94	-13.89/-12.66	-15.92/-14.42	-17.42/-14.2	-11.61/-14.83	-15.38/-18.42	-10.19/-9.32	-10.19/-17.57	-12.31/-7.62	-10.5/-15.53	-9.95/-12.08	-7.93/-12.75	-9.92/-10.41	-6.22/-10.41	-6.22/-10.41
Θ(140°)	-9.62/-9.01	-10.24/-14.27	-17.46/-18.87	-15.16/-12	-14.29/-14.02	-18.32/-13.71	-17.72/-13.71	-11.22/-12.4	-13.56/-14.25	-10.13/-12.58	-13.3/-10.03	-17.98/-9.67	-8.8/-7.84	-19.15/-19.12	-14.83/-11.84	-18.4/-12.57	-15.84/-7.35	-6.39/-7.77
Θ(150°)	-15.35/-13.43	-13.34/-18.51	-17.94/-19.1	-18.7/-18.27	-15.49/-18.39	-17.59/-17.79	-18.74/-16.31	-18.16/-17.8	-19.11/-14.04	-12.17/-11.21	-12.61/-16.41	-17.09/-8.96	-6.22/-7.67	-13.67/-19.05	-17.73/-16.07	-15.97/-17.16	-11.5/-8.41	-9.93/-15.23
Θ(160°)	-13.55/-18.8	-18.71/-17.07	-18.38/-17.87	-13.01/-12.85	-17.94/-19.24	-11.76/-17.82	-17.78/-14.96	-16.63/-15.35	-13.84/-14.79	-11.76/-10.28	-12.73/-13.63	-15.76/-16.96	-13.9/-12.56	-15.83/-18.03	-19.18/-18.3	-18.72/-16.68	-12.2/-10.6	-9.18/-9.91
Θ(170°)	-7.95/-9.21	-10.94/-15.64	-17.39/-16.87	-17.99/-18.62	-18.4/-16.92	-17.49/-19.07	-17.57/-19.02	-12.85/-9.68	-8.32/-9.62	-11.68/-12.24	-13.34/-14.87	-18.09/-17.92	-17.53/-15.34	-16.37/-19.14	-17.49/-17.87	-14.86/-13.6	-11.56/-8.48	-7.95/-8.28
Θ(180°)	-18.65/-14.55	-13.12/-13.41	-13.92/-15.89	-18.16/-18.02	-17.49/-18.85	-19.68/-19.32	-16.96/-16.25	-14.54/-12.5	-12.18/-11.76	-11.51/-10.47	-11.36/-11.94	-13.02/-14.22	-15.08/-17.87	-17.95/-18.44	-14.77/-18.78	-14.77/-11.66	-10.81/-11.74	-13.2/-16.15
Freq(Hz)	5.785GPol.	PhiAnt. 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°)	-14.28/-18.97	-18.29/-14.77	-11/-8.46	-6.54/-5.3	-4.43/-4.11	-3.85/-3.67	-3.8/-4.26	-5.15/-6.3	-7.95/-10.29	-12.18/-16.35	-19.08/-13.12	-9.46/-7.89	-6.9/-5.8	-4.32/-4.17	-4.01/-4.07	-4.41/-4.88	-5.76/-6.73	-8.37/-10.8
Θ(10°)	-19.48/-18.1	-16.63/-11.96	-9.41/-7.02	-5.13/-3.41	-2.71/-2.76	-2.93/-3.41	-4.04/-4.63	-5.39/-6.43	-8.02/-11.07	-14.19/-13.84	-12.91/-12.96	-9.67/-7.24	-5.21/-4.56	-3.58/-2.8	-2.57/-2.78	-3.19/-3.97	-5.21/-6.68	-8.94/-12.08
Θ(20°)	-18.46/-19.07	-13.62/-10.6	-8.65/-7.54	-6/-5.03	-4.54/-3.32	-2.94/-3.32	-3.74/-4.91	-5.98/-7.44	-8.68/-10.55	-14.74/-15.81	-13.73/-9.98	-8.46/-7.64	-6.69/-5.47	-4.45/-3.4	-3.04/-3.92	-4.47/-4.63	-5.08/-6.34	-9.57/-14
Θ(30°)	-15.92/-18.11	-13.44/-10.47	-7.59/-6.42	-4.7/-3.81	-3.07/-2.64	-2.64/-2.14	-2.07/-3.02	-4.74/-7.13	-10.55/-15.13	-16.77/-14.04	-13.32/-16.1	-13.06/-8.18	-5.78/-4.91	-4.74/-3.53	-2.03/-2.3	-3.6/-4.04	-4.81/-6.77	-8.23/-10.12
Θ(40°)	-13.03/-18.21	-16.23/-12.95	-11.71/-7.77	-4.85/-4.06	-2.76/-2.23	-1.95/-1.86	-2.43/-4.03	-5.03/-6.04	-8.22/-9.97	-2.14/-18.87	-1.06/-1.74	-8.67/-5.97	-4.81/-7.55	-1.06/-1.74	-3.12/-3.41	-4.17/-5.88	-10.31/-10.68	-10.31/-10.68
Θ(50°)	-10.74/-19.07	-16.41/-13.47	-10.35/-7.68	-5.98/-4.12	-2.22/-2.47	-2.62/-2.64	-2.04/-1.11	-2.03/-5.17	-9.27/-12.18	-15.33/-14.42	-12.19/-9.52	-7.37/-5.19	-4.55/-3.8	-2.26/-2.55	-1.9/-2.67	-4.16/-3.67	-4.36/-5.46	-7.46/-9.33
Θ(60°)	-12.45/-16.07	-17.83/-11.53	-9.24/-6.51	-5.47/-3.75	-1.93/-2.44	-2.16/-1.22	-1.28/-3.21	-5.84/-7.85	-9.79/-12.58	-13.28/-13.61	-12.13/-8.89	-10.56/-7.76	-5.28/-4.64	-5.17/-4.76	-3.82/-2.76	-4.56/-4.12	-4.06/-5.46	-7.64/-10.22
Θ(70°)	-15.38/-17.56	-16.11/-11.14	-6.92/-5.46	-4.79/-2.65	-2.04/-3.11	-2.65/-3.08	-3.13/-3.44	-5.44/-6.67	-7.05/-9.91	-9.3/-10.36	-13.43/-10.96	-8.36/-7.97	-5.08/-4.21	-3.37/-4	-2.84/-3.2	-3.37/-4	-4.87/-5.65	-7.74/-10.55
Θ(80°)	-13.87/-13.72	-14.62/-9.78	-6.46/-5.45	-6.54/-4.84	-3.8/-3.05	-2.42/-2.18	-2.91/-5.03	-7.79/-8.86	-10.9/-14.36	-9.14/-10.05	-11.02/-11.92	-8.62/-7.37	-4.53/-2.75	-3.52/-2.69	-1.23/-3.68	-3.05/-5.53	-7.88/-7.87	-9.83/-11.14
Θ(90°)	-13.01/-16.96	-9.41/-7.95	-8.27/-9.57	-5.84/-3.88	-4.91/-2.02	-2.49/-5.37	-7.61/-5.41	-7.76/-8.22	-6.6/-9.36	-9.1/-11.36	-8.49/-6.87	-5.55/-3.29	-1.85/-2.09	0.591/7	2.02/-1.9	-0.39/-2.56	-4.83/-6.01	-10.98/-13.52
Θ(100°)	-15.67/-10.9	-10.38/-12.07	-9.91/-6.01	-4.35/-2.92	-6.27/-7.55	-5.61/-4.56	-10.69/-11.06	-5.79/-12.47	-7.72/-10.02	-3.87/-14.4	-3.03/-2.06	-4.23/-4.68	-16.55/-7.28	-10.73/-16.5	-10.67/-14.21	-10.67/-14.21	-10.67/-14.21	-10.67/-14.21
Θ(110°)	-17.65/-12.11	-13.46/-7.36	-8.69/-10.82	-7.15/-5.28	-6.08/-8.48	-6.56/-6.38	-11.81/-8.82	-9.11/-13.99	-9.07/-13.62	-6.33/-7.83	-12.09/-8.96	-5.64/-8.01	-7.46/-3.08	-6.06/-4.9	-4.54/-5.37	-7.65/-10.72	-7.83/-8.08	-10.19/-17.32
Θ(120°)	-11.59/-9.95	-12.4/-11.35	-9.04/-9.05	-6.76/-6.75	-9.46/-11.69	-12.43/-8.56	-13.26/-14.67	-18.22/-18.85	-11.88/-13.97	-13.7/-10.99	-11.36/-5.65	-7.05/-9.47	-12.37/-6.18	-16.39/-8.51	-6.77/-6.34	-5.95/-13.68	-13.14/-8.84	-11.29/-11.61
Θ(130°)	-17.96/-11.18	-8.01/-7.61	-8.79/-10.13	-8.66/-6.32	-8.41/-9.76	-11.46/-18.65	-18.79/-14.24	-13.22/-13.97	-17.83/-13.5	-13.21/-9.77	-15.92/-5.18	-8.62/-8.64	-8.13/-7.38	-9.12/-8.41	-3.78/-2.84	-7.24/-9.26	-11.99/-7.46	-9.74/-18.53
Θ(140°)	-13.18/-8.87	-8.6/-7.55	-6.53/-11.44	-10.84/-9.05	-9.77/-11.5	-18.29/-19.09	-12.38/-14.18	-13.38/-9.65	-12.25/-18.35	-16.29/-10.89	-8.79/-13.01	-10.98/-7.92	-11.51/-8.47	-13.6/-10.35	-5.28/-5.39	-8.28/-13.21	-13.22/-12.73	-13.22/-12.73
Θ(150°)	-18.75/-17.45	-12.56/-10.26	-9.22/-6.86	-12.16/-13.08	-13.39/-18.62	-15.24/-12.04	-12.69/-14.61	-14.05/-9.86	-7.89/-11.86	-18.99/-17.9	-16.23/-16.15	-11.21/-8.98	-8/-10.76	-10.89/-9.51	-7.52/-6.44	-8.23/-11.22	-11.94/-13.41	-16.56/-18.23
Θ(160°)	-13.51/-11.31	-12.79/-16.77	-15.63/-10.5	-10.02/-11.7	-14.89/-17.75	-18.73/-14.42	-13.94/-15.36	-16.31/-18.01	-17.3/-17.85	-18.62/-17.9	-19.37/-17.67	-15.52/-13.97	-12.21/-11.95	-11.4/-11.94	-11.73/-9.47	-8.82/-10.96	-13.75/-14.46	-15.49/-18.01
Θ(170°)	-14.2/-10.68	-10.1/-9.24	-9.63/-10.89	-12.54/-17.86	-17.74/-18.75	-17.72/-18.22	-15.46/-15.49	-15.39/-18.72	-19.14/-16.07	-15.23/-16.04	-13.19/-11.76	-10.83/-10.62	-12.8/-13.53	-13.47/-13.74	-15.17/-16.45	-17.48/-16.73	-17.48/-16.73	-17.48/-16.73
Θ(180°)	-15.51/-15.04	-16.74/-18.01	-18.13/-18.87	-17.93/-18.9	-19.31/-18.6	-18.48/-18.82	-18.17/-17.89	-18.49/-18.76	-18.72/-17.88	-18.24/-18.29	-15.57/-13.09	-12.88/-12.27	-12.04/-11.37	-12.01/-12.97	-13.93/-14.69	-15.8/-18.56	-18.81/-18.1	-18.89/-16.57
Freq(Hz)	5.785GPol.	ThetaAnt. 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°)	-4.07/-4.17	-3.8/-3.68	-4.66/-5.75	-7.39/-9.16	-12.03/-16.26	-18.73/-18.1	-13.51/-10.18	-7.84/-6.55	-5.18/-4.24	-3.78/-4.06	-3.98/-4.04	-4.57/-5.58	-6.89/-8.5	-11.43/-14.14	-15.32/-14.84	-11.84/-9.41	-8.03/-6.7	-5.1/-3.93
Θ(10°)	-2.34/-2.33	-3.08/-3.31	-3.22/-4	-5.13/-7.24	-10.27/-13.39	-17.68/-19	-18.44/-13.67	-9.2/-7.38	-6.62/-6.78	-6.28/-6.06	-5.93/-5.52	-6/-7.44	-9.24/-11.49	-9.51/-8.33	-17.1/-13.07	-4.45/-3.45	-3.35/-2.9	-3.35/-2.9
Θ(20°)	-3.13/-3.03	-3.3/-3.35	-3.38/-4.14	-4.56/-6.25	-7.32/-8.6	-10.84/-9.65	-9.77/-11.5	-18.29/-19.09	-12.38/-14.18	-13.38/-9.65	-12.25/-18.35	-16.29/-10.89	-8.79/-13.01	-10.98/-7.92	-11.51/-8.47	-13.6/-10.35	-5.28/-5.39	-8.28/-13.21
Θ(30°)	-4.67/-4.96	-3.49/-3.56	-4.61/-5.56	-5.65/-5.85	-7.01/-4.38	-13.48/-14.37	-14.35/-13.64	-10.78/-9.42	-9.14/-9.68	-8.66/-8.48	-9.62/-11.14	-12.72/-14.41	-15/-15.87	-18.52/-17.68	-11.58/-9.73	-7.5/-6.03	-6.02/-5.53	-3.78/-4.01
Θ(40°)	-5.16/-4.16	-4.49/-5.88	-5.35/-5.06	-5.74/-7.44	-10.84/-12.98	-10.86/-9.7	-11.14/-12.68	-14.73/-14.3	-14.34/-11.74	-11.78/-13.24	-12.84/-14.12	-18.5/-19.29	-18.49/-18.76	-17.77/-16.77	-12.81/-8.84	-8.62/-5.93	-6.84/-7.77	-7.49/-5.97
Θ(50°)	-4.86/-4.95	-4.86/-5.48	-7.39/-6.86	-6.68/-8.73	-12.36/-12.81	-11.05/-11.72	-15.15/-17.16	-13.78/-13.32	-15.62/-18.23	-18.31/-17.2	-12.42/-10.51	-17.84/-15.85	-13.35/-17.96	-17.84/-16.77	-18.48/-17.96	-9.79/-10.62	-9.18/-7.08	-7.2/-6
Θ(60°)	-5.93/-5.65	-6.61/-6.23	-7.57/-8.24	-8.89/-14.37	-14.26/-12.87	-10.85/-9.37	-9.46/-11.95	-14.6/-18.15	-18.87/-17.67	-19.06/-17.58	-17.42/-18.19	-18.51/-17.95	-17.83/-17.85	-17.26/-15.59	-15.11/-10.61	-10.51/-10.19	-7.26/-6.29	-6.83/-6.67
Θ(70°)	-8.34/-6.75	-8.19/-7.49	-7.63/-11.21	-15.95/-12.59	-10.38/-12.55	-12.2												



