



Antenna Composite Gain Test Report

FCC ID	2AHKM-CODA5834
Equipment	DOCSIS 3.1 Wi-Fi 6E Tri-Band EMTA Gateway
Brand Name	Hitron
Model Name	CODA5X3X (Please refer to section 2 of the test report for detailed information.)
Applicant	Hitron Technologies Inc. No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park, Hsinchu 30078, Taiwan
Manufacturer	Hitron Technologies Inc. No. 1-8, Li-Hsin 1st Rd. Hsinchu Science Park, Hsinchu 30078, Taiwan
Sample Received	May 05, 2022
Start Test Date	Jun. 17, 2022
Final Test Date	Jun. 17, 2022

Approved by: Sam Chen

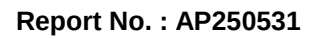
Sporton International Inc. Hsinchu Laboratory

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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	SPEED	S-D5-49-6003-004-00	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G 5GAnt2	2	SPEED	S-D5-49-6003-003-00	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G 5GAnt3	3	SPEED	S-D5-49-6003-002-00	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3
2G 5GAnt4	4	SPEED	S-D5-49-6003-001-00	Dipole	I-PEX	2.4GHz, 5GHz UNII 1~3

Note:

2.4GHz and 5GHz Operation Mode (4TX/4RX)

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

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

2. Table for Multiple Listing

The model names in the following table are all refer to the identical product.

Model Name	Description
CODA5X3X	CODA5X3X : The X in model name can be 0 to 9, A to Z or blank, for marketing purpose.

Note 1: From the above model: CODA5834 was selected as representative model for the test and its data was recorded in this report.

Note 2: The above information was declared by manufacturer.

3. Test Frequency

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

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

**4. Testing Location**

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

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
Radiated	05CH03-HY	Rex Liao	23.1-24.5 / 56-62	Jun. 17, 2022

Note:

Testing Site Information

Brand Name: TDK

Dimension: 11m*6m*6m

Characteristic: Fully Anechoic Chamber

5. Test Facility and Configuration

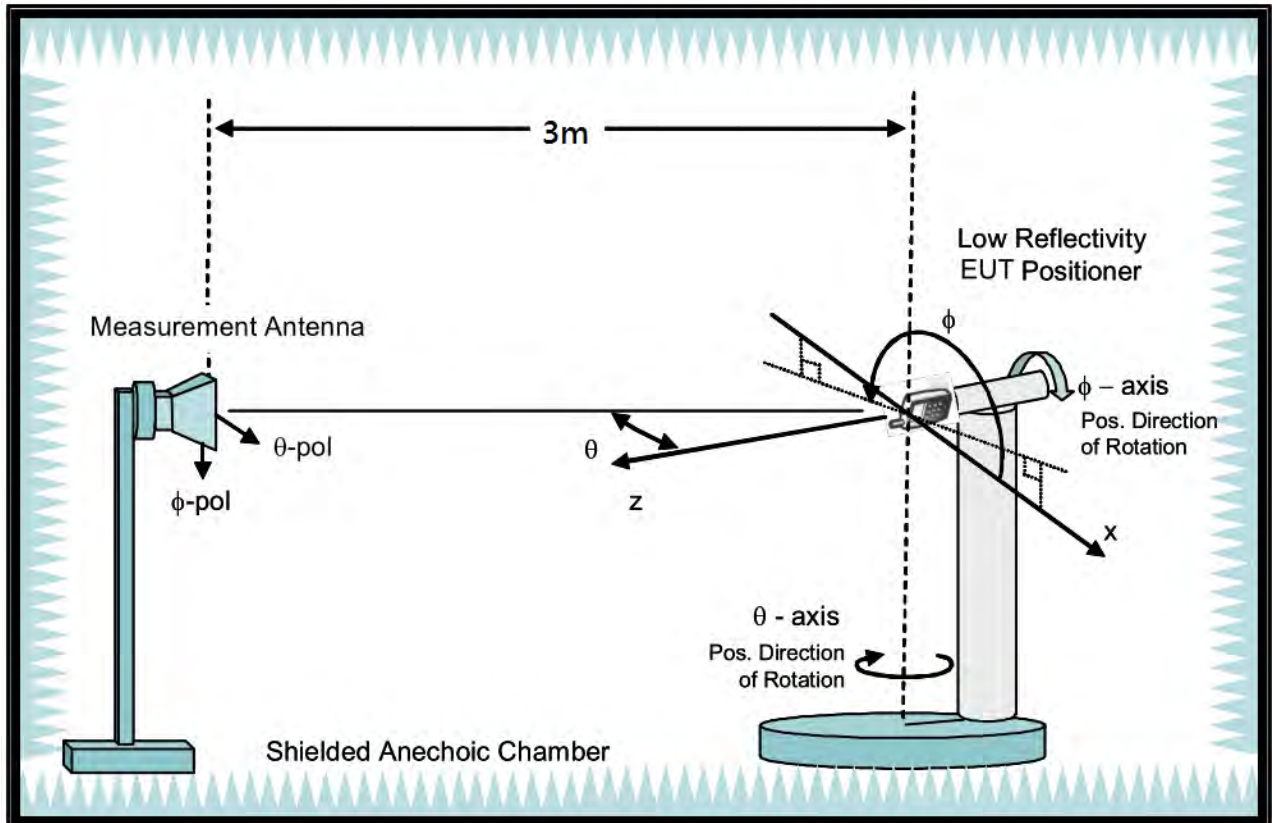
Test configuration: Reference to CITA OTA distributed-axes system configuration.

Chamber: Fully Anechoic Chamber.

Measurement antenna: Dual Polarization Horn antenna

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

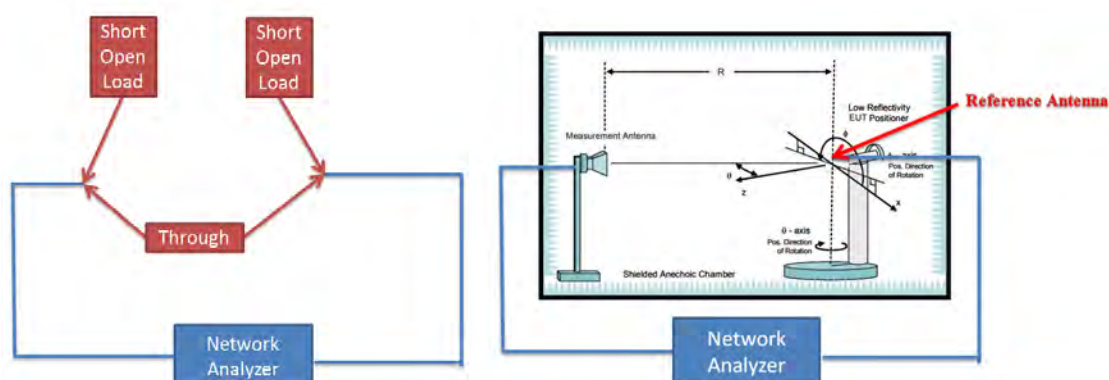
#Reference to CTIA "ctia-test-plan-for-wireless-device-over-the-air-performance-ver-3-7-1"



6. Reference Calibration

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

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



Frequency (MHz)	2400	2450	2500	5150	5200	5300	5600	5750	5800	5900	6000	6500	7000	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)



7. Test Method

EUT set on multi-axis positioner and adjust EUT's physical center to measurement reference center. Measurement antenna set at phi polarization and 1.5 meter height. Port 1 of Network analyzer connect to antenna 1 of EUT. Record G value every 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 8 tables.

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

8. Measured Values and Calculation of Maximum Gain Positions

DG_1SS Max Value Position

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 (dBi)	-0.18	0.52	-6.36	-9.19	1.06
Ant. 2 (dBi)	1.27	0.69	-0.87	-1.35	-8.57
Ant. 3 (dBi)	-1.1	0.12	2.81	1.84	-3.9
Ant. 4 (dBi)	-4.29	-9.24	-3.97	-4.69	0.25
DG [1SS] (dBi)	5.17	4.87	4.61	3.59	4
Polarization	Phi	Phi	Phi	Phi	Theta
$\Theta(^{\circ})$	10	80	30	30	30
$\Phi(^{\circ})$	230	240	290	250	280

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

DG_1SS max value position calculation

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 [$10^{(G/20)}$]	$10^{(-0.18/20)}$	$10^{(0.52/20)}$	$10^{(-6.36/20)}$	$10^{(-9.19/20)}$	$10^{(1.06/20)}$
Ant. 2 [$10^{(G/20)}$]	$10^{(1.27/20)}$	$10^{(0.69/20)}$	$10^{(-0.87/20)}$	$10^{(-1.35/20)}$	$10^{(-8.57/20)}$
Ant. 3 [$10^{(G/20)}$]	$10^{(-1.1/20)}$	$10^{(0.12/20)}$	$10^{(2.81/20)}$	$10^{(1.84/20)}$	$10^{(-3.9/20)}$
Ant. 4 [$10^{(G/20)}$]	$10^{(-4.29/20)}$	$10^{(-9.24/20)}$	$10^{(-3.97/20)}$	$10^{(-4.69/20)}$	$10^{(0.25/20)}$
Ant. 1 [$10^{(G/20)}$] value	0.979	1.062	0.481	0.347	1.13
Ant. 2 [$10^{(G/20)}$] value	1.157	1.083	0.905	0.856	0.373
Ant. 3 [$10^{(G/20)}$] value	0.881	1.014	1.382	1.236	0.638
Ant. 4 [$10^{(G/20)}$] value	0.61	0.345	0.633	0.583	1.029
Sum All Antenna [Amax]	3.628	3.503	3.401	3.022	3.17
DG [$10 \cdot \log(A_{max}^2/N_{ant})$]	5.17	4.87	4.61	3.59	4

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

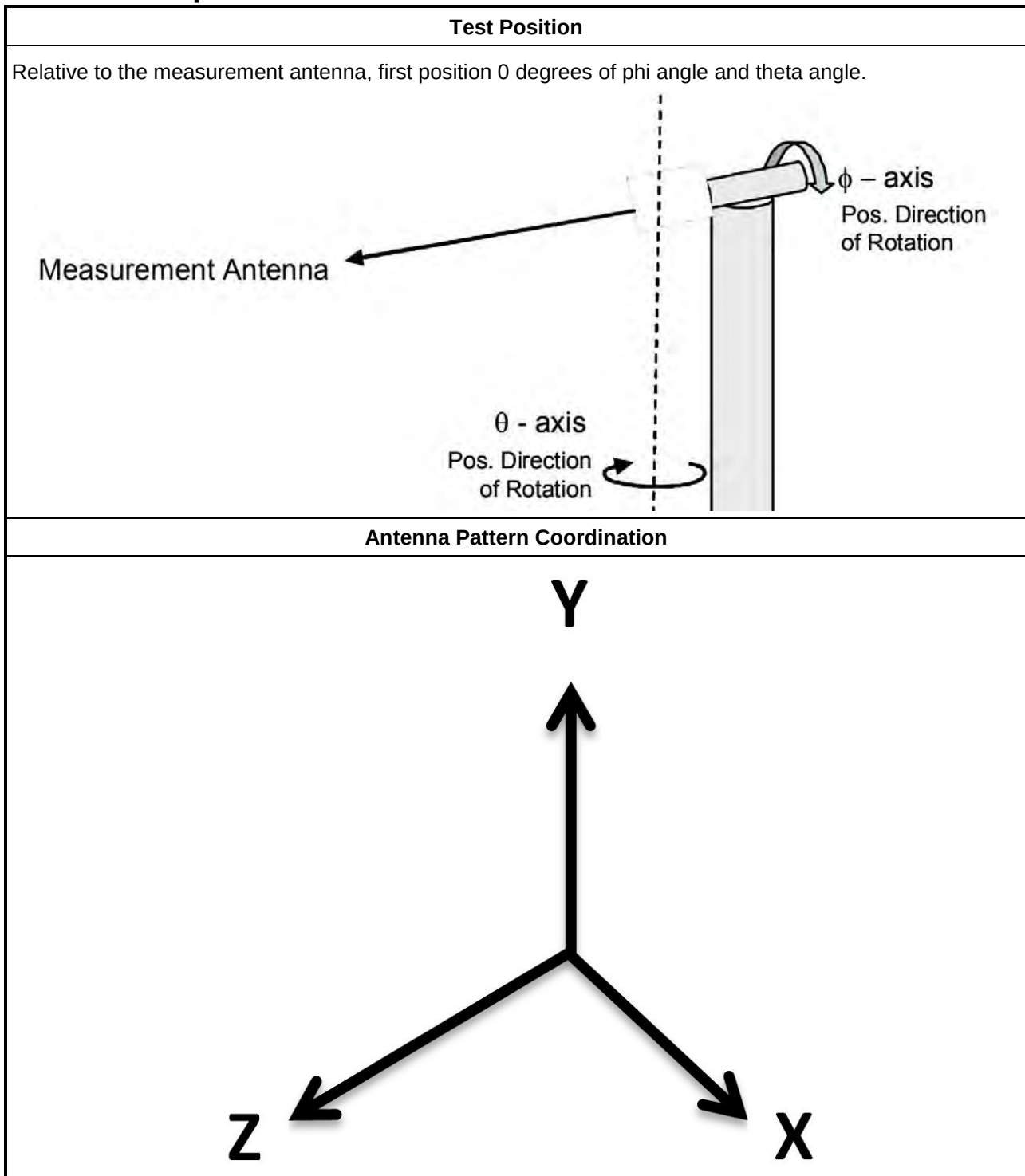
9. Summary of Test Result

Frequency (Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.55	2.97	2.91	2.09	2.15
Ant. 2 Max Gain (dBi)	4.09	3.07	3.49	2.73	3.31
Ant. 3 Max Gain (dBi)	3.16	3.19	4	3.11	2.83
Ant. 4 Max Gain (dBi)	2.17	2.4	3.04	2.44	2.25
Ant. 1 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/110/170	Phi/90/350	Phi/90/350	Phi/120/190	Theta/30/270
Ant. 2 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/60/90	Phi/140/90	Phi/130/120	Phi/140/110	Phi/140/110
Ant. 3 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Theta/30/350	Phi/30/290	Theta/20/0	Phi/0/110	Phi/50/110
Ant. 4 Polarization/ $\theta(^{\circ})/\Phi(^{\circ})$	Phi/60/0	Phi/60/160	Phi/60/160	Phi/40/140	Phi/50/140
Max Gain (dBi)	4.09	3.19	4	3.11	3.31
DG [1SS] (dBi)	5.17	4.87	4.61	3.59	4
DG [2SS] (dBi)	4.09	3.19	4	3.11	3.31
DG [4SS] (dBi)	4.09	3.19	4	3.11	3.31

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.

10. Test Setup



Note:

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

**11. Test Equipment and Calibration Data**

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date
Horn Antenna	SCHWARZBECK	BBHA9120D	BBHA 9120D-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.



12. Test Results

Please refer to the appendix.

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Appendix C – Test Photos.....	Page 30



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Freq(Hz)	2.45G	5.2G	5.3G	5.6G	5.785G
Ant. 1 Max Gain (dBi)	3.55	2.97	2.91	2.09	2.15
Ant. 2 Max Gain (dBi)	4.09	3.07	3.49	2.73	3.31
Ant. 3 Max Gain (dBi)	3.16	3.19	4	3.11	2.83
Ant. 4 Max Gain (dBi)	2.17	2.4	3.04	2.44	2.25
Ant. 1 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/110/170	Phi/90/350	Phi/90/350	Phi/120/190	Theta/30/270
Ant. 2 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/60/90	Phi/140/90	Phi/130/120	Phi/140/110	Phi/140/110
Ant. 3 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Theta/30/350	Phi/30/290	Theta/20/0	Phi/0/110	Phi/50/110
Ant. 4 Polarization/ $\theta(^{\circ})/\phi(^{\circ})$	Phi/60/0	Phi/60/160	Phi/60/160	Phi/40/140	Phi/50/140
Max Gain (dBi)	4.09	3.19	4	3.11	3.31
DG [1SS] (dBi)	5.17	4.87	4.61	3.59	4
DG [2SS] (dBi)	4.09	3.19	4	3.11	3.31
DG [4SS] (dBi)	4.09	3.19	4	3.11	3.31



DG 1SS Result

Freq(Hz)	2.45GPol.	Phi-	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	
DG(dB)	Phi(°)/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(°)	1.96/2.74	3.44/4.01	4.44/4.46	4.52/4.53	3.91/3.61	3.57/3.49	3.11/3.18	2.54/2.67	2.09/1.36	1.51/2.6	3.2/4.1	4.56/4.74	3.96/3.62	3.59/3.68	3.66/3.49	3.14/2.59	2.04/1.9	
Theta(10°)	1.96/2.59	2.93/3.21	3.28/3.99	3.81/4.19	3.88/3.24	3.37/3.52	3.43/3.3	2.77/2.25	2.53/2.43	1.97/2.96	3.98/4.62	5.04/5.17	5/4.62	4.11/3.6	3.57/3.66	3.74/3.64	3.27/2.58	1.77/1.49
Theta(20°)	2.9/2.68	3.49/3.72	3.83/3.71	3.61/2.9	3.42/3.02	2.95/3.44	3.9/4.11	4.38/4.19	4.08/3.25	2.46/2.73	3.45/4.2	4.54/4.59	4.38/3.97	3.43/3.2	3.35/3.56	3.74/3.9	3.92/3.63	3/2.21
Theta(30°)	2.29/2.56	3.23/3.69	4.16/4.39	4.42/3.67	2.95/2.63	2.64/3.32	3.21/3.35	3.62/3.27	2.11/2.08	2.55/3.31	3.94/3.42	2.63/2.36	2.78/3.17	3.55/3.79	3.97/3.93	3.31/2.6		
Theta(40°)	2.87/2.4	2.95/3.22	3.54/3.72	4.05/3.55	3.13/3.07	3.36/3.7	3.93/3.82	3.89/3.97	3.87/3.45	2.58/2.22	1.47/1.87	2.25/3.01	3.6/3.4	2.46/1.56	1.65/2.41	2.97/3.6	3.71/3.68	3.51/3.17
Theta(50°)	1.92/1.47	1.32/1.52	1.66/2.27	3.46/3.85	3.35/2.52	2.7/3.33	3.5/3.27	3.17/3.07	2.76/1.9	0.58/0.35	1.02/1.64	1.74/1.95	2.62/3	2.32/1.2	2.34/2.78	3.03/3.43	3.9/4.16	3.87/3.03
Theta(60°)	1.02/1.34	1.54/1.11	0.04/0.02	2.11/4.02	4.54/4	3.39/3.31	3.31/2.62	1.71/1.93	1.98/1.51	0.72/0.4	1.71/1.59	1.76/2.14	2.03/2.24	1.20/0.97	2.04/3.28	3.94/4.11	4.08/3.71	2.99/2.01
Theta(70°)	2.75/3.42	2.75/2.25	-0.28/-0.09	1.93/3.42	4.45/4.21	3.55/3.53	3.63/3.2	2.20/8.7	1.8/1.76	1.3/0.89	1.26/1.52	2.34/2.78	2.51/1.95	2.14/2.1	1.95/2.74	3.6/4.18	4.5/4.62	4.32/4.32
Theta(80°)	2.33/1.86	0.74/1.6	0.95/1.54	1.77/3.22	3.94/3.65	3.2/2.31	3.15/3.7	2.91/1.16	-0.69/-1.04	-1.55/-1.01	0.42/0.84	1.3/2.33	3/2.69	1.04/1.01	2.16/2.64	3.62/4.12	4.4/24	3.5/2.78
Theta(90°)	0.38/0.2	1.12/1.34	0.69/0.88	1.47/2.69	3.75/3.86	3.8/3	2.74/2.85	1.97/-0.03	-3.09/-2.49	-1.52/-0.4	1.5/2.57	2.68/2.09	0.78/0.61	1.15/1.71	2.78/3.31	3.39/3.09	2.39/1.51	
Theta(100°)	0.95/0.9	1.81/1.76	1.79/2.17	1.24/1.84	2.88/3.6	3.88/3.49	2.56/3.14	3.15/2.36	0.98/-0.48	-1.78/-2.25	-2.68/-1.58	-0.3/1.68	2.15/1.21	-0.34/-0.63	0.81/1.92	2.51/2.66	2.98/2.96	2.53/1.36
Theta(110°)	1.78/1.86	0.32/-1.19	-0.86/0.83	1.46/2.34	2.94/3.77	4.01/3.59	2.04/2.62	3.06/2.97	2.65/2.38	0.91/0.11	-1.33/-1.34	0.92/1.5	1.31/-0.53	-1.34/0.06	1.61/1.51	1.28/1.24	1.88/2.41	2.4/2.11
Theta(120°)	-0.85/-1.61	-1.84/0	1.53/2.42	2.1/2.14	0.41/1.55	2.18/1.91	0.86/-0.07	0.95/0.37	1.43/1.53	0.95/0.37	-1.12/-2.42	-0.25/2.23	1.79/0.14	-1.14/-1.4	-0.53/0.02	0.51/0.85	0.43/-0.35	
Theta(130°)	-1.16/-0.92	-0.96/-1.11	-1.6/-2.12	-2.58/-3.84	-2.3/0.09	1.73/2.18	2.23/2.13	1.27/1.96	1.65/3.33	2.57/2.57	1.89/0.63	-0.45/-0.11	0.21/-0.34	-1.87/-2.96	-1.71/-1.32	-1.71/-2.13	-1.98/-0.96	-0.45/-0.64
Theta(140°)	-1.35/-0.89	-0.65/-0.57	-0.77/-1.22	-3.43/-4.58	-6.06/-4.08	-1.89/-0.67	0.11/0.36	0.11/-0	0.02/-0.27	-1.08/-1.98	-2.11/-3.19	-2.61/-1.89	-0.86/-0.69	-1.79/-2.68	-2.77/-2.93	-3.18/-3.03	-2.36/-2.31	-2.64/-2.43
Theta(150°)	-2.49/-2.43	-2.05/-1.75	-2.99/-4.09	-5.09/-6.52	-6.74/-5.86	-5.41/-4.47	-4.92/-4.38	-3.27/-2.63	-3.42/-3.57	-4.92/-5.82	-6.22/-5.54	-3.93/-1.6	-0.49/-0.77	-2.19/-3.78	-3.88/-3.52	-4.11/-4.71	-4.51/-3.9	-3.25/-2.43
Theta(160°)	1.08/1.13	0.90/0.23	-1.3/2.6	-5.64/-7.22	-7.1/-6.61	-6.15/-5.59	-0.51/0.02	-1.46/-0.63	0.51/0.02	0.27/0.16	0.1/-0.61	-0.32/-0.99	-1.05/-2.07	-3.95/-5.68	-5.84/-4.63	-3.42/-1.93	-0.58/0.34	0.91/2.7
Theta(170°)	-0.83/-0.89	-0.8/-2.74	-4.47/-6.42	-7.71/-8.03	-7.79/-7.56	-7.47/-6.47	-5.36/-4.3	-3.3/-2.4	-1.83/-0.92	-0.95/-1.24	-2/-3.13	-4.05/-4.93	-6.24/-7.26	-7.73/-7.88	-8.85/-9.47	-7.29/-5.39	-3.67/-2.69	-1.92/-1.42
Theta(180°)	-7.15/-6.48	-6.31/-6.08	-5.97/-6.42	-6.39/-6.93	-7.36/-7.45	-7.05/-6.62	-6.45/-6.65	-7.01/-7.54	-7.94/-8.21	-8.32/-7.74	-7.11/-6.76	-6.42/-6.47	-6.71/-6.99	-7.31/-8.04	-8.3/-8.52	-9.54/-8.93	-7.5/-7.54	-7.24/-6.74
Freq(Hz)	2.45GPol.	Theta-	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+
DG(dB)	Phi(°)/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(°)	3.54/3.54	3.85/3.44	3.26/2.59	2.4/2.09	1.89/2.16	1.89/2.39	1.42/4.58	1.43/4.07	3.73/3.7	3.63/3.6	3.39/1.45	1.55/2.12	2.21/1.47	2.25/2.12	2.11/1.47	4.61/4.91	4.98/4.85	4.51/3.36
Theta(10°)	3/2.72	3.43/3.51	3.01/2.64	2.22/1.61	1.46/1.78	2.32/3.01	3.77/4.25	4.61/4.72	4.46/4.26	3.43/0.8	3.23/2.83	3.29/2.88	2.46/1.76	2.02/2.34	3.38/4.14	4.48/4.41	4.57/4.19	3.84/2.7
Theta(20°)	2.34/2.41	2.98/3.23	3.05/2.56	1.87/1.15	0.31/0.29	0.99/1.89	2.71/3.26	3.67/3.87	3.95/3.88	3.37/3.44	2.52/2.12	2.8/2.66	1.97/1.11	0.84/1.51	2.36/3.22	3.94/4.03	4.08/4.14	4.02/3.04
Theta(30°)	2.14/2.09	2.35/2.46	2.31/1.71	1.28/0.44	-0.31/-0.44	0.15/0.72	1.23/1.56	2.02/2.49	2.63/2.64	2.77/2.82	2.88/2.88	2.74/2.14	1.31/0.19	-0.11/0.81	2.05/3.02	3.5/3.85	3.86/3.86	3.4/2.69
Theta(40°)	2.91/2.61	2.49/2.72	2.66/2.6	1.32/0.75	-1.01/-1.43	-1.71/-1.77	1.24/1.14	-1.83/-1.28	-0.34/0.77	1.3/1.13	1.15/1.04	0.45/-0.02	-0.02/0.9	1.71/2.46	3.31/3.47	3.47/3.21	2.55/2.13	
Theta(50°)	2.53/3.01	3/3.2	3.18/2.35	0.6/-1.37	-2.62/-2.74	-3.17/-2.98	-3.13/-2.21	-1.1/-0.8	0.3/-0.39	-0.42/-0.64	-0.5/-0.25	-0.12/-0.18	-0.47/-0.48	0.08/0.03	0.21/0.8	1.44/1.7	1.81/4.5	1.29/1.87
Theta(60°)	2.42/2.76	2.85/2.78	2.62/2.28	1.30/0.97	0.31/-0.71	-0.88/-1.74	-3.33/-4.07	-2.62/-0.84	-0.63/-0.62	-1.44/-2.23	-2.22/-2.28	-1.5/-1.12	-1.93/-3.57	-3.61/-3.57	-3.46/-2.35	-0.99/-0.06	0.02/0.17	1.08/2.21
Theta(70°)	1.2/0.88	0.49/-0.17	-0.28/-0.09	-0.34/-1.27	-0.98/-0.63	-0.81/-1.94	-1.78/-1.64	-5.15/-4.36	-2.68/-3.19	-3.94/-3.39	-3.25/-3.96	-1.58/-3.67	-2.65/-1.5	-0.58/-0.43	-0.77/-0.56	0.42/0.96		
Theta(80°)	-0.97/-0.44	-0.49/-0.72	-1.38/-1.4	-3.21/-4.95	-6.23/-1.95	-1.26/-3.63	-5.43/-6.66	-6.29/-4.96	-3.31/-2.93	-3.32/-4.15	-3.82/-3.65	-3.25/-4.05	-5.62/-5.38	-4.21/-0.03	-3.47/-3.13	-2.72/-2.25	-2.1/-1	-0.05/-0.01
Theta(90°)	-2.68/-3.69	-3.34/-3.24	-3.63/-3.51	-5.26/-7.78	-7.76/-4.39	-5.15/-6.37	-8.52/-9.19	-8.89/-6.87	-4.33/-3.38	-3.75/-4.26	-4.45/-4.71	-5.69/-6.27	-7.34/-8.09	-7.12/-5.86	-4.44/-3.48	-2.45/-2.48	-2.87/-2.86	-2.57/-2.77
Theta(100°)	-6.96/-6.31	-5.77/-5.15	-4.75/-3.78	-3.98/-6.76	-8.31/-7.39	-7.35/-7.16	-7.93/-8.27	-8.55/-6.96	-4.99/-3.85	-3.37/-3.29	-8.95/-7.96	-8.16/-10.09	-7.51/-7.26	-7.7/-6.66	-4.8/-4.06	-3.5/-3.21	-3.35/-5.09	
Theta(110°)	-9.18/-8.06	-5.56/-4.24	-3.77/-2.09	-0.63/-2.05	-2.9/-4.04	-5.68/-7.11	-6.87/-6.47	-5.81/-4.22	-4.7/-5.26	-6.26/-6.98	-7.37/-6.99	-7.27/-7.49	-7.59/-7.85	-6.8/-5.55	-5.11/-4.79	-4.35/-4.71	-6.4/-5.31	-5.15/-6.87
Theta(120°)	-8.76/-7.95	-5.98/-4.19	-2.91/-1.44	-0.9/-0.91	-2.3/-2.36	-1.42/-0.99	-1.73/-3.86	-5.07/-5.96	-6.01/-6.63	-7.58/-8.15	-7.84/-7.01	-7.07/-6.19	-5.28/-4.02	-3.05/-3.57	-3.55/-3.48	-3.63/-3.92	-4.7/-6.02	-6.91/-6.97
Theta(130°)	-9.11/-10.3	-6.51/-3.45	-1.59/-0.87	-0.31/-0.17	-0.84/-1.21	-1.51/-1.73	-1.72/-1.59	-0.84/-1.21	-1.51/-1.73	-2.84/-3.82	-3.19/-3.24	-3.16/-2	-1.8/-1.7	-0.80/-18	-0.09/-0.36	-1.63/-2.74	-4.48/-6.3	-6.69/-7.09
Theta(140°)	-10.4/-9.34	-7.79/-4.97	-2.73/-1.82	-0.95/-0.83	-0.27/0.02	-0.01/-0.85	-2.4/-3.64	-4.93/-5.35	-6.02/-5.67	-6.79/-7.61	-7.2/-5.23	-2.9/-2.22	-1.96/-1.33	-0.74/-1.01	-2.08/-3.45	-5.17/-6.26	-6.46/-7.24	-8.31/-8.47
Theta(150°)	-8.24/-7.7	-5.44/-3.7	-2.38/-2.34	-1.81/-0.9	-0.47/-0.2	-0.61/-1.83	-2.38/-2.74	-3.17/-3.6	-3.81/-4.21	-5.84/-7.17	-8.27/-6.56	-5.98/-5.81	-2.95/-0.67	0.59/0.65	-0.14/-1.49	-2.5/-4.06	-6.25/-7.76	-7.73/-8.09
Theta(160°)	-9.2/-10.65	-9.12/-6.97	-5.48/-4.48	-4.1/-4.53	-4.32/-3.84	-3.01/-2.12	-2.18/-3.7	-0.89/-1.35	-2.19/-0.9	-4.31/-5.07	-5.12/-6.54	-7.29/-4.74	-0.45/-3.96	0.53/0.1	-0.95/-2.76	-7.29/-7.1	-7.72/-7.01	
Theta(170°)	-6.11/-8.42	-8.01/9.31	-9.64/-9.24	-7.77/-6.84	-6.07/-4.92	-4.08/-3.44	-3.07/-2.91	-3.09/-3.56	-4.72/-5.55	-6.74/-7.07	-7.03/-6.91	-6.97/-7.84	-8.54/-7.94	-5.94/-4	-2.48/-1.64	-1.18/-1.31	-1.71/-2.48	-3.49/-5.06
Theta(180°)	-7.94/-8.55	-8.25/-7.31	-7.31/-6.64	-6.17/-5.68	-5.11/-4.68	-4.84/-4.7	-4.81/-5.4	-6.04/-6.45	-6.98/-7.76	-7.97/-8.22	-8.04/-7.97	-8/-7.11	-6.14/-5.36	-4.75/-4.12	-4.21/-4.13	-4.22/-4.7	-5.4/-6.51	-7.41/-8.04
Freq(Hz)	5.3GPol.	Phi-	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+	-+
DG(dB)	Phi(°)/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(°)	1.34/1.6	1.77/2.12	2.5/3.4	1.97/1.58	0.98/0.63	1/1.53	2.21/2.74	2.84/2.28	1.72/1.18	0.54/0.73	1.62/2.24	2.49/2.31	1.76/1.19	0.66/0.59	1.14/1.98	2.31/2.49	2.51/2.09	1.06/0.88
Theta(10°)	2.4/2.44	2.58/2.93	3.43/3.37	2.98/2.15	0.89/0.97	1.12/1.46	1.71/1.66	1.42/1.05	0.59/0.12	-0.02/0.71	1.41/1.83	1.67/2.54	1.45/1.14	1.05/0.91	1.67/2.54	3.11/3.37	3.39/3.2	2.82/2.38
Theta(20°)	0.68/1.28	2.33/3.17	3.68/3.83	3.69/2.81	1.92/1.57	2.25/2.47	2.35/2.11	1.55/0.7	-0.25/-0.24	0.44/1.46	2.29/2.64	2.35/1.76	1.08/0.42	0.71/1.31	2.42/3.51	3.85/3.75	3.4/2.43	1.7/0.6
Theta(30°)	2.75/1.69	1.54/2.7	2.78/2.98	3.10/2.6	1.81/1.99	2.74/2.63	1.77/1.19	0.88/0.9	1.91/2.46	3.17/3.14	3.18/2.83	2.5/2.54	2.64/2.16	1.54/2.47	3.85/4.53	4.29/3.83	3.87/4.05	3.99/3.74
Theta(40°)	1.86/2.04</																	