Radiated Composite Gain Data

Appendix A

Θ(150°)	-7.93/-8.96	-8.29/-10.25	-13.51/-13.73	-10.6/-11.53	-18.79/-18.24	-18.31/-17.78	-18.81/-18.76	-18.82/-11.84	-11.07/-10.06	-9.1/-9.53	-8.83/-7.51	-6.87/-7.21	-9.02/-18.87	-17.46/-15.54	-16.78/-16.61	-14.33/-12.11	-13.5/-15.65	-10.72/-7.83
Θ(160°)	-18.68/-18.94	-17.91/-17.96	-18.57/-18.74	-17.72/-15.37	-13.02/-12.77	-13.6/-12.98	-10.62/-9.7	-8.77/-8.09	-7.61/-8.12	-8/-6.31	-4.37/-3.72	-4.86/-5.1	-6.26/-6.6	-7.34/-9.79	-13.4/-16.7	-16.52/-16.47	-17.81/-9.1	-18.47/-18.41
Θ(170°)	-8.6/-7.75	-7.29/-7.23	-7.56/-7.74	-8.27/-8.89	-9.7/-12.77	-8.71/-8.89	-18.03/-12.12	-8.34/-6.06	-4.73/-3.18	-2.11/-1.49	-1.02/-1.56	-2.37/-3.3	-4.55/-6.41	-10.02/-13.89	-17.32/-15.88	-14.65/-12.26	-10.8-65	-7.89/-17.14
Θ(180°)	-5.34/-4.43	-3.82/-4.02	-4.6/-5.91	-5.99/-5.96	-7.03/-9.61	-13.91/-18.89	-18.47/-17.14	-12.73/-9.05	-6.55/-5.17	-4.52/-4.21	-5.15/-5.69	-5.4/-5.78	-8.13/-11.49	-12.44/-14.35	-13.99/-13.38	-17.68/-17.81	-16.09/-12.07	-8.19/-6.28
Freq(Hz)	5.2G/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°)	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°)	-11.13/-8.17	-5.17/-3.04	-1.95/-1.17	-0.57/-0.11	0.31/0.37	0.12/-0.24	-1.3/-3.06	-5.85/-8.78	-11.71/-12.24	-11.9/-8.4	-5.15/-3.17	-2.03/-0.85	0.02/0.16	-0.17/-0.86	-1/-1.43	-2.13/-3.68	-5.64/-7.82	-9.96/-12.21
Θ(10°)	-10.64/-8.08	-5.97/-3.58	-2.03/-0.92	0.33/1.31	2.61/1.72	0.22/-0.48	-1.75/-3.45	-5.94/-8.86	-14.78/-16	-10.95/-9.71	-8.68/-3.27	-0.79/-1.33	-1.51/-0.71	-0.5/-1	-1.35/-2.18	-3.24/-4.82	-6.61/-8.54	-11.52/-11.41
Θ(20°)	-9.94/-8.26	-5.95/-4.25	-3.46/-2.69	-2.57/-2.06	-1.15/-0.96	-1.16/-2.1	-2.95/-3.64	-5.64/-8.76	-14.89/-18.9	-12.3/-7.58	-5.85/-3.76	-2.17/-1.63	-1.07/-0.17	-0.09/-0.3	-0.62/-1.15	-2.47/-3.91	-6.17/-8.68	-10.35/-11.43
Θ(30°)	-12.96/-11.25	-9.31/-7.73	-7.29/-6.32	-4.99/-4.57	-4.04/-4.16	-3.27/-3.02	-4.1/-5.01	-8.31/-13.82	-17.86/-14.48	-9.43/-7.35	-5.89/-3.65	-2.27/-2.02	-1.06/-0.19	-0.46/-1.2	-1.54/-2.26	-2.48/-2.89	-5.35/-8.13	-10.35/-12.47
Θ(40°)	-12.05/-10.43	-9.07/-8.97	-8.35/-8.85	-8.49/-8.07	-7.05/-8.35	-10.06/-8.46	-10.24/-12.46	-10.8/-10.93	-10.01/-7.9	-7.32/-5.53	-3.44/-3.21	-3.43/-2.14	-0.64/-0.9	-1.61/-2.38	-1.98/-2.56	-3.84/-5.79	-6.76/-7.49	-10.36/-13.14
Θ(50°)	-10.75/-10.78	-8.95/-10.69	-10.97/-11.47	-13.14/-10.92	-8.85/-9.11	-8.06/-9.33	-12.94/-18.14	-14/-11	-9/-7.16	-5.67/-4.06	-2.86/-2.82	-3.42/-5.06	-4.1/-4.26	-1.61/-2.38	-1.98/-2.56	-3.84/-5.79	-6.76/-7.49	-10.36/-13.14
Θ(60°)	-12.79/-17.71	-17.61/-17.27	-16.16/-12.77	-16.25/-13.51	-10.5/-11.04	-10.9/-12.58	-13.99/-11.96	-10.11/-7.67	-6.97/-6.26	-6.12/-4.33	-3.21/-2.53	-2.66/-3.75	-3.3/-4.17	-4.68/-4.99	-4.58/-6.7	-6.47/-7.35	-9.85/-8.35	-9.19/-11.55
Θ(70°)	-13.12/-18.84	-17.63/-13.93	-13.79/-9.86	-9.62/-13.96	-16.99/-14.28	-15.4/-13.27	-11.87/-10.63	-6.04/-5.32	-5.82/-6.57	-6.77/-6.25	-4.35/-3.35	-5.89/-4.47	-3.17/-4.1	-4.9/-5.41	-5.27/-7.66	-8.87/-9.66	-11.49/-11.81	-12.27/-10.98
Θ(80°)	-14.57/-14.8	-17.79/-10.43	-13.71/-8.74	-6.32/-7.6	-13.54/-16.43	-18.41/-19.47	-15.63/-13.07	-8.99/-7.43	-6.95/-8.75	-7.87/-8.97	-5.77/-6.47	-8.33/-4.94	-4.94/-5.3	-5.11/-6.25	-7.06/-9.29	-8.49/-11.91	-10.18/-11.11	-13.3/-13.9
Θ(90°)	-16.18/-19.47	-17.37/-17.24	-16.54/-15.64	-15.78/-15.25	-17.68/-18.9	-14.11/-10.66	-10.42/-9.28	-8.57/-5.69	-3.54/-5.34	-4.96/-6.14	-5.38/-4.6	-7.59/-9.42	-8.78/-5.13	-5.27/-6.85	-14.33/-15.08	-11.8/-13.37	-14.89/-14.89	-17.13/-15.17
Θ(100°)	-12.5/-17.94	-17.58/-15.68	-8.81/-8.02	-11.47/-18.54	-13.87/-9.32	-11.85/-12.64	-11.11/-9.58	-8.1/-9.6	-4.58/-4.86	-4.55/-4.69	-4.48/-4.91	-5.98/-8.61	-12.02/-11.36	-8.9/-9.65	-16.54/-8.7	-13.08/-16.71	-15.69/-12.75	-18.48/-18.21
Θ(110°)	-17.53/-18.63	-15.32/-18	-9.94/-11.95	-12.22/-12.74	-12.68/-9.19	-6.79/-8.53	-4.27/-3.19	-7.59/-5.38	-4.48/-4.87	-3.43/-3.6	-4.08/-8.06	-5.29/-7.11	-6.58/-5.3	-13.05/-10.45	-9.42/-13.71	-12.19/-11.33	-14.44/-15.84	-17.13/-15.17
Θ(120°)	-10.42/-15.82	-15/-15.36	-15.66/-12.87	-15.07/-13.06	-11.77/-8.68	-9.32/-10.51	-8.02/-7.85	-8.08/-6.55	-5.87/-4.62	-6.42/-4.77	-7.06/-4.84	-5.8/-11.08	-7.19/-6.96	-10.75/-7.85	-7.35/-8.3	-7.62/-12.47	-13.88/-9.11	-16.91/-14.71
Θ(130°)	-17.48/-13.29	-17.11/-12.14	-10.21/-9.86	-11.83/-8.66	-7.59/-6.65	-6.67/-9.16	-6.21/-6.41	-7.49/-10.19	-10.23/-10.46	-6.96/-6.21	-5.52/-3.69	-5.12/-12.18	-7.37/-7.29	-6.32/-15.94	-7.38/-11.96	-3.83/-2.75	-12.04/-15.19	-10.43/-18.61
Θ(140°)	-16.79/-17.64	-17.41/-14.42	-18.98/-15.11	-8.84/-7.23	-10.46/-8.76	-6.57/-4.63	-4.08/-5.69	-8.03/-8.12	-7.35/-10.39	-9.1/-6.7	-9.26/-14.74	-6.53/-5.92	-16.15/-16.64	-18.09/-7.58	-9.01/-15.4	-10.18/-12.38	-17.13/-15.17	-17.13/-15.17
Θ(150°)	-17.33/-17.28	-17.52/-17.96	-15.65/-11.17	-9.48/-8.47	-9.13/-8.75	-9.81/-12.96	-10.17/-12.54	-18.53/-18.36	-17.76/-12.75	-14.92/-18.95	-17.34/-16.51	-18.04/-17.95	-17.93/-13.46	-8.76/-9.9	-10.76/-10.32	-8.71/-8.1	-11.93/-17.74	-17.34/-13.41
Θ(160°)	-18.93/-17.46	-16.96/-12.4	-11.75/-12.94	-12.47/-12.06	-10.92/-8.45	-6.68/-6.41	-6.36/-6.86	-8.12/-9.9	-12.53/-14.9	-17.73/-18.17	-15.02/-10.64	-8.19/-9.62	-11.65/-9.23	-8.34/-9.7	-13.05/-12.95	-13.67/-17.9	-17.21/-19	-18.05/-19
Θ(170°)	-10.14/-10.06	-17.45/-17.86	-16.3/-16.43	-14.87/-13.01	-10.13/-6.95	-4.37/-3.09	-2.38/-2.59	-3.03/-3.37	-12.4/-13.44	-18.5/-17.61	-17.62/-14.84	-18.97/-13.67	-9.71/-7.49	-5.48/-5.37	-5.38/-5.37	-5.6/-6.66	-17.13/-15.17	-17.13/-15.17
Θ(180°)	-10.16/-10.21	-12.46/-16.86	-18.69/-17.88	-16.17/-12.05	-7.93/-5.28	-3.8/-3.06	-2.57/-2.21	-2.79/-3.52	-5.22/-6.7	-7.51/-8.62	-11.38/-16.26	-18.11/-18.89	-14.53/-10.31	-7.76/-5.87	-5.72/-6.75	-7.54/-7.32	-6.84/-6.98	-6.88/-9.28
Freq(Hz)	5.3G/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°)	-0.99/-1.4	-1.82/-2.62	-4.08/-6.75	-9.88/-12.97	-14.05/-10.98	-7.94/-5.35	-3.77/-3	-2.01/-1.12	-0.6/-0.44	-0.62/-1.28	-2.45/-3.61	-4.75/-6.92	-9.62/-12.39	-14.71/-11.02	-7.58/-4.96	-3.44/-2.07	-1.05/-0.47	-0.35/-0.59
Θ(10°)	-2.1/-2.41	-3.37/-4.72	-5.8/-7.65	-10.82/-15.19	-15.11/-9.97	-6.7/-4.54	-3.25/-2.4	-1.69/-0.94	-0.24/-0.01	-0.52/-1.13	-2.19/-3.36	-5.56/-8.28	-10.66/-13.39	-16.04/-12.32	-8.78/-6.35	-5.51/-4.5	-3.33/-2.64	-2.58/-2.44
Θ(20°)	-3.45/-2.66	-3.84/-4.62	-5.45/-7.81	-10.89/-16.1	-18.3/-14.42	-5.85/-5.87	1.22/-4.1	2.41/-1.31	0.17/-1.32	-3.24/-6.29	-18.76/-13.42	-6.86/-6.35	-6/-4.81	-18.76/-13.42	-3.78/-3.25	-3.36/-3.7	-3.36/-3.7	-3.36/-3.7
Θ(30°)	-3.47/-3.61	-4.92/-7.07	-8.98/-12.25	-14.21/-18.99	-17.75/-18.09	-10.99/-6.07	-2.94/-1.84	-1.87/-1.77	-1.73/-1.5	-1.95/-2.99	-4.16/-3.46	-3.96/-7	-8.78/-12.44	-16.75/-16.21	-10.08/-8.73	-5.98/-3.73	-2.59/-1.95	-2.52/-3.2
Θ(40°)	-4.14/-8.129	-7.88/-12.89	-16.69/-17.02	-18.45/-19.03	-17.81/-15.11	-11.39/-6.85	-4.01/-2.08	-1.75/-1.27	-1.76/-1.48	-1.63/-1.84	-2.12/-3.61	-5.04/-6.09	-9.48/-12.01	-11.3/-19.01	-18.11/-13.28	-8.96/-6.26	-3.92/-1.8	-0.9/-2.06
Θ(50°)	-4.16/-5.01	-4.18/-6.14	-6.87/-9.91	-11.1/-12.03	-10.19/-10.17	-8.39/-6.92	-4.01/-1.56	-1.06/-2.61	-4.35/-4.77	-4.49/-5.41	-5.94/-4.33	-3.78/-4.92	-8.01/-7.14	-17.21/-10.74	-9.33/-9.44	-7.76/-8.92	-6.9/-4.31	-6.9/-4.31
Θ(60°)	-5.32/-7.71	-10.15/-12.62	-10.92/-10.72	-9.96/-12.75	-12.65/-8.74	-6.35/-5.24	-2.24/-0.21	-0.34/-2.04	-3.05/-2.64	-2.28/-3.08	-4.13/-5.75	-5.97/-5.23	-4.15/-7.19	-13.74/-8.64	-13.15/-14.83	-10.41/-9.25	-10.46/-12.98	-8.63/-5.07
Θ(70°)	-6.19/-7.16	-6.49/-12.76	-10.16/-7.84	-9.56/-7.82	-9.36/-6.47	-3.7/-4.81	-1.070/-27	-0.5/-0.97	-2.33/-2.84	-3.9/-4.88	-4.56/-5.21	-5.98/-6.77	-5.61/-7.38	-5.67/-7.54	-7.63/-7.01	-7.35/-7.47	-8.96/-10.02	-12.18/-9.21
Θ(80°)	-7.38/-8.8	-9.01/-8.07	-5.39/-5.43	-9.04/-9.24	-6.46/-5.43	-3.57/-3.36	-1.730/-15	-0.06/-0.75	-8.06/-4.76	-3.95/-7.36	-7.33/-7.71	-8.88/-16.72	-9.89/-10.27	-8.88/-16.72	-9.89/-10.27	-8.88/-16.72	-15.68/-11.02	-15.68/-11.02
Θ(90°)	-7.83/-9.22	-7.37/-6.5	-3.99/-1.65	-2.3/-7.3	-5.19/-4.55	-1.52/-1.84	-2.87/-1.99	-0.43/-1.12	-2.44/-2.55	-3.03/-3.39	-2.79/-3.92	-5.6/-7.99	-12.1/-4.34	-4.02/-5.75	-9.11/-6.49	-7.47/-11.65	-5.92/-10.16	-19.08/-12.67
Θ(100°)	-5.63/-5.07	-4.92/-3.69	-2.93/-0.79	-1.45/-5.48	-6.2/-7.44	-2.37/-1.37	-3.31/-4.04	-2.34/-1.83	-2.06/-3.57	-4.64/-5.69	-5.25/-4.28	-6.33/-5.76	-13.01/-8.04	-7.84/-8	-18.02/-12.83	-8.33/-12.04	-8.79/-12.05	-18.73/-17.1
Θ(110°)	-3.6/-5.85	-2.14/-2.68	-3.96/-3.39	-1.79/-4.97	-7.3/-6.15	-5.95/-4.26	-2.94/-2.74	-1.16/-1.42	-1.92/-2.98	-3.39/-4.02	-7.25/-7.55	-9.91/-12.73	-7.48/-10.22	-9.71/-14.14	-13.47/-15.01	-7.28/-14.35	-12.51/-7.26	-12.51/-7.26
Θ(120°)	-9.34/-7.13	-5.74/-4.19	-4.41/-4.1	-5.46/-8.25	-11.36/-6.66	-8.89/-6.17	-3.93/-7.24	-6.47/-5.17	-5.16/-3.35	-2.71/-3.12	-6.32/-6.23	-6.63/-10.95	-4.8/-10.9	-12.08/-12.24	-13.49/-18.49	-13.49/-18.49	-17.72/-15.89	-17.72/-15.89
Θ(130°)	-5.09/-4.6	-3.55/-4.04	-4.7/-6.34	-5.25/-7.02	-11.65/-11.64	-12.75/-16.17	-8.68/-8.36	-5.54/-5.01	-4.33/-3.96	-6.9/-5.36	-4.65/-4.23	-4.61/-11.95	-9.99/-9.62	-15.54/-12.19	-14.15/-17.39	-19.21/-15.24	-18.45/-19.11	-11.05/-7.57
Θ(140°)	-9.78/-18.38	-13.35/-7.69	-5.99/-6.76	-5.83/-6.02	-13.08/-15.57	-10.17/-10.34	-10.99/-8.17	-7.64/-6.33	-4.86/-5.71	-4.75/-3.46	-3.66/-3.84	-7.84/-12.15	-7.95/-12.42	-13.55/-17.93	-15.74/-13.93	-16.53/-12.77	-8.23/-7.32	-8.23/-7.32
Θ(150°)	-7.94/-8.72	-8.74/-11.26	-17.2/-10.95	-7.95/-9.54	-7.66/-8.18	-18.44/-18.31	-17.73/-18.8	-18.13/-11.17	-11.06/-9.94	-7.66/-8.8	-10.52/-8.66	-7.22/-8.31	-8.58/-14.64	-15.77/-15.51	-14.84/-12.26	-14.09/-16.63	-15.77/-15.51	-11.22/-7.34
Θ(160°)	-18.23/-19.3	-18.89/-18.68	-17.87/-18.66	-19.31/-16.42	-14.42/-14.45	-13.03/-12.7	-11.22/-10.08	-10.05/-9.28	-8.45/-8.44	-9.83/-8.14	-5.32/-4.08	-4.12/-5.65	-5.2/-5.65	-6.4/-8.17	-10.31/-13.67	-15.22/-14.24	-16.14/-18.73	-18.35/-18.37
Θ(170°)	-8.79/-7.67	-7.02/-6.88	-7.16/-6.94	-7.39/-7.77	-8.51/-10.37	-11.88/-14.61	-12.19/-8.38	-12.19/-8.38	-6.05/-3.92	-2.38/-1.12	-0.92/-1.44	-1.97/-2.44	-3.26/-5.28	-9.22/-14.68	-19.03/-18.04	-17.08/-14.01	-11.87/-10.32	-9.35/-9.14
Θ(180°)	-5.74/-4.33	-4.35/-4.18	-4.63/-4.7	-4.95/-5.														