Radiated Composite Gain Data

Appendix A

Θ(60°)	-1.94/-1.13	0.67/1.68	0.75/-2.53	-3.48/0.64	0.69/-1.37	-0.89/0.86	-1.57/-1.78	-2.29/-4.31	-6.44/-2.54	0.09/0.98	0.82/2.17	0.93/-1.78	-1.43/-2.87	-0.93/-2.82	-2.28/-2.34	-1.48/-0.52	-0.60/1.7	0.39/-1.64
Θ(70°)	-3.46/-4.77	-2.35/-0.88	-1.22/-1.22	-0.06/-0.47	-1.06/-4.27	0.29/-0.58	-1.73/-0.08	-1.11/-2.03	-3.68/-3.47	-1.02/0.32	-0.22/-0.74	-0.39/-1.87	-1.69/-4.04	-0.48/-1.29	-3.18/-2.97	-2.22/-1.68	0.66/0.9	-1/-4.23
Θ(80°)	-3.21/-3.32	-2.26/-1.01	-0.92/0.53	0.57/1.98	0.01/-4.29	-0.16/0.11	-1.28/-1.41	-1.21/-3.83	-8.71/-8.17	-4.08/-1.78	-1.28/-0.32	-1.58/-1.2	-3.3/-2.93	-0.11/-2.7	-4.71/-3.9	-1.58/-1.6	-0.56/-3.25	-3.71/-3.15
Θ(90°)	-2.48/-0.14	0.18/-1.23	-2.71/-2.76	-5.33/-3.03	-1.33/-8.56	-1.77/0.27	-1.36/-0.52	-2.74/-4.6	-6.63/-6.49	-3.19/-2.36	-2.19/-2.16	-3.66/-1.79	-2.16/-2.77	-2.19/-1.96	-2.97/-3.12	-4.91/-3.84	-4.89/-7.6	-7.38/-6.36
Θ(100°)	-0.87/-1.59	-2.46/-2.6	-4.69/-5.66	-8.64/-4.73	-3.6/-10.75	-2.97/-1.25	-3.17/-3.62	-3.66/-3.57	-6.03/-6.98	-6.88/-3.77	-2.62/-4.29	-3.77/-3.18	-4.32/-2.82	-0.87/-3.1	-2.16/-2.56	-3.52/-3.31	-3.76/-5.9	-6.04/-4.98
Θ(110°)	-5.25/-5	-5.37/-4.99	-7.54/-3.97	-4.9/-5.05	-3.16/-5.91	-3.97/-2.1	-4.09/-5.64	-5.37/-6.27	-2.58/-4.63	-5.92/-4.67	-2.29/-3.94	-2.48/-1.29	-5.35/-4.08	-3.35/-2.23	-2.18/-5.35	-7.61/-6.08	-4.36/-5.48	-6.76/-4.82
Θ(120°)	-4.35/-8.83	-7.5/-5.32	-6.19/-5.75	-4.9/-4.08	-3.97/-5.99	-5.17/-2.49	-2.53/-4.08	-5.78/-5.57	-5.64/-6.39	-1.27/-1.31	-0.64/-3.33	-0.46/-0.59	-4.07/-1.15	-1.33/-3.68	-0.46/-1.95	-5.78/-3.03	-4.77/-4.46	-2.52/-4.58
Θ(130°)	-7.55/-9.53	-6.58/-7.3	-6.02/-5.21	-3.5/-2.72	0.08/1.27	-0.09/-3.46	-8.2/-7.96	-6.4/-4.76	-8.18/-3.39	-2.39/-0.74	-1.25/-0.99	-0.62/0.03	-0.16/-0.5	1.12/-0.3	0.91/1.42	-3.55/-5.34	-1.28/-2.76	-6.34/-5.89
Θ(140°)	-3.66/-5.72	-4.7/-4.71	-6.32/-5.92	-5.59/-3.02	-1.01/-0.78	-1.58/-3.2	-4.22/-4.46	-4.79/-6	-4.98/-6.39	-7.51/-1.89	-3.83/-5.57	-3.05/-0.74	0.16/-0.22	0.89/-0.44	-1.16/0.81	0.96/-2.84	-3.9/-2.85	-4.56/-3.5
Θ(150°)	-5.75/-4.04	-4.56/-6.54	-6.87/-6.09	-4.73/-2.27	0.3/-0.77	-1.37/-1.45	-3.16/-4.43	-7/-6.92	-6.65/-5.74	-3/-3.26	-4.59/-4.74	-4.57/-2.65	-2.45/-0.66	0.3/-1.4	-3.23/-3.14	-2.6/-4.09	-8.07/-6.04	-7.73/-7.49
Θ(160°)	-5.52/-5.02	-5.92/-5.88	-6.37/-6.14	-5.92/-5.16	-4.1/-2.47	-3.32/-4.88	-6.29/-6.43	-4.87/-3.92	-4.75/-5.41	-4.57/-4.53	-6.21/-6.13	-4.74/-3.33	-2.28/-1.62	-1.34/-0.57	0.39/0.9	0.13/-1.97	-3.51/-6.65	-8.86/-8.43
Θ(170°)	-5.22/-7.52	-6.68/-5.09	-3.8/-3.54	-4.26/-4.85	-4.36/-3.03	-1.72/-0.76	0.15/0.56	0.80/2.4	-1.13/-3.89	-6.5/-7.98	-6.79/-3.28	-0.55/0.68	0.97/0.44	-0.51/-2.04	-2.53/-1.96	-1.45/-1.79	-2.11/-1.96	-2.14/-3.18
Θ(180°)	-7.34/-8.31	-9.28/-8.07	-6.11/-4.49	-2.82/-0.96	0.05/0.48	0.43/-0.08	-0.33/-0.46	-1.21/-2.15	-3.79/-5.11	-7.14/-8.67	-10.94/-8.89	-5.53/-3.53	-2.27/-1.66	-1.38/-0.65	0.35/0.58	0.38/0.18	-0.04/-1.54	-3.48/-5.12
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°)	-0.23/-0.88	-0.59/0.77	1.32/1.46	1.56/1.49	1.11/1.36	1.98/2.22	2.41/2.54	2.51/1.95	1.56/0.73	0.16/0.03	0.39/1	1.67/1.98	1.96/1.66	1.38/1.42	1.37/1.89	2.44/2.46	2.24/1.91	1.12/0.49
Θ(10°)	-0.43/-1.07	-2.24/-2.01	-1.59/-1.1	-0.46/-0.06	0.41/0.08	1.64/2.23	2.31/1.83	1.31/0.62	-0.64/-1.22	-1.44/-0.88	0.91/8.2	2.34/2.84	3.03/2.48	1.48/0.94	1.08/1.72	2.03/2.22	2.16/1.68	1/-0.03
Θ(20°)	-0.02/-0.4	-1.3/-1.49	-0.44/-0.28	-0.83/-1.53	-0.59/0.55	1.13/1.57	1.02/-0.16	-1.79/-3.86	-3.16/-2.07	0.43/0.87	1.03/1.95	2.86/2.82	1.64/1.35	2.01/2.39	2.04/1.76	1.11/0.31	0.84/0.87	0.3/0.26
Θ(30°)	-1.89/-1.71	-1.62/-1.89	-1.41/-0.07	-0.6/-1.99	-2.55/-0.73	1.12/2.25	2.35/1.39	0.43/-0.73	-1.94/-1.33	-0.85/-1.5	-1.82/-2.18	-0.57/1.34	3.13.59	2.76/2.33	2.43/2.32	1.38/-0.24	-1.95/-3.11	-3.79/-2.87
Θ(40°)	1.44/1.71	1.47/1.39	0.39/-0.69	0.05/0.49	-0.51/1.25	2.81/2.61	2.17/2.52	1.52/0.57	0.81/0.42	0.25/0.54	1.29/0.95	0.71/1.74	3.04/3.57	2.27/1.24	1.64/1.93	1.01/0.77	0.84/0.87	0.3/0.26
Θ(50°)	2.03/2.82	2.15/2.68	3.15/2.22	0.11/-0.59	-1.76/0.41	2.57/2.34	1.11/1.89	1.75/-0.32	2.81/2.17	1.51/0.53	0.16/2.12	1.15/2.89	1.91/2.01	1.04/0.11	0.98/0.95	1.15/2.89	3.32/1.91	2.42/2.11
Θ(60°)	0.43/-1.09	-2.39/-0.33	1.91/2.72	1.18/-0.54	-0.81/1.8	2.73/0.35	-0.5/0.41	0.28/1.62	2.22/2.21	2.01/0.41	0.02/1.1	2.71/1.16	1.26/1.96	-0.13/-1.91	-1.17/-0.52	1.52/2.48	2.58/2.62	2.86/1.98
Θ(70°)	-0.72/1.62	0.81/-1.3	-1.73/1.1	-0.09/-0.12	1.78/0.49	-0.85/1.59	2.65/0.5	0.44/1.72	0.13/-1.02	-1.03/0.15	2.11/1.47	0.73/2.95	1.17/-0.57	0.73/2.95	2.29/2.39	2.58/1.81	1.61/1.16	
Θ(80°)	-0.50/-4.8	-1.08/-2.71	-1.32/-0.32	-0.28/-1.04	0.91/1.65	0.02/0.14	0.41/-1.75	0.5/-0.1	-1.68/-2.19	0.72/0.48	1.58/1.51	2.30/4.2	0.47/1.96	2.30/4.2	0.65/-1.25	2.86/2.89	2.04/0.94	1.11/0.92
Θ(90°)	0.66/-0.55	-3.22/-2.91	0.84/-0.01	-2.03/1.92	1.37/1.95	-0.17/-3.34	-2.74/0.86	1.76/0.53	-1.98/-1.43	-1.2/-0.68	0.18/0.52	2.59/1.49	1.15/0.78	0.69/0.65	0.91/2.25	2.82/3.17	2.23/0.9	2.05/3.01
Θ(100°)	-0.22/-2.3	-3.44/-1.25	2.96/0.82	-1.37/2.7	3.21/0.62	-7.22/-2.47	-0.87/0.88	2.05/0.53	-1.12/-1.31	-0.52/-0.36	0.67/-0.85	1.6/-1.03	-0.54/-1.77	-1.72/-1.41	-1.18/1.5	2.25/1.47	-0.98/-0.54	-0.48/1.54
Θ(110°)	-1.22/-5.16	-2.61/1.83	0.32/-1.4	-0.32/0.83	1.85/0.91	-3.77/0.02	-0.9/0.32	-1.72/-1.14	-1.55/-2.5	-0.59/-0.42	-3.69/-1.4	-1.44/-4.47	-3.31/-4.3	-0.56/1.08	-1.44/-0.93	-3.31/-4.3	-0.56/1.08	
Θ(120°)	-4.21/-4.46	-0.71/1.46	0.06/-3.11	0.51/1.15	1.39/0.84	-1.93/-0.42	-1.34/-2.18	-3.43/-1.93	-0.61/0.11	-0.88/0.32	-0.6/-0.29	1.23/0.39	-0.92/-4.86	-2.25/-5.96	-3.18/-0.97	-2.62/-1.36	-4.06/-3.89	-2.05/-2.76
Θ(130°)	-4.67/-3.71	-3.32/-1.98	-4.27/-0.06	1.19/0.23	1.82/0.41	-0.57/-0.92	0.17/-1.07	-0.84/-4.91	-1.07/-3.42	-1.57/-2.04	-1.34/0.2	-1.71/-1.94	-1.08/-1.08	0.05/-3.32	-1.36/0.98	-2.88/-2.5	-3.7/-4.51	-2.32/-2.12
Θ(140°)	-1.6/-4.57	-5.48/-3.36	-2.53/-3.82	-3.09/-0.4	0.26/-0.68	-0.51/0.99	0.59/-0.23	1.13/1.53	-0.89/1.29	1.79/-0.32	-4.48/-5.83	-4.33/-3.28	-3.24/-6.25	-6.46/-0.69	-3.54/-3.68	-4.27/-3.76	-1.97/-1.79	
Θ(150°)	-1.97/-3.77	-4.12/-3.48	-3.75/-4.17	-3.05/-1.93	-2.73/-4.35	-4.83/-2.79	-3.22/-1.1	-1.5/-1.91	-2.01/-3.12	-5.11/-4.65	-4.27/-4.45	-2.62/-3.05	-5.62/-9.14	-6.84/-3.66	-1.08/-3.19	-3.87/-5.01	-3.82/-2.54	
Θ(160°)	-6.3/-8.03	-9.54/-8.71	-8.33/-7.67	-7.27/-1.7	-7.15/-7.4	-4.9/-1.93	-1.15/-2.83	-5.89/-7.16	-8.18/-7.14	-4.85/-3.72	-3.15/-3.21	-4.79/-6.84	-7.52/-6.83	-6.67/-7.96	-9.58/-7.88	-4.88/-2.94	-2.92/-3.48	-4/-5.37
Θ(170°)	-2.07/-2.94	-3.96/-3.89	-4.26/-5.21	-6.72/-6.23	-4.96/-4.69	-5.22/-4.71	-4.52/-4.35	-3.11/-1.65	-0.16/0.22	0.34/0.28	0.19/-0.42	-1.55/-2.01	-2.26/-2.86	-4.16/-6.03	-7.27/-7.46	-5.75/-3.11	-1.29/-0.77	-0.98/-0.46
Θ(180°)	-2.76/-2.45	-1.57/-1.47	-1.77/-2.3	-3.23/-4.04	-4.87/-5.83	-6.72/-8.39	-1.48/-0.78	-8.17/-2.43	-1.48/-0.78	-0.12/0.18	-1.26/-2.04	-1.26/-2.04	-3.33/-4.97	-6.58/-7.48	-8.94/-9.4	-11.45/-9.83	-7.18/-4.42	-2.22/-1.67
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°)	1.31/1.85	2.55/2.71	2.67/2.51	2.38/2.16	1.28/0.19	-0.78/-0.54	0.11/1.38	1.99/2.13	2.12/1.68	1.83/1.84	1.72/1.16	2.22/2.05	1.6/0.73	-0.29/-1.14	-0.55/0.22	0.81/1.27	1.86/2.08	1.81/1.34
Θ(10°)	1.64/2.07	2.32/2.89	2.98/2.57	2.37/2.02	1.52/0.67	-0.44/-0.16	0.69/1.51	2.32/2.4	1.59/1.16	0.52/0.42	0.58/0.84	1.28/1.45	1.39/0.99	-0.28/-0.47	0.35/0.61	0.9/1.16	1.57/2.13	2.31/1.58
Θ(20°)	0.32/1.22	1.41/1.7	2.67/2.44	1.87/1.66	1.25/0.61	-0.44/-0.36	0.08/0.34	1.31/1.76	1.75/1.26	0.82/0.56	0.88/0.84	0.6/0.83	1.72/2.04	0.9/0.18	0.44/1.19	1.78/1.92	1.61/1.29	0.9/0.35
Θ(30°)	0.05/0.14	0.19/0.08	0.95/1.47	1.27/1.03	1.54/0.67	-2.28/-1.49	-0.12/-1.13	-1.36/-1.6	-2.28/-1.59	0.31/1.49	2.22/1.98	1.61/0.36	-0.01/0.24	1.61/0.36	-0.01/0.24	-1.24/-1.31	-0.7/-0.51	
Θ(40°)	-1.56/-1.79	-1.08/0.73	2.44/-1.18	2.11/0.52	1.41/2.41	-0.16/-4.21	-0.27/1.02	0.9/-1.29	-2.25/-2.8	-3.24/-3.54	-2.94/-0.96	1.5/2.52	1.58/1.59	1.1/2.23	0.65/0.9	1.1/0.95	-0.22/-0.65	-0.86/-1.08
Θ(50°)	-4.37/-4.2	-3.71/-3.5	-0.31/1.73	2.41/0.93	1.98/2.97	0.46/1.38	2.30/0.96	-0.87/2.99	-4.17/-3.26	-0.84/0.91	0.37/-0.17	0.82/2.18	1.46/1.12	1.07/-1.4	0.52/0.35	-1.11/-2	0.31/0.6	-0.05/-3.57
Θ(60°)	-4.85/-3.99	-2.89/-2.36	-0.69/1.62	2.24/-1.38	-1.49/1.24	-3.44/-4.62	-0.79/1.13	-3.44/-4.62	-2.74/0.87	0.94/-1.13	-1.11/0.18	0.14/-0.04	0.12/-1.76	-0.76/-1.38	-2.2/-0.74	-0.82/-0.01	-0.54/-3.8	
Θ(70°)	-3.16/-2.09	-1.08/0.3	-0.31/0.17	-0.41/-0.42	2.08/1.48	-0.85/1.26	-1.72/-2.26	-0.56/-2.18	-4.37/-4.91	-3.25/-0.33	0.32/-0.55	-2.93/-1.17	-1.19/-0.3	-1.2/-2.19	-1.8/-1.99	-4.93/-1.86	0.25/-1.44	-2.25/-2.57
Θ(80°)	-3/-3.55	-1.59/-0.64	-3.06/-3.67	0.46/0.04	-1.13/-0.97	1.25/1.23	-1.50/-7.6	0.81/-1.09	-3.18/-3.98	-4.79/-2.91	-1.08/-1.98	-1.4/-0.49	-2.99/-1.43	-0.49/-3.86	-5.6/-1.57	-3.65/-0.01	-0.74/-1.89	-1.95/-1.86
Θ(90°)	-4.15/-5.38	-3.28/-1.61	-5.6/-5.08	-0.32/0.18	-5.9/-6.35	-0.02/-2.96	-2.78/-4.18	-3.58/-3.36	-2.02/-2.96	-4.15/-3.67	-4.98/-1.66	-1.22/-2.22	-3.15/-3.67	-6.08/-4.2	-2.22/-2.26	-2.92/-2.6	-4.03/-4.06	
Θ(100°)	-4.42/-5.31	-3.76/-2.13	-5.96/-4.65	-2.95/-3.86	-3.89/-8.31	-4.93/-2.08	-2.22/-1.24	-3.96/-7.37	-7.47/-8.39	-5.73/-3.88	-3.32/-6.13	-5.04/-2.35	-3.69/-3.15	-4.88/-5.04	-4.02/-3.06	-5.92/-3.86	-6.6/-6.85	-5.38/-6.31
Θ(110°)	-2.15/-5.95	-6.19/-4.95	-8.39/-7.35	-5.23/-3.51	-1.56/-6.25	-5.4/-1.3	-2.6/-4.2											



Radiated Composite Gain Data

Appendix A

Gain Result

Freq(Hz)	2.45GPol.	PhiAnt. 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°)	-1.01/-0.79	-0.85/-0.96	-1.19/-1.67	-2.41/-3.33	-4.44/-5.61	-6.77/-7.74	-7.91/-7.29	-6.24/-5.05	-3.95/-3	-2.31/-1.77	-1.62/-1.81	-2.34/-3.21	-4.48/-3.42	-6.77/-3.36	-7.38/-6.81	-6.04/-5.33	-4.38/-3.42	-2.24/-1.85
Θ(10°)	-1.57/-1.87	-2.62/-3.62	-4.94/-6.2	-7.02/-7.02	-8.52/-6.24	-6.34/-6.54	-7.03/-6.93	-5.87/-4.19	-2.21/-0.65	0.58/1.37	1.63/1.4	0.86/-0.18	-1.68/-3.61	-5.57/-7.03	-7.22/-6.47	-5.42/-4.62	-3.91/-3.35	-2.68/-2.14
Θ(20°)	0.71/0.55	-0.03/-1.27	-3.45/-6.95	-13.38/-15.72	-10.42/-7.56	-6.43/-6.02	-6.34/-6.77	-6.33/-4.71	-2.86/-1.25	-0.05/0.81	1.37/1.43	1/-0.07	-1.96/-4.32	-6.96/-8.32	-7.84/-6.69	-5.24/-3.6	-2.06/-0.81	-0.01/0.39
Θ(30°)	2.04/1.9	1.47/0.7	-0.56/-2.78	-6.83/-15.47	-18.58/-12.25	-9.32/-8.13	-8.23/-8.59	-7.78/-6.12	-4.1/-2.49	-1.43/-0.64	-0.25/0.05	-0.13/-0.97	-2.78/-5.67	-9.65/-12.66	-11.7/-8.43	-5.16/-2.55	-0.5/0.8	1.54/1.85
Θ(40°)	0.43/-0.16	-0.86/-1.51	-2.41/-3.91	-6.57/-11.35	-17.23/-14.83	-11.26/-10.49	-11.31/-12.53	-10.95/-7.55	-4.76/-3.16	-2.52/-2.64	-2.52/-2.02	-1.51/-1.53	-2.35/-4.15	-6.71/-9.31	-9.97/-7.97	-5.19/-2.79	-0.84/0.54	1.33/1.55
Θ(50°)	-2.16/-3.89	-5.67/-6.7	-7.46/-7.55	-8.01/-8.81	-11.89/-19.56	-16.43/-12.07	-11.7/-14.44	-13.06/-6.97	-3.85/-2.72	-2.48/-2.45	-2.51/-2.64	-2.78/-2.92	-3.34/-4.54	-6.3/-7.65	-8.22/-7.16	-4.65/-2.45	-0.94/-0.1	0/0.56
Θ(60°)	-1.143/-9.33	-7.8/-8.4	-11.65/-17.33	-13.13/-6.86	-5.16/-6.12	-8.89/-11.23	-11.32/-15.44	-18.3/-6.55	-1.66/0.57	1.41/1.52	1.04/-1.08	-2.15/-2.92	-4.79/-7.53	-8.6/-7.68	-7.47/-5.64	-3.18/-1.81	-1.92/-3.37	-5.55/-7.42
Θ(70°)	-0.56/0.21	0.78/0.36	-1.44/-5.67	-16.59/-13.8	-7.5/-7.03	-10.05/-9.49	-5.4/-4.89	-8.71/-14.81	-3.66/-0.29	0.75/0.69	0.1/-0.67	-1.38/-2.65	-5.96/-13.94	-17.65/-11.31	-12.21/-7.85	-4.15/-2.89	-2.39/-1.86	-1.24/-0.84
Θ(80°)	-2.45/-1.6	-1.25/-1.68	-3.13/-6.59	-14.13/-10.18	-4.84/-3.74	-6.4/-17.88	-9.04/-4.07	-3.95/-7.29	-9.29/-4.9	-1.94/-0.74	-0.93/-1.72	-1.85/-1.63	-2.31/-5.48	-13.21/-5.48	-2.94/-1.81	-1.84/-2.33	-2.76/-2.65	-2.76/-2.65
Θ(90°)	-2.97/-2.47	-2.06/-1.75	-2.57/-5.48	-12.7/-16.13	-6.25/-3.77	-5.28/-14.21	-10.7/-2.9	-0.83/-1.77	-4.12/-4.51	-2.81/-1.86	-1.98/-2.27	-2.02/-2.26	-4.23/-11.06	-17.73/-10.78	-13.9/-13	-6.63/-5.08	-5.37/-4.9	-3.87/-3.23
Θ(100°)	-1.51/-1.15	-1.09/-0.64	-0.68/-2.97	-8.22/-10.1	-4.16/-1.6	-2.15/-6.44	-14.23/-4.27	-0.07/1.51	1.73/1.19	-0.02/-1.48	-3/-3.81	-3.8/-4.73	-6.94/-13.32	-18.3/-13.85	-18.41/-12.99	-8.74/-7.87	-5.75/-3.38	-2.39/-2.14
Θ(110°)	-2.93/-2.19	-2.58/-3.23	-2.63/-3.12	-4.55/-3.8	-1.58/-0.39	-1.45/-5.44	-18.17/-7.49	-0.96/2.25	3.2/3.55	3.12/2.55	1.43/0.31	-1.22/-2.92	-6.62/-17.09	-13.08/-9.33	-9.83/-8.87	-8.37/-8.23	-5.45/-3.41	-3.29/-4.05
Θ(120°)	-4.45/-5.59	-4.15/-13.33	-3.71/-2.43	-2.69/-3.98	-5.39/-6.3	-7.35/-9.67	-14.71/-16.78	-7.71/-2.52	-0.19/0.82	1.38/1.69	1.33/0.19	-1.66/-1.85	-2.61/-4.69	-10.96/-18.67	-13.15/-8.81	-6.68/-3.87	-3.89/-5.23	-3.89/-5.23
Θ(130°)	-6.25/-5.23	-4.04/-4.55	-6.71/-7.72	-8.57/-11.49	-13.75/-10.95	-7.29/-5.48	-5.28/-7.72	-16.78/-13.73	-5.04/-1.04	1.02/1.68	1.19/0.74	0.87/0.18	-1.78/-4.38	-8.81/-16.69	-10.82/-8.71	-11.15/-18.93	-18.24/-9.35	-5.9/-5.18
Θ(140°)	-2.27/-1.7	-1.37/-1.96	-3.48/-4.7	-5.62/-7.56	-10.81/-12.55	-9.29/-6.31	-4.56/-4	-4.19/-5.01	-6.02/-6.75	-7.54/-8.46	-7.83/-6.33	-6/-6.99	-7.67/-7.8	-9.85/-11.15	-10.17/-10.92	-16.06/-18.89	-12.77/-7.71	-4.64/-3.26
Θ(150°)	-9.04/-9.3	-10.01/-11.78	-15.72/-18.42	-17.7/-18.09	-15.72/-17.72	-16.13/-11.87	-9.5/-6.89	-7.42/-6.68	-6.33/-6.51	-6.71/-6.68	-4.66/-5.89	-5.01/-4.19	-10.24/-13.23	-13.67/-11.83	-16.74/-18.31	-14.61/-10.76	-8.53/-7.08	-8.53/-7.08
Θ(160°)	-6.38/-5.94	-5.6/-5.81	-6.62/-8.68	-11.31/-12.96	-12.74/-12.11	-11.71/-10.83	-9.09/-7.12	-5.17/-3.59	-2.31/-1.48	-0.84/-0.13	0.23/0.36	0.04/-1.05	-3.21/-7.07	-13.56/-18.42	-15.48/-16.1	-17.57/-12.6	-8.42/-6.43	-5.46/-4.62
Θ(170°)	-5.19/-4.54	-4.21/-4.53	-5.5/-6.91	-7.83/-8.34	-8.25/-8.27	-8.45/-8.93	-8.04/-8.94	-7.93/-9.93	-4.11/-2.8	-2.07/-2.19	-2.75/-3.82	-5.43/-8.2	-13.05/-18.43	-17.63/-15.38	-15.39/-19.72	-19.07/-14.81	-10.13/-7.71	-6.33/-5.05
Θ(180°)	-15.24/-12.72	-11.05/-9.66	-9.13/-9.02	-8.85/-8.61	-8.6/-8.74	-8.94/-9.2	-9.79/-10.65	-11.59/-12.96	-14.57/-16.85	-18.01/-17.19	-18.78/-15.92	-14.02/-12.34	-11.28/-10.28	-9.98/-10.62	-12.13/-15.14	-17.79/-18.67	-18.71/-18.72	-17.77/-14.62
Freq(Hz)	2.45GPol.	ThetaAnt. 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°)	-7.68/-8.19	-8.15/-14.2	-5.88/-4.1	-1.8/-3.1	-2.79/-1.77	-1.08/-0.51	-0.18/-0.17	-0.38/-6.86	-2.56/-2.14	-1.71/-1.51	-1.65/-1.92	-0.89/-3.86	-2.41/-3.28	-2.41/-3.28	-2.41/-3.28	-2.41/-3.28	-2.41/-3.28	-2.41/-3.28
Θ(10°)	-12.56/-9.74	-7.21/-5.7	-4.75/-4.31	-3.69/-3.14	-2.4/-1.53	-0.62/0.06	0.58/0.74	0.45/-0.31	-1.45/-2.91	-5.05/-7.75	-8.13/-7.78	-5.47/-3.77	-2.64/-2.02	-1.91/-2.04	-2.18/-2.85	-3.6/-4.68	-5.62/-7.06	-8.74/-11.17
Θ(20°)	-16.29/-12.25	-7.76/-5.08	-3.67/-3.43	-3.7/-4.29	-4.6/-3.96	-2.44/-1.3	-0.15/0.34	0.27/-0.32	-1.28/-2.7	-4.88/-7.47	-9.22/-8.34	-5.77/-3.57	-2.28/-1.97	-2.17/-2.75	-3.3/-3.98	-4.47/-5.02	-6.14/-7.96	-10.3/-13.96
Θ(30°)	-13.11/-13.04	-10.01/-11.78	-4.31/-3.45	-3.8/-4.83	-6.33/-6.97	-10.6/-5.92	-2.46/-2.01	-2.01/-2.26	-2.77/-3.49	-5.55/-8.46	-2.92/-4.89	-7.09/-4.54	-3.03/-2.47	-2.6/-3.91	-3.37/-2.91	-2.51/-2.62	-3.88/-5.94	-8.79/-12.21
Θ(40°)	-8.28/-7.32	-6.54/-5.62	-4.79/-4.45	-5.35/-6.72	-7.88/-8.56	-8.21/-7.36	-7.26/-7.31	-6.94/-6.21	-5.92/-6.81	-8.56/-10.28	-12.4/-12.58	-8.69/-6.19	-3.35/-1.76	-1.24/-1.38	-1.43/-0.98	-0.62/-1.06	-2.41/-4.87	-8.29/-10.89
Θ(50°)	-7.42/-6.02	-5.02/-4.07	-3.3/-3.25	-4.4/-6.6	-9.29/-10.9	-10.09/-9.39	-9.91/-9.81	-8.07/-6.84	-7.23/-8.81	-10.34/-11.83	-12.26/-10.61	-7.54/-4.3	-2.03/-1.05	-1.04/-1.99	-3.04/-3.22	-5.93/-9.96	-14.9/-11.5	-14.9/-11.5
Θ(60°)	-10.88/-9.41	-7.76/-5.75	-3.8/-2.41	-1.68/-2.11	-3.15/-4.5	-5.34/-6.69	-10.81/-17.9	-10.83/-7.72	-8.27/-10.76	-13.71/-14.72	-13.68/-11.76	-9.36/-6.91	-5.37/-4.68	-5.04/-6.83	-7.48/-5.03	-3.94/-5.64	-10.91/-18.45	-18.68/-11.86
Θ(70°)	-11.47/-11.27	-10.7/-9.54	-8.53/-6.96	-4.68/-3.63	-3.93/-4.36	-3.98/-4.96	-9.04/-18.28	-11.35/-7.72	-7.52/-8.61	-11.32/-15.84	-17.9/-17.59	-14.86/-9.24	-6.28/-4.89	-5.38/-6.43	-4.72/-2.35	-2.45/-5.57	-13.35/-19.07	-16.97/-14.82
Θ(80°)	-7.76/-7.44	-6.71/-6.36	-7.85/-11.92	-12.75/-11.92	-11.1/-8.21	-5.68/-5.44	-8.08/-16.64	-18.87/-14	-11.06/-9.78	-10.42/-12.66	-15.11/-15.46	-12.51/-8.82	-6.45/-5.47	-6.27/-7.08	-4.72/-3.16	-3.97/-7.57	-15.79/-14.01	-10.1/-8.76
Θ(90°)	-11.44/-9.45	-8.23/-8.31	-9.8/-12.72	-14.7/-13.68	-12.06/-11.16	-10.41/-9.47	-8.73/-10.4	-11.38/-11.47	-10.52/-9.8	-10.55/-11.71	-8.71/-8.6	-8.15/-10.02	-10.08/-10.18	-10.65/-10.95	-8.19/-6.8	-7.68/-10.88	-16.93/-17.63	-15.22/-12.84
Θ(100°)	-18.4/-17.21	-13.78/-13.33	-13.38/-10.75	-8.25/-7.17	-8.16/-11	-14.48/-14.8	-14.14/-13.49	-13.72/-15.04	-14.6/-13.51	-13.58/-11.79	-10.74/-12.59	-13.43/-17.29	-11.53/-16.09	-17.8/-17.43	-13.22/-11.41	-18.03/-16.9	-17.8/-17.43	-15.81/-18.88
Θ(110°)	-11.89/-7.47	-6.72/-5.43	-5.73/-4.09	-1.74/-1.17	-2.34/-4.99	-9.71/-15.98	-12.77/-9.47	-8.86/-9.92	-10.14/-9.28	-9.51/-9.89	-9.93/-7.81	-6.85/-8.61	-10.81/-12.38	-15.34/-14.48	-10.47/-9.51	-10.41/-14.34	-19.19/-14.32	-10.9/-11.64
Θ(120°)	-17.02/-13.04	-7.83/-5.3	-4.43/-4.32	-1.92/-1.36	-1.99/-3.75	-6.17/-7.21	-7.2/-8.17	-10.06/-10.94	-9.67/-9.22	-8.6/-9.99	-8.87/-9.04	-15.09/-18.01	-14.34/-11.25	-11.82/-19.23	-9.87/-7.24	-8.12/-9.37	-12.83/-18.87	-15.91/-12.99
Θ(130°)	-15.18/-15.25	-10.77/-6.81	-4.62/-3.26	-2.22/-1.77	-2.26/-3.98	-7.48/-39	-5.01/-4.35	-6.59/-5.37	-4.12/-4.81	-5.99/-10.76	-18.46/-10.29	-7.46/-6.77	-5.93/-5.66	-7.46/-6.77	-5.93/-5.66	-6.14/-9.52	-13.35/-12.06	-13.35/-12.06
Θ(140°)	-13.8/-17.37	-18.3/-14.76	-9.35/-6.59	-4.68/-2.93	-1.88/-1.9	-3/-4.66	-6/-6.49	-6.56/-6.3	-6.72/-7.68	-9.48/-11.21	-11.81/-12.8	-9.1/-7.71	-7.93/-6.48	-5.66/-6.77	-9.28/-10.47	-10.67/-10.11	-8.59/-7.67	-8.82/-12.91
Θ(150°)	-13.43/-13.83	-12.22/-9.46	-7.26/-6.34	-5.49/-3.92	-2.31/-1.13	-0.67/-0.59	-0.92/-1.39	-2/-2.98	-4.38/-1.64	-8.12/-10.62	-12.99/-15.16	-16.72/-15.29	-9.91/-6.44	-5.53/-6.86	-10.78/-18.67	-17.59/-17.82	-18.57/-18.84	-14.78/-13.11
Θ(160°)	-11.28/-13.05	-13.31/-12.16	-10.27/-9.19	-8.29/-6.99	-4.94/-2.99	-1.63/-0.55	-0.21/0.37	0.18/-0.32	-4.5/-6.61	-8.89/-9.7	-9.03/-8.46	-3.52/-3.17	-9.82/-5.54	-7.46/-5.06	-3.92/-3.17	-3.92/-5.54	-8.13/-10.93	-8.13/-10.93
Θ(170°)	-7.94/-11.12	-15.15/-19.08	-19.08/-19.53	-15.71/-13.66	-11.79/-9.95	-8.29/-6.85	-5.7/-4.92	-4.6/-4.56	-4.98/-6.04	-7.6/-8.72	-9.16/-9.97	-11.28/-12.94	-14.16/-12.84	-9.44/-6.49	-4.32/-2.94	-2.16/-1.91	-2.19/-3.02	-4.43/-6.16
Θ(180°)	-9.98/-11.26	-12.29/-13.89	-17.92/-17.78	-17.83/-17.23	-14.94/-13.31	-11.96/-10.62	-8.82/-9.43	-9.46/-9.71	-10.01/-10.06	-10.16/-10.61	-12.88/-14.92	-16.22/-14.71	-12.1/-10.01	-8.63/-7.36	-6.58/-6.33	-6.53/-6.92	-7.66/-8.37	-9.07/-10.02
Freq(Hz)	5.2GPol.	PhiAnt. 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°)	-1.76/-2.22	-2.77/-3.38	-3.68/-5.1	-7.52/-10.71	-15.08/-18.09	-14.94/-11.48	-8.38/-5.84	-4.72/-3.99	-3.32/-3.13	-2.92/-3.07	-3.03/-3.68	-4.62/-6.21	-9.3/-13.68	-18.18/-17.61	-13.47/-10.33	-8.24/-5.67	-3.97/-3.02	-3.05/-2.55
Θ(10°)	-0.44/-1.05	-1.58/-3.01	-2.95/-3.67	-5.37/-9.16	-12.33/-17.9	-1.88/-17.47	-1.18/-11.83	-1.18/-1.12	-2.34/-1.55	-2.82/-4.02	-1.38/-1.83	-2.62/-4.29	-7.52/-11.95	-14.88/-15.96	-12.52/-8.67	-7.5/-3.69	-2.29/-1.18	-0.46/-0.75
Θ(20																		



Radiated Composite Gain Data

Appendix A

Θ(60°)	-18.28/9.57	-6.08/5.54	-7.71/9.1	-6.91/5.05	-8/5.85	-1.93/4.54	-9.09/7.58	-6.44/9.5	-15.32/18.54	-17.98/17.54	-10.07/5.74	-4.07/4.71	-1.69/4.06	-4.18/2.23	-1.94/3.36	-4.3/6.73	-5.31/6.26	-8.48/15.35
Θ(70°)	-14.95/-19.43	-13.17/-7.66	-8.08/-6.67	-6.92/-8.37	-7.07/-6.05	-3.24/-5.52	-7.15/-4.22	-4.5/-7.43	-11.96/-18.16	-14.11/-15.73	-10.04/-5	-4.31/5.15	-1.74/-6.13	-3.67/-3.29	-3.88/-6.14	-7.73/-6.29	-4.85/-7.43	-14.93/-18.99
Θ(80°)	-7.64/-11.61	-18.71/-9.51	-11.68/-9.22	-17/9.51	-10.67/-7.14	-2.88/-5.53	-1.79/-5.1	-3.9/-7.46	-13.41/-14.86	-18.92/-10.3	-8.97/-6.23	-6.44/-6.55	-3.4/-5.97	-5.99/-6.88	-7.03/-5.86	-4.47/-4.97	-5.54/-7.41	-17.54/-7.96
Θ(90°)	-7.04/-11.67	-11.46/-13.26	-14.12/-16.67	-15.83/-8.55	-8.16/-14.28	-6.36/-5.58	-7.61/4.91	-4.73/-7.18	-9.72/17.94	-18.53/-14.49	-8.71/4.88	8.09/-6.63	-4.79/10.05	-7.07/4.09	-2.76/-3.04	-5.01/-5.64	-8.16/-12.34	-10.47/-10.91
Θ(100°)	-5.64/-11.76	-14.6/-6.68	-8.93/-9.94	-11.31/-11.98	-10.02/-12.47	-10.69/-8.53	-13.4/-6.29	-5.23/-6.03	-6.18/-8.77	-10.54/-16.97	-10.19/-9.31	-13.34/-11.71	-6.84/9.06	-4.33/-6.78	-5.48/-3.25	-4.78/-7.76	-11.41/-11.22	-11.64/-8.54
Θ(110°)	-9.2/-13.27	-18.56/-11.28	-18.91/-9.85	-10.72/-13.81	-8.43/-6.62	-9.88/-9.47	-11.91/-11.59	-10.65/-8.52	-5.82/-12.66	-10.54/-11.23	-9.92/-4.94	-9.83/-7.88	-6.94/-4.29	-7.47/-6.19	-18.87/-11.92	-11.4/-12.13	-12.8/-8.71	
Θ(120°)	-9.98/-18.93	-19.23/-16.04	-18.78/-15.74	-12.14/-14.14	-10.88/-10.92	-7.97/-11.33	-11.01/-8	-9.62/-8.75	-10.02/-10.31	-5.12/-12.08	-5.99/-10.79	-5.69/-8.4	-15.37/-6.54	-14.64/-12.29	-5.63/4.35	-17.42/-11.32	-18.06/-18.72	-10.21/-10.62
Θ(130°)	-17.69/-18.4	-19.08/-18.75	-18.71/-9.65	-10.28/-9.24	-7.28/-8.45	-6.38/-9.1	-13.94/-8.97	-9.28/-9.59	-8.96/-6.47	-8.56/-8.83	-12.52/-4.81	-5.22/-18.45	-6.38/5.34	-4.22/-9.49	-3.41/-2.08	-8.95/-17.62	-7.77/-9.33	-17.39/-14.39
Θ(140°)	-12.63/-14.76	-18.9/-13.5	-11.14/-8.81	-9.93/-8.15	-9.93/-14.01	-7/4.289	-18.9/-14.01	-2.47/-4.96	-5.99/-5.82	-6.66/-10.8	-10.63/-9.41	-14.72/-10.89	-16.75/-9.98	-3.15/-4.07	-2.65/-4.39	-4.38/-0.28	-0.78/-5.43	-18.3/-10.24
Θ(150°)	-16.29/-10.43	-11.22/-14.79	-12.27/-14.49	-9.58/-4.36	-3.03/-3.89	-2.54/-2.85	-6.02/-7.27	-7.52/-10.38	-13.86/-7.44	-5.69/-11.79	-15.58/-11.53	-13.48/-8.4	-10.72/-7.22	-5.5/-7.18	-12.57/-7.54	-5.44/-6.56	-12.44/-14.67	-18.79/-11.98
Θ(160°)	-14.26/-14.35	-19.27/-18.98	-16.27/-15.32	-15.94/-15.6	-13.4/-12.04	-13.72/-11.91	-7.42/-6.47	-5.8/-5.33	-5.33/-6.16	-8.6/-13.16	-19.82/-17.2	-18.6/-16.34	-8.4/-5.72	-4.19/-2.05	-1.34/-1	-1.21/-2.51	-5.18/-8.57	-11.57/-18.79
Θ(170°)	-9.08/-13.33	-15.86/-14.05	-10.45/-8.61	-8.17/-7.99	-6.54/-5.2	-4.19/-3.21	-0.96/-1.48	-2.64/-5.09	-8.97/-12.88	-14.1/-10.6	-1.55/-0.92	-6.75/-4.72	-4.17/5.16	-7.52/-13.2	-18.67/-14.52	-10.81/-10.23	-10.41/9.39	-8.74/-7.71
Θ(180°)	-14.41/-14.45	-18.93/-18.88	-15.68/-10.46	-7.04/-3.92	-2.22/-1.53	-1.8/-2.1	-2.07/-2.06	-2.77/-4	-5.71/-7.9	-10.57/-15	-18.69/-16.3	-10.86/-8.02	-6.26/-5.62	-5.19/-3.7	-2.6/-2.89	-3.51/-4.34	-4.51/-6.03	-8.35/-9.68
Freq(Hz)	5.6G/Pol.	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°)	-3.34/-3.78	-4.54/-3.57	-4.36/-7.16	-10.02/-12.45	-16.48/-17.65	-18.34/-14.08	-10.03/-7.85	-6.11/-4.81	-4.23/-3.52	-2.94/-3.02	-3.52/-4.05	-4.77/-6.14	-8.82/-12.65	-18.38/-18.18	-18.58/-13.34	-9.28/-7.33	-5.63/-4.4	-3.86/-2.85
Θ(10°)	-3.76/-4.52	-5.8/-7.58	-9.76/-11.33	-14.86/-15.82	-16.06/-15.87	-17.85/-18.74	-14.58/-11.2	-9.41/-7.8	-7.33/-6.91	-7.08/-5.8	-4.99/-4.31	-4.24/-4.51	-4.97/-7.56	-12.31/-18.65	-18.44/-12.93	-8.85/-6.82	-5.58/-3.91	-3.2/-4.14
Θ(20°)	-2.88/-2.95	-3.65/-4.72	-3.72/-5.41	-9.67/-17.3	-11.61/-9.55	-17.44/-17.96	-17.41/-14.96	-11.61/-9.55	-4.57/-3.47	-3.45/-4.89	-7.71/-5.69	-6.11/-7.69	-14.27/-18.13	-15.12/-9.9	-5.23/-4.74	-5.24/-7.1	-3.19/-4.14	
Θ(30°)	-4.33/-5.15	-4.43/-5.1	-5.65/-5.47	-7.28/-11.9	-18.02/-19.1	-17.34/-16.18	-13.28/-11.01	-9.87/-8.73	-7.33/-4.98	-3.76/-2.86	-2.03/-2.16	-4.69/-10.16	-10.22/-9.19	-13.64/-17.04	-13.78/-9.89	-7.29/-6.14	-4.47/-4.46	-5.06/-4.67
Θ(40°)	-0.04/-0.11	-0.81/-1.25	-3.43/-6.52	-5.9/-7.99	-15.48/-11.27	-10.97/-14.26	-14.36/-13.16	-14.17/-13.97	-9.57/-5.45	-3.82/-3.28	-1.24/-4.02	0.02/-2.33	-6.11/-7.51	-12.35/-18.48	-15.91/-8.49	-6.1/-6.1	-4.93/-3.6	-3.51/-2.01
Θ(50°)	0.16/0.74	-1.26/-1.22	1.2/-1.75	-5.26/-4.84	-10.11/-15.39	-13.36/-13.89	-13.78/-14.13	-14.39/-11.23	-4.9/-3.66	-1.87/-6.09	-2.26/-1.16	-13.11/-5.38	-8.91/-16.38	-13.11/-5.38	-7.86/-2.91	-1.75/-1.58	-1.13/-0.57	
Θ(60°)	-1.66/-3.22	-6.48/-4.97	-3.45/-2.8	-3.61/-4.82	-9.06/-11.64	-7.82/-11.78	-18.07/-17.72	-10.25/-5.74	-4.44/-3.01	-1.43/-0.11	0.68/0.92	0.35/-2.16	-4.4/-6.74	-10.22/-16.55	-18.07/-18.16	-8.19/-3.95	-2.6/-0.72	0.65/-0.2
Θ(70°)	-1.37/-0.35	-2.82/-6.94	-9.98/-4.4	-6.27/-6	-13.26/-9.23	-9.49/-10.88	-18.45/-18.22	-10.16/-7.03	-5.02/-1.45	-0.18/0.4	0.75/-1.02	-4.6/-4.69	-9.69/-15.81	-18.33/-18.23	-5.25/-2.36	-1.52/-2.06	-1.03/0.08	
Θ(80°)	-3.42/-4.93	-7.64/-5	-8.71/-14.56	-9.06/-6.94	-14.36/-9.23	-12.2/-17.73	-15.96/-15.7	-7.24/-6.99	-4.68/-4.28	-2.24/-1.02	0.08/-2.05	-5.67/-4.13	-12.39/-7.83	-3.37/-1.23	-1.43/-0.79	-1.89/-0.97		
Θ(90°)	-1.81/-5.19	-7.28/-5.99	-10.42/-18.39	-17.27/-9.23	-16.5/-13.34	-9.3/-18.2	-18.61/-11.53	-7.18/-7.64	-4.2/-3.05	-1.98/-3.13	-1.16/-0.15	1.52/-3.02	-3.45/-4.56	-14.07/-18.33	-9.61/-7.01	-2.57/-0.28	0.79/-0.72	-0.84/0.27
Θ(100°)	-2.61/-8.64	-13.53/-5.09	-7.04/-18.06	-14.21/-14.04	-14.24/-17.19	-15.06/-18.48	-12.44/-18.81	-6.35/-6.02	-5.35/-3.63	-1.59/-1.8	0.39/-0.11	-0.17/-5.2	-5.43/-8.69	-11.85/-18.06	-12.29/-8.01	-4.18/-1.5	-1.97/-1.74	-3.49/-0.82
Θ(110°)	-4.19/-16.38	-14.49/-12.88	-8/14.38	-18.05/-12.88	-12.54/-16.37	-19/-17.59	-2.43/-2.88	-6.18/-3.65	-4.2/-2.88	-2.43/-0.98	-2.95/-12.53	-5.53/-13.09	-18.7/-18.15	-15.39/-12.53	-16.38/-6.33	-6.99/-7.35	-4.87/-0.92	
Θ(120°)	-8.12/-18.98	-14.47/-6.56	-8.82/-15.7	-13.22/-10.12	-8.49/-18.03	-17.42/-14.76	-18.58/-18.79	-17.42/-8.53	-2.53/0.89	1.01/2.09	1.25/0.36	-3.84/-4.79	-5.88/-15.4	-8.64/-12.11	-10.39/-7.86	-11.6/-4.54	-10.74/-7.02	-6.73/-7.15
Θ(130°)	-16.88/-16.36	-14.06/-11.8	-8.41/-8.52	-7.77/-9.94	-9.1/-18.4	-11.58/-16.31	-15.26/-9.94	-8.76/-13.33	-6.74/-7.57	-5.71/-5.28	-1.46/0.19	-3.77/-9.33	-6.99/-9.88	-3.79/-6.82	-8.69/-5.01	-9.21/-12.92	-13.84/-10.74	
Θ(140°)	-3.57/-8.15	-18.24/-8.9	-7.98/-10.77	-14.32/-18.01	-18.06/-17.91	-18.17/-14.34	-17.78/-15.02	-9.42/-3.88	-3.01/-1.54	-0.24/-0.98	-6.62/-3.21	-6.17/-10.55	-12.07/-8.3	-7.51/-10.52	-15.03/-6.68	-11.87/-11.58	-18.79/-14.89	-6.01/-5.19
Θ(150°)	-12.86/-18.9	-18.32/-14.62	-16.72/-17.66	-12.34/-9.13	-12.36/-17.31	-19.11/-19.43	-15.42/-12.53	-7.03/-7.33	-6.19/-3.86	-5.57/-7.05	-10.77/-18.45	-4.12/-4.46	-4.59/-6.35	-10.77/-18.45	-4.12/-3.81	-7.99/-12.95	-16.76/-16.45	-8.71/-9.86
Θ(160°)	-7.82/-9.85	-13.44/-13.97	-15.13/-13.99	-11.7/-10.58	-12.2/-15.2	-16.13/-13.65	-12.86/-14.25	-16.77/-14.74	-11.3/-9.85	-8.84/-6.97	-4.82/-4.09	-6.06/-9.57	-8.74/-6.57	-6.84/-10.34	-18.5/-12.89	-8.05/-6.23	-6.44/-7.26	-7.39/-7.58
Θ(170°)	-6.14/-6.24	-7.1/-6.8	-6.19/-7.43	-9.42/-9.88	-8.77/-9.81	-12.28/-14.24	-13.22/-9.93	-7.19/-4.86	-2.37/-0.5	0.19/0.21	0.47/0.82	0.35/-0.31	-1.37/-3.23	-6.35/-11.29	-15.93/-12.89	-17.24/-11.95	-8.42/-6.46	-6.36/-5.31
Θ(180°)	-8.96/-6.44	-3.77/-2.2	-2.05/-1.91	-2.4/-3.04	-4.19/-5.69	-8.06/-10.45	-3.03/-9.51	-4.43/-3.57	-18.85/-18.01	-3.5/-4.06	-6.35/-9.86	-16.3/-17.69	-18.85/-18.01	-17.4/-16.74	-11.94/-11.51	-9.11/-7.77		
Freq(Hz)	5.6G/Pol.	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°)	-18.11/-18.2	-11.69/-9.56	-7.86/-6.07	-4.65/-3.38	-2.95/-3.04	-3.37/-3.75	-4.6/-5.74	-7.29/-9.52	-12.65/-18.72	-19.25/-18.03	-12.62/-8.69	-6.65/-5.47	-4.2/-3.94	-3.78/-4.15	-3.79/-3.98	-5.16/-7	-7.83/-8.41	-10.81/-15.37
Θ(10°)	-13.67/-12.84	-11.79/-6.83	-7.66/-7.85	-6.95/-6.23	-5.08/-4.63	-4.68/-5.02	-5.78/-7.17	-8.79/-11.01	-14.67/-17.56	-19.34/-17.38	-15.55/-10.33	-7.72/-5.19	-3.05/-4.1	-1.37/-1.93	-2.12/-3.39	-4.89/-7.17	-9.24/-9.31	-10.13/-13.41
Θ(20°)	-13.22/-16.24	-16.87/-13.55	-6.63/-9.2	-12.25/-13.3	-7.27/-6.48	-6.85/-7.45	-8.93/-11.22	-12.25/-13.3	-13.92/-15.54	-18.45/-18.68	-15.45/-10.13	-7.17/-4.72	-1.55/0.25	0.02/-1.19	-3.4/-4.67	-3.23/-2.84	-4.04/-5.59	-7.06/-9.61
Θ(30°)	-9.78/-12.75	-15.28/-17.78	-16.33/-13.22	-13.65/-14.62	-18.43/-13.67	-17.05/-18.78	-10.81/-9.47	-11.4/-15.58	-18.62/-18.5	-5.91/-13.71	-2.59/-1.31	-2.52/-4.37	-0.61/-0.61	-3.1/-1.07	-1.94/-2.59	-2.52/-4.37	-4.42/-4.82	-6.69/-8.4
Θ(40°)	-11.29/-14.18	-15.1/-12.09	-10.08/-8.55	-8.46/-11.58	-8.11/-5.3	-8.77/-16.18	-9.23/-8.37	-10.27/-15.74	-18.56/-17.75	-16.45/-15.44	-12.41/-7.74	-3.39/-1.46	-2.78/0.65	0.81/2.53	-0.92/-1.23	-1.59/-1.12	-2.65/-6.19	-9.72/-10.54
Θ(50°)	-19.37/-18.62	-19.05/-15.66	-12.42/-8.44	-5.39/-5.97	-8.77/-4.05	-5.55/-10.67	-5.76/-7.45	-9.18/-14.6	-17.23/-16.37	-10.91/-7.88	-10.86/-7.07	-2.89/-0.51	-1.74/-0.74	0.04/-2.7	-2.22/-1.73	-2.41/-2.89	-4.69/-7.82	-10.2/-13.03
Θ(60°)	-18.14/-12.15	-14.67/-11.06	-9.65/-10.08	-8.32/-4.33	-17.71/-4.3	-5.19/-6.7	-8/-7.72	-9.68/-9.96	-15.23/-18.17	-14.35/-9.58	-8.89/-8.24	-6.04/-1.92	-2.59/-2.88	-1.94/-3.35	-1.63/-2.93	-1.88/-0.58	-8.42/-5.47	-6.11/-13.37
Θ(70°)	-9.46/-8.4	-6.98/-6.78	-5.9/-3.61	-5.51/-2.89	-5.42/-3.76	-2.85/-4.61	-6.45/-3.65	-5.7/-10.16	-11.28/-12.87	-8.47/-9.62	-9.78/-9.33	-6.04/-2.65	-1.6/-1.18	-2.26/-3.2	-5.36/-4.56	-5.12/-9.35	-6.02/-8.66	-10.53/-10.84
Θ(80°)	-8.38/-10.27	-8.89/-6.81	-8.14/-6.08	-3.77/-3.29	-10.08/-4.89	-2.98/-4.81	-5.73/-3.65	-4.82/-5.32	-5.36/-5.76	-7.51/-14.84	-14.07/-14.54	-6.03/-2.87	-2.26/-3.46	-2.48/-5.4	-9.03/-4.93	-8.56/-4.81	-5.76/-12.46	-11.99/-9.77
Θ(90°)	-8.56/-11.87	-9.58/-5.72	-9.42/-11.63	-8.55/-4.36	-8.15/-7.61	-3.41/-4.07	-9.56/-6.44	-4.32/-3.79	-6.37/-6.2	-5.12/-9.48	-9.56/-8.64	-5.71/-8.11	-6.8/-6.					



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Radiated Composite Gain Data