Radiated Composite Gain Data

Appendix A

Θ (40°)	-5.58/-2.96	-2.64/-3.23	-3.91/-7.59	-9.97/-10.4	-10.57/-9.74	-8.52/-5.82	-3.28/-1.99	-1.07/-0.08	0.22/0.07	-0.24/-0.13	-1.57/-1.33	-2.25/-4.23	-5.59/-7.38	-9.49/-12.81	-11.68/-6.33	-5.76/-6.04	-5.22/-5.21	-6.15/-6.39
Θ (50°)	-4.63/-6.38	-5.98/-7.13	-9.64/-12.23	-16.32/-17.96	-18.91/-8.72	-4.56/-3.81	-0.97/-1.28	-1.85/-1.31	-0.05/0.58	0.02/-0.73	-2.63/-2.12	-4.78/-6.6	-5.26/-10.77	-13.65/-10.87	-17.54/-15.44	-12.31/-12.08	-10.16/-6.55	-4.09/-3.34
Θ (60°)	-4.48/-4.18	-5.61/-7.84	-5.85/-6.77	-7.12/-6.13	-8.36/-10.96	-6.43/-3.48	-1.68/-4.06	-4.16/-1.4	-2.75/-5.64	-6.7/-5.77	-6.46/-8.38	-6.27/-7.93	-8.94/-10.69	-14.45/-9.71	-8.2/-9.74	-5.99/-11.95	-8.41/-7.98	-6.75/-4.42
Θ (70°)	-3.17/-6.54	-9.52/-8.29	-7.77/-6.99	-9.14/-9	-7.43/-5.41	-3.97/-2.37	0.09/-1.99	-1.88/-0.24	0.57/-0.45	0.28/-0.46	-1.81/-5.57	-5.57/-6.4	-8.48/-7.37	-9.1/-8.34	-8.96/-7.58	-6.45/-6.84	-8.03/-12	-6.02/-3.18
Θ (80°)	-3.64/-5.17	-4.41/-3.14	-3.43/-4.34	-6.95/-8.15	-12.41/-3.11	-2.38/-2.26	-1.36/-3.26	-2.85/-2.33	-2.57/-3.16	-4.28/-4.65	-4.09/-3.91	-7.33/-6.36	-10.63/-6.97	-9.1/-5.32	-11.47/-10.25	-7.57/-5.73	-5.9/-8.14	-9.24/-7.04
Θ (90°)	-4.47/-7.22	-9.54/-5.92	-2.59/-3.15	-6.07/-4.91	-10.87/-6.49	-5.05/-5.23	-0.31/0.42	0.03/-0.9	-2.08/-3.29	-5.2/-4.66	-2.43/-3.67	-8.47/-7.73	-16.33/-8.22	-17.99/-11.53	-11.89/-10.31	-10.11/-5.09	-7.26/-6.49	-6.78/-4.49
Θ (100°)	-3.03/-3.64	-1.83/-4.12	-4.64/-2.13	-0.78/-4.39	-2.91/-3.43	-0.63/-6.39	-4.91/-0.69	0.59/-1.89	-2.55/-1.73	-1.78/-1.05	-0.6/-2.95	-5.63/-8.78	-7.47/-6.81	-15.49/-9	-8.59/-10.15	-18.05/-9.49	-9.15/-17.77	-14.32/-8.54
Θ (110°)	-8.3/-3.09	-2.7/-0.73	-3/-2.27	-2.69/-9.04	-3.91/-8.83	-1.5/-2.44	-2.04/-6.76	-1.51/-1.87	-3.94/-5.19	-4.24/-4.68	-5.87/-7	-4.94/-12.21	-7.35/-7.37	-17.26/-7.47	-17.13/-18.96	-18.81/-18.97	-11.98/-18.88	-15.48/-8.74
Θ (120°)	-3.35/-2.94	-2.28/-3.19	-3.29/-1.4	-1.39/-7.64	-9.43/-7.76	-3.35/-1.14	-3.74/-2.48	-2.1/-2.8	-1.72/-2.9	-2.73/-2.39	-4.81/-6.16	-6.37/-9.95	-11.6/-4.94	-15.03/-13.66	-13.48/-14.72	-18.08/-13.61	-17.64/-16.79	-10/-6.44
Θ (130°)	-5.58/-7.74	-11.04/-7.4	-8.55/-4.63	-1.85/-3.91	-13.79/-13.55	-13.44/-8	-6.68/-4.85	-5.1/-3.97	-6.01/-5.04	-6.47/-7.33	-10.06/-3.31	-4.15/-11.12	-9.11/-6.18	-6.57/-15.09	-7.4/-19.29	-14.67/-17.87	-13.59/-9.66	-7.57/-4.5
Θ (140°)	-12.18/-8.63	-6.45/-7.23	-8.16/-7.11	-5.37/-10.52	-10.22/-5.41	-5.44/-8.84	-9.2/-7.24	-5.66/-7.14	-6.32/-4.22	-2.88/-0.27	-1.12/-4.23	-4.18/-9.39	-18.1/-4.55	-3.72/-9.17	-15.23/-9.85	-13.12/-8.34	-11.55/-12.98	-8.55/-10.36
Θ (150°)	-11.66/-10.14	-14.48/-16.7	-8.36/-4.34	-3.3/-6.83	-9.81/-12.61	-17.15/-18.96	-17.22/-12.04	-11.2/-8.65	-8.51/-11.55	-11.83/-7.73	-6.75/-7.96	-4.6/-3.24	-4.54/-8.26	-18.51/-9.39	-8.89/-11.73	-11.13/-9.12	-12.87/-19.58	-14.15/-11.22
Θ (160°)	-15.96/-17.28	-19.4/-15.07	-12.19/-12.44	-18.48/-18.92	-17.57/-11.84	-7.72/-6.62	-7.47/-9.13	-11.05/-12.57	-10.93/-9.58	-8.54/-8.16	-9.05/-8.82	-5.96/-5.41	-5.7/-4.75	-4.44/-6.15	-10.42/-14.16	-16.53/-16.97	-16.44/-17.01	-15.88/-16.03
Θ (170°)	-5.72/-4.43	-4.27/-5.12	-5.7/-5.56	-5.28/-4.39	-3.61/-3.29	-3.62/-5.4	-9.82/-18.25	-15.8/-9.66	-5.35/-2.74	-0.94/0.78	1.65/2.51	1.5/0.69	-1.24/-3.87	-7.42/-13.72	-17.21/-18.71	-13.97/-11.79	-9.6/-8.75	-8/-8.01
Θ (180°)	-2.61/-0.99	-0.19/0.41	0.79/0.51	-0.19/-0.72	-1.57/-2.74	-4.11/-6.83	-11.63/-18.34	-15.37/-10.33	-6.32/-3.76	-2.59/-1.46	-0.92/-0.92	-1.23/-1.92	-3.65/-6.23	-9.83/-11.78	-10.36/-9.93	-10.33/-13.11	-14.56/-10.53	-7.67/-4.91
Freq(Hz)	5.785G/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°)	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°)	-12.23/-9.37	-7.38/-5.12	-3.43/-2.68	-1.74/-0.92	-0.85/-1.14	-1.67/-2.36	-2.94/-4.38	-6.18/-7.45	-10.07/-12	-11.35/-8.18	-6.32/-5.3	-3.53/-2.1	-1.49/-1.5	-0.72/-0.42	-1.04/-1.88	-2.75/-3.79	-5.32/-7.7	-9.62/-13.54
Θ (10°)	-10.49/-6.26	-5.11/-4.34	-3.15/-2.79	-2.45/-2.62	-3/-3.54	-4.31/-4.89	-5.81/-7.34	-8.39/-10.73	-11.97/-9.86	-8.75/-7.18	-3.95/-2.04	-1.26/-0.64	0.15/0.77	0.83/0.41	-0.43/-1.64	-2.7/-4.3	-6.81/-10.19	-14.32/-16.01
Θ (20°)	-18.31/-18.03	-12.92/-8.42	-6.49/-4.57	-4.44/-6.22	-7.58/-6.08	-5.69/-7.07	-10.45/-18.13	-17.97/-16.35	-10.26/-8.28	-5.89/-3.6	-2.04/-0.92	-0.48/0.22	0.61/3.4	0.82/-0.95	-1.16/-1.02	-2.18/-3.84	-5.86/-7.86	-9.65/-17.28
Θ (30°)	-15.62/-9.8	-6.42/-6.26	-6.15/-5.49	-5.19/-3.03	-3.03/-4.6	-4.86/-6.41	-11.51/-15.02	-13.72/-11.68	-8.81/-6.53	-5.62/-4	-2.64/-2.33	-0.58/-0.4	-1.35/-0.71	-0.08/1.47	1.16/-0.72	-1.73/-3.37	-5.48/-11.14	-18.03/-17.85
Θ (40°)	-16.38/-12.61	-11.98/-9.63	-8.03/-5.62	-2.86/-2.33	-2.27/-1.36	-1.6/-3.07	-6.02/-9.2	-11.06/-14.71	-15.82/-15.44	-11.67/-7.01	-5.24/-3.92	-3.22/-2.64	-2.19/-2.45	-2.79/-1.91	-2.73/-3.09	-3.63/-6.97	-7.77/-8.2	-10.56/-13.91
Θ (50°)	-13.6/-15.99	-16.2/-14.47	-15.48/-9.77	-7.2/-7.8	-6.53/-2.78	-4.67/-6.61	-8.1/-18.31	-13.29/-13.72	-15.59/-11.37	-7.6/-6.13	-3.59/-2.25	-2.61/-3.15	-2.89/-1.7	-3.24/-1.94	-3.04/-3.88	-4.11/-4.13	-4.81/-6.08	-7.15/-9.17
Θ (60°)	-12.34/-16.92	-18.57/-16.38	-14.51/-11.24	-10.58/-10.54	-15.15/-12.48	-10.95/-10.33	-14.11/-16.97	-17.52/-11.19	-8.48/-8.25	-7.16/-8.19	-7.38/-5.05	-4.5/-5.77	-4.06/-3.44	-3.92/-4.76	-3.96/-7.93	-7.93/-7.33	-9.29/-9.68	-9.15/-8.95
Θ (70°)	-9.18/-16.17	-16.95/-15.33	-11.08/-7.44	-9.34/-6.24	-4.66/-9.37	-18.85/-9.82	-11.08/-17.85	-15.82/-8.39	-6.69/-6.92	-6.08/-7.89	-5.4/-4.91	-4.46/-4.51	-4.54/-3.95	-4.84/-3.6	-5.12/-7.64	-4.15/-5.2	-7.05/-8.8	-9.72/-7.71
Θ (80°)	-13.78/-18.54	-17.4/-18.99	-14.97/-11.08	-9.42/-16.39	-8.92/-11.86	-17.46/-12.83	-18.38/-16.28	-11.47/-12.75	-11.08/-8.81	-10.32/-8.76	-11.16/-6.64	-15.63/-7.38	-5.93/-7.68	-7.25/-3.35	-8.77/-17.7	-11.96/-7.32	-16.45/-10.6	-10.96/-12.34
Θ (90°)	-15.24/-15.05	-16.06/-12.71	-15.17/-14.92	-13.8/-11.34	-8.97/-9.78	-11.74/-13.74	-18.78/-8.34	-4/-5.15	-7.58/-9.92	-8/-7.83	-6.54/-5.19	-5.94/-5.68	-9.31/-8.34	-7.49/-8.12	-8.87/-5.62	-8.98/-18.03	-10.63/-10.76	-15.65/-18.98
Θ (100°)	-14.19/-15.63	-19.36/-15.46	-18.31/-17.73	-19.14/-12.36	-18.38/-9.82	-9.99/-13.2	-18/-10.76	-5.08/-4.12	-5.01/-7.97	-7.22/-11.64	-9.51/-7	-5.85/-6.73	-8.82/-7.74	-5/-11.31	-10.04/-9.64	-16.66/-13.19	-14.82/-18.66	-17/-17.69
Θ (110°)	-5.93/-14.3	-17.15/-17.95	-12.44/-13.01	-8.49/-10.39	-12.69/-6.73	-6.95/-6.4	-6.12/-5.98	-10.48/-9.67	-4.26/-3.91	-2.95/-5.2	-2.7/-4.12	-4.42/-8.74	-8.81/-5.75	-5.7/-5.51	-10.94/-5.68	-6.56/-7.35	-9.54/-15.11	-19.16/-11.15
Θ (120°)	-10.24/-18.21	-14.61/-17.83	-12.14/-11.6	-11.91/-14.84	-13.05/-11.23	-9.84/-8.44	-6.44/-5.31	-7.44/-9.3	-13.52/-10.31	-9.17/-7.25	-6.47/-5.62	-3.18/-6.25	-12.91/-8.61	-4.62/-3.64	-19.04/-17.18	-5.6/-10.3	-17.61/-9.94	-14.16/-19.32
Θ (130°)	-10.81/-12.96	-18.77/-18.1	-14.58/-11.55	-5.18/-6.21	-9.21/-6.22	-6.6/-8.08	-18.43/-10.22	-8.49/-10.91	-9.73/-10.88	-13.71/-9.16	-9.33/-3.18	-4.74/-8.87	-11.29/-4.59	-3.02/-3.52	-16.17/-11.78	-4.07/-0.71	-12.41/-8.8	-12.04/-11.49
Θ (140°)	-14.28/-11.55	-17.89/-18.99	-12.71/-7.04	-4.23/-4.71	-5.17/-4.04	-2.72/-2.85	-5.25/-6.13	-6.87/-6.74	-5.47/-4.4	-3.04/-3.73	-3.78/-2.53	-3.34/-10.46	-18.81/-4.67	-2.39/-3.84	-13.84/-8.12	-10.42/-9.26	-10.29/-18.86	-12.23/-13.69
Θ (150°)	-12.15/-15.81	-18.12/-18.45	-18.12/-19.01	-12.15/-7.97	-7.47/-8.29	-6.57/-4.26	-6.3/-9.48	-13.77/-11.74	-9.8/-8.03	-7.73/-8.65	-11.58/-11.36	-9.09/-8.37	-11.57/-12.9	-8.22/-7.69	-8.96/-8.5	-6.66/-8.45	-15.65/-19.14	-10.65/-7.99
Θ (160°)	-13.52/-14.19	-11.84/-13.92	-14.64/-11.46	-9.95/-8.77	-8.75/-9.44	-10.37/-11.57	-10.21/-8.51	-7.91/-7.81	-9.25/-11.11	-11.14/-11.57	-9.28/-9.04	-8.44/-6.63	-6.45/-6.53	-5.41/-6.14	-7.78/-10.18	-12.25/-11.43	-12.45/-12.31	-12.44/-11.66
Θ (170°)	-8.58/-8.42	-9.52/-9.9	-10.51/-12.48	-15.84/-16.77	-11.84/-7.18	-3.9/-1.82	-0.53/0.28	0.57/0.61	0.19/-0.23	-1.05/-1.99	-3.34/-4.39	-4.94/-4.89	-4.43/-4.74	-5.93/-8.04	-9.91/-9.43	-7.88/-6.24	-5.59/-5.21	-5.5/-7.21
Θ (180°)	-1.45/-3.03	-5.19/-7.76	-14.52/-17.42	-15.61/-9.45	-5.75/-3.61	-1.93/-0.63	0/0.29	0.39/0.16	-0.16/-1.05	-2.52/-4.27	-6.8/-8.79	-10.85/-13.89	-15.58/-13.08	-10.61/-9.89	-8.36/-6.4	-5.37/-3.45	-1.79/-0.57	-0.22/-0.37



Total Gain Data

Freq(Hz)	2.45G/Pol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)Ψ(10°)	Φ(20°)Ψ(30°)	Φ(40°)Ψ(50°)	Φ(60°)Ψ(70°)	Φ(80°)Ψ(90°)	Φ(100°)Ψ(110°)	Φ(120°)Ψ(130°)	Φ(140°)Ψ(150°)	Φ(160°)Ψ(170°)	Φ(180°)Ψ(190°)	Φ(200°)Ψ(210°)	Φ(220°)Ψ(230°)	Φ(240°)Ψ(250°)	Φ(260°)Ψ(270°)	Φ(280°)Ψ(290°)	Φ(300°)Ψ(310°)	Φ(320°)Ψ(330°)	Φ(340°)Ψ(350°)
Θ(0°)	-4.71/-5.29	-5.26/-5.06	-4.69/-4.23	-3.90/-3.72	-3.63/-3.52	-3.69/-3.64	-3.60/-3.37	-3.44/-3.70	-4.01/-4.57	-4.54/-5.19	-5.48/-5.27	-5.55/-5.41	-5.71/-5.93	-5.79/-5.66	-5.82/-5.66	-5.34/-4.83	-4.36/-4.10	-3.98/-4.13
Θ(10°)	-2.33/-2.67	-2.87/-3.12	-3.34/-3.36	-3.41/-3.63	-3.70/-3.70	-3.85/-3.47	-3.15/-2.54	-2.06/-1.96	-2.19/-2.54	-2.85/-3.43	-3.68/-3.83	-4.09/-4.32	-4.91/-5.21	-5.38/-5.76	-5.73/-5.39	-4.87/-4.19	-3.58/-2.93	-2.38/-2.14
Θ(20°)	-1.69/-1.74	-1.59/-1.87	-2.31/-2.71	-2.96/-2.98	-3.09/-3.18	-3.16/-2.69	-1.61/-0.52	0.17/0.40	0.41/0.14	-0.10/-0.46	-0.70/-0.90	-1.37/-2.10	-3.54/-5.06	-5.88/-6.24	-5.20/-3.98	-3.24/-2.90	-2.61/-2.27	-1.96/-1.78
Θ(30°)	-2.69/-2.63	-2.27/-2.76	-3.29/-3.84	-3.71/-3.08	-2.51/-2.42	-2.36/-1.63	-0.29/0.86	1.50/1.71	1.68/1.58	2.47/1.28	1.04/0.67	-0.03/-1.33	-3.04/-4.67	-4.86/-3.84	-2.50/-1.67	-1.67/-1.82	-1.97/-2.15	-2.34/-2.47
Θ(40°)	-1.32/-1.62	-1.69/-1.66	-1.90/-2.70	-3.26/-3.22	-3.12/-2.81	-2.19/-1.05	0.15/1.05	1.47/1.53	1.46/1.38	1.31/1.23	0.92/0.55	0.07/0.49	-1.24/-1.77	-1.66/-1.24	-0.99/-1.13	-1.16/-0.80	-0.35/-0.20	-0.44/-0.84
Θ(50°)	-2.38/-2.66	-2.88/-2.31	-1.33/-0.69	-0.93/-1.81	-3.32/-4.13	-2.67/-0.58	0.66/0.97	0.58/0.09	-0.23/-0.27	-0.37/-0.68	-0.95/-0.88	-0.33/0.23	0.18/-0.44	-1.53/-2.49	-2.99/-2.57	-1.56/-0.79	-0.62/-1.06	-1.63/-2.11
Θ(60°)	-2.47/-2.37	-3.02/-3.85	-3.26/-1.63	-0.83/-1.10	-2.62/-4.41	-2.97/0.05	-0.17/-1.45	-2.16/-2.41	-2.76/-3.56	-3.86/-2.68	-1.15/-0.48	-0.67/-1.81	-3.94/-5.07	-3.33/-1.30	-0.20/-0.17	-1.13/-2.71	-3.59/-3.32	
Θ(70°)	-4.08/-3.42	-3.24/-4.17	-3.12/-1.97	-1.36/-1.47	-2.65/-4.94	-5.79/-2.05	-0.06/-0.21	-1.72/-3.24	-4.23/-4.82	-5.15/-5.09	-4.06/-2.43	-1.30/-0.20	0.33/-0.60	-2.48/-3.06	-1.74/-0.76	-0.50/-0.52	-0.84/-1.80	-3.05/-4.28
Θ(80°)	-3.98/-3.71	-3.79/-4.98	-5.95/-4.64	-3.42/-3.24	-3.67/-4.94	-5.96/-3.13	-0.54/-0.21	-1.39/-3.14	-4.25/-4.91	-5.48/-6.24	-6.14/-4.99	-2.52/-0.02	0.54/-1.07	-4.00/-3.02	-1.37/-1.52	-2.46/-2.74	-2.25/-2.02	-2.32/-3.27
Θ(90°)	-6.89/-7.68	-7.19/-6.04	-4.74/-4.21	-4.48/-3.93	-2.75/-2.81	-2.96/-1.02	0.82/0.80	-1.01/-3.62	-5.59/-6.61	-7.37/-7.93	-6.66/-4.54	-0.16/-1.47	-2.25/-1.09	-0.80/-1.18	-0.89/-0.33	-0.64/-1.60		-2.87/-4.74
Θ(100°)	-8.65/-8.04	-6.18/-4.11	-2.93/-2.15	-2.75/-4.63	-4.83/-4.61	-4.00/-1.44	0.27/0.05	-1.79/-4.29	-6.76/-9.16	-10.92/-10.08	-8.05/-5.27	-2.70/-1.02	-0.47/-0.81	-0.64/-0.31	-0.79/-1.30	-1.30/-1.11	-1.81/-3.49	-5.73/-7.98
Θ(110°)	-8.52/-9.24	-9.05/-6.51	-6.24/-5.45	-4.49/-5.82	-7.74/-8.00	-8.22/-5.15	-2.55/-2.56	-3.91/-5.06	-6.03/-6.54	-6.33/-5.84	-5.90/-5.83	-3.79/-1.95	-1.47/-3.13	-5.48/-5.43	-3.95/-2.70	-2.01/-2.12	-2.84/-4.25	-5.80/-7.04
Θ(120°)	-11.51/-11.99	-9.15/-5.01	-2.95/-3.00	-3.85/-3.49	-3.05/-3.11	-7.50/-6.94	-4.15/-2.69	-3.13/-4.82	-6.92/-7.84	-5.26/-6.94	-6.35/-3.31	-1.34/-0.55	-0.71/-1.43	-1.91/-2.30	-4.06/-6.49	-5.70/-3.52	-2.77/-4.17	-7.35/-10.47
Θ(130°)	-9.07/-7.85	-5.00/-3.01	-1.49/-1.63	-2.50/-2.99	-2.49/-1.97	-2.50/-3.81	-4.26/-4.06	-4.58/-5.71	-7.79/-10.08	-10.97/-9.16	-5.24/-2.71	-1.67/-1.85	-2.51/-2.82	-2.72/-2.88	-2.96/-1.99	-0.65/0.28	0.22/-1.14	-3.77/-6.72
Θ(140°)	-5.82/-5.94	-5.08/-3.59	-2.17/-1.74	-1.57/-2.00	-2.99/-3.39	-3.79/-4.32	-4.94/-5.16	-4.90/-3.70	-3.12/-3.18	-3.74/-4.42	-4.51/-4.81	-5.55/-5.57	-3.51/-1.50	-1.08/-1.46	-1.61/-1.10	-0.55/-0.37	-0.71/-2.02	-4.05/-5.66
Θ(150°)	-11.40/-10.37	-9.43/-7.49	-5.14/-3.08	-2.11/-1.95	-2.23/-2.24	-1.55/-0.86	-0.43/-0.40	-0.78/-1.59	-2.78/-4.05	-5.01/-5.47	-5.30/-5.08	-3.94/-2.09	-0.49/0.33	0.26/-0.14	-0.31/-0.39	-0.46/-0.89		-5.99/-6.65
Θ(160°)	-6.59/-7.26	-7.96/-8.39	-6.73/-4.97	-3.89/-3.14	-3.03/-2.46	-1.65/-0.71	0.06/0.53	0.77/0.94	0.91/0.84	0.80/0.74	0.55/0.53	0.64/0.94	0.92/0.42	-0.42/-1.46	-2.36/-2.87	-3.18/-3.61	-3.83/-4.19	-4.92/-5.87
Θ(170°)	-6.79/-7.78	-8.84/-9.39	-7.70/-6.69	-6.19/-5.86	-5.68/-5.06	-4.52/-3.83	-3.09/-2.54	-2.20/-1.96	-1.69/-1.51	-1.57/-1.65	-1.93/-2.18	-2.66/-3.34	-4.18/-5.18	-5.75/-5.84	-5.62/-5.78	-6.09/-6.46	-6.59/-6.37	-6.26/-6.27
Θ(180°)	-8.73/-8.27	-8.00/-6.89	-6.57/-6.02	-6.03/-6.16	-6.29/-6.19	-6.00/-6.05	-5.83/-5.64	-5.52/-5.61	-5.87/-6.07	-6.47/-7.04	-7.35/-7.80	-8.93/-10.52	-10.59/-9.74	-8.79/-7.91	-7.88/-7.98	-8.72/-9.39	-9.47/-8.96	-8.41/-8.53
Freq(Hz)	5.2G/Pol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Ψ(10°)	Φ(20°)Ψ(30°)	Φ(40°)Ψ(50°)	Φ(60°)Ψ(70°)	Φ(80°)Ψ(90°)	Φ(100°)Ψ(110°)	Φ(120°)Ψ(130°)	Φ(140°)Ψ(150°)	Φ(160°)Ψ(170°)	Φ(180°)Ψ(190°)	Φ(200°)Ψ(210°)	Φ(220°)Ψ(230°)	Φ(240°)Ψ(250°)	Φ(260°)Ψ(270°)	Φ(280°)Ψ(290°)	Φ(300°)Ψ(310°)	Φ(320°)Ψ(330°)	Φ(340°)Ψ(350°)
Θ(0°)	-0.88/-0.90	-1.28/-1.50	-1.26/-1.06	-0.71/-0.55	-0.53/-0.55	-0.69/-0.93	-1.05/-0.97	-0.83/-1.11	-1.27/-0.71	-0.61/-0.98	-0.73/-1.29	-0.91/-1.26	-0.96/-0.81	-0.92/-0.64	-0.80/-1.32	-1.23/-1.54		-1.22/-1.13