Appendix A

θ(50°)	-3.51/-3.29	-5.23/-5.9	-6.04/-9.42	-16.12/-12.42	-5.68/-2.73	-3.1/-4.13	-3.98/-4.2	-9.43/-17.88	-8.47/-6.19	-7.28/-12.09	-8.64/-2.64	-1.37/-1.36	-0.76/-1.09	-0.91/-0.05	-0.07/-0.85	-2.4/-3.5	-4.07/-3.71	-3.62/-3.36
θ(60°)	-9.63/-16.69	-17.96/-12.05	-7.68/-6.41	-10/-18.76	-5.25/-1.32	-2.32/-4.16	-4.38/-6.08	-9/-14.24	-9.31/-5.68	-5.51/-8.97	-15.11/-4	-0.330.48	0.60.21	-1.5/-2.17	-2.65/-2.81	-2.62/-4.03	-4.09/-3.63	-3.62/-5.91
θ(70°)	-15.47/-12.91	-18.69/-19.02	-17.19/-11.29	-13.39/-11.08	-6.32/-1.85	0.12/-2.01	-5.88/-18.47	-15.68/-8.19	-6.32/-5.12	-7.32/-10.6	-11.93/-6.06	-2.01/-0.97	0.40.47	-0.67/-0.91	-2.48/-4.48	-4.07/-2.1	-4.45/-6.84	-11.14/-10.87
θ(80°)	-14.76/-13.28	-13.85/-17.23	-12.98/-6.41	-4.61/-3.82	-1.98/-2.53	-0.83/-0.37	-4.92/-18.43	-7.32/-5.89	-7.37/-7.41	-11.04/-15.43	-7.58/-6.65	-2.72/-2	-1.16/-0.23	1.160.63	-1.25/-5.22	-5.73/-5.83	-8.45/-14.5	-13.79/-16.85
θ(90°)	-14.74/-15.51	-18.29/-15.53	-8.7/-5.37	-3.410.01	-1.09/-1.55	-1.74/-9.35	-12.11/-5.18	-2.85/-3.6	-7.12/-7.24	-9.85/-12.51	-12.19/-9.47	-4.01/-1.49	-2.88/-1.83	-1.35/-0.26	-2.71/-5.41	-7.59/-8.53	-10.04/-9.74	-8.33/-9.09
θ(100°)	-15.01/-11.89	-18.69/-14.65	-6.55/-1.6	1.192.58	2.03/-2.93	-6.99/-7.38	-6.05/-4.2	-4.59/-3.78	-3.45/-4.48	-8.3/-13.54	-11.28/-14.02	-9.85/-9.27	-6.62/-4.32	-5.44/-5.15	-7.54/-16.21	-18.98/-11.36	-11.38/-18.87	
θ(110°)	-12.64/-18.27	-18.55/-13.41	-11.9/-1.57	0.91.55	0.79/-1.33	-1.39/-0.97	-1.26/-1.53	-4.22/-8.04	-9.55/-7.78	-9.66/-12.95	-10.37/-9.46	-9.85/-13.64	-18.72/-16.11	-18.14/-9.67	-10.59/-11.12	-10.18/-18.56	-19.23/-17.93	-14.56/-13.56
θ(120°)	-18.39/-13.06	-11.85/-8.37	-5.61/-2.78	-0.421	1.752.06	0.840.26	-2.51/-4.61	-3.03/-0.28	-1.76/-5.55	-10.59/-14.13	-18.1/-12.74	-7.04/-9.73	-18.43/-18.14	-19/-9.5	-8.2/-4.44	-11.53/-19.76	-18.91/-17.37	-16.19/-18.05
θ(130°)	-10.35/-18.85	-16.95/-8.6	-6.93/-3.26	0.230.97	1.431.11	0.810.79	2.161.38	-0.91/-5.34	-4.06/-4.99	-9.97/-18.12	-17.67/-18.22	-12.82/-12	-18.5/-10.85	-9.97/-18.12	-9.29/-8.92	-12.82/-12	-17.62/-17.63	-9.22/-10.66
θ(140°)	-17.96/-12.25	-8.67/-5.71	-3.99/-2.98	-0.670.52	0.871.08	1.682.73	2.621.88	0.28/-0.37	-3.21/-5.08	-9.56/-13.61	-10.73/-8.93	-11.19/-13.94	-14.66/-17.12	-18.32/-18.37	-10.95/-9.03	-11.67/-8.65	-9.85/-17.82	-18.01/-16.72
θ(150°)	-8.88/-14.74	-11.31/-10.94	-9.17/-7.01	-5.17/-2.54	-1.44/-2.17	-3.9/-4.67	-3.65/-2.4	-1.71/-2.83	-5.22/-6.58	-7.33/-10.29	-17.6/-18.48	-19.22/-16.21	-14.54/-15.04	-17.81/-19.03	-18.36/-15.62	-9.34/-9.91	-7.35/-7.86	-8.66/-6.76
θ(160°)	-15.73/-17.78	-12.92/-10.84	-10.75/-9.33	-9.67/-8.94	-9/-7.18	-4.53/-2.91	-12.91/-4.04	-6.38/-9.7	-18.57/-17.94	-9.85/-8.42	-12.24/-14.9	-16.33/-18.21	-19.35/-17.96	-17.68/-18.89	-18.09/-17.74	-17.13/-13.5	-10.94/-9.92	-10.04/-11.23
θ(170°)	-17.55/-17.66	-18.3/-16.9	-18.81/-17.9	-18.77/-17.16	-10.92/-7.58	-6.06/-5.56	-5.87/-6.21	-6.55/-7.21	-7.86/-8.4	-8.22/-8.81	-11.02/-13.85	-17.68/-18.32	-15.78/-13.08	-12.26/-12.14	-11.49/-9.54	-7.6/-6.15	-6.01/-6.55	-9.36/-11.19
θ(180°)	-9.4/-8.85	-8.06/-7.89	-8.68/-9.23	-9.67/-10.46	-11.67/-14.38	-18.27/-18.36	-15.06/-11.3	-8.69/-6.55	-5.23/-4.47	-4.19/-4.49	-5.35/-6.13	-7.79/-9.39	-11.26/-12.7	-12.26/-11.31	-11.4/-12.6	-18.39/-18.59	-16.4/-10.88	-7.88/-7.79
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°)	-3.64/-3.57	-3.53/-4.29	-5.38/-7.49	-9.1/-11.27	-15.91/-17.43	-18.42/-12.26	9.42/-6.5	-4.63/-3.27	-2.57/-2.59	-3.08/-3.91	-4.93/-5.64	-7.68/-9.6	-13.16/-16.38	-18.17/-18.23	-13.23/-10.6	-8.38/-6.55	-5.49/-4.72	-4.24/-4
θ(10°)	-3.54/-3.7	-3.7/-3.7	-4.77/-5.54	-6.61/-8.25	-11.26/-15.28	-17.65/-14.7	-8.17/-5.05	-3.23/-2.58	-2.89/-3.26	-3.71/-4.47	-4.12/-4.65	-4.9/-6.39	-8.59/-12.61	-18.22/-15.97	-7.53/-5.66	-4.79/-3.55	-2.88/-3.18	
θ(20°)	-2.85/-2.77	-3.29/-4.04	-4.66/-5.61	-6.68/-7.23	-7.51/-9.72	-12.77/-12.03	-7.93/-4.61	-2.42/-1.89	-2.75/-3.94	-3.83/-2.48	-2.01/-1.95	-1.88/-2.63	-4.41/-6.54	-8.17/-11.35	-15.87/-10.93	-6.92/-4.29	-3.02/-2.29	-2.31/-2.67
θ(30°)	-5.9/-6.09	-5.49/-5.85	-5.65/-4.93	-5.27/-4.85	-5.32/-4.59	-5.44/-7.14	-8.26/-7.06	-4.89/-4.24	-5.56/-8.11	-6.65/-6.48	-3.64/-2.45	-1.34/-1.65	-2.81/-3.4	-5.22/-4.94	-12.91/-7.43	-4.5/-4.21	-4.87/-5.26	-4.89/-5.16
θ(40°)	-6.92/-6.55	-5.47/-4.15	-3.82/-2.96	-4.05/-4.57	-6.18/-3.82	-3.04/-4.47	-6.38/-8.32	-3.2/-2.19	-4.26/-4.33	-5.55/-4.76	-2.56/-1.64	-1.03/-0.96	-1.68/-3.29	-5.26/-10.31	-9.54/-4.86	-4.9/-6.4	-7.25/-6.63	-9.82/-9.38
θ(50°)	-11.17/-9.84	-9.38/-8.52	-9.84/-9.51	-6.65/-4.66	-4.95/-3.94	-1.33/-2.26	-5.92/-3.74	-1.38/-2.12	-4.23/-10.8	-8.26/-3.48	0.49/-0.26	-0.91/-1.61	-3.42/-3.89	-4.33/-9.3	-10.85/-8.77	-13.55/-12.76	-10.46/-10.65	-11.68/-13.75
θ(60°)	-12.74/-12.15	-6.8/-5.42	-5.28/-6.11	-5.91/-9.07	-11.35/-4.66	-3.77/-6.41	-6.03/-5.62	-4.05/-5.22	-7.05/-16.42	-0.28/-1.01	-1.97/-3.06	-3.78/-5.64	-6.57/-9.63	-8.89/-7.82	-12.7/-13.46	-14.42/-14.09	-12.08/-16.3	
θ(70°)	-16.36/-10.08	-7.39/-6.12	-3.94/-6.12	-6.02/-7.24	-8.18/-4.75	-4.26/-4.54	-10.17/-10.95	-8.62/-3.65	-0.9/-1.69	-7.92/-10.77	-9.92/-9.69	-18.52/-15.4	-10.12/-11.39	-11/-12.81				
θ(80°)	-19.16/-13.32	-12.22/-9.71	-8.95/-10.47	-4.9/-4.27	-12.65/-4.06	-3.1/-3.51	-3.15/-4.97	-4.86/-5.87	-7.96/-9.17	-12.2/-6.07	-2.52/-2.7	-5.8/-9.57	-17.45/-17.9	-12.09/-9.54	-10.85/-10.77	-14.61/-15.91	-9.74/-8.76	-12.54/-13.15
θ(90°)	-18.01/-18.61	-16.5/-12.97	-14.28/-15.51	-7.26/-8.44	-7.14/-8.24	-2.08/-3.2	-8.87/-12.28	-17.67/-16.97	-14.69/-12.82	-7.92/-8.09	-11.39/-9.25	-7.52/-9.38	-18.86/-10.72	-13.7/-12.27	-18.37/-14.45	-13.91/-10.55	-13.75/-14.7	
θ(100°)	-18.55/-14.29	-18.32/-18.07	-19.12/-17.06	-13.35/-11.2	-8.62/-14.95	-8.11/-4.54	-18.56/-16.64	-6.11/-9.3	-12/-17	-18.82/-17.69	-11.3/-8.8	-12/-17	-8.33/-10.77	-16.78/-14.18	-12.74/-14.62			
θ(110°)	-11.67/-18.05	-18.49/-18.73	-18.11/-14.41	-13.38/-12	-6.89/-18.85	-11.45/-8.3	-6.41/-9.42	-12.03/-18.57	-15.5/-18.16	-19.07/-16.63	-13.68/-17.56	-11.21/-10.58	-10.55/-8.84	-14.25/-15.61	-8.67/-12.55	-16.36/-12.93	-19.24/-18.8	-19.39/-13.43
θ(120°)	-9.22/-18.16	-13.91/-16.21	-12.13/-7.19	-8.33/-14.03	-18.08/-15.4	-6.83/-4.76	-7.54/-12.17	-16.65/-19.71	-19.24/-19.12	-17.65/-15.86	-18.99/-11.79	-12.33/-10.07	-7.87/-8.93	-11.21/-14.85	-6.53/-6.56	-12.28/-7.8	-11.75/-15.76	-13.39/-16.61
θ(130°)	-18.94/-17.75	-18.42/-15.66	-9.27/-6.97	-5.02/-5.08	-7.62/-13.53	-16.1/-9.09	-8.48/-10.42	-9.24/-11.78	-15.72/-15.65	-8.37/-5.45	-2.53/-12.6	-15.31/-14.6	-8.78/-5.38	-6.99/-10.17	-5.38/-4.78	-15.63/-8.48	-8.72/-19.07	-17.69/-19.01
θ(140°)	-12.44/-11.04	-11.85/-14.14	-8.62/-6.95	-5.28/-5.22	-3.42/-3.24	-18.03/-11.33	-9.32/-18.07	-12.73/-11.19	-15.94/-18	-18.54/-15.23	-2.32/-8.62	-16.68/-9.02	-9.58/-5.31	-12.05/-11.1	-9.99/-17.09	-12.05/-13.7	-12.07/-17.31	
θ(150°)	-17.47/-10.57	-8.71/-7.66	-5.53/-4.26	-2.95/-2.25	-3.32/-5.99	-10.26/-14.86	-16.81/-12.57	-8.87/-8.28	-8.15/-8.76	-16.78/-6.34	-5.23/-6.62	-7.7/-9.54	-8.3/-15.58	-17.12/-11.66	-6.37/-5.64	-10.03/-16.82	-13.93/-8.87	-10.25/-13.14
θ(160°)	-14.72/-12.8	-10.08/-9.13	-10.39/-10.8	-10.51/-10.49	-9.53/-9.09	-10.07/-11.65	-11.54/-9.34	-8.42/-8.93	-8.67/-10.92	-17.3/-8.56	-4.65/-4.64	-5.57/-6.88	-11.15/-18.94	-15.06/-10.68	-7.76/-6.16	-6.58/-9.29	-12.89/-14.26	-14.86/-16.91
θ(170°)	-18.09/-18.57	-14.76/-9.48	-7.93/-6.58	-5.47/-8.87	-4.66/-5.17	-6.59/-8.9	-10.77/-14.61	-14.83/-12.3	-12.46/-11.61	-11.1/-11.18	-10/-8.05	-7.08/-6.56	-6.88/-6.7	-7.36/-7.89	-7.69/-7.77	-9.51/-14.1	-17.6/-17.91	-15.02/-14.28
θ(180°)	-16.72/-18.63	-18.53/-18.41	-18.1/-18.06	-12.59/-10.14	-7.95/-6.72	-5.51/-5.47	-6.3/-7.08	-7.53/-9.29	-10.97/-10.4	-11.29/-12.7	-15.49/-14.65	-14.91/-13.47	-11.18/-11.11	-13.56/-15.85	-12.64/-9.41	-7.08/-5.93	-5.94/-7.96	-10.36/-13.98
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°)	-19.32/-11.92	-8.43/-6.17	-4.35/-3.03	-2.38/-1.99	-1.44/-1.31	-1.61/-2.17	-2.75/-3.55	-4.62/-6.47	-9.41/-13.67	-18.18/-12.37	-9.61/-7.35	-4.92/-3.3	-2.32/-2.13	-2.09/-1.94	-1.76/-2.22	-3.32/-4.7	-6.46/-8.67	-12.59/-19.51
θ(10°)	-12.9/-15.06	-13.86/-10.65	-7.09/-7.49	-3.13/-2.02	-1.15/-0.66	-1.09/-1.66	-6.04/-9.3	-14.88/-19.08	-19.1/-13.59	-10.04/-7.87	-6.38/-4.75	-3.21/-2.4	-1.66/-1.2	-1.15/-1.9	-3.06/-4.61	-6.61/-7.98	-9.76/-10.7	
θ(20°)	-17.82/-18.26	-18.39/-15.73	-10.57/-8.82	-6.36/-6.42	-2.23/-1.06	-0.82/-1.37	-2.53/-3.93	-5.56/-8.07	-13.37/-18.32	-7.18/-16.53	-1.99/-2.87	-1.67/-6.71	-5.22/-3.31	-2.32/-1.91	-0.99/-2.03	-2.36/-3.19	-5.14/-7.31	-10.5/-14.46
θ(30°)	-12.56/-12.87	-10.89/-7.86	-7.22/-6.62	-6.67/-4.45	-3.07/-2.47	-2.63/-2.29	-2.05/-3.4	-5.68/-8.47	-12.53/-17.16	-17.74/-18.17	-14.12/-11.98	-11.52/-7.42	-3.91/-1.88	-0.390.32	0.05/-1.42	-3.21/-4.94	-7.01/-8.05	-9.28/-10.67
θ(40°)	-6.9/-6.57	-5.24/-4.23	-4.36/-4.77	-6.59/-7.53	-6.48/-5.46	-5.3/-3.81	-1.8/-2.08	-13.52/-18.47	-18.16/-17.96	-17.74/-12.78	-7.18/-4.51	-2.220.45	1.191.26	-1.124.07	-2.72/-4.17	-5.51/-7.88	-8.28/-7.95	
θ(50°)	-5.57/-6.49	-6.31/-6.38	-4.27/-5.36	-7.52/-6.69	-4.38/-3.01	-3.96/-2.97	-1.73/-3.42	-6.17/-6.62	-1.94/-18.45	-10.68/-4.21	-0.14/-1.36	-2.86/-3.92	-4.04/-0.94	-0.104.05	-2.86/-3.92	-4.44/-5.65	-6.24/-6.67	
θ(60°)	-10.32/-11.27	-13.1/-12.55	-9.47/-5.71	-6.13/-9.15	-5.15/-2.35	-2.32/-0.8	-0.74/-4.12	-8.71/-19.47	-17.84/-12.49	-9.34/-8.69	-19/-4.91	-0.730.15	-0.61/-1.22	-1.23/-0.79	-2.15/-3.13	-3.78/-4.55	-4.22/-2.54	-3.52/-5.59
θ(70°)	-16.41/-11.75	-11.03/-10.48	-18.23/-14.51	-12.84/-17.57	-10.38/-2.07	-0.88/-0.52	-2.97/-9.38	-15.91/-18.32	-8.55/-4.65	-6.79/-10.74	-14.06/-8.19	-1.680.17	1.071.21	-0.19/-1.06	-2.12/-3.28	-3.73/-3.39	-4.01/-4.84	-8.67/-15.05
θ(80°)	-18.17/-83	-15.62/-13.12	-12.07/-7.38	-8.56/-10.38	-8.02/-1.22	-1.530.78	-12.87/-19.2	-7.78/-10.33	-0.55/-6.1	-3.21/-1.02	0.270.66	-2.83/-3.86	-3.27/-3.51	-7.12/-10.78	-1.27/-10.78	-10.12/-14.1		
θ																		



Radiated Composite Gain Data

Appendix A

Θ(150°)	-18.36/-15.58	-13.89/-13.05	-13.15/-14.77	-17.85/-17.95	-18.32/-16.03	-16.96/-15.83	-14.53/-15.16	-18.97/-18.15	-14.36/-12.74	-14.85/-17.65	-18.85/-10.18	-8.41/-8.71	-9.77/-10.24	-9.77/-9.83	-10.24/-10.81	-11.71/-13.56	-18.87/-19.43	-18.84/-18.86
Θ(160°)	-18.85/-17.66	-18.26/-17.61	-18.19/-17.47	-16.73/-18.36	-17.94/-19.04	-17.69/-18.13	-17.73/-19.19	-19.04/-17.62	-15.11/-14.16	-15.96/-17.59	-15.83/-13.57	-13.05/-14.25	-15.44/-15.15	-13.94/-13.72	-13.66/-13.14	-13.2/-14.03	-15.75/-17.46	-18.48/-18.81
Θ(170°)	-14.98/-15.42	-15.17/-16.87	-16.43/-15.59	-15.43/-16.31	-17.97/-18.3	-18.42/-17.84	-18.16/-16.33	-12.78/-16.14	-18.18/-19.3	-17.79/-18.22	-18.16/-18.85	-17.79/-18.22	-18.72/-18.01	-18.37/-18.56	-18.72/-19.04	-17.86/-16.58	-15.48/-13.35	
Θ(180°)	-17.66/-19.2	-18.23/-17.41	-17.2/-16.84	-15.97/-16.12	-17.05/-17.24	-17.25/-18.74	-17.81/-18.86	-18.03/-15.77	-16.48/-17.19	-17.74/-18.84	-18/-17.84	-18.7/-17.26	-17.77/-19.06	-18.95/-17.74	-18.73/-18.17	-18.82/-18.73	-18.19/-18.92	-18.63/-17.87
Freq(Hz)	5.2G/Pol.	Phi/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-18.16/-18.78	-13.91/-9.39	-5.9/-3.75	-2.41/-1.19	-0.53/-0.43	-0.39/-0.36	-0.51/-1.54	-2.1/-4.08	-6.36/-9.8	-18.12/-19.07	-11.23/-6.67	-4.51/-3.16	-2.07/-1.18	-0.52/-0.17	-0.54/-0.68	-1.09/-2.22	-3.74/-5.77	-8.37/-11.84
Θ(10°)	-11.68/-18.05	-12.75/-7.3	-4.6/-3.15	-1.96/-0.99	-0.52/-0.32	-1.07/-1.26	-1.64/-2.6	-4.73/-7.81	-11.65/-15.57	-13.94/-8.35	-5.79/-4.4	-3.74/-3.37	-2.84/-2.29	-1.46/-0.76	-0.26/-0.17	-0.36/-0.9	-1.78/-3.17	-4.8/-7.46
Θ(20°)	-17.52/-17.79	-9.58/-5.32	-3.08/-1.77	-1/-0.29	0.31/0.65	0.630.15	-0.51/-2.23	-5.14/-10.4	-18.93/-17.76	-9.7/-5.57	-3.59/-2.53	-2.18/-2.13	-1.96/-1.48	-0.24/0.65	1.13/1.38	0.950.12	-1.46/-3.83	-5.96/-9.36
Θ(30°)	-8.39/-12.66	-13.56/-6.33	-2.66/-0.55	0.41/0.32	0.16/0.6	1.47/1.18	0.11/-2.09	-5.83/-6.74	-5.66/-7.13	-5.43/-6.25	-4.92/-3.25	-2.46/-2.18	-1.71/-0.68	0.46/1.59	2.74/3.19	2.63/1.51	0.26/-1.14	-2.72/-4.71
Θ(40°)	-12.67/-11.97	-8.98/-5.52	-2.69/-1.1	-1.76/-3.9	-2.68/0.03	1.14/0.36	-2.28/-6.13	-6.1/-3.68	-2.79/-5.19	-6.09/-8.12	-7.42/-4.15	-2.37/-2.12	-2.58/-2.01	0.15/1.91	2.58/2.35	1.67/0.53	-0.81/-2.79	-6.03/-9.21
Θ(50°)	-17.82/-10.6	-7.18/-4.51	-1.51/-0.62	-2.55/-4.28	-0.44/-1.67	0.32/-2.97	-4.47/-3.35	-1.09/-0.61	-1.58/-3	-6.89/-11.42	-6.13/-2.67	-2.25/-3.53	-4.47/-2.46	-0.39/0.65	1.07/0.81	-0.34/-1.22	-2.64/-4.45	-6.86/-13.63
Θ(60°)	-6.93/-7.84	-8.73/-7.23	-4.03/-3.43	-6.71/-7.3	-0.97/0.86	-1.39/-7.47	-7.56/-4.37	-1.75/-0.3	-1.79/-4.68	-8.73/-18.16	-8.82/-3.38	-1.47/-2.46	-5.76/-5.42	-2.27/0.42	0.89/0.74	-0.74/-1.23	-2.58/-6.17	-11.82/-12.83
Θ(70°)	-14.75/-17.33	-10.32/-5.68	-3.47/-5.84	-15.45/-6.43	-0.58/0.07	-3.67/-12.19	-5.89/-4.73	-5.77/-7.87	-12.76/-14.45	-18.06/-11.74	-7.47/-7.37	-0.99/0.09	-3.57/-4.49	-0.54/0.59	0.78/0.75	-0.4/-2.27	-2.59/-6.98	-10.22/-9.19
Θ(80°)	-11.94/-12.84	-11.09/-5.06	-3.13/-6.45	-15.41/-2.23	1.1/-0.12	-12.16/-5.58	-4.42/-4.65	-4.23/-4.29	-7.98/-8.93	-13.33/-6.76	-7.42/-4.08	-0.96/1.65	0.12/-3.55	0.75/0.08	1.13/1.96	1.06/-3.33	-3.86/-8.31	-7.69/-7.06
Θ(90°)	-18.74/-14.62	-6.22/-5.14	-8.58/-15.51	-4.61/-0.95	1.39/-0.52	-10.66/-4.82	-4.54/-7.09	-6.2/-4.79	-6.2/-6.12	-9.48/-4.86	-6.45/-2.85	-0.04/1.45	1.46/-1.38	1.02/0.04	-0.15/2.04	1.76/-1.15	-6.39/-7.01	-9.7/-8.2
Θ(100°)	-17.2/-14.97	-6.14/-42	-8.53/-11.21	-1.59/-0.97	-0.82/-4.72	-18/-8.7	-9.86/-18.85	-15.29/-15.09	-11.5/-18.3	-9.73/-6.8	-6.17/-6.43	-1.32/0.65	0.43/-1.65	-0.01/-2.82	-1.23/-0.1	-0.94/-2.76	-4.84/-14.04	-9.97/-13.32
Θ(110°)	-15.66/-13.09	-5.37/-1.4	-1.7/-6.71	-2.04/-1.92	-4.14/-10.08	-18.42/-7.52	-7.6/-10.75	-14.5/-19.08	-16.23/-19.38	-17.86/-7.5	-7.83/-7.19	-3.88/-0.79	-0.31/-3.47	-2.99/-4.23	-6.15/-7.09	-3.13/-5.67	-8.41/-12.88	-8.82/-9.06
Θ(120°)	-15.11/-13.4	-10.9/-18.64	-7.56/-3.56	-4.83/-6.87	-8.91/-12.39	-12.43/-18.23	-11.44/-8.76	-8.01/-15.01	-19.2/-13.58	-16.46/-10.2	-19.26/-4.89	-2.37/-1.4	-0.89/-2.85	-1.91/-3.05	-4.45/-3.49	-4.46/-3.38	-3.38/-7.74	-6.05/-11.64
Θ(130°)	-14.54/-16.22	-13.52/-12.33	-8.23/-5.77	-10.15/-17.73	-13.55/-12.54	-14.01/-16.36	-13.73/-17.65	-18.05/-17.51	-12.35/-12.76	-13.84/-17.52	-18.21/-18.14	-4.24/-2.72	-2.85/-2.05	-0.01/-1.52	-3.84/0.16	-1.75/-1.06	-6.96/-10.43	-8.46/-9.44
Θ(140°)	-7.61/-16.58	-14.43/-11.23	-6.73/-9.52	-13.46/-16.26	-18.01/-18.39	-16.63/-11.81	-11.97/-19.05	-18.48/-15.29	-14.94/-18.09	-18.56/-19.27	-15.29/-15.68	-6.67/-2.51	-0.89/-2.51	-0.89/-2.51	-0.89/-2.51	-0.89/-2.51	-6.84/-16.15	-18.05/-9.95
Θ(150°)	-6.16/-11.47	-17.65/-18.81	-11.24/-11.28	-19/-17.18	-14.89/-17.66	-13.44/-9.32	-9.02/-13.05	-16.89/-12.09	-10.82/-7.83	-7.85/-10.06	-13.75/-18.04	-18.75/-19.16	-10.66/-5.03	-4.44/-6.22	-8.37/-8.57	-6.61/-8.07	-12.18/-12.69	-7.9/-6.03
Θ(160°)	-7.7/-11	-18.57/-18.48	-17.98/-17.24	-18.63/-18.19	-18.02/-18.65	-10.68/-8.07	-8.18/-10.72	-12.8/-19.2	-16.15/-19.15	-17.47/-18.76	-18.77/-18.09	-17.42/-16.62	-16.55/-15.59	-12.13/-9.3	-9.18/-12.92	-17.5/-19.52	-11.42/-7.57	-6.54/-7.2
Θ(170°)	-14.77/-15.08	-16.41/-17.26	-19.09/-19.31	-16.17/-12.37	-12.21/-13.16	-13.71/-14.12	-14.78/-14.76	-16.82/-14.49	-16.75/-17.85	-19.16/-17.52	-19.02/-15.14	-13.1/-11.89	-10.7/-9.64	-9.39/-10.28	-13.7/-12.77	-11.75/-11.61	-12.34/-14.71	-17.45/-18.93
Θ(180°)	-17.6/-16.49	-14.22/-14.09	-12.63/-11.55	-11.19/-11.23	-10.62/-10.59	-10.5/-9.85	-10.25/-10.64	-10.14/-14.8	-16.14/-18.58	-19.01/-18.41	-18.91/-18.49	-15.8/-14	-12.65/-12.52	-12.37/-12.77	-11.75/-11.61	-12.34/-14.71	-17.45/-18.93	-18.28/-18.23
Freq(Hz)	5.2G/Pol.	Theta/Ant. 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-0.27/-0.09	-0.72/-0.88	-1.78/-2.84	-4.03/-5.79	-8.15/-11.66	-15.12/-11.8	-7.76/-5.54	-3.77/-2.7	-1.72/-1.43	-1/-0.96	-1.01/-1.88	-2.57/-3.63	-4.7/-6.72	-9.67/-13.74	-12.94/-9.42	-6.77/-4.24	-2.73/-1.4	-1.43/-0.55
Θ(10°)	1.73/1.7	0.94/0.3	-0.36/-1.75	-3.52/-5.91	-8.35/-10.18	-10.89/-7.52	-4.04/-1.75	-0.58/0.14	0.49/0.45	-0.08/-0.52	-1.62/-2.9	-4.07/-5.14	-6.36/-8.03	-14.04/-14.06	-18.56/-19.02	-10.94/-6.65	-3.49/-1.07	0.6/1.61
Θ(20°)	2.59/2.83	2.36/1.15	-0.67/-3.22	-4.96/-6.03	-12.89/-16.03	-9.58/-5.47	-2.9/-1.05	-0.01/0.49	-1.44/-3.33	-6.35/-8.36	-5.92/-1.94	-9.7/-14.9	-6.76/-7.37	-9.25/-11.8	-5.92/-9.4	0.59/1.43	1.42/1.69	
Θ(30°)	1.61/99	1.59/0.05	-2.01/-3.31	-5.83/-8.38	-14.75/-16.07	-7.79/-3.84	-1.68/-0.62	-0.62/-1.38	-1.46/-2.08	-3.54/-5.46	-8.01/-11.92	-18.47/-14.48	-9.14/-7.53	-8.41/-15.47	-16.17/-6.09	-3.02/-1.47	0.35/0.96	0.89/1.38
Θ(40°)	-1.07/-0.57	-0.49/-1.72	-4.33/-6.98	-8.31/-8.1	-9.36/-11.74	-11.65/-5.82	-3.42/-5.97	-5.31/-3.52	-3.28/-3.25	-2.96/-5.51	-11.55/-18.12	-10.37/-12.06	-13.46/-17.69	-14.42/-8.48	-4.51/-2.99	-2.49/-1.87	-0.81/0.06	
Θ(50°)	-4.21/-2.9	-2.62/-4	-5.97/-8.9	-10.34/-8.96	-14.13/-13.39	-12.03/-6.99	-4.62/-4.6	-6.43/-10.62	-8.05/-5.45	-3.66/-1.74	-1.4/-2.12	-13.76/-17.38	-14.57/-13.77	-7.86/-4.9	-3.65/-4.1	-2.62/-2.02		
Θ(60°)	-6.74/-3.64	-2.38/-4.04	-6.63/-11.57	-16.39/-8.32	-8.57/-16.57	-18.58/-12.22	-9.94/-10.61	-15.59/-15.65	-10.4/-6.33	-4.28/-3.82	-4.91/-5.01	-6.89/-13.2	-19.05/-17.62	-15.31/-15.79	-18.71/-11.4	-9.83/-7.68	-6.44/-7.48	-6.77/-8.46
Θ(70°)	-7.88/-4.31	-3.61/-4.21	-6.86/-5.88	-2.9/-4.2	-6.46/-13.68	-13.15/-12.7	-17.17/-15.96	-18.09/-16.44	-18.91/-14.65	-8.91/-5.1	-6.53/-8.13	-13.42/-19.67	-13.26/-15.47	-14.18/-19.09	-8.58/-12.22	-11.83/-11.97	-9.37/-10.23	
Θ(80°)	-7.42/-2.97	-2.38/-2.5	-4.95/-5.65	-5.06/-5.23	-6.09/-12.06	-19.13/-9.89	-11.61/-7.55	-10.96/-15.06	-7.07/-6.41	-7.33/-6.49	-8.06/-7.36	-11.67/-13.78	-10.51/-11.36	-11.75/-16.76	-13.05/-13.44			
Θ(90°)	-8.14/-3.94	-2.27/-2.85	-6.06/-14.85	-15.28/-11.19	-9.28/-15.6	-12.29/-10.68	-10.32/-9.99	-7.09/-11.13	-18.41/-11.63	-7.46/-6.03	-8.78/-8.37	-8.74/-8.21	-10.71/-7.97	-6.84/-6.43	-9.55/-13.46	-11.68/-8.88	-14.78/-17.78	-18.03/-14.78
Θ(100°)	-7.05/-4.17	-4.38/-6.28	-14.57/-18.56	-12.46/-11.37	-10.42/-18.27	-7.69/-6.77	-10.85/-16.9	-6.92/-8.32	-16.55/-14	-13.57/-16.9	-7.71/-9.39	-9.67/-9.74	-10.57/-15.99	-8.5/-8.87	-11.36/-18.47	-10.22/-9.33	-12.81/-18.68	-14.78/-9.01
Θ(110°)	-11.38/-10.2	-14.22/-15.78	-19.03/-10.85	-5.55/-5.88	-5.88/-9.26	-9.91/-9.59	-14.02/-16.21	-11.24/-12.05	-10.56/-18.51	-17.23/-9.25	-7.28/-7.33	-13.5/-13.95	-6.26/-8.69	-9.17/-14.5	-18.33/-16.65	-18.41/-15.69		
Θ(120°)	-12.18/-17.2	-16.46/-16.57	-16.45/-17.19	-18.06/-7.78	-3.55/-5.43	-8.03/-9.75	-18.75/-18.62	-19.07/-10.85	-12.31/-18.54	-14.2/-4.3	-6.2/-10.77	-19.12/-13.95	-9.14/-11.67	-7.02/-10.83	-16.02/-9.74	-6.02/-11.85		
Θ(130°)	-11.04/-18.65	-9.95/-9.23	-11.09/-19.24	-11.9/-9.06	-4.28/-2.76	-7.05/-10.38	-12.92/-14.41	-10.81/-14.44	-16.49/-18.09	-7.21/-5.88	-10.02/-6.12	-4.59/-4.02	-8.63/-14.9	-4.92/-14.74	-9.06/-9.89	-11.78/-8.83	-11.98/-16.98	-8.53/-5.8
Θ(140°)	-10.17/-14.42	-10.64/-10.24	-18.92/-18.74	-16.32/-9.4	-5.79/-5.08	-5.07/-8.51	-9.99/-8.05	-7.38/-12.17	-15.59/-12.18	-12.74/-7.82	-8.11/-8.13	-4.65/-10.02	-12.95/-7.39	-5.38/-9.3	-18.1/-11.71	-9.01/-15.13	-12.66/-11.27	-10.7/-9.21
Θ(150°)	-14.47/-15.22	-17.02/-16.7	-18.49/-17.76	-18.74/-18.03	-10.35/-8.14	-7.78/-8.98	-16.22/-18.42	-9.82/-7.31	-5.68/-7.8	-8.02/-7.06	-9.82/-11.15	-15.12/-18.05	-6.42/-4	-5.18/-9.13	-15.12/-18.85	-19.02/-13.48	-13.34/-15.29	
Θ(160°)	-7.34/-8.67	-12.52/-19.21	-18.13/-19.49	-19.05/-16.84	-13.46/-9.64	-8.61/-11.96	-17.73/-18.94	-15.54/-11.98	-11.12/-12.19	-15.58/-14.72	-11.65/-11.57	-13.33/-14.15	-11.49/-9.97	-9.7/-12.04	-16.71/-18.87	-18.57/-17.99	-17.96/-18.81	-12.22/-3.7
Θ(170°)	-14.63/-11.23	-8.85/-8.05	-8.72/-10.25	-10.69/-11.91	-13.49/-18.63	-18.84/-16.99	-16.66/-18.28	-17.95/-18.57	-17.05/-12.17	-9.83/-9.21	-8.21/-9.62	-6.19/-5.81	-5.59/-6.25	-7.32/-9.47	-11.88/-14.93	-14.03/-11.82	-10.58/-12.41	-16.54/-15.88
Θ(180°)	-11.54/-10.29	-9.19/-9.51	-10.33/-11.56	-12.11/-11														