Θ(10°)	-1.14/-1.58	-1.59/-1.32	-1.45/-1.40	-1.34/-0.91	-0.77/-0.50	-1.06/-1.05	-1.01/-0.55	-0.29/-0.15	-0.26/-0.53	-0.58/-0.11	0.47/0.69	-0.00/-0.44	-0.53/-0.37	-0.36/-0.52	-0.59/-0.29	-0.21/-0.64	-1.24/-1.54	-1.30/-1.20
Θ(20°)	-1.94/-2.05	-2.02/-2.14	-1.80/-0.61	-0.34/-0.26	-0.22/-0.33	0.03/0.22	-0.04/0.20	0.19/0.05	-0.58/-1.03	-0.60/0.12	0.48/0.13	-0.76/-1.67	-1.66/-1.27	-1.12/-1.41	-1.56/-1.33	-1.57/-1.78	-1.52/-1.06	-1.33/-1.89
Θ(30°)	-3.04/-3.04	-2.60/-1.93	-1.48/-1.12	-0.74/-0.39	-0.92/-0.29	-0.16/0.65	-0.75/-1.30	-0.64/-0.15	-0.19/0.27	-0.75/-1.01	-1.37/-1.01	-1.13/-0.70	0.30/0.70	0.02/-0.75	0.02/-0.92	-1.89/-2.69	-3.39/-3.46	
Θ(40°)	-4.20/-3.31	-4.52/-3.71	-2.18/-1.60	-1.52/-0.31	1.29/1.55	1.92/2.04	1.22/0.56	0.34/-0.92	-1.95/-1.55	-1.35/-1.98	-1.32/0.06	0.12/0.11	0.93/1.18	1.52/1.68	1.26/0.42	-0.26/-0.33	-0.88/-2.66	-4.64/-5.57
Θ(50°)	-6.22/-4.15	-5.42/-5.69	-4.29/-2.45	-1.86/-1.02	0.09/1.08	1.55/2.32	2.02/0.61	0.48/-0.25	-1.90/-2.18	-2.88/-3.49	-1.77/-0.32	0.01/-1.02	0.59/0.92	-0.02/0.21	0.59/-0.44	-0.67/-1.22	-1.86/-2.38	-3.65/-6.06
Θ(60°)	-6.79/-5.91	-5.50/-5.17	-4.14/-3.17	-1.83/-0.91	-0.14/0.22	1.25/1.79	-0.97/-1.50	-2.15/-2.62	-3.24/-3.47	-2.56/-1.12	-0.91/-0.77	0.19/-0.08	-0.29/-0.63	-0.60/-1.84	-1.60/-2.38	-3.55/-3.30	-2.97/-5.08	
Θ(70°)	-5.24/-5.80	-6.21/-5.12	-4.23/-2.67	-0.68/0.24	0.26/0.75	0.92/0.65	-0.25/-0.64	-4.86/-5.90	-6.05/-5.63	-3.08/-1.66	-1.82/-1.03	0.01/0.69	0.58/0.82	-0.04/-1.02	-3.61/-3.98	-4.46/-5.96	-6.04/-6.23	
Θ(80°)	-4.00/-5.93	-5.31/-5.63	-5.17/-3.73	-2.96/-1.36	0.09/0.14	1.02/1.37	0.34/-0.02	-2.24/-2.99	-6.90/-8.75	-7.71/-8.10	-4.24/-3.20	-3.31/-1.15	-0.41/-1.57	1.80/1.07	0.58/-0.59	-2.72/-3.31	-3.98/-6.20	-6.87/-6.90
Θ(90°)	-7.29/-8.66	-8.66/-9.25	-6.10/-3.92	-4.10/-2.39	-1.58/-2.41	-1.96/-0.76	-2.06/-1.07	-1.46/-3.45	-6.80/-6.68	-9.43/-7.11	-4.42/-3.13	-1.37/1.56	2.39/3.60	2.22/0.52	-0.10/-0.78	-1.60/-1.78	-5.09/-6.38	-7.75/-10.03
Θ(100°)	-7.73/-8.71	-8.82/-9.77	-6.27/-5.24	-4.01/-2.60	-2.87/-1.60	-1.48/-1.20	-2.14/-2.71	-4.76/-5.21	-8.91/-9.68	-13.15/-6.48	-6.40/-5.42	-3.59/-2.08	1.12/2.41	-1.56/-0.35	-0.92/-0.88	-2.31/-4.72	-6.14/-6.61	-10.56/-13.67
Θ(110°)	-8.81/-8.85	-11.70/-7.90	-10.39/-6.62	-5.02/-4.57	-4.21/-4.44	-2.66/-2.88	-2.21/-2.37	-3.27/-3.80	-3.67/-6.22	-5.88/-4.66	-5.46/-5.68	-7.50/-3.40	-1.10/-1.02	-0.20/-1.46	-0.45/-1.56	-6.95/-8.01	-5.40/-7.42	-11.05/-10.91
Θ(120°)	-12.33/-15.07	-12.66/-11.39	-12.61/-7.92	-6.53/-6.99	-3.98/-5.79	-3.62/-3.26	-4.17/-4.84	-6.34/-8.43	-6.05/-5.67	-4.59/-5.07	-5.54/-6.11	-6.59/-4.34	-2.16/-1.09	-2.05/-6.06	-4.00/-9.41	-6.38/-10.37	-7.07/-6.80	-10.24/-8.17
Θ(130°)	-11.64/-14.65	-15.15/-13.62	-12.47/-7.72	-5.49/-7.64	-3.85/-5.24	-4.51/-2.53	-3.77/-5.49	-6.84/-3.40	-5.38/-6.17	-1.53/-3.92	-5.47/-7.92	-0.21/-0.23	-1.85/-3.92	-1.53/-3.92	-5.47/-10.22	-4.58/-4.94	-9.64/-8.88	
Θ(140°)	-7.92/-8.18	-8.50/-11.04	-10.18/-10.94	-11.51/-9.56	-6.37/-5.95	-5.10/-5.79	-4.79/-5.08	-7.62/-7.73	-7.01/-6.55	-7.21/-6.87	-3.43/-8.65	-12.78/-3.58	-1.91/0.13	-1.88/-4.57	-6.78/-3.74	-3.04/-3.25	-9.84/-6.70	-10.13/-9.12
Θ(150°)	-8.95/-10.84	-15.09/-11.68	-7.80/-7.81	-8.46/-7.59	-6.28/-5.75	-5.75/-5.05	-5.25/-6.47	-7.36/-9.58	-8.64/-9.79	-10.33/-6.23	-4.89/-6.92	-7.74/-5.55	-2.93/-3.35	-5.69/-5.62	-5.18/-2.26	-1.35/-3.98	-9.00/-4.95	-4.57/-8.18
Θ(160°)	-10.55/-9.60	-6.27/-6.45	-8.02/-13.11	-12.09/-9.74	-6.90/-7.03	-7.21/-6.63	-3.77/-6.38	-4.50/-6.07	-10.93/-10.24	-10.83/-10.88	-7.94/-5.96	-5.77/-6.41	-7.96/-8.56	-10.08/-8.85	-5.99/-3.86	-3.89/-6.40	-9.65/-9.02	-8.84/-10.56
Θ(170°)	-11.24/-12.95	-14.20/-12.37	-11.22/-9.47	-7.92/-7.55	-7.02/-6.55	-5.53/-5.17	-4.90/-4.69	-5.01/-5.20	-4.57/-3.91	-4.08/-4.11	-4.39/-5.41	-5.76/-6.16	-6.34/-6.40	-6.54/-5.68	-5.47/-5.91	-6.81/-7.75	-9.32/-9.61	-9.36/-9.35
Θ(180°)	-7.92/-9.73	-10.16/-10.15	-8.08/-7.63	-7.92/-8.59	-8.66/-7.98	-8.14/-7.73	-7.08/-7.11	-7.87/-8.92	-9.05/-8.20	-8.84/-8.23	-7.37/-7.70	-7.76/-5.86	-5.99/-6.42	-6.57/-6.95	-7.26/-7.27	-6.83/-6.35	-5.28/-4.68	-4.84/-4.86
Freq(Hz)	5.3G/Pol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)Ψ(10°)	Φ(20°)Ψ(30°)	Φ(40°)Ψ(50°)	Φ(60°)Ψ(70°)	Φ(80°)Ψ(90°)	Φ(100°)Ψ(110°)	Φ(120°)Ψ(130°)	Φ(140°)Ψ(150°)	Φ(160°)Ψ(170°)	Φ(180°)Ψ(190°)	Φ(200°)Ψ(210°)	Φ(220°)Ψ(230°)	Φ(240°)Ψ(250°)	Φ(260°)Ψ(270°)	Φ(280°)Ψ(290°)	Φ(300°)Ψ(310°)	Φ(320°)Ψ(330°)	Φ(340°)Ψ(350°)
Θ(0°)	-0.88/-1.38	-1.84/-1.70	-1.35/-1.41	-1.51/-1.68	-1.58/-1.13	-1.02/-1.04	-0.95/-0.83	-0.81/-0.78	-0.95/-1.15	-1.42/-1.89	-2.08/-1.62	-1.66/-1.83	-1.77/-1.47	-1.38/-0.98	-1.30/-1.40	-1.09/-0.95	-1.04/-1.50	-1.80/-1.34
Θ(10°)	-0.80/-1.18	-1.76/-2.06	-1.00/-0.16	-0.25/-0.86	-0.60/-0.25	0.10/0.01	0.25/-0.45	0.49/0.35	-0.10/0.01	0.13/0.21	-0.23/-0.60	-0.37/-0.10	-0.08/-0.30	-0.37/-0.10	-0.23/-0.20	-0.13/-0.00	-0.05/-0.32	-0.59/-1.09
Θ(20°)	-1.07/-2.29	-3.74/-2.54	-0.96/-0.79	-1.03/-1.04	-0.80/-0.35	0.08/0.36	0.60/0.66	0.40/-0.39	-0.48/0.13	0.79/0.61	-0.35/-0.94	-0.63/-0.47	-1.34/-2.15	-1.85/-1.68	-1.36/-0.82	-		



Antenna Pattern

Appendix B

Θ(70°)	-5.26/-4.12	-3.13/-2.59	-2.10/-1.55	-0.82/-0.18	0.11/-0.12	-0.40/-0.58	-1.19/-2.80	-4.54/-4.35	-3.28/-2.47	-2.16/-2.35	-2.96/-3.19	-2.78/-2.27	-1.57/-0.73	-0.08/-0.06	-0.14/-0.99	-2.65/-4.33	-5.68/-6.73	-6.68/-5.97
Θ(80°)	-8.28/-6.45	-5.13/-4.49	-3.53/-2.65	-2.60/-2.56	-2.44/-2.37	-2.91/-2.88	-2.25/-4.10	-7.58/-8.38	-6.60/-5.14	-4.77/-4.74	-3.98/-2.79	-1.68/-0.57	0.210.41	0.520.69	0.04/-1.85	-4.13/-6.62	-10.20/-13.04	-12.42/-10.26
Θ(90°)	-6.04/-5.34	-4.56/-3.81	-3.02/-1.86	-1.67/-2.32	-1.67/-2.32	-1.67/-2.32	-1.11/-3.20	-5.08/-9.60	-8.02/-6.24	-5.21/-4.21	-3.51/-2.39	-0.59/-1.27	2.12/-1.95	1.08/-1.38	-3.42/-6.29	-8.04/-7.85	-7.40/-6.66	
Θ(100°)	-4.24/-2.60	-1.99/-1.65	-1.48/-1.21	-1.46/-2.54	-3.29/-3.56	-3.71/-3.23	-1.89/-3.19	-9.30/-11.49	-6.31/-3.73	-3.16/-3.45	-3.45/-2.52	-0.710.81	1.51/-1.14	0.34/-0.11	-0.79/-2.88	-5.59/-7.74	-8.36/-8.71	-8.43/-7.03
Θ(110°)	-4.37/-2.21	-1.38/-1.10	-0.56/-0.40	-0.30/-1.62	-2.32/-2.34	-3.37/-4.35	-4.29/-5.77	-9.10/-9.22	-8.23/-7.99	-8.07/-6.32	-3.79/-2.23	-1.170.12	0.87/-0.57	-0.22/-0.30	-0.69/-2.17	-3.17/-2.82	-3.05/-5.26	-8.05/-7.51
Θ(120°)	-8.94/-4.75	-1.59/-0.95	-1.67/-1.73	-0.93/-0.91	-1.51/-2.12	-3.44/-3.21	-2.82/-4.05	-6.10/-8.28	-6.60/-6.02	-4.35/-2.83	-1.000.79	3.23/-3.85	3.42/-1.85	0.36/-0.49	-0.36/-1.18	-3.27/-5.05	-4.70/-5.02	-6.33/-8.14
Θ(130°)	-4.15/-3.03	-1.60/-0.75	-0.91/-2.01	-1.22/-1.22	-1.97/-3.67	-5.91/-5.55	-3.71/-2.67	-2.54/-3.93	-7.01/-10.96	-12.50/-11.50	-7.35/-2.82	0.552.30	2.55/-1.52	-0.15/-0.97	-0.270.38	-0.28/-2.48	-4.65/-5.30	-4.90/-3.89
Θ(140°)	-5.02/-0.47	-3.34/-2.85	-2.34/-1.81	-1.67/-2.06	-2.97/-3.62	-2.69/-0.93	0.040.54	0.34/-0.61	-2.17/-3.74	-4.81/-5.33	-5.18/-3.53	-1.260.08	-0.14/-0.98	-2.50/-3.09	-2.98/-1.62	-0.87/-1.77	-4.40/-7.40	-7.81/-6.39
Θ(150°)	-15.04/-11.54	-8.00/-5.04	-2.84/-1.58	-1.40/-2.10	-3.11/-3.46	-2.66/-1.68	-1.10/-1.16	-1.84/-2.96	-4.32/-5.33	-5.37/-5.02	-3.79/-2.14	-0.80/-0.11	0.05/-0.07	-0.46/-0.93	-1.24/-0.94	-0.76/-1.46	-3.56/-7.62	-12.64/-14.95
Θ(160°)	-7.90/-6.72	-5.38/-4.28	-3.50/-3.26	-3.34/-4.04	-4.40/-3.93	-3.34/-2.54	-2.42/-3.01	-4.49/-6.37	-8.42/-9.38	-8.79/-7.50	-5.94/-4.49	-3.53/-3.00	-2.98/-3.03	-3.14/-2.86	-3.01/-3.26	-3.62/-4.47	-6.39/-8.95	-9.81/-8.37
Θ(170°)	-9.58/-8.93	-8.16/-7.76	-7.64/-8.35	-8.79/-8.56	-7.43/-6.43	-5.64/-5.20	-5.04/-5.19	-5.35/-5.53	-5.36/-4.95	-4.35/-3.76	-3.84/-4.08	-4.68/-5.65	-6.76/-7.48	-7.75/-7.79	-7.84/-8.26	-9.15/-10.93	-12.65/-15.72	-13.29/-11.56
Θ(180°)	-7.88/-8.38	-9.31/-10.40	-10.89/-10.84	-10.29/-10.21	-9.84/-8.73	-8.68/-7.82	-8.98/-9.00	-8.72/-8.48	-8.72/-8.48	-8.37/-8.64	-8.85/-9.63	-10.45/-11.57	-13.00/-14.27	-13.27/-12.32	-11.07/-10.46	-9.66/-9.48	-8.39/-7.50	
Freq(Hz)	5.2GPol.	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°)	-2.71/-3.00	-2.81/-2.69	-2.19/-1.82	-1.83/-1.91	-1.74/-1.78	-1.53/-1.75	-1.89/-1.92	-2.32/-2.80	-3.11/-3.43	-3.54/-3.23	-2.87/-2.73	-2.76/-2.56	-2.62/-2.56	-2.28/-2.52	-2.09/-2.15	-2.51/-2.88	-2.87/-3.00	
Θ(10°)	-0.76/-0.62	-0.90/-1.20	-0.330.18	0.08/-0.15	-0.17/-0.33	-0.74/-1.38	-1.91/-2.44	-3.00/-3.75	-3.90/-3.86	-3.21/-2.59	-2.15/-2.51	-2.63/-2.83	-3.37/-3.93	-4.17/-3.91	-3.02/-1.83	-0.89/-0.09	-0.21/-0.51	-0.65/-1.09
Θ(20°)	-1.29/-0.91	-0.45/-0.09	0.180.45	0.09/-0.06	-0.54/-0.92	-1.23/-1.36	-1.31/-1.71	-2.08/-2.28	-2.42/-2.18	-2.48/-3.13	-4.05/-6.46	-4.83/-4.30	-3.63/-2.84	-1.96/-1.87	-2.90/-3.21	-1.63/-0.85	-1.28/-2.31	-2.15/-1.64
Θ(30°)	-1.18/-1.06	-0.64/-0.04	0.290.42	-0.07/-0.14	-0.44/-0.59	-1.53/-3.05	-3.58/-3.80	-1.09/-1.69	-2.52/-1.03	-5.93/-4.07	-3.88/-5.26	-3.30/-4.61	-5.45/-6.18	-5.95/-4.07	-3.88/-5.26	-7.07/-4.47	-2.72/-2.82	-1.97/-1.08
Θ(40°)	-2.460.11	0.570.59	0.700.70	0.590.36	-0.12/-1.36	-3.04/-3.86	-3.04/-2.07	-2.55/-3.05	-2.01/-1.59	-2.24/-2.03	-1.57/-1.61	-1.76/-2.86	-4.07/-4.93	-6.13/-7.28	-10.06/-8.16	-5.40/-5.09	-6.68/-4.84	-2.87/-2.26
Θ(50°)	-1.640.50	1.060.30	0.53/-1.38	1.490.92	-0.23/-1.85	-3.41/-5.05	-4.13/-2.33	-2.38/-2.39	-1.29/-1.47	-3.01/-2.57	-2.29/-2.23	-0.55/-1.09	-2.65/-5.45	-6.83/-10.25	-11.19/-9.20	-8.14/-4.89	-5.16/-4.97	-3.59/-3.00
Θ(60°)	0.30/-1.23	1.68/-1.99	1.540.80	1.29/-1.37	0.90/-0.86	-1.39/-4.46	-3.60/-3.33	-2.89/-3.99	-3.48/-2.50	-1.53/-0.59	-0.34/-1.11	-1.88/-3.23	-13.84/-12.74	-3.35/-6.16	-10.75/-13.51	-9.45/-4.96	-5.03/-4.23	-2.51/-1.25
Θ(70°)	1.75/-2.71	1.97/-1.82	1.080.53	0.780.65	-1.85/-4.96	-7.33/-6.62	-2.83/-3.82	-4.68/-4.79	4.47/-2.67	-1.14/-0.07	0.18/-0.46	-0.62/-0.99	-2.11/-4.56	-8.35/-12.29	-13.19/-10.05	-7.70/-6.18	-3.33/-3.99	-0.73/-1.19
Θ(80°)	1.06/-2.15	2.67/-2.14	-0.23/-2.02	-1.36/-0.35	-1.24/-6.41	-9.43/-7.20	-7.11/-3.56	-4.45/-4.24	-4.69/-2.42	-1.340.12	0.53/-1.23	0.15/-2.27	-3.99/-9.70	-8.89/-5.70	-3.43/-4.08	-4.95/-2.99	-0.90/-9.92	
Θ(90°)	0.662.27	2.842.41	0.70/-2.45	-4.08/-4.27	-4.06/-3.23	-11.95/-5.26	-2.68/-0.67	-8.86/-5.79	-7.04/-4.47	-0.55/-0.38	2.530.27	-2.55/-8.49	-5.79/-2.25	-1.69/-1.87	-4.47/-5.74	-2.19/-0.37		
Θ(100°)	0.902.19	2.80/-1.82	0.03/-3.48	-6.77/-5.06	-5.25/-10.84	-11.59/-7.15	-6.07/-3.15	-5.82/-6.08	-2.85/-3.50	0.58/-1.12	-0.85/-1.09	1.323.38	2.05/-1.13	-1.47/-6.00	-3.62/-2.03	0.38/-4.09	-5.75/-5.78	-2.510.23
Θ(110°)	-1.40/-1.49	-0.86/-0.77	-2.25/-6.60	-10.42/-5.56	-9.48/-13.72	-14.98/-9.15	-9.81/-6.38	-9.15/-13.09	-5.60/-3.82	-3.31/-1.75	-2.25/-3.01	0.82/-1.41	1.32/-1.71	-0.47/-2.03	-5.28/-7.33	-0.33/-1.93	-8.40/-8.79	-7.29/-3.45
Θ(120°)	-4.66/-5.05	-2.72/-2.51	-6.24/-7.18	-10.46/-10.35	-8.47/-6.65	-5.00/-7.51	-2.72/-4.28	-6.87/-6.54	-5.00/-7.51	-2.22/-3.74	-1.10/-5.07	-1.360.72	1.10/-5.07	-2.22/-3.74	-11.96/-0.25	-1.64/-2.15	-4.37/-6.49	-8.86/-3.61
Θ(130°)	-10.14/-6.64	-6.38/-6.99	-7.69/-15.47	-14.82/-12.27	-10.88/-15.72	-12.03/-13.30	-15.73/-10.62	-9.83/-8.50	-9.41/-13.58	-6.40/-2.12	-7.18/-2.33	1.263.49	1.92/-6.81	0.04/-0.15	-6.36/-2.04	2.80/-2.91	-2.71/-4.97	-1.31/-6.89
Θ(140°)	-8.44/-11.75	-7.18/-11.75	-9.80/-10.21	-11.77/-13.15	-10.45/-8.39	-3.99/-4.22	-8.31/-10.06	-8.46/-8.84	-14.18/-7.42	-3.30/-2.63	-2.02/-2.44	-1.24/-1.51	-5.68/-6.81	-0.250.21	-4.00/-0.84	0.25/-0.18	-6.34/-3.48	-5.34/-3.06
Θ(150°)	-2.16/-4.49	-7.38/-10.39	-15.53/-15.20	-15.01/-10.48	-9.93/-10.26	-9.93/-12.46	-15.36/-13.99	-8.43/-9.36	-9.17/-7.53	-4.04/-1.98	-2.26/-2.67	-1.56/-3.21	-7.24/-3.03	2.232.88	-1.07/-8.74	-9.20/-4.73	-5.51/-8.04	-3.23/-1.95
Θ(160°)	-3.32/-3.44	-5.34/-8.80	-11.92/-15.28	-14.70/-14.68	-9.08/-5.42	-6.69/-11.55	-15.34/-13.93	-11.56/-10.84	-7.59/-3.98	-2.32/-2.69	-8.47/-7.56	-9.97/-8.77	-6.20/-2.37	0.250.44	-0.87/-4.80	-10.85/-11.49	-7.54/-5.09	-4.28/-3.66
Θ(170°)	-5.17/-5.24	-5.85/-5.39	-6.22/-6.70	-8.23/-10.22	-11.86/-10.59	-9.47/-9.99	-9.84/-9.54	-9.37/-9.49	-9.40/-9.77	-10.82/-12.16	-12.04/-10.91	-8.21/-5.23	-3.03/-1.57	-0.74/-1.04	-2.04/-4.62	-9.10/-11.47	-10.48/-13.26	-9.33/-7.03
Θ(180°)	-8.78/-9.23	-9.34/-8.10	-7.63/-6.04	-5.02/-4.50	-4.35/-4.05	-4.38/-5.58	-5.80/-5.37	-5.62/-5.40	-4.81/-4.76	-4.90/-4.90	-4.90/-5.05	-5.17/-5.51	-5.14/-5.12	-4.66/-4.22	-5.38/-5.60	-6.73/-9.42	-10.58/-9.91	-10.55/-8.93
Freq(Hz)	5.3GPol.	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°)	-2.89/-2.98	-2.42/-2.51	-2.31/-2.17	-2.12/-2.18	-2.24/-1.78	-2.122.00	-2.82/-2.88	-2.88/-2.84	-2.42/-2.51	-2.31/-2.26	-2.57/-2.39	-2.82/-2.77	-2.00/-2.06	-2.85/-2.89	-2.54/-2.10	-2.04/-2.73		
Θ(10°)	-2.58/-3.09	-2.27/-1.52	-0.99/-0.95	-0.90/-0.51	-1.08/-1.43	-1.95/-2.64	-3.39/-4.41	-5.20/-5.95	-6.11/-6.24	-6.23/-6.13	-5.75/-5.01	-4.46/-4.31	-3.94/-4.12	-3.98/-3.62	-3.31/-3.09	-2.86/-3.20	-3.30/-3.21	-2.21/-2.57
Θ(20°)	-1.12/-1.01	-1.19/-1.46	-0.76/-0.75	-0.420.08	-0.57/-1.44	-2.62/-4.36	-5.82/-5.60	-6.49/-5.89	-4.85/-3.28	-2.95/-3.41	-3.86/-3.76	-3.59/-2.81	-2.63/-3.18	-3.85/-4.88	-5.10/-3.81	-2.46/-2.01	-2.44/-2.33	-1.22/-1.17
Θ(30°)	-2.45/-1.93	-1.46/-0.44	0.14/-0.16	-0.85/-1.27	-2.08/-2.06	-2.45/-3.38	-4.15/-2.33	-4.10/-5.15	-4.15/-2.33	-1.89/-2.41	-2.79/-3.16	-3.85/-5.24	-7.28/-6.03	-3.00/-1.89	-3.13/-6.56	-6.57/-3.92	-3.12/-2.99	-1.54/-1.83
Θ(40°)	-2.72/-1.04	-1.30/-0.69	-0.270.16	-0.08/-0.29	-1.25/-2.66	-3.30/-4.22	-3.92/-4.27	-1.95/-2.87	-2.78/-2.09	-2.86/-2.75	-1.90/-1.58	-1.39/-2.05	-3.33/-4.80	-6.57/-8.44	-8.28/-5.66	-4.52/-5.02	-4.83/-3.76	-4.16/-5.52
Θ(50°)	-0.550.95	-1.31/-1.20	-0.63/-0.25	-0.03/-0.54	-1.31/-3.30	-6.00/-4.56	-3.25/-3.09	-2.95/-3.38	-2.95/-1.87	-2.33/-1.75	-1.07/-0.65	0.07/-0.62	-2.24/-4.53	-7.75/-10.98	-8.30/-6.46	-5.74/-3.75	-5.26/-4.66	-3.29/-1.67
Θ(60°)	1.18/-1.55	1.20/-1.29	0.06/-0.70	-0.38/-0.33	-1.30/-3.78	-6.77/-7.25	-4.42/-5.00	-5.66/-6.99	-5.36/-4.10	-2.03/-0.91	-0.62/-0.71	-1.14/-1.21	-2.73/-5.60	-10.54/-11.75	-11.29/-10.40	-8.54/-5.98	-6.47/-3.56	-1.200.38
Θ(70°)	1.73/-1.98	2.17/-1.78	0.37/-0.47	-0.48/-0.93	-2.85/-6.06	-7.20/-4.95	-2.89/-3.87	-5.13/-5.79	-5.86/-3.39	-1.390.07	-0.12/-0.61	-6.38/-5.44	-1.10/-2.72	-5.10/-8.03	-11.32/-10.61	-6.38/-5.48	-5.35/-3.45	-0.43/-1.63
Θ(80°)	0.962.12	1.94/-1.77	-0.61/-2.29	-1.93/-1.82	-3.19/-9.34	-10.01/-6.08	-5.61/-2.76	-3.25/-4.16	-5.51/-3.91	-2.31/-0.43	-1.83/-2.02	0.150.87	0.18/-1.18	-3.28/-7.13	-9.94/-6.63	-4.07/-4.99	-5.18/-4.00	-1.580.90
Θ(90°)	0.51/-1.87	2.11/-1.82	0.44/-2.84	-6.00/-5.95	-5.22/-9.34	-12.02/-4.55	-5.36/-6.41	-5.58/-6.48	-6.52/-5.01	-1.51/-0.63	-2.87/-1.51	0.912.57	2.400.40	-2.24/-7.92	-7.47/-3.26	-2.60/-3.12	-5.40/-5.74	-2.720.01
Θ(100°)	-0.09/-1.55	2.21/-1.95	-0.07/-3.81	-8.33/-5.89	-6.32/-11.98	-11.27/-7.18	-4.29/-2.29	-1.000.31	-4.75/-4.85	-1.21/-7.18	-1.01/-1.91	0.582.69	1.71/-0.79	-1.20/-7.08	-5.75/-3.72	-0.61/-4.58	-4.76/-5.69	-4.26/-3.06
Θ(110°)	-2.41/-2.08	-0.84/-0.90	-3.32/-8.65	-11.37/-9.34	-9.44/-14.22	-14.58/-7.62	-7.02/-3.91	-8.13/-10.66	-7.53/-5.42	-3.58/-3.13	-3.97/-3.88	-0.240.62	0.88/-1.97	-				