Radiated Composite Gain Data

Appendix A

θ(40°)	-2.76/-2.39	-2.53/-2.11	-0.88/-1.03	-3.19/-5.64	-5.24/-8.92	-19.34/-9.64	-4.84/-3.73	-3.83/-4.8	-4.58/-3.15	-4.76/-6.76	-12.41/-18.03	-11.39/-9.77	-8.61/-9.74	-11.02/-11.37	-8.47/-8.77	-7.34/-4.53	-3.47/-1.97	-1.01/-1.91
θ(50°)	-3.5/-4.76	-5.06/-3.32	-1.01/-1.88	-4.29/-4.81	-4.24/-10.27	-10.78/-5.11	-3.99/-5.98	-8.53/-9.8	-8.5/-6.55	-4.69/-3.76	-7.11/-7.9	-11.36/-11.77	-10.23/-11.41	-15.44/-12.16	-9.5/-11.9	-5.45/-8.53	-2.58/-0.19	-0.2/-2.27
θ(60°)	-3.74/-4.56	-5.86/-4.94	-3.09/-4.54	-6.85/-8.38	-5.8/-15.25	-8.46/-4.31	-4.73/-8.76	-13.15/-15.55	-10.88/-9.19	-9.1/-6.73	-10.93/-16.21	-18.04/-15.29	-13.69/-10.14	-9.1/-16.7	-14.35/-13.64	-8.53/-3.44	-2.78/-1.03	-0.67/-1.84
θ(70°)	-4.77/-5.92	-6.93/-4.8	-5.96/-13.81	-15.64/-4.79	-3.71/-14.13	-12.19/-8.71	-10.5/-15.21	-11.46/-10.21	-10.96/-7.9	-8.09/-6.31	-7.49/-10.8	-16.47/-13.09	-9.19/-10.72	-13.61/-18.97	-15.12/-13.38	-9.93/-3.7	-3.38/-2.46	-2.14/-2.23
θ(80°)	-7.33/-7.12	-5.07/-3.56	-7.23/-18.78	-13.31/-6.82	-8.35/-18.51	-14.76/-13.66	-16.93/-18.39	-12.31/-13.09	-17.52/-11.87	-12.11/-9.14	-8.4/-10.69	-10.2/-8.96	-11.27/-7.91	-5.66/-17.83	-17.64/-9.14	-6.14/-3.72	-4.69/-4.27	-3.48/-4.52
θ(90°)	-7.39/-7.18	-5.17/-4.21	-7.87/-15.23	-10.97/-6.97	-10.55/-17.54	-9.81/-11.12	-15.88/-10.73	-7.4/-11.75	-14.01/-13.22	-11.6/-7.47	-8.96/-14.79	-9.86/-9.81	-7.93/-12.03	-5.62/-11.04	-15.14/-9.9	-4.82/-6.11	-2.77/-9.32	-5.64/-6.45
θ(100°)	-11.93/-8.92	-4.9/-4.17	-9.37/-18.31	-11.5/-10.82	-16.62/-17.98	-18.36/-17.76	-18.5/-12.59	-12.26/-18.86	-18.77/-18.26	-18.61/-9.75	-7.9/-10.1	-11.81/-8.89	-8.37/-9.5	-8.29/-11.79	-14.12/-10.59	-10.85/-10.41	-11.81/-8.63	-6.57/-10.55
θ(110°)	-9.43/-7.73	-5.7/-9.01	-18.59/-13.31	-13.83/-12.5	-11.9/-18.46	-10.22/-7.69	-10.71/-18.83	-13.38/-18.06	-18.07/-12.25	-11.2/-7.2	-6.64/-9.43	-8.54/-10.99	-16.25/-9.6	-8.76/-11.25	-9.77/-14.39	-18.99/-18.21	-18.34/-15.11	-13.09/-15.04
θ(120°)	-11.73/-8.84	-10.31/-15.88	-18.89/-14.97	-16.82/-9.96	-7.94/-12.81	-6.32/-4.73	-12.78/-17.85	-15.77/-16.5	-18.91/-17.84	-12.95/-4.83	-7.13/-16.58	-5.83/-4.68	-9.41/-11.24	-7.95/-18.78	-18.51/-16.22	-13.07/-8.26	-10.64/-11.92	
θ(130°)	-16.72/-14.65	-18.59/-14.08	-13.8/-17.84	-10.26/-12.02	-10.43/-9.86	-7.32/-10.15	-14.95/-18.66	-13.86/-8.5	-16.6/-11.44	-7.85/-3.66	-13.71/-4.92	-4.38/-3.81	-9.74/-9.06	-3.53/-8.06	-8.88/-8.03	-9.9/-6.17	-18.45/-12.36	-7.54/-10.74
θ(140°)	-13.4/-17.66	-12.27/-8.9	-10.43/-19.12	-17.39/-12.7	-12.88/-7.66	-7.47/-9.06	-18.3/-17.1	-12.98/-13.37	-19.04/-18.44	-9.72/-9.49	-9.69/-13.09	-3.8/-7.74	-15.03/-6.77	-3.97/-9.7	-15.78/-7.45	-8.62/-14.65	-9.65/-18.32	-9.06/-6.9
θ(150°)	-12.34/-10.72	-9.96/-10.4	-8.87/-11.42	-18.99/-14.48	-7.25/-5.83	-6.28/-9.06	-13.46/-18.09	-18.29/-15.66	-8.16/-6.67	-8.57/-7.45	-6.49/-10.58	-8.1/-6.16	-5.94/-10.76	-15.77/-17.85	-12.58/-11.52	-14.12/-10.39	-9.89/-9.53	
θ(160°)	-6.42/-7.21	-10.27/-15.02	-15.85/-18.5	-18.12/-17.15	-18.39/-11.75	-10.62/-12.7	-15.67/-18.37	-17.5/-13.59	-13.34/-17.97	-19.08/-18.08	-16.12/-12.83	-11.04/-10.04	-9.24/-7.5	-6.77/-8.32	-13.3/-18.13	-16.85/-17.88	-14.4/-15.55	-15.63/-8.12
θ(170°)	-18.27/-18.21	-18.15/-14.81	-11.37/-13.23	-15.11/-17.11	-17.73/-11.74	-10.38/-11.96	-14.86/-19.57	-18.46/-18.86	-16.74/-12.83	-11/-11.22	-9.76/-7.9	-5.64/-5.19	-5.81/-7.06	-8.9/-10.49	-13.5/-16.29	-19.19/-17.75	-19.79/-18.65	-17.54/-17.78
θ(180°)	-12.98/-12.27	-12.02/-12.43	-11.07/-10.93	-11.32/-12.56	-14.39/-13.5	-13.62/-19.14	-19.06/-18.39	-18.39/-19.08	-18.7/-16.94	-13.04/-10.28	-8.91/-8.7	-9.3/-9.56	-10.06/-10.62	-12.33/-15.13	-18.37/-18.04	-18.64/-18.85	-18.92/-19.08	-18.29/-18.48
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°)	-8.21/-13.57	-13.41/-8.6	-4.81/-2.17	-0.17/-1.3	1.79/2.01	1.41/-5.3	1.77/-13.3	0.21/-0.83	2.72/-5.2	9.49/-14.78	-13.01/-6.68	3.35/-1.53	1.49/0.85	2.22/2.13	1.96/2.21	2.22/2.13	-0.05/-1.46	-3.1/-5.56
θ(10°)	-7.72/-8.13	-7.31/-5.86	-4.16/-2.29	-0.76/0.62	1.58/1.89	1.22/0.88	0.42/-0.37	-1.31/-3.39	-5.86/-9.58	-14.54/-16	-9.12/-6.39	-4.03/-2.36	-1.29/-0.23	0.56/0.65	0.68/0.2	-0.22/-1.43	-2.44/-4.02	-5.86/-7.3
θ(20°)	-7.21/-7.45	-9.74/-8.84	-6.71/-3.14	-0.42/1.04	1.46/1.71	1.6/1	-0.53/-2.7	-4.99/-8.88	-13.97/-13.34	-10.53/-8.75	-7.26/-5.88	-4.68/-3.74	-2.74/-1.41	-0.19/0.26	-0.65/-2.24	-4.27/-6.94	-9.55/-11.2	-13.47/-6.92
θ(30°)	-11.02/-8.43	-8.31/-10.22	-8.5/-4.3	-1.71/-1.38	0.55/-0.18	-0.72/-0.48	-0.99/-2.26	-5.98/-13.89	-17.75/-12.59	-0.96/-1.35	-8.57/-5.05	-3.72/-3.09	-2.39/-1.23	-0.96/-0.43	-3.87/-8.72	-15.08/-18.08	-15.36/-12.44	
θ(40°)	-14.17/-10.8	-6.72/-6.13	-7.15/-5.12	-3.57/-2.72	-2.95/-2.95	-0.72/0.45	-0.72/-3.51	-9.38/-19.32	-10.47/-5.47	-4.35/-3.7	-3.36/-4.2	-3.51/-1.86	-2.08/-3.7	-3.51/-1.66	-1.75/-3.32	-5.54/-8.13	-10.56/-10.93	-15.93/-18.92
θ(50°)	-17.44/-9.66	-5.42/-4.43	-6/-6.13	-3.45/-1.71	-2.63/-1.77	2.65/2.83	-1.56/-4.77	-4.98/-2.13	-0.17/-1.71	-3.04/-3.42	-2.39/-3.38	-4.45/-2.86	-2.42/-5.75	-5.19/-1.36	-1.88/-3.79	-4.44/-3.96	-5.54/-7.6	-11.18/-18.1
θ(60°)	-8.89/-6.43	-7.41/-11.43	-8.84/-2.7	0.28/-1.22	-4.83/-1.51	1.72/0.51	-5.57/-5.04	-4.98/-3.24	-2.34/-4.45	-8.35/-9.73	-3.05/-2.13	-3.76/-8.23	-6.7/-6	-7.48/-2.52	-1.87/-4.06	-3.92/-5.82	-8.05/-10.06	
θ(70°)	-8.03/-7.9	-9.33/-12.29	-7.59/-2.4	0.13/-2.41	-2.88/0.36	0.62/-2.43	-3.25/-3.98	-7.27/-4.29	-7.36/-13.33	-17.07/-9.59	-4.06/-3.57	-1.62/-6.45	-10.55/-4.95	-5.39/-0.17	-0.14/-1.64	-2.34/-2.21	-4.02/-5.53	-5.64/-7.03
θ(80°)	-5.68/-5.01	-8.85/-15.98	-10.27/-4.32	-2.84/-8.39	-2.92/-0.56	-3.88/-11.4	-6.66/-6.26	-12.51/-16.27	-12.32/-13.03	-9.97/-8.61	-7.32/-7.44	-3.59/-2.53	-3.59/-4.36	-2.29/-1.64	-0.32/1.02	0.1/-1.3	-1.94/-4.08	-4.79/-6.34
θ(90°)	-8.45/-8.45	-16.78/-19.21	-6.99/-7.74	-10.34/-8.07	-0.93/0.46	-6.64/-6.16	-1.59/-5.41	-11.51/-12.86	-12.98/-12.45	-1.58/-1.47	0.69/2.51	-1.31/-3.52	-5.39/-1.9	-1.31/-3.52	2.65/0.75	-0.96/-6.36	-6.87/-3.85	
θ(100°)	-7.43/-9.53	-19.05/-8.66	-2.74/-6.5	-11.46/-4.68	-1.62/-3.13	-17.5/-11.08	-3.38/-5.44	-4.66/-8.92	-14.42/-13.24	-15.24/-10.94	-10.21/-8.58	-5.04/-5.29	-0.64/-3.35	-1.41/-1.7	-1.76/2.3	1.27/0	-4.11/-6.46	-8.97/-5.12
θ(110°)	-10.8/-15.98	-18.67/-9.42	-6.09/-8.05	-11.57/-3.11	-0.14/-2.63	-18.22/-13.83	-7.38/-6.52	-6.18/-8.17	-12.55/-18.34	-18.52/-8.3	-9.51/-6.84	-3.26/-3.98	-4.23/-5.54	-2.22/-2.27	-5.44/-1.74	0.94/-0.6	-4.8/-8.35	-6.71/-5.78
θ(120°)	-12.74/-11.52	-13.13/-9.25	-10.52/-12.11	-9.62/-5.6	-2.23/-6.33	-18.01/-10.02	-10.49/-10.24	-18.21/-18.64	-14.88/-15.49	-8.77/-15.17	-12.28/-5.31	-2.33/-3.55	-3.41/-6.54	0.2/-8.93	0.96/0.39	-6.95/-12.64	-7.84/-6.46	
θ(130°)	-18/-17.04	-16.2/-7.86	-8.4/-6.91	-10.69/-4.95	-2.71/-7.15	-17.61/-14.76	-6.84/-11.24	-10.36/-12.99	-6.58/-12.63	-1.59/-5.84	-11.92/-9.17	-7.23/-1.46	-6.18/-2.45	-2.45/0.68	0.61/-3.04	-6.58/-4.92	-2.66/-4.12	
θ(140°)	-18.24/-14.15	-14.68/-7.91	-9.6/-12.16	-9.75/-5.67	-4.29/-7.93	-13.67/-19.06	-18.27/-9.61	-8.39/-11.16	-13.04/-10.88	-12.44/-18.95	-19.17/-15.14	-15.43/-8.6	-9.45/-1.49	-0.36/-6.96	-10.1/-2.17	-4.06/-3.46	-12.68/-11.52	-10.22/-12.55
θ(150°)	-15.63/-12.49	-12.02/-12.34	-14.02/-18.16	-11.31/-8.01	-8.06/-10.35	-15.33/-17.21	-14.54/-14.49	-14.4/-18.09	-19.41/-15.76	-13.34/-13.28	-14.99/-15.26	-12.81/-11.89	-7.25/-3.83	-3.97/-7.52	-12.89/-8.04	-4.23/-5.02	-6.03/-7.99	-10.27/-11.66
θ(160°)	-10.26/-16.52	-18.33/-15.02	-14.39/-16.87	-17.72/-12.98	-11.08/-14.32	-14.31/-11.93	-11.85/-12.7	-15.42/-13.04	-18.68/-13.41	-10.81/-11.21	-10.77/-9.44	-11.4/-14.5	-14.14/-13.69	-10.15/-7.67	-16.1/-15.3	-6.98/-6.06	-5.58/-7.04	
θ(170°)	-17.77/-18.38	-17.7/-16.62	-17.41/-15.86	-12.5/-10.14	-10.66/-15.22	-18.9/-12.74	-9.91/-8.61	-8.7/-8.74	-7.62/-8.61	-8.08/-8.36	-8.42/-9.54	-10.61/-13.29	-18.02/-19.26	-18.23/-16.76	-15.42/-15.77	-13.21/-10.62	-9.16/-9.6	-12.76/-17.8
θ(180°)	-19.3/-18.64	-17.21/-14.11	-13.13/-13.67	-14.8/-16.21	-15.2/-14.05	-12.9/-14.16	-17.38/-17.17	-18.55/-15.98	-17.46/-16.83	-17.36/-17.95	-18.35/-17.75	-18.04/-18.86	-17.68/-15.51	-15.88/-15.8	-17.82/-18.2	-18.35/-17.58	-17.55/-17.75	-18.91/-18.9
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°)	2.48/2.68	2.52/2.38	1.68/0.8	-0.5/-2.25	-4.46/-7.36	-10.45/-10.9	-7.74/-4.69	-2.21/-0.56	0.34/1.07	1.36/1.85	1.75/1.15	0.61/0.06	-1.69/-3.55	-6.34/-9.17	-11.28/-9.03	-5.42/-2.72	-1.17/0.1	0.61/2.12
θ(10°)	1.67/2.03	2.37/2.35	1.45/0.72	-0.68/-2.27	-4.41/-7.48	-13.15/-17.97	-14.16/-9.84	-6.5/-4.08	-0.53/0.21	-8.52/-5.68	-11.92/-9.17	-7.23/-1.46	-6.18/-2.45	-2.45/0.68	0.61/-3.04	-6.58/-4.92	-2.66/-4.12	
θ(20°)	-1.98/-2.02	-1.55/-1.01	-0.57/-0.25	-1.83/-2.64	-3.96/-6.91	-13.74/-18.98	-10.83/-8.03	-5.78/-4.23	-3.33/-3.33	-3.95/-3.86	-7.42/-5.38	-4.4/-5.13	-5.97/-7.41	-10.8/-12.03	-4.49/-3.93	-4.59/-4.69	-2.91/-2.66	
θ(30°)	-5.85/-6.64	-5.83/-4.16	-1.46/-0.97	-1.34/-4.46	-6.29/-7.18	-11.49/-11.24	-6.21/-2.91	-1.35/-2.33	-2.42/-2.51	-3.52/-4.26	-3.71/-3.3	-3.75/-5.41	-7.67/-12.33	-18.86/-7.93	-3.9/-3.95	-4.17/-3.44	-4.02/-4.79	-3.82/-3.47
θ(40°)	-2.19/-2.9	-4.17/-3.27	-0.74/-0.21	-2.62/-7.4	-7.94/-8.96	-10.87/-9.37	-4.8/-3.13	-2.58/-4.08	-4.8/-4.61	-6.1/-9.63	-11.25/-8.49	-6.49/-5.78	-4.23/-3.74	-17.93/-11.42	-6.04/-4.6	-4.2/-3.74	-7.37/-1.56	-1.59/-2.88
θ(50°)	-1.13/-2.71	-4.48/-4.29	-1.54/-1.95	-7.09/-8.84	-5.98/-6.47	-8.68/-6.46	-4.59/-5.76	-9.33/-14.26	-8.98/-6.81	-6.71/-6.65	-16.68/-17.15	-8.44/-9.6	-10.37/-12.17	-14.52/-10.2	-6.63/-4.77	-4.59/-4.87	-4.42/-1.14	0.24/0.29
θ(60°)	-2.61/-2.95	-6.32/-4.72	-2.91/-3.3	-4.76/-5.98	-5.51/-9	-8.67/-3.33	-3.6/-8.96	-19.13/-15.86	-7.57/-4	-2.48/-3.67	-8.27/-18.11	-14.99/-12.85	-10.35/-9.59	-5.87/-8.15	-8.27/-2.53	-3.73/-7.03	-0.51/-0.01	
θ(70°)	-5.21/-5.68	-8.25/-5.58	-9.8/-7.63	-11.6/-3.77	-3.35/-10.17	-12.27/-5.96	-12.67/-9.61	-8.38/-17.61	-14.42/-12.73	-6.09/-6.58	-9.67/-14.							



Radiated Composite Gain Data

Appendix A

Θ (140°)	1.15/-0.24	-1.68/-3.17	-6.74/-9.65	-9.55/-10.33	-10.43/-8.38	-8.82/-6.41	-7.81/-8.84	-6.84/-9.88	-18.66/-10.64	-10.28/-10.71	-8.61/-15.44	-10.09/-17.64	-11.66/-12.53	-16.09/-13.11	-8.55/-12.79	-9.78/-10.06	-4.67/-1.71	0.09/0.82
Θ (150°)	-5.52/-4.44	-4.33/-4.51	-3.85/-6.16	-11.95/-12.94	-8.59/-8.53	-11.55/-7.44	-8.19/-15.75	-17.83/-17.87	-18.22/-9.03	-8.09/-12.07	-17.96/-12.7	-7.86/-8.55	-10.41/-12.8	-18.16/-15.97	-12.18/-15.93	-9.83/-6.03	-5.5/-4.05	-6.24/-8.92
Θ (160°)	-7.96/-7.19	-7.1/-8.01	-7.68/-8.23	-8.81/-8.82	-9.3/-13.91	-19.07/-11.37	-3.61/-9.27	-9.68/-11.55	-10.92/-11.55	-18.14/-19.28	-6.67/-7.39	-9.06/-11.83	-16.63/-18.8	-17.69/-18.66	-18.14/-19.28	-17.69/-18.66	-12.83/-12.13	-11.98/-13.81
Θ (170°)	0.62/0.6	-0.48/-1.23	-2.08/-4.08	-7.02/-11.05	-14.89/-17.16	-18.81/-18.85	-18.27/-17.38	-8.98/-4.26	-2.3/-2.04	-1.51/-1.68	-2.6/-3.12	-4.49/-6.5	-8.97/-10.9	-11.77/-13.87	-18.86/-18.35	-11.06/-7.55	-5.19/-2.39	-0.60/-2.4
Θ (180°)	-3.15/-3.69	-4.43/-5.18	-6.72/-9.66	-13.69/-18.01	-18.91/-18.59	-18.6/-17.33	-9.84/-6.4	-4.42/-3.3	-2.3/-1.6	-0.91/-0.55	-0.91/-1.91	-3.02/-4.51	-5.87/-7.87	-11.8/-17.28	-14.83/-9.37	-5.87/-3.64	-2.33/-1.52	-1.43/-2.22
Freq(Hz)	5.2GPol.	ThetaAnt. 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°)	-14.73/-9.8	-5.87/-3.25	-1.87/-0.54	0.40/0.98	1.0/91	1.18/0.78	-0.05/-1.69	-3.95/-5.6	-9.5/-17.53	-14.5/-9.41	-5.56/-3.02	-1.51/-0.41	0.41/0.8	0.95/1.02	0.71/0.09	-1.27/-2.81	-4.82/-7.5	-11.69/-16.95
Θ (10°)	-14.92/-9.95	-6.24/-2.9	-0.82/0.6	0.91/0.8	1.37/0.97	0.35/-0.48	-2.05/-4.09	-7.55/-10.53	-13.89/-18.13	-11.84/-8.54	-6.76/-5.16	-4.09/-2.96	-1.97/-1.12	-0.4/-0.01	-0.19/-0.96	-2.39/-3.93	-5.8/-8.66	-11.92/-17.11
Θ (20°)	-14.6/-12.14	-7.81/-4.74	-2.8/-0.92	0.81/2.1	2.32/1.31	-0.34/-2.96	-5.41/-7.54	-10.59/-16.41	-17.65/-11.02	-7.22/-4.85	-3.53/-2.5	-1.65/-1.17	-1.31/-2.49	-3.58/-2.91	-2.21/2.88	-3.82/-4.38	-5.76/-8.77	-13.21/-17.12
Θ (30°)	-18.25/-9.39	-6.16/-3.62	-1.34/-0.85	-0.78/-0.47	0.33/0.63	-1.39/-7.25	-8.04/-4.81	-4.59/-6.36	-9.14/-13	-13.04/-7.96	-4.36/-2.31	-1.2/-0.66	-0.27/0.42	0.44/-1.31	-2.23/-1.34	-2.58/-2.94	-3.21/-5.76	-8.86/-14.78
Θ (40°)	-10.45/-6.91	-4.51/-4.28	-2.58/-1.24	-1.87/-2.69	-1.26/-1.93	-7.67/-7.43	-2.64/-3.55	-6.23/-9.01	-11.91/-17.92	-18.09/-18.8	-12.23/-9.14	-4.24/-1.38	-0.18/0.27	-0.56/-3.25	-6.47/-5.39	-4.58/-5.49	-6.03/-10.06	-9.88/-10.48
Θ (50°)	-9.77/-8.89	-5.64/-3.86	-2.8/-2.9	-5.3/-5.27	-1.23/-2.55	-11.04/-6.19	-5.44/-7.11	-7.91/-8.49	-15.37/-18.2	-13.97/-6.32	-6.84/-8.32	-6.58/-6.32	-7.78/-4.11	-4.54/-7.08	-8.66/-8.11	-8.52/-8.18	-11.1/-17.4	-19.18/-11.2
Θ (60°)	-11.89/-11.48	-10.26/-10.83	-7.65/-6.36	-4.37/-2.09	-0.95/-5.78	-7.22/-3.88	-4.28/-3.86	-4.34/-4.89	-10.83/-8.63	-7.11/-4.8	-8.65/-12.24	-6.19/-11.17	-5.84/-6.16	-2.33/-5.65	-8.17/-8.63	-6.8/-6.23	-11.26/-12.47	-8.93/-9.5
Θ (70°)	-12.62/-14.81	-14.05/-12.28	-6.13/-4.18	-5.33/-4.25	-4.76/-10.91	-3.4/-1.6	-7.87/-12.5	-5.62/-10.35	-13.22/-6.29	-11.19/-9.15	-12.22/-6.29	-11.19/-9.15	-12.22/-6.29	-11.19/-9.15	-12.22/-6.29	-11.19/-9.15	-12.22/-6.29	-11.19/-9.15
Θ (80°)	-14.48/-9.87	-9.82/-8.15	-2.82/-2.09	-2.32/-0.85	-1.29/-6.11	-1.88/0.1	-3.92/-4.86	-6.49/-6.83	-17.44/-8.81	-4.13/-5.16	-8.53/-11.11	-8.24/-5.96	-8.59/-8.51	-2.51/-7.13	-18.35/-13.69	-8.64/-18.05	-10.39/-7.41	-13.24/-14.44
Θ (90°)	-10.75/-7.33	-10.24/-9.52	-5.81/-4.03	-7.1/-5.23	-2.87/-13.05	-4.3/-7.7	-3.6/-4.82	-9.92/-4.71	-11.55/-13.04	-7.49/-6.04	-7.07/-10.46	-17.52/-7.86	-5.59/-12.87	-5.59/-12.87	-9.76/-12.7	-17.72/-12.59	-11.18/-9.9	-12.97/-13.93
Θ (100°)	-9.45/-13.7	-19.28/-14.73	-8.3/-8.14	-15.04/-7.26	-12.06/-14.56	-7.81/-6.06	-7.03/-11.62	-11.71/-14.08	-14.93/-12.85	-9.87/-11.99	-8.22/-5.22	-12.8/-6.73	-6.18/-9.97	-8.27/-14.23	-13.06/-8.59	-4.94/-6.75	-6.42/-9.58	-10.39/-8.21
Θ (110°)	-19.18/-13.22	-12.01/-9.15	-7.61/-12.45	-17.23/-11.34	-12.58/-18.55	-11.43/-9.58	-16.28/-16.28	-13.95/-14.6	-5.62/-7.68	-13.57/-15	-10.97/-16.57	-7.11/-3.8	-17.78/-8.79	-11.92/-13.42	-10.85/-17.39	-8.25/-10.19	-5.96/-7.25	-10.91/-14.48
Θ (120°)	-14.86/-9.31	-10.88/-11.53	-11.21/-10.19	-10.83/-16.15	-18.64/-18.13	-12.03/-11.03	-10.81/-19.02	-18.94/-18.27	-18.97/-15.01	-10.1/-7.4	-10.8/-7.21	-5.62/-4.15	-10.45/-2.94	-3.82/-8.08	-12.42/-15.5	-6.56/-5.39	-6.66/-5.53	-6.15/-10.01
Θ (130°)	-8.89/-13.79	-14.44/-15.69	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45	-13.95/-18.45
Θ (140°)	-9.45/-12.82	-13.35/-11.73	-14.72/-16.69	-18.89/-18.13	-12.11/-9.86	-12.37/-15.58	-14.97/-18.55	-17.66/-17.82	-14.6/-13.04	-13.66/-8.54	-7.76/-13.54	-7.53/-2.16	-3.57/-6.02	-3.28/-4.05	-4.95/-12.07	-17.43/-9.05	-4.65/-4.82	-6.9/-8.65
Θ (150°)	-10.01/-8.66	-10.31/-10.84	-11.21/-13.57	-18.78/-18.02	-15.6/-17.95	-18.11/-15.19	-11.71/-10.34	-15.45/-12.32	-9.69/-13.09	-1.79/-21.7	-2.89/-6.04	-4.29/-4.34	-5.09/-4.2	-2.91/-2.17	-13.01/-11.6	-18.62/-13.78	-19.09/-19.11	-19.09/-19.11
Θ (160°)	-15.82/-16	-14.39/-10.18	-7.81/-6.82	-6.73/-7.86	-9.4/-10.2	-9.92/-11.59	-16.94/-18.75	-17.65/-14	-16.48/-13.48	-8.99/-8.97	-12.91/-9.77	-5.99/-4.07	-2.99/-2.52	-2.59/-2.8	-2.11/-9.1	-4.58/-9.46	-9.45/-8.93	-12.99/-16.33
Θ (170°)	-11.98/-16.06	-15.3/-10.64	-11.56/-15.7	-18.33/-17.51	-10.48/-6.6	-4.26/-3.38	-2.92/-2.16	-1.61/-2.27	-4.82/-9.83	-18.91/-17.49	-17.46/-12.12	-8.76/-6.7	-5.43/-4.79	-4.06/-3.22	-2.56/-0.98	-0.14/-0.41	-1.4/-2.63	-4.04/-7.93
Θ (180°)	-16.22/-15.85	-15.58/-16.02	-6.57/-4.34	-3.18/-2.25	-2.05/-2.28	-2.72/-3.09	-3.05/-3.85	-5.32/-7.36	-10.51/-11.84	-14.29/-16.48	-11.86/-9.5	-6.72/-4.58	-3.11/-2	-1.02/-0.36	-0.19/-0.54	-1.2/-2	-3.21/-5.98	-8.86/-11.88
Freq(Hz)	5.3GPol.	PhiAnt. 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°)	-0.48/-0.13	-1.24/-2.94	-4.81/-7.21	-9.26/-13.61	-15.94/-10.78	-7.11/-4.48	-2.81/-1.73	-0.54/0.1	-0.22/-0.22	-0.33/-8.09	-1.66/-2.54	-4.1/-6.92	-11/-15.11	-15.3/-10.2	-6.42/-4.03	-2.54/-1.55	-0.53/0.46	0.68/0.6
Θ (10°)	-1.51/-1.93	-2.29/-2.81	-4.25/-6.38	-1.9/-2.61	-1.94/-10.43	-6.91/-4.36	-2.4/-1.61	-2.24/-3.49	-1.74/-5.81	-6.97/-6.77	-6.43/-7.78	-10.19/-12.51	-7.74/-5.66	-3.09/-1.97	-1.25/-0.87	-0.73/-0.73	-0.73/-0.73	-0.73/-0.73
Θ (20°)	0.06/-0.45	-0.84/-1.28	-2.77/-4.78	-8.57/-13.02	-16.24/-8.23	-4.05/-2.21	-1.66/-1.79	-1.38/-0.18	0.35/0.61	-0.08/-1.59	-4.41/-8.24	-9.66/-11.48	-11.56/-9.77	-10.66/-13.63	-8.97/-6.19	-4.1/-2.35	-1.87/-1.55	-0.33/0.21
Θ (30°)	-0.96/-0.16	-0.3/-0.85	-2.35/-4.49	-7.1/-10.25	-12.27/-6.76	-4.8/-4.88	-5.03/-2.74	0.33/2.14	1.91/1.81	-1.16/-4.33	-9.75/-19.17	-15.01/-12.4	-12.09/-18.14	-9.52/-3.97	-2.11/-1.04	-0.94/-0.94	0.03/-0.03	0.03/-0.03
Θ (40°)	0.19/-1.01	-1.38/-1.57	-1.81/-3.63	-9.86/-17.76	-18.02/-13.04	-6.46/-5.78	-3.81/-4.9	0.28/-0.81	-3.81/-6.72	-4.31/-2.35	-1.79/-1.45	-18.21/-12.1	-11.88/-13.48	-10.23/-5.82	-4.09/-5.21	-2.32/-2.1	-0.55/-0.22	-0.55/-0.22
Θ (50°)	-2.57/-1.85	-0.14/-3.19	-9.2/-9.33	-6.67/-11.29	-18.48/-14.15	-10/-8.98	-3.55/-2.41	-9.18/-7.75	-3.54/-1.64	-4.41/-5.95	-2.22/-2.11	-5.19/-6.51	-13.03/-9.35	-13.6/-13.92	-11.56/-6.03	-5.32/-6.87	-3.56/-1.76	-2.64/-2.94
Θ (60°)	-0.91/-1.5	-1.3/-1.18	-4.72/-5.93	-5.09/-2.98	-7.9/-9.99	-10.53/-8.17	-3.31/-3.21	-1.77/1.71	3.04/1.33	-0.29/-2.17	-9.84/-16.47	-7.6/-6.06	-9.28/-12.55	-10.84/-18.38	-11.6/-12.29	-9.22/-7.02	-5.46/-4.9	-3.74/-4.16
Θ (70°)	-0.99/-2.39	-3.73/-2.26	-2.15/-5.62	-2.8/-0.14	-12.66/-14.19	-5.57/-5.09	-1.27/-2.75	-3.5/-3.57	-15.02/-18.46	-9.89/-11.47	-11.75/-6.56	-5.82/-16.17	-15.02/-18.46	-9.89/-11.47	-11.75/-6.56	-5.82/-16.17	-15.02/-18.46	-9.89/-11.47
Θ (80°)	-2.27/-4.62	-3.87/-0.86	-0.45/-4.17	-14.54/-6.61	-8.14/-5.69	-7.89/-5.44	-9.33/-3.76	-0.1/-0.02	-3.23/-5.66	-2.87/-3.81	-7.01/-16.47	-18.32/-11.84	-7.28/-13.57	-14.58/-12.47	-7.99/-8.4	-15.53/-6.29	-6.72/-3.64	-1.52/-0.83
Θ (90°)	-0.22/-0.39	0.15/0.73	-1.5/-2.5	-5.23/-5.82	-16.49/-9.92	-15.51/-7.92	-3.51/-1.06	-1.44/-1.58	6.08/-0.65	-1.35/-0.07	-2.47/-8.58	-12.85/-19.18	-12.25/-13.03	-16.23/-13.06	-7.34/-8.51	-11.86/-8.95	-0.88/-6.52	-4.15/-5.26
Θ (100°)	0.12/-1.2	-1.48/-2.8	-6.8/-5.69	-2.53/-5.79	-4.58/-6.34	-16.64/-8.14	-5.89/-3	-4.71/-5.59	-18.04/-10.89	-2.86/-2.64	-2.45/-5.93	-9.06/-16.11	-15.43/-16.22	-16.77/-7.54	-10.57/-9.13	-8.97/-12.7	-5.38/-1.49	-5.38/-1.49
Θ (110°)	-0.06/0.89	0.33/-0.14	-3.67/-4.74	-5.03/-13.82	-4.09/-5.94	-6.19/-6.64	-7.88/-6.53	-18.24/-11.66	-4.55/-9.48	-14.54/-7.71	-5.67/-12.59	-10.8/-8.76	-9.52/-7.63	-5.51/-4.46	-5.4/-2.3	-5.4/-2.3	-5.4/-2.3	-5.4/-2.3
Θ (120°)	-1.41/-2.74	-4.79/-7.19	-17.38/-9.04	-6.28/-16.83	-11.42/-9.48	-17.46/-19.03	-19.49/-14.2	-14.73/-10.7	-18.98/-15.78	-11.19/-12.89	-9.8/-6.43	-4.95/-9.95	-6.8/-7.23	-12.8/-15.55	-18.13/-12.77	-4.98/-5.25	-5.5/-3.26	-2.35/-0.51
Θ (130°)	-5.19/-5.02	-7.64/-9.88	-4.52/-4.66	-8.61/-10.37	-10.21/-12.43	-7.54/-7.58	-6.04/-8.51	-9.86/-15.67	-17.05/-11.56	-8.84/-5	-10.03/-10.89	-5.49/-3.88	-14.69/-12.53	-18.42/-8.95	-8.84/-6.39	-0.82/-0.93	-2.57/-3.52	-2.57/-3.52
Θ (140°)	-0.13/-1.35	-2.41/-2.86	-6.26/-11.94	-9.87/-12.78	-17.11/-8.09	-6.36/-5.99	-4.28/-7.19	-15.92/-13.68	-8.82/-9.12	-8.08/-16.74	-9.67/-12.26	-10.11/-12.94	-9.67/-12.26	-10.11/-12.94	-9.67/-12.26	-10.11/-12.94	-9.67/-12.26	-10.11/-12.94
Θ (150°)	-4.81/-4.29	-4.35/-4.68	-2.82/-3.7	-8.73/-17.53	-12.11/-8.51	-8.73/-6.35	-7.36/-14.05	-17.52/-19	-13.62/-13.28	-8.18/-8.73	-11.86/-9.04	-7.31/-7.82	-8.08/-10.02	-14.72/-17.05	-18.93/-14.03	-6.13/-4.29	-4.41/-3.81	-5.8/-6.5
Θ (160°)	-8.61/-7.44	-7.06/-7.5	-7.12/-7	-7.54/-8.67	-9.32/-12.76	-18.82/-15.06	-11.73/-11.18	-11.04/-11.95	-15.24/-13.29	-8.78/-6.49	-6.86/-6.8	-7.5/-9.65	-11.56/-11.12	-11.54/-15.18	-19.38/-19.13	-17.5/-18.06	-18.15/-14.73	-12.53/-11.1
Θ (170°)	-8.88/0.78	0.26/-7.12	-2.18/-4.54	-7.37/-11.35	-18.78													