Antenna Pattern

Appendix B

Θ (170°)	-7.85/-7.54	-7.28/-7.03	-7.20/-7.84	-8.43/-9.38	-10.15/-9.87	-10.29/-10.37	-10.14/-9.75	-9.39/-9.10	-9.18/-9.47	-9.72/-9.67	-9.07/-8.46	-8.12/-7.99	-8.02/-7.94	-8.09/-8.58	-8.95/-9.13	-9.13/-8.70	-8.44/-8.23	-8.13/-8.47
Θ (180°)	-10.58/-10.20	-10.34/-9.82	-9.08/-8.31	-7.77/-7.47	-7.69/-8.33	-9.22/-10.01	-10.18/-10.44	-10.15/-9.53	-9.75/-10.74	-10.46/-10.10	-9.63/-9.17	-9.19/-9.56	-10.02/-9.95	-9.87/-10.15	-10.63/-10.29	-9.98/-9.30	-8.85/-9.13	-9.75/-10.02
Freq(Hz)	5.2G/Pol.	TotalAnt. 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°)	-1.20/-2.29	-3.04/-2.87	-2.32/-2.41	-2.04/-1.66	-2.04/-2.11	-1.54/-1.64	-1.80/-1.64	-1.56/-1.33	-1.44/-1.51	-1.73/-2.08	-1.97/-1.98	-1.81/-1.96	-2.12/-2.11	-1.84/-1.67	-1.64/-1.39	-1.44/-1.52	-1.51/-1.34	-1.09/-0.66
Θ (10°)	-0.41/-0.49	-1.61/-2.75	-2.71/-2.40	-1.93/-2.25	-2.42/-2.77	-2.48/-1.83	-2.24/-2.77	-2.48/-1.83	-2.92/-2.15	-1.49/-1.25	-2.24/-1.97	-1.74/-1.94	-1.96/-1.63	-1.88/-0.66	-0.88/-0.29	-0.52/-0.31	-0.15/-0.22	-0.39/-0.40
Θ (20°)	-0.18/-1.03	-3.33/-3.82	-2.33/-1.44	-1.37/-1.68	-1.59/-1.59	-1.34/-1.87	-1.71/-1.58	-1.90/-3.00	-3.70/-3.02	-2.26/-2.38	-3.38/-3.84	-3.48/-3.41	-3.02/-2.38	-1.88/-1.89	-1.97/-1.98	-1.64/-1.55	-1.49/-1.80	-1.75/-0.89
Θ (30°)	-1.51/-1.93	-3.04/-2.52	-1.47/-0.81	-1.39/-1.73	-1.29/-0.88	-0.97/-1.40	-0.90/-0.85	-2.12/-3.95	-4.28/-3.03	-2.79/-3.71	-4.35/-4.51	-3.43/-2.45	-2.23/-2.39	-2.09/-1.67	-1.27/-0.77	-0.80/-0.98	-1.51/-2.24	-2.61/-1.85
Θ (40°)	-2.18/-2.09	-2.91/-3.35	-1.74/-0.62	-0.77/-0.68	-0.53/-0.32	-0.21/-0.63	-1.33/-1.53	-2.38/-3.86	-4.89/-3.62	-3.92/-5.54	-5.98/-4.91	-4.06/-2.93	-2.26/-1.46	-0.81/-0.59	-0.79/-0.69	-0.63/-1.48	-1.55/-2.42	-3.92/-3.38
Θ (50°)	-3.65/-3.35	-2.88/-2.87	-3.64/-2.40	0.04/-1.23	0.74/-1.37	2.320.63	-0.83/-1.42	-2.39/-4.95	-5.75/-6.99	-7.73/-7.06	-6.57/-4.35	-4.23/-4.29	-2.98/-2.35	-1.72/-1.11	-1.37/-0.79	-0.60/-1.00	-1.14/-1.60	-2.60/-3.59
Θ (60°)	-3.17/-2.95	-4.26/-4.18	-3.16/-1.82	-0.37/0.35	0.44/-0.30	-0.90/-0.93	-1.14/-2.27	-3.32/-4.46	-5.90/-7.49	-8.99/-8.30	-7.96/-6.95	-4.57/-4.68	-3.96/-2.67	-2.72/-2.40	-2.24/-1.35	-0.69/-2.05	-1.79/-2.26	-3.66/-3.78
Θ (70°)	-2.89/-2.64	-3.16/-3.52	-2.41/-1.78	-1.25/-0.91	-0.27/-0.06	-0.92/-1.06	-1.23/-3.36	-4.99/-6.82	-7.03/-7.47	-8.71/-12.41	-10.23/-8.88	-7.04/-5.03	-3.47/-2.43	-1.56/-1.19	-0.64/-1.45	-1.51/-2.93	-2.80/-2.89	-3.51/-3.66
Θ (80°)	-2.98/-3.90	-3.52/-3.22	-3.31/-2.76	-1.99/-0.66	-0.83/-1.14	-1.29/-2.15	-2.46/-3.27	-4.93/-6.25	-6.70/-8.77	-8.78/-11.80	-12.82/-8.97	-6.02/-4.55	-3.90/-2.32	-2.08/-1.89	-0.75/-0.28	-1.10/-2.83	-2.48/-2.03	-3.30/-4.04
Θ (90°)	-4.46/-4.48	-4.46/-3.45	-4.10/-2.56	-1.76/-1.26	-2.50/-3.47	-2.31/-1.95	-4.62/-4.10	-6.21/-7.72	-7.80/-7.30	-9.44/-12.59	-12.54/-10.53	-6.33/-3.76	-2.29/-2.11	-2.13/-0.37	0.83/0.74	-0.30/-1.69	-3.44/-2.91	-2.75/-5.03
Θ (100°)	-5.69/-3.43	-4.30/-5.05	-3.91/-1.37	-1.67/-3.79	-4.30/-3.84	-8.14/-4.13	-6.08/-5.51	-5.97/-4.42	-7.84/-7.82	-8.14/-11.08	-11.11/-10.74	-5.97/-4.42	-3.47/-3.12	-4.82/-1.95	0.00/0.25	-0.04/-2.36	-4.11/-4.01	-2.95/-4.25
Θ (110°)	-5.63/-4.63	-6.26/-4.09	-1.88/-2.31	-4.06/-6.20	-6.06/-6.73	-6.31/-6.69	-6.41/-8.11	-10.42/-13.07	-14.38/-10.85	-9.84/-10.72	-10.32/-7.26	-6.57/-8.36	-6.97/-2.82	-5.11/-4.29	-1.93/-1.53	-2.58/-4.25	-4.01/-2.76	-4.29/-5.19
Θ (120°)	-5.66/-5.24	-5.88/-4.88	-3.56/-3.38	-2.75/-3.98	-5.14/-6.94	-7.60/-8.67	-11.33/-13.08	-11.61/-13.41	-10.45/-13.43	-9.06/-8.69	-11.06/-8.72	-8.65/-8.19	-7.25/-7.31	-8.75/-7.99	-2.56/-0.39	-2.55/-4.41	-4.23/-5.01	-6.37/-5.76
Θ (130°)	-6.44/-5.20	-5.70/-6.11	-4.18/-3.29	-4.36/-4.26	-7.55/-8.59	-11.05/-11.56	-14.85/-15.15	-10.93/-9.92	-10.58/-14.89	-10.10/-10.86	-7.20/-4.96	-6.04/-7.17	-5.61/-6.04	-7.50/-4.25	-1.57/-1.49	-0.44/-0.74	-6.28/-2.69	-5.58/-5.65
Θ (140°)	-5.40/-4.46	-5.79/-5.67	-5.95/-4.27	-3.14/-4.52	-5.82/-7.31	-8.91/-13.99	-12.09/-10.76	-10.46/-12.56	-9.84/-8.59	-7.31/-8.97	-8.54/-5.43	-4.94/-2.41	-3.95/-4.65	-4.87/-3.02	-0.43/-0.86	-3.15/-6.49	-12.17/-5.69	-4.74/-6.15
Θ (150°)	-11.40/-8.29	-7.10/-6.65	-6.54/-7.68	-8.14/-8.72	-8.98/-8.09	-8.84/-9.65	-11.72/-11.36	-10.28/-14.00	-13.75/-9.97	-9.10/-6.46	-6.71/-8.84	-9.76/-6.94	-4.27/-6.74	-6.28/-7.02	-3.83/-3.14	-5.79/-6.99	-6.21/-5.31	-5.76/-8.40
Θ (160°)	-11.43/-11.02	-10.48/-10.73	-9.24/-8.20	-7.93/-8.57	-9.83/-11.14	-10.52/-12.34	-13.02/-13.27	-14.41/-11.48	-9.16/-10.37	-10.52/-7.98	-8.24/-10.46	-11.22/-9.05	-7.02/-7.20	-9.73/-12.71	-8.29/-8.97	-8.06/-7.07	-7.15/-8.25	
Θ (170°)	-4.58/-7.20	-7.50/-7.29	-7.78/-8.79	-10.28/-11.92	-11.71/-11.43	-12.18/-11.84	-11.08/-10.82	-9.62/-8.92	-8.67/-8.78	-8.82/-9.16	-8.79/-8.17	-7.72/-7.22	-6.84/-6.30	-6.52/-6.68	-6.79/-5.84	-4.67/-4.51	-4.90/-3.70	-2.99/-3.06
Θ (180°)	-10.46/-7.13	-7.74/-7.92	-8.48/-8.29	-8.07/-7.66	-7.42/-7.52	-8.42/-9.44	-9.45/-8.69	-7.85/-7.92	-8.27/-8.69	-8.64/-8.26	-8.59/-8.10	-7.89/-7.63	-7.73/-7.79	-7.81/-7.76	-8.62/-9.35	-9.90/-9.08	-8.29/-9.77	-12.06/-13.69
Freq(Hz)	5.3G/Pol.	TotalAnt. 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°)	-1.48/-1.43	-1.37/-1.63	-1.96/-2.01	-2.01/-2.39	-2.32/-1.83	-1.75/-1.61	-1.40/-1.36	-1.91/-2.05	-1.47/-1.52	-1.99/-2.28	-2.01/-1.72	-2.02/-2.36	-2.42/-2.10	-1.73/-1.80	-1.81/-1.59	-1.39/-1.36	-1.26/-1.46	-1.45/-1.77
Θ (10°)	-0.68/-1.15	-0.98/-0.68	-1.01/-1.15	-1.21/-1.26	-1.01/-1.11	-1.27/-1.25	-2.37/-2.61	-2.68/-2.58	-2.77/-2.61	-1.06/-0.90	-0.81/-0.49	0.04/0.34	-2.05/-1.40	-0.05/-0.90	0.04/0.34	0.24/-0.17	0.23/-0.14	
Θ (20°)	-1.56/-2.12	-1.16/-0.70	-1.30/-1.67	-1.47/-0.97	-0.96/-1.01	-0.61/-0.88	-1.27/-1.44	-1.84/-2.49	-3.20/-3.24	-3.41/-3.14	-2.63/-2.65	-3.38/-3.95	-3.78/-2.81	-1.82/-1.83	-1.93/-1.45	-1.08/-1.05	-1.08/-0.36	0.09/-0.55
Θ (30°)	-1.94/-2.34	-2.31/-1.95	-1.33/-0.95	-1.27/-1.62	-1.74/-1.49	-1.24/-1.71	-1.91/-1.49	-1.75/-2.62	-3.72/-4.15	-3.50/-3.81	-4.58/-4.64	-3.27/-1.95	-1.70/-1.90	-1.46/-0.98	-0.89/-0.70	-0.61/-1.01	-1.85/-2.74	-3.00/-3.26
Θ (40°)	-2.93/-3.00	-2.92/-1.86	-1.82/-1.55	-0.51/-0.13	-0.39/-0.53	-0.99/-1.22	-4.84/-4.49	-5.48/-4.71	-4.80/-5.43	-0.99/-1.22	-5.48/-4.84	-3.10/-2.19	-2.14/-1.53	-0.96/-0.58	-0.60/-0.21	-0.50/-0.85	-0.64/-1.33	-1.99/-2.15
Θ (50°)	-2.65/-3.49	-3.60/-2.33	-1.70/-1.26	-0.03/-1.21	2.192.72	1.56/0.65	-1.10/-2.37	-3.28/-4.74	-4.97/-5.92	-9.78/-7.79	-5.37/-4.50	-3.56/-3.38	-2.97/-2.66	-2.23/-1.65	-1.03/-0.03	-0.07/-1.21	-1.45/-1.58	-1.87/-2.45
Θ (60°)	-4.15/-4.40	-3.79/-3.36	-3.87/-2.14	-1.22/-0.78	0.08/0.12	-0.24/-0.40	-0.60/-1.52	-3.26/-4.80	-5.70/-6.21	-7.80/-8.67	-6.73/-6.76	-5.64/-4.12	-3.75/-2.89	-2.53/-2.74	-2.28/-0.97	-0.78/-2.27	-1.98/-2.14	-2.91/-3.57
Θ (70°)	-4.11/-3.60	-2.80/-2.74	-3.11/-2.56	-1.67/-1.01	-0.55/-0.10	-1.00/-0.97	-1.00/-1.74	-3.41/-6.50	-9.00/-10.68	-10.27/-8.19	-5.94/-5.33	-2.99/-1.92	-1.34/-1.10	-0.47/-0.72	-0.52/-2.00	-1.82/-2.21	-3.03/-4.32	
Θ (80°)	-4.60/-3.64	-2.99/-3.13	-3.41/-2.38	-2.15/-1.61	-1.79/-1.64	-0.99/-1.13	-1.04/-1.68	-4.72/-8.28	-8.20/-8.82	-7.39/-13.27	-12.57/-7.98	-6.61/-4.73	-3.03/-1.59	-1.88/-1.50	-0.53/-0.33	-0.62/-1.57	-1.29/-1.33	-3.41/-4.88
Θ (90°)	-4.37/-4.37	-4.77/-4.60	-4.19/-3.49	-2.62/-2.64	-2.96/-3.48	-4.14/-1.28	-2.72/-3.13	-5.40/-8.25	-8.67/-9.03	-8.39/-12.46	-13.38/-9.30	-6.41/-4.21	-2.33/-1.49	-1.72/-0.14	1.13/0.98	-0.34/-1.57	-3.20/-2.86	-3.22/-5.14
Θ (100°)	-5.32/-3.86	-4.75/-3.55	-4.25/-2.29	-1.89/-3.49	-5.29/-5.84	-4.47/-4.41	-11.12/-9.55	-4.95/-5.05	-8.13/-7.64	-7.82/-11.85	-4.59/-5.05	-5.60/-3.96	-3.97/-2.44	-3.19/-1.51	0.26/0.47	0.08/-2.44	-3.44/-3.46	-2.81/-4.87
Θ (110°)	-6.90/-4.50	-4.48/-4.58	-3.34/-3.35	-4.43/-5.86	-6.93/-7.37	-6.65/-6.92	-6.00/-6.83	-11.42/-13.81	-12.98/-10.58	-8.64/-10.07	-11.17/-7.50	-7.04/-7.88	-6.40/-3.07	-4.78/-4.00	-1.83/-1.66	-2.33/-4.09	-3.78/-2.48	-3.14/-5.67
Θ (120°)	-6.81/-5.10	-4.75/-6.61	-4.47/-3.95	-3.91/-4.24	-6.06/-7.03	-7.57/-8.31	-11.47/-10.80	-12.25/-9.25	-12.93/-15.96	-8.05/-8.34	-11.28/-7.95	-8.85/-9.12	-8.49/-6.60	-8.70/-7.64	-2.83/-1.37	-3.39/-4.83	-4.40/-4.73	-5.26/-6.52
Θ (130°)	-7.76/-5.72	-5.92/-5.89	-5.52/-4.38	-4.86/-4.53	-8.02/-8.30	-8.60/-14.41	-11.45/-15.39	-9.34/-8.26	-7.53/-15.72	-10.24/-10.80	-7.85/-4.50	-6.38/-7.59	-5.92/-5.72	-5.29/-4.30	-1.33/-1.06	-2.34/-7.46	-5.56/-2.28	-2.70/-7.50
Θ (140°)	-5.93/-4.48	-4.16/-5.78	-8.49/-4.54	-3.02/-5.67	-6.96/-7.88	-10.67/-13.31	-10.40/-10.92	-10.38/-12.74	-8.06/-7.04	-6.06/-3.79	-6.41/-3.01	-4.40/-5.15	-0.86/-3.79	-0.96/-1.52	-3.20/-7.60	-12.93/-5.74	-3.55/-4.80	
Θ (150°)	-13.27/-9.79	-8.04/-7.12	-6.40/-7.95	-9.59/-9.56	-8.99/-9.08	-10.68/-11.79	-8.20/-14.17	-10.64/-9.88	-12.20/-13.10	-7.23/-6.16	-8.20/-9.13	-6.43/-6.03	-4.38/-5.00	-6.73/-8.10	-4.50/-4.00	-5.65/-6.42	-5.89/-5.05	-5.54/-9.14
Θ (160°)	-8.72/-10.48	-10.84/-11.23	-9.81/-9.40	-9.21/-9.25	-11.06/-12.88	-14.85/-12.66	-13.98/-11.35	-10.65/-14.11	-9.13/-8.36	-8.34/-9.76	-10.46/-8.93	-8.20/-8.92	-11.20/-13.04	-11.16/-9.28	-8.99/-8.44	-7.15/-6.64	-6.74/-7.65	
Θ (170°)	-3.88/-6.48	-8.89/-9.00	-3.88/-8.88	-9.96/-11.61	-13.89/-11.75	-12.68/-12.91	-11.46/-10.39	-9.90/-8.94	-8.26/-9.30	-9.34/-8.51	-7.49/-7.26	-6.93/-7.55	-5.42/-4.75	-4.72/-4.64	-4.24/-3.63			
Θ (180°)	-12.58/-8.52	-7.69/-8.66	-9.31/-9.71	-9.60/-9.82	-9.41/-9.34	-8.77/-10.02	-10.30/-9.76	-10.04/-9.59	-9.76/-10.26	-10.10/-9.10	-8.64/-8.89	-8.43/-8.31	-8.43/-9.01	-9.34/-8.80	-8.56/-8.99	-9.72/-9.79	-10.06/-11.24	-11.68/-14.06
Freq(Hz)	5.6G/Pol.	TotalAnt. 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°)	-2.56/-2.68	-2.83/-3.14	-3.53/-3.93	-3.59/-3.19	-3.99/-3.29	-3.10/-3.13	-3.10/-7.23	-2.38/-2.87	-3.49/-3.19	-2.77/-3.28	-3.67/-3.79	-3.17/-2.69	-3.29/-3.55	-3.31				