Radiated Composite Gain Data

Appendix A

Θ(30°)	-2.93/-4.13	-4.19/-5.47	-6.74/-9.62	-10.06/-11.4	-12.06/-11.02	-8.16/-5.67	-5.13/-5.77	-4.47/-3.18	-2.97/-1.5	-2.17/-3.73	-4.3/-4.67	-2.4/-1.5	-2.29/-6.4	-14.61/-18.03	-12.29/-8.43	-9.79/-11.62	-11.28/-6.79	-4.28/-2.78
Θ(40°)	-3.46/-3.31	-3.95/-4.99	-6.58/-9.13	-14.36/-19.14	-16.65/-11.55	-5.81/-3.28	-1.93/-0.39	1.61/0.2	-2.13/-3	-4.31/-8.09	-6.66/-6.81	-9.16/-4.84	-3.59/-8.69	-16.56/-11.6	-9.69/-11.73	-11.08/-9.35	-7.29/-6.41	-4.35/-2.94
Θ(50°)	-1.04/-3.91	-9.05/-9.9	-8.93/-9.25	-16.76/-18	-18.92/-8.28	-4.39/-2.73	-0.61/1.16	2.25/0.33	0.16/0.74	-2.01/-4.88	-5.96/-8.06	-12.47/-12.78	-7.34/-9.98	-17.28/-18.73	-11.77/-10.31	-9.18/-8.1	-7.45/-6.36	-3.26/-1.48
Θ(60°)	-4.35/-5.8	-12.14/-10.82	-6.55/-5.59	-18.67/-9.36	-11.73/-10.23	-5.6/-6.19	-1.70/7.3	-2.08/-0.72	0.84/-0.12	-1.8/-5.61	-8.91/-10.58	-12.68/-19.04	-9.8/-8.29	-18.55/-17.46	-12.45/-9.58	-7.03/-7.55	-5.95/-2.3	-1.89/-2.74
Θ(70°)	-3.14/-6.18	-5.7/-2.47	-1.46/-1.76	-9.2/-6.01	-4.9/-18.74	-6.83/-10.19	-1.98/-2.47	-0.95/1.65	1.67/-0.25	-0.78/-2.03	-6.14/-19.02	-10.33/-14.19	-15.51/-7.81	-18.7/-13.69	-14.56/-10.71	-8.27/-7.96	-4.85/-2.38	-1.28/-2.67
Θ(80°)	-1.33/-1.72	-1.61/-1.85	-4.02/-3.38	-10.19/-6.43	-5.6/-17.74	-14.82/-6.36	-2.27/-2.2	-0.02/0.86	-1.39/-3.93	-3/-1.92	-4.32/-8.73	-12.53/-11.96	-14.92/-19.31	-18.66/-17.73	-16.63/-14.36	-8.89/-10.58	-6.57/-2.2	-2.17/-1.18
Θ(90°)	-0.93/-0.61	-1.93/-3.99	-3.24/-1.46	-6.28/-3.97	-6.81/-12.15	-18.05/-4.38	-6.52/-5.32	-2.18/-3.26	-10.43/-13.22	-3.65/-4.45	-5.13/-7.8	-12.55/-11.25	-13.31/-18.61	-17.81/-11.63	-9.34/-10.12	-8.05/-10.55	-8.08/-2.84	-2.33/-0.74
Θ(100°)	-1/-1.19	-3.64/-2.25	0.44/-1.67	-6.73/-4.06	-6.23/-11.56	-16.63/-6.27	-8.92/-4.14	-2.54/-2.89	-8.7/-18.28	-4.64/-6.88	-12.85/-8.83	-10.2/-10.46	-13.99/-11.32	-15.99/-17.87	-8.78/-10.27	-9.96/-11.42	-8.59/-4.07	-3.67/-1.58
Θ(110°)	-1.18/-1.53	-0.52/-0.21	-0.74/-7.01	-7.82/-4.41	-8.87/-4.6	-17.96/-4.65	-5.72/-2.5	-7.38/-3.7	-5.48/-10.16	-3.53/-8.22	-15.99/-10.49	-3.19/-13.68	-12.86/-12.08	-18.44/-18.88	-11.59/-12.01	-9.39/-8.86	-6.09/-6.71	-4.89/-1.36
Θ(120°)	-1.67/-1.72	0.01/0.82	0.51/-3.47	-3.92/-3.98	-13.45/-4.81	-19.07/-7.53	-4.89/-4.77	-8.19/-9.65	-9.87/-9.4	-14.33/-9.9	-8.66/-7.77	-2.36/-5.41	-7.33/-8.74	-17.97/-18.37	-17.84/-10.5	-7.94/-5.69	-7.44/-6.02	-1.91/-2.97
Θ(130°)	-4.53/-0.07	-0.69/1.38	-2.75/-8.34	-6.42/-13.79	-8.68/-7.15	-15.63/-17.61	-13.21/-19.08	-18.63/-9.09	-10.23/-14.31	-16.71/-7.27	-13.37/-2.53	-4.7/-10.24	-6.02/-7.8	-18.61/-18.37	-11.75/-10.51	-14.64/-5.05	-1.91/-2.98	-8.94/-8.77
Θ(140°)	-0.92/-2.85	-2.71/-5.33	-4.93/-5.61	-11.85/-10.38	-6.87/-11.86	-11.26/-7.03	-6.88/-18.72	-7.31/-6.91	-17.09/-7.41	-7.72/-15.37	-9.46/-8.22	-14/-14.04	-7.27/-15.37	-14.81/-17.4	-9.57/-5.12	-7.99/-9.94	-3.91/-1.01	-1.17/0.05
Θ(150°)	-2.76/-4.47	-3.93/-3.49	-3.84/-3.68	-6.08/-9.75	-12.06/-17.5	-16.91/-6.4	-5.19/-8.46	-17.36/-15.1	-13.63/-18.92	-14.35/-11.54	-15.25/-17.96	-18.83/-10.95	-11.72/-18.33	-18.93/-19.63	-11.08/-5.85	-5.01/-4.99	-3.71/-4.01	-3.89/-2.5
Θ(160°)	-12.42/-13.86	-17.93/-17.95	-18.39/-18.2	-12.22/-9.59	-10.39/-13.75	-17.66/-11.64	-9.6/-9.75	-14.46/-18.56	-19.1/-10.81	-7.26/-6.27	-5.68/-6.23	-8.02/-11.8	-15.64/-15.3	-14.16/-12.29	-9.73/-6.43	-4.16/-3.73	-4.31/-6.02	-11.55/-18.67
Θ(170°)	-1.86/-2.57	-3.63/-4.37	-6.27/-9.05	-11.8/-15.29	-16.98/-17.67	-14.59/-14.3	-17.66/-18.08	-15.56/-9.32	-5.85/-6.3	-7.51/-7.61	-8.72/-10.19	-10.67/-11.33	-11.89/-11.2	-10.8/-10.93	-11.26/-12.38	-12.98/-14.4	-9.93/-7.16	-5.52/-2.75
Θ(180°)	-5.01/-6.31	-6.02/-6.53	-6.82/-8.74	-12.37/-17.65	-18.39/-17.14	-14.17/-14.61	-18.41/-18.79	-15.21/-10.82	-8.17/-6.61	-4.77/-4.09	-4.12/-3.87	-4.32/-4.94	-6.24/-7.63	-9.11/-11.37	-15.47/-18.08	-14.69/-12.26	-9.68/-6.75	-4.2/-3.75
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°)	-11.92/-12.32	-11.63/-9.62	-7.22/-5.23	-3.45/-2.58	-2.12/-1.73	-1.45/-1.95	-2.62/-2.81	-3.87/-6.02	-6.86/-8.68	-10.79/-12.72	-12.18/-7.49	-5.5/-4.25	-3.4/-2.53	-2.19/-2.37	-2.25/-1.87	-1.76/-2.9	-4.3/-5.66	-7.14/-9.56
Θ(10°)	-6.52/-7.19	-6.27/-5.98	-5.69/-4.18	-2.15/-1.27	-0.84/-0.37	-0.2/-0.11	-0.45/-1.01	-1.78/-2.59	-4.92/-7.79	-10.32/-15.53	-17.36/-11.29	-7.02/-5.07	-3.9/-2.58	-1.88/-1.66	-1.6/-2.05	-2.7/-3.13	-3.82/-5.39	-5.96/-5.9
Θ(20°)	-9.74/-9.05	-10.11/-8.57	-6.39/-3.76	-1.97/-1.03	-0.53/0.16	1.1/1.51	1.11/-0.4	-2.33/-2.91	-3.51/-4.33	-4.72/-6.33	-6.61/-8.33	-1.16/-8.1	-6.88/-6.31	-5.23/-3.42	-2.08/-2.34	-3.36/-4.03	-5.85/-6.88	-9.11/-10.26
Θ(30°)	-12.05/-8.44	-8.24/-7.26	-4.28/-2.26	-1.68/-2.18	-3.36/-0.93	1/0.5	-2.48/-6.88	-10.18/-9.38	-8.64/-7.43	-6.86/-6.21	-4.39/-4.4	-5.77/-7.04	-6.59/-3.85	-2.03/-0.66	0.25/-1.37	-4.16/-5.21	-7.15/-6.72	-7.06/-9.43
Θ(40°)	-10.49/-10.23	-8.99/-9.23	-8.49/-3.11	-0.33/-2.14	-1.77/1.45	0.81/-4.39	-17.19/-7.79	-6.91/-9.3	-14.82/-16.24	-17.37/-16.04	-10.03/-5.24	-3.34/-5.68	-9.39/-8.76	-9.79/-6.62	-5.75/-8.05	-10.24/-8.76	-6.26/-5.74	-7.37/-10.11
Θ(50°)	-9.89/-7.23	-4.34/-5.58	-8.92/-6.74	-1.33/-2.04	-4.42/1.17	-0.95/-8.83	-1.78/-0.27	-3.68/-8.33	-9.59/-12.39	-8.24/-8.81	-9.32/-10.16	-6.13/-5.2	-5.57/-6.51	-11.07/-8.95	-8.41/-10.56	-11.28/-7.32	-3.27/-4.69	-8.37/-10.12
Θ(60°)	-9.29/-8.67	-5.67/-5.47	-13.86/-3.96	0.88/-0.89	-2.652.17	-3.29/-2.02	-0.84/-5.19	-16.68/-16.75	-17.59/-7.3	-5.03/-3.39	-6.31/-10.04	-8.91/-9.52	-7.13/-6.59	-4.91/-5.83	-3.44/-4.89	-7.2/-2.01	-2.66/-6	-11.28/-9.6
Θ(70°)	-14.49/-18.18	-14.47/-7.82	-8.55/-4.35	0.69/-2.49	-2.19/1.75	-5.39/-0.73	-2.09/-8.43	-5.75/-7.01	-12.03/-9.75	-6.32/-3.66	-7.48/-11.56	-8.3/-18.1	-7.09/-3.5	-8.25/-7.36	-5.59/-4.56	-6.87/-3.75	-8.02/-9.47	-9.23/-11.16
Θ(80°)	-12.42/-15.95	-13.96/-6.57	-7.19/-7.54	-2.89/-5.84	-1.14/-1.23	-9.2/0.62	-6.11/-4.26	-2.43/-5.81	-9.38/-10.94	-8.61/-6.63	-7.43/-11.16	-8.33/-6.22	-11.89/-5.27	-6.53/-7.41	-3.85/-4.48	-3.57/-3.26	-10.28/-5.39	-8.6/-11.44
Θ(90°)	-18.2/-18.66	-17.69/-6.61	-8.44/-7.86	-2.77/-3.49	-0.4/-2.62	-3.85/0.18	-6.75/-7.64	-6.03/-9.95	-14.98/-14.11	-7.97/-4.98	-6.78/-12.16	-5.78/-5.68	-13.22/-6.41	-6.22/-9.23	-2.73/-5.85	-4.55/-7.83	-9.1/-6.43	-9.28/-15.52
Θ(100°)	-12.13/-18.42	-15.64/-11.64	-15.27/-8.07	-3.16/-3.36	-2.6/-6.03	-7.55/-7.83	-18.54/-5.8	-5.65/-10.04	-11.1/-18.65	-9.93/-10.32	-14.7/-18.21	-10.1/-9.02	-17.27/-9.19	-7.24/-14.27	-6.18/-7.46	-11.34/-7.92	-18.43/-9.91	-19.44/-19.47
Θ(110°)	-7.85/-11.33	-11.52/-17.98	-14.22/-14.54	-12.39/-7.84	-4.71/-10.42	-11.08/-12.93	-14.13/-7.95	-7.97/-18.34	-18.43/-17.79	-6.74/-16.02	-10/-13.06	-16.62/-10.3	-14.94/-17.29	-11.58/-17.07	-7.92/-7.72	-12.82/-11.16	-11.17/-13.35	-14.43/-9.98
Θ(120°)	-7.17/-11.03	-10.5/-19.14	-18.8/-9.99	-6.86/-6.68	-11.99/-13.8	-11.45/-6.84	-7.9/-14.37	-7.07/-11.1	-13.68/-18.61	-12.32/-13.25	-11.34/-12.67	-16.44/-13.23	-18.84/-10.71	-11.76/-12.68	-6.73/-6.15	-9.26/-5.84	-5.37/-9.78	-7.01/-8.76
Θ(130°)	-18.76/-12.39	-18.57/-19.14	-10.48/-9.6	-8.69/-9.84	-8.76/-8.52	-10.79/-18.15	-10.87/-12.62	-18.22/-13.61	-12.8/-15.52	-17.22/-13.96	-10.91/-11.88	-10.67/-4.64	-4.05/-5.57	-8.39/-5.63	-6.11/-3.93	-9.75/-5.93	-1.15/-3.7	-19.22/-17.05
Θ(140°)	-11.22/-18.99	-14.39/-9.59	-6.33/-4.39	-5.44/-12.4	-13.97/-7.74	-6.37/-13.36	-11.98/-7.87	-7.84/-17.78	-14.7/-17.16	-10.47/-9.58	-15.44/-18.93	-9/-2.85	-1.66/-8.7	-7.58/-7.49	-4.54/-2.06	-7.93/-8.4	-4.5/-3.28	-7.21/-8.36
Θ(150°)	-18.54/-14.71	-11.07/-9.29	-13.15/-18.85	-17.6/-18.44	-11.77/-7.97	-10.36/-9.82	-14.11/-19.35	-15.6/-18.78	-18.53/-15.51	-18.73/-12.26	-11.42/-19.19	-11.53/-2.92	-4.67/-12.39	-11.25/-9.06	-6.74/-5.21	-6.55/-17.83	-11.05/-16.15	-12.63/-13.69
Θ(160°)	-19.08/-12.9	-12.08/-11.48	-10.24/-10.58	-13.66/-16.56	-11.38/-8.04	-5.7/-4.88	-6.25/-9.76	-15.87/-18.43	-15.83/-17.56	-17.96/-18.17	-13.71/-13.13	-11.72/-8.17	-6.47/-7.47	-7.53/-5.97	-6.45/-8.71	-8.75/-8.07	-9.76/-10.04	-9.33/-14.25
Θ(170°)	-13.95/-18.02	-19.12/-14.08	-12.38/-12.56	-13.23/-15.79	-18.96/-17.57	-17.87/-16.88	-11.6/-7.09	-5.59/-5.86	-8.37/-11.14	-14.56/-15.48	-14.3/-14.34	-14.96/-12.98	-11.1/-9.23	-7.68/-5.69	-4.93/-4.83	-5.34/-5.59	-4.83/-5.22	-7.77/-9.4
Θ(180°)	-9.69/-11.56	-17.96/-18.71	-18.28/-13.72	-11.36/-12.33	-16.88/-16.17	-11.2/-6.83	-5.06/-5.3	-6.1/-6.57	-7.5/-8.32	-9.55/-12.32	-15.07/-16.01	-13.7/-9.96	-7.82/-6.97	-6.53/-6.65	-4.5/-2.94	-2.63/-2.82	-4.09/-5.06	-6.23/-8.55



Total Gain Data

Freq(Hz)	2.45GPol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-0.17/-0.06	-0.11/-0.08	0.08/0.25	0.41/0.53	0.57/0.66	0.68/0.53	-0.85/-0.03	-0.47/-0.97	-1.22/-1.19	-1.13/-0.96	-0.66/-0.86	-0.88/-0.95	-1.09/-1.17	-1.16/-1.00	-0.66/-0.39	-0.30/-0.29	-0.31/-0.34	-0.28/-0.27
Θ(10°)	-1.24/-1.21	-1.32/-1.53	-1.83/-2.14	-2.03/-1.65	-0.98/-0.27	0.41/0.92	1.27/1.43	1.36/1.18	1.20/1.38	1.63/1.87	1.98/1.90	1.77/1.40	0.88/0.27	-0.36/-0.84	-1.00/-1.28	-1.41/-1.64	-1.67/-1.81	-1.72/-1.63
Θ(20°)	0.80/0.77	0.65/0.24	-0.55/-1.83	-3.26/-3.99	-3.59/-2.39	-0.98/0.09	0.79/1.11	1.13/1.03	1.01/1.10	1.18/1.41	1.73/1.87	1.83/1.53	0.89/0.02	-0.93/-1.69	-1.99/-2.12	-1.83/-1.24	-0.63/-0.04	0.38/0.55
Θ(30°)	2.17/2.04	1.77/1.46	0.97/-0.09	-2.05/-4.47	-6.08/-5.84	-4.01/-2.38	-0.10/-0.02	-0.37/0.05	-0.70/0.05	-0.16/0.47	0.67/0.61	1.41/1.63	0.67/0.61	-1.82/-2.64	-2.77/-1.84	-0.63/0.43	1.14/1.63	1.92/2.02
Θ(40°)	0.98/0.60	0.18/-0.09	-0.43/-1.16	-2.91/-5.43	-7.40/-7.64	-6.46/-5.64	-5.82/-6.17	-5.49/-3.82	-2.29/-1.60	-1.55/-1.95	-2.10/-1.65	-0.91/-0.25	0.19/0.22	-0.16/-0.73	-0.86/-0.19	0.68/1.17	1.46/1.64	1.78/1.79
Θ(50°)	-1.03/-1.82	-2.32/-2.18	-1.89/-1.88	-2.83/-4.56	-7.39/-10.35	-9.18/-7.52	-7.70/-8.52	-6.87/-3.89	-2.21/-1.76	-1.82/-1.98	-2.07/-2.00	-1.53/-0.55	0.37/0.56	0.09/-0.95	-1.89/-1.75	-0.81/-0.03	0.26/0.33	0.14/-0.22
Θ(60°)	-8.14/-6.36	-4.77/-3.87	-3.14/-2.27	-1.38/-0.86	-1.03/-2.22	-3.75/-5.38	-8.05/-13.49	-10.11/-4.09	-0.80/0.88	1.53/1.62	1.18/-0.72	-1.39/-1.46	-2.06/-2.86	-3.45/-4.22	-4.46/-2.31	-0.53/-0.31	-1.40/-3.24	-5.34/-6.09
Θ(70°)	-0.22/0.51	1.08/0.78	-0.66/-3.26	-4.41/-3.23	-2.35/-2.48	-3.02/-3.65	-3.84/-4.70	-7.44/-6.94	-2.16/0.31	1.01/0.79	0.17/-0.58	-1.19/-1.79	-3.11/-4.38	-5.13/-5.21	-4.01/-1.27	-0.21/-1.02	-2.06/-1.78	-1.13/-0.67
Θ(80°)	-1.33/-0.59	-0.16/-0.41	-1.87/-5.47	-10.38/-7.95	-3.92/-2.41	-3.01/-5.20	-5.52/-3.84	-3.81/-6.45	-7.08/-3.68	-1.36/-0.47	-0.77/-1.54	-1.49/-0.87	-0.88/-2.46	-5.60/-6.09	-3.37/-1.26	-0.41/-0.79	-1.67/-2.04	-2.02/-1.70
Θ(90°)	-2.39/-1.68	-1.12/-0.88	-1.82/-4.73	-10.58/-11.72	-5.24/-3.04	-4.12/-8.21	-7.18/-2.19	-0.46/-1.33	-3.22/-3.38	-2.13/-1.25	-1.14/-1.36	-1.25/-1.59	-3.23/-7.59	-9.87/-7.85	-7.16/-5.87	-4.11/-4.07	-5.08/-4.67	-3.56/-2.78
Θ(100°)	-1.42/-1.04	-0.86/-0.41	-0.45/-2.30	-5.22/-5.38	-2.70/-1.13	-1.90/-5.85	-11.17/-3.78	0.11/1.61	1.83/1.33	0.17/-1.09	-2.32/-3.27	-3.35/-4.50	-6.61/-11.74	-13.71/-11.08	-12.07/-9.12	-6.90/-7.26	-5.49/-3.21	-2.20/-2.05
Θ(110°)	-2.41/-1.49	-1.16/-1.18	-0.90/-0.57	0.09/0.72	1.07/0.90	-0.85/-5.07	-11.67/-5.36	-0.31/2.51	3.40/3.77	3.35/2.79	1.74/0.93	-0.17/-1.88	-5.22/-11.12	-11.05/-8.17	-7.13/-6.17	-6.26/-7.28	-5.27/-3.07	-2.60/-3.35
Θ(120°)	-4.22/-3.12	-2.60/-2.20	-1.04/0.11	0.72/0.53	-0.36/-1.83	-3.71/-5.26	-6.49/-7.56	-5.36/-1.88	0.27/1.23	1.71/1.98	1.73/0.68	-0.36/-0.75	-1.43/-1.38	-1.94/-4.54	-7.37/-6.94	-6.93/-6.07	-4.91/-3.78	-3.54/-4.56
Θ(130°)	-5.73/-4.82	-3.20/-2.52	-2.53/-1.93	-1.31/-1.33	-1.96/-3.18	-4.13/-3.69	-2.88/-3.40	-4.73/-3.88	-1.23/0.96	2.18/2.56	1.95/1.04	0.92/0.55	-0.82/-2.17	-4.00/-6.35	-4.71/-3.91	-5.91/-9.05	-10.80/-8.12	-5.18/-4.37
Θ(140°)	-1.97/-1.58	-1.28/-1.74	-2.48/-2.53	-2.11/-1.64	-1.36/-1.54	-2.08/-2.40	-2.21/-2.06	-2.20/-2.60	-3.35/-4.18	-5.39/-6.61	-6.37/-5.45	-4.27/-4.32	-7.19/-4.08	-4.26/-5.42	-6.69/-7.68	-9.57/-9.72	-7.19/-4.68	-3.24/-2.74
Θ(150°)	-7.69/-7.99	-7.77/-7.46	-6.68/-6.08	-5.24/-3.76	-2.20/-1.04	-0.55/-0.28	-0.90/-1.44	-0.24/-3.31	-4.35/-5.21	-5.59/-5.40	-4.73/-3.87	-3.32/-3.33	-4.27/-5.96	-2.47/-5.96	-14.13/-15.05	-13.14/-10.13	-7.61/-6.17	
Θ(160°)	-5.16/-5.17	-4.92/-4.90	-5.06/-5.92	-6.53/-6.01	-4.27/-2.49	-1.22/-0.16	0.69/1.08	1.29/1.36	1.28/1.01	0.71/0.75	0.77/0.79	0.46/-0.49	-2.20/-4.70	-7.59/-8.62	-6.82/-4.73	-3.35/-2.70	-2.60/-2.95	-3.58/-3.71
Θ(170°)	-3.34/-3.68	-3.87/-3.48	-5.31/-6.68	-7.17/-7.22	-6.66/-6.02	-5.36/-4.76	-4.05/-3.47	-2.94/-2.18	-1.51/-1.11	-1.00/-1.32	-1.86/-2.88	-4.43/-6.94	-10.56/-11.78	-6.83/-5.96	-3.99/-2.85	-2.07/-1.69	-1.54/-1.75	-2.27/-2.56
Θ(180°)	-8.85/-8.92	-8.62/-8.27	-8.59/-8.48	-8.33/-8.05	-7.69/-7.44	-7.18/-6.84	-6.79/-6.99	-7.39/-8.03	-8.71/-9.23	-9.50/-9.75	-11.89/-12.38	-11.97/-10.35	-8.66/-7.13	-6.24/-5.68	-5.51/-5.79	-6.22/-6.64	-7.33/-7.99	-8.52/-8.73
Freq(Hz)	5.2GPol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-1.61/-1.83	-2.29/-2.02	-1.53/-1.67	-2.29/-2.02	-1.73/-1.75	-2.71/-1.97	-2.78/-2.87	-2.23/-2.78	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87	-2.78/-2.87
Θ(10°)	0.01/-0.55	-0.92/-1.67	-0.96/-0.61	-1.12/-1.80	-2.75/-3.75	-3.75/-3.79	-3.69/-2.96	-2.07/-1.55	-1.06/-0.95	-0.95/-1.01	-1.20/-1.16	-1.43/-2.07	-3.03/-3.42	-2.70/-2.16	-1.23/-0.45	0.19/0.36	0.47/0.54	0.55/-0.05
Θ(20°)	-1.89/-1.62	-1.79/-1.50	-0.84/-0.50	-0.57/-1.02	-1.96/-2.48	-2.52/-2.35	-2.09/-2.29	-2.63/-2.85	-3.01/-3.11	-2.93/-2.23	-1.21/-0.40	-2.24/-3.44	-5.34/-4.66	-2.13/-0.39	0.81/0.96	0.36/-0.29	-0.78/-1.68	
Θ(30°)	1.03/0.31	0.23/0.08	-1.76/-2.99	-2.61/-2.18	-2.29/-2.40	-1.71/-1.84	-0.83/-0.05	0.19/0.41	-1.17/0.40	0.20/0.41	1.02/0.25	-1.86/-0.46	-0.34/-0.16	-1.41/-2.19	-1.86/-0.42	0.35/0.61		
Θ(40°)	-0.38/-0.94	-0.31/0.30	-0.24/-1.73	-2.37/-2.99	-4.50/-4.49	-2.52/-2.88	-6.51/-11.67	-8.65/-5.52	-4.04/-3.90	-4.58/-5.86	-5.60/-3.64	-1.36/-0.51	-1.28/-0.57	-5.96/-2.75	0.78/1.23	-0.64/-0.89	-0.73/-1.80	-3.10/-0.71
Θ(50°)	-0.95/-2.07	-2.76/0.67	0.22/-1.68	-2.34/-1.45	-4.35/-4.29	-1.28/-3.05	-6.04/-6.97	-4.27/-2.84	-2.23/-0.65	0.09/0.17	-0.24/-2.35	-0.79/-0.14	-2.34/-4.65	-3.20/-1.18	-1.22/-2.77	-0.66/0.60	1.16/1.82	1.99/-0.56
Θ(60°)	-1.08/-0.03	-1.15/-1.59	-0.92/-0.72	-3.00/-1.27	-3.17/-0.88	-2.16/-3.53	-4.78/-4.73	-4.40/-4.04	-3.13/-2.54	-2.08/-1.10	-0.12/-0.15	-0.33/-0.86	-2.23/-0.18	-2.01/-3.39	-2.63/-0.28	1.48/0.59		-0.15/0.05
Θ(70°)	0.57/-1.41	-2.24/-2.35	-5.24/-3.14	-2.14/-2.90	-2.90/-7.14	-4.06/-4.98	-5.35/-4.86	-3.88/-2.20	-1.38/-0.65	-1.13/1.34	-1.38/-0.29	-1.44/-2.45	-1.66/-0.28	-5.50/-4.24	-1.29/0.63	-0.16/-0.28	1.52/1.55	
Θ(80°)	2.22/-0.79	-2.85/-3.82	-5.60/-8.13	-5.33/-3.72	-5.36/-9.21	-2.41/-3.45	-8.06/-6.13	-3.27/-2.70	-2.48/-1.90	0.47/1.79	2.96/2.57	-1.62/-0.32	1.41/-2.71	-6.19/-3.85	-5.67/-3.48	-0.25/-0.27	0.72/1.87	1.72/2.41
Θ(90°)	2.99/-0.18	-2.09/-3.77	-5.73/-9.90	-9.56/-3.58	-5.16/-14.18	-5.33/-3.78	-9.23/-6.14	-4.00/-2.01	-1.21/-0.95	-0.02/0.99	2.08/-1.52	-3.47/0.52	0.93/-3.36	-2.76/-2.67	-2.81/-0.48	0.29/0.85	1.20/-1.28	2.48/3.51
Θ(100°)	1.97/-1.83	-3.22/-3.72	-5.06/-7.98	-10.87/-7.00	-4.47/-12.26	-8.80/-7.65	-12.46/-7.75	-6.72/-6.04	-4.07/-2.21	-1.97/0.02	-0.94/-0.13	-4.53/-0.62	-4.47/-5.28	-2.99/-6.51	-3.08/-0.97	0.28/0.80	-0.74/0.67	
Θ(110°)	-0.15/-6.90	-9.11/-6.27	-6.04/-9.75	-8.21/-10.17	-6.94/-6.28	-11.50/-11.65	-8.86/-8.55	-10.06/-7.11	-3.69/-2.21	0.74/-1.02	1.12/-0.32	-4.25/-1.88	-6.94/-6.96	-6.50/-3.30	-5.68/-4.48	-13.92/-4.95	-3.33/-2.92	-5.05/0.24
Θ(120°)	-4.32/-8.51	-12.05/-8.16	-7.13/-13.42	-9.07/-8.72	-9.36/-7.40	-5.67/-10.71	-10.58/-7.62	-6.36/-5.21	-3.00/-0.75	0.44/0.13	-1.35/-4.20	-1.42/-1.87	-4.67/-4.22	-7.27/-9.17	-5.11/-3.55	-14.77/-5.25	-7.09/-8.41	-6.29/-4.17
Θ(130°)	-6.28/-11.34	-10.35/-15.44	-11.29/-9.30	-7.88/-6.94	-5.33/-7.24	-8.01/-9.75	-12.05/-7.11	-7.76/-7.08	-5.49/-3.66	-1.87/-2.09	-0.59/0.79	-3.75/-6.29	-3.67/-3.71	-8.45/-7.97	-7.86/-5.80	-4.57/-8.80	-15.68/-8.06	
Θ(140°)	-5.64/-9.27	-14.27/-5.79	-5.61/-5.34	-5.44/-4.10	-6.10/-10.37	-7.54/-3.54	-2.99/-4.94	-3.29/-4.17	-2.13/0.31	0.75/0.02	1.23/-0.55	-2.62/-5.76	-1.68/0.04	-0.32/-3.95	-4.21/0.19	-1.07/-4.87	-11.39/-7.51	-5.50/-4.29
Θ(150°)	-9.75/-8.10	-9.43/-9.44	-8.26/-10.91	-7.17/-3.27	-3.72/-4.93	-3.04/-3.69	-4.61/-4.95	-6.60/-8.99	-6.56/-4.70	-5.28/-3.18	-1.62/-2.61	-3.71/-3.35	-5.55/-2.49	-2.78/-4.37	-7.46/-4.46	-2.95/-4.26	-7.82/-13.84	-11.05/-9.68
Θ(160°)	-9.48/-9.08	-11.84/-12.75	-14.07/-11.85	-11.66/-11.98	-11.93/-11.94	-13.93/-13.70	-9.52/-7.93	-7.03/-5.59	-3.97/-3.02	-2.25/-3.92	-2.36/-1.92	-4.73/-4.45	-4.22/-6.57	-0.72/-0.53	-0.28/-1.57	-4.22/-6.57	-7.80/-11.01	
Θ(170°)	-6.89/-6.57	-4.55/-3.89	-3.68/-4.76	-5.85/-6.90	-6.00/-4.69	-4.49/-4.13	-2.51/-0.86	-0.24/0.42	1.22/1.79	1.91/1.62	1.62/1.87	1.59/0.75	-0.37/-2.05	-4.76/-9.59	-15.64/-14.46	-11.44/-11.08	-9.03/-7.17	-6.39/-5.19
Θ(180°)	-5.30/-5.33	-4.25/-3.48	-2.49/-2.31	-2.66/-2.84	-2.44/-2.00	-2.20/-2.67	-3.20/-2.75	-2.58/-2.68	-2.99/-3.30	-3.55/-3.23	-2.84/-2.61	-2.71/-3.32	-4.13/-5.02	-4.93/-3.28	-2.47/-2.33	-2.83/-3.18	-2.73/-2.72	-2.92/-3.53
Freq(Hz)	5.3GPol.	TotalAnt. 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-3.95/-3.54	-3.41/-3.85	-5.15/-4.47	-3.42/-3.56	-4.24/-4.65	-5.04/-4.62	-4.36/-4.26	-4.00/-3.75	-3.62/-3.37	-3.39/-4.09	-4.28/-4.18	-4.61/-5.18	-5.52/-5.53	-5.20/-5.09	-4.99/-4.42	-4.93/-4.64	-4.76/-4.82	-3.94/-3.36
Θ(10°)	-2.11/-2.15	-1.81/-1.21	-2.61/-4.67	-4.52/-4.32	-4.06/-4.58	-0.77/-0.31	-3.96/-3.09	-2.24/-1.56	-4.99/-4.80	-0.08/0.08	-0.07/-0.37	-2.84/-2.91	-1.33/-3.12	-2.84/-2.26	-1.87/-2.23	-1.33/-1.54	-2.84/-2.19	
Θ(20°)	-1.40/-1.89	-1.75/-1.72	-1.97/-2.94	-2.63/-3.97	-5.61/-6.64	-5.22/-3.47	-3.13/-3.40	-3.96/-4.16	-3.72/-3.58	-3.55/-3.31	-2.78/-1.42	0.10/0.58	-0.78/-2.70	-2.74/-2.33	-1.30/-0.16	0.39/0.29	0.13/-0.05	-0.22/-0.87
Θ(30°)	-0.12/-0.47	-0.74/-																