Antenna Pattern

Appendix B

Θ(60°)	-4.91/-7.33	-9.54/-11.69	-9.16/-8.66	-8.89/-9.79	-7.43/-5.30	-5.16/-5.00	-2.08/-0.00	0.07/-1.24	-1.83/-0.95	-0.68/-0.62	-1.47/-0.70	-0.91/-1.86	-0.68/-2.68	-4.88/-4.53	-4.61/-4.93	-4.96/-6.42	-7.90/-8.20	-6.49/-4.17
Θ(70°)	-5.87/-6.84	-6.14/-10.18	-8.56/-5.54	-6.54/-7.27	-8.76/-6.12	-3.51/-4.40	-0.72/-0.66	0.46/-0.12	-1.05/-1.49	-2.18/-2.20	-1.83/-1.32	-2.63/-3.50	-1.13/-1.16	-1.64/-2.71	-3.64/-4.97	-5.20/-5.12	-6.38/-7.39	-9.16/-8.10
Θ(80°)	-6.74/-7.82	-8.38/-6.21	-4.75/-3.73	-4.61/-5.57	-5.96/-5.25	-3.31/-3.64	-1.50/-0.30	0.24/-0.31	-1.17/-1.71	-2.10/-2.54	-2.57/-2.09	-4.90/-4.16	-3.95/-2.52	-1.49/-4.04	-3.50/-6.57	-5.28/-7.65	-5.83/-8.94	-10.73/-9.72
Θ(90°)	-7.27/-8.80	-7.03/-6.24	-3.85/-1.53	-2.04/-6.26	-5.02/-4.36	-1.13/-1.25	-2.21/-1.31	0.34/-0.06	-0.21/-0.83	-0.94/-1.51	-1.35/-1.71	-3.46/-5.54	-7.49/-3.28	-1.65/-3.71	-8.53/-5.93	-5.28/-10.25	-5.58/-8.86	-15.22/-11.29
Θ(100°)	-5.12/-4.70	-4.66/-3.57	-2.65/-0.49	-1.38/-5.06	-5.43/-5.91	-2.04/-0.68	-2.53/-3.25	-1.77/-1.07	-0.71/-1.67	-2.00/-2.32	-2.48/-2.35	-3.34/-4.19	-10.41/-7.21	-6.09/-6.41	-13.67/-6.16	-6.38/-11.09	-8.41/-9.49	-15.20/-10.76
Θ(110°)	-3.46/-5.65	-2.04/-2.55	-3.44/-3.01	-1.64/-4.27	-6.32/-4.11	-3.04/-0.84	-1.88/-0.50	-1.25/-0.89	0.08/-0.30	-0.29/-0.51	-0.68/-1.11	-2.18/-4.59	-5.82/-4.71	-4.38/-5.50	-7.93/-7.50	-6.13/-12.08	-6.90/-10.06	-11.12/-6.35
Θ(120°)	-7.16/-6.80	-5.18/-4.06	-4.16/-3.86	-4.86/-7.06	-8.82/-4.85	-6.62/-4.65	-3.43/-4.19	-4.11/-2.83	-2.62/-1.08	-1.30/-1.27	-2.04/-2.60	-3.29/-7.25	-3.62/-5.91	-7.29/-7.54	-7.30/-7.14	-6.04/-8.11	-9.18/-8.69	-13.47/-12.61
Θ(130°)	-4.89/-4.16	-3.41/-3.69	-4.03/-5.16	-4.39/-4.58	-5.83/-5.82	-4.84/-6.66	-4.09/-4.91	-3.54/-4.11	-3.19/-3.13	-4.28/-3.29	-1.58/-0.45	-1.76/-9.38	-7.54/-2.84	-3.93/-8.50	-10.16/-11.62	-4.13/-2.67	-11.24/-14.33	-7.58/-6.65
Θ(140°)	-8.81/-13.42	-11.64/-7.26	-5.77/-6.42	-4.53/-3.75	-8.97/-7.70	-4.56/-2.73	-3.22/-3.66	-3.88/-3.73	-3.07/-3.55	-2.99/-2.46	-2.21/-1.78	-5.84/-10.72	-7.28/-3.18	-3.54/-8.81	-12.24/-13.48	-13.81/-6.34	-8.47/-11.61	-6.56/-6.08
Θ(150°)	-7.15/-8.30	-8.30/-10.57	-14.43/-9.73	-5.74/-6.22	-9.61/-10.46	-10.81/-10.88	-8.33/-11.59	-12.55/-9.49	-9.84/-8.11	-6.85/-8.38	-9.86/-8.22	-6.92/-7.86	-7.99/-10.54	-9.27/-7.60	-8.38/-8.69	-7.43/-7.20	-11.36/-14.08	-8.79/-5.24
Θ(160°)	-14.44/-15.48	-13.94/-12.11	-11.59/-12.75	-10.91/-10.45	-9.25/-8.20	-6.67/-6.35	-6.37/-5.30	-4.80/-5.24	-5.83/-6.93	-8.82/-7.41	-4.78/-3.40	-3.10/-3.98	-4.25/-4.29	-4.20/-5.72	-8.42/-11.92	-11.90/-11.45	-13.96/-15.80	-15.33/-15.16
Θ(170°)	-6.10/-6.50	-6.49/-6.63	-6.88/-6.64	-7.10/-7.44	-7.43/-6.40	-4.34/-2.82	-1.84/-1.18	-0.94/-0.87	-0.98/-0.73	-0.29/-0.24	-0.32/-1.29	-1.86/-2.34	-2.73/-4.18	-7.33/-10.27	-9.35/-7.36	-5.90/-4.75	-4.26/-3.91	-4.27/-4.93
Θ(180°)	-2.91/-2.74	-3.42/-3.55	-4.27/-4.54	-4.74/-4.94	-4.46/-4.70	-4.05/-3.46	-2.92/-2.49	-2.28/-1.97	-1.67/-1.87	-2.74/-3.42	-3.93/-3.88	-4.46/-5.94	-7.05/-7.62	-7.14/-6.26	-5.92/-6.69	-7.85/-7.30	-5.87/-5.48	-5.07/-4.36
Freq(Hz)	5.65GPol.	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°)	-0.35/-0.98	-0.78/-0.19	-0.32/-0.76	-1.17/-1.121	-0.95/-1.10	-1.15/-0.96	-0.91/-0.90	-0.95/-0.84	-1.02/-0.93	-0.60/-0.01	-0.12/-0.69	-0.52/-0.08	-0.37/-0.73	-1.10/-1.58	-1.52/-1.60	-1.12/-0.54	-0.65/-0.99	-0.87/-0.66
Θ(10°)	0.50/-0.30	-0.61/-1.06	-0.84/-1.22	-2.01/-2.55	-2.60/-0.43	-2.51/-2.00	-1.64/-1.41	-0.88/-0.43	-0.28/-0.09	0.12/-0.25	0.09/-0.48	0.27/-0.25	-0.65/-0.48	-0.65/-0.81	-0.60/-0.57	0.01/-0.43	0.61/-0.40	0.18/-0.66
Θ(20°)	-0.06/-0.04	-0.41/-1.01	-1.42/-0.23	0.21/-0.53	-1.40/-2.30	-1.71/-0.88	-1.45/-2.11	-1.49/-1.56	-1.30/-1.21	-1.45/-2.11	-2.78/-2.32	-1.91/-1.05	-0.73/-1.35	-0.73/-1.35	-0.17/-0.43	-0.76/-1.20	-0.97/-0.06	-0.43/-0.13
Θ(30°)	-3.77/-3.33	-2.66/-2.44	-2.56/-1.95	-1.87/-1.63	-0.58/-1.04	-0.99/-0.22	0.24/-0.28	-1.14/-0.69	0.10/-0.68	0.33/-0.28	0.34/-0.33	-0.58/-0.42	-0.76/-1.01	-0.38/-0.92	-2.82/-3.05	-1.85/-2.84	-4.65/-4.50	-4.31/-3.98
Θ(40°)	-4.03/-3.76	-2.79/-2.70	-4.15/-5.69	-6.54/-4.63	-3.55/-1.67	-0.56/-0.30	-0.65/-0.80	-1.00/-1.55	-1.43/-0.40	0.54/-0.62	0.31/-0.23	0.11/-0.27	-1.22/-2.22	-4.73/-4.51	-3.33/-3.66	-3.52/-3.88	-3.76/-4.55	-4.82/-4.20
Θ(50°)	-7.42/-10.10	-11.49/-13.55	-11.85/-9.71	-6.98/-6.19	-8.78/-10.06	-3.19/-2.38	-2.22/-2.32	-2.54/-1.30	-0.46/-0.15	-0.14/-0.25	0.29/-0.05	-1.22/-2.00	-2.10/-2.50	-1.76/-2.69	-3.42/-3.42	-3.73/-4.53	-4.33/-3.84	-4.58/-6.26
Θ(60°)	-7.69/-6.88	-5.35/-5.93	-3.97/-4.83	-5.70/-4.58	-4.20/-6.08	-5.45/-4.39	-0.73/-1.13	-2.95/-1.94	-0.87/-1.28	-1.99/-2.39	-1.42/-1.56	-1.20/-2.04	-3.74/-4.17	-4.05/-3.67	-5.30/-4.74	-5.53/-7.34	-6.38/-8.05	-7.54/-7.30
Θ(70°)	-4.58/-10.51	-12.86/-9.02	-7.92/-7.11	-6.90/-8.05	-5.67/-5.34	-5.10/-3.47	-0.72/-0.52	-0.79/-0.91	-1.63/-1.40	-1.03/-1.32	-1.70/-1.49	-1.55/-3.75	-2.65/-2.49	-1.62/-2.04	-5.62/-3.96	-2.31/-4.73	-6.34/-7.18	-5.80/-3.63
Θ(80°)	-5.42/-6.50	-4.47/-4.03	-5.09/-3.46	-3.46/-5.02	-6.30/-4.54	-3.14/-3.20	-0.73/-0.72	-0.85/-0.82	-1.25/-1.66	-1.19/-2.12	-3.04/-4.20	-6.16/-6.14	-5.27/-3.52	-4.68/-5.31	-7.50/-6.64	-7.28/-6.48	-5.56/-7.24	-7.73/-6.15
Θ(90°)	-4.74/-6.01	-5.85/-4.96	-3.60/-2.77	-6.69/-7.69	-5.63/-5.11	-1.92/-3.37	-1.12/-0.72	0.62/-0.13	0.02/-0.72	-1.22/-1.92	-2.50/-3.09	-5.71/-4.79	-6.09/-6.43	-5.32/-7.79	-6.41/-5.59	-6.28/-4.70	-5.09/-7.76	-8.72/-6.16
Θ(100°)	-4.16/-4.57	-2.56/-2.28	-2.41/-2.35	-1.35/-5.56	-3.65/-4.33	-2.06/-4.28	-0.87/-2.15	-0.42/-0.77	-2.34/-3.78	-3.25/-3.77	-2.52/-4.18	-4.37/-5.98	-4.58/-9.47	-7.29/-5.99	-7.87/-10.60	-7.91/-9.44	-7.57/-16.05	-12.05/-9.51
Θ(110°)	-3.86/-3.81	-2.89/-1.93	-3.07/-3.33	-2.24/-5.17	-4.52/-3.15	-1.68/-0.88	-0.23/-1.01	-0.66/-0.49	0.23/-1.01	-1.81/-3.50	-4.37/-3.28	-3.66/-5.75	-8.92/-3.36	-4.37/-3.28	-12.98/-7.02	-5.24/-9.08	-8.53/-12.41	-11.55/-4.83
Θ(120°)	-4.46/-4.91	-2.82/-2.61	-3.68/-3.76	-3.32/-5.27	-7.65/-5.05	-5.37/-1.64	-2.20/-1.95	-1.41/-1.45	-0.49/-0.89	-0.87/-0.69	-1.74/-4.56	-2.04/-3.73	-9.08/-6.11	-5.89/-6.49	-8.67/-6.45	-5.46/-11.85	-13.74/-9.95	-12.83/-9.09
Θ(130°)	-3.62/-4.18	-5.48/-7.47	-6.02/-7.00	-2.27/-2.58	-4.87/-5.95	-7.13/-5.72	-3.99/-3.11	-2.19/-1.99	-4.28/-3.23	-4.46/-4.24	-4.67/-0.21	-1.74/-14.61	-5.32/-2.11	-3.09/-4.82	-6.12/-11.41	-2.95/-2.33	-13.10/-9.47	-6.25/-3.34
Θ(140°)	-8.28/-13.04	-8.44/-6.36	-6.53/-6.99	-3.82/-4.08	-4.63/-3.17	-1.19/-2.60	-3.43/-2.07	-1.40/-1.74	-1.19/-0.72	-0.38/-0.09	-1.02/-0.94	-3.24/-9.14	-12.88/-1.66	-1.50/-6.46	-13.07/-10.27	-11.05/-5.14	-7.13/-13.70	-5.82/-5.97
Θ(150°)	-9.85/-9.89	-12.34/-15.23	-10.62/-6.62	-4.05/-4.43	-6.01/-7.20	-9.54/-7.65	-8.26/-6.53	-7.35/-6.48	-7.13/-7.75	-6.63/-5.49	-5.98/-6.26	-3.90/-3.94	-6.64/-9.25	-5.98/-6.21	-4.79/-6.47	-12.38/-15.25	-8.40/-6.72	
Θ(160°)	-11.84/-12.35	-11.04/-10.03	-11.35/-10.94	-9.69/-7.82	-6.71/-6.54	-5.67/-5.82	-6.53/-6.67	-5.61/-5.81	-5.35/-6.19	-8.44/-9.13	-7.05/-4.81	-2.19/-1.55	-2.48/-3.11	-2.86/-4.14	-7.78/-11.33	-11.18/-9.60	-11.00/-12.88	-13.65/-10.90
Θ(170°)	-4.49/-4.03	-3.85/-3.97	-4.21/-4.80	-4.35/-4.42	-3.72/-2.47	-0.93/-0.09	-0.16/-0.49	1.34/-1.50	1.28/-1.88	2.55/-2.90	3.25/-2.02	1.33/-0.56	-0.92/-2.78	-5.23/-7.85	-9.23/-8.51	-6.19/-4.74	-3.77/-3.37	-4.31/-5.63
Θ(180°)	0.35/-0.09	0.08/-0.31	-0.24/-0.58	-0.93/-0.96	-1.07/-1.07	-0.33/-0.12	-0.13/-0.63	-0.31/-0.37	0.52/-0.20	-0.40/-0.86	-1.15/-1.43	-2.34/-3.61	-5.55/-7.37	-8.15/-6.58	-6.68/-6.23	-4.83/-4.06	-2.98/-1.72	-0.54/-0.20
Freq(Hz)	5.785GPol.	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°)	-0.94/-0.91	-0.68/-0.88	-1.02/-1.10	-0.80/-0.36	-0.55/-0.90	-1.19/-1.20	-1.00/-1.27	-1.04/-0.32	-0.43/-0.88	-0.60/-0.03	-0.31/-0.65	-0.49/-0.31	-0.55/-0.94	-0.35/-0.08	-0.43/-0.71	-0.83/-0.72	-0.63/-1.12	-0.94/-0.78
Θ(10°)	-0.47/-0.18	-0.72/-0.72	-1.10/-1.52	-1.49/-1.91	-2.51/-3.10	-3.45/-2.89	-2.39/-2.15	-1.49/-0.99	-0.65/-0.18	0.50/-0.51	0.73/-1.07	1.04/-0.97	1.22/-1.39	1.19/-0.77	0.15/-0.50	-0.66/-0.74	-0.68/-0.18	-0.14/-0.59
Θ(20°)	-0.63/-2.14	-2.53/-2.81	-3.34/-3.57	-4.28/-5.98	-6.59/-5.27	-4.44/-4.28	-4.25/-3.64	-3.09/-2.47	-0.86/-0.01	0.16/-0.42	0.70/-0.93	0.78/-0.67	0.95/-1.54	1.08/-0.30	-0.25/-0.51	0.63/-0.25	-0.14/-0.10	0.44/-0.31
Θ(30°)	-1.38/-1.70	-1.88/-3.12	-4.08/-3.70	-4.34/-2.69	-2.63/-3.28	-3.25/-3.42	-4.10/-2.29	-0.81/-0.37	-0.62/-0.25	-0.07/-0.39	0.55/-0.22	0.59/-0.44	-0.75/-0.59	0.08/-1.56	1.52/-0.45	0.08/-0.10	0.13/-0.70	-1.38/-1.33
Θ(40°)	-5.23/-2.51	-2.16/-2.33	-2.49/-3.48	-2.09/-1.70	-1.67/-0.77	-0.80/-1.22	-1.43/-1.23	-0.66/-0.07	0.33/-0.19	0.06/-0.68	-0.02/-0.58	0.30/-0.35	-0.56/-1.24	-1.95/-1.57	-2.21/-1.40	-1.56/-3.47	-3.30/-3.44	-4.81/-5.68
Θ(50°)	-4.11/-5.93	-5.59/-6.39	-8.63/-7.82	-6.70/-7.40	-6.29/-1.79	-1.60/-1.98	-0.20/-1.19	-1.55/-1.07	0.07/-0.85	0.71/-0.37	-0.07/-0.83	-0.55/-1.53	-0.88/-1.19	-2.86/-1.42	-2.89/-3.59	-3.50/-3.48	-3.70/-3.30	-2.35/-2.33
Θ(60°)	-3.82/-3.95	-5.40/-7.27	-5.30/-5.44	-5.50/-4.79	-7.53/-8.64	-5.12/-2.66	-1.44/-3.84	-3.96/-0.97	-1.72/-3.74	-3.91/-3.80	-3.89/-3.39	-2.29/-3.71	-2.84/-2.69	-3.55/-3.55	-2.57/-5.73	-3.84/-6.04	-5.82/-5.74	-4.78/-3.11
Θ(70°)	-2.20/-6.09	-8.80/-7.51	-6.11/-4.20	-6.23/-4.39	-2.82/-3.94	-3.83/-1.65	0.41/-1.88	-1.71/-0.38	1.32/-0.43	1.18/-0.26	-0.23/-2.22	-1.97/-2.34	-3.07/-2.32	-3.46/-2.34	-3.62/-4.60	-2.14/-2.93	-4.50/-7.10	-4.48/-1.87
Θ(80°)	-3.24/-4.97	-4.20/-3.03	-3.14/-3.51	-5.00/-7.76	-7.31/-2.57	-2.25/-1.89	-1.27/-3.05	-2.29/-1.95	-2.00/-2.11	-3.31/-3.23	-3.31/-2.05	-6.73/-3.83	-4.66/-4.30	-5.07/-1.21	-6.90/-9.53	-6.22/-3.44	-5.53/-6.19	-7.01/-5.92
Θ(90°)	-4.12/-6.56	-8.67/-5.09	-2.36/-2.87	-5.39/-4.02	-6.81/-4.82	-4.21/-4.66	-0.25/-0.96	1.48/-0.49	-1.00/-2.44	-3.37/-2.95	-1.01/-1.35	-4.01/-3.57	-8.52/-5.27	-7.12/-6.49	-7.11/-4.35	-6.50/-4.87	-5.62/-5.11	-6.25/-4.34
Θ(100°)	-2.71/-3.37	-1.75/-3.81	-4.46/-2.01	-0.73/-3.75	-2.													

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