Antenna Pattern

Appendix B

Θ(60°)	-1.15/-1.48	-3.47/-4.92	-4.80/-1.88	0.53/2.66	3.75/4.17	3.91/3.47	3.15/2.80	1.68/0.62	-0.86/-1.79	-3.54/-4.30	-2.76/-4.35	-5.00/-3.76	-2.68/-2.80	-5.54/-5.87	-7.09/-5.88	-4.61/-3.13	-1.30/-0.36	0.03/-0.26
Θ(70°)	-2.16/-2.10	-6.02/-8.22	-13.31/-8.54	-2.88/-0.06	2.53/3.50	3.20/2.54	1.44/0.98	1.03/-0.05	-0.56/-2.86	-3.46/-4.88	-5.58/-5.83	-4.91/-3.78	-1.91/-1.02	-1.66/-3.60	-6.11/-7.81	-5.73/-3.09	-1.09/-0.47	-0.15/-0.76
Θ(80°)	-3.24/-5.24	-7.38/-4.95	-6.50/-3.48	-3.07/0.38	2.64/4.22	4.01/2.82	2.48/-1.88	0.25/-1.98	-4.22/-5.37	-7.20/-7.52	-5.87/-6.40	-6.04/-6.71	-3.60/-1.92	-2.73/-5.84	-8.42/-13.52	-6.67/-2.51	-0.47/-0.36	-0.60/-1.45
Θ(90°)	-5.35/-8.82	-7.36/-6.58	-7.92/-7.34	-5.92/-0.49	2.55/4.07	3.92/3.06	1.60/0.03	-2.24/-5.87	-6.93/-8.83	-8.61/-8.96	-8.78/-9.72	-7.95/-4.95	-1.88/-1.50	-3.43/-9.80	-13.87/-12.09	-5.37/-2.16	-1.26/-1.79	-2.67/-3.59
Θ(100°)	-8.42/-8.08	-5.07/-4.04	-3.75/-2.43	-4.31/-1.17	1.45/2.79	2.99/2.85	2.50/-1.78	-0.27/-2.64	-6.77/-7.09	-5.40/-5.60	-5.52/-6.75	-11.37/-5.55	-2.61/-2.93	-6.86/-14.14	-14.00/-10.19	-5.70/-3.39	-2.36/-2.49	-2.56/-4.55
Θ(110°)	-8.83/-6.35	-8.90/-9.96	-8.80/-5.07	-3.45/-1.48	1.06/2.51	2.50/2.42	2.07/2.10	-1.10/-0.52	-3.29/-5.39	-9.72/-10.62	-13.49/-12.81	-6.61/-6.13	-3.60/-4.53	-5.82/-9.10	-7.12/-5.12	-6.13/-5.50	-6.08/-6.40	
Θ(120°)	-10.65/-9.06	-7.83/-4.87	-4.32/-3.82	-5.20/-1.19	-2.19/0.19	1.15/-1.69	1.75/-1.48	0.51/-1.36	-3.98/-4.11	-8.04/-13.73	-15.80/-10.69	-8.72/-5.62	-3.63/-3.66	-5.48/-8.39	-11.70/-10.24	-6.58/-4.89	-4.89/-6.46	-8.95/-10.10
Θ(130°)	-13.03/-10.47	-7.83/-7.29	-6.81/-6.06	-3.56/-2.05	-0.53/0.67	1.62/-1.85	2.19/2.08	1.36/-1.40	-3.08/-0.70	-7.09/-8.64	-7.74/-7.35	-8.49/-9.87	-9.58/-8.11	-6.99/-7.35	-8.36/-9.79	-9.34/-7.55	-6.54/-8.18	-10.55/-12.63
Θ(140°)	-13.95/-11.34	-9.61/-8.25	-6.22/-6.41	-5.25/-6.89	-6.36/-4.26	-2.58/-2.84	-1.77/-2.18	-2.58/-2.84	-2.84/-3.36	-5.76/-7.64	-6.80/-9.03	-8.28/-9.18	-10.08/-12.11	-15.18/-15.59	-15.08/-15.15	-12.29/-9.51	-8.20/-9.43	-13.49/-14.51
Θ(150°)	-7.90/-8.46	-7.60/-6.69	-6.88/-6.29	-5.96/-5.52	-5.42/-4.94	-4.34/-4.23	-4.19/-3.61	-4.27/-5.23	-7.56/-6.61	-8.37/-8.71	-8.82/-8.58	-8.34/-8.04	-8.23/-9.56	-11.59/-12.83	-12.32/-11.81	-11.66/-12.28	-12.02/-12.02	-9.59/-8.34
Θ(160°)	-7.44/-7.27	-7.46/-7.60	-7.75/-8.65	-10.22/-11.82	-11.62/-10.06	-8.72/-6.93	-5.74/-6.73	-6.07/-6.61	-5.11/-4.41	-6.74/-6.99	-6.48/-7.52	-7.03/-7.26	-7.96/-9.04	-10.04/-10.49	-9.26/-8.77	-8.76/-8.17	-8.06/-8.07	-8.12/-8.71
Θ(170°)	-7.32/-7.81	-5.68/-9.86	-13.80/-15.90	-15.32/-15.29	-13.29/-12.55	-11.98/-11.27	-9.99/-9.06	-8.20/-8.23	-9.03/-8.06	-8.96/-8.35	-8.59/-9.03	-9.36/-9.63	-10.13/-9.94	-9.69/-9.14	-9.66/-9.50	-9.22/-9.35	-9.37/-9.68	-9.39/-9.94
Θ(180°)	-12.67/-12.66	-12.72/-10.46	-9.65/-10.50	-10.32/-10.11	-9.72/-9.41	-10.30/-9.51	-9.65/-9.48	-10.22/-10.48	-10.67/-11.98	-11.51/-11.02	-10.14/-11.39	-11.94/-12.94	-13.03/-12.62	-12.24/-12.00	-11.06/-11.13	-12.80/-12.00	-9.91/-10.22	-10.48/-11.77
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°)	-0.55/-0.52	-0.54/-0.40	-0.50/-0.92	-0.72/-0.63	-0.63/-0.78	-0.76/-0.75	-0.77/-0.35	-0.04/0.22	0.35/0.48	0.38/0.28	-0.12/-0.17	-0.44/-0.68	-1.00/-0.80	-0.66/-0.76	-0.38/-0.19	-0.31/-0.42	-0.40/-0.42	-0.43/-0.88
Θ(10°)	0.44/0.22	-0.02/-0.16	-0.35/-0.22	-0.53/-0.09	-0.26/-0.36	-0.17/-0.08	-0.19/-0.35	-0.80/-1.01	-1.00/-0.89	-1.63/-1.64	-0.98/-1.10	-0.43/-0.71	-0.50/-0.18	0.11/0.30	0.66/0.77	0.96/0.78	0.73/0.70	0.40/0.05
Θ(20°)	-1.17/-1.70	-1.51/-1.10	-0.56/-0.68	-0.33/-0.63	-0.17/-0.06	1.03/-1.27	0.71/-0.53	0.22/0.64	1.03/-1.27	-1.81/-2.43	-2.99/-2.73	-2.57/-2.67	-1.20/-0.35	0.46/0.74	1.08/0.61	0.35/0.07	-0.36/-0.76	
Θ(30°)	-3.87/-5.60	-5.36/-4.32	-3.89/-3.61	-2.29/-1.38	-0.41/0.34	0.81/0.96	0.57/0.53	0.12/-1.24	-2.05/-1.67	-0.95/-1.08	-1.45/-1.94	-1.76/-0.55	-0.10/-0.07	0.11/0.65	1.59/-1.82	0.99/0.09	-1.00/-1.52	-2.60/-3.04
Θ(40°)	-0.15/-1.40	-2.84/-2.12	-3.28/-4.68	-4.45/-0.47	-2.81/-0.51	1.41/-1.91	0.82/-1.26	-3.58/-5.34	-5.78/-3.05	-1.53/-0.85	0.20/0.97	1.42/-6.1	2.07/2.04	1.84/0.82	-0.68/-1.21	-0.44/-0.52	-0.70/-0.64	-1.68/-2.35
Θ(50°)	-0.53/-0.90	-3.67/-1.08	-1.48/-1.11	-1.81/-3.85	-3.61/-0.43	-1.01/-0.91	0.59/0.67	-7.30/-7.79	-1.91/-0.41	0.89/0.74	0.92/-1.15	0.70/-1.40	-2.48/-1.26	-0.80/-0.71	0.53/0.61	-0.07/-1.40		
Θ(60°)	-2.92/-3.60	-3.45/-0.72	-0.05/-0.35	-3.72/-4.15	-3.10/-2.17	-2.02/-4.55	-8.31/-10.73	-11.11/-9.20	-8.80/-5.97	-4.01/-1.82	-1.73/-0.48	-0.07/-1.09	-0.23/-1.29	0.54/-1.40	-3.10/-3.56	-2.30/-0.91	-0.44/-0.71	-0.53/-1.58
Θ(70°)	-6.99/-6.72	-5.95/-3.15	0.20/-1.45	0.04/-2.17	-1.05/-1.84	-4.55/-8.65	-6.04/-3.69	-3.20/-2.71	-2.44/-2.37	-1.44/-0.93	-0.21/-2.04	-0.06/-1.61	0.97/-0.75	-2.60/-3.21	-2.00/-0.96	-0.78/-1.82	-2.49/-8.77	
Θ(80°)	-9.79/-12.16	-10.61/-5.79	-0.51/1.30	-0.08/-0.26	0.63/-2.33	-9.35/-7.75	-5.06/-4.14	-10.22/-9.04	-2.64/-1.52	-2.09/-3.39	-3.48/-5.72	0.95/-1.12	-1.71/-2.05	-2.37/-1.89	-0.46/-1.88	-4.48/-5.26	-5.30/-7.67	
Θ(90°)	-10.61/-6.37	-5.41/-5.19	-2.01/-1.46	1.73/0.89	1.23/-1.39	-6.09/-5.57	-6.12/-4.90	-5.17/-3.61	-3.78/-4.09	-4.29/-7.26	-7.35/-7.94	-4.84/-3.78	-3.32/-3.68	-3.05/-2.42	-3.18/-6.27	-8.49/-10.03	-9.70/-8.39	
Θ(100°)	-7.33/-8.16	-10.36/-6.22	-1.98/-0.59	-0.22/-1.7	2.23/-0.89	-3.52/-2.89	-2.89/-3.46	-1.49/-1.90	-7.44/-8.65	-9.65/-9.63	-14.01/-9.90	-6.50/-6.61	-4.42/-4.13	-6.35/-4.57	-3.96/-4.09	-5.94/-15.94	-14.18/-14.83	-13.15/-9.47
Θ(110°)	-9.25/-8.88	-6.30/-4.04	-2.38/-0.54	0.69/-1.82	3.27/2.84	1.22/-1.92	-2.85/-1.99	-2.59/-3.97	-6.37/-6.82	-9.97/-10.28	-7.92/-6.08	-5.19/-10.98	-13.67/-11.29	-6.30/-10.08	-16.05/-10.98	-12.62/-15.32	-12.87/-6.43	
Θ(120°)	-12.62/-13.30	-11.60/-4.36	-2.27/-0.60	0.44/-1.52	3.45/-5.00	1.93/2.87	2.94/-1.93	1.41/-0.14	-3.45/-5.00	-2.69/-4.51	-3.66/-10.06	-12.36/-5.39	-4.20/-7.14	-10.70/-8.90	-14.47/-8.01	-11.24/-9.53	-10.93/-13.29	
Θ(130°)	-14.20/-15.05	-10.57/-6.76	-3.58/-1.50	0.96/-1.84	2.03/2.30	2.31/2.77	2.63/0.98	-2.93/-5.68	-7.46/-3.85	-4.84/-1.65	-1.06/-6.41	-5.16/-4.41	-7.32/-5.49	-10.00/-8.16	-1.55/-2.22	-9.60/-9.04	-6.08/-11.52	-10.08/-8.74
Θ(140°)	-7.19/-9.12	-5.82/-5.22	-3.05/-1.72	-0.59/-1.05	2.49/3.22	2.76/0.89	-0.08/-0.51	-1.22/-4.39	-4.52/-6.29	-12.67/-8.11	-9.41/-11.04	-8.80/-8.08	-7.35/-6.79	-12.29/-10.37	-3.53/-1.25	-3.09/-8.80	-9.58/-7.47	-9.10/-6.21
Θ(150°)	-5.36/-12.53	-13.01/-9.32	-6.52/-3.64	-1.94/-0.56	0.30/0.28	-0.17/-0.50	-5.60/-6.37	-0.17/-0.50	-7.07/-13.52	-5.43/-6.85	-8.96/-9.12	-9.42/-10.31	-14.30/-10.87	-7.31/-5.98	-6.76/-9.78	-10.26/-7.41	-5.15/-3.73	
Θ(160°)	-9.97/-12.94	-11.01/-8.58	-7.95/-8.21	-7.61/-6.46	-4.64/-2.64	-1.56/-1.31	-2.41/-4.49	-6.38/-8.40	-12.09/-9.64	-6.02/-4.62	-4.87/-5.35	-5.49/-6.63	-8.50/-7.74	-8.67/-10.69	-8.01/-6.03	-5.70/-6.76	-8.27/-7.27	-6.25/-7.33
Θ(170°)	-7.50/-7.33	-7.36/-7.91	-7.70/-7.92	-7.85/-7.61	-6.98/-5.96	-5.54/-5.96	-10.56/-9.53	-9.63/-8.61	-8.27/-8.10	-7.72/-7.77	-7.82/-7.47	-6.48/-6.44	-8.08/-9.83	-11.19/-10.20	-9.04/-9.22	-9.87/-8.85	-8.00/-7.36	
Θ(180°)	-12.15/-10.83	-10.73/-10.43	-10.14/-9.63	-9.25/-9.55	-9.38/-9.36	-9.20/-9.63	-11.20/-9.47	-10.75/-11.12	-10.88/-7.72	-7.55/-7.73	-7.74/-7.72	-7.74/-7.79	-7.64/-8.13	-9.15/-8.92	-8.07/-7.53	-7.09/-7.17	-7.36/-7.90	-8.31/-9.44
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°)	-0.17/-0.20	-0.16/-0.32	-0.45/-0.54	-0.34/-0.39	-0.40/-0.10	-0.19/0.07	-0.36/-0.22	-0.19/-0.06	-0.21/-0.24	-0.62/-0.43	-0.22/0.20	-0.41/-0.45	-0.12/0.15	0.12/0.10	0.41/0.16	-0.02/0.10	0.12/0.23	
Θ(10°)	-0.67/-0.62	-1.23/-1.21	-1.07/-0.59	-0.20/0.00	0.40/0.74	0.75/0.75	0.81/0.86	0.61/0.44	-0.07/-0.83	-1.65/-1.31	-0.83/-1.14	-0.48/-0.23	0.26/0.51	0.92/0.99	0.96/-1.01	0.84/0.68	0.43/0.67	0.10/-0.23
Θ(20°)	-2.08/-3.37	-2.70/-1.79	-1.02/-0.45	-0.16/0.24	0.17/0.46	0.37/0.34	0.49/0.40	0.36/-0.57	-1.96/-3.78	-5.60/-2.93	-4.03/-3.92	-3.20/-3.01	-2.46/-1.31	-0.37/0.05	0.47/0.62	0.36/0.04	-0.18/-0.17	-0.62/-1.44
Θ(30°)	-4.17/-4.91	-3.65/-2.28	-2.32/-2.35	-1.60/-1.01	-0.30/0.33	1.00/-1.49	0.70/-0.04	-0.54/-1.73	-5.27/-5.65	-3.33/-2.80	-2.57/-2.09	-1.89/-1.24	-0.38/-0.27	-0.32/-0.08	0.42/0.68	0.26/-0.50	-1.62/-2.29	-2.92/-3.10
Θ(40°)	-1.98/-3.00	-3.16/-3.38	-5.50/-5.85	-3.31/-1.07	0.45/0.97	1.14/-1.52	1.29/-0.40	-1.76/-3.10	-4.89/-3.80	-1.81/-0.21	0.47/0.22	0.78/-1.20	1.42/-1.34	1.28/0.62	0.03/-0.31	-0.43/-0.92	-1.22/-2.20	-4.47/-3.63
Θ(50°)	-0.77/-1.05	-0.58/0.13	-0.39/-0.65	-2.49/-4.85	-1.49/0.79	-0.27/-2.24	-3.47/-5.56	-7.35/-8.16	-5.42/-2.55	-1.41/-0.12	1.17/-1.33	1.02/-1.07	1.00/0.64	-0.28/-1.85	-2.02/-0.88	-0.57/-0.49	-0.63/-1.41	-1.73/-2.12
Θ(60°)	-3.25/-3.66	-3.02/-0.79	-0.28/-0.28	-2.04/-2.34	-2.51/-1.70	-2.60/-5.65	-10.77/-11.41	-0.80/-0.55	-2.72/-7.59	-0.17/-1.98	0.62/0.28	1.24/-0.11	0.87/-1.84	-0.77/-2.95	-1.88/-0.22	0.47/0.03	-0.53/-2.77	
Θ(70°)	-6.64/-7.07	-5.58/-4.03	-0.42/0.83	-0.23/-2.59	-1.30/-0.73	-2.86/-4.94	-6.65/-8.35	-4.22/-2.70	-2.35/-2.38	-1.59/-1.70	-0.71/-0.75	0.06/-1.03	-0.42/-1.39	0.65/-1.71	-3.37/-3.54	-1.41/-0.51	-0.65/-1.13	-1.87/-4.71
Θ(80°)	-8.75/-12.55	-11.55/-7.00	-1.17/0.58	0.22/-1.03	0.62/-3.07	-5.22/-5.65	-11.83/-7.07	-0.53/-0.08	-1.41/-3.47	-3.71/-3.00	-1.65/-0.91	-0.01/0.80	-1.30/-2.68	-2.45/-3.21	-0.80/-1.84	-3.06/-4.90	-4.81/-6.31	
Θ(90°)	-13.05/-7.43	-7.19/-7.40	-2.43/-1.74	1.71/-1.13	1.93/-2.20	-8.73/-5.86	-5.96/-4.18	-3.49/-1.46	-3.26/-5.53	-5.02/-4.53	-3.21/-2.62	-0.97/-0.69	-3.47/-4.59	-2.99/-6.08	-7.54/-9.48	-10.12/-8.57		
Θ(100°)	-6.38/-7.98	-12.59/-9.83	-4.26/-1.31	0.38/2.90	2.15/-1.71	-3.21/-1.95	-1.37/-1.55	-3.44/-4.83	-7.37/-7.42	-9.17/-7.88	-8.							



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Θ(150°)	-12.98/-12.07	-11.15/-10.91	-11.78/-13.46	-13.29/-11.86	-12.50/-12.84	-15.00/-14.23	-13.18/-13.71	-15.52/-15.19	-12.72/-11.82	-13.21/-15.19	-15.42/-8.55	-5.60/-3.63	-2.65/-1.90	-1.81/-2.22	-2.94/-3.60	-4.37/-5.68	-8.02/-9.53	-11.34/-12.18
Θ(160°)	-11.34/-11.91	-12.44/-13.10	-14.46/-14.17	-11.70/-10.48	-10.00/-10.70	-11.12/-11.98	-12.93/-14.99	-15.64/-14.95	-13.21/-12.31	-13.08/-13.90	-12.53/-10.04	-8.40/-7.68	-6.84/-6.21	-6.01/-5.93	-6.77/-7.25	-7.74/-6.89	-9.51/-10.35	-11.20/-11.76
Θ(170°)	-13.41/-13.56	-13.84/-13.98	-14.67/-14.06	-13.65/-13.71	-14.97/-15.38	-15.08/-14.57	-12.05/-12.38	-12.91/-11.69	-11.23/-10.57	-10.73/-11.93	-12.05/-12.38	-13.79/-11.63	-12.53/-13.21	-13.79/-14.66	-15.39/-15.46	-15.08/-15.68	-14.84/-14.76	-14.43/-14.44
Θ(180°)	-14.99/-15.84	-14.98/-14.87	-14.97/-14.51	-13.91/-14.23	-14.30/-14.70	-14.27/-15.36	-14.66/-15.87	-14.95/-13.81	-14.45/-14.67	-14.87/-15.15	-14.48/-14.56	-15.04/-14.44	-14.97/-15.99	-15.69/-14.92	-15.59/-14.78	-15.74/-15.85	-14.99/-16.14	-15.90/-15.04
Freq(Hz)	5.2GPol.	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°)	-0.20/-0.03	-0.52/-0.31	-0.36/-0.26	-0.130/-0.10	0.16/-0.11	-0.25/-0.06	0.24/-0.08	0.16/-0.33	-0.44/-0.84	-0.92/-0.89	-0.62/-0.64	-0.42/-0.38	-0.18/-0.11	-0.020/-0.02	-0.30/-0.14	-0.05/-0.10	-0.20/-0.05	-0.63/-0.24
Θ(10°)	1.92/1.75	1.12/1.00	1.03/0.82	0.34/0.22	0.140/-0.11	-0.64/-0.34	0.330/0.86	0.830/0.79	0.750/0.56	0.090/-0.14	-0.21/-0.58	-0.89/-1.16	-1.24/-1.26	-1.23/-0.56	-0.20/-0.11	0.00/-0.12	0.46/-0.02	1.702/1.12
Θ(20°)	2.632/87	2.632/0.3	1.300/58	0.460/39	0.510/74	1.031/20	1.47/1.41	1.15/0.83	0.38/-0.07	-0.84/-1.30	-1.74/-1.52	-1.29/-1.00	0.230/77	1.17/1.58	1.762/22	2.702/56	2.152/0.2	
Θ(30°)	2.012/1.4	1.720/95	0.69/130	1.340/87	0.300/69	1.962/37	2.321/72	0.52/-0.27	-0.06/-0.90	-1.37/-2.83	-3.19/-2.70	-2.35/-1.93	-0.990/-14	0.99/1.67	2.803/67	3.683/28	3.323/0.5	2.462/34
Θ(40°)	-0.78/-0.27	0.09/-0.21	-0.42/-0.10	-0.89/-2.50	-1.840/-31	1.36/1.30	0.25/-1.14	-1.55/-1.67	-0.86/-1.26	-1.45/-2.03	-1.63/-1.77	-1.87/-2.01	-1.91/-1.60	0.34/1.96	2.672/69	2.612/13	1.440/70	0.330/55
Θ(50°)	-4.02/-2.22	-1.32/-1.24	-0.18/-0.02	-1.88/-3.01	0.11/1.80	0.57/-1.52	-1.53/-0.92	0.02/-0.20	-0.70/-1.04	-1.97/-1.30	-0.140/62	-0.71/-3.27	-4.26/-2.15	-0.190/72	1.14/1.15	0.370/33	-0.11/-1.26	-1.23/-2.66
Θ(60°)	-3.82/-2.24	-1.47/-2.34	-2.13/-2.81	-6.27/-4.77	-0.270/94	-1.31/-6.22	-5.58/-3.44	-1.57/-0.18	-1.23/-2.42	-2.95/-3.66	-3.43/-1.11	-0.37/-2.11	-5.56/-5.17	-2.060/52	0.94/1.00	-0.24/-0.34	-1.08/-3.77	-5.59/-1.11
Θ(70°)	-7.07/-4.10	-2.77/-1.87	-1.83/-2.85	-2.67/-2.16	0.420/25	-3.21/-9.08	-5.58/-4.41	-5.52/-7.30	-11.82/-11.54	-8.41/-4.25	-3.96/-2.49	-0.750/-14	-3.13/-4.16	-0.36/1.03	1.100/96	0.21/-1.85	-2.10/-5.78	-6.76/-6.67
Θ(80°)	-6.11/-2.83	-1.83/-0.58	-0.94/-3.02	-4.68/-0.47	1.860/15	-11.36/-4.21	-3.22/-2.85	-3.51/-4.11	-7.18/-6.26	-6.15/-3.57	-4.36/-2.11	-0.51/1.75	1.290/80	6.152/0.7	1.35/-2.70	0.32/-1.73	-6.58/-6.16	
Θ(90°)	-7.78/-3.58	-0.80/-0.84	-4.13/-12.16	-4.25/-0.56	1.75/-0.39	-8.39/-3.82	-3.52/-5.29	-3.61/-3.88	-5.95/-5.04	-5.34/-2.40	-4.45/-1.78	0.51/1.90	1.72/-0.52	1.680/92	0.322/16	1.95/-0.47	-5.80/-6.66	-9.10/-7.34
Θ(100°)	-6.65/-3.82	-2.15/-2.12	-7.56/-10.48	-1.25/-0.59	-0.37/-4.53	-7.30/-4.62	-7.32/-14.76	-6.33/-4.79	-10.32/-7.13	-8.23/-4.37	-3.86/-4.65	-0.730/0.3	0.76/-1.49	0.57/-1.86	-0.83/-0.04	-0.46/-1.91	-4.20/-9.83	-8.73/-7.61
Θ(110°)	-10.44/-8.40	-4.78/-6.58	-15.30/-5.29	-0.44/-0.45	-1.91/-6.64	-9.34/-5.42	-6.71/-9.66	-9.56/-11.26	-9.52/-15.91	-14.52/-5.28	-4.54/-4.25	-0.10/-0.14	-0.11/-3.10	0.51/-2.52	-3.00/-5.34	-8.00/-11.05	-6.91/-5.59	
Θ(120°)	-10.39/-11.89	-9.83/-14.47	-7.03/-3.38	-4.44/-4.29	-2.44/-4.63	-6.68/-9.17	-10.70/-8.33	-7.68/-9.44	-11.50/-12.38	-12.17/-3.31	-5.99/-3.89	-0.030/37	-0.56/-2.74	-1.16/-2.49	-2.54/-2.75	-4.31/-3.01	-3.15/-5.62	-3.02/-8.73
Θ(130°)	-9.44/-14.26	-8.37/-1.50	-6.42/-5.58	-7.93/-8.51	-3.79/-2.33	-6.25/-9.40	-10.30/-12.72	-10.06/-9.66	-10.93/-11.64	-6.36/-5.59	-9.41/-5.57	-1.40/-0.31	-1.83/-0.10	1.21/-0.47	-2.700/57	-1.34/-0.39	-5.77/-9.56	-5.48/-4.24
Θ(140°)	-5.69/-12.36	-9.12/-1.70	-7.06/-1.03	-11.65/-8.59	-5.54/-4.88	-4.78/-6.84	-7.86/-7.72	-7.06/-11.04	-13.79/-10.45	-0.69/-7.43	-7.74/-7.81	-4.29/-8.98	-5.75/-1.29	-0.62/-2.92	-5.73/-3.14	-0.80/-4.50	-5.83/-10.05	-9.96/-6.55
Θ(150°)	-5.56/-9.94	-14.31/-14.62	-10.49/-10.40	-15.86/-14.57	-9.04/-7.68	-6.74/-6.14	-7.26/-11.94	-13.53/-6.06	-4.52/-4.80	-4.92/-5.30	-8.34/-10.34	-9.79/-9.96	-5.03/-1.47	-1.78/-4.43	-7.42/-8.17	-6.04/-7.72	-11.36/-10.06	-6.81/-5.54
Θ(160°)	-4.51/-6.67	-11.56/-15.82	-15.04/-15.21	-16.82/-14.45	-12.16/-9.13	-6.51/-6.58	-7.72/-10.11	-10.95/-11.23	-9.93/-10.43	-13.41/-13.28	-10.88/-10.70	-11.90/-12.20	-10.31/-8.92	-7.74/-7.45	-8.47/-11.94	-14.99/-15.68	-10.56/-7.26	-5.50/-4.25
Θ(170°)	-11.69/-9.73	-8.15/-7.56	-8.34/-9.74	-9.61/-9.12	-8.79/-12.08	-12.55/-12.31	-13.72/-13.16	-13.61/-14.58	-14.82/-10.17	-9.03/-8.65	-8.77/-6.56	-6.88/-5.20	-5.69/-6.54	-7.79/-9.00	-9.04/-7.94	-6.92/-8.46	-10.67/-10.99	
Θ(180°)	-10.58/-9.36	-8.00/-8.21	-8.32/-8.54	-8.62/-8.50	-8.86/-9.81	-9.81/-9.20	-9.51/-8.88	-8.92/-9.89	-10.11/-10.62	-10.70/-12.21	-13.12/-13.39	-12.18/-11.68	-11.15/-11.49	-11.43/-11.58	-10.89/-10.61	-11.53/-13.39	-14.41/-15.76	-15.26/-10.82
Freq(Hz)	5.3GPol.	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°)	0.50/-0.08	-0.16/-0.39	-0.49/-0.28	0.66/0.26	-0.21/-0.14	0.610/0.62	0.440/0.7	0.91/-0.59	-0.230/0.7	0.54/1.01	1.27/1.37	1.320/65	0.970/63	0.070/0.1	0.11/-0.15	-0.39/-0.34	-0.34/-0.07	-0.100/27
Θ(10°)	3.34/3.13	2.65/-1.98	1.95/-1.25	1.080/43	-0.31/-1.06	-1.21/-1.21	-1.09/-0.45	-0.080/26	0.82/-0.20	1.110/70	0.17/-0.06	-0.34/-0.42	-0.46/-0.28	-0.470/42	0.67/1.11	1.38/-1.72	1.94/1.86	1.902/78
Θ(20°)	4.04/3.93	3.252/29	1.380/79	1.200/74	0.490/0.6	-0.93/-0.51	0.01/0.62	-0.45/-0.51	0.97/-0.12	-1.13/-1.03	0.79/1.43	1.742/06	2.322/50	2.282/22	2.593/76			
Θ(30°)	2.373/28	2.94/1.90	1.74/2.02	1.290/19	-0.80/-0.31	1.372/32	2.48/1.88	0.50/-1.19	-1.48/-2.28	-1.79/-2.71	-3.11/-2.80	-2.28/-1.26	-0.080/99	1.48/1.82	2.893/70	3.683/55	2.93/1.74	1.40/-1.55
Θ(40°)	0.220/94	1.92/1.58	1.46/1.72	0.92/-0.38	-1.36/-0.76	0.31/1.43	1.610/37	-0.62/-0.69	-0.61/-1.05	-1.20/-2.35	-1.78/-1.50	-2.38/-2.95	-2.20/-1.51	0.942/58	2.492/13	1.680/33	-0.41/-1.73	-1.330/0.2
Θ(50°)	-1.87/-0.37	-0.08/-0.52	0.59/1.13	-1.07/-4.08	-2.480/73	0.440/0.0	-0.100/37	-0.87/-0.91	-1.68/-1.35	-0.59/-0.36	-4.81/-1.07	-0.36/-0.03	0.660/30	-1.64/-2.26	-0.54/-1.23	-1.32/-1.37		
Θ(60°)	-3.28/-1.54	-0.57/-0.78	-1.07/-2.07	-3.80/-4.66	-0.68/-1.10	0.05/-2.01	-2.17/-0.64	0.31/-0.02	-1.73/-2.60	-3.11/-4.24	-2.71/-0.60	-1.25/-3.70	-8.09/-5.29	-0.68/-0.40	-0.95/-0.67	-2.34/-1.77	-1.67/-1.93	-2.44/-4.43
Θ(70°)	-5.21/-4.55	-2.17/-0.96	-2.03/-3.34	-3.21/-4.52	-0.59/-1.65	-2.06/-0.17	-8.66/-6.53	-4.26/-4.43	-6.29/-6.58	-7.40/-5.33	-4.81/-2.16	-0.53/-1.25	-3.93/-3.80	-0.23/-1.43	-0.22/-1.07	-1.20/-1.15	-0.07/-1.74	-4.69/-7.25
Θ(80°)	-8.47/-4.91	-0.82/-2.28	-0.06/-2.69	-4.50/-1.38	1.710/19	-9.63/-9.72	-2.43/-1.51	-4.58/-7.02	-9.85/-8.88	-10.51/-3.98	-3.47/-1.77	-0.05/-1.06	-1.50/-2.22	1.58/1.02	0.280/56	0.83/-0.92	-1.14/-4.89	-5.14/-6.59
Θ(90°)	-8.71/-3.16	0.80/-1.34	-0.02/-5.84	-4.95/-1.24	2.510/55	-9.13/-5.02	-2.46/-2.66	-2.53/-4.46	-7.59/-7.44	-9.13/-3.40	-4.23/-1.26	0.61/1.18	0.79/-0.25	1.560/58	-0.62/-1.28	1.46/-0.17	-3.24/-6.50	-9.51/-5.61
Θ(100°)	-6.59/-1.62	0.400/53	-3.25/-13.09	-2.27/-1.01	0.39/-2.19	-1.19/-5.81	-8.56/-1.44	-2.77/-5.79	-8.14/-5.35	-6.15/-2.88	-3.44/-4.88	-0.860/64	0.20/-1.63	0.34/-2.58	-1.260/41	-0.71/-1.66	-3.64/-7.48	-5.80/-7.82
Θ(110°)	-6.89/-7.18	-3.17/-2.24	-7.56/-8.05	-1.37/-1.56	-2.37/-7.69	-10.63/-4.58	-6.84/-10.47	-7.30/-8.35	-9.89/-14.57	-12.99/-4.30	-4.12/-4.77	-0.60/-3.77	0.78/-3.29	-3.45/-3.51	-1.85/-3.84	-5.09/-6.61	-4.25/-5.11	
Θ(120°)	-8.82/-12.21	-7.84/-11.27	-8.89/-3.15	-3.26/-3.49	-2.08/-4.99	-5.11/-5.16	-8.98/-4.85	-5.06/-3.64	-8.66/-2.47	-8.51/-10.30	-9.26/-9.81	-0.20/-1.12	-4.19/-5.89	-8.29/-7.27	-3.95/-4.03	-3.70/-4.85	-1.87/-8.93	
Θ(130°)	-11.85/-12.92	-6.47/-10.22	-7.24/-4.51	-5.78/-6.79	-2.97/-1.42	-4.33/-5.12	-6.78/-10.64	-8.36/-7.75	-9.53/-8.60	-5.61/-4.45	-8.59/-5.20	-2.22/-4.13	-0.910/61	1.340/37	-2.360/83	-2.680/0.2	-6.75/-5.01	-2.92/-4.81
Θ(140°)	-5.45/-10.27	-7.06/-7.51	-7.28/-10.05	-12.89/-7.96	-4.42/-3.97	-4.16/-7.89	-10.01/-8.37	-6.26/-10.67	-10.76/-12.11	-8.32/-5.37	-7.38/-7.21	-4.08/-4.65	-4.37/-0.09	-0.19/-3.21	-6.48/-2.62	0.50/-3.58	-5.30/-11.11	-10.40/-7.09
Θ(150°)	-4.00/-6.03	-9.40/-11.95	-14.17/-12.47	-16.06/-14.24	-5.80/-4.93	-1.08/-4.70	-5.19/-9.30	-1.49/-7.11	-8.51/-10.30	-3.00/-4.47	-8.51/-10.30	-9.26/-9.81	-0.20/-1.12	-4.19/-5.89	-8.29/-7.27	-3.95/-4.03	-3.70/-4.85	-8.44/-6.18
Θ(160°)	-2.64/-4.14	-7.43/-10.86	-12.94/-13.37	-15.53/-13.12	-10.04/-6.61	-5.20/-5.17	-5.96/-8.52	-10.15/-12.65	-10.58/-9.67	-11.30/-11.55	-12.89/-15.34	-15.58/-11.64	-9.44/-7.79	-5.56/-6.64	-7.79/-9.88	-13.05/-13.44	-9.70/-10.74	-4.71/-3.12
Θ(170°)	-13.21/-12.28	-9.54/-7.97	-7.44/-7.90	-8.21/-8.12	-9.45/-11.61	-11.09/-10.47	-10.46/-10.93	-10.99/-11.72	-11.88/-10.48	-10.26/-10.83	-9.48/-6.99	-5.08/-3.93	-3.36/-3.51	-4.00/-4.90	-6.46/-8.85	-9.22/-8.32	-7.00/-6.58	-11.13/-13.05
Θ(180°)	-15.97/-12.79	-9.85/-8.84	-8.56/-9.51	-9.69/-10.40	-9.98/-10.20	-11.11/-12.83	-12.57/-13.41	-11.59/-11.67	-12.55/-13.41	-11.56/-11.46	-14.22/-14.17	-12.55/-12.90	-11.56/-11.46	-14.22/-14.17	-12.55/-12.90	-11.56/-11.46	-14.22/-14.17	-15.17/-15.54
Freq(Hz)	5.6GPol.	TotalAnt.																



Antenna Pattern

Appendix B

Θ(30°)	1.01/1.22	1.66/1.85	2.10/1.82	0.96/0.09	0.43/0.94	-0.42/-3.16	-2.94/-0.57	1.10/1.49	1.34/1.56	1.40/1.48	1.60/1.08	0.33/-0.20	-0.03/0.57	0.49/-1.16	-1.78/-0.40	-0.28/0.45	1.27/1.06	1.11/1.71
Θ(40°)	-0.24/0.50	0.80/1.01	0.62/0.36	-0.93/-2.12	-1.11/-1.76	-4.92/-5.58	-1.50/0.46	0.91/-1.11	-4.32/-4.02	-2.74/-2.74	-1.54/-0.77	-0.18/-0.16	0.03/0.70	-0.41/-3.12	-5.09/-2.30	-0.93/-2.03	-2.50/-2.43	-2.09/-0.57
Θ(50°)	-0.55/-0.93	-1.35/-1.25	-1.11/-1.05	-3.11/-4.97	-1.15/-2.08	-5.63/-3.69	-1.53/-1.55	-4.26/-1.34	1.28/1.05	-2.94/-2.64	-2.15/-1.74	-1.69/-3.35	-6.89/-3.91	-4.34/-6.57	-6.62/-5.38	-4.18/-3.76	-3.08/-1.33	-0.96/-0.40
Θ(60°)	-3.45/-1.46	-1.18/-3.00	-4.17/-3.32	-0.61/-0.01	-0.72/-4.77	-5.99/-2.93	-1.64/-0.81	0.14/2.45	2.60/1.05	0.35/-0.75	-4.24/-11.32	-5.16/-4.28	-4.90/-5.95	-2.17/-5.38	-5.62/-5.30	-4.82/-3.52	-3.32/-3.65	-3.79/-3.98
Θ(70°)	-1.82/-2.31	-1.67/-1.53	-1.87/-3.06	-2.46/-2.31	-4.43/-7.95	-2.08/-0.02	1.02/-1.24	0.30/1.46	-1.19/-1.94	-1.06/-0.37	-3.82/-7.88	-10.38/-4.00	-4.34/-8.57	-3.09/-6.54	-8.53/-7.94	-6.91/-5.70	-5.41/-4.64	-2.08/-2.28
Θ(80°)	-4.87/-2.32	-0.14/0.83	0.80/-0.98	-1.01/0.16	-0.77/-2.00	-0.67/0.56	-2.15/-0.92	0.68/1.04	-1.97/-2.38	0.55/-0.94	-3.18/-9.23	-7.75/-5.48	-5.89/-8.05	-2.11/-6.55	-8.42/-4.90	-7.21/-6.39	-5.10/-4.57	-3.38/-3.35
Θ(90°)	-0.94/-0.06	-0.06/-0.45	-1.03/-1.79	-3.72/-3.44	-2.75/-7.91	-3.86/-3.02	-1.28/-0.45	-1.02/0.32	-4.31/-6.14	-0.83/0.61	-1.22/-4.24	-9.63/-7.46	-4.94/-11.48	-4.72/-10.99	-6.71/-6.00	-9.63/-6.56	-5.72/-5.39	-3.61/-2.83
Θ(100°)	-1.69/-2.87	-3.21/-2.99	-2.94/-3.21	-5.52/-6.77	-6.21/-5.10	-6.77/-3.45	-2.81/-2.40	-5.62/-3.20	-10.73/-9.89	-1.10/-1.82	-2.55/-4.60	-4.75/-5.00	-8.46/-5.96	-4.91/-9.45	-7.51/-5.29	-5.41/-4.04	-1.90/-2.62	-1.31/-2.37
Θ(110°)	-0.58/0.39	-0.37/-1.09	-4.10/-3.60	-5.71/-9.97	-2.73/-5.93	-9.54/-5.76	-6.56/-7.98	-12.10/-12.76	-3.74/-3.03	-2.77/-8.47	-8.05/-7.10	-3.45/-2.97	-9.51/-6.99	-7.87/-12.39	-10.19/-8.26	-4.86/-3.72	-0.79/-0.97	-1.74/-1.84
Θ(120°)	0.16/-1.12	-4.62/-7.47	-9.47/-5.47	-5.76/-14.06	-9.85/-10.49	-11.14/-9.81	-10.07/-12.30	-9.99/-10.19	-15.97/-10.52	-7.62/-6.26	-7.54/-4.63	-3.53/-3.45	-5.65/-1.59	-3.14/-6.90	-11.20/-11.99	-2.26/-1.27	-1.45/-1.40	1.38/1.38
Θ(130°)	-2.82/-5.22	-5.73/-6.93	-4.91/-5.91	-5.82/-6.51	-3.94/-2.64	-3.24/-6.34	-5.90/-11.49	-10.87/-9.06	-12.17/-9.60	-8.31/-11.52	-4.18/-2.93	-5.59/-3.35	-1.98/-0.73	-2.60/-3.70	-6.83/-5.00	-5.37/-4.87	0.88/0.96	-0.96/-1.62
Θ(140°)	1.51/0.01	-1.39/-2.60	-6.10/-8.87	-9.07/-9.66	-8.17/-6.05	-7.23/-5.91	-7.05/-8.40	-6.49/-9.23	-13.16/-8.67	-8.64/-6.48	-5.15/-11.38	-5.61/-2.04	-2.94/-5.14	-3.06/-3.54	-3.38/-9.40	-9.09/-6.52	-1.65/0.02	0.88/1.28
Θ(150°)	-4.20/-3.05	-3.35/-3.60	-3.12/-5.44	-11.13/-11.77	-7.80/-8.06	-10.68/-6.77	-6.59/-9.24	-13.47/-11.09	-9.12/-7.59	-7.63/-10.40	-11.02/-6.86	-2.71/-2.94	-3.97/-3.64	-1.69/-1.99	-2.41/-5.60	-8.12/-4.97	-5.29/-3.61	-6.02/-8.52
Θ(160°)	-7.30/-6.65	-6.36/-5.95	-4.73/-4.46	-4.64/-5.30	-6.34/-8.66	-9.42/-8.47	-8.01/-8.81	-9.62/-9.59	-10.47/-9.60	-6.51/-4.90	-5.74/-5.41	-4.25/-3.40	-2.81/-2.42	-2.47/-2.70	-1.98/-1.82	-4.42/-8.89	-7.81/-7.23	-9.45/-8.94
Θ(170°)	0.85/0.69	-0.34/-0.76	-1.62/-3.79	-6.71/-10.17	-9.14/-6.23	-4.11/-3.26	-2.46/-0.14	-0.37/-1.37	-1.43/-1.57	-3.84/-3.84	-3.11/-3.59	-3.38/-2.86	-2.46/-0.90	0.20/0.36	0.12/0.50	1.02/0.86		
Θ(180°)	-2.94/-3.43	-4.11/-4.09	-3.63/-3.22	-2.81/-2.14	-1.96/-2.18	-2.61/-2.93	-2.22/-1.93	-1.84/-1.86	-1.69/-1.21	-0.72/-0.44	-0.57/-1.21	-1.48/-1.53	-1.26/-1.00	-0.67/-0.27	-0.04/-0.01	0.07/0.27	0.26/-0.19	-0.71/-1.77
Freq(Hz)	5.3GPol.	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°)	-0.07/0.85	0.52/0.13	0.26/0.28	0.23/0.13	0.10/-0.30	-0.45/-0.02	0.13/0.19	0.32/0.40	-0.06/-0.01	0.17/0.06	0.18/0.60	0.56/0.34	0.40/0.56	0.55/0.45	0.36/0.21	0.24/0.35	0.38/0.71	0.76/0.74
Θ(10°)	-1.05/-0.60	-0.30/-0.06	0.26/0.85	1.07/0.97	1.25/1.02	0.83/0.31	-0.21/-0.35	-0.96/-1.66	-1.74/-2.47	-3.09/-3.14	-3.17/-2.66	-2.06/-1.80	-1.43/-0.95	-0.90/-1.04	-1.40/-1.06	-0.67/-0.50	-0.57/-0.48	-0.51/-0.46
Θ(20°)	0.33/0.29	0.36/0.36	0.16/0.19	0.13/1.00	1.71/1.80	1.22/0.17	-0.80/-1.44	-1.27/0.11	0.52/1.20	-0.69/-0.72	-0.52/0.12	-2.78/-2.62	-0.51/-0.92	-1.77/-2.92	-1.45/-0.59	-0.71/0.95	-0.11/0.38	
Θ(30°)	-0.78/0.42	0.94/1.34	1.23/1.30	1.08/0.69	1.06/1.53	0.63/-2.03	-3.94/-1.51	1.01/2.41	2.08/1.93	1.99/1.62	0.59/0.28	0.01/-0.84	-1.21/-1.38	-2.02/-3.82	-2.32/-0.61	0.39/1.39	0.82/-0.00	0.36/0.03
Θ(40°)	0.52/0.19	0.94/1.39	1.58/1.15	-0.81/-1.53	0.32/0.26	-1.91/-4.69	-2.01/-0.53	0.91/-0.42	-3.34/-6.44	-4.13/-2.07	0.13/-0.39	0.40/0.13	0.79/0.78	-0.84/-2.96	-3.68/-0.63	-0.63/-0.75	-1.01/-1.48	-0.38/0.38
Θ(50°)	-1.90/-0.57	1.53/0.67	0.07/-0.05	-1.57/-5.08	-1.91/-1.09	-5.11/-3.57	-0.89/-2.09	-6.11/-5.09	-3.12/-1.26	2.58/-2.37	0.06/-0.23	-3.25/-3.40	-4.41/-2.11	-2.93/-4.55	-6.61/-4.14	-2.75/-4.41	-2.91/-1.68	-2.04/-2.30
Θ(60°)	-0.49/-0.93	-0.27/0.08	-1.87/-4.29	-4.02/0.03	1.29/-2.15	-5.82/-1.12	-0.39/-0.57	0.35/2.22	-0.77/-0.87	-7.38/-5.82	-4.64/-4.47	-1.84/-4.74	-1.94/-9.78	-6.27/-6.76	-4.04/-3.91	-5.20/-4.17	-3.04/-1.02	
Θ(70°)	-0.51/-2.09	-3.28/-2.07	-1.24/-2.38	-5.47/-1.43	-1.42/-12.02	-2.46/-0.82	0.11/0.04	-0.57/-1.19	-0.34/-1.66	-1.44/-0.77	-4.14/-10.30	-7.67/-3.79	-3.95/-4.58	-1.54/-7.93	-7.77/-3.40	-5.56/-6.98	-2.95/-1.40	0.10/0.06
Θ(80°)	-1.54/-2.81	-2.31/-0.22	1.47/1.24	-3.48/0.81	1.17/-3.42	-1.71/0.88	-2.82/-2.01	0.51/0.53	-3.10/-5.05	-0.94/-2.37	-5.36/-6.50	-7.52/-3.54	-5.34/-6.72	-2.78/-9.62	-7.47/-6.40	-7.26/-5.21	-3.39/-2.20	-1.20/-0.55
Θ(90°)	1.08/1.35	1.16/1.39	0.07/-0.41	-2.71/-2.66	-1.92/-6.79	-3.50/-1.57	-0.83/-1.19	-0.99/-0.75	-5.87/-5.28	-0.14/0.99	-1.21/-6.80	-1.48/-6.00	-6.57/-7.75	-11.03/-7.87	-6.81/-6.09	-5.71/-7.87	-1.29/-1.87	
Θ(100°)	1.02/-0.37	-0.98/-2.62	-5.41/-4.17	-2.38/-2.98	-3.26/-6.11	-7.22/-4.68	-3.42/-5.70	-4.51/-3.79	-10.76/-9.29	-2.60/-1.75	-1.40/-4.85	-5.83/-5.34	-7.61/-5.86	-6.56/-11.24	-8.23/-6.14	-7.83/-5.54	-3.35/-3.66	-2.96/-0.82
Θ(110°)	0.13/1.20	0.74/0.24	-2.34/-2.53	-4.34/-10.48	-3.68/-5.54	-13.75/-5.47	-7.01/-5.71	-10.76/-9.43	-3.12/-3.30	-4.21/-8.46	-6.79/-6.52	-3.64/-4.55	-9.99/-5.68	-8.61/-9.82	-8.61/-6.77	-5.90/-5.66	-1.26/-1.77	-4.00/-1.76
Θ(120°)	-0.65/-2.07	-4.17/-4.92	-8.39/-8.93	-3.66/-8.25	-10.79/-8.88	-1.06/-9.93	-6.67/-10.27	-11.36/-9.89	-7.38/-5.47	-1.36/-12.01	-2.42/-3.18	-3.12/-9.50	-9.77/-9.74	-2.45/-1.53	-2.14/-0.69	-0.71/0.48	-0.27/0.47	
Θ(130°)	-3.66/-3.89	-5.73/-8.49	-4.04/-4.47	-7.89/-7.04	-3.21/-2.11	-2.29/-5.47	-5.76/-8.16	-9.34/-10.61	-13.41/-10.30	-7.97/-9.52	-4.63/-3.51	-5.74/-2.87	-1.75/-1.15	-4.20/-4.27	-7.44/-4.22	-5.00/-4.95	1.68/1.10	-1.55/-1.18
Θ(140°)	0.60/-0.88	-1.89/-2.28	-5.76/-11.11	-9.23/-11.57	-9.08/-3.87	-4.04/-5.49	-7.35/-7.09	-4.12/-6.89	-13.81/-10.68	-7.89/-4.87	-5.22/-11.08	-5.69/-2.00	-3.85/-6.41	-3.85/-5.04	-5.44/-9.48	-8.08/-6.48	-1.95/0.22	0.86/0.55
Θ(150°)	-3.22/-2.44	-3.01/-4.05	-2.65/-3.54	-8.31/-12.96	-7.48/-7.14	-8.24/-5.05	-4.12/-6.96	-13.42/-14.71	-9.67/-11.46	-7.85/-7.80	-2.16/-3.78	-4.48/-2.89	-3.73/-3.39	-2.16/-2.47	-4.67/-3.01	-2.73/-2.66	-5.42/-6.06	
Θ(160°)	-7.92/-6.74	-6.39/-6.00	-5.09/-4.50	-4.25/-4.90	-5.53/-6.38	-7.24/-8.57	-10.08/-10.46	-10.07/-9.82	-12.09/-10.28	-6.67/-5.59	-6.45/-5.50	-3.65/-2.42	-2.49/-2.80	-3.30/-3.95	-3.33/-3.56	-6.07/-10.30	-9.05/-9.72	-11.35/-10.27
Θ(170°)	1.29/0.95	0.41/-0.49	-1.87/-4.11	-7.02/-10.68	-11.64/-7.47	-5.16/-3.48	-2.26/-1.65	-1.09/-0.85	-1.35/-1.52	-2.03/-2.33	-2.65/-3.03	-3.62/-3.87	-3.63/-2.66	-1.39/-0.17	0.50/0.45	0.25/0.74	1.14/-1.25	
Θ(180°)	-3.15/-3.39	-3.54/-3.73	-3.37/-3.40	-3.39/-2.72	-2.19/-2.41	-2.81/-3.44	-1.46/-1.97	-1.82/-2.17	-1.70/-0.92	-0.90/-1.07	-1.25/-1.50	-1.48/-1.39	-0.47/-0.76	-0.45/-0.29	-0.57/-0.43	-0.44/-0.81	-1.25/-2.85	
Freq(Hz)	5.6GPol.	TotalAnt. 4	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
Gain	Φ(0°)/Φ(10°)	Φ(20°)/Φ(30°)	Φ(40°)/Φ(50°)	Φ(60°)/Φ(70°)	Φ(80°)/Φ(90°)	Φ(100°)/Φ(110°)	Φ(120°)/Φ(130°)	Φ(140°)/Φ(150°)	Φ(160°)/Φ(170°)	Φ(180°)/Φ(190°)	Φ(200°)/Φ(210°)	Φ(220°)/Φ(230°)	Φ(240°)/Φ(250°)	Φ(260°)/Φ(270°)	Φ(280°)/Φ(290°)	Φ(300°)/Φ(310°)	Φ(320°)/Φ(330°)	Φ(340°)/Φ(350°)
Θ(0°)	-1.17/-0.89	-0.83/-0.77	-1.06/-0.71	-0.63/-0.38	-0.09/-0.31	-0.50/-1.40	-1.83/-0.81	-0.78/-1.64	-0.89/-0.54	-0.81/-0.53	-1.04/-1.35	-1.11/-0.71	-0.46/-1.62	-1.14/-1.22	-1.23/-1.06	-1.64/-1.36	-1.20/-0.84	
Θ(10°)	-2.06/-1.58	-1.84/-1.80	-2.09/-2.08	-1.83/-1.16	-0.39/0.54	1.06/1.25	0.46/-0.08	0.20/0.19	-0.99/-0.58	-0.90/-0.93	-0.32/-0.84	-1.46/-1.58	-1.80/-1.93	-2.67/-2.68	-2.76/-3.01	-3.18/-2.55	-2.00/-1.83	-1.66/-1.82
Θ(20°)	-2.19/-1.57	-2.45/-2.20	-1.48/-1.72	-1.52/-0.92	-0.55/0.70	1.58/1.24	-0.31/-2.89	-4.52/-4.97	-4.58/-2.99	-2.40/-2.70	-1.09/-1.62	-2.67/-2.56	-2.54/-2.60	-3.47/-3.44	-2.05/-1.42	-1.40/-1.65	-1.93/-2.04	-1.98/-1.89
Θ(30°)	-2.31/-2.17	-2.80/-3.61	-2.72/-1.37	-2.31/-1.82	0.62/1.12	-0.62/0.47	-0.16/-0.81	-0.64/-1.70	-2.85/-2.80	-6.22/-4.24	-2.44/-1.09	-4.44/-4.62	-1.17/-1.307	-4.64/-4.72	-3.75/-5.24	-7.64/-7.79	-5.92/-6.06	
Θ(40°)	-5.09/-5.53	-4.73/-2.42	-0.81/-0.34	-0.87/-1.33	-0.43/-1.48	0.94/-1.15	0.19/2.63	3.31/1.78	0.43/-0.45	-2.26/-2.67	-3.23/-5.35	-5.09/-3.27	-3.09/-4.77	-8.30/-7.26	-3.87/-4.01	-4.32/-6.02	-5.50/-3.83	-4.44/-4.13
Θ(50°)	-3.54/-3.10	-1.95/-3.48	-0.99/1.03	0.59/-4.63	0.17/2.17	-2.64/-1.04	1.17/2.09	0.48/-3.47	-1.21/0.26	-0.05/-2.77	-4.58/-4.31	-4.85/-5.19	-3.01/-4.17	-5.27/-5.77	-2.01/-2.57	-3.71/-3.57	-1.37/-1.08	-2.37/-3.89
Θ(60°)	-2.78/-2.10	-1.41/-2.09	-1.64/-1.64	2.23/-4.12	-1.86/-0.17	-5.91/-2.66	-2.71/-8.15	-5.20/-6.21	1.00/0.85	-0.10/-0.72	-2.78/-1.15	-5.53/-4.11	-6.66/-6.18	-5.14/-5.47	-4.73/-3.24	-2.16/-4.69	-5.88/-3.90	
Θ(70°)	-2.30/0.11	1.01/-0.68	-3.04/-0.56	-1.54/-4.32	0.42/-0.22	-7.82/-1.72	-1.14/-0.93	1.27/2.30	1.14/-1.61	-2.82/-3.81	-6.09/-7.11	-11.03/-7.77	-9.45/-3.78	-9.99/-9.51	-4.77/-4			

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

